

IBM DB2 10.1
for Linux, UNIX, and Windows

Message Reference Volume 2



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Note

Before using this information and the product it supports, read the general information under Appendix B, "Notices," on page 831.

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Part 1. Introduction to messages

It is assumed that you are familiar with the functions of the operating system where DB2® is installed. You can use the information contained in the following chapters to identify an error or problem and resolve the problem by using the appropriate recovery action. This information can also be used to understand where messages are generated and logged.

Message Structure

Message help describes the cause of a message and describes any action you should take in response to the message.

Message identifiers consist of a three character message prefix, followed by a four or five digit message number, followed by a single letter suffix. For example, *SQL1042C*. For a list of message prefixes, see “Invoking message help” on page 2 and “Other DB2 Messages” on page 2. The single letter suffix describes the severity of the error message.

In general, message identifiers ending with a *C* are for severe messages; those ending with an *E* indicate urgent messages; those ending with an *N* indicate error messages; those ending with a *W* indicate warning messages; and those ending with an *I* indicate informational message.

For ADM messages, message identifiers ending with a *C* indicate severe messages; those ending with an *E* indicate urgent messages; those ending with a *W* indicate important messages; and those ending with an *I* indicate informational messages.

For SQL messages, message identifiers ending with a *C* indicate critical system errors; those ending with an *N* indicate error messages; those ending with a *W* indicate warning or informational messages.

Some messages include tokens, sometimes also called message variables. When a message containing tokens is generated by DB2, each token is replaced by a value specific to the error condition that was encountered, to help the user diagnose the cause of the error message. For example, the DB2 message *SQL0107N* is as follows:

- from the command line processor:
SQL0107N The name "<name>" is too long. The maximum length is "<length>".
- from the DB2 information center:
SQL0107N The name *name* is too long. The maximum length is *length*.

This message includes the two tokens "<name>" and "<length>". When this message is generated at runtime, the message tokens would be replaced by the actual name of the object that caused the error, and the maximum length allowed for that type of object, respectively.

In some cases a token is not applicable for a specific instance of an error, and the value *N is returned instead, for example:

SQL20416N The value provided ("*N") could not be converted to a security label. Labels for the security policy with a policy ID of "1" should be "8" characters long. The value is "0" characters long. SQLSTATE=23523

Invoking message help

To invoke message help, open the command line processor and enter:

```
? XXXnnnnn
```

where *XXX* represents a valid message prefix and *nnnnn* represents a valid message number.

The message text associated with a given SQLSTATE value can be retrieved by issuing:

```
? nnnnn
```

or

```
? nn
```

where *nnnnn* is a five digit SQLSTATE (alphanumeric) and *nn* is the two digit SQLSTATE class code (first two digits of the SQLSTATE value).

Note: The message identifier accepted as a parameter of the **db2** command is not case sensitive. Also, the single letter suffix is optional and is ignored.

Therefore, the following commands will produce the same result:

- ? SQL0000N
- ? sql0000
- ? SQL0000w

To invoke message help on the command line of a UNIX based system, enter:

```
db2 "? XXXnnnnn"
```

where *XXX* represents a valid message prefix
and *nnnnn* represents a valid message number.

If the message text is too long for your screen, use the following command (on Unix-based systems and others which support 'more'):

```
db2 "? XXXnnnnn" | more
```

Other DB2 Messages

Some DB2 components return messages that are not available online or are not described in this manual. Some of the message prefixes might include:

AUD Messages generated by the DB2 Audit facility.

DIA Diagnostics messages generated by many DB2 components. These messages are written in the DB2 diagnostic (db2diag) log files, and are intended to provide additional information for users and DB2 service personnel when investigating errors.

In most cases, these messages provide sufficient information to determine the cause of the warning or error. For more information on the command or utility that generated the messages, please refer to the appropriate manual where the command or utility is documented.

Other Message Sources

When running other programs on the system, you may receive messages with prefixes other than those mentioned in this reference.

For information on these messages, refer to the information available for that program product.

Part 2. SQL Messages

Chapter 1. SQL0000 - SQL0499

SQL0000W Statement processing was successful.

Explanation: The SQL statement executed successfully, unless a warning condition occurred.

User response: Check SQLWARN0 to ensure that it is blank. If it is blank, the statement executed successfully. If it is not blank, a warning condition exists. Check the other warning indicators to determine the particular warning condition. For example, if SQLWARN1 is not blank, a string was truncated.

sqlcode: 0

sqlstate: 00000, 01003, 01004, 01503, 01504, 01506, 01509, 01517

SQL0001N Binding or precompilation did not complete successfully.

Explanation: For reasons specified in the previous messages, the bind or precompile request was unsuccessful.

No package is created.

User response: Refer to the messages in the message file. Resubmit the command.

If installing the sample database, drop it and install the sample database again.

SQL0002N The bind file name is not valid.

Explanation: For reasons specified in the previous messages, the bind file name cannot be used as specified.

No package is created.

User response: Refer to the messages in the message file. Resubmit the command.

If installing the sample database, drop it and install the sample database again.

SQL0003N The database name is not valid.

Explanation: For reasons specified in the previous messages, the database name cannot be used as specified.

No package is created.

User response: Refer to the messages in the message file. Resubmit the command.

SQL0004N The password is not valid.

Explanation: The password contains characters that

are not valid or the password is too long.

No package is created.

User response: Resubmit the command with a valid password.

SQL0005N The message file name is not valid.

Explanation: For reasons specified in the previous messages, the message file name cannot be used as specified.

No package is created.

User response: Refer to the messages in the message file. Check the name of the message file. Check the attributes of the message file if it exists. Resubmit the command.

SQL0006N The datetime format parameter is not valid.

Explanation: The value of the datetime format parameter is not in the valid range of 0 through 3.

No package is created.

User response: Resubmit the command with a valid format parameter.

SQL0007N The character *character* following *text* is not valid.

Explanation: The specified *character* is not a valid character in SQL statements. The *text* field indicates the 20 characters of the SQL statement that preceded the character that is not valid.

Federated system users: some data sources do not provide the appropriate values for the *character* and *text* message tokens. In these cases, *character* and *text* will have the following format: "<data source>:UNKNOWN", indicating that the actual values for the specified data source are unknown.

The statement cannot be processed.

User response: Remove or replace the character that is not valid.

sqlcode: -7

sqlstate: 42601

SQL0008N The token *token* found in a host variable declaration is not valid.

Explanation: A host variable declaration has invalid

syntax. The precompiler cannot identify the host variable.

The statement cannot be processed. None of the host variables declared in the statement (up to the semicolon) are accepted.

User response: Examine the syntax of the host variable declaration.

SQL0009W An attempt to override a precompilation option was ignored.

Explanation: An attempt was made to override a precompiler option.

The option is ignored.

User response: Ensure that all precompiler options are specified correctly.

SQL0010N The string constant beginning with *string* does not have an ending string delimiter.

Explanation: The statement contains a string constant, beginning with *string*, that is not terminated properly.

The statement cannot be processed.

User response: Examine the statement for missing apostrophes in the indicated string constant.

sqlcode: -10

sqlstate: 42603

SQL0011N The comment is not terminated.

Explanation: The comment is not terminated properly.

The statement cannot be processed.

User response: Examine the statement for a missing or extra comment delimiter in the indicated comment.

SQL0012W Correlation without qualification has occurred for the column *column*.

Explanation: The named column occurs in a SELECT statement, is not explicitly qualified, and occurs in a table specified in the FROM clause of an outer select. Consequently, the reference to the column in the SELECT statement has been taken to be an outer reference and correlation will occur.

The statement was processed under the assumption that correlation was intended.

User response: Ensure that correlation was intended. It is a good practice to explicitly qualify intended outer references.

sqlcode: +12

sqlstate: 01545

SQL0013N An empty delimited identifier is not valid.

Explanation: During precompilation, either a cursor name, statement name, database name, or authorization ID, specified as an empty string, was found. This is not valid. The statement cannot be processed.

User response: Provide a valid cursor name, statement name, database name, or authorization ID.

SQL0014N The source file name is not valid.

Explanation: The source file name specified in the call to the precompiler contains invalid characters or the pointer to the source file name is invalid.

No package was created.

User response: Ensure that the source file name is correct.

SQL0015N The host variable data type *token-1* is not valid. Use *token-2* instead.

Explanation: If the WCHARTYPE CONVERT precompile option is in effect then the graphic host variable must be declared with the data type 'wchar_t', not 'sqldbchar'.

If the WCHARTYPE NOCONVERT precompile option is in effect (the default) and 'wchar_t' is defined as a 4-byte integer on this platform, then the graphic host variable must be declared with the data type 'sqldbchar', not 'wchar_t'.

User response: Replace the current data type of the host variable with the data type specified in the message.

SQL0017N A RETURN statement must be specified and executed in an SQL function or method.

Explanation: The SQL function or method either does not contain a RETURN statement, or the function or method did not end with the execution of a RETURN statement.

User response: Ensure the function or method executes a RETURN statement.

sqlcode: -17

sqlstate: 42632

SQL0020W The bind or precompile command parameters or parameter values in the following list were ignored because they are not supported by the target database: *parameter-names-or-values*.

Explanation: You can prepare SQL statements that are stored in a bind find that was generated by the

precompiler, and create a package in the database using the BIND command. You can process an application program source file containing embedded SQL statements and create a package in the database using the PRECOMPILE command.

This warning is returned in the following situations:

- One or more parameters that were specified with either the PRECOMPILE command or the BIND command are not supported by the target database server.
- Values given for one or more parameters that were specified with either the PRECOMPILE command or the BIND command are not supported by the target database server.

User response: Execute the BIND command or PRECOMPILE command again, specifying parameters and values that are supported by the target database server.

SQL0021W Invalid precompiler option *option* is ignored.

Explanation: The option specified in the message is not a valid precompiler option.

The option is ignored.

User response: Ensure that all precompiler options are specified correctly.

SQL0022W Duplicate precompiler option *option* is ignored.

Explanation: The precompiler option *option* is a duplicate.

The option is ignored.

User response: Ensure that all precompiler options are specified only once.

SQL0023N The database name is not valid.

Explanation: The specified database name is not a valid name.

Precompilation is terminated.

User response: Ensure that the database name is spelled correctly and follows the rules for short identifiers.

SQL0024N A database name was not specified.

Explanation: No database name was provided to proceed with precompilation.

Precompilation is terminated.

User response: Provide a database name.

SQL0025W Binding or precompilation completed with warnings.

Explanation: Binding or precompilation succeeded, but warnings were issued. A package and/or bindfile was created as requested in the command.

User response: Refer to the messages in the message file. If necessary, correct the problems and resubmit the command.

SQL0026N The password is not valid.

Explanation: The specified password is not a valid password.

Precompilation is terminated.

User response: Ensure that the password provided follows the rules for valid passwords.

SQL0028C The release number of the bind file is not valid.

Explanation: The release number of the bind file is not compatible with the release number of the installed version of the database manager.

The bind file cannot be used with the current version of the database manager. The command cannot be processed.

User response: If possible, repeat the precompile process with the current database manager. Otherwise, use only bind files created with a compatible release level of the database manager.

SQL0029N INTO clause required.

Explanation: Non-cursor SELECT or VALUES statements embedded in an application program must have an INTO clause to denote where the results of the statement are to be placed. Dynamic SELECT statements do not permit the INTO clause.

User response: Add the INTO clause to the SELECT or VALUES statement and precompile the application program again.

sqlcode: -29

sqlstate: 42601

SQL0030N A source file name was not specified.

Explanation: A source file name was not provided to proceed with precompilation.

Precompilation is terminated.

User response: Specify a source file name.

SQL0031C File *name* could not be opened.

Explanation: The file *name* is required but could not be opened.

Precompilation is terminated.

User response: Ensure that the file name specified is correct and exists in the file system, and that the file permissions are correct.

If installing the sample database, drop it and install the sample database again. If the error continues, reinstall the database manager and then install the sample database.

SQL0032C Unable to use file *name*.

Explanation: While reading or writing file *name*, an error was encountered.

Precompilation is terminated.

User response: Retry the precompilation.

SQL0033N *name* is not a valid bind file.

Explanation: The bind file *name* specified is not a bind file.

Binding is terminated.

User response: Ensure that the correct file name was specified.

SQL0034N A bind file name was not specified.

Explanation: No bind file name was specified to proceed with binding.

Binding is terminated.

User response: Provide a bind file name.

SQL0035N The file *name* cannot be opened.

Explanation: The message file *name* could not be opened.

Binding or precompilation has been terminated.

User response: Ensure that the system can access the file.

SQL0036N The syntax of the file name *name* is not valid.

Explanation: If the file is input to the precompiler, it must have an extension with the correct extension for the language being used. If the file is input to the binder, it must have an extension of *.bnd*. Also, a fully resolved file name which is over the platform maximum length will cause this error.

Precompilation or binding is terminated.

User response: Ensure that the specified file name is correct.

SQL0037W The syntax of the message file *name* is not valid.

Explanation: The message file name *name* is not syntactically correct for this function.

The system redirects the output to the standard output device.

User response: Ensure that the specified file name is correct.

SQL0038W The bind option SQLERROR CONTINUE has been activated since it is required when binding this DB2-supplied list file to DB2/MVS, SQL/DS, or OS/400.

Explanation: The SQLERROR CONTINUE bind option is required when binding the following DB2-supplied list files:

- ddcsmvs.lst
- ddcsvm.lst
- ddcsvse.lst
- ddcs400.lst

This option instructs a DRDA server to create a package even if there are SQL statements in a bind file which it considers invalid. Since not all of the DRDA servers support all of the SQL statements contained in the DB2-supplied bind files, the SQLERROR CONTINUE bind option must be used to guarantee that packages are created for all of the bind files in the list file.

User response: No response is necessary. The required bind option, SQLERROR CONTINUE, has been specified for you. To avoid receiving this warning in the future specify the SQLERROR CONTINUE bind option.

SQL0039N The binder did not finish processing because the bind file is not valid.

Explanation: The binder could not process the bind file. The bind file may not be valid because the bind file contents were altered accidentally.

The bind file is not processed.

User response: If possible, repeat the precompile process to create a new bind file. Otherwise, obtain a new copy of the bind file.

SQL0040N An error occurred on one or more bind files in list *name*. The following files were not bound: *list*.

Explanation: For reasons specified in the previous messages in the message file, one or more bind files were not bound. The list of files that were not bound is composed of digits, starting from 1, that indicate the relative position of the unbound files in the list file. *name* does not include the path specification of the list file.

Only the first 20 bind files in error are listed in the message. If there were more than 20 bind files in error, ellipses (...) are inserted after the last bind file name in the list.

One or more packages were not created.

User response: Refer to the messages in the message file. Check the list file to verify that it contains valid names. Resubmit the command.

SQL0041N No attempt was made to bind the files following file number *number* in list *name* because a fatal error occurred which terminated processing.

Explanation: Some errors encountered during the binding process are considered fatal (that is, system errors, memory errors). If one of these errors occurs while processing a file in a list file, processing terminates. No attempt is made to bind the remaining files in the list file.

Such an error occurred while binding the specified bind file in the list. Note that the digit used to identify the bind file indicates the relative position of the file in the list file.

User response: Refer to the other messages which accompanied this one to resolve the errors which occurred. Resubmit the command.

SQL0051N The space required to hold all SQL statements for a single program has exceeded its allowed maximum.

Explanation: The space required by all SQL statements in the program cannot fit into the column SECT_INFO in SYSIBM.SYSPLAN.

Precompilation is terminated.

User response: Either simplify the program, or split the program into smaller, separate programs, or do both.

SQL0053W No SQL statements were found in the program.

Explanation: The specified source file contains no SQL statements.

If binding, an empty package is created.

User response: Ensure that you are precompiling or binding the correct program.

SQL0055N Source input file is empty.

Explanation: The program source input file contained no data.

Precompilation is terminated.

User response: Ensure that the correct input file was specified.

SQL0056N An SQLSTATE or SQLCODE variable declaration is in a nested compound statement.

Explanation: An SQLSTATE or SQLCODE variable declaration is in a nested compound statement instead of the outermost compound statement in the SQL routine.

The statement cannot be processed.

User response: Declare the SQLSTATE and SQLCODE variables only in the outermost compound statement of the SQL routine.

sqlcode: -56

sqlstate: 42630

SQL0057N A RETURN statement in an SQL function or method must include a return value.

Explanation: A RETURN statement is specified in the SQL function or method without specifying a value to return.

The statement cannot be processed.

User response: Specify a value on the RETURN statement.

sqlcode: -57

sqlstate: 42631

SQL0058N The data type of the RETURN statement value in an SQL procedure must be INTEGER.

Explanation: A RETURN statement is specified in the SQL procedure with a value or expression that is not of the INTEGER data type.

The statement cannot be processed.

User response: Specify a value on the RETURN statement that has a data type of INTEGER.

sqlcode: -58

sqlstate: 428F2

SQL0060W The *name* precompiler is in progress.

Explanation: This message is written to the standard output device when the precompiler begins processing. The token *name* refers to the particular language precompiler which was invoked.

Processing continues.

User response: No action is required.

SQL0061W The binder is in progress.

Explanation: This message is written to the standard output device when the binder begins processing.

Processing continues.

User response: No action is required.

SQL0062W Starting INCLUDE of file *name*.

Explanation: An INCLUDE statement has been encountered. The precompiler is now processing the INCLUDE file.

User response: No action is required.

SQL0063W Completed INCLUDE of file *name*.

Explanation: The precompiler has completed processing the INCLUDE file. It will resume processing the file which contained the INCLUDE statement.

User response: No action is required.

SQL0064N File *name* directly or indirectly INCLUDEs itself.

Explanation: A cyclic INCLUDE has been encountered. A precompiler input file cannot INCLUDE itself, nor be INCLUDED by a file it INCLUDEs.

The specified file is not INCLUDED.

User response: Check the nesting of the INCLUDE files, and remove any cycles.

SQL0065N An unexpected end-of-line was encountered in a host variable declaration.

Explanation: A host variable declaration has an invalid syntax. An end-of-line was encountered before the declaration was complete.

The statement cannot be processed.

User response: Examine the syntax of the host variable declaration.

SQL0078N Parameter names must be specified for routine *routine-name*.

Explanation: The routine *routine-name* does not have parameter names specified for all parameters. When the routine is defined with LANGUAGE SQL or SQLMACRO a parameter name is required for each parameter defined.

The statement cannot be processed.

User response: Ensure that each defined parameter includes a parameter name.

sqlcode: -78

sqlstate: 42629

SQL0079N The Schema name for the declared global temporary table or index *name* must be SESSION, not *schema-name*.

Explanation: The schema name *name* for a declared temporary table or an index on a declared global temporary table must be SESSION. The statement is specifying an explicit schema-name of *schema-name* for the declared global temporary table or index on a declared global temporary table. This is not allowed.

The statement cannot be processed.

User response: Change the statement in one of the following ways:

- Change the schema name to SESSION.
- Remove the schema name and let DB2 use the default value, SESSION.

sqlcode: -79

sqlstate: 428EK

SQL0081N SQLCODE *sqlcode* returned during precompilation/bind.

Explanation: While precompiling or binding the program, an unexpected SQLCODE *sqlcode* was returned from the database manager.

The statement cannot be processed.

User response: Inspect the SQLCODE to determine the problem and take the appropriate action.

SQL0082C An error has occurred which has terminated processing.

Explanation: A previous, non-SQL error has caused processing to terminate.

Precompile/bind/rebind is terminated. No package was created.

User response: Correct the situation that caused the previous error and retry the operation.

SQL0083C A memory allocation error has occurred.

Explanation: During processing, there was not enough memory to continue processing.

User response: Possible solutions include:

- Ensure that your system has sufficient real and virtual memory.
- Remove background processes.

If you continue to receive this message after attempting the suggested solutions, contact IBM Customer Support.

SQL0084N An EXECUTE IMMEDIATE statement contains a SELECT or VALUES statement.

Explanation: A SELECT or VALUES statement was used in an EXECUTE IMMEDIATE statement.

The statement cannot be processed.

User response: The implied function is not supported. Prepare the SELECT or VALUES statement. Then use OPEN, FETCH, and CLOSE.

sqlcode: -84

sqlstate: 42612

SQL0085N The statement name *name* is already defined.

Explanation: A previous DECLARE statement already used the statement name specified in the current DECLARE statement.

The current DECLARE statement is not processed. The previous DECLARE statement retains use of the statement name.

User response: Use a different name for the statement.

SQL0086C A memory allocation error has occurred.

Explanation: During processing, there was not enough memory to continue processing.

User response: Possible solutions include:

- Verify that your system has the required memory.
- Remove background processes.

SQL0087N A null value was specified in a context where a null value is not allowed.

Explanation: A variable is used in a context where it must not be the null value. For example, a cursor variable can be used in an OPEN or FETCH statement, but the value of the cursor variable must not be the null value. The statement cannot be processed.

User response: Ensure that the value of the variable is

not null in a context that does not allow the null value and try the request again.

sqlcode: -87

sqlstate: 22004

SQL0088N Host variable *name* is ambiguous.

Explanation: Host variable *name* cannot be uniquely identified. More than one host variable with the same qualification can be found.

The statement cannot be processed.

User response: Qualify the host variable further, or rename it if it is already fully qualified.

SQL0089N Processing ended after 100 errors were found.

Explanation: The precompiler or binder quits processing after 100 errors were found.

User response: Fix the errors indicated in the message log and resubmit the command.

SQL0091W Precompilation or binding was ended with *number-1* errors and *number-2* warnings.

Explanation: The precompilation or binding has terminated with the stated number of warnings and errors.

Precompilation or binding is terminated.

User response: If warnings or errors occurred, correct the program, if necessary, and retry the precompilation or binding.

SQL0092N No package was created because of previous errors.

Explanation: Because of previous errors, no package was created.

User response: Correct the errors and retry the precompilation or bind.

SQL0093N The end-of-input was encountered before the statement terminator for EXEC SQL.

Explanation: While processing an SQL statement, the end of source was encountered before the statement terminated.

Precompilation is terminated.

User response: Ensure that the SQL statement terminates properly.

SQL0094N Binding was ended because of a user interrupt request.

Explanation: Binding was terminated because the user may have pressed the interrupt key sequence.

Processing is terminated. No package is created.

User response: Resubmit the bind, if needed.

If installing the sample database, drop it and install the sample database again.

SQL0095N No bind file was created because of previous errors.

Explanation: Because of previous errors, no bind file was created.

No bind file is created.

User response: Correct the errors and retry the precompilation.

SQL0097N Variables or parameters of LONG VARCHAR or LONG VARGRAPHIC data types are not supported in SQL routines.

Explanation: SQL routines (procedures, functions or methods) do not support variables or parameters of LONG VARCHAR or LONG VARGRAPHIC data types.

User response: Do not use variables or parameters of LONG VARCHAR or LONG VARGRAPHIC data types in SQL routines. For LONG VARCHAR, use VARCHAR with an explicit length. For LONG VARGRAPHIC, use VARGRAPHIC with an explicit length.

sqlcode: -97

sqlstate: 42601

SQL0100W No row was found for FETCH, UPDATE or DELETE; or the result of a query is an empty table.

Explanation: One of the following conditions is true:

- No row was found that meets the search conditions specified in an UPDATE or DELETE statement.
- The result of a SELECT statement was an empty table.
- A FETCH statement was executed when the cursor was positioned after the last row of the result table.
- The result of the SELECT used in an INSERT statement is empty.

No data was retrieved, updated, or deleted.

User response: No action is required. Processing can continue.

sqlcode: +100

sqlstate: 02000

SQL0101N The statement was not processed because a limit such as a memory limit, an SQL limit, or a database limit was reached.

Explanation: This message can be returned when an attempt is made to prepare or execute an SQL statement that exceeds a limit such as a memory limit, an SQL limit, or a database limit. In this context, "memory limits" include the following examples:

- Statement heap (STMTHEAP)
- Application heap (APPLHEAPSZ)
- Application memory (APPL_MEMORY)
- Instance memory (INSTANCE_MEMORY)
- Other process or system memory limits

For example, this message can be returned for the following reasons:

- The statement heap isn't large enough to compile the statement. (The statement heap is used by the SQL or XQuery compiler as a work space when compiling SQL or XQuery statements.)
- There is not enough application memory to service application requests.
- If the statement is one that creates or modifies a packed description, the new packed description might be too large for the corresponding column in the system catalogs.

This message can also be returned when an attempt is made to execute an SQL statement that is too complex to compile. For example, the following elements contribute to the complexity of a statement:

- Constraints, such as table check constraints or foreign key constraints
- Triggers
- Row access controls and column access controls

Federated environments:

In a federated environment, this message can be returned when a statement exceeds a limit of either a federated server or a federated data source.

Code page conversion:

If character data is being converted between two different code pages, this message can be returned when the result of a data conversion exceeds a limit (even when the original data did not exceed any limits.)

User response: Respond to this error by taking one or more of the following actions:

- Increase the size of the statement heap using the stmtheap database configuration parameter, or enable the statement heap to grow automatically by setting the stmtheap parameter to AUTOMATIC.

- Enable the amount of memory that is allocated for application requests to grow automatically by setting the `appl_memory` database configuration parameter to `AUTOMATIC`.
- Break the statement up into shorter or less complex SQL statements.
- Reduce the complexity of the statement by making one or more of the following types of changes:
 - Reduce the number of constraints, such as table check constraints or foreign key constraints, involved in the statement.
 - Reduce the number of triggers involved in the statement.
 - Reduce the number of row access controls or column access controls involved in the statement.

Federated environments:

1. Determine whether it is a federated data source that is returning the error, or the federated server that is returning the error.
2. Take one or more of the general actions already described. For example:
 - If the error is being returned by the federated server, increase the size of the statement heap using the `stmheap` database configuration parameter, or set the `stmheap` parameter to `AUTOMATIC`.
 - Reduce the complexity of the statement.

sqlcode: -101

sqlstate: 54001

SQL0102N The string constant beginning with *string* is too long.

Explanation: One of the following has occurred:

- The comment in the `COMMENT ON` statement is greater than 254 bytes.
- The application server name specified in the `SQL CONNECT` statement is greater than 18 bytes.
- The string constant beginning with *string* has a length greater than 32672 bytes. Character strings with lengths greater than 32672 bytes or graphic strings with lengths greater than 16336 characters can be specified only through assignment from host variables. Note that other servers in the DB2 family of products may specify a different size limit for character strings. Consult the documentation for the appropriate DB2 product for details.
- In an XQuery expression, a string literal beginning with *string* has a length greater than 32672 bytes. The limit is determined on the string literal encoded in UTF-8. A string with length greater than 32672 bytes can only be specified in an XQuery expression using XML values from the database through the XQuery functions that access data or through an XQuery

variable assigned a value using SQL/XML functions like `XMLQUERY`, `XML EXISTS`, or `XMLTABLE`.

- Federated system users: the data source-specific limits must not be exceeded in a pass-through session. For example, a character literal larger than 254 bytes included in a statement sent to DB2 for OS/390 in a pass-through session would cause this error.
- The job ID string on the `INGEST` command is greater than 128 bytes.
- The date, time, or timestamp format string in a field definition on the `INGEST` command is greater than its maximum length. Date format strings have a maximum length of 10 bytes. Time format strings have a maximum length of 8 bytes. Timestamp format strings have a maximum length of 32 bytes.

It may be that data conversion is occurring and the resultant string is too long. For connections between applications and databases running under different codepages, string constants are converted from the application codepage to the database codepage. In certain situations, graphic string constants may be further converted from the database codepage to a UCS-2 (UNICODE) encoding, for example when the database has been created with an EUC codepage. This means that it is possible to have a resultant string which is longer than the input string.

The statement cannot be processed.

User response: For `Comment on Table` or `Comment on Column`, reduce the size of the comment. For the `SQL CONNECT` statement, reduce the length of the application server name. For other string constants, the requested function is not available interactively. For an error occurring in the context of a non-`CONNECT` SQL statement embedded in an application program, assign the long string to a host variable and substitute that variable for the string literal in the SQL statement.

Federated system users: for a pass-through session, determine what data source is causing the error. Examine the SQL dialect for that data source to determine which specific limit has been exceeded, and adjust the failing statement as needed.

Ingest utility users: Specify an ingest job ID that is less than 129 bytes, or specify a format string that is not greater than the maximum length.

sqlcode: -102

sqlstate: 54002

SQL0103N The numeric literal *literal* is not valid.

Explanation: The indicated *literal* begins with a digit but is not a valid integer, decimal, or floating point literal.

Federated system users: a data source-specific literal

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representation error has occurred in a pass-through session.

The statement cannot be processed.

User response: Correct the invalid numeric literal. Federated system users, if the error occurred in a pass-through session, determine what data source is causing the error. Examine the SQL dialect for that data source to determine which literal representation rule has been violated, and adjust the failing statement as needed.

sqlcode: -103

sqlstate: 42604

SQL0104N An unexpected token *token* was found following *text*. Expected tokens may include: *token-list*.

Explanation: A syntax error in the SQL statement or the input command string for the SYSPROC.ADMIN_CMD procedure was detected at the specified token following the text *text*. The *text* field indicates the 20 characters of the SQL statement or the input command string for the SYSPROC.ADMIN_CMD procedure that preceded the token that is not valid.

As an aid, a partial list of valid tokens is provided in the SQLERRM field of the SQLCA as *token-list*. This list assumes the statement is correct to that point.

This message can be returned when text is passed to the command line processor (CLP) in command mode and the text contains special characters that are interpreted by the operating system shell, such as single or double quotes, which are not identified with an escape character.

The statement cannot be processed.

User response: Respond to this error in one of the following ways:

- Examine and correct the statement in the area of the specified token.
- If you are using the CLP in command mode and there are any special characters, such as quotes, in the command, use an escape character, such as the backslash character, to cause the operating system shell to not take any special action for those special characters. You could also issue the statement using CLP in interactive mode or batch mode to avoid any processing of special characters by the operating system shell.

sqlcode: -104

sqlstate: 42601

SQL0105N The string constant beginning with *string* is not valid.

Explanation: The statement contains a string constant beginning with *string* that is not valid.

The statement cannot be processed.

User response: Specify the correct format of the string constant. Check for graphic string, paired delimiters, and an even number of bytes within the string.

sqlcode: -105

sqlstate: 42604

SQL0106N SQL statement begins properly but is incomplete.

Explanation: The SQL statement was correct up to the point where no more input was found. This may be caused by failure to properly end a literal. String literals need a final quote mark.

Processing of this SQL statement has ended.

User response: Check that the statement has all the necessary parts to complete the desired function and that all clauses are complete.

For PL/I: Check that the SQL statement is complete before the semicolon. For Assembler: Check that the continuation rules are properly followed. (A nonblank character must be in column 72, and continued lines must start in column 16 or beyond.)

For COBOL: Check that the SQL statement is complete before END-EXEC.

sqlcode: -106

sqlstate: 42601, 42603

SQL0107N The name *name* is too long. The maximum length is *length*.

Explanation: The name returned as *name* is too long. The maximum length in bytes permitted for names of that type is indicated by *length*. This does not include any escape characters, if present.

Federated system users: If in a pass-through session, a data source-specific limit might have been exceeded.

The statement cannot be processed.

Note: Where character data conversions are performed for applications and databases running under different code pages, this error can be returned because the result of the conversion exceeds the length limit.

User response: Choose a shorter name or correct the spelling of the object name.

Federated system users: For a pass-through session, determine what data source is causing the error. Examine the SQL dialect for that data source to determine which specific limit has been exceeded, and

adjust the failing statement as needed.

sqlcode: -107

sqlstate: 42622, 10901

SQL0108N The name *name* has the wrong number of qualifiers.

Explanation: The name *name* is improperly qualified.

The object given the name *name* can only have one qualifier in this context.

A column name is qualified with a table name, which is either qualified or unqualified, or a correlation name. In some contexts, a column name requires a table name qualifier.

Identification of a module-object for an ALTER MODULE statement action must be an unqualified one-part name.

The statement cannot be processed.

User response: Ensure that the name for the object is qualified correctly.

sqlcode: -108

sqlstate: 42601

SQL0109N The *clause* clause is not allowed.

Explanation: The indicated clause is not allowed in the context where it appears in the SQL statement or command.

- A subquery, an INSERT statement, or a CREATE VIEW statement cannot have INTO, ORDER BY, or FOR UPDATE clauses.
- An embedded SELECT statement cannot have ORDER BY or FOR UPDATE clauses.
- An embedded SELECT statement cannot contain a set operator except in a subquery.
- SELECT or VALUES statements used in cursor declarations cannot have an INTO clause.
- A RAISE_ERROR function can only be used as a select list item if it is cast to some data type using the CAST specification.
- The USE AND KEEP clause cannot be used with a query that:
 - invokes an SQL function or SQL method that was not created with the INHERIT ISOLATION LEVEL WITH LOCK REQUEST clause
 - might invoke a trigger
 - modifies a parent or child table requiring a referential integrity check
 - requires incremental maintenance of a materialized query table
- The INITIALSIZE clause is not valid for system managed space (SMS) or database managed space (DMS) table spaces.

- The AUTORESIZE, INCREASESIZE and MAXSIZE clauses are not valid for system managed space (SMS) table spaces or for database managed space (DMS) table spaces that are defined to use raw device containers.
- The AUTORESIZE, INITIALSIZE, INCREASESIZE and MAXSIZE clauses are not valid for temporary table spaces that are created using automatic storage.
- The INCREASESIZE and MAXSIZE clauses are not valid for table spaces that do not have auto-resize enabled.
- The ADD, ADD TO STRIPE SET, and BEGIN NEW STRIPE SET clauses cannot be used to add raw device containers to table spaces that have auto-resize enabled.
- Federated system users: In a pass-through session, a data source-specific restriction might have been violated.
- A CREATE INDEX statement cannot specify PARTITIONED or NOT PARTITIONED keywords when creating an index on a nonpartitioned table.
- A CREATE INDEX statement cannot specify a table space name when creating an index on a created temporary table or a declared temporary table.
- The REBALANCE clause can only be used for regular and large automatic storage tables.
- A CREATE TABLE, CREATE VIEW, or ALTER TABLE statement cannot have an isolation clause or a lock clause.
- An isolation clause or a lock clause cannot be specified in a subselect that:
 - Invokes a trigger.
 - Causes a referential integrity check.
 - Causes maintenance of an MQT.
- A lock clause cannot be specified in a subselect which references any SQL functions that are not declared with the INHERIT ISOLATION LEVEL WITH LOCK REQUEST clause.
- An isolation clause or a lock clause cannot be specified as part of a subselect within a scrollable cursor.
- A subselect isolation or lock request clause cannot be specified in the context where it will cause conflict isolation or lock intent on a common table expression.
- A subselect isolation or lock request clause cannot be specified in an XML context
- A cursor declared as WITH RETURN cannot specify TO CALLER in a dynamically prepared compound SQL (compiled) statement.

The statement cannot be processed.

User response: Correct the SQL statement or command by removing the clause.

Federated system users: For a pass-through session,

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determine what data source is causing the error. Examine the SQL dialect for that data source to determine which specific restriction has been violated, and adjust the failing statement as needed.

sqlcode: -109

sqlstate: 42601

SQL0110N *string* is an invalid hexadecimal constant.

Explanation: The hexadecimal constant *string* is invalid. The problem is one of the following:

- An invalid hexadecimal digit was specified. Only '0 to 9', 'A to F', and 'a to f' are allowed.
- An uneven number of hexadecimal digits was specified.
- More than 8000 hexadecimal digits were specified.

User response: Correct the constant and resubmit the statement.

sqlcode: -110

sqlstate: 42606

SQL0111N The column function *name* does not include a column name.

Explanation: The specification of the column function *name* (AVG, MIN, MAX, SUM, or COUNT(DISTINCT)) was not specified correctly because such functions must include a column name in the operand.

The statement cannot be processed.

User response: Specify a column name in the expression that is the operand to the column function.

NOTE: This error is only applicable to releases of DB2 prior to Version 2 .

sqlcode: -111

sqlstate: 42901

SQL0112N The operand of the column function *name* includes a column function, a scalar fullselect, or a subquery.

Explanation: The operand of a column function cannot include:

- a column function
- a scalar fullselect
- a subquery
- an XMLQUERY or XML EXISTS expression except as an operand of an XMLAGG column function.

In a SELECT list, the operand of an arithmetic operator cannot be a column function that includes the DISTINCT keyword.

The statement cannot be processed.

User response: Correct the use of the column function to eliminate the invalid expression and try again.

sqlcode: -112

sqlstate: 42607

SQL0113N *identifier* contains a character that is not allowed or does not contain any characters.

Explanation: An SQL-variable-name, parameter-name, security label component element, or condition-name *identifier* contains an invalid character.

for SQL-variable-name, parameter-name, and condition-name, only characters that are valid for an SQL ordinary identifier are allowed. Note that because the identifier is delimited, folding is not performed and uppercase and lowercase letters are treated as distinct from each other.

For security label component element, only characters that are valid for element values are allowed.

User response: Correct the identifier and resubmit the statement.

sqlcode: -113

sqlstate: 42601

SQL0117N The number of values assigned is not the same as the number of specified or implied columns or variables.

Explanation: The number of values can be different when:

- The number of insert values in the value list of the INSERT statement is not the same as the number of columns specified or implied. If no column list is specified, a column list that includes all columns of the table (except those implicitly hidden) or view is implied.
- The number of values on the right hand side of an assignment in a SET statement or SET clause of an UPDATE statement does not match the number of columns or variables on the left hand side.

The statement cannot be processed.

User response: Correct the statement to specify one value for each of the specified or implied columns or variables.

sqlcode: -117

sqlstate: 42802

SQL0118N The table or view that is the target of the INSERT, DELETE, or UPDATE statement is also specified in a FROM clause.

Explanation: The table or view specified as the target of an INSERT, DELETE, or UPDATE statement also appears in the FROM clause of a subquery within the statement.

The table or view that is the target of an INSERT, UPDATE, or DELETE cannot also be used to supply the values to be inserted or to qualify the rows to be inserted, updated, or deleted.

The statement cannot be processed.

This message is only applicable to Version 1.2 servers and earlier, and hosts accessed through DB2 Connect.

User response: The implied function is not supported. To attempt to obtain the desired result, create a temporary copy of the object table or view and address the subselect to that copy.

sqlcode: -118

sqlstate: 42902

SQL0119N An expression starting with *expression-start* specified in a SELECT clause, HAVING clause, or ORDER BY clause is not specified in the GROUP BY clause or it is in a SELECT clause, HAVING clause, or ORDER BY clause with a column function and no GROUP BY clause is specified.

Explanation: The SELECT statement has one of the following errors:

- The identified expression and a column function are contained in the SELECT clause, HAVING clause, or ORDER BY clause but there is no GROUP BY clause
- The identified expression is contained in the SELECT clause, HAVING clause, or ORDER BY clause but is not in the GROUP BY clause.

The identified expression is an expression that starts with *expression-start*. The expression may be a single column name.

If the NODENUMBER or PARTITION functions are specified in the HAVING clause, then all partitioning key columns of the underlying table are considered to be in the HAVING clause.

The statement cannot be processed.

User response: Correct the statement by including the expression in the GROUP BY clause that are in the SELECT clause, HAVING clause, or ORDER BY clause or by removing the column function from the SELECT statement.

sqlcode: -119

sqlstate: 42803

SQL0120N Invalid use of an aggregate function or OLAP function.

Explanation: An aggregate function or OLAP function can only be used in the select list of a fullselect, the having clause, or, with restrictions, in a WHERE clause or GROUP BY clause.

A WHERE clause can contain an aggregate function or OLAP function only if that clause appears within a subquery of a HAVING clause and the argument of the function is a correlated reference to a group.

A GROUP BY clause can contain an aggregate function or OLAP function only if the argument of the function is a correlated reference to a column in a different subselect than the one containing the GROUP BY clause.

An OLAP function cannot be used within the argument list of an XMLQUERY or XMLEXISTS expression.

The statement cannot be processed.

User response: Change the statement so that the aggregate function or OLAP function is not used or used only where it is supported.

sqlcode: -120

sqlstate: 42903

SQL0121N The target name *name* is specified more than once for assignment in the same SQL statement.

Explanation: The same target name *name* is specified more than once as an OUT or INOUT argument of a CALL statement, or in the list of columns of an INSERT statement, the left hand side of assignments in the SET clause of an UPDATE statement, or the left hand side of the assignment statement. The target name identifies a column, SQL parameter, or variable.

Note that this error may occur when updating or inserting into a view where more than one column of the view is based on the same column of a base table.

The statement cannot be processed.

User response: Correct the syntax of the statement so each column name is specified only once.

sqlcode: -121

sqlstate: 42701

SQL0122N A SELECT statement with no GROUP BY clause contains a column name or expression and a column function in the SELECT clause, or a column name or expression is contained in the SELECT

clause but not in the GROUP BY clause.

Explanation: The SELECT statement has one of the following errors:

- A column name or expression and a column function are contained in the SELECT clause but there is no GROUP BY clause.
- A column name or expression is contained in the SELECT clause but not in the GROUP BY clause.

The column or expression may be contained in a scalar function.

If the DATAPARTITIONNUM, DBPARTITIONNUM, NODENUMBER, HASHEDVALUE or PARTITION functions are specified in the SELECT clause, then all database or table-partitioning key columns of the underlying table are considered to be in the SELECT clause.

The statement cannot be processed.

User response: Correct the statement by including the columns or expressions in the GROUP BY clause that are in the SELECT clause, or by removing the columns or expressions from the SELECT clause.

sqlcode: -122

sqlstate: 42803

SQL0123N The parameter in position *n* in the function *name* must be a constant or a keyword.

Explanation: The parameter in position *n* in the function *name* is not a constant when it is required to be a constant or a keyword when it is required to be a keyword.

User response: Ensure that each argument of the function conforms to the definition of the corresponding parameter.

sqlcode: -123

sqlstate: 42601

SQL0125N The column number in the ORDER BY clause is either less than one or greater than the number of columns in the result table.

Explanation: The ORDER BY clause in the statement contains a column number that is either less than 1 or greater than the number of columns in the result table (the number of items in the SELECT clause).

The statement cannot be processed.

User response: Correct the syntax of the ORDER BY clause so each column identifier properly identifies a column of the result table.

sqlcode: -125

sqlstate: 42805

SQL0127N DISTINCT is specified more than once.

Explanation: The DISTINCT qualifier cannot be used:

- In both the SELECT clause and a column function
- In two or more column functions in the same SELECT statement.

The statement cannot be processed.

User response: This error is only applicable to releases of DB2 prior to DB2 Version 2 and hosts accessed through DB2 Connect.

sqlcode: -127

sqlstate: 42905

SQL0129N The statement contains too many table names.

Explanation: The SQL statement contains too many table names. A single SQL statement can reference up to 255 tables. Each table in any view referenced is included in this limit.

The statement cannot be processed.

User response: Break the SQL statement into two or more simple statements with 255 or fewer table references.

This message is applicable to hosts accessed through DB2 Connect.

sqlcode: -129

sqlstate: 54004

SQL0130N The ESCAPE clause is not a single character, or the pattern string contains an invalid occurrence of the escape character.

Explanation: The escape character must be a single character no more than two bytes in length. It can only appear in the pattern string if it is followed by itself, a percent sign, or an underscore. For more information about the ESCAPE clause on the LIKE predicate, refer to the *SQL Reference*.

User response: Correct the pattern string or the escape character accordingly.

sqlcode: -130

sqlstate: 22019, 22025

SQL0131N The operands of a LIKE predicate have incompatible data types.

Explanation: If the expression to the left of a LIKE or NOT LIKE is of type character, the expression to the right must be of type character.

If the expression to the left is of type graphic, the expression to the right must be of type graphic.

If the expression to the left is of type BLOB, the expression to the right must be of type BLOB.

The statement cannot be processed.

User response: Correct the expressions of the LIKE predicate to be the same data type.

sqlcode: -131

sqlstate: 42818

SQL0132N A LIKE predicate or POSSTR scalar function is not valid because the first operand is not a string expression or the second operand is not a string. A LOCATE or POSITION scalar function is not valid because the first operand is not a string or the second operand is not a string expression.

Explanation: A LIKE predicate or POSSTR scalar function appearing in the statement is not valid because either the first operand is not a string expression or the second operand is not a string. A LOCATE scalar function or POSITION scalar function appearing in the statement is not valid because either the first operand is not a string or the second operand is not a string expression.

The operand appearing to the left of a LIKE or NOT LIKE predicate, the second operand of LOCATE, the second operand of POSITION, or the first operand of POSSTR must be a string expression. The value appearing to the right of the predicate, the first operand of LOCATE, the first operand of POSITION, or the second operand of POSSTR can be one of:

- a constant
- a special register
- a host variable
- for LOCATE and POSITION only, a column reference
- a scalar function whose operands are any of the previously listed items
- an expression concatenating any of the previously listed items

with the restrictions that:

- no element in the expression can be of type LONG VARCHAR, CLOB, LONG VARGRAPHIC, or DBCLOB. In addition it cannot be a BLOB file reference variable.
- the actual length of the expression cannot be more than 4000 bytes.

A LIKE predicate, LOCATE scalar function, POSITION scalar function, or POSSTR scalar function cannot be used with DATE, TIME, or TIMESTAMP.

The statement cannot be processed.

User response: Check and correct the syntax of LIKE, LOCATE, POSITION, or POSSTR.

sqlcode: -132

sqlstate: 42824

SQL0134N Improper use of a string column, host variable, constant, or function *name*.

Explanation: The use of the string *name* is not permitted.

An expression resulting in a CLOB, DBCLOB, BLOB, LONG VARCHAR, or LONG VARGRAPHIC data type is not permitted in:

- A SELECT DISTINCT statement
- A GROUP BY clause
- An ORDER BY clause
- A column function with DISTINCT
- A SELECT or VALUES statement of a set operator other than UNION ALL.

Federated system users: in a pass-through session, a data source-specific restriction can cause this error. See the SQL Reference documentation for the failing data sources.

The statement cannot be processed.

User response: The requested operation on the string is not supported.

sqlcode: -134

sqlstate: 42907

SQL0135N The input for a long string column in an INSERT statement or UPDATE statement must be from a host variable or be the keyword NULL.

Explanation: The UPDATE or INSERT is using constants, column names, or subqueries where it should be using NULL or a host variable.

A long string column is either a LONG VARCHAR, LONG VARGRAPHIC, VARCHAR(*n*) where *n* is greater than 254 but less than or equal to 32767, or VARGRAPHIC(*n*) where *n* is greater than 127 but less than or equal to 16383.

User response: Refer to the DB2 for VM Application Programming manual for information on the use of long strings. Correct the statement. Try again.

sqlcode: -135

sqlstate: 56033

SQL0137N The length resulting from operation is greater than *maximum-value*.

Explanation: The operation has produced a result string with an actual length that exceeds the maximum allowed for the operation.

If the operation is CONCAT, the result of concatenating the given operands was longer than what is supported by the result type.

Character string results are limited to 32,700 bytes unless one of the operands is a CLOB and then the limit is 2 gigabytes.

Graphic string results are limited to 16,350 characters unless one of the operands is a DBCLOB and then the limit is 1,073,741,823 (1 less than 1 gigabyte) double byte characters.

Binary string results (operands are BLOB) are limited to 2 gigabytes.

User response: Refer to the documentation for the operation to determine how the result string is produced and the maximum length for the operation is determined. Consider whether changing the arguments of the operation will change the length of the result or the maximum length.

If the operation is CONCAT, ensure that the sum of the lengths of the operands does not exceed the supported maximum and try the operation again.

sqlcode: -137

sqlstate: 22001, 54006

SQL0138N A numeric argument of a built-in string function is out of range.

Explanation: For the SUBSTR function, one of the following conditions exist:

- The value of the second argument of the SUBSTR function is an expression whose value is less than 1 or greater than M.
- The value of the third argument of the SUBSTR function is an expression whose value is less than 0 or greater than M-N+1.

For the SUBSTRING function, the following condition exists:

- The value of the second argument of the SUBSTRING function is an expression whose value is less than 1 or greater than M.

For the LEFT or RIGHT functions, the following condition exists:

- The value of the second argument of the LEFT or RIGHT function is an expression whose value is less than 0 or greater than the length attribute of the first argument.

For the INSERT function, one of the following conditions exist:

- The value of the second argument of the INSERT function is an expression whose value is less than 1 or greater than M + 1.
- The value of the third argument of the INSERT function is an expression whose value is less than 0.

For the OVERLAY function, one of the following conditions exist:

- The value of the third argument of the OVERLAY function is an expression whose value is less than 1 or greater than M + 1.
- The value of the fourth argument of the OVERLAY function is an expression whose value is less than 0.

M is the length of the first argument, if it is of fixed length, or M is the maximum length of the first argument, if it is of varying-length. N is the value of the second argument.

The statement cannot be executed.

User response: Ensure that all the numeric arguments of the built-in string function have legal values according to the rules described in this message's Explanation.

sqlcode: -138

sqlstate: 22011

SQL0139W A redundant clause appears in the specification for column *column*.

Explanation: The clause in the column specification is redundant.

The statement was processed successfully, but the redundant clause was ignored.

User response: Correct the column specification.

sqlcode: +139

sqlstate: 01589

SQL0142N The SQL statement is not supported.

Explanation: A procedural SQL statement that is valid in other SQL dialects is not supported by this data server or an SQL statement that is valid for other IBM relational databases is not supported by this data server.

Federated system users: Check to see if an SQL statement was directed at a data source that does not support the SQL statement.

The statement cannot be processed.

User response: Change the syntax of the SQL statement or remove the statement from the program.

Federated system users: If the reason is unknown,

isolate the problem to the data source failing the request and examine the SQL dialect for that data source.

SQL0143W The SQL statement is not supported; invalid syntax is ignored.

Explanation: An embedded SQL statement that may be valid for other IBM relational database products is understood but is not supported by the database manager.

The statement may produce inconsistent or unwanted results.

User response: Change the syntax of the SQL statement or remove the statement from the program.

SQL0150N The target fullselect, view, typed table, materialized query table, range-clustered table, or staging table in the INSERT, DELETE, UPDATE, MERGE, or TRUNCATE statement is a target for which the requested operation is not permitted.

Explanation: The fullselect, view, typed table, materialized query table, range-clustered table, or staging table named in the INSERT, UPDATE, DELETE, MERGE, or TRUNCATE statement is defined so that the requested insert, update, delete, or truncate operation cannot be performed.

A view or a fullselect is read only if the SELECT statement of the view or the fullselect contains any of the following:

- A DISTINCT keyword
- A column function in the select list
- A GROUP BY or HAVING clause
- A FROM clause that identifies one of the following:
 - More than one table or view
 - A read-only view (READONLY column of SYSCAT.VIEWS is set to 'Y')
 - A system-period temporal table that is followed by a period specification
- A set operator (other than UNION ALL).
- Federated system users: a data source specific limitation that causes the view not to be updatable

Note that these conditions do not apply to subqueries of the SELECT statement or of the fullselect.

A view that directly or indirectly contains a WHERE clause that references a subquery or a routine defined with NOT DETERMINISTIC or EXTERNAL ACTION cannot be used as the target of a MERGE statement.

A view defined with the WITH ROW MOVEMENT clause cannot be used as the target of a MERGE statement that includes an update operation.

A view defined with a fullselect that uses UNION ALL cannot be used as the target of a MERGE statement that specifies a period-clause in a modification operation.

Rows cannot be inserted directly into a typed table defined on a structured type that is not instantiable. Subtables of this table may allow inserts.

In general, system maintained materialized query tables and staging tables do not allow the insert, update, delete, or truncate operations.

A range-clustered table cannot be used in a truncate operation.

The statement cannot be processed.

User response: The requested function cannot be performed on the fullselect, view, system maintained materialized query table, range clustered table, or staging table.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the object definition and the update restrictions for that data source.

sqlcode: -150

sqlstate: 42807

SQL0151N The column *name* cannot be updated.

Explanation: The specified column cannot be updated because one of the following was attempted.

- The object table is a view, and the specified column is derived from a scalar function, expression, keyword, constant, or column of a view where that column cannot be updated.
- The specified column is a non-updateable column of a system catalog, or a column explicitly marked as READ ONLY.
- The BUSINESS_TIME period in the table includes a column that was specified to be updated. A column of a BUSINESS_TIME period must not be modified within a trigger body.
- The BUSINESS_TIME period in the table includes a column that was specified to be updated. A column of a BUSINESS_TIME period must not be modified if the data change statement includes a period clause.

Federated system users should check to see if some other data source specific limitation prevents the column from being updated.

The statement cannot be processed.

User response: If the specified column is derived from a scalar function, expression, keyword, or non updatable column, omit the column from the set clause of the update or the column of the insert. For a list of

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updatable catalogs (and the updatable columns) see the SQL Reference.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the object definition and the update restrictions for that data source.

sqlcode: -151

sqlstate: 42808

SQL0152N **Constraint** *constraint-name* **is a** *actual-constraint-type* **constraint instead of** a *expected-constraint-type* **constraint.**

Explanation: An attempt was made to alter or drop constraint *constraint-name*, but it is defined as a *expected-constraint-type* constraint, not as the specified *actual-constraint-type* constraint.

User response: Verify the name and type of constraint to be altered or dropped.

sqlcode: -152

sqlstate: 42809

SQL0153N **The statement does not include a** **required column list.**

Explanation: A column list must be specified in a CREATE VIEW statement, a common table expression or in a CREATE TABLE statement containing an as-subquery-clause when:

- any element of the SELECT list in the fullselect is other than a column name and is not named using the AS clause.
- any two elements are the same column name that were not renamed using the AS clause.

The statement cannot be processed.

User response: Provide a column name list in the CREATE VIEW statement, common table expression, CREATE TABLE statement, or name the columns in the SELECT list of the fullselect using the AS clause.

sqlcode: -153

sqlstate: 42908

SQL0155N **A trigger transition table cannot be** **modified.**

Explanation: The trigger includes a REFERENCING clause with an OLD_TABLE or NEW_TABLE identified. A DELETE, INSERT or UPDATE triggered SQL statement has used the name specified as the OLD_TABLE or NEW_TABLE as the table to modify.

User response: Remove the DELETE, INSERT or UPDATE triggered SQL statement from the triggered action or change the name of the transition table so that

it does not conflict with the table you are attempting to modify.

sqlcode: -155

sqlstate: 42807

SQL0156N **The name used for this operation is not** **a table.**

Explanation: The SQL statements ALTER TABLE, DROP TABLE, SET INTEGRITY, CREATE TRIGGER, CREATE INDEX, LOCK TABLE, and RENAME TABLE are applicable only to tables, not to views. The RUNSTATS, LOAD, and REDISTRIBUTE DATABASE PARTITION GROUP utilities are also applicable only to tables, not to views.

Federated system users: Some utilities and statements are not supported in a federated environment. See the Administration Guide for more information.

The statement or utility cannot be processed.

User response: Verify that the correct table name is specified in the statement. If an alias name was supplied, ensure that the alias resolves to a table.

Federated system users: Verify that the object is not a nickname.

sqlcode: -156

sqlstate: 42809

SQL0157N *name* **is not allowed in a FOREIGN KEY** **clause because it does not identify a** **base table.**

Explanation: The object *name* was identified in a FOREIGN KEY clause of a CREATE or ALTER TABLE statement. A FOREIGN KEY clause must identify a base table.

The statement cannot be processed. The specified table is not created or altered.

User response: Correct the statement to specify a base table name in the FOREIGN KEY clause.

If an alias name was supplied, ensure that the alias resolves to a base table.

sqlcode: -157

sqlstate: 42810

SQL0158N **The number of columns specified for** *name* **is not the same as the number of** **columns in the result table.**

Explanation: The identifier *name* could identify:

- a view named in a CREATE VIEW statement
- a table name of a common table expression
- a correlation name of a nested table expression

- a materialized query table named in a CREATE TABLE or ALTER TABLE statement
- a function named in a CREATE FUNCTION statement
- a method named in a CREATE METHOD statement.
- a staging table name in a CREATE STAGING TABLE statement

The number of column names specified must be equal to the number of columns in the result table of the associated fullselect. If *name* is a staging table and the associated materialized query table has group by clause, the number of column names specified must be 2 more than the number of columns in the materialized query table for which the staging table is being defined. If the associated materialized query table has no group by clause, the number of column names specified must be 3 more than the number of columns in the materialized query table.

The statement cannot be processed.

User response: Correct the syntax so that the list of column names defined for *name* specify a name for each column of the result table.

sqlcode: -158

sqlstate: 42811

SQL0159N The statement references *object* which identifies a(n) *object-type* rather than a(n) *expected-object-type*.

Explanation: The object *object* specified as part of the statement or command refers to an object of type *object-type* instead of the expected type *expected-object-type*.

The type of the object provided with the statement or command must match the type identified by *expected-object-type*. For example:

- If the statement is DROP ALIAS *PBIRD.T1*, then *PBIRD.T1* must be an alias name.
- If the *object-type* is TABLE, then it is possible that the type of table is incorrect for the statement issued.
- A CREATE MASK or CREATE PERMISSION statement must name a base table that exists at the current server.

User response: Change the statement or command to properly match the type of object identified by *expected-object-type*.

sqlcode: -159

sqlstate: 42809

SQL0160N The WITH CHECK OPTION clause is not valid for the specified view.

Explanation: The WITH CHECK OPTION clause cannot be used in a view definition if:

- The view is defined as read only. The view is read only if the SELECT statement contains any of the following. (Note that these conditions do not apply to subqueries of the SELECT statement.)
 - A DISTINCT keyword
 - A column function in the selected list
 - A GROUP BY or HAVING clause
 - A FROM clause that identifies either:
 - More than one table or view
 - A read-only view
 - A set operator (other than UNION ALL).
- The SELECT statement in the CREATE VIEW statement includes a subquery (except for specific statistic columns of some catalog tables).
- A view on which the specified view definition is dependent has an INSTEAD OF trigger defined.
- A view on which the specified view definition is dependent contains a text search function.

Federated system users: the WITH CHECK option is not supported on views that reference updatable nicknames.

The statement cannot be processed. The specified view was not created.

User response: Remove the WITH CHECK OPTION clause or change the view definition so it conforms to the rules listed in this message.

sqlcode: -160

sqlstate: 42813

SQL0161N The resulting row of the insert or update operation does not conform to the view definition.

Explanation: The WITH CHECK OPTION clause was specified in the view definition that is the object of the insert or update operation or a FROM clause specified an insert or update operation with a view as the target. Consequently, all attempts to insert or update rows in that view are checked to ensure that the results conform to the view definition.

If the insert or update operation that target a view is in a FROM clause, the insert or update operation is always processed as if the view had been defined WITH CHECK OPTION.

The statement cannot be processed. No inserts or updates are performed, and the contents of the view and underlying base table remain unchanged.

User response: Examine the view definition to

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determine why the requested insert or update operation was rejected. Note that this may be a data-dependent condition.

Requested insert or update operation may be trying to put out of range values in the target columns.

Federated system users, if the reason is unknown, isolate the problem to the data source failing the request and examine the object definition and the view definition for that data source.

sqlcode: -161

sqlstate: 44000

SQL0170N The number of arguments for function *name* is incorrect.

Explanation: The specified scalar function *name* has either too few or too many arguments.

The statement cannot be processed.

User response: Ensure that the correct number of arguments is specified for the scalar function.

sqlcode: -170

sqlstate: 42605

SQL0171N The data type, length or value of the argument for the parameter in position *n* of routine *name* is incorrect. Parameter name: *parameter-name*.

Explanation: The data type, length or value of the argument to routine *name* is incorrect. The argument is identified by the position *n* that the parameter is defined in routine *name*, and the name of the parameter *parameter-name*, if the parameter has a name.

If the position is not applicable or unknown, a value of 0 is returned for *n*. If the parameter name is not applicable or unknown, the empty string is returned for *parameter-name*.

The statement cannot be processed.

User response: Ensure the arguments to the routine conform to the rules for the parameter of the routine, as documented.

sqlcode: -171

sqlstate: 42815, 10608, 5UA05, 5UA06, 5UA07, 5UA08, 5UA09, 5UA0J

SQL0172N *name* is not a valid function name.

Explanation: The SQL statement includes an unknown scalar function.

The statement cannot be processed.

User response: Ensure that you correctly spell the function name.

sqlcode: -172

sqlstate: 42601

SQL0176N The second, third or fourth argument of the TRANSLATE scalar function is incorrect.

Explanation: The statement is not correct for one or more of the following reasons:

- The translate scalar function does not allow replacement of a character by another character which is encoded using a different number of bytes. For example, a single-byte character cannot be replaced with a double-byte character nor can a double-byte character be replaced with a single-byte character.
- The second and third arguments of the translate scalar function must end with correctly formed characters.
- The fourth argument of the translate scalar function must be a correctly formed single-byte character if the first argument is CHAR or VARCHAR.
- The fourth argument of the translate scalar function must be a correctly formed double-byte character if the first argument is GRAPHIC or VARGRAPHIC.

The statement cannot be processed.

User response: Ensure that the second, third, and fourth arguments of the translate scalar function have correct values.

sqlcode: -176

sqlstate: 42815

SQL0180N The syntax of the string representation of a datetime value is incorrect.

Explanation: The string representation of a date, time, or timestamp value does not conform to the syntax for the specified or implied data type.

The statement cannot be processed.

User response: Ensure that the syntax of the date, time, or timestamp value conforms to the syntax for its data type. If the string is not intended to be a date, time, or timestamp value, ensure that when used, it does not imply that data type.

Federated system users: the problem might be due to a date/time representation problem at the data source. If the reason is unknown, isolate the problem to the data source failing the request and examine the date/time representation restrictions for that data source.

sqlcode: -180

sqlstate: 22007

SQL0181N The string representation of a datetime value is out of range.

Explanation: The string representation of a date, time or timestamp value contains a value that is out of range.

This error could be caused by accessing a datetime value from an application using a territory code whose datetime format is different than the one used by the application that created it. For example, a string datetime value stored in the format dd/mm/yyyy will not be valid when read by an application expecting its format to be mm/dd/yyyy.

The correct ranges for date, time, or timestamp values are as follows:

- 0001 to 9999 for years.
- 1 to 12 for months.
- 1 to 31 for days when the month is 1, 3, 5, 7, 8, 10, and 12.
- 1 to 30 for days when the month is 4, 6, 9, 11.
- 1 to 28 for days when the month is 2 in a non-leap year.
- 1 to 29 for days when the month is 2 in a leap year.
- 0 to 24 for hours. If the hour is 24, the other parts of the time are 0. If the format is USA, the hour cannot be greater than 12.
- 0 to 59 for minutes.
- 0 to 59 for seconds.
- 0 to 999999999999 for fractional seconds.
- 001 to 365 for the day portion of a Julian calendar date when the year is not a leap year.
- 001 to 366 for the day portion of a Julian calendar date when the year is a leap year.

Federated system users: the problem might be due to a date/time representation problem at the data source. Refer to the data source's documentation for the ranges for date and time values at the data source. If the reason is unknown, isolate the problem to the data source failing the request and examine the date/time representation restrictions for that data source.

The statement cannot be processed.

User response: Ensure that the value is within the valid range, and the application's datetime format is the same as the string value.

sqlcode: -181

sqlstate: 22007

SQL0182N An expression with a datetime value or a labeled duration is not valid.

Explanation: The specified expression contains an improperly used date, time, or timestamp value or labeled duration.

The statement cannot be processed.

User response: Examine the SQL statement to determine the cause of the problem and correct the statement.

sqlcode: -182

sqlstate: 42816

SQL0183N A datetime arithmetic operation or a datetime scalar function has a result that is not within the valid range of dates.

Explanation: The result of an arithmetic operation is a date or timestamp duration which is outside the range 0001-01-01 through 9999-12-31.

The statement cannot be executed.

User response: Examine the SQL statement to determine the cause of the problem. If the problem is data-dependent, examine the data processed when the error occurred.

sqlcode: -183

sqlstate: 22008

SQL0187N A reference to a current date/time special register is invalid.

Explanation: An error indication from the operating system was detected while retrieving date/time information.

User response: Ensure that the system TOD clock and timezone settings are correct.

sqlcode: -187

sqlstate: 22506

SQL0190N ALTER TABLE *table-name* specified attributes for column *column-name* that are not compatible with the existing column.

Explanation: The attributes specified in the ALTER COLUMN clause for the column *column-name* of the table *table-name* in an ALTER TABLE statement are not compatible with the attributes of the existing column. The error was returned for one of the following reasons.

- If a SET DATA TYPE clause is specified for an existing column, but:
 - the data type is not one that can be altered
 - the data type conversion of existing data or default values would result in an overflow, disallowed truncation, or casting error
 - the data type cannot be changed to the new data type

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- the current data type is SYSPROC.DB2SECURITYLABEL, which cannot be changed
- the data type cannot be altered to SYSPROC.DB2SECURITYLABEL
- If a SET EXPRESSION clause is specified, but the existing column
 - is not defined as generated using an expression.
 - is part of a table partitioning key.
- If the DROP COLUMN SECURITY option is specified, but the column is not already protected by a security label.
- If DROP DEFAULT is specified, but the column is not defined with default attributes.
- If DROP IDENTITY is specified, but the column is not defined as an identity column.
- If DROP EXPRESSION is specified, but the column is not defined with a generation expression.
- If SET DEFAULT is specified, but the column is already defined with another form of generation (identity or expression) and there is no corresponding DROP in the same statement.
- If SET GENERATED ALWAYS AS (expression) is specified, but the column is already defined with a form of generation (default, identity, or expression) and there is no corresponding DROP in the same statement.
- If SET GENERATED ALWAYS AS IDENTITY or SET GENERATED BY DEFAULT AS IDENTITY is specified, but the column is already defined with a form of generation (default, identity, or expression) and there is no corresponding DROP in the same statement.
- If SET GENERATED ALWAYS or SET GENERATED BY DEFAULT is specified, but the column is not an identity column.
- If ALTER COLUMN is specified with SET GENERATED to change the column to a ROW-BEGIN, ROW-END, or TRANSACTION-START-ID column, but the column is already defined as a generated column.
- If ALTER COLUMN is specified to change the column to a ROW BEGIN, ROW END, or TRANSACTION START ID column, but the column is already defined with a user specified default value.
- If ALTER COLUMN SET DATA TYPE is specified, but the precision was reduced for the start column or end column of a BUSINESS_TIME period. Precision cannot be reduced.
- If ALTER COLUMN SET DEFAULT is specified, but the column is a generated column.
- If DROP DEFAULT is specified, but the column is a row-begin column, row-end column, or transaction-start-ID column

- If DROP GENERATED is specified, but the column is not a generated column.
- If DROP NOT NULL is specified, but the column is specified in the primary key of the table, or is an identity column, row change timestamp column, row-begin column, or row-end column.

The statement cannot be processed.

User response: Make the attributes specified compatible with the existing column, remove the attribute specification, or specify a different column name. If a SET DATA TYPE clause was specified, check the notification log for possible entries listing conflicting rows that may have disallowed the ALTER COLUMN. If an ALTER COLUMN was specified for a column that already has a user specified default value, an ALTER TABLE statement must be issued to drop the default before the column definition can be changed.

sqlcode: -190

sqlstate: 42837

SQL0191N Error occurred because of a fragmented MBCS character.

Explanation: Possible causes:

1. User data contained an improperly formed multi-byte character. For example, the first byte of a DBCS character was found, but the second character was not.
2. A scalar function, such as SUBSTR or POSSTR has truncated a multi-bytes string incorrectly. For these functions, start and length values must be correct in terms of bytes, in the context of the database code page. For a Unicode database, a common cause of this could be that the start or length for a UTF-8 string are incorrect.
3. A scalar function such as TRANSLATE has may have changed the multi-byte string.

Federated system users: this situation can also be detected by the data source.

User response:

1. Correct the input data and try again.
2. Change the start and length values such that when characters are converted to the database code page, the multi-byte characters are not truncated incorrectly.
3. Correct the TRANSLATE in error.

Federated system users: if the data is correct, isolate the problem to the data source failing the request and examine the DBCS restrictions of that data source. If the data appears to be correct, contact IBM service for assistance.

sqlcode: -191

sqlstate: 22504

SQL0193N In an ALTER TABLE statement, the column *column-name* has been specified as NOT NULL and either the DEFAULT clause was not specified or was specified as DEFAULT NULL.

Explanation: When new columns are added to a table that already exists, a value must be assigned to that new column for all existing rows. By default, the null value is assigned. However, since the column has been defined as NOT NULL, a default value other than null must be defined.

User response: Either remove the NOT NULL restriction on the column or provide a default value other than null for the column.

sqlcode: -193

sqlstate: 42601

SQL0195N Last column of *table-name* cannot be dropped.

Explanation: An attempt was made to drop one or more columns using an ALTER TABLE statement. The columns cannot be dropped from table *table-name* because at least one of the existing columns must be preserved when altering a table.

User response: Ensure table *table-name* will have at least one column once the ALTER statement is complete. Either remove the DROP of one of the columns and try the request again, or, if all of the columns should be removed, drop the table and create it again.

sqlcode: -195

sqlstate: 42814

SQL0196N Column *column-name* in *table-name* cannot be dropped. Reason code = *reason-code*.

Explanation: An attempt was made to drop column *column-name*. See the reason code for an explanation of why the column cannot be dropped.

1

The column cannot be dropped because it is part of the multi-node distribution key, table partitioning key, or MDC organizing dimension.

2

The column cannot be dropped, because a system generated column is dependent on it.

3

A column of type SYSPROC.DB2SECURITYLABEL cannot be dropped.

4

The column cannot be dropped because it is referenced in the definition of a period.

5

The column cannot be dropped because it is a column in a system-period temporal table.

6

The column cannot be dropped because it is a column in a history table.

User response:

1

The column cannot be dropped until the key or dimensions of the table are changed.

2

Change the generation expression of the dependent column.

3

Drop and recreate the table without creating the column of type SYSPROC.DB2SECURITYLABEL

4

Change the statement requesting the drop of the column.

5

Dropping a column from a system-period temporal table requires that the column also be dropped from the associated history table. The following steps can be used to drop a column from both tables.

1. Alter the system-period temporal table to drop versioning. This breaks the link between the tables.
2. Alter the system-period temporal table to drop the column.
3. Alter the table that was the history table to drop the column.
4. Alter the former system-period temporal table to add versioning. This reestablishes the link between the tables.

6

Dropping a column from a history table requires that the column also be dropped from the associated system-period temporal table. The following steps can be used to drop a column from both tables.

1. Alter the system-period temporal table to drop versioning. This breaks the link between the tables.
2. Alter the system-period temporal table to drop the column.
3. Alter the table that was the history table to drop the column.
4. Alter the former system-period temporal table to add versioning. This reestablishes the link between the tables.

sqlcode: -196

sqlstate: 42817

SQL0197N A qualified column name is not allowed in the ORDER BY clause.

Explanation: The ORDER BY clause of a fullselect that includes a set operator (UNION, EXCEPT, INTERSECT) cannot have qualified column names.

User response: Ensure that all column names in the ORDER BY clause are unqualified.

sqlcode: -197

sqlstate: 42877

SQL0198N The statement string of the PREPARE or EXECUTE IMMEDIATE statement is blank or empty.

Explanation: The host variable that was the object of the PREPARE or EXECUTE IMMEDIATE statement either contained all blanks or was an empty string.

The PREPARE or EXECUTE IMMEDIATE could not be completed.

User response: Correct the logic of the program to ensure that a valid SQL statement is provided in the operand of the PREPARE or EXECUTE IMMEDIATE statement before it is executed.

sqlcode: -198

sqlstate: 42617

SQL0199N The use of the reserved word *keyword* following *text* is not valid. Expected tokens may include: *token-list*.

Explanation: A syntax error in the SQL statement was detected at the point in the statement when the reserved word *keyword* appears following *text*. The *text* field indicates the 20 characters of the SQL statement that preceded the reserved word. Clauses in the statement may be in the wrong order.

As an aid to the programmer, a partial list of valid tokens is provided in the SQLERRM field of the

SQLCA as *token-list*. This list assumes the statement is correct to that point.

The statement cannot be processed.

User response: Examine the statement in the keyword area. Add a colon or SQL delimiter, if missing. Verify that the clauses are in the correct order. If the reserved word identified in the messages is listed as a reserved word, make the word a delimited identifier.

NOTE: This error is only applicable to releases of DB2 prior to Version 2 .

sqlcode: -199

sqlstate: 42601

SQL0203N A reference to column *name* is ambiguous.

Explanation: The column *name* is used in the statement and there is more than one possible column to which it could refer. This could be the result of:

- two tables specified in a FROM clause that have columns with the same name
- the ORDER BY clause refers to a name that applies to more than one column in the select list
- a reference to a column from the subject table in a CREATE TRIGGER statement does not use the correlation name to indicate if it refers to the old or new transition variable.

The column name needs further information to establish which of the possible table columns it is.

The statement cannot be processed.

User response: Add a qualifier to the column name. The qualifier is the table name or correlation name. A column may need to be renamed in the select list.

sqlcode: -203

sqlstate: 42702

SQL0204N *name* is an undefined name.

Explanation: This error is caused by one of the following:

- The object identified by *name* is not defined in the database.
- The object identified by *name* is defined in a module and is not a published module object and it was referenced from outside the module.
- The data partition identified by *name* is not defined on the table.
- A data type is being used. This error can occur for the following reasons:
 - If *name* is qualified, then a data type with this name does not exist in either the schema that

matches the qualifier or the module that matches the qualifier that was found first based on user's SQL path.

- If *name* is unqualified, then the user's path does not contain the schema to which the desired data type belongs or the data type is not defined in the module if the reference is within a module routine.
 - The data type does not exist in the database with a create timestamp earlier than the time the package was bound (applies to static statements).
 - If the data type is in the UNDER clause of a CREATE TYPE statement, the type name may be the same as the type being defined, which is not valid.
- A function is being referenced in one of:
 - a DROP FUNCTION statement
 - a COMMENT ON FUNCTION statement
 - the SOURCE clause of a CREATE FUNCTION statement

If *name* is qualified, then the function does not exist. If *name* is unqualified, then a function of this name does not exist in any schema of the current path.

Note that a function cannot be sourced on the COALESCE, DBPARTITIONNUM, GREATEST, HASHEDVALUE, LEAST, MAX (scalar), MIN (scalar), NULLIF, RID, NVL, RAISE_ERROR, TYPE_ID, TYPE_NAME, TYPE_SCHEMA, or VALUE built-in functions.

- The element named *name* is used on the right side of the UNDER clause in CREATE SECURITY LABEL COMPONENT statement but has not yet been defined as being ROOT or being UNDER some other element
- The security label component element named *name* has not yet been defined.
- One of the following scalar functions specified a security policy identified by *name* which is not defined in the database.
 - SECLABEL
 - SECLABEL_TO_CHAR
 - SECLABEL_BY_NAME

This return code can be generated for any type of database object.

Federated system users: the object identified by *name* is not defined in the database or *name* is not a nickname in a DROP NICKNAME statement.

Some data sources do not provide the appropriate values for *name*. In these cases, the message token will have the following format: "OBJECT:<data source> TABLE/VIEW", indicating that the actual value for the specified data source is unknown.

The statement cannot be processed.

User response: Ensure that the object name (including any required qualifiers) is correctly specified in the SQL statement and it exists. If the name refers to a data partition, query the catalog table SYSCAT.DATAPARTITIONS to find the names of all the data partitions for a table. For missing data type or function in SOURCE clause, it may be that the object does not exist, OR it may be that the object does exist in some schema, but the schema is not present in your path.

For the CREATE or ALTER SECURITY LABEL COMPONENT statement, make sure that each element specified as a reference element value for positioning the location of a new element value already exists in the security label component.

For the CREATE SECURITY LABEL COMPONENT statement, make sure that each element is specified as either ROOT or as the child in an UNDER clause before specifying it as the parent in an UNDER clause.

For the scalar functions SECLABEL, SECLABEL_TO_CHAR or SECLABEL_BY_NAME, ensure that a valid security policy was specified for the argument security-policy-name.

Federated system users: if the statement is DROP NICKNAME, make sure the object is actually a nickname. The object might not exist in the federated database or at the data source. Verify the existence of the federated database objects (if any) and the data source objects (if any).

sqlcode: -204

sqlstate: 42704

SQL0205N Column, attribute, or period *name* is not defined in *object-name*.

Explanation: If *object-name* is a table or view, then *name* is a column or period that is not defined in *object-name*. If *object-name* is a structured type, then *name* is an attribute that is not defined in *object-name*.

Federated system users: *object-name* could refer to a nickname.

The statement cannot be processed.

User response: If *object-name* is a table or view, verify that the column or period and table or view names (including any required qualifiers) are specified correctly in the SQL statement. If *object-name* is a structured type, verify that the attribute and type names (including any required qualifiers) are specified correctly in the SQL statement.

Also, if you receive this error during a REORG or an IMPORT, the column names in the index may violate the database manager naming rules as defined in the SQL Reference.

SQL0206N

sqlcode: -205

sqlstate: 42703

SQL0206N *name* is not valid in the context where it is used.

Explanation: This error can occur in the following cases:

- For an INSERT or UPDATE statement, the specified column is not a column of the table, or view that was specified as the object of the insert or update.
- For a SELECT or DELETE statement, the specified column is not a column of any of the tables or views identified in a FROM clause in the statement.
- For an assignment statement, the reference name does not resolve to the name of a column or variable.
- When referencing a field in a row type variable, the reference name does not resolve to the name of any field in the row type.
- For an ORDER BY clause, the specified column is a correlated column reference in a subselect, which is not allowed.
- For a SELECT statement in a parameterized cursor constructor, the reference to *name* does not match a column or in-scope variable. Local variables and routine SQL parameters are not considered in scope for parameterized cursors.
- For a standalone compound SQL (compiled) statement:
 - The reference *name* does not resolve to the name of a column or local variable that is in scope.
 - The condition name *name* specified in the SIGNAL statement has not been declared.
 - When referencing a field in a row type variable, the reference name does not resolve to the name of any field in the row type.
- For a CREATE TRIGGER,CREATE METHOD,CREATE FUNCTION or CREATE PROCEDURE statement:
 - The reference *name* does not resolve to the name of a column, local variable or transition variable.
 - The reference *name* resolves to the name of a local variable that is not available in the current scope.
 - The condition name *name* specified in the SIGNAL statement has not been declared.
 - When referencing a field in a row type variable, the reference name does not resolve to the name of any field in the row type.
- For a CREATE TRIGGER statement:
 - A reference is made to a column of the subject table without using an OLD or NEW correlation name.
 - The left hand side of an assignment in the SET transition-variable statement in the triggered action specifies an old transition variable where only a new transition variable is supported.

- For a CREATE FUNCTION statement with a PREDICATES clause:
 - The RETURN statement of the SQL function references a variable that is not a parameter or other variable that is in the scope of the RETURN statement.
 - The FILTER USING clause references a variable that is not a parameter name or an expression name in the WHEN clause.
 - The search target in an index exploitation rule does not match some parameter name of the function that is being created.
 - A search argument in an index exploitation rule does not match either an expression name in the EXPRESSION AS clause or a parameter name of the function being created.
- For a CREATE INDEX EXTENSION statement, the RANGE THROUGH clause or the FILTER USING clause references a variable that is not a parameter name that can be used in the clause.
- For a parameterized cursor variable reference, a local SQL variable or SQL parameter referenced in the select statement used in the definition of a parameterized cursor variable is not available in the current scope.
- For a period reference, the specified period is not in any of the source or target tables or views of the statement.

The statement cannot be processed.

User response: Verify that the names are specified correctly in the SQL statement. For a SELECT statement, ensure that all the required tables are named in the FROM clause. For a subselect in an ORDER BY clause, ensure that there are no correlated column references. If a correlation name is used for a table, verify that subsequent references use the correlation name and not the table name.

For a CREATE TRIGGER statement, ensure that only new transition variables are specified on the left hand side of assignments in the SET transition-variable statement and that any reference to columns of the subject table have a correlation name specified.

For a standalone compound SQL statement, CREATE FUNCTION, CREATE PROCEDURE, or CREATE TRIGGER statement, verify that the columns or variables are available in the scope of the current compound SQL statement.

For a fullselect embedded in XQuery using the db2-fn:sqlquery function, a reference within the fullselect must be one of the following: a column in the context of the fullselect, a global variable, or a parameter passed to the new SQL context using an additional argument of the db2-fn:sqlquery function.

sqlcode: -206

sqlstate: 42703

SQL0207N A column name is not allowed in the ORDER BY clause of a SELECT statement used with a set operator.

Explanation: A SELECT statement with a set operator contains an ORDER BY clause, which specifies column names. In this case, the list of columns in the ORDER BY clause must contain only integers.

The statement cannot be processed.

User response: Specify only integers in the list of columns in the ORDER BY clause.

NOTE: This error is only applicable to releases of DB2 prior to Version 2 and hosts accessed through DB2 Connect.

sqlcode: -207

sqlstate: 42706

SQL0208N The ORDER BY clause is not valid because column *name* is not part of the result table.

Explanation: The statement is not valid because a column *name* specified in the ORDER BY list is not specified in the SELECT list and is not in the result table. Only columns in the result table can be used to order that result when the fullselect of the select-statement is not a subselect.

The statement cannot be processed.

User response: To correct the syntax of the statement, either add the specified column to the result table or delete it from the ORDER BY clause.

sqlcode: -208

sqlstate: 42707

SQL0212N *name* is a duplicate table designator or is specified more than once in the REFERENCING clause of a trigger definition.

Explanation: The exposed table, view, alias, or correlation name specified by *name* is identical to another exposed table, view, alias, or correlation name in the same FROM clause.

If the statement is a CREATE TRIGGER, the REFERENCING clause may have specified the same name as the subject table or may have the same name for more than one of the OLD or NEW correlation names or the NEW_TABLE or OLD_TABLE identifiers.

The statement cannot be processed.

User response: Rewrite the FROM clause of the SELECT statement. Associate correlation names with table, view, or alias names so no exposed table, view, alias, or correlation name is identical to any other

exposed table, view, alias, or correlation name in the FROM clause.

For a CREATE TRIGGER statement, change the names in the REFERENCING clause so that there are no duplicates.

sqlcode: -212

sqlstate: 42712

SQL0213N Parameter *parameter-name* not in routine *routine-name*.

Explanation: A parameter with name *parameter-name* does not exist in routine *routine-name*.

User response: Specify an existing parameter name for the routine and resubmit the statement.

sqlcode: -213

sqlstate: 42703

SQL0214N An expression in the ORDER BY clause in the following position, or starting with *expression-start-or-order-by-position* in the *clause-type* clause is not valid. Reason code = *reason-code*.

Explanation: The expression identified by the first part of the expression *expression-start-or-order-by-position* in the *clause-type* clause is not valid for the reason specified by the *reason-code* as follows:

- 1 The fullselect of the select-statement is not a subselect. Expressions are not allowed in the ORDER BY clause for this type of select-statement. This reason code occurs only when *clause-type* is ORDER BY.
- 2 DISTINCT is specified in the select clause and the expression cannot be matched exactly with an expression in the select list. This reason code occurs only when *clause-type* is ORDER BY.
- 3 Grouping is caused by the presence of a column function in the ORDER BY clause. This reason code occurs only when *clause-type* is ORDER BY.
- 4 Expression in a GROUP BY clause cannot include a scalar-fullselect. This reason code occurs only when *clause-type* is GROUP BY.
- 5 The left side of a dereference operator in a GROUP BY clause cannot be a variant function. This reason code occurs only when *clause-type* is GROUP BY.
- 6 Expression in a ORDER BY clause cannot include an XMLQUERY or XMLEXISTS. This reason code occurs only when *clause-type* is ORDER BY.
- 7 Expression in a GROUP BY clause cannot

include an XMLQUERY or XMLEXISTS. This reason code occurs only when *clause-type* is GROUP BY.

The statement cannot be processed.

User response: Modify the select-statement based on the reason specified by the *reason-code* as follows:

- 1 Remove the expression from the ORDER BY clause. If attempting to reference a column of the result, change the sort key to the simple-integer or simple-column-name form.
- 2 Remove DISTINCT from the select clause or change the sort key to the simple-integer or simple-column-name form.
- 3 Add a GROUP BY clause or remove the column function from the ORDER BY clause.
- 4 Remove any scalar-fullselect from the GROUP BY clause. If grouping is desired on a column of the result that is based on a scalar-fullselect use a nested table expression or a common table expression to first provide a result table with the expression as a column of the result.
- 5 Remove any variant function from the left side of the dereference operators in the GROUP BY clause.
- 6 Remove any XMLQUERY or XMLEXISTS expression from the ORDER BY clause. If ordering is desired on a column of the result that is based on an XMLQUERY or XMLEXISTS expression, use a nested table expression or a common table expression to first provide a result table with the expression as a column of the result.
- 7 Remove any XMLQUERY or XMLEXISTS expression from the GROUP BY clause. If grouping is desired on a column of the result that is based on an XMLQUERY or XMLEXISTS expression, use a nested table expression or a common table expression to first provide a result table with the expression as a column of the result.

sqlcode: -214

sqlstate: 42822

SQL0216N The number of elements on each side of a predicate operator does not match. Predicate operator is *predicate-operator*.

Explanation: A predicate includes a list of elements on the right or left side (or both sides) of the predicate operator. The number of elements must be the same on both sides. These elements may appear in a list of expressions enclosed in parentheses or as elements of a select list in a fullselect.

The statement cannot be processed.

User response: Correct the predicate with mismatched number of elements on each side of the predicate operator.

sqlcode: -216

sqlstate: 428C4

SQL0217W The statement was not executed as only Explain information requests are being processed.

Explanation: The current value of one of the Explain special registers has been set to EXPLAIN. This value allows dynamic SQL statements to be prepared and explained but prevents any dynamic statement from being executed.

User response: Change the value of the appropriate Explain special register to a setting other than EXPLAIN by issuing the appropriate SET statement from the interface or application that is encountering this condition.

sqlcode: +217

sqlstate: 01604

SQL0219N The required Explain table *name* does not exist.

Explanation: The Explain facility has been invoked but was unable to find the required Explain table *name*. The Explain tables must be created prior to invoking Explain.

User response: Create the required Explain tables. The SQL Data Definition Language statements needed to create the Explain tables are available in the file called EXPLAIN.DDL in the misc directory under sqllib.

sqlcode: -219

sqlstate: 42704

SQL0220N The Explain table *name*, column *name2* does not have the proper definition or is missing.

Explanation: The Explain facility has been invoked but the Explain table *name* did not have the expected definition. The definition could be incorrect due to:

- Incorrect number of columns defined (if *name2* is numeric)
- Incorrect data type assigned to columns (if *name2* is a column name).
- Incorrect CCSID for the table.

User response: Correct the definitions of the specified Explain table. The SQL Data Definition Language statements needed to create the Explain tables are available in the file called EXPLAIN.DDL in the misc directory under sqllib.

sqlcode: -220

sqlstate: 55002

SQL0222N Operation was attempted against a hole using cursor *cursor-name*.

Explanation: If the SQLSTATE is 24510, then an error occurred. A positioned update or delete was attempted with cursor *cursor-name*, which is defined as SENSITIVE STATIC, and the current row has been identified as either a delete hole or update hole. A hole occurred when DB2 tried to update or delete a row in the database corresponding to the current row of the result table for cursor *cursor-name* and the corresponding row of the underlying table no longer exists.

If the SQLSTATE is 02502, then this is a warning. A delete hole or update hole has been detected while processing a fetch for cursor *cursor-name*. A hole occurred when DB2 tried to refetch a row from the database corresponding to the current row of the result table for cursor *cursor-name* and the corresponding row of the underlying table no longer exists. No data is returned.

A delete hole occurs when the corresponding row of the underlying table has been deleted.

An update hole occurs when the corresponding row of the underlying table has been updated in the underlying table such that the updated row no longer satisfies the search condition specified in the SELECT statement of the cursor.

The statement cannot be processed. The cursor remains positioned on the hole.

User response: Issue a FETCH statement to position the cursor on a row that is not a hole.

sqlcode: -222

sqlstate: 02502, 24510

SQL0224N The result table does not agree with the base table using cursor *cursor-name*.

Explanation: A positioned UPDATE or DELETE was attempted using cursor *cursor-name*, defined as SENSITIVE STATIC, on a row where the column values in the result table do not match the current values in the base table row. The rows do not match because the row of the base table was updated between the time it was fetched into the result table and the time the positioned UPDATE or DELETE was processed.

The statement cannot be processed. The cursor position is unchanged.

User response: Change isolation levels so that the base table row cannot be updated again during the cursor operation, or change the application to do a

FETCH INSENSITIVE and try the positioned UPDATE or DELETE again.

sqlcode: -224

sqlstate: 24512

SQL0225N FETCH statement for cursor *cursor-name* is not valid because the cursor is not defined as SCROLL.

Explanation: A FETCH statement for non-scrollable cursor *cursor-name* been specified with one of the following scrollable cursor keywords: PRIOR, FIRST, LAST, BEFORE, AFTER, CURRENT, ABSOLUTE or RELATIVE. Only NEXT can be specified for non-scrollable cursors. No data is fetched.

The statement cannot be processed. The cursor position is unchanged.

User response: Change the FETCH statement to remove the current fetch orientation keyword, such as PRIOR or FIRST, and replace it with NEXT. Alternatively, change the definition of the cursor to be scrollable.

sqlcode: -225

sqlstate: 42872

SQL0227N FETCH NEXT, PRIOR, CURRENT or RELATIVE is not allowed because cursor *cursor-name* has an unknown position (*sqlcode*, *sqlstate*).

Explanation: The cursor position for *cursor-name* is unknown. A previous multiple row FETCH for cursor *cursor-name* resulted in an error (SQLCODE *sqlcode*, SQLSTATE *sqlstate*) in the middle of processing multiple retrieved rows. One or more of the requested rows could not be returned to the program following the error, leaving the position of the cursor unknown.

If an indicator structure had been provided on the previous multiple row FETCH, a positive SQLCODE would have been returned and all of the retrieved rows could have been returned to the application program.

The statement cannot be processed. The cursor position is unchanged.

User response: Close and reopen the cursor to reset the position. For scrollable cursors, you can change the FETCH statement to specify one of the other fetch orientations, such as FIRST, LAST, BEFORE, AFTER or ABSOLUTE, to establish a valid cursor position and fetch a row of data.

sqlcode: -227

sqlstate: 24513

SQL0228N FOR UPDATE clause specified for read-only cursor *cursor-name*.

Explanation: Cursor *cursor-name* is defined as INSENSITIVE SCROLL, but the corresponding SELECT statement contains a FOR UPDATE clause.

The statement cannot be processed.

User response: To define a read-only cursor, specify INSENSITIVE on DECLARE CURSOR, but do not specify the FOR UPDATE clause as part of the SELECT statement of the cursor.

sqlcode: -228

sqlstate: 42620

SQL0231W Current position of cursor *cursor-name* is not valid for FETCH of the current row.

Explanation: A FETCH CURRENT or FETCH RELATIVE 0 statement was issued for scrollable cursor *cursor-name*. The operation is not valid, because the cursor is not positioned on a row of the result table. A FETCH of the current row is not allowed following a FETCH BEFORE or FETCH AFTER statement, or following a FETCH statement that resulted in SQLCODE +100.

The statement cannot be processed. The cursor position is unchanged.

User response: Ensure that the cursor is positioned on a row of the result table before attempting to fetch the current row.

sqlcode: +231

sqlstate: 02000

SQL0236W SQLDA has only provided *integer1* SQLVAR entries. *integer2* SQLVAR entries are required for *integer3* columns. No SQLVAR entries have been set.

Explanation: The value of the SQLN field of the SQLDA should be at least as large as the number of columns in the result set.

The database manager has not set any SQLVAR entries (and the SQLDOUBLED flag has been set to "off" (i.e. to the space character)).

User response: Increase the value of the SQLN field in the SQLDA to the value indicated in the message (making sure the SQLDA is large enough to support that amount) and resubmit the statement.

sqlcode: +236

sqlstate: 01005

SQL0237W SQLDA has only provided *integer1* SQLVAR entries. Since at least one of the columns being described is a distinct type, *integer2* SQLVAR entries should have been specified. None of the Secondary SQLVAR entries have been set.

Explanation: Since at least one of the columns in the result set is a distinct type, space should be provided for twice as many SQLVAR entries as the number of columns in the result set. The database manager has only set the Base SQLVAR entries (and the SQLDOUBLED flag has been set off (i.e. to the space character)).

User response: If there is no need for the additional information about the distinct type(s) in the result set, then no action is required. If the distinct type information is needed, the value of the SQLN field in the SQLDA should be increased to the value indicated in the message (after making sure that the SQLDA is large enough to support that amount) and the statement should be resubmitted.

sqlcode: +237

sqlstate: 01594

SQL0238W SQLDA has only provided *integer1* SQLVAR entries. Since at least one of the columns being described is a LOB or structured type, *integer2* SQLVAR entries are required for *integer3* columns. No SQLVAR entries have been set.

Explanation: Since at least one of the columns in the result set is a LOB or structured type, space must be provided for twice as many SQLVAR entries as the number of columns in the result set. Note also that one or more of the columns in the result set may be a distinct type.

The database manager has not set any SQLVAR entries (and the SQLDOUBLED flag has been set off (i.e. to the space character)).

User response: Increase the value of the SQLN field in the SQLDA to the value indicated in the message (after making sure that the SQLDA is large enough to support that amount) and resubmit the statement.

sqlcode: +238

sqlstate: 01005

SQL0239W SQLDA has only provided *integer1* SQLVAR entries. Since at least one of the columns being described is a distinct type or reference type, *integer2* SQLVAR entries are required for *integer3* columns. No SQLVAR entries have been set.

Explanation: If any of the columns in the result set is a distinct type or reference type, then space should be provided for twice as many SQLVAR entries as the number of columns in the result set.

The database manager has not set any SQLVAR entries (and the SQLDOUBLED flag has been set off (i.e. to the space character).

User response: If the distinct type or reference type information is needed, the value of the SQLN field in the SQLDA should be increased to the value indicated in the message (after making sure the SQLDA is large enough to support that amount) and the statement should be resubmitted. If there is no need for the additional information about the distinct type(s) or reference type(s) in the result set, then it is possible to resubmit the statement only providing enough SQLVAR entries to accommodate the number of columns in the result set.

sqlcode: +239

sqlstate: 01005

SQL0242N The object named *object-name* of type *object-type* was specified more than once in the list of objects.

Explanation: In a list of object names of type *object-type*, the object named *object-name* was specified more than once. The operation of the statement cannot be performed on the object more than once.

User response: Correct the duplicated object in the list removing duplicate occurrences.

sqlcode: -242

sqlstate: 42713

SQL0243N SENSITIVE cursor *cursor-name* cannot be defined for the specified SELECT statement.

Explanation: Cursor *cursor-name* is defined as SENSITIVE, but the content of the SELECT statement requires DB2 to build a temporary result table of the cursor, and DB2 cannot guarantee that changes made outside this cursor will be visible. This situation occurs when the content of the query makes the result table read-only. For example, if the query includes a join, the result table is read-only. In these cases, the cursor must be defined as INSENSITIVE or ASENSITIVE.

The statement cannot be processed.

User response: Either change the content of the query to yield a result table that is not read-only, or change the type of the cursor to INSENSITIVE or ASENSITIVE.

sqlcode: -243

sqlstate: 36001

SQL0244N SENSITIVITY *sensitivity* specified on FETCH is not valid for cursor *cursor-name*.

Explanation: The sensitivity option *sensitivity* specified on FETCH conflicts with the sensitivity option in effect for cursor *cursor-name*. The following list shows what can be specified on FETCH:

```

DECLARE CURSOR
FETCH Statement
INSENSITIVE          INSENSITIVE
SENSITIVE STATIC     SENSITIVE
                     or INSENSITIVE
SENSITIVE DYNAMIC    SENSITIVE
SENSITIVE             SENSITIVE
ASENSITIVE            INSENSITIVE
                     or SENSITIVE
                     (depending on the
                     effective
                     sensitivity of the
                     cursor)

```

In the case of a non-scrollable cursor, a sensitivity option cannot be specified.

The statement cannot be processed.

User response: Change or remove the sensitivity option specified on FETCH.

sqlcode: -244

sqlstate: 428F4

SQL0245N The invocation of routine *routine-name* is ambiguous. The argument in position *position* does not have a best fit.

Explanation: When a routine is referenced in an SQL statement, the database manager must determine exactly which routine to invoke. For functions, this process is called function resolution, and it applies to both built-in and user-defined functions. This error is returned when an invocation of a function is ambiguous. This occurs when there are two or more possible candidate functions that satisfy the criteria for function resolution.

In this case, two candidate functions have a parameter in position *position*, but the data types of the parameters for the two candidate functions are not in the same data type precedence list. A best fit for the argument cannot be determined. For more detailed information, see the section "Determining the best fit" in the topic "Functions" in the DB2 Information Center.

The statement cannot be processed.

User response: Change the SQL statement to explicitly cast the argument to the desired data type, the definition of a function, or the SQL path to remove the ambiguity from the set of candidate functions and try again.

sqlcode: -245

sqlstate: 428F5

SQL0257N Raw device containers are not supported.

Explanation: An attempt was made to use raw device containers but one of the following conditions is true:

- Raw devices are not supported on this platform.
- Raw device containers cannot be specified via the SET TABLESPACE CONTAINERS command for auto-resize table spaces.
- Raw device containers are not supported in a DB2 pureCluster environment.

User response: In a DB2 pureCluster environment:

No response is required. You cannot use raw device containers in a DB2 pureCluster environment.

In environments that are not DB2 pureCluster environments:

- If creating a table space then use file containers or system-managed table spaces instead.
- If specifying a SET TABLESPACE CONTAINERS command then use file containers instead.

sqlcode: -257

sqlstate: 42994

SQL0258N Neither container operations nor a REBALANCE can be performed while a rebalance of the table space is pending or in progress.

Explanation: One of the following conditions is true:

1. An ALTER TABLESPACE statement involving container operations or the REBALANCE clause has previously been issued by this application or another and has yet to be committed.
2. A rebalance is in progress.

User response: Perform the response that is appropriate to the condition:

1. If possible, roll back the uncommitted unit of work and issue a single ALTER TABLESPACE statement to perform all of the container operations. Otherwise, wait until the rebalance has completed and then try the operation again. Note that pages cannot both be added to and removed from a table space in the same ALTER TABLESPACE statement.
2. Wait until the rebalance has completed and then try the operation again.

sqlcode: -258

sqlstate: 55041

SQL0259N Container map for table space is too complicated.

Explanation: The map structure keeps a record of how the table space address space is mapped to the various containers. If this gets too complicated, it does not fit in the table space file.

User response: The table space may need to be rebalanced to more evenly distribute the data among the containers. This may simplify the mapping.

If this does not work, try making as many containers as possible the same size. Existing container sizes can be changed by backing up the table space and then using the database administration utility to change the containers. Restore the table space to the new containers.

sqlcode: -259

sqlstate: 54037

SQL0260N Column *column-name* cannot belong to either the distribution key or the table partitioning key because it is either a LONG column, DATALINK column, XML column, or structured type column.

Explanation: Neither the distribution key nor the table partitioning key can have a LONG column, DATALINK column, XML column, or structured type column.

The statement cannot be processed.

User response: Do not use LONG columns, DATALINK columns, XML columns, or structured type columns for either the distribution key or the table partitioning key.

If the table needs to be distributed and only has LONG columns, DATALINK columns, XML columns, or structured type columns, either add a column that can be used for the distribution key to the table, or define the table without a distribution key in a single-partition database partition group.

If the table needs to be partitioned and only has LONG columns, DATALINK columns, XML columns, or structured type columns, either add a column that can be used for the partitioning key of the table, or define a nonpartitioned table.

sqlcode: -260

sqlstate: 42962

SQL0262N Table *table-name* cannot be created in the database partition group *group-name* because no column exists that can be used as the distribution key.

Explanation: The table *table-name* cannot be created in a database partition group. The table must have at least one column that can be used as the distribution key.

Columns of the following data types cannot be used in a distribution key:

- BLOB
- CLOB
- DATALINK
- DBCLOB
- LONG VARCHAR
- LONG VARGRAPHIC
- XML
- Structured type
- A user-defined data type based on any of the previously listed data types

The statement cannot be processed.

User response: Either create the table with one or more columns that can be used in a distribution key, or create the table in a single database partition group.

sqlcode: -262

sqlstate: 428A2

SQL0263N Member range from *member-number-1* to *member-number-2* is not valid. The second member number must be greater than or equal to the first member number.

Explanation: The specified member range is not valid.

The statement cannot be processed.

User response: Correct the member range in the statement, then try the request again.

sqlcode: -263

sqlstate: 428A9

SQL0264N Partitioning key cannot be added or dropped because table resides in a table space defined on the multi-partition database partition group *name*.

Explanation: You can only add or drop a partitioning key on a table in a single database partition group.

The statement cannot be processed.

User response: Do one of the following and try the request again:

- Define an identical table with a partitioning key.
- Redistribute the database partition group to a single database partition group.

sqlcode: -264

sqlstate: 55037

SQL0265N A duplicate database partition number was detected in the list of database partition numbers.

Explanation: For the CREATE DATABASE PARTITION GROUP statement, a database partition number can only appear once in the ON DBPARTITIONNUMS clause.

For the CREATE TABLESPACE and ALTER TABLESPACE statement, a database partition number can appear only once and in only one ON DBPARTITIONNUMS clause.

For the ALTER DATABASE PARTITION GROUP statement or REDISTRIBUTE DATABASE PARTITION GROUP command, one of the following occurred:

- The database partition number appeared more than once in the ADD DBPARTITIONNUMS or the DROP DBPARTITIONNUMS clause.
- The database partition number appeared in both the ADD DBPARTITIONNUMS and the DROP DBPARTITIONNUMS clause.
- The database partition number to be added is already a member of the database partition group.

The statement cannot be processed.

User response: Ensure that the database partition names or database partition numbers in the ON DBPARTITIONNUMS, ADD DBPARTITIONNUMS, or DROP DBPARTITIONNUMS clause are unique. For the CREATE TABLESPACE and ALTER TABLESPACE statements, ensure that a database partition number appears in no more than one ON DBPARTITIONNUMS clause.

In addition, for the ALTER DATABASE PARTITION GROUP statement or REDISTRIBUTE DATABASE PARTITION GROUP command:

- Do not specify a database partition number in both the ADD DBPARTITIONNUMS and the DROP DBPARTITIONNUMS clause.
- Remove the database partition number from the ADD DBPARTITIONNUMS clause if the database partition number is already defined in the database partition group.

sqlcode: -265

sqlstate: 42728

SQL0266N The specified member number or database partition number *member-number* is not valid.

Explanation: The specified member number or database partition number *member-number* is not valid for one of the following reasons:

- The member number or database partition number is not in the valid range of 0 to 999.

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- The member number or database partition number is not in the node configuration file.
- The member number or database partition number is not part of the database partition group, therefore the requested operation cannot be processed.

The statement cannot be processed.

User response: Depending on the condition:

- Issue the statement, command or API with member numbers or database partition numbers in the valid range.
- Follow the procedure to add a member or database partition to the system.
- Remove the member or database partition from the specified members or database partitions in the statement, command or API.

sqlcode: -266

sqlstate: 42729

SQL0268N *operation cannot be performed while the database partition group is being redistributed.*

Explanation: One of the following applies, as indicated by *operation*:

- The database partition group is being redistributed and it cannot be altered, dropped or redistributed again until the current operation is complete.
- The partitioning key of a table cannot be dropped while the database partition group of the table is being redistributed.
- New objects cannot be created because REDISTRIBUTE is dropping all of the old database partitions in this database partition group.
- New columns cannot be added through ALTER TABLE, because REDISTRIBUTE is dropping all of the old database partitions in this database partition group.

The statement cannot be processed.

User response: Wait until the redistribution is complete, then try the request again.

sqlcode: -268

sqlstate: 55038

SQL0269N *Database contains maximum number of partitioning maps.*

Explanation: Because the database contains the maximum number of partitioning maps (32,768), you cannot create a new database partition group, alter a database partition group, or redistribute an existing one.

The statement cannot be processed.

User response: Drop one or more database partition group in the database.

Note: Dropping a database partition group drops all database objects such as table spaces, tables and views that reside in the database partition group.

sqlcode: -269

sqlstate: 54033

SQL0270N *Function not supported (Reason code = reason-code).*

Explanation: The statement cannot be processed because it violates a restriction as indicated by the following reason code:

1

The primary key, each unique constraint, and each unique index must contain all distribution columns of the table (columns can appear in any order).

2

Updating the distribution key column value is not supported.

3

A foreign key cannot include any nullable distribution key columns when defined with ON DELETE SET NULL. This is a special case of reason code 2 because defining such a constraint would result in attempting to update a distribution key column.

5

Views created with the WITH CHECK OPTION clause should not use functions (or reference views that use functions) that:

- are non-deterministic
- have side effects
- are related to the placement of data, for example, nodenumber or partition functions

These functions must also not be present within a referenced view if the new view is created with the CASCADED check option.

6

A transform cannot be defined for a user-defined distinct type.

7

Long fields can only be defined using a table space with a page size that is 4 KB. A LARGE TABLESPACE can only be created using a 4 KB page size.

8

9	Structured types are not supported as columns of a table or structured type attribute data types prior to DB2 Version 7.1.	20	A default value must be specified when defining a default for a column of a typed table.
10	Triggers are not supported on typed tables.	21	ALTER TABLE is not supported for a materialized query table.
11	A single default table space cannot be selected because the table has one or more LOB columns that must be placed in a table space with a 4 KB page size and the row size or number of columns in the table requires a table space with an 8 KB page size.	22	A column cannot be dropped or have its length, data type, security, nullability, or hidden attribute altered on a table that is a base table for a materialized query table.
12	A typed table or typed view cannot be created using a structured type that has no attributes.	23	Materialized query tables cannot be defined in a CREATE SCHEMA statement.
13	The type of a source key parameter must be a user-defined structured type or a distinct type that is not sourced on the LOB, XML, LONG VARCHAR, or LONG VARGRAPHIC data type.	24	REPLICATED can be specified only for a materialized query table defined with REFRESH DEFERRED.
14	Check constraints cannot be defined on a typed table or the WITH CHECK OPTION clause cannot be specified on a typed view.	25	The triggered-action in a BEFORE trigger cannot reference a materialized query table defined with REFRESH IMMEDIATE.
15	Referential constraints cannot be defined on a typed table or to a parent table that is a typed table.	26	Only one materialized query table can be specified for a SET INTEGRITY statement.
16	A default value cannot be defined for reference type columns.	27	The database partition group being redistributed contains at least one replicated materialized query table.
17	A reference data type or structured data type cannot be used as a parameter data type or a returns data type of a user-defined function prior to DB2 UDB Version 7.1. Otherwise, a scoped reference data type or an array data type cannot be used as a parameter data type or returns data type of a routine. A structured data type or an array data type cannot be used as a return column of a table or row function.	28	A replicated materialized query table cannot be defined on a table that does not have a unique index existing on one or more columns that make up the replicated materialized query table.
18	The SET INTEGRITY statement cannot be used for a typed table.	29	A typed table or materialized query table cannot be renamed.
19	Column-level UPDATE and REFERENCES privileges cannot be granted on a typed table, typed view, or nickname.	30	The FOR EXCEPTION clause cannot be specified with a materialized query table in the SET INTEGRITY statement.
		31	Typed tables and typed views cannot be defined in a CREATE SCHEMA statement.
			A distribution key cannot be defined with more than 500 columns.

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32	A table defined using a multipartition database partition group or a single-partition database partition group on other than the catalog partition does not support DATALINK columns defined with FILE LINK CONTROL.	45	The following EXPLAIN MODES are not supported in MPP, SMP, and Data Joiner: <ul style="list-style-type: none">• COUNT CARDINALITIES• COMPARE CARDINALITIES• ESTIMATE CARDINALITIES
33	An underlying table of a materialized query table defined with REFRESH IMMEDIATE cannot be the child of a referential constraint with a cascading effect (that is, with the option ON DELETE CASCADE or ON DELETE SET NULL).	46	APPEND mode is not supported for multidimensional clustering (MDC) or insert time clustering (ITC) tables.
34	The underlying object relational feature is not supported in the current release.	47	INPLACE table reorganization is not supported for multidimensional clustering (MDC) or insert time clustering (ITC) tables.
35	A sequence or an identity column cannot be created in a Version 7 multinode database environment.	48	Index extensions are not supported for multidimensional clustering (MDC) or insert time clustering (ITC) tables.
36	Activation of a multinode Version 7 database that contains sequences or identity columns is not allowed.	49	Changes to the dimension specification of a multidimensional clustering (MDC) table are not supported.
38	An index using an index extension is not supported in a multiple partition database partition group prior to DB2 UDB Version 8.1 FixPak 6.	50	Clustering indexes are not supported for multidimensional clustering (MDC) or insert time clustering (ITC) tables.
39	Nicknames or OLE DB table functions cannot be referenced directly or indirectly in the body of an SQL function or SQL method.	51	A user-defined temporary table cannot be a multidimensional clustering (MDC) or insert time clustering (ITC) table.
40	The function IDENTITY_VAL_LOCAL cannot be used in a trigger or SQL function.	52	Using CREATE PROCEDURE with LANGUAGE SQL from a database partition that is not the coordinator database partition is not supported.
41	A single SQL variable statement cannot assign values to both a local variable and a transition variable.	53	The expression of a generated column cannot be modified or added to a column that was not generated using an expression if that column is a distribution key column or was used in the ORGANIZE BY clause, the PARTITION BY clause, or the DISTRIBUTE BY clause.
42	The execution of a trigger, method, or function using SQL control statements and the execution of a dynamic compound statement in a multinode database are not allowed.	54	A column with a LONG VARCHAR, LONG VARGRAPHIC, LOB, or XML type, a distinct type on any of these types, or a structured type cannot be specified in the select-list of a scrollable cursor.
43	One or more of the specified options are currently not supported.		
44			

55	INPLACE table reorganization is not supported for the specified system catalog table.	65	Federated processing is not supported on this platform.
56	Federated database system support and the concentrator feature cannot be active at the same time.	66	Altering the nickname local type from the current type to the specified type is not allowed.
57	Online index reorganization in rebuild mode is not supported for spatial indexes in ALLOW WRITE mode.	67	The built-in transform group SYSSTRUCT is not supported.
58	Online index reorganization is supported on multi-dimensionally clustered (MDC) or insert time clustering (ITC) tables in ALLOW WRITE mode only when the CLEANUP option or RECLAIM EXTENTS option is specified.	68	Nicknames or views on nicknames cannot be specified as target in the MERGE statement.
59	For a Version 8 database: the XML data type can be used only as a transient data type and cannot be stored in the database nor returned to an application.	69	In a partitioned database, the maximum number of distinct NEXT VALUE expressions supported in an SQL statement is 55.
60	A function or method that contains SQL statements cannot be used in a partitioned database environment.	70	Delete from view would cause a descendent table to be delete-connected via multiple paths to two or more tables that appear in the view definition. Either a check constraint or trigger defined on the descendent table needs to be fired according to the final result which is not guaranteed.
61	The ALTER TABLE ALTER COLUMN SET INLINE LENGTH statement is not allowed because there is an object of type VIEW, either typed or untyped, that depends on the typed table.	71	A column cannot be dropped, or have its length, data type, security, or nullability altered on a table which is a base table of a view enabled for query optimization.
62	A text search function cannot be used in the expression for check constraints or generated columns.	72	CALL statement cannot be used in a trigger, a SQL function, a SQL method or a dynamic compound statement in a partitioned database environment.
63	The WITH CHECK OPTION clause cannot be used with views that reference text search functions directly or depend on other views referencing text search functions.	73	A nullable column cannot be changed to become an identity column.
64	A column with a LOB type, distinct type on a LOB type, A column with a LONG VARCHAR, LONG VARGRAPHIC, DATALINK, LOB, XML type, distinct type on any of these types, or structured type cannot be specified in the select-list of an insensitive scrollable cursor.	74	Backup images in a partitioned database environment are not allowed to include logs.
		75	Updating a status field in the recovery history file by time stamp is not allowed.
		83	Automatic statistics profiling is not supported on a multiple database partition system, on a system where SMP is enabled, or on a federated system.

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	For versions of DB2 database prior to V9.7, the statement cannot be processed because DATA CAPTURE CHANGES and COMPRESS YES are not compatible.	97	A table with an attached partition whose integrity has not been verified yet cannot be altered to be a materialized query table.
87	The following types of tables cannot be defined as partitioned tables: typed tables, staging tables, user temporary tables, and range clustered tables.	98	Altering this data type is not supported for an element of the multinode distribution key, data distribution key, or MDC organizing dimension.
88	For DB2 database servers Version 9.7 GA and earlier, the REORG INDEXES or REORG TABLE commands are only supported on a partitioned table in ALLOW WRITE or ALLOW READ mode in the following situations.	99	Altering the type of an identity column is not supported.
	<ul style="list-style-type: none">• ALLOW WRITE and ALLOW READ are supported for REORG INDEXES when CLEANUP or ON DATA PARTITION are specified.• ALLOW READ is supported for REORG TABLE when ON DATA PARTITION is specified and the INPLACE clause is not specified.	101	An alter table set data type changed the external UDF used by a check constraint.
89	REORG INDEX is only supported for nonpartitioned indexes on partitioned tables.	102	The LOAD command is not supported for a table with type-1 indexes in a large table space. Starting in Version 9.7, type-1 indexes have been discontinued and have been replaced with type-2 indexes. You can convert indexes to type-2 indexes by using the REORG INDEXES ALL command with the CONVERT parameter.
90	For versions of DB2 database prior to Version 9.7, the PARTITIONED clause cannot be specified on the CREATE INDEX statement because partitioned indexes are not supported.	103	A security policy cannot be added to a typed table.
91	For versions of DB2 database prior to V9.7, the statement cannot be processed because DATA CAPTURE CHANGES is not supported for a table that has a compression dictionary.	104	On DB2 database servers Version 9.5 and earlier, online index reorganization in ALLOW WRITE mode is not supported for tables with XML columns.
92	Detaching from a table that is the parent of an enforced referential integrity constraint is not allowed.	105	In place table REORG is not allowed if an index on an XML column is defined on the table.
93	Detaching a partition is not allowed for partitions that contain data that was appended using LOAD INSERT, and that have dependent materialized query tables or dependent staging tables that have not been incrementally refreshed with respect to the appended data.	106	The REORG INDEX command is supported only for block indexes in CLEANUP or RECLAIM EXTENTS mode.
95		109	Attaching a partition to a materialized query table is not supported.
		110	A text search function cannot be applied to the text index of a partitioned table if the text search function does not directly reference the partitioned table or is a member of a sub-select that contains an OUTER JOIN clause.

	For SECLABEL, SECLABEL_BY_NAME, and SECLABEL_TO_CHAR, the security policy name parameter must be a string constant.	3	deleting and then inserting the row with the new values in the distribution columns.
111	An audit policy cannot be associated with a typed table.		Make the distribution key column not nullable, specify a different ON DELETE action, or change the distribution key of the table so that the foreign key does not include any columns of the distribution key.
112	The health monitor does not support configuration of actions and notifications on non-root installations.	4	
113	Use of a Compound SQL (compiled) statement in the body of a trigger is not supported in partitioned database environments. Prior to DB2 Version 9.7 Fix Pack 1, use of a Compound SQL (compiled) statement as an SQL function body is not supported in partitioned database environments.	5	Either specify DATA CAPTURE NONE or ensure that the table is placed in a table space in a single-partition database partition group that specifies the catalog partition.
114	Partitioned spatial indexes are not supported.	6	Do not use the WITH CHECK OPTION clause, or remove the function or view from the view definition.
115	The sourced function cannot be revalidated because it was created in a release previous to V9.7.	7	Transforms are automatic for user-defined distinct types. Use the CREATE TRANSFORM statement for user-defined structured types only.
116	The same name was used for more than one named parameter marker in a compound SQL (compiled) statement that is dynamically prepared or executed.		Use a table space with a 4 KB page size for any table that includes long fields. If you are using DMS table spaces, you can place long fields in a table space with a 4 KB page size with other table or index data in table spaces with a different page size. When defining a LARGE TABLESPACE, use PAGESIZE 4K.
118	You attempted to execute one of the functions ENV_GET_NETWORK_RESOURCES or ENV_GET_DB2_SYSTEM_RESOURCES on a platform or operating system that is not supported by these functions.	8	For servers prior to DB2 UDB Version 7.1, ensure that no column data types are structured types in the CREATE TABLE statement or ALTER TYPE ADD COLUMN statement. Ensure that no attribute data types are structured types in the CREATE TYPE statement or ALTER TYPE ADD ATTRIBUTE statement.
119	If a field of a ROW variable has an ARRAY type, then array element values cannot be directly retrieved by specifying the corresponding index value for the element on the ROW variable field reference.	9	Do not define triggers on typed tables.
	User response: The action corresponding to the reason code is as follows:	10	Either reduce the row size or number of columns in the table or specify two table spaces such that the long data is in a table space with a 4 KB page size and the base data is in a table space with an 8 KB page size.
1	Correct the CREATE TABLE, ALTER TABLE or CREATE UNIQUE INDEX statement.		
2	Do not attempt to update the distribution key columns for a multipartition table, or consider	11	When creating a typed table or typed view, specify a structured type that has at least one attribute defined.

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12	For the type of a source key parameter, use only a user-defined structured type or a distinct type that is not sourced on a LOB, XML, LONG VARCHAR, or LONG VARGRAPHIC type.	22	3. Re-create the materialized query table.
13	In a CREATE TABLE or ALTER TABLE statement for a typed table, do not specify check constraints. In a CREATE VIEW statement for a typed view, do not specify the WITH CHECK OPTION clause.	23	Issue the CREATE SUMMARY TABLE statement outside of the CREATE SCHEMA statement.
14	Do not specify referential constraints involving typed tables in a CREATE TABLE or ALTER TABLE statement.	24	Either remove the REPLICATED specification or ensure that REFRESH DEFERRED is specified for the materialized query table definition.
15	Do not specify a DEFAULT clause for a column with a reference data type in a CREATE TABLE or ALTER TABLE statement.	25	Remove the reference to the materialized query table in the triggered-action in the BEFORE trigger.
16	For servers prior to DB2 UDB Version 7.1, do not specify a structured type parameter or returns type when creating a user-defined function. Otherwise, do not specify a scoped reference type as a parameter or returns type. Do not specify a structured type as a return column of a table or row function.	26	Issue separate SET INTEGRITY IMMEDIATE CHECKED statements for each materialized query table.
17	Do not specify a typed table in the SET INTEGRITY statement.	27	Drop all replicated materialized query tables in the database partition group, and then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. Re-create the replicated materialized query tables.
18	Do not include specific column names when granting REFERENCES or UPDATE privileges on a typed table, typed view, or nickname.	28	Ensure that a subset of the columns defined for the materialized query table also is the set of columns that make up a unique index on the base table.
19	Include a specific value when specifying the DEFAULT clause on a column of a typed table.	29	You can change a typed table or materialized query table name only by dropping the table and creating it again with the new name. Dropping the table might have implications on other objects that depend on the table, and the privileges on the table are lost.
20	Drop the materialized query table, and re-create it with the desired attributes.	30	Remove the FOR EXCEPTION clause from the SET INTEGRITY statement.
21	To drop or alter a column in a table that is a base table for a materialized query table, perform the following steps: <ol style="list-style-type: none">1. Drop the dependent materialized query table.2. Drop the column of the base table, or alter the length, data type, nullability, or hidden attribute of this column.	31	Issue the CREATE statement for the typed view or typed table outside of the CREATE SCHEMA statement.
		32	Reduce the number of columns in the distribution key.
			Either specify NO LINK CONTROL for the DATALINK column or place the table in a

	table space on a single-partitioned database partition group that specifies the catalog partition. If you are redistributing data to a multiple-partition database partition group, you must drop the table to continue with the redistribute.	41	Remove the invocation of the IDENTITY_VAL_LOCAL function from the trigger definition or the SQL function definition.
33	Use one of the following approaches: <ul style="list-style-type: none"> • Do not define a referential constraint with cascading effect (that is, with option ON DELETE CASCADE or ON DELETE SET NULL) on an underlying table of a materialized query table defined with REFRESH IMMEDIATE as the child. • Do not define a REFRESH IMMEDIATE materialized query table whose underlying table is the child of a referential constraint with cascading effect (that is, with option ON DELETE CASCADE or ON DELETE SET NULL). 	42	Split the assignment into two separate statements. One statement must assign values only to SQL variables, and the other statement must assign values only to transition variables.
34	Remove the use of any unsupported object relational features.	43	Drop the new node or nodes to return to a single node configuration. If you require more nodes, you must drop the triggers, functions, or methods containing control statements.
35	Do not create or remove the GENERATED [ALWAYS BY DEFAULT] AS IDENTITY ... attribute.	44	Reissue the RUNSTATS command and turn off the unsupported option.
36	Drop the new node or nodes to go back to a single node configuration. If you require more nodes, drop the sequences or tables with identity columns before adding new nodes.	45	You cannot use these EXPLAIN modes in SMP, MPP, and Data Joiner environments. If possible, run the query in serial mode. Otherwise, set the EXPLAIN mode to YES or EXPLAIN to provide the same information except for the actual cardinalities.
38	An index using an index extension cannot be created on a table in a multiple partition database partition group. A database partition group cannot become a multiple partition database partition group while an index using an index extension exists on a table in the database partition group. Either drop any such indexes and add the partition to the database partition group, in which case the indexes cannot be re-created, or leave the database partition group unchanged.	46	Do not specify the APPEND clause in an ALTER TABLE statement for multi-dimensionally clustered (MDC) or insert time clustering (ITC) tables.
39	Remove the reference to a nickname or OLE DB table function, or remove the reference to the object that indirectly references one of these.	47	Reissue the REORG command without specifying the INPLACE option.
40		48	Do not specify the EXTENSION clause in a CREATE INDEX statement for multidimensional clustering (MDC) or insert time clustering (ITC) tables.
		49	Drop the multidimensional clustering (MDC) table and re-create it with the modified dimension specification.
		50	Do not specify the CLUSTER clause in a CREATE INDEX statement for multidimensional clustering (MDC) or insert time clustering (ITC) tables.
			Do not specify the ORGANIZE BY clause in a CREATE TABLE statement for declared global temporary tables.

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51	Issue the CREATE PROCEDURE statement with the LANGUAGE SQL clause from the coordinator database partition.	61	COLUMN SET INLINE LENGTH statement for the typed table, and re-create the views that you dropped.
52	Do not modify the expression or add it to an existing column. To change the composition of the PARTITIONING KEY clause, the ORGANIZE BY clause, the PARTITION BY clause, the DISTRIBUTE BY clause, or the generating expression of any of its members that are generated columns, drop and re-create the table and then repopulate it.	62	Do not use the text search function in the expression for check constraints or generated columns. Use the LIKE function instead of CONTAINS, if possible.
53	Modify the select-list of the scrollable cursor to not include a column with these types.	63	Do not specify the WITH CHECK OPTION clause for this view.
54	Reissue the REORG command without specifying the INPLACE option.	64	Modify the select-list of the scrollable cursor to not include a column with these types.
55	Turn off concentrator or federated database system support. Turn off the concentrator by setting the value of the database manager configuration parameter MAX_CONNECTIONS to be less than or equal to the value of the database manager configuration parameter MAX_COORDAGENTS. Turn off federated database system support by setting the FEDERATED parameter in the database manager configuration to NO.	65	Do not attempt federated processing on this platform.
56	Reissue the REORG INDEXES command, specifying ALLOW NONE or ALLOW READ.	66	Do not attempt to alter the nickname local type from the current type to the specified type.
57	Reissue the REORG INDEXES command, specifying ALLOW NONE or ALLOW READ.	67	Do not specify SYSSTRUCT as a transform group.
58	For a Version 8 database: Input the XML data to one of the functions that accept XML input (ultimately XMLSERIALIZE) and store the output of the function in the database or return it to the application.	68	Do not specify a nickname or a view on nicknames as a target in the MERGE statement.
59	In a partitioned database environment, only use functions and methods defined with the NO SQL option.	69	Reduce the number of distinct NEXT VALUE expressions in the statement, or change to a non-partitioned database.
60	Drop the views that depend on the typed table. Reissue the ALTER TABLE ALTER	70	Do not use DELETE FROM view-name.
		71	Disable the views enabled for query optimization, drop or alter the column of the base table and then enable the views for query optimization.
		72	In a partitioned database environment, do not use the CALL statement in a trigger, an SQL function, an SQL method, or a dynamic compound statement.
			The column cannot become an identity column while it is nullable. To make this change, the table must be dropped and re-created with a

	not null column and then repopulated. Adding a new column as the identity column might also be considered.		Drop the referential constraint by using the following statement: ALTER TABLE 'child-table' DROP CONSTRAINT ...
73			
	Issue the BACKUP command without specifying the INCLUDE LOGS option.		Alternatively, alter the child table in the foreign key relationship so that the foreign key constraint is not enforced: ALTER TABLE 'child-table' ALTER FOREIGN KEY ... NOT ENFORCED
74			
	Update the status field in the recovery history file by EID only.		
75			Note: The failing detach statement was executed from the parent table in the foreign key constraint, while the constraint enforcement is executed on the child table. These two tables are distinct unless the foreign key constraint is self-referential. Next, resubmit the ALTER TABLE ... DETACH PARTITION statement. You can now alter the child table to enforce the foreign key constraint: ALTER TABLE 'child-table' ALTER FOREIGN KEY ... ENFORCED
	Use one of the following approaches: Disable automatic statistics profiling for this database by setting the database configuration parameters AUTO_STATS_PROF and AUTO_PROF_UPD to OFF. Change the system to one that is on a single database partition, that does not have SMP enabled, and that is not federated.		
83			
	If both DATA CAPTURE CHANGES and COMPRESS YES are being specified, you must only specify one of them. If one of DATA CAPTURE CHANGES or COMPRESS YES is being specified, you must not specify it as the other is already in effect on the table.	93	This will recheck the tables to ensure that the foreign key relationship is still being enforced.
87			
	Create the table as a non-partitioned table.		Issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option to maintain the dependent materialized query tables or dependent staging tables with respect to the data that was appended using LOAD INSERT.
88			
	Reissue the REORG INDEXES or REORG TABLE command using the default or ALLOW NO ACCESS mode. If REORG TABLE was specified with the INPLACE clause, remove the INPLACE clause. If REORG INDEXES was specified, consider using the REORG INDEX command for online reorganization of the nonpartitioned indexes on a partitioned table.	95	Issue the SET INTEGRITY statement with the IMMEDIATE CHECKED or IMMEDIATE UNCHECKED option on the table to verify the integrity of the attached partition.
		97	
89			Do not alter the column data type.
	Use the REORG INDEXES ALL command to reorganize all indexes on the table or data partition.	98	Drop the identity attribute, alter the type, and then re-enable the identity attribute.
90			
	Create a nonpartitioned index by using the default or by explicitly specifying NOT PARTITIONED on CREATE INDEX.	99	Drop the check constraint, and then re-issue the ALTER statement.
91			
	Do not specify DATA CAPTURE CHANGES for this table.	101	Use the REORG INDEXES command with the CONVERT parameter to convert existing indexes on the table to type-2 indexes before issuing the LOAD command.
92			
		102	Do not add a security policy to a typed table.

103	On DB2 database servers Version 9.5 and earlier, reissue the REORG INDEXES command, specifying ALLOW READ ACCESS or ALLOW NO ACCESS.	116	sourced function, recreate it, and grant the privileges to the sourced function.
104	Remove the INPLACE option and reissue the REORG TABLE command.	118	Give each named parameter marker in a compound SQL (compiled) statement that is dynamically prepared or executed a unique name.
105	Reissue the REORG INDEX command specifying CLEANUP, or RECLAIM EXTENT, or issue REORG INDEXES ALL to reorganize all indexes (including the block indexes) for the table.	119	The functions ENV_GET_NETWORK_RESOURCES and ENV_GET_DB2_SYSTEM_RESOURCES are not supported on the current platform. Modify applications so that the applications do not call these functions on the current platform.
106	Issue the ALTER TABLE statement to drop the materialized query attribute from the table before attempting to attach a partition to the table.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
109	Modify the query to place the text search function in a sub-select that directly references the partitioned table that contains the text index and that does not contain an OUTER JOIN clause.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
110	Provide a string constant for the security policy name parameter.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
111	Do not associate an audit policy with a typed table.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
112	Do not try to configure actions or notifications for the health monitor on non-root installations.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
113	If possible, define the trigger using a compound SQL (inlined) statement, or remove the trigger definition. For DB2 Version 9.7 prior to Fix Pack 1, define the function or trigger using a compound SQL (inlined) statement, or remove the function or trigger definition.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
114	Create the spatial index as a nonpartitioned index by using the NOT PARTITIONED clause on the CREATE INDEX statement.	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.
115	Record the privileges granted to the sourced function in SYSCAT.ROUTINEAUTH, drop the	119	Do not specify an index value when retrieving element values when the field of a ROW variable has an ARRAY type.

sqlcode: -270

sqlstate: 42997

SQL0271N Index file for table with fid *fid* is either missing, or is not valid.

Explanation: The index file for the table with fid *fid* is required during processing. The file is either missing, or it is not valid.

The statement cannot be processed, and the application is still connected to the database. This condition does not affect other statements that do not use the index on this table.

User response: Ensure that all users are disconnected from the database, then issue the RESTART DATABASE command on all nodes. Then try the request again.

The index (or indexes) is re-created when the database is restarted.

sqlcode: -271

sqlstate: 58004

SQL0276N Connection to database *name* cannot be made because it is in the restore pending state.

Explanation: The database must be restored before a connection can be done.

No connection was made.

User response: Restore the database, then issue the CONNECT statement again.

sqlcode: -276

sqlstate: 08004

SQL0279N The database connection has been terminated during COMMIT or ROLLBACK processing. The transaction could be in doubt. Reason code = *reason-code*.

Explanation: Commit processing encountered an error. The transaction has been put in the commit state, but the commit processing may not have completed. The application's database connection has been terminated.

The cause of the error is indicated by the *reason-code*:

- 1 A node or data source involved in the transaction has failed.
- 2 Commit was rejected on one for the nodes. Check the administration notification log for details.

User response: Determine the cause of the error. It may be necessary to contact the system administrator for assistance since the most common cause of the error is node failure or connection failure. The RESTART DATABASE command will complete the commit processing for this transaction.

sqlcode: -279

sqlstate: 08007

SQL0280W View, trigger or materialized query table *name* has replaced an existing inoperative view, trigger or materialized query table.

Explanation: An existing inoperative view, trigger or materialized query table *name* was replaced by:

- the new view definition as a result of a CREATE VIEW statement
- the new trigger definition as a result of a CREATE TRIGGER statement
- the new materialized query table definition as a result of a CREATE SUMMARY TABLE statement.

User response: None required.

sqlcode: +280

sqlstate: 01595

SQL0281N Table space *tablespace-name* cannot be altered with additional containers because it is a system managed table space.

Explanation: Additional containers cannot be added to a system managed table space. The exception to this is when a database partition group was modified to add a node without table spaces, then containers can be added once on the new node using the ALTER TABLESPACE command. In general, the table space must be managed by the database in order to add additional containers.

The statement cannot be processed.

User response: To add more containers to a system managed table space, drop and recreate the table space with more containers, ensuring that each container is of the same size and less than the container size limit, or change to a DMS table space.

sqlcode: -281

sqlstate: 42921

SQL0282N Table space *tablespace-name* cannot be dropped because at least one of the tables in it, *table-name*, has one or more of its parts in another table space.

Explanation: A table in the specified table space does not contain all of its parts in that table space. If more than one table spaces are specified, then a table in one of the specified table spaces does not contain all of its parts in the list. The base table, indexes, or long data may be in another table space, so dropping the table space(s) will not completely drop the table. This would leave the table in an inconsistent state and therefore the table space(s) cannot be dropped.

User response: Ensure that all objects contained in table space *tablespace-name* contain all their parts in this table space before attempting to drop it, or include those table spaces containing the parts in the list to be dropped.

This may require dropping the table *table-name* before dropping the table space.

sqlcode: -282

sqlstate: 55024

SQL0283N System temporary table space *tablespace-name* cannot be dropped because it is the only system temporary table space with a *page-size* page size in the database.

Explanation: A database must contain at least one system temporary table space with the same page size as the page size of the catalog tablespace. Dropping table space *tablespace-name* would remove the last system temporary tablespace with a *page-size* page size from the database.

User response: Ensure there will be another system temporary table space with a *page-size* page size in the database before attempting to drop this table space.

sqlcode: -283

sqlstate: 55026

SQL0284N The table was not created because the table space *tablespace-name* following the clause *clause* is a *tablespace-type* table space.

Explanation: The CREATE TABLE, CREATE GLOBAL TEMPORARY TABLE, or DECLARE GLOBAL TEMPORARY TABLE statement specified a table space named *tablespace-name* following the clause *clause* that is not a valid type of table space for this clause.

This can occur in the following situations:

- For regular tables, *tablespace-name* was specified on the IN clause and the table space is not a REGULAR or LARGE table space.
- For created temporary tables or declared temporary tables, *tablespace-name* was specified on the IN clause and the table space is not a USER TEMPORARY table space.
- *tablespace-name* was specified on the LONG IN clause and the table space is not a LARGE, managed by database table space.
- *tablespace-name* was specified on the INDEX IN clause and the table space is not a REGULAR or LARGE, managed by database, table space.
- *tablespace-name* was specified when creating an insert time clustering (ITC) table and the table space is not a managed by database table space.

User response: Correct the statement to specify a table space with the correct type for the *clause* clause.

sqlcode: -284

sqlstate: 42838

SQL0285N The indexes and/or long columns for table *table-name* cannot be assigned to separate table spaces because the primary table space *tablespace-name* is a system managed table space.

Explanation: If the primary table space is a system managed table space, all table parts must be contained in that table space. A table can have parts in separate table spaces only if the primary table space, index table space and long table space are database managed table spaces.

User response: Either specify a database managed table space for the primary table space, or do not assign the table parts to another table space.

sqlcode: -285

sqlstate: 42839

SQL0286N A table space could not be found with a page size of at least *pagesize* that authorization ID *user-name* is authorized to use.

Explanation: The CREATE TABLE, CREATE GLOBAL

TEMPORARY TABLE, or DECLARE GLOBAL TEMPORARY TABLE statement did not specify a table space, and a table space of the right type (USER TEMPORARY for created temporary table or declared temporary table) with sufficient page size (at least *pagesize*), over which authorization ID *user-name* has USE privilege, could not be found.

Sufficient page size for a table is determined by either the byte count of the row or the number of columns.

User response: Ensure the existence of a table space of the correct type (REGULAR or USER TEMPORARY) with a page size of at least *pagesize* and that authorization ID *user-name* has USE privilege on this table space.

sqlcode: -286

sqlstate: 42727

SQL0287N SYSCATSPACE cannot be used for user objects.

Explanation: The CREATE TABLE or GRANT USE OF TABLESPACE statement specified a table space named SYSCATSPACE which is reserved for catalog tables.

User response: Specify a different table space name.

sqlcode: -287

sqlstate: 42838

SQL0288N A large table space cannot be defined using MANAGED BY SYSTEM.

Explanation: The table space being defined is for use with large objects and long strings. These can only be stored in table spaces that are defined in database managed space. Thus a large table space cannot be defined to use system managed space.

User response: Remove the keyword LARGE or change to MANAGED BY DATABASE in the CREATE TABLESPACE statement.

sqlcode: -288

sqlstate: 42613

SQL0289N Unable to allocate new pages in table space *tablespace-name*.

Explanation: One of the following conditions is true on one or more database partitions:

1

One of the containers assigned to this SMS table space has reached the maximum file size. This is the likely cause of the error.

2

3	All the containers assigned to this DMS table space are full. This is the likely cause of the error.	1	Either switch to a DMS TABLESPACE or recreate the SMS TABLESPACE with more directories (PATHs) such that: (number of directories) >= (max tablesize / maxfilesize). Note that maximum file size is operating system dependent.
4	A rebalance is in progress, but has not progressed far enough to enable the newly added space to be used.	2	Add new container(s) to the DMS table space and try the operation again, after the rebalancer has made the new pages available for use.
5	A redirected restore is being done to containers that are too small.	3	Wait for the rebalancer to finish.
6	A rollforward is being done following a redirected restore and all the containers assigned to this tablespace are full.	4	Perform the redirected restore again to larger containers.
7	A rollforward skipping add containers is being done and all the containers assigned to this tablespace are full.	5	Perform the redirected restore again to larger containers.
8	An attempt was made to create a table space with less than 5 usable extents.	6	Perform the rollforward again allowing add containers, or perform a redirected restore to larger containers.
9	An auto-resize table space has reached its maximum size and all of the containers are full. Alternately, there is not enough space between the current size and the maximum size for containers to be extended or added so an automatic increase in space is not possible.	7	Resubmit the CREATE TABLESPACE statement, ensuring that the table space has at least 5 usable extents.
10	An automatic storage table space is being created with a value for initial size that does not result in an equal distribution of container space. As a result, a higher value is being used but this value is larger than the maximum size specified.	8	Increase the maximum size for the table space.
11	A DMS table space enabled for auto-resize has not reached its maximum size but one of the file systems on which the containers exists is full and the container cannot grow.	9	Reduce the initial size or increase the maximum size for the table space.
11	A DMS table space enabled for auto-resize has not reached its maximum size and the file systems on which the table space resides are not full. However, a container operation (or a subsequent rebalance) is in progress and the auto-resize capability is suspended until it is complete.	10	Add a new stripe set of containers to the table space. Existing containers will no longer grow, only those new containers in the last range of the table space are extended when an automatic resize occurs.
		11	Wait for the operation and subsequent rebalance to complete.
			sqlcode: -289
			sqlstate: 57011

User response: Perform the action corresponding to the cause of the error:

SQL0290N Table space access is not allowed.

Explanation: A process attempted to access a table space which is in an invalid state, for which the intended access is not allowed.

- If the table space is in a quiesced state ("Quiesced: SHARE", "Quiesced: UPDATE", or "Quiesced: EXCLUSIVE"), only processes which also hold the table space in a quiesced state are allowed access to the table space.
- If the table space is in any other state, only the process which is performing the action that caused the current table space state is allowed access to the table space.
- A system or user temporary table space cannot be dropped which contains active system temporary tables, create temporary tables, or declared temporary tables.
- The SET CONTAINER API cannot be used to set the container list unless the table space is in the "Restore pending" state.

User response: Possible actions include:

- If the table space is in a quiesced state, attempt to acquire a quiesced share or quiesced update state on the table space. Or, attempt to quiesce reset the table space.
- If the table space is in any other state, wait until the table space has returned to normal state before attempting to access the table space.

Refer to the Administration Guide for further information about the table space states.

sqlcode: -290

sqlstate: 55039

SQL0291N State transition not allowed on table space.

Explanation: An attempt was made to change the state of a table space. Either the new state is not compatible with the current state of the table space, or an attempt was made to turn off a particular state and the table space was not in that state.

User response: Table space states change when a backup is taken, the load completes, the rollforward completes, etc., depending on the current state of the table spaces. Refer to the systems administration guide for further information about the table space states.

sqlcode: -291

sqlstate: 55039

SQL0292N An internal database file could not be created.

Explanation: An internal database file could not be created.

User response: Check that the directory containing the file is accessible (for example, mounted) and writable by the database instance owner.

sqlcode: -292

sqlstate: 57047

SQL0293N Error accessing a table space container.

Explanation: This error may be caused by one of the following conditions:

- A container (directory, file or raw device) was not found.
- A container is not tagged as being owned by the proper table space.
- A container tag is corrupt.

This error can be returned during database startup and during the processing of the ALTER TABLESPACE SQL statement.

User response: Try the following actions:

1. Check that the directory, file, or device exists and that the file system is mounted (if it is on a separate file system). Containers must be readable and writable by the database instance owner.
2. If you have a recent backup, try restoring the table space or database. If that fails because of the bad container and the container is not a DEVICE type, try manually removing the container first.

If the error was returned from the processing of an ALTER TABLESPACE SQL statement with the SWITCH ONLINE option, then re-issue the statement after correcting the problem.

If the error persists, call your IBM service representative.

sqlcode: -293

sqlstate: 57048

SQL0294N The container is already in use.

Explanation: Table space containers cannot be shared. The possible causes of this error include the following.

- A CREATE TABLESPACE or ALTER TABLESPACE statement included a container that is already in use by another table space.

- A CREATE TABLESPACE or ALTER TABLESPACE statement included a container from a table space that has been dropped but the drop statement has not been committed.
 - An ALTER DATABASE PARTITION statement used to add a database partition used the containers of a LIKE database partition that is on the same physical database partition. These containers would therefore already be in use.
 - A CREATE TABLESPACE or ALTER TABLESPACE statement is attempting to use the same container on more than one logical database partition on a single physical database partition. The same containers cannot be used for more than one database partition on the same physical database partition.
 - An ADD DATABASE PARTITION command or API used the containers from the system temporary table spaces of a LIKE database partition that is on the same physical database partition. These containers would therefore already be in use.
 - A CREATE TABLESPACE statement, ALTER TABLESPACE statement, or CREATE DATABASE command included a DMS container from another database that no longer exists but was not dropped properly. The container is not actually in use but it is tagged as being in use. Therefore, the DB2 data server will not allow it to be used until it is untagged. However, it is very important to verify that the container is not in use by the same database or another database when untagging it. If the container is in use when you untag it, the database (or databases) involved will be corrupted.
 - A REORG attempted to automatically select a DMS temporary table space for use, and although one with the correct page size exists, it is currently in use by another REORG command.
 - The ADD DBPARTITIONNUM option of the REDISTRIBUTE command, which was used to add a database partition, creates table space container names on the newly added database partition based on the table space container names of the table spaces on the lowest numbered database partition. If these container names specify absolute paths, and if the new database partition is on the same physical device as a database partition using the same container names, then the containers for the new partition would already be in use.
 - A RESTORE DATABASE command has found containers from a database that no longer exists but was not dropped properly.
 - A temporary staging database was created for a transport operation, and then an attempt was made to create a table space on the target database while the temporary staging database still exists.
- User response:** Ensure the containers are unique.
- For the CREATE or ALTER TABLESPACE statement, specify a different container for the table space.
 - For the CREATE or ALTER TABLESPACE statement including a container from a dropped table space, try again after the drop statement is committed or specify a different container.
 - For the ALTER DATABASE PARTITION statement, reissue the statement using the WITHOUT TABLESPACES clause, and then use the ALTER TABLESPACE statement to create unique containers for the new database partition.
 - For CREATE or ALTER TABLESPACE statements where the environment includes more than one logical database partition on a physical database partition, ensure that the same containers are not specified for such logical database partition.
 - For an ADD DATABASE PARTITION command or API, reissue the statement using the WITHOUT TABLESPACES clause, and then use the ALTER TABLESPACE statement to create unique containers at the new database partition for the system temporary table spaces.
 - If you are trying to use a DMS container that belonged to a database that no longer exists but was not dropped properly, then the db2untag utility can be used to remove the DB2 container tag from it. When this tag is removed DB2 considers the container to be free and the container can be used in a CREATE TABLESPACE statement, ALTER TABLESPACE statement, or CREATE DATABASE command.
- NOTE: Use extreme caution with db2untag. If you issue a db2untag command against a container that is still in use by a database, then both the database that originally used the container and the database that is now using the container will be corrupted.
- For REORG, resubmit the command once the initial REORG that is using the required table space completes, or provide another temporary table space of the correct page size for use.
 - For the REDISTRIBUTE command, instead of using the ADD DBPARTITIONNUM option, before issuing the REDISTRIBUTE command issue the ALTER DATABASE PARTITION GROUP statement using the WITHOUT TABLESPACES clause, and then use the ALTER TABLESPACE statement to create unique containers for the new database partition.
 - For the RESTORE DATABASE command (where a container belongs to a database that no longer exists but was not dropped properly), remove the container.
- NOTE: Ensure that the container is not in use by another database prior to removing it.
- If a temporary staging database was created for a transport operation, remove the temporary staging database after the staging database is no longer needed, and then attempt operations on the target that were blocked as a result of the existence of the staging database.

SQL0295N • SQL0298N

sqlcode: -294

sqlstate: 42730

SQL0295N The combined length for all container names for the table space is too long.

Explanation: The total space required to store the list of containers exceeds the space allotted for this table space in the table space file.

User response: Try one or more of the following:

- Use symbolic links, mounted file systems, etc. to shorten the new container names.
- Back up the table space and then use the database administration utility to reduce the number and/or name lengths of the containers. Restore the table space to the new containers.

sqlcode: -295

sqlstate: 54034

SQL0296N The CREATE statement failed because a database limit for the object has been reached. Limit: *limit-number*. Object type keyword: *object-keyword*

Explanation: This message is returned when an attempt is made to create a database object when there are already the maximum number of that type of database object defined for the database.

User response: Respond to this error in one of the following ways:

- Delete any database objects of the same type that are not being used any more, and then reissue the CREATE statement.
- For table spaces:
 1. Move data from multiple, small table spaces into one, larger table space.
 2. Delete the original, small table spaces.
 3. Reissue the CREATE statement.

sqlcode: -296

sqlstate: 54035

SQL0297N Path name for container or storage path is too long.

Explanation: One of the following conditions is true:

- The full path specifying the container name exceeds the maximum length allowed (254 characters). If the container was specified as a path relative to the database directory, the concatenation of these two values must not exceed the maximum length. Details can be found in the administration notification log.

- The storage path exceeds the maximum length allowed (175 characters).

User response: Shorten the path length.

sqlcode: -297

sqlstate: 54036

SQL0298N Bad container path.

Explanation: The container path violates one of the following requirements:

- Container paths must be valid fully-qualified absolute paths or valid relative paths. The latter are interpreted relative to the database directory.
- For EXTEND, REDUCE, RESIZE and DROP operations, the specified container path must exist.
- The path must be read/write accessible to the instance id (check file permissions on UNIX-based systems).
- Containers must be of the type specified in the command (directory, file or device).
- Containers (directories) in system managed table spaces must be empty when designated as containers and must not be nested underneath other containers.
- The containers for one database must not be located underneath the directory of another database, and they may not be underneath any directory that appears to be for another database. This rules out any directory of the form SQLnnnnn, where 'n' is any digit.
- The container must be within the file size limit for the operating system.
- Containers (files) for dropped database managed table spaces can only be reused as containers (directories) for system managed table spaces after all agents terminate and vice versa.
- During a redirected restore, an SMS container was specified for a DMS table space or a DMS container was specified for an SMS table space.
- The specified type of the container for an EXTEND, REDUCE, RESIZE, or DROP operation does not match the type of the container (FILE or DEVICE) that was specified when the container was created.

This message will also be returned if any other unexpected error occurred which prevents DB2 from accessing the container.

If you are using a cluster manager, this error can be returned if the DB2 database manager failed to add the database container path to the cluster manager configuration. If the cluster manager cannot access this path, the cluster manager will not be able to successfully manage a failover involving this path. Error messages from the cluster manager will be recorded in the db2diag log file.

User response: Specify another container location or

change the container to make it acceptable to DB2 (such as changing file permissions) and try again.

If you are using a cluster manager, correct the problem and resubmit the command:

1. Review the db2diag log file for error messages from the cluster manager.
2. Respond to the cluster manager error messages in the db2diag log file to correct the underlying problem that prevented the DB2 database manager from adding the path to the cluster manager configuration.
3. Resubmit the command.

sqlcode: -298

sqlstate: 428B2

SQL0299N Container is already assigned to the table space.

Explanation: The container that you are attempting to add has already been assigned to the table space.

User response: Choose another container and try again.

sqlcode: -299

sqlstate: 42731

SQL0301N The value of input variable, expression or parameter number *number* cannot be used because of its data type.

Explanation: A variable, expression, or parameter in position *number* could not be used as specified in the statement because its data type is incompatible with the intended use of its value.

This error can occur as a result of specifying an incorrect host variable or an incorrect SQLTYPE value in a SQLDA on an EXECUTE or OPEN statement. In the case of a user-defined structured type, the associated built-in type of the host variable or SQLTYPE might not be compatible with the parameter of the TO SQL transform function defined in the transform group for the statement. In the case of performing an implicit or explicit cast between character and graphic data types, this error indicates that such a cast was attempted with a non-Unicode character or graphic string.

The statement cannot be processed.

User response: Verify that the data types of all host variables in the statement are compatible with the manner in which they are used.

sqlcode: -301

sqlstate: 07006

SQL0302N The value of a host variable in the EXECUTE or OPEN statement is out of range for its corresponding use.

Explanation: The value of an input host variable was found to be out of range for its use in the SELECT, VALUES, or prepared statement.

One of the following occurred:

- The corresponding host variable or parameter marker used in the SQL statement is defined as string, but the input host variable contains a string that is too long.
- The corresponding host variable or parameter marker used in the SQL statement is defined as numeric, but the input host variable contains a numeric value that is out of range.
- The terminating NUL character is missing from the C language NUL-terminated character string host variable.
- Federated system users: in a pass-through session, a data source-specific restriction might have been violated.

This error occurs as a result of specifying either an incorrect host variable or an incorrect SQLLEN value in an SQLDA on an EXECUTE or OPEN statement.

The statement cannot be processed.

User response: Ensure that the input host variable value is the correct type and length.

If the input host variables supply values to parameter markers, match values with the implied data type and length of the parameter marker.

Federated system users: for a pass-through session, determine what data source is causing the error.

Examine the SQL dialect for that data source to determine which specific restriction has been violated, and adjust the failing statement as needed.

sqlcode: -302

sqlstate: 22001, 22003

SQL0303N A value cannot be assigned to a host variable in the SELECT, VALUES, FETCH or assignment statement because the data types are not compatible.

Explanation: An embedded SELECT, VALUES, FETCH or assignment statement assigns to a host variable, but the data type of the variable is not compatible with the data type of the corresponding SELECT-list, VALUES-list, or right-hand side of the assignment statement element. For a user-defined data type, the host variable might be defined with an associated built-in data type that is not compatible with the result type of the FROM SQL transform function defined in the transform group for the statement. For example, if

SQL0304N • SQL0310N

the data type of the column is date or time, the data type of the variable must be character with an appropriate minimum length.

The statement cannot be processed.

User response: Verify that the table definitions are current and that the host variable has the correct data type. For a user-defined data type, verify that the associated built-in type of the host variable is compatible with the result type of the FROM SQL transform function defined in the transform group for the statement.

sqlcode: -303

sqlstate: 42806

SQL0304N A value cannot be assigned to a host variable because the value is not within the range of the host variable's data type.

Explanation: A FETCH, VALUES, SELECT, or assignment into a host variable list failed because the host variable was not large enough to hold the retrieved value.

The statement cannot be processed. No data was retrieved.

User response: Verify that table definitions are current and that the host variable has the correct data type. For the ranges of SQL data types, refer to the *SQL Reference*.

Federated system users: for the ranges of data types that are returned from a data source, refer to the documentation for that data source.

sqlcode: -304

sqlstate: 22001, 22003

SQL0305N The NULL value cannot be assigned to a host variable because no indicator variable is specified.

Explanation: A FETCH, assignment, or embedded SELECT or VALUES operation resulted in the retrieval of a NULL value to be inserted into a host variable for which no indicator variable was provided. An indicator variable must be supplied if a column can return a NULL value.

The statement cannot be processed. No data was retrieved.

User response: Examine the definition of the FETCH or SELECT object table, the elements of the VALUES list, or the right-hand side of the assignment statement. Correct the program to provide indicator variables for all host variables where NULL values from those columns can be retrieved.

sqlcode: -305

sqlstate: 22002

SQL0306N The host variable *name* is undefined.

Explanation: The host variable *name* is not declared in any DECLARE SECTION.

The statement cannot be processed.

User response: Ensure that the host variable is declared and the name spelled correctly.

SQL0307N The host variable *name* is already defined.

Explanation: The host variable *name* has already been declared in a DECLARE SECTION.

The definition is ignored. The previous definition is used.

User response: Ensure that the host variable name is spelled correctly and the name is defined only once for each program.

SQL0308N The limit on the number of host variables has been reached.

Explanation: The limit on the number of host variables is dependent on how many will fit in the HOST_VARS column of SYSPLAN. This limit has been reached.

The remaining variable declarations are ignored.

User response: Either simplify the program, split the program into smaller, separate programs, or do both.

SQL0309N The value of a host variable in the OPEN statement is NULL, but its corresponding use cannot be NULL.

Explanation: The value of an input host variable was found to be NULL but the corresponding use in the SELECT, VALUES, or prepared statement did not specify an indicator variable.

The statement cannot be processed.

User response: Ensure you need a USING clause. Otherwise, ensure an indicator variable is specified only if required.

sqlcode: -309

sqlstate: 07002

SQL0310N SQL statement contains too many host variables.

Explanation: The maximum number of host variables was exceeded in the statement.

The statement cannot be processed.

User response: Ensure the statement has fewer host variables or is less complex.

SQL0311N The length of string host variable number *var-number* is negative or greater than the maximum.

Explanation: When evaluated, the length specification for the string host variable, whose entry in the SQLDA is indicated by <var-number> (based at 1), was negative or greater than the maximum defined for that host variable.

The statement cannot be processed.

User response: Correct the program to ensure that the lengths of all string host variables are not negative or that they are not greater than the maximum allowed length.

sqlcode: -311

sqlstate: 22501

SQL0312N The variable *variable-name* is not defined or not usable.

Explanation: The variable *variable-name* appears in the SQL statement, but one of the following conditions exists:

- The host variable *variable-name* appears in the SQL statement, but variables are not allowed in dynamic SQL statements or in DDL statements.
- The host variable *variable-name* is a structure used where structure references are not permitted. When a structure reference is used in an SQL statement, it is treated as if a comma-separated list of its component fields had been used instead. Since a list of host variables is not permitted in SQL statements such as PREPARE, neither is a reference to a structure with multiple fields.

The statement cannot be processed.

User response: Do one of the following and try the request again:

- Use parameter markers instead of the host variables in dynamic SQL statements.
- Remove references to host variables in DDL statements.
- Replace the reference *variable-name* with a host variable that is not a structure.

sqlcode: -312

sqlstate: 42618

SQL0313N The number of variables in the EXECUTE statement, the number of variables in the OPEN statement, or the number of arguments in an OPEN statement for a parameterized cursor is not equal to the number of values required.

Explanation: The number of variables specified in the EXECUTE or OPEN statement does not equal the number of variables required for the parameter markers appearing in the SQL statement.

If a parameterized cursor is referenced, the number of cursor arguments is not the same as the number expected.

User response: Correct the application program so the number of variables specified in the EXECUTE or OPEN statement is correct for the parameter markers in the SQL statement.

Correct the parameterized cursor reference so that the correct number of arguments is specified.

sqlcode: -313

sqlstate: 07001, 07004

SQL0314N The host variable *name* is incorrectly declared.

Explanation: The host variable *name* is not declared correctly for one of the following reasons:

- The type specified is not one that is supported.
- The length specification is 0, negative, or too large.
- An initializer is used.
- An incorrect syntax is specified.

The variable remains undefined.

User response: Ensure that you correctly specify only the declarations the database manager supports.

SQL0315N The host variable is incorrectly declared.

Explanation: The host variable is not declared correctly for one of the following reasons:

- The type specified is not one that is supported.
- The length specification is 0, negative or too large.
- An incorrect syntax is specified.

The variable remains undefined.

User response: Ensure that you correctly specify only the declarations the database manager supports.

SQL0317N No END DECLARE SECTION was found after a BEGIN DECLARE SECTION.

Explanation: The end of input was reached during processing of a DECLARE SECTION.

Precompilation is terminated.

User response: Add an END DECLARE SECTION statement to end a DECLARE SECTION.

SQL0318N An END DECLARE SECTION was found without a previous BEGIN DECLARE SECTION.

Explanation: An END DECLARE SECTION statement was found, but there was no previous BEGIN DECLARE SECTION.

The statement cannot be processed.

User response: Enter a BEGIN DECLARE SECTION before an END DECLARE SECTION.

SQL0324N The *usage variable name* is the wrong type.

Explanation: Either the INDICATOR variable *name* is not a small integer or the STATEMENT variable *name* is not a character data type.

The statement cannot be processed.

User response: Ensure that the variable is the correct type and is specified correctly.

SQL0327N The row cannot be inserted into table *table-name* because it is outside the bounds of the defined data partition ranges.

Explanation: If the operation is an insert or an update, the value of the table partitioning key for the row is not within range of values for any defined data partition. If the operation is altering a table to become a range-partitioned table, then there exists one or more rows in the table with a table partitioning key value that is not within the range of values for any defined data partition.

The statement cannot be processed.

User response: For an insert or update operation, ensure that the table partitioning key columns are within the specified ranges for the data partitions of the table. An additional data partition may need to be added to the table. If altering a table to become a range-partitioned table, ensure that the necessary ranges are specified to allow all of the data in the table to be within a range of a data partition.

sqlcode: -327

sqlstate: 22525

SQL0329N The path name list *string-constant-or-host-variable* is not valid.

Explanation: String constant or input host variable *string-constant-or-host-variable* contains a path name list that is not valid. The maximum number of schema names for the SQL path (FUNCPATH bind option or CURRENT PATH special register) or package path (CURRENT PACKAGE PATH special register) has been exceeded. See the Limits appendix of the SQL

Reference for details of this limit.

The statement or command cannot be processed.

User response: Specify fewer schema names so as to not exceed the limit. Consider consolidating user-defined functions, procedures, methods, distinct types, or packages to fewer schemas.

sqlcode: -329

sqlstate: 0E000

SQL0330N A string cannot be used because it cannot be processed. Reason **code=reason-code**. Code point=*code-point*. Host variable position=*host-variable-position*.

Explanation: A string cannot be processed because a translation error occurred during the translation of a string to a different coded character set. The type of error is indicated by the *reason-code*:

- 8 Length exception (for example, expansion required for PC MIXED data exceeds the maximum length of the string).
- 12 Invalid code point (for example, use of the ERRORBYTE option of SYSSTRINGS).
- 16 Form exception (for example, invalid MIXED data).
- 20 Conversion procedure error (for example, an exit on a z/OS server set the length control field of the string to an invalid value).
- 24 Single byte character found in string contained in a wchar_t host variable.

If the *reason-code* is 12, *code-point* is the invalid code point. Otherwise, *code-point* is either blank or an additional reason code returned by an exit. If the string is the value of an input host variable, the position-number is the ordinality of the variable in the SQLDA. If the string is not the value of a host variable, the position-number is blank.

The statement cannot be processed.

User response: Take one of the following actions based on the reason-code:

- 8 Extend the maximum length of the host variable to allow for the expansion that occurs when the string is converted.
- 12 Either change the convert table to accept the code-point or the data to eliminate the code-point.
- 16 If the string is described as MIXED data, either change its description or the string to conform to the rules for well-formed mixed data.
- 20 Correct the conversion procedure.

- 24 Delete the single byte character from the graphic string.

sqlcode: -330

sqlstate: 22021

SQL0332N Character conversion from the source code page *source-code-page* to the target code page *target-code-page* is not supported.

Explanation: The operation failed because there is no code page conversion between the *source-code-page* and *target-code-page*. This may be due to one of the following reasons:

1. The character repertoires of the source code page and the target code page are incompatible, and therefore may cause character loss and corruption when converting between the source and target code pages.
2. This specific code page conversion is not supported.

Some of the possible operations that can cause this error include:

- Connecting a client to a database where the client's code page is different from the database code page.
- Executing an SQL statement where the client's code page is different from the database code page.
- Importing or exporting an IXF file where the file's code page is different from the database code page.
- Federated system users: the data source does not support the specified code page conversion.

User response:

1. Make the source and target code pages compatible with each other. Search the DB2 information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using the phrase "Code set Territory code" for compatibility of the supported DB2 code pages. To set the client's code page compatible with the database code page:
 - On Unix platforms, set the LANG, LC_CTYPE or LC_ALL environment variable to a locale whose code page is compatible with the database code page. Consult the platform documentation to see the valid locale names and the code page associated with each of them.
 - On Windows platforms, set the DB2CODEPAGE registry variable to override the client's code page with a value compatible with the database code page.
2. For database manager code page support, search the DB2 information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using the phrase "Code set Territory code". For federated system users, see the Federated Systems Guide for data source code page. If the source and

target code pages are compatible, then DB2 currently does not support this particular code page conversion. Contact your technical service representative to determine if such support can be added.

DB2 UDB for iSeries users should be aware that character or graphic columns with CCSID 65535 are not supported. Character or graphic columns with CCSID 65535 must be converted to a supported CCSID (using CAST) before they can be accessed using DB2 Connect.

sqlcode: -332

sqlstate: 57017

SQL0334N Overflow occurred while performing conversion from codepage *source* to codepage *target*. The maximum size of the target area was *max-len*. The source string length was *source-len* and its hexadecimal representation was *string*.

Explanation: During the execution of the SQL statement, a code page conversion operation has resulted in a string that is longer than the maximum size of the target object.

User response: Modify the data to avoid the overflow condition, depending on the circumstances, by:

- decreasing the length of the source string or increasing the size of the target object (refer to the note that follows this list),
- altering the operation,
- casting the encrypted data value to a VARCHAR string with a larger number of bytes before using it in a decryption function, or
- ensuring that the application codepage and the database codepage are the same. This eliminates the need for codepage conversions for most connections.

Note: Automatic promotion of character or graphic string data types will not occur as part of character conversion. If the resultant string length exceeds the maximum length of the data type of the source string then an overflow has occurred. To correct this situation either change the data type of the source string or use data type casting to allow for an increase in the string length due to conversion.

sqlcode: -334

sqlstate: 22524

SQL0336N The scale of the decimal number must be zero.

Explanation: The decimal number is used in a context where the scale must be zero. This can occur when a decimal number is specified in a CREATE or ALTER

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SEQUENCE statement for START WITH, INCREMENT, MINVALUE, MAXVALUE or RESTART WITH.

The statement cannot be processed.

User response: Change the decimal number to remove any non-zero digits from the right side of the decimal delimiter.

sqlcode: -336

sqlstate: 428FA

SQL0338N An ON clause associated with a JOIN operator or in a MERGE statement is not valid.

Explanation: An ON clause associated with a JOIN operator or in a MERGE statement is not valid for one of the following reasons.

- The ON clause cannot include any subqueries.
- Column references in an ON clause must only reference columns of tables that are in the scope of the ON clause.
- Scalar fullselects are not allowed in the expressions of an ON clause.
- A function referenced in an ON clause of a full outer join must be deterministic and have no external action.
- A dereference operation (->) cannot be used.
- A SQL function or SQL method cannot be used.
- The ON clause cannot include an XMLQUERY or XMLEXISTS expression.

The statement cannot be processed.

User response: Correct the ON clause to reference appropriate columns or delete any subqueries or scalar fullselects. Remove any dereference operations, SQL functions, or SQL methods from the ON clause.

If using full outer join ensure that all functions in the ON clause are deterministic and have no external action.

sqlcode: -338

sqlstate: 42972

SQL0340N The common table expression *name* has the same identifier as another occurrence of a common table expression definition within the same statement.

Explanation: The common table expression name *name* is used in the definition of more than one common table expressions in the statement. The name used to describe a common table expression must be unique within the same statement.

The statement cannot be processed.

User response: Change the name of one of the common table expressions.

sqlcode: -340

sqlstate: 42726

SQL0341N A cyclic reference exists between the common table expressions *name1* and *name2*.

Explanation: The common table expression *name1* refers to *name2* in a FROM clause within its fullselect and *name2* refers to *name1* in a FROM clause within its fullselects. Such forms of cyclic references are not allowed.

The statement cannot be processed.

User response: Remove the cyclic reference from one of the common table expressions.

sqlcode: -341

sqlstate: 42835

SQL0342N The common table expression *name* cannot use SELECT DISTINCT and must use UNION ALL because it is recursive.

Explanation: There are two possible explanations:

- A fullselect within the common table expression *name* cannot start with SELECT DISTINCT because the common table expression is recursive.
- A fullselect within the common table expression *name* specified UNION instead of UNION ALL as required for recursive common table expressions.

The statement cannot be processed.

User response: Remove the keyword DISTINCT from the common table expression, add the keyword ALL following UNION, or remove the recursive reference within the common table expression.

sqlcode: -342

sqlstate: 42925

SQL0343N The column names are required for the recursive common table expression *name*.

Explanation: The recursive common table expression *name* must include the specification of the column names following the identifier of the common table expression.

The statement cannot be processed.

User response: Add column names following the identifier of the common table expression.

sqlcode: -343

sqlstate: 42908

SQL0344N The recursive common table expression *name* has mismatched data types, lengths or code pages for column *column-name*.

Explanation: The recursive common table expression *name* has a column *column-name* that is referred to in the iterative fullselect of the common table expression. The data type, length and code page are set based on the initialization fullselect for this column. The result of the expression for the column *column-name* in the iterative fullselect has a different data type, length or code page that may result in failure to assign the value for the column.

The statement cannot be processed.

User response: Correct the column used in the fullselects of the recursive common table expression so that the initialization column matches the iterative columns.

sqlcode: -344

sqlstate: 42825

SQL0345N The fullselect of the recursive common table expression *name* must be the UNION of two or more fullselects and cannot include column functions, GROUP BY clause, HAVING clause, ORDER BY clause, or an explicit join including an ON clause.

Explanation: The common table expression *name* includes a reference to itself and therefore:

- must be the union of two or more fullselects
- cannot include a GROUP BY clause
- cannot have column functions
- cannot include a HAVING clause
- cannot include an ORDER BY clause on the iterative fullselect
- and cannot include an explicit join with an ON clause.

The statement cannot be processed.

User response: Change the common table expression by:

- making it a union of two or more fullselects
- removing any column functions, GROUP BY clause, HAVING clause, ORDER BY clause, or explicit JOIN including an ON clause.
- removing the recursive reference.

sqlcode: -345

sqlstate: 42836

SQL0346N An invalid reference to common table expression *name* occurs in the first fullselect, as a second occurrence in the same FROM clause, or in the FROM clause of a subquery.

Explanation: The common table expression *name* includes an invalid reference to itself as described by one of the following.

- A recursive reference in the first fullselect before the UNION ALL set operator. The first fullselect must be an initialization and cannot include a recursive reference.
- More than one reference to the same common table expression in the same FROM clause. Such references are not permitted in recursive common table expression.
- A recursive reference in the FROM clause of a subquery. A recursion cycle cannot be defined using a subquery.

The statement cannot be processed.

User response: Change one of the following:

- the fullselect prior to the union operator so that it does not include a recursive reference
- the FROM clause containing more than one reference to the same common table expression to just one reference
- the FROM clause of the subquery so that it does not reference the common table expression.

sqlcode: -346

sqlstate: 42836

SQL0347W The recursive common table expression *name* may contain an infinite loop.

Explanation: The recursive common table expression called *name* may not complete. This warning is based on not finding specific syntax as part of the iterative portion of the recursive common table expression. The expected syntax includes:

- incrementing an INTEGER column in the iterative select list by 1.
- a predicate in the where clause of the iterative portion of the form "counter_col < constant" or "counter_col < :hostvar".

The absence of this syntax in the recursive common table expression may result in an infinite loop. The data or some other characteristic of the recursive common table expression may allow the successful completion of the statement anyway.

User response: To prevent an infinite loop, include the expected syntax as described.

sqlcode: +347

sqlstate: 01605

SQL0348N *sequence-expression cannot be specified in this context.*

Explanation: The statement contains a NEXT VALUE expression or PREVIOUS VALUE expression in an invalid context. NEXT VALUE expressions and PREVIOUS VALUE expressions cannot be specified in the following contexts:

- join condition of a full outer join
- DEFAULT value for a column in a CREATE TABLE or ALTER TABLE statement
- generated column definition in a CREATE TABLE or ALTER TABLE statement
- condition of a CHECK constraint
- CREATE TRIGGER statement (a NEXT VALUE expression may be specified, but a PREVIOUS VALUE expression cannot be specified)
- CREATE VIEW statement, CREATE METHOD statement or CREATE FUNCTION statement

NEXT VALUE expressions cannot be specified in the following contexts:

- CASE expression
- argument list of an aggregate function
- subquery except in the fullselect of an INSERT, UPDATE or VALUES INTO statement
- SELECT statement for which the outer SELECT contains a DISTINCT operator
- SELECT statement for which the outer SELECT contains a GROUP BY clause
- join condition of a join
- SELECT statement for which the outer SELECT is combined with another SELECT statement using the UNION, INTERSECT or EXCEPT set operator
- nested table expression
- argument list of a table function
- argument list of an XMLTABLE, XMLQUERY or XMLEXISTS expression
- WHERE clause of the outer-most SELECT statement, DELETE or UPDATE statement
- ORDER BY clause of the outer-most SELECT statement
- select-cause of the fullselect of an expression, in the SET clause of an UPDATE statement
- IF, WHILE, DO...UNTIL, or CASE statement in an SQL routine
- argument list of the CONNECT_BY_ROOT operator and the SYS_CONNECT_BY_PATH function
- START WITH and CONNECT BY clauses

The statement cannot be executed.

User response: Remove the reference to the sequence

expression and resubmit the statement.

sqlcode: -348

sqlstate: 428F9

SQL0349N *The specification of the NEXT VALUE expression for the column in position column-position must match the specification of all other expressions for the same column for all rows.*

Explanation: The expression specified for the column in position *column-position* of a VALUES clause of a multiple row INSERT statement or VALUES expression included a NEXT VALUE expression. When an expression containing a NEXT VALUE expression is used to specify the value of a column in one of these contexts, then that same expression must be specified for that column for all rows. For example, the following INSERT statement succeeds:

```
INSERT INTO T1
VALUES(
    NEXT VALUE FOR sequence1 + 5, 'a'
),
(
    NEXT VALUE FOR sequence1 + 5, 'b'
),
(
    NEXT VALUE FOR sequence1 + 5, 'c'
)
```

However, the following INSERT statement fails:

```
INSERT INTO T1
VALUES(
    NEXT VALUE FOR sequence1 + 5, 'a'
),
(
    NEXT VALUE FOR sequence1 + 5, 'b'
),
(
    NEXT VALUE FOR sequence1 + 4, 'c'
)
```

User response: Correct the syntax and resubmit the statement.

sqlcode: -349

sqlstate: 560B7

SQL0350N *The column column-name was implicitly or explicitly referenced in a context where the data type of the column is not supported.*

Explanation: The ALTER statement, CREATE statement, or DECLARE GLOBAL TEMPORARY TABLE statement is invalid for one of the following reasons:

- A LOB, LONG VARCHAR, LONG VARGRAPHIC, XML, or structured type column cannot be used in a key.

- A LOB, LONG VARCHAR, LONG VARGRAPHIC, XML, or structured type column cannot be used in a unique constraint.
- A LOB, LONG VARCHAR, LONG VARGRAPHIC, XML, or structured type column cannot be used in a generated column.
- A LONG VARCHAR, LONG VARGRAPHIC, SYSPROC.DB2SECURITYLABEL, XML, or structured type column cannot be used in a created temporary table.
- A LONG VARCHAR, LONG VARGRAPHIC, SYSPROC.DB2SECURITYLABEL, or structured type column cannot be used in a declared temporary table.
- A LOB column cannot be used in an index definition.
- An XML column can only be used in an index definition if it is the only column and an XMLPATTERN clause is specified.
- A structured type column can only be used in an index definition if it is the only column and has an associated index extension specified.
- The definition of a column mask or a row permission cannot reference a LOB or XML column.
- A column mask cannot be defined for a LOB or XML column.

The same restrictions apply to a distinct type column where the base data type is subject to one of the restrictions in the listed previously.

The statement cannot be processed.

User response: Remove the column from the context where the data type is not supported or change the data type of the column. If indexing an XML column or structured type column, ensure that it is the only column and that the index definition includes the appropriate clauses.

sqlcode: -350

sqlstate: 42962

SQL0351N An unsupported SQLTYPE was encountered in position *position-number* of the output SQLDA (select list).

Explanation: The element of the SQLDA at position *position-number* is for a data type that either the application requestor or the application server does not support. If the application is not using the SQLDA directly, *position-number* could represent the position of an element in the select list or a parameter of a CALL statement.

The statement cannot be processed.

User response: Change the statement to exclude the unsupported data type. For a select statement, remove the names of any columns in the select-list with the unsupported data type or use a cast in the query to

cast the column to a supported data type.

sqlcode: -351

sqlstate: 56084

SQL0352N An unsupported SQLTYPE was encountered in position *position-number* of the input list (SQLDA).

Explanation: The element of the SQLDA at position *position-number* is for a data type that either the application requestor or the application server does not support. If the application is not using the SQLDA directly, *position-number* could represent the position of an input host variable, parameter marker, or a parameter of a CALL statement.

The statement cannot be processed.

User response: Change the statement to exclude the unsupported data type.

sqlcode: -352

sqlstate: 56084

SQL0355N The column *column-name*, as defined, is too large to be logged.

Explanation: Large Object data types (BLOB, CLOB, and DBCLOB) may be created in sizes up to 2 gigabytes (2147483647 bytes). Logging of data values is allowed only upon objects which are less than or equal to than 1 gigabyte (1073741823 bytes) in size. Therefore, large objects greater than 1 gigabyte in size can not be logged.

User response: Either explicitly indicate logging of data is not required, by using the NOT LOGGED phrase during column creation, or reduce the maximum size of the column to 1 gigabyte or below.

sqlcode: -355

sqlstate: 42993

SQL0359N The range of values for the identity column or sequence is exhausted.

Explanation: DB2 attempted to generate a value for an identity column or sequence object, however all allowable values have already been assigned.

The statement cannot be processed.

User response: For an identity column, redefine the table with a larger range of values for the identity column. If a MAXVALUE or MINVALUE specification has been made that limits the range of values to be less than the range for the data type of the column, then the column can be altered to expand the range of valid values. Otherwise, the identity column must be recreated which requires that the table be recreated. First drop the existing table, and then recreate the table with a different data type for the identity column,

specifying a data type that has a larger range of values than the current data type for the identity column.

For a sequence object, redefine the sequence with a larger range of values. If a MAXVALUE or MINVALUE clause limits the range of values to less than the range for the data type of the sequence object, then alter the sequence to expand the range of valid values.

Otherwise, drop the sequence object and reissue the CREATE SEQUENCE statement specifying a data type that allows a larger range of values.

sqlcode: -359

sqlstate: 23522

SQL0360W DATALINK values may not be valid because the table *table-name* is in Datalink Reconcile Pending (DRP) or Datalink Reconcile Not Possible (DRNP) state.

Explanation: DATALINK values in table *table-name* may not be valid because the table is either in Datalink Reconcile Pending (DRP) or Datalink Reconcile Not Possible (DRNP) state. While in either of these states, control of the files on the DB2 Data Links Manager is not guaranteed.

Statement processing continues.

User response: Refer to the Administration Guide for information on Datalink Reconcile Pending (DRP) and Datalink Reconcile Not Possible (DRNP) states to take appropriate action.

sqlcode: +360

sqlstate: 01627

SQL0361W The operation was successful, but some portion of the operation was unsuccessful. Tokens *msg-token1* and *msg-token2* provide further details about the operation *msg-token3*.

Explanation: The operation was successful as some of what was specified completed successfully, but some parts of the operation were unsuccessful.

User response: Determine what action to take, if any, depending on the operation *msg-token3*:
 SYSPROC.ADMIN_REVALIDATE_DB_OBJECTS - Some of the objects specified to be revalidated were not able to be revalidated successfully because at least one object that they reference does not exist or continues to be invalid. One object not revalidated is *msg-token1* because of its reference to object *msg-token2*. If the objects not yet revalidated still need to be revalidated, then create any objects that should exist and correct any objects that continue to be invalid that are referenced by the objects to be revalidated. The SYSCAT.INVALIDOBJECTS catalog view contains information on invalid objects. If *msg-token1* refers to an object of permission or mask, and *msg-token2* contains

CREATE PERMISSION or CREATE MASK, then ensure the user that runs ADMIN_REVALIDATE_DB_OBJECTS has SECADM authority.

sqlcode: +361

sqlstate: 0168B

SQL0364W DECFLOAT exception *exception-type* has occurred during operation *operation*.

Explanation: The exception *exception-type* occurred while doing an *operation-type* operation on a field whose data type is DECFLOAT. The exception occurred while processing an arithmetic expression.

The possible values for *exception-type* are:

- UNDERFLOW for an underflow exception
- OVERFLOW for an overflow exception
- INEXACT for an inexact exception
- INVALID OPERATION for an invalid operation exception
- DIVISION BY ZERO for an division by zero exception

The possible values for *operation-type* are:

- ADDITION for an addition operation
- SUBTRACTION for a subtraction operation
- MULTIPLICATION for a multiplication operation
- DIVISION for a division operation
- NEGATION for a negation operation
- BUILT-IN FUNCTION for a built-in function operation

The DECFLOAT exception may occur due to a temporary internal copy of the data that was converted to DECFLOAT for the operation.

Any of the exceptions can occur during the processing of a built-in function. If the *operation-type* is FUNCTION, then the exception occurred while processing either an input, intermediate, or final value. The cause could be that the value of a parameter is out of range.

Statement processing continues.

User response: To stop this warning from being returned, examine the expression for which the warning occurred to see if the cause, or the likely cause, of the exception can be determined. The exception may be data-dependent, in which case it will be necessary to examine the data that was being processed at the time the warning occurred. See the SQL Reference for the supported ranges of DECFLOAT values.

sqlcode: +364

sqlstate: 0168C

sqlstate: 0168D

sqlstate: 0168E

sqlstate: 0168F

SQL0365N The value of the extended indicator variable in position *position* is not valid.

Explanation: A value of default (-5) or unassigned (-7) was used for the extended indicator variable in position *position*. In this context, these values are not allowed. These values are only allowed in INSERT, UPDATE, and MERGE statements, as the source for a column value. The host variable or parameter marker representing the default or unassigned value must not be in an expression, except as a single variable or the CAST of a single variable.

Also, values of default (-5) or unassigned (-7) must not be used for extended indicator variables in the following situations:

- A VALUES clause that specifies more than one rows of values
- An INSERT, UPDATE, or MERGE statement that is updating or inserting into a nickname

If *position* is 0, a mismatch in extended indicator support occurred. Extended indicator support was not explicitly enabled or disabled for the dynamically prepared UPDATE statement, and there was a mismatch between the extended indicator support that was explicitly enabled or disabled for the dynamically prepared SELECT statement that is the target of the update and the extended indicator support for the bind or precompile.

User response: Change the value of the extended indicator variable to an allowable value for the context in which it is used.

If *position* is 0, either explicitly enable or disable extended indicator support for the dynamically prepared UPDATE statement, or ensure that the extended indicator support specified for the dynamically prepared SELECT statement that is the target of the update is the same as the extended indicator support for the bind or precompile.

sqlcode: -365

sqlstate: 22539

SQL0368N The DB2 Data Links Manager *dln-name* is not registered to the database.

Explanation: The DB2 Data Links Manager *dln-name* is not registered to the database. Registered DB2 Data Links Managers are ignored if the database manager configuration parameter DATALINKS is set to NO. The DB2 Data Links Manager may have been dropped using the DROP DATALINKS MANAGER command. It

is possible that a new incarnation of the DB2 Data Links Manager with the same name is currently registered; in that case, the error pertains to one or more previously dropped incarnations of that DB2 Data Links Manager.

The statement cannot be processed.

User response: Ensure that the database manager configuration parameter DATALINKS is set to YES. DATALINK values that are links to previously dropped DB2 Data Links Managers should be removed using the reconcile utility. For additional details, see the usage notes for the DROP DATALINKS MANAGER command in the *Command Reference*.

sqlcode: -368

sqlstate: 55022

SQL0370N The parameter in position *n* must be named in the CREATE FUNCTION statement for LANGUAGE SQL function *name*.

Explanation: All parameters for functions defined with LANGUAGE SQL must have a *parameter-name* for each parameter.

The statement cannot be processed.

User response: Include a parameter name for each parameter of the function.

sqlcode: -370

sqlstate: 42601

SQL0372N Column types of ROWID, IDENTITY, security label, row change timestamp, row-begin, row-end, or transaction start-ID can only be specified once for a table.

Explanation: An attempt was made to do one of the following:

- Create a table with more than one IDENTITY column.
- Add an IDENTITY column to a table which already has one.
- Create a table with more than one ROWID column.
- Add a ROWID column to a table which already has one.
- Create a table with more than one security label column.
- Add a security label column to a table that already has one.
- Create a table with more than one row change timestamp column.
- Add a row change timestamp column to a table that already has one.
- Create a table with more than one row-begin column.

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- Add a row-begin column to a table that already has one.
- Create a table with more than one row-end column.
- Add a row-end column to a table that already has one.
- Create a table with more than one transaction start-ID column.
- Add a transaction start-ID column to a table that already has one.
- Define a period more than once in a table.

The ROWID data type is supported in DB2 for z/OS and DB2 for iSeries.

The statement cannot be processed.

User response: For a CREATE TABLE statement, specify the specified attribute only once for the table. For an ALTER TABLE statement, the specified column already exists for the table. Do not attempt to define a period more than once in a table.

sqlcode: -372

sqlstate: 428C1

SQL0373N A DEFAULT clause cannot be specified for column or SQL variable *name*

Explanation: A DEFAULT clause was specified when defining or changing column or SQL variable *name*. The data type for the column definition or SQL variable declaration does not support DEFAULT. A CREATE or ALTER TABLE statement cannot use the DEFAULT clause when defining the following:

- an identity column
- a ROWID column
- an XML column
- a row change timestamp column
- a security label column
- a row-begin column
- a row-end column
- a transaction-start-ID column

The statement cannot be processed.

User response: Remove the DEFAULT clause and resubmit the statement.

sqlcode: -373

sqlstate: 42623

SQL0374N The *clause* clause has not been specified in the CREATE FUNCTION statement for LANGUAGE SQL function *function-name* but an examination of the function body reveals that it should be specified.

Explanation: The following situations may be the cause of this error.

MODIFIES SQL DATA must be specified if the body of the function defined with LANGUAGE SQL can modify SQL data or if it calls a function or a procedure that can modify SQL data.

READS SQL DATA must be specified if the body of the function defined with LANGUAGE SQL contains a subselect or if it calls a function that can read sql data.

The statement cannot be processed.

User response: Either specify the clause or change the function body.

sqlcode: -374

sqlstate: 428C2

SQL0385W Assignment to an SQLSTATE or SQLCODE variable in an SQL routine may be over-written and does not activate any handler.

Explanation: The SQL routine includes at least one statement that assigns a value to the SQLSTATE or SQLCODE special variables. These variables are assigned values by processing of SQL statements in the SQL routine. The value assigned may therefore be over-written as a result of the SQL statement processing. Furthermore, the assignment of a value to the SQLSTATE special variable does not activate any handlers.

The routine definition was processed successfully.

User response: None required. Remove any assignments to the SQLSTATE or SQLCODE special variable to prevent the warning.

sqlcode: +385

sqlstate: 01643

SQL0388N In a CREATE CAST statement for function *function-name*, either the source *source-data-type-name* and target *target-data-type-name* are both built-in types or they are the same type.

Explanation: One of the data types must be a user-defined type. The source type and the target type cannot be the same data type.

The statement cannot be processed.

User response: Change the data type of either the source or the target.

sqlcode: -388

sqlstate: 428DF

SQL0389N The specific function instance *specific-name* identified in a CREATE CAST statement either has more than one parameter, has a parameter that does not match the source data type, or returns a data type that does not match the target.

Explanation: A cast function must

- have exactly one parameter,
- the data type of the parameter must be the same as the source data type,
- the result data type must be the same as the target data type.

The statement cannot be processed.

User response: Either chose a different function instance, change the source data type, or change the target data type.

sqlcode: -389

sqlstate: 428DG

SQL0390N The function *function-name* resolved to specific function *specific-name* that is not valid in the context where it is used.

Explanation: A function resolved to a specific function that is not valid in the context where it is used. If *specific-name* is an empty string, then the function resolved to the built-in function identified by *function-name*. Here is a list of some of the possible situations in which this message can be returned:

- The specific function is a table function where only a scalar, column, or row function is expected (such as creating a sourced scalar function).
- The specific function is a scalar, column, or row function where only a table function is expected (such as in the FROM clause of a query).
- The specific function is a row function where only a scalar or column function is expected.
- The specific function is allowed only in restricted contexts but is referenced in a context that is not allowed for the function. The description of the function specifies the contexts in which the function is allowed.
- The specified function has OUT or INOUT parameters and the context in which the function is used is not supported. A compiled function can be invoked only if the function invocation is the sole expression on the right hand side of a SET variable statement that is in a compound SQL (compiled) statement.
- The specified function is a compiled SQL function and the context in which the function is used is not supported in a partitioned database environment. A compiled function can only be invoked in a partitioned database environment if the function

invocation is the sole expression on the right hand side of a SET variable statement that is not in a compound SQL (inlined) statement.

- The specified function is a generic table function, but a typed-correlation clause was not specified.
- The specified function is not a generic table function, but a typed-correlation clause was specified.

The statement cannot be processed.

User response: Ensure that the correct function name and arguments are specified and that the current path includes the schema where the correct function is defined. You might need to change the function name, the current path (using SET CURRENT FUNCTION PATH or the FUNCPATH bind option), or change the context in which the function is used.

sqlcode: -390

sqlstate: 42887

SQL0391N Invalid use of the row based function *function-name*.

Explanation: The statement uses a row based function *function_name* that cannot be used for one of the following reasons:

- The function is used in a GROUP BY or a HAVING clause but is not also included in the select list.
- The function cannot be used in this context because of the recursive nature of the statement.
- The function cannot be used in a check constraint.
- The function cannot be used in a generated column.
- The function cannot be used in a view definition where the WITH CHECK OPTION clause is specified or any view dependent on such a view having the WITH CHECK OPTION clause specified.
- The function has an argument that does not resolve to a row of a base table. This would include the situation involving a result column of an outer join where NULL producing rows are possible.
- The function cannot be used on rows from a replicated materialized query table.

The statement cannot be processed.

User response: Remove *function-name* from the context where it is not allowed.

sqlcode: -391

sqlstate: 42881

SQL0392N SQLDA provided for cursor *cursor* has been changed from the previous fetch.

Explanation: The application is running with DB2 rules, and has requested that LOB data be returned as a LOB in one FETCH statement, and as a locator in another FETCH statement. This is not permitted.

User response: The statement cannot be executed.

Either do not use **DB2 rules**, or change the application to not change the data type code from LOB to locator (or the reverse) in the SQLDA between successive fetches.

sqlcode: -392

sqlstate: 42855

SQL0396N *Object-type object-name (specific name specific-name) attempted to execute an SQL statement during final call processing.*

Explanation: A routine *object-name* (specific name *specific-name*) attempted to execute an SQL statement (other than CLOSE cursor) during FINAL CALL (call-type = 255) processing. This is not allowed.

User response: Change the routine to not issue SQL statements during FINAL CALL (call-type = 255) processing.

sqlcode: -396

sqlstate: 38505

SQL0401N *The data types of the operands for the operation operator are not compatible or comparable.*

Explanation: The operation using *operator* cannot be processed for one of the following reasons:

- The data types of the operands must be comparable and compatible but there is at least one pair of types that is not comparable or compatible.
- The data type of an operand is XML which cannot be compared (with itself or any other type).
- The data type of an operand is DATALINK which cannot be compared (with itself or any other type).
- The data type of an operand is a structured type which cannot be compared (with itself or any other type).

Federated system users: this data type violation can be at the data source or at the federated server.

Some data sources do not provide the appropriate values for *operator*. In these cases the message token will have the following format: "<data-source>:UNKNOWN", indicating that the actual value for the specified data source is unknown.

The statement cannot be processed.

User response: Check all operand data types to ensure that they are comparable and compatible with the statement usage.

If all the SQL statement operands are correct and

accessing a view, check the data types of all the view operands.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the data type restrictions for that data source.

sqlcode: -401

sqlstate: 42818

SQL0402N *The data type of an operand of an arithmetic function or operation operator is invalid.*

Explanation: An invalid operand is specified for the arithmetic function or operator *operator*.

The statement cannot be processed.

User response: Correct the SQL statement syntax so all specified function or operator operands are valid.

A valid operand is either numeric or is capable of being implicitly cast to a numeric data type.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the operators applied to that data source.

sqlcode: -402

sqlstate: 42819

SQL0403W *The newly defined alias name resolved to the object name2 which is currently undefined.*

Explanation: The alias <name> has been defined upon:

- a table, view, module, or sequence which currently is not defined in the database
- another alias which resolves to a table, view, module, or sequence which is not defined in the database.

The object <name2> is the undefined object. This object must exist before any SQL statement (other than CREATE ALIAS) can successfully use the newly created alias. The specified alias <name> is created.

An inoperative view is considered to be undefined for the purposes of creating an alias.

User response: Ensure that the undefined object <name2> is defined prior to using the newly created alias in an SQL statement (other than CREATE ALIAS).

sqlcode: +403

sqlstate: 01522

SQL0407N Assignment of a NULL value to a NOT NULL column *name* is not allowed.

Explanation: One of the following occurred:

- The update or insert value was NULL, but the object column was declared as NOT NULL in the table definition. Consequently:
 - NULL values cannot be inserted into that column.
 - An update cannot set values in that column to NULL.
 - A SET transition-variable statement in a trigger cannot set values in that column to NULL.
- The update or insert value was DEFAULT, but the object column was declared as NOT NULL without WITH DEFAULT in the table definition. Consequently:
 - A default value of NULL cannot be inserted into that column.
 - An update cannot set default values of NULL in that column.
 - A SET transition-variable statement in a trigger cannot set default values of NULL in that column.
- The column name list for the INSERT statement omits a column declared NOT NULL and without WITH DEFAULT in the table definition.
- The view for the INSERT statement omits a column declared NOT NULL and without WITH DEFAULT in the base table definition.
- An alter table statement attempted to alter the column with SET NOT NULL, but the existing table data contained a row with the NULL value.

If the value for *name* is of the form "TBSPACEID=n1, TABLEID=n2, COLNO=n3", then the column name from the SQL statement was not available when the error was issued. The values provided identify the tablespace, table, and column number of the base table that does not allow NULL value.

Federated system users: this situation can be detected by the federated server or by the data source. Some data sources do not provide the appropriate values for *name*. In these cases the message token will have the following format: "<data source>:UNKNOWN", indicating that the actual value for the specified data source is unknown.

The statement cannot be processed.

Under some circumstances, the token *name* may not be filled in (sqlerrmc field of the SQLCA not filled in).

User response: Correct the SQL statement after examining the object table definition to determine which columns of the table have the NOT NULL attribute and do not have the WITH DEFAULT attribute.

If the value for *name* is of the form "TBSPACEID=n1,

TABLEID=n2, COLNO=n3", you can determine the table name and column name using the following query:

```
SELECT C.TABSCHEMA, C.TABNAME,
       C.COLNAME
FROM SYSCAT.TABLES AS T,
     SYSCAT.COLUMNS AS C
WHERE T.TBSPACEID = n1
      AND T.TABLEID = n2
      AND C.COLNO = n3
      AND C.TABSCHEMA = T.TABSCHEMA
      AND C.TABNAME = T.TABNAME
```

The table and column identified by this query may be the base table of a view for which the SQL statement failed.

If the error is returned as part of an alter table statement, when setting a column to NOT NULL, modify any row data for the column that contains the NULL value, and retry the statement.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the object definition for that data source. Remember that the defaults (NULL and NOT NULL) are not necessarily the same between data sources.

sqlcode: -407

sqlstate: 23502

SQL0408N A value is not compatible with the data type of its assignment target. Target name is *name*.

Explanation: The data type of the value to be assigned to the column, parameter, SQL variable, or transition variable by the SQL statement is incompatible with the declared data type of the assignment target.

The statement cannot be processed.

User response: Examine the statement and possibly the target table or view to determine the target data type. Ensure the variable, expression, or literal value assigned has the proper data type for the assignment target.

For a user-defined structured type, also consider the parameter of the TO SQL transform function defined in the transform group for the statement as an assignment target.

sqlcode: -408

sqlstate: 42821

SQL0409N The operand of a COUNT function is not valid.

Explanation: As specified in the SQL statement, the operand of the COUNT function does not conform to the rules of SQL syntax. Only COUNT(*) and COUNT(DISTINCT *column*) are allowed.

The statement cannot be processed.

User response: Specify COUNT(*) or COUNT(DISTINCT *column*).

NOTE: This message is only applicable to versions of DB2 prior to Version 2 .

sqlcode: -409

sqlstate: 42607

SQL0410N A numeric value *value* is too long.

Explanation: The specified value is too long. A floating-point string has a maximum length of 30 characters. A decimal floating-point string has a maximum length of 42 characters.

The statement cannot be processed.

User response: Shorten the specified literal.

sqlcode: -410

sqlstate: 42820

SQL0412N Multiple columns are returned from a subquery that is allowed only one column.

Explanation: In the context of the SQL statement, a fullselect is specified that can have only one column as a result.

The statement cannot be processed.

User response: Specify only one column when only a scalar fullselect is allowed.

sqlcode: -412

sqlstate: 42823

SQL0413N Overflow occurred during numeric data type conversion.

Explanation: During processing of the SQL statement, an overflow condition arose when converting from one numeric type to another. Numeric conversion is performed according to the standard rules of SQL.

Federated system users: numeric conversion can occur at the federated server, at data sources, or both.

The statement cannot be processed. No data was retrieved, updated, or deleted.

User response: Examine the syntax of the SQL statement to determine the cause of the error. If the

problem is data-dependent, it may be necessary to examine the data processed at the time of the error.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the data range restrictions for that data source.

sqlcode: -413

sqlstate: 22003

SQL0415N The data types of corresponding columns are not compatible in a fullselect that includes a set operator or in the multiple rows of a VALUES clause of an INSERT or fullselect.

Explanation: There are various statements where this error may occur.

- It may occur within a SELECT or VALUES statement that includes set operations (UNION, INTERSECT, or EXCEPT). The corresponding columns of the subselects or fullselects that make up the SELECT or VALUES statements are not compatible.
- It may occur within an INSERT statement that is inserting multiple rows. In this case, the corresponding columns of the rows specified in the VALUES clause are not compatible.
- It may occur within a SELECT or VALUES statement where the VALUES clause is used with multiple rows. In this case, the corresponding columns of the rows specified in the VALUES clause are not compatible.

It may occur within the array constructor, when the data type of the two values listed in the constructor are not compatible.

See Assignments and Comparisons in the SQL Reference for details on data type compatibility.

The statement cannot be processed.

User response: Correct the column names used in the SELECT statements or the expressions in the VALUES clause so that all corresponding columns are compatible types.

sqlcode: -415

sqlstate: 42825

SQL0416N You cannot specify a result column longer than 254 bytes in the SELECT or VALUES statements connected by a set operator other than UNION ALL.

Explanation: One of the SELECT or VALUES statements connected by a set operator specifies a result column that is longer than 254 bytes. VARCHAR or VARGRAPHIC result columns longer than 254 bytes can be used only with the UNION ALL set operator.

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The statement cannot be processed.

User response: Either use the UNION ALL operator instead of UNION, or remove the result columns longer than 254 bytes from the SELECT or VALUES statements.

sqlcode: -416

sqlstate: 42907

SQL0417N A statement string to be prepared contains parameter markers as the operands of the same operator.

Explanation: The statement string specified as the object of a PREPARE or EXECUTE IMMEDIATE contains a predicate or expression in which parameter markers have been used as operands of the same operator without a CAST specification. For example:

? > ?

The statement cannot be processed.

User response: This syntax is not supported. Use a CAST specification to give at least one of the parameter markers a data type.

sqlcode: -417

sqlstate: 42609

SQL0418N A statement contains a use of an untyped parameter marker, the DEFAULT keyword, or a null value that is not valid.

Explanation: Untyped parameter markers, the DEFAULT keyword, or an untyped null value (untyped expressions) cannot be used:

- in a SELECT list unless its type can be resolved based on the context of its use in the statement
- as the only argument of a datetime arithmetic operation
- in some cases as an argument of a scalar function
- as a standalone argument in a GROUP BY clause
- as a standalone argument in the PARTITION BY clause of an aggregation-specification of an OLAP-specification
- as a standalone argument in the ORDER BY clause of an aggregation-specification of an OLAP-specification
- if all result-expressions of a CASE expression are untyped
- for a simple CASE expression, if the expression following the CASE keyword is untyped and all expressions that follow the WHEN keyword are untyped
- if the result of a generation expression for a column is untyped

- if the same untyped expression is referred to in different contexts resolves to different data types. For example, given the following table:

```
CREATE TABLE order (ordered INT,  
                    amount DECIMAL(6,2)  
                    desc VARCHAR(100))
```

The following query will have a parameter marker that resolves to different data types:

```
MERGE INTO order USING (VALUES (?,?))  
AS x(a1,a2) ON (ordered=a1)  
WHEN MATCHED THEN UPDATE  
SET amount=a2, desc=a2;
```

- as an argument of an XMLQUERY, XMLEXISTS or XMLTABLE expression.
- as an argument of UNNEST, CARDINALITY, MAX_CARDINALITY or the first argument of TRIM_ARRAY, or used in array element specification.
- if both arguments of the NULLIF scalar function are untyped
- on the left hand side of an assignment statement when the data type of the right hand side cannot be determined
- if an untyped expression cannot be resolved based on context
- in period specifications or period clauses against views

Parameter markers can never be used:

- in a statement that is not a prepared statement
- in the fullselect of a CREATE VIEW statement
- in the triggered action of a CREATE TRIGGER statement

References to the PARAMETER function in the first argument of the XQuery function db2-fn:sqlquery are also considered to be parameter markers.

The statement cannot be processed.

User response: Correct the syntax of the statement. If untyped parameter markers or an untyped null value are not allowed, use the CAST specification to give the untyped expression a data type. If DEFAULT is not allowed, provide a value.

sqlcode: -418

sqlstate: 42610

SQL0419N A decimal divide operation is not valid because the result would have a negative scale.

Explanation: A specified decimal division is not valid because it will result in a negative scale.

The formula used internally to calculate the scale of the result for decimal division is:

Scale of result = 31 - np + ns - ds

where np is the precision of the numerator, ns is the scale of the numerator, and ds is the scale of the denominator.

Federated system users: Decimal division can occur at the federated server, at data sources, or both. The specified decimal division results in an invalid scale for that data source.

The statement cannot be processed.

User response: Examine and ensure the precision and scale of all columns that may participate in a decimal division. Note that an integer or small integer value may be converted to a decimal for this calculation.

Federated system users: if the reason is unknown, isolate the problem to the data source failing the request and examine the data range restrictions for that data source.

sqlcode: -419

sqlstate: 42911

SQL0420N Invalid character found in a character string argument of the function
function-name.

Explanation: The function *function-name* has a character string argument that contains a character that is not valid in a numeric SQL constant. The function may have been called as a result of using the CAST specification with *function-name* as the target data type or when an argument is implicitly cast to a numeric data type. The function or data type used in the SQL statement may be a synonym for *function-name*.

If a decimal character is specified in the DECIMAL function then that is the character that must be used in place of the default decimal character.

User response: Ensure that the character strings that are being converted to numeric types contain only characters that are valid in numeric SQL constants, using the decimal character, if specified.

sqlcode: -420

sqlstate: 22018

SQL0421N The operands of a set operator or a VALUES clause do not have the same number of columns.

Explanation: The operands of a set operator such as UNION, EXCEPT, or INTERSECT must have the same number of columns. The rows in a VALUES clause must have the same number of columns.

The statement cannot be processed.

User response: Change the SQL statement so each operand, or each row of a VALUES clause, has exactly the same number of columns.

sqlcode: -421

sqlstate: 42826

SQL0423N Locator variable *variable-position* does not currently represent any value.

Explanation: A locator variable is in error. Either it has not had a valid result set locator or LOB locator variable value assigned to it, the locator associated with the variable has been freed, or the result set cursor has been closed.

If *variable-position* is provided, it gives the ordinal position of the variable in error in the set of variables specified. Depending on when the error is detected, the database manager may not be able to determine *variable-position*.

Instead of an ordinal position, *variable-position* may have the value "function-name RETURNS", which means that the locator value returned from the user-defined function identified by function-name is in error.

User response: Correct the program or routine so that the locator variables used in the SQL statement have valid values before the statement is executed.

A LOB value can be assigned to a locator variable by means of a SELECT INTO statement, a VALUES INTO statement, or a FETCH statement.

Result set locator values are returned by the ASSOCIATE LOCATORS statements. Result set locator values are only valid as long as the underlying SQL cursor is open. If a commit or rollback operation is run, the result set locator associated with the cursor is no longer valid. If this was a WITH RETURN cursor, ensure the cursor is opened before attempting to allocate it.

If the following statements are all true about the application code:

- the application contains a cursor declared for a query that defines a result set containing LOB columns
- the cursor declaration contains the WITH HOLD clause
- LOB locators are used to reference the LOB values in the result set of the cursor
- the unit of work is committed before the cursor is closed

Do one of the following actions to remove a factor contributing to this warning case so as to successfully upgrade your application:

- Precompile your application again using the PREP command making sure to include the SQLRULES STD option.
- If possible, alter the application so that the LOB columns are retrieved as values instead of locators

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- If possible, alter the application so that the cursor is no longer declared with the WITH HOLD option and remove the commit before the cursor is closed.

sqlcode: -423

sqlstate: 0F001

SQL0426N Dynamic commit invalid for application execution environment.

Explanation: An application executing in a CONNECT TYPE 2 environment or Distributed Transaction Processing (DTP) environment such as CICS has attempted to execute an SQL dynamic COMMIT statement. The SQL dynamic COMMIT statement cannot be executed in this environment.

Federated system users: SQL dynamic COMMIT statements cannot be executed during a pass-through session.

User response:

- Use the commit statement provided by the DTP environment to perform the commit. For example, in a CICS environment this would be the CICS SYNCPOINT command.
- If this statement was executed within a stored procedure, remove the statement entirely.

Federated system users: Either comment out the COMMIT statement or code it as a static statement. Then resubmit your program.

sqlcode: -426

sqlstate: 2D528

SQL0427N Dynamic roll back invalid for application execution environment.

Explanation: An application executing in a CONNECT TYPE 2 environment or Distributed Transaction Processing (DTP) environment such as CICS has attempted to execute an SQL dynamic ROLLBACK statement. The SQL dynamic ROLLBACK statement cannot be executed in this environment.

Federated system users: SQL dynamic ROLLBACK statements cannot be executed during a pass-through session.

User response:

- Use the rollback statement provided by the DTP environment to perform the rollback. For example, in a CICS environment this would be the CICS SYNCPOINT ROLLBACK command.
- If this statement was executed within a stored procedure, remove the statement entirely.

Federated system users: Either comment out the ROLLBACK statement or code it as a static statement. Then resubmit your program.

sqlcode: -427

sqlstate: 2D529

SQL0428N The SQL statement is only allowed as the first statement in a unit of work.

Explanation: The SQL statement that was issued is required to execute before any other SQL statement that initiates a unit of work. Following are possible situations:

- The SQL statement must be first in the unit of work and SQL has been issued against the connection within the unit of work.
- The SQL statement must be first in the unit of work and a WITH HOLD cursor is currently open for the connection.

Note that when the statement is DISCONNECT ALL, it causes the DISCONNECT to be directed against all connections, so the request will fail if any of the connections violate the previously described restrictions.

User response: Issue a COMMIT or ROLLBACK prior to processing the SQL statement. If there are any WITH HOLD cursors, these will need to be closed. If the statement is SET INTEGRITY, remove the COMMIT THRESHOLD clause.

sqlcode: -428

sqlstate: 25001

SQL0429N The maximum number of concurrent LOB locators has been exceeded.

Explanation: A maximum of 4,000,000 concurrent LOB locators per unit of work, is supported by DB2.

User response: Modify the program so that it requires fewer concurrent LOB locators and run the program again. For example, use the FREE LOCATOR statement to free LOB locators as soon as the application no longer needs them.

sqlcode: -429

sqlstate: 54028

SQL0430N User defined function *function-name* (specific name *specific-name*) has abnormally terminated.

Explanation: An abnormal termination has occurred while the named UDF was in control.

User response: The UDF needs to be fixed. Contact the author of the UDF or your database administrator.

Until it is fixed, the UDF should not be used.

sqlcode: -430

sqlstate: 38503

SQL0431N User defined function *function-name* (specific name *specific-name*) has been interrupted by the user.

Explanation: A user/client interrupt has occurred while the named UDF was in control.

User response: This could indicate some problem in the UDF, such as an infinite loop or wait. If the problem persists, (that is, the need to interrupt results in the same error condition), then contact the author of the UDF or your database administrator. Until the problem is fixed, the UDF should not be used.

sqlcode: -431

sqlstate: 38504

SQL0432N A parameter marker or null value cannot have the user defined type name or reference target type name *udt-name*.

Explanation: An untyped expression (parameter marker or null value) in the statement has been determined as having the user-defined type *udt-name* or a reference type with the target type *udt-name* based on the context in which it is used. An untyped expression cannot have a user-defined type or reference type as its data type unless it is part of an assignment (VALUES clause of INSERT or SET clause of UPDATE) or it is being explicitly cast to a user-defined distinct data type or reference data type using the CAST specification.

The statement cannot be processed.

User response: Use an explicit cast to the user-defined distinct data type or reference data type for the untyped expression. An alternative is to cast the columns that are user-defined distinct data types to their corresponding source data type or columns that are reference data types to their corresponding representation type.

sqlcode: -432

sqlstate: 42841

SQL0433N Value *value* is too long.

Explanation: The value *value* required truncation by a system (built-in) cast or adjustment function, which was called to transform the value in some way. The truncation is not allowed where this value is used.

The value being transformed is one of the following:

- an argument to a user defined function (UDF)
- an input to the SET clause of an UPDATE statement
- a value being INSERTed into a table

- an input to a cast or adjustment function in some other context
- a recursively referenced column whose data type and length is determined by the initialization part of recursion and may grow in the iterative part of the recursion
- an XML data value being serialized to the output by XMLSERIALIZE function.

The statement cannot be processed.

User response: If *value* is a literal string in the SQL statement, it is too long for its intended use.

If *value* is not a literal string, examine the SQL statement to determine where the transformation is taking place. Either the input to the transformation is too long, or the target is too short.

Correct the problem and rerun the statement.

sqlcode: -433

sqlstate: 22001

SQL0434W An unsupported value for clause *clause* has been replaced by the value *value*.

Explanation: The value that was specified for clause *clause* is not supported and has been replaced with the identified supported value *value*.

User response: No change is required if the selected value is acceptable. Otherwise, specify a value that is valid for *clause*.

sqlcode: +434

sqlstate: 01608

SQL0435N An invalid application defined SQLSTATE *sqlstate* was specified.

Explanation: The SQLSTATE value specified by the RAISE_ERROR function or on the SIGNAL or RESIGNAL statement does not conform to the rules for an application defined SQLSTATE.

User response: Correct the specified value for the SQLSTATE. The SQLSTATE value must be a character string containing exactly 5 characters. It must be of type CHAR defined with a length of 5, or type VARCHAR defined with a length of 5 or greater. The SQLSTATE value must follow the rules for application-defined SQLSTATES.

The following are the rules for an SQLSTATE value specified on the SIGNAL or RESIGNAL statement.

- Each character must be from the set of digits ('0' through '9') or non-accented upper case letters ('A' through 'Z').
- The SQLSTATE class (first two characters) cannot be '00'.

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The following are the rules for an SQLSTATE value specified by the RAISE_ERROR function

- Each character must be from the set of digits ('0' through '9') or non-accented upper case letters ('A' through 'Z')
- The SQLSTATE class (first two characters) cannot be '00', '01', or '02' since these are not error classes.
- If the SQLSTATE class (first two characters) starts with the character '0' through '6' or 'A' through 'H', then the subclass (last three characters) must start with a character in the range 'I' through 'Z'
- If the SQLSTATE class (first two characters) starts with the character '7', '8', '9' or 'I' through 'Z', then the subclass (last three characters) can be any of '0' through '9' or 'A' through 'Z'.

sqlcode: -435

sqlstate: 428B3

SQL0436N The terminating NULL character is missing from the C language NULL-terminated character string host variable.

Explanation: The value of an input host variable code in the C programming language requires a NULL-terminator character at the end of the string.

The statement cannot be processed.

User response: Ensure that the value of the input host variable is terminated by the NULL-terminator character.

sqlcode: -436

sqlstate: 22024

SQL0437W Performance of this complex query might be sub-optimal. Reason code: reason-code.

Explanation: Query optimization is one of the factors that affect application performance. The SQL and XQuery compiler performs several steps to produce an access plan that can be executed.

In general, this message is returned when the complexity of a query requires resources that are not available or when optimization boundary conditions were encountered.

The reason code indicates in more detail why the performance might be sub-optimal:

1

The join enumeration method was altered due to memory constraints

2

The join enumeration method was altered due to query complexity

3

Optimizer cost underflow

4

Optimizer cost overflow

5

Query optimization class was too low

6

Optimizer ignored an invalid statistic

13

An optimization guideline could not be applied

15

Chosen plan materializes an intermediate result set, whose size might exceed the limit imposed by the registry variable DB2_OPT_MAX_TEMP_SIZE

16

The query contains XQuery transform expressions that are not parallelized in a database partitioned environment.

The statement will be processed.

User response: If the performance of your query is sub-optimal, perform one or more of the following actions:

- Increase the size of the statement heap (stmtheap) in the database configuration file. After increasing the stmtheap configuration parameter, cause the statement to be recompiled. (Reason code 1)
- Break the statement up into less complex SQL statements. (Reason codes 1, 2, 3, 4)
- Ensure predicates do not over-specify the answer set. (Reason code 3)
- Change the current query optimization class to a lower value. (Reason codes 1, 2, 4)
- Issue Runstats for the tables involved in the query. (Reason codes 3, 4)
- Change the current query optimization class to a higher value. (Reason code 5)
- Reissue RUNSTATS for both the tables involved in the query and their corresponding indexes, that is, use the AND INDEXES ALL clause so that table and index statistics are consistent. (Reason code 6)
- Use the Explain diagnostic facility to obtain more detailed information about why the optimization guideline could not be applied. (reason code 13).
- If the materialization is caused by a spilling sort, try creating an index that would avoid the sort. To

suppress the warning, increase the value specified by the registry variable DB2_OPT_MAX_TEMP_SIZE or unset it completely. (Reason code 15)

- Set server options CPU_RATIO, IO_RATIO, COMM_RATE or function mapping options IOS_PER_INVOC, INSTS_PER_INVOC, IOS_PER_ARGBYTE, INSTS_PER_ARGBYTE, PERCENT_ARGBYTES, INITIAL_IOS, INITIAL_INSTS to a value that is not too high or too low. (Reason codes 3, 4)
- Rewrite the query to parallelize the transform expressions. (Reason code 16)

sqlcode: +437

sqlstate: 01602

SQL0438N Application raised error or warning with diagnostic text: *text*.

Explanation: This error or warning occurred as a result of execution of the RAISE_ERROR function or the SIGNAL SQLSTATE statement in a trigger. An SQLSTATE value that starts with '01' or '02' indicates a warning.

User response: See application documentation.

sqlcode: -438, +438

sqlstate: application-defined

SQL0439N User defined function *function-name* is indirectly implemented by function *source-function* which resulted in error *sqlcode*.

Explanation: The function *function-name* was referenced in the user's statement. However, because the SOURCE clause was used in the definition of this function, it has turned out that function *source-function* actually implements the function. (It may be a direct or an indirect definition path from *function-name* to *source-function*.) At compile time, the encapsulator (DB2 code which acts on behalf of a function) for *source-function* has returned the error identified by *sqlcode*.

User response: The actual error situation needs to be understood better before corrective action can be taken. Look up the explanation for *sqlcode*. If *source-function* is a built-in function, the *sqlcode* should indicate the problem, as in the case where a built-in function is directly referenced in the user's statement. If *source-function* is a user defined function, the message most likely indicates a problem with one of the arguments or with the result from the function.

Correct the problem and try again.

sqlcode: -439

sqlstate: 428A0

SQL0440N No authorized routine named *routine-name* of type *routine-type* having compatible arguments was found.

Explanation: This occurs in a reference to routine *routine-name*, when the database manager cannot find a routine it can use to implement the reference. There are several reasons why this could occur:

- *routine-name* was either incorrectly specified or does not exist in the database.
- A qualified reference was made, and the qualifier was incorrectly specified.
- The user's SQL path does not contain the schema to which the desired function or method belongs, and an unqualified reference was used.
- The user's SQL path does not contain the module to which the desired routine belongs.
- The module-qualified routine reference is made from outside the module but the module routine is not published.
- The wrong number of arguments was included.
- The right number of arguments was included in the function or method reference, but the data types of one or more of the arguments is incorrect.
- Named arguments were used which do not match the parameter names of routine *routine-name*.
- There are one or more routines with the same name and number of parameters declared in the current compound statement.
- There are one or more routines with the same name declared in the outer compound statements within which the current compound statement declaring a routine is nested.
- The routine does not exist in the database with the same function id that was used when the package was bound (applies to static statements).
- The mutator method corresponding to an attribute assignment used in an UPDATE statement could not be found. The data type of the new value for the attribute is not a data type that is the same or promotable to the data type of the attribute.
- The routine invoker is not authorized to execute the routine.
- The server time was reset or changed.
- The database was restored on a server with a different time or time zone.
- The time associated with the members in multi-partitioned database environments is out of sync.

User response: Fix the problem and retry. This could involve catalog access, a change to the statement, a grant of the execute privilege to the routine invoker, the addition of new functions, and/or a change to the SQL path.

sqlcode: -440

sqlstate: 42884

SQL0441N Invalid use of keyword DISTINCT or ALL with function *function-name*.

Explanation: There are several possible causes.

- The keyword DISTINCT or ALL was detected within the parentheses in a reference to function *function-name*, and the function has been resolved as a scalar function. Use of the keyword DISTINCT or ALL with a scalar function is invalid.
- The keyword DISTINCT is used in a column function for which it is not supported. These functions include COVARIANCE, CORRELATION and the linear regression functions (those that start with REGR).
- The function was expected to be a column function supporting the keyword ALL or DISTINCT but the function it resolved to was not a column function.

User response:

- If a scalar function is being used, then remove the keyword DISTINCT or ALL. It is invalid for a scalar function.
- If the function is a column function that does not support the DISTINCT or ALL keywords, then remove the keywords.
- If a column function is being used, then there is a problem with function resolution. Check your path to see if the desired function is in one of the schemas, and also check the SYSFUNCTIONS catalog for the spelling of the function name and the number and types of parameters.

Correct the error and try again.

sqlcode: -441

sqlstate: 42601

SQL0442N Error in referring to routine *routine-name*. The maximum number of allowable arguments (90) has been exceeded.

Explanation: Too many arguments were specified in the reference to routine *routine-name*. The maximum allowable is 90.

User response: Correct the statement by ensuring that the correct number of arguments has been used and try again.

sqlcode: -442

sqlstate: 54023

SQL0443N Routine *routine-name* (specific name *specific-name*) has returned an error SQLSTATE with diagnostic text *text*.

Explanation: This message is returned when a built-in or user-defined routine (procedure, function, or method) fails.

The contents of the third run-time token, *text*, varies:

- When this message is returned because a user-defined routine failed, the contents of the third run-time token, *text*, is whatever was implemented by the creator of the routine.
- In general, when this message is returned because a built-in routine failed, the contents of the third run-time token, *text*, will contain an embedded error code:

Example 1

In this example, *text* refers to message DBA7904.

```
[IBM][CLI Driver][DB2/AIX64] SQL0443N Routine
"SYSPROC.ALTOBJ" (specific name "ALTOBJ") has
returned an error SQLSTATE with diagnostic text
"DBA7904, DBAD". SQLSTATE=38553
```

Example 2

In this example, *text* refers to sqlcode -805.

```
[IBM][CLI Driver][DB2/AIX64] SQL0443N Routine
"SYSIBM.SQLTABLES" (specific name "TABLES") has
returned an error SQLSTATE with diagnostic text
"SYSIBM:CLI:-805". SQLSTATE=38553
```

- When this message is returned because a built-in function in the SYSFUN schema failed, the third run-time token, *text*, is of the following format:
SYSFUN:nn

where nn is a reason code having the following meaning:

01	Numeric value out of range
02	Division by zero
03	Arithmetic overflow or underflow
04	Invalid date format
05	Invalid time format
06	Invalid timestamp format
07	

08	Invalid character representation of a timestamp duration	used to get the complete library path and function names from the system catalog views: <pre>SELECT implementation FROM syscat.routines WHERE specificname = 'specific-name'</pre>
09	Invalid interval type	1
10	String too long	Path name <i>library-or-path</i> is longer than the maximum (255 bytes).
11	Length or position in string function out of range	2 The DB2 instance path name could not be retrieved from DB2.
12	Invalid character representation of a floating point number	3 The path <i>library-or-path</i> could not be found.
13	Out of memory	4 The file in <i>library-or-path</i> could not be found, because of one of the following reasons:
	Unexpected error	5 1. The routine library associated with the routine is not available in the location specified by the EXTERNAL clause in the routine CREATE statement definition. 2. The routine library is dependent on a shared library that cannot be located (within the concatenation of directories specified in the LIBPATH environment variable in UNIX-based systems, or the PATH environment variable in Windows systems). There can be multiple levels of this indirection involved, leading to this reason code. For example, routine body X can be found, and it needs shared library Y which can also be found. But Y needs another shared library Z that cannot be located. 3. This is a partitioned database and the library is not located in one of the partitions on which the user-defined function was run.

User response: Respond to this error in one of the following ways:

- If this message was returned because a user-defined procedure, function, or routine failed, review any diagnostic information in the third run-time token, *text*, and work with the author of the procedure, function, or routine to troubleshoot the cause of the problem.
- If this message was returned because a DB2 built-in procedure, function, or routine failed, perform the following troubleshooting steps:
 1. Determine which error code is embedded in the third run-time token, *text*.
 2. Review the extended message for the embedded error code by searching the Information Center for the message identifier or sqlcode.
 3. Review additional diagnostic information, such as the values of any run-time tokens for the embedded error code, in the db2diag log files.

SQL0444N Routine *routine-name* (specific name *specific-name*) is implemented with code in library or path *library-or-path*, function *function-code-id* which cannot be accessed. Reason code: *code*.

Explanation: The database manager is trying to access the body of code that implements routine *routine-name* (specific name *specific-name*), and cannot access it for the reason given by reason code *code* (the codes are listed below). The file implementing the routine is identified by *library-or-path*, and the function by *function-code-id*.

The library name, path name, or the function name might be truncated due to a limit on the maximum available token length. The following query can be

There is insufficient memory to load the library containing the function or one or more symbols could not be resolved. This reason code indicates one of the following situations:

1. One or more symbols might not have been resolved. The routine library might be dependent on a shared library that cannot be located (using the concatenation of directories specified in the LIBPATH environment variable in UNIX-based systems, the PATH environment variable in INTEL systems).
2. The routine has a 64-bit library which is not supported within a 32-bit DB2 instance, or, the routine has a 32-bit library or DLL

SQL0444N

within a 64-bit DB2 instance that is incompatible with the routine definition.

3. There was insufficient memory to load the library containing the function.

6

The function *function-code-id* could not be found in the library that was named.

7

The symbol given as the function name (*function-code-id*) is not the name of a valid function in the named library.

8

The "load" system function has failed, for reasons other than those given in this message. The object file might not have been linked properly or not have been linked at all.

9

There was insufficient memory to resolve the function name *function-code-id* in the library identified in *library-or-path*.

10

The "loadquery" system call has failed. This can only happen on UNIX operating systems, and is a symptom that the database manager has not been installed correctly.

11

The agent process is searching for a particular database manager function that should be in the libdb2.a library, and it cannot find it. This can only happen on UNIX operating systems, and is a symptom that the database manager is not correctly installed.

15

System or network access has been denied. This can happen in Windows environments if the EXTERNAL NAME specification in the routine definition statement does not specify a full path, or the function does not exist in the directory called *db2_installation_path*\function, necessitating a search using the PATH environment variable. For example, if the PATH contains a LAN drive prior to the directory containing your function and the DB2 instance is running under the SYSTEM account, this reason code can result.

Other:

An unidentified system failure has occurred.

Federated system users: if this user defined function is a function template (and thus no code is required to reside on the federated server), consider modifying the

SQL statement or statistics to enable this function to be evaluated on the remote data source.

User response: Given for each reason code:

1

Either the routine definition needs to be changed to specify a shorter path, or the DB2 instance path name is too long. Analyze the routine definition within the DB2 catalog views to determine which action to take. It may be necessary to move the function body to a directory with a shorter path name.

2, 10, and 11

See your system administrator, and provide them with the full text of the appropriate reason code.

3, 6, and 7

See the routine creator or your database administrator. Provide them with the full text of the appropriate reason code. The routine definition or the location of the routine library will need to be corrected.

4

Possible solutions are grouped by the causes provided in the message explanation:

1. Make the routine library associated with the routine available:
 - Correct the routine definition EXTERNAL clause value or verify that the routine library is in the location specified by the EXTERNAL clause.
 - For built-in routines, if you have recently updated your database to a different fix pack level that requires updating the system catalog, issue the update database to current release command to update the system catalog including the built-in routines and restart the instance.
 - Verify that the routine library can be accessed by the database manager. For fenced routines, verify that the fenced process owner has EXECUTE access permission on the library or DLL. For unfenced routines, verify that the instance owner has read access permissions on the library or DLL.
2. The routine should be relinked or user should verify that dependent libraries are available in the LIBPATH (UNIX) or PATH (INTEL). Use the db2set command to update the LIBPATH to include the path where the library or DLL is located. For example, `db2set db2libpath=/db2test/db2inst1/sql`
3. In a partitioned database, the library associated with a user-defined function

must be accessible as *library-or-path* on all partitions of the database. Verify that the routine library has been deployed to the function directory on all partitions of the database.

5

Possible solutions are ordered to match the causes provided in the message explanation:

1. There can be multiple levels of this indirection involved, leading to this reason code. For example, routine body X can be found, and it requires shared library Y which is also found, however Y needs another shared library Z that cannot be located. The routine library should be relinked or the user should verify that all dependent libraries are available in the LIBPATH (UNIX) or PATH (INTEL). Use the db2set command to update the LIBPATH to include the path where the library is located. For example: db2set db2libpath=/db2test/db2inst1/sql
2. Use a supported library.
3. If a lack of memory is determined then the system configuration may need to be changed to make more memory available to DB2.

8

Ensure that the module is correctly linked.

9

Contact the routine creator or your database administrator to make sure the library containing the function was correctly linked. The system configuration may need to be changed to make more memory available to DB2 Server.

15

Verify that the EXTERNAL NAME clause in the routine definition statement contains the full path, or the function exists in the directory called db2_installation_path\function.

If any of these situations is true and the error occurs due to a DB2 instance running under an account which cannot access a LAN drive prior to the directory containing your function in the PATH environment variable, you need to reconfigure the DB2 service to run under a user account that has access to all the network paths that are in the PATH environment variable.

When assigning a user account to the DB2 service, make sure that the account is granted all the required advanced user rights.

Other:

Note the code, and see your system administrator.

Federated system users: if this user defined function is a function template (and thus no code is required to reside on the federated server), you may want to consider modifying the SQL statement or statistics to enable this function to be evaluated on the remote data source.

sqlcode: -444

sqlstate: 42724

SQL0445W Value *value* has been truncated.

Explanation: The value *value* was truncated when transformed in some way by a system (built-in) cast, adjustment, or codepage-conversion function. This is a warning situation.

The value being transformed may be one of:

- The output of a routine (user-defined function (UDF) or method), and is being transformed because of a CAST FROM specification in the routine definition.
- The output of a routine (user-defined function (UDF) or method) that is sourced on another function and the result needed to be transformed.
- The output of a built-in string processing routine that needed to perform codepage conversion during processing, for example, due to a string length unit specification.

User response: Ensure that the output is as expected and that the truncation has not caused any unexpected consequences.

sqlcode: +445

sqlstate: 01004

SQL0447W The statement contains redundant specifications involving the clause *clause*.

Explanation: The *clause* keyword was included more than once in the statement. This is a warning condition.

User response: If the redundancy was intentional, or if it is determined that no harm has resulted, then no response is necessary. The type of "harm" alluded to could include, for example, the omission of some other desired keyword.

sqlcode: +447

sqlstate: 01589

SQL0448N Error in defining routine *routine-name*. The maximum number of allowable parameters (90 for user defined functions and methods, 32767 for stored procedures) has been exceeded.

Explanation: Too many parameters were specified when defining routine *routine-name*. The routine definition statement may be a CREATE FUNCTION, CREATE PROCEDURE, CREATE TYPE (method definition), or ALTER TYPE (method definition).

User response: Change the statement to include fewer parameters.

sqlcode: -448

sqlstate: 54023

SQL0449N The statement defining routine *routine-name* contains an invalidly formatted library/function identification in the EXTERNAL NAME clause.

Explanation: An error was found in the EXTERNAL NAME clause of the CREATE statement for user defined function (UDF), user-defined method, or procedure *routine-name*. The rules for the library/function identification are as follows:

For LANGUAGE C, the name takes the form '*<a>* or '*<a>!*' as follows:

- *<a>* is the file name containing the routine (function) to invoke
- ** is the entry point (function) within *<a>* that will be invoked as the body of the routine. If ** is omitted, the default entry point of *<a>* will be used.

For LANGUAGE OLE, the name takes the form '*<a>!*' as follows:

- *<a>* is the programmatic or class identifier of the OLE object
- ** is the method of the object to invoke.

For LANGUAGE JAVA and LANGUAGE CLR, the name takes the form '*<a>:!<c>*' as follows:

- *<a>* is the jar identifier (LANGUAGE JAVA) or assembly file (LANGUAGE CLR) in which the class is located. '*<a>:*' is optional for LANGUAGE JAVA and if it is omitted the corresponding class must reside in either the function directory or the CLASSPATH.
- ** is the class in which the method to invoke resides
- *<c>* is the method to invoke. For LANGUAGE JAVA '*!<c>*' can be used as an alternative to '*!<c>*'

For all languages, no leading or trailing blank characters are permitted between the single quotes, object identifiers, or the separating characters (for

example, '*<a>!*' is invalid). Path and file names, however, may contain blanks if the platform permits.

For all file names, the file can be specified by using either the short form of the name (examples: *math.a* (on UNIX), *math.dll* (on Windows)) or the fully qualified pathname (examples: */u/slick/udfs/math.a* (on UNIX), *d:\udfs\math.dll* (on Windows)). If the short form of the file name is used, the file must be located as follows:

- If the platform is UNIX or the routine is a LANGUAGE CLR routine: in the function directory
- Otherwise, if the platform is Windows: in the system PATH

File extensions (examples: *.a* (on UNIX), *.dll* (on Windows)) should always be included in the file name.

User response: Correct the problem and try again. A possible cause is the inclusion of a blank, or having the '*!*' or '*:*' at the beginning or end of the name.

sqlcode: -449

sqlstate: 42878

SQL0450N Routine *routine-name* (specific name *specific-name*) has generated a result value, SQLSTATE value, message text, or scratchpad which is too long.

Explanation: Upon return from routine *routine-name* (specific name *specific-name*), DB2 has detected that more bytes were returned than were allocated for one of the following:

- the result value (based upon the routine definition). There are several possible causes:
 - Too many bytes were moved to the result buffer.
 - The data type is one where the data value must be delimited by a null, such as VARCHAR(*n*), and the delimiting null was not within the range of the defined size.
 - DB2 is expecting a two- or four- byte length value preceding the value, and this length exceeds the defined size of the result.
 - A LOB locator is returned by the routine, and the length of the LOB value associated with this locator exceeds the defined size of the result.

The definition of the result argument in the Routine must conform to the requirement for the data type.

- the SQLSTATE value (6 bytes including the null terminator)
- the message text (71 bytes including the null terminator).
- the scratchpad content (length declared on CREATE FUNCTION).

This is not permitted.

This error will also be returned if the length field of the scratchpad is altered by the routine.

User response: See your Database Administrator, or the author of the routine.

sqlcode: -450

sqlstate: 39501

SQL0451N The *data-item* definition, in the statement that defines routine *routine-name*, contains a data type *type* that is not appropriate for a non-sourced routine written in the given language or a routine that is defined as autonomous.

Explanation: An error was made in the *data-item* part of the statement defining routine *routine-name*. The user's statement contained the invalid type *type*, or it contained a user defined type (UDT) which is based on the invalid type *type*. The routine definition may be a CREATE FUNCTION, CREATE PROCEDURE, CREATE TYPE (method definition), or ALTER TYPE (method definition).

data-item is a token that identifies the area of the problem in the statement. For example, "PARAMETER 2" or "RETURNS" or "CAST FROM".

In an autonomous transaction, a block of statements within the transaction can be committed even if that transaction is rolled back. You can use the AUTONOMOUS keyword with the CREATE PROCEDURE command to create a procedure that will commit its work even if it is called from within a unit of work which is rolled back.

User response: Determine which situation has occurred, and take corrective action. Possible corrective actions include:

- Changing the routine definition to a supported type; for example, from DECIMAL to FLOAT. This may involve a change in the routine body itself, and may also involve use of cast functions upon use of the routine.
- Creating a new (suitably based) user defined type, or changing the definition of an existing UDT.

sqlcode: -451

sqlstate: 42815

SQL0452N Unable to access the file referenced by host variable *variable-position*. Reason code: *reason-code*.

Explanation: An error was encountered attempting to access or while accessing the file referenced by the "nth" host variable, where *n* = *variable-position*, for the reason given by *reason-code*. <*variable-position*> is set to 0 if the host variable position could not be determined. The possible reason codes are as follows:

- 01 - The file name length is invalid or the file name and/or the path has an invalid format.
- 02 - The file option is invalid. It must have one of the following values:

```
SQL_FILE_READ
    -read from an existing file
SQL_FILE_CREATE
    -create a new file for write
SQL_FILE_OVERWRITE
    -overwrite an existing file.
    If the file does not exist,
    create the file.
SQL_FILE_APPEND
    -append to an existing file.
    If the file does not exist,
    create the file.
```

- 03 - The file cannot be found.
- 04 - The SQL_FILE_CREATE option was specified for a file with the same name as an existing file.
- 05 - Access to the file was denied. The user does not have permission to open the file.
- 06 - Access to the file was denied. The file is in use with incompatible modes. Files to be written to are opened in exclusive mode.
- 07 - Disk full was encountered while writing to the file.
- 08 - Unexpected end of file encountered while reading from the file.
- 09 - A media error was encountered while accessing the file.
- 10 - An incomplete or invalid multibyte character was encountered while reading from the file.
- 11 - An error was encountered while converting data from the file code page to the application's graphic character code page.

User response: For reason code 01, correct the file name length, file name and/or path.

For reason code 02, specify a valid file option.

For reason code 03, ensure that the file specified exists before attempting to access the file.

For reason code 04, either delete the file if it is no longer required or specify a file name that does not currently exist.

For reason code 05, ensure that the user has access (correct file permissions) to the file.

For reason code 06, either use a different file or, if the file must be accessed, modify the application to ensure that the file is not accessed concurrently.

For reason code 07, delete unnecessary files to free up disk space or specify a file that resides on another drive/file system with sufficient disk space. Also, ensure that no operating system or user file size limits were reached. If your application code page uses a multibyte encoding scheme it is possible that only part of the last character was written, ensure that the file

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contains only fully formed characters.

For reason code 08, if a file is to be used for input, ensure that the file is not modified before the entire file has been read.

For reason code 09, correct all errors on the media where the file resides.

For reason code 10, ensure that the file contains valid multibyte characters based on the code page of the application or submit the request while running under the same code page as the contents of the file.

For reason code 11, ensure that character conversion support between the code page of the file, for example Japanese EUC, and the graphic code page of the application, for example UCS-2, is installed.

sqlcode: -452

sqlstate: 428A1

SQL0453N A problem has been identified with the RETURNS clause in the statement that defines the routine *routine-name*.

Explanation: A problem casting the result of routine *routine-name* has been identified. The CAST FROM data type is not castable to the RETURNS data type, and it should be. See the *SQL Reference* for details on casting between data types.

User response: Change the RETURNS or CAST FROM clause so that the CAST FROM data type is castable to the RETURNS data type.

sqlcode: -453

sqlstate: 42880

SQL0454N The signature provided in the definition for routine *routine-name* matches the signature of some other routine.

Explanation: The signature of a function consists of the function name, the number of parameters defined for the function, and an ordered list of the types of the parameters.

The signature of a method consists of the method name, the subject type of the method, the number of parameters defined for the method, and an ordered list of the types of the parameters.

The signature of a procedure consists of the procedure name and the number of parameters defined for the procedure (data types are not considered).

This can occur when:

- There already is a function or procedure (*routine-name*) in the schema, module, or compound SQL (compiled) statement with the same signature as the function or procedure being created. If you are

altering a module to add a routine body to a defined routine prototype, the routine already has a routine body definition.

- There already is a procedure (*routine-name*) in an outer compound SQL (compiled) statement with the same name as the procedure being declared.
- There already is a method (*routine-name*) for the subject type with the same signature as the method specification being added or the method body being created

The statement cannot be processed.

User response: Determine if the existing routine already provides the functionality desired. If not, then the signature of the routine will have to be changed; for example, by changing the routine name.

If altering a module to add a routine body to a defined routine prototype, check that the signature matches or if the signature also needs to change and ensure that the routine name and specific name match those of the defined routine prototype. If the routine body of an existing module routine needs to be changed, alter the module to drop the routine and then alter the module to recreate the routine with the new routine body.

sqlcode: -454

sqlstate: 42723

SQL0455N In routine *routine-name*, the schema name *schema-name1* provided for the SPECIFIC name does not match the schema name *schema-name2* of the routine.

Explanation: If the SPECIFIC name is specified as a two part name, the *schema-name1* portion must be the same as the *schema-name2* portion of the *routine-name*. Note that the *schema-name2* portion of *routine-name* may have been specified directly or it may have defaulted to the authorization ID of the statement. If the routine is a method, *schema-name* refers to the schema name of the subject type of the method.

User response: Correct the statement and try again.

sqlcode: -455

sqlstate: 42882

SQL0456N In the definition of routine *routine-name*, the SPECIFIC name *specific-name* already exists in the schema or module.

Explanation: The user has supplied an explicit SPECIFIC name *specific-name* in the definition of routine *routine-name*, but this name already exists as the SPECIFIC name for a function, method, or procedure in the schema or module.

User response: Choose a new SPECIFIC name and try again.

sqlcode: -456

sqlstate: 42710

SQL0457N A function, method, user-defined data type, or structured data type attribute cannot be called *name* since it is reserved for system use.

Explanation: The user-defined function, method, user-defined data type, or structured data type cannot be created because a specified name is reserved for use by the system. Names that cannot be used for function names, distinct type names, structured type names, or attribute names include:

```
"=", "<", ">", ">=", "<=",
"&=", "&>", "&<",
"!=", "!>", "!<", "<>",
SOME, ANY, ALL, NOT, AND, OR,
BETWEEN, NULL, LIKE, EXISTS, IN,
UNIQUE, OVERLAPS, SIMILAR, and MATCH.
```

User response: Select a name for the function, method, user-defined data type, or structured data type attribute that is not reserved for system use.

sqlcode: -457

sqlstate: 42939

SQL0458N In a reference to routine *routine-name* by signature, a matching routine could not be found.

Explanation: In a reference to function, method, or stored procedure *routine-name* by signature, no matching function, method, or stored procedure could be found.

If a data type is used that can accept a parameter, then the type parameter is optional. For example, for CHAR(12), you can either specify the parameter (CHAR(12)) or omit it (CHAR()). If you specify the parameter, then the DBMS will only accept an exact match on the data type and the data type parameter. If you omit the parameter, then the DBMS will accept a match on data type only. The CHAR() syntax provides a way to tell the DBMS to ignore data type parameters when finding a matching function.

Note also that in the DROP FUNCTION/PROCEDURE, COMMENT ON FUNCTION/PROCEDURE and TRANSFER OWNERSHIP FUNCTION/PROCEDURE/METHOD statements, an unqualified reference is qualified with the statement authorization ID, and this is the schema where the problem can be found. In the SOURCE clause of a CREATE function, the qualification comes from the current path. In this case, there is no matching function in the entire path.

A function cannot be sourced on the COALESCE, DBPARTITIONNUM, GREATEST, HASHEDVALUE, LEAST, MAX (scalar), MIN (scalar), NULLIF, NVL, RID, RAISE_ERROR, TYPE_ID, TYPE_NAME,

TYPE_SCHEMA, or VALUE built-in functions.

The statement cannot be processed.

User response: Possible responses include:

- Changing the path to include the correct schema.
- Removing parameters from the specifications of data types.
- Using a SPECIFIC name to refer to the function or procedure instead of a signature.

sqlcode: -458

sqlstate: 42883

SQL0461N A value with data type *source-data-type* cannot be CAST to type *target-data-type*.

Explanation: The statement contains a CAST with the first operand having a data type of *source-data-type* to be cast to the data type *target-data-type*. This cast is not supported.

User response: Change the data type of either the source or target so that the cast is supported. For predefined data types these are documented in the SQL Reference. For a cast involving a user-defined distinct type, the cast can be between the base data type and the user-defined distinct type or from a data type that is promotable to the base data type to the user-defined distinct type.

sqlcode: -461

sqlstate: 42846

SQL0462W Command or routine *command-or-routine-name* (**specific name** *specific-name*) has returned a warning SQLSTATE, with diagnostic text *text*.

Explanation: An SQLSTATE of the form 01Hxx was returned to DB2 by the command or routine *command-or-routine-name* (with specific name *specific-name*), along with message text *text*. If *command-or-routine-name* is a command, then *specific-name* will contain the value "*N".

User response: The user will need to understand the meaning of the warning. See your database administrator, or the author of the routine.

sqlcode: +462

sqlstate: Valid warning SQLSTATEs returned by a user-defined function, external procedure CALL, or command invocation.

SQL0463N Routine *routine-name* (**specific name** *specific-name*) has returned an invalid SQLSTATE *state*, with diagnostic text *text*.

Explanation: The valid SQLSTATes that a routine can return are 38xxx (error), 38502 (error) and 01Hxx (warning). This routine *routine-name* (specific name *specific-name*) returned an invalid SQLSTATE *state*, along with message text *text*. The routine is in error.

User response: The routine will need to be corrected. See your database administrator, or the author of the routine. The application significance of the bad SQLSTATE can also be learned from the routine author.

sqlcode: -463

sqlstate: 39001

SQL0464W Procedure *procedure-name* returned *generated-nbr-results* query result sets, which exceeds the defined limit *max-nbr-results*.

Explanation: The stored procedure named by *procedure-name* completed normally. However, the stored procedure exceeded the defined limit on the number of query result sets the procedure can return.

generated-nbr-results

identifies the number of query result sets returned by the stored procedure.

max-nbr-results

identifies the defined limit on the number of query result sets for the stored procedure.

Only the first *max-nbr-results* query result sets are returned to the SQL program that issued the SQL CALL statement.

The possible causes are as follows:

- The stored procedure is unable to return *generated-nbr-results* result sets due to the DRDA limitations imposed by the client. The DRDA client establishes this limit with the MAXRSLCNT DDM code point.
- The procedure was called from a C application. The processing of result sets is not supported for C, so the result set is simply closed before returning to the C application.

User response: The SQL statement is successful. The SQLWARN9 field is set to 'Z'.

sqlcode: +464

sqlstate: 0100E

SQL0465N Unable to start, initialize, or communicate with fenced mode process. Reason code *code*.

Explanation: There is a system related problem involved with the running of a fenced mode routine (user-defined function or method). The exact nature of the problem is indicated by *code*. This is NOT a user problem. Possible reason codes are:

Routine process errors

- 21:** Failure to initialize internal data or application data.
- 22:** Failure to register signal handlers.
- 23:** Failure to grant agent process the access permission for the REQUEST QUEUE.
- 24:** Failure to connect to the routine process Shared Memory.
- 25:** Failure to open the REPLY QUEUE.
- 26:** Failure to write to the REPLY QUEUE.
- 27:** Failure to create the REQUEST QUEUE.
- 28:** Failure to read from the REQUEST QUEUE.
- 29:** Routine process dies.
- 30:** Routine process catches an USER INTERRUPT signal.
- 31:** Failure to unload routine module.
- 32:** Failure to allocate storage for control blocks used in module loading/unloading.
- 33:** Failure to send SIGINT from agent process to routine process.
- 34:** Failure to initialize OLE library.
- 35:** Failure to initialize OLE DB Initialization Service Component.
- 40:** Internal error occurred in routine process.

Agent process errors

- 41:** Failure to spawn routine process.
- 42:** Failure to create the REPLY QUEUE.
- 43:** Failure to read from the REPLY QUEUE.
- 44:** Failure to open the REQUEST QUEUE.
- 45:** Failure to write to the REQUEST QUEUE.
- 47:** Failure to grant the routine process the access permission to the UDFP shared memory set.
- 48:** Failure to grant the routine process the access permission to the REPLY QUEUE.
- 49:** Failure to allocate storage for control blocks used in module loading/unloading.
- 50:** Agent process died while running routine code or agent code.
- 51:** Agent process catches USER INTERRUPT while running un-fenced routine code.
- 60:** Internal error occurred in routine process.

User response: Contact your Database or System administrator.

sqlcode: -465

sqlstate: 58032

SQL0466W The procedure *procedure-name* returns *number-results* result sets from the stored procedure.

Explanation: This message is returned as a result of issuing a CALL SQL statement. It indicates that the stored procedure *procedure-name* has *number-results* result sets associated with it.

The statement completed successfully.

User response: None required.

sqlcode: +466

sqlstate: 0100C

SQL0467W The procedure *procedure-name* includes another result set. There are a total of *max-nbr-results* result sets.

Explanation: This message is returned as a result of closing a cursor. It indicates that another result set exists for stored procedure *procedure-name* and the cursor was re-opened on the next result set. There are a total of *max-nbr-results* result sets from the stored procedure.

The statement completed successfully.

User response: None required. Fetches can proceed on to the next result set.

sqlcode: +467

sqlstate: 0100D

SQL0469N The parameter mode OUT or INOUT is not valid for a parameter in the routine named *routine-name* with specific name *specific-name* (parameter number *number*, name *parameter-name*).

Explanation: A parameter in an SQL procedure is declared as OUT and the corresponding argument is not a valid assignment target. For functions only, a parameter is declared as OUT or INOUT and the corresponding argument is not an SQL variable, global variable, or SQL parameter.

A constant or an expression is an example of an invalid argument for OUT or INOUT parameters.

For example, if a function named *my_function* was declared to have one OUT parameter, the following function call is not valid because the argument that is passed to the OUT parameter cannot have values assigned to it:

```
SET my_variable = my_function( 1 + 2 );
```

User response: If calling an SQL procedure, change the output argument to a valid assignment target. If invoking a function, change the OUT or INOUT

argument to an SQL variable, global variable, or SQL parameter.

sqlcode: -469

sqlstate: 42886

SQL0470N The user defined routine *routine-name* (specific name *specific-name*) has a null value for argument *argument* that could not be passed.

Explanation: A routine has an input argument with a null value but was defined with a parameter style that does not pass null indicators, or the data type of this parameter does not support null values.

User response: If the routine is to be called with null values, ensure the parameter style and input types are capable of accepting a null value. For functions, the function could also be created with "RETURNS NULL ON NULL INPUT".

sqlcode: -470

sqlstate: 39004

SQL0471N Invocation of routine *name* failed due to reason *reason-code*.

Explanation: The invocation of routine *name* failed. Use reason code *reason-code* to find out more details about the cause of the failure.

User response: If the reason code starts with "DSNX9":

- The routine was invoked on a DB2 Universal Database for z/OS server. A DSNX9xx message describing the error might be displayed on the server's system console. Consult the documentation for the DB2 UDB for z/OS server and correct the condition described by the reason code.

Else, the following lists the action to take for the indicated reason code:

- 1 The invocation failed because the SQL routine was created on a previous release of the product and the DBMS was not able to migrate it to the current release. The routine must be dropped and re-created to become operative again.

sqlcode: -471

sqlstate: 55023

SQL0472N One or more cursors were left open by function or method *routine-name* (specific name *specific-name*).

Explanation: The function or method *routine-name* (specific name *specific-name*) did not close all its open cursors before the invoking statement completed.

SQL0473N • SQL0478N

Functions and methods must close all cursors before the invoking statement completes.

User response: Consult with the developer of the function or method. The function or method must be rewritten to ensure that all cursors are closed before the invoking statement completes.

sqlcode: -472

sqlstate: 24517

SQL0473N A user-defined data type having the same name as a built-in data type is not allowed.

Explanation: You are trying to create a user-defined data type or to upgrade a database having a user-defined data type with a name that is the same name of a built-in data type. This release now includes ARRAY, BINARY, CURSOR, DECFLOAT, ROW, VARBINARY, or XML as data type names.

You cannot use built-in data type names to create user-defined data types. Adding delimiters will also return an error.

The command or statement could not be processed.

User response: Perform one of the following actions, whichever is appropriate:

- Re-issue the statement using a non-reserved data type name.
- Before database upgrade, drop this data type and database objects that reference this data type and recreate it using a non-reserved data type name. Then issue the UPGRADE DATABASE command from the DB2 copy to which you want to upgrade the database.

sqlcode: -473

sqlstate: 42918

SQL0475N The result type (*type-1*) of the SOURCE function cannot be cast to the RETURNS type (*type-2*) of the user defined function *function-name*.

Explanation: In order for the CREATE of a sourced user defined function (UDF) to be valid, the result type (*type-1*) of the source function must be castable to the RETURNS type (*type-2*) of the function being created. There is no supported cast between these data types. See the *SQL Reference* for details on casting between data types.

User response: Change the RETURNS data type or the SOURCE function identification so that the result type of the SOURCE function is castable to the RETURNS data type.

sqlcode: -475

sqlstate: 42866

SQL0476N Reference to routine *function-name* was made without a signature, but the routine is not unique in its schema.

Explanation: References to a function or stored procedure without a signature is permitted, but the named function or store procedure *function-name* must be unique in its schema and is not. If the routine is a method, a reference without a signature is permitted but this named method must be unique for the data type.

Note that in the DROP FUNCTION/PROCEDURE and COMMENT ON FUNCTION/PROCEDURE statements, an unqualified reference is qualified with the statement authorization ID, and this is the schema where the problem can be found. In the SOURCE clause of a CREATE FUNCTION, the qualification comes from the current path. In this case, the first schema in the path containing a function with this name had other functions by the same name.

Federated system users: For a pass-through session, if the statement is a CREATE FUNCTION MAPPING statement, this error indicates that an attempt was made to create a function mapping from one remote function to more than one local function.

User response: Correct the reference by one of the following:

- completing the signature
- using the SPECIFIC name of the desired routine
- changing the SQL path

and try again.

sqlcode: -476

sqlstate: 42725

SQL0478N DROP, ALTER, TRANSFER OWNERSHIP or REVOKE on object type *object-type1* cannot be processed because there is an object *object-name*, of type *object-type2*, which depends on it.

Explanation: The requested DROP, ALTER, TRANSFER OWNERSHIP or REVOKE cannot be processed because a dependency exists on this *object-type1*.

There is a restrict dependency defined with objects of type *object-type2* (of which object *object-name* is an example).

If *object-type1* is ALIAS, the dependencies for DROP might include a row permission or a column mask which references this alias.

If *object-type1* is SYNONYM, the dependencies for DROP might include a row permission or a column

mask which references this synonym.

If *object-type1* is TABLE, the dependencies for DROP might include a row permission or a column mask which references this table.

If *object-type1* is VIEW, the dependencies for DROP might include a row permission or a column mask which references this view.

If *object-type1* is TABLE, a system-period temporal table exists that uses this table as the corresponding history table.

If *object-type1* is TABLESPACE, a system-period temporal table exists for which the corresponding history table resides in this table space.

For a DB2 for z/OS server, if *object-type1* is DATABASE, a system-period temporal table exists for which the corresponding history table resides in this database.

Objects might have indirect dependencies. You can determine whether there are database objects that have direct or indirect dependencies on the object named *object-name* by referring to information in the system catalogs.

For example, a drop fails on a table because a row permission indirectly depends on that table:

- a table T1 is created
- a view V1 is defined using T1
- a permission P1 is defined that uses V1
- an attempt to drop table T1 will fail due to the indirect dependency of P1 on T1, as P1 depends on V1 and V1 depends on T1

For example, a drop fails on a function because a direct dependency exists on another function and an indirect dependency exists on a view:

- function F1 is sourced on function F2
- view V1 is defined using F1
- an attempt to drop F2 will fail due to the direct dependency of F1 on F2 and the indirect dependency of V1 on F2

User response:

1. Consult the system catalogs to determine which objects have direct or indirect dependencies on the object named *object-name*.
2. Remove the dependencies on this object and then reissue the request.

sqlcode: -478

sqlstate: 42893

SQL0480N The procedure *procedure-name* has not yet been called.

Explanation: Either the procedure identified in an ASSOCIATE LOCATORS statement has not yet been called within the application process, or the procedure has been called, but an explicit or implicit commit occurred before the statement.

User response: Correct the statements so that the exact syntax used to specify the procedure name on the CALL statement is the same as that on the ASSOCIATE LOCATORS statement. If an unqualified name is used to CALL the procedure, the one-part name must also be used in the other statements. Reissue the statements.

sqlcode: -0480

sqlstate: 51030

SQL0481N The GROUP BY clause contains *element-1* nested within *element-2*.

Explanation: The following types of nesting are not allowed within a GROUP BY clause:

- CUBE within CUBE, ROLLUP, or GEL
- ROLLUP within CUBE, ROLLUP, or GEL
- () within CUBE, ROLLUP, or GEL
- GROUPING SETS within GROUPING SETS, CUBE, ROLLUP, or GEL
- CUBE, ROLLUP, (), GROUPING SETS within any function, CASE expression, or CAST specification where GEL represents the element shown as grouping-expression-list in the syntax diagram of the GROUP BY clause.

where GEL represents the element shown as grouping-expression-list in the syntax diagram of the GROUP BY clause.

In some instances the value “---” will be shown for *element 2*. In this case “---” represents one of CUBE, ROLLUP, GROUPING SETS, or GEL.

The statement cannot be processed.

User response: Modify the GROUP BY clause to remove the nesting.

sqlcode: -481

sqlstate: 428B0

SQL0483N In the CREATE for user defined function *function-name* statement, the number of parameters does not match the number of parameters of the SOURCE function.

Explanation: An attempt is being made to CREATE a user defined function *function-name* which is sourced on

another function. One of the following situations has been identified:

- The SOURCE clause uses a function-name (input parameter list) to identify the source function, and the number of types in the list is different from the number of parameters of the function being created.
- The SOURCE clause uses different syntax to identify the source function, and the number of types of that function is different from the number of parameters of the function being created.

User response: The number of parameters for the SOURCE function and for the function being created must be the same. The identification of the SOURCE function needs to be changed, to

- fix the input parameter list
- correct the function name or function specific name to identify the proper function.

It is also possible that the path needs to be corrected in order for correct function resolution to occur.

sqlcode: -483

sqlstate: 42885

SQL0486N The BINARY and VARBINARY data types are currently only supported internally.

Explanation: One or more of the data types in the statement is BINARY or VARBINARY. This is not supported in the current version of DB2.

User response: Change the data type(s) then resubmit the statement.

sqlcode: -486

sqlstate: 42991

SQL0487N Routine *routine-name* (specific name *specific-name*) attempted to execute an SQL statement.

Explanation: The program used to implement the body of a routine is not allowed to execute SQL statements. This routine *routine-name* (specific name *specific-name*) contains SQL statements or this routine calls a procedure that uses SQL statements, such as the SYSPROC.ADMIN_CMD procedure.

User response: Remove any SQL statements then recompile the program. Investigate the level of SQL allowed as specified on the statement defining the routine.

sqlcode: -487

sqlstate: 38001

SQL0489N The function *function-name* in a SELECT or VALUES list item has produced a BOOLEAN result.

Explanation: The function *function-name* is defined for use as a predicate, returning a boolean result. Such a result is not valid in a select list.

The statement cannot be processed.

User response: Correct the function name or remove the use of the function.

sqlcode: -489

sqlstate: 42844

SQL0490N Number *number* directly specified in an SQL statement or command is outside the range of allowable values in this context (*minval,maxval*).

Explanation: A number (*number*) was specified that is not valid in the context in which it was specified. The minimum allowed value in this context is *minval*. The maximum allowed value in this context is *maxval*. *n* must be within the range specified by *minval* and *maxval* (*minval* =< *n* => *maxval*).

If creating or altering a table space, the minimum and maximum values may be dependant on the page size of the table space. Refer to the SQL Reference for more details on table space limits.

User response: Change the value *n* to a valid value in the statement or command.

sqlcode: -490

sqlstate: 428B7

SQL0491N The CREATE FUNCTION or ALTER MODULE statement used to define *routine-name* must have a RETURNS clause, and one of: the EXTERNAL clause (with other required keywords); an SQL function body; or the SOURCE clause.

Explanation: A required clause is missing in the definition of routine *routine-name*. If EXTERNAL was specified, one of the following clauses must also be specified: LANGUAGE, PARAMETER STYLE.

If defining an SQL function, the SQL function body must be included unless using the PUBLISH action of ALTER MODULE to define an SQL function prototype.

User response: Add the missing clause, and then try again.

sqlcode: -491

sqlstate: 42601

SQL0492N There is a problem in the CREATE for user defined function *function-name*, with parameter number *number*. It may involve a mismatch with a SOURCE function.

Explanation: The parameter in position *number* of function *function-name* is in error and the CREATE cannot be performed. The parameter in position *number* of the source function is not castable to the corresponding parameter of the function being created.

User response: Possible corrections include:

- Identify a different source function.
- Change the data type of the parameter of the function being created so that the data type of the source function can be cast to this data type.

sqlcode: -492

sqlstate: 42879

SQL0493N Routine *routine-name* (specific name *specific-name*) has returned a date, time or timestamp value which is syntactically or numerically invalid.

Explanation: The body of user defined function (UDF) or method *routine-name* (specific name *specific-name*) has returned an invalid date, time or timestamp value.

An example of a syntactically invalid date value is '1994-12*25': the '*' should be a '-'. An example of a numerically invalid time value is '11.71.22': there is no 71st minute in the hour.

User response: The routine needs fixing. See your DBA, or the author of the routine.

sqlcode: -493

sqlstate: 22007

SQL0494W The number of result sets is greater than the number of locators.

Explanation: The number of result set locators specified on the ASSOCIATE LOCATORS statement is less than the number of result sets returned by the stored procedure. The first "n" result set locator values are returned, where "n" is the number of result set locator variables specified on the SQL statement.

The SQL statement is successful. The SQLWARN3 field is set to 'Z'.

User response: Increase the number of result set locator variables specified on the SQL statement.

sqlcode: +494

sqlstate: 01614

SQL0495N Estimated processor cost of *estimate-amount1* processor seconds (*estimate-amount2* service units) in cost category *cost-category* exceeds a resource limit error threshold of *limit-amount* service units.

Explanation: The prepare of a dynamic INSERT, UPDATE, DELETE, or SELECT SQL statement resulted in a cost estimate that exceeded the error threshold value specified in the resource limit specification table (RLST).

This error is also issued if DB2's cost category value was "B", and the default action specified in the RLF_CATEGORY_B column in the RLST is to issue an error.

estimate_amount1

The cost estimate (in processor seconds) if the prepared INSERT, UPDATE, DELETE or SELECT statement were to be executed.

estimate_amount2

The cost estimate (in service units) if the prepared INSERT, UPDATE, DELETE or SELECT statement were to be executed.

cost-category

DB2's cost-category for this SQL statement. The possible values are A or B.

limit-amount

The error threshold (in service units) specified in the RLFASUERR column of the RLST.

The prepare of the dynamic INSERT, UPDATE, DELETE, or SELECT statement was unsuccessful.

User response: If this SQLCODE was returned because the cost category value is "B", it might be that the statement is using parameter markers or that some statistics are not available for the referenced tables and columns. Make sure the administrator has run the utility RUNSTATS on the referenced tables. It might also be that UDFs will be invoked when the statement is executed, or for INSERT, UPDATE, or DELETE statements that triggers are defined on the changed table. Check the DSN_STATEMNT_TABLE or the IFCID 22 record for this statement to find the reasons this SQL statement has been put in cost category "B". If the program cannot be changed, or if statistics cannot be obtained, ask the administrator to change the value in the RLF_CATEGORY_B column in the RLST to "Y" which allows the statement to execute or "W" which returns a warning instead of an error.

If the warning is caused by an SQL statement that is consuming too much processor resource, attempt to rewrite the statement to perform more efficiently. Another option is to ask the administrator to increase the error threshold value in the RLST.

sqlcode: -495

SQL0499N

sqlstate: 57051

SQL0499N Cursor *cursor-name* has already been assigned to this or another result set from procedure *procedure-name*.

Explanation: An attempt was made to assign a cursor to a result set but multiple cursors have been allocated for procedure *procedure-name*.

User response: Determine if the target result set was previously assigned to a cursor. If multiple cursors have been allocated for procedure *procedure-name* ensure that only one cursor is used to process the result sets of a stored procedure.

sqlcode: -499

sqlstate: 24516

Chapter 2. SQL0500 - SQL0999

SQL0501N The cursor specified in a FETCH statement or CLOSE statement is not open or a cursor variable in a cursor scalar function reference is not open.

Explanation: The program attempted to do one of:

- FETCH using a cursor at a time when the specified cursor was not open.
- CLOSE a cursor at a time when the specified cursor was not open.
- Reference a cursor variable in an OPEN statement and the cursor variable is not open.
- Reference a cursor scalar function, such as CURSOR_ROWCOUNT function, and the cursor variable is not open.

The statement cannot be processed.

User response: Check for a previous message (SQLCODE) that may have closed the cursor. Note that after the cursor is closed, any fetches or close cursor statements receive SQLCODE -501.

If no previous SQLCODEs have been issued, correct the application program to ensure that the cursor is open when the FETCH or CLOSE statement is executed.

If a cursor variable is referenced in a cursor scalar function, verify that that the cursor is not null, is defined, and is open, else replace the cursor variable with one that is in that state.

sqlcode: -501

sqlstate: 24501

SQL0502N The cursor specified in an OPEN statement is already open.

Explanation: The program attempted to execute an OPEN statement for an open cursor.

The statement cannot be processed. The cursor was unchanged.

User response: Correct the application program to ensure it does not attempt to execute an OPEN statement for a cursor already open.

sqlcode: -502

sqlstate: 24502

SQL0503N A column cannot be updated because it is not identified in the FOR UPDATE clause of the SELECT statement of the cursor.

Explanation: Using a cursor, the program attempted to update a value in a table column that was not identified in the FOR UPDATE clause in the cursor declaration or the prepared SELECT statement.

Any column to be updated must be identified in the FOR UPDATE clause of the cursor declaration.

The statement cannot be processed.

User response: Correct the application program. If the column requires updating, add its name to the FOR UPDATE clause of the cursor declaration.

sqlcode: -503

sqlstate: 42912

SQL0504N The cursor *name* is not defined.

Explanation: An UPDATE or DELETE WHERE CURRENT OF *name* was specified, but the cursor *name* was not declared in the application program.

The statement cannot be processed.

User response: Ensure the completeness of the application program and correct spelling errors in the cursor names.

sqlcode: -504

sqlstate: 34000

SQL0505N The cursor *name* is already defined.

Explanation: The cursor name specified in the DECLARE statement has already been declared.

The statement cannot be processed.

User response: Ensure the name is spelled correctly.

SQL0507N The cursor specified in the UPDATE or DELETE statement is not open.

Explanation: The program attempted to execute an UPDATE or DELETE WHERE CURRENT OF cursor statement when the specified cursor was not open.

The statement cannot be processed. No update or delete was performed.

User response: Check for a previous message (SQLCODE) that may have closed the cursor. Note that after the cursor is closed, any fetches or close cursor statements receive SQLCODE -501 and any updates or deletes receive SQLCODE -507. Correct the logic of the application program to ensure that the specified cursor is open at the time the UPDATE or DELETE statement is executed.

SQL0508N • SQL0510N

sqlcode: -507

sqlstate: 24501

SQL0508N The cursor specified in the UPDATE or DELETE statement is not positioned on a row.

Explanation: The program attempted to execute an UPDATE or DELETE WHERE CURRENT OF cursor statement when the specified cursor was not positioned on an object table row. The cursor must be positioned on the row to be updated or deleted.

The cursor is no longer positioned on a row if the row is deleted. This includes any use of cursors within a savepoint when a ROLLBACK TO SAVEPOINT is performed.

Federated system users: the record in a remote data source has been updated and/or deleted by another application (or a different cursor within this application) and the record no longer exists.

The statement cannot be processed. No data is updated or deleted.

User response: Correct the logic of the application program to ensure that the cursor is correctly positioned on the intended row of the object table before the UPDATE or DELETE statement is executed. Note that the cursor is not positioned on a row if FETCH returned message SQL0100W (SQLCODE = 100).

sqlcode: -508

sqlstate: 24504

SQL0509N The table specified in the UPDATE or DELETE statement is not the same table specified in the SELECT for the cursor.

Explanation: The program attempted to execute an UPDATE or DELETE WHERE CURRENT OF cursor statement where the table named did not match the name of the table specified in the SELECT statement that declared the cursor.

The statement cannot be processed.

User response: Correct the application program to ensure that the table identified in the UPDATE or DELETE statement is the same table identified in the cursor declaration.

sqlcode: -509

sqlstate: 42827

SQL0510N UPDATE or DELETE is not allowed against the specified cursor.

Explanation: The program attempted to execute an UPDATE or DELETE WHERE CURRENT OF cursor statement against a table or view definition that does

not permit the requested update or delete operation. For example, this error can occur in a delete from a read-only view or in an update where the cursor was not defined with the FOR UPDATE clause.

On the database manager the view is read-only if the SELECT statement includes :

- The DISTINCT keyword
- A column function in the SELECT list
- A GROUP BY or HAVING clause
- A FROM clause that identifies one of the following:
 - More than one table or view
 - A read-only view (READONLY column of SYSCAT.SYSVIEWS is set to 'Y')
- A set operator (other than UNION ALL).

Note that these conditions do not apply to subqueries of the SELECT statement.

The cursor is declared with a FOR FETCH ONLY clause.

The cursor is ambiguous and the BLOCKING ALL bind option was specified.

The cursor references a view that has an INSTEAD OF UPDATE (or DELETE) trigger.

The cursor directly or indirectly references a view that is defined with the WITH ROW MOVEMENT clause and an UPDATE WHERE CURRENT OF CURSOR was attempted.

The statement cannot be processed.

User response: If the database manager is failing the statement and the cursor is based on a read-only SELECT or VALUES statement, do not issue any update or delete statements against it.

If the database manager is failing the statement and the cursor is not based on a read-only SELECT or VALUES statement and is defined with a FOR FETCH ONLY clause, either remove this clause from the cursor definition or do not issue any update or delete statements.

If the database manager is failing the statement and the cursor cannot be determined to be either fetch only or updatable from its definition or context, rebind the program with either the BLOCKING NO or BLOCKING UNAMBIG bind option.

If the database manager is failing the statement and the cursor is based on a view with an INSTEAD OF UPDATE (or DELETE) trigger, use a searched UPDATE (or DELETE) statement.

If the database manager is failing the statement and the cursor directly or indirectly references a view that is defined with the WITH ROW MOVEMENT clause, do

not issue any update statements against it.

Federated system users: isolate the problem to the data source failing the request. If a data source is failing the request, examine the restrictions for that data source to determine the cause of the problem and its solution. If the restriction exists on a data source, see the SQL reference manual for that data source to determine why the object is not updatable.

sqlcode: -510

sqlstate: 42828

SQL0511N The FOR UPDATE clause is not allowed because the table specified by the cursor cannot be modified.

Explanation: The result table of the SELECT or VALUES statement cannot be updated.

On the database manager, the result table is read-only if the cursor is based on a VALUES statement or the SELECT statement contains any of the following:

- The DISTINCT keyword
- A column function in the SELECT list
- A GROUP BY or HAVING clause
- A FROM clause that identifies one of the following:
 - More than one table or view
 - A read-only view
 - An OUTER clause with a typed table or typed view
 - A data change statement
- A set operator (other than UNION ALL).

Note that these conditions do not apply to subqueries of the SELECT statement.

The statement cannot be processed.

User response: Do not perform updates on the result table as specified.

Federated system users: isolate the problem to the data source failing the request.

If a data source is failing the request, examine the restrictions for that data source to determine the cause of the problem and its solution.

If the restriction exists on a data source, see the SQL reference manual for that data source to determine why the object is not updatable.

sqlcode: -511

sqlstate: 42829

SQL0512N A three-part name *name* that references a remote object is not supported in the context in which it appears. Reason Code = *reason-code*.

Explanation: The statement cannot be processed because it violates a restriction on a three-part name that references a remote object as indicated by *reason-code* as follows:

1

IMPORT and EXPORT are not supported for a three-part name that references a remote object.

2

CREATE ALIAS on a three-part name that references a remote object is not supported in a partitioned database.

3

CREATE INDEX, GRANT, REVOKE, LOCK TABLE, ALTER NICKNAME, DROP NICKNAME, COMMENT, RENAME, CREATE VIEW, CREATE TABLE, CREATE TRIGGER, CREATE FUNCTION (SQL and External), CREATE PROCEDURE (SQL and External), CREATE METHOD and REFRESH TABLE are not supported for a three-part name that references a remote object.

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A three-part name that references a remote object is not supported in static SQL.

User response: Do not specify a three-part name that references a remote object where it is not supported.

sqlcode: -512

sqlstate: 56023

SQL0513W The SQL statement will modify an entire table or view.

Explanation: The UPDATE or DELETE statement does not contain a WHERE clause so all rows of the table or view are modified if this statement is executed.

The statement is accepted.

Federated system users: not all data sources report this warning condition. The federated server attempts to issue this warning whenever the condition exists, but there is no guarantee that the federated server can always detect this condition. Do not rely on this warning to preclude UPDATE/DELETE operations from affecting an entire table or view.

User response: Ensure that you intend to modify the entire table or view.

sqlcode: +513

sqlstate: 01504

SQL0514N The cursor *name* is not in a prepared state.

Explanation: The application program tried to use a cursor that is not in a prepared state. The cursor is associated with a statement that meets the following conditions:

1. was never prepared
2. was made not valid by either an explicit or implicit rebind of the package
3. was prepared in a previous transaction and the application's package is bound with KEEPDPYNAMIC NO

The statement cannot be processed.

User response:

1. Prepare the statement named in the DECLARE CURSOR statement before you try to open the cursor.
2. The prepare for the cursor must be reissued.
3. The statement should be prepared again after COMMIT or ROLLBACK. Alternatively, either bind the package with KEEPDPYNAMIC YES or use the ALTER PACKAGE statement to change the KEEPDPYNAMIC property to YES.

sqlcode: -514

sqlstate: 26501

SQL0516N The DESCRIBE statement does not specify a prepared statement.

Explanation: The statement name in the DESCRIBE statement must specify a statement that was prepared in the same database transaction.

The statement cannot be processed.

User response: Verify that the statement name specifies a statement that has been prepared.

sqlcode: -516

sqlstate: 26501

SQL0517N The cursor *name* identifies a prepared statement that is not a SELECT or VALUES statement.

Explanation: The cursor *name* could not be used as specified because the prepared statement named in the cursor declaration was not a SELECT or VALUES statement.

The statement cannot be processed.

User response: Verify that the statement name is specified correctly in the PREPARE and the DECLARE

CURSOR for cursor *name* statements. Or correct the program to ensure that only prepared SELECT or VALUES statements are used in association with cursor declarations.

sqlcode: -517

sqlstate: 07005

SQL0518N The statement named in the EXECUTE statement is not in a prepared state or is a SELECT or VALUES statement.

Explanation: The application program tried to EXECUTE a statement that

1. was never prepared,
2. is a SELECT or VALUES statement,
3. was made not valid by either an explicit or implicit rebind of the package, or
4. was prepared in a previous transaction and the application's package is bound with KEEPDPYNAMIC NO.

The statement cannot be processed.

User response:

1. Prepare the statement before attempting the EXECUTE.
2. Ensure that the statement is not a SELECT or VALUES statement.
3. The prepare for the cursor must be reissued.
4. The statement should be prepared again after COMMIT or ROLLBACK. Alternatively, either bind the package with KEEPDPYNAMIC YES or use the ALTER PACKAGE statement to change the KEEPDPYNAMIC property to YES.

sqlcode: -518

sqlstate: 07003

SQL0519N The PREPARE statement identifies the SELECT or VALUES statement of the open cursor *name*.

Explanation: The application program attempted to prepare the SELECT or VALUES statement for the specified cursor when that cursor is already open.

The statement cannot be prepared. The cursor was not affected.

User response: Correct the application program so it does not attempt to prepare the SELECT or VALUES statement for a cursor that is open.

sqlcode: -519

sqlstate: 24506

SQL0525N The SQL statement cannot be executed because it was in error at bind time for section = *section-number* package = *pkgschema.pkgname* consistency token = *Xcontoken*.

Explanation: One of the following:

- The statement was in error when the package was bound, but the error was ignored then because the option SQLERROR (CONTINUE) was used. Since the statement contains an error, it cannot be executed.
- The statement might not be an executable statement at this location, or might only be executable by a DB2 application requester

Note that *contoken* is given in hexadecimal.

The statement cannot be executed.

User response: If the SQL statement is not supposed to execute at the indicated location, then correct the program so that the statement in error does not execute at that location. Precompile, compile, and bind replace the package. If the SQL statement is supposed to execute at the indicated location, correct the problem found and reissue PREP or BIND using ACTION(REPLACE). If multiple versions of the package have been bound, issue the following SELECT statement to determine which version has the error: SELECT PKGVERSION FROM SYSCAT.PACKAGES where PKGSHEMA='pkgschema' AND PKGNAME = 'pkgname' and HEX(UNIQUE_ID) = 'contoken'

sqlcode: -525

sqlstate: 51015

SQL0526N The requested function does not apply to temporary tables.

Explanation: The SQL statement being executed refers to a created temporary table or a declared temporary table. A created temporary table or a declared temporary table cannot be used in the given context.

The statement cannot be processed.

User response: Modify the SQL statement to ensure that the object references are not to created temporary tables or declared temporary tables.

sqlcode: -526

sqlstate: 42995

SQL0528N The table or nickname *tablename-or-nickname* already has a unique constraint that is a duplicate of constraint *name*.

Explanation: A UNIQUE clause uses the same column list as the PRIMARY KEY clause, another UNIQUE clause or the PRIMARY KEY or a UNIQUE constraint

that already exists for the table *tablename*. Duplicate unique constraints are not allowed.

name is the constraint name, if one was specified or exists. If a constraint name is not specified, *name* is the first column name specified in the column list of the UNIQUE clause followed by three periods.

The statement cannot be processed.

User response: Remove the duplicate UNIQUE clause or change the column list to a set of columns that is not already part of a unique constraint.

sqlcode: -528

sqlstate: 42891

SQL0530N The insert or update value of the FOREIGN KEY *constraint-name* is not equal to any value of the parent key of the parent table.

Explanation: A value in a foreign key of the object table is being set, but this value is not equal to any value of the parent key of the parent table.

When a row is inserted into a dependent table, the insert value of a foreign key must be equal to some value of the parent key of any row of the parent table of the associated relationship.

Similarly, when the value of a foreign key is updated, the update value of a foreign key must be equal to the value of the parent key of any row of the parent table of the associated relationship at the completion of the statement.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *constraint name*. In these cases the message token will have the following format: "<data source>:UNKNOWN", indicating that the actual value for the specified data source is unknown.

The statement could not be executed. The contents of the object table are unchanged.

User response: Examine the insert or update value of the foreign key first, and then compare it with each of the parent key values of the parent table to determine and correct the problem.

sqlcode: -530

sqlstate: 23503

SQL0531N The parent key in a parent row of relationship *constraint-name* cannot be updated.

Explanation: An operation attempted to update a parent key in the row of the parent table but the parent key in the specified row has dependent rows in the

dependent table associated with it in the *constraint-name* constraint.

When the update rule of constraint *constraint-name* is NO ACTION, the value of a parent key in a parent row cannot be updated if the parent row has any dependent rows at the completion of the statement.

When the update rule of constraint *constraint-name* is RESTRICT, the value of a parent key in a parent row cannot be updated if the parent row has any dependent rows at the time the update of the parent key is attempted.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *constraint name*. In these cases the message token will have the following format: "<data source>:UNKNOWN", indicating that the actual value for the specified data source is unknown.

The statement could not be executed. The contents of the parent table are unchanged.

User response: Examine the parent key of the object table and the foreign key of the dependent table to determine if the value of the specified row of the parent key should be changed. If this does not show the problem, examine the contents of the object table and the dependent table to determine and correct the problem.

sqlcode: -531

sqlstate: 23001, 23504

SQL0532N A parent row cannot be deleted because the relationship *constraint-name* restricts the deletion.

Explanation: An operation attempted to delete a specified row of the parent table but the parent key in the specified row has dependent rows in the referential constraint *constraint-name* and the delete rule of NO ACTION or RESTRICT is specified for the relationship.

When the delete rule of constraint *constraint-name* is NO ACTION, a row of the parent table cannot be deleted if the dependent rows are still dependent on the parent key at the completion of the statement.

When the delete rule of constraint *constraint-name* is RESTRICT, a row of the parent table cannot be deleted if the parent row has any dependent rows at the time of the delete.

Note that a delete can cascade to delete other rows in dependent tables that have a delete rule of NO ACTION or RESTRICT. Thus the constraint *constraint-name* may be on a different table than the original delete operation.

Federated system users: the constraint can exist on the

data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *constraint name*. In these cases the appropriate fields contain values (such as "unknown") that indicate that the actual value is unknown.

The statement could not be executed. The contents of the table are unchanged.

User response: Examine the delete rule for all descendent tables to determine and correct the problem. The specific tables involved can be determined from the relationship *constraint-name*.

sqlcode: -532

sqlstate: 23001, 23504

SQL0533N The INSERT statement is not valid because a relationship restricts the result of the fullselect to one row.

Explanation: An INSERT operation with a fullselect attempted to insert multiple rows into a table that is a parent and a dependent in the same relationship of a referential constraint.

The fullselect of the INSERT operation should return no more than one row of data.

The INSERT statement could not be executed. The contents of the object table are unchanged.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

User response: Examine the search condition of the fullselect to ensure selection of no more than one row of data.

sqlcode: -533

sqlstate: 21501

SQL0534N Invalid multiple-row update.

Explanation: An UPDATE operation attempted to perform a multiple-row update of a column included in a primary key or unique index.

Multiple-row updates of columns of a primary key or unique index are not supported.

The UPDATE statement could not be executed. The contents of the table are unchanged.

Federated system users: the constraint can exist on federated server (if the child and parent tables exist as tables on federated server), or it can exist on the data source (if the child and parent tables exist on the data source).

User response: Ensure the search condition of the UPDATE statement selects only one object table row to update.

sqlcode: -534

sqlstate: 21502

SQL0535N The DELETE statement is not valid because a self-referencing relationship restricts the deletion to one row.

Explanation: A DELETE operation with a WHERE clause attempted to delete multiple rows from a table which is a parent and a dependent in the same relationship of a referential constraint with a RESTRICT or SET NULL delete rule.

The WHERE clause of the DELETE operation should select no more than one row of data.

The DELETE statement could not be executed. The contents of the object table are unchanged.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

User response: Examine the WHERE clause search condition to ensure no more than one row of data is selected.

NOTE: This is only a restriction in releases of DB2 prior to Version 2.

sqlcode: -535

sqlstate: 21504

SQL0536N The DELETE statement is not valid because table *name* can be affected by the operation.

Explanation: A DELETE operation was attempted with the indicated table referenced in a subquery.

The indicated table referenced in a subquery of the DELETE statement can be affected because it is either:

- A dependent of the DELETE object table in a relationship with a CASCADE or SET NULL delete rule.
- A dependent of another table in a relationship with a CASCADE or SET NULL delete rule and deletions from the DELETE object table can cascade to that table.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *name*. In these cases the appropriate fields contain values (such as “unknown”) that indicate that the actual value is unknown.

The statement could not be processed.

User response: Do not reference a table in a DELETE

statement subquery when the table can be affected by the DELETE statement.

NOTE: This error is only applicable to releases of DB2 prior to Version 2 and hosts accessed through DB2 Connect.

sqlcode: -536

sqlstate: 42914

SQL0537N A key column list identifies column *column-name* more than once.

Explanation: The column *column-name* appears more than once in a key column list. A key column list could occur in a PRIMARY KEY clause, FOREIGN KEY clause, UNIQUE clause, DISTRIBUTE BY clause, ORGANIZE BY clause, PARTITION BY clause or as a functional dependency of a CREATE or ALTER statement.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *column-name*. In these cases the appropriate fields contain values (such as “unknown”) that indicate that the actual value is unknown.

The statement cannot be processed.

User response: Remove the duplicate column names.

sqlcode: -537

sqlstate: 42709

SQL0538N FOREIGN KEY *name* does not conform to the description of the parent key of table or nickname *table-name-or-nickname*.

Explanation: The definition of the indicated foreign key does not conform to the parent key description of the table or nickname *table-name-or-nickname*.

Possible reasons are:

- The number of columns in the foreign key column list does not match the number of columns in the parent key column list.
- The number of columns in the foreign key column list does not match the number of columns in the primary key of the parent table or the parent nickname (a parent key column list is not specified).
- The descriptions of the corresponding columns are not compatible. Column descriptions are compatible if corresponding columns have compatible data types (both columns are numeric, character strings, graphic, date/time, or have the same distinct type).
- The list of column names in a REFERENCES clause cannot reference a parent key defined with BUSINESS_TIME WITHOUT OVERLAPS.

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name is the constraint name if specified in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the clause followed by three periods.

Federated system users should note that some data sources do not provide the appropriate values for *name* and *table-name-or-nickname*. In these cases the appropriate fields contain values (such as "unknown") that indicate that the actual value is unknown.

The constraint can exist the data source (if the child and parent tables exist on the data source).

The statement cannot be processed.

User response: Correct the statement so the foreign key description conforms to the parent key description.

sqlcode: -538

sqlstate: 42830

SQL0539N Table or nickname *name* does not have a *key-type* key.

Explanation: One of the following occurred:

- The table or nickname *name* was specified as a parent in a FOREIGN KEY clause but the table or nickname is not defined as a parent because it does not have a primary key.
- The ALTER TABLE statement attempted to create the FOREIGN KEY for the table *name* but the table or nickname does not have a primary key.
- The ALTER TABLE statement attempted to drop the primary key for the table *name* but the table does not have a primary key.
- The ALTER TABLE statement attempted to drop the partitioning key for the table *name* but the table does not have a partitioning key.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *name* and *key-type*. In these cases the appropriate fields contain values (such as "unknown") that indicate that the actual value is unknown.

The statement cannot be processed. A system catalog cannot be defined as a parent in a referential constraint.

User response: When creating a referential constraint, specify the primary key before specifying any foreign keys (constraints).

sqlcode: -539

sqlstate: 42888

SQL0540N The definition of table *table-name* is incomplete because it lacks a primary index or a required unique index.

Explanation: The table named was defined with a PRIMARY KEY clause or a UNIQUE clause. Its definition is incomplete, and it cannot be used until a unique index is defined for the primary key (the primary index) and for each set of columns in any UNIQUE clause (the required unique indexes). An attempt was made to use the table in a FOREIGN KEY clause or in an SQL manipulative statement.

The statement cannot be executed.

User response: Define a primary index or a required unique index on the table before referencing it.

sqlcode: -540

sqlstate: 57001

SQL0541W The referential, primary key, or unique constraint *name* is ignored because it is a duplicate constraint.

Explanation: If *name* refers to a referential constraint, then a FOREIGN KEY clause uses the same foreign key and parent table or the same foreign key and parent nickname as another FOREIGN KEY clause.

If *name* refers to a primary key or unique constraint, then one of the following situations exists.

- A PRIMARY KEY clause uses the same set of columns as a UNIQUE clause in the statement.
- A UNIQUE clause uses the same set of columns as the PRIMARY KEY clause or another UNIQUE clause in the statement.
- A PRIMARY KEY or a UNIQUE constraint on the same set of columns already exists for the table.

name is the constraint name, if specified.

If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY or UNIQUE clause followed by three periods.

Federated system users: the constraint can exist on the data source (if the child and parent tables exist on the data source).

Some data sources do not provide the appropriate values for *name*. In these cases the appropriate fields contain values (such as "unknown") that indicate that the actual value is unknown.

The indicated referential constraint or unique constraint was not created. The statement was processed successfully.

User response: No action is required. Processing can continue.

sqlcode: +541

sqlstate: 01543

SQL0542N The column named *column-name* cannot be a column of a primary key or unique key constraint because it can contain null values.

Explanation: The column named *column-name* identified in a PRIMARY KEY clause or UNIQUE clause is defined to allow null values, or an attempt was made to alter a column that is part of a PRIMARY KEY or UNIQUE constraint to allow null values.

Federated system users: some data sources do not provide the appropriate values for *column-name*. In these cases the appropriate fields contain values (such as "unknown") that indicate that the actual value is unknown.

The statement cannot be processed.

User response: Correct the column, primary key or unique key definition. If this error was returned as part of an alter table statement, the PRIMARY KEY or UNIQUE constraint must be removed before the column can be altered to allow null values.

sqlcode: -542

sqlstate: 42831

SQL0543N A row in a parent table cannot be deleted because the check constraint *constraint-name* restricts the deletion.

Explanation: The delete operation cannot be executed because the target table is a parent table and is connected with a referential constraint to a dependent table with a delete rule of SET NULL. However, a check constraint defined on the dependent table restricts the column from containing a null value.

The statement cannot be processed.

User response: Examine the foreign key and its delete rule in the dependent table and the conflicting check constraint. Change either the delete rule or the check constraint so that they do not conflict with each other.

sqlcode: -543

sqlstate: 23511

SQL0544N The check constraint *constraint-name* cannot be added because the table contains a row that violates the constraint.

Explanation: At least one existing row in the table violates the check constraint that is to be added in the ALTER TABLE statement.

The statement cannot be processed.

User response: Examine the check constraint definition that was specified in the ALTER TABLE statement and the data in the table to determine why there is a violation of the constraint. Change either the check constraint or the data so that the constraint is not violated.

sqlcode: -544

sqlstate: 23512

SQL0545N The requested operation is not allowed because a row does not satisfy the check constraint *constraint-name*.

Explanation: Check constraint violations can occur on either INSERT or UPDATE operations. The resulting row violated the check constraint definition on that table.

The statement cannot be processed.

User response: Examine the data and the check constraint definition in the catalog view SYSCAT.CHECKS to determine why the INSERT or UPDATE statement failed. Change the data so that the constraint is not violated.

sqlcode: -545

sqlstate: 23513

SQL0546N The check constraint *constraint-name* is invalid.

Explanation: A check constraint in the CREATE TABLE or CREATE NICKNAME, ALTER TABLE, or ALTER NICKNAME statement is invalid for one or more of the following reasons:

- the constraint definition contains a subquery
- the constraint definition contains a column function
- the constraint definition contains a host variable
- the constraint definition contains a parameter marker
- the constraint definition contains a special register or a built-in function that depends on the value of a special register
- the constraint definition contains a global variable
- the constraint definition contains a variant user defined function
- the constraint definition contains a user defined function with external action
- the constraint definition contains a user defined function with the scratchpad option
- the check constraint is part of a column definition, and its check-condition contains a reference to a column name other than the column being defined.

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- the constraint definition contains a dereference operation or a Deref function where the scoped reference argument is other than the object identifier (OID) column.
- the constraint definition uses a TYPE predicate.
- the constraint definition includes a CAST specification with a SCOPE clause.
- the functional dependency is defined with attribute ENFORCED.
- a nullable column is specified in the child-set columns of the functional dependency.
- the constraint definition contains a text search function.
- the constraint definition contains an XML column.
- the constraint definition contains an XMLQUERY or XMLEXISTS expression.

The statement cannot be processed.

User response: The user response is one of the following, depending on the cause of the error:

- change the check constraint so that it does not include the listed item.
- move the check constraint definition outside the column definition, so that it becomes a table level constraint definition.
- change the functional dependency so that it does not specify the ENFORCED attribute.
- change the nullable column to not nullable in the child-set of columns of the functional dependency.

sqlcode: -546

sqlstate: 42621

SQL0548N A check constraint or generated column that is defined with *check-condition-element* is invalid.

Explanation: A check constraint in the CREATE TABLE or CREATE NICKNAME, ALTER TABLE or ALTER NICKNAME statement is invalid for one or more of the following reasons:

- the constraint definition contains a subquery
- the constraint definition contains a column function
- the constraint definition contains a host variable
- the constraint definition contains a parameter marker
- the constraint definition contains a special register or a built-in function that depends on the value of a special register
- the constraint definition contains a global variable
- the constraint definition contains a function that is not deterministic
- the constraint definition contains a user defined function with external action

- the constraint definition contains a user defined function with the scratchpad option
- the definition contains a user defined function with the CONTAINS SQL or READS SQL DATA option
- the definition contains a reference to a generated column which is based on an expression
- the check constraint is part of a column definition, and its check-condition contains a reference to a column name other than the column being defined
- the generated column definition contains a reference to itself
- the constraint definition contains a dereference operation or a Deref function where the scoped reference argument is other than the object identifier (OID) column
- the constraint definition uses a TYPE predicate
- the constraint definition includes a CAST specification with a SCOPE clause
- the constraint or generated column definition contains a text search function
- the constraint definition contains an XML column
- the constraint definition contains an XMLQUERY or XMLEXISTS expression
- the generated column expression references a column for which a column mask is defined

The token within the text of the error message lists the invalid item.

The statement cannot be processed.

User response: The user response is one of the following, depending on the cause of the error:

- change the check constraint or generated column so that it does not include the listed item.
- move the check constraint definition outside the column definition, so that it becomes a table level constraint definition.

sqlcode: -548

sqlstate: 42621

SQL0549N The *statement* statement is not allowed for *object-type1 object-name1* because the bind option DYNAMICRULES RUN is not in effect for the *object-type2*.

Explanation: A program attempted to issue the indicated SQL statement that is one of several SQL statements that can be dynamically prepared only in a package exhibiting run behavior. Those SQL statements are:

- Dynamic GRANT statement
- Dynamic REVOKE statement
- Dynamic ALTER statement

- Dynamic CREATE statement
- Dynamic DROP statement
- Dynamic COMMENT ON statement
- Dynamic RENAME statement
- Dynamic SET INTEGRITY statement
- Dynamic SET EVENT MONITOR STATE statement
- Dynamic TRANSFER OWNERSHIP statement
- Dynamic CREATE USAGE LIST
- Dynamic ALTER USAGE LIST

statement

The SQL statement in error

object-type1

PACKAGE or DBRM. DBRM is valid only in a DRDA connection.

object-name1

If *object-type1* is PACKAGE, *object-name1* is the name of the package in the format 'location-id.collection-id.package-id'. If *object-type1* is DBRM, *object-name1* is the name of the DBRM in the format 'plan-name DBRM-name'.

object-type2

PACKAGE or PLAN. PLAN is valid only in a DRDA connection. If *object-type1* is PACKAGE, *object-type2* can be either PACKAGE or PLAN (whichever is bound with DYNAMICRULES(BIND)). If *object-type1* is DBRM, *object-type2* is PLAN.

The SQL statement cannot be executed.

User response: Do one of the following to correct the error:

- If the SQL statement is embedded, remove it, precompile and compile the application program again, and reissue the BIND command.
- If appropriate, use the SQL statement with a package or plan that is bound with DYNAMICRULES(RUN).
- Issue the REBIND command with the DYNAMICRULES(RUN) option for the plan or package to which the SQL statement is bound.

sqlcode: -549

sqlstate: 42509

SQL0551N *authorization-ID does not have the required authorization or privilege to perform operation operation on object object-name.*

Explanation: Authorization ID *authorization-ID* attempted to perform the specified operation *operation* on *object-name* without sufficient authorization. The

following circumstances can lead to this message being returned:

1. If a table with referential constraints is being created or altered, this message might indicate that the user does not have the REFERENCES privilege to create or drop a foreign key. In this case the *operation* is REFERENCES and the *object-name* is the object that the constraint references.
2. If execution of a DB2 utility or CLI application is being attempted, the DB2 utility program or CLI package might need to be rebound to the database because the user ID that created the database no longer exists or no longer has the required privileges. The EXECUTE privilege might need to be granted.
3. If this error occurs during invocation or creation of a routine:
 - During invocation: Authorization ID *authorization-ID* does not have the EXECUTE privilege on any candidate routine in the SQL path. *object-name* is the name of a candidate routine in the SQL path.
 - During creation: The authorization ID *authorization-ID*, which was used to bind a routine, might not have the privileges necessary to issue all the statements in the routine. For example, if a statement in a routine updates table A and *authorization-ID* does not have update privileges on table A, the binding operation fails. Group privileges are not used to bind static SQL statements.
4. If this error occurs during the execution of the LOAD or IMPORT utility using the REPLACE mode against protected tables, the authorization ID *authorization-ID* requires one of the following additional authorities or privileges:
 - DATAACCESS authority
 - CONTROL privilege on the target table or view
5. If the *operation* is SET ROLE, *authorization-ID* does not have membership in the role *object-name*.
6. If the *operation* is REVOKE ROLE and the role *object-name* is being revoked from an authorization ID that has been granted membership in the role with the WITH ADMIN OPTION clause, *authorization-ID* does not hold the SECADM authority.
7. If attempting to update or remove a scheduled task, the user must be the creator of the task or have DBADM, SYSADM, SYSCTRL, or SYSMAINT authority. In this case the operation is either UPDATE or REMOVE, and the name is the task name.
8. If replacing an existing object by using the OR REPLACE option, the user must be the owner of the object.
9. For FEDERATED system users, the following situations can cause this message to be returned:

- A user who does not have the required authorization tries to alter the REMOTE_PASSWORD user-mapping option. To alter the setting of the REMOTE_PASSWORD option, the user must have DBADM authority or have an authorization ID (the value in the USER special register) that matches the value of the authid column in the rows that are being updated.
 - A user who has a trusted user mapping (the USE_TRUSTED_CONTEXT option is set to 'Y') tries to alter the user mapping. When using a trusted user mapping, a user can modify only the setting of the REMOTE_PASSWORD option. To alter other options of a trusted user mapping, the user must have DBADM authority.
 - A user tries to alter the FED_PROXY_USER user-mapping option or USE_TRUSTED_CONTEXT user-mapping option. To alter the values of these options, the user must have SECADM authority.
 - A user tries to create or drop a user mapping that has the FED_PROXY_USER option or the USE_TRUSTED_CONTEXT option. To create or drop a user mapping that has these options, the user must have SECADM authority.
 - A user tries to alter the FED_PROXY_USER server option. To alter the setting for this option, the user must have SECADM authority.
 - A user tries to create or drop a server that has the FED_PROXY_USER option. To create or drop a server that has this option, the user must have SECADM authority.
10. If this message was returned when the user with authorization ID *authorization-ID* called the ADMIN_MOVE_TABLE procedure, it is because that user does not have the same authorization ID as the user who initiated the online move table operation.

Some data sources do not provide appropriate values for *authorization-ID*, *operation*, and *object-name*. In these cases, the message tokens have the following format: <data source> AUTHID:UNKNOWN, UNKNOWN, and <data source> :TABLE/VIEW.

The statement cannot be processed.

User response: For each circumstance, the recommended resolution is as follows:

1. Grant the REFERENCES privilege by using the statement GRANT REFERENCES ON *object-name* TO *authorization-ID*.
2. If the DB2 utility programs or CLI packages must be rebound to the database, the database administrator can issue one of the following CLP commands from the bnd subdirectory of the instance, while connected to the database:

- For the DB2 utilities: DB2 bind @db2ubind.lst blocking all grant public
- For CLI packages: DB2 bind @db2cli.lst blocking all grant public

To grant the EXECUTE privilege on a package, use the GRANT statement, for example: GRANT EXECUTE ON PACKAGE NULLID.SYSH200 TO PUBLIC.

3. If the error occurs during invocation, grant the EXECUTE privilege on the routine to *authorization-ID* by using the statement GRANT EXECUTE ON *object-name* TO *authorization-ID*.
If the error occurs during creation, grant explicit privileges to *authorization-ID* on the objects that the statements within the routine are attempting to access.
4. Grant DBADM authority or the CONTROL privilege on the target table or view to *authorization-ID*.
5. Grant membership in the role *object-name* to *authorization-ID*.
6. Revoke the role by using an authorization ID that has the SECADM authority.
7. Ensure that the user is the same user who scheduled the task or is a user who has DBADM, SYSADM, SYSCTRL, or SYSMAINT authority.
8. Make sure that the user issuing the statement is the owner of the object to be replaced. The security administrator (who holds SECADM authority) can use the TRANSFER OWNERSHIP statement to transfer the ownership of the object, if necessary.
9. Federated system users: The required authorization can be at the federated server, at the data source, or at both the federated server and the data source.
10. Call the procedure again, with the same authorization ID as the user who initiated the online move table operation.

sqlcode: -551

sqlstate: 42501, 5UA0K

SQL0552N *authorization-ID* does not have the privilege to perform operation *operation*.

Explanation: Authorization ID *authorization-ID* attempted to perform the specified *operation* without the proper authorization.

Federated system users: some data sources do not provide the appropriate values for *authorization-ID* and <operation>. In these cases the message tokens will have the following format: "<data source> AUTHID:UNKNOWN", and "UNKNOWN" indicating that the actual values for authid and operation at the specified data source are not known.

The statement cannot be processed.

User response: Ensure that *authorization-ID* has the authorization to perform the operation.

Federated system users: this authorization can be at the federated server, the data source, or both.

sqlcode: -552

sqlstate: 42502

SQL0553N An object cannot be created with the schema name *schema-name*.

Explanation: The reason the schema name *schema-name* is invalid depends on the type of object that is being created.

- Table, view, index and package objects cannot be created with the schema name SYSCAT, SYSFUN, SYSPUBLIC, SYSSTAT, SYSIBM, or SYSIBMADM. It is strongly advised that schema names should not start with *SYS* since additional schemas starting with these letters may be reserved for exclusive use of DB2 products in the future.
- All other types of objects (for example: user defined functions, distinct types, triggers, schemas, aliases, usage lists) cannot be created with any schema name that starts with the letters *SYS*.

The statement cannot be processed.

User response: Use a valid schema name or remove the explicit schema name and rerun the statement.

sqlcode: -553

sqlstate: 42939

SQL0554N An authorization ID cannot grant a privilege or authority to itself.

Explanation: An authorization ID attempted to execute a statement that would grant a privilege or authority to the authorization ID itself. If this is a GRANT statement, the authorization ID itself appears as one of the entries in the authorization ID list to which privileges, authorities, security labels, or exemptions are to be granted. If this is a CREATE TRUSTED CONTEXT or an ALTER TRUSTED CONTEXT, the authorization ID itself appears as either the value for the SYSTEM AUTHID attribute or one of the authorization names specified in the WITH USE FOR clause.

The statement cannot be processed.

User response: Remove or replace the authorization ID in the statement.

sqlcode: -554

sqlstate: 42502

SQL0555N An authorization ID cannot revoke a privilege from itself.

Explanation: An authorization ID attempted to execute a REVOKE statement where the authorization ID itself appears as one of the entries in the authorization ID list from which privileges are to be revoked.

The statement cannot be processed.

User response: Remove the authorization ID from the list.

sqlcode: -555

sqlstate: 42502

SQL0556N An attempt to revoke a privilege, security label, exemption, or role from *authorization-ID* was denied because *authorization-ID* does not hold this privilege, security label, exemption, or role.

Explanation: The privilege, security label, exemption, or role cannot be revoked because *authorization-ID* does not hold the privilege, security label, exemption, or role.

The statement cannot be processed.

User response: Change the REVOKE statement to conform to the REVOKE rules and resubmit the statement. Ensure that when a REVOKE statement lists several privileges, security labels, exemptions, or roles to be revoked and a list of authorization IDs that each authorization ID possesses at least one of the specified privileges, security labels, exemptions, or roles.

sqlcode: -556

sqlstate: 42504

SQL0557N The specified combination of privileges cannot be granted or revoked.

Explanation: One of the following occurred:

- The GRANT or REVOKE statement contains a combination of privileges that are of different classes. The privileges must all be of one class. Examples are DATABASE, PLAN, or TABLE.
- The GRANT statement attempted to grant a privilege for a view that is not allowed. ALTER, INDEX and REFERENCES cannot be granted for a view.

The statement cannot be processed.

User response: Correct and resubmit the statement.

sqlcode: -557

sqlstate: 42852

SQL0558N An attempt to revoke a privilege from *authorization-ID* was denied because *authorization-ID* holds control privilege.

Explanation: *authorization-ID* holds the control privilege. The privilege to be revoked is implicitly provided by the control privilege, so it cannot be revoked unless the control privilege is also revoked.

The valid values for *control* are as follows:

- DBADM
- CONTROL
- CREATE NOT FENCED ROUTINE

The statement cannot be executed. No privileges are revoked.

User response: Revoke the control privilege, if desired.

sqlcode: -558

sqlstate: 42504

SQL0562N The specified database privileges cannot be granted to PUBLIC directly or indirectly by using a role.

Explanation: The GRANT statement attempted to grant a database privilege to the reserved authorization ID PUBLIC, directly or indirectly by using a role. DBADM authority cannot be granted to PUBLIC.

The statement cannot be processed.

User response: Administrative authorities, such as DBADM, cannot be granted to PUBLIC, because this would give every user access to administrative functions.

sqlcode: -562

sqlstate: 42508

SQL0567N The operation failed because the specified authorization name does not meet the identifier naming rules.

Authorization name: *authorization-name*.

Explanation: Rules exist for the naming of all database objects, user names or authorization names, passwords, groups, files, and paths. Some of these rules are specific to the platform you are working on.

This message is returned when a specified authorization name does not satisfy the identifier naming rules. For example this message can be returned when an authorization name contains characters other than a through z, A through Z, 0 through 9, and the supported special characters.

The statement cannot be processed.

User response: Perform the operation again, specifying an authorization name that satisfies the identifier naming rules.

sqlcode: -567

sqlstate: 42602

SQL0569N Authorization ID *authorization-name* does not uniquely identify a user, a group or a role in the system.

Explanation: The authorization ID specified by the GRANT or REVOKE statement does not uniquely identify a user, a role, or a group in the security namespace. The reference to *authorization-name* is ambiguous. Note that when using DCE security, the USER, GROUP or ROLE keyword is always required.

User response: Change the statement to explicitly specify the USER, GROUP or ROLE keyword to uniquely identify the specified authorization id.

sqlcode: -569

sqlstate: 56092

SQL0570W Not all requested privileges on object *object-name* of type *object-type* were granted.

Explanation: A GRANT operation was attempted on object *object-name* of type *object-type*, but some or all of the privileges were not granted. The authorization ID that issued the statement does not have all of the privileges to be granted with the GRANT option or does not have ACCESSCTRL or SECADM authority.

All valid requested privileges were granted.

User response: Obtain the required authority and try the operation again.

sqlcode: +570

sqlstate: 01007

SQL0572N Package *pkgname* is inoperative.

Explanation: The package *pkgname* is marked as inoperative and must be explicitly rebound (without specifying RESOLVE CONSERVATIVE) before it can be used. This package cannot be used because one or more user-defined functions that it depends upon have been dropped.

User response: Explicitly rebound the named package using either the REBIND (without specifying RESOLVE CONSERVATIVE) or the BIND command.

sqlcode: -572

sqlstate: 51028

SQL0573N A column list specified in the references clause of constraint *name* does not identify a unique constraint of the parent table or nickname *table-name*.

Explanation: A list of column names was specified in

the references clause for the constraint identified by *name* that does not match the column names of the primary key or any unique key of the referenced table *table-name*.

name is the constraint name, if specified. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed.

User response: Correct the column list in the references clause or add the unique constraint to the referenced table or nickname.

sqlcode: -573

sqlstate: 42890

SQL0574N **DEFAULT value or IDENTITY attribute value is not valid for column**
column-name in table *table-name*. Reason code: *reason-code*.

Explanation: The DEFAULT value or IDENTITY attribute value for column *column-name* in table *table-name* is not valid. The possible reason codes are as follows:

- 1 The value is not assignable to the column because the constant does not conform to the format for a constant of that data type, the value has an incorrect length or precision, or the function returns an incorrect data type.
- 2 A floating-point constant is specified and the column is not a floating point data type
- 3 A decimal constant is specified and non-zero digits would be truncated when assigned to the column
- 4 The value is more than 254 bytes, including quotes for strings, introducer characters such as the X for a hex constant, fully qualified function names, and parentheses. Non-significant blanks in the value are ignored. In an unequal code page environment, the value may be more than 254 bytes due to expansion of the string in the database code page.
- 5 The USER special register is specified and the length attribute of the character string data type is less than 8.
- 6 A datetime special register (CURRENT DATE, CURRENT TIME, or CURRENT TIMESTAMP) is specified and does not match the data type of the column.
- 7 A function was specified that is not supported. The specified function must be

system-generated cast function or one of the built-in functions BLOB, DATE, TIME, or TIMESTAMP.

- 8 The argument to a datetime function was not a string constant or the corresponding datetime special register.
- 9 A system-generated cast function was specified and the column is not defined with a user-defined distinct type.
- 10 A value with non-zero scale was specified for the START WITH or INCREMENT BY option of an identity column.
- 11 A special register is specified as the DEFAULT value and the length attribute of the character string data type is less than 128.
- 12 A decimal floating-point constant is specified and the column is not a decimal floating point data type.
- <0 Any reason code that is less than zero is an SQLCODE. The error in the DEFAULT value specification can be determined by checking the error message corresponding to this SQLCODE.

The statement cannot be processed.

User response: Correct the DEFAULT value or IDENTITY attribute value based on the reason code that was returned.

sqlcode: -574

sqlstate: 42894

SQL0575N **View or materialized query table *name* cannot be used because it has been marked inoperative.**

Explanation: The view or materialized query table *name* has been marked inoperative because a table, view, alias, or privilege upon which it is dependent has been removed. The view cannot be used by any SQL statement other than one of the following:

- COMMENT ON
- DROP VIEW or DROP TABLE
- CREATE ALIAS
- CREATE VIEW or CREATE TABLE

The statement cannot be processed.

User response: If *name* is a view, recreate the view by issuing a CREATE VIEW statement using the same view definition as the inoperative view. If *name* is a materialized query table, recreate the materialized query table by issuing the CREATE TABLE statement using the same materialized query table definition as in the inoperative materialized query table.

sqlcode: -575

sqlstate: 51024

SQL0576N Alias *name* cannot be created for *name2* as it would result in a repetitive alias chain.

Explanation: The alias definition of *name* on *name2* would have resulted in a repetitive alias chain which could never be resolved. For example, "alias A refers to alias B which refers to alias A" is a repetitive alias chain which could never be resolved.

The statement cannot be processed.

User response: Change the alias definition for *name* or revise the definition of one of the other alias definitions in the alias chain to avoid a repetitive chain.

sqlcode: -576

sqlstate: 42916

SQL0577N User defined routine *routine-name* (specific name *specific-name*) attempted to modify data but was not defined as MODIFIES SQL DATA.

Explanation: The program used to implement the body of a routine is not allowed to modify SQL data.

User response: Remove any SQL statements that modify data then recompile the program. Investigate the level of SQL allowed as specified when defining the routine.

sqlcode: -577

sqlstate: 38002

sqlstate: 42985

SQL0579N Routine *routine-name* (specific name *specific-name*) attempted to read data but was not defined as READS SQL DATA or MODIFIES SQL DATA.

Explanation: The program used to implement the body of a routine is not allowed to read SQL data.

User response: Remove any SQL statements that read data then recompile the program. Investigate the level of SQL allowed as specified when defining the routine.

sqlcode: -579

sqlstate: 38004

sqlstate: 42985

SQL0580N The result-expressions of a CASE expression cannot all be NULL.

Explanation: There is a CASE expression in the statement that has all the result-expressions (expressions following THEN and ELSE keywords) coded with the keyword NULL.

The statement cannot be processed.

User response: Change the CASE expression to include at least one result-expression that is other than the keyword NULL.

sqlcode: -580

sqlstate: 42625

SQL0581N The data types of the result-expressions of a CASE expression or DECODE function are not compatible.

Explanation: There is a CASE expression or a DECODE function in the statement that has result-expressions (expressions following THEN and ELSE keywords for CASE expressions) that are not compatible.

The data type of a CASE expression or the result of a DECODE function is determined using the "Rules for Result Data Types" on the result-expressions.

The statement cannot be processed.

User response: Correct the result-expressions so that they are compatible.

sqlcode: -581

sqlstate: 42804

SQL0582N A CASE expression in a VALUES clause, IN predicate, GROUP BY clause, or ORDER BY clause cannot include a quantified predicate, an IN predicate using a fullselect, or an EXISTS predicate.

Explanation: A search condition of a CASE expression is:

- a quantified predicate (one using SOME, ANY, or ALL),
- an IN predicate using a fullselect or
- an EXISTS predicate

and the CASE expression is part of:

- a VALUES clause
- an IN predicate
- a GROUP BY clause or
- an ORDER BY clause.

Such CASE expressions are not supported. The CASE expression may be part of a function written in SQL.

The statement cannot be processed.

User response: Remove the use of the quantified predicate, IN predicate, or EXISTS predicate from the CASE expression. If the CASE expression is part of a function, the query may need to be written without the function that causes the error.

sqlcode: -582

sqlstate: 42625

SQL0583N The use of routine or expression *name* is invalid because it is not deterministic or has an external action.

Explanation: The routine (function or method) or expression is defined as non-deterministic or as having external action. This is not supported in the context in which it is used. The contexts in which these are not valid are:

- as the first operand of a BETWEEN predicate
- in the expression prior to the first WHEN keyword in a simple-case-expression.
- as the first argument of a DECODE function
- as the argument of a RATIO_TO_REPORT function
- in an expression of a GROUP BY clause
- in an expression of an ORDER BY clause (external action only)
- in an expression of a PARTITION BY clause
- in a FILTER clause of a user-defined predicate specification or an index extension definition
- in the default expression for a global variable or parameter of a procedure definition

The statement cannot be processed.

User response: If the use of a non-deterministic or external action routine or expression was not intended, substitute a routine without these characteristics. If the behavior associated with the non-deterministic or external action routine or expression is intentional, use the alternate form of the statements that make that intent explicit.

- Instead of the BETWEEN predicate, use the corresponding statement using the equivalent combination of comparison predicates ($a \geq b$ and $a \leq c$ instead of a between b and c).
- Instead of a simple-when-clause or DECODE function, use the corresponding searched-when-clause where the routine would get specified in each search-condition.
- Push the argument of the RATIO_TO_REPORT function into a nested query.
- Remove the non-deterministic or external action routine or expression from the GROUP BY clause. If grouping is desired on a column of the result that is based on a non-deterministic or external action routine or expression use a nested table expression or a common table expression to first provide a result table with the expression as a column of the result.
- Remove the external action routine from the ORDER BY clause. If the column is part of the result set of the query, change the expression in the ORDER BY clause to the simple-integer or simple-column-name form of the sort key.

- Remove the non-deterministic or external action routine or expression from the FILTER clause.
- Remove the non-deterministic or external action routine or expression from the default clause for the global variable or parameter of a procedure definition.

sqlcode: -583

sqlstate: 42845

SQL0584N Invalid use of NULL or DEFAULT.

Explanation: DEFAULT can be used in a VALUES clause only if it is part of an INSERT or MERGE statement.

A VALUES clause that is not part of an INSERT statement must have a value other than NULL in at least one row for each column, unless the data type for the NULL can be resolved based on the context of its use in the statement.

If DEFAULT is used as a column-name in a WHERE or HAVING clause, it must be capitalized and enclosed in double quotes.

DEFAULT cannot be used in an assignment statement that assigns to an SQL variable or an SQL parameter in an SQL procedure, a host variable, or a parameter marker.

Federated system users: DEFAULT cannot be used in a VALUES clause of an INSERT statement where the object is a nickname.

User response: Substitute a value other than NULL or DEFAULT in the VALUES clause. If DEFAULT is used as a column-name, capitalize it and enclose it in double quotes. Do not assign DEFAULT to an SQL variable or an SQL parameter in an SQL procedure, a host variable, or a parameter marker.

sqlcode: -584

sqlstate: 42608

SQL0585N The schema name *schema-name* appears more than once in the set *special-register* statement.

Explanation: The SET statement for special register *special-register* includes the schema *schema-name* more than once.

The statement cannot be processed.

User response: Verify the list in the SET statement that contains the duplicate. If the error is only in entering a schema-name incorrectly, which happens to duplicate another entry, enter the schema name correctly and reissue the statement. If the entry is really a duplicate no action is required.

sqlcode: -585

sqlstate: 42732

SQL0586N The total length of *special-register* special register cannot exceed *length*.

Explanation: The *special-register* is defined as a length smaller than the value specified on the SET statement. The content of the string includes each schema name delimited with double quotes and separated from the next schema name by a comma. The total length of the string of all schema names in the special register cannot exceed the maximum length of the special register. A SET PATH or SET CURRENT PACKAGE PATH statement could result in this message.

The statement or command cannot be processed.

User response: Remove schema names to reduce the total length to fit the length of the special register. If the statement that failed was SET PATH and if all the schema names are required, it may be necessary to consolidate some user-defined functions, procedures, methods, or distinct types, so that fewer schema names are required on the SQL PATH.

sqlcode: -586

sqlstate: 42907

SQL0590N Name *name* specified in context *context-tag* is not unique.

Explanation: Name *name* is specified as a parameter, SQL variable, cursor, label, or condition in a context defined by *context-tag*. The name is not unique.

If *context-tag* is "BEGIN...END", then the context of the error is a dynamic SQL compound statement. Otherwise, the context of the error is a trigger or routine and *context-tag* is the trigger name or routine name containing the compound statement.

- If *name* is a parameter name, then it must be unique within the parameter list and the EXPRESSION AS clause of a routine.
- If *name* is an SQL variable name, cursor name or condition, then it must be unique within a compound statement .
- A label must be unique within a compound statement and different from the labels of the statements in which it is nested.

User response: Change the name so that it is unique.

sqlcode: -590

sqlstate: 42734

SQL0593N NOT NULL must be specified for a ROW CHANGE TIMESTAMP column, ROW BEGIN column, ROW END column, or column of a period. *column-name*.

Explanation: Row change timestamp, row-begin, and

row-end columns do not support null values. When such a column is defined on a CREATE TABLE or ALTER TABLE statement, the NOT NULL clause must be specified for these columns.

A column of a period must be defined as NOT NULL.

The statement cannot be executed.

User response: Change the statement to specify NOT NULL for the column *column-name*.

sqlcode: -593

sqlstate: 42831

SQL0595W Isolation level *requested-level* has been escalated to *escalated-level*.

Explanation: The isolation level specified is not supported by DB2. It has been escalated to the next higher level of isolation supported by DB2.

User response: To avoid this warning, specify an isolation level which is supported by DB2. DB2 supports isolation levels Repeatable Read (RR), Read Stability (RS), Cursor Stability (CS), and Uncommitted Read (UR).

sqlcode: +595

sqlstate: 01526

SQL0597N Unable to retrieve a DATALINK value. Reason code = *reason-code*.

Explanation: A DATALINK value could not be retrieved. The possible reason codes are as follows:

- 01** The DB2 Data Links Manager does not authorize the DB2 user to retrieve a DATALINK value embedded with a write token for modifying the DATALINK value referenced file.

User response: The action is based on the reason code as follows.

- 01** Contact the DB2 Data Links Manager administrator to grant the write access privilege to this file.

sqlcode: -0597

sqlstate: 42511

SQL0598W Existing index *name* is used as the index for the primary key or a unique key.

Explanation: An index was required for an ALTER TABLE operation that defined a primary key or a unique key, and the indicated index matches the required index.

If the index description of a nonpartitioned primary key or a nonpartitioned unique key index identifies the

same set of columns (in any order) as the primary or unique key and if it is specified as unique, then it is considered to match, regardless of the ascending or descending specifications.

However, partitioned indexes whose columns are not a superset of the range partitioning key columns are not considered to match.

The statement is processed successfully.

User response: No action is required.

sqlcode: +598

sqlstate: 01550

SQL0599W Comparison functions are not created for a distinct type based on a long string data type.

Explanation: Comparison functions are not created for a distinct type based on a long string data type (BLOB, CLOB, DBCLOB, LONG VARCHAR, or LONG VARGRAPHIC) since the corresponding functions are not available for these built-in data types.

This is a warning situation. The statement is processed successfully.

User response: No action is required.

sqlcode: +599

sqlstate: 01596

SQL0600N A routine *routine-name* could not be generated because of a duplicate signature or because it would override an existing routine.

Explanation: During the CREATE or ALTER operation, a system-generated cast function, observer method, mutator method, or constructor function could not be created because another function or method with the same name and signature already exists in the schema, or because the method or function would override an existing method.

User response: Choose another name for the user-defined type, attribute, or cast function that causes the conflict, or drop the function or method with the same name as the function or method that could not be generated.

sqlcode: -600

sqlstate: 42710

SQL0601N The name of the object to be created is identical to the existing name *name* of type *type*.

Explanation: The CREATE or ALTER statement tried to create or add an object *name* when an object of type *type* already exists with that name on the application

server or in the same statement.

If *type* is FOREIGN KEY, PRIMARY KEY, UNIQUE, or CHECK CONSTRAINT, the *name* is the constraint name specified in the ALTER NICKNAME, ALTER TABLE, CREATE NICKNAME or CREATE TABLE statement or generated by the system.

If *type* is ROLE, the name is the role name specified in the CREATE or ALTER ROLE statement.

If *type* is DATA PARTITION, the *name* is the data partition name specified in the ALTER TABLE or CREATE TABLE statement.

This error can also occur when registering an XML schema repository object using a REGISTER command or the one of the procedures XSR_REGISTER, XSR_DTD, or XSR_EXTENTIVITY. The error occurs when the name for the XSROBJECT already exists.

Federated system users: some data sources do not provide the appropriate values for the *name* and *type* message tokens. In these cases, *name* and *type* will have the following format: "OBJECT:<data source>TABLE/VIEW", and "UNKNOWN" indicating that the actual values at the specified data source are not known.

If *type* is permission, *name* is the permission name specified in the CREATE PERMISSION statement.

If *type* is mask, *name* is the mask name specified in the CREATE MASK statement.

The statement cannot be processed. No new object is created, and the existing object is not altered or modified.

User response: Either drop the existing object or choose another name for the new object.

Federated system users: if the statement is a CREATE FUNCTION MAPPING or a CREATE TYPE MAPPING statement, the user can also consider not supplying a type mapping name and the system will automatically generate a unique name for this mapping.

sqlcode: -601

sqlstate: 42710

SQL0602N Too many columns, periods, or key-expressions are specified in a CREATE INDEX, CREATE INDEX EXTENSION, or ALTER INDEX statement.

Explanation: The number of columns plus twice the number of identified periods specified in the CREATE INDEX statement exceeds the maximum allowed. The DB2 maximum permitted is 64. If the index is defined on a typed table, there is additional overhead that reduces the maximum number of specified columns to 63.

For a CREATE INDEX EXTENSION statement, the

GENERATE KEY function returns a number of columns that exceeds the maximum of 64 columns allowed in an index.

Federated system users: the limit for other data sources is different. That limit could have been exceeded. This problem may be detected on the federated server, or it may be detected on the data source.

The statement cannot be processed and the specified index was not created.

User response: Modify the index definition to conform to the system limit of 64. For a CREATE INDEX EXTENSION statement, specify a different GENERATE KEY function, or redefine the function to return fewer columns.

Federated system users: change the index definition to conform to the column limit for the data source.

sqlcode: -602

sqlstate: 54008

SQL0603N A unique index cannot be created because the table contains data that would result in duplicate index entries.

Explanation: The index defined in the CREATE INDEX statement could not be created as unique, because the specified table already contains rows that duplicate the values of the identified columns and periods. If defining an index on an XML column, there may be duplicate index values generated from a single XML document.

If a partitioned table has a newly attached partition (that is, a partition with a value of 'A' in the STATUS column in the SYSDATAPARTITIONS catalog table), the duplicate index entry may exist in the newly attached partition. The CREATE INDEX statement creates an index partition on the newly attached table partition, even if you cannot yet view the data in that partition.

Federated system users: this situation may also be detected by the data source.

The statement cannot be processed. The specified index is not created.

User response: Examine the data to determine if the duplicate data is permitted. Alternatively, consider creating a non-UNIQUE index.

If the index is partitioned and there are newly attached partitions on the table, run the SET INTEGRITY statement to bring the newly attached partitions online. The duplicate data might be removed by the SET INTEGRITY statement for violating other constraints, so you should issue the CREATE INDEX statement again. If a unique index is not created again, then check for data that would result in duplicate index entries.

sqlcode: -603

sqlstate: 23515

SQL0604N The length, precision, or scale attribute for column, distinct type, structured type, array type, attribute of structured type, routine, cast target type, type mapping, or global variable *data-item* is not valid.

Explanation: There is an error in the data type specification in a CREATE or ALTER statement, or a CAST specification. An invalid length, precision or scale attribute may have been specified, or it may be that the data type itself is incorrect or not permitted in this context. The location of the error is given by *data-item* as follows:

- For a CREATE or ALTER TABLE statement, *data-item* gives the name of the column containing the error or the data type containing an error. If the column data type is a structured or XML data type, then the INLINE LENGTH value must be at least 292 and cannot exceed 32673. For a LOB data type, the INLINE LENGTH value must be at least the size of the LOB descriptor (see the CREATE TABLE statement) and cannot exceed 32673
- For a CREATE FUNCTION statement, *data-item* is a token that identifies the area of the problem in the statement. For example, "PARAMETER 2" or "RETURNS" or "CAST FROM". In some cases, it may also be the data type containing the error.
- For a CREATE DISTINCT TYPE statement, *data-item* gives the name of the type being defined or the source data type containing the error.
- For a CREATE TYPE(array) statement, *data-item* gives the data type containing an error. The integer value specified inside the square brackets must be an integer greater than or equal to 1 and not larger than 2147483647.
- For a CREATE or ALTER TYPE statement, *data-item* gives the type of the attribute containing the error or the name of the structured type having an incorrect inline length value. The inline length cannot be smaller than 292 and the size returned by the constructor function for the structured type.
- For a CREATE VARIABLE statement, *data-item* gives the name of the variable having an incorrect data type. The data type of a global variable can be of any built-in data type with the exception of LONG types, LOBs, XML, ARRAY, and structured types. Distinct types and reference types are supported.
- For CAST(expression AS data-type), *data-item* is "CAST" or the data type containing the error.
- For XMLCAST(expression AS data-type), *data-item* is "XMLCAST" or the data type containing the error.
- For a reverse type mapping, [p..p] expression cannot be used for the remote data type. For example, the following statement (reverse type mapping) is incorrect.


```
CREATE TYPE MAPPING tm1
  FROM SERVER drdasvr TYPE CHAR([1..255])
  TO SYSIBM.VARCHAR
```

Whereas, the following statement (forward type mapping) is correct.

```
CREATE TYPE MAPPING tm1
  TO SERVER drdasvr
  TYPE CHAR([1..255])
  FROM SYSIBM.VARCHAR
```

Federated system users: if the statement is a CREATE TYPE MAPPING statement, an attempt was made to create a type mapping where a type attribute for either the local data type or the remote data type is not valid. Possible reasons include:

- The local length/precision is set to 0 or a negative value.
- The length/precision attribute is specified for data types such as date/time/timestamp, float, or integer.
- The scale attribute is specified for data types such as character, date/time/timestamp, float, or integer.
- The FOR BIT DATA clause is specified for a non-character type.
- The remote precision is set to 0 for remote types other than Informix datetime.
- An invalid field qualifier is being used in a type mapping for an Informix datetime type.
- An ending value is lower than the starting value in a precision/scale range.

The statement cannot be processed.

User response: Correct the syntax and try again.

sqlcode: -604

sqlstate: 42611

SQL0605W The index was not created because an index *name* with a matching definition already exists.

Explanation: A CREATE INDEX statement attempted to create a new index which matches an existing index definition.

Two index definitions match if they identify the same columns in the same order, with the same ascending or descending specifications, and both enforce uniqueness or only the new index does not enforce uniqueness.

Two index definitions also match if they identify the same columns in the same order, with the same or reverse ascending or descending index key order, and at least one index supports both forward and reverse scans.

For partitioned tables, two index definitions do not match if one is partitioned and the other is nonpartitioned, even if all other specifications match. Partitioned and nonpartitioned indexes of otherwise

similar definitions can coexist on the same table.

The new index was not created.

User response: No action is required unless the existing index *name* is not a suitable index. For example, the existing index *name* is not a suitable index if it does not allow reverse scans, and the required one does (or vice versa). In this case, the index *name* must be dropped before the required index can be created.

sqlcode: +605

sqlstate: 01550

SQL0606N The COMMENT ON or LABEL ON statement failed because the specified table or column is not owned by *owner*.

Explanation: An attempt was made to comment or label on a table or column which does not exist or is not owned by the owner specified in the message text.

Processing of the SQL statement has ended.

User response: Correct the statement. Try again.

sqlcode: -606

sqlstate: 42505

SQL0607N *operation* is not defined for system objects.

Explanation: The *operation* specified in the SQL statement cannot be performed on system objects. One of the following was attempted:

- ALTER, DROP or TRANSFER OWNERSHIP of a system owned object such as a system catalog table, built-in function or built-in data type
- COMMENT ON a system owned built-in function.
- INSERT, DELETE, or TRUNCATE on a system catalog table.
- UPDATE directly on a system catalog table. Some columns of a subset of system catalog tables are updatable. For UPDATE operation on these catalog tables, updatable views in SYSSTAT schema should be used. For a description of updatable catalog views (SYSSTAT views), see the SQL Reference.
- CREATE or DROP of an index on a system table
- CREATE of a trigger on a system table
- A non-updatable system table was identified in the FROM clause of a SELECT statement containing a FOR UPDATE clause. For a list of updatable system catalogs see the SQL Reference.
- DROP or ALTER of a system table space.
- DROP or ALTER of a system database partition group.
- DROP of a system default workload.
- ALTER of SYSDEFAULTUSERWORKLOAD with ENABLE, DISABLE, POSITION, ADD, or DROP option specified.

SQL0612N

- ALTER of SYSDEFAULTADMWORKLOAD with option other than COLLECT specified.
- ALTER of a workload with SYSDEFAULTADMWORKLOAD or SYSDEFAULTUSERWORKLOAD specified as the value of the POSITION BEFORE or AFTER option.
- REDISTRIBUTE of the IBMCATGROUP or IBMTEMPGROUP database partition group.
- Transfer ownership on a schema whose name begins with "SYS".
- CREATE of a work action set or a threshold for the default administration workload SYSDEFAULTADMWORKLOAD.

An online admin move table operation cannot be performed on any tables in a reserved schema.

The statement cannot be processed.

User response: Do not attempt to modify any system objects except for those columns of the system catalog tables which are updatable through updatable SYSSTAT views. See the SQL Reference for more information.

sqlcode: -607

sqlstate: 42832

SQL0612N *name is a duplicate name.*

Explanation: A statement was issued with the same name appearing more than once where duplicates are not allowed. Where these names appear varies depending on the type of statement.

- CREATE TABLE statements cannot have the same column name defined for two columns.
- CREATE TABLE statements specifying table partitioning cannot define an identical data partition name for two data partitions.
- ALTER TABLE statements cannot add or attach a data partition to a table specifying a partition name that is identical to a partition name of an existing data partition in the table.
- CREATE VIEW statements or common table expression definitions cannot have the same column name in the column name list. If no column name list is specified, then the column names of the columns in the select list of the view must be unique.
- ALTER TABLE statement cannot add a column to a table using the name of a column that already exists or is the same as another column being added. Furthermore, a column name can only be referenced in one ADD, DROP COLUMN, or ALTER COLUMN clause in a single ALTER TABLE statement.
- CREATE INDEX cannot have a column name specified more than once as part of the index key or the INCLUDE columns of the index.

- CREATE TRIGGER cannot have a column name specified more than once in the list of columns that cause an update trigger to be activated.
- CREATE TABLE OF statements cannot have the same name defined for the REF IS column and any attribute of the structured type.
- CREATE TYPE statements cannot have the same name defined for two fields in a ROW data type or two attributes in a structured type. Field and attribute names must be unique within the type and all supertypes.
- ALTER TYPE statements cannot add an attribute to a structured type using the name of an attribute that already exists in the type or any of its subtypes or is the same as another attribute being added. Also, the name of the attribute may not be the same as the REF IS column in any table created from the structured type. Furthermore, an attribute name can only be referenced in one ADD or DROP ATTRIBUTE clause in a single ALTER TYPE statement.
- CREATE INDEX EXTENSION statements cannot have the same name defined for two parameters.
- A column name can only be referenced in one ALTER COLUMN clause in a single ALTER NICKNAME statement.
- An XMLQUERY, XMLEXISTS, or XMLTABLE argument list contained two arguments with the same name.
- An XMLTABLE column list contains two columns with the same name.
- The typed-correlation clause of a SELECT statement cannot contain two columns with the same name.
- CREATE or ALTER TABLE statements must not specify the same period more than once in a unique key.
- CREATE or ALTER TABLE statements must not define a period and a column with the same name.
- A period cannot be dropped at the same time as it is being added or altered in the same ALTER TABLE statement. For example, the same period name cannot appear in both a DROP PERIOD clause and an ADD PERIOD clause in the same ALTER TABLE statement.

The statement cannot be processed.

User response: Specify unique names as appropriate for the type of statement.

sqlcode: -612

sqlstate: 42711

SQL0613N The primary key, unique key, or table partitioning key identified by *name* is too long or has too many columns and periods.

Explanation: This error is caused by one of the following:

- The sum of the internal lengths of columns in the PRIMARY KEY clause or a UNIQUE clause identified by *name* exceeds the index key length limit or the number of columns and two times the number of periods exceeds the maximum of 64. Also, a primary key or a unique key cannot be defined using a LONG VARCHAR column. If the primary key or unique constraint is defined on a typed table, there is additional index overhead that reduces the maximum number of specified columns to 63 and limits the length by 4 bytes.
- The number of columns in the PARTITION BY clause exceeds the maximum of 16.

name is the constraint name, if specified, of the primary key or unique constraint. If a constraint name was not specified, *name* is the first column name specified in the primary key or unique constraint clause followed by three periods.

The index key length limit is based on the page size of the tablespace used by the index:

Max Key Length	Page size
-----	-----
1K	4K
2K	8K
4K	16K
8K	32K

For a table partitioning key, *name* is the column name of the column which exceeds the limit.

The statement cannot be processed.

User response: Modify the primary key, unique key or table partitioning key definition by eliminating one or more key columns or periods to conform to the column limit of 64 and the key length limit.

sqlcode: -613

sqlstate: 54008

SQL0614N The index or index extension *index-name* cannot be created or altered because the combined length of the specified columns is too long.

Explanation: The index could not be created or altered because the sum of the key column internal lengths would exceed the index key length limit. Also, an index cannot be created using a LONG VARCHAR, LONG VARGRAPHIC, or LOB column. If the index is defined on a typed table, there is additional index overhead that reduces the maximum length by 4 bytes. The index

may be altered by an ALTER TABLE or ALTER NICKNAME statement that alters the data type of one or more columns.

An index extension could not be created because the sum of the columns returned by the GENERATE KEY function would exceed the index key length limit.

The index key length limit is based on the page size of the tablespace used by the index:

Max Key Length	Page size
-----	-----
1K	4K
2K	8K
4K	16K
8K	32K

The statement cannot be processed. The specified index or index extension was not created or the table or nickname could not be altered.

User response: To modify the index definition or alter column, eliminate one or more key columns and reduce the key length to the permitted maximum. For an index extension definition, specify a different GENERATE KEY function, or redefine the function to reduce the length of the returned row.

sqlcode: -614

sqlstate: 54008

SQL0615N The object *object-name* of type *object-type* cannot be dropped because it is currently in use.

Explanation: A DROP statement of an object cannot be issued when it is in use.

The statement cannot be processed. The object is not dropped.

User response: Close any cursors that depend either directly or indirectly on the object *object-name* and resubmit the statement.

For temporary table spaces, resubmit the statement when the table space is not in use.

sqlcode: -615

sqlstate: 55006

SQL0620N The CREATE TABLE statement failed because *user-id* has no private, recoverable dbspaces with less than 255 tables.

Explanation: The dbspace name was not specified in the CREATE TABLE statement, so the database manager tried to find a private dbspace owned by *user-id*. This message will appear under one of the following conditions:

1. There were no private dbspaces found in the DB2 for VM database for the *user-id*.

2. There were one or more private dbspaces found for the *user-id*, but each contained 255 tables.
3. The private dbspaces were located in nonrecoverable storage pools. Only private dbspaces that exist in recoverable storage pools will be available when the CREATE TABLE statement does not specify the dspace name.

Processing of the SQL statement has ended.

User response: Suggestions for the three possible conditions are:

1. Acquire a private dspace in a recoverable storage pool. You may require a database administrator's assistance.
2. Drop a table in a private dspace residing in a recoverable storage pool to free up an entry, or take the action indicated in (1).
3. If you want to create the table in a dspace existing in a non-recoverable storage pool, then specify the dspace name on the CREATE TABLE command. Otherwise, take the action indicated in (1).

Then rerun the CREATE TABLE statement.

If appropriate, acquire a private dspace for the user.

sqlcode: -620

sqlstate: 57022

SQL0622N The clause *clause* is invalid for this database.

Explanation: The clause indicated is invalid because it is incompatible with the defined characteristics for this database.

Possible reasons:

- CCSID ASCII and PARAMETER CCSID ASCII cannot be specified when connected to a database created using a Unicode code page.
- CCSID UNICODE and PARAMETER CCSID UNICODE cannot be specified when connected to a database created using a non-Unicode code page before the alternate collating sequence is specified in the database configuration.
- CCSID UNICODE or PARAMETER CCSID UNICODE cannot be specified in this statement when connected to a database created using a non-Unicode code page.
- FOR SBCS DATA can only be specified when connected to a database created using a single byte code page.
- FOR MIXED DATA can only be specified when connected to a database created using a double byte or Unicode code page.
- The IN *database-name.table-space-name* or IN DATABASE *database-name* clause was specified using

a database name that does not match the name of the database to which the application is currently connected.

The statement cannot be processed.

User response: Change or remove the clause and re-issue the SQL statement.

To allow Unicode objects in a non-Unicode database, update the database configuration to specify the alternate collating sequence (ALT_COLLATE).

sqlcode: -622

sqlstate: 56031

SQL0623N A clustering index already exists on table *name*.

Explanation: The CREATE INDEX statement would create a second clustering index on the specified table. A given table can have only one clustering index.

The statement cannot be executed.

User response: Check to determine the identity and validity of the existing clustering index on table *name*. Consider creating the index without the CLUSTER attribute.

sqlcode: -623

sqlstate: 55012

SQL0624N Table *name* already has a primary key or unique constraint using the specified columns and periods.

Explanation: A primary key or unique constraint cannot be defined in an ALTER TABLE statement because the indicated table already has a key or constraint of this type.

The statement cannot be executed.

User response: A table cannot have more than one primary key. A table cannot have a unique constraint that duplicates an existing constraint.

sqlcode: -624

sqlstate: 42889

SQL0628N Multiple or conflicting keywords involving the *clause-type* clause are present.

Explanation: There are several possible reasons why this condition might have been diagnosed for the statement. The cause is indicated by the value of *clause-type*. The possible reasons include:

- The keyword might not be specified in the same statement as some other keyword.
- The keyword might be part of a sequence of keywords where the order in which they are

specified is not enforced. A keyword in such a sequence might have been specified with the contradicting keyword also specified.

- The keyword might appear more than once with different associated values.
- The keyword might require the specification of other particular keywords in the same statement which were not specified.
- When ALTERING an object, a keyword was specified that conflicts with an existing property of the object.
- When ALTERING a partitioned table, the ADD, ATTACH and DETACH clauses are not supported with any other clauses.
- When CREATING or DECLARING a table with the LIKE *table-name* clause where *table-name* identifies a nickname, the INCLUDING COLUMN DEFAULTS clause has no effect and column defaults are not copied.
- The parameter mode OUT or INOUT was used to define a parameter in a function that does not support OUT or INOUT parameters.
- A generic table function was being created using the CREATE PROCEDURE statement, with the RETURNS GENERIC TABLE clause, and one of the following errors occurred:
 - A language other than JAVA was specified with the LANGUAGE clause
 - A parameter style other than DB2GENERAL was specified with the PARAMETER STYLE clause
- When CREATING a trigger, the same trigger event was specified more than once.
- When CREATING a table space, the 'USING STOGROUP' clause cannot be used with DMS or SMS table spaces
- When CREATING a table space, STOGROUP cannot be changed for temporary automatic storage table spaces
- When CREATING a table space, DATA TAG cannot be set for a temporary table space
- When CREATING a table space, DATA TAG cannot be set for the system catalog table space
- When CREATING or ALTERING a table VERSIONING cannot be specified with LIKE for as-result-table or materialized-query-definition.

User response: Check that the statement conforms to the syntax and rules defined for the statement. Correct any invalid occurrences of duplicate or conflicting keywords.

sqlcode: -628

sqlstate: 42613

SQL0629N SET NULL cannot be specified because either the column or FOREIGN KEY name cannot contain null values.

Explanation: The SET NULL option of the ALTER TABLE statement or indicated FOREIGN KEY clause is not valid. For an ALTER TABLE statement, the column *name* cannot be altered to not allow NULL values because this column was the last nullable column in the foreign key constraint with action type 'on delete set NULL'.

For the FOREIGN KEY clause, no column of the key allows null values. *name* is the constraint name, if specified. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed.

User response: For an ALTER TABLE statement, either remove the foreign constraint or change at least one other column in this constraint to be nullable. For the FOREIGN KEY clause, change either a column of the key to allow an assignment to the null value or change the delete rule.

sqlcode: -629

sqlstate: 42834

SQL0631N FOREIGN KEY *name* is too long or has too many columns.

Explanation: The sum of the column internal lengths identified in the FOREIGN KEY clause in a CREATE TABLE statement exceeds the index key length limit, or the number of columns identified exceeds 64. Also, a foreign key cannot be defined using a LONG VARCHAR column.

name is the constraint name, if specified, in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The index key length limit is based on the page size of the tablespace used by the index:

Max Key Length	Page size
1K	4K
2K	8K
4K	16K
8K	32K

The statement cannot be processed.

User response: To modify the foreign key definition, eliminate one or more key columns and conform to the 64 column limit and the key length limit.

sqlcode: -631

sqlstate: 54008

SQL0632N FOREIGN KEY *name* is not valid because the table cannot be defined as a dependent of table *table-name* because of delete rule restrictions (reason code = *reason-code*).

Explanation: A referential constraint cannot be defined because the object table of the CREATE TABLE or ALTER TABLE statement cannot be defined as a dependent of table *table-name* for one of the following reason codes:

- (01) The relationship is self-referencing and a self-referencing relationship already exists with the SET NULL delete rule.
- (02) The relationship forms a cycle of two or more tables that cause the table to be delete-connected to itself (all other delete rules in the cycle would be CASCADE).
- (03) The relationship causes the table to be delete-connected to the indicated table through multiple relationships and the delete rule of the existing relationship is SET NULL.

The delete rules of the existing relationships cause an error, not the delete rule specified in the FOREIGN KEY clause of the CREATE TABLE or ALTER TABLE statement.

name is the constraint name, if specified, in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed.

User response: If possible, eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.

sqlcode: -632

sqlstate: 42915

SQL0633N The delete rule of FOREIGN KEY *name* must be *delete-rule* (reason code = *reason-code*).

Explanation: The delete rule specified in a FOREIGN KEY clause of the CREATE TABLE or ALTER TABLE statement is not valid. The indicated delete rule is required for one of the following reason codes:

- (01) The referential constraint is self-referencing and an existing self-referencing constraint has the indicated delete rule (NO ACTION, RESTRICT or CASCADE).
- (02) The referential constraint is self-referencing and the table is dependent in a relationship with a delete rule of CASCADE.

- (03) The relationship would cause the table to be delete-connected to the same table through multiple relationships and such relationships must have the same delete rule (NO ACTION, RESTRICT or CASCADE).

name is the constraint name, if specified, in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed.

User response: If possible, change the delete rule.

sqlcode: -633

sqlstate: 42915

SQL0634N The delete rule of FOREIGN KEY *name* must not be CASCADE (reason code = *reason-code*).

Explanation: The CASCADE delete rule specified in the FOREIGN KEY clause of the CREATE TABLE or ALTER TABLE statement is not valid for one of the following reason codes:

- (01) A self-referencing constraint exists with a delete rule of SET NULL, NO ACTION or RESTRICT.
- (02) The relationship would form a cycle that would cause a table to be delete-connected to itself. One of the existing delete rules in the cycle is not CASCADE, so this relationship may be definable if the delete rule is not CASCADE.
- (03) The relationship would cause another table to be delete-connected to the same table through multiple paths with different delete rules or with delete rule equal to SET NULL.

name is the constraint name, if specified, in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed.

User response: If possible, change the delete rule.

sqlcode: -634

sqlstate: 42915

SQL0636N Range specified for data partition *partition-name* is not valid. Reason code = *reason-code*.

Explanation: The range specified for the partitioning key is not valid for one of the following reason codes:

1

	<p>The STARTING value for the partition is greater than the ENDING value. Generally the STARTING value for a partition must be less than the ENDING value. However, the starting value can be EQUAL to the ending value if BOTH bounds are inclusive. A bound which includes MINVALUE or MAXVALUE is exclusive. For example, a partition defined as STARTING (1, MINVALUE) ENDING (1, MINVALUE) is illegal (with reason code 1), because the bound values are equal and both are exclusive. Even if only one bound (e.g. only a STARTING bound) is explicitly specified, this reason code will be returned if the resulting bounds (after the missing bounds are generated) violate this rule.</p>	<pre>FROM SYSCAT.DATAPARTITIONS WHERE TABSCHEMA='table-schema' AND TABNAME='table-name' ORDER BY SEQNO</pre>
3	<p>STARTING value is not specified for the partition with the lowest key.</p>	11
4	<p>ENDING value is not specified for the partition with the highest key.</p>	12
5	<p>A STARTING value is not specified when the previous ENDING value was not specified.</p>	13
7	<p>On DB2 UDB for iSeries only: The data partitions are not specified in ascending sequence.</p>	14
9	<p>The STARTING or ENDING value for the partition is too long. The total length of the table partitioning key limit values must be less than or equal to 512 bytes.</p>	15
10	<p>The range overlaps with another partition. Each data partition must have a well defined starting and ending boundary and each data value must go into one and only one data partition. Also, if the same value (except MINVALUE or MAXVALUE) is used in the ending bound of one partition and the starting bound of the next partition, then at least one of these bounds must be defined as EXCLUSIVE. For an existing table, to determine whether the bounds of a partition are INCLUSIVE or EXCLUSIVE, query the SYSCAT.DATAPARTITIONS catalog table as follows (substituting the appropriate values for 'table-schema' and 'table-name'):</p> <pre>SELECT DATAPARTITIONID, DATAPARTITIONNAME, LOWINCLUSIVE, LOWVALUE, HIGHINCLUSIVE, HIGHVALUE</pre>	<p>MINVALUE and MAXVALUE cannot be specified when the EVERY clause is specified.</p>
		<p>The value specified for the EVERY clause must be greater than zero and large enough to define unique partitions.</p>
		<p>A constant cannot be specified following MINVALUE or MAXVALUE in the STARTING or ENDING value for a partition. Once a MINVALUE or MAXVALUE is specified, all subsequent (less significant) columns must be MINVALUE or MAXVALUE, respectively.</p>
		<p>Decimal floating-point special values cannot be specified as the starting bound, ending bound or increment when the EVERY clause is specified.</p>
		<p>The STARTING value and ENDING value for the partition cannot be the null value. Note that a character string value with a length of zero is treated as a null value when the varchar2_compat database configuration parameter is set to ON.</p>
		<p>If the value for <i>partition-name</i> is of the form "PARTITION=value", then the partition name was not available when the error occurred. The value provided identifies the starting or ending value of the offending partition in the partition list clause.</p>
		<p>The statement cannot be processed.</p> <p>User response: Correct the invalid ranges for the data partitions.</p>
		<p>sqlcode: -636</p>
		<p>sqlstate: 56016</p>
		<hr/> <p>SQL0637N Keyword <i>keyword</i> is not valid as used.</p>
		<p>Explanation: The SQL statement contains a duplicate or conflicting specification for a clause with the indicated keyword. For example:</p>
		<ul style="list-style-type: none"> • DEFAULT, UNIQUE, and PRIMARY can only be specified once in a column definition • UNIQUE and PRIMARY cannot both be specified for the same column definition

SQL0638N • SQL0658N

- PRIMARY can only be specified once in a CREATE TABLE statement
- the attribute-string specified for the PREPARE statement cannot specify an option more than once, or there are conflicting options
- ACTIVATE or DEACTIVATE ROW ACCESS CONTROL can only be specified once
- ACTIVATE or DEACTIVATE COLUMN ACCESS CONTROL can only be specified once

The statement cannot be processed.

User response: Correct the statement to specification of duplicate or conflicting clauses.

sqlcode: -637

sqlstate: 42614

SQL0638N Table *name* cannot be created because no column definitions were specified.

Explanation: The CREATE TABLE statement does not contain any column definitions.

The statement cannot be processed.

User response: Add one or more column definitions to the statement.

sqlcode: -638

sqlstate: 42601

SQL0644N Invalid value specified for keyword *keyword* in statement *statement-type*.

Explanation: The keyword *keyword* is followed by an invalid value as allowed by the description of *statement-type*. For numeric values, the value may be outside a defined range. For other types, the value is not in the defined set of valid values.

User response: Determine from reference documentation for the *statement-type* what are valid values and make the appropriate change.

sqlcode: -644

sqlstate: 42615

SQL0647N Bufferpool *bufferpool-name* is currently not active.

Explanation: The bufferpool *bufferpool-name* is not active in the current database environment. An attempt was made to find another bufferpool with the same page size but there are no such bufferpools active in the current database environment. The bufferpool *bufferpool-name* was recently defined but has not yet been activated.

The statement cannot be processed.

User response: The database must be stopped and

started again to activate the required bufferpool.

sqlcode: -647

sqlstate: 57003

SQL0648N The foreign key cannot be defined because it will cause table *owner1.table-name1* to be delete-connected to table *owner2.table-name2* through multiple paths. Reason Code = *reason-code*.

Explanation: The foreign key cannot be defined because one of the following reason codes = *reason-code*:

- 01 The relationship will cause table *owner1.table-name1* to be delete-connected to table *owner2.table-name2* through multiple paths with the same delete rule of SET NULL.
- 02 The relationship will cause table *owner1.table-name1* to be delete-connected to table *owner2.table-name2* through multiple paths with different delete rules.

Processing of the SQL statement has ended.

User response: Correct the statement. Try again.

sqlcode: -648

sqlstate: 42915

SQL0650N The ALTER statement cannot be executed. Reason code = *reason-code*.

Explanation: The ALTER of an index or a table cannot be executed as specified. The reason is indicated by the reason code as follows:

- 23 Compression cannot be specified for the following indexes: MDC or ITC block indexes, XML path indexes, index specifications.

User response: Correct the ALTER statement as indicated by the reason code and issue the statement again.

sqlcode: -650

sqlstate: 56090

SQL0658N The object *name* cannot be explicitly dropped or altered.

Explanation: The identifier *name* identifies one of the following:

- a cast function or comparison function that cannot be dropped using the DROP statement because it was created by the system for use with a distinct type
- a function that cannot be altered because it is a sourced function

- a method that cannot be dropped using the ALTER TYPE method because it was created by the system for use with a structured type
- a package that cannot be dropped using the DROP statement because it was created by the system for use with a SQL procedure. The consistency token (or unique_id) is given in hexadecimal as part of the package name in the form of "pkgschema.pkgname 0Xcontoken".
- a threshold defined in the context of a work action set.
- a routine that cannot be altered because it is defined with LANGUAGE SQL
- a nickname that cannot be altered to disallow caching because the nickname is referred to in the fullselect of a materialized query table definition
- a default row permission cannot be explicitly dropped with the DROP PERMISSION statement

The statement cannot be processed.

User response:

- The function *name* can only be dropped by dropping the distinct type or structured type that caused the function to be defined. The distinct type name corresponds to either the name of the function or the type of the parameters to the function.
- The function *name* can only be altered by dropping it and then recreating it.
- The method *name* can only be dropped by dropping the structured type that caused the method to be defined. The method name corresponds to the name of an attribute for the structured type.
- The package *name* can only be dropped by dropping the SQL procedure that caused the package to be defined. The specific name of the SQL procedure can be found by retrieving the DSCHEMA and DNAME from the SYSIBM.SYSDEPENDENCIES catalog table where the BSHEMA, BNAME, and BUNIQUE_ID match the relevant parts of *name*, BTYPE is 'K' and DTYPE is 'L'. The consistency token (or unique_id) is needed to distinguish between package versions that share the same schema and name.
- Alter or drop the threshold using ALTER WORK ACTION SET, or DROP WORK ACTION SET.
- The routine *name* can only be changed by dropping the routine and then redefining it.
- The nickname *name* can only be altered to disallow caching by dropping all references to it in any materialized query table definition.
- A default row permission can only be dropped implicitly when the associated table is dropped using the DROP TABLE statement. Alternatively, the default row permission can be dropped by using the ALTER TABLE statement with the DEACTIVATE ROW ACCESS CONTROL clause.

SQL0659N Maximum size of a table object has been exceeded.

Explanation: One or more of the objects which make up a table has reached its maximum size. The storage objects that make up a table are:

- Data: This is where basic column data is stored
- Index: This is where all indexes on the table are stored
- Long Data: This is where LONG VARCHAR and LONG VARGRAPHIC column data is stored
- Lob/Lob Allocation: This is where BLOB, CLOB, and DBCLOB column data and control information are stored
- XML: This is where XML data is stored.

Once a storage object has grown to its maximum size, it cannot be extended further.

User response: To make existing space within the object available to store new data, the following actions may be taken:

- Reorganize the table
- Delete unnecessary rows from the table
- Drop an index from the table
- Update rows to reduce the amount of data (a reorg may be required after this action in order to reclaim unused storage)
- Delete unnecessary XML documents

sqlcode: -659

sqlstate: 54032

SQL0663N Number of partitioning values is not correct for data partition *partition-name*.

Explanation: The wrong number of data partition key limit values was specified in the STARTING or ENDING clause for the data partition. If the data partition specification included an EVERY clause, there must be only one table partitioning key column with a numeric or datetime data type. If the value for *partition-name* is of the form "PARTITION=value", then the partition name was not available when the error occurred. The value provided identifies the starting or ending value of the offending partition in the partition list clause.

User response: Change the number of values specified in the STARTING or ENDING clause to match the number of columns in the table partitioning key. Alternatively, change the number of columns in the table partitioning key.

sqlcode: -663

sqlstate: 53038

SQL0667N The FOREIGN KEY *name* cannot be created because the table contains rows with foreign key values that cannot be found in the parent key of the parent table.

Explanation: The definition of the indicated foreign key failed because the table being altered contains at least one row where the foreign key does not match the parent key value in the parent table.

name is the constraint name, if specified. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed. The specified table is not altered.

User response: Remove the erroneous table rows and define the foreign key.

sqlcode: -667

sqlstate: 23520

SQL0668N Operation not allowed for reason code *reason-code* on table *table-name*.

Explanation: Access to table *table-name* is restricted. The cause is based on the following reason codes *reason-code*:

1

The table is in the Set Integrity Pending No Access state. The integrity of the table is not enforced and the content of the table may be invalid. An operation on a parent table or an underlying table that is not in the Set Integrity Pending No Access state may also receive this error if a dependent table is in the Set Integrity Pending No Access state.

2

The table is in the No Data Movement state. When in this state, operations that cause data movement are disallowed. Data movement operations include REDISTRIBUTE, update of database partitioning key, update of multidimensional clustering key, update of range clustering key, update of table partitioning key and REORG TABLE.

3

The table is in the Load Pending state. A previous LOAD attempt on this table resulted in failure. No access to the table is allowed until the LOAD operation is restarted or terminated.

4

The table is the Read Access state. This state can occur during on-line LOAD processing

5

(LOAD INSERT with the READ ACCESS option), or after an on-line LOAD operation, but before all constraints have been validated in the newly appended portion of the table using the SET INTEGRITY statement. This state can also occur if the READ ACCESS clause was used when turning off integrity checking with the SET INTEGRITY statement. No update activity is allowed on this table.

6

The table is in the Load In Progress state. The LOAD utility is currently operating on this table, no access is allowed until the LOAD is finished.

7

Materialized query tables that reference a nickname cannot be refreshed in DB2 Enterprise Server Edition.

8

The table is in the reorg pending state. This can occur after an ALTER TABLE statement containing a REORG-recommended operation.

9

The table is in the alter pending state. This can occur when using the table in the same unit of work as an ALTER TABLE statement containing a REORG-recommended operation.

10

The table is in Redistribute Pending state. The REDISTRIBUTE utility is not completed on this table, no access is allowed until the REDISTRIBUTE is finished.

11

The table is the source table for an ongoing ADMIN_MOVE_TABLE operation. The attempted operation is restricted until the move is completed or canceled.

The table, which has a nonpartitioned index, has a new data partition that the operation is attempting to access in the same transaction as the add or attach operation that created the partition, but the transaction does not have the table locked in exclusive mode.

User response:

1

Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on table *table-name* to bring the table out of the Set Integrity Pending No Access state. For a user maintained materialized query table, execute the statement with the IMMEDIATE

2	<p>UNCHECKED option instead of the IMMEDIATE CHECKED option.</p>	8	<p>Complete the unit of work, and re-issue the command.</p>
3	<p>Execute REFRESH TABLE statement on the dependent immediate materialized query tables and staging tables of table <i>table-name</i>. The contents of these dependent immediate materialized query tables and staging tables can be incrementally maintained from the appended data of <i>table-name</i> through previous LOAD INSERT operations and from the attached data of <i>table-name</i> through previous ALTER TABLE statements with the ATTACH clause.</p>	9	<p>If the REDISTRIBUTE utility is working, wait until it finishes working on the current table. You can use the LIST UTILITIES command to monitor the progress of the REDISTRIBUTE utility. If a previous REDISTRIBUTE operation failed and left the table in this state, issue the REDISTRIBUTE utility again with the CONTINUE or ABORT option and let it finish on this table.</p>
4	<p>Restart or terminate the previously failed LOAD operation on this table by issuing LOAD with the RESTART or TERMINATE option respectively.</p>	10	<p>Complete or cancel the table move operation and reissue the command. You can query the SYSTOOLS.ADMIN_MOVE_TABLE table for information about the status of the move operation.</p>
5	<p>If the Read Access state was due to a LOAD, issue the LOAD QUERY command to check whether the table is in the process of being loaded. If yes, wait until the LOAD utility has completed, or if necessary, restart or terminate previously failed LOAD operation. If LOAD is currently not in progress, issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option, to validate constraints in the newly loaded portion of the table.</p> <p>If the Read Access state was due to turning off integrity checking, issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option.</p>	11	<p>Modify the application so that transactions that include add or attach partition operations are committed prior to the application accessing the new partitions where the target table has a nonpartitioned index. Alternatively, modify the application so that a table that has a nonpartitioned index and that is affected by the online add or attach operation is exclusively locked when a new partition is being accessed in the same transaction as the add or attach operation that created the partition.</p>
6	<p>Wait until the current LOAD operation has finished. You can use the LOAD QUERY command to monitor the progress of load.</p>		<p>sqlcode: -668</p> <p>sqlstate: 57007</p> <hr/> <p>SQL0669N A system required index cannot be dropped explicitly.</p> <p>Explanation: The DROP INDEX statement attempted to drop an index required to:</p> <ul style="list-style-type: none"> • enforce the primary key constraint on a table • enforce a unique constraint on a table • enforce the uniqueness of the object identifier (OID) column of a typed table hierarchy • maintain a replicated materialized query table • maintain an XML column in the table. <p>A system required index cannot be dropped using the DROP INDEX statement.</p> <p>The statement cannot be processed. The specified index is not dropped.</p> <p>User response: If you do not want to keep the</p>
7	<p>Define a materialized query table using the MAINTAIN BY USER option. Then, use an INSERT statement with a subquery to populate the materialized query table.</p>		
8	<p>Reorganize the table using the REORG TABLE command.</p> <p>For a table in the reorg pending state, note that the following clauses are not allowed when reorganizing the table:</p> <ul style="list-style-type: none"> • The INPLACE REORG TABLE clause • The ON DATA PARTITION clause for a partitioned table when table has nonpartitioned indexes defined on the table 		

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primary or unique constraint, use the DROP PRIMARY KEY clause or the DROP CONSTRAINT clause of the ALTER TABLE statement to remove the primary key or unique constraint. If the index was created only for enforcing the primary or unique key, then the index will be dropped. If not, the DROP INDEX statement could then be processed.

The index for an OID column can only be dropped by dropping the table.

The index required to maintain a replicated materialized query table can only be dropped by first dropping the replicated materialized query table.

The system-required indexes associated with one or more XML columns in a table cannot be dropped explicitly. Such indexes are maintained by the database manager to support the XML column in the table. The index specified in the DROP INDEX statement cannot be dropped without dropping the table.

sqlcode: -669

sqlstate: 42917

SQL0670N The row length of the table exceeded a limit of *length* bytes. (Table space *tablespace-name*.)

Explanation: The row length of a table in the database manager cannot exceed:

- 4005 bytes in a table space with a 4K page size
- 8101 bytes in a table space with an 8K page size
- 16293 bytes in a table space with an 16K page size
- 32677 bytes in a table space with an 32K page size

The length is calculated by adding the internal lengths of the columns. Details of internal column lengths can be found under CREATE TABLE in the *SQL Reference*.

One of the following conditions can occur:

- The row length for the table defined in the CREATE TABLE or ALTER TABLE statement exceeds the limit for the page size of the table space. The regular table space name *tablespace-name* identifies the table space from which the page size was used to determine the limit on the row length.
- The row length for the table defined in the CREATE GLOBAL TEMPORARY TABLE or DECLARE GLOBAL TEMPORARY TABLE statement exceeds the limit for the page size of the table space. The user temporary table space name *tablespace-name* identifies the table space from which the page size was used to determine the limit on the row length.

The statement cannot be processed.

User response: Depending on the cause, do one of the following.

- In the case of CREATE TABLE, ALTER TABLE, CREATE CLOBAL TEMPORARY TABLE, or

DECLARE GLOBAL TEMPORARY TABLE, specify a table space with a larger pagesize, if possible.

- Otherwise, reduce the row length by eliminating one or more columns or reducing the lengths of one or more columns.

sqlcode: -670

sqlstate: 54010

SQL0672N Operation DROP not allowed on table *table-name*.

Explanation: The DROP operation failed for one of the following reasons:

- The table being dropped has the RESTRICT ON DROP attribute.
- The table space or database partition group being dropped contains the specified table, which has the RESTRICT ON DROP attribute.

The DROP statement cannot be executed.

User response: If the problem occurred during a DROP TABLE statement, issue an ALTER TABLE statement using the DROP RESTRICT ON DROP clause. Then re-issue the DROP TABLE statement.

If the problem occurred during a DROP TABLESPACE or DROP DATABASE PARTITION GROUP statement, ensure that there are no other tables within the table space or database partition group with the RESTRICT ON DROP attribute. The following select statement can help identify the tables:

```
SELECT TB.TABNAME, TB.TABSHEMA,
       TS.TBSPACE, TS.NGNAME
FROM SYSCAT.TABLES TB,
     SYSCAT.TABLESPACES TS
WHERE TYPE = 'T' AND
       DROPRULE = 'R' AND
       TB.TBSPACEID = TS.TBSPACEID
ORDER BY TS.NGNAME, TS.TBSPACE,
         TB.TABSHEMA, TB.TABNAME;
```

After identifying tables with the RESTRICT ON DROP attribute, issue an ALTER TABLE statement using the DROP RESTRICT ON DROP clause for each table with the RESTRICT ON DROP attribute. Then re-issue the DROP TABLESPACE or DROP DATABASE PARTITION GROUP statement.

sqlcode: -672

sqlstate: 55035

SQL0673N A primary or unique key index cannot be created because the table contains rows which are duplicates with respect to the values of the identified primary or unique key columns of constraint *name*.

Explanation: The primary or unique key definition of the constraint identified by *name* failed because the table being altered already contains rows with duplicate values for the PRIMARY KEY or UNIQUE clause columns.

name is the constraint name, if specified. If a constraint name was not specified, *name* is the first column name specified in the primary key or unique constraint clause followed by three periods.

The statement cannot be processed. The specified table is not altered.

User response: Remove the erroneous rows from the table before attempting to define the primary or unique key.

sqlcode: -673

sqlstate: 23515

SQL0678N The literal *literal* must be compatible with the data type *data-type* of column *column-name*.

Explanation: The literal *literal* specified for the STARTING, ENDING or EVERY clause is not compatible with the data type of column *column-name*. The data type of the column is *data-type*. The value of a literal used in the EVERY clause must not be zero or negative. The EVERY clause must specify a duration when the PARTITION BY clause specifies a datetime data type.

User response: Specify a valid literal in the STARTING, ENDING, or EVERY clause.

sqlcode: -678

sqlstate: 53045

SQL0680N Too many columns are specified for a table, view, or table function or too many fields are specified for a user-defined row data type.

Explanation: The maximum number of columns permitted for a table is based on the page size of the table space and the data types of the columns.

For a page size of:

- 4K: The maximum number of columns allowed is 500.
- 8K, 16K, or 32K: The maximum number of columns permitted is 1012.

The actual number of columns for a table is determined by the following formula: Total Columns * 8 + Number of LOB Columns * 12 + Number of Datalink Columns * 28 <= row size limits for page size.

The maximum number of columns permitted for a view is 5000.

The maximum number of columns permitted for a table function is 255. This includes generic table functions, where the number of columns is specified in a typed-correlation clause.

The maximum number of columns permitted for a nickname is 5000.

The maximum number of fields permitted for a user-defined row data type is 1012.

Federated system users: Other data sources may have a different maximum column limit. This limit has been exceeded. The maximum number of fields permitted for a row type is 1012.

The statement cannot be processed.

User response: Ensure that the number of columns or fields does not exceed the limit.

If creating a table where a larger page size would allow the number of columns, specify a table space with the larger page size. Create separate tables or views, as required, to hold additional information beyond the limit.

If creating a row data type, remove one or more fields so that the total number of fields does not exceed the maximum number allowed and try again.

Federated system users: Limit the number of table columns to the maximum supported by the data source. Create separate tables or views, as required, to hold additional information beyond the maximum number of columns supported by the data source.

For more information, see the documentation: * CREATE TABLE * CREATE VIEW * CREATE FUNCTION * CREATE TYPE

sqlcode: -680

sqlstate: 54011

SQL0683N The specification for column, attribute, user-defined type or function *data-item* contains incompatible clauses.

Explanation: There is an error in a data item specification in a CREATE statement, ALTER statement, an XMLTABLE expression, or a typed-correlation clause of a SELECT statement which is referencing a generic table function. Incompatible specifications are present, such as: "INTEGER and FOR BIT DATA". If the column is of type DB2SECURITYLABEL, incompatible

specifications include NOT NULL WITH DEFAULT. The location of the error is given by *data-item* as follows:

- For a CREATE TABLE statement, ALTER TABLE statement, an XMLTABLE expression, or a typed-correlation clause of a SELECT statement, *data-item* gives the name of the column containing the error.
- For a CREATE FUNCTION statement, *data-item* is a token that identifies the area of the problem in the statement. For example, "PARAMETER 3" or "RETURNS" or "CAST FROM".
- For a CREATE DISTINCT TYPE statement, *data-item* gives the name of the type being defined.
- For a CREATE or ALTER TYPE statement, *data-item* identifies the clause containing the error or gives the name of the attribute containing the error.
- For a CREATE or ALTER TABLE statement, the columns for a BUSINESS_TIME period must be defined as DATE, or TIMESTAMP(p) where p is between 0 and 12 (inclusive).
- For a CREATE or ALTER TABLE statement, *data-item* for a ROW BEGIN, ROW END, or TRANSACTION START ID column must be TIMESTAMP(12).

The statement cannot be processed.

User response: Remove the incompatibility and try the statement again.

sqlcode: -683

sqlstate: 42842

SQL0695N The value provided (*seclabel*) could not be converted to a security label. In the security policy with a policy ID of *policy-id*, the element value *element-value* does not correspond to any element in the component in ordinal position *ordinal*.

Explanation: An INSERT or UPDATE statement specified a value for the column of type DB2SECURITYLABEL. The value cannot be converted to a valid security label for the security policy protecting the table. If the *seclabel* value is *N, then the actual value has been written in the db2diag log file.

The value has a problem in the component indicated by the component number. The ordinal position refers to the position of the component in COMPONENTS clause of the CREATE SECURITY POLICY statement used to create the policy. The indicated element value does not correspond to a valid element in that component.

User response: Check the INSERT or UPDATE statement and make sure that the value being set in the security label column is valid for the security policy protecting the table. Sometimes an invalid value can be generated as the result of a SELECT done from a table

that is not protected with the same security policy as the target table. You should only copy security labels between tables protected by the same security policy.

To get the security policy name for the given policy ID use this SQL query. Replace *policy-id* with the policy ID number given in the error message.

```
SELECT SECPOLICYNAME
      FROM SYSCAT.SECURITYPOLICIES
      WHERE SECPOLICYID = policy-id
```

sqlcode: -695

sqlstate: 23523

SQL0696N The definition of trigger *trigger-name* includes an invalid use of correlation name or transition table name *name*. Reason code=*reason-code*.

Explanation: The trigger definition included an invalid use of *name*. The value of *reason-code* identifies the problem:

1

NEW correlation name and NEW TABLE name are not allowed in a DELETE trigger if the DELETE trigger is not defined using a compound SQL (compiled) statement.

2

OLD correlation name and OLD TABLE name are not allowed in an INSERT trigger if the INSERT trigger is not defined using a compound SQL (compiled) statement.

3

OLD TABLE name and NEW TABLE name are not allowed in a BEFORE trigger.

4

OLD TABLE name and NEW TABLE name are not allowed in a trigger if the trigger is defined using a compound SQL (compiled) statement.

The statement cannot be processed.

User response: Remove the invalid correlation name or transition table name along with the preceding keyword.

SQL0697N OLD or NEW correlation names are not allowed in a trigger defined with the FOR EACH STATEMENT clause.

Explanation: The trigger, as defined, includes a REFERENCING clause with OLD or NEW correlation names specified (or both) and the FOR EACH STATEMENT clause. These cannot be specified together.

The statement cannot be processed.

User response: Remove any OLD or NEW correlation names from the REFERENCING clause or replace FOR EACH STATEMENT with FOR EACH ROW.

sqlcode: -697

sqlstate: 42899

SQL0707N The name *name* cannot be used because the specified identifier is reserved for system use.

Explanation: The following list provides rules about reserved names and qualifiers:

- A table space name cannot start with SYS.
- A storage group name cannot start with SYS.
- A database partition group name cannot start with SYS or IBM.
- A module name cannot start with SYS.
- An object name for an object defined in a module cannot start with SYS_ except for the module initialization procedure..
- A savepoint name cannot start with SYS.
- A role name cannot start with SYS, and it cannot be ACCESSCTRL, DATAACCESS, DBADM, NONE, NULL, PUBLIC, SECADM, SQLADM, or WLMADM.
- A workload management object name cannot start with SYS.

User response: Select a name that is not reserved.

sqlcode: -707

sqlstate: 42939

SQL0713N The replacement value for *special-register* is invalid.

Explanation: Either the value specified in the SET *special-register* statement is not a valid value of the indicated special register, the value specified is valid for the special register but cannot be used on the current server, or the value specified is NULL as a result of an indicator variable.

The statement cannot be executed.

User response: Correct the replacement value and/or any indicator variables. See the *SQL Reference* for an explanation of the valid values of each special register.

sqlcode: -713

sqlstate: 42815

SQL0719N Bind error for user *auth-id*. Package *package-name* already exists.

Explanation: An attempt is made, using the ACTION ADD option of PRECOMPILE or BIND to add a package that already exists. The combination of

'pkgschema.pkgname.pkgversion' must be unique in the SYSCAT.PACKAGES catalog view.

auth-id Authorization ID of the invoker of the BIND or PREP

package-name

Name of the package in the form 'pkgschema.pkgname.pkgversion'. If the package version is the empty string, then '.pkgversion' is omitted from the name.

The package is not created.

User response: Possible ways to ensure that there is no attempt to add a duplicate entry include:

- Check the SYSCAT.PACKAGES catalog view for names of existing application packages. Re-invoke the PRECOMPILE or BIND with a 'pkgschema.pkgname.pkgversion' that is not in use.
- Reissue the PREP or BIND statement without the ACTION ADD option. This will replace the existing package.

sqlcode: -719

sqlstate: 42710

SQL0720N Attempting to replace package *pkgschema.pkgname* WITH VERSION *pkgversion*, where this version already exists.

Explanation: An attempt is made to create a version of a package that already exists using the ACTION REPLACE REPLVER option. The version specified in the REPLVER keyword is different from the version specified in the VERSION precompile option. The version specified in the VERSION precompile option already exists in the catalog. The combination of 'pkgschema.pkgname.version' must be unique in the SYSCAT.PACKAGES catalog view.

A common mistake is that the user may believe that the version that is being created is the one specified in the REPLVER keyword. This is not the case. The version specified in the REPLVER keyword is the name of the version being replaced. The version that will be created is the version that is given to the program in the VERSION option.

No package is created.

User response: Ensure that the version being created does not already exist.

There are two approaches to solve this problem:

- Precompile the program again with a new version name and reissue the original PREP or BIND command.
- The other approach is to reissue the PREP or BIND command specifying the ACTION REPLACE clause without the REPLVER specification. In this case, the

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REPLACE will replace the version that matches the version specified in the VERSION option.

sqlcode: -720

sqlstate: 42710

SQL0721N Package *pkgschema.pkgname* with consistency token = *0Xcontoken* cannot be created since it is not unique.

Explanation: An attempt is made to add or replace a package with a consistency token that is not unique for that package. The combination of 'pkgschema.pkgname.contoken' already exists. This is most likely caused by using the LEVEL option of the PRECOMPILE to specify the consistency token.

The package is not created.

User response: Check the SYSCAT.PACKAGES catalog table for names of existing application packages with the indicated consistency token. Reissue the PREP or BIND command such that the 'pkgschema.pkgname.contoken' is unique within the catalog. The following SQL statement can be used to query the catalog:

```
SELECT PKGSHEMA, PKGNAME
FROM SYSCAT.PACKAGES
WHERE HEX(UNIQUE_ID) = 'contoken';
```

If the LEVEL option on the precompile was used, reissuing the precompile and specifying a different LEVEL value would change the consistency token. It is recommended that the LEVEL option is not used; not specifying the LEVEL option of the precompile would ensure that the consistency token is a current timestamp value.

SQL0722N Error performing *bind-command* for user *auth-id*. Package *package-name* does not exist.

Explanation: Bind or rebind was issued against a package that does not exist. The error would occur if ACTION REPLACE was specified and the REPLVER option specified a version that doesn't exist.

bind-command

Type of bind command (BIND | REBIND) issued. Note that the value 'BIND' will be used for a precompile as well.

auth-id

Authorization ID that issued the bind or rebind.

package-name

Name of the package in the form 'pkgschema.pkgname.pkgversion'. If the package version is the empty string, then 'pkgversion' is omitted from the name.

The package was not bound or rebound.

Explanation: Check the SYSCAT.PACKAGES catalog view for the correct 'pkgschema.pkgname.pkgversion' to specify in the REPLVER option.

sqlcode: -722

sqlstate: 42704

SQL0723N An error occurred in a triggered SQL statement in trigger *trigger-name*. Information returned for the error includes SQLCODE *sqlcode*, SQLSTATE *sqlstate* and message tokens *token-list*.

Explanation: An SQL statement in the trigger *trigger-name* has failed during execution of the trigger. The sqlcode, sqlstate and message token list (each token is separated by the vertical bar character) are provided. The message tokens may be truncated. See the corresponding message for the *sqlcode* for further explanation of the error.

The trigger and the original SQL statement that caused the trigger to execute cannot be processed.

User response: Check the message associated with the SQLCODE of the SQL statement that failed. Follow the action suggested by that message.

sqlcode: -723

sqlstate: 09000

SQL0724N The activation of *object-name* of type *object-type* would exceed the maximum level of indirect SQL cascading.

Explanation: Cascading of indirect SQL occurs when a trigger activates another trigger (possibly through referential constraint delete rules) or a routine, containing SQL, invokes another routine. The depth of this cascading is limited to 16 for triggers and 64 for routines.

Note that recursive situations where a trigger includes a triggered SQL statement that directly or indirectly causes the same trigger to be activated, or where a routine directly or indirectly invokes itself, is a form of cascading that is very likely to cause this error if there are no conditions to prevent cascading from exceeding the limit.

The *object-type* is one of TRIGGER, FUNCTION, METHOD, or PROCEDURE.

The *object-name* specified is one of the objects that would have been activated at the seventeenth level of cascading.

User response: Start with the objects that are activated or invoked by the statement that received this error. If any of these objects are recursive, ensure that there is some condition that prevents the object from being activated or invoked more than the limit allows. If this

is not the cause of the problem, follow the chain of objects that are activated or invoked to determine the chain that exceeds the cascading limit.

sqlcode: -724

sqlstate: 54038

SQL0727N An error occurred during implicit system action type *action-type*. Information returned for the error includes **SQLCODE** *sqlcode*, **SQLSTATE** *sqlstate* and message tokens *token-list*.

Explanation: The processing of a statement or command has caused the database manager to implicitly perform additional processing. During this processing an error was encountered. The action attempted is shown by the *action-type*:

- 1
implicit rebind of a package
- 2
implicit prepare of a cached dynamic SQL statement
- 3
implicit revalidation of an object
- 4
This return code is reserved for use by DB2.
- 5
incremental bind of a static SQL statement, not bound during package bind time
- 6
implicit prepare of a reoptimizable statement containing host-variables, special registers, or parameter markers
- 7
implicit regeneration of a trigger
- 8
implicit regeneration of a function
- 9
implicit regeneration of a check constraint
- 10
implicit instantiation of a global variable
- 11
implicit invocation of module initialization routine

The sqlcode, sqlstate and message token list (each token is separated by the vertical bar character) are

provided. The message tokens may be truncated. See the corresponding message for the *sqlcode* for further explanation of the error.

The original SQL statement or command that caused the *action-type* cannot be processed and the implicit system action was not successful.

Federated system users: You may have received this message because you dynamically prepared an SQL statement in a pass-through session and then tried to execute the statement after the session was closed.

User response: Check the message associated with the SQLCODE of the SQL statement that failed. Follow the action suggested by that message.

For an invalid package, the REBIND command can be used to recreate the error or to explicitly validate the package once the cause of the error has been resolved.

For a failure that occurred while a database object was being revalidated:

1. Determine the name of the database object that could not be revalidated by locating the revalidation failure message in the administration notification log.
2. To avoid this error in the future, you can do one of the following:
 - If the database object that is causing this error is no longer needed, drop the database object.
 - If the statement or command that caused this database object to be revalidated can be changed, change the statement or command so that the next time that statement is executed or that command is run the database object will not be revalidated.
 - Revalidated the database object now by doing one of the following:
 - Execute an SQL statement that directly references the database object.
 - Call the ADMIN_REVALIDATE_DB_OBJECTS procedure for the database object.

Federated system users: If the statement that failed was dynamically prepared in a pass-through session, open another pass-through session, write and prepare the statement again, and execute it while the session is still open.

sqlcode: -727

sqlstate: 56098

SQL0740N Routine *routine-name* (specific name *specific-name*) is defined with the **MODIFIES SQL DATA** option, which is not valid in the context where the routine is invoked.

Explanation: The routine *routine-name* (specific name *specific-name*) is defined with MODIFIES SQL DATA and is therefore not allowed in:

- a BEFORE trigger that is not defined using a compound SQL (compiled) statement
- a correlated subquery
- a search-condition (such as a WHERE clause or check constraint)

Module functions and functions defined with a compound SQL (compiled) statement as the function body that are defined with the MODIFIES SQL DATA option can only be the sole expression on the right hand side of an assignment statement in a compound SQL (compiled) statement.

User response: Ensure that routine resolution resolved to the desired routine. Remove the routine from the failing statement or redefine the routine with an SQL access indicator other than MODIFIES SQL DATA.

sqlcode: -740

sqlstate: 51034

SQL0746N Routine *routine-name* (specific name *specific-name*) violated nested SQL statement rules when attempting to perform operation *operation* on table *table-name*.

Explanation: The routine *routine-name* (specific name *specific-name*) attempted to perform the operation *operation* on table *table-name*. This operation conflicts with other uses of the table by either the application, or a routine invoked directly or indirectly from that application.

If the operation is "READ", then the table *table-name* is currently being written to by either the application or another routine.

If the operation is "MODIFY", then the table *table-name* is already being read from or written to by the application or another routine.

If *table-name* references an explain table and the statement that receives this error message is either a PREPARE statement or an EXECUTE IMMEDIATE statement, then a conflict occurred when inserting explain information into the explain table.

User response: The operation may be successful if retried. Redesign either the application or the routine to avoid the conflict.

If the conflict occurred when inserting explain information for a dynamic statement, then disable explain for dynamic statements and try the PREPARE statement or EXECUTE IMMEDIATE statement again.

sqlcode: -746

sqlstate: 57053

SQL0750N The statement failed because the table or column cannot be renamed.

Explanation: The source table in a RENAME statement cannot be renamed for one or more of the following reasons.

- The table is referenced in one or more existing materialized query tables.
- The table is involved in one or more referential constraints as a parent or dependent table.
- The table is a target table for decomposition of one or more XSR objects.
- The table is a system-period temporal table.
- The table is a history table.
- The database manager configuration parameter `auto_reval` is set to DISABLED and one of the following occurred:
 - The table is referenced in one or more existing views.
 - The table is referenced in one or more existing triggers. This includes triggers on the table or references in triggered SQL statements.
 - The table is referenced in one or more existing SQL functions or SQL methods.
 - The table has check constraints defined. This includes check constraints caused by generated columns.

The column of the target table in an ALTER TABLE statement cannot be renamed because the target table is a history table.

User response: If the error pertains to a RENAME statement, drop the view, materialized query table, trigger, SQL function, SQL method, check constraint, referential constraint, or XSR object dependent on the table before issuing the RENAME statement. Objects dependent on the table can be determined by querying the catalog.

- For views or materialized query tables dependent on the table, query SYSCAT.VIEWDEP, where the table matches the BSCHEMA and BNAME columns.
- For triggers dependent on the table, query SYSCAT.TRIGDEP, where the table matches the BSCHEMA and BNAME columns.
- For SQL functions or SQL methods, query SYSCAT.ROUTINEDEP where the table matches the BSCHEMA and BNAME columns.
- For check constraints on the table, query SYSCAT.CHECKS, where the table matches the TABSCHEMA and TABBNAME columns.
- For referential constraints dependent on the table, query SYSCAT.REFERENCES, where the table matches the TABSCHEMA and TABNAME columns or the REFTABSCHEMA and REFTABNAME columns.

- For XSR objects enabled for decomposition for which the table is a target, query SYSCAT.XSROBJECTDEP, where the table matches the BSHEMA and BNAME columns.

If the error pertains to a RENAME COLUMN action of an ALTER TABLE statement, the column cannot be renamed directly while the target table is a history table. The column can be renamed by taking one of the following actions.

- Determine the name of the system-period temporal table that uses the history table and issue the RENAME COLUMN operation with that name as the target of the ALTER TABLE statement. This renames the column in both the system-period temporal table and the associated history table.
- Determine the name of the system-period temporal table and issue the DROP VERSIONING operation with that name as the target of ALTER TABLE statement. This changes the history table and the system-period temporal table into a regular tables. You can now rename the column of the table in your original ALTER TABLE statement. Note that if the column is renamed, the table can no longer be the history table for the table on which versioning was dropped.

sqlcode: -750

sqlstate: 42986

SQL0751N Routine *routine-name* (specific name *specific-name*) attempted to execute a statement that is not allowed.

Explanation: The program used to implement the body of a routine is not allowed to issue any connection statements. If the routine is a function or method, COMMIT and ROLLBACK (without the SAVEPOINT option) are also not allowed. If the routine is a procedure and is called within a trigger, function, method, or dynamic compound statement, a COMMIT or ROLLBACK statement is not allowed in the procedure.

User response: Remove the statement that is not allowed, then recompile the program.

sqlcode: -751

sqlstate: 38003, 42985

SQL0752N Connecting to a database is not permitted within a logical unit of work when the CONNECT type 1 setting is in use.

Explanation: An attempt was made to connect to either another database or the same database before issuing a COMMIT or ROLLBACK statement. The

request cannot be processed within a CONNECT type 1 environment.

User response:

- Submit a COMMIT or ROLLBACK statement before requesting a connection to another database.
- If multiple databases need to be updated within a unit of work, change the connection settings to SYNCPOINT TWOPHASE and CONNECT 2 by re-precompiling or by issuing the SET CLIENT API from within the application.

sqlcode: -752

sqlstate: 0A001

SQL0773N The case was not found for the CASE statement.

Explanation: A CASE statement without an ELSE clause was found in the routine body of an SQL routine. None of the conditions specified in the CASE statement were met.

User response: Change the CASE statement to handle all conditions that can occur.

sqlcode: -773

sqlstate: 20000

SQL0774N The statement cannot be executed within an ATOMIC compound SQL statement.

Explanation: A COMMIT or ROLLBACK statement was encountered within the context of an ATOMIC compound SQL statement. These statements are not allowed in this context.

User response: Remove the COMMIT or ROLLBACK statement or change the context so that it is not an ATOMIC compound statement.

sqlcode: -774

sqlstate: 2D522

SQL0776N Use of cursor *cursor-name* is not valid.

Explanation: Cursor *cursor-name* is specified as the cursor name on a FOR statement in an SQL procedure. The cursor cannot be specified on a CLOSE, FETCH, or OPEN statement within the FOR statement.

User response: Remove the CLOSE, FETCH, or OPEN statement.

sqlcode: -776

sqlstate: 428D4

SQL0777N Nested compound statements not allowed.

Explanation: Atomic compound statements in the routine body of an SQL procedure cannot be nested.

User response: Ensure that the SQL procedure does not contain nested atomic compound statements.

sqlcode: -777

sqlstate: 42919

SQL0778N End label *label* is not the same as the begin label.

Explanation: Label *label* specified at the end of a FOR, IF, LOOP, REPEAT, WHILE or compound statement is not the same as the label at the beginning of the statement. You cannot specify an end label if a begin label is not specified.

User response: Ensure that the end label is the same as the begin label for FOR, IF, LOOP, REPEAT, WHILE, and compound statements.

sqlcode: -778

sqlstate: 428D5

SQL0779N Label *label* specified on a GOTO, ITERATE, or LEAVE statement is not valid.

Explanation: Label *label* is specified on a GOTO, ITERATE or LEAVE statement. The label is not defined or is not a valid label for the statement.

The label on an ITERATE statement must be the label for a FOR, LOOP, REPEAT, or WHILE statement.

The label on a LEAVE statement must be the label for a FOR, LOOP, REPEAT, WHILE, or compound statement.

The label on a GOTO must be defined within a scope that the GOTO statement can reach.

- If the GOTO statement is defined in a FOR statement, *label* must be defined inside the same FOR statement, excluding a nested FOR statement or nested compound statement.
- If the GOTO statement is defined in a compound statement, *label* must be defined inside the same compound statement, excluding a nested FOR statement or nested compound statement.
- If the GOTO statement is defined in a handler, *label* must be defined in the same handler, following the other scope rules.
- If the GOTO statement is defined outside of a handler, *label* must not be defined within a handler.

User response: Specify a valid label on the GOTO, ITERATE, or LEAVE statement.

sqlcode: -779

sqlstate: 42736

SQL0780N UNDO is specified for a handler when ATOMIC is not specified for the compound statement.

Explanation: UNDO is specified for a handler in a compound statement in an SQL procedure. UNDO cannot be specified unless the compound statement is ATOMIC.

User response: Either specify that the compound statement is ATOMIC or specify EXIT or CONTINUE on the handler.

sqlcode: -780

sqlstate: 428D6

SQL0781N Condition *condition-name* is not defined or the definition is not in scope.

Explanation: Condition *condition-name* was specified in a handler declaration, SIGNAL statement, or RESIGNAL statement, but the condition is not defined in the scope of the compound statement that includes the condition reference or the condition could not be found as a defined module condition.

The statement cannot be processed.

User response: Define the condition either by using the DECLARE CONDITION statement in a compound statement that includes the condition reference or by defining the condition in a module that is visible where the condition is referenced. As an alternative, you could replace the condition reference with a specific SQLSTATE value or remove the handler declaration, SIGNAL statement or RESIGNAL statement that references the condition.

sqlcode: -781

sqlstate: 42737

SQL0782N A condition or SQLSTATE value specified in a handler is not valid.

Explanation: A condition or SQLSTATE value specified in a handler in an SQL statement is not valid for one of the following reasons:

- The condition or SQLSTATE value has already been specified by another handler in the same scope.
- The condition or SQLSTATE value was specified in the same handler as SQLEXCEPTION, SQLWARNING, or NOT FOUND.
- The condition, SQLSTATE value or SQLCODE value specified in a continue-handler clause of an error tolerant nested-table-expression is invalid.

User response: Remove the condition, SQLSTATE value or SQLCODE value from the handler.

sqlcode: -782

sqlstate: 428D7

SQL0783N A duplicate column name or unnamed column was specified in a DECLARE CURSOR statement of a FOR statement.

Explanation: The select list in the FOR statement must contain unique column names. The select list specified contains either duplicate column names or unnamed expressions.

User response: Specify unique column names in the select list specified in the FOR statement.

sqlcode: -783

sqlstate: 42738

SQL0784N The statement failed because the constraint named *constraint-name* cannot be dropped.

Explanation: A constraint that is implicitly generated when a BUSINESS_TIME period is defined cannot be dropped using an ALTER TABLE statement with either a DROP CHECK or DROP CONSTRAINT clause.

User response: Remove the DROP CHECK or DROP CONSTRAINT clause from the ALTER TABLE statement. If you need to drop the constraint, the BUSINESS_TIME period can be dropped using the DROP PERIOD clause in an ALTER TABLE statement.

sqlcode: -784

sqlstate: 42860

SQL0785N The declaration or use of the SQLSTATE or SQLCODE variable is not valid.

Explanation: SQLSTATE or SQLCODE was used as a variable in the routine body of an SQL routine, but is not valid for one of the following reasons:

- SQLSTATE is not declared as CHAR(5)
- SQLCODE is not declared as INTEGER
- The variable is assigned the NULL value.

The statement cannot be processed.

User response: Declare the SQLSTATE variable as CHAR(5) and the SQLCODE variable as INTEGER. Set the variable to a valid value.

sqlcode: -785

sqlstate: 428D8

SQL0787N RESIGNAL statement is not within a handler.

Explanation: The RESIGNAL statement can only be used inside condition handlers.

User response: Remove the RESIGNAL statement or

use a SIGNAL statement instead.

sqlcode: -787

sqlstate: 0K000

SQL0788N The same row of target table *table-name* was identified more than once for an update, delete or insert operation of the MERGE statement.

Explanation: The ON search-condition of the MERGE statement matched a single row from the target table with multiple rows of the source table-reference. This could result in the target row being operated on more than once with an update or delete operation and is not allowed.

The statement cannot be processed.

User response: Correct the search condition to ensure that each row in the target table only matches one row in the source table.

Alternatively, aggregate the rows in the source table that match the row in the target table by using GROUP BY functions or cleanse the data by using the ROW_NUMBER() OLAP expression.

sqlcode: -788

sqlstate: 21506

SQL0789N The data type for parameter or SQL variable *name* is not supported in the routine, compound SQL statement, or parameter list of a cursor value constructor.

Explanation: The SQL routine (function, method, or procedure) or compound SQL statement does not support parameters or SQL variables of the REFERENCE, LONG VARCHAR, LONG VARGRAPHIC, or structured data type. A trigger or function whose body is a compound SQL (compiled) statement, a stand-alone compound SQL statement, or a routine that is an SQL method does not support parameters or SQL variables of the XML data type. A default value cannot be specified for a parameter of type ARRAY, ROW, or CURSOR.

An external routine does not support parameters of a structured data type.

A parameter list of a cursor value constructor does not support parameters of ARRAY, BOOLEAN, CURSOR, ROW, LONG VARCHAR, LONG VARGRAPHIC, REFERENCE, or structured data type.

User response:

- Do not use parameters or SQL variables of the REFERENCE, LONG VARCHAR, LONG VARGRAPHIC, or structured data type in the SQL routine definition or compound SQL statement.

SQL0796N • SQL0798N

- Do not use parameters or SQL variables of the XML data type in a trigger or function (whose body is a compound SQL (compiled) statement), a stand-alone compound SQL statement, or a routine that is an SQL method.
- Do not use parameters of the structured data type in external routines.
- Specify a different data type for the parameter or SQL variable *name*.
- Do not specify the default value for parameters of type ARRAY, ROW, or CURSOR.
- Do not use parameters of ARRAY, BOOLEAN, CURSOR, ROW, LONG VARCHAR, LONG VARGRAPHIC, REFERENCE, or structured data type in the parameter list of a cursor value constructor.

sqlcode: -789

sqlstate: 429BB

SQL0796N The grant of role *role-name1* to role *role-name2* is not valid as it would create a cycle.

Explanation: A role cannot be granted if it would create a cycle. The role *role-name1* contains the role *role-name2*, possibly through another role, and so it cannot be granted to *role-name2*.

User response: If appropriate, to remove the potential for a cycle to be created, revoke the role *role-name2* from role *role-name1*, or from whichever role contained in *role-name1* that contains *role-name2*, then resubmit the statement.

sqlcode: -796

sqlstate: 428GF

SQL0797N The trigger *trigger-name* is defined with an unsupported triggered SQL statement.

Explanation: The trigger must be defined with a triggered SQL statement that can only include statements from the following lists.

A trigger can include the following control statements:

- Compound SQL (compiled) statement
- Compound SQL (inlined) statement
- FOR statement
- GET DIAGNOSTICS statement
- IF statement
- ITERATE statement
- LEAVE statement
- SIGNAL statement
- WHILE statement

An AFTER trigger or an INSTEAD OF trigger can also include the following triggered SQL statements:

- an INSERT statement
- a searched UPDATE statement
- a searched DELETE statement
- a MERGE statement
- a CALL statement
- a fullselect
- an assignment statement (excluding assignment of transition variables)

A BEFORE trigger that is defined using an SQL compound (compiled) statement can also include the following triggered SQL statements:

- an INSERT statement
- a searched UPDATE statement
- a searched DELETE statement
- a MERGE statement
- a CALL statement
- a fullselect
- an assignment statement

If a BEFORE trigger is not defined using an SQL compound (compiled) statement, or a BEFORE INSERT trigger is defined with a SQL compound (compiled) statement and the triggering operation is an INSERT on a UNION ALL view or an UPDATE on a WITH ROW MOVEMENT view, then the triggered SQL statement cannot include:

- a table function or a scalar function defined with a compound SQL (compiled) statement that modifies SQL data
- a nested DELETE, INSERT, MERGE, or UPDATE statement

In some cases the *trigger-name* is not available for use in the message.

User response: Check the triggered SQL statements in the trigger for any statement that does not match the list described in this message and remove it.

sqlcode: -797

sqlstate: 42987

SQL0798N A value cannot be specified for column *column-name* which is defined as GENERATED ALWAYS.

Explanation: When inserting or updating a row in a table, a value was specified for the GENERATED ALWAYS column *column-name*. GENERATED ALWAYS columns should not be specified in the column-list for an INSERT or in the SET clause for an update unless the keyword DEFAULT is specified.

The INSERT or UPDATE is not performed.

User response: Remove the GENERATED ALWAYS column from the column-list or SET clause, or specify DEFAULT as the column value.

sqlcode: -798

sqlstate: 428C9

SQL0799W A SET statement references a special register that does not exist at the server site.

Explanation: A DB2 server received a SET statement that it does not understand.

The SET SPECIAL REGISTER request is ignored.

User response: This SQLCODE can be returned to an application for any SQL statement. This SQLCODE may be masked by other negative SQLCODEs that the SQL statement receives. Processing continues at the server.

sqlcode: +799

sqlstate: 01527

SQL0801N Division by zero was attempted.

Explanation: The processing of a column function or arithmetic expression resulted in division by zero.

The statement cannot be processed. For the INSERT, UPDATE, or DELETE statements, no inserts or updates are performed.

User response: Examine the SQL statement to determine the cause of the problem. If the problem is data dependent, it is necessary to examine the data processed when the error occurred. Refer to the *SQL Reference* to see the valid ranges for the data types.

Federated system users: examine the SQL statement to determine the cause of the problem. If the problem is data dependent, examine the data being processed at the data sources when the error occurred.

sqlcode: -801

sqlstate: 22012

SQL0802N Arithmetic overflow or other arithmetic exception occurred.

Explanation: The processing of a column function or arithmetic expression has resulted in an arithmetic overflow.

The statement cannot be processed. For the INSERT, UPDATE, or DELETE statements, no inserts or updates are performed.

User response: Examine the SQL statement to determine the cause of the problem. If the problem is data dependent, it is necessary to examine the data processed when the error occurred. Refer to the *SQL Reference* to see the valid ranges for the data types.

This error may also be returned when column functions cannot handle the value that is returned by the SQL statement. For example, issuing a SELECT COUNT statement against a table that has more rows than defined by the MAX_LONGINT_INT SQL limit will cause an arithmetic overflow error. Consider using the COUNT_BIG column function for tables with more than 2 147 483 647 rows.

Federated system users: examine the SQL statement to determine the cause of the problem. If the problem is data dependent, examine the data being processed at the data sources when the error occurred. Refer to the corresponding SQL Reference for the data source to determine the valid ranges for the data types.

sqlcode: -802

sqlstate: 22003

SQL0803N One or more values in the INSERT statement, UPDATE statement, or foreign key update caused by a DELETE statement are not valid because the primary key, unique constraint or unique index identified by *index-id* constrains table *table-name* from having duplicate values for the index key.

Explanation: The INSERT or UPDATE object table *table-name* is constrained by one or more UNIQUE indexes to have unique values in certain columns or groups of columns. Alternatively, a DELETE statement on a parent table caused the update of a foreign key in a dependent table *table-name* that is constrained by one or more UNIQUE indexes. Unique indexes might support primary keys or unique constraints defined on a table. The statement cannot be processed because completing the requested INSERT, UPDATE or DELETE statement would result in duplicate column values. If the index is on an XML column, the duplicate values for the index key may be generated from within a single XML document.

Alternatively, if a view is the object of the INSERT or UPDATE statement, it is the table *table-name* on which the view is defined that is constrained.

If *index-id* is an integer value, the index name can be obtained from SYSCAT.INDEXES by issuing the following query:

```
SELECT INDNAME, INDSHEMA
   FROM SYSCAT.INDEXES
  WHERE IID = <index-id>
     AND TABSCHEMA = 'schema'
     AND TABNAME = 'table'
```

where 'schema' represents the schema portion of *table-name* and 'table' represents the table name portion of *table-name*.

The statement cannot be processed. The table remains unchanged.

SQL0804N

User response: Examine the definition for the index identified by *index-id*.

For an UPDATE statement, ensure that the specified operation is not itself inconsistent with the uniqueness constraint. If this does not show the error, examine the object table content to determine the cause of the problem.

For an INSERT statement, examine the object table content to determine which of the values in the specified value list violates the uniqueness constraint. Alternatively, if the INSERT statement contains a subquery, the object table contents addressed by that subquery must be matched against the object table contents to determine the cause of the problem. Note that if the table is protected using a security policy, your LBAC credentials may not allow you to see the rows that are causing the error.

If the index is on an XML column and the statement is either INSERT or UPDATE, consider whether the XML document would result in duplicate values from within the single XML document.

For a DELETE statement, examine the identified dependent table for unique constraints on foreign keys that are defined with the rule ON DELETE SET NULL. This table has a foreign key column included in the identified unique index that cannot be set to null since there is already a null in the column for that table.

Federated system users: isolate the problem to the data source failing the request and examine the index definitions and data for the conditions listed previously.

sqlcode: -803

sqlstate: 23505

SQL0804N The application program parameters for the current request are not valid. Reason code *reason-code*. If a host variable or SQLVAR in the SQLDA is invalid then: host variable/SQLVAR number = *var-number*, SQLTYPE = *sqltype*, SQLENN = *sqllen*, host variable/SQLVAR type = *input-or-output*.

Explanation: An error occurred while processing the current request.

- The call parameter list, which is created by the precompiler, may not be correct if the application programmer has modified the output of the precompiler or over-written the call parameter list in another way.
- The SQLDA or host variable(s) in the SQL statement are invalid.
- The request being made is not supported or is out of context.

Reason codes are interpreted as follows:

- 100 The request being made is not supported or is out of context.
- 101 SQLDA.SQLN is less than SQLDA.SQLD
- 102 SQLVAR.SQLTYPE is invalid.
Federated system users: A data type that you specified is not supported by either the federated server or the data source that you want to access.
- 103 The length specified in SQLVAR.SQLENN or SQLVAR2.SQLENN is incorrect for the SQL type given in SQLVAR.SQLTYPE.
- 104 Doubling of the SQLVARs is expected, but the SQLDOUBLED field of SQLDA.SQLDAID is not set to '2'. This may be required because of a large object type or a structured type.
- 105 A double-byte character Large Object has an odd value indicated by the SQLVAR2.SQLDATALEN pointer, which is always in terms of bytes, even for DBCLOBs.
- 106 The SQLDATA pointer is invalid or points to insufficient storage.
- 107 The SQLIND pointer is invalid or points to insufficient storage.
- 108 The SQLDATALEN pointer is invalid or points to insufficient storage.
- 109 A specific number of host variables/SQLVARs is expected for the current SQL statement.
- 110 The LOB locator is not associated with a LOB of a compatible type.
- 111 A LOB is indicated by the SQLTYPE of the SQLVAR, but the second SQLVAR is null.
- 112 The SQLDATATYPE NAME field is not valid. It does not conform to the format for identifying an existing user-defined type in the database. The format for identifying an existing user-defined type is as follows: 8 bytes, followed by a period, followed by 18 bytes.
- 113 The SQLFLAG4 field is not valid. If a structured type is specified the value must be X'12'. If a reference type is specified the value must be X'01'. Otherwise the value must be X'00'.
- 114 The DB2_TRUSTED_BINDIN registry variable is enabled, and an unsupported host variable data type is being used during bindin. Either unset the DB2_TRUSTED_BINDIN registry variable or change the data type of the input host variable.
- 115 The XML Subtype Indicator is set in the

SQLVAR.SQLNAME field for an SQLVAR.SQLTYPE that cannot contain XML data.

In SQL statements with host variables, use the host variable number to count in from the beginning of the statement (or substatement, in the case of compound SQL) to locate the invalid host variable. For statements using an SQLDA, the SQLVAR number is used to locate the invalid SQLVAR. For an input SQLDA, count only input host variables or SQLVARs; similarly for output. Note that this number is based at 1.

The statement cannot be processed.

User response: Examine the application program for any errors noted. Note that the programmer should not attempt to modify the precompiler output.

Federated system users: If you received reason code 102, specify a supported data type and resubmit the program.

sqlcode: -804

sqlstate: 07002

SQL0805N Package *package-name* was not found.

Explanation: The statement cannot complete because the necessary package was not found in the catalog.

The *package-name* is either in the form:

- 'pkgschema.pkgname 0Xcontoken', where the consistency token is given in hexadecimal.
- 'pkgschema.pkgname.pkgversion', if the package version is the empty string then '.pkgversion' is omitted from the name.
- '%.pkgname' if the CURRENT PACKAGE PATH is set. The set of schema names in the CURRENT PACKAGE PATH are implied by the percent character ('%').

Possible causes for this message (SQLCODE) are:

- The package was not bound or it was dropped.
- If attempting to run a DB2 utility or CLI application, the DB2 utilities may need to be rebound to the database.
- '%.pkgname' if the CURRENT PACKAGE PATH is set but no package with the name 'pkgname' could be found in any of the schemas in the CURRENT PACKAGE PATH.

Note that when version-ids are in use for the given package-schema.package-name, there may be packages defined with the same package schema and package name, but the correct package is not found since the existing packages do not match the requested version or consistency token. A package must match all three parts of the package-name. When multiple versions are being used, additional causes for this messages are:

- the version of the application being executed was precompiled, compiled, and linked, but was not bound, or it was bound but that version of package was subsequently dropped.
- the application was precompiled and bound, but not compiled and/or linked, so the application being executed is not up to date.
- the package was bound from a bind file generated by a different precompile of the source file than the precompile that produced the modified source file that was compiled and linked into the application executable.
- a new application was bound with the same name (and version) of an existing package, thus replacing the existing package. If the application associated with the replaced package is run, this error would result.

In all these cases, the consistency token of the request does not match the consistency token of the existing version and thus the package is considered to be not found.

The statement cannot be processed.

User response: Specify the correct package name or bind the program. If the application being run is not bound to the database, contact the database administrator to do the necessary binding. Ensure that the application or object module being executed is the compiled and linked modified source code associated with the precompile and bind that generated the package.

If the CURRENT PACKAGE PATH is set, ensure that the schema that includes the package is specified in the CURRENT PACKAGE PATH.

The following SQL statements can be used to query the catalog to determine if there are different versions of the package.

```
SELECT PKGSHEMA, PKGNAME,
       PKGVERSION, UNIQUE_ID
FROM SYSCAT.PACKAGES
WHERE PKGSHEMA = 'pkgschema'
      and PKGNAME='pkgname'.
```

Note that the UNIQUE_ID column corresponds to the consistency token.

If the DB2 utility programs need to be rebound to the database, the database administrator can accomplish this by issuing one of the following CLP command from the bnd subdirectory of the instance, while connected to the database:

- "db2 bind @db2ubind.lst blocking all grant public" for the DB2 utilities.
- "db2 bind @db2cli.lst blocking all grant public" for CLI.

Federated system users: ensure that the packages required for the federated server are bound at the applicable data sources. Refer to the Federated Systems Guide for more information about binding packages to data sources.

sqlcode: -805

sqlstate: 51002

SQL0808N The CONNECT statement semantics are not consistent with those of other existing connections.

Explanation: The CONNECT statement originates from a source file which was precompiled having different connection options (SQLRULES, CONNECT type, SYNCPOINT, or RELEASE type) than that of a source file for which a connection exists.

User response: Ensure that all source files are precompiled using the same CONNECT options, or if this is not possible, call the SET CLIENT api to set the desired options for the application process before issuing the first CONNECT statement.

sqlcode: -808

sqlstate: 08001

SQL0811N The result of a scalar fullselect, SELECT INTO statement, or VALUES INTO statement is more than one row.

Explanation: One of the following caused the error:

- Execution of an embedded SELECT INTO or VALUES INTO statement resulted in a result table of more than one row.
- Execution of a scalar fullselect resulted in a result table of more than one row.

Federated system users: this situation can be detected by federated server or by the data source.

The statement cannot be processed.

User response: Ensure that the statement contains the proper condition specifications. If it does, there may be a data problem that is causing more than one row to be returned when only one is expected.

Federated system users: isolate the problem to the data source failing the request and examine the selection criteria and data for that object.

sqlcode: -811

sqlstate: 21000

SQL0817N The SQL statement cannot be executed because the statement will result in a prohibited update operation.

Explanation: The application attempted to execute an SQL statement that would result in updates to user data or to the subsystem catalog. This is prohibited for one of the following reasons:

- The application is running as an IMS inquiry-only transaction.
- The application is an IMS or CICS application that is attempting to update data at a remote DBMS that does not support two-phase commit.
- The application is attempting to update data at multiple locations and one of the locations does not support two-phase commit.

These SQL statements include INSERT, UPDATE, DELETE, CREATE, ALTER, DROP, GRANT, and REVOKE.

The statement cannot be executed.

User response: If the application is running as an IMS inquiry-only transaction, see your IMS system programmer about changing the inquiry-only status of the transaction under which your application is running.

If the IMS or CICS application is attempting a remote update, either the application must be changed to run as a local application on the server DBMS, or the server DBMS must be upgraded to support two-phase commit.

If the application is attempting to update data at multiple locations, either the application must be changed, or all DBMSs involved must be upgraded to support two-phase commit.

sqlcode: -817

sqlstate: 25000

SQL0818N A timestamp conflict occurred.

Explanation: The timestamp generated by the precompiler at precompile time is not the same as the timestamp stored with the package at bind time.

This problem can be caused by the following:

- The application was precompiled, compiled, and linked, but was not bound.
- The application was precompiled and bound, but not compiled and/or linked, so the application being executed is not up to date.
- The package was bound from a bind file generated by a different precompile of the source file than the precompile that produced the modified source file that was compiled and linked into the application executable.

- A new application was bound of the same name and existing package, thus replacing the existing package. If the application associated with the replaced package is run, this error would result.

Federated system users: in addition to the causes listed previously, the problem can also be due to not binding the required packages at all applicable data sources.

The statement cannot be processed.

User response: Bind the application again, using the bind file for the program that matches the object module. Or, execute the program that corresponds to the package stored in the database.

If installing the sample database, record the number and text of this message and then contact your technical service representative.

Federated system users: in addition to the previously listed actions, ensure that the packages required for the federated server are bound at the applicable data sources. Refer to the Federated Systems Guide for more information on binding packages to data sources.

sqlcode: -818

sqlstate: 51003

SQL0822N The SQLDA contains a data address or indicator variable address which is not valid.

Explanation: The application program placed an address that is not valid in the SQLDA.

The statement cannot be processed.

User response: Correct the application program so that valid addresses are placed in SQLDA.

sqlcode: -822

sqlstate: 51004

SQL0840N Too many items were returned in a SELECT list.

Explanation: The number of items returned in the SELECT list exceeds the allowable maximum. The maximum for SELECT lists (other than on common table expressions) is 1012. The maximum for SELECT lists in common table expressions is 5000.

The statement cannot be processed.

User response: Determine whether all the information is actually needed. (Note that the number of items returned by the SELECT list * in the SQL statement SELECT * from A, B, C is the sum of the number of columns in all three tables.) If possible, rewrite the SQL statement so only the necessary items of information are returned. If all the information is necessary, break the SQL statement into two or more statements.

sqlcode: -840

sqlstate: 54004

SQL0842N A connection to server *server-name* already exists.

Explanation: SQLRULES(STD) is in effect and a CONNECT statement identifies an existing SQL connection.

User response: The correction depends on the error:

- If the server name is not the intended name, correct it.
- If SQLRULES(STD) is in effect and the CONNECT statement identifies an existing SQL connection, replace the CONNECT with SET CONNECTION or change the option to SQLRULES(DB2).

Correct the error in the application and try again.

sqlcode: -842

sqlstate: 08002

SQL0843N The server name does not specify an existing connection.

Explanation: A statement, command, or API specified a server name that does not identify an existing SQL connection of the application process.

This may have occurred using:

- a SET CONNECTION statement
- a RELEASE statement
- a DISCONNECT statement
- SET or QUERY CLIENT INFORMATION

User response: The correction depends on the error:

- If the server name is not the intended name, correct it.
- Ensure that a connection to the server has been established and is in a current or dormant state before issuing the request for that connection.

Correct the error in the application and try again.

sqlcode: -843

sqlstate: 08003

SQL0845N A PREVIOUS VALUE expression cannot be used before the NEXT VALUE expression generates a value in the current session for sequence *sequence-name*.

Explanation: A PREVIOUS VALUE expression specified sequence *sequence-name*, but a value has not yet been generated for this sequence. A NEXT VALUE

expression must be issued in this session to generate a value for this sequence before a PREVIOUS VALUE expression for the sequence can be issued.

User response: Issue at least one NEXT VALUE expression for a sequence before issuing any PREVIOUS VALUE expression for the same sequence in a session.

sqlcode: -845

sqlstate: 51035

SQL0846N Invalid specification of an identity column or sequence object *object-type object-name*. Reason code = *reason-code*.

Explanation: For an identity column or sequence object, the specification of an attribute in a CREATE or ALTER statement may be invalid for one of the following reasons:

1. The underlying data type of the identity column or sequence object is not supported. Identity columns and sequence objects support the following data types: SMALLINT, INTEGER, BIGINT and DECIMAL (or NUMERIC) with a scale of zero.
2. The value for START WITH, INCREMENT BY, MINVALUE or MAXVALUE is outside of the range for the data type of the identity column or sequence object.
3. MINVALUE must be less than or equal to MAXVALUE.
4. An invalid value was specified for CACHE. The value must be an INTEGER with a minimum value of 2.

User response: Correct the syntax and resubmit the statement.

sqlcode: -846

sqlstate: 42815

SQL0857N Conflicting options have been specified (*option1, option2*).

Explanation: Conflicting options have been specified. Either *option1* and *option2* must be specified together, or the two options must not be specified together.

If IMPLICITLY HIDDEN is specified when defining a column, the column must also be defined as a ROW CHANGE TIMESTAMP column.

The statement cannot be executed.

User response: Depending on the options, either specify the options together or do not specify the options together.

sqlcode: -857

sqlstate: 42867

SQL0859N Access to the Transaction Manager Database failed with SQLCODE *SQLCODE*.

Explanation: The application was precompiled with SYNCPOINT(TWOPHASE) and requires a Transaction Manager Database to coordinate the two phase commit. Reasons why the Transaction Manager Database is not available might include the following:

- It was not created.
- The *tm_database* field of the database manager configuration file has not been updated and activated with the name of the database.
- The database exists, but communication to the database failed.

User response: Possible actions:

- Refer to the SQLCODE that was returned with this message, and follow the appropriate action for that SQLCODE.
- Verify that the *tm_database* exists; if not, create a new database or select a database that currently exists for use as the TM database. It is recommended to create a separate database if there are no serious constraints on disk storage.
- Update the database manager configuration for the TM database using the field *tm_database* if that has not already been done.
- Verify that a connection to the *tm_database* can be made. For example, attempt the connection using the Command Line Processor.
- Ensure that the *tm_database* chosen is not a database accessed through DB2 Connect.

sqlcode: -859

sqlstate: 08502

SQL0863W A successful connection was made, but only single byte characters should be used.

Explanation: The server database and client application are using codepages for different language types and any characters outside the 7-bit ASCII range cannot be guaranteed (only the characters in the 7-bit ASCII range exist in all codepages). For example, the connection might be between a Japanese and a Latin-1 codepage, but none of the Japanese characters will be available in the Latin-1 codepage, so all of these characters should be avoided (English characters are fine though).

Federated system users: possible causes are:

- The federated database supports single-byte and double-byte characters but the database client system supports only single-byte characters.

- The data source supports single-byte and double-byte characters but the federated system supports only single-byte characters.

User response: Do not submit SQL statements or commands that use characters which are not common between the application and database codepages.

Federated system users: do not submit SQL statements or commands that use characters which are not common between the client system, the federated system, and the data source.

sqlcode: +863

sqlstate: 01539

SQL0864N A referential constraint *constraint-name* attempted to modify a row in table *table-name* that was modified by an SQL data change statement within a fullselect.

Explanation: An SQL data change statement was specified in the FROM clause, but the underlying target base table of the SQL data change statement has a referential constraint which modifies the same table. This is disallowed.

The statement cannot be processed.

User response: Avoid using the SQL data change statement within a FROM clause, or change the referential constraint so that it does not modify the table that is the target of the SQL data change statement.

sqlcode: -864

sqlstate: 560C6

SQL0865N Invalid *tm_database* value.

Explanation: The database chosen as the *tm_database* in the database manager configuration is not valid. The database must be at level DB2 V2.1 or later, and cannot be a database accessed through DRDA protocol (ie. through DB2 Connect).

The statement cannot be executed.

User response:

1. Update the database manager configuration to specify a valid database for the *tm_database* parameter.
2. Issue db2stop and db2start to ensure that the change takes effect.

sqlcode: -865

sqlstate: 08001

SQL0866N The data server driver or data server client terminated the connection to the database named *database-name* because the <alternategroup> section of the db2dsdriver.cfg file is not valid.

Explanation: You can specify multiple alternate database servers for automatic client reroute to connect to, in the event that the connection to a database fails, using the <alternategroup> section of the db2dsdriver.cfg file. This functionality is supported in DB2 for Linux, UNIX, and Windows and DB2 for z/OS servers.

There are some restrictions on the contents of the <alternategroup> section of the db2dsdriver.cfg file when connecting to DB2 for z/OS database servers. If a database, named db_A, is located on a DB2 for z/OS database server, there can be no more than one <database> entry in the <alternategroup> section for db_A.

This message is returned when one of these situations occur:

1. Alternate groups is not supported on the database server where the database named *database-name* resides.
2. The db2dsdriver.cfg contents do not satisfy the DB2 for z/OS restrictions for the <alternategroup> section.

User response: In the db2dsdriver.cfg file, modify the <alternategroup> sections that are related to the given database, *database-name*, so that those entries and sections satisfy the <alternategroup> support restrictions:

1. Remove the <alternategroup> section in the db2dsdriver.cfg file.
2. Specify only one database entry in the <alternategroup> section.

sqlcode: -866

sqlstate: 08001

SQL0868N A CONNECT using a USER/USING clause was attempted to a server for which a connection already exists.

Explanation: A current or dormant connection to a server exists, and an attempt to CONNECT to this server using the USER/USING clause is invalid.

User response: Possible actions:

- Use the SET CONNECTION statement to make the connection to the DORMANT connection current.
- Use the CONNECT statement without USER/USING if SQLRULES(DB2) are being used by the application.
- Complete the existing unit of work, disconnect, and then reconnect using USER/USING.

sqlcode: -868

sqlstate: 51022

SQL0873N Objects encoded with different encoding schemes cannot be referenced in the same SQL statement.

Explanation: All tables, SQL functions, and SQL methods referenced in the SQL statement are not defined with the same encoding scheme.

This situation can occur when:

- a table created with either the ASCII or Unicode encoding scheme is referenced in a statement with a table that was not created with the same encoding scheme
- an SQL function or SQL method created with either the ASCII or Unicode encoding scheme is referenced in a statement with a table that was not created with the same encoding scheme
- a sourced function is created with a different encoding scheme than the source function
- an exception table is created with a different encoding scheme than the base table for the operation

User response: Correct the SQL statement so that only objects with the same encoding scheme are referenced.

sqlcode: -873

sqlstate: 53090

SQL0874N The CCSID of all the parameters must match the PARAMETER CCSID of the routine.

Explanation: All the parameters of a routine must use the same encoding scheme as the routine itself. If the CCSID is specified for a parameter, it must match the implicitly or explicitly specified PARAMETER CCSID option for the routine.

User response: Remove the CCSID option from the parameter or change the statement so the same CCSID value is specified throughout.

sqlcode: -874

sqlstate: 53091

SQL0880N SAVEPOINT *savepoint-name* does not exist or is invalid in this context.

Explanation: An error occurred issuing a RELEASE or ROLLBACK TO SAVEPOINT *savepoint-name* statement. Either a savepoint with that name does not exist, or it was established outside the current atomic execution context.

The statement cannot be processed.

User response: Correct the name of the savepoint in

the statement and reissue the statement.

sqlcode: -880

sqlstate: 3B001

SQL0881N A SAVEPOINT with name *savepoint-name* already exists, but this savepoint name cannot be reused.

Explanation: The name *savepoint-name* has already been used in a SAVEPOINT statement. The savepoint name cannot be reused because at least one of the SAVEPOINT statements that used this name also specified the UNIQUE keyword, which asserts that the name must be unique.

The statement cannot be processed. The new savepoint is not set. The old savepoint with the same name still exists.

User response: Choose another name for this savepoint and reissue the SAVEPOINT statement. If this existing savepoint name must be reused, issue the RELEASE SAVEPOINT statement to free the existing savepoint. However, be aware that the RELEASE SAVEPOINT statement also releases any savepoints that were established in the transaction since the specified savepoint was established. For more information, refer to the SQL Reference.

sqlcode: -881

sqlstate: 3B501

SQL0882N Savepoint does not exist.

Explanation: An error occurred issuing a ROLLBACK TO SAVEPOINT statement. Issuing a ROLLBACK TO SAVEPOINT without specifying a specific savepoint name is not allowed when there are no existing savepoints.

The statement cannot be processed.

User response: Issue a different statement, or try rolling back the entire transaction with the ROLLBACK statement.

sqlcode: -882

sqlstate: 3B502

SQL0900N The application state is in error. A database connection does not exist.

Explanation: A connection to a database does not exist. This may be due to one of the following reasons:

- A serious error in the application state has caused the database connection to be lost.
- The application may have disconnected from a database and not established a new current connection before executing the next SQL statement.
- A request to switch the user in a trusted connection was unsuccessful.

User response: Reestablish a current connection by either switching to an existing dormant connection (using CONNECT TO or SET CONNECTION), by establishing a new connection (using CONNECT), or by successfully switching to another user in a trusted connection.

sqlcode: -900

sqlstate: 08003

SQL0901N The SQL statement or command failed because of a database system error.
(Reason *reason*.)

Explanation: There are many scenarios in which this message can be returned. Here are two examples of scenarios in which this message can be returned:

- Windows operating systems: One reason that this error can be returned on Windows operating systems is that anti-virus or firewall software is preventing the DB2 database manager from reading from or writing to DB2 database or database manager-related files.
- Migration and upgrade scenarios: One reason that this error can be returned after an upgrade to a new version of DB2 database or after the application of a fix pack is because statistics about one or more tables, associated indexes, or statistical views are not up-to-date.

In some cases, although this attempt to execute the SQL statement failed, future attempts to execute this SQL statement or other statements might succeed.

The runtime token, *reason*, might be empty or it might contain English text that is intended for IBM software support personnel only.

User response: Respond to this error by performing the following troubleshooting steps:

Windows operating systems:

Disable anti-virus or firewall software.

If anti-virus or firewall software is installed and running on the computer on which DB2 database is installed, determine whether the anti-virus or firewall software is causing the problem by disabling the anti-virus or firewall software and executing the statement again.

If disabling anti-virus or firewall software resolves the problem, add exceptions for the following DB2 database-related directories before enabling the anti-virus or firewall software again:

- "IBM\sqlllib" - DB2 database application files
- "IBM\DB2" - DB2 database manager instances

- "<install-drive>\DB2" - Database partition directories

Migration and upgrade scenarios:

Update statistics using the RUNSTATS command, and then execute the statement again.

Federated environments:

1. Determine which federated data source or federated database server is returning the error.
2. Collect diagnostic information and perform troubleshooting steps for data source or federated database server that is returning the error.

Refer to diagnostic and troubleshooting reference information for the data source or federated database server that is returning the error because the problem determination procedures for data sources vary.

If the error continues after performing the troubleshooting steps described, contact IBM software support for assistance:

1. Collect diagnostic information using trace facilities such as the DB2 trace and the Independent Trace Facility.
2. Collect the following diagnostic information:
 - Problem description
 - SQLCODE
 - Reason *reason*
 - SQLCA contents if possible
 - Trace files, if possible.
3. Contact IBM software support.

sqlcode: -901

sqlstate: 5UA0L, 58004

SQL0902C A system error occurred. Subsequent SQL statements cannot be processed.
IBM software support reason code:
reason-code.

Explanation: This message is returned when the database manager encounters a critical error, such as a severe operating system error, or an error accessing storage media, which might prevent a database from continuing to be usable. There are different scenarios in which the database manager might encounter an operating system error, or a severe media error. Here is one example of a scenario in which this message can be returned:

- This message can be returned when a database manager resource requires a semaphore, but there are not enough semaphores to satisfy the request.

SQL0903N • SQL0904N

The runtime token, *reason-code*, might sometimes be empty, and is intended to assist IBM software support personnel only.

User response: Respond to this message by performing the following troubleshooting steps:

1. Review diagnostic information in db2diag log files to identify errors that occurred before this message was returned.
2. If there are messages in the db2diag log files indicating that too many semaphores have been requested, or that there are not enough semaphores to serve the database manager requests, increase the number of semaphores using operating system parameters.

If the error continues after performing the troubleshooting steps described, contact IBM software support for assistance:

1. Collect diagnostic information using trace facilities such as the DB2 trace and the Independent Trace Facility.
2. Collect the following diagnostic information:
 - Problem description
 - SQLCODE
 - Reason *reason*
 - SQLCA contents if possible
 - Trace files, if possible
3. Contact IBM software support.

Federated system users: isolate the problem to the data source failing the request and take the necessary diagnostic steps for that data source. The problem determination procedures for data sources vary, so refer to the applicable data source manuals.

sqlcode: -902

sqlstate: 58005

SQL0903N COMMIT statement failed, transaction rolled back. Reason code: *reason-code*.

Explanation: One or more of the servers participating in the current unit of work was unable to prepare the database to be committed. The COMMIT statement has failed and the transaction has been rolled back. If there is only one server participating in the current unit of work, the transaction may have been committed instead.

Possible reason codes are:

01

A connection to one of the databases participating in the unit of work was lost.

02

One of the databases or nodes participating in the unit of work was accessed, but unable to prepare to commit.

Federated system users: if the database you connected to is a federated server database where nicknames are used, one of the data sources required for a nickname is unable to prepare to commit.

03

A DB2 Data Links Manager participating in the unit of work was unable to prepare to commit.

04

One or more created temporary tables, or declared temporary tables are in an inconsistent state.

05

An unexpected error occurred. Check the administration notification log for details.

Federated system users: if the database you connected to is a federated server database where nicknames are used, a connection to one of the data sources required for a nickname within the database was lost.

06

Unable to send Resync Information to one of the participants. The participant only supports IPv4. Please enable dual-stack mode for the participant.

User response: If a connection to a database was lost, reestablish the connection. If the failure was not connection related, reference the error diagnostic logs on the remote system to determine the nature of the failure and what action might be required. Rerun the application.

sqlcode: -903

sqlstate: 40504

SQL0904N Unsuccessful execution caused by an unavailable resource. Reason code: *reason-code*, **type of resource:** *resource-type*, **and resource name:** *resource-name*.

Explanation: The SQL statement could not be executed because resource *resource-name* of type *resource-type* was not available at the time for the reason indicated by *reason-code*. Refer to the Problem Determination documentation of DB2 for MVS for an explanation of resource type codes.

User response: Verify the identity of the resource that was not available. To determine why the resource was unavailable, refer to the specified *reason-code*.

sqlcode: -904

sqlstate: 57011

SQL0905N Unsuccessful execution due to resource limit being exceeded. Resource name = *resource-name*, limit = *limit-amount1* CPU seconds (*limit-amount2* service units) derived from *limit-source*.

Explanation: The execution of the SQL statement was terminated because a resource limit was exceeded.

The name of the resource whose limit was exceeded is *resource-name*. It is also the name of the column in the resource limit specification table from which the limit was derived. The limit that was exceeded in CPU seconds is *limit-amount1* and in service units it is *limit-amount2*. The *resource-name* may be ASUTIME, which is the number of CPU seconds permitted for each SQL statement. The maximum number of CPU seconds permitted is *limit-amount1*. The maximum number in service units is *limit-amount2*.

The source used to derive the limit-amount is *limit-source* and is either the name of a resource limit specification table or a 'system parameter'. If the source is a system parameter, the resource limit specification table did not contain an applicable entry or an error occurred while accessing the table. In either case, the limit is obtained from an install (system) parameter.

User response: Determine why this SQL statement took so long and take appropriate action. Consider simplifying the SQL statement, restructuring tables and indexes, or contacting the installation group responsible for maintaining the resource limit specification tables.

An application program that receives this return code can execute additional SQL statements.

sqlcode: -905

sqlstate: 57014

SQL0906N The SQL statement cannot be executed because this function is disabled due to a prior error.

Explanation: Execution of the SQL statement failed because the requested function had been disabled by a prior error. This situation can arise if the application program has intercepted an abend (for instance, by an ON ERROR condition in a PL/I program) and continued to execute SQL statements. This situation may also arise if a DB2 CICS transaction encountered a create thread error yet continued to issue SQL requests without issuing a SYNCPOINT ROLLBACK first.

User response: In general, an application program should terminate upon receipt of this return code. All subsequent attempts by the application to execute other SQL statements will also fail with the same return code. In the case of a DB2 CICS transaction, if the SQLERRP field in the SQLCA contains the module name DSNCEXT1, the transaction may issue a SYNCPOINT

ROLLBACK and continue processing. If the transactions chooses to ROLLBACK and continue processing, it must be capable of correcting the situation that caused the create thread error to occur originally.

sqlcode: -906

sqlstate: 24514, 51005, 58023

SQL0907N An attempt was made to modify the target table, *table-name*, of the MERGE statement by constraint or trigger *name*.

Explanation: The MERGE statement caused constraint or trigger *name* to activate, which attempted to update, insert into or delete from table *table-name* that is also a target table, or table within the same table hierarchy, of the MERGE statement. This is not allowed.

User response: Change the MERGE statement to remove the operation that causes the constraint or trigger to activate, or alter the table that has the constraint or trigger to remove the reference to the target table.

sqlcode: -907

sqlstate: 27000

SQL0908N *bind-type* error using *auth-id* authority BIND, REBIND, or AUTO_REBIND operation is not allowed.

Explanation: For BIND and REBIND, the indicated authorization ID is not allowed to perform the indicated *bind-type* against a plan or package. An entry in the resource limit specification table (RLST) prohibits binding and rebinding by this authorization ID, or all authorization IDs. For AUTO-REBIND, the system parameter controlling AUTO-REBIND operations is set to disallow AUTO-REBIND.

bind-type

Type of bind operation (BIND, REBIND or AUTO-REBIND).

auth-id Authorization ID of the invoker of the BIND subcommand or primary authorization ID of the invoker of the plan for AUTO-REBIND operations.

User response: If the indicated authorization id should be allowed to bind, change the entry in the active RLST table. If AUTO-REBIND operations are disabled, rebind the package before reexecuting the package.

sqlcode: -908

sqlstate: 23510

SQL0909N The object has been deleted.

Explanation: The application program has either (1) dropped a table and then attempted to access it, or (2) dropped an index and then tried to access its object table using that index.

User response: The logic of the application program must be corrected such that it does not attempt to access or use an object after it has been dropped.

Dropping indexes within an application program is especially hazardous, because there is no way of determining whether or not the plan that has been generated for the application (by BIND or REBIND) actually uses a particular index for access to its object table.

sqlcode: -909

sqlstate: 57007

SQL0910N The SQL statement cannot access an object on which a modification is pending.

Explanation: The application program attempted to access an object within the same unit of work in which either:

- The application program issued a DROP against the object or a related object (for example, an index for a table)
- The application program issued a statement against the object that added or dropped a constraint.
- The application program issued a DROP TRIGGER or CREATE TRIGGER statement that affected the object, either directly or indirectly.
- The application program issued a ROLLBACK TO SAVEPOINT statement, which placed the object in the modification pending state.
- The application program issued a statement that caused all rows of a NOT LOGGED created temporary table or declared temporary table to be deleted.
- The application program issued an ALTER TABLE ... ADD PARTITION, ALTER TABLE ... ATTACH PARTITION or ALTER TABLE ... DETACH PARTITION statement against the object (in this case a table). If a unit of work contains an ALTER TABLE ... ATTACH PARTITION, then subsequently in the same unit of work, an ALTER TABLE ... DETACH PARTITION cannot be done on the same table.
- The application program issued a DETACH to create this object from a data partition in a partitioned MDC table.
- The application program issued an SQL statement that attempted to access a trusted context object on which a modification is pending. The SQL statement may be one of the following:

- ALTER TRUSTED CONTEXT

- CREATE TRUSTED CONTEXT
- DROP TRUSTED CONTEXT
- The application program issued a CREATE USER TEMPORARY TABLESPACE statement or ALTER TABLESPACE statement. If a unit of work contains a CREATE USER TEMPORARY TABLESPACE statement or ALTER STATEMENT statement, then subsequently in the same unit of work, a reference to a created temporary table that instantiates the table cannot be made.

or the application program issued an SQL statement that attempted to access a WLM object on which a modification is pending. The SQL statement may be one of the following:

- ALTER HISTOGRAM TEMPLATE
- ALTER THRESHOLD
- ALTER SERVICE CLASS
- ALTER WORK ACTION
- ALTER WORK CLASS
- ALTER WORKLOAD
- CREATE HISTOGRAM TEMPLATE
- CREATE THRESHOLD
- CREATE SERVICE CLASS
- CREATE WORK ACTION
- CREATE WORK CLASS
- CREATE WORKLOAD
- DROP of any of these objects: HISTOGRAM TEMPLATE, THRESHOLD, SERVICE CLASS, WORK ACTION, WORK CLASS, WORKLOAD
- GRANT (Workload privileges)
- REVOKE (Workload privileges)

Federated system users: in addition to the previously listed causes, other data source specific restrictions may exist that prevent access to the object.

The SQL statement cannot be processed.

User response: Modify the application program so there is no attempt to access an object within the same unit of work in which the modification was made. In general, it is better to isolate Data Definition Language (DDL) statements in a different unit of work than Data Manipulation Language (DML) statements that access the same objects.

The unit of work must be committed or rolled back before the statement that failed can be processed successfully. If the committed modification caused an object to be dropped, then the object may have to be recreated in order for the failing SQL statement to be processed successfully.

If the object is modified within a SAVEPOINT, modify the application program so that it does not attempt to access the object after the application issues a ROLLBACK TO SAVEPOINT statement. Any cursor

that accesses the modified object and is open at the time of the ROLLBACK TO SAVEPOINT will not be accessible. Modify the application so that it closes the cursor.

If an insert, delete or update statement involving a NOT LOGGED created temporary table or declared temporary table fails, then all rows in that table are deleted. Any cursor that is open against that table at the time of the failure will not be accessible and should be closed by the application.

If an ALTER TABLE ... DETACH PARTITION fails because of a pending ALTER TABLE ... ATTACH PARTITION, use two different units of work to do the two operations.

If the SQL statement attempted to access a trusted context object, then reissue the statement later.

If the SQL statement attempted to access a WLM object, then reissue the statement later.

Federated system users: if the previous action does not solve the problem, isolate the request and determine what additional constraints exist on the data source that are preventing access to the object. Ensure that the application is not violating any of those constraints.

sqlcode: -910

sqlstate: 57007

SQL0911N **The current transaction has been rolled back because of a deadlock or timeout.**
Reason code *reason-code*.

Explanation: The current unit of work was involved in an unresolved contention for use of an object and had to be rolled back.

The reason codes are as follows:

2

The transaction was rolled back due to a deadlock.

68

The transaction was rolled back due to a lock timeout.

72

The transaction was rolled back due to a DB2 Data Links Manager error during the transaction.

73

The transaction was rolled back because a queuing threshold such as the CONCURRENTDBCOORDACTIVITIES threshold caused two or more activities to reach a deadlock state. For more information, see "CONCURRENTDBCOORDACTIVITIES threshold" in the DB2 Information Center.

The application was rolled back to the previous COMMIT.

User response: The changes associated with the unit of work must be entered again.

To help avoid deadlock or lock timeout, issue frequent COMMIT operations, if possible, for a long-running application, or for an application likely to encounter a deadlock.

Federated system users: the deadlock can occur at the federated server or at the data source. There is no mechanism to detect deadlocks that span data sources and potentially the federated system. It is possible to identify the data source failing the request (refer to the problem determination guide to determine which data source is failing to process the SQL statement).

Deadlocks are often normal or expected while processing certain combinations of SQL statements. It is recommended that you design applications to avoid deadlocks to the extent possible.

If a deadlock state was reached because of a queuing threshold such as the CONCURRENTDBCOORDACTIVITIES threshold, increase the value of the queuing threshold.

sqlcode: -911

sqlstate: 40001

SQL0912N **The maximum number of lock requests has been reached for the database.**
Reason code = *reason-code*

Explanation: The maximum number of locks for the database was reached because of insufficient memory for the lock request.

The reason code indicates the type of memory limit that was reached:

1

Local lock manager memory, which is configured using the LOCKLIST database configuration parameter.

2

Global lock manager memory, which is configured using the CF_LOCK_SZ database configuration parameter.

The statement cannot be processed.

User response: The application should submit a COMMIT or ROLLBACK statement before submitting other SQL statements. Consider increasing the value of the database configuration parameter indicated by the reason code to support more lock requests.

1

Increase the LOCKLIST database configuration parameter, which manages lock memory allocated for the local lock manager.

2

Increase the CF_LOCK_SZ database configuration parameter, which manages lock memory allocated for the global lock manager.

sqlcode: -912

sqlstate: 57011

SQL0913N Unsuccessful execution caused by deadlock or timeout. Reason code reason-code.

Explanation: The request issued was involved in an unresolved contention for use of an object and the execution failed.

The reason codes are as follows:

2

transaction branch failed due to deadlock.

68

transaction branch failed due to lock timeout.

72

transaction rolled back due to an error concerning a DB2 Data Links Manager involved in the transaction.

80

statement failed due to timeout.

The text of this message and the runtime tokens might vary, depending on the version and platform of the DB2 database server or client.

User response:

- For reason code 80, you can retry the failed statement without terminating the application. If the application accesses multiple remote databases, it may be better to rollback the transaction to avoid the possibility of a global deadlock.
- For other reason codes, issue a request to rollback the transaction. The transaction cannot be committed due to the failure of the current transaction branch.
- To help avoid deadlock or lock timeout, issue frequent COMMIT operations, if possible, within long-running applications or applications requiring data with high concurrent access.

sqlcode: -913

sqlstate: 57033

SQL0917N Bind package failed.

Explanation: An error has occurred which prevents the package from being created.

This SQLCODE can be issued during bind or commit processing. If issued during commit processing, all changes to the database are rolled back. If issued during bind processing, only package creation fails and other changes within the logical unit of work are still able to be committed.

User response: This problem is usually caused by one or more SQL statements which did not get bound because of an error.

Determine which statements are causing the error and correct them. Reissue the command to create the package.

sqlcode: -917

sqlstate: 42969

SQL0918N Application must execute a rollback.

Explanation: The unit of work has already been rolled back in the database but other resource managers involved in this unit of work might not. To ensure integrity of this application, all SQL requests will be rejected until the application issues a rollback.

User response: All SQL requests will be rejected until the application issues a rollback. For example, in a CICS environment, this would be a CICS SYNCPOINT ROLLBACK command.

sqlcode: -918

sqlstate: 51021

SQL0920N Data on a database client system cannot be accessed from other database client systems.

Explanation: The workstation has been configured as a client or a server with local clients. Any databases created on this system cannot be shared by other workstations.

The function cannot be processed.

User response: Request data only from server workstations.

sqlcode: -920

sqlstate: 57019

SQL0925N SQL COMMIT invalid for application execution environment.

Explanation: COMMIT is disallowed in the following cases:

- In a Distributed Transaction Processing environment such as CICS, a static SQL COMMIT statement was

attempted, but a commit statement specific to the environment is required. For example, in a CICS environment this would be the CICS SYNCPOINT command.

- A DB2 application precompiled or set to use CONNECT 2 in a non-TP Monitor environment has issued a dynamic SQL COMMIT statement, whereas only static SQL COMMITs are allowed.
- When issued from a stored procedure, SQL COMMIT is also not allowed if the calling program is executing in a distributed unit of work or Distributed Transaction Processing environment.

User response: Correct the problem by doing one of the following:

- Remove the statement issuing the COMMIT and replace it with a statement which does the valid equivalent for the environment
- In the case of a connect type 2 in a non-TP Monitor environment, use only static COMMIT.
- In the case of a stored procedure, remove the COMMIT

sqlcode: -925

sqlstate: 2D521

SQL0926N SQL ROLLBACK invalid for application execution environment.

Explanation: ROLLBACK is disallowed in the following cases:

1. In a Distributed Transaction Processing environment such as CICS, a static SQL ROLLBACK statement was attempted, but a rollback statement specific to the environment is required. For example, in a CICS environment this would be the CICS SYNCPOINT ROLLBACK command.
2. A DB2 application precompiled or set to use CONNECT 2 has issued a dynamic SQL ROLLBACK statement, whereas only static SQL ROLLBACKs are allowed.
3. When issued from a stored procedure, SQL ROLLBACK is also restricted if the calling program is executing in a distributed unit of work (CONNECT type 2) or Distributed Transaction Processing environment.

User response:

1. Remove the statement issuing the ROLLBACK and replace it with a statement which does the valid equivalent for the environment.
2. In the case of a connect type 2, use only static COMMIT.
3. In the case of a stored procedure, remove it entirely.

sqlcode: -926

sqlstate: 2D521

SQL0930N There is not enough storage available to process the statement.

Explanation: A request was made to the database that required another memory page but no more pages are available to the database manager.

The statement cannot be processed.

User response: Possible solutions include:

- Verify that your system has sufficient real and virtual memory.
- Remove background processes.
- If the error occurs during DUOW resynchronization, reduce the RESYNC_INTERVAL database manager configuration parameter value.
- If the error occurs on a statement which referenced a routine (UDF, stored procedure or method), it may be that the storage required to contain the arguments and return values was more than the memory available in the system. This might occur if the routine is defined with BLOB, CLOB, DBCLOB parameters or return values, having a large size (2GB for example).

If these solutions do not solve the problem, it may be necessary to consider changing the definition of the routine.

sqlcode: -930

sqlstate: 5UA0L, 57011

SQL0931C Operating system file table overflow occurred. Subsequent SQL statements cannot be processed.

Explanation: An Operating system limit has been reached. The application program is not permitted to issue additional SQL statements. The database is marked as needing recovery and all applications using the database are prevented from accessing the database.

User response: Terminate all the applications using the database. Restart the database.

To help prevent the problem from recurring:

- Change the MAXFILOP database configuration parameter to a smaller value (this will reduce DB2's use of the operating system file table), and/or
- Terminate other applications that are using files, if appropriate, and/or,
- Refer to the operating system documentation for increasing the operating system file table limit. In most UNIX environments this can be accomplished by updating the kernel configuration with a larger value. (On AIX, this may only be possible by increasing the amount of memory in your machine).

sqlcode: -931

sqlstate: 58005

SQL0949N An invalid operating system operation was attempted by a UTL_FILE module routine. Operating system error = *error-text*.

Explanation: The operation attempted by a UTL_FILE module routine caused the operating system to return an error, as indicated in *error-text*.

User response: Refer to the operating system error message information to determine how to correct the problem reported by *error-text*.

sqlcode: -949

sqlstate: 58024

SQL0950N The table or index cannot be dropped because it is currently in use.

Explanation: A DROP TABLE or DROP INDEX statement cannot be issued when an open cursor is currently using the table or index.

The statement cannot be processed. The table or index is not dropped.

User response: Close any cursors required and resubmit the statement.

sqlcode: -950

sqlstate: 55006

SQL0951N The object *object-name* of type *object-type* cannot be altered because it is currently in use by the same application process.

Explanation: An ALTER statement, SET INTEGRITY, or TRUNCATE statement for an object cannot be issued when it is either locked or in use.

The statement cannot be processed. The object is not altered.

User response: Close any cursors that depend either directly or indirectly on the object *object-name* and resubmit the statement.

sqlcode: -951

sqlstate: 55007

SQL0952N Processing was cancelled due to an interrupt.

Explanation: The user may have pressed the interrupt key sequence.

The statement processing is terminated. Some changes may have been applied to the database, but not committed, before termination occurred.

You might also receive this error if Call Level Interface (CLI) issues an interrupt because a query timed out.

For example: if an application uses the SQLSetStmtAttr() function to configure the SQL_ATTR_QUERY_TIMEOUT statement attribute to a non-zero value, then if a SQL statement or XQuery expression does not complete in the specified amount of time, CLI will issue an interrupt to cancel the execution and return to the application.

Federated system users: this situation can also be detected by the data source.

User response: Continue the application.

If installing the sample database, drop it and install the sample database again.

If you want to prevent CLI from issuing an interrupt when a query times out, you can disable query timeout behavior by setting QUERYTIMEOUTINTERVAL=0 in the db2cli.ini file. Disabling query timeout behavior will allow queries run to completion, unless there is a deadlock or lock wait timeout value set at the server.

sqlcode: -952

sqlstate: 57014

SQL0954C Not enough storage is available in the application heap to process the statement.

Explanation: All available memory for the application has been used.

The statement cannot be processed.

User response: Terminate the application on receipt of this message. If the *applheapsz* database configuration parameter is set to AUTOMATIC, you will need to increase either the APPL_MEMORY database configuration setting, or the INSTANCE_MEMORY database manager configuration setting. Otherwise, increase the *applheapsz* database configuration parameter to allow a larger application heap.

When updating configuration parameters, it is recommended to change them by 10% of the current size at a time until the error condition is resolved. To change *applheapsz*, enter a command similar to the following, which sets *applheapsz* to size 4000 for database *sample*:

```
db2 UPDATE DB CFG FOR sample USING APPLHEAPSZ 4000
```

If all associated configuration parameters are set to either AUTOMATIC or COMPUTED, then the memory demands of the instance exceed the amount of memory configured on the machine. Possible solutions include reducing the database workload, enabling the connection concentrator feature, or adding additional memory to the machine.

sqlcode: -954

sqlstate: 57011

SQL0955C Sort memory cannot be allocated to process the statement. Reason code = *reason-code*.

Explanation: Insufficient virtual memory is available to the database agent for sort processing, as indicated by the reason code:

- 1 Insufficient private process memory.
- 2 Insufficient shared memory in the database-wide shared memory area designated for sort processing.

The statement cannot be processed but other SQL statements may be processed.

User response: One or more of the following:

- Decrease the value of the sort heap parameter (*sortheap*) in the corresponding database configuration file.
- For reason code 1, increase the private virtual memory available, if possible. For example, on UNIX systems you can use the `ulimit` command to increase the maximum size of the data area for a process.
- For reason code 2, increase the size of the database-wide shared memory area designated for sort processing by increasing the value of the `SHEAPTHRES_SHR` database configuration parameter.

sqlcode: -955

sqlstate: 57011

SQL0956C Not enough storage is available in the database heap to process the statement.

Explanation: All available memory for the database has been used.

The statement cannot be processed.

User response: Terminate the application on receipt of this message.

Increase the *dbheap* database configuration parameter to allow a larger database heap. If the number of I/O servers is near the high limit, reducing this number might also help.

If the *dbheap* database configuration parameter is set to `AUTOMATIC`, you will need to increase either the `DATABASE_MEMORY` database configuration setting, or the `INSTANCE_MEMORY` database manager configuration setting.

When updating configuration parameters, it is recommended to change them by 10% of the current size at a time until the error condition is resolved. To change *dbheap*, enter a command similar to the following, which sets *dbheap* to size 2400 for database *sample*:

```
db2 UPDATE DB CFG FOR sample
    USING DBHEAP 2400
```

To change *dbheap* when disconnected from the database, enter a command similar to the following

```
db2 CONNECT RESET;
db2 UPDATE DB CFG FOR sample
    USING DBHEAP 2400
```

If all associated configuration parameters are set to either `AUTOMATIC` or `COMPUTED`, then the memory demands of the instance exceed the amount of memory configured on the machine. Possible solutions include reducing the database workload, enabling the connection concentrator feature, or adding additional memory to the machine.

sqlcode: -956

sqlstate: 57011

SQL0958C The maximum number of open files has been reached.

Explanation: The maximum number of file handles available to the database has been reached.

The statement cannot be processed.

User response: Increase any parameter that affects the maximum number of open files allowed at the location of the database. This includes increasing the configuration parameter (*maxfilop*) to allow more file handles for the instance and terminating other sessions to reduce the number of file handles being used.

sqlcode: -958

sqlstate: 57009

SQL0959C Not enough storage is available in the communication heap of the server to process the statement.

Explanation: All available memory in the server communication heap has been used.

The command or statement cannot be processed.

User response: Terminate the application on receipt of this message. Increase the size of the communication heap (*comheapsz*) parameter in the server workstation database manager configuration file.

NOTE: This message is applicable only for releases of DB2 prior to Version 2 .

sqlcode: -959

sqlstate: 57011

SQL0960C The maximum number of objects have been created in the table spaces with the following names or identifiers *table-space-list*.

Explanation: You cannot create a new object in the table space because the maximum number of objects for the table space has been reached.

User response: Specify a different table space in which to create the object or table. If the table space is a SYSTEM TEMPORARY table space, there are too many concurrent temporary tables in use.

sqlcode: -960

sqlstate: 57011

SQL0964C The transaction log for the database is full.

Explanation: All space in the transaction log is being used.

If a circular log with secondary log files is being used, an attempt has been made to allocate and use them. When the file system has no more space, secondary logs cannot be used.

If an archive log is used, then the file system has not provided space to contain a new log file.

This message can also be returned when the database has used almost all of the possible log sequence numbers. The database manager identifies database log records using a unique identifier, called a log sequence number (LSN). When transactions cause database logs to be written, the database uses new LSN values.

The application cannot perform any transactions that cause the database to write log records.

The statement cannot be processed.

User response: Execute a COMMIT or ROLLBACK on receipt of this message (SQLCODE) or retry the operation.

If the database is being updated by concurrent applications, retry the operation. Log space may be freed up when another application finishes a transaction.

Issue more frequent commit operations. If your transactions are not committed, log space may be freed up when the transactions are committed. When designing an application, consider when to commit the update transactions to prevent a log full condition.

If deadlocks are occurring, check for them more frequently. This can be done by decreasing the database configuration parameter DLCHKTIME. This will cause deadlocks to be detected and resolved sooner (by ROLLBACK) which will then free log space.

If the condition occurs often, increase the database configuration parameter to allow a larger log file. A

larger log file requires more space but reduces the need for applications to retry the operation. Transaction configuration parameters which may need to be adjusted are LOGFILSIZ, LOGPRIMARY, LOGSECOND. For more information about the transaction log search the DB2 Information Center using phrases such as "transaction log".

If installing the sample database, drop it and install the sample database again.

If this message was returned because the database used nearly all of the possible LSN values, you can reset the LSN values to zero by doing the following:

1. unload all data from the database
2. drop and recreate the database
3. load all the data

sqlcode: -964

sqlstate: 57011

SQL0965W There is no message text corresponding to SQL warning *SQLCODE* in the message file on this workstation. The warning was returned from module *name* with original tokens *token-list*.

Explanation: Database server returned code *SQLCODE* to your application. The warning code does not correspond to a message in the DB2 message file on this workstation.

User response: Refer to your database server documentation for more information about the specified *SQLCODE*.

SQL0966N The error mapping file *name* specified in the Database Connection Services directory cannot be found or cannot be opened.

Explanation: One of the following conditions is true:

- The error mapping file does not exist.
- The error mapping file is currently opened by another application.
- The error mapping file is not located in the expected path.
- The error mapping file is damaged.

The error mapping data could not be retrieved.

User response: Release the file from the application in which it is open or reinstall or restore the original file.

sqlcode: -966

sqlstate: 57013

SQL0967N The format of the error mapping file *name* specified in the Database Connection Services directory is not valid.

Explanation: An error occurred while the program was reading the error mapping file.

The error mapping data could not be retrieved.

User response: Correct all syntactic errors in the error mapping file.

sqlcode: -967

sqlstate: 55031

SQL0968C The file system is full.

Explanation: One of the file systems containing the database is full. This file system may contain the database directory, the database log files, or a table space container.

The statement cannot be processed.

User response: Free system space by erasing unwanted files. Do not erase database files. If additional space is required, it may be necessary to drop tables and indexes identified as not required.

On unix-based systems, this disk full condition may be due to exceeding the maximum file size allowed for the current userid. Use the `chuser` command to update `fsize`. A reboot may be necessary.

This disk full condition may be caused when containers are of varying sizes. If there is sufficient space in the file system, drop the table space and recreate it with containers of equal size.

If the statement that could not be processed referenced LOB data types:

- Ensure that any cursors used in the application are closed immediately after their use.
- Ensure that within the application that COMMIT statements are periodically executed.
- Add additional containers to the system temporary tablespace to hold the temporary LOB data during this statement's execution.

sqlcode: -968

sqlstate: 57011

SQL0969N There is no message text corresponding to SQL error *error* in the message file on this workstation. The error was returned from module *name* with original tokens *token-list*.

Explanation: The Database server returned SQLCODE *error* to your application. The error code does not

correspond to a message in the DB2 message file on this workstation.

User response: Refer to your database server documentation for information about the specified SQLCODE. Take action specified in the documentation for the database server to fix this problem.

Federated system users: isolate the problem to the data source failing the request. Find the *error* in the applicable manual at the data source. If the problem is data dependent, it may be necessary to examine the data being processed at the data source at the time the error occurred.

SQL0970N The system attempted to write to a read-only file.

Explanation: A file used by the database is marked read-only or does not exist. The database requires write access to this file.

The statement cannot be processed.

User response: Terminate the application on receipt of this message (SQLCODE). Ensure that all database files are allowed both read and write access. Check for unnecessary blank spaces within the specified filename.

sqlcode: -970

sqlstate: 55009

SQL0972N The database drive does not contain the correct diskette.

Explanation: The diskette in the drive is not the database diskette.

The statement cannot be processed.

User response: Place the required diskette into the drive. Do not remove a diskette if the application starts using a database that resides in it.

sqlcode: -972

sqlstate: 57019

SQL0973N Not enough storage is available in the *heap-name* heap or stack to process the statement.

Explanation: All available memory for this heap has been used.

The statement cannot be processed.

User response: Terminate the application on receipt of this message (SQLCODE). Modify the *heap-name* configuration parameter to increase the heap or stack size.

If the *heap-name* configuration parameter is set to AUTOMATIC, you will need to increase the APPL_MEMORY database configuration setting, the DATABASE_MEMORY database configuration settings,

SQL0974N • SQL0977N

or the INSTANCE_MEMORY database manager configuration setting. Otherwise, modify the *heap-name* configuration parameter value to increase the heap size.

When modifying the DATABASE_MEMORY database configuration parameter:

- Setting the parameter to AUTOMATIC will tell the database manager to manage database memory automatically.
- If the parameter is currently set to a user-defined numeric value, increasing the value by 256 pages should resolve the problem.

For the application shared heap size, you will need to increase either the APPL_MEMORY database configuration setting, or the INSTANCE_MEMORY database manager configuration setting.

When updating configuration parameters, it is recommended to change them by 10% of the current size at a time until the error condition is resolved.

For example, if *heap-name* is UTIL_HEAP_SZ and the database name is TORDB1, to update this database configuration parameter to 10000, issue the following command:

```
db2 update db cfg
for TORDB1
using UTIL_HEAP_SZ 10000
```

To view a list of the database configuration parameters, use the GET DATABASE CONFIGURATION command.

To update a database manager configuration parameter, say MON_HEAP_SZ, to a new size of 100, issue the following command:

```
db2 update dbm cfg
using MON_HEAP_SZ 100
```

To view a list of the database manager configuration parameters, use the GET DATABASE MANAGER CONFIGURATION command.

If all associated configuration parameters are set to either AUTOMATIC or COMPUTED, then the memory demands of the instance exceed the amount of memory configured on the machine. Possible solutions include reducing the database workload, enabling the connection concentrator feature, or adding additional memory to the machine.

sqlcode: -973

sqlstate: 57011

SQL0974N The drive containing the database is locked.

Explanation: The system reported that the drive containing the database is locked.

The statement cannot be processed.

User response: Ensure no other processing (for example, CHKDSK) that can lock the drive is occurring on the system. Retry the operation.

If installing the sample database, drop it and install the sample database again.

sqlcode: -974

sqlstate: 57020

SQL0975N A new transaction could not be started because database or instance *name* is quiesced by user *username*. Quiesce type: *type*.

Explanation: Another user has quiesced the instance or database that you are attempting to use, and no new transactions are allowed until the instance or database is no longer in the quiesced state.

Quiesce type *type* refers to the instance or database already quiesced and is a '1' for an instance and a '2' for a database.

User response: Contact the user who currently has the instance or database quiesced to determine when DB2 will no longer be quiesced, and retry the request at that time.

sqlcode: -975

sqlstate: 57046

SQL0976N The specified I/O device is not ready.

Explanation: The I/O device or media is not ready to accept I/O commands.

The statement cannot be processed.

User Response:

Ensure the I/O device or media is ready and retry the operation.

User response: **sqlcode:** -976

sqlstate: 57021

SQL0977N COMMIT state unknown.

Explanation: The *tm_database* has become unavailable during COMMIT processing, and this has caused the result of the COMMIT to be unknown. Resynchronization of the databases will occur when the *tm_database* becomes available. Note that the transaction may be rolled back during resynchronization. Further execution of SQL statements can safely occur, however

locks might be held until the resynchronization process is complete.

User response: Verify that the connection to the *tm_database* can be made, for example by using CLP. If it cannot be made, follow the necessary actions for the SQLCODE returned to ensure that a connection can be established.

sqlcode: -977

sqlstate: 40003

SQL0978N The storage medium is write-protected.

Explanation: A write operation was attempted to the database but the database storage medium is write protected.

The statement cannot be processed.

User response: Verify that you are using the correct storage media. Remove write protection from the storage medium, if necessary.

sqlcode: -978

sqlstate: 55009

SQL0979N COMMIT has failed against *num* databases for an application process running with SYNCPOINT of NONE. The failures include the following database alias and SQLSTATE pairs (a maximum of four can be returned): *alias/SQLSTATE1, alias/SQLSTATE2, alias/SQLSTATE3, alias/SQLSTATE4.*

Explanation: An application was connected to multiple databases, and a COMMIT was issued which failed for one or more of these connections.

Federated system users: if one of the failed connections is a federated server database where nicknames are used, then a commit against one of the data sources required for a nickname has failed.

User response: Depending upon the nature of the application and the data being updated, the user might wish to discontinue the processing being done, log the failure, and issue the appropriate SQL to ensure that the changes intended by the application are consistently reflected across all databases involved.

If a full list of databases affected by COMMIT errors could not be returned please refer to the diagnostic log for a full list.

sqlcode: -979

sqlstate: 40003

SQL0980C A disk error occurred. Subsequent SQL statements cannot be processed.

Explanation: A disk error occurred that prevented successful execution of the current and subsequent SQL statements. The application program is not permitted to issue additional SQL statements. For example, a recovery routine associated with the application program cannot issue additional SQL statements. The database is marked as needing recovery and all applications using the database are prevented from accessing the database.

The statement cannot be processed.

User response: Record all error information from the SQLCA, if possible. Terminate all applications using the database. Determine if the error is a hardware error. Restart the database. If recovery is not possible, restore the database from a backup copy.

If installing the sample database, drop it and install the sample database again.

sqlcode: -980

sqlstate: 58005

SQL0982N A disk error occurred. However, subsequent SQL statements can be processed.

Explanation: A disk error occurred during processing of a temporary system file that prevented successful execution of the current SQL statement. However, subsequent SQL statements can be processed.

The statement cannot be processed.

User response: Terminate the application on receipt of this message (SQLCODE).

sqlcode: -982

sqlstate: 58004

SQL0983N The transaction log does not belong to the current database.

Explanation: The signature stored in the log file does not match the database dependent signature. This error usually occurs when the user specified that the log file be stored in a directory different from where the database is stored. File redirection can be involved.

The statement cannot be processed.

User response: Resubmit the command with the proper access to the log file.

sqlcode: -983

sqlstate: 57036

SQL0984C COMMIT or ROLLBACK was not successful. Subsequent SQL statements cannot be processed.

Explanation: A commit or rollback operation could not be processed successfully because of a system error. The application program is not permitted to issue additional SQL statements. For example, a recovery routine associated with the application program may not issue additional SQL statements. The database is marked as needing recovery and all applications using the database are prevented from accessing the database.

The statement cannot be processed.

User response: Record the message number (SQLCODE) and all SQLCA error information, if possible. Terminate all applications using the database. Restart the database. If installing the sample database, drop it and install the sample database again.

If recovery is not possible, restore the database from a backup copy.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact your technical service representative with the following information:

Information required:

- Problem description
- SQLCODE
- SQLCA contents if possible
- Trace file if possible.

Federated system users: isolate the problem to the data source failing the request and take the necessary diagnostic steps and database recovery procedures for that data source. The troubleshooting procedures and database recovery procedures for data sources vary, so refer to the applicable data source manuals.

sqlcode: -984

sqlstate: 58005

SQL0985C A file error occurred while processing the database catalogs. The database is not usable.

Explanation: The system is unable to recover from an I/O error on a catalog file.

The system cannot process any statements using the database.

User response: Restore the database from a backup copy.

If installing the sample database, drop it and install the sample database again.

sqlcode: -985

sqlstate: 58005

SQL0986N A file error occurred while processing a user table. The table is not usable.

Explanation: The data in the table is no longer valid.

The system cannot process any statements using the table.

User response: Restore the database from a backup version if the database is inconsistent.

If installing the sample database, drop it and install the sample database again.

sqlcode: -986

sqlstate: 58004

SQL0987C The application control shared memory set cannot be allocated.

Explanation: The application control shared memory set cannot be allocated. This error is caused by insufficient memory resources for either the database manager or the environment in which its operations are being attempted. Memory resources that can cause this error include:

- The number of shared memory identifiers allocated in the system.
- The amount of paging or swapping space available in the system.
- The amount of physical memory available in the system.

User response: One or more of the following:

- Ensure that sufficient memory resources are available to satisfy the database manager requirements and those of the other programs running on the system.
- Reduce the database manager memory requirement for this memory set by reducing the database configuration parameter, `app_ctl_heap_sz`, which affects it.
- Reduce one or more of the database configuration parameters `dbheap`, `util_heap_sz`, and `buffpage`. Refer to the *Administration Guide* for the parameters affecting the amount of database global memory allocated.
- Reduce the database manager configuration parameter, `sheapthres`, if `intra_parallel` is set to `yes`, or set `intra_parallel` to `no`.
- Where appropriate, stop other programs using the system.

sqlcode: -987

sqlstate: 57011

SQL0989N AFTER trigger *trigger-name* attempted to modify a row in table *table-name* that was modified by an SQL data change statement within a FROM clause.

Explanation: An SQL data change statement was specified in the FROM clause, but the underlying target base table of the SQL data change statement has an AFTER trigger defined which modifies the same table. This is disallowed.

The statement cannot be processed.

User response: Avoid using the SQL data change statement within a FROM clause, or change the trigger so that it does not modify the table that is the target of the SQL data change statement.

sqlcode: -989

sqlstate: 560C3

SQL0990C An index error occurred. Reorganize the table.

Explanation: An index has had considerable activity that used all the free space for indexes.

Federated system users: this situation can also be detected by the data source.

The statement cannot be processed.

User response: Commit your work and retry the command. If the error continues, roll back your work. If errors still persist, reorganize the table, if possible.

Federated system users: isolate the problem to the data source failing the request and follow the index re-creation procedures for that data source.

SQL0992C The release number of the precompiled program is not valid.

Explanation: The release number of the precompiled program (package) is not compatible with the release number of the installed version of the database manager.

The precompiled program (package) cannot be used with the current version of the database manager. The command cannot be processed.

User response: Use only programs that are precompiled with a compatible release level of the database manager.

sqlcode: -992

sqlstate: 51008

SQL0993W The new path to the log (newlogpath) in the database configuration file is not valid.

Explanation: The path to the log file is not valid for one of the following reasons:

- The path does not exist.
- A file with the correct name was found in the specified path, but it is not a log file for this database.
- The database manager instance id does not have permission to access the path or a log file.

The requested change is not made.

User response: To change the path to the log file, submit a database configuration command with a valid value.

sqlcode: +993

sqlstate: 01562

SQL0994N Invalid usage of the application savepoint.

Explanation: The application savepoint function has been used inconsistently. The program attempted to perform one of the following:

- Request more than one active savepoint.
- Issue an end savepoint call without an active savepoint.
- Issue a rollback savepoint call without an active savepoint.

The function cannot be processed.

User response: Correct the savepoint usage in the program.

SQL0995W The current path to the log file (logpath) is not valid. The log file path is reset to the default.

Explanation: The path to the log file is not valid for one of the following reasons:

- The path does not exist.
- A file with the correct name was found in the specified path, but it is not a log file for this database.
- The database manager instance id does not have permission to access the path or log file.

For circular logging, the log file is created in the default log path. For archive logging, the next log file is created in the default log path. The requested change is not made.

User response: To change the path to the log file, submit a configuration command with a valid value.

sqlcode: +995

sqlstate: 01563

SQL0996N Cannot free pages for an object in a table space.

Explanation: There are corrupted internal database pages or internal logic errors in a table space.

User response: Discontinue use of the object or table space. Contact IBM service to inspect the object and the table space.

sqlcode: -996

sqlstate: 58035

SQL0997W General informational message for transaction processing. Reason Code = XA-reason-code.

Explanation: The SQLCODE 997 is only passed between components of the database manager and will not be returned to an application. It is used to carry XA return codes for non-error situations. The possible reason codes are:

- XA_RDONLY (3) - the transaction branch was read-only and has been committed.
- 64 - TM database indicates transaction to be committed on DUOW resynchronization
- 65 - TM database indicates transaction to be rolled back on DUOW resynchronization

User response: No action required.

SQL0998N Error occurred during transaction or heuristic processing. Reason Code = reason-code. Subcode = subcode.

Explanation: An error is detected when processing a distributed transaction. The transaction is:

- Running under a Distributed Transaction Processing environment (such as those from CICS or other transaction managers).
- Performing heuristic operations.
- Updating multiple nicknames within a federated database, where each updated nickname represents a different data source. In this case, one of the data sources has failed during transaction processing. The reason code returned in this case is the reason for the failure at the data source, not the federated database.

The possible reason codes (corresponding X/Open XA reason codes are shown in parenthesis) are:

- 01 - (XAER_ASYNC) asynchronous operation already outstanding.
- 02 - (XAER_RMERR) a resource manager error occurred in the transaction branch.
- 03 - (XAER_NOTA) the XID is not valid.

- 04 - (XAER_INVALID) invalid arguments were given. Possible subcodes are:
 - 01 - xa_info pointer is invalid, eg. the XAOpen string is null.
 - 02 - database name exceeds maximum length.
 - 03 - username exceeds maximum length.
 - 04 - password exceeds maximum length.
 - 05 - username specified but not a password.
 - 06 - password specified but not a username.
 - 07 - too many parameters in the xa_info string.
 - 08 - multiple xa_opens generate different RM ids for the same database name.
 - 09 - database name not specified.
 - 10 - invalid exe_type.
 - 11 - the Sybase LRM name is not present in the xa_config file or the xa_config file does not exist.
- 05 - (XAER_PROTO) routine invoked in improper context.
- 06 - (XAER_RMFAIL) resource manager unavailable.
- 07 - (XAER_DUPID) the XID already exists.
- 08 - (XAER_OUTSIDE) RM doing work outside global transaction.
- 09 - registration (ax_reg) with the transaction manager failed. Possible subcodes are:
 - 01 - Joining XID not found
 - 02 - dynamic library specified in the tp_mon_name configuration parameter could not be loaded.
- 10 - attempted to start a different transaction while suspended.
- 12 - unregistering (ax_unreg) with the transaction manager failed.
- 13 - ax interface failure: ax_reg() and ax_unreg() not found.
- 14 - The enlistment for DB2 with the Microsoft Distributed Transaction Coordinator has failed. MSDTC service may be down. You must terminate the current transaction.
- 15 - The transaction does not exist.
- 16 - A failure occurred with the Microsoft Distributed Transaction Coordinator (MSDTC). Possible subcodes are:
 - 01 - DB2 is unable to communicate with the MSDTC.
 - 02 - The MSDTC is unable to register the DB2 connection. The subcode represents the Microsoft error code.
 - 03 - MSDTC is unable to enlist the DB2 connection in the Distributed Transaction. The subcode represents the Microsoft error code.
 - 04 - The DB2 Connection cannot be enlisted as there is an active transaction.

- 05 - No transaction exists. The connection has not been enlisted.
- 35 - Heuristic operations are invalid for non-XA database.
- 36 - The XID is not known by the database manager.
- 37 - The transaction has already been heuristically committed.
- 38 - The transaction has already been heuristically rolled back.
- 39 - The transaction is not an indoubt transaction.
- 40 - Only rollbacks are allowed for this transaction.
- 41 - Transaction is not heuristically committed on some MPP subordinator nodes because of node failure.
- 42 - DB2 Connect XA support is only available to outbound connections that were established using TCP/IP.
- 43 - A connection could not be established because the server does not support native XA.
- 69 - Database log ID mismatch during DUOW resynchronization.
- 85 - As a result of heuristic processing, the transaction has partially committed and rolled back.
- 210 - Only heuristic commits are allowed for this transaction. Some nodes are already in commit state.
- 221 - The version of DBMS on the host requires that all applications that participate in the same XA transaction use the same user ID to connect to the database.
- 222 - The version of DBMS on the host requires that all applications that participate the same XA transaction have the same CCSID.
- 223 - DB2 Connect XA support is only available to local clients or remote clients that use TCP/IP to establish the inbound connection.
- 224 - DB2 Connect XA support is only available to clients that are at least version 7.1.
- 225 - Operation Invalid in an XA Loosely Coupled Transaction. Possible subcodes are:
 - 01 - DDL statements are not allowed.
 - 02 - updates and deletes specifying WHERE CURRENT OF clause are not allowed.
 - 03 - buffered insert operations are not allowed.
 - 04 - only rollbacks are allowed for this transaction.
 - 05 - implicit rebind operations are not allowed.
- 226 - The transaction has already been rolled back.
- 227 - Heuristic request should be run on the coordinator node.
- 228 - There are open cursors.
- 229 - The previous transaction is not yet complete.
- 230 - The transaction has already been committed.

User response: For reason codes 1 through 8, an entry will be made in the system log because sometimes the

SQLCA cannot be returned to the caller.

If the error is due to a failed data source associated with a nickname, the location of the failed data source will always appear in federated server's system log.

For reason code 4, verify the content of the xa open string and make necessary corrections.

For reason code 4, subcode 11, ensure xa_config file exists in \$SYBASE/\$SYBASE_OCS directory and the LRM name that is specified as the NODE server option exists in the file.

For reason code 9, subcode 02, ensure that the tp_mon_name configuration parameter contains the name of the dynamic library in the external product which has the ax_reg() function used for dynamic registration of transactions.

For reason code 14, ensure that the MSDTC service is active.

For reason code 15, this error may occur when the MSDTC transaction timeout value is too low. Increase the timeout value and see if the error continues.

For reason code 16:

- subcode 01, ensure that the MSDTC service is active.
- subcode 02, MSDTC was unable to register the connection. For more information refer to the db2diag log file or the Windows Event Viewer for an entry titled MicrosoftXARMCreate.
- subcode 03, MSDTC was unable to enlist the connection into a Transaction. For more information refer to the db2diag log file or the Windows Event Viewer for an entry titled MicrosoftEnglishWithRM. The most common error is that the current transaction has been explicitly or implicitly rolled back. This may occur when the MSDTC transaction timeout is too low. Increase the timeout value and see if the error continues.
- subcode 04, there has been an attempt to enlist a DB2 connection that is currently active in a different distributed transaction.
- subcode 05, enlist the connection before attempting to issue an SQL statement.

For reason code 35, you attempted to perform a heuristic operation against a database that only participates as a read-only resource manager in a global transaction. Examples are any DRDA databases such as DB2 on MVS. These type of non-XA databases would not have any XA indoubt transactions.

For reason codes 36, 37, and 38, you attempted to perform an invalid heuristic operation on an indoubt transaction. Either you specified the wrong XID, or a heuristic or resync operation had taken place since you recorded this XID. Perform a Heuristic Query request to get the current list of indoubt transactions to verify if you still need to perform your heuristic operation.

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For reason code 39, the XID specified is for a transaction that has ended and is waiting for the two-phase commit process to begin. You can only perform heuristic operations on transactions that have entered the two-phase commit process and become indoubt transactions.

For reason code 40, an SQL statement was attempted under a transaction which has failed. An example of this is to attempt an SQL statement in a transaction thread that has successfully registered after a tightly coupled thread participating in the same transaction has abnormally terminated.

For reason code 41, you can find more information about the problem in the administration notification log. You need to restart DB2 on the failed nodes. It may be necessary to contact the system administrator for assistance.

For reason code 42, an outbound connection can be established by modifying the gateway catalogs to use TCPIP communication protocol.

For reason code 43, if connecting to DB2 on a zSeries or iSeries server, catalog the database using DB2 Connect and then start the sync point manager.

For reason code 69, either the transaction manager (TM) database or the resource manager (RM) database or both are different from the ones when the indoubt transaction was generated. In other words, the TM database or RM database names could be referencing different database instances. The log ID mismatch may be caused by the following reasons:

- The database directory for the TM database at the RM instance is incorrect.
- The configuration may have been changed after the indoubt transaction was generated.
- The database may have been dropped and recreated. In that case, you can only commit or rollback the indoubt transaction heuristically.

For reason code 85, you are updating multiple data sources, and some of the data sources have been heuristically rolled back or committed, resulting in the transaction having partially committed and rolled back. With this reason code data is now in an inconsistent state, you must manually check every data source updated by the transaction to correct the data.

For reason code 210, some of the nodes are already in commit state. You have to perform heuristic commit to resolve the indoubt transaction.

For reason code 221, ensure all applications that participate in the same XA transaction use the same user ID to connect to the database.

For reason code 222, ensure all applications that participate in the same XA transaction have the same CCSID.

For reason code 223, modify the application and client set-up to use local clients, or for remote clients use TCPIP as the communication protocol to connect to the gateway.

For reason code 224, update the client to version 7.1 or later.

For reason code 225, ensure the application did not contain any of the invalid operations in an XA Loosely Coupled Transaction. Common application server environments where XA Loosely Coupled Transaction can be used are IBM Encina Transaction Server, IBM WebSphere Application Server, Microsoft Transaction Server, and BEA Tuxedo. If you encounter this reason code, then you must review your application and ensure none of the indicated actions are performed.

For reason code 226, the transaction has reached a rollback state, and is now rolled back on this node.

For reason code 227, heuristic request should be run on the coordinator node, see the db2diag log file for the coordinator node number.

For reason code 228, ensure that the cursors are closed prior to issuing the request.

For reason code 229, ensure that the previous transaction is complete prior to issuing the request.

For reason code 230, the transaction has already been committed.

General information collection procedure:

If you cannot resolve the problem identified by the reason codes, record the message number (SQLCODE), reason code, and the optional subcode in the message or the SQLCA in the system log.

If the failure is from a federated database, you should also record the location of the failed data source found in the federated server's system log.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Then, contact your technical service representative with the following information:

- Problem description
- SQLCODE, embedded reason code, and subcode
- SQLCA contents (if possible)
- Trace file (if possible)
- Location of the failed data source if the failure is from a federated server.

There might be additional information in the console or message logs of the transaction manager and the database manager.

sqlcode: -998

sqlstate: 58005

Chapter 3. SQL1000 - SQL1499

SQL1000N *alias is not a valid database alias name.*

Explanation: The alias specified in the command or api is not valid. The alias must contain 1 to 8 characters (bytes in MBCS countries) and all the characters must be from the database manager base character set.

The command cannot be processed.

User response: Resubmit the command with the correct alias.

SQL1001N *name is not a valid database name.*

Explanation: The syntax of the database name specified in the command is not valid. The database name must contain 1 to 8 characters and all the characters must be from the database manager base character set.

The command cannot be processed.

User response: Resubmit the command with the correct database name.

sqlcode: -1001

sqlstate: 2E000

SQL1002N *drive is not a valid drive.*

Explanation: The drive specified in the command is not valid. The drive is a single character (A to Z) indicating the diskette drive or fixed-disk partition where the database or database directory is located.

The command cannot be processed.

User response: Resubmit the command with the correct drive.

SQL1003N **The password is not valid because the syntax is not correct or the password does not match the password of the specified database.**

Explanation: The length of the password is expected to be 18 characters or less. However, if the password is to be verified for an APPC conversation, it must be 8 characters or less.

User response: Ensure that the password is not longer than the limit allowed.

sqlcode: -1003

sqlstate: 28000

SQL1004C **There is not enough storage on the file system to process the command.**

Explanation: There is not enough storage on the specified file system to process the command.

In a partitioned database environment on Windows environments, each node in the partitioned database group must have the exact same physical hard drive specification (letter) available and useable (must contain useable space) for the CREATE DATABASE command to succeed. The physical hard drive letter is specified in the database manager configuration. If DFTDBPATH is left blank the default will be the hard drive where DB2 is installed on the instance owning machine (db2 installation path).

The command cannot be processed.

User response: Choose a different file system or erase some non-database files from the specified file system to make space for the database manager functions.

In a partitioned database environment on Windows environments, follow the following steps:

- Determine which hard drive specification (letter) is required. The drive letter is specified in the error message.
- Determine which node/s of the database partition are experiencing the problem. You can usually find this information in the db2diag log file of the instance owning node.
- Correct the drive problem on the individual node that is experiencing the problem or change the drive specification in the database manager configuration so that the same drive is available (and has sufficient space) on each and every node of the partitioned database group.
- re-issue the command.

SQL1005N **The database alias *name* already exists in either the local database directory or system database directory.**

Explanation: The alias name specified has already been used. If no alias is specified in the catalog database command, the database name is used as the alias. When a database is created, the alias name is the same as the database name.

This error may occur on the catalog database command when the alias already exists in the system database directory.

On the create database command this error may occur in one of the following situations:

- The alias already exists in the system database directory and local database directory.
- The alias already exists in the system database directory but not in the local database directory.

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- The alias already exists in the local database directory but not in the system database directory.

User response: For the catalog database command, uncatalog the alias from the system database directory and resubmit your original command or catalog the database with a different alias name.

For the create database command, do the following operations corresponding to the three situations listed previously:

- Drop the database using the alias name. Resubmit your original command.
- Uncatalog the alias. Resubmit your original command.
- Catalog the alias into the system database directory. Drop the database using the same alias. Resubmit your original command.

SQL1006N The code page *code-page* of the application does not match the code page *code-page* of the database.

Explanation: The application could not connect to the database because the active codepage is different from the one that was active when the database was created.

The command cannot be processed.

User response: Exit the current application program and return to the operating system. Change the code page for the process and restart the application program.

SQL1007N Error in finding pages for an object in a table space.

Explanation: There are corrupted internal database pages or internal logic error for a table space.

User response: Discontinue use of the object or table space. Contact IBM service to inspect the object and the table space.

sqlcode: -1007

sqlstate: 58034

SQL1008C Invalid storage group or table space ID.

Explanation: The storage group or table space ID specified does not exist. It is either larger than the current maximum storage group or table space ID, or the storage group or table space has been dropped.

User response: Discontinue use of the database. Save the diagnostic information in the error log and contact IBM Software Support.

sqlcode: -1008

sqlstate: 58036

SQL1009N The command is not valid.

Explanation: The command is not supported when issued on a client-only workstation or against remote databases. An example of such a command is cataloging a local database.

The command cannot be processed.

User response: Possible solutions include:

- Issue the specified command from a non client-only workstation or from the workstation where the database resides.
- Verify that the database is cataloged correctly.
- Issue a different command.

SQL1010N *type* is not a valid type parameter.

Explanation: The type specified in the Database Environment command is not valid. It must be '0' for an indirect database or '1' for a remote database.

In addition, on the Unix platforms, the type can be '3' for a database that has a DCE global name.

The command cannot be processed.

User response: Resubmit the command with a valid type.

SQL1011N No drive was specified in the CATALOG DATABASE command for an indirect entry.

Explanation: A CATALOG DATABASE command was issued for an indirect entry but no path was specified. Indirect entries must specify the path where the database resides.

The command cannot be processed.

User response: Resubmit the command with the required path or change the type.

SQL1012N No node name was specified in the CATALOG DATABASE command for a remote entry.

Explanation: There was no *nodename* parameter specified in the CATALOG DATABASE command for a remote entry. Remote entries must specify the node name of the database.

The command cannot be processed.

User response: Resubmit the command with the *nodename* parameter or a different type.

SQL1013N The database alias name or database name *name* could not be found.

Explanation: The database name or alias specified in the command is not an existing database or the database could not be found in the (client or server)

database directories or the db2dsdriver.cfg configuration file.

User response: Ensure that the specified database name exists in the system database directory. If the database name does not exist in the system database directory, then the database either does not exist or the database name has not been cataloged.

If the database name appears in the system database directory and the entry type is INDIRECT, ensure that the database exists in the specified local database directory. If the entry type is REMOTE, then ensure that the database exists and is cataloged on the database directories for the server.

For CREATE DATABASE with the AT DBPARTITIONNUM clause, ensure that the database name is in the system database directory with an entry type of INDIRECT and with a catalog database partition number that does not equal -1.

Federated system users: in addition to the previous responses, verify that the database names specified in SYSCAT.SERVERS are all valid. Correct any SYSCAT.SERVERS entry for which the database specified in that entry does not exist.

sqlcode: -1013

sqlstate: 42705

SQL1014W There are no more entries in the directory, file, or list being scanned.

Explanation: The scan of the directory, file, or list is finished.

User response: No action is required.

SQL1015N The database is in an inconsistent state.

Explanation: The possible causes of the inconsistent state include:

- The database is offline as a result of an abnormal termination of the previous session (for example, a power failure).
- If the error was encountered when issuing the db2ckupgrade command:
 - The database is online and SQL has been issued which modified data in the database.
 - The database is online and HADR has been enabled.

In DB2 pureCluster environments only, possible causes also include:

- The database on this DB2 member is offline as a result of an abnormal termination of the previous session.
- The database is offline across the entire DB2 pureCluster instance as a result of an abnormal termination of the previous session.

- If add/drop operations are done in the instance, recoverable databases are already put into backup pending state. Add and drop operations are not allowed until backup of database is done.

User response:

- If the database is offline as a result of an abnormal termination of the previous session, respond with the following actions:
 1. Restart the database using the RESTART DATABASE command. In a partitioned database server environment, the command must be issued on all database partitions.
- If this error was encountered when issuing the db2ckupgrade command, respond with the following actions:
 1. Perform a clean shutdown of the database.
 2. After shutdown, if HADR has been enabled on the database, issue the STOP HADR command on the database.
 3. Re-issue the db2ckupgrade command.

In a DB2 pureCluster environment only:

- If the database on this DB2 member is offline as a result of an abnormal termination of the previous session, respond with the following actions:

By default, member crash recovery is automatically initiated in a DB2 pureCluster environment, so no user action is required. If member crash recovery is not automatically enabled, perform member crash recovery on this DB2 member by issuing the RESTART DATABASE command.

Some database operations can still complete on other, consistent members even if one member is inconsistent. To access the database during member crash recovery, connect to an active DB2 member. To access this specific member, wait for member crash recovery to complete.

- If the database is offline across the entire DB2 pureCluster instance as a result of an abnormal termination of the previous session, warn users that the database will not be available until recovery completes. The next step depends on whether group crash recovery is automatically enabled. If it is enabled (the default) then no user action is required. If automatic group crash recovery is not enabled, respond with the following actions:
 1. Perform group crash recovery by issuing the RESTART DATABASE command.
 2. After the recovery completes, perform member crash recovery on any other members that have in-doubt transactions.
- Back up databases that are in backup pending state, and resubmit add or drop operation.

sqlcode: -1015

sqlstate: 55025

SQL1016N The local_lu alias *name* specified in the CATALOG NODE command is not valid.

Explanation: The local logical unit (*local_lu*) alias specified in the CATALOG NODE command is not permitted. The local logical unit alias is the local SNA logical unit alias and must be 1 to 8 characters and cannot contain blank characters.

The command cannot be processed.

User response: Verify that the alias is a permitted logical unit name. Verify the characters used in the name. Resubmit the command with a valid logical unit name.

SQL1017N The mode parameter *mode* specified in the CATALOG NODE command is not valid.

Explanation: The *mode* specified in the CATALOG NODE command is not permitted.

The *mode* parameter identifies the communications profile the Communications Manager uses to set up a session. The mode must be 1 to 8 characters. Valid characters are uppercase or lowercase A through Z, 0 through 9, #, @, and \$. The first character must be alphabetic. The system changes lowercase characters to uppercase.

The command cannot be processed.

User response: Verify that the name is a permitted mode name. Verify the characters used in the name. Resubmit the command with a correct mode.

SQL1018N The node name *name* specified in the CATALOG NODE command already exists.

Explanation: The node name specified in the *nodename* parameter of the CATALOG NODE command is already cataloged in the node directory on this file system.

The command cannot be processed.

User response: If the *nodename* parameter is typed correctly, continue processing.

Uncatalog the cataloged node in the node directory if the node cataloged information is no longer valid and resubmit the command. If the node cataloged information is valid, define a new node name and resubmit the command using the new node name.

SQL1019N The node name *name* specified in the command is not valid.

Explanation: The node name specified in the command is not valid. The node name may be 1 to 8 characters and all of the characters must be from the

database manager base character set. The specified node name cannot be the same as the local instance name.

The command cannot be processed.

User response: Ensure the node name is not the same as the local instance name by displaying the value of the DB2INSTANCE environment variable. On UNIX operating systems, display the DB2INSTANCE environment variable by entering the following command:

```
echo $DB2INSTANCE
```

On Windows operating systems, display the DB2INSTANCE environment variable by entering the following command:

```
echo %DB2INSTANCE%
```

Resubmit the command with the correct node name.

SQL1020C The node directory is full.

Explanation: The node directory cannot hold any more entries.

The command cannot be processed.

User response: Uncatalog any unnecessary entries in the node directory.

SQL1021N The node name *name* specified in the UNCATALOG NODE command was not found.

Explanation: The *nodename* specified in the command could not be found in the node directory.

The command cannot be processed.

User response: If the *nodename* parameter is correct, the node may already have been uncataloged, and processing can continue. Otherwise, resubmit the command with the correct node name.

SQL1022C There is not enough memory available to process the command.

Explanation: Not enough random access memory (RAM) is available to process the command.

If a remote procedure was invoked, the remote procedure may use a local variable space that is larger than the allowable maximum (4K).

If the statement involves a user-defined function (UDF), the memory set controlled by the *ASLHEAPSZ* database manager configuration parameter may be larger than the memory available.

The command cannot be processed.

User response: Stop the application. Possible solutions include:

- Change the MEMMAN NO SWAP, NO MOVE option in the CONFIG.SYS file to SWAP, MOVE.
- Remove background processes.
- Decrease the values of the configuration parameters that define allocation of memory, including *ASLHEAPSZ* if UDFs are involved in the failing statement.
- Install more random access memory (RAM).
- If a remote procedure was invoked, ensure that the remote procedure uses a local variable space that is less than or equal to 4K.
- If you are using Remote Data Services, increase the Remote Data Services heap size (*rsheapsz*) in the server and client configuration because at least one block is used per application.

sqlcode: -1022

sqlstate: 57011

SQL1023C The communications conversation failed.

Explanation: An error occurred in the communications conversation.

The command cannot be processed.

User response: Retry the original command. If the error persists, contact your communications administrator.

Federated system users: this situation can also be detected by the data source.

sqlcode: -1023

sqlstate: 08001

SQL1024N A database connection does not exist.

Explanation: There is no connection to a database. Other SQL statements cannot be processed unless an SQL CONNECT was previously executed.

The command cannot be processed.

User response: If the error occurred when disconnecting from the database, continue processing. If the error occurred on another SQL statement, issue an SQL CONNECT statement and resubmit the command or statement.

sqlcode: -1024

sqlstate: 08003

SQL1025N The database manager was not stopped because databases are still active.

Explanation: The stop database manager command cannot be processed if there are any applications connected to databases under control of the database

manager, or if any databases have been activated, or if there are any active HADR primary or standby database under control of this database manager.

No action is taken.

User response: Usually no action is required. To stop the database manager, all active applications must disconnect from all the databases they are using. Alternatively, the user can use the FORCE command to force applications to disconnect, and the DEACTIVATE command to deactivate the database, including any HADR primary or standby databases.

SQL1026N The database manager is already active.

Explanation: The start command was not processed because the database manager is already started.

User response: The database manager is started, so database applications can continue.

SQL1027N The node directory cannot be found.

Explanation: The list node directory command cannot be processed because the node directory could not be found.

The command cannot be processed.

User response: Issue a CATALOG NODE command with the appropriate parameters and resubmit the current command.

SQL1029N The partner_lu alias *name* specified in the CATALOG NODE command is not valid.

Explanation: The *partner_lu* alias specified in the CATALOG NODE command was not specified or contains characters that are not valid. The *partner_lu* alias is the partner SNA logical unit alias and must be 1 to 8 characters and must not contain blank characters.

The command cannot be processed.

User response: Examine the *partner_lu* for a typing error. Verify that the alias is a permitted logical unit name. Verify the characters used in the alias. Resubmit the command with a correct *partner_lu*.

SQL1030C The database directory is full.

Explanation: Either the system database directory or the local database directory cannot hold any more entries.

The command cannot be processed.

User response: Uncatalog any unnecessary entries in the directory. Create new databases on another file system if the local database directory is full.

SQL1031N The database directory cannot be found on the indicated file system.

Explanation: The system database directory or local database directory could not be found. A database has not been created or it was not cataloged correctly.

The command cannot be processed.

User response: Verify that the database is created with the correct path specification. The Catalog Database command has a path parameter which specifies the directory where the database resides.

sqlcode: -1031

sqlstate: 58031

SQL1032N No start database manager command was issued.

Explanation: The start database manager command has not been processed. It must be processed before a stop database manager, any SQL statement, or utility can be issued.

The command cannot be processed.

User response: Issue a start database manager command and resubmit the current command.

If using multiple logical nodes, ensure the DB2NODE environment variable is set correctly. The DB2NODE environment variable indicates the node the application will attempt to connect to. DB2NODE must be set to the node number of one of the nodes defined on the same host as the application.

In a DB2 pureCluster environment, respond to this message in one of the following ways:

- Set the DB2NODE environment variable to a DB2 member that is active.
- Rerun the command on a computer that is not configured to run only a cluster caching facility (CF).

sqlcode: -1032

sqlstate: 57019

SQL1033N The database directory cannot be accessed because it is being used.

Explanation: The database directory cannot be accessed if it is currently being updated. Also, the directory cannot be accessed for update if it is already being accessed for any reason. This situation could exist with either the system database directory or the local database directory.

The command cannot be processed.

User response: Wait until the access has completed, then resubmit the command.

sqlcode: -1033

sqlstate: 57019

SQL1034C The database is damaged. All applications processing the database have been stopped.

Explanation: Damage has occurred to the database. The database cannot be used until it is recovered. All applications connected to the database have been disconnected and all processes running applications on the database have been stopped.

The command cannot be processed.

User response: In general, respond to this error by performing the following steps:

1. Recover the database by issuing the RESTART DATABASE command.
2. If the RESTART DATABASE command consistently fails, you may want to restore the database from a backup.

In a partitioned database environment, respond to this error by performing the following steps:

1. Before restoring the database from a backup, refer to the syslog to determine if the RESTART DATABASE command is failing because of database partition or communication failures
2. If the RESTART DATABASE command is failing because of database partition or communication failures, ensure that the following conditions are true:
 - the database manager is up and running
 - communication is available among all the database partitions
3. Resubmit the RESTART DATABASE command, with the db2_all command:


```
db2_all db2 restart database <database_name>
```
4. If there are in-doubt transactions that remain unresolved after the RESTART DATABASE command is completed, run the RESTART DATABASE command multiple times to ensure that all in-doubt transactions have been resolved.

In a DB2 pureCluster environment, respond to this error by performing the following steps:

1. Refer to the administration log to determine if the RESTART DATABASE command is failing because the member being restarted is unable to access a shared storage device.
2. If the RESTART DATABASE command is failing because the member being restarted is unable to access a shared storage device, correct the access problem and retry the RESTART DATABASE command.
3. If the member being restarted is able to access the shared storage device, issue the RESTART DATABASE command from a different member.

- If none of these actions work, restore the database and then perform a rollforward operation.

If you encountered this error during roll-forward processing, respond to this error by performing the following steps:

- Restore the database from a backup.
- Perform a roll-forward operation again.

If you are installing the sample database, respond to this error by performing the following steps:

- Drop the sample database
- Install the sample database again

sqlcode: -1034

sqlstate: 58031

SQL1035N The database is currently in use.

Explanation: One of the following conditions exists:

- There are open connections to the database preventing the attempted operation from succeeding. This can occur in the following situations:
 - Exclusive use was requested, but the database is already in use as a shared database by another user (in the same process).
 - Exclusive use was requested, but the database is already in use as an exclusive database (Two different processes are trying to access the same database).
 - The maximum number of connections to the database has been reached.
 - The database is being used by another user on another system.
- The database has been activated explicitly, preventing the operation from succeeding.
- The database is active because it is in WRITE SUSPEND state.
- In a DB2 pureCluster environment, the following series of events occurred:
 - An offline operation, such as backup, restore, or rollforward, was initiated for the database.
 - The offline operation acquired an exclusive connection to the database.
 - The member on which that offline operation was initiated failed (because of a hardware or software failure, for example.)
 - The exclusive connection that was held by the offline operation was not released.
 - The member on which that offline operation was initiated failed to restart automatically.

The command cannot be processed.

User response:

- Valid options are:
 - Resubmit the command later when the database is not in use.
 - Change the authorization to match the current user or wait until the database is not in use.
 - Wait until the database is not in exclusive use.
 - Wait until other users on another system have disconnected from the database
 - Issue a QUIESCE DATABASE DEFER WITH TIMEOUT <minutes> command and a CONNECT RESET command to free connections to the database and prevent application users from re-connecting. The DEFER option will wait for applications until they commit the current unit of work instead of rolling back all running transactions.
 - Issue a LIST APPLICATIONS command to list connections to the database. Issue a FORCE APPLICATION ALL command to free connections to the database. Note: FORCE APPLICATION ALL is an asynchronous command which might return as successful even though it is still continuing to clean up connections. A varying interval of time might be required for the command to complete.
- Deactivate the database using the command DEACTIVATE DATABASE <DBALIAS>.
- Issue a SET WRITE RESUME FOR DATABASE command to resume write operations for the database.
- Restart the member where the offline operation was taking place by issuing the following command:
db2start member <member-number>

Re-issue the command.

sqlcode: -1035

sqlstate: 57019

SQL1036C An I/O error occurred while accessing the database.

Explanation: The problem may have occurred in one of the following situations:

- The system cannot open, read from, or write to a database file.
- The system cannot create the database because an error occurred while the system was creating a database file or a directory for the database.
- The system cannot drop the database because an error occurred while the system was deleting a database file or a directory for the database.

SQL1037W • SQL1040N

- The system cannot create the database because an interrupt was received while the system was creating or deleting a database file or a directory for the database.
- The system cannot locate the database subdirectory or database configuration file during connect.

Problem causes are ordered in terms of their frequency of occurrence:

- A log file cannot be found in the active log path directory.
- There may be a problem with the database directory the operation is being attempted on.
- There may be inadequate disk space to complete the operation.

The database cannot be used.

User response: Appropriate responses for the problem causes described in the Explanation are:

- To verify if a log file is missing, check the db2diag log file for the presence of a logging error (return code contains SQLO_FNEX). If present, this error will contain the name of the missing log file. Ensure that the file is located in the active log path directory. If the file cannot be located, restore and roll-forward the database to an earlier point in time referenced in a log file preceding the missing log file (use a timestamp that is earlier than that of the missing file).
- There may be a problem with the database directory. Check the integrity of the directory. Examples of potential problems include: permissions issues, mount point problems, corruption.
- Increase filesystem size.

NOTE: If the error occurred during CREATE DATABASE or DROP DATABASE, a subsequent CREATE DATABASE or DROP DATABASE command attempts to erase files and directories left from the unsuccessful CREATE DATABASE or DROP DATABASE command.

sqlcode: -1036

sqlstate: 58030

SQL1037W The node directory is empty.

Explanation: An attempt was made to read the contents of the node directory, but no entries existed.

User response: No action is required.

sqlcode: +1037

sqlstate: 01606

SQL1038C An I/O error occurred while accessing the node directory.

Explanation: The node directory could not be accessed because of an I/O error.

The command cannot be processed.

User response: Resubmit the command. If the error continues, remove the node directory (sqlnodir under the sqllib directory) and recatalog the node names on the network.

sqlcode: -1038

sqlstate: 58031

SQL1039C An I/O error occurred while accessing the database directory.

Explanation: Either the system database directory or the local database directory cannot be accessed. This error may occur not only when the system is cataloging or uncataloging a database but also when the system is accessing a database that is cataloged in the directory.

The command cannot be processed.

User response: Possible solutions include:

- If the error occurred on a diskette system, verify that the correct diskette is in the drive and ready to use. Verify that it is not write-protected.
- If the database directory is damaged, restore the databases that were cataloged there from backup versions and catalog them.

If installing the sample database, drop it and install the sample database again.

sqlcode: -1039

sqlstate: 58031

SQL1040N The maximum number of applications is already connected to the database.

Explanation: The number of applications connected to the database is equal to the maximum value defined in the configuration file for the database.

The command cannot be processed.

User response: Wait for other applications to disconnect from the database. If more applications are required to run concurrently, increase the value for *maxapps*. After all applications disconnect from the database and the database is restarted, the new value takes effect.

sqlcode: -1040

sqlstate: 57030

SQL1041N The maximum number of concurrent databases have already been started.

Explanation: The application attempted to start an inactive database but the number of active databases already equals the maximum value defined in the system configuration file.

The command cannot be processed.

User response: Wait for one of the databases to become inactive. If more databases are required to be active at the same time, increase the value for *numdb*. The new value takes effect after the next successful database manager start.

sqlcode: -1041

sqlstate: 57032

SQL1042C An unexpected system error occurred.

Explanation: A system error occurred. Some possible reasons for this error are:

- The database manager is not installed correctly or the environment is not set up correctly.
- On UNIX-based systems, db2iupdt may need to be run in order to update the DB2 instance to enable acquisition of a new system configuration or access to function associated with the installation or removal of certain product options, FixPaks, or modification levels.
- You might get this message if you are not using the correct DB2 Administration Server password.

The command cannot be processed.

User response:

- To update the instance to acquire a configuration or access to function run DB2IUPDT <InstName>.
- If the error occurred while trying to connect to a database, get a trace (instructions below) and call IBM support.

If the problem falls outside of these suggestions, ensure that the system time and date is correctly set, and make sure your system has enough memory and swapping/paging space available.

Resubmit the current command.

If the error continues, stop the database manager and restart it.

If the error still continues, reinstall the database manager.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE or message number
- SQLCA contents if possible
- Trace file if possible.

Federated system users: if necessary isolate the problem to the data source rejecting the request. If the problem is with a data source follow the problem determination procedures for that data source.

sqlcode: -1042

sqlstate: 58004

SQL1043C Database Services could not initialize the system catalogs. Error error was returned.

Explanation: The CREATE DATABASE command failed while initializing the system catalogs.

User response: Record the message number (SQLCODE) and error in this message.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Then contact your technical service representative with the following information:

- Environment: Application
- Required information:
 - Problem description
 - SQLCODE or message number and error identifier
 - SQLCA contents if possible
 - Trace file if possible.

SQL1044N Processing was cancelled due to an interrupt.

Explanation: The user may have pressed the interrupt key sequence.

Processing is stopped.

Federated system users: this situation can also be detected by the data source.

User response: Continue processing to handle the interrupt.

If installing the sample database, drop it and install the sample database again.

If starting the database manager, issue a db2stop before issuing any db2 commands.

sqlcode: -1044

sqlstate: 57014

SQL1045N The database was not found because it was not cataloged correctly.

Explanation: An indirect entry in the database directory points to another non-HOME entry.

The command cannot be processed.

User response: Verify the entries in all the associated database directories with the directory scan commands.

sqlcode: -1045

sqlstate: 58031

SQL1046N The authorization ID is not valid.

Explanation: The authorization specified at logon is not valid for either the data source or the database manager. One of the following occurred:

- The authorization contains more than 30 characters for Windows platforms or 8 characters for other platforms.
- The authorization contains characters not valid for an authorization. Valid characters are A through Z, a through z, 0 through 9, #, @ and \$.
- The authorization is PUBLIC or public.
- The authorization begins with SYS, sys, IBM, ibm, SQL or sql.
- The authorization violates some data source-specific naming convention.

The command cannot be processed.

User response: Log on with a valid authorization ID.

Federated system users: if necessary isolate the problem to the data source rejecting the request and use an authorization ID valid for that data source.

sqlcode: -1046

sqlstate: 28000

SQL1047N The application is already connected to another database.

Explanation: An application cannot create a database while connected to another database.

Binding a bind file to one database while already connected to another database is not permitted.

The command cannot be processed.

User response: Disconnect from the active database and resubmit the command.

SQL1048N The use parameter *parameter* in the START USING DATABASE or CONNECT TO command is not valid. It must be an S for shared access, an X for exclusive use or an N for exclusive use at single node. For DB2 Connect connections, only S is supported. N is only supported in MPP configuration.

Explanation: The *use* parameter in the START USING DATABASE or CONNECT TO command must be either an S for shared or an X for exclusive use. If connecting to a database using DB2 Connect, only shared access is allowed. Mnemonic equates for these values are provided in the SQLENV.H file.

The command cannot be processed.

User response: Resubmit the command with a valid *use* parameter (preferably from the mnemonic equates).

SQL1049C The application state is in error. The database connection has been lost.

Explanation: The connection to the database has been lost.

The command cannot be processed.

User response: Issue a CONNECT RESET statement.

SQL1050N The database cannot be uncataloged because it is a home database.

Explanation: The database specified in the UNCATALOG DATABASE command is a home database. Home databases cannot be uncataloged because their directory entries are deleted when the database is dropped.

The command cannot be processed.

User response: Continue processing if the database name was specified correctly.

SQL1051N The path *path* does not exist or is not valid.

Explanation: One of the following conditions is true:

- The value specified for the database directory or storage path does not exist or is inaccessible.
- The value specified for the database directory or storage path contains characters that are incompatible with the code page of the database.
- Storage paths must have an absolute path name and cannot be relative.
- An attempt is being made to activate or connect to a database but a storage path cannot be found or it is inaccessible.
- An attempt is being made to restore an automatic storage database while maintaining the storage paths

defined in the backup image. However, a storage path cannot be found or it is inaccessible.

- A rollforward is attempting to replay a log record related to adding storage paths but a storage path cannot be found or it is inaccessible.
- An attempt is being made to drop a storage path that is not associated with the database.

If you are using a cluster manager, this message can be returned if the DB2 database manager failed to add the given storage path to the cluster manager configuration. Error messages from the cluster manager will be recorded in the db2diag log file.

The statement or command cannot be processed.

User response: Depending on the condition:

- Create the path if it does not exist, or change the permissions of the path if it is inaccessible. Resubmit the statement or command.
- Use supported characters for database directory and storage paths. For more information, see the topic on naming rules in the DB2 Information Center.
- If specifying a relative storage path name then specify its absolute path name instead. Resubmit the statement or command.
- Resolve the issue with the storage path and resubmit the command. If the storage path is no longer available then the database must be restored from a backup image.
- Create the storage path if it does not exist, or change the permissions of the path if it is inaccessible. Alternately, the storage paths can be redefined using the ON parameter of the RESTORE DATABASE command or by using the SET STOGROUP PATHS command.
- Create the storage path if it does not exist, or change the permissions of the path if it is inaccessible. Alternately, restore the database again and redefine the storage paths associated with the database. When storage paths are redefined during a restore, all subsequent add storage path log records are ignored.
- If trying to drop a storage path, ensure that it exists and is associated with the database. Then try the request again.

If you are using a cluster manager, correct the problem and resubmit the command:

1. Review the db2diag log file for error messages from the cluster manager.
2. Respond to the cluster manager error messages in the db2diag log file to correct the underlying problem that prevented the DB2 database manager from adding the path to the cluster manager configuration.
3. Resubmit the command.

sqlcode: -1051

sqlstate: 57019

SQL1052N The database path *path* does not exist.

Explanation: The path specified in the *path* parameter of the command is not valid. Either there is no path with that name, or a path has been specified when the DB2_CREATE_DB_ON_PATH registry variable is disabled (Windows only).

In a partitioned database environment on Windows or UNIX environments, each node in the partitioned database group must have the same hard drive specification (path) available with usable space for the CREATE DATABASE command to succeed. The hard drive path is specified in the database manager configuration. If DFTDBPATH is left blank the default will be the hard drive path where DB2 is installed on the instance owning machine (db2 installation path).

The command cannot be processed.

User response: Resubmit the command with the correct database path.

In a partitioned database environment on Windows or UNIX environments, follow the following steps:

- Determine which hard drive specification (path) is required. The path is specified in the error message.
- Determine which node/s of the database partition are experiencing the problem. You can usually find this information in the db2diag log file of the instance owning node.
- Correct the drive problem on the node that is experiencing the problem, or change the drive specification in the database manager configuration so that the same drive is available and has sufficient space on each node of the partitioned database group.
- Re-issue the command.
- On Windows if all applications that will access the database are built on at least Version 9 external APIs then the DB2_CREATE_DB_ON_PATH registry variable can be enabled to support a path as the database path.

SQL1053N An interrupt is already being processed.

Explanation: The system is currently processing an interrupt so another interrupt is not honored.

The interrupt request is ignored.

User response: Wait until the current interrupt processing finishes and resubmit the command.

SQL1054N A COMMIT is in progress and cannot be interrupted.

Explanation: The system is currently processing a COMMIT. The user entered an interrupt key sequence.

The interrupt request is ignored.

SQL1055N • SQL1061W

Federated system users: this situation can also be detected by the data source.

User response: Wait until COMMIT is finished and resubmit the request.

SQL1055N A ROLLBACK is in progress and cannot be interrupted.

Explanation: The system is currently processing a ROLLBACK. The user entered an interrupt key sequence.

The interrupt request is ignored.

Federated system users: this situation can also be detected by the data source.

User response: Wait until ROLLBACK is finished and resubmit the request.

SQL1056N There are already eight database directory scans open.

Explanation: Eight database directory scans in this process are already open. No more than eight open scans are allowed.

The command cannot be processed.

User response: Issue one or more CLOSE DIRECTORY SCAN commands and resubmit the command.

sqlcode: -1056

sqlstate: 54029

SQL1057W The system database directory is empty.

Explanation: An attempt was made to read the contents of the system database directory, but no entries existed.

User response: No action is required.

sqlcode: +1057

sqlstate: 01606

SQL1058N The handle parameter in the Directory Scan command is not valid.

Explanation: The *handle* parameter specified in the Directory Scan command is not valid. The *handle* must be the one returned from the OPEN DIRECTORY SCAN or the OPEN NODE DIRECTORY SCAN command.

The command cannot be processed.

User response: Resubmit the command with a valid *handle* parameter.

SQL1059N A Get Next command cannot be processed because no Open Scan command was issued.

Explanation: A directory scan command was issued before the scan was opened.

The command cannot be processed.

User response: Issue an OPEN DIRECTORY SCAN or OPEN NODE DIRECTORY SCAN command and resubmit the current command.

SQL1060N User *authorization-ID* does not have the CONNECT privilege.

Explanation: The specified authorization ID does not have the CONNECT privilege to access the database. The CONNECT privilege must be granted before the user can connect to a database. This error is also returned when a switch user request is made with a user ID allowed on the trusted connection but that user ID does not hold CONNECT privilege on the database. The connection is put in an unconnected state.

Federated system users: This situation can also be detected by the data source

The command cannot be processed.

User response: Contact the system administrator or database administrator for the database and request a GRANT CONNECT for the authorization ID. Resubmit the command.

If this error is returned as a result of a switch user request, then until a switch user request with a valid user ID is made (the user ID that established the trusted connection or a user ID allowed on the trusted connection), if any SQL statement is issued, an error is returned (SQLSTATE 08003). The connection remains trusted when it is taken out of the unconnected state.

Federated system users: if necessary isolate the problem to the data source that rejected the request and ensure that correct privileges have been granted for that data source. Some data sources might use a different name than the CONNECT privilege for the privilege required to connect to a database.

sqlcode: -1060

sqlstate: 08004

SQL1061W The RESTART DATABASE command completed successfully, but in-doubt transactions exist against the database.

Explanation: Although the restart database operation was successful, existing in-doubt transactions still need to be resolved. The database is usable, but if the in-doubt transactions are not resolved before the last connection to the database is dropped, then the database will again require a RESTART before it can be used.

In a DB2 pureCluster environment, the effect of the in-doubt transactions depends on which DB2 member they are associated with, and the type of recovery operation that just completed. If the in-doubt transactions are associated with the DB2 member from which the restart operation was issued, the database will be usable but any data associated with the in-doubt transactions will not be accessible. If the restart command initiated a group crash recovery and the in-doubt transactions are associated with a different DB2 member, that DB2 member will remain inconsistent until it undergoes member crash recovery and the in-doubt transactions will not be available for resolution until that member crash recovery completes.

User response: Either resolve the in-doubt transactions, or be prepared to restart the database whenever you wish to use it. If the transaction manager (TM) that was using the database (in an XA/DTP environment) is available, then the administrator should instruct the TM to resolve the in-doubt transactions. Alternatively, with great caution, the administrator can use the CLP to heuristically complete the transactions.

- In a partitioned database server environment, the RESTART DATABASE command is run on a per-node basis. In order to ensure that the database is restarted on all nodes, use the following command:

```
db2_all db2 restart database
<database_name>
```

Issuing this command will resolve any in-doubt transactions if all nodes are operational.

This command may have to be run several times to ensure that all in-doubt transactions have been resolved.

- In a DB2 pureCluster environment, the user response depends on whether automatic recovery is enabled (the default). If automatic recovery is enabled, the member crash recovery will occur automatically when the DB2 process model is started on any member (i.e., through a db2start command or by DB2 cluster services). If automatic recovery is not enabled, a manual member crash recovery must be initiated using the RESTART DATABASE command. In both cases, the in-doubt transactions are available for resolution after member crash recovery completes.

SQL1062N The database path *path* was not found.

Explanation: The database *path* parameter specified in the command does not exist. If the path is not specified, the default path defined in the system configuration file is used, and it does not exist.

In a partitioned database environment on Windows environments, each node in the partitioned database group must have the exact same physical hard drive specification (letter) available and useable (must contain

useable space) for the CREATE DATABASE command to succeed. The physical hard drive letter is specified in the database manager configuration. If DFTDB is left blank the default will be the hard drive where DB2 is installed on the instance owning machine (db2 installation path).

The command cannot be processed.

User response: Verify the path or the default path and make sure they exist in the system. Resubmit the command.

In a partitioned database environment on Windows environments, follow the following steps:

- Determine which hard drive specification (letter) is required. The drive letter is specified in the error message.
- Determine which node/s of the database partition are experiencing the problem. You can usually find this information in the db2diag log file of the instance owning node.
- Correct the drive problem on the individual node that is experiencing the problem or change the drive specification in the database manager configuration so that the same drive is available (and has sufficient space) on each and every node of the partitioned database group.
- re-issue the command.

SQL1063N DB2START processing was successful.

Explanation: The command to start the database manager completed successfully.

SQL1064N DB2STOP processing was successful.

Explanation: The command to stop the database manager completed successfully.

SQL1065W The database was created or upgraded successfully, but an error occurred binding one or more bind files in list *list-name*. The file(s) in the following position(s) in the bind list file were not bound: *list*.

Explanation: One or more utilities were not bound to the database. The list file *list-name* contains a list of the bind files. The numbers in *list* indicate the relative positions of the unbound files in the list file.

The listed utility bind files are not bound to the created or upgraded database.

User response: Bind the indicated utilities to the database using the list of bind files *list-name*. Do not use the format option on the binder call.

SQL1066N DB2START processing was successful. IPX/SPX protocol support was not successfully started.

Explanation: The IPX/SPX protocol support was not successfully started. Remote clients cannot use IPX/SPX to connect to the server. Possible causes are:

- The workstation is not logged in to the NetWare file server.
- The workstation does not have authority to create an object in the NetWare file server bindery.
- Another database manager on the network is using the same object name specified in the database manager configuration file.

User response: Ensure that the workstation is logged in to the NetWare file server, and has sufficient authority to create an object in the bindery at the file server. The user must be logged in as SUPERVISOR or equivalent. Also ensure that the object name specified in the database manager configuration file is unique for all database managers in the network. Make any corrections, run DB2STOP, and then run DB2START again.

If the problem continues, at the operating system command prompt type DB2TRC ON -L 0X100000. Run DB2START again, then at the command prompt, type DB2TRC DUMP filename to save the trace information. To turn trace off, type DB2TRC OFF. Contact your service coordinator with the trace information.

SQL1067N DB2STOP processing was not successful. IPX/SPX protocol support was not successfully stopped.

Explanation: The IPX/SPX protocol support was not successfully stopped. Possible causes are:

- The workstation is not logged in to the NetWare file server.
- The workstation does not have authority to delete an object in the NetWare file server bindery.

User response: Ensure that the workstation is logged in to the NetWare file server, and has sufficient authority to delete an object in the bindery at the file server. The user must be logged in as SUPERVISOR or equivalent. Make any corrections, and run DB2STOP again.

If the problem continues, at the operating system command prompt type DB2TRC ON -L 0X100000. Run DB2STOP again, then at the command prompt, type DB2TRC DUMP filename to save the trace information. To turn trace off, type DB2TRC OFF. Contact your service coordinator with the trace information.

SQL1068N The domain that owns the user ID *user-ID* for the CONNECT or ATTACH statement is not defined in the DB2DOMAINLIST environment variable.

Explanation: A user ID in a CONNECT TO or ATTACH TO statement does not belong to a domain defined in the DB2DOMAINLIST environment variable.

User response: Specify the name of the domain which owns the user ID in the DB2DOMAINLIST environment variable by using the DB2SET command.

sqlcode: -1068

sqlstate: 08004

SQL1069N The database *name* is not a home database.

Explanation: The database is not a local database. A local database is cataloged as indirect in the system database directory and this entry references a home entry in the local database directory on the same node. Remote databases cannot be dropped.

The command cannot be processed.

User response: If the specified database name was incorrect, resubmit the command with the correct database name. If the specified database name was correct and the intent is to remove the database name from the database directory, use the UNCATALOG DATABASE command.

SQL1070N The address of the database name parameter is not valid.

Explanation: The application program used an address that is not valid for the database name parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Correct the application program so a correct address is used and the input string is null terminated.

SQL1071N The address of the database alias name parameter is not valid.

Explanation: The application program used an address that is not valid for this parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1072C The database manager resources are in an inconsistent state. The database manager might have been incorrectly terminated, or another application might be using system resources in a way that conflicts with the database manager's use of system resources. System resource cleanup might be required.

Explanation: The request failed because the database manager resources are in an inconsistent state. This situation can occur if:

- The database manager was incorrectly terminated (on UNIX-based systems, for example, this situation might occur if the processes were terminated with the "kill" command, rather than the stop database manager command).
- Another application or user might have removed the database manager resources (on UNIX-based systems, for example, a user with sufficient privilege might have accidentally removed an Interprocess Communication (IPC) resource owned by the database manager, using the "ipcrm" command).
- Another application's use of system resources conflicts with the database manager's use of system resources (on UNIX-based systems, for example, another application might be using the same keys that the database manager uses for creating IPC resources).
- Another instance of the database manager might be using the same resources. This situation could occur on UNIX-based systems if the two instances are on different file systems and the sqllib directories happen to have the same i-node (i-nodes are used to get the IPC keys).

User response: Resource cleanup may be required. See the db2diag log file for more information.

- Remove all the database manager processes running under the instance ID (on UNIX-based systems, issue the db2_ps command to list all the database manager processes running under the instance ID, and the "kill -9 process_ID" command to remove them).
- Ensure that no other application is running under the instance id, and then remove all resources owned by the instance id (on UNIX-based systems, you can use the "ipcs | grep instance_ID" command to list all IPC resources owned by the instance id, and the "ipcrm -[q|m|s] ID" command to remove them).
- If there is another instance of the database manager running, there might be an inode conflict. This is probably the case if you find that two instances cannot be active at the same time, but can be started individually. It is necessary to change the inode being used to generate IPC keys for one of the instances.

For single-node instances, perform the following steps as the instance owner from the sqllib directory:

1. Delete the .ftok file:

```
rm .ftok
```

2. Create a new .ftok file:

```
touch .ftok
```

For multi-node instances, perform the following as the instance owner:

1. Create another directory at the same level as sqllib.
 2. Move everything from under sqllib to the new directory.
 3. Delete sqllib.
 4. Rename the new directory to sqllib.
- For single-node instances, run the db2ftok command as the instance owner to restore system resources used by the database manager to a consistent state.
 - Restart the database manager instance.

SQL1073N The node directory release number is not correct.

Explanation: The node directory release number does not match the product expected release number. The node directory could be from a previous release.

User response: Re-catalog all the node entries and try the command again.

SQL1074N The address of the password parameter is not valid.

Explanation: The application program used an address that is not valid for this parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1075N The address of the database comment parameter is not valid.

Explanation: The application program used an address that is not valid for this parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1076N The address of the count parameter is not valid.

Explanation: The application program used an address that is not valid for the *count* parameter.

SQL1077N • SQL1083N

The command cannot be processed.

User response: Ensure that a valid address is used in the application program.

SQL1077N The address of the handle parameter is not valid.

Explanation: The application program used an address that is not valid for the *handle* parameter.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program.

SQL1078N The address of the buffer parameter is not valid.

Explanation: The application program used an address that is not valid for the *buffer* parameter.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program.

SQL1079N The address of the nodename parameter is not valid.

Explanation: The application program used a *nname* parameter address that is invalid. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1080N The address of the local_lu name parameter is not valid.

Explanation: The application program used an address that is not valid for the *local_lu* name parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1081N The address of the partner_lu name parameter is not valid.

Explanation: The application program has used an address that is not valid for the *partner_lu* parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1082N The address of the mode parameter is not valid.

Explanation: The application program has used an address that is not valid for the *mode* parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1083N The database cannot be created because the database description block cannot be processed, reason code = *reason-code*.

Explanation: The application issued a CREATE DATABASE command, but the database descriptor block (DBDB) could not be processed for one of the following reason codes:

- 1 The address of the DBDB is not valid.
- 2 The value of the SQLDBDID field of the DBDB is not valid. It should be set to the value SQLDBDB1.
- 4 The value of the SQLDBCSS field of the DBDB is not valid. When using the CREATE DATABASE CLP command, the value specified in the COLLATE USING option is invalid.
- 5 The collation value specified in SQLDBUDC is invalid for collation type SQL_CS_UNICODE. When using the CREATE DATABASE CLP command, the value specified in the COLLATE USING option is not valid for UTF-8 code set.
- 6 A database cannot be created with an explicit collation type, and implicit code set. You must either specify the code set desired, or leave collation as SQL_CS_SYSTEM. When using the CREATE DATABASE CLP command, you must either specify the code set desired with an explicit collation type, or use implicit collation without COLLATE USING option.

The command cannot be processed.

User response: Correct the error and resubmit the command.

SQL1084C The database manager failed to allocate shared memory because an operating system kernel memory limit has been reached.

Explanation: The default values for some kernel parameters on some operating systems are not sufficient for running a DB2 database. If any other software is running on the same system as the DB2 database, the other software will compete for operating system resources, which makes configuring kernel parameters more difficult. To simplify kernel parameter configuration, the database manager automatically adjusts some kernel parameter settings when an instance is started on some operating systems. Also, there is a tool called `db2osconf` that you can use with some operating systems to determine recommended minimum operating system kernel settings for running a DB2 database system.

This message is returned when the database manager is unable to allocate shared memory, during activities such as activating a database or rolling a database forward, because an operating system kernel memory limit, such as `SHMMAX` on Linux, has been reached.

User response: Respond to this error by performing one or more of the following troubleshooting steps:

- Generate database configuration recommendations by running the following command:
DB2 AUTOCONFIGURE APPLY NONE
- Increase the operating system kernel setting that limits the amount of operating system memory that is available for the database manager.
- Decrease the amount of memory that the database uses by decreasing the `database_memory` configuration parameter.
- On Linux operating systems only: the default value of some kernel configuration parameters, such as `SHMMAX`, are not large enough for DB2 LUW. Determine the current kernel configuration parameter settings and modify any kernel parameters that are not large enough.

If this error continues to happen after you have performed these troubleshooting steps, collect diagnostic information using the `db2support` utility and contact IBM software support.

sqlcode: -1084

sqlstate: 57019

SQL1085N The application heap cannot be allocated.

Explanation: The application could not connect to the database because the database manager could not allocate the number of application heap 4K pages specified in the database configuration file. The system

is out of 4K pages. The command cannot be processed.

User response: Possible solutions are:

- Lower the size of the application heap (`applheapsz`) in the database configuration file.
- Reduce the maximum number of applications in the database configuration file.
- Remove background processes.
- Install more memory.

sqlcode: -1085

sqlstate: 57019

SQL1086C An operating system error *error* occurred.

Explanation: The command received an error from the operating system that prevents further processing.

The command cannot be processed.

User response: Refer to the operating system user publications to determine the nature of the error.

SQL1087W The database was created or upgraded successfully, but an error occurred while opening the list file *name*. The DB2 utilities are not bound to the database.

Explanation: The `CREATE DATABASE` or `UPGRADE DATABASE` command could not open the list file containing the list of utility bind files. The list file should be located in the `bnd` subdirectory of the `sqllib` subdirectory.

The utility bind files are not bound to the created or upgraded database.

User response: Bind the utilities to the database. Do not use the `format` option on the binder call. Refer to the DB2 Information Center for details.

SQL1088W The database was created or upgraded successfully but an error occurred while binding the utilities. The utilities are not bound to the database.

Explanation: The `CREATE DATABASE` or `UPGRADE DATABASE` command could not bind the utility bind files to the database.

The utility bind files are not bound to the newly created or upgraded database.

User response: Perform the following actions:

- Bind the utilities to the database. Do not use the `format` option on the binder call.
- Bind the `db2schema.bnd` file from the database server.

Refer to the DB2 Information Center for details on how to perform these actions.

SQL1089W The database was created, but the binding of the utilities was interrupted. The utilities are not bound to the database.

Explanation: CREATE DATABASE was interrupted while binding the utilities to the database. The interrupt key sequence may have been pressed.

The utility bind files are not bound to the newly created database.

User response: Bind the utilities to the database. Do not use the format option on the binder call.

SQL1090C The release number of the precompiled application program or utility is not valid.

Explanation: The release number of the precompiled application program or utility is not compatible with the release number of the installed version of the database manager.

The error will also occur if the application program is using down-level database manager libraries or DLLs while accessing the installed version of the database manager configuration file.

The command cannot be processed.

User response: Verify that there is no older version of the database manager libraries or DLLs that will be picked up for your application processing.

If the problem persists, repeat the precompile process with the current database manager. Use only application programs precompiled with a compatible release level of the database manager.

SQL1091C The release number of the database is unsupported.

Explanation: The release number of the database is not the same release number of the instance. This release number was set when the database was created, when the database was upgraded, or the highest version, release, modification, and fix pack level defined in the system catalog.

The command cannot be processed.

If the error occurred during a database upgrade or database restore, you are attempting to upgrade or restore an incompatible release of database.

If the error occurred on the first connection after removing a fix pack, you are attempting to connect to a database which is only supported from higher fix pack level.

User response: If the error occurred during a database

upgrade or database restore, you must first upgrade the database to a release supported for database upgrade in the DB2 copy to which you want to upgrade.

If the error occurred the first time you connect to a database after removing a fix pack, restore the database from a backup and then issue the update database to current level command from a DB2 copy at a fix pack level that supports the database.

sqlcode: -1091

sqlstate: 08004

SQL1092N The requested command or operation failed because the user ID does not have the authority to perform the requested command or operation. User ID: *user-id*.

Explanation: Authentication of a user is completed using a security facility outside of the DB2 database system (part of the operating system or a separate product.) Authorization is performed using DB2 facilities (using DB2 tables and configuration files.) This message can be returned when there is a problem with either authentication or authorization.

Troubleshooting authentication and authorization problems is complicated by the fact that multiple agents are controlling access at different levels (local operating system login credentials, Windows user groups, domains, third-party security services such as Kerberos, the context in which a command is executed, DB2 authority levels, and database objects, just to name a few.)

Here are some common scenarios, listed by operating environment, in which this message can be returned:

Windows operating systems using groups

Here is a description of a scenario in which this message could be returned in a Windows environment using groups:

DB2 database configuration:

- The DB2 database product was installed with the DB2 database manager instance user set to the Windows LocalSystem account (or set to another local Windows account.)
- The DB2_GRP_LOOKUP environment variable is not set.

Action that fails:

- A user attempts to connect to a database using a two-part user ID that is defined at a remote domain.

Reason for the failure:

- Because the environment variable DB2_GRP_LOOKUP is not set, the database

manager attempts to enumerate the groups at the location where the user ID is defined. However, because the database manager is running under the context of the LocalSystem account, the database manager does not have authority to access the network to enumerate the groups at the location where the user ID is defined.

Windows operating systems using Kerberos

In a Windows environment in which Kerberos authentication is being used, this message can be returned when an attempt is made to log on to a computer with an account that is not a domain account.

Windows operating systems using Extended Security

In a Windows environment with Extended Security enabled, this message can be returned if a user ID that is not a member of the local DB2USERS group or DB2ADMNS group attempts to use or modify a database resource.

Lightweight Directory Access Protocol (LDAP) environments

In an LDAP environment, this message can be returned if the user ID or the DB2 Connect gateway does not have the authority to perform the CATALOG DATABASE, CATALOG ... NODE, or CATALOG DCS DATABASE command.

The Windows command prompt

On Windows Vista or later versions of the Windows operating system, the command prompt might have standard user privileges, even if the user has administrative privileges. This message can be returned if a command that requires administrative privileges is executed from a command prompt that has only standard privileges.

Federated database environments

In federated environments, this error could happen at the federated server or at the federated data source.

User response: In general, respond to this error by performing the following troubleshooting steps:

1. Work with a system administrator or a database administrator to collect information about the privileges and authority that the given user ID has. Here is an example of one way to collect this type of information about a give user ID:

```
db2 SELECT * FROM TABLE
(SYSPROC.AUTH_LIST_GROUPS_FOR_AUTHID('<id>'))
```
2. Identify the attempted operation that failed.
3. Compare the privileges and authority that the given user ID has with the action that was attempted.

4. Use a different user ID that has the required authority and privileges, or grant the user ID the required privileges by performing one or more of the following type of administrative actions:
 - Add the user ID to the necessary groups
 - Alter the authority or privileges of the group to which the user ID already belongs
 - Specifically grant the user ID the authority to perform the action using the GRANT statement

Here are some examples of ways to respond to specific scenarios:

Windows operating systems using Kerberos

In a Windows environment in which Kerberos authentication is being used, log on to the computer with a domain account.

Windows operating systems using Extended Security

In a Windows environment with Extended Security enabled, to use or modify a database resource, take on of the following actions:

- Add the user ID to the local DB2USERS group or DB2ADMNS group.
- Use a user ID that is a member of the local DB2USERS group or DB2ADMNS group.

Lightweight Directory Access Protocol (LDAP) environments

In an LDAP environment, if the user ID or the DB2 Connect gateway does not have the authority to perform the CATALOG DATABASE, CATALOG ... NODE, or CATALOG DCS DATABASE command, enable users to catalog and uncatalog databases and nodes, or DCS and ODBC directories, without SYSADM authority using the catalog_noauth database manager configuration parameter.

The Windows command prompt

To run a command with full administrative privileges, perform the following steps:

1. Open a command window that is will run with full administrative privileges using the shortcut called "Command window - Administrator" that is created during the DB2 database install process.
2. Launch the command from the command window that is running with full administrative privileges.

Federated environments

Determine whether it is the federated server that is returning the error, or the federated data source that is returning the error, and then perform the same troubleshooting steps described in this message.

SQL1093N The user is not logged on.

Explanation: A user must be logged on before any command requiring authorization can be processed. Possible causes for this error include:

- Unable to get a user ID.
- An unexpected operating system error occurred when attempting to log on.
- The application is running in a background process.
- The user cancelled an attempted logon.

The command cannot be processed.

User response: Log on with a valid user ID and resubmit the command. If several concurrent processes are attempting to log on, wait a few seconds and retry the logon procedure.

sqlcode: -1093

sqlstate: 51017

SQL1094N The node directory cannot be accessed because it is being updated.

Explanation: The node directory cannot be scanned or used while it is being updated. Also, the directory cannot be accessed for update if it is already being accessed for any reason.

The command cannot be processed.

User response: Resubmit the command after the update is finished.

sqlcode: -1094

sqlstate: 57009

SQL1095N There are already eight node directory scans open.

Explanation: Eight node directory scans are already open in this process and no more than eight are allowed.

The command cannot be processed.

User response: Issue one or more CLOSE NODE DIRECTORY SCAN commands. Resubmit the command.

sqlcode: -1095

sqlstate: 54029

SQL1096N The command is not valid for this node type.

Explanation: A command was issued on a node that does not support the command, or the system environment was found to be set up incorrectly for this node type. For example, a database was cataloged as LOCAL on a client node.

The command cannot be processed.

User response: Verify that the command and parameters are correct for the node type. Also verify that the environment where the command is to be processed is correct. Resubmit the command.

SQL1097N The node name was not found in the node directory.

Explanation: Either the node name listed in the database directory for a remote database or the node name specified on an attach command was not cataloged in the node directory.

The command cannot be processed.

Federated system users: this situation can also be detected by the data source.

User response: Verify that the node name listed in the database directory or as the object of the attach command is cataloged in the node directory. If the node is not listed in the node directory, submit a CATALOG NODE command.

Federated system users: in addition to these actions, also verify that the node names listed in all the SYSCAT.SERVERS entries are correct. If the node is not listed in the node directory and the server is a member of the DB2 family, issue a CATALOG NODE command for that node.

sqlcode: -1097

sqlstate: 42720

SQL1098N The application is already connected to this database.

Explanation: A connection to a database was requested but the application is already connected to the specified database.

The command cannot be processed.

User response: No action is necessary.

sqlcode: -1098

sqlstate: 53056

SQL1099N The diskette is write-protected.

Explanation: A write operation was attempted to a database residing on a write-protected diskette.

The statement cannot be processed.

User response: Verify you are using the correct diskette. Remove protection from the diskette, if necessary.

SQL1100W The node name *name* specified in the Catalog Database command has not been cataloged in the Node Directory.

Explanation: The Catalog Database command specified node name *name* but that is not cataloged in the node directory. The node name must be cataloged before the remote database can be used.

The CATALOG DATABASE command completed successfully.

User response: Issue a CATALOG NODE command.

SQL1101N Remote database *name* on node *node-name* could not be accessed with the specified authorization id and password.

Explanation: A connection to the remote database *name* on node *node-name* was requested, and the remote node does not accept the authorization ID and password combination specified for this node (either in the remote authorization tables or at runtime).

Federated system users: This error can also occur when any of the following is true:

- There is no user mapping and the remote authorization ID or remote password does not match the authorization ID and password that were specified when connecting to the DB2 federated database.
- The user mapping does not specify the REMOTE_PASSWORD option, and no password was specified when connecting to the DB2 federated database.
- The user mapping does not specify the REMOTE_PASSWORD option, and the remote password does not match the password specified when connecting to the DB2 federated database.
- The user mapping does not specify the REMOTE_AUTHID option, and the remote authorization ID does not match the authorization ID specified when connecting to the DB2 federated database.
- The remote authorization ID or remote password do not match those specified on the user mapping.

The request cannot be processed.

User response: Resubmit the request with a valid authorization ID and password combination for the remote system.

sqlcode: -1101

sqlstate: 08004

SQL1102N A database name was not specified.

Explanation: No database name was provided to proceed with database upgrade.

The statement cannot be processed.

User response: Specify a database name for upgrade.

SQL1103W The UPGRADE DATABASE command was completed successfully.

Explanation: The UPGRADE DATABASE command was completed successfully. You can now access this database.

Note that this message will also be returned if the database was already at the current level and was not upgraded.

User response: Refer to the DB2 Information Center for details about post-upgrade tasks that you should perform after upgrading your database.

SQL1104N The address of the program name parameter is not valid.

Explanation: The application program has used an address for the program name that is not valid.

The command cannot be processed.

User response: Use a correct address in the application program.

SQL1105N The SQL CONNECT RESET statement is not allowed in a Remote Application Interface procedure.

Explanation: The remote application procedure contains an SQL CONNECT RESET statement.

The remote procedure is not allowed to continue.

User response: Remove the SQL CONNECT RESET statement and retry the remote procedure.

sqlcode: -1105

sqlstate: 38003

SQL1106N The specified DLL *name* module was loaded, but the function *function* could not be executed.

Explanation: The function within the DLL (dynamic link library) cannot be found.

The command cannot be processed.

User response: Ensure that the DLL module is built correctly. Reference the module in the definition file.

sqlcode: -1106

sqlstate: 42724

SQL1107N An interrupt was received while loading the specified DLL *name*.

Explanation: When loading the DLL (dynamic link library) module, the command was interrupted, perhaps by Ctrl+Break.

Processing is stopped.

User response: Resubmit the command.

sqlcode: -1107

sqlstate: 42724

SQL1108N An unexpected I/O error or operating system error was received while loading the specified DLL *name*.

Explanation: An unexpected error occurred when trying to load the DLL (dynamic link library) module specified in the program name field.

The command cannot be processed.

User response: Resubmit the current command. If the error continues, reinstall the database manager.

If reinstallation does not correct the error, record the message number (SQLCODE) and all information in the SQLCA if possible.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Then contact your technical service representative.

sqlcode: -1108

sqlstate: 42724

SQL1109N The specified DLL *name* could not be loaded.

Explanation: The DLL (dynamic link library) module specified could not be found.

The command cannot be processed.

User response: Ensure that the specified file is in a subdirectory identified in the system LIBPATH.

sqlcode: -1109

sqlstate: 42724

SQL1110N A supplied data area was invalid and could not be used.

Explanation: The data area is not initialized correctly.

The command cannot be processed.

User response: Ensure that the user-supplied input SQLDA or output SQLDA fields are initialized correctly.

SQL1111N The program name *name* specified was invalid.

Explanation: The DLL (dynamic link library) module or program name syntax is not correct.

The command cannot be processed.

User response: Ensure that the DLL or program name is specified correctly.

sqlcode: -1111

sqlstate: 42724

SQL1112N There are not enough system resources to load the specified DLL *name*.

Explanation: There is not enough random access memory (RAM) to load the specified DLL (dynamic link library) module.

The command cannot be processed.

User response: Stop the application. Possible solutions are:

- Change the MEMMAN NO SWAP, NO MOVE option in the CONFIG.SYS file to SWAP, MOVE.
- Remove background processes.
- Decrease the values of the configuration parameters that define the allocation of memory.
- Install more random access memory (RAM).

sqlcode: -1112

sqlstate: 42724

SQL1113N The data type for sqlvar *n* in the output SQLDA was changed from *type-1* to *type-2*.

Explanation: The remote stored procedure changed the data type of the *n*th sqlvar in the output SQLDA; *n* is the sequence number of the first mismatched sqlvar.

The stored procedure does not return any data.

User response: Correct the remote stored procedure so the data type information in the output SQLDA is not changed.

sqlcode: -1113

sqlstate: 39502

SQL1114N The data length for sqlvar *n* in the output SQLDA was changed from *length-1* to *length-2*.

Explanation: The remote stored procedure changed the data length of the *n*th sqlvar in the output SQLDA; *n* is the sequence number of the first mismatched sqlvar.

The stored procedure does not return any data.

User response: Correct the remote stored procedure so the data length information in the output SQLDA is not changed.

sqlcode: -1114

sqlstate: 39502

SQL1115N The number of sqlvars in the output SQLDA was changed from *count-1* to *count-2*.

Explanation: The remote procedure changed the sqld field in the output SQLDA; sqld is the number of used sqlvars in the SQLDA.

The stored procedure does not return any data.

User response: Correct the remote stored procedure so the sqld field in the output SQLDA is not changed.

sqlcode: -1115

sqlstate: 39502

SQL1116N A connection to or activation of database *name* cannot be made because of BACKUP PENDING.

Explanation: The specified database requires a backup to be taken to provide a starting point for roll-forward recovery.

No connection was made.

User response: Back up the database by calling the BACKUP routine or, if roll-recovery is not required, set the database configuration parameters LOGARCHMETH1 and LOGARCHMETH2 to OFF.

sqlcode: -1116

sqlstate: 57019

SQL1117N A connection to or activation of database *name* cannot be made because of ROLL-FORWARD PENDING.

Explanation: The specified database is enabled for roll-forward recovery and it has been restored but not rolled forward.

No connection was made.

Federated system users: this situation can also be detected by the data source.

User response: Roll forward the database or indicate that you do not wish to roll forward by using the ROLLFORWARD command. Note that if you do not roll forward the database, the records written since the last backup of the database will not be applied to the database.

Federated system users: if necessary isolate the problem to the data source rejecting the request and take recovery action appropriate to that data source to bring

the data source to a point of consistency.

sqlcode: -1117

sqlstate: 57019

SQL1118N A connection to or activation of database *name* cannot be made because a previous backup is incomplete.

Explanation: The database is in an inconsistent state because a system error occurred during a backup function.

No connection was made.

Federated system users: this situation can also be detected by the data source.

User response: Issue the BACKUP command and then try the command again.

Federated system users: if necessary isolate the problem to the data source rejecting the request and issue the BACKUP command against that data source prior to trying the command again.

sqlcode: -1118

sqlstate: 57019

SQL1119N A connection to or activation of database *name* cannot be made because a previous restore is incomplete or still in progress.

Explanation: The database is in an inconsistent state because a system error occurred during a restore function or a restore is still in progress.

No connection was made.

Federated system users: this situation can be detected by the data source.

User response: Ensure that the database has been successfully restored before trying to re-issue the current command.

Federated system users: if necessary isolate the problem to the data source rejecting the request and issue the RESTORE command against that data source prior to trying the command again.

sqlcode: -1119

sqlstate: 57019

SQL1120N A connection to or activation of database *name* cannot be made because a previous backup or restore is incomplete.

Explanation: The database is in an inconsistent state because a system error occurred during a backup or restore function. It cannot be determined if backup or restore was being processed.

SQL1121N • SQL1128W

No connection was made.

Federated system users: this situation can also be detected by the data source.

User response: Issue the BACKUP or RESTORE command, and then try the command again.

Federated system users: if necessary isolate the problem to the data source rejecting the request and issue the BACKUP or RESTORE command against that data source prior to trying the command again.

sqlcode: -1120

sqlstate: 57019

SQL1121N The address of the node structure parameter is not valid.

Explanation: The application used an address for the node structure parameter that is not valid. Either the address points to an unallocated buffer or the buffer is not large enough to contain the required input.

The command cannot be processed.

User response: Verify that the program allocates the required buffer area and resubmit the command.

SQL1122N The address of the protocol structure parameter is not valid.

Explanation: The application used an address for the protocol structure parameter that is not valid. Either the address points to an unallocated buffer or the address points to the incorrect protocol buffer.

The command cannot be processed.

User response: Verify that the program allocates the required buffer area based on the protocol field in the node structure and resubmit the command.

SQL1123N The protocol type is not valid.

Explanation: The protocol type specified in the node structure for the Catalog command does not represent a recognized value. The valid protocol types are defined in the *sqlenv* header files.

The command cannot be processed.

User response: Verify the protocol type in the node structure and resubmit the command.

SQL1124N The remote workstation name *name* is not valid.

Explanation: The remote workstation name specified in the NETBIOS protocol structure for the Catalog command is not specified or contains characters that are not valid. The workstation name must be 1 to 8 characters. Valid characters are A through Z, a through z, 0 through 9, #, @, and \$. The first character must be alphabetic or a special character: #, @, or \$. Lowercase

characters are changed to uppercase by the system.

The command cannot be processed.

User response: Verify the characters specified in the remote workstation name. Resubmit the command with a valid workstation name.

SQL1125N The adapter number *number* is not valid.

Explanation: The adapter number specified in the NETBIOS protocol structure for the Catalog command is not valid.

The command cannot be processed.

User response: Verify that the adapter number is valid and resubmit the command.

SQL1126N The network ID *ID* is not valid.

Explanation: The network ID specified in the APPN protocol structure for the Catalog command is not valid. The network ID identifies the SNA network where the remote logical unit (LU) resides. The network ID must be 1 to 8 characters. Valid characters are A through Z, a through z, 0 through 9, #, @, and \$. The first character must be alphabetic or a special character: #, @, or \$. Lowercase characters are changed to uppercase by the system.

The command cannot be processed.

User response: Verify the characters specified in the network ID. Resubmit the command with a valid network ID.

SQL1127N The remote lu name *name* is not valid.

Explanation: The remote logical unit (LU) name specified in the APPN protocol structure for the Catalog command is not valid. The remote LU name is the remote SNA logical unit name and must be 1 to 8 characters. Valid characters are A through Z, a through z, 0 through 9, #, @, and \$. The first character must be alphabetic or a special character: #, @, or \$. Lowercase characters are changed to uppercase by the system.

The command cannot be processed.

User response: Verify the characters specified in the remote LU name. Resubmit the command with a remote LU name.

SQL1128W SAVECOUNT is ignored. Reason code = *reason-code*.

Explanation: Possible reason codes are as follows:

1

Consistency points are not supported when loading into MDC or ITC tables.

2

The specified filetype does not allow consistency points.

3

Consistency points are not supported when loading into partitioned tables.

4

Consistency points are not supported when loading into tables containing XML columns.

User response: No action is required.

SQL1129N New stored procedure process could not be started because there are insufficient resources for a new process to be created.

Explanation: New stored procedure process could not be started because there are insufficient resources for a new process to be created.

User response: Do one of the following:

- Reduce the number of users using DB2
- Increase the system process limit.

sqlcode: -1129

sqlstate: 42724

SQL1130N New stored procedure process could not be started because the maximum number of processes allowed to be present on the server has been reached.

Explanation: New stored procedure process could not be started because the maximum number of processes allowed to be present at the server at the same time has been reached.

User response: Increase the fenced_pool configuration parameter.

sqlcode: -1130

sqlstate: 42724

SQL1131N A stored procedure process has been terminated abnormally. Routine name: *routine-name*. Specific name: *specific-name*.

Explanation: The DB2 architecture is designed so that applications run in a different address space than the DB2 database server. Running applications in a different address space prevents application programming errors from overwriting database manager internal buffers or files, and prevents application errors from crashing the database manager. The fenced mode process (db2fmp) is responsible for executing fenced stored procedures and user-defined functions in a different address space than the DB2 database server.

This message is returned when the db2fmp process terminates abnormally while running the named routine. The db2fmp process could have terminated abnormally for many reasons, including the following reasons:

- There was a coding error, such as division by zero or an out-of-bounds pointer reference, in the implementation of the stored procedure or user-defined function that the db2fmp process was executing.
- Another process terminated the db2fmp process using a signal, such as the termination signal SIGTERM.

User response:

1. Ensure that there are no coding errors in the stored procedure or user-defined function that could result in abnormal termination by reviewing and unit-testing the stored procedure or user-defined function code.
2. Ensure that other application or users will not send termination signals to the db2fmp process by reviewing the activities of all applications that are running on the system and users who are accessing the system.
3. Run the stored procedure again.

Run the stored procedure again.

sqlcode: -1131

sqlstate: 38503

SQL1132N The command is not allowed to execute within a stored procedure.

Explanation: An illegal command has been made within the scope of stored procedure.

The procedure is not allowed to continue.

User response: Remove the illegal command in the procedure and retry.

sqlcode: -1132

sqlstate: 38003

SQL1133N A pointer address inside an sqlvar (index = *n*) of the output SQLDA was modified within the DARI (Stored Procedure) function.

Explanation: The "sqlind" or the "sqldata" pointer within the sqlvar of the output SQLDA has been altered within the user prepared DARI function.

The stored procedure does not return any data.

User response: Correct the usage of the indicated sqlvar within the output SQLDA so that pointer addresses are not changed within the DARI (Stored

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Procedure) function routine.

sqlcode: -1133

sqlstate: 39502

SQL1134N For the database authentication type CLIENT, the command is not allowed within the scope of a stored procedure.

Explanation: A command that requires SYSADM authorization is not allowed in a stored procedure if the database authentication type is CLIENT.

The stored procedure does not return any data.

The procedure is not allowed to continue.

User response: Remove the unauthorized command in the procedure and rerun the stored procedure.

sqlcode: -1134

sqlstate: 38003

SQL1135N An invalid value was specified for the number of segments when creating a database.

Explanation: The value that was specified for the number of segments was out of range. The valid range is from 1 to 256.

User response: Respecify the number of segments and try to create the database again.

SQL1136N An invalid value was specified for the default table space extent size (dft_extentsize) when creating a database.

Explanation: The value that was specified for the default table space extent size (dft_extentsize) is out of range. The valid range is from 2 to 256.

User response: Correct the table space extent size and try again.

SQL1137W The database manager was unable to remove the database path or some of the containers when dropping database dbalias. Cleanup is required.

Explanation: Either the list of containers could not be accessed or some failure occurred while attempting to remove them or the database directory.

If you are using a cluster manager, this error can be returned if the DB2 database manager failed to remove the container paths for the given database alias from the cluster manager configuration. Error messages from the cluster manager will be recorded in the db2diag log file.

User response: System managed containers (directories) and database managed file containers may

be manually removed using operating system commands. To release device containers, please call your IBM service representative for assistance.

If the log directory has been changed via the New Log Path configuration parameter, then manually unmount the log directory file system and remove the log and database directories.

If you are using a cluster manager, correct the problem and remove the path from the cluster manager configuration:

- Review the db2diag log file for error messages from the cluster manager.
 - Respond to the cluster manager error messages in the db2diag log file to correct the underlying problem that prevented the cluster manager from removing the path from its configuration.
 - Remove the container paths for this database from the cluster manager configuration using the cluster manager's tools and utilities.
-

SQL1138W The unique index *name* was migrated to support deferred uniqueness checking. A new index was not created.

Explanation: A CREATE INDEX operation was attempted on an existing index. Since the index had not yet been migrated to support deferred uniqueness checking, this migration was performed.

The migrated format of the unique index will allow multiple row updates to check the uniqueness of the columns of the index at the end of the update statement instead of when each row is updated.

User response: No action is required.

sqlcode: +1138

sqlstate: 01550

SQL1139N The total size of the table space is too big.

Explanation: The size of the current table space is too big. The size of a REGULAR table space is limited to 0x0100 0000 (16777216) pages while the size of LARGE and TEMPORARY table spaces are limited to 0x7FFF FFFF (2147483391) pages.

User response: Check the administration notification log for details. Reduce the size of the table space and correct the SQL statement.

sqlcode: -1139

sqlstate: 54047

SQL1140W Estimated processor cost of *estimate-amount1* processor seconds (*estimate-amount2* service units) in cost category *cost-category* exceeds a resource limit warning threshold of *limit-amount* service units.

Explanation: The prepare of a dynamic INSERT, UPDATE, DELETE, or SELECT SQL statement resulted in a cost estimate that exceeded the warning threshold value specified in the resource limit specification table (RLST).

This warning is also issued if DB2's cost category value was "B", and the default action specified in the RLF_CATEGORY_B column in the RLST is to issue a warning.

estimate_amount1

The cost estimate (in processor seconds) if the prepared INSERT, UPDATE, DELETE or SELECT statement were to be executed.

estimate_amount2

The cost estimate (in service units) if the prepared INSERT, UPDATE, DELETE or SELECT statement were to be executed.

cost-category

DB2's cost-category for this SQL statement. The possible values are A or B.

limit-amount

The warning threshold (in service units) specified in the RLFASUWARN column of the RLST.

The prepare of the dynamic INSERT, UPDATE, DELETE, or SELECT statement was successful. An SQLCODE -905 might be issued if the execution of the prepared statement exceeds the ASUTIME value specified in the RLST.

User response: Ensure that there is application logic to handle the warning to either allow the statement to execute or to stop the statement from being executed. If this SQLCODE was returned because the cost category value is "B", it might be that the statement is using parameter markers or that some statistics are not available for the referenced tables and columns. Make sure the administrator has run the utility RUNSTATS on the referenced tables. It might also be that UDFs will be invoked when the statement is executed, or for INSERT, UPDATE, or DELETE statements that triggers are defined on the changed table. Check the DSN_STATEMNT_TABLE or the IFCID 22 record for this statement to find the reasons this SQL statement has been put in cost category "B".

If the warning is caused by an SQL statement that is consuming too much processor resource, attempt to rewrite the statement to perform more efficiently. Another option is to ask the administrator to increase the warning threshold value in the RLST.

sqlcode: +1140

sqlstate: 01616

SQL1141N The operation completed with errors or warnings. The details are located in the result file *file-name* that needs to be formatted with the db2inspf utility.

Explanation: In a partitioned database environment, the file extension corresponds to the database partition node number. The files are located in the directory specified by the DIAGPATH database manager configuration parameter.

User response: Use the db2inspf utility to format the inspection data result file *file-name*.

SQL1142N The operation cannot complete because the file *file-name* is already in use.

Explanation: There is an existing file using the file name specified in the INSPECT command.

The command cannot be processed.

User response: Resubmit the command using a different file name that is not already in use. Or remove the existing file *file-name* and resubmit the command.

In a partitioned database environment, the file extension corresponds to the database partition node number. The files are located in the directory specified by the DIAGPATH database manager configuration parameter.

SQL1143N The operation cannot complete because a file error occurred for the file *file-name*.

Explanation: The file could not be accessed because of an I/O error. The system cannot open, read from, or write to the file. The file may be incomplete or the disk may be full.

The utility stops processing.

User response: If possible, record all error information from the SQLCA. Look in the diagnostics log file for additional information.

In a database partitioned environment, the file extension corresponds to the database partition node number. The files are located in the directory specified by the DIAGPATH database manager configuration parameter.

sqlcode: -1143

sqlstate: 5UA0A, 5UA0B

SQL1144N The current transaction was rolled back as a result of a failure creating an index, *sqlcode* =*sqlcode*.

Explanation: In the same transaction, the last remaining index on a table was dropped and then a new index was created on the same table. The index creation either failed with an error, *sqlcode*, or was rolled back by a ROLLBACK TO SAVEPOINT statement (*sqlcode*=0). A rollback of the index creation cannot be successfully completed when a drop index of the last remaining index on a table has not yet been committed. The entire transaction is rolled back for either of these cases. Note that indexes are also created or dropped by adding or dropping unique or primary key constraints in an ALTER TABLE statement.

User response: Where possible, commit the drop of an index before creating a new index on the same table in order to avoid rolling back the entire transaction. If the *sqlcode* is not 0, then refer to the message for the *sqlcode* for corrective action. All statements in the rolled back transaction need to be issued again. If the *sqlcode* is zero and the index is dropped within the savepoint scope, the statements may need to be re-ordered to create the new index before dropping the old index on the same table. If the drop and add unique or primary key constraints are in the same ALTER TABLE statement, this may need to be done in two statements, performing the ADD in the first statement and the drop in the second statement.

sqlcode: -1144

sqlstate: 40507

SQL1145N PREPARE statement is not supported when using a gateway concentrator. Reason code: *reason-code*.

Explanation: The statement failed for one of the following reasons, based on *reason-code*.

- 1 When gateway concentrator feature is ON, dynamically prepared statements from embedded SQL are not supported. In this configuration, dynamically prepared statements are only supported if the client is a CLI application.
- 2 When the gateway concentrator feature is ON, dynamically prepared SET statements are not supported.

User response: Based on the reason code, perform the following actions:

- 1 Change the application to use CLI for dynamic SQL statements, or change the application to use static SQL.
- 2 Use EXECUTE IMMEDIATE for SET statements.

sqlcode: -1145

sqlstate: 560AF

SQL1146N There are no indexes on table *table-name*.

Explanation: The *table-name* specified for index reorganization has no indexes.

User response: Resubmit the command with a valid table name.

SQL1147W TOTALFREESPACE is ignored for MDC and ITC tables.

Explanation: Because the table free space is well managed for MDC and ITC tables, the TOTALFREESPACE file type modifier is unnecessary and will be ignored.

User response: No action required.

SQL1148N The index needs to be refreshed. However, the index resides in a table space which is currently in backup pending state and it cannot be refreshed.

Explanation: The index needs to be refreshed, however, the index resides in a table space which is currently in backup pending state and it cannot be refreshed.

User response: Complete a database or table space backup and resubmit the query or command.

SQL1149N CLP error *clp-msg-id* with short text *clp-msg-short-text* returned. Refer to CLP message documentation for details.

Explanation: A CLP error was encountered. Use the *clp-msg-id* information to look up the appropriate message details for the indicated CLP message.

User response: See the CLP message information for details on what action to take.

sqlcode: -1149

sqlstate: 5U007

SQL1150N The address of the user id parameter is not valid.

Explanation: The application program used an address that is not valid for this parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL1151N Load REMOTEFETCH media options are invalid. Reason Code: *reason-code*.

Explanation: The Load utility was invoked using the REMOTEFETCH media type, but one or more specified arguments is incompatible or invalid. This is due to one of the following reasons:

- 1 The server does not support the REMOTEFETCH media type.
- 2 The source database name was not specified.
- 3 The password field was specified without the user-id field.
- 4 One of the source table-name or schema fields was specified without the other.
- 5 Both the source table-name and source statement fields were specified.
- 6 Neither the source table-name nor source statement fields were specified.
- 7 The isolation-level specified is invalid.
- 8 One of the specified arguments exceeds the maximum applicable size for that argument.
- 9 The SQLU_REMOTEFETCH_ENTRY API structure was not setup correctly.

User response: The responses corresponding to each reason code are:

- 1 Ensure that the server level is version 9 or greater.
- 2 Ensure that the source database-name is specified. This field is mandatory.
- 3 Do not specify the password field without specifying the user-id field.
- 4 If providing a source table-name instead of a source query, ensure that you specify both the source table-name and schema.
- 5 Specify either the source table-name and schema, or the source statement, not both.
- 6 Specify the source table-name and schema, or the source statement.
- 7 Ensure that the isolation level specified is correct.
- 8 Ensure that the arguments provided and their length tokens (API) are all valid.
- 9 Ensure that the SQLU_REMOTEFETCH_ENTRY API structure is set-up and initialized correctly. Unused fields should be NULL. Length values should be set.

SQL1152N Invalid utility priority.

Explanation: The specified priority is not within the legal range of 0 - 100.

User response: Reissue the command with a valid priority.

SQL1153N The utility ID *utility-ID* does not exist.

Explanation: The specified utility ID could not be found. Either an invalid ID has been specified or the utility has already completed.

User response: Verify that the utility exists and resubmit the command. To determine if the utility has completed, review the database manager snapshot data.

SQL1154N Unable to set the priority for a utility that does not support throttling.

Explanation: There has been an attempt to throttle a utility that does not support throttling.

User response: The utility will continue to run unthrottled.

SQL1155W A numeric value that is out of range for the data type has been replaced with the maximum or minimum value, as appropriate.

Explanation: The value to be assigned for a column of a result set from the ADMIN_CMD procedure either is greater than the maximum value for the data type of the column or is less than the minimum value for the data type. If the value was greater than the maximum value, then the maximum value for the data type has been assigned. If the value was less than the minimum value, then the minimum value for the data type has been assigned. For an SMALLINT data type, the value assigned for the maximum is 32767 and the minimum is -32768. For an INTEGER data type, the value assigned for the maximum is 2147483647 and the minimum is -2147483648. For a BIGINT data type, the value assigned for the maximum is 9223372036854775807 and the minimum is -9223372036854775808.

User response: See the db2diag log file for the actual values returned by the ADMIN_CMD procedure.

sqlcode: +1155

sqlstate: 01608

SQL1156N The utility operation ID is not valid.

Explanation: The utility operation ID provided is not valid. It cannot be null and it must be a value previously returned from the SYSPROC.ADMIN_CMD procedure for a utility that was executed by it. However, once the messages have been removed from

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the server by the SYSPROC.ADM_REMOVE_MSGS procedure, the utility operation ID can no longer be used to refer to the messages on the server.

User response: The messages were neither retrieved nor removed from the server. Verify that the correct value was provided. The SYSPROC.ADMIN_CMD procedure returns SQL statements in the MSG_RETRIEVAL and MSG_REMOVAL columns of the first result set. They contain the operation ID that corresponds to the utility being executed. Use these SQL statements for message retrieval or removal.

sqlcode: -1156

sqlstate: 5U008

SQL1157N The routine *routine-name* cannot be invoked in a trigger.

Explanation: The routine *routine-name* is disallowed from being invoked in a trigger. Triggers do not support executing an API, execution of a COMMIT statement and the return of result sets.

User response: Remove the routine reference from the trigger definition.

sqlcode: -1157

sqlstate: 42987

SQL1158N The directory *directory-name* is restricted from access.

Explanation: The directory *directory-name* may contain database sensitive information and so access to it is restricted. In order to maintain database integrity, applications cannot create a new file, read from a file, write to a file, or delete a file under this directory.

User response: Specify a different directory name.

sqlcode: -1158

sqlstate: 42832

SQL1159N Initialization Error with the IBM Data Server Provider for .NET. Reason Code: *reason-code*.

Explanation: Reason codes for this message:

1

The codebase path too short

2

File does not exist

3

The dll cannot be loaded

4

Invalid return code on capabilities query

5

Invalid length on capabilities result

6

The file db2app.dll was not the cli driver

7

Registry key error

8

Structure size mismatch between native and managed code

9

Security violation during remote debugging initialization. Either an invalid security descriptor, pre-existing kernel object, or invalid data in shared memory was encountered.

10

Version mismatch between IBM.Data.DB2.dll and db2app.dll

User response: There was a problem with your DB2 installation. If this is the first time DB2 was installed on this computer, review the install logs for any possible errors and run a repair of DB2 from the Add/Remove Programs control panel applet. The default location of the installation logs is the My Documents/DB2LOG folder of the user that performed the installation. If this does not resolve the issue please contact IBM Support and provide the reason code associated with this message along with any installation logs.

SQL1160N The DOS *network-protocol* TSR has not been loaded.

Explanation: The Terminate and Stay Resident (TSR) network driver for the specified communications protocol has not been loaded. The TSR must be loaded before attempting to use network communications.

User response: Ensure that the TSR for the specified communications protocol has been successfully loaded, then run your application again.

SQL1161W Reconcile processing failed. DataLink column(s) not defined on DB2 DataLinks Manager(s). Check the administration notification log for details.

Explanation: Metadata information about one of more DataLink columns of the table are missing on DB2 DataLinks Managers. Reconcile processing has failed. Table is placed in DataLink Reconcile Not Possible (DRNP) state.

User response: To take the table out of DataLink Reconcile Not Possible state, follow the procedure mentioned under "Removing a table from the DataLink

Reconcile Not Possible state” in the Administration Guide.

SQL1162W Reconcile processing failed. DB2 DataLinks Manager(s) became unavailable during exception processing.

Explanation: One of more DB2 DataLinks Managers referred to by the table data became unavailable during reconcile exception processing. Reconcile processing has failed. Table is placed in DataLink Reconcile Pending (DRP) state.

User response: Run reconcile again.

SQL1163N The table cannot be enabled for data capture as the identifier name *ident-name* of type *ident-type* is too long.

Explanation: Data capture is not supported with certain identifier types exceeding specific lengths. In processing the attempted change, it was found that the identifier *ident-name* of type *ident-type* is too long. The identifier types and the maximum lengths allowed for data capture enablement are as follows:

1. column. Column names cannot be longer than 128 bytes for data capture to be enabled.
2. table. Table names cannot be longer than 128 bytes for data capture to be enabled.
3. schema. Schema names cannot be longer than 128 bytes for data capture to be enabled.

User response: If data capture is to be enabled for this table then ensure that the identifiers in question do not exceed the maximum sizes indicated in the Explanation. Otherwise disable data capture for the table in order to use longer identifier names.

sqlcode: -1163

sqlstate: 42997

SQL1164N The SQLDA or host variables, of type *type*, used in the SQL statement are not valid. Reason code *reason-code*, host variable/SQLVAR number *var-number*.

Explanation: An error occurred while processing the SQLDA or host variable(s) in the SQL statement.

The call parameter list, which is created by the precompiler, may not be correct if the application programmer has modified the output of the precompiler, used a variable name beginning with SQL in the application program, or over-written the call parameter list in another way.

Also, if an SQLDA is passed directly by the application, it may not be initialized correctly.

Host variable/SQLDA types:

- 1 input host variable(s) or SQLDA

- 2 output host variable(s) or SQLDA

In SQL statements with host variables, use the host variable number to count in from the beginning of the statement (or substatement, in the case of compound SQL) to locate the invalid host variable. For statements using an SQLDA, the SQLVAR number is used to locate the invalid SQLVAR. For an input SQLDA, count only input host variables or SQLVARs; similarly for output. Note that this number is based at 1, and may not be applicable to all reason codes. Reason codes are interpreted as follows:

- 1 SQLDA.SQLN is less than SQLDA.SQLD
- 2 SQLVAR.SQLTYPE is invalid.
- 3 The length specified in SQLVAR.SQLLEN or SQLVAR2.SQLLONGLEN is incorrect for the SQL type given in SQLVAR.SQLTYPE.
- 4 A Large Object SQLVAR is present, but the SQLDOUBLED field of SQLDA.SQLDAID is not set to '2'.
- 5 An input varchar is supplied whose current length (from the length field of the varchar itself) is greater than the maximum length. The maximum length is determined by the declaration (in the case of a host variable) or by the setting of SQLVAR.SQLLEN (in the case of a user-defined SQLDA).
- 6 An input Large Object is passed in whose current length (either in the length field of the SQLVAR2.SQLDATALEN pointer) is greater than the maximum length. The maximum length is determined by the declaration (in the case of a host variable) or by the setting of SQLVAR2.SQLLONGLEN (in the case of a user-defined SQLDA).
- 7 A double-byte character Large Object has an odd value indicated by the SQLVAR2.SQLDATALEN pointer, which is always in terms of bytes, even for DBCLOBs.
- 8 The SQLDATA pointer is invalid or points to insufficient storage.
- 9 The SQLIND pointer is invalid or points to insufficient storage.
- 10 The SQLDATALEN pointer is invalid or points to insufficient storage.
- 11 A specific number of input host variables/SQLVARs is expected for the current SQL statement.

The statement cannot be processed.

User response: Examine the application program for any errors noted. Note that the programmer should not attempt to modify the precompiler output.

sqlcode: -1164

sqlstate: 07002

SQL1165W A value cannot be assigned to a host variable because the value is not within the range of the host variable's data type.

Explanation: A FETCH, VALUES, or SELECT into a host variable list failed because the host variable was not large enough to hold the retrieved value.

The statement processing continued returning a null indicator of -2.

User response: Verify that table definitions are current and that the host variable has the correct data type. For the ranges of SQL data types, refer to the *SQL Reference*.

sqlcode: +1165

sqlstate: 01515

SQL1166W Division by zero was attempted.

Explanation: The processing of an arithmetic expression resulted in division by zero. This warning may be returned with a row other than the row which caused the warning. For example, this occurs with arithmetic expressions in predicates or when the query is processed using system temporary tables. The warning may be issued again since it is also returned whenever a null indicator variable is set to -2.

The statement processing continued, using null as the result of the division expression and possibly returning a null indicator of -2.

User response: Examine the SQL statement to determine the cause of the problem. If the problem is data dependent, it is necessary to examine the data processed when the error occurred.

sqlcode: +1166

sqlstate: 01564

SQL1167W Arithmetic overflow or other arithmetic exception occurred.

Explanation: The processing of an arithmetic expression has resulted in an arithmetic overflow, underflow or other arithmetic exception. This warning may be returned with a row other than the row which caused the warning. For example, this occurs with arithmetic expressions in predicates or when the query is processed using system temporary tables. The warning may be issued again since it is also returned whenever a null indicator variable is set to -2.

The statement processing continued, using null as the result of the arithmetic expression and possibly returning a null indicator of -2.

User response: Examine the SQL statement to

determine the cause of the problem. If the problem is data dependent, it is necessary to examine the data processed when the error occurred. Refer to the *SQL Reference* to see the valid ranges for the data types.

sqlcode: +1167

sqlstate: 01519

SQL1168N Load REMOTEFETCH media error.
Reason Code: *reason-code*.

Explanation: The Load utility encountered an error associated with the REMOTEFETCH media. This is due to one of the following reasons:

1 A connection to the database-name specified in the REMOTEFETCH media arguments could not be made.

2 The source table-name specified in the REMOTEFETCH media arguments does not exist or the source table is inaccessible.

3 The source query specified in the REMOTEFETCH media arguments could not be PREPARED.

4 The result set from the source table or query is not compatible with the target table definition.

5 An error occurred while fetching records from the source table or query.

User response: The responses corresponding to each reason code are:

1 Ensure that the database-name, userid, and password arguments are all correct.

2 Ensure that the table-name is correct.

3 Ensure that the query is valid.

4 Ensure that the source table/query and target table have compatible column definitions.

5 Examine the db2diag log file to determine the source of the error.

SQL1169N An error occurred while explaining the statement. Reason code = *reason-code*.

Explanation: The Explain facility has been invoked to explain a statement, previously compiled with REOPT ONCE, but an error occurred as described by one of the following reason codes:

1. The specified statement could not be found in the package cache.
2. The cached statement has not been compiled using REOPT ONCE.
3. The cached statement has been compiled in multiple environments with REOPT ONCE, and can't be uniquely identified.
4. No values could be found for the cached reoptimized statement.
5. A column of an Explain table is too small. The *additional-information* identifies the schema name, table name and column name as well as the column size required to contain the data generated by the Explain facility, using the format *schema-name.table-name.column-name (recommended-size)*.

The *additional-information* might be truncated if the names are very long. The db2diag log file will contain more detail.

User response: The user response corresponding to the reason code is:

1. Ensure that the statement text specified matches the statement text for the statement in the package cache.
2. Recompile the statement using REOPT ONCE. See the Command Reference for details.
3. Ensure that the statement has a unique environment with REOPT ONCE setting.
4. Ensure that the statement gets explained on the database partition it was originally reoptimized on.
5. Decide whether the required column size can be accommodated in your table and database. If it can, increase the column size using the ALTER TABLE statement.

sqlcode: -1169

sqlstate: 560C9

SQL1170N The operation cannot continue because database partition *dbpartition* is not available.

Explanation: The database partition *dbpartition* is not available. This error can occur when new storage paths are being used as part of a RESTORE command, or when a BACKUP command using the ON DBPARTITIONNUM clause is being run.

User response: Resubmit the BACKUP or RESTORE command after the database partition becomes

available. If the unavailable database partition cannot be made available, resubmit the RESTORE command without specifying the new storage paths, or exclude the database partition from the BACKUP command.

sqlcode: -1170

sqlstate: 5U013

SQL1171N Maximum number of storage paths has been reached.

Explanation: The maximum number of storage paths for a storage group is 128 and this has been reached. The CREATE DATABASE command or ALTER STOGROUP statement issued may contain too many paths or the database may already be using the maximum number allowed.

User response: If this error occurred as part of a CREATE DATABASE command then too many storage paths were specified. Reduce the number of storage paths and re-issue the command.

If this error occurred as part of an ALTER STOGROUP statement then either there were more than the maximum allowed number of paths specified, or the number of paths specified plus the number of paths already in use by this storage group is greater than the maximum. Decrease the number of storage paths specified in the ALTER statement and resubmit it.

sqlcode: -1171

sqlstate: 5U009

SQL1172N The restore operation on a non-catalog database partition cannot specify automatic storage paths.

Explanation: The restore operation specified a list of storage paths when restoring to a non-catalog partition in a partitioned database. This is not supported.

User response: Either perform the restore operation again without specifying a list of storage paths, or first restore the catalog partition using the new list of storage paths.

sqlcode: -1172

sqlstate: 5U010

SQL1173N The restore operation must specify automatic storage paths.

Explanation: A previous attempt was made to restore the catalog partition specifying a list of automatic storage paths in a partitioned database, and that restore failed. Any subsequent restore operations on the catalog partition must also specify a list of automatic storage paths. This restriction is removed from the database once the database is returned to normal state via a rollforward operation.

SQL1174N • SQL1179W

User response: Perform the restore operation again, specifying a list of automatic storage paths.

sqlcode: -1173

sqlstate: 5U011

SQL1174N Invalid or incorrect use of database partition expression in path *path*. Reason code = *reason-code*.

Explanation: A database partition expression using the \$N notation was found in the specified path *path* but it is either not permitted or not specified correctly. The reason codes are as follows:

1

A database partition expression was used as part of the database path, specified either implicitly as the first storage path or explicitly using the DBPATH ON option, and this is not permitted.

2

A database partition expression was found within the path but it could not be evaluated due to an error in the syntax.

3

The database partition expression specified a number outside the permitted range. If a number is specified before the N argument (\$[number]N), then the number can be from 2 to 6 inclusive.

User response: Remove the database partition expression from the database path. Alternatively, if the database path is being derived from the first storage path in the list, explicitly provide a database path using the DBPATH ON option where the given database path does not contain a database partition expression. Correct the database partition expression. Resubmit the command.

sqlcode: -1174

sqlstate: 5U012

SQL1175I The number of Load Partitioning Agents was reduced to optimize REMOTEFETCH execution.

Explanation: The Load utility has automatically reduced the number of Partitioning Agents in order to optimize REMOTEFETCH parallelism.

SQL1176N The values assigned to parameter *parameter-1* and parameter *parameter-2* are incompatible.

Explanation: Incompatible values for parameters have been provided to the command or API.

User response: Modify one of the parameters and resubmit the command. See the Command or API Reference for more information on valid values.

SQL1177N Run time execution of routine *routine-name* (specific name *specific-name*) failed in the current DB2 database server environment.

Explanation: OLE, OLEDB and CLR routines can only be created and run on DB2 database servers in Windows operating system environments. The current DB2 database server is not in a Windows operating system environment. The routine cannot be invoked from this server.

User response: Please create the OLE, OLEDB or CLR routine on a DB2 database server in a Windows operating system environment and try again to invoke the routine from that DB2 database server.

sqlcode: -1177

sqlstate: 42997

SQL1178N The federated *object-type* called *object-name* does not reference a federated database object.

Explanation: The object of type *object-type* identified by *object-name* is defined using the keyword FEDERATED but the fullselect in the statement does not reference a federated database object.

The statement cannot be processed.

User response: Remove the keyword FEDERATED from the statement.

sqlcode: -1178

sqlstate: 429BA

SQL1179W The *object-type* called *object-name* may require the invoker to have necessary privileges on data source objects.

Explanation: The object identified by *object-name* references a federated object (such as an OLE DB table function, federated routine, federated view, or a nickname), where the actual data exists at a data source. When the data source data is accessed, the user mapping and authorization checking is based on the user that initiated the operation.

If the *object-type* is SUMMARY TABLE, then the operation is refreshing the data for the materialized query table. The user that invoked the REFRESH TABLE or SET INTEGRITY statement that causes the refresh may be required to have the necessary privileges to access the underlying data source object at the data source.

If the *object-type* is VIEW, then any user of the view may be required to have the necessary privileges to

access the underlying data source object at the data source.

If the *object-type* is PROCEDURE, FUNCTION, or METHOD then the invoker of the routine may be required to have the necessary privileges to access the underlying data source object at the data source for any SQL statements in the routine.

If the *object-type* is PACKAGE and this message results from precompiling or binding an application, then the invoker of the application may be required to have the necessary privileges to access the underlying data source object at the data source for any static SQL statements in the application.

If the *object-type* is PACKAGE and this message results from creating an SQL or XQuery procedure, then the invoker of the procedure may be required to have the necessary privileges to access the underlying data source object at the data source for any SQL statements in the procedure.

In any case, an authorization error may occur when the attempt is made to access the data source object.

User response: Granting privileges to the object may not be sufficient to support operations that access the data from the data source. User access may need to be granted at the data source for the underlying data source objects.

If the *object-type* is PACKAGE and this message results from precompiling or binding an application, specify option FEDERATED YES on the PRECOMPILE (PREP) or BIND command.

If the *object-type* is PACKAGE and this message results from creating an SQL or XQuery procedure, set the precompile and bind options for SQL and XQuery procedures to include option FEDERATED YES. You set the precompile and bind options for SQL and XQuery procedures by setting registry variable DB2_SQLROUTINE_PREOPTS or calling procedure SYSPROC.SET_ROUTINE_OPTS. For example, to set the registry variable, issue the following command at an operating system command prompt:

```
db2set DB2_SQLROUTINE_PREOPTS="FEDERATED YES"
```

sqlcode: +1179

sqlstate: 01639

SQL1180N Routine *routine-name* (specific name *specific-name*) has caused an OLE error. HRESULT=*hresult*. Diagnostic text: *message-text*.

Explanation: DB2 received an OLE error code while trying to communicate with the OLE automation server of user defined function (UDF) or stored procedure *routine-name* (specific name *specific-name*). HRESULT *hresult* is the returned OLE error code, and *message text* is the retrieved error message.

The following shows a partial list of error messages, HRESULTS, and possible causes. The error message text may be changed by OLE, and new error codes may be added by OLE.

Unknown interface (0x80020001):

The specified OLE object does not support the IDispatch interface.

Type mismatch (0x80020005):

One or more of the SQL data types do not match the data types of the method arguments.

Unknown name (0x80020006):

The specified method name was not found for the specified OLE object.

Invalid number of parameters (0x8002000E):

The number of arguments passed to the method is different from the number of arguments accepted by the method.

Invalid class string (0x800401F3):

The specified ProgID or CLSID is invalid.

Class not registered (0x80040154):

CLSID is not properly registered.

Application not found (0x800401F5):

Local server EXE not found.

DLL for class not found (0x800401F8):

In-process DLL not found.

Server execution failed (0x80080005):

Creation of the OLE object failed.

User response: Consult the *OLE Programmer's Reference Guide* for a complete documentation, including the meaning of the special terminology.

sqlcode: -1180

sqlstate: 42724

SQL1181N Routine *routine-name* (specific name *specific-name*) has raised an exception with description *message-text*.

Explanation: The user defined function (UDF) or stored procedure *routine-name* (specific name *specific-name*) has raised an exception. The message text shows the textual description of the exception returned by the routine.

User response: The user will need to understand the meaning of the exception. See the author of the routine.

sqlcode: -1181

sqlstate: 38501

SQL1182N User defined function *function-name* could not initialize data source object of specified OLE DB provider.
HRESULT=*hresult*. **Diagnostic text:** *message-text*.

Explanation: The OLE DB data source object of the specified OLE DB provider could not be instantiated or initialized. *hresult* is the returned OLE DB error code, and *message-text* is the retrieved error message.

The following shows a partial list of HRESULTS and possible causes.

0x80040154

Class (OLE DB provider) not registered.

0x80040E73

The initialization string specified does not conform to specification.

0x80004005

Unspecified error (during initialization).

User response: Verify proper registration of the OLE DB provider and correct initialization of the parameters in the connection string. Consult Microsoft OLE DB Programmer's Reference and Data Access SDK for a complete documentation of HRESULT codes and Data Link API connection string syntax in OLE DB Core Components.

sqlcode: -1182

sqlstate: 38506

SQL1183N User defined function *function-name* received an OLE DB error from specified OLE DB provider.
HRESULT=*hresult*. **Diagnostic text:** *message-text*.

Explanation: The specified OLE DB provider returned an OLE DB error code. *hresult* is the returned OLE DB error code, and *message-text* is the retrieved error message.

The following shows a partial list of HRESULTS and possible causes.

0x80040E14

The command contained one or more errors, for example, syntax error in pass-through command text.

0x80040E21

Errors occurred, for example, the supplied columnID was invalid (DB_INVALIDCOLUMN).

0x80040E37

The specified table does not exist.

User response: Consult Microsoft OLE DB Programmer's Reference and Data Access SDK for a complete documentation of HRESULT codes.

sqlcode: -1183

sqlstate: 38506

SQL1184N One or more EXPLAIN tables were not created using the current version of DB2.

Explanation: EXPLAIN will not be able to insert into these tables until they are migrated using DB2EXMIG, or dropped and created with the EXPLAIN.DDL CLP script for the current version of DB2.

User response: Either migrate the tables using DB2EXMIG, or drop and re-create them with the EXPLAIN.DDL CLP script for the current version of DB2. Re-issue the command.

sqlcode: -1184

sqlstate: 55002

SQL1185N FEDERATED *value* is incorrectly used in binding the package.

Explanation: If *value* is NO, then at least one static SQL statement in the package includes a reference to either a nickname or OLE DB table function or OLE DB procedure. In this case, you must specify FEDERATED YES to bind the package.

If *value* is YES, then no static SQL statement in the package includes a reference to either a nickname or OLE DB table function or OLE DB procedure. In this case, you must specify FEDERATED NO to bind the package.

The package is not created.

User response: Specify the correct FEDERATED option.

SQL1186N The object *object-type* named *object-name* is either being altered to become a federated object, or being created as a federated object, without specifying the FEDERATED clause.

Explanation: The object identified by *object-name* references a federated object (such as an OLE DB table function, federated routine, federated view, or a nickname) where the actual data exists at a data source.

If a non-federated view is being altered and the fullselect now refers to a federated database object, either directly or indirectly, then FEDERATED must be specified.

If a federated view is being altered and the fullselect still refers to a federated database object, either directly or indirectly, then NOT FEDERATED must not be specified.

If a materialized query table is being created and the fullselect refers to a federated database object, either

directly or indirectly, then NOT FEDERATED must not be specified.

If an SQL routine is being created and the routine refers to a federated database object, either directly or indirectly, then NOT FEDERATED must not be specified.

User response: To alter a non-federated view to become a federated view, specify the FEDERATED clause.

To alter a federated view that continues to be a federated view, do not specify the NOT FEDERATED clause.

To create a materialized query table in which the fullselect refers to a federated database object, either directly or indirectly, do not specify the NOT FEDERATED clause.

To create an SQL routine which refers to a federated database object, either directly or indirectly, do not specify the NOT FEDERATED clause.

sqlcode: -1186

sqlstate: 429BA

SQL1187W The database was created or upgraded successfully but an error occurred while creating the detailed deadlocks event monitor *event-monitor-name*. The detailed deadlocks event monitor was not created.

Explanation: The CREATE DATABASE or UPGRADE DATABASE command could not create a detailed deadlocks event monitor for the created or upgraded database.

User response: Create a detailed deadlocks event monitor if desired.

SQL1188N Column *src-col-num* of the SELECT or VALUES statement is not compatible with table column *tgt-col-num*. The source column has *sqltype src-sqltype*, and the target column has *sqltype tgt-sqltype*.

Explanation: The source and target columns are not compatible. This may be a result of an incorrect ordering of the columns in the SELECT or VALUES statement, or of an incorrect ordering of the METHOD P or METHOD N specification.

User response: Correct the command so that the source and target columns are compatible, and then resubmit the command.

SQL1189N The LOAD METHOD specified is invalid for the specified file type.

Explanation: An invalid METHOD was specified for the specified file type.

User response: Resubmit the command with a different METHOD.

SQL1190N The LOAD utility encountered SQLCODE *sqlcode*, SQLSTATE *sqlstate*, and message tokens *token-list*.

Explanation: The LOAD utility encountered an error with the SQLCODE *sqlcode* and has stopped processing.

User response: Look up the SQLCODE *sqlcode* in the Message Reference. Take the required corrective actions, and then resubmit the command.

SQL1191N Column *col-spec* specified in the METHOD parameter does not exist.

Explanation: Column *col-spec* does not exist in the result of the query.

User response: Correct the invalid column specification and resubmit the command.

SQL1192W Too many input sources were specified for the current filetype. The maximum number allowed is *max-input-sources*.

Explanation: The filetype specified does not allow more than *max-input-sources* input sources to be specified for a single load.

User response: Resubmit the command with a number of input sources that does not exceed *max-input-sources*.

SQL1193I The utility is beginning to load data from the SQL statement *statement*.

Explanation: This is an informational message indicating that a load from an SQL statement has begun.

User response: No action is required.

SQL1194W The value in row *row-num* corresponding to target column number *col-num* is not valid. The row has been rejected.

Explanation: Row number *row-num* has been rejected because the value corresponding to target column *col-num* is not a valid value for that column.

Possible reasons are :

- A numeric value is not within the minimum or maximum range of its target column.
- A character value is too long for its target column.

SQL1195N • SQL1198N

User response: Examine the input value. If necessary, define a new table replacing target column *col-num* with a more appropriately defined column and repeat the process.

SQL1195N **The Tools Catalog Database**
database-name **creation or initialization**
failed at *server-name*. **SQLCODE =**
SQLCODE.

Explanation: The Tools Catalog Database *database-name* creation or initialization failed at *server-name*.
SQLCODE = *SQLCODE*.

User response: Refer to the user response for the SQLCODE returned from the operation.

SQL1196W **Backup completed successfully.**
However, one or more Data Links File
Managers could not be contacted. The
timestamp for this backup image is
backup-image-timestamp.

Explanation: Backup completed successfully. One or more Data Links File Managers were not available during backup processing. Additional verification are needed from the Data Links File Managers when they are available.

User response: Bring up the Data Links File Managers that were unavailable during backup processing. Once all the Data Links File Managers can be contacted, DB2 will automatically complete the final verification for this backup image.

SQL1197N **Invalid value specified for keyword**
keyword **in command** *command*.

Explanation: The *keyword* value specified for the *command* is invalid. For numeric values, the value may be outside a defined range. For other types, the value specified is not in the defined set of valid values.

User response: Determine from reference documentation for the *command* what are valid values and make the appropriate change. If this error has been returned by an API, determine from the reference documentation for the *command* API what are valid values for the corresponding API option and make the appropriate change.

SQL1198N **This command is not supported in the**
current downlevel client-server
configuration. Reason code = *reason-code*.

Explanation: The command you have entered is not supported in your current configuration involving either a pre-V8 client or server. The possible reason codes are as follows:

1

Scrollable cursors are not supported from a pre-V8 client through a V8 or later gateway to a DB2 server.

2

Utility commands are not supported from a pre-V8 client through a V8 or later gateway to any DB2 server.

3

Access to a pre-V8 server through a V8 or later gateway is not supported.

4

Utility commands are not supported to a pre-V8 server from a V8 or later client.

5

Pre-V8 clients may only access tables, table functions, and procedures that are created with the CCSID value whose corresponding code page is the same as the database code page.

6

Tablespace point-in-time rollforward commands are not supported from a pre-V9 client to a V9 or later server because some of the function of these commands runs on the client side. The pre-V9 client is NOT able to perform these operations when connected to a V9 or later server.

7

The back-level API is not supported in the current client-server configuration.

98

Operation not supported to a pre-V8 server from a V8 or later client.

99

Operation not supported from a pre-V8 client to a V8 or later server.

User response: The action is based on the reason code as follows:

1

Do not use scrollable cursors from a downlevel client through a gateway. Use a direct client-server connection or upgrade your client to a compatible release.

2

Do not issue utility commands from a downlevel client through a gateway. Use a direct client-server connection or upgrade your client to a compatible release.

3

4 Use a compatible level of gateway or configure a direct connection (non-gateway) to the server.

5 Use a compatible client level to issue V8 utility commands.

6 Use a V8 or later client to access tables, table functions and procedures that are created with the CCSID value whose corresponding code page is the different than the database code page.

7 Resubmit the rollforward to a point in time command using a V9.1 client. Alternatively, roll forward to the end of logs (instead of to a point in time).

98 Use a newer version of the API in order to proceed in the current client-server configuration.

99 Use a compatible level of client to issue this command or consider upgrading your server's level of code.

Use a compatible level of server to issue this command or consider upgrading your client's level of code.

sqlcode: -1198

sqlstate: 42997

SQL1200N The object parameter is not valid.

Explanation: The value specified for the object parameter in the COLLECT DATABASE STATUS function call is not valid. Valid values are:

SQL_E_DATABASE

Status is to be collected for a single database.

SQL_E_DRIVE

Status is to be collected for all LOCAL databases on a single path.

SQL_E_LOCAL

Status is to be collected for all LOCAL databases.

The command cannot be processed.

User response: Correct the object parameter and resubmit the COLLECT DATABASE STATUS function call.

SQL1201N The status parameter is not valid.

Explanation: The value specified for the status parameter in the COLLECT DATABASE STATUS function call is not valid. Valid values are:

SQL_E_SYSTEM

System status is to be collected.

SQL_E_DATABASE

System status and database status is to be collected.

SQL_E_ALL

System status, database status and user status is to be collected.

The command cannot be processed.

User response: Correct the status parameter and resubmit the COLLECT DATABASE STATUS function call.

SQL1202N Status has not been collected.

Explanation: The value specified for the *handle* parameter in the GET NEXT DATABASE STATUS BLOCK or the FREE DATABASE STATUS RESOURCES function calls is not valid. The handle must be the one returned as the positive function value from the COLLECT DATABASE STATUS function call.

This is the second COLLECT DATABASE STATUS call made from the process. The first COLLECT DATABASE STATUS call terminates and its handle can no longer be used.

The command cannot be processed.

User response: Correct the *handle* parameter and resubmit the COLLECT DATABASE STATUS function call.

SQL1203N The database has no users connected.

Explanation: A request was made for user status on a database, but the database has no users connected.

The command cannot be processed.

User response: Verify the database name and the connection status. Resubmit the command with a database currently being used.

SQL1204N The code page *code-page* and/or territory code *territory-code* is not supported by the installed version of the database manager.

Explanation: This version of the database manager does not support the active code page or territory code or both.

The command cannot be processed.

Choose an active code page and territory code

SQL1205N • SQL1212N

supported by this version of the database manager.

Federated system users: if necessary isolate the problem to the data source rejecting the request and choose an active code page and territory code supported by both the federated server and the data source.

User response: Exit the current program and return to the operating system.

sqlcode: -1204

sqlstate: 22522

SQL1205N The code page *code-page* and/or territory code *territory* that has been specified is not valid.

Explanation: This version of DB2 does not support the active code page or territory code or both, as specified by the Create Database command.

The command cannot be processed.

User response: Refer to the Create Database command in the *Command Reference* for details of valid code page and territory code pairs supported by DB2/2.

SQL1206N PRUNE LOGFILE is not supported in this database configuration.

Explanation: The PRUNE LOGFILE request is not supported if:

1. the database is not in recoverable mode. A database is in recoverable mode if LOGARCHMETH1 is set to DISK, TSM, VENDOR, USEREXIT, or LOGRETAIN, or if LOGARCHMETH2 is set to DISK, TSM, or VENDOR.
2. the active logfile path is set to a raw device.

User response: Do not issue the PRUNE LOGFILE command for this database.

SQL1207N Communication Manager configuration file *name* cannot be found.

Explanation: The Communication Manager configuration file name specified on the CATALOG NODE command was not found either in the path specified or in the CMLIB directory on the default drive.

The command cannot be processed.

User response: Resubmit the command with the correct configuration file name and path.

SQL1208W The performance of the Load utility might be constrained by the available memory.

Explanation: The Load utility is unable to allocate all requested memory. Success of the operation is unaffected, but performance might be suboptimal. The

memory available to the Load utility is determined either by the value of the DATA BUFFER Load option, or by the value of the util_heap_sz database configuration parameter.

User response: If appropriate, increase the memory limits for future invocations of the Load utility.

SQL1209W The partner_lu name *name* specified in the CATALOG NODE function does not exist. One was created.

Explanation: The logical partner unit name specified in the CATALOG NODE function does not exist in the Communications Manager configuration file located in the CMLIB directory on the default drive.

A logical unit profile of the specified name was created.

User response: No action is required.

SQL1210W Default values were returned for one or more configuration file parameters.

Explanation: One or more of the DOS Requester/WINDOWS Requester configuration values returned was defaulted. The parameter may not be defined in the DOS Requester/WINDOWS Requester configuration file or the configuration file could not be opened or an error occurred reading the file.

User response: Ensure that the DOS Requester/WINDOWS Requester configuration file exists in the appropriate path and that the parameters are explicitly defined.

SQL1211N The computer name *name* is not valid.

Explanation: The computer name specified in the NPIPE protocol structure for the Catalog command is not valid. The size of the computer name must be 15 characters or less.

The command cannot be processed.

User response: Verify that the computer name is valid and resubmit the command.

SQL1212N The instance name *name* is not valid.

Explanation: The instance name specified for the Catalog command is not valid. The size of the instance name must be 8 characters or less.

The command cannot be processed.

User response: Verify that the instance name is valid and resubmit the command.

SQL1213N The change password LU name *name* is not valid.

Explanation: The change password logical unit (LU) name specified in the APPN protocol structure for the CATALOG command is not valid.

The change password LU name is the remote SNA LU name and must be 1 to 8 characters. Valid characters are A through Z, a through z, 0 through 9, #, @, and \$. The first character must be alphabetic or a special character: #, @, or \$. Lowercase characters are changed to uppercase by the system.

The command cannot be processed.

User response: Verify the characters specified in the change password LU name.

Resubmit the command with a valid change password LU name.

SQL1214N The transaction program name *name* is not valid.

Explanation: The transaction program (TP) name specified in the APPN protocol structure for the CATALOG command is not valid.

The TP name is the remote SNA Application TP name and must be 1 to 64 characters. Valid characters are A through Z, a through z, 0 through 9, #, @, and \$. The first character must be alphabetic or a special character: #, @, or \$.

The command cannot be processed.

User response: Verify the characters specified in the TP name.

Resubmit the command with a TP name.

SQL1215N The LAN adapter address *address* is not valid.

Explanation: The LAN adapter address specified in the APPN protocol structure for the CATALOG command is not valid.

The LAN adapter address is the remote SNA LAN adapter address and must be a 12-hexadecimal number.

The command cannot be processed.

User response: Verify the LAN adapter address.

Resubmit the command with a valid LAN adapter address.

SQL1216N Graphic data and graphic functions are not supported for this database.

Explanation: The code page of the database does not support graphic data. The data types GRAPHIC, VARGRAPHIC, LONG VARGRAPHIC, and DBCLOB are not valid for this database. The GRAPHIC literal

and the VARGRAPHIC scalar functions are not valid for this database.

The statement cannot be processed.

Federated system users: this situation can also be detected by the data source.

User response: Resubmit the command with valid data types.

sqlcode: -1216

sqlstate: 56031

SQL1217N The REAL data type is not supported by the target database.

Explanation: An SQL operation is using a data type of REAL (single-precision floating point number) as an input or output variable. The REAL data type is not supported on the target database for this request.

The statement is not processed.

User response: Replace the declaration of any host variable that corresponds to the SQL data type of REAL with a declaration that corresponds to an SQL data type of DOUBLE in your application.

sqlcode: -1217

sqlstate: 56099

SQL1218N There are no pages currently available in bufferpool *buffpool-num*.

Explanation: All of the pages in the bufferpool are currently being used. A request to use another page failed.

The statement cannot be processed.

User response: The bufferpool is not large enough to provide pages to all database processes or threads at this time. The bufferpool is too small or there are too many active processes or threads.

The statement may be successful if executed again. If this error occurs frequently, some or all of the following actions may prevent further failures:

1. increase the bufferpool size
2. decrease the maximum number of database agents and/or connections
3. decrease the maximum degree of parallelism
4. decrease the prefetch size for table spaces that are in this bufferpool
5. move some table spaces into other bufferpools.

sqlcode: -1218

sqlstate: 57011

SQL1219N The request failed because private virtual memory could not be allocated.

Explanation: The instance was unable to allocate enough private virtual memory to process the request. This may be a result of shared memory allocations made in other (unrelated) processes.

User response: The problem may be corrected by:

- Stopping other applications running on the machine, especially those that use large amounts of shared memory.

sqlcode: -1219

sqlstate: 57011

SQL1220N The database manager failed to allocate shared memory.

Explanation: The database manager allocates and deallocates memory at various times. Memory might be allocated to a particular memory area when a specific event occurs (for example, when an application connects), or memory might be reallocated in response to a configuration change.

In general, this message is returned when the database manager cannot perform an operation because of one of the following problems:

- There are insufficient database manager memory resources
- There are insufficient environment memory resources

Specifically, this message can be returned when there are allocation or configuration problems with the following types of memory resources:

- The instance memory
- The amount of physical memory available in the system
- The number of shared memory identifiers allocated in the system
- The size of the shared memory segment
- The amount of paging or swapping space available in the system

User response: Respond to this message by investigating the current memory configuration:

- Set the instance_memory database manager configuration parameter to AUTOMATIC.
- Validate that sufficient memory resources are available to satisfy the database manager's requirements, and those of the other programs running on the system.
- On Linux 32-bit, increase the kernel parameter `shmmax` to 256 MB. On Linux 64-bit, increase the kernel parameter `shmmax` to 1GB.

- Where appropriate, free system resources for the database manager to use, by stopping other programs that are using the system.
-

SQL1221N The Application Support Layer heap cannot be allocated.

Explanation: The Application Support Layer heap could not be allocated. The cause of this error may be insufficient memory resources either for the database manager or the environment in which its operations are being attempted. Memory resources that can cause this error include:

- The number of shared memory identifiers allocated in the system
- The amount of paging or swapping space available in the system
- The amount of physical memory available in the system

User response: One or more of the following:

- Validate that sufficient memory resources are available to satisfy the database manager's requirements, and those of the other programs running on the system.
- Reduce the `aslheapsz` configuration parameter.
- Where appropriate, stop other programs using the system.

sqlcode: -1221

sqlstate: 57011

SQL1222N Not enough storage is available in the Application Support Layer heap to process the request.

Explanation: All available memory in the Application Support Layer heap has been used.

User response: Increase the `aslheapsz` configuration parameter.

sqlcode: -1222

sqlstate: 57011

SQL1224N The database manager is not able to accept new requests, has terminated all requests in progress, or has terminated the specified request because of an error or a forced interrupt.

Explanation: There are many reasons for which this message can be returned, including the following reasons:

Client/server configuration problems

- In client/server environments using the TCP/IP protocol: The port number assigned to the TCP/IP service name on the client is

not the same as the port number on the server. The error condition can be detected by the federated server or by the data source.

A database manager agent was unavailable

- The database manager was stopped or had not been started on the database server.
- An administrator forced a database agent off the system.
- A database manager process terminated abnormally.

The user ID had insufficient authority

- The user ID was forced off of the system when another user with SYSADM authority issued a FORCE QUIESCE command. The FORCE QUIESCE command forces off of the system all users who do not have CONNECT QUIESCE authority for the database or instance or who do not belong to a group that has CONNECT QUIESCE authority.
- In Windows operating system environments: Extended Security was enabled, and the user ID was not a member of the DB2USERS or DBADMINS group.

Database directory conflicts

- There were two databases, one local and one remote, with the same database name and same database alias.
- A local database was cataloged as a remote database.
- After a change was made to the way that one or more databases were cataloged, the changes did not take effect because the database manager is still using a cached copy of the database cataloging information.

A configured database limit or a system resource limit was reached

- The application was using more transaction log space than allowed by the max_log database configuration parameter or the num_log_span database configuration parameter.
- There were insufficient coordinator agents to process the application requests. Applications that hold locks in WITH HOLD cursors and are queued for execution in concentrator mode might cause active agents to be held up waiting for those locks.
- The connection was idle for longer than the time specified in the CONNECTIONIDLETIME threshold.
- A unit of work on the connection lasted longer than the time specified in the UOWTOTALTIME threshold and the

connection was terminated because the threshold action specified FORCE APPLICATION.

- A query took longer than the time specified in the SQL_ATTR_QUERY_TIMEOUT statement attribute.

The requested function is not supported

- An attempt was made to connect to a member that was in restart light mode.

User response: Reconnect to the database.

If the connection continues to fail, perform the following troubleshooting steps with the assistance of a database administrator:

1. Federated environments only: Determine whether it is a federated data source that is returning the error or the federated database server that is returning the error.
2. Ensure that client/server configuration is correct:
 - a. Confirm whether the communication subsystem (including network cables, network cards, and communication protocols such as TCP/IP) is up and running.
 - b. In client/server environments using the TCP/IP protocol: Assign the same port number to the TCP/IP service name on the client as the port number on the server.
3. Ensure the database manager is up and running:
 - a. Determine whether the DB2 database manager is up and running.
 - b. Review the db2diag log files for evidence that a database manager process was interrupted or terminated abnormally.
 - c. If the database manager is stopped, or if there is evidence in the diagnostic logs of any database manager agents being interrupted or terminating abnormally, restart the database manager.
4. Ensure that the user ID has authority:
 - If the database or instance was quiesced, take one of the following actions:
 - Unquiesce the database or instance.
 - Add the user ID to the group that has CONNECT QUIESCE authority.
 - In Windows operating system environments: If Extended Security is enabled, add the appropriate user ID to the local Windows security group DB2USERS or DBADMINS.
5. Remove any database directory conflicts:
 - a. Compare the contents of the local database directory and the system catalog to the database configuration. In particular, look for the following problems:
 - Ensure that no two databases have the same name or alias as each other.

- Ensure that local database are cataloged as local, and that any remote databases are cataloged as remote.
 - b. After making any changes to the ways databases have been cataloged, stop and restart the database manager instance.
6. Make necessary configuration and application changes to avoid exceeding database or operating system limits:

Determine which limit was exceeded by reviewing db2diag log files, and then make one or more of the following changes:

- Reduce the chance of applications being forced off for using too much transaction log space by make one or more of the following changes:
 - Alter the application to issue more frequent commit statements.
 - Increase the max_log database configuration parameter or the num_log_span database configuration parameter.
 - Reduce the chance of applications being forced off because there are insufficient coordinator agents by make one or more of the following changes:
 - Increase the value of max_coordagents relative to the value of max_connections.
 - Reduce the use of WITH HOLD cursors.
 - Reduce the chance of connections being closed for being idle for too long by increasing the CONNECTIONIDLETIME threshold.
 - Reduce the chance of connections being closed because a unit of work is taking too long to execute by increasing the UOWTOTALTIME threshold.
 - Reduce the chance of queries timing out by increasing the SQL_ATTR_QUERY_TIMEOUT statement attribute or using the QueryTimeoutInterval CLI/ODBC configuration keyword.
 - In AIX, 32-bit environments: reduce the chance of running out of AIX shared memory by making one or more of the following changes:
 - Catalog the database as a loopback data source using TCP/IP.
 - If the application is using multiple contexts with local protocol, then either reduce the number of connections in the application, or switch to another protocol, such as TCP/IP.
 - Set the EXTSHM parameter if the application supports the EXTSHM parameter and if there are sufficient memory resources to use the parameter.
7. Alter the application as needed to avoid unsupported usage scenarios:
- To avoid connecting to a DB2 member that is in restart light mode, either specify a member that is

not in restart light mode, or do not specify any specific member and allow the database manager to route the connection to an appropriate member.

sqlcode: -1224

sqlstate: 55032

SQL1225N The request failed because an operating system process, thread, or swap space limit was reached.

Explanation: An operating system process, thread, or swap space limit was reached. You can find more information about the problem in the administration notification log.

User response: Check the administration notification log to determine which limit was reached and increase that limit.

sqlcode: -1225

sqlstate: 57049

SQL1226N The maximum number of client connections are already started.

Explanation: The number of client connections is already equal to the maximum value defined for the instance in the system configuration file.

This error might be reported for system-driven connections used for maintenance operations. Such connections are capped at a percentage of the active user workload. When no more connections are allowed, these operations will be retried at a later time automatically.

The operation cannot be processed.

User response: Wait for other applications to disconnect from the database. If one or more applications are required to run concurrently, increase the value for max_connections. If the error was returned from a client connection attempt, you might also want to consider setting max_connections to AUTOMATIC to allow any number of connections so long as there is enough memory to support them. If the value for max_connections is larger than the value for max_coordagents, the concentrator feature is turned on.

sqlcode: -1226

sqlstate: 57030

SQL1227N The catalog statistic *value* for column *column* is out of range for its target column, has an invalid format, or is inconsistent in relation to some other statistic. Reason Code = *code*.

Explanation: The value or format of a statistic

provided for an updatable catalog is either invalid, out of range, or inconsistent. The most common checks for value, range and format are (corresponding to *code*):

1

Numeric statistics must be -1 or ≥ 0 .

2

Numeric statistics representing percentages (eg. CLUSTERRATIO) must be between 0 and 100.

3

HIGH2KEY, LOW2KEY related rules:

- The data type of any HIGH2KEY, LOW2KEY value must be the same as the data type of the corresponding user column.
- The length of HIGH2KEY, LOW2KEY value must be the smaller of 33 or the target column's data type's maximum length.
- HIGH2KEY must be $>$ LOW2KEY whenever there are 3 or more distinct values in the corresponding column. In the case of less than 3 distinct values in the column, HIGH2KEY can be equal to LOW2KEY.

4

PAGE_FETCH_PAIRS related rules:

- Individual values in the PAGE_FETCH_PAIRS statistic must be separated by a series of blank delimiters.
- There must be exactly 11 pairs in a single PAGE_FETCH_PAIR statistic.
- There must always be a valid PAGE_FETCH_PAIRS value if the CLUSTERFACTOR is > 0 .
- Individual values in PAGE_FETCH_PAIRS statistics must not be longer than 19 digits and must be less than the maximum integer value (MAXINT = 9223372036854775807).
- Buffer size entries of PAGE_FETCH_PAIRS must be ascending in value. Also, any buffer size value in a PAGE_FETCH_PAIRS entry cannot be greater than MIN(NPAGES, 1048576) for 32-bit platforms and MIN(NPAGES, 2147483647) for 64-bit platforms where NPAGES is the number of pages in the corresponding table.
- "fetches" entries of AVGPARTITION_PAGE_FETCH_PAIRS must be descending in value, with no individual fetches entry being less than NPAGES. Also, any "fetch" size value in a AVGPARTITION_PAGE_FETCH_PAIRS entry must not be greater than CARD (cardinality) statistic of the corresponding table.

5

- If buffer size value is the same in two consecutive pairs, then page fetch value must also be the same in both the pairs.

CLUSTERRATIO and CLUSTERFACTOR related rules:

- Valid values for CLUSTERRATIO are -1 or between 0 and 100
- Valid values for CLUSTERFACTOR are -1 or between 0 and 1
- Either CLUSTERRATIO or CLUSTERFACTOR must be -1 at all times.
- If CLUSTERFACTOR is a positive value, it must be accompanied by a valid PAGE_FETCH_PAIR statistic.

6

The cardinality of a column (COLCARD statistic in SYSCOLUMNS) or column group (COLGROUPCARD in SYSCOLGROUPS) cannot be greater than the cardinality of its corresponding table (CARD statistic in SYSTABLES).

7

No statistics are supported for user-defined structured types. For columns with the following data types, statistics support is limited to AVGCOLLEN and NUMNULLS: LONG VARCHAR, LONG VARGRAPHIC, BLOB, CLOB, and DBCLOB.

8

A statistic is inconsistent with other related statistics for this entity or is invalid in this context.

9

For tables that are not partitioned, the following table partitioning statistics in SYSSTAT.INDEXES cannot be updated: AVGPARTITION_CLUSTERRATIO, AVGPARTITION_CLUSTERFACTOR, AVGPARTITION_PAGE_FETCH_PAIRS, DATAPARTITION_CLUSTERFACTOR

10

AVGPARTITION_PAGE_FETCH_PAIRS related rules:

- Individual values in the AVGPARTITION_PAGE_FETCH_PAIRS statistic must be separated by a series of blank delimiters.
- There must be exactly 11 pairs in a single AVGPARTITION_PAGE_FETCH_PAIR statistic.
- There must always be a valid AVGPARTITION_PAGE_FETCH_PAIRS

value if the
AVGPARTITION_CLUSTERFACTOR is > 0.

- Individual values in
AVGPARTITION_PAGE_FETCH_PAIRS
statistics must not be longer than 19 digits
and must be less than the maximum integer
value (MAXINT = 9223372036854775807).
- Buffer size entries of
AVGPARTITION_PAGE_FETCH_PAIRS
must be ascending in value. Also, any buffer
size value in a
AVGPARTITION_PAGE_FETCH_PAIRS
entry cannot be greater than MIN(NPAGES,
1048576) for 32-bit platforms and
MIN(NPAGES, 2147483647) for 64-bit
platforms where NPAGES is the number of
pages in the corresponding table.
- "fetches" entries of
AVGPARTITION_PAGE_FETCH_PAIRS
must be descending in value, with no
individual fetches entry being less than
NPAGES. Also, any "fetch" size value in a
AVGPARTITION_PAGE_FETCH_PAIRS
entry must not be greater than CARD
(cardinality) statistic of the corresponding
table.
- If buffer size value is the same in two
consecutive pairs, then page fetch value
must also be the same in both the pairs.

11

AVGPARTITION_CLUSTERRATIO and
AVGPARTITION_CLUSTERFACTOR related
rules:

- Valid values for
AVGPARTITION_CLUSTERRATIO are -1 or
between 0 and 100.
- Valid values for
AVGPARTITION_CLUSTERFACTOR are -1
or between 0 and 1.
- Either AVGPARTITION_CLUSTERRATIO or
AVGPARTITION_CLUSTERFACTOR must
be -1 at all times.
- If AVGPARTITION_CLUSTERFACTOR is a
positive value, it must be accompanied by a
valid AVGPARTITION_PAGE_FETCH_PAIR
statistic.

12

DATAPARTITION_CLUSTERFACTOR related
rules:

- Valid values for
DATAPARTITION_CLUSTERFACTOR are -1
or between 0 and 1.

13

AVGCOMPRESSEDROWSIZE related rules:

- Valid values for
AVGCOMPRESSEDROWSIZE are -1, or
between 0 and AVGGROWSIZE.

14

AVGROWCOMPRESSIONRATIO related rules:

- Valid values for
AVGROWCOMPRESSIONRATIO are -1, or
greater than 1.

15

PCTROWSCOMPRESSED related rules:

- Valid values for PCTROWSCOMPRESSED
are -1, or between 0 and 100, inclusive.

User response: Make sure the new catalog statistic
satisfies the indicated range, length and format checks.

Make sure that any updates to statistics are consistent
in their inter-relationships (eg. cardinality).

For tables that are not partitioned, do not attempt to
update statistics columns that are specific to partitioned
tables.

sqlcode: -1227

sqlstate: 23521

**SQL1228W DROP DATABASE has completed but
the database alias name or database
name *name* could not be found on *num*
nodes.**

Explanation: The drop database command has
completed successfully, however, there are some nodes
where the database alias or database name was not
found. It is possible that DROP DATABASE AT NODE
was already performed on these nodes.

User response: This is a warning message only. No
response is necessary.

**SQL1229N The current transaction has been rolled
back because of a system error.**

Explanation: One of the following has occurred:

1. A system error, such as member failure or
connection failure, has occurred. The application is
rolled back to the previous COMMIT.

Note that in the case of DB2 utility functions, the
behavior is described as follows:

Import

The application is rolled back. If the
COMMITCOUNT parameter was used, the
operation is rolled back to a previous
committed point.

Reorg

The operation is aborted and must be
resubmitted.

Redistribute

The operation is aborted, however, some of the operation might have been successful. Issuing the request again with the "continue" option will restart the operation from the point of failure.

Rollforward

The operation is aborted and the database is still in rollforward pending state. The command must be resubmitted.

Backup/Restore

The operation is aborted and must be resubmitted.

- The service port numbers assigned for FCM (Fast Communication Manager) communications are not the same on all the members in the DB2 instance. Check the services file being used on all members to ensure that the ports are the same. The ports are defined using the format:

```
DB2_<instance>      xxxx/tcp
DB2_<instance>_END  xxxx/tcp
```

where <instance> is the DB2 instance name and xxxx is the port number. Ensure that these port numbers are not being used for DB2 remote client support.

User response:

- Try the request again. If the error persists, you can find more information about the problem in the administration notification log. It might be necessary to contact the system administrator for assistance since the most common reason for this error is that a member has failed.

In an environment where the netname and the hostname that are defined in the db2nodes.cfg file are different, this error can be a symptom of a failure in the netname interface. This applies to both multi-partition database environments and DB2 pureCluster environments.

- Update the service ports to be the same on all the members and try the request again.

The sixth sqlerrd field of the SQLCA will indicate the member number that detected the member failure. On the member that detected the failure, a message will be placed in the db2diag log file that identifies the member that failed.

sqlcode: -1229

sqlstate: 40504

SQL1230W At least one agent id specified could not be forced.

Explanation: At least one agent id specified on the Force command could not be forced. Causes of this warning may be:

- A nonexistent or invalid agent id was specified.
- The agent disconnected from the database manager between the time that the agent ids were collected and the Force command was issued.
- The agent id specified was for a parallel agent which cannot be forced.

User response: If a nonexistent or invalid agent id was specified, retry the command using the valid agent id.

SQL1231N Invalid Force count specified.

Explanation: The value specified for the count parameter of the Force command is not valid. The value specified must either be a positive integer or SQL_ALL_USERS. A value of 0 will result in an error.

User response: Correct the value of count and resubmit the command.

SQL1232N Invalid Force mode specified.

Explanation: The value specified for the mode parameter of the Force command is not valid. Only asynchronous mode is supported for the Force command. The parameter must be set to the value SQL_ASYNCH.

User response: Set the mode to SQL_ASYNCH and resubmit the command.

SQL1233N The use of this data type, clause or scalar function is supported only for a Unicode database.

Explanation: The following is supported only for a Unicode database:

- The NCHAR, NVARCHAR, and NCLOB data types.
- Specifying a UCS-2 hexadecimal constant using the format UX'hex-digits'.
- The NCHAR, NVARCHAR, NCLOB, TO_NCHAR, TO_NCLOB and EMPTY_NCLOB scalar functions.
- Specifying a graphic expression as the first argument of the VARCHAR scalar function.
- Specifying a graphic expression as the first argument of the VARGRAPHIC scalar function when a second argument is specified.

The statement cannot be processed.

User response: Remove the use of the data type, clause, or scalar function that can only be used for a Unicode database.

sqlcode: -1233

sqlstate: 560AA

SQL1234N The table space *tablespace-name* cannot be converted to a LARGE table space.

Explanation: Only REGULAR DMS table spaces can be converted to a LARGE DMS table space. The system catalog table space, SMS table spaces, and temporary table spaces cannot be converted to be a LARGE table space.

User response: Verify the attributes of the table space by issuing SELECT TBSPACE, TBSPACETYPE, DATATYPE FROM SYSCAT.TABLESPACES WHERE TBSPACE = '*tablespace-name*'. The table space cannot be the system catalog table space (TBSPACE cannot be 'SYSCATSPACE'), must be a DMS table space (TBSPACETYPE must be 'D'), and also must be a REGULAR table space (DATATYPE must be 'A').

sqlcode: -1234

sqlstate: 560CF

SQL1235N The table space *tablespace-name* is restricted by table *table-name* from being converted to be a LARGE table space.

Explanation: The partitioned table has data partitions in multiple regular DMS table spaces. The table space must contain all of the data partitions of a partitioned table in order to be converted to be a LARGE table space.

User response: To successfully convert the table spaces of the partitioned table:

1. For each table space containing data partitions of the partitioned table (except for one of the table spaces), detach the data partitions in these table spaces from the partitioned table. Commit the detach actions.
2. Convert each of these table spaces using the COVERT TO LARGE option of the ALTER TABLESPACE statement. Commit each statement.
3. Convert the table space containing the remaining data partitions of the partitioned table. Commit this action.
4. Rebuild the indexes on the partitioned table using REORG INDEXES ALL FOR TABLE *table-name* ALLOW NO ACCESS, or by reorganizing the partitioned table.
5. Reorganize each new table resulting from the detach of data partitions.
6. Re-attach each table to the partitioned table.

sqlcode: -1235

sqlstate: 560CF

SQL1236N The REORG command failed. Table *table-name* cannot allocate a new page because the index with identifier *index-id* does not yet support large RIDs.

Explanation: The table space in which this table resides was converted to a LARGE table space via the CONVERT TO LARGE clause of the ALTER TABLESPACE statement. The table itself cannot support large RIDs until all previously existing indexes on the table have been reorganized or rebuilt to support large RIDs. The index(es) must be reorganized or rebuilt to support future growth of this table.

User response: The indexes can be reorganized using the rebuild option of the REORG INDEXES ALL FOR TABLE *table-name* command. For partitioned tables, ALLOW NO ACCESS must be specified. Alternatively, the table can be reorganized (REORG TABLE without the INPLACE clause) which will not only rebuild all indexes, but will enable the table to support greater than 255 rows per page.

sqlcode: -1236

sqlstate: 55066

SQL1237W Table space *tbspace-name* is being converted from REGULAR to LARGE. Indexes on tables in this table space must be reorganized or rebuilt to support large RIDs.

Explanation: The table space being converted can, following COMMIT, support a storage capacity larger than that of a regular table space. The maximum page number for a data page in a regular table space is 0x00FFFFFF. For a table to support a page number above 0x00FFFFFF, the indexes on the table must be reorganized or rebuilt.

User response: The documentation for the ALTER TABLESPACE statement in the SQL Reference specifies the best practices when using the CONVERT TO LARGE option. Please follow these recommendations to be pro-active in reorganizing or rebuilding all indexes on all tables in this table space to prevent possible future failures when a page number above 0x00FFFFFF is allocated to a table.

sqlcode: +1237

sqlstate: 01686

SQL1238N The result set specified to be returned to the client is invalid. Reason code = *reason-code*.

Explanation: The result set specified by the WITH RETURN TO CLIENT clause in the CREATE PROCEDURE (Sourced) statement is not valid. Possible reason codes are:

- 1 If the data source is Microsoft SQL Server,

Sybase, or Informix, the result set specified by the position number in the returned set of result sets in the WITH RETURN TO CLIENT clause in the CREATE PROCEDURE (Sourced) statement is not equal to 1.

- 2 If the data source is Oracle, the largest position number in the returned set of result sets in the WITH RETURN TO CLIENT clause in the CREATE PROCEDURE (Sourced) statement is greater than the maximum number of REF CURSORS at the data source.

User response: Actions based on the reason codes are:

- 1 Remove references to any position number in the returned set of result sets other than 1.
- 2 Remove references to any position number in the returned set of result sets which is greater than the maximum number of REF CURSORS at the data source.

sqlcode: -1238

sqlstate: 560CI

SQL1239N On DB2 database servers Version 9.5 and earlier, pureXML data store features can be used only in a single-partition database.

Explanation: On DB2 database servers Version 9.5 and earlier, the use of XML data store features is restricted to databases having only one database partition. Features such as defining columns of data type XML, registering XML schema repository objects, and XQuery expressions are not available within a partitioned database environment.

User response: On DB2 database servers Version 9.5 and earlier, for a database with multiple database partitions, you can input XML data to those functions that accept XML input and either store the output of the function in the database or return it to the application. In this case, to use the features of pureXML storage you need to create a new database in a separate instance in which the database partitioning feature is not used. Similarly, to use the database partitioning feature you must either use a database on which pureXML storage features have not been used, or you need to create a new database in a separate, partitioned database environment.

sqlcode: -1239

sqlstate: 42997

SQL1240N The maximum number of quiescers has been reached.

Explanation: An attempt was made to acquire a quiesce state on a table space which has already been quiesced by 5 processes.

User response: Wait for one of the processes to release its quiesce state and try again.

SQL1241N An invalid value was specified for the *tbs-name* table space definition when creating a database. Attribute is *string*.

Explanation: The value for a table space attribute was out of range. See the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) for the format of the sqletsdesc structure used for the create database api. The identified attribute is the field name of this structure.

User response: Correct the create database request.

SQL1242N An XML feature is not supported in the context where it is used. Reason code = *reason-code*.

Explanation: The statement cannot be processed because there was an attempt to use an XML feature in a context where it is not supported. The *reason-code* indicates the context:

1

On DB2 database servers Version 9.5 and earlier, columns of data type XML are not supported in a table that is organized by dimensions.

2

On DB2 database servers Version 9.5 and earlier, columns of data type XML are not supported in a range-partitioned table.

3

Columns of data type XML cannot be added to a table with existing type-1 indexes. Starting in Version 9.7, type-1 indexes are discontinued and are replaced with type-2 indexes.

4

A distribution key cannot be defined for a table with an XML column.

5

Columns of data type XML are not supported in a view that is the target of an INSTEAD OF trigger.

6

References to transition variables of data type XML are not supported in a trigger definition.

7

For a table containing columns of data type XML, an operation that drops XML columns must drop all of the XML columns in the table in a single ALTER TABLE statement.

SQL1242N

	On DB2 database servers Version 9.5 and earlier, and for a table containing columns of data type XML, a REORG-recommended operation cannot be specified in an ALTER TABLE statement.		partition that contains the database catalog tables, the IBMCATGROUP database partition.
8	A column of data type XML is supported by the wrapper associated with the nickname definition only if the column definition has no options. Such a column references the contents of an XML document returned from the data source.	1	On DB2 database servers Version 9.5 and earlier, do not use the XML data type for any column defined in a table that is organized by dimensions.
9	References to XML data types or values in compound SQL (compiled) statements in functions, triggers, or compound SQL (inlined) statements are not allowed. XML is only supported in compound SQL (compiled) statements in procedures.	2	On DB2 database servers Version 9.5 and earlier, do not use the XML data type for any column defined in a range-partitioned table.
100	In a partitioned database environment, tables with XML columns are only supported in the database partition that contains the database catalog tables, the IBMCATGROUP database partition.	3	Use the REORG INDEXES ALL command with the CONVERT parameter to convert existing indexes on the table to type-2 indexes before issuing the ALTER TABLE command to add a column of type XML.
101	Prior to DB2 Version 9.7, the ADD DBPARTITIONNUM command and the REDISTRIBUTE DATABASE PARTITION GROUP command are not supported on a database partition group that contains tables that have XML columns.	4	Change the table definition to avoid having both a distribution key and an XML column. In a CREATE TABLE statement, you can do this by removing the DISTRIBUTE BY clause (or PARTITIONING KEY clause) or by removing all columns of data type XML. In an ALTER TABLE statement, either drop the distribution key before adding a column of type XML or drop all XML columns before adding a distribution key.
102	In a partitioned database environment, annotated XML schema decomposition is supported on only the database partition that contains the database catalog tables, the IBMCATGROUP database partition.	5	Do not specify a view with columns of data type XML as the target of an INSTEAD OF trigger.
103	In a partitioned database environment, the following XML-related commands are only supported in the database partition that contains the database catalog tables, the IBMCATGROUP database partition: <ul style="list-style-type: none">• COMPLETE XMLSCHEMA• REGISTER XMLSCHEMA• ADD XMLSCHEMA DOCUMENT• REGISTER XSROBJECT	6	Do not use transition variables that are of data type XML in a trigger definition.
104	In a partitioned database environment, for an application to process XML data, the application must be connected to the database	7	For a table containing multiple columns of data type XML, either do not drop any XML columns or drop all of the XML columns in the table using a single ALTER TABLE statement.
		8	On DB2 database servers Version 9.5 and earlier, remove any REORG-recommended alterations from the ALTER TABLE statement.
			In the nickname definition, check for columns of type XML that have column options. For

	each column definition that is not correct, change the data type, or remove all column options.
9	
	Remove the XML data type or value reference from the compound SQL (compiled) statement or include the compound SQL (compiled) statement in an SQL procedure.
100	
	To create a table with XML columns, create the table in the IBMCATGROUP database partition.
101	
	Respond to this reason code in one of the following ways:
	<ul style="list-style-type: none"> • If this message was returned because an attempt was made to add a new database partition to a database partition group that contains tables that have XML columns, add the new database partition to a database partition group that does not contain tables that have XML columns. • If this message was returned because an attempt was made to redistribute data across a database partition group that contains tables that have XML columns, no response is required. Redistributing data across a database partition group that contains tables that have XML columns is not supported.
102	
	To decompose XML documents using annotated XML schema decomposition in a partitioned database environment, perform the decomposition on the database partition that contains the database catalog tables, the IBMCATGROUP database partition.
103	
	To perform XML-related actions, run the required command on the IBMCATGROUP database partition.
104	
	To process XML data, connect the application to the catalog partition, the IBMCATGROUP database partition.
	sqlcode: -1242
	sqlstate: 42997

SQL1243W Dropping SYSTOOLS.DB2LOOK_INFO db2look operation table failed in a DB2 Version 8 database.

Explanation: The UPGRADE DATABASE command checks whether the DB2 Version 8 database has a db2look operation table called SYSTOOLS.DB2LOOK_INFO, and drops this table if it exists. The drop table command fails if the database owns a table with the same name but a different column definition.

User response: Check the definition of the SYSTOOLS.DB2LOOK_INFO table after the database upgrade is complete. If it is a system created table, it should be dropped manually. If it is a user created table, it should be renamed. Otherwise, the ALTER TABLE and COPY SCHEMA statements in DB2 Version 9 will fail to execute.

SQL1244W Disconnect for transaction manager database *server-name* will occur at next COMMIT.

Explanation: A disconnect has been issued against a database which is acting as the TM database. The disconnect cannot be completed until the next COMMIT is processed.

User response: If it is necessary that the database which is acting as the TM database be disconnected immediately, issue a COMMIT statement before execution continues.

sqlcode: +1244

sqlstate: 01002

SQL1245N Connection limit has been reached. No more connections are allowed from this client.

Explanation: The maximum number of concurrent database connections has been reached for an environment where the number of connections is restricted or must be predefined. The primary example of where this would occur is when the NETBIOS protocol is being used.

User response: Possible actions:

- Use the SET CLIENT command or API to set the MAX NETBIOS CONNECTIONS field to the maximum number of concurrent connections required. This must be done before any connections are made.

sqlcode: -1245

sqlstate: 08001

SQL1246N Connection settings cannot be changed while connections exist.

Explanation: One of the following occurred:

- An attempt was made to change the connection settings for an application using the SET CLIENT API. This was rejected because one or more connections exist.
- The application contains both DB2 Call Level Interface API calls and calls to functions containing embedded SQL, and the connection management was not invoked using the CLI APIs.

User response: Possible actions:

- Ensure that the application disconnects from all servers before attempting to issue the SET CLIENT API (sqlsetc or sqlgsetc) or CLP command.
- Ensure that all connection management requests are issued via the DB2 Call Level Interface APIs if CLI is being used by the application.

SQL1247N Applications running in an XA transaction processing environment must use the SYNCPOINT TWOPHASE connection setting.

Explanation: The application was precompiled with the option SYNCPOINT ONEPHASE or SYNCPOINT NONE, or the SYNCPOINT connection setting was changed to one of these values using the SET CLIENT API. These settings are invalid for applications which cause transaction processing syncpoint commands (for example CICS SYNCPOINT) to be executed. Note that SYNCPOINT ONEPHASE is the default precompiler option.

User response: Possible actions:

- Re-compile the application using the precompiler option SYNCPOINT TWOPHASE.
- Modify the program such that the SET CLIENT API is called to set the connection option to SYNCPOINT TWOPHASE prior to any other processing.

sqlcode: -1247

sqlstate: 51025

SQL1248N Database *database-alias* not defined with the transaction manager.

Explanation: You attempted to access a database that had not been opened by the transaction manager. A database must be defined to the transaction manager in order to participate in the two-phase commit process.

User response: Define the database as a resource manager to the transaction manager of your Distributed Transaction Processing environment. For example, in a CICS environment this requires adding the database to the XAD file and provides the database

alias name in the XAOOpen string of the XAD entry.

sqlcode: -1248

sqlstate: 42705

SQL1249N The DATALINK data type is not supported. *db-object* must be dropped or altered to avoid using the DATALINK data type.

Explanation: The db2ckupgrade command has identified an occurrence of the DATALINK data type which will cause database upgrade to fail.

Database objects which use the DATALINK data type include tables, views, functions, methods, distinct types and structured data types.

User response: Remove or update the database object identified by *db-object* which references the DATALINK data type before attempting to upgrade the database.

SQL1250N A database partition is not added because XML features have been used in the instance.

Explanation: An instance of the database manager has already had at least one database created where an XML object, such as a table with a column of data type XML or a XML schema repository object, was created. Even if the XML objects no longer exist, the database manager instance is still considered to have used XML. Once the database manager instance is known to have used XML in this way, the instance is no longer permitted to have more than a single database partition. Any attempt to add a database partition will return this error.

User response: If any of the databases that are part of the instance are using columns of data type XML or XML schema repository objects, then a different instance will be required to establish an instance with multiple database partitions.

If the databases in the instance are not actually intended for storage of XML data, the instance must be cleansed of all references to XML data. Indicators still exist in the instance and the databases, even when there are no longer columns of data type XML and XML schema repository objects. There are two approaches to clearing the instance XML indicator and database level XML indicators.

1. Export non-XML data from the existing databases in the instance. Create a new instance with new databases. Import the data into the database in the new instance.
2. Use a password protected db2pdcfg option to change the XML indicators in the database configuration for each database within the instance and for the database manager configuration of the instance. Before this is done, it is extremely important that no database in the instance includes

any columns of type XML and that the XML schema repository of each database is empty. Contact IBM Service to use this option.

SQL1251W No data returned for heuristic query.

Explanation: There are no in-doubt transactions in the database, nor any transactions that have ended and are waiting to enter the syncpoint process.

User response: No action is required.

SQL1252N More than one procedure was identified at the data source for the source procedure *source-procedure-name* specified in the CREATE PROCEDURE (Sourced) statement. Reason code = *reason-code*.

Explanation: More than one procedure was identified at the data source for the source procedure *procedure-name* specified in the CREATE PROCEDURE (Sourced) statement. Possible reason codes are:

- 1 There are multiple source procedures at the data source with identical source procedure name and source schema name.
- 2 There are multiple source procedures at the data source with identical source procedure name, source schema name and NUMBER OF PARAMETERS.
- 3 There are multiple source procedures at the data source with identical source procedure name.

User response: Actions based on the reason codes are:

- 1 Specify the NUMBER OF PARAMETERS in the CREATE PROCEDURE (Sourced) statement to help uniquely identify the procedure at the data source.
- 2 Specify the UNIQUE ID in the CREATE PROCEDURE (Sourced) statement to help uniquely identify the procedure at the data source.
- 3 Specify the source-schema-name in the CREATE PROCEDURE (Sourced) statement to help uniquely identify the procedure at the data source.

sqlcode: -1252

sqlstate: 42725

SQL1253N The source procedure with the name *source-procedure-name* was not found at the data source. Reason code = *reason-code*.

Explanation: The source procedure specified in the CREATE PROCEDURE (Sourced) statement was not

found at the data source. Possible reason codes are:

- 1 The source object name along with the NUMBER OF PARAMETERS does not identify a procedure at the data source.
- 2 The source object name along with the NUMBER OF PARAMETERS and UNIQUE ID does not identify a procedure at the data source.
- 3 The source package name specified in the CREATE PROCEDURE (Sourced) statement is not found at the data source.
- 4 The source package name specified in the CREATE PROCEDURE (Sourced) statement is marked invalid at the data source
- 5 The source object name does not identify a procedure at the data source.
- 6 The source object name specifies a UNIQUE ID, but UNIQUE ID is not supported at the data source.

User response: Actions based on the reason codes are:

- 1 Verify that the NUMBER OF PARAMETERS specified is correct.
- 2 Verify that the UNIQUE ID specified is valid for the data source and identifies a procedure at the data source.
- 3 Verify that the source package name specified is correct.
- 4 Correct the package definition at the data source.
- 5 Verify that the source object name specified is correct.
- 6 Remove the UNIQUE ID clause.

sqlcode: -1253

sqlstate: 42883

SQL1254N The data type *data-type* is not supported by the federated server or data source *server-name*. It was used for parameter *parameter-name* in the procedure *procedure-name*.

Explanation: The data type of the parameter that was specified for the procedure is not supported by either the federated server or the data source that was accessed.

User response: Specify a supported data type and resubmit the program.

sqlcode: -1254

sqlstate: 428C5

SQL1255N The option value *value* specified for procedure *procedure-name* does not match the corresponding option of the source procedure.

Explanation: The value for SQL data access (NO SQL, CONTAINS SQL, READS SQL DATA, or MODIFIES SQL DATA), determinism (DETERMINISTIC or NOT DETERMINISTIC), or external action (EXTERNAL ACTION or NO EXTERNAL ACTION) specified in the CREATE PROCEDURE (Sourced) statement does not match the corresponding option of the source procedure.

User response: Correct the option value to match the corresponding option of the source procedure.

sqlcode: -1255

sqlstate: 428GS

SQL1256W The package body for the source procedure *source-procedure-name* at the data source was not found or is invalid.

Explanation: The federated procedure was created successfully but the package body for the source procedure *procedure-name* at the data source was not found or is invalid.

User response: Ensure that the package body of the source procedure is valid before the federated procedure is invoked.

sqlcode: +1256

sqlstate: 0168A

SQL1257N The query must contain a predicate using the column *column-name* in nickname *nickname*.

Explanation: The data source requires a predicate that uses the indicated column. Either the predicate is not in the query, or the predicate is in the query but was not made available to the data source wrapper during query compilation.

User response: If the required column is not used in a predicate in the query, add a predicate that uses the column appropriately. If the required column is in a predicate in the query, restructure the query so that the predicate is valid. Valid predicates are listed in the documentation for the data source.

sqlcode: -1257

sqlstate: 429C0

SQL1258N The SYSTOOLSPACE and SYSTOOLSTMPSPACE table spaces must be created in the IBMCATGROUP database partition group.

Explanation: In order for the SYSTOOLSPACE and

SYSTOOLSTMPSPACE table spaces to be created, they must be defined in the IBMCATGROUP database partition group.

User response: Resubmit the CREATE TABLESPACE command and specify the IN IBMCATGROUP clause.

sqlcode: -1258

sqlstate: 560CJ

SQL1259N The ARCHIVE LOG command failed for database *db-name* on database partition *partition-list* due to SQLCODE *SQLCODE*.

Explanation: An SQL error occurred while attempting to issue the ARCHIVE LOG command for database *db-name* on database partition *partition-list*.

User response: Refer to the SQLCODE in the Message Reference for the user response and resubmit the ARCHIVE LOG command.

SQL1260N Database *name* is not configured for roll-forward recovery on node(s) *node-list*.

Explanation: The specified database is not configured for roll-forward recovery on the specified node(s). If "...", is displayed at the end of the node list, see the administration notification log for the complete list of nodes.

The database is not rolled forward on the specified node(s).

(Note : if you are using a partitioned database server, the node number(s) indicate which node(s) the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: Ensure that recovery is required on the specified node(s), then restore the most recent backup version of the database on these nodes.

SQL1261N Database *name* is not in rollforward pending state on node(s) *node-list*, so it does not need to be rolled forward on these nodes.

Explanation: The specified database is not in roll-forward pending state on the specified node(s). This may be because the database has not been restored, or was restored with the WITHOUT ROLLING FORWARD option, or roll-forward recovery is complete on these nodes.

If "...", is displayed at the end of the node list, see the administration notification log for the complete list of nodes.

The database is not rolled forward.

(Note : if you are using a partitioned database server,

the node number(s) indicate which node(s) the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: Do the following:

1. Ensure that recovery is required on the specified node(s).
2. Restore a backup version of the database on these nodes.
3. Issue the ROLLFORWARD DATABASE command.

SQL1262N The point-in-time specified for rolling forward database *name* is not valid.

Explanation: The timestamp parameter specified for the point-in-time stopping value is not valid. The timestamp must be entered in ISO format (YYYY-MM-DD-hh.mm.ss.<sssss> where YYYY represents year, MM represents month, DD represents day, hh represents hours, mm represents minutes, ss represents seconds, and ssssss represents optional microseconds).

The database is not rolled forward.

User response: Ensure that the timestamp is entered in the correct format.

When you issue a ROLLFORWARD DATABASE command, ensure that you are not specifying a year greater than 2105.

SQL1263N The archive log file *logfile* is not a valid log file for database *database-name* on database partition *dbpartitionnum* and log stream *log-stream-ID*.

Explanation: The specified archive log file exists in the database log directory or the overflow log directory on the specified database partition, but the file is not valid.

Rollforward recovery processing stops.

(Note: If you are using a partitioned database server, the database partition number indicates the database partition on which the error occurred. Otherwise, this value is not pertinent and should be ignored.)

User response: To determine the correct archive log file, issue the ROLLFORWARD DATABASE command with the QUERY STATUS option. Move the correct archive log file into the database log directory or, if the database is in a consistent state, change the log path to point to the correct archive file, and issue the ROLLFORWARD DATABASE command again. Alternatively, reissue the command with the overflow log path pointing to the correct archive file.

SQL1264N The archive log file *logfile* does not belong to database *database-name* on database partition *dbpartitionnum* and log stream *log-stream-ID*.

Explanation: The specified archive log file was found in the log directory or the overflow log directory but does not belong to the specified database.

Rollforward recovery processing stops.

(Note: If you are using a partitioned database server, the database partition number indicates the database partition on which the error occurred. Otherwise, this value is not pertinent and should be ignored.)

User response: To determine the first archive log file that does not belong to the database, issue the ROLLFORWARD DATABASE command with the QUERY STATUS option. To continue with rollforward recovery:

- If you are using an overflow log path, verify that it applies to the correct database and contains the correct archive files.
- If you are not using an overflow log path, find the correct archive log files and copy them into the database log directory.

To stop rollforward recovery, perform one of the following steps before issuing the ROLLFORWARD DATABASE...STOP command:

- Remove the invalid log files from the active log path and from the archive path (including the overflow path)
- Replace the invalid log files with the correct log files in the active log path and the archive path (including the overflow path)

SQL1265N The archive log file *logfile* is not associated with the current log sequence for database *database-name* on database partition *dbpartitionnum* and log stream *log-stream-ID*.

Explanation: For rollforward recovery, log files must be processed in correct sequence. The log file sequence is determined by the database that has been restored or by the log files that have been processed. For table space-level rollforward recovery, moreover, the log files must be processed in the sequence through which the current state of the database was reached. The specified archive log file was found in the log directory or the overflow log path for the database on the specified database partition, but the log file is not in the correct log sequence.

Rollforward recovery processing stops.

(Note: If you are using a partitioned database server, the database partition number indicates the database partition on which the error occurred. Otherwise, this value is not pertinent and should be ignored.)

User response: To determine the correct archive log file, issue the ROLLFORWARD DATABASE command with the QUERY STATUS option. Move the correct archive log file into the database log directory or, if the database is in a consistent state, change the log path to point to the correct archive file and issue the ROLLFORWARD DATABASE command again. Alternatively, resubmit the command with the overflow log path pointing to the correct archive file.

SQL1266N The rollforward operation failed because the specified point-in-time value is not valid. This rollforward operation was a continuation of a previous rollforward operation. The point-in-time value specified for this rollforward operation was earlier in time than the point-in-time value specified for the previous rollforward operation. Database or table space name: *database-or-table-space-name*. Point-in-time value specified for the previous rollforward operation: *timestamp*.

Explanation: When a rollforward operation fails, is interrupted, or finishes but does not include the STOP or COMPLETE option, you must continue the rollforward operation by calling the ROLLFORWARD command, or the db2Rollforward API, again. However, a rollforward cannot be continued to a point in time that is earlier than the point-in-time value that was specified for the previous rollforward operation.

This message is returned when a rollforward operation is a continuation of a previous rollforward operation that did not complete and the previous rollforward operation was to a point in time that is later than the point in time specified for this rollforward operation. When continuing a rollforward operation that was to a point in time, the new rollforward must be one of the following:

- a rollforward to the same point in time
- a rollforward to a later point in time
- a rollforward to the end of logs

This error can happen with both database and table space rollforward operations.

When this error occurs, rollforward processing stops.

User response: Respond to this error in one of the following ways:

- Resubmit the ROLLFORWARD command, or db2Rollforward API, specifying a valid point-in-time value.
- Resubmit the ROLLFORWARD command, or db2Rollforward API, specifying to rollforward to the end of logs.
- Recover from a backup image by performing the following steps:

1. Restore the database or table space subset from a backup image.
2. Resubmit the ROLLFORWARD command, or db2Rollforward API.

SQL1267N The system could not find db2uexit in the current PATH.

Explanation: The user-supplied file *db2uexit* cannot be found, either because it is not in the current PATH environment variable or it does not exist.

The command cannot be processed.

User response: Update the current PATH environment variable to include the path to *db2uexit* or create a *db2uexit* file and update the current PATH environment variable if necessary.

SQL1268N Rollforward recovery processing has stopped because of error *error* while retrieving log file *logfile* for database *database-name* on database partition *dbpartitionnum* and log stream *log-stream-ID*.

Explanation: Rollforward processing is unable to retrieve a required log file. This error is sometimes returned because the target system to which you are attempting to restore the backup image does not have access to the facility being used by the source system to archive its transaction logs.

(Note: If you are using a partitioned database server, the database partition number indicates the database partition on which the error occurred. Otherwise, this value is not pertinent and should be ignored.)

User response:

- Ensure that log archiving is being performed correctly by checking the administration notification log. Correct any errors and resume rollforward recovery.
- If the database is configured to use log archiving through a userexit program, check the userexit diagnostic logs to determine whether an error occurred while executing the userexit program. Correct the error and resume rollforward recovery.
- Ensure that the target system to which you are attempting to restore the backup image has access to the facility being used by the source system to archive its transaction logs. Make appropriate changes and resume rollforward recovery.

SQL1269N Table space level roll-forward recovery is already running.

Explanation: An attempt has been made to use table space level roll-forward recovery but it is already running. Only one agent can be executing roll-forward recovery at any given time.

User response: Wait until table space level roll-forward recovery is complete. If more table spaces need recovery, initiate table space level roll-forward recovery again.

SQL1270C The LANG environmental variable is set to *string*. This language is not supported.

Explanation: The LANG environmental variable is set to a language that is not supported by the database manager. Processing cannot continue.

User response: Set the LANG environmental variable to a language that is supported. For more information please refer to “National Language Support” appendix in the *Administration Guide*.

Federated system users: see the *Federated Systems Guide* for NLS information.

SQL1271W Database *name* is recovered but one or more table spaces are offline on members or nodes *node-list*.

Explanation: This message can occur after crash recovery, database level roll-forward recovery, or table space level roll-forward recovery. For database level roll-forward recovery, the database is available for use if the STOP option was specified. One or more table spaces on the specified members or nodes are not available. This could happen if:

- One or more table spaces receive I/O errors during recovery.
- One or more table spaces may require storage definition following recovery.
- One of more table spaces are unusable and must be dropped.
- One or more table spaces have been taken offline.
- Additional table spaces are restored while a table space level roll-forward recovery is already in progress.
- The database is rolled forward past a previous point-in-time table space roll-forward, causing all table spaces involved to be placed in restore pending state.

The table spaces that are offline can be identified on the specified members or nodes by the MON_GET_TABLESPACE table function. In environments other than DB2 pureCluster environments, the db2dart utility can also be used. The administration notification log will provide more information on specific table spaces.

If “,...” is displayed at the end of the member or node list, see the administration notification log for the complete list of member or nodes.

Note: The member or node numbers provide useful information only in DB2 pureCluster environments and

partitioned database environments. Otherwise, the information should be ignored.

User response: Repair or restore the table spaces if necessary and run roll-forward recovery. If the same message occurs, try running table space level roll-forward recovery offline.

SQL1272N Table space level roll-forward recovery for database *name* has stopped before completion on members or nodes *node-list*.

Explanation: Table space level roll-forward recovery has stopped on the specified members or nodes before all qualifying table spaces could be rolled forward. This can be caused by one of the following:

- The transaction table is full.
- All table spaces being rolled forward received I/O errors.
- Point-in-time table space level roll-forward encountered an I/O error on one of the table spaces being rolled forward.
- Point-in-time table space level roll-forward encountered an active transaction that made changes to one of the table spaces being rolled forward. This transaction could be an indoubt transaction.
- The table space level roll-forward was interrupted and, before it was resumed, all table spaces that were being rolled forward are restored again.
- The table space rollforward state information has become corrupted or been lost.

If “,...” is displayed at the end of the member or node list, see the administration notification log for the complete list of members or nodes.

Note: The member or node numbers provide useful information only in DB2 pureCluster environments and partitioned database environments. Otherwise, the information should be ignored.

User response: Check the administration notification log for the cause. Do one of the following depending on the cause:

- Use the MON_GET_TABLESPACE table function to determine if the table spaces received I/O errors. If the table spaces received I/O errors, repair them.
- If the transaction table became full, increase the MAXAPPLS database configuration parameter or try running table space level roll-forward recovery offline.
- If the cause is an active or indoubt transaction, complete the transaction.
- If the table spaces were restored after a previous table space level roll forward was interrupted, the previous table space level roll-forward is now

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canceled. The next table space level roll-forward command will check for table spaces in rollforward pending state.

- Cancel the rollforward operation, which will put the table space in restore pending state. Before reissuing the ROLLFORWARD command, restore a table space level backup image.

Run table space level roll-forward recovery again.

SQL1273N An operation reading the logs on database *database-name* cannot continue because of a missing log file *log-file-name* on database partition *dbpartitionnum* and log stream *log-stream-ID*.

Explanation: The operation cannot find the specified log file in the archive, database log directory, or overflow log directory for the given log stream. The operation reading the logs has been stopped. This operation was either a recovery operation, a rollforward operation, a call to the db2ReadLog API, or any other operation that requires access to the transaction logs.

If the operation was a crash recovery, the database is left in an inconsistent state. If the operation was a rollforward operation, the operation has stopped and the database is left in rollforward pending state.

User response: Recover the missing log file by taking one of the following actions:

- Move the specified log file into the database log directory and restart the operation.
- If an overflow log path can be specified, restart the operation with the overflow log path, specifying the path that contains the log file.

If the missing log file cannot be found, determine whether one of the following special cases applies:

- If the operation is a ROLLFORWARD DATABASE command to maintain a standby system through log shipping, this error might be normal, because some files that are available on the primary site might not yet be available on the standby system. To ensure that your standby system is up-to-date, issue a ROLLFORWARD DATABASE command with the QUERY STATUS option after each rollforward operation to verify that the log replay is progressing properly. If you find that a rollforward operation on the standby system is not making progress over an extended period of time, determine why the log file that is reported as missing is not available on the standby system, and correct the problem. Note that the ARCHIVE LOG command can be used to truncate currently active log files on the primary system, making them eligible for archiving and subsequent replay on the standby system.
- If a ROLLFORWARD DATABASE command with the TO END OF LOGS option was issued following a

restore operation from an online backup image in which the only available logs are those that were included in the backup image, there are two possible scenarios to consider:

- Scenario 1: All of the log files contained in the backup image are found by the rollforward operation. However, the rollforward operation still looks for log files that were updated following the original backup operation. Bring the database to a consistent state by issuing the ROLLFORWARD DATABASE command with the STOP option (without the TO END OF LOGS option). To avoid this scenario in the future, use the END OF BACKUP option instead of the END OF LOGS option, because the rollforward operation will not look for log files that were updated after the backup was taken.
- Scenario 2: One or more log files that were contained in the backup image were not found by the rollforward operation. These log files are required to bring the database to a consistent state. Attempting to bring the database to a consistent state by issuing the ROLLFORWARD DATABASE command with the STOP option (without the TO END OF LOGS option) will fail with SQL1273N; recover the missing log file, as described earlier in this section.

If the missing log file cannot be recovered:

- If the operation is a ROLLFORWARD DATABASE command, you can issue the ROLLFORWARD DATABASE command again with the STOP option (without the END OF LOGS option or the END OF BACKUP option) to bring the database to a consistent state. If this consistency point (immediately prior to the missing log file) is not acceptable, you can restore the database and roll forward to any point in time that is prior to the missing log file by providing an earlier time stamp to the ROLLFORWARD DATABASE command.
- If the operation is a ROLLFORWARD DATABASE command with the STOP or COMPLETE option (without the END OF LOGS option or the END OF BACKUP option), the missing log file is needed to bring the database to a consistent state. Because you cannot recover the missing log file, you must restore and roll forward to an earlier point in time (as long as that point in time is not prior to the minimum recovery time).
- If the operation is a call to the db2ReadLog or db2ReadLogNoConn API for the purpose of replicating data, resynchronize the replicated tables and terminate the current connection being used by the API. If the API is being used to maintain a disaster recovery site, a backup image that was created after the last time stamp in the missing log file must be restored to the disaster recovery site before any subsequent API calls can complete successfully. If the API is being used for any other purpose, terminate the connection being used by the

API and deactivate the database. In all cases, restart the scan by creating a new connection to the database and calling the API with the query action. Use the nextStartLRI as the piStartLRI on the next call to the API.

SQL1274N The database *name* requires roll-forward recovery and the point-in-time must be to the end of logs.

Explanation: The database needs to be rolled forward. For database level roll-forward recovery, the point-in-time must be to the end of logs because a database level roll-forward to end of logs is already in progress. To continue the roll forward, the same stoptime must be specified.

For table space level roll-forward recovery, the point-in-time must be to the end of logs for one of the following reasons:

- The system catalogs require roll-forward recovery. System catalogs must always be rolled forward to the end of logs to remain consistent with all other table spaces.
- A table space level roll-forward to the end of logs is already in progress. To continue the roll forward, the same stoptime must be specified.
- The point in time specified for a table space level roll-forward is past the end of the logs of the database. It is very likely that this time is incorrect. If this is the intended recovery stop time, resubmit the command with the END OF LOGS option.

The database is not rolled forward.

User response: Resubmit the ROLLFORWARD command specifying ROLLFORWARD TO END OF LOGS.

SQL1275N The stop time passed to the rollforward utility must be greater than or equal to timestamp *timestamp*, because database *name* on nodes *node-list* contains information later than the specified time.

Explanation: The stop time passed to the rollforward utility must be greater than or equal to the time the backup ended on the specified nodes.

If "... " is displayed at the end of the node list, see the administration notification log for the complete list of nodes.

(Note : if you are using a partitioned database server, the node number or numbers indicate which nodes the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: Do one of the following:

- Resubmit the command with a stop time greater than or equal to *timestamp*. Time must be specified in CUT (Coordinated Universal Time).
- Restore an earlier backup on the specified nodes, then issue the ROLLFORWARD DATABASE command again.

SQL1276N Database *name* cannot be brought out of rollforward pending state until roll-forward has passed a point in time greater than or equal to *timestamp*, because node *node-number* contains information later than the specified time.

Explanation: A request was made to bring the database or subset of table spaces out of rollforward pending state by specifying caller action SQLUM_ROLLFWD_STOP, SQLUM_STOP, SQLUM_ROLLFWD_COMPLETE, or SQLUM_COMPLETE. However, the database or at least one of the table spaces to be rolled forward was backed up online. The request cannot be granted until the database or all table spaces have been rolled forward to the end of the online backup timestamp on the specified node.

This error can also occur if not all the log files are provided to perform the requested recovery.

(Note : if you are using a partitioned database server, the node number indicates which node the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: If the stoptime specified on the ROLLFORWARD command is smaller than *timestamp*, resubmit the command with a stoptime greater than or equal to *timestamp*.

Verify that all the log files were provided. the ROLLFORWARD QUERY STATUS command shows which log file is to be processed next. Some of the reasons for missing log files include:

- the log path has changed. The file can be found in the old log path.
- DB2 is unable to find the log file from the archive location reflected by the current LOGARCHMETH1 or LOGARCHMETH2 database configuration parameters.

If the missing log file is found, copy it to the log path and resubmit the command.

SQL1277W A redirected restore operation is being performed. During a table space restore, only table spaces being restored can have their paths reconfigured. During a database restore, storage group storage paths and DMS table space containers can be reconfigured.

Explanation: The Restore utility validates that the containers needed by each table space being restored are currently accessible on the system. Where possible, the Restore utility will create the containers if they do not exist. If they cannot be created, are currently in use by another table space, or are inaccessible for any other reason, then the list of containers needed must be corrected before the restore operation can continue.

In a redirected restore, the state of each container of a non-automatic storage table space being restored is set to "storage must be defined". This makes it possible to use the SET TABLESPACE CONTAINERS command or API against the containers to redefine their storage.

For table spaces using automatic storage, the only way to redefine container paths is to use the SET STOGROUP PATHS command for a specific storage group or the ON keyword when you issue the RESTORE DATABASE command to redefine all the storage groups paths. You cannot use the SET TABLESPACE CONTAINERS command or API against automatic storage table spaces.

User response: To determine the list of containers for each table space being restored, use the MON_GET_CONTAINER table function. To specify an updated list for each table space, use the SET TABLESPACE CONTAINERS command or API. This API or command lets you specify whether this should be the initial list of containers (meaning that a subsequent rollforward will redo any "add container" operations described in the database log) or the final list (meaning that the rollforward operation will not redo "add container" operations).

It is also possible that the container(s) or storage path(s) are read-only, in which case the only action required before continuing with the restore is to give read/write access to the container(s) or storage path(s).

To reconfigure the paths of specific storage groups during a database restore, use the SET STOGROUP PATHS command.

When you are ready to proceed with the restore, issue a RESTORE DATABASE command with the CONTINUE keyword to perform the actual restore.

SQL1279W Some indexes may not have been recreated.

Explanation: An error occurred during index recreation while performing a database restart or following a table reorganization which may have prevented some of the indexes from being recreated successfully. Details can be found in administration notification log.

Database restart or Reorg table was successful.

User response: Examine the administration notification log to determine why the index(es) could not be recreated and correct the problem. The invalid

indexes for a table will be recreated when the table is first accessed.

SQL1280N The stoptime passed to roll-forward must be less than or equal to *timestamp* for database *name* because at least one of the table spaces was already rolled forward to this point in time.

Explanation: At least one of the table spaces specified by the roll-forward to point in time has already been rolled forward to an earlier point in time. It cannot be rolled forward any further.

User response: Do one of the following:

- Resubmit the command with stoptime *timestamp*.
- Restore all table spaces again, and resubmit the command with a stoptime less than *timestamp*.
- Restore the table space backup(s) taken following the earlier table space roll-forward to point in time and resubmit the command with the same stoptime.

Time must be specified in CUT (Coordinated Universal Time).

SQL1281N The connection to database *database-alias* has been severed because the pipe *pipe-name* has been broken.

Explanation: The connection was lost because the DB2 server broke the pipe. The current transaction has been rolled back.

User response: Resubmit the current command. If the error continues, contact your technical service representative.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE or message number
- SQLCA contents, if possible
- Trace file, if possible.

sqlcode: -1281

sqlstate: 40504

SQL1282N The attempt to connect to database *database-alias* failed because all the pipe instances on *pipe-name* are busy.

Explanation: Attempts to connect to the named pipe failed because the connection was refused by DB2. There is a limit to the number of connections that are allowed on the named pipe.

User response: Increase the connection limit on the DB2 server, or terminate some of the applications using named pipe to free up connection resources.

sqlcode: -1282

sqlstate: 08001

SQL1283N The attempt to connect to database *database-alias* failed because the pipe *pipe-name* is in use by another process.

Explanation: The name of the named pipe is already in used by another process. Named pipe support did not start.

User response: Choose a different name by setting the environment variable DB2PIPENAME, or have the other programs which use named pipe use a different pipe name.

SQL1284N The attempt to connect to database *database-alias* failed because the pipe *pipe-name* cannot be found.

Explanation: The server has not started its named pipe support, or the server is using a different name for the named pipe.

User response: Start the database manager and ensure the named pipe support starts. If the named pipe support has been started, then ensure the name of the named pipe is the same between the client and server by setting the environment variable DB2PIPENAME to the same value.

sqlcode: -1284

sqlstate: 08001

SQL1285N The attempt to connect to database *database-alias* failed because the pipe *pipe-name* is invalid.

Explanation: The alternate pipe name set by the environment variable DB2PIPENAME is invalid.

User response: The value of the environment variable DB2PIPENAME must be a valid pipe name. The pipe name must be no longer than eight characters, and has the same syntactical restrictions as a normal file name.

sqlcode: -1285

sqlstate: 08001

SQL1286N The connection to database *database-alias* has been severed because the operating system ran out of resources for pipe *pipe-name*.

Explanation: Named pipe failed because the operating system ran out of resources (swapping space, disk space, file handles). The current transaction has been rolled back.

User response: Free up the system resources and try again.

sqlcode: -1286

sqlstate: 40504

SQL1287N ATTACH to instance *instance* failed because the named pipe *pipe* cannot be found.

Explanation: The server has not started its named pipe support, or the instance name is incorrect.

User response: Ensure that the database manager is started at the server and that the named pipe support is started. Ensure that the instance name is correct.

SQL1288N The remote server does not support this operation.

Explanation: The remote server is running on a 64-bit platform that does not support non-SQL requests from Version 7 (or earlier) 32-bit clients.

User response: Perform this operation from a supported client.

SQL1289W During conversion of an argument to *function-name* from code page *from-code-page* to code page *to-code-page*, one or more invalid characters were replaced with a substitute character, or a trailing partial multi-byte character was omitted from the result.

Explanation: The input to *function-name* passed to the code page conversion function contains a byte sequence that is not a valid character in the input code page, *from-code-page*. Each invalid byte sequence was replaced with the substitute character when converting to *to-code-page*. The inserted substitute character may or may not be included in the final result. If an invalid byte sequence appears at the end of the input, it is omitted from the result rather than replaced with a substitute character.

User response: Ensure that the data being converted does not contain invalid byte sequences.

sqlcode: +1289

sqlstate: 01517

SQL1290N The value of either the DFT_CLIENT_COMM database manager configuration parameter or the DB2CLIENTCOMM environment variable is not valid.

Explanation: Either an incorrect value was specified or the protocol(s) specified are not supported by the target database. The acceptable values are:

- Unix platforms: TCPIP and APPC

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- Windows: TCPIP, APPC (Windows 32-bit only), NETBIOS, and NPIPE

If more than one value is specified, then they must be delimited by a comma.

Note that this message may be returned from an intermediate node involved in your connection. For example, if you are trying to connect to a DRDA server via a DB2 Connect gateway and your client workstation does not use global directory services, this message may be returned from the DB2 Connect gateway.

User response: Correct the value and try again.

sqlcode: -1290

sqlstate: 08001

SQL1291N A directory services error has been detected. **Service:** *directory-services-type*, **API:** *API*, **function:** *function*, **error code:** *rc*.

Explanation: An error has been detected by the directory services subsystem. Refer to the token values for details. The following is the explanation of the token values:

directory-services-type

The type of the directory services being used. Valid tokens include:

- DCE

API

The application programming interface used to access the listed directory services. Valid tokens include:

- XDS/XOM

function

The name of the directory services subsystem function that returned the error code.

rc

The error code returned from the indicated function. The meaning of the value is specific to the API being used.

For XDS functions such as `ds_read`, the return code values can be found in the DCE include file `xds.h`.

For XOM functions such as `om_get`, the return code values can be found in the DCE include file `xom.h`.

Note that this message may be returned from an intermediate node involved in your connection. For example, if you are trying to connect to a DRDA server via a DB2 Connect gateway and your client

workstation does not use global directory services, this message may be returned from the DB2 Connect gateway.

User response: Ensure that:

- The product providing the directory services is properly installed and operational.
- You are logged in to the directory services with the appropriate authorization to access the directory entries, if login is required by the directory services provider, for example, DCE.

If the problem persists, consult with your system administrator and/or database administrator to determine the cause of the problem using the set of tokens provided.

sqlcode: -1291

sqlstate: 08001

SQL1292N The global name of the database or database manager instance is invalid.

Explanation: The global name of the database or database manager instance cannot be NULL and cannot be longer than 255 characters. It must start with either `"/.../"` or `"/:./"`.

Note that this message may be returned from an intermediate node involved in your connection. For example, if you are trying to connect to a DRDA server via a DB2 Connect gateway and your client workstation does not use global directory services, this message may be returned from the DB2 Connect gateway.

User response: Correct the global name and try again.

SQL1293N An error was found in a global directory entry. **Error code:** *error-code*.

Explanation: An error has been detected in one of the global database directory entries used. Refer to the following error codes for details:

- 1 The database object does not contain authentication information
- 2 Both the database object and the database locator object do not contain communication protocol information
- 10 Entry not a database object
- 11 Native database name in the database object is either not found or too long
- 12 Database protocol in the database object is either not found or too long
- 13 Invalid authentication value found in the database object

- 14 Insufficient or invalid communication protocol information in the database object
- 15 Database locator object name not found in the database object
- 16 Database locator object name in the database object invalid
- 20 Entry not a database locator object
- 22 Insufficient or invalid communication protocol information in the database locator object
- 30 Entry not a routing information object
- 31 Target database information not found in the routing information object
- 32 Insufficient information for the target database in the routing information object
- 33 No appropriate gateway found in the routing information object
- 34 Invalid flag for authentication at gateway
- 35 Database locator object name for the gateway invalid
- 36 Database name in the target database information attribute of the routing information object is either not found or too long
- 37 Database protocol in the target database information attribute of the routing information object is either not found or too long

Note that you may also see this message if the DCE subsystem is not operational, or if you do not have sufficient privilege to read the DCE directory entry.

Note that this message may be returned from an intermediate node involved in your connection. For example, if you are trying to connect to a DRDA server via a DB2 Connect gateway and your client workstation does not use global directory services, this message may be returned from the DB2 Connect gateway.

User response: Make sure the DCE subsystem is operational and that you have the appropriate privilege to read the directory entry. If the problem persists, inform the database administrator to correct the error in the directory entry. Refer to the *Administration Guide* for the format of these directory objects.

sqlcode: -1293

sqlstate: 08001

SQL1294N The directory path name being used for global directory access is not specified or not valid.

Explanation: In order to use global directory services, a directory path name must be specified either in the *dir_path_name* database manager configuration parameter, or in the DB2DIRPATHNAME environment variable. You either did not specify it, or the name you specified is not valid.

Note that this message may be returned from an intermediate node involved in your connection. For example, if you are trying to connect to a DRDA server via a DB2 Connect gateway and your client workstation does not use global directory services, this message may be returned from the DB2 Connect gateway.

User response: Consult your database administrator for the correct name to use, specify it, and try again.

sqlcode: -1294

sqlstate: 08001

SQL1295N The routing information object name being used for global directory access is not specified or not valid.

Explanation: In order to use global directory services to access a remote database with a database protocol that is not native to this client, the name of a routing information object must be specified either in the *route_obj_name* database manager configuration parameter, or in the DB2ROUTE environment variable. You either did not specify it, or the name you specified is not valid.

Note that this message may be returned from an intermediate node involved in your connection. For example, if you are trying to connect to a DRDA server via a DB2 Connect gateway and your client workstation does not use global directory services, this message may be returned from the DB2 Connect gateway.

User response: Consult with your database administrator for the correct object name to use, specify it and try again.

sqlcode: -1295

sqlstate: 08001

SQL1296N Valid values must be specified for the DIR_PATH_NAME and DIR_OBJ_NAME database manager configuration parameters if the DIR_TYPE parameter has a value other than NONE.

Explanation: These three parameters are interrelated. If the DIR_TYPE value is NONE, then the other two are ignored. If the DIR_TYPE value is not NONE, then

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the other two must both contain valid values. The following rules apply when the DIR_TYPE value is not NONE:

1. The DIR_PATH_NAME and DIR_OBJ_NAME values cannot be NULL (or blanks).
2. If the DIR_TYPE value is DCE, then the DIR_PATH_NAME value must start with either of the special DCE strings enclosed in the following quotes: "/.../" or "/:./".

User response: If you want to change the DIR_TYPE value, make sure the DIR_PATH_NAME and DIR_OBJ_NAME parameters have been specified with the valid values first. If you want to blank out either the DIR_PATH_NAME or the DIR_OBJ_NAME parameter, make sure you set DIR_TYPE to NONE first.

SQL1297N This command is currently not supported on this platform.

Explanation: The function requested using this command is not supported on this platform.

User response: Do not use this command.

SQL1300N Invalid DCE principal name in catalog statement.

Explanation: The DCE principal name in the catalog database operation was invalid. DCE principal names are subject to the following conditions:

- If AUTHENTICATION is specified as DCE, a principal name must be included in the catalog statement.
- If AUTHENTICATION is not specified as DCE, a principal name can not be included in the catalog statement.
- The maximum length of the principal name is 1024 bytes.

User response: Ensure that the principal name conforms to the listed conditions, and resubmit the catalog command.

SQL1301N An error occurred when accessing the server's DCE keytab file.

Explanation: An error occurred when accessing the server's DCE keytab file. For a keytab file to be valid, the following conditions must be satisfied:

- The server's keytab file exists, has the name keytab.db2, and is in the sqllib/security directory.
- There is only a single entry in the keytab file.

User response: Make sure that DCE is started. Next, check that the keytab file exists, and contains a single entry (with rgy_edit). Retry the operation.

SQL1302N DCE principal to DB2 authorization id mapping error. Reason code: reason-code.

Explanation: An error occurred when mapping a DCE principal to a DB2 authorization id. Refer to the following reason codes:

- 1
Missing or invalid DCE user to DB2 authorization id mapping.
- 2
Missing or invalid DCE group to DB2 authorization id mapping.

User response: The DCE principal must have an ERA mapping to a DB2 authorization id. Add the missing entry to the DCE registry, and retry the operation.

sqlcode: -1302

sqlstate: 08001

SQL1303N Security daemon could not be restarted.

Explanation: An attempt to restart the security daemon has failed after communication between the agents and the security daemon was severed or the security daemon terminated abnormally. All new connections to the database manager will be rejected, as authentication is not possible.

User response: Stop the database manager and start it again. If the db2start command fails, follow the user response for that sqlcode.

sqlcode: -1303

sqlstate: 58004

SQL1304N The TCP/IP security type SOCKS is not valid.

Explanation: The TCP/IP security type SOCKS in the TCP/IP protocol structure of the Catalog Node command is invalid with authentication type DCE.

User response: Make sure you do not use the combination of TCP/IP protocol with security type SOCKS and authentication type DCE.

sqlcode: -1304

sqlstate: 08001

SQL1305N An internal DCE error occurred.

Explanation: DB2 processing failed due to an internal DCE error.

User response: Make sure DCE is started. If the problem persists, contact a service representative for assistance.

sqlcode: -1305

sqlstate: 58004

SQL1306N An invalid parameter was specified during invocation of the security audit facility. Reason Code: *reason-code*.

Explanation: One of the parameters of the security audit API is incorrect. Reasons:

- 1 An invalid audit option was specified.
- 2 Invalid pointer to Configure/Describe sqleaucfg structure.
- 3 Invalid Configure/Describe parameter token.
- 4 Invalid Configure/Describe parameter value. The value is incorrect or outside the valid range for the parameter.
- 5 Invalid count specification for Configure/Describe parameter.
- 6 Insufficient length allocated for Configure/Describe parameter.
- 7 Invalid pointer to Extract sqleauextract structure.
- 8 Invalid Extract parameter token.
- 9 Invalid Extract parameter value. The value is incorrect or outside the valid range.
- 10 Invalid count specification for Extract parameter.
- 11 Invalid length for Extract parameter.
- 12 Invalid Archive parameter value. The value is incorrect or outside the valid range.
- 13 Invalid path. The length of the path is outside the valid range.
- 14 The use of a relative path is unsupported.

User response: The system administrator should take specific actions for each of the reasons.

- 1 Provide the right option value for the audit API call by looking at the sqlutil.h include file.
- 2 Check to see if a valid pointer has been provided to a Configure/Describe structure.
- 3 The correct parameter should be specified by looking up the audit facility reference section for the sqleaucfg parameter tokens.
- 4 Correct the parameter value by looking up the valid values in the audit facility reference.
- 5 Specify the correct count and allocate/initialize the appropriate length for variable length parameters.
- 6 Correct the length allocated for Configure/Describe parameter based on the error token that is returned in the SQLCA.

- 7 Check to see if a valid pointer has been provided to a Extract structure.
- 8 The correct parameter should be specified by looking up the audit facility reference section for the sqleauextract parameter tokens.
- 9 Correct the parameter value by looking up the valid values in the audit facility reference.
- 10 Specify the correct count and allocate/initialize the appropriate length for variable length parameters.
- 11 Correct the length allocated for Extract parameter based on the error token that is returned in the SQLCA.
- 12 Correct the parameter value or the parameter length by looking up the valid value in the audit facility reference.
- 13 Provide a path with a length in the supported range.
- 14 Specify an absolute path.

SQL1307N An error occurred during invocation of the security audit facility. Reason Code: *reason-code*.

Explanation: The invocation of the security audit API caused an error to occur. Reasons:

1. Audit is already started.
2. Audit is already stopped.
3. Invalid checksum for audit configuration file.
4. The default or user-provided audit pathname is too long.
5. Could not update the audit configuration file. Either the filesystem is full or the permissions do not allow write.
6. Configuration File not found. Either the file or the directory which contains the file does not exist.
7. The extract file is not found.
8. Invalid format of audit records during extract. The file is corrupted.
9. The file does not exist.
10. Access to the file is denied due to file permissions.
11. The active audit log has already been archived and new events can not be logged to it.
12. Out of disk space (disk full).
13. File I/O error during Extract or Archive.
14. Extract can not be performed on the active audit log file.

User response: The system administrator should take specific actions for each of the reasons.

1. No action required.
2. No action required.

3. Restore the configuration file from backup or issue 'audit reset' command.
4. Choose a different audit pathname which is within the filename length limit.
5. If the file permissions are incorrect, set the permissions to allow write by owner. If the filesystem is full, create free space before proceeding.
6. If the audit configuration file is missing, then restore it from a backup or issue the 'reset' command to initialize the file to defaults. If the directory is missing, restore from a backup or recreate the database manager instance.
7. Verify that file exists in the specified path. If file missing, restore from backup if available.
8. The audit log file is most likely corrupted. If problem persists for other audit log files, notify DB2 service.
9. Verify that the active log files to be archived or the archived log files to be extracted exist in the specified path.
10. Correct the file permissions within the file system.
11. An archived audit log file has been renamed to the active audit log file. The active audit log file must be renamed back to the archived audit log file.
12. Ensure enough disk space is available.
13. Check the db2diag log file for details.
14. Extract must be run on an archived audit log file. Archive the active audit log file before extracting from it.

SQL1308W The audit Extract Facility completed Processing. *num-records* records were extracted.

Explanation: The security audit extract facility completed its processing successfully and extracted the specified number of records.

User response: If zero records were extracted, the user should verify that the extract pathname contains extract files and the extract parameters are correct.

SQL1309N Invalid server principal name.

Explanation: The server principal name specified in the database catalog statement does not exist in the DCE registry. Because of this a DCE ticket could not be obtained for the DB2 server.

User response: Make sure that the principal name in the database catalog entry corresponds to the DCE principal being used by the DB2 server. It may be necessary to fully qualify the principal name.

sqlcode: -1309

sqlstate: 08001

SQL1310N The Database Connection Services directory service failed while attempting to access the Database Connection Services directory.

Explanation: The Database Connection Services Directory Service failed because of file errors while trying to access the Database Connection Services directory file.

The function cannot be processed.

User response: Rerun the function after doing one of the following:

- If you are adding an entry to the Database Connection Services directory, ensure that there is sufficient space for the directory file to become larger.
- Ensure that no other concurrently running program is trying to access the file.
- Verify that the directory file has not been damaged. If it is unrecoverable, you must erase it and recreate it or restore it from a backed-up version.

SQL1311N The Database Connection Services directory cannot be found.

Explanation: The directory cannot be found. The directory may have been deleted.

The function cannot be processed.

User response: Use the CATALOG DCS DATABASE command to add an entry to the Database Connection Services directory, or restore the directory from a backed-up version.

SQL1312W The Database Connection Services directory is empty.

Explanation: An attempt was made to read the contents of the Database Connection Services directory, but no entries existed.

Processing continues, but subsequent commands expecting entries to be available cannot be processed.

User response: Use the Catalog DCS Database command to add entries to the directory or restore a backed-up version that contains entries.

SQL1313N The Database Connection Services directory is full.

Explanation: The entry cannot be added to the Database Connection Services directory because the directory has already reached its maximum size.

The function cannot be processed.

User response: Delete an entry or entries from the directory before adding any more entries.

SQL1314N The address of the Database Connection Services directory entry parameter is not valid.

Explanation: The application program has used an address for this parameter that is not valid. Either the address points to an unallocated buffer or the buffer is not large enough to contain the required input.

The function cannot be processed.

User response: Ensure that the application program has allocated the required buffer area and resubmit the command.

SQL1315N The local database name is not valid.

Explanation: A local database name was specified that contains characters that are not valid. All characters must be from the database manager base character set.

The function cannot be processed.

User response: Ensure that the characters used in the local database name are from the database manager base character set and resubmit the command.

SQL1316N No entry was found in the Database Connection Services directory for the specified local database name.

Explanation: The Database Connection Services directory service failed because no entry could be found in the Database Connection Services directory that corresponds to the input local database name.

The function cannot be processed.

User response: Ensure that the local database name is correct and resubmit the command.

SQL1317N The local database name already exists in the Database Connection Services directory.

Explanation: The entry could not be added to the directory because an entry for that local database name already exists in the directory.

The function cannot be processed.

User response: Specify a unique local database name or delete the existing entry and add the new entry.

SQL1318N The length of element *name* in the input structure for parameter 1 is not valid.

Explanation: The length values in the Database Connection Services directory entry structure should not be less than zero nor greater than the maximum length for the element it represents.

The function cannot be processed.

User response: If an element of the directory entry

structure is specified, the associated length value should represent the number of bytes in the element. Otherwise, the length value should be zero. Ensure that all the directory entry structure elements have the required specifications and lengths for the command and resubmit the command.

SQL1319N The Database Connection Services directory entries have not been collected.

Explanation: A request to copy all the directory entries was received, but either a prior request to collect the entries was not received or the prior request to collect the entries failed.

The function cannot be processed.

User response: Issue a request to open the directory and collect the entries. Then resubmit this command.

SQL1320N The Database Connection Services directory cannot be accessed at this time.

Explanation: A request to access the Database Connection Services directory failed. Access to the Database Connection Services directory is dependent on the type of access requested and the current activity in the directory. If the request is for the intention of updating the directory, then the directory must not be active. If the request is to read the directory, then access is allowed if the directory is not being updated.

The function cannot be processed.

User response: Wait for the current activity to complete and resubmit the command.

SQL1321N The structure ID specified in the directory entry structure is not valid.

Explanation: The structure ID received in the directory entry structure does not represent a recognized value.

The function cannot be processed.

User response: Verify the structure ID passed in the directory entry structure is a valid value and resubmit the command.

SQL1322N An error occurred when writing to the audit log file.

Explanation: The DB2 audit facility encountered an error when invoked to record an audit event to the trail. There is no space on the file system the audit log resides on. Free up space on this file system or prune the audit log to reduce its size.

When more space is available, use db2audit to flush out any data in memory, and to reset the auditor to a ready state. Ensure that appropriate extracts have

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occurred, or a copy of the log has been made prior to pruning the log, as deleted records are not recoverable.

User response: The system administrator should take the suggested corrective action so that the audit facility can resume logging.

sqlcode: -1322

sqlstate: 58030

SQL1323N An error occurred when accessing the audit configuration file.

Explanation: db2audit.cfg could not be opened, or was invalid. Possible reasons:

- The db2audit.cfg file either does not exist, or has been damaged. Take one of the following actions:
 - Restore from a saved version of the file.
 - Reset the audit facility configuration file by issuing the reset command from the db2audit executable.

User response: The system administrator should take the suggested action to resolve the problem.

sqlcode: -1323

sqlstate: 57019

SQL1324N Error converting data from nickname column *schema.name.column*. Reason Code: *reason-code*. Value: *value*.

Explanation: A data conversion problem occurred while transferring data from or to the remote source. Possible reasons:

- 1 Numeric value was out of range
- 2 Numeric value syntax error
- 3 Base 64 decoding error
- 4 Hexbin decoding error

User response: Check the data type mapping between the remote type and the local type. Also ensure that the remote system returns valid data.

SQL1325N The remote database environment does not support the command or one of the command options.

Explanation: An attempt has been made to issue a DB2 workstation database specific command or command option against a host database through DB2 Connect or federated server. The following commands generate this error when issued against a DB2 for MVS*, DB2 for OS/400* or SQL/DS* database:

- OPSTAT (Collect Operational Status)
- GETAA (Get Administrative Authorizations)
- GETTA (Get Table Authorizations)
- PREREORG (Prepare to Reorganize Table)

- REORG (Call Reorganize Function)
- RQSVPT/ENSVPT/RLBSVPT (Subtransaction Requests)
- RUNSTATS (Run Statistics).
- COMPOUND SQL ATOMIC STATIC (Atomic Compound SQL)
- ACTIVATE DATABASE
- DEACTIVATE DATABASE

As well, the following commands generate this error with incorrect options:

- IMPORT (Import table) The filetype must be IXF, commitcount must be 0 for offline import or must not be automatic for online import, and the first word in the Action String (for example, "REPLACE into ...") must be INSERT.
- EXPORT (Export table) The filetype must be IXF.

The command cannot be processed.

User response: Do not attempt to issue this command against a host database through DB2 Connect or federated server.

SQL1326N The file or directory *name* cannot be accessed.

Explanation: The file or directory *name* cannot be accessed because either the file permissions are incorrect, the file path is incorrect, or there is insufficient space in the directory or path.

If you are using a cluster manager, this error can be returned if the DB2 database manager failed to add the given path to the cluster manager configuration. Error messages from the cluster manager will be recorded in the db2diag log file.

User response: Verify that any path or filename specified in the command is valid, you have the proper permissions to access the path or filename, and there is sufficient space to contain the file. Correct the problem and resubmit the command. If the problem persists, contact your System Administrator.

If you are using a cluster manager, correct the problem and resubmit the command:

- Review the db2diag log file for error messages from the cluster manager.
- Respond to the cluster manager error messages in the db2diag log file to correct the underlying problem that prevented the DB2 database manager from adding the path to the cluster manager configuration.
- Resubmit the command.

SQL1327N An implicit connection attempt failed. *database-name* is not a valid database name.

Explanation: An attempt to perform an implicit connection failed. The syntax of the database alias name specified by the DB2DBDFT environment variable is not valid. The database name must contain 1 to 8 bytes and all the characters must be from the database manager base character set.

The command cannot be processed.

User response: Correct the database alias name specified by the DB2DBDFT environment variable and resubmit your command. If using the command line processor, then a "db2 terminate" should be issued prior to resubmitting the command. If you do not want an implicit connection to be performed, remove the DB2DBDFT environment variable.

sqlcode: -1327

sqlstate: 2E000

SQL1328N An implicit connection attempt failed. The database alias name or database name *name* was not found in the local database directory.

Explanation: An attempt to perform an implicit connection failed. The database name specified by the DB2DBDFT environment variable does not name an existing database. The database could not be found in the database directory.

The command cannot be processed.

Note that a CONNECT RESET request issued within a distributed unit of work will attempt an implicit connect to the default database. This may be the reason for this error.

User response:

- Correct the database alias name specified by the DB2DBDFT environment variable and resubmit the command.
- If the intended action is to remove a connection while operating in a distributed unit of work environment, consider replacing the CONNECT RESET statement with a DISCONNECT or RELEASE statement.
- If using the command line processor, then a "db2 terminate" should be issued prior to resubmitting the command.
- If you do not want an implicit connection to be performed, remove the DB2DBDFT environment variable.

sqlcode: -1328

sqlstate: 42705

SQL1329N The resolved path specified on the command is too long.

Explanation: The resolved path specified on the command exceeds the maximum length supported by the database manager. The resolved path must be no longer than 215 characters in length. During a Create Database, Catalog Database, Open Database Directory for scan, and change database comment commands, the database manager instance name is appended to the end of the specified path.

User response: Check that the fully resolved absolute or relative path name, including the database manager instance name, does not exceed 215 characters in length. Correct the path and resubmit the command.

SQL1330N The symbolic destination name *name* is not valid.

Explanation: The symbolic destination name in the CPIC protocol structure of the Catalog Node command is either not specified or longer than the allowable length. The name must be 1 to 8 bytes in length.

User response: Verify that the symbolic destination name is specified and that it is not longer than 8 bytes in length. Resubmit the command with a valid symbolic destination name.

SQL1331N The CPIC security type *type* is not valid.

Explanation: The CPIC security type specified in the CPIC protocol structure of the Catalog Node command is invalid. The security type specifies the security information that will be included when a database client allocates a conversation with a partner LU, as specified by the LU 6.2 architecture. Correct values for security type are:

SQL_CPIC_SECURITY_NONE

No access security information will be included.

Note: This is not supported when using federated server. When DB2 Connect is used, it is only supported when authentication type is DCE, KERBEROS, or SERVER_ENCRYPT.

SQL_CPIC_SECURITY_SAME

A userid will be included together with an indicator specifying that the userid is already verified. This is not supported when authentication type SERVER is used with DB2 Connect or federated server, or when authentication type is DCE, KERBEROS, or SERVER_ENCRYPT.

SQL_CPIC_SECURITY_PROGRAM

Both a userid and a password will be included. This is not supported when authentication type CLIENT is used with DB2

SQL1332N • SQL1337N

Connect or when authentication type is DCE, KERBEROS, or SERVER_ENCRYPT.

User response: Set the security type to one of the types listed in this message and resubmit the command.

sqlcode: -1331

sqlstate: 08001

SQL1332N The Host Name *name* is not valid.

Explanation: The host name in the TCP/IP protocol structure of the Catalog Node command is either not specified or longer than the allowable length. The name must be 1 to 255 characters in length and cannot be all blanks.

User response: Verify that the host name is specified and that it is not longer than 255 characters in length. Resubmit the command with a valid host name.

SQL1333N The Service Name *name* is not valid.

Explanation: The service name in the TCP/IP protocol structure of the Catalog Node command is either not specified or longer than the allowable length. The name must be 1 to 14 characters in length and cannot be all blanks.

User response: Verify that the service name is specified and that it is not longer than 14 characters in length. Resubmit the command with a valid service name.

SQL1334N The database server or DB2 Connect server cannot be used to route a remote request to a second database server in this configuration.

Explanation: An attempt was made to route a request through a database server node or DB2 Connect server node using an unsupported combination of client and target database server, or from a non-LUW DRDA client to a DRDA target database through a LUW database server or DB2 Connect server. The request must be routed directly from the client to the node on which the target database is running.

User response: Uncatalog the database at the client machine and then catalog the database specifying the node on which the database actually resides. Ensure that the node is also cataloged.

SQL1335N The application requestor name is not valid.

Explanation: An application requestor name was specified that contains characters that are not valid. All characters must be from the database manager base character set.

User response: Ensure that the characters used in the

application requestor name are from the database manager base character set and resubmit the command.

SQL1336N The remote host *hostname* was not found.

Explanation: The system cannot resolve the address of the remote host. Possible causes are:

- An incorrect hostname value was specified when the TCP/IP node was cataloged.
- The correct hostname was specified, but was not defined in any TCP/IP name server accessible to your client node, nor in the client's hosts file.
- The TCP/IP name server where the hostname was defined was not available at the time you tried to connect.
- TCP/IP is not running.
- The remote host was cataloged on this client using the CATALOG TCPIP6 NODE command. However, the remote host does not support IPv6.

User response: Make sure that TCP/IP is running and that the hostname specified when cataloging the TCP/IP node is a correct name, and that it is defined in an accessible name server or in the local hosts file.

If the remote host was cataloged on this client using the CATALOG TCPIP6 NODE command but the remote host does not support IPv6, then perform the following steps: (1) Use the UNCATALOG command and (2) recatalog using the CATALOG TCPIP NODE command.

Federated system users: verify that the remote host is cataloged correctly in the SYSCAT.SERVERS view.

sqlcode: -1336

sqlstate: 08001, 08508

SQL1337N The service *service-name* was not found.

Explanation: The system cannot resolve the port number associated with the service-name. Possible causes are:

- An incorrect service-name value was specified when the TCP/IP node was cataloged.
- The correct service-name was specified, but was not defined in the client's services file.

Federated system users: this situation can also be detected by the data source.

User response: Make sure that the service-name specified when cataloging the TCP/IP node is a correct name, and that it is defined in the local services file.

Federated system users must also ensure that the name is defined in the services file at the data source.

SQL1338N The symbolic destination name *symbolic-destination-name* was not found.

Explanation: The system cannot find the Side Information associated with the symbolic-destination-name you specified. Possible causes are:

- An incorrect symbolic-destination-name value was specified when the CPIC NODE was cataloged.
- The symbolic destination name and its associated side information have not been defined to the SNA communications subsystem.
- The SNA communication subsystem has not been started.

User response: Make sure that the symbolic-destination-name specified when cataloging the CPIC node is a correct name, and that it has been defined to the local SNA communication subsystem.

Start the SNA communication subsystem if it has not been started.

SQL1339N *n* SQL error(s) were detected in the execution of a Not Atomic Compound SQL statement, and have the following identification: *error1 error2 error3 error4 error5 error6 error7*.

Explanation: One or more SQL substatements within a Compound SQL statement resulted in SQL errors (negative return codes).

The error tokens will not be returned for CLI/ODBC applications. CLI/ODBC applications can use SQLGetDiagRec, SQLGetDiagField, or SQLError APIs to get more information about each error.

User response: Examine the error identification information provided. There will be <n> <errorX> tokens filled in, up to a maximum of 7. Each <errorX> represents an SQL statement error. These errors are listed in the order that they were encountered. If the message text has not been formatted, this information can be found in the second and subsequent tokens of the SQLERRMC field (tokens are separated by a one byte hexadecimal value 0xFF).

Each <errorX> is of the format PPPSSSS where:

PPP PPP represents the position of the statement that caused the error within the Compound SQL block, and is left-justified. For example, if the first statement failed, this field would contain the number one ("1").

SSSSS SQLSTATE of the statement that failed.

More information can be found by examining the SQLCA itself. The third SQLERRD field contains the number of rows affected by the compound SQL statement, the fourth SQLERRD field contains the position of the last statement that succeeded, the 5th SQLERRD field contains the number of rows affected

by referential integrity when IBM Data Server Client/DB2 Server and SQL/DS databases are accessed, and the 6th SQLERRD field contains the number of statements that failed (returned negative SQLCODES).

sqlcode: -1339

sqlstate: 56091

SQL1340N The file server *fileserver* was not found.

Explanation: The system cannot find the specified file server on the network. Possible causes are:

- An incorrect *fileserver* name was specified when the IPX/SPX node was cataloged.
- The correct *fileserver* name was specified, but the file server was not available at the time the connect was tried.

User response: Make sure that the *fileserver* name specified when cataloging the IPX/SPX node is correct, and that the file server is available on the network.

SQL1341N A workstation name must be specified in the client database manager configuration file.

Explanation: A workstation name has not been specified in the client database manager configuration file. A workstation name must be specified when using NetBIOS to communicate with the server.

User response: Specify a workstation name in the client database manager configuration file.

SQL1342N The File Server name *name* is missing or invalid.

Explanation: The File Server name specified in the command/API is missing or invalid.

User response: Verify that a File Server name was specified, that the name does not contain invalid characters, and is not longer than 48 characters in length. Resubmit the command/API with a valid File Server name.

SQL1343N The Object Name *name* is missing or invalid.

Explanation: The Object Name specified in the command/API is missing or invalid.

User response: Verify that the Object Name was specified, that the name does not contain invalid characters, and is not longer than 48 characters in length. Resubmit the command/API with a valid Object Name.

SQL1344N Orphan rows found in the system catalogs. Contact your technical service representative prior to attempting a database upgrade.

Explanation: One or more system catalogs contain orphan rows that can cause a database upgrade to fail.

User response: Contact your technical service representative. Do not attempt a database upgrade until this problem has been resolved.

SQL1345N Execution failed due to a cluster manager error that will not affect the successful execution of subsequent SQL statements.

Explanation: A cluster manager error occurred that prevented successful processing of the current environment command or SQL statement. The error occurred at execution time.

The command or statement cannot be processed. The current transaction is not rolled back and the application remains connected to the database.

User response: Record the message number. Record all error information from the SQLCA, if possible. Attempt to make the necessary corrective actions based on the cluster manager return code in the db2diag log file and resubmit the command or SQL statement.

Required information:

- Problem description
- SQLCODE and reason code
- SQLCA contents, if possible
- Trace file, if possible

sqlcode: -1345

sqlstate: 58038

SQL1348W The table space could not be reduced in size.

Explanation: The table space size could not be reduced any further because no free space exists above the table space high water mark.

User response: A reorg table or index operation may allow space below the high water mark to be freed, allowing a subsequent ALTER TABLESPACE ... REDUCE statement to reduce the size of the table space.

sqlcode: +1348

sqlstate: 0168J

SQL1349W An external NOT FENCED routine and/or a user defined wrapper was encountered by db2ckmig or during database migration. During database migration, all external NOT FENCED routines that have no dependency on the DB2 engine library are altered to FENCED and NOT THREADSAFE. In addition, the DB2_FENCED option for all user defined wrappers is altered to 'Y'. Refer to *generated-file* for the list of routines affected.

Explanation: Beginning in DB2 Version 9.5, the database manager is now multi-threaded as opposed to multi-processed on Linux and UNIX platforms. The execution of NOT FENCED and NOT THREADSAFE external routines in the multi-threaded database manager could result in incorrect results, database corruption, or abnormal termination of the database manager. As a result, all NOT FENCED routines must be THREADSAFE.

Similarly, usage of user defined wrappers which are NOT FENCED in the multi-threaded database manager could result in incorrect results, database corruption, or abnormal termination of the database manager. As a result, all user defined wrappers which are NOT FENCED must be threadsafe.

During database migration, all external NOT FENCED routines that have no dependency on the DB2 engine library are altered to FENCED and NOT THREADSAFE to prevent problems that can occur due to the execution of code that is not thread safe. Similarly, the DB2_FENCED option is set to 'Y' for all user defined wrappers during database migration.

When running db2ckmig, external NOT FENCED routines that have no dependency on the DB2 engine library are detected. These routines will be altered to FENCED and NOT THREADSAFE during database migration. The file *generated-file* is generated with a list of all the affected external NOT FENCED routines. In addition when running db2ckmig, user defined wrapper are detected and the DB2_FENCED option is altered to 'Y' during database migration.

The file *generated-file* is generated with a list of all the affected external NOT FENCED routines and user defined wrappers.

User response: When migrating the database, verify that all the affected routines and user defined wrappers can safely be run as NOT FENCED and THREADSAFE. Once verified they can be altered back to NOT FENCED and THREADSAFE. The file *generated-file* is a CLP script that can be executed to alter all of the routines and user defined wrappers to NOT FENCED. Modify this file to contain only the ALTER statements that should be executed and run the CLP script after the database has been migrated.

When running db2ckmig, you may choose to alter the

affected routines listed in the generated file *generated-file*, to FENCED and NOT THREADSAFE mode and the DB2_FENCED option for user defined wrappers to Y, before database migration.

SQL1350N The application is not in the correct state to process this request. Reason code=*rc*.

Explanation: Corresponding to *rc*:

- 01 The application is currently processing SQL and cannot process the utility command requested.
- 02 A Backup request is in progress. A warning was received from the initial utility call indicating that further requests are required before Backup can complete.
- 03 A Restore request is in progress. A warning was received from the initial utility call indicating that further requests are required before Restore can complete.
- 04 A Rollforward request is in progress. A warning was received from the initial utility call indicating that further requests are required before Rollforward can complete.
- 05 A Load request is in progress. A warning was received from the initial utility call indicating that further requests are required before Load can complete.
- 07 Federated system users: the application cannot process this command after executing SQL statements.

User response: Corresponding to *rc*:

- 01 Complete the unit of work (using either COMMIT or ROLLBACK) before reissuing this command.
- 02-05 Issue the required call(s) to complete the utility in progress, then reissue this command.
- 07 Federated system users: the application must issue the commands after establishing a connection to the database manager but prior to any other SQL statements.

SQL1351C No FCM channels are available.

Explanation: No FCM channels are available. FCM is unable to increase the number of channels automatically because the maximum value has been reached.

The statement cannot be processed.

User response: Try the request again after other processes have freed up some of this resource.

If the error persists, increase the number of FCM channels (*fc_m_num_channels*) specified in the database

manager configuration file, then try the request again.

sqlcode: -1351

sqlstate: 57011

SQL1352N Trusted Connection cannot be reused during a transaction.

Explanation: An attempt to reuse a connection failed because the connection was in a transaction. The connection is now in an unconnected state.

User response: Before trying to reuse a connection make sure that you perform a commit or rollback.

SQL1353N A column option for column *column-name* is invalid in a transparent DDL statement. Reason code = *reason-code*.

Explanation: Transparent DDL statements create objects at a data source. Certain column options that can be specified for objects created at the federated server are not supported via transparent DDL statements. The specific column option specified for column *column-name* is indicated by the *reason-code* as follows:

1. lob-options
2. unique-constraint, referential-constraint, or check-constraint
3. default-clause
4. generated-column-spec (not including the default-clause)

The statement cannot be processed.

User response: Remove or replace the option that is invalid.

sqlcode: -1353

sqlstate: 428GO

SQL1354N An SQL variable in routine *routine-name* is not available for reference due to a recent commit or rollback operation.

Explanation: During the execution of routine *routine-name* an attempt was made to reference an SQL variable or SQL parameter of data type XML that cannot be referenced because a recent commit or rollback operation has caused its value to no longer be available.

Referencing variables or parameters of data type XML in SQL procedures after a commit or rollback operation occurs without first assigning new values to these variables is not supported.

User response: To prevent the error from occurring, do one or more of the following:

- Move the commit or rollback operation to after the SQL statement that references SQL variables or SQL parameters of data type XML.
- Remove references to SQL variables or SQL parameters of data type XML that follow commit or rollback operations.
- Assign values to SQL variables or SQL parameters of data type XML that will be referenced in SQL statements that follow a commit or rollback operation.
- Retry the transaction if the rollback was implicit as a result of conditions such as deadlocks or system failures.

sqlcode: -1354

sqlstate: 560CE

SQL1355N One or more values specified when retrieving alert configuration settings are invalid. Reason code: *reason-code*.

Explanation: One or more values specified when retrieving alert configuration settings are invalid for the reason given by reason code *reason-code*. The possible reason codes are as follows:

- 1 The specified object type is invalid.
- 2 The specified configuration level is invalid.
- 3 The request to retrieve alert configuration for a particular database failed because the database name is not specified.
- 4 The request to retrieve alert configuration for a particular object failed because either the database name or the object name is not specified.
- 5 The object specified does not match the object type.
- 6 An object was specified but no object level settings were requested.

User response: The action corresponding to the reason code is:

- 1 To retrieve alert configuration settings for the database manager, specify object type DBM, for the database, specify object type DB, for a tablespace, specify object type TS, for a tablespace container, specify object type TSC.
- 2 If the object type is DBM, specify configuration level D to retrieve install default settings, or specify G or O to retrieve instance level settings. If the object type is not DBM, specify configuration level D to retrieve install default settings, specify G to retrieve global level settings, or specify O for object level settings.
- 3 Specify the database name.

- 4 Ensure both the database name and the object name are specified.
- 5 Ensure the object specified matches the object type.
- 6 Specify object name only if you want to retrieve object level settings.

Resubmit the request.

sqlcode: -1355

sqlstate: 560CD

SQL1356N The data partition cannot be detached from the table *tablename*.

Explanation: The ALTER TABLE ... DETACH PARTITION statement cannot be processed. The data partition has been attached within the same unit of work (UOW) and so the table has a pending modification to be made.

User response: Either COMMIT or ROLLBACK the pending ATTACH transaction before detaching the partition.

SQL1357N The specified data type is invalid as the local data type for a data type mapping from a data source. Reason code = *reason-code*. Altering the local type to the specified data type is not allowed.

Explanation: The data type you specified is an invalid type mapping or an unsupported data type.

User response: The *reason-code* indicates which action to take.

1. The local data type specified is not compatible with the data type being mapped to from the data source. Specify a data type that is compatible with the one at the data source.
2. The specified data type is not a built-in data type. Specify an appropriate built-in data type.
3. The wrapper does not support the data type mapping. Specify a data type supported by the wrapper.

sqlcode: -1357

sqlstate: 42815

SQL1358N A duplicate cursor cannot be opened.

Explanation: More than 65533 instances of this cursor have been opened since the first instance was opened at this nesting level.

User response: Close all instances of this cursor at this nesting level.

sqlcode: -1358

sqlstate: 54064

SQL1359N Processing of a trusted context switch user request was cancelled due to an interrupt.

Explanation: An interrupt request was received during switch user processing. The switch user request did not complete and the connection has been placed in the unconnected state.

User response: Continue the application. The connection must first be placed back into the connected state by issuing a valid switch user request or by terminating this connection and establishing a new one.

sqlcode: -1359

sqlstate: 51018

SQL1360N Current processing cannot be interrupted.

Explanation: The user attempted to interrupt a process which is not interruptible.

User response: Do not interrupt the current process.

SQL1361W Execution time has exceeded timeout value. Do you wish to interrupt it?

Explanation: If a command takes longer than a pre-defined timeout period, a dialog box pops up asking if the (Windows client) user wants to interrupt it or not.

Note that this message is applicable in Windows environments only, and will only be seen in a dialog pop up box.

User response: There are three choices: YES - interrupt now; NO - continue, don't prompt me; CANCEL - continue, same timeout.

SQL1362W One or more of the parameters submitted for immediate modification were not changed dynamically. Client changes will not be effective until the next time the application is started or the TERMINATE command has been issued. Server changes will not be effective until the next DB2START command.

Explanation: Some changes to the database manager configuration could not be applied immediately. For these parameters, the changes become effective only after DB2 is started. This typically occurs after a DB2START on a server and after the application restarts on a client.

User response: To see which parameter changes took

effect dynamically and which ones did not, retrieve the database manager configuration parameters and display the parameter details using the following command:

```
DB2 GET DBM CFG SHOW DETAIL
```

Changes to database manager configuration parameters can only take effect dynamically if you are attached to the instance. Not all configuration parameters support dynamic update. To see which parameters can be changed dynamically, refer to the Administration Guide.

If several parameters were submitted in a group, submit the parameters individually. In those cases where a configuration parameter could not change dynamically, do one or more of the following:

- for user applications: stop and start the application
- for CLP: TERMINATE and reconnect
- for a server: issue DB2STOP and DB2START

SQL1363W One or more of the parameters submitted for immediate modification were not changed dynamically. For these configuration parameters, the database must be shutdown and reactivated before the configuration parameter changes become effective.

Explanation: The database configuration command has been successfully processed. However, not all changes were processed right away.

Changes to database configuration parameters can only take effect dynamically if you are connected to the database. Not all configuration parameters support dynamic update, meaning that they will not take effect until the database is deactivated and reactivated.

User response: To see which parameter changes took effect dynamically and which ones did not, retrieve the database configuration parameters and display the parameter details using the following command:

```
DB2 GET DB CFG FOR <database-alias> SHOW DETAIL
```

If the parameters were submitted in a group, resubmit the parameter updates individually.

For the configuration parameters that do not support dynamic updates, do one or more of the following:

- Deactivate the database by using the DEACTIVATE DATABASE command, then reactivate it by using the ACTIVATE DATABASE command.
- Rebind your packages after the new configuration parameters take effect so that the new values will be used during the bind.
- Use the FLUSH PACKAGE CACHE command to invalidate dynamic statements in the SQL cache.

SQL1364W One or more of the parameters were set to AUTOMATIC in a case where the parameter does not support AUTOMATIC.

Explanation: One or more of the configuration parameters were set to AUTOMATIC in a case where the parameter does not support AUTOMATIC.

User response: If the parameter changes were submitted as a group, resubmit the changes individually to see which parameter changes were successful.

If only one parameter was submitted then this message indicates that the value AUTOMATIC is not supported for this parameter.

To find out which configuration parameters support the AUTOMATIC value, refer to the Administration Guide.

SQL1365N db2start or db2stop failed in processing the plugin *plugin-name*. Reason code = *reason-code*.

Explanation: Processing failed for the server side security plug-in *plugin-name*. The explanation corresponding to the *reason-code* is:

1

Security plug-in not found.

2

Unable to load the security plug-in.

3

More than one Kerberos security plug-in is specified in the SRVCON_GSSPLUGIN_LIST database manager configuration parameter.

4

No Kerberos based security plug-in is found and Kerberos is specified in the SRVCON_AUTH or AUTHENTICATION database manager configuration parameter.

5

Required API is missing in the security plug-in.

6

Wrong security plug-in type.

7

Error encountered during unloading of the security plug-in.

8

Invalid security plug-in name.

9

10

The version of the APIs reported by the security plug-in is not compatible with DB2.

11

Security plug-in encountered an unexpected error on the database server

12

The SRVCON_GSSPLUGIN_LIST database manager configuration parameter is not set and GSSPLUGIN or GSS_SERVER_ENCRYPT is specified in the SRVCON_AUTH or AUTHENTICATION database manager configuration parameter.

13

The communication buffer exit library name in the database manager configuration parameter COMM_EXIT_LIST is invalid.

14

The communication buffer exit library can not be found.

15

The communication buffer exit library can not be loaded.

16

The communication buffer exit library is missing a required API.

17

The communication buffer exit library encountered an error when loading.

The version of the APIs reported by the communication buffer exit library is not compatible with DB2.

User response: The user response corresponding to the *reason-code* is:

1

Ensure that the indicated security plug-in is located in the server-plug-in directory.

2

Check the administration notification log file for the cause of the failure. Fix the problem identified by the error message text in the administration notification log.

3

Ensure that only one Kerberos security plug-in is specified in the SRVCON_GSSPLUGIN_LIST database manager configuration parameter.

4

5	Specify one Kerberos security plug-in in the SRVCON_GSSPLUGIN_LIST database manager configuration parameter or do not specify Kerberos in the SRVCON_AUTH or AUTHENTICATION database manager configuration parameter.	14	Check the db2diag.log for messages indicating the reason that the communication buffer exit library can not be loaded.
6	Check the administration notification log file for the missing required API name. Add the missing API to the security plug-in.	15	Check the db2diag.log for the missing API name. Add the missing API to the communication buffer exit library.
7	Specify the right type of security plug-in in the appropriate database manager configuration parameter. For example, do not specify a userid-password based security plug-in for the SRVCON_GSSPLUGIN_LIST database manager configuration parameter.	16	Check the db2diag.log for any messages returned from the communication buffer exit library. The message indicates the communication buffer exit library encountered an error, not DB2.
8	Check the administration notification log file for the cause of the failure. Fix the problem identified by the error message text in the administration notification log.	17	Use a version of the communication buffer exit library that is compatible with this version of DB2.
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p style="margin: 0;">SQL1366N A security plug-in <i>plugin-name</i> processing error occurred on the client. Reason code = <i>reason-code</i>.</p> <p style="margin: 0;">Explanation: The client side security plug-in returned an error. The explanation corresponding to the <i>reason-code</i> is:</p> <ol style="list-style-type: none"> 1. Required API is missing in the security plug-in. 2. Wrong security plug-in type. 3. Unable to load the client security plug-in. 4. Unable to unload the security plug-in. 5. Invalid plug-in name. 6. The version of the APIs reported by the security plug-in is not compatible with DB2. 7. Security plug-in encountered an unexpected error. 8. Invalid client credential. 9. Security plug-in received an expired credential. <p style="margin: 0;">User response: The user response corresponding to the <i>reason-code</i> is:</p> <ol style="list-style-type: none"> 1. Check the administration notification log file for the name of the required missing API. Add the missing API to the security plug-in. 2. Specify the right type of security plug-in in the appropriate database manager configuration parameter. For example, do not specify a userid-password based security plug-in for the SRVCON_GSSPLUGIN_LIST database manager configuration parameter. 3. Check the administration notification log file for the cause of the failure. Fix the problem identified by the error message text in the administration notification log. </div> <div style="width: 50%; padding-left: 10px;"> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 10px;"/> <p style="margin: 0;">SQL1366N A security plug-in <i>plugin-name</i> processing error occurred on the client. Reason code = <i>reason-code</i>.</p> <p style="margin: 0;">Explanation: The client side security plug-in returned an error. The explanation corresponding to the <i>reason-code</i> is:</p> <ol style="list-style-type: none"> 1. Required API is missing in the security plug-in. 2. Wrong security plug-in type. 3. Unable to load the client security plug-in. 4. Unable to unload the security plug-in. 5. Invalid plug-in name. 6. The version of the APIs reported by the security plug-in is not compatible with DB2. 7. Security plug-in encountered an unexpected error. 8. Invalid client credential. 9. Security plug-in received an expired credential. <p style="margin: 0;">User response: The user response corresponding to the <i>reason-code</i> is:</p> <ol style="list-style-type: none"> 1. Check the administration notification log file for the name of the required missing API. Add the missing API to the security plug-in. 2. Specify the right type of security plug-in in the appropriate database manager configuration parameter. For example, do not specify a userid-password based security plug-in for the SRVCON_GSSPLUGIN_LIST database manager configuration parameter. 3. Check the administration notification log file for the cause of the failure. Fix the problem identified by the error message text in the administration notification log. </div> </div>			
9	Specify a valid security plug-in name. The name should not contain any directory path information.		
10	Ensure that the security plug-in is using a supported version of the APIs and that it is reporting a correct version number.		
11	Check the administration notification log file on the client and on the server for more information. Fix the problem identified by the error message text in the administration notification log.		
12	Specify at least one GSS-API based security plug-in for the SRVCON_GSSPLUGIN_LIST database manager configuration parameter or specify a different authentication type for the SRVCON_AUTH or AUTHENTICATION database manager configuration parameter.		
13	Use a library name that is compatible with the communication buffer exit library naming rules.		
14	Ensure the indicated communication buffer exit library is located in the commexit directory.		

4. Check the administration notification log file for the cause of the failure. Fix the problem identified by the error message text in the administration notification log.
5. Specify a valid security plug-in name. The name should not contain any directory path information.
6. Ensure that the security plug-in is using a supported version of the APIs and that it is reporting a correct version number.
7. Check the administration notification log file on the client and on the server for more information. Fix the problem identified by the error message text in the administration notification log.
8. Verify that the client credential (generated by db2secGenerateInitialCred or provided as an inbound delegated credential) is in a format recognized by the security plug-in. As the credential will be used to initiate contexts, it must be an INITIATE or BOTH credential.
9. The user issuing the statement must obtain the appropriate credentials (or re-obtain their initial credentials) and then resubmit the statement.

SQL1367N Insufficient operating system configuration for resource policy support.

Explanation: Resource policy does not support the current operating system configuration.

User response: Install the appropriate operating system level or disable the DB2_RESOURCE_POLICY registry variable.

SQL1368N Invalid resource policy configuration.

Explanation: The resource policy file is invalid.

User response: Correct the policy definition specified by the file defined by the DB2_RESOURCE_POLICY registry variable.

Disable resource policy support by clearing the DB2_RESOURCE_POLICY registry variable or set DB2_RESOURCE_POLICY to AUTOMATIC for automatic configuration.

SQL1369N Invalid XML document.

Explanation: The current XML document is invalid.

User response: Validate the XML document before proceeding.

SQL1370N An attempt to quiesce instance or database *name1* failed because instance or database *name2* is already quiesced by user *username*. **Quiesce type:** *type*.

Explanation: An attempt was made to quiesce an instance or database which would have caused an

overlapping quiesce, such as quiescing an instance while a database is already quiesced by another user.

Quiesce type *type* refers to the instance or database already quiesced and is a '1' for an instance and a '2' for a database.

User response: Contact the user who currently has the instance or database quiesced to determine when DB2 will no longer be quiesced, and retry the request at that time.

SQL1371W The quiesce operation was not executed because the specified instance or database named *name* is already quiesced.

Explanation: Before performing maintenance activities, you can force users off of a database manager instance or database by quiescing the instance or database.

This message is returned when an attempt is made to quiesce an instance or database which is already quiesced.

User response: No action is required.

SQL1372N Cannot perform a quiesce while in a transaction.

Explanation: An attempt was made to quiesce a database or instance while the user issuing the quiesce has uncompleted units of work. Quiesce cannot be issued while in this state.

User response: Complete the unit of work (COMMIT or ROLLBACK) and retry the request.

SQL1373W Cannot unquiesce instance or database *name*, because it is not quiesced.

Explanation: Unquiesce failed because the instance or database is not quiesced.

User response: Ensure that the unquiesce is being issued for the correct instance or database.

SQL1374N Cannot QUIESCE RESET instance or database *name*, because it has been quiesced by another user *username*.

Explanation: The instance or database is quiesced, but you are not the quiescer.

User response: Ensure that the quiesce reset is being issued for the correct instance or database.

SQL1375N An invalid parameter was passed to the api. Parameter *parm-code* is in error.

Explanation: *parm-code* indicates the parameter in error:

1 scope

2 options

The value may be out of range or invalid.

User response: Check the syntax of the api, correct the parameter and try again.

SQL1376N Creating or invoking a sourced procedure using a wrapper defined as fenced is not supported.

Explanation: The sourced procedure cannot be created or invoked using a wrapper defined as fenced.

User response: Submit the statement using a wrapper defined as unfenced.

sqlcode: -1376

sqlstate: 55069

SQL1377N Creating or altering the sourced procedure is not supported at this data source.

Explanation: The sourced procedure cannot be created or altered at this data source.

User response: Submit the statement at a supported data source.

sqlcode: -1377

sqlstate: 560CL

SQL1379W Database partition group *partition_group* has been partially redistributed. The number of tables redistributed is *number*, and the number of tables yet to be redistributed is *number*. Reason code = *reason-code*.

Explanation: This redistribute operation completed successfully, however the database partition group is only partially redistributed. As a result, redistributed tables in the database partition group could use a different partitioning map than tables that have not been redistributed. Also, if collocation between redistributed and non-redistributed tables existed before the redistribute operation, the collocation property between these tables is temporarily disabled. Query performance may not be optimal.

Reason codes:

1

The redistribute request specified a table list, which did not include all the tables in the specified database partition group. As a result, other tables in the database partition group, which were not listed in the request, are not redistributed.

2

The STOP AT parameter was specified with the redistribute request, and the value was reached before the redistribute operation completed.

User response: Issue another redistribute request specifying the CONTINUE parameter to apply the new distribution to another specified set of tables or to the rest of the database partition group, or specify the ABORT parameter to undo the redistribution operation and return to the old distribution system.

SQL1380N An unexpected Kerberos security error has occurred.

Explanation: An unexpected Kerberos security error occurred during authentication.

User response: No action required.

SQL1381N The Security Support Provider Interface is not available.

Explanation: Authentication failed because the Security Support Provider Interface (SSPI) was not available.

User response: When running under Windows operating system, ensure that the file security.dll exists under the system directory. Also ensure that SSPI is supported for the operating system that is being used.

SQL1382N Kerberos support is not available.

Explanation: Authentication failed because Kerberos support is not installed.

User response: Ensure that Kerberos support is installed and operational, then retry the connection.

SQL1383N The target principal name is not valid.

Explanation: The target principal name that was specified in the CATALOG DATABASE command is not valid.

User response: Remove the database entry that has the invalid target principal name by using the UNCATALOG DATABASE command. Re-catalog the database entry with a valid target principal name using the CATALOG DATABASE command and retry the connection.

When running in a Windows operating system environment, the target principal name is the logon account name of the DB2 service in the format of <domain name>\<user ID>.

SQL1384N Unable to complete mutual authentication.

Explanation: The connection failed because either the client or server was unable to complete mutual authentication.

User response: If the target principal name was specified in the CATALOG DATABASE command, ensure that the target principal name is valid for the server to which the client is attempting to connect or attach.

When running in a Windows operating system environment, the target principal name is the logon account name of the DB2 service in the format of <domain name>\<user ID>.

If the target principal name appears to be invalid, then contact IBM service for assistance.

Invalid table option parameter. The table option value must be either DB2REDIST_TABLES_FIRST ('F') or DB2REDIST_TABLES_ONLY ('O').

10

Missing information from input parameter struct. Input struct db2RedistStruct can not be NULL. Also its field struct db2RedistIn can not be NULL.

11

Undefined database partition group name, or bad struct db2Char to database partition group name. Database partition group name must be provided. Struct db2Char which stores the database partition group name must have valid data. Check struct db2Char to database partition group name. When pioData is NULL, iLength has to be zero and vice versa.

SQL1385N The parameter *parameter* has been specified improperly for the redistribute operation. Reason code = *reason-code*.

Explanation: The parameter named in the error message is invalid, incorrectly specified, or is incompatible with one of the other redistribute options specified.

Reason codes:

1

An invalid redistribution option was specified. The distribution option can be one of "U" (Uniform), "T" (Target map), "C" (Continue), or "A" (Abort).

12

The structure db2Char that is storing data distribution file name is not valid.

13

The structure db2Char that is storing target partition map file name is not valid.

2

The maximum number of partition numbers in a partition list must be less than or equal to the maximum number of partitions allowable in a cluster.

14

The redistribute option 'T'(target map) was specified, but no target map file is specified.

15

When the redistribute option is 'T'(Target map) or 'A' (Abort), a data distribution file should not be specified.

16

When the redistribute option is 'U'(Uniform), 'C'(Continue) or 'A' (Abort), the target map file should not be specified.

3

Invalid STOP AT parameter value. The STOP AT value must be ISO format, with a length of 26. The format must be "yyyy.mm.dd.hh-mm-ss-nnnnnn".

17

When the redistribute option is 'T'(Target map), 'C'(Continue) or 'A' (Abort), the add partition list, drop partition list should be empty, and the add count and the drop count should be zero.

7

Invalid STATISTICS parameter value. The value must be either DB2REDIST_STAT_USE_PROFILE ('P') or DB2REDIST_STAT_NONE ('N').

18

Redistribute options may not be specified more than once.

8

The length of a table name is out of range. The maximum length of the name of each table is (SQL_MAX_IDENT + SQL_MAX_IDENT + 2).

19

Wrong version number is passed into the API.

9

A typed table specified in the TABLE list is not the root table of the whole hierarchy.

20

21

Invalid DATA BUFFER parameter value. The value must be greater than 0, and less than the size of util_heap_sz db cfg parameter.

User response: Check the corresponding parameter based on the reason code, ensure that a valid parameter is specified, then call the utility again.

SQL1387W A DB2 High Availability Disaster Recovery (HADR) takeover completed successfully. However, a HADR resource group remains locked; and the cluster manager is not controlling that resource group.

Explanation: A HADR takeover completed successfully, and the cluster manager should now take over responsibility for managing the resource groups on the affected cluster nodes again.

However, the DB2 database manager failed to return control of a resource group to the cluster manager. As a result, the cluster manager is not currently controlling that resource group.

If the cluster manager is not controlling this resource group, the cluster manager will not respond to any failures related to that resource group.

Error messages from the cluster manager will be recorded in the db2diag log file.

User response: Manually unlock the resource group so the cluster manager can control the resource group:

1. Review the db2diag log file for diagnostic information detailing why the DB2 database manager failed to unlock the resource group and return control of the resource group to the cluster manager.
2. Use the cluster manager's tools and utilities to unlock, enable, or monitor the affected resource group.

SQL1388W An error occurred while trying to access a resource or part of a resource requested. Partial information was still returned. Details are available in the administration notification log with message *message-number*.

Explanation: An error occurred when trying to access one or more sources of information requested. The information which could be collected is valid and was returned but some records may be missing.

User response: The query results are not complete. Refer to the related entries in the administration notification log for more information then correct and resubmit the command. If the problem persists, contact IBM support.

SQL1389N Table designator *table-designator* is not valid for the expression.

Explanation: The table designator is not defined to be a table designator in this SQL statement or the table designator cannot be referenced where it is specified in the SQL statement.

The statement cannot be executed.

User response: Correct the syntax and resubmit the statement. Refer to DB2 SQL Reference for rules for table designator of ROW CHANGE TIMESTAMP expression and ROW CHANGE TOKEN expression, or RID and RID_BIT built-in functions.

sqlcode: -1389

sqlstate: 42703

SQL1390C The environment variable DB2INSTANCE is not defined or is invalid.

Explanation: The environment variable DB2INSTANCE is not defined or is not set to a valid instance owner.

User response: Set the DB2INSTANCE environment variable to the name of the instance to use. If you do not know the name of the instance to use or how to set the DB2INSTANCE environment variable to the instance name, refer to the *Administration Guide*.

Federated system users: refer to the *Federated Systems Guide* for DB2INSTANCE information.

Ensure your PATH environment variable contains the sqllib/adm path in the home directory of the instance you want to use (for example, /u/instance/sqllib/adm, where /u/instance is the home directory of the instance owner on a UNIX system).

SQL1391N The database is already in use by another instance of the database manager.

Explanation: The request failed because the database is in use by another instance of the database manager (a database may only be used by one instance.) This may be caused by attempting to access a database located on a mounted file system accessible to another instance located on another machine.

This can also occur if you have an open connection (via SNA) to a database and the database manager was brought down abnormally.

User response:

- Validate that you are using the correct database and ensure no other instance uses this database.
- If the database manager was brought down abnormally, and you have a command line processor

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connection to it, perform a db2 terminate to close the offending open connection before attempting to connect again.

sqlcode: -1391

sqlstate: 51023

SQL1392N Multiple instances of applications using *prep,-bind,-import,-export* is not supported.

Explanation: Only 1 instance of prep, bind, import, or export can be running at any one time within WINDOWS.

User response: Within WINDOWS, do not attempt to start more than 1 application that uses prep, bind, import, or export.

SQL1393C The environment variable DB2PATH is not defined or is invalid.

Explanation: The environment variable DB2PATH is not defined or is not set to a valid directory path.

User response: Set the DB2PATH environment variable to the directory where the database manager is installed.

SQL1394N The instance is not defined.

Explanation: The new instance can not be set for the application because the instance is not defined.

This message can be returned when the current user does not have the required authority to execute in the current instance environment.

User response: Ensure that the specified instance exists and that the current user has sufficient authority to execute programs in the current instance environment. Use the db2ilist command to display the list of instances:

```
db2ilist
```

SQL1395N Unable to switch to another instance because the application is using multiple contexts.

Explanation: The request to switch to another instance failed because the application is using multiple contexts.

User response: Ensure that the application is not using multiple contexts before switching to another instance.

SQL1396N Unable to switch to another instance because the application is connected to a database or attached to an instance.

Explanation: Request to switch to another instance

failed because the application is connected to a database or attached to an instance.

User response: Ensure that the application is not connected to any database or attached to any instance before switching to another instance.

SQL1397N The DB2 service failed to logon.

Explanation: DB2 service did not start due to a logon failure.

User response: If you are starting the DB2 Administration Server, then use the DB2ADMIN SETID command to set a new logon account. If you are starting a DB2 server on Windows, you can set the logon account for a DB2 service by using the Services dialog box from the Control Panel.

SQL1398N The routine *routine-name* is not supported in a partitioned database environment.

Explanation: The routine *routine-name* is not supported in a partitioned database environment. The return data type of the RID function does not uniquely identify a row across database partitions. The RID function is supported in a non-partitioned database environment for compatibility with DB2 for z/OS.

User response: Only use the routine in a non-partitioned database environment. Instead of using the RID function, use the RID_BIT function.

sqlcode: -1398

sqlstate: 56038

SQL1399N Operation *operation-name* is not valid for option *option-name1* because of option *option-name2* for object *object-name*. Reason code= *reason-code*.

Explanation: Two wrapper or server options have dependency on each other. Whether an option can be dropped or added depends on the existence of another option. Please view section Changes Related to DDL Statements for the examples of how this sqlcode is used.

The reason codes are:

- 01 Option *option-name1* cannot be added because option *option-name2* for object *object-name* does not exist.
- 02 Option *option-name1* cannot be dropped because option *option-name2* for object *object-name* exists.

User response: Two wrapper or server options have dependency on each other. Whether an option can be dropped or added depends on the existence of another option.

The reason codes are:

- 01 Add option *option-name2* for object *object-name*. Then add option *option-name1*.
- 02 Drop option *option-name2* for object *object-name*. Then drop option *option-name1*.

SQL1400N Authentication is not supported.

Explanation: The authentication type supplied is not one of the supported types.

The command can not be processed.

User response: The user should reissue the command with a valid parameter value.

SQL1401N Authentication types do not match.

Explanation: The user is attempting to connect to a remote database which is cataloged on the local node with a different authentication type from the remote node.

Federated system users: this message can also appear when:

- A data source is identified in SYSCAT.SERVEROPTIONS with SETTING='N' for OPTION='PASSWORD' and the data source is not running in trusted client mode (that is, the data source expects a password)
- The data source is identified in SYSCAT.SERVEROPTIONS with SETTING='Y' for OPTION='PASSWORD' and the data source is running in trusted client mode (that is, the data source does not expect a password)
- There is no server option specified for OPTION='PASSWORD' in SYSCAT.SERVEROPTIONS and the system default value for PASSWORD violates the data source password requirement.

User response: The command can not be processed.

The user should recatalog the database alias on the client node with the same authentication type as the remote database. Resubmit the command.

Federated system users:

- If the problem is that the data source requires a password but SYSCAT.SERVEROPTIONS contains SETTING='N' for OPTION='PASSWORD' for that server, alter SYSCAT.SERVEROPTIONS to reflect the true data source password requirement using the ALTER SERVER SQL statement.
- If the problem is that the data source does not require a password but SYSCAT.SERVEROPTIONS contains SETTING='Y' for OPTION='PASSWORD' for that server, alter SYSCAT.SERVEROPTIONS to reflect the true data source password requirement using the ALTER SERVER SQL statement.
- If the server option for OPTION='PASSWORD' is not set in SYSCAT.SERVEROPTIONS, create an entry

using the CREATE SERVER SQL statement to reflect the trusted data source password requirement.

sqlcode: -1401

sqlstate: 08001

SQL1402N Unable to authenticate user due to unexpected system error.

Explanation: Call your system administrator. On unix-based systems, the file *db2ckpw* may not have the correct permission bits set, or the system may have run out of swap/paging space. On Windows, the DB2 security service may not have been started or the account may be locked.

The command can not be processed.

Federated system users: this situation can also be detected by the data source.

User response: On unix-based systems, have the system administrator ensure the correct access permissions are set for *db2ckpw*, and that there is enough swap/paging space allocated. On Windows, ensure that the account is not locked.

SQL1403N The username and/or password supplied is incorrect.

Explanation: The username and/or password supplied is incorrect or not a valid username/password combination or the database to which you are attempting to connect to has an authentication type of SERVER and no username and password was supplied on the CONNECT TO statement.

If DB2 Connect is being used, the problem may be that the DCS directory entry for the host connection could not be found.

The command can not be processed.

Federated system users: this situation can also be detected by the data source.

User response: Supply the correct username and password combination.

Federated system users: ensure that the entry in SYSCAT.USEROPTIONS contains the correct username and password for the data source being accessed.

sqlcode: -1403

sqlstate: 08004

SQL1404N Password expired.

Explanation: Your password has expired.

User response: Change your password, then retry the request using the new password. You can use the Command Line Processor to issue the CONNECT

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statement or the ATTACH command to change your password.

sqlcode: -1404

sqlstate: 08004

SQL1405N Unable to communicate with local DB2 authentication server.

Explanation: The application failed to authenticate due to an error while communicating to the local DB2 authentication server.

User response: Ensure that the DB2 authentication server is started.

SQL1406N Shared sort memory cannot be allocated for this utility.

Explanation: Shared sort memory is not available and is required for this operation.

User response: Do any of the following:

- Configure the value of the SHEAPTHRES_SHR configuration parameter to allow for sorts to occur in shared memory.
- Enable intra-partition parallelism by setting the INTRA_PARALLEL configuration parameter to "YES".
- Activate the connection concentrator.

SQL1407N The *option-name* option is incompatible with *feature*.

Explanation: The utility does not support the *option_name* option with *feature*.

User response: Resubmit the command using compatible options.

SQL1408N The audit policy *audit-policy* is already in use for the object *object-name* of type *object-type*.

Explanation: An AUDIT USING statement for object *object-name* of type *object-type* attempted to associate the audit policy for the specified object, but an audit policy *audit-policy* is already in use. Only one audit policy can be associated to a particular object. The statement could not be processed.

User response: Use the REPLACE option of the AUDIT statement to replace the existing audit policy with the desired audit policy.

sqlcode: -1408

sqlstate: 5U041

SQL1409N An audit policy is not associated with the object *object-name* of type *object-type*.

Explanation: An AUDIT statement specifying the REMOVE option attempted to remove an association with the object *object-name* of type *object-type*, but an association does not exist. The statement could not be processed.

User response: Verify the correct object and type was used. If that is correct, then nothing needs to be done as the association does not exist.

sqlcode: -1409

sqlstate: 5U042

SQL1410N The SQL statement cannot be issued within an XA transaction.

Explanation: One of the following statements has been issued, but it cannot be issued within an XA transaction.

- CREATE, ALTER, or DROP WORKLOAD
- GRANT or REVOKE USAGE ON WORKLOAD
- CREATE, ALTER, or DROP SERVICE CLASS
- CREATE, ALTER, or DROP WORK CLASS SET
- CREATE, ALTER, or DROP WORK ACTION SET
- CREATE, ALTER, or DROP THRESHOLD
- CREATE, ALTER, or DROP TRUSTED CONTEXT
- CREATE, ALTER, or DROP AUDIT POLICY

User response: Reissue the statement from a non-XA connection or wait until the current XA transaction is complete before reissuing the statement.

sqlcode: -1410

sqlstate: 51041

SQL1411N The specified clause, *clause*, is not supported for service superclasses.

Explanation: The clause, *clause*, that is specified is valid for a service subclass but is not valid for a service superclass. When creating or altering a service subclass use the UNDER clause.

User response: Remove the unsupported clause, or specify the UNDER clause to create or alter a service subclass.

sqlcode: -1411

sqlstate: 5U043

SQL1412N The table named *table-name* could not be processed. Reason: *reason-code*.

Explanation: The possible reason codes are as follows:

31

The table contains data of type XML created on a DB2 database server Version 9.5 or earlier. The redistribute utility cannot process tables that have XML columns containing data of type XML created on a DB2 database server prior to Version 9.7.

User response: Take the action that corresponds to the *reason-code*.

31

Use the procedure SYSPROC.ADMIN_MOVE_TABLE to recreate the table. The new version of the table can be distributed.

You can verify that no other table in the database partition group has XML columns that were created prior to DB2 database server Version 9.7 by performing the following steps:

1. Use the ADMIN_GET_TAB_INFO table function or review the administrative view SYSIBMADM.ADMINTABINFO to retrieve the XML_RECORD_TYPE information for the table.
2. If the value of the returned column XML_RECORD_TYPE is 2 or greater, then the redistribute utility can process the table.
3. If the value of XML_RECORD_TYPE is 1, then the redistribute utility cannot process the table. Use the procedure SYSPROC.ADMIN_MOVE_TABLE to recreate the table.

sqlcode: -1412

sqlstate: 55019

SQL1413N Invalid specification of a row change timestamp column for table *table-name*.

Explanation: The specification of a row change timestamp column is invalid. A row change timestamp column cannot be:

- A column of a foreign key.
- A column of a functional dependency DEPENDS ON clause.
- A column of a database partitioning key.
- Defined for a temporary table.

The statement cannot be executed.

User response: Correct the syntax and resubmit the statement.

sqlcode: -1413

sqlstate: 429BV

SQL1414N Table designator *table-designator* is not valid for the expression.

Explanation: The table designator is not defined to be a table designator in this SQL statement or the table designator cannot be referenced where it is specified in the SQL statement. The statement cannot be executed.

User response: Correct the syntax and resubmit the statement. Refer to the *SQL Reference* for rules for table designator of ROW CHANGE TIMESTAMP expression and ROW CHANGE TOKEN expression.

sqlcode: -1414

sqlstate: 42703

SQL1415N The statement was compiled for diagnostic purposes only and has not been executed.

Explanation: The statement was processed through parts of the system to collect diagnostic information using service features. The necessary steps to allow further processing of the statement have not been completed.

User response: This error is returned to prevent further processing by the system of statements prepared using service features and is expected.

SQL1416N Wrapper library *wrapper-library-name* is not compatible with the release of DB2 installed at the federated server. The wrapper library is compatible with the following DB2 releases *list-of-DB2-releases*.

Explanation: The wrapper library is not compatible with the release and fix pack level of DB2 installed at the federated server. The wrapper library is compatible with the releases of DB2 listed in *list-of-DB2-releases*. The most common cause of this error is one of the following:

- You installed a DB2 fix pack, but did not install the corresponding InfoSphere Federation Server fix pack.
- During the installation of a InfoSphere Federation Server fix pack, the script to link the fenced wrapper library did not run or did not complete successfully.
- You installed a patch for InfoSphere Federation Server that requires running a script to link the fenced wrapper library. The script did not run or did not complete successfully.
- You put incompatible product libraries in the DB2 install directory.

User response: To determine the release and fix pack level of DB2, issue the db2level command. If necessary, install the InfoSphere Federation Server fix pack that is equivalent to the current DB2 release and fix pack level. If the wrapper requires running a script to link the fenced wrapper library, then run the linking script.

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Wrappers that require this are the following:

Data Source	Default Wrapper Name	Linking Script
Informix	INFORMIX	djxlinkInformix
Microsoft SQL Server	DJXMSSQL3	djxlinkMssql
Oracle	NET8	djxlinkOracle
Sybase	CTLIB	djxlinkSybase
Teradata	TERADATA	djxlinkTeradata

For more information on the linking scripts, consult the InfoSphere Federation Server Installation Guide.

sqlcode: -1416

sqlstate: 560CN

SQL1417W Wrapper *wrapper-name* supports data source server versions *list-of-data-source-versions*. Using the wrapper with later versions might result in errors or unexpected results.

Explanation: IBM tested the wrapper with only the data source server versions in the list *list-of-data-source-versions*. If you use the wrapper to access the version of the data source server that you specified on the CREATE SERVER or ALTER SERVER statement, then you might get errors or unexpected results.

User response: Contact the data source vendor to determine if the version of the data source server that you are using is compatible with applications written for earlier versions. If the version of the data source server that you are using is compatible, the wrapper should function correctly. However, IBM did not test the wrapper with the version of the data source server that you are using. If the version of the data source server that you are using is not compatible and you continue to use the wrapper to access that version of the data source server, then errors or unexpected results will probably occur.

sqlcode: +1417

sqlstate: 0168Q

SQL1418W Changing the database configuration parameter DECFLT_ROUNDING may have unintended consequences. The value was not changed dynamically. All applications must disconnect from this database before the changes become effective.

Explanation: Changing the database configuration parameter (DB config parameter) DECFLT_ROUNDING may have several unintended consequences. Any

calculation using the DECFLOAT data type could produce a different result with the new rounding mode.

The following is a list of some of the most significant consequences:

- Previously constructed MQTs could contain results that differ from what would be produced with the new rounding mode.
- A trigger whose execution is potentially dependent on rounding mode could produce different results now, based on the new rounding mode. However, even if the results of a trigger can be affected by the rounding mode, changing it will have no effect on data that was already written.
- It is possible for constraints that allowed data to be inserted into a table, will now, if re-evaluated, reject that same data. Similarly it is possible for constraints that did not allow data to be inserted into a table, would now, with the new rounding mode, accept that same data.
- The value of a generated column whose calculation is dependent on DECFLT_ROUNDING could be different for two rows identical except for the generated column value, if one row was inserted before the change to DECFLT_ROUNDING and the other was inserted after.
 - Note: rounding mode is not compiled into packages, so static SQL does not need to be recompiled after changing DECFLT_ROUNDING.

The value of the configuration parameter was not changed dynamically but will only become effective after all applications disconnect from this database. If the database was activated, it must be deactivated.

User response: To rectify the MQT issue, refresh any MQTs potentially impacted by rounding mode. Evaluate and correct any issues related to triggers affected by rounding mode manually.

To rectify the presence of data in a table which now violate a constraint based on the new rounding mode, use SET INTEGRITY to check for rows that violate the constraint based on the new rounding mode. To rectify the generated column issue, use SET INTEGRITY with the FORCE GENERATED option on tables with generated columns which could be affected.

Alternatively, change the rounding mode database configuration parameter (DB config parameter) DECFLT_ROUNDING back to its prior value to avoid all of the potential consequences indicated in this message.

To have the new value for the configuration parameter come into effect, disconnect all applications from this database. If the database was activated, it must be deactivated.

sqlcode: +1418

sqlstate: 0168M

SQL1420N Too many concatenation operators.

Explanation: The database manager has reached an internal limit while evaluating an expression, of long or large object string result type, that contains concatenation operators.

User response: Reduce the number of concatenations in the expression and try again.

sqlcode: -1420

sqlstate: 54001

SQL1421N MBCS conversion error occurred when converting host variable or sqlvar number to or from wchar_t format. Reason code rc.

Explanation: A C/C++ application with embedded SQL statements was precompiled with the WCHARTYPE CONVERT option. At runtime, the application received an error which occurred during conversion in either `wcstombs()`, for input host variables, or `mbstowcs()`, for output host variables. The host variable or sqlvar number indicates which data item experienced the problem. Valid reason codes are:

- 1 the problem occurred with input data
- 2 the problem occurred with output data

User response: If application data is already in MBCS format, re-compile the application with WCHARTYPE NOCONVERT and re-build. If application data is intended to be in `wchar_t` format, then input data failing in `wcstombs()` may be corrupt. Correct the data and re-execute the application.

sqlcode: -1421

sqlstate: 22504

SQL1422N The size of the container is invalid.

Explanation: One of the containers to be used in a database managed table space is either too large or too small. A container must be at least 2 * extentsize pages in length. The maximum size of a container is operating system dependent. The most common system limit is 2 gigabytes (524288 4K pages).

User response: Check the administration notification log for details. Then correct the SQL statement.

sqlcode: -1422

sqlstate: 54039

SQL1423N The query includes a column with a large object data type.

Explanation: The query includes a column with a data type of BLOB, CLOB or DBCLOB. In general, such data types cannot be handled from clients available prior to Version 2.1.

The error occurred for a condition that corresponds to warning SQLCODE +238. See this message for details that explain the condition. The client level receiving this message cannot process BLOB data types. It may be able to handle CLOB and DBCLOB data types by using the SUBSTR function or by setting the data type in the SQLDA to one of the character data types available in Version 1 if the LOB column is not larger than the supported length of the character data type.

User response: Change the query to exclude any column that has a data type of BLOB, CLOB or DBCLOB. This is the only possible action if the query includes a column of type BLOB. If the column (say C1) is a CLOB, you could use `CAST(C1 AS LONG VARCHAR)` to get the first 32700 characters. Similarly for DBCLOB column (DC1) use `CAST(DC1 AS LONG VARGRAPHIC)` to get the first 16350 characters. If the application code can be changed, code can be added to change the SQLDA to use LONG VARCHAR or LONG VARGRAPHIC for CLOB and DBCLOB.

sqlcode: -1423

sqlstate: 56093

SQL1424N Too many references to transition variables and transition table columns or the row length for these references is too long. Reason code=rc.

Explanation: The trigger includes a REFERENCING clause that identifies one or more transition tables and transition variables. The triggered action of the trigger contains references to transition table columns or transition variables with one of the following conditions identified by the reason code:

- 1 references total more than the limit of the number of columns in a table
- 2 sum of the lengths of the references exceeds the maximum length of a row in a table.

User response: Reduce the number of references to transition variables and transition table columns in the trigger action of the trigger so that the length is reduced or the total number of such references is less than the maximum number of columns in a table.

sqlcode: -1424

sqlstate: 54040

SQL1425N A password has been supplied without a userid.

Explanation: Any command/API that accepts a userid and password will not accept a password without a userid.

User response: Resubmit the command/API and supply a userid if you are also supplying a password.

SQL1426N A default instance cannot be determined.

Explanation: If an explicit 'attach to instance' has not been performed, instance commands try to form an implicit attachment to a default instance. The default instance is determined from the DB2INSTDFLT and DB2INSTANCE environment variables. If neither of these are set, then no implicit attachment can be formed.

User response: Set one of these environment variables to a valid instance name and resubmit the command.

SQL1427N An instance attachment does not exist.

Explanation: The application is not attached to an instance. The attempted command/API cannot be executed unless there is an existing instance attachment.

User response: If the error occurred when detaching from an instance, continue processing. If the error occurred during the execution of any other command, attach to an instance and reissue the failed command.

SQL1428N The application is already attached to *nodename1* while the command issued requires an attachment to *nodename2* for successful execution.

Explanation: In order to successfully process the command, an attachment to a node other than that which currently exists is required. The application must either: 1) have no attachment when the command is issued, or 2) already be attached to the node required by the command.

User response: Ensure that the application has no attachment before issuing the command or that the attachment that exists is to the correct node.

SQL1429N A node directory entry cannot be created in which the node name matches the value of the DB2INSTANCE environment variable.

Explanation: The CATALOG NODE command or API does not allow an entry whose nodename matches the value of the DB2INSTANCE environment variable.

User response: Choose another node name for the node being cataloged and try again.

SQL1430N The database name *database* cannot be found in the system database directory on node *nodename*.

Explanation: When specific database names are provided to the database monitor, those databases must reside either at the node to which you are currently attached or at the local node.

User response: Make sure the databases listed in the request all reside at the node to which you are attached or at the local node. Reissue the request.

SQL1431N The relative path *path* is not allowed when executing remotely.

Explanation: When the application is remote from the server, relative paths are not allowed.

User response: Specify a fully qualified path that is valid at the server and reissue the command.

SQL1432N A request has been sent to a server using a database protocol which the server does not recognize.

Explanation: This error is caused by sending a DB2 request to a server which does not understand the database protocol being used to transmit the request. This situation will occur most frequently when sending a DB2 ATTACH request to a server listed in your node directory which is not a DB2 Version 2 or greater server. This error will also arise if you send an attach request to DB2 for AS/400, DB2 for MVS, or DB2 for VM and VSE servers.

User response: Do not attempt to attach to any of the servers listed in the Explanation.

SQL1433N The application is already connected to *database1* while the command issued requires a connection to *database2* for successful execution.

Explanation: In order to successfully process the command, a connection to a database other than that which currently exists is required. The application must either: 1) have no connection when the command is issued, or 2) already be connected to the database required by the command.

User response: Ensure that the application has no connection before issuing the command or that the connection that exists is to the correct database.

SQL1434N A CONNECT or ATTACH statement failed because of a client/server incompatibility between 32 bit and 64 bit platforms.

Explanation:

1. Version 7 does not support client/server connections between 32 bit and 64 bit platforms.
2. Version 8 Windows 64-bit database server does not support client/server connections from Version 7 64-bit clients.

User response: For scenario 1, you can issue a CONNECT or ATTACH statement in the following scenarios:

- from a 32 bit client to a 32 bit server

- from a 64 bit client to a 64 bit server

For scenario 2 listed above, reissue the statement from a supported client.

sqlcode: -1434

sqlstate: 08004

SQL1435N Binding or rebinding the automated maintenance policy configuration stored procedures failed.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

Before you can use SYSPROC.AUTOMAINT_SET_POLICY, SYSPROC.AUTOMAINT_SET_POLICYFILE, SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE, these stored procedures must be bound to the database against which you will run them. The bind file for these stored procedures is called db2policy.bnd.

The DB2 server attempts to automatically bind these automated maintenance policy configuration stored procedures for you. However, this automatic binding or rebinding failed.

You will not be able to use these stored procedures until they are bound to the database.

User response: To bind these automated maintenance policy configuration stored procedures perform the following steps:

1. Connect to the database on which you will use these stored procedures
2. Run the DB2 bind command with the bind file called db2policy.bnd in the SQLLIB/bnd directory:

```
DB2 bind db2policy.bnd blocking
      all grant public
```

For more information about these automated maintenance policy configuration stored procedures, see the topic "Configuring automated maintenance using SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1435

sqlstate: 5U0ZZ

SQL1436N Automated maintenance policy configuration file named *file-name* could not be opened.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

When you call SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE, you can specify an XML file that contains the automated maintenance policy details that you want to configure. In this case, the file specified could not be opened.

No new automated maintenance policy configuration was applied.

User response:

1. Confirm that the specified file satisfies the following conditions:
 - the file exists
 - the user id as which the stored procedure is running has permission to read the file
 - the file is not empty
 - the format of the file is UTF-8
2. Call the SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE procedure again specifying a file that satisfies the previously listed conditions.

sqlcode: -1436

sqlstate: 5U0ZZ

SQL1437N The XML in the automatic maintenance policy file or LOB parameter passed to AUTOMAINT_SET_POLICY or AUTOMAINT_SET_POLICYFILE is not valid at line number *line-number* and column number *column-number*. Validation error message: *error-message*.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

There are two forms of SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE: one version of this stored procedure takes a parameter that is the name of an XML file that contains automated

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maintenance configuration details, and the other version of this stored procedure takes a LOB parameter containing automated maintenance configuration details in XML format.

The XML in the automatic maintenance configuration file or LOB parameter passed to SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE contains invalid XML at the line specified. The column number indicates the location within that line of the error.

No new automatic maintenance configuration was applied.

User response: Correct the contents of the XML configuration file and call the stored procedure again.

For more information, see the topic called "Configuring automated maintenance using SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1437

sqlstate: 5U0ZZ

SQL1438N An internal error occurred while processing the XML automated maintenance policy configuration file or LOB parameter passed to AUTOMAINT_SET_POLICY or AUTOMAINT_SET_POLICYFILE.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

There are two forms of SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE: one version of this stored procedure takes a parameter that is the name of an XML file that contains automated maintenance configuration details, and the other version of this stored procedure takes a LOB parameter containing automated maintenance configuration details in XML format.

An internal error occurred while processing the XML in the automatic maintenance configuration file or LOB passed to SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE.

No new automatic maintenance configuration was applied.

User response: Confirm that the contents of the XML configuration file or the LOB parameter passed to SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE is valid

and call the stored procedure again.

For more information, see the topic called "Configuring automated maintenance using SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1438

sqlstate: 5U0ZZ

SQL1439N Could not retrieve automated maintenance policy configuration information.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

The stored procedure SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE was unable to collect existing automated maintenance configuration information because it could not find any default automated maintenance policies.

No automatic maintenance configuration information was collected.

User response: Default automated maintenance policies are created by the DB2 health monitor. If the health monitor has not yet created the default maintenance policies, then you can manually create them:

1. Connect to the database for which you wish to create default automated maintenance policies
2. Call the system stored procedure called SYSPROCS.SYSINSTALLOBJECTS with the following parameters:

```
SYSPROCS.SYSINSTALLOBJECTS( 'POLICY', 'C', '', '' )
```

For more information about the SYSINSTALLOBJECTS system stored procedure, see the topic called "SYSINSTALLOBJECTS procedure" in the DB2 Information Center.

For more information, see the topic called "Collecting automated maintenance configuration information using SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1439

sqlstate: 5U0ZZ

SQL1440W The WITH GRANT OPTION has been ignored on the GRANT (Database Authorities) statement, GRANT (Index Privileges) statement, or when granting CONTROL privilege on a table or view.

Explanation: The WITH GRANT OPTION is not applicable when granting database authorities or privileges or privileges on indexes. The WITH GRANT OPTION does not apply to CONTROL privilege on tables, views, indexes, or packages.

All valid requested privileges were granted.

User response: When granting database authorities or index privileges do not include the WITH GRANT OPTION clause. When granting CONTROL, use a separate grant statement for the CONTROL privilege without specifying the WITH GRANT OPTION clause.

sqlcode: +1440

sqlstate: 01516

SQL1441N Invalid parameter. Reason code *code*.

Explanation: The following is a list of valid reason codes:

- 1 A NULL was passed in for the context pointer.
- 3 The context pointer has been initialized, but not to a valid context area.
4. Invalid option
- 5 reserved parameter was not NULL

User response: Ensure that the application context pointer has been properly initialized and that any options used are valid and try again.

SQL1442N The context is not in use or is not in use by the current thread. Reason code *code*.

Explanation: The call failed because:

- 1 The context is not in use by any thread (no attach was done)
- 2 The context is not in use by the current thread.
- 3 The current thread is not using a context.

User response: For a detach call, ensure that the context is the one in use by the current thread, and that a corresponding attach was done.

For a get current context call, ensure that the thread is currently using a context.

SQL1443N Thread is already attached to a context.

Explanation: The user attempted to attach a context to a thread, and the thread is already using a context.

User response: Detach from the previous context before attaching to a new one.

SQL1444N The application context cannot be destroyed because it is in use.

Explanation: The user attempted to destroy an application context while it is still in use. Either there is a thread attached to the context, or the context has a CONNECT or ATTACH associated with it. A CONNECT RESET or DETACH must be done (if a CONNECT or ATTACH has been done), and all threads must detach from the context before it can be destroyed.

User response: Ensure that all calls to attach to a context have a corresponding detach, all CONNECTS have a corresponding CONNECT RESET, and all ATTACHES have a corresponding DETACH.

SQL1445N Thread or process does not have a context to use.

Explanation: A context type of SQL_CTX_MULTI_MANUAL is in effect, but the current thread or process has not been attached to a context.

User response: Make sure the current thread or process is attached to a context before making any database calls.

SQL1446N An internal error occurred while processing the XML automated maintenance policy configuration file or LOB parameter passed to AUTOMAINT_GET_POLICY or AUTOMAINT_GET_POLICYFILE.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

There are two forms of SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE: one version of this stored procedure takes a parameter that is the name of an XML file that contains automated maintenance configuration details, and the other version of this stored procedure takes a LOB parameter containing automated maintenance configuration details in XML format.

An internal error occurred while processing the XML in the automatic maintenance configuration file or LOB passed to SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE.

No automatic maintenance configuration was collected.

User response: Confirm that the contents of the XML configuration file or the LOB parameter passed to

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SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE is valid and call the stored procedure again.

For more information, see the topic called "Collecting automated maintenance configuration information using SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1446

sqlstate: 5U0ZZ

SQL1447N The XML in the automated maintenance policy file or LOB parameter passed to AUTOMAINT_SET_POLICY or AUTOMAINT_SET_POLICYFILE is not valid for reason: *reason-code*.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

The automated maintenance configuration file or LOB parameter passed to SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE contains invalid XML according to the given reason code:

- 1 The PathName element does not specify a valid path. For example, this message is returned if the specified path does not exist.
- 2 The SQL syntax of the FilterClause element is not valid.
- 3 The database manager attempted to validate the XML input file or LOB parameter you passed to SYSPROC.AUTOMAINT_SET_POLICY using a schema document in the /home/misc directory. The database manager could not find the schema document.
- 4 The first element in the XML input file or LOB parameter is not valid XML.
- 5 The encoding of the input XML file is not UTF-8.

No new automatic maintenance configuration was applied.

User response: Respond according to the reason code:

1, 2, and 4

Correct the contents of the XML configuration file or LOB parameter and call the stored procedure again.

- 3 Without this schema document, you cannot use the SYSPROC.AUTOMAINT_SET_POLICY, SYSPROC.AUTOMAINT_SET_POLICYFILE, SYSPROC.AUTOMAINT_GET_POLICY, or SYSPROC.AUTOMAINT_GET_POLICYFILE procedures.

You cannot replace this schema document manually. Reinstall the DB2 server to replace the missing file.

- 5 Ensure that the first line of the XML input specifies encoding="UTF-8". If the editor in which you created the XML input saved the file using different encoding, save the file again using UTF-8 encoding.

For more information, see the topic called "Configuring automated maintenance using SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1447

sqlstate: 5U0ZZ

SQL1448N The path or file name *full-file-name* that was passed to AUTOMAINT_GET_POLICY or AUTOMAINT_GET_POLICYFILE does not exist.

Explanation: You can use the stored procedures SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE and SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE to configure DB2 server automated maintenance activities such as automatic backup, automatic reorganization, and automatic statistics collection.

When you call SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE, you can specify the name of an XML file into which the output from the stored procedure should be saved. In this case, the file specified could not be created or written to.

No automated maintenance policy configuration information was saved.

User response:

1. Confirm that the specified path and file satisfy the following conditions:
 - the directory path and file exist
 - the user id as which the stored procedures is running has permission to create or write to the file
2. Call the SYSPROC.AUTOMAINT_SET_POLICY or SYSPROC.AUTOMAINT_SET_POLICYFILE

procedure again specifying a file that satisfies the previously listed conditions.

For more information about these automated maintenance policy configuration stored procedures, see the topic "Collecting automated maintenance configuration information using SYSPROC.AUTOMAINT_GET_POLICY or SYSPROC.AUTOMAINT_GET_POLICYFILE" in the DB2 Information Center.

sqlcode: -1448

sqlstate: 5U0ZZ

SQL1449C Tools catalog migrated successfully to the current level. The scheduler was not started successfully for the reason code *reason-code*.

Explanation: The db2tdbmgr command successfully migrated the database to the current level, but the scheduler was not started successfully for the reason indicated by the reason code:

1

The Tools Catalog Database configuration in the DB2 Administration Server configuration parameters is not correct.

2

The database manager containing the Tools Catalog Database has not been started.

3

The Tools Catalog Database is being used by another scheduler.

4

Unexpected error occurred when starting the scheduler.

User response:

1

Correct the Tools Catalog Database configuration in the DB2 Administration Server configuration parameters. For instructions on configuring the Tools Catalog Database, refer to the section on the DB2 Administration Server in the DB2 Administration Guide.

2

Start the database manager containing the Tools Catalog Database.

3

Wait until the Tools Catalog Database is not being used by another scheduler.

4

Stop and Restart the DB2 Administration Server.

SQL1450N Invalid registration information pointer.

Explanation: An invalid registration information pointer was passed to the register/deregister DB2 server command/API.

User response: Verify that a valid pointer was passed to the register/ deregister DB2 server command/API.

SQL1451N Register/deregister DB2 server must be issued from a server node.

Explanation: Register/deregister DB2 server was issued from an invalid node.

User response: Reissue the register/deregister DB2 server command/API from a server node.

SQL1452N An invalid registration location was specified.

Explanation: An invalid registration location was passed to the register/deregister DB2 server command/API.

User response: Verify that a valid registration location was passed to the register/deregister DB2 server command/API.

SQL1453N The entry in the database manager configuration file for file server name is missing or invalid.

Explanation: The file server name specified in the configuration command/API or in the database manager configuration file is missing or invalid.

User response: Verify that a file server name was specified, that the name does not contain invalid characters, and is not longer than 48 characters in length. Update the file server name in the database manager configuration file and resubmit the command/API.

SQL1454N The entry in the database manager configuration file for object name is missing or invalid.

Explanation: The object name specified in the configuration command/API or in the database manager configuration file is missing or invalid.

User response: Verify that an object name was specified, that the name does not contain invalid characters, and is not longer than 48 characters in length. Update the object name in the database manager configuration file and resubmit the command/API.

SQL1455N The entry in the database manager configuration file for IPX socket number is missing or invalid.

Explanation: The IPX socket number specified in the configuration command/API or in the database manager configuration file is missing or invalid.

User response: Verify that an IPX socket number was specified, that the number does not contain invalid characters, and is not longer than 4 characters in length. Update the IPX socket number in the database manager configuration file and resubmit the command/API.

SQL1456N The object name specified in the database manager configuration file already exists on the NetWare file server.

Explanation: A duplicate object name was found when trying to register the DB2 server object name on the NetWare file server.

User response: The object name specified in the database manager configuration file is already in use. Change the object name and then re-register the DB2 server.

SQL1457N Register/deregister failed to login to the NetWare file server specified because a NetWare directory services connection is already established to that file server.

Explanation: A bindery login using NWLoginToFileServer cannot be performed if a NetWare directory services connection is already established to the specified file server.

User response: Sever the directory services connection by logging out and detaching from Directory Services, and then reissue register/deregister.

SQL1458N IPX/SPX has been configured in the database manager configuration file for direct addressing. It is not necessary to register/deregister the DB2 server at/from a NetWare file server.

Explanation: Issuing register/deregister is not necessary since the database manager configuration file has been configured for IPX/SPX direct addressing. ie. Fileserver and objectname have been specified as '*'.

User response: Note that since the DB2 server has been configured for direct addressing only, IPX/SPX clients using fileserver addressing will not be able to connect to this server. For the server to support both types of IPX/SPX client addressing, specify a fileserver and objectname in the database manager configuration file.

SQL1459I Tools catalog migrated successfully to the current level.

Explanation: The db2tdbmgr command successfully migrated the database to the current level.

User response: No response is required.

SQL1460N The environment variable *variable* required for SOCKS server name resolution is not defined or not valid.

Explanation: The SOCKS environment variable SOCKS_NS or SOCKS_SERVER is not defined. SOCKS protocol support requires that both these environment variables be defined.

SOCKS_NS

This is the IP address of the domain name server where the SOCKS server is defined.

SOCKS_SERVER

This is the hostname of the SOCKS server.

User response: Define the missing environment variable and resubmit the command.

SQL1461N The security option *security* is not valid.

Explanation: The SECURITY option for a TCP/IP node has a value other than 'SOCKS'. This option is used to enable the TCP/IP node being cataloged to use SOCKS protocol support to traverse a firewall. No value other than 'SOCKS' is permitted.

User response: Verify that SOCKS protocol support is required. If so, re-catalog the node with SECURITY SOCKS. If not, re-catalog the node, but omit the SECURITY option.

SQL1462N Request is only valid for a syncpoint manager connection.

Explanation: A request was attempted which is only valid for a syncpoint manager connection, but the syncpoint manager instance is not connected to.

User response: Connect to the syncpoint manager instance and reissue the request.

SQL1463N The operation cannot be performed on the administration task because the administration task table *table-name* cannot be used.

Explanation: The administration task cannot be added, updated, or removed because the table *table-name* that is used to store information about the tasks cannot be used as required. The table exists but cannot be used in its existing state. The administration task tables are automatically created when administration tasks are added to the database system. If the table was created in some other way, it may not

be usable for administration task operations.

User response: Make the administration task table usable for administration task operations. To re-create table *table-name*, explicitly drop the table and then call the SYSPROC.ADMIN_TASK_ADD procedure to schedule a task.

sqlcode: -1463

sqlstate: 55070

SQL1464W Not all tasks were removed because some tasks were running.

Explanation: The SYSPROC.ADMIN_TASK_REMOVE procedure attempted to remove a set of tasks, but not all were removed. The tasks that were not running were removed by the procedure, but any tasks that were running when the procedure attempted to remove them were not removed.

User response: Wait until the running tasks complete and then use the SYSPROC.ADMIN_TASK_REMOVE procedure to remove the tasks. The SYSTOOLS.ADMIN_TASK_STATUS view can be used to check the execution status of tasks.

sqlcode: +1464

sqlstate: 0168S

SQL1465N The result of the SQL statement specified for the administrative task is not valid as input to the procedure *procedure-name* specified for the administrative task.

Explanation: The SQL statement that was specified as the PROCEDURE_INPUT for the scheduled administrative task was executed but the result could not be used as input to the procedure *procedure-name* that was specified for the scheduled administrative task. The SQL statement must result in no more than one row with the same number of columns in the result as there are arguments to the procedure.

User response: Modify the data in the database so that the SQL statement results in no more than one row, or modify the administrative task to change either the SQL statement or procedure specified for it. Ensure that the SQL statement will return no more than one row, and the number of arguments to the procedure specified for the administrative task matches the number of columns returned by the SQL statement. To modify the administrative task, use the SYSPROC.ADMIN_TASK_REMOVE procedure to remove the task, then call SYSPROC.ADMIN_TASK_ADD to recreate it.

sqlcode: -1465

sqlstate: 21507

SQL1467C The database manager received an I/O error while trying to read a page from the system managed temporary table space with table space id *table-space-id*.

Explanation: The most likely reason for the I/O error is a file system or hardware error.

The statement cannot be processed; and the utility or transaction of which this statement is a part will be rolled back.

User response:

SQL1468N The database manager TCP/IP listener must be configured and running on the server instance *instance* (database partition number *database-partition-number1*) before attempting to CONNECT or ATTACH to node *database-partition-number2*.

Explanation: The SET CLIENT command or api or the environment variable DB2NODE was used to set the node for CONNECT or ATTACH to *database-partition-number2*. In order to CONNECT or ATTACH to this node, the Database Manager TCP/IP listener must be configured and running on the server instance *instance* (database partition number *database-partition-number1*).

Note: This message may be returned by an implicit CONNECT or ATTACH.

User response: Either:

- Ensure that *svccname* has been specified in the database manager configuration on the instance *instance*, database partition number *database-partition-number1*, the DB2COMM environment variable has been set to use TCP/IP, and that TCP/IP listener was successfully started at DB2START time.
- or
- Explicitly catalog the node and database.

sqlcode: -1468

sqlstate: 08004

SQL1469N Instance *instance-name* (database partition number *database-partition-number1*) does not have node *database-partition-number2* specified in its *db2nodes.cfg* file.

Explanation: The SET CLIENT command or api or the environment variable DB2NODE was used to set the node for CONNECT or ATTACH to *database-partition-number2*. Subsequent CONNECT or ATTACH processing was unable to locate this node in the *db2nodes.cfg* file on the instance *instance-name*

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(node *database-partition-number1*).

Note: This message may be returned by an implicit CONNECT or ATTACH.

User response: Ensure that the node number specified by the SET CLIENT command or api or the DB2NODE environment variable exists in the db2nodes.cfg file of the intermediate instance *instance-name*, node *database-partition-number1*.

sqlcode: -1469

sqlstate: 08004

SQL1470N Value of DB2NODE environment variable is not valid.

Explanation: The DB2NODE environment variable indicates the node the application will attempt to connect to. If DB2NODE is unset or is blank, the application will attempt to connect to the default node. Otherwise, DB2NODE must be set to the node number of one of the nodes defined on the same host as the application.

User response: Set the DB2NODE environment variable to one of the following values:

unset causes the application to connect to the default node.

blank causes the application to connect to the default node.

A number

causes the application to connect to the node with that node number. The node must be running on the same host as the application.

sqlcode: -1470

sqlstate: 08001

SQL1471N Cannot connect to database *database-name* on node *node-number* because the database on this node is not synchronized with catalog node.

Explanation: The end-of-log information on this node does not match the corresponding record on the catalog node. This can be caused by restoring the database on various nodes with backups taken from different times.

User response: If the database is restored without rolling forward on one node, ensure that the database is restored from consistent offline backups on all nodes without rolling forward.

sqlcode: -1471

sqlstate: 08004

SQL1472N Cannot connect to database *database-name* on node *node-number* because the difference between the system time on the catalog node and the virtual timestamp on this node is greater than the *max_time_diff* database manager configuration parameter.

Explanation: The system time difference for the machines in the configuration (listed in the db2nodes.cfg file) is greater than the *max_time_diff* database manager configuration parameter.

User response: Synchronize the system times on all machines, and ensure that the *max_time_diff* parameter is configured to allow for normal communication delays among the database machines.

If this does not fix the problem, see the DB2 Information Center for possible causes and actions.

sqlcode: -1472

sqlstate: 08004

SQL1473N Cannot commit the transaction because the time difference between the system time on the local node and the virtual timestamps of node(s) *node-list* is greater than the *max_time_diff* database manager configuration parameter. The transaction is rolled back.

Explanation: The system time difference for the machines in the configuration (listed in the db2nodes.cfg file) is greater than the *max_time_diff* database manager configuration parameter.

If "... " is displayed at the end of the node list, see the syslog file for the complete list of nodes.

User response: Synchronize the system times on all machines, and ensure that the *max_time_diff* parameter is configured to allow for normal communication delays among the database machines.

sqlcode: -1473

sqlstate: 40504

SQL1474W The transaction completed successfully, but the time difference between the system time on the local member and the virtual timestamps of member or members *member-list* is greater than the *max_time_diff* database manager configuration parameter.

Explanation: The system time difference for the machines in the configuration (listed in the db2nodes.cfg file) is greater than the *max_time_diff* database manager configuration parameter.

This warning message is returned to read-only transactions because they are not affected by this

condition. However, other transactions would be rolled back. This message is to inform the user about this condition so that action can be taken at the earliest possible time.

If "... " is displayed at the end of the member list, see the syslog file for the complete list of members.

User response: Synchronize the system times on all machines, and ensure that the `max_time_diff` parameter is configured to allow for normal communication delays among the database machines.

sqlcode: +1474

sqlstate: 01607

SQL1475W A system error occurred during CONNECT RESET processing.

Explanation: The CONNECT RESET was successful but a system error such as a node failure or a communications error may have occurred.

User response: Check the administration notification log for details. The database at this node may need to be restarted.

sqlcode: +1475

sqlstate: 01622

SQL1476N The current transaction was rolled back because of error *sqlcode*.

Explanation: The transaction was rolled back because:

1. An implicit or explicit CLOSE CURSOR failed, or
2. A table was being created with the NOT LOGGED INITIALLY option, or NOT LOGGED INITIALLY was activated for an existing table. During the same unit of work, either an error occurred, or a ROLLBACK TO SAVEPOINT statement was issued. This unit of work is rolled back, with the following effects:
 - any table that was created in this unit of work is dropped.
 - any NOT LOGGED INITIALLY tables that were activated in the transaction are marked inaccessible, and can only be dropped.
 - the *sqlcode* will be 0 if a ROLLBACK TO SAVEPOINT was issued in the transaction.
3. A rollback to savepoint failed or release savepoint failed.
4. A severe error occurred during an atomic array input operation.
5. An error occurred during the creation of a system temporary LOB that was to be used to maintain a LOB locator value for a LOB column of a declared temporary table or created temporary table whose rows were being deleted.

User response: Correct the problem as indicated by

the error *sqlcode*, then run the transaction again. Remove any ROLLBACK TO SAVEPOINT statement that is used in the same transaction in which a NOT LOGGED INITIALLY table is created or activated.

sqlcode: -1476

sqlstate: 40506

SQL1477N For table *table-name* an object *object-id* in table space *tblspace-id* cannot be accessed.

Explanation: An attempt was made to access a table where one of its objects is not accessible. The table may not be accessible because of one of the following reasons:

- The table had NOT LOGGED INITIALLY activated when the unit of work was rolled back.
- The table is a partitioned created temporary table or declared temporary table and one or more database partitions failed since the temporary table was instantiated or declared.
- ROLLFORWARD encountered the activation of NOT LOGGED INITIALLY on this table or a NONRECOVERABLE load on this table.

Access to this table is not allowed because its integrity cannot be guaranteed.

User response: One of the following actions can be taken.

- If the object is a table and it had NOT LOGGED INITIALLY activated, drop the table. If this table is required, re-create it.
- If the object is a data partition, detach it from the table. If this data partition is required, add a new one.
- If the object is a non-partitioned index, drop the index. If this index is required, create a new one.
- If the table is a created temporary table, disconnect from the server and connect again to instantiate a new copy of the created temporary table.
- If the table is a declared temporary table, drop the table. If this table is required, declare it again.
- Otherwise, restore from a table space or database backup. The backup image must have been taken subsequent to the commit point following the completion of the non-recoverable operation (NOT LOGGED INITIALLY operation, or NONRECOVERABLE load).

The catalogs and administrative views can be used to determine what the object is. To determine if the object is a table, use the following query:

```
SELECT TABNAME
FROM SYSCAT.TABLES
WHERE TBSPACEID=tblspace-id AND
TABLEID=object-id
```

SQL1478W • SQL1482W

If a table name does not appear as the result for this query you can determine if the object is a partition by using the following query:

```
SELECT DATAPARTITIONNAME, TABNAME
   FROM SYSCAT.DATAPARTITIONS
   WHERE TBSPACEID=tblspace-id AND
      PARTITIONOBJECTID=object-id
```

To determine if the object is an index, use the following query:

```
SELECT INDNAME
   FROM SYSCAT.INDEXES
   WHERE TBSPACEID=tblspace-id AND
      INDEX_OBJECTID=object-id
```

To determine if the object is a created temporary table or a declared temporary table, use the following query:

```
SELECT TABNAME
   FROM SYSIBMADM.ADMINTEMPTABLES
   WHERE TBSP_ID=tblspace-id AND
      INDEX_TAB_FILE_ID=object-id
```

sqlcode: -1477

sqlstate: 55019

SQL1478W The defined buffer pools could not be started. Instead, one small buffer pool for each page size supported by DB2 has been started.

Explanation: The defined buffer pools could not be started. Instead, one small buffer pool for each page size supported by DB2 has been started. The defined buffer pools could not be started for one or more of the following reasons:

- Not enough memory could be allocated for the total size of the buffer pools specified for this database.
- The buffer pool files in the database directory are missing or corrupt.

User response: Check the administration notification log for the correct source of the problem. A possible solution includes:

- Drop or alter the size of one or more of the buffer pools to allow the database to start properly.

After making the changes, disconnect from the database and start the database again.

sqlcode: +1478

sqlstate: 01626

SQL1479W Attempt to fetch before the result set returned the first rowset.

Explanation: The requested rowset overlapped the start of the result set and, depending on the fetch orientation specified:

SQL_FETCH_PRIOR

one of the following situations:

- the current position was beyond the first row, and the number of the current row is less than or equal to the rowset size.
- the current position was beyond the end of the result set, and the rowset size was greater than the result set size.

SQL_FETCH_RELATIVE

the absolute value of the fetch offset was less than or equal to the current rowset size.

SQL_FETCH_ABSOLUTE

the fetch offset was negative, and the absolute value of the fetch offset was greater than the result set size but less than or equal to the current rowset size.

User response: No action needed.

SQL1480N The discover type specified in the DISCOVER database manager configuration parameter is invalid.

Explanation: Valid values for the DISCOVER parameter in the database manager configuration file are: DISABLE, KNOWN, or SEARCH.

User response: Update the DISCOVER database manager configuration parameter with a type of DISABLE, KNOWN, or SEARCH.

SQL1481N One or more of the communications protocols specified in the DISCOVER_COMM parameter is invalid.

Explanation: Valid values for the DISCOVER_COMM parameter in the database manager configuration file are any combination of NETBIOS, and TCPIP, separated by commas.

User response: Update the DISCOVER_COMM database manager configuration parameter with any combination of NETBIOS, and TCPIP, separated by commas.

SQL1482W The BUFFPAGE parameter will only be used if one of the buffer pools is defined with a size of -1.

Explanation: This is a warning that the BUFFPAGE database configuration parameter will be ignored if none of the database's buffer pools is defined with a size of -1. -1 indicates that the buffer pool is to use the BUFFPAGE parameter as the number of buffer pool pages.

User response: You can select from the SYSCAT.BUFFERPOOLS to review the buffer pool definitions. If none of the buffer pools are defined with size -1 (NPAGES), then setting the BUFFPAGE

parameter will not change the size of the buffer pools for the database.

SQL1483N Add database partition server processing for database partition server *partitionnum* failed. Information returned for the error includes **SQLCODE** *sqlcode*, **SQLSTATE** *sqlstate*, and message tokens *token-list*.

Explanation: Add database partition server processing failed for database partition server *partitionnum*. The *sqlcode*, *sqlstate*, and message token list (each token is separated by the vertical bar character) are provided. The message tokens may be truncated. See the corresponding message for the *sqlcode* for further explanation of the error.

User response: Check the message associated with the **SQLCODE** of the SQL statement that failed. Follow the action suggested by that message.

sqlcode: -1483

sqlstate: 5UA02

SQL1484N Request *request* cannot be performed while add database partition server *partitionnum* processing is in progress.

Explanation: The database partition server *partitionnum* is being added, and request *request* is not allowed.

User response: Wait for the add database partition server operation to complete and resubmit the request .

sqlcode: -1484

sqlstate: 55071

SQL1485N The database partition server cannot be added because the database or instance *name* is in the state *state*.

Explanation: A database partition server cannot be added when the database or instance is in the state *state*.

User response: Change the database or instance so that it is in a state that allows the adding of a database partition server and resubmit the request.

sqlcode: -1485

sqlstate: 55019

SQL1487W The database partition server, DB2 member, or CF was added successfully but will not be operational until the instance is restarted.

Explanation: In a partitioned database environment, this message is returned when The a new database partition server was added to a single-partition

database environment. At the completion of the add database partition server operation, the new database partition server is not active until the DB2 instance is restarted.

In a DB2 pureCluster environment, the message is returned when a new DB2 member or cluster caching facility (CF) is added to a DB2 instance. After the member or CF is added, it is not active until the instance is restarted.

User response: Restart the instance.

SQL1488W The add database partition server operation was successful, and the new database partition server *partitionnum* is active. The DB2 cluster manager is detected in the instance. You may want to run the cluster manager tool *db2haicu* to configure the new database partition server for the cluster manager.

Explanation: The instance is managed by the DB2 cluster manager. When the newly added database partition server is configured, it can be managed by the cluster manager.

User response: Use the *db2haicu* tool to add the new database partition server to the cluster manager.

SQL1489I The add database partition server operation was successful. The new database partition server *dbpartitionnum* is active.

User response: No response is required.

SQL1490W Activate database is successful, however, the database has already been activated on one or more nodes.

Explanation: Database has already been explicitly started (activated) on one or more nodes.

User response: No action required.

SQL1491N The database *name* was not deactivated because the database is still being used.

Explanation: The database cannot be deactivated if there are any applications connected to the specified database.

User response: Ensure that all applications have done a **CONNECT RESET**, then try again.

SQL1492N The database *name* was not deactivated because it was not activated.

Explanation: The database cannot be deactivated because the specified database was not active.

User response: No action is required.

SQL1493N The application is already connected to an active database.

Explanation: The ACTIVATE DATABASE and DEACTIVATE DATABASE commands cannot proceed because the application is already connected to a database.

User response: Disconnect from the database then re-submit the command.

SQL1494W Activate database is successful, however, there is already a connection to the database.

Explanation: There is already database connection on one or more nodes.

User response: No action required.

SQL1495W Deactivate database is successful, however, there is still a connection to the database.

Explanation: There is still database connection to one or more nodes. The database will be shut down when the last connection disconnects from the database.

User response: No action required.

SQL1496W Deactivate database is successful, but the database was not activated.

Explanation: Database was not explicitly started on one or more nodes when deactivate database was executed.

User response: No action required.

SQL1497W Activate/Deactivate database was successful, however, an error occurred on some nodes.

Explanation: Activate/Deactivate database is successful at least on the catalog node and coordinator node, however, on some other node(s) an error has occurred.

User response: Refer to the diagnostic log to find out what error has occurred on which node, fix the problem if possible and then reissue the activate/deactivate database command.

SQL1498W There are tables in the database that contain one or more type-1 indexes. To convert them to type-2 indexes, run the *generated-file* CLP script prior to database upgrade.

Explanation: Beginning in DB2 Version 9.7, type-1 indexes are no longer supported and they must be converted to type-2 indexes. Type-2 indexes were introduced in DB2 UDB Version 8 as a replacement for

type-1 indexes in order to improve concurrency by minimizing next-key locking and using columns with length greater than 255 bytes as part of the index key.

The db2ckupgrade command identifies all type-1 indexes and generates the *generated-file* CLP script file in the same directory as the command logfile. The CLP script contains a REORG INDEXES ALL statement with the ALLOW WRITE ACCESS and CONVERT options for each identified type-1 index. It can be executed to convert all the identified type-1 indexes to type-2 indexes.

During database upgrade, any remaining type-1 indexes are marked invalid. The database manager will automatically rebuild the indexes as type-2 indexes on the first table access after database upgrade. No access to the table will be allowed until the index rebuild has completed.

User response: To avoid the overhead of index rebuild on the first table access, run the *generated-file* CLP script generated by the db2ckupgrade command to convert type-1 indexes to type-2 indexes prior to database upgrade.

SQL1499W Database upgrade was successful; however, additional user action may be required. See the administration notification log for more details.

Explanation: Database upgrade was successful; however, additional user action may be required because one or more of the following conditions were detected:

- Database upgrade altered NOT FENCED routines to FENCED and NOT THREADSAFE or altered user defined wrappers to FENCED on UNIX and Linux operating systems.
- Database upgrade could not successfully collect statistics on the system catalog tables.
- Database upgrade detected identifiers called NULL.
- Database upgrade marked indexes for rebuild on one or more tables.
- Database upgrade detected asterisks in workload connection attributes.
- Database upgrade detected databases enabled for XML Extender.
- Database upgrade detected databases enabled for DB2 WebSphere MQ functions.

User response: Refer to the administration notification log for additional information on the conditions detected to help you determine the action that might be required.

Chapter 4. SQL1500 - SQL1999

SQL1509N The statement cannot be processed because all available transports are in use, and no more transports can be created. Reason code: *reason-code*.

Explanation: A transport is a physical connection to a database. For more information about transports, refer to the topic called "Transaction-level load balancing" in the DB2 Information Center.

The reason that no more transports can be created is indicated by the given reason code:

1

No memory is available for additional transports.

2

The value set for the configuration parameter maxTransports has been reached.

User response: Respond to this error according to the reason code:

1

Resolve the memory shortage:

1. Make more memory available to the application. For example, terminate any unused connections.
2. Rerun the statement.

2

Change the database configuration to allow more transports:

1. Set the maxTransports configuration parameter to a higher value in the db2dsdriver.cfg configuration file.
For more information about maxTransports or the db2dsdriver.cfg configuration file, refer to the DB2 Information Center.
2. Restart the application.

sqlcode: -1509

sqlstate: 57060

SQL1510N The result set element list in a WITH RETURN TO CLIENT clause of a CREATE PROCEDURE statement is invalid. The following reason code indicates why the result set element list is invalid: *reason-code*

Explanation: You can return multiple, interleaved result sets from stored procedures by using the WITH

RETURN TO CLIENT clause in the CREATE PROCEDURE statement.

For more information about interleaved result sets, see the topic called "Interleaved result sets" in the DB2 Information Center.

The given reason code indicates what is invalid about the specified result set elements:

1

The list of result set elements contained a value that is not a positive integer. Result set elements specified with WITH RETURN TO CLIENT must be positive integers. For example, the following are not valid result set elements: -2, 0, 2.3

2

The list of result set elements contained duplicate entries. You cannot include a result set element multiple times in the list. For example, the following list is not valid: (1, 2, 2).

3

The result set elements were not specified in ascending order. For example, the following list is valid: (1, 3). The following list is not valid: (3, 1).

4

An element in the result set list was greater than 32767. The largest valid result set list element is 32767.

The stored procedure was not created.

User response: Call the CREATE PROCEDURE statement again specifying valid result set elements.

SQL1511N The specified clause, *clause*, is not supported for service subclasses.

Explanation: The clause, *clause*, that is specified is valid for a service superclass but is not valid for a service subclass.

User response: Remove the unsupported clause, or specify a service superclass.

sqlcode: -1511

sqlstate: 5U044

SQL1512N ddcstrc could not write to the specified file.

Explanation: *ddcstrc* was not able to write the trace information to the filename that it has been instructed to write to.

User response: Ensure that the filename specified is valid for your file system. If a filename is not specified, ensure that you have the necessary permission to write to the default file *ddcstrc.tmp*.

SQL1513W ddcstrc has not been turned off.

Explanation: Because of an error condition *ddcstrc* has not been turned off. This was done to ensure that the trace information will not be lost before being safely placed in a file.

User response: Correct the *ddcstrc* error condition reported prior to this error and attempt to turn off the trace again.

SQL1514N DB2START with the ADMIN MODE option cannot proceed because the specified member is part of a DB2 pureCluster environment.

Explanation: The *db2start* command is not compatible with the ADMIN MODE option in a DB2 pureCluster environment.

User response: If you need to restrict access to a certain member, use the QUIESCE option of the *db2stop* or STOP DATABASE MANAGER commands.

SQL1515N The user mapping cannot be created for server *server-name* because of a conflict with an existing user mapping or federated server option. Reason code *reason-code*.

Explanation: A user mapping defined for PUBLIC cannot coexist on a server with user mappings defined for individual users or on a server defined with the federated server option FED_PROXY_USER. The attempt to create the user mapping failed.

User response: The reason code *reason-code* indicates the particular situation. The following actions can resolve the situation.

1

A user mapping for an individual user is being defined but server *server-name* already has a user mapping defined for PUBLIC. Drop the user mapping defined for PUBLIC from the server and create the user mapping again.

2

A user mapping for PUBLIC is being defined but server *server-name* already has a user mapping defined for an individual user. Drop

all user mappings defined for individual users from the server and create the user mapping for PUBLIC again.

3

A user mapping for PUBLIC is being defined but server *server-name* is already defined with federated server option FED_PROXY_USER. Alter the server to remove the FED_PROXY_USER option and create the user mapping for PUBLIC again.

sqlcode: -1515

sqlstate: 428HE

SQL1516N The ALTER SERVER statement cannot add the FED_PROXY_USER federated server option to server *server-name* because of a conflict with an existing user mapping.

Explanation: The FED_PROXY_USER federated server option cannot be added to server *server-name* because it has an existing user mapping defined for PUBLIC. The ALTER SERVER statement failed.

User response: Drop the user mapping defined for PUBLIC from the server and issue the ALTER SERVER statement again.

sqlcode: -1516

sqlstate: 428HE

SQL1517N db2start failed because the cluster manager resource states are inconsistent.

Explanation: The *db2start* command has failed to start the processes because there are inconsistencies between the cluster manager resource model and the *db2nodes.cfg* file. These inconsistencies occur when there is a modification (intentional or unintentional) to *db2nodes.cfg* that is not synchronized with the cluster manager.

A DB2 pureCluster instance or new resources cannot be started until the inconsistencies have been resolved. DB2 resources that are already started are not affected by this error.

User response: Restore the *db2nodes.cfg* file to an earlier configuration (one that was synchronized with the cluster manager). If this cannot be done, repair the cluster resource model. To do this, issue a global *db2stop* to stop the instance, and run the *db2cluster* tool with the *-repair* option.

SQL1520N **Buffersize must be a numeric value greater than or equal to 65536.**

Explanation: The user specified an invalid buffersize for the ddcstrc command.

User response: Ensure that the buffersize used is numeric and greater than or equal to 65536 (64K). Note that the memory to be used will be a multiple of 64K. ddcstrc rounds down the buffersize specified to the nearest multiple of 64K.

SQL1522N **The deactivate command failed at one or more members where indoubt transactions were detected for the given database.**

Explanation: This message is returned when an attempt is made to explicitly deactivate a database using the DEACTIVATE DATABASE command or the sqlc_deactivate_db API but the database could not be deactivated because indoubt transactions were detected for the given database at one or more members.

The database has been deactivated at members where no indoubt transactions were detected. At members where indoubts were detected, the database will be left activated or in the same state it was in, prior to the deactivate command being issued.

User response: Respond to this error in one of the following ways:

- Wait for the transaction manager to resolve the indoubt transactions:
 1. Identify the indoubt transaction that involve the database using the LIST INDOUBT TRANSACTIONS command.
 2. Monitor the indoubt transactions until the transaction manager automatically resolve the indoubt transactions.
 3. Resubmit the DEACTIVATE DATABASE command or call the sqlc_deactivate_db API again.
- Resolve the transactions manually:
 1. Identify the indoubt transaction that involve the database using the LIST INDOUBT TRANSACTIONS command.
 2. Manually resolve the indoubt transactions. Resubmit the DEACTIVATE DATABASE command or call the sqlc_deactivate_db API again.
- Force the database deactivation by calling the DEACTIVATE DATABASE command with the FORCE option:
 1. Determine on which members the deactivation operation failed by reviewing the db2diag log files.
 2. On each member on which the deactivation operation failed, call the DEACTIVATE DATABASE command with the FORCE option.

Any indoubt transactions will be left unresolved.

SQL1523N **An extent movement operation attempted to access the table space named *tablespace-name* while another process was already accessing that table space. Reason code = *reason-code*.**

Explanation: An extent movement operation attempted to reclaim unused storage to lower the high water mark but a utility or process is already accessing the table space. The extent movement operation resulted from an ALTER TABLESPACE statement specifying a REDUCE or LOWER HIGH WATER MARK clause.

The utility or process that is affecting the table space is indicated by one of the following reason codes:

- | | |
|----|--|
| 1 | The table space is in a backup pending state. |
| 2 | The table space is in a restore in progress state. |
| 3 | The table space is in a restore pending or a recovery pending state. |
| 4 | The table space is in a rebalance in progress state. |
| 5 | The table space is in a rollforward in progress state. |
| 6 | The table space is in a rollforward pending state. |
| 7 | The table space is in a redistribute in progress state. |
| 8 | The table space is in a quiesce shared state. |
| 9 | The table space is in a quiesce update state. |
| 10 | The table space is in a quiesce exclusive state. |
| 11 | The table space is in a pstat_deletion state. |
| 12 | The table space is in a pstat_creation state. |
| 13 | |

The table space is in a stordef pending state.

14

The table space is in a disable pending state.

15

The table space is in a move in progress state.

User response: Refer to the documentation on the different states that a table space can be in. The documentation also tells you how to change the state to one that will allow the desired extent movement operation, or you can wait until the operation in process completes. For example, you can back up the table space to change the state from backup pending. Reissue the statement.

sqlcode: -1523

sqlstate: 55039

SQL1524N The request cannot occur until all applications in the instance are aware of the new database partition server.

Explanation: A new database partition server has been added online to the instance. When this event occurs, an existing application becomes aware of the new database partition server at its next transaction boundary (the exception occurs if the application has an open WITH HOLD cursor). A new database application becomes aware of the new database partition server at its first request. Until all applications in the instance are aware of the new database partition server, CREATE DATABASE PARTITION GROUP, ALTER DATABASE PARTITION GROUP, DROP DATABASE PARTITION GROUP, and REDISTRIBUTE DATABASE PARTITION GROUP requests are not allowed.

User response: One of the following, then try the request again.

- Wait until all applications are aware of the new database partition server.
- If waiting is not an option, terminate the application that is causing the request to fail. You can identify this application by using the db2pd -addnode oldviewapps command or the db2pd addnode -oldviewapps detail command.
- If multiple database applications are preventing the request, you can force all the applications or quiesce the instance.

sqlcode: -1524

sqlstate: 55077

SQL1525N An error occurred when starting the DB2 security daemon.

Explanation: An unexpected error occurred when starting the DB2 security daemon.

User response: Retry the DB2START command. If the problem persists, contact IBM Service.

SQL1526N db2start failed because DB2VIA support was not started. Reason code *reason-code*.

Explanation: DB2VIA support was not started successfully at db2start time. The reason code indicates the error:

1. The VIPL library specified in DB2_VI_VIPL registry variable could not be loaded.
2. The Device name specified in DB2_VI_DEVICE registry variable could not be opened.
3. DB2 does not support the VIA implementation installed.

User response:

1. Make sure the DB2 registry DB2_VI_VIPL is properly set and the name specified in DB2_VI_VIPL is in the %PATH% environment variable.
2. Make sure the DB2 registry DB2_VI_DEVICE is properly set.
3. DB2 only supports a VIA implementation that supports at least Reliable Delivery reliability level. It is also required that the VIA implementation complies with Intel Virtual Interface Architecture Implementation Guide and passes the conformance Suite. Make sure the VIA implementation you chose satisfies these requirements.

SQL1528W An enabled workload is associated with a disabled service class.

Explanation: Incoming connections will be assigned to the enabled workload *workload-name*, but the workload cannot map any new requests to the service class *service-class-name*, because the service class is disabled. Any new request mapped or remapped to the disabled service class will receive an SQL4714N error message.

User response: If necessary, correct the issue by disabling the workload or by enabling the service class. Otherwise, no action is required.

sqlcode: +1528

sqlstate: 01HN0

SQL1529N The last remaining CF cannot be dropped.

Explanation: In a DB2 pureCluster environment at least one cluster caching facility (CF) must exist. The last one cannot be dropped.

User response: Add a new CF and activate the changes before dropping this one.

SQL1530W The specified degree of parallelism will be ignored because the system is not enabled for intra-partition parallelism.

Explanation: Either the DEGREE bind option was specified with a value greater than 1 or the SET CURRENT DEGREE statement was executed with a value greater than 1, but the database manager was not enabled for intra-partition parallelism.

The database manager must be started with the `intra_parallel` configuration parameter set to ON in order for the instance to be enabled for intra-partition parallelism.

The statement or command completed successfully, but the degree specification was ignored.

User response: If you want to use intra-partition parallelism restart the database manager with the `intra_parallel` configuration parameter set to ON.

Otherwise use a value of 1 or ANY for the degree specification.

sqlcode: +1530

sqlstate: 01623

SQL1531N The database alias *database-alias* could not be found in the `db2dsdriver.cfg` configuration file.

Explanation: The `db2dsdriver.cfg` configuration file contains database information, and is used by the following drivers and clients:

- IBM Data Server Driver for ODBC and CLI
- IBM Data Server Driver Package
- For DB2 Version 9.7: for CLI and open source applications, the IBM Data Server Client and IBM Data Server Runtime Client

The information in the `db2dsdriver.cfg` file is similar to the information that is in the system database directory on an IBM Data Server Client or IBM Data Server Runtime Client.

You must add an alias to the `db2dsdriver.cfg` configuration file in order to connect to that alias with the IBM Data Server Driver for ODBC and CLI, or, the IBM Data Server Driver Package.

The connection failed.

User response:

1. Add the specified database alias to the `db2dsdriver.cfg` configuration file.
2. Stop the application process and start it again for the new `db2dsdriver.cfg` file settings to take effect.

3. Try again to connect to the specified database alias.

SQL1532N The `db2dsdriver.cfg` configuration file contains multiple entries for the database alias *database-alias*.

Explanation: The `db2dsdriver.cfg` configuration file contains database information, and is used by the following drivers and clients:

- IBM Data Server Driver for ODBC and CLI
- IBM Data Server Driver Package
- For DB2 Version 9.7: for CLI and open source applications, the IBM Data Server Client and IBM Data Server Runtime Client

The information in the `db2dsdriver.cfg` file is similar to the information that is in the system database directory on an IBM Data Server Client or IBM Data Server Runtime Client.

The client driver configuration file cannot contain multiple identical database alias entries or multiple identical database entries.

User response:

1. Remove duplicate entries from the `db2dsdriver.cfg` configuration file.
2. Stop the application process and start it again for the new `db2dsdriver.cfg` file settings to take effect.

SQL1533N The `db2dsdriver.cfg` configuration file contains multiple entries for a database with the following properties: database name *database-name*; server name *server-name*; and port number *port-number*.

Explanation: The `db2dsdriver.cfg` configuration file contains database information, and is used by the following drivers and clients:

- IBM Data Server Driver for ODBC and CLI
- IBM Data Server Driver Package
- For DB2 Version 9.7: for CLI and open source applications, the IBM Data Server Client and IBM Data Server Runtime Client

The information in the `db2dsdriver.cfg` file is similar to the information that is in the system database directory on an IBM Data Server Client or IBM Data Server Runtime Client.

The client driver configuration file cannot contain multiple identical database alias entries or multiple identical database entries.

User response:

1. Remove duplicate entries from the `db2dsdriver.cfg` configuration file.

SQL1534N • SQL1537N

2. Stop the application process and start it again for the new db2dsdriver.cfg file settings to take effect.

SQL1534N The call to db2dsdcfgfill failed because invalid command options were specified.

Explanation: You can use the db2dsdcfgfill command to create and populate a db2dsdriver.cfg configuration file based on the contents of the local database directory, node directory, and DCS directory.

db2dsdcfgfill Syntax:

```
db2dsdcfgfill  
[ -i <instance-name> [ -db2cliFile <path> ] |  
  -p <instance-path> [ -db2cliFile <path> ] |  
  -migrateCliIniFor.NET -db2cliFile <path> |  
  -o <output-path> ] |  
[ -h ]
```

The command options are:

-h

Print this message.

-i <instance-name>

The name of the database manager instance whose database directory, node directory, and dcs directory will be used as input by db2dsdcfgfill.

-db2cliFile <path>

For Microsoft Windows systems only: The full path of the db2cli.ini file.

-p <instance-path>

The full path of the database manager instance directory under which the system database directory, node directory, and dcs directory are located.

-migrateCliIniFor.NET

For Microsoft Windows systems only: Copies a subset of entries from the db2cli.ini file into the db2dsdriver.cfg file.

-o <output-path>

The path where db2dsdcfgfill will create the db2dsdriver.cfg configuration file.

User response: Run db2dsdcfgfill again, specifying valid command options.

SQL1535I The db2dsdcfgfill utility successfully created the db2dsdriver.cfg configuration file.

Explanation: The configuration file db2dsdriver.cfg contains database directory information and client configuration parameters in a human-readable format. You can create and populate the configuration file

db2dsdriver.cfg using the db2dsdcfgfill utility.

User response: You do not need to respond to this message.

SQL1536N The db2dsdcfgfill utility failed to create the db2dsdriver.cfg configuration file.
Reason code: *reason-code*.

Explanation: You can use the db2dsdcfgfill utility to create and populate a db2dsdriver.cfg configuration file based on the contents of the local database directory, node directory, and DCS directory.

The reason codes are as follows:

1

The db2dsdcfgfill utility could not create the db2dsdriver.cfg configuration file because there were insufficient system resources. For example, this error can happen if there is not enough room in the output directory to create the new file.

2

A non-severe, internal or system error occurred.

User response: Run the db2dsdcfgfill utility again.

If the problem persists, respond to this error according to the given reason code:

1

Resolve the system resources problem:

1. Use operating system diagnostics tools to examine system resource data. For example, verify that there is enough space to create the new file.
2. Make more system resources available. For example, free disk space.
3. Run the db2dsdcfgfill utility again.

2

Work with IBM support to resolve the internal or system error:

1. Collect diagnostic information using db2trace while running the db2dsdcfgfill utility.
2. Contact IBM Support to investigate the collected db2trace diagnostic information.

SQL1537N The db2dsdcfgfill utility failed because an invalid value was passed to the command. **Reason-code:** *reason-code*.

Explanation: You can use the db2dsdcfgfill utility to create and populate a db2dsdriver.cfg configuration file based on the contents of the local database directory, node directory, and DCS directory.

For more information about the db2dsdcfgfill utility, refer to the topic called "db2dsdcfgfill utility" in the DB2 Information Center.

The reason this message was returned is indicated by the given reason code:

- 1
The specified database manager instance does not exist on this client.
- 2
The specified database manager instance path is not valid. For example, the path might not exist, or the db2dsdcfgfill utility might not have permission to access that directory.
- 3
The specified output directory is invalid. For example, the directory might not exist, or the db2dsdcfgfill utility does not have permission to create a file in that directory.
- 4
The specified db2cli.ini file path is invalid. For example, the directory might not exist, or the db2dsdcfgfill utility does not have permission to access that file or directory.

User response: Respond to this message according to the given reason code:

- 1
Run db2dsdcfgfill again, specifying a valid database manager instance.
- 2
Resolve the problem with the database manager instance directory:
 1. Determine why db2dsdcfgfill could not access the specified database manager instance directory. For example, determine if the permission settings of the directory prevent db2dsdcfgfill from accessing the directory.
 2. Address the reason db2dsdcfgfill could not access the specified database manager instance directory. For example, change the permission settings of the directory to allow db2dsdcfgfill to access the directory.
 3. Run db2dsdcfgfill again.
- 3
Resolve the problem with the output directory:
 1. Determine why db2dsdcfgfill could not access the specified output directory. For example, determine if the permission settings of the directory prevent db2dsdcfgfill from creating a file in the directory.

2. Address the reason db2dsdcfgfill could not create the db2dsdriver.cfg configuration file in the specified directory. For example, change the permission settings of the directory to allow db2dsdcfgfill to create a file in the directory.
3. Run db2dsdcfgfill again.

4
Resolve the problem with the db2cli.ini file path:

1. Determine why db2dsdcfgfill could not access the specified file. For example, determine if the permission settings of the directory prevent db2dsdcfgfill from accessing a file in the directory.
2. Address the reason db2dsdcfgfill could not access the db2cli.ini file in the specified directory. For example, change the permission settings of the directory to allow db2dsdcfgfill to read a file in the directory.
3. Run db2dsdcfgfill again.

SQL1538N The following keyword is not supported in the current environment: *keyword*.

Explanation: The keyword you specified is not supported in a DB2 pureCluster environment.

User response: Rerun the command or execute the SQL statement again specifying only supported keywords.

sqlcode: -1538

sqlstate: 56038

SQL1539N The load operation failed because the load target table is incompatible with exception tables in general or with the specific exception table in particular.
Reason code: *reason-code*.

Explanation: You can efficiently move large quantities of data into newly created tables, or into tables that already contain data using the load utility.

You can create a consolidated report of all of the rows that violated unique index rules, range constraints, and security policies during a load operation using a load exception table. You specify a load exception table by using the FOR EXCEPTION clause of the LOAD command.

The reason code indicates the specific reason this error was returned:

- 1
The load target table uses LBAC security and has at least one XML column.

2

The load target table is range partitioned and has at least one XML column.

3

The partition map for the load target table is not the same as the partition map for the specified load exception table.

A partition map determines the distribution of the rows of a table among database partitions. The distribution of the rows of the load target table must be the same as the distribution of the rows of the load exception table.

User response: Re-issue the LOAD command without the FOR EXCEPTION option.

sqlcode: -1539

sqlstate: 5U049

SQL1540N An SQL statement or a DB2 utility encountered an error because a storage group or table space object is not accessible on a member. **Object identifier:** *object-id*. **Member:** *member-id*. **Object type keyword:** *object-type-keyword*.

Explanation: An SQL statement or a DB2 utility encountered an error because the storage group or table space where a database object resides is not accessible on this member. The SYSCAT.TABLESPACES catalog view can be used to identify the table space name given a table space identifier. The SYSCAT.STOGROUPS catalog view can be used to identify the storage group name given a storage group identifier. If the object identifier token value is "*N", a storage group file header is not accessible on this member.

User response: Verify that all database storage paths are accessible on this member and reissue the SQL statement, or issue the SQL statement on a different member.

sqlcode: -1540

sqlstate: 57048

SQL1541N Dropping the member failed because the specified member is the only member in this DB2 pureCluster instance. The last member cannot be dropped.

Explanation: In a DB2 pureCluster environment at least one member must exist. The last one cannot be dropped.

User response:

1. Add a new member using the db2iupdt command with the -add option.

2. Drop the original member using the db2iupdt command with the -drop option.

SQL1542N Adding the CF failed because the maximum number of CFs in the DB2 instance has been reached.

Explanation: A DB2 pureCluster environment supports a maximum of 2 cluster caching facilities (CFs) for each DB2 instance. This message is returned when an attempt is made to add more CFs than the maximum.

User response:

1. Drop one of the existing CFs using the db2iupdt command with the -drop option
2. Add the new CF using the db2iupdt command with the -add option

SQL1543N The host specified for the CF is a duplicate.

Explanation: In a DB2 pureCluster environment only one cluster caching facility (CF) can exist on a given host.

User response: Specify a different host that does not already have a CF.

SQL1544N Backup of a database following a topology change in a DB2 pureCluster environment cannot be performed from a newly added member.

Explanation: Following a topology change in a DB2 pureCluster environment, a backup of the database is required. This must be performed from one of the preexisting instance members.

User response: Perform the backup from one of the preexisting members.

SQL1545N Restore of a database image from a previous topology is not supported.

Explanation: In a DB2 pureCluster environment, restore of an image with a topology different than the current database topology (different setup or number of members) is not permitted.

User response: Restore the image taken following the most recent topology change and proceed from there.

SQL1546N Rollforward through an add or drop member operation is not permitted.

Explanation: In a DB2 pureCluster environment, rollforward through a topology change (add or drop of a member) is not permitted.

User response: Restore the image taken following the

topology change and proceed with the rollforward from that point.

SQL1547N The start or stop command failed because there was a previous incomplete add or drop operations.

Explanation: An attempt to add or drop a DB2 member or cluster caching facility (CF) failed. As a result, the start or stop command cannot be processed until the incomplete add or drop operation is corrected.

Use response

1. Manually correct the failed add or drop operation using the db2iupdt command with the fixtopology parameter.
Note that using the db2iupdt command with the fixtopology parameter always performs a drop operation to complete an incomplete add or drop operation.
2. Resubmit the start or stop command.

User response:

SQL1548N The REORG command failed because the ALLOW WRITE ACCESS and ALLOW READ ACCESS modes are not valid for a partitioned table.

Explanation: For a partitioned table, the REORG command supports the following use of the ALLOW WRITE ACCESS and ALLOW READ ACCESS modes:

- For the REORG INDEXES ALL command, the ALLOW WRITE ACCESS or ALLOW READ ACCESS modes are supported only when one or more of the following clauses are specified: ON DATA PARTITION, CLEANUP, and RECLAIM EXTENTS.
- For the REORG TABLE command, the ALLOW READ ACCESS mode is supported only when the ON DATA PARTITION clause is specified and there are no nonpartitioned indexes other than XML PATH indexes defined on the table, and the INPLACE clause is not specified.

User response: Reissue the index or data reorganization command with the appropriate access mode for a partitioned table.

sqlcode: -1548

sqlstate: 5U047

SQL1549N The ON DATA PARTITION clause is not allowed with the command.

Explanation: A REORG TABLE command with the ON DATA PARTITION clause is not allowed on a table that meets both conditions:

- It is in the reorg pending state.
- One or more nonpartitioned indexes are defined on the table. A nonpartitioned index can be a

user-defined index or a system-created index such as an XML PATH index that is created when the table contains an XML column.

User response: Issue the REORG TABLE command without the ON DATA PARTITION clause.

sqlcode: -1549

sqlstate: 5U047

SQL1550N The SET WRITE SUSPEND command failed because of the condition that is indicated by the reason code. Reason code = reason-code.

Explanation: You cannot issue the SET WRITE SUSPEND command until the condition indicated by reason-code is resolved:

1

The database is not activated.

2

A backup database operation is currently in progress for the target database.

3

A restore database operation is currently in progress for the target database.

4

Write operations have already been suspended for the database.

5

One of the following conditions exists:

- The current state of one or more table spaces does not permit the suspension of write operations.
- Changes to the buffer pools that are associated with the table spaces are still pending and do not permit the suspension of write operations.

6

An error occurred during an attempt to suspend write operations for the database.

In a DB2 pureCluster environment, SQL1550N can be returned with reason code 6 if the SET WRITE command failed on one or more members in the DB2 cluster.

7

The database is quiesced or in a temporary state that does not permit the suspension of write operations. This can be caused, for example, by a quiesced database or instance, or by a database deactivation in progress.

SQL1551N

User response: Respond to this message according to the reason code:

1

Activate the database by issuing the `ACTIVATE DATABASE` command, and then reissue the `SET WRITE SUSPEND` command.

2

After the `BACKUP` procedure finishes, reissue the `SET WRITE SUSPEND` command.

3

After the `RESTORE` procedure finishes, reissue the `SET WRITE SUSPEND` command.

4

If you want to resume write operations for the database, issue the `SET WRITE RESUME` command.

5

- View the table space states by using the `MON_GET_TABLESPACE` table function. If there are table spaces that are in a pending state, issue the appropriate command to bring them out of the pending state before reissuing the `SET WRITE SUSPEND` command.
- If an operation is in progress for one or more table spaces, wait until the operation is complete before reissuing the `SET WRITE SUSPEND` command. For example, if the self-tuning memory manager is enabled, buffer pool changes might be in progress. When the changes are complete, the write suspend operations will be allowed.

6

Respond to reason code 6 by performing the following steps:

1. Investigate the cause of the failure by reviewing the administration notification log.
In a DB2 pureCluster environment, review the administration notification log on each member in the DB2 cluster.
2. Correct the problem that is preventing the `SET WRITE` command from succeeding.
In a DB2 pureCluster environment, if different members in the DB2 cluster are reporting different root causes for this problem, correct all of the causes reported by the members.
3. Reissue the `SET WRITE SUSPEND` command.

7

Unquiesce the database if quiesced, or wait a short period of time and reissue the `SET WRITE` command with the `SUSPEND` option.

SQL1551N The `SET WRITE RESUME` command or the `RESTART DATABASE` command with the `WRITE RESUME` parameter failed because of the condition that is indicated by the reason code. Reason code = *reason-code*.

Explanation: You cannot issue the `SET WRITE RESUME` command or the `RESTART DATABASE` command with the `WRITE RESUME` parameter until the condition indicated by *reason-code* is resolved:

1

A snapshot backup is in progress for the target database.

2

The database is not currently in the `WRITE SUSPEND` state.

3

An error occurred during an attempt to resume the write operations for the database.

User response: Respond to this message according to the reason code:

1

1. Wait until the snapshot backup is complete.
2. Reissue the `SET WRITE RESUME` command.

2

If the command that failed is the `SET WRITE RESUME` command, no action is required because write operations are already enabled for this database. To suspend write operations for the database, issue the `SET WRITE SUSPEND` command.

If the command that failed is the `RESTART DATABASE` command with the `WRITE RESUME` parameter, issue the `RESTART DATABASE` command without the `WRITE RESUME` parameter. If this fails and the database is not in the `WRITE SUSPEND` state:

1. Wait until all `SET WRITE SUSPEND` operations are completed.
2. Reissue the `RESTART DATABASE` command with the `WRITE RESUME` parameter.

3

1. Investigate the cause of the failure by reviewing the DB2 diagnostic log files.
2. Correct the problem.

3. Reissue the SET WRITE RESUME command.

SQL1552N The command failed because write operations for the database are suspended or are being suspended.

Explanation: You can suspend write operations for a database using the db2SetWriteForDB API or the SET WRITE command with the SUSPEND clause. There are some operations that cannot be performed on a database when write operations for that database have been suspended, or while the database manager is in the process of suspending write operations for that database:

- Backing up the database
- Restoring the database
- Restarting the database
- Connecting to or activating the database
- Updating or resetting database configuration files

This message is returned when an attempt is made to perform these kinds of operations against a database that is in WRITE SUSPEND state, or that is in the process of having write operations suspended.

User response: First, if write operations for the database are in the process of being suspended, monitor the state of the database using the suspend_io configuration parameter, and wait until the SET WRITE SUSPEND operation completes before you continue.

Second, respond to this error according to the scenario in which the message was returned:

Backing up or restoring the database:

1. Resume write operations for the database by issuing the SET WRITE RESUME FOR DATABASE command.
2. Perform the backup or restore operation again.

Restarting the database without the WRITE RESUME clause:

Perform the restart again by performing one of the following actions:

- Issue the RESTART DATABASE command with the WRITE RESUME clause.
- Call the db2DatabaseRestart API specifying the DB2_RESUME_WRITE option

In a multiple database partition environment, reissue the restart command or API call on each database partition.

Restarting the database with the WRITE RESUME clause in DB2 pureCluster environments:

- If automatic restart is enabled, with the autorestart database configuration parameter set to ON, wait for several seconds and

submit the restart again, specifying the WRITE RESUME clause or the DB2_RESUME_WRITE option.

- If automatic restart is disabled, with the autorestart database configuration parameter set to OFF, perform the following two steps:
 1. Restart the database without specifying the WRITE RESUME clause or the DB2_RESUME_WRITE option.
 2. Restart the database again, specifying the WRITE RESUME clause or the DB2_RESUME_WRITE option.

Other scenarios (including connecting to the database, activating the database, or updating database configuration files):

Restart the database by performing one of the following actions:

- Issue the RESTART command with the WRITE RESUME clause.
- Call the db2DatabaseRestart API specifying the DB2_RESUME_WRITE option.

In DB2 pureCluster environments, issuing the command or API on any one member will cause write operations to resume on all suspended members.

SQL1553N DB2 cannot be stopped because one or more databases are in WRITE SUSPEND state.

Explanation: You cannot shut down a database for which write operations are suspended. The database is in WRITE SUSPEND state.

User response: Issue the SET WRITE RESUME command to resume write operations for the database, then re-issue the db2stop command.

sqlcode: -1553

SQL1554N The command failed because LIST TABLESPACES and LIST TABLESPACE CONTAINERS commands have been deprecated and are not supported in a DB2 pureCluster environment.

Explanation: The commands and APIs that show information about table spaces and table space containers have been deprecated, are not supported in a DB2 pureCluster environment, and might be removed in a future release. The LIST TABLESPACES and LIST TABLESPACE CONTAINERS commands are no longer being updated with new features.

User response: Modify any of your existing scripts using the deprecated commands or APIs to call the MON_GET_TABLESPACE or the MON_GET_CONTAINER table functions instead. These table functions return more information than was

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provided by the deprecated commands and APIs.

sqlcode: -1554

sqlstate: 5U001

SQL1560N Statistics profile does not exist for table *table-name*.

Explanation: A statistics profile needs to be defined before use.

User response: Register a statistics profile for the table using the SET PROFILE option of the RUNSTATS command and then reissue the operation.

SQL1561N Statistics option not compatible with the database server level.

Explanation: One or more of the options specified are not compatible with the database server level. This database server version does not support all of the statistics options available using the db2runstats API.

User response: Use the sqlustat API to collect the statistics or use the db2runstats API and specify only those options that are available using the sqlustat API.

SQL1562N Statistics node option is not compatible with the existed statistics for table *table-name*.

Explanation: The statistics node option is different from the existing table and/or index statistics of the table.

User response: Use consistent node option to collect the statistics for a table.

SQL1563N The SYSINSTALLOBJECTS procedure failed to migrate the explain tables.

Explanation: You can migrate explain tables using the SYSINSTALLOBJECTS procedure only if the explain tables were created in DB2 Version 9.5 or higher.

User response: Migrate the explain tables using the db2exmig command.

sqlcode: -1563

sqlstate: 5U048

SQL1564N The restore or rollforward operation did not complete successfully because the specified operation is not supported.

Explanation: The following operations are not supported:

- In a DB2 pureCluster environment, restoring a backup image to a system with a different topology (a different number of members or different member numbers)

- In a DB2 pureCluster environment, rollforward recovery across changes in topology
- Restoring a backup image that was taken from an environment that is not a DB2 pureCluster environment into a DB2 pureCluster environment
- Restoring a backup image that was taken from DB2 pureCluster environment into an environment that is not a DB2 pureCluster environment

User response: If the error pertains to a topology mismatch during a restore operation, take one of the following actions:

- Restore from a different backup image, one that was produced with the same topology as the target system.
- Update the topology of the target system before attempting the restore operation.

Otherwise, restore the backup image in a compatible environment (a DB2 pureCluster environment or an environment that is not a DB2 pureCluster environment.)

To avoid this error condition during a rollforward operation, restore a backup image that was taken after the most recent topology change.

SQL1565N The entry in the database manager configuration file for the CF diagnostic directory path (*cf_diagpath*) is invalid.

Explanation: The entry in the database manager configuration file for the diagnostic directory path of the cluster caching facility (CF) is *cf_diagpath*.

This message is returned when you try to update the dbm config parameter *cf_diagpath* with specification of an invalid path. An invalid value for *cf_diagpath* is specified in the UPDATE DATABASE MANAGER CONFIGURATION command. For example, this message can be returned if a path is specified that does not exist, or if a path is specified for which the database manager does not have write access.

User response: Run the command again, specifying a valid value for the *cf_diagpath*. Ensure that this is a valid and fully qualified path.

sqlcode: -1565

sqlstate: 5U054

SQL1566N The UPDATE DATABASE MANAGER CONFIGURATION command failed because the specified value for the *cf_diaglevel* configuration parameter is invalid.

Explanation: You can specify the level of diagnostic errors that are recorded in the *cfdiag.log* file using the database manager configuration parameter *cf_diaglevel*.

This message is returned when an invalid value for `cf_diaglevel` is specified in the `UPDATE DATABASE MANAGER CONFIGURATION` command.

User response: Run the command again, specifying a valid value for the `cf_diaglevel`.

sqlcode: -1566

sqlstate: 5U054

SQL1567N An exclusive connection to a single database partition cannot be made in this environment

Explanation: In a DB2 pureCluster environment, connecting to a single database partition in exclusive mode is not supported.

User response: Do not specify the `ON SINGLE DBPARTITIONNUM` clause on the `CONNECT` statement.

SQL1568N The database manager configuration file is not accessible.

Explanation: An error occurred while attempting to access the database manager configuration file. This file is created during instance creation and is critical for all DB2 processing. An inaccessible database manager configuration file can be an indication of an incomplete instance setup or a damaged instance.

This message can also be returned when the file system on which the database manager configuration file resides is unavailable. For example, if the shared file system is IBM General Parallel File System (GPFS), this message can be returned if the GPFS cluster is offline.

The command cannot be processed.

User response: Respond to this message by performing the following troubleshooting steps:

- Confirm that the shared file system where the database manager configuration file is located is mounted.
- If the shared file system is of type GPFS, confirm that the file system cluster is not stopped by performing the following steps:
 1. Verify the status of the shared file system cluster using the following command:


```
db2cluster -cfs -list -host -state
```
 2. If the shared file system cluster is stopped, restart the cluster using the following command:


```
db2cluster -cfs -start -host <hostname>
```
- If the DB2 database manager instance was recently created, recreate the instance using `db2icrt` command.

SQL1569N The operation failed because the command or API specified invalid database partitions.

Explanation: If this message is being returned as a result of a backup operation, the specified database partitions are not currently defined in the database. If this message is being returned as a result of a rollforward or recover operation, either the `ON DBPARTITIONNUMS` or the `ON DBPARTITIONNUM` clause were specified and an invalid database partition number was specified. In non-DPF environments, only the current database partition can be specified.

User response: For backup operations, reissue the command or API, specifying existing database partitions. For rollforward and recover operations, reissue the command or API without specifying `ON DBPARTITIONNUMS` or only specify the current database partition

sqlcode: -1569

sqlstate: 428A9

SQL1572N The database rollforward or group crash recovery has failed because of a disk full situation.

Explanation: If a log full situation occurs during a database rollforward or group crash recovery, more log files are automatically allocated as needed. However, in this case, new log files could not be allocated due to insufficient disk space. The recovery or rollforward operation has failed.

User response: Make more disk space available to the group crash recovery or the database rollforward, and reissue the command.

Alternatively, the operation may succeed if reissued on a different member as follows:

- If the operation that failed was a group crash recovery, DB2 cluster services will automatically reissue the group crash recovery on a different member. If the DB2 pureCluster instance does not have automatic crash recovery enabled, the group crash recovery operation needs to be reissued manually on a different member.
- If the operation that failed was a database rollforward, the rollforward operation needs to be restarted manually on another member.

SQL1573N The database cannot be activated or connected to in the current instance environment.

Explanation: This message is returned if

- You are trying to activate or connect to a database that has not been verified for a DB2 pureCluster environment, but are using a DB2 pureCluster environment.

SQL1575N • SQL1579N

- You are trying to activate or connect to a database that has been verified for a DB2 pureCluster environment, but are not using a DB2 pureCluster environment.

These two actions are not supported.

User response: If you are using a DB2 pureCluster environment you can use the db2checkSD utility to determine if the database can be used in that environment. If the db2checkSD utility does not report any errors, activate or connect to the database again.

sqlcode: -1573

sqlstate: 55001

SQL1575N The most recent attempt to add or drop a DB2 member for database *dbname* in this DB2 pureCluster environment failed.

Explanation: Adding or dropping a DB2 member (a topology change) in this DB2 pureCluster environment would leave database *dbname* in an unrecoverable state.

User response: Backup or drop the database *dbname* then repeat the add or drop DB2 member operation.

SQL1576N The database removal failed because of a cluster manager error.

Explanation: A cluster manager error occurred that prevented successful processing of the drop command.

All data files associated with the database has been removed. However, the database location information might not have been removed.

User response: Clean up the database resources that the cluster manager failed to remove by performing the following steps:

1. Collect as much of the following diagnostic information as possible:
 - Error information from the SQLCA
 - Related errors in the db2diag log files
2. Make the necessary corrective actions based on the cluster manager return code in the db2diag log files.
3. Manually remove or delete the related mount resources.
4. Remove the database location information from the system database directory using the UNCATALOG DATABASE command.

If you are unable to successfully remove the database resources using this procedure, contact IBM support with the following information:

- Problem description
- SQLCODE
- SQLCA contents, if possible

- Environment data on the client and server collected using the db2support command

sqlcode: -1576

sqlstate: 5U056

SQL1577N The START command failed because the STANDALONE parameter was specified, and the current environment is a DB2 pureCluster environment.

Explanation: The STANDALONE parameter is not supported with the START command in a DB2 pureCluster environment.

User response: Call the command again without specifying the STANDALONE parameter.

SQL1578N The START command failed because the RESTART parameter was specified, and the current environment is a DB2 pureCluster environment.

Explanation: The RESTART parameter is not supported with the START command in a DB2 pureCluster environment.

User response: Call the command again without specifying the RESTART parameter.

SQL1579N Two or more log streams for database *dbname* on database partition *dbpartitionnum* are following different log chains. Log file *file1* on log stream *stream1* follows log chain *chain1* and log file *file2* on log stream *stream2* follows log chain *chain2*.

Explanation: When a database rollforward to a point-in-time operation completes, or a database restore operation without rolling forward is done, a new history of the database, called a log chain, is created. The database manager assigns log chain numbers to log extents and other database objects so that it can verify that the set of objects belongs to the same database history. The database manager has detected that two or more log streams are following different log chains, and has halted the current operation.

User response: Check the log streams that are identified in this message and determine which log stream is following the correct log chain. Retrieve the required log files from the invalid log stream into an overflow log path, and attempt the operation again.

SQL1580W Trailing blanks were truncated while performing conversion from codepage *source-code-page* to codepage *target-code-page*. The maximum size of the target area was *max-len*. The source string length was *source-len* and its hexadecimal representation was *string*.

Explanation: During the execution of the SQL statement, a code page conversion operation has resulted in a string that is longer than the maximum size of the target object. Processing continued because only blank characters were truncated.

User response: Ensure that the output is as expected and that the truncation has not caused any unexpected consequences.

sqlcode: +1580

sqlstate: 01004

SQL1581N The table *table-name* cannot be in append mode and have a clustering index.

Explanation: There are two situations where this error is issued.

- A clustered index exists for a table and ALTER TABLE is used to attempt to place the table in append mode.
- A table is in append mode and CREATE INDEX is used to attempt to create a clustering index.

User response: If a clustering index is necessary then alter the table to set append mode off. If append mode is desired, drop the existing clustering index on the table.

sqlcode: -1581

sqlstate: 428CA

SQL1582N The PAGESIZE of the table space *tbspace-name* does not match the PAGESIZE of the bufferpool *bufferpool-name* associated with the table space.

Explanation: The PAGESIZE value specified in the CREATE TABLESPACE statement does not match the page size of the bufferpool specified for use with the table space. These values must match.

The statement cannot be processed.

User response: Change the value specified for PAGESIZE to match the page size of the bufferpool or change the bufferpool to one that has a page size that matches.

sqlcode: -1582

sqlstate: 428CB

SQL1583N PAGESIZE value *pagesize* is not supported.

Explanation: The PAGESIZE that is specified is not a supported page size. The supported page sizes are 4096, 8192, 16384, and 32768, while a value of 4 K, 8 K, 16 K, or 32 K can also be specified.

The statement cannot be processed.

User response: Specify one of the supported page sizes.

sqlcode: -1583

sqlstate: 428DE

SQL1584N System temporary tablespace with page size of at least *pagesize* could not be found.

Explanation: A system temporary table space was required to process the statement. There was no system temporary table space available that had a page size of *pagesize* or larger.

The statement cannot be processed.

User response: Create a system temporary table space with a page size of at least *pagesize*.

sqlcode: -1584

sqlstate: 57055

SQL1585N A temporary table could not be created because there is no available system temporary table space that has a compatible page size.

Explanation: Temporary table spaces hold temporary data required by the database manager when performing operations such as sorts or joins, since these activities require extra space to process the results set. This message is returned when the database manager fails to create a temporary table because the database manager cannot find a table space with a compatible page size that is in a "normal" state.

This message can be returned when one of the following conditions occurs:

- The row length of the system temporary table being generated is larger than can be accommodated by the system temporary table space with the largest page size that is currently in "normal" state.
- The number of columns required in a system temporary table exceeded the limit that can be accommodated in the largest system temporary table space in the database.

User response: Perform the following troubleshooting steps:

1. Determine what size of temporary table space is required using the following table:

SQL1586N • SQL1588N

Max Record Length	Max Cols	Page size of temporary table space
4005 bytes	500	4K
8101 bytes	1012	8K
16293 bytes	1012	16K
32677 bytes	1012	32K

- Determine whether a temporary table space exists that has a large enough page size and is in "normal" state using the MON_GET_TABLESPACE table function.
- If a table space does not exist that has a large enough page size, create a system temporary table space of a larger page size.
- If a table space already exists that has a large enough page size and in "normal" state, perform one of the following steps:
 - Eliminate one or more columns from the system temporary table.
 - Create separate tables or views, as required, to hold additional information beyond the limit.
- If a table space already exists that has a large enough page size but is not in "normal" state, perform the necessary operation to move that table space to a "normal" state. For example, this might require dropping the table space and recreating it.

sqlcode: -1585

sqlstate: 54048

SQL1586N The statement was not executed because the query compiler was unable to successfully resolve the text search function in the statement.

Explanation: There are some rare situations in which text search functions cannot successfully be resolved by the query compiler. One example of such a situation is the application of a text search function to a column from the null-producer of an OUTER JOIN.

This message is returned when the query compiler is unable to successfully resolve text search functions.

The statement was not executed.

User response: No user response is required. The specified statement cannot be executed.

SQL1587N The command or statement failed because there is currently a CF on the host on which the command was run or the statement executed. Command or statement type: *command-statement-code*. Host name: *host*.

Explanation: There are some DB2 commands, such as "ATTACH", and SQL statements, such as "CONNECT", that cannot be performed on a host where a DB2

cluster caching facility (CF) is located. This message can be returned when these commands or statements have been issued explicitly or implicitly.

The token *command-statement-code* indicates which type of command or SQL statement was attempted:

- Explicit or implicit CONNECT TO
<database-alias>
- Explicit or implicit ATTACH TO
<instance-alias>

User response: Respond to this message in one of the following ways:

- Run the command or execute the statement again on a host that does not have a CF on it by performing the following steps:
 - Find a host that does not currently have a CF on it using the following command:
db2instance -list
 - Log in to a host that does not currently have a CF on it.
 - Run the DB2 command or execute the SQL statement again.
- Specify a host that does not currently have a CF on it by using one of the following methods:
 - Use the environment variable DB2NODE to specify the member and run the DB2 command or execute the SQL statement again.
 - Use the Set Client command's CONNECT_MEMBER or ATTACH_MEMBER option with the DB2 command or SQL statement.

sqlcode: -1587

sqlstate: 560CW

SQL1588N Error *sqlcode* on member *member-ID* prevents processing of the current statement.

Explanation: The current member cannot process data change statements until the condition causing error *sqlcode* on member *member-ID* is corrected. The statement cannot be processed.

User response: Retry the operation. If the error persists, correct the problem and try again.

sqlcode: -1588

sqlstate: 57063

SQL1589N The database connection failed because an operating system resource limit was reached.

Explanation: This message can be returned when there are more than 1024 simultaneous local database connections, and as a result, an operating system limit is reached. On AIX operating systems, no more than 1024 local database connections established by a single process or application can exist simultaneously.

This message can also be returned when the DB2 database manager encounters an internal error while making operating system calls.

User response: Terminate any unneeded local database connections.

If terminating local database connections resolves the problem, prevent reoccurrences of this error by modifying your applications to use fewer simultaneous local connections. If your applications require many database connections, use remote connections (or loopback connections when the database server and client are on the same host machine) using TCP/IP instead of local connections.

If reducing the number of local connections does not resolve this problem, contact IBM software support for help with investigating the cause of the problem.

sqlcode: -1589

sqlstate: 54067

SQL1590N LONG VARCHAR and LONG VARGRAPHIC fields are not permitted in TABLESPACES which are built on DEVICES.

Explanation: Devices (raw i/o) on HP require i/o to be aligned on 1024 byte boundaries. LONG VARCHAR and LONG VARGRAPHIC fields are handled in 512 byte pieces, and thus can only be used in SYSTEM MANAGED TABLESPACES or in DATABASE MANAGED TABLESPACES with only FILE containers.

User response: Alternatives:

- Choose one of the LOB columns types (BLOB,CLOB,DBCLOB) instead of LONG.
- Use a table space with the correct attributes.

sqlcode: -1590

sqlstate: 56097

SQL1592N The INCREMENTAL option is not valid with reason code *reason-code* since the table *table-name* cannot be incrementally processed.

Explanation: The cause is based on the reason code *reason-code*.

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The table is not a REFRESH IMMEDIATE materialized query table, nor a REFRESH DEFERRED materialized query table with a supporting staging table, nor a PROPAGATE IMMEDIATE staging table.

33

A LOAD REPLACE or LOAD INSERT has occurred to the table if it is a materialized query table or staging table.

34

A LOAD REPLACE has occurred to the table after the last integrity check.

35

One of the following:

- The materialized query or staging table was newly created. Full processing is required for the first time the table is checked for integrity after it has been created.
- New constraint has been added to the table itself or its parents (or its underlying table if it is a materialized query table or staging table) while in the Set Integrity Pending state.
- If it is a materialized query table or staging table, a LOAD REPLACE has occurred to any underlying table of the table after the last refresh.
- If it is a materialized query table, at least one underlying table was forced to full access (using the FULL ACCESS option) before the materialized query table was refreshed.
- If it is a staging table, at least one underlying table was forced to full access (USING the FULL ACCESS option) before the staging table was propagated.
- If it is a deferred materialized query table and its corresponding staging table is in incomplete state.
- Some of its parents (or underlying tables for materialized query tables or staging tables) have been non-incrementally checked for integrity.
- The table was in the Set Integrity Pending state before database upgrade. Full processing is required for the first time the table is checked for integrity after database upgrade.
- The table was placed in the Set Integrity Pending state during a point in time roll-forward operation.

User response: Do not specify the INCREMENTAL option. The system will check the entire table for

constraint violations (or if it is a materialized query table, recompute the materialized query table definition query).

sqlcode: -1592

sqlstate: 55019

SQL1594W Integrity of non-incremental data remains unverified by the database manager.

Explanation: The table was previously unchecked. When the option NOT INCREMENTAL is not specified, incremental processing of the table is done. The previously unchecked portion of the table remains unchecked and the corresponding values in the CONST_CHECKED column remains marked as 'U'.

User response: No action is required. To verify the integrity of previously unchecked data and have the system maintain the integrity of the data in the table, issue the SET INTEGRITY statement with the OFF option to place the table in the Set Integrity Pending state and then re-execute the SET INTEGRITY statement with the IMMEDIATE CHECKED and NOT INCREMENTAL options.

sqlcode: +1594

sqlstate: 01636

SQL1596N WITH EMPTY TABLE cannot be specified for *table-name*.

Explanation: The WITH EMPTY TABLE clause cannot be specified for table *table-name* because the table meets one of the following conditions:

- It is a materialized query table or is a staging table.
- It has a dependent refresh immediate materialized query table or has a dependent propagate immediate staging table.
- It is the parent in a referential constraint.
- It has attached data partitions that have not been checked for constraint violations.
- The ALTER TABLE statement was previously executed against this table, specifying the DETACH PARTITION clause, and that asynchronous detach operation is not complete. There are data partitions in this table that are still in the logically detached state (SYSCAT.DATAPARTITIONS.STATUS = 'L').

The WITH EMPTY TABLE clause cannot be specified when altering such a table to ACTIVATE NOT LOGGED INITIALLY.

The statement cannot be processed.

User response: If the table does not have a logically detached partition, issue the ALTER TABLE statement without the WITH EMPTY TABLE clause.

If the table does have a logically detached partition,

perform the following steps:

1. Wait for the asynchronous partition detach task to complete.

You can monitor the progress of the detach task in the following ways:

- Monitor the progress of the detach task by using the LIST UTILITIES command and look for the description containing source table *table-name*.
- Confirm that there are no data partitions in the logically detached state by using the SYSCAT.DATAPARTITIONS catalog view. Any data partitions that are still logically detached will have an 'L' in the column named STATUS.

2. Execute the ALTER TABLE statement again.

sqlcode: -1596

sqlstate: 42928

SQL1597N Configuring the DB2 environment failed because the specified DB2 configuration parameter is discontinued.

Explanation: The LOGRETAIN and USEREXIT database configuration parameters have been discontinued.

Log retention and the use of user exit programs to archive and retrieve the files are still supported. To configure a database to use log retention and user exit programs, you should use the LOGARCHMETH1 database configuration parameter.

User response: To enable log retention, set the LOGARCHMETH1 database configuration parameter to LOGRETAIN.

To enable log retention and identify that a user exit program should be used to archive and retrieve the log files, set the LOGARCHMETH1 database configuration parameter to USEREXIT.

SQL1598N An attempt to connect to the database server failed because of a licensing problem.

Explanation: This message can be returned in the following situations:

Connecting directly to the database server using IBM DB2 Connect Unlimited Edition for System z

If you use IBM DB2 Connect Unlimited Edition for System z to connect directly to the database server, this message is returned when a valid license has not been activated on the DB2 for z/OS subsystem.

Connecting directly to the database server using an edition of IBM DB2 Connect other than IBM DB2 Connect Unlimited Edition for System z

If you use an edition other than IBM DB2 Connect Unlimited Edition for System z to connect directly to a database server, this message is returned when a valid license is not present on the client computer.

Connecting to a database server through a DB2 Connect gateway server

If you connect to a database server through a DB2 Connect gateway server, this message is returned when a valid license is not present on the DB2 Connect gateway server.

User response: Respond to this message according to which scenario applies to your situation:

Connecting directly to the database server using IBM DB2 Connect Unlimited Edition for System z

If you use IBM DB2 Connect Unlimited Edition for System z to connect directly to the database server, activate the license by running the activation program in the activation kit.

Connecting directly to the database server using an edition of IBM DB2 Connect other than IBM DB2 Connect Unlimited Edition for System z

If you use an edition other than IBM DB2 Connect Unlimited Edition for System z to connect directly to a database server, ensure that a DB2 Connect product and valid license key are installed on your client computer.

Connecting to a database server through a DB2 Connect gateway server

If you connect to a database server through a DB2 Connect gateway server, ensure that a valid license key is installed on the gateway server.

sqlcode: -1598

sqlstate: 42968

SQL1599N Creating the public alias failed because the environment is configured for SAP.

Explanation: You can configure the DB2 environment for SAP by setting the system environment variable named DB2_WORKLOAD to the value SAP.

You can reference objects outside the local schema using public aliases, also known as public synonyms. You can create public aliases using the CREATE PUBLIC ALIAS statement.

Public aliases are not supported in a DB2 environment that is configured for SAP. This message is returned when an attempt is made to create a public alias when the system environment variable named DB2_WORKLOAD is set to the value SAP.

There are several ways to refer to objects outside of the

local schema without creating public aliases, including: using full-qualified names, or creating local aliases. In the following examples, the local schema is called "schemaA" and there is a table called "tableX" in a different schema, called "schemaB".

Example 1: Using fully-qualified names

You could refer to tableX using a fully-qualified name:

```
select * from schemaB.tableX
```

Example 2: Creating a local alias

You could refer to tableX by first creating a local alias:

```
create alias AX for table schemaB.tableX
select * from AX
```

User response: Instead of creating public aliases, refer to database objects outside of the local schema by using fully-qualified names, or by creating local aliases.

sqlcode: -1599

sqlstate: 42612

SQL1600N The storage group *storage-group* cannot be dropped because it is the default storage group.

Explanation: DROP STOGROUP cannot be processed because *storage-group-name* is the current default storage group.

The statement cannot be processed.

User response: Before dropping the current default storage group, designate a new default storage group by using the ALTER STOGROUP statement.

sqlcode: -1600

sqlstate: 42893

SQL1601N The Database System Monitor input parameter *parameter* is a null pointer.

Explanation: The user called one of the Database System Monitor APIs and provided a null pointer instead of a required parameter.

The command can not be processed.

User response: The user should reissue the command with a valid parameter value.

SQL1602N An object type supplied in the input data structure (sqlma) is not supported.

Explanation: An object type specified in the variable data area of the input data structure (sqlma) for Database System Monitor Snapshot API is not supported.

The command can not be processed.

User response: Reissue the command using a valid object type.

SQL1603N The parameter *parameter* is not specified in the input data structure (sqlma).

Explanation: A required parameter is not specified in the input data structure (sqlma) of the Database System Monitor Snapshot or Estimate Buffer Size API.

The command cannot be processed.

User response: The user should reissue the command specifying a valid parameter value.

SQL1604N The parameter *parameter* is not null terminated.

Explanation: A null character is expected at the end of the character string parameter.

The command can not be processed.

User response: Add a null character at the end of the character string parameter and reissue the command.

SQL1605W The database *db-alias* is not active.

Explanation: The Database System Monitor Reset API was called for a specific database, but the database was not active.

The command completed successfully but no action was taken.

User response: Verify that the database alias is correct and the database has been started.

SQL1606W The Database System Monitor output buffer is full.

Explanation: The Database System Monitor output buffer area is not large enough to accommodate the returned data. Likely causes are intense system activity when the call was made, or in the case of a Database Monitor API call within a user application, the user allocated a buffer too small to contain the returned data.

The command completed successfully and data collected prior to the buffer overflow is returned in the user's buffer.

User response: The user should reissue the command, or in the case of a Database Monitor API call within a user application, allocate a larger buffer or reduce the amount of information requested.

SQL1607N There is not enough working memory to execute the requested Database Monitor function.

Explanation: The database manager is out of working

memory to process the Database System Monitor command.

The command can not be processed.

User response: Reduce the buffer size in the input parameter and reissue the command.

SQL1608W Two or more database aliases specified as input refer to the same database.

Explanation: A Database System Monitor Snapshot or Estimate Buffer Size API call was issued specifying the same request for two or more database aliases in the sqlma input data structure, and they point to the same database.

Database System Monitor executes successfully, but returns only one copy of the information in the output buffer.

User response: No action is required. However, the user should verify that the database aliases specified on input are correct if information on different databases was expected.

SQL1609N The database alias *db-alias* is a remote database and cannot be monitored.

Explanation: A Database System Monitor API call was issued specifying the database alias of a remote database. Database System Monitor does not support monitoring of remote databases.

The command cannot be processed.

User response: The user should verify that the database alias specified on input is correct, and reissue the command with the correct database alias.

SQL1610N The Database System Monitor input parameter *parameter* is invalid.

Explanation: The user called one of the Database System Monitor APIs and specified an invalid value for the specified parameter.

The command can not be processed.

User response: The user should reissue the command with a valid parameter value.

SQL1611W No data was returned by Database System Monitor.

Explanation: None of the monitoring information requested by the users was available at the time the Database System Monitor API call was issued. This can occur when a requested database or application is inactive, or when a monitoring group such as the Table group is turned OFF, and Table information is requested.

User response: The command completed successfully, but no data is returned to the user.

The user should make sure that the databases or applications for which monitoring is desired are active at the time the Database System Monitor API is called, or that the desired monitoring groups are active.

SQL1612N The specified event monitor target path is invalid.

Explanation: The target path specified in the CREATE EVENT MONITOR statement is not a valid path name. The command could not be processed.

User response: Resubmit the statement with the correct event monitor target path.

sqlcode: -1612

sqlstate: 428A3

SQL1613N The specified event monitor option is invalid.

Explanation: The option specified in the CREATE EVENT MONITOR statement is not valid. Possible causes include:

- The specified MAXFILES, MAXFILESIZE, or BUFFERSIZE is too low.
- MAXFILESIZE is smaller than BUFFERSIZE.
- MAXFILESIZE NONE was specified with MAXFILES not equal to 1.

The command could not be processed.

User response: Resubmit the statement with the corrected event monitor options.

sqlcode: -1613

sqlstate: 428A4

SQL1614N An I/O error occurred when activating an event monitor. Reason code = *reason-code*.

Explanation: An I/O error was detected when an event monitor was activated. <reason-code> is one of the following:

- 1 Encountered an unknown event monitor target type.
- 2 The Event monitor target path was not found.
- 3 Access to event monitor target path was denied.
- 4 Event monitor target path is not the name of a pipe.
- 5 No process has opened the event monitor target pipe for reading.
- 6 Encountered an unexpected I/O error.

User response: Where possible, fix the problem described by the reason code, and resubmit the SET

EVENT MONITOR statement.

sqlcode: -1614

sqlstate: 58030

SQL1615W The specified event monitor or usage list is already in the requested state.

Explanation: An attempt was made to either activate an already active event monitor or usage list, or to deactivate an already inactive event monitor or usage list. The SET EVENT MONITOR or SET USAGE LIST statement was ignored.

In a partitioned database environment or a DB2 pureCluster environment, the usage list on one or more members was already in the requested state. Any usage lists that were not in the requested state when the statement was issued were changed to the requested state.

If the statement was issued for a usage list for a partitioned table or index, the usage list for one or more data partitions was already in the requested state. Any usage lists that were not in the requested state when the statement was issued were changed to the requested state.

User response: No user response is required.

sqlcode: +1615

sqlstate: 01598

SQL1616N The limit on the maximum number of active event monitors has already been reached.

Explanation: A maximum of 128 event monitors can be active simultaneously on each database partition.

In a multiple partition database environment, a maximum of 32 GLOBAL event monitors can be active simultaneously on each database.

One of these limits has already been reached. The specified event monitor cannot be activated.

User response: If possible, deactivate one of the active event monitors and resubmit the SET EVENT MONITOR statement. Use the following query to determine all the active event monitors and whether or not they are global:

```
SELECT EVMONNAME, MONSCOPE FROM
SYSCAT.EVENTMONITORS WHERE
EVENT_MON_STATE(EVMONNAME) = 1
```

sqlcode: -1616

sqlstate: 54030

SQL1617N The specified event monitor has already reached its MAXFILES and MAXFILESIZE limit.

Explanation: The specified event monitor was created with a limit on the amount of data that would be allowed in the event monitor target directory. This limit has already been reached. The specified event monitor cannot be activated.

User response: If possible, delete some of the event monitor data files from the target directory, and resubmit the SET EVENT MONITOR statement.

sqlcode: -1617

sqlstate: 54031

SQL1618N The target path of the specified event monitor is in use by another event monitor.

Explanation: The specified event monitor was created with the same target path as another event monitor. This other event monitor was activated at least once, and has left .evt and/or .ctl files in the target path. These files may be in use by application(s) that are reading the event information they contain.

User response: If the other event monitor is currently active, deactivate it. After ensuring no application(s) are using the files it created in the target path, remove the files. Then resubmit the SET EVENT MONITOR statement.

Alternatively, recreate the required event monitor, specifying a different target path, and resubmit the SET EVENT MONITOR statement.

sqlcode: -1618

sqlstate: 51026

SQL1619N Cannot DROP an active event monitor.

Explanation: The specified event monitor is currently active, and therefore cannot be dropped.

User response: Deactivate the event monitor and resubmit the DROP EVENT MONITOR statement.

sqlcode: -1619

sqlstate: 55034

SQL1620N Unable to flush event monitor. Reason code *rc*.

Explanation: The event monitor could not be flushed. Possible reasons are indicated by the following reason codes:

1. The event monitor is not active.
2. The event monitor is running at a pre-version 6 level of output, for which flush is not available.

3. The flush succeeded on some database partitions, but failed on at least one database partition.

User response: Actions, according to reason code, are provided as follows:

1. Ensure that the event monitor is active and, if necessary, issue a SET EVENT MONITOR *evmonname* STATE 1 statement to activate the event monitor.
2. If the event monitor is running at a pre-version 6 level of output, do not attempt to flush it.
3. If the flush failed on at least one database partition, check the db2diag log file for any probes from routines *sqlm_bds_flush_monitor* or *sqlm_bds_flush_monitor_hdl* which would indicate the partition experiencing the issue with the event monitor being flushed, take any required corrective actions (for example, make sure there is enough monitor heap on that partition, and for a write-to-table event monitor, ensure the table space has enough space on that partition), and then deactivate and reactivate the event monitor by issuing the following statements:

```
SET EVENT MONITOR evmonname STATE 0
```

```
SET EVENT MONITOR evmonname STATE 1
```

sqlcode: -1620

sqlstate: 55034

SQL1621N The transaction in which the specified event monitor or usage list was created has not yet been committed. The event monitor or usage list cannot be activated.

Explanation: An event monitor or usage list cannot be activated until the transaction in which it was created has been committed.

User response: Commit the transaction in which the event monitor or usage list was created and then reissue the SET EVENT MONITOR or SET USAGE LIST statement.

sqlcode: -1621

sqlstate: 55033

SQL1622N The STATE value specified in the SET EVENT MONITOR STATE or the SET USAGE LIST STATE statement is not valid.

Explanation: The STATE value specified in the SET EVENT MONITOR STATE or the SET USAGE LIST STATE statement is not within the range of valid values, or the value is NULL as a result of an indicator variable.

Valid values for the event monitor state are:

0

to deactivate the event monitor

1

to activate the event monitor

Valid values for the usage list state are:

ACTIVE

to activate the usage list

INACTIVE

to deactivate the usage list

RELEASED

to release the memory associated with the usage list

The statement cannot be executed.

User response: Correct the event monitor or usage list state value and/or any indicator variable and reissue the statement.

sqlcode: -1622

sqlstate: 42815

SQL1623N The sqlmonsz or sqlmonss API was called with too many objects specified in the sqlma input structure.

Explanation: The limit imposed on the number of objects that are permitted in the sqlma input structure has been exceeded.

User response: Reduce the number of objects in the sqlma parameter and try the call again.

SQL1624N All databases referenced by the sqlmonsz or sqlmonss API must be located at the same node.

Explanation: The sqlma parameter contained references to databases that reside on different nodes.

User response: Modify the sqlma parameter so that all database objects reference the same node and then try the call again.

SQL1625W The monitor is not able to convert from the code page *source* to the code page *target*. This conversion was attempted for data pertaining to type *type*.

Explanation: Possible types are as follows:

1. statement text
2. dcs application
3. application
4. table
5. locks

6. table space

Conversion of data from the source code page to the target code page is not supported. This condition can occur under the following conditions:

1. source and target code page combination is not supported by the database manager.
2. source and target code page combination is not supported by the operating system character conversion utility on the server node.

This situation can occur when the monitor tries to convert data pertaining to a database whose code page is incompatible to that of the monitor application.

User response: Check your operating system documentation for a list of supported conversions and ensure that the appropriate ones are installed and accessible to the database manager.

If possible ensure that the database being monitored and the monitoring application are in the same codepage.

SQL1626W Overflow occurred while performing conversion from codepage *source* to codepage *target*. The size of the target area was *max-len*, the data pertained to type *type*, and the first eight characters are *data*.

Explanation: Possible types are as follows:

1. statement text
2. dcs application
3. application
4. table
5. locks
6. table space

The monitor is unable to convert the data due to space constraints. The data is retained in its original form.

User response: If possible ensure that the database being monitored and the monitoring application are in the same codepage.

SQL1627W A snapshot api request was made at the self-describing datastream level, but the server was only able to return a snapshot of the fixed size structure format.

Explanation: Although the application issuing the snapshot request made it at the SQLM_DBMON_VERSION6 or later level, the server returning the snapshot returned a downlevel view of the data.

User response: In the self describing data format for snapshot (DB2 version 6 and later), collected

information, including the server level, is returned as part of the snapshot datastream. In the pre-version 6 levels of DB2, the snapshot collected information is returned in an `sqlm_collected` structure. You must use the `sqlm_collected` structure, and the old data stream processing method to parse this snapshot datastream.

SQL1628W A remote get switches operation returned partial results because the output buffer is full. To retrieve the full results, use a minimum buffer size of size bytes.

Explanation: The output buffer provided was not large enough to return all the switch data available. The monitor returned as much data as possible using the given output buffer.

User response: Allocate a larger data buffer and re-issue the switch request.

SQL1629W A remote snapshot operation failed on node or nodes *node-list*, with reason code or codes *reason-list*.

Explanation: Some type of failure occurred during an operation on a remote node for reason <reason-code>, which is one of the following:

- 1 FCM was unable to communicate with the target node, due to a node failure or communications error.
- 2 The snapshot operation failed to complete on the target node. Please see the administration notification log for the specific `sqlca`.

User response: If the cause of the error was a node failure, or communication error, you will need to resolve the communication error, or restart the node that failed to correct the error.

If the error was due to a snapshot operation failure on a remote node, see the administration notification log for the `sqlca` from the failed operation, and refer to the instructions for that code to correct the problem.

SQL1630N The specified event monitor has already reached its PCTDEACTIVATE limit.

Explanation: The specified Write to Table event monitor was created with a PCTDEACTIVATE limit, specifying how full a DMS table space must be before the event monitor automatically deactivates, and this limit has already been reached. The specified event monitor cannot be activated.

User response: Reduce the space used in the table space, and resubmit the SET EVENT MONITOR statement. Alternatively, drop the event monitor and recreate it with a higher PCTDEACTIVATE limit value.

sqlcode: -1630

sqlstate: 54063

SQL1631N Event monitor *event-monitor-name* of type *event-monitor-type* is already active. Event monitor was not activated.

Explanation: Only one event monitor of type ACTIVITIES, STATISTICS or THRESHOLD VIOLATIONS may be active at any one time. Event monitor activation failed because an event monitor of the same type is already active.

User response: Deactivate event monitor *event-monitor-name* before attempting to activate this event monitor.

sqlcode: -1631

sqlstate: 5U024

SQL1632W The collect and reset statistics request was ignored because another collect and reset statistics request is already in progress.

Explanation: The collect and reset statistics request was ignored because a previous collect and reset statistics request is already in progress. Only one collect and reset statistics request may be processed at one time on this database.

User response: No action required.

sqlcode: +1632

sqlstate: 01H53

SQL1633W The activity identified by application handle *application-handle*, unit of work ID *unit-of-work-id*, and activity ID *activity-id* could not be captured because there is no active activity event monitor.

Explanation: An attempt was made to capture an activity identified by an application handle, a unit of work identifier, and an activity identifier. This requires that an activity event monitor be created and its state set to active. There currently is no activity event monitor in the active state.

User response: If there already is an activity event monitor but it is not in active state, set its state to active. If there are no activity event monitors in this database, create one, set its state to active. Reinvoke this procedure.

sqlcode: +1633

sqlstate: 01H53

SQL1634N Statistics could not be collected because there is no active statistics event monitor.

Explanation: An attempt was made to collect workload management statistics. This requires that a statistics event monitor be created and its state set to active. There currently is no statistics event monitor in the active state.

User response: If there already is a statistics event monitor but it is not in active state, set its state to active. If there are no statistics event monitors in this database, create one, set its state to active. Reinvoke this procedure.

sqlcode: -1634

sqlstate: 51042

SQL1635N The size of the snapshot is *snapshot-size* bytes, which exceeds the maximum allowable size of *max-size* bytes.

Explanation: The snapshot failed because the requested snapshot size is too large to fit into the snapshot buffer.

User response: Reduce the size of the snapshot and rerun the GET SNAPSHOT command.

If this is a global snapshot spanning multiple database partitions run the GET SNAPSHOT command separately on each database partition.

SQL1636N The event monitor encountered errors during activation. Reason code *reason-code*.

Explanation: During the activation of the event monitor, errors were encountered as indicated by the following reason code:

1

The event monitor was successfully activated. However this is a DB2 pureCluster environment and an error has occurred leading to limited or no restart capability for this global or write-to-table event monitor. If the monitoring member is no longer able to run the event monitor, the system may not be able to restart it on another member.

2

The event monitor failed to activate on the current member. However this is a DB2 pureCluster environment and this global or write-to-table event monitor may have been successfully activated on another member.

User response: The action corresponding to the reason code is:

1

Examine the administration notification log and the db2diag.log for details. Correct the problem affecting the member and deactivate and reactivate the event monitor to ensure full restart capability is enabled.

2

Examine the administration notification log and the db2diag.log for details. Correct the problem affecting the member. Check to see if the event monitor is active, deactivate the event monitor if required and reactivate the event monitor to ensure full restart capability is enabled.

sqlcode: -1636

sqlstate: 560CS

SQL1637N The statement failed because a clause was specified that is not supported with transparent DDL. Specified clause: *clause*.

Explanation: You can create, alter, and drop remote tables in a federated environment using familiar SQL statements such as CREATE TABLE, ALTER TABLE, and DROP TABLE by using transparent DDL. The ability to work with both local and remote tables using the same, familiar SQL statements simplifies the administration of federated database environments. You can enable using transparent DDL with a remote table by creating the table using the CREATE TABLE statement with the OPTIONS clause.

This message is returned when the CREATE TABLE statement or the ALTER TABLE statement is called, specifying a clause that is not supported with transparent DDL.

User response: Execute the statement again, without specifying the unsupported clause.

sqlcode: -1637

sqlstate: 428I2

SQL1638N Redirecting storage group paths is not possible.

Explanation: A process attempted to modify storage group paths using the SET STOGROUP PATHS command or the db2SetStogroupPaths API at a time when this is not possible. For example, this message can be returned when an attempt is made to redirect a storage group path during a table space restore. Storage group paths can only be redirected during a redirected database restore.

User response: Possible actions include: To modify storage group paths of an active database, use the ALTER STOGROUP statement. To perform a redirected restore, issue a RESTORE DATABASE command using

the REDIRECT option. During the redirected restore it is possible to use the SET STOGROUP PATHS command or the db2SetStogroupPaths API to redirect storage group paths.

sqlcode: -1638

sqlstate: 5U057

SQL1639N The database server was unable to perform authentication because security-related database manager files on the server do not have the required operating system permissions.

Explanation: The DB2 database system requires that your instance and database directories, and the files in those directories, have a minimum level of operating system permissions. When the instance and database directories are created by the DB2 database manager the permissions are accurate, and changing those permissions could cause DB2 database manager functions to fail. The complexity of DB2 file permissions is increased in the case of non-root installed instances and operating system-based authentication.

This message is returned when security-related DB2 database manager executable files do not have necessary permissions for the database manager to perform remote connection authentication-related tasks.

There are several reasons why these security-related files might not have the necessary permissions, including the following reasons:

- The DB2 instance is a non-root installed instance and operating system-based authentication has not been enabled using the db2rfe command
- Operating system permissions of DB2 database manager files were accidentally changed

User response: Respond to this message in one of the following ways:

- If the instance is a non-root installed instance, enable operating system-based authentication using the db2rfe command.
- Reset all of the operating system permissions for the DB2 database manager binary files for this instance by running the following command as a superuser:
db2iupdt -k <instance-name>

where <instance-name> is the name of the affected instance.

Note that both the db2rfe command and the db2iupdt command require that the database manager instance be stopped and restarted.

sqlcode: -1639

sqlstate: 08001

SQL1640N A usage list cannot be created for the object *object-name*.

Explanation: Usage lists can be created only for regular tables and indexes. For more information about the types of objects for which usage lists can be created, refer to the Related topics section.

User response: Use the name of a valid table or index object.

sqlcode: -1640

sqlstate: 42809

SQL1641N The db2start command failed because one or more DB2 database manager program files was prevented from executing with root privileges by file system mount settings.

Explanation: With a root-installed instance in UNIX and Linux environments, several DB2 database manager executable programs are what is known as "set user ID upon execution" (setuid) programs. A setuid program executes with the privileges of the owner of the program, instead of the privileges of the user than ran the program. For example, DB2 database manager programs such as the db2start program are owned by root, and therefore executes with root privileges regardless of what the privileges are of the user who runs the db2start command.

The ability of programs to run with setuid privileges on a mounted file system is configured using the nosuid option when the file system is mounted. Mounting a file system with the nosuid option prevents programs from running with setuid privileges.

This message is returned in UNIX and Linux environments when DB2 database manager programs that are needed to start a database instance were not able to execute as root because the file system on which the the database manager programs are located was mounted with the nosuid option.

User response:

1. Remount the file system on which the DB2 product files, including the sqllib directory and the db2start program, are located without the nosuid option.
2. Re-run the db2start command.

SQL1642N The database manager failed to connect to an internet socket on a remote computer because the connection request was refused by the remote computer.

Explanation: To interact with a remote database across a network, the DB2 database manager must use a communication protocol, such as TCP/IP, and use operating system interfaces, such as an internet socket, to connect to database-related operating system services

on the computer on which the remote database is located.

This message is returned when the DB2 database manager attempts to connect to a remote computer using the TCP/IP communication protocol and receives the error code ECONNREFUSED or WSAECONNREFUSED from the TCP/IP function called CONNECT. Usually, the connection is refused because the database-related operating system service to which the database manager is attempting to connect on the remote computer is inactive.

There are multiple scenarios that can lead to this error being returned, including the following scenarios:

- The database manager on the remote computer is stopped
- There is a problem with the way the remote database is cataloged
- There is a problem with the way the remote database server is configured
- The DB2COMM registry variable at the remote database server is not set to the communication protocol that is being used by the client
- Firewall software on the remote computer is blocking the database manager connection attempt
- There are more TCP/IP connection requests than the remote computer can handle

User response: Respond to this error by systematically eliminating the possible causes:

1. Ensure that the database manager on the remote computer has been started successfully.
2. Ensure that the database is cataloged correctly.
3. Ensure that the entries in the database manager configuration file for the remote database are valid and consistent.
4. Ensure that the DB2COMM environment variable at the remote database server is set to the communication protocol that is being used by the client.
5. Ensure that firewall software is not blocking the TCP/IP connection to the remote computer.
6. Ensure the number of connection requests being sent to the remote computer by all applications is less than the number of request that can be handled by the computer.

If you have eliminated the possible causes listed here, collect DB2 and system diagnostic information using the db2support command and then contact IBM software support.

SQL1643C The database manager failed to allocate shared memory because the database manager instance memory limit has been reached.

Explanation: The maximum amount of memory that

can be allocated for each database partition is controlled by the instance_memory database manager parameter. DB2 memory consumption varies depending on workload and configuration. In addition to this, self-tuning of database_memory becomes a factor if it is enabled. There are many factors that contribute to the calculation of instance_memory and the affect that parameter has on the instance memory limit, including the following factors:

- You can specify the maximum amount of memory that can be allocated for a database partition using the instance_memory database manager parameter.
- Setting the instance_memory database manager parameter to AUTOMATIC allows the database manager instance memory to grow as needed, up to a limit calculated based on physical RAM on the computer and on the maximum allowed by the DB2 database product license.

This message is returned when the database manager is unable to allocate shared memory during activities such as activating a database or rolling a database forward, because the instance memory limit has been reached.

User response:

1. Determine the total instance memory consumption by a DB2 instance for a specific database partition, or for all database partitions using the ADMIN_GET_DBP_MEM_USAGE table function or the db2pd command with the -dbptnmem parameter.
2. Increase the value to which the instance_memory database manager parameter is set or set instance_memory to AUTOMATIC.
3. If this error continues to happen after you have set instance_memory as large as possible, or have set instance_memory to AUTOMATIC, collect diagnostic information using the db2support utility and contact IBM software support.

sqlcode: -1643

sqlstate: 57019

SQL1644N The database manager failed to send data to an internet socket on a remote computer because the connection request was reset by the remote computer.

Explanation: To interact with a remote database across a network, the DB2 database manager must use a communication protocol, such as TCP/IP, and use operating system interfaces, such as an internet socket, to connect to database-related operating system services on the computer on which the remote database is located.

This message is returned when the DB2 database manager attempts to send data to a remote computer

SQL1645N

using the TCP/IP communication protocol and receives the error code ECONNRESET or WSAECONNRESET from the TCP/IP function called RECV.

There are multiple scenarios that can lead to this error being returned, including the following scenarios:

- Client-side connection pooling is enabled and a database application has not been retrying after database connection failures.
- A database agent was forced off of the remote computer.
- A database agent on the remote computer was terminated.
- A DB2 database-related operating system thread on the remote computer has timed out.
- The connection was closed by the remote gateway or server at the TCP/IP level.

User response: Systematically investigate and resolve the possible causes:

Client-side connection pool problems

If client-side connection pooling is enabled, ensure that the database application retries database connections after receiving database connection failures.

Database agent forced off

1. Investigate whether any events might have forced a database agent off of the remote computer, such as an administrator forcing all users and agents off the remote computer to perform maintenance.
2. If database agents have been forced off the remote computer, work with a database or system administrator to bring the database server back online and ready to process requests, and then retry the unit of work.

Database agent terminated

1. Investigate whether any failures on the remote computer might have terminated a database agent. For example, the termination of a key database manager process might cause the termination of a database agent.
2. If failures on the remote computer have terminated a key database manager process, work with a database or system administrator to bring the database server back online and ready to process requests, and then retry the unit of work.

Thread timed out

1. Review diagnostic logs on the remote computer for error messages that indicate an operating system thread timed out.
2. If DB2 database-related operating system threads ran longer than the idle thread timeout (IDTHTOIN) operating system

parameter, take one or more of the following corrective actions:

- Increase the value of the IDTHTOIN parameter.
- If connection pooling is enabled at the gateway, disable that connection pooling.
- Ensure that the database application is not holding resources open longer than necessary. For example, ensure the database application closes with-hold cursors after the cursors are no longer needed.

Connection closed by the remote gateway or server

Resolve any problems external to the DB2 database product might have caused a TCP/IP connection to be closed on the remote gateway or server. Some examples of problems that could cause the connection to be closed include the following problems:

- Firewall software errors or failure
- Power failure
- Network failure

If you have eliminated the possible causes listed here, collect DB2 and system diagnostic information using the db2support command and then contact IBM software support.

sqlcode: -1644

sqlstate: 08001

SQL1645N The database manager failed to connect to or send data to an internet socket on a remote computer because the connection was terminated by the remote computer.

Explanation: To interact with a remote database across a network, the DB2 database manager must use a communication protocol, such as TCP/IP, and use operating system interfaces, such as an internet socket, to connect to database-related operating system services on the computer on which the remote database is located.

There are multiple scenarios that can lead to this error being returned, including the following scenarios:

- A database agent could not be started at the remote computer because of a memory allocation failure.
- A database agent was forced off of the remote computer.
- A database agent on the remote computer was terminated.
- The connection was closed by the remote gateway or server at the TCP/IP level.

User response: Systematically investigate and resolve the possible causes:

Failure to start a new database agent

1. Investigate diagnostic logs at the remote computer to determine whether any memory limits have been exceeded and memory allocation failures happened as a result.
2. If any memory limits have been reached at the remote computer, or if there were memory allocation failures at the remote computer, work with a database or system administrator to resolve the cause of the memory allocation problems, and then retry the unit of work.

Database agent forced off

1. Investigate whether any events might have forced a database agent off of the remote computer, such as an administrator forcing all users and agents off the remote computer to perform maintenance.
2. If database agents have been forced off the remote computer, work with you database or system administrator to bring the database server back online and ready to process requests, and then retry the unit of work.

Database agent terminated

1. Investigate whether any failures on the remote computer might have terminated a database agent. For example, the termination of a key database manager process might cause the termination of a database agent.
2. If failures on the remote computer have terminated a key database manager process, work with you database or system administrator to bring the database server back online and ready to process requests, and then retry the unit of work.

Connection closed by the remote gateway or server

Resolve any problems external to the DB2 database product might have caused a TCP/IP connection to be closed on the remote gateway or server. Some examples of problems that could cause the connection to be closed include the following problems:

- Firewall software errors or failure
- Power failure
- Network failure

If you have eliminated the possible causes listed here, collect DB2 and system diagnostic information using the db2support command and then contact IBM software support.

sqlcode: -1645

sqlstate: 08001

SQL1646N A routine failed because the fenced user ID cannot access required files in the sqllib directory or other instance or database directories.

Explanation: The DB2 database manager runs user defined functions and stored procedures outside of the DB2 database address space by running those routines as the DB2 fenced user. The default fenced user ID is "db2fenc1" and the default group is "db2fadm1".

The fenced user ID needs to be able to access DB2 database-related files, such as executable and library files, in the sqllib directory and other instance and database directories. When the instance and database directories are created by the DB2 database manager, the file and directory operating system permissions are set correctly and should not be changed.

This message can be returned when you are working with fenced stored procedures or routines directly, or when a DB2 utility, such as the health monitor, runs as a fenced mode process.

The most common cause of this error is that the operating system file permissions for DB2 database-related files or directories were accidentally changed after the DB2 database manager created the instance and database directories.

User response: Respond to this error by performing the following troubleshooting steps:

- If possible, determine which file or directory the DB2 database manager or the db2fmp process itself was unable to access by reviewing available database diagnostic information (such as the db2diag log files) or operating system diagnostic information.
- Compare the operating system permissions on DB2 database-related files and directories, including the sqllib directory and the db2fmp executable itself, with the documented default permissions that the DB2 database manager would have set when the instance and database directories were initially created.

sqlcode: -1646

sqlstate: 58004

SQL1648N The SQL statement or command/utility cannot be processed because of the state of member *member-id* in a DB2 pureCluster environment.

Explanation: The state of the member prevents the SQL statement or command / utility from being processed. This could be a result of:

- The database manager being stopped or started on a member.
- Member crash recovery is being performed for a failed member.

User response: Try the request again. It may be necessary to contact the system administrator for assistance since the most common reasons for this error is that a member is being stopped or started. If the error continues, contact your technical service representative.

sqlcode: -1648

sqlstate: 57061

SQL1649W Deactivate database is successful, however, the database remains available in suspended I/O write operations mode.

Explanation: The database cannot be shutdown while it is in suspended I/O write operations mode. The database will be shut down when I/O write operations are resumed.

User response: No action required. Issue a 'SET WRITE RESUME' command to resume I/O write operations and deactivate the database completely.

SQL1650N The function invoked is no longer supported.

Explanation: The user has attempted to call an API that is no longer supported in this version of the database manager.

User response: The function required may be supported by a different API call. See the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) to determine if the function is supported through a different API call.

If your Windows application calls the sqledgne API or the db2DbDirGetNextEntry API with a pre-V9 version number, it must be updated to call the db2DbDirGetNextEntry API with the current, i.e. V9, version number.

SQL1651N The request cannot be executed because the DB2 server version does not support this functionality.

Explanation: Some new functionality is not supported against older DB2 server versions. Another possible cause of this error could be the request referenced objects with qualifiers of length that exceeds the support of the server version.

User response: Execute the request against a DB2 server where the latest DB2 server version has been installed, or upgrade the server to the latest DB2 server version.

SQL1652N File I/O error occurred.

Explanation: Error occurred either opening, reading, writing, or closing a file.

User response: Check the db2diag log file for details. Also, check for disk full conditions, file permissions, and operating system errors.

SQL1653N An invalid profile path was specified.

Explanation: A full path to a file where server information should be generated must be specified.

User response: Ensure that the profile path specified is correct and not null.

SQL1654N An instance path error was encountered.

Explanation: The instance path could not be returned.

User response: Check that the DB2INSTANCE path was specified correctly. Check that the complete path length specified is not approaching the maximum supported by the operating system.

SQL1655C The operation could not be completed due to an error accessing data on disk.

Explanation: The failure to complete the operation is due to a problem in accessing data on a disk. The SQL statement has been rolled back or the operation has been aborted. The database remains accessible.

User response: The application can retry the operation, although it may continue to fail. If the operation continues to fail, it may be necessary to contact the DB2 system administrator to investigate further.

Check the administration notification log for details that may help to diagnose the problem. Investigate the errors and determine the cause, possibly involving IBM Software Support.

If DB2 data is determined to be in error, then restore and rollforward the table space or database.

If hardware or other software is determined to be the cause, repair the systems involved (possibly requiring a DB2 outage).

sqlcode: -1655

sqlstate: 58030

SQL1656C An error occurred while processing data. The operation could not be completed, but the database remains accessible. Contact IBM Software Support.

Explanation: The failure to complete the operation is due to a detected DB2 page inconsistency. The SQL statement has failed or the operation has been aborted. The database remains accessible.

User response: Contact IBM Software Support for instructions on what diagnostic data to collect to assist in resolving this issue. The application can retry the operation, although it may continue to fail.

sqlcode: -1656

sqlstate: 58004

SQL1657W The database was successfully deactivated. Because the database is an HADR primary database and because the database was in disconnected peer state when it was deactivated, crash recovery will automatically be performed on the database when it is restarted.

Explanation: In general, you can deactivate an HADR primary database using one of the following methods:

- DEACTIVATE DATABASE command or the `sqlc_deactivate` API
- `db2stop` command with the FORCE option

If an HADR primary database is deactivated while it is in disconnected peer state, the database will be deactivated in an inconsistent state, and crash recovery will automatically be performed when the database is restarted.

Attempts to perform offline backup operations on this database will fail until the database is successfully restarted.

User response: No response is required.

When the database is restarted, the database manager will automatically perform crash recovery for this database.

SQL1658N The quiesce operation failed for the object named *name*. Reason code: *reason-code*.

Explanation: Before performing maintenance activities, you can force users off of a database manager instance or database by quiescing the object.

The specific reason this message was returned is indicated by the *reason-code*:

1

An attempt was made to quiesce a database that is in WRITE SUSPEND state.

2

An attempt was made to quiesce a database manager instance in which at least one databases is in WRITE SUSPEND state.

User response: Respond to this error according to the reason code:

Reason code 1

To quiesce a database that is in WRITE SUSPEND state perform the following steps:

1. Resume writes on the database using the SET WRITE command with the RESUME option or using the `db2SetWriteForDB` API with the `DB2_RESUME_WRITE` option.
2. Re-issue the quiesce operation.

Reason code 2

To quiesce an instance in which there are one or more databases in WRITE SUSPEND state perform the following steps:

1. Determine which databases are in WRITE SUSPEND state by referring to the `suspend_io` configuration parameter for each database in the instance.
2. For each database that is in WRITE SUSPEND state, resume writes on the database using the SET WRITE command with the RESUME option or using the `db2SetWriteForDB` API with the `DB2_RESUME_WRITE` option.
3. Re-issue the quiesce operation.

SQL1659N The database manager started with fewer Host Channel Adapters (HCAs) than configured for the cluster caching facilities (CFs).

Explanation: The database manager encountered a non-critical error when starting. Communication could not be established with one or more HCAs on a CF, however each cluster caching facility (CF) is connected by at least one HCA. With fewer HCAs the CF has less throughput capacity. There is also a greater risk of downtime due to the reduced redundancy.

User response: Review cluster alerts by running `'db2cluster -cm -list -alert'` to see which HCAs are not responding. Follow the corrective actions given by the alerts to rectify any reported problem.

SQL1660N The Generator at the server, which is used by Discovery to gather server information, has failed.

Explanation: A server system failure has occurred.

User response: Report the failure to your DB2 server administrator. More details of the failure can be found in the server's `db2diag` log file.

SQL1661N The query failed because the information you are trying to retrieve could not be found on the HADR standby database.

Explanation: The statement or command is trying to retrieve an XML value that is not available on the

SQL1662N • SQL1671N

HADR standby database. This might be because that value has not yet been replayed on the standby.

User response: Retry your query on the read-enabled HADR standby later, or submit the query against the HADR primary database.

sqlcode: -1661

sqlstate: 58004

SQL1662N Log archive compression failed while archiving or retrieving log file *log-file* for *log-archive-method* for database *database* on member *member-number*. Reason code: *reason-code*.

Explanation: While archive log file compression is enabled, an error occurred when archiving or retrieving an archived log file.

User response: Check the db2diag.log file for more details.

Contact IBM Support.

SQL1663W Log archive compression is not fully enabled for *log-archive-method*.

Explanation: Log archive compression is not fully enabled for *log-archive-method* until *log-archive-method* is set to DISK, TSM, or VENDOR.

User response: You can change *log-archive-method* to DISK, TSM, or VENDOR with the UPDATE DATABASE CONFIGURATION command.

SQL1665N The command failed because log archive compression is not supported when raw devices are used for database logging.

Explanation: Log archive compression is not supported when log files, yet to be archived, are on raw devices. You receive this error when:

- A command to enable log archive compression was issued and the LOGPATH or NEWLOGPATH database configuration parameters already point to raw devices.
- A command to set the NEWLOGPATH database configuration parameter to a raw device was issued and log archive compression is already active.
- A command to enable log archive compression and set the NEWLOGPATH database configuration parameter to a raw device was issued.

User response: If you want to use log archive compression, ensure that both LOGPATH and NEWLOGPATH do not point to raw devices.

If you must set NEWLOGPATH to point to a raw device, first disable log archive compression, then retry setting the NEWLOGPATH configuration parameter.

SQL1670N The discover type specified in the DISCOVER database manager configuration parameter indicates discovery is disabled.

Explanation: DISCOVER = DISABLE is configured in the database manager configuration file.

User response: If DISCOVER functionality is required, change the discover type to KNOWN or SEARCH.

SQL1671N The search discovery request failed. Check the administration notification log for further details.

Explanation: The search discovery request failed for one of the following reasons:

1. Initialization failed (sqlCommonInitializationForAPIs)
2. Failed to retrieve the client instance path (sqlinstancepath)
3. Failed to open the output file (sqlfopen)
4. Failed to write to output file (sqlfprt)
5. Failed to get memory (sqlgmbk)
6. Failed to retrieve database manager configuration (sqlfcsys)
7. NetBIOS call failed
8. DB2 internal system function failed (sqlgpidd, sqlogmt)

Check the db2diag log file for details.

User response:

1. If initialization fails, try re-booting the machine or re-installing the product.
2. If there was an instance path failure, check the DB2INSTANCE value to ensure it is correctly set.
3. If the open or write to file failed, check that you have access to open and write a file to the <sqllib path>\<instance>\tmp directory on Intel machines, or the <instance path>/sqllib/tmp directory on UNIX machines.
4. If get memory failed, check the available memory on your machine.
5. If retrieving the DBM configuration failed, try re-booting the machine or re-installing the product.
6. If a NetBIOS call failed:
 - If Add Name failed with a return code of 13, check that the nname configured in the DBM configuration was not used to configure another IBM Data Server Client/DB2 server on the network.
 - Check that NetBIOS was installed and configured properly, and is functioning correctly.
 - Check your network for problems.

7. If a DB2 internal system function failed, check that the operating system functions on your machine are functioning correctly.

DB2 Service can provide details about the error codes returned by these functions and written to the db2diag log file.

SQL1673N The address list specified as input to the discover interface is invalid.

Explanation: The application program used an invalid input address list pointer. The address list points to nothing.

User response: Ensure that a valid input address list pointer is specified in the application program, and that it is not null.

SQL1674N The server address specified as input to the discover interface is invalid.

Explanation: The application program used an invalid input server address pointer. The server address points to nothing.

User response: Ensure that a valid input server address is specified in the application program, and that it is not null.

SQL1675N Discovery is only allowed against DB2 administration servers. The communications information provided does not access an administration server.

Explanation: A KNOWN discovery request was issued against a DB2 server that is not a DB2 administration server. The communications information specified is not correct.

User response: Verify that DB2ADMINSERVER is set on the DB2 server instance you are accessing. This indicates that the server instance is a DB2 administration server. Retry the KNOWN discovery request with the correct communications information.

SQL1677N DB2START or DB2STOP processing failed due to a DB2 cluster services error.

Explanation: DB2 cluster services failed to perform the required operation.

User response: Troubleshoot the DB2 cluster services status using the db2cluster command.

SQL1678W DB2START of CF with identifier *identifier* was not possible on host *host-name* because the instance was previously stopped using the "db2stop INSTANCE ON" command. CF duplexing is not available on this instance.

Explanation: While multiple cluster caching facilities (CFs) are configured in this DB2 instance, the CF has been temporarily disabled by the user from participation in the instance through the use of "db2stop INSTANCE ON" command.

Typical reasons for this are to allow for rolling upgrades of the CF or, to allow the instance to start without CF duplexing. If the CF server failed to start with an error this allows the instance to be started up while the source of the error is resolved by the user.

User response: Once the CF becomes available, issue a "db2start INSTANCE ON" command followed by "db2start CF" command to start the CF and to make it available for the instance. CF duplexing will automatically be re-established by the database manager once the CF is started.

SQL1679N DB2START was unable to start a CF with identifier *identifier* on host *host-name*. Reason code *reason-code*.

Explanation: The reason code indicates why this error was returned:

1

This message can be returned with reason code 1 for multiple reasons, including the following reasons:

- The host on which the cluster caching facility (CF) is located is unavailable.
- A TCP/IP communication error occurred while trying to establish a connection with the host on which the CF is located.
- DB2 cluster services was unable to allocate memory for the CF because the CF memory database manager configuration parameter CF_MEM_SZ is set to a value that is larger than the amount of memory that is available.

User response: Respond to this message according to the reason code:

1

1. Perform the following troubleshooting activities:
 - Ensure that the host has the proper authorization defined in the .rhosts or the host.equiv files to execute remote commands.

- Ensure that the application is not using more than the maximum allowed file descriptors at the same time: $500 + (1995 - 2 * \text{total_number_of_nodes})$
 - Ensure all the Enterprise Server Edition environment variables are defined in the profile file.
 - Ensure the profile file is written in valid Korn Shell script format.
 - Ensure that all the host names defined in the db2nodes.cfg file in the sqllib directory are defined on the network and are running.
 - Ensure that the DB2FCMCOMM registry variable specifies the correct IP format to use (TCPIP4 or TCPIP6).
 - Ensure that the CF_MEM_SZ database manager configuration parameter is set to a valid value.
2. Then, rerun the DB2START command.

SQL1680W An error occurred during DB2START processing of DB2 member with identifier *identifier* on host *host-name*. Reason code *reason-code*. The database manager will asynchronously attempt to start the member in recovery mode on another available host.

Explanation: An error was encountered while attempting to start the member on the host. The DB2START command has failed as a result of this error.

The reason code indicates why this error was returned:

1

Host is not reachable because the host is unavailable or a TCP/IP communication error occurred while trying to establish a connection with the host.

User response: Respond to this message according to the reason code:

1

For reason code 1, perform the following troubleshooting activities:

1. Ensure that the host has the proper authorization defined in the .rhosts or the host.equiv files
2. Ensure that the application is not using more than $(500 + (1995 - 2 * \text{total_number_of_nodes}))$ file descriptors at the same time.
3. Ensure all the Enterprise Server Edition environment variables are defined in the profile file.
4. Ensure the profile file is written in the Korn Shell script format.

5. Ensure that all the host name defined in the db2nodes.cfg file in the sqllib directory are defined on the network and are running.
6. Ensure that the DB2FCMCOMM registry variable is set correctly.
7. Rerun the DB2START command.

SQL1681W DB2START of DB2 member with identifier *identifier* was not possible on host *host-name* as the instance was previously stopped using the "db2stop INSTANCE ON" command. The database manager will asynchronously attempt to start the DB2 member in light mode on another available host. While in recovery mode, the DB2 member will not accept any client connections.

Explanation: The instance on the host was previously stopped by "db2stop INSTANCE ON" command. One of the reasons for doing so is to bring down the host for maintenance or software rolling upgrade. The member could not be started on this host. However, the database manager will attempt to start it in light mode on another available host.

User response: The user can issue DB2 LIST command to find out if and on which host the member has been started. Once the software upgrade or maintenance work has been completed on the host, the user should issue "db2start INSTANCE ON" command to start up the instance on the host and then reissue "db2start MEMBER" command to relocate the member to this host.

SQL1682W DB2START processing was successful on host *host-name*. Due to a previous DB2START failure of a DB2 member or host failure, the DB2 member has been relocated by the database manager to this host.

Explanation: When the member was previously stopped, it was running in restart light mode. It will continue to run in restart light mode until its home host becomes active and database manager relocates it to its home host.

User response: No user response is required.

SQL1683N An error was encountered during DB2START processing. The database manager failed to restart the DB2 member with identifier *identifier* as a light member on host *host-name*.

Explanation: The member failed to start as a light member on the host either because there was no DB2 idle processes running on the host or the animation of

one of the DB2 idle processes failed.

User response: Investigate the problems on the host.

SQL1684N An error was encountered during DB2START processing. The database manager failed to start a component of the DB2 pureCluster environment.

Explanation: A component of the DB2 pureCluster environment failed to start due to insufficient memory, CPU resources, or a problem with the DB2 cluster file system.

User response: Run the db2cluster command to check the health of the DB2 cluster file system. Also ensure that the hosts in the DB2 pureCluster instance have sufficient memory and CPU resources.

SQL1685N An error was encountered during DB2START processing of DB2 member with identifier *identifier* because the database manager failed to start one or more CFs.

Explanation: The database manager failed to start the cluster caching facilities (CFs), therefore the DB2 member could not be started.

There are multiple reasons for which this message can be returned. For example, this message can be returned because the CF_MEM_SZ memory configuration parameter was set to a value that is larger than the physical memory limit of the system. When this message is returned because CF_MEM_SZ is set too large, there will be messages in the db2diag log files indicating that there are not enough system resources to process requests.

User response: Ensure that the instance is configured with functioning CFs by performing the following steps:

1. Identify problems with any CFs using the following db2cluster command:
db2cluster -cm -list -alert
2. Resolve the identified problems using the db2cluster command with the -clear parameter:
db2cluster -cm -clear -alert

You must have SYSADM, SYSCTL or SYSMAINT authority to run the db2cluster command with these parameters.

If the CF is under maintenance, run the "db2start INSTANCE ON" command after the maintenance has completed.

SQL1686N An error was encountered during DB2START processing on host *host-name* as the database manager failed to activate the host.

Explanation: The database manager tried to start up the instance on the host while the DB2 cluster services failed to make the host active and rejoin the DB2 pureCluster cluster.

User response: Determine why the DB2 cluster services failed to make the host active and rejoin the DB2 cluster.

SQL1687N An error was encountered during DB2STOP processing. The DB2 member with identifier *identifier* is performing restart recovery, or has unresolved in-doubt transactions.

Explanation: The member cannot be stopped when it is still performing restart recovery or has unresolved in-doubt transactions.

User response:

1. Determine the status of this member using the db2instance command with the -list parameter. You can also use the DB2_MEMBER administrative view or the DB2_GET_INSTANCE_INFO table function.
2. Resolve the in-doubt transactions, if they exist.

SQL1688N DB2STOP failed to stop the CF with identifier *identifier*. Reason code *reason*.

Explanation: The reason code indicates why this error was returned:

1

The cluster caching facility (CF) still contains dirty pages or holds locks.

2

The named CF is the only running CF in the instance.

3

The primary CF cannot be stopped until the secondary CF is in PEER state and ready to take over. The secondary CF has not yet completed the transition from the initial CATCHUP state to a PEER state.

4

The instance is in the process of failing over the CF primary role, no CF can be stopped.

User response: Respond to this message according to the reason code:

1

Ensure that no active member is running. The user should also wait for the CF to flush out dirty pages before issuing the "db2stop CF" command again.

2

Perform the following steps:

1. If there are active members, stop each of the members using the "db2stop MEMBER" command.
2. After the members have been stopped, stop the CF with a global call to db2stop.

3

Wait for the secondary CF to transition to a PEER state before re-running this command. Refer to the STATE column in the DB2_CF administrative view for this information.

4

Stop the instance by running a global "db2stop FORCE" command.

SQL1689W DB2STOP processing was successful. However, the DB2 member with identifier *identifier* was running in recovery mode on a host other than its home host *host-name*.

Explanation: The member was successfully stopped, however the host it was running on was not its home host. It was running in light mode on another DB2 member's host. Typically it is not advisable to stop DB2 members that are running in light mode.

User response: No user response is required.

It is recommended that if the member is running in light mode on a host other than its home host, the user performs the necessary actions so that the member is to be relocated by the database manager to its home host before stopping it.

SQL1690N An error occurred during DB2STOP processing of a DB2 member or CF with identifier *identifier* on host *host-name*. Reason code *reason-code*.

Explanation: The reason code indicates why this error was returned:

1

The host is not reachable because the host is unavailable or a TCP/IP communication error occurred while trying to establish a connection with the host.

This message can also be returned when a password has expired.

User response: Respond to this message according to the reason code:

1

Perform the following troubleshooting activities for reason code 1:

- Ensure that the host has the proper authorization defined in the .rhosts or the host.equiv files
- Ensure that the application is not using more than (500 + (1995 - 2* total_number_of_nodes)) file descriptors at the same time.
- Ensure all the Enterprise Server Edition environment variables are defined in the profile file.
- Ensure the profile file is written in the Korn Shell script format.
- Ensure that all the host name defined in the db2nodes.cfg file in the sqllib directory are defined on the network and are running.
- Ensure that the DB2FCMCOMM registry variable is set correctly.

Then, rerun the DB2STOP command.

Review the db2diag log files for more information.

SQL1691N An error was encountered during DB2STOP processing on host *host-name*. Reason code *reason-code*. The database manager failed to bring down the host for maintenance.

Explanation: The reason code indicates why this error was returned:

1

One or more DB2 members or cluster caching facilities (CFs) were still active on the host and could not be stopped.

2

The instance was still active and the CF running on this host is not stoppable.

The instance on the host could not be stopped due to active DB2 members or CFs were running.

User response: Respond to this message according to the reason code:

1

Run "db2stop MEMBER" or "db2stop CF" command to stop the member or CF prior to stop the instance on the host. To force the instance on the host to shut down, run "db2stop INSTANCE ON" command with FORCE option.

2

Ensure all members are stopped and retry "db2stop INSTANCE ON" command

SQL1692N An error was encountered during DB2STOP processing. The database manager failed to stop a component of the DB2 pureCluster environment.

Explanation: A component of the DB2 pureCluster environment failed to respond to the DB2 cluster services and did not shut down.

User response: The processes or interprocess communication (IPC) resources will have to be cleaned up manually.

SQL1693N An error was encountered during DB2STOP processing on host *host-name* as the database manager failed to deactivate the host. The database manager failed to bring down the host for maintenance.

Explanation: The database manager tried to stop the instance on the host while the DB2 cluster services failed to temporarily take the host out of the DB2 pureCluster cluster.

User response: Determine why the DB2 cluster services failed to temporarily take the host out of the DB2 pureCluster cluster

SQL1694N The command option *option* is not valid for a DB2 pureCluster instance.

Explanation: Some options are only supported on certain instance types. The option that was specified is not available with a DB2 pureCluster instance.

User response: Use the supported command options for DB2 pureCluster instance.

sqlcode: -1694

sqlstate: 56038

SQL1695N The command option *option* is not valid for an instance that is not a DB2 pureCluster instance.

Explanation: Some options are only supported on certain instance types. The option that was specified is not available with an instance that is not a DB2 pureCluster instance.

User response: Use the supported command options for instances that are not DB2 pureCluster instances.

sqlcode: -1695

sqlstate: 56038

SQL1700N The reserved schema name *name* was found in the database during database upgrade.

Explanation: The database contains one or more database objects using the schema name *name* which is a reserved schema name in the DB2 copy version to which you want to upgrade the database.

The command cannot be processed.

User response: Ensure that all the database objects that use the reserved schema name are dropped and recreate the objects using a different schema name.

Reverse the database upgrade and make the corrections using the DB2 copy version where the database resided prior to the database upgrade.

Ensure that no reserved schema names are in use before attempting the database upgrade again.

Then, re-issue the UPGRADE DATABASE command from the DB2 copy version to which you want to upgrade the database.

SQL1701N The database cannot be upgraded because the database terminated abnormally.

Explanation: The database terminated abnormally (for example, due to a power failure) before attempting to upgrade the database. You must restart the database before you can upgrade the database successfully.

The command cannot be processed.

User response: You must issue the RESTART DATABASE command using the DB2 copy where the database resided prior to attempting to upgrade the database. Then, re-issue the UPGRADE DATABASE command from the DB2 copy version to which you want to upgrade.

SQL1702W The *protocol* connection managers have started successfully.

User response: No action required.

SQL1703W The db2event directory could not be created during database upgrade.

Explanation: The database was upgraded successfully but the db2event directory could not be created.

This is a warning only.

User response: The db2event directory must be created to use the event monitor. The db2event directory must be created in the database directory where the upgraded database resides. The database directory of the upgraded database can be determined by issuing the LIST DATABASE DIRECTORY command.

SQL1704N

SQL1704N Database upgrade failed. Reason code
reason-code.

Explanation: Database upgrade failed. The reason codes are as follows:

2

database cannot be upgraded because it could be in one of the following states:

- backup pending state
- restore pending state
- roll-forward pending state
- transaction inconsistent state
- HADR has marked the database inconsistent

3

database logs are full.

4

insufficient disk space.

5

cannot update database configuration file.

7

failed to access the database subdirectory or one of the database files.

8

failed to update database container tag.

9

table space access is not allowed.

17

Failure to allocate new page from the system catalog table space.

21

Database upgrade is complete on the catalog partition but not on all the other database partitions. There are database partitions that cannot be upgraded due to system errors, such as node failure or connection failure.

22

Database upgrade failed because the catalog partition cannot be upgraded due to system errors, such as database partition failure or connection failure.

24

Error creating the dbpath/db2event/db2detaildeadlock event monitor directory where dbpath is the file path used to create the database.

User response: Possible solutions based on the reason code are:

2

Reverse the database upgrade and correct the database state by performing any necessary corrective action in the DB2 copy version where the database resided prior to the upgrade. For HADR systems, stop HADR should be issued prior to attempting to upgrade the HADR primary database. Resubmit the UPGRADE DATABASE command from the DB2 copy version to which you want to upgrade the database.

3

Increase the database configuration parameters logfilsiz or logprimary to a larger value. Resubmit the UPGRADE DATABASE command.

4

Ensure that there is sufficient disk space and resubmit the UPGRADE DATABASE command.

5

There was a problem in updating the database configuration file. Ensure that the database configuration file is not being held exclusively by any users and is updatable. Resubmit the UPGRADE DATABASE command. If the problem persists, inform your IBM service representatives.

7

Restore the database from the database backup.

8

Resubmit the UPGRADE DATABASE command. If the problem persists, contact your IBM service representative.

9

Reverse the database upgrade and correct the table space access. Resubmit the UPGRADE DATABASE command from the DB2 copy version to which you want to upgrade the database. Refer to message SQL0290N for the suggested actions to take to correct the table space.

17

If the system catalog table space is an Automatic Storage DMS table space or SMS table space, ensure that there is at least 50% free disk space available for the system catalog table space, then upgrade the database. If the system catalog table space is a DMS table space. Reverse the database upgrade and add more containers to the system catalog table space from the DB2 copy version where the

database resided prior to upgrade. You should allocate 50% free space for database upgrade. Resubmit the UPGRADE DATABASE command from the DB2 copy version to which you want to upgrade the database.

21

Check the administration notification log to determine the database partitions that cannot be upgraded. Correct the situation and resubmit the UPGRADE DATABASE command. As database upgrade only takes place on database partitions that require upgrade, you can submit the UPGRADE DATABASE command from any database partition.

22

Correct the database partition failure situation on the catalog partition. Resubmit the UPGRADE DATABASE command.

24

Remove the dbpath/db2event/db2detaildeadlock event monitor directory where dbpath is the file path used to create the database. Resubmit the UPGRADE DATABASE command.

SQL1705W Unable to update a database directory entry to the current release level.

Explanation: One or more database aliases could not be updated in the database directory for a database which has just been upgraded from a previous release.

User response: Uncatalog database aliases for the upgraded database and re-catalog them using the same information.

SQL1706W At least one non local database was detected in the node directory for this instance during word size instance update.

Explanation: While performing word size instance update, at least one database not created under this instance was encountered. Such databases must have the same word size as this instance for instance update to complete successfully.

User response: Ensure that all databases cataloged at the instance have the same word size.

SQL1707N Unable to update the instance word size.

Explanation: There was an error while attempting to update the word size of the instance. Please contact your IBM service representative.

User response: Contact your IBM service representative.

SQL1708W Database upgrade is completed with the warning-code warning code.

Explanation: Database upgrade is completed with a warning. The warning codes are as follows:

1

One or more database partitions were not upgraded.

User response: Possible solution based on the warning codes:

1

Re-issue the UPGRADE DATABASE command.

SQL1751N The resulting database partition group would not contain any nodes that can be used in a partition map.

Explanation: A database partition group must contain at least one node that can be used in a partition map. If a node is added to a database partition group WITHOUT TABLESPACES, it cannot be included in the partition map because there are no containers for the table spaces defined on the database partition group. If a node is added LIKE another node and the other node does not have containers for all table spaces on the database partition group then neither node can be included in the partition map.

User response: Do not drop all the nodes in the database partition group without adding at least one node. If tablespaces are already defined on the database partition group but there are no tables, ensure that at least one node has containers for all the table spaces.

sqlcode: -1751

sqlstate: 428C0

SQL1752N The table space cannot be created in the database partition group db-partition-group.

Explanation: The database partition group IBMTEMPGROUP can be specified if and only if the table space is a system temporary table space.

User response: For system temporary table spaces, specify database partition group IBMTEMPGROUP. For other table space types, specify a database partition group other than IBMTEMPGROUP.

sqlcode: -1752

sqlstate: 429A1

SQL1753N Database partition *database-partition-number* does not have containers for all the system temporary table spaces defined in the database partition group IBMTEMPGROUP.

Explanation: A database partition must have containers defined for all the system temporary table spaces defined in the database partition group IBMTEMPGROUP for this database before it can be included in a database partition group.

User response: Issue the ALTER TABLESPACE statement to add containers on every database partition for every system temporary table space in the database.

sqlcode: -1753

sqlstate: 57052

SQL1754N The index table space or long table space is not in the same database partition group as the primary table space.

Explanation: All the table spaces specified in the CREATE TABLE statement must belong to the same database partition group.

User response: Make sure all the table spaces specified in the CREATE TABLE statement belong to the same database partition group.

sqlcode: -1754

sqlstate: 42838

SQL1755N Database partition *dbpartnum* does not have containers for all the table spaces defined in the database partition group *dbpartgrpname*.

Explanation: All the table spaces in a database partition group must have containers defined on all the database partitions. Otherwise, that database partition should not be included in a redistribution of a database partition group or in a LIKE DBPARTITIONNUM clause of the ALTER DATABASE PARTITION GROUP statement.

User response: Issue the ALTER TABLESPACE statement to add containers to all the table spaces on this database partition.

SQL1756N More than one clause specifies containers without the ON DBPARTITIONNUMS clause.

Explanation: For the CREATE TABLESPACE, the USING clause without the ON DBPARTITIONNUMS clause can only be specified once.

For the ALTER TABLESPACE, the ADD clause without

the ON DBPARTITIONNUMS clause can only be specified once.

The statement was not processed.

User response: Correct the statement and reissue it.

sqlcode: -1756

sqlstate: 428B1

SQL1757N A USING clause without an ON DATABASE PARTITION clause is missing.

Explanation: In CREATE TABLESPACE statement, every USING clause specifies the ON DATABASE PARTITION clause. However not all the database partitions in the database partition group are included, and therefore not all database partitions in the database partition group have containers.

The statement is not processed.

User response: Ensure that the USING clause without the ON DATABASE PARTITION clause is specified or that each database partition in the database partition group is included once in an ON DATABASE PARTITION clause.

sqlcode: -1757

sqlstate: 428B1

SQL1758W The containers not designated for specific nodes are not used by the table space on any node.

Explanation: The ALTER TABLESPACE and CREATE TABLESPACE statement includes container specification for all the database partition in the database partition group. The specification of the containers that is not followed by an ON DATABASE PARTITION clause is redundant and has been ignored.

The statement has been processed.

User response: If the containers are needed on some of the nodes, issue an ALTER TABLESPACE statement to add the necessary containers.

sqlcode: +1758

sqlstate: 01589

SQL1759W Redistribute database partition group is required to change database partitioning for objects in database partition group *database-partition-group-name* to include some added database partitions or exclude some dropped database partitions.

Explanation: This warning indicates that a change being made using the ALTER DATABASE PARTITION or ALTER TABLESPACE statements has not caused the

partitioning map for the database partition group to be changed. The partitioning map for a database partition group is only changed immediately by these statements if there are no tables defined using any table space defined in the database partition group or the database partition being dropped is not in the partitioning map.

This warning is issued in the following cases:

- One or more database partitions are added using ALTER DATABASE PARTITION ADD DATABASE PARTITION
- One or more database partitions are dropped using ALTER DATABASE PARTITION DROP DATABASE PARTITION
- Containers are added for table space and no further containers are required for a database partition to be used.

For all of these cases, a table is already defined using a table space in the database partition group.

User response: If you want the database partition included or excluded for database partitioning then issue the REDISTRIBUTE DATABASE PARTITION command or API. Another alternative is to drop all tables that use table spaces in the database partition group.

sqlcode: +1759

sqlstate: 01618

SQL1760N The CREATE PROCEDURE or ALTER MODULE statement used to define stored procedure *procedure-name* must have a valid LANGUAGE clause, EXTERNAL clause, and PARAMETER STYLE clause, or include an SQL procedure body.

Explanation: A required clause is missing in the CREATE PROCEDURE or ALTER MODULE statement used to define procedure *procedure-name*. LANGUAGE clause, EXTERNAL clause, and PARAMETER STYLE clause must be specified. An external procedure defined in a module must be completely specified since only SQL procedures allow prototypes to be published.

If defining an SQL procedure, the SQL procedure body must be included unless using the PUBLISH action of ALTER MODULE to define an SQL procedure prototype

User response: Add the missing clause, then try again.

sqlcode: -1760

sqlstate: 42601

SQL1761N The database partition group *db-partition-group* is not defined for the buffer pool *bpname*.

Explanation: The database partition group for the table space has not been defined for the buffer pool. The table space cannot be created or altered to use this combination of database partition group and buffer pool.

The statement cannot be processed.

User response: The possible actions are:

- Specify a buffer pool that has defined the database partition group for the table space.
- Alter the buffer pool to add the database partition group of the table space.
- If CREATE TABLESPACE, specify a database partition group that is defined for the buffer pool.

sqlcode: -1761

sqlstate: 42735

SQL1762N Unable to connect to database because there is not enough space to allocate active log files.

Explanation: There is not enough disk space to allocate active log files. Possible reasons include:

- There is insufficient space available on the device used to store the recovery logs.
- If userexits are enabled, the userexit program may be failing due to an incorrect path, incorrect install directory, sharing violation, or other problem.
- If log archiving is enabled, the log archiving method may not be functioning or the target might be inaccessible.

User response: Based on the cause:

- Ensure that there is sufficient space on the device for the primary logs, as DB2 may require extra space to allocate new logs so that the database will start with at least LOGPRIMARY log files. Do NOT delete recovery logs to free space, even if they appear inactive.
- Ensure the userexit program is operating correctly by manually invoking it. Review the instructions provided in the sample userexit source code for compiling and installing the userexit program. Ensure that the archive destination path exists.
- Ensure that the log archiving method is working correctly. If errors are being encountered then further information can be found in the db2diag.log file.

As a last resort, try reducing the values for LOGPRIMARY and/or LOGFILSIZ database configuration parameters so that a smaller set of active log files are used. This will reduce the requirement for disk space.

SQL1763N

Reissue the connect statement after determining and correcting the problem.

SQL1763N Invalid ALTER TABLESPACE statement for table space *table-space-name* due to reason *reason-code*

Explanation: The clauses specified in the ALTER TABLESPACE statement cannot be used in conjunction with each other.

1

The CONVERT TO LARGE clause must be specified by itself.

2

The BEGIN NEW STRIPE SET container clause cannot be specified with any other container clauses (ADD, DROP, EXTEND, REDUCE or RESIZE).

3

When adding or removing space from the table space:

1. EXTEND and RESIZE can be used in the same statement, provided that the size of each container is increasing.
2. REDUCE and RESIZE can be used in the same statement, provided that the size of each container is decreasing.
3. EXTEND and REDUCE cannot be used in the same statement, unless they are being directed to different database partitions.
4. ADD cannot be used with REDUCE or DROP in the same statement, unless they are being directed to different database partitions.
5. DROP cannot be used with EXTEND or ADD in the same statement, unless they are being directed to different database partitions.

4

A container clause cannot be used in conjunction with the REDUCE option when altering automatic storage managed table spaces.

5

A container clause must be specified when altering nonautomatic storage managed table spaces.

6

Temporary table spaces and system-managed table spaces (SMS) cannot be converted to use automatic storage.

7

There are no storage groups in the database.

8

Database-managed table spaces (DMS) that have DEVICE containers cannot be converted to use automatic storage using the ALTER TABLESPACE statement.

9

The REBALANCE clause must be specified by itself.

10

The REDUCE MAX clause or the REDUCE with a specified size clause can only be used with table spaces having the Reclaimable Storage attribute and managed by automatic storage.

11

Table spaces without the Reclaimable Storage attribute cannot use clauses to reduce or lower the high water mark.

12

The REDUCE option with the MAX, numeric value, PERCENT, or STOP clauses, and the LOWER HIGH WATER MARK option including the STOP clause, must be specified and run without any other options, including each other.

13

The ADD, DROP, RESIZE, EXTEND, REDUCE, LOWER HIGH WATER MARK, and BEGIN_STRIPE_SET clauses cannot be used in conjunction with the MANAGED BY AUTOMATIC STORAGE clause or the USING STOGROUP clause.

14

The USING STOGROUP clause cannot be specified when altering an automatic storage hybrid table space.

User response:

1

Issue the CONVERT TO LARGE clause in its own ALTER TABLESPACE statement.

2

If using the BEGIN NEW STRIPE SET container operation and other operations in the same statement, move the BEGIN NEW STRIPE SET operation into its own ALTER TABLESPACE statement.

3

4	If both adding pages to and removing pages from a table space, use two ALTER TABLESPACE statements.	13	Remove the ADD, DROP, RESIZE, EXTEND, REDUCE, LOWER HIGH WATER MARK, or BEGIN_STRIPE_SET clause from the ALTER statement and re-issue the statement.
5	Remove the container clause from the ALTER statement and re-issue the statement.	14	Issue the REBALANCE clause so the table space contains only automatic storage containers. After the rebalance operation completes, issue the ALTER TABLESPACE with the USING STOGROUP clause.
6	Specify a container clause including the list of containers to reduce and re-issue the statement.		
7	To convert temporary table spaces using automatic storage, create a new automatic storage-managed temporary table space and drop the old temporary table space. To convert from system-managed to automatic storage-managed table spaces, all data must be moved manually.	sqlcode: -1763	sqlstate: 429BC
8	Create a storage group using the CREATE STOGROUP statement. A table space can only be managed by automatic storage if there is a storage group created.	SQL1764N	Specified size for a RESIZE action in an ALTER TABLESPACE statement is smaller than the current size of the table space container.
9	To convert database-managed table spaces that use DEVICE containers to be managed by automatic storage, perform the following steps:	Explanation:	The size specified in an ALTER TABLESPACE statement using the RESIZE action is smaller than the current size of the table space container. You can only increase the size of a container.
10	<ol style="list-style-type: none"> 1. Perform a table space or database level redirected restore operation. 2. Issue the SET TABLESPACE CONTAINERS command with the USING AUTOMATIC STORAGE option. 	User response:	Specify a size that is larger than the current size value of the table space container.
11	Issue the REBALANCE clause in its own ALTER TABLESPACE statement.	sqlcode: -1764	sqlstate: 560B0
12	Convert the table space to be managed by automatic storage and ensure the table space has the Reclaimable Storage attribute before using the REDUCE MAX clause or the REDUCE with a specified size clause.	SQL1765W	The update completed successfully. However, index creation, recreation, or reorganization may not be recovered on the secondary database server.
13	Table spaces must have the Reclaimable Storage attribute before you can use clauses to reduce or lower the high water mark.	Explanation:	When HADR is enabled, it is recommended that the database configuration parameter LOGINDEXBUILD is set to ON, and the database or database manager configuration parameter INDEXREC is set to either RESTART or ACCESS. Otherwise, any index creation, recreation, or reorganization on the current or future primary database server may not be recovered on the current or future secondary database server using HADR. Those indexes which cannot be recovered will be marked as invalid and will be rebuilt implicitly either at the end of the HADR takeover process or after the HADR takeover process when indexes are to be accessed.
14	Only use a single clause to reduce or lower the high water mark in each ALTER TABLESPACE statement.	User response:	To enable full logging, update the database configuration parameter LOGINDEXBUILD or issue the SQL statement ALTER TABLE LOG INDEX BUILD ON. To enable redo of any logged index build operations, update the configuration parameter INDEXREC to either RESTART or ACCESS.

SQL1766W The command completed successfully. However, LOGINDEXBUILD was not enabled before HADR was started.

Explanation: If the database configuration parameter LOGINDEXBUILD is not set to ON before HADR is started, any index creation, recreate, or reorganization on the current or future primary database server may not be recovered on the current or future secondary database server using HADR.

User response: To enable full logging, set the database configuration parameter LOGINDEXBUILD to ON.

SQL1767N Start HADR cannot complete. Reason code = *reason-code*.

Explanation: Start HADR cannot complete. The explanation corresponding to the reason code is:

1

The database was not in roll forward-pending or roll forward-in-progress state when the START HADR AS STANDBY command was issued.

2

START HADR AS PRIMARY cannot be issued on an HADR standby database.

3

START HADR AS STANDBY cannot be issued on an active database.

97

The command was issued in a DB2 pureCluster environment.

98

A valid HADR license is not installed. The command did not complete successfully.

99

The command was issued in a multi-partition instance environment.

User response: The user response corresponding to the reason code is:

1

Initialize the standby database from a backup image or a split mirror of the primary database, then reissue the START HADR AS STANDBY command.

2

If you intend to change the standby database to a primary database, issue the TAKEOVER command.

3

If you intend to change a primary database to a standby database, issue the TAKEOVER command from the current standby. If you intend to change a standard database to a standby, the database must be deactivated first.

97

The HADR feature is not supported in a DB2 pureCluster environment.

98

Obtain and install a valid HADR license and resubmit the command.

99

The HADR feature is not supported in a multi-partition instance environment.

SQL1768N Unable to start HADR. Reason code = *reason-code*.

Explanation: The explanation corresponding to the reason code is:

1

The database is not recoverable because circular logging is in use.

2

The database has infinite active logging enabled.

3

The database has DATALINKS enabled.

4

Invalid entry for the *hadr_local_host* configuration parameter.

5

Invalid service name for the *hadr_local_svc* configuration parameter.

6

Invalid service name for the *hadr_remote_svc* configuration parameter.

7

The primary database failed to establish a connection to its standby database within the HADR timeout interval. There are multiple scenarios that can cause this error condition. For example, this message can be returned with reason code 7 if the value of the *hadr_timeout* configuration parameter or the *hadr_peer_window* configuration parameter on the primary database is not the same as the value on the standby database.

8

9	One or more HADR database configuration parameters have no values.	98	Cannot start as primary database because another primary database is detected.
10	The database is configured to use raw logs. However, HADR does not support the use of raw I/O (direct disk access) for database log files.	99	A valid HADR license is not installed. The command did not complete successfully.
11	The command was interrupted by HADR shutdown due to a STOP HADR command, deactivation of the database, or an internal error.		An internal error occurred during HADR startup. User response: The user response corresponding to the reason code is:
12	The entries specified by the <i>hadr_remote_host</i> , <i>hadr_local_host</i> , or <i>hadr_target_list</i> configuration parameter do not resolve to the same IP format.	1	The database must be a recoverable database. Activate log archiving by setting database configuration parameter <i>logarchmeth1</i> or <i>logarchmeth2</i> to a value other than OFF. Take an offline database backup to make the database recoverable and reissue the command.
13	Invalid entry for the <i>hadr_remote_host</i> configuration parameter.	2	Disable infinite active logging and reissue the command.
14	An HADR standby database cannot start without at least one regular buffer pool. A buffer pool could not be started due to insufficient memory.	3	Update the database manager configuration file so that DATALINKS is set to NO and reissue the command.
15	The entries for the <i>hadr_target_list</i> configuration parameter do not contain the pair specified in the <i>hadr_remote_host</i> and <i>hadr_remote_svc</i> configuration parameters.	4	Ensure that the <i>hadr_local_host</i> configuration parameter can be mapped to an IPv4 or IPv6 address associated with the local host.
16	An entry for the <i>hadr_target_list</i> configuration parameter cannot be resolved into a valid TCP/IP address.	5	Ensure that the <i>hadr_local_svc</i> configuration parameter is set to a valid service name. For Unix platforms, edit the <i>/etc/services</i> file. For Windows, edit <i>%SystemRoot%\system32\drivers\etc\services</i> . Alternatively, a literal port number can be specified for this parameter.
17	The entries specified for the <i>hadr_target_list</i> configuration parameter are not in the correct format.	6	Ensure that the <i>hadr_remote_svc</i> configuration parameter is a valid service name. For Unix platforms, edit the <i>/etc/services</i> file. For Windows, edit <i>%SystemRoot%\system32\drivers\etc\services</i> . Alternatively, a literal port number can be specified for this parameter.
18	The <i>hadr_replay_delay</i> configuration parameter can only be set to a non-zero value if the <i>hadr_syncmode</i> configuration parameter is SUPERASYNC.	7	Perform the following troubleshooting steps: 1. Ensure that the standby is online and that the network is functioning.
19	The <i>hadr_replay_delay</i> configuration parameter can only be set to 0 on a HADR primary database.		

8	<p>2. Look in the db2diag.log files for other error messages that indicate there are incompatible configuration settings on the primary database and the standby database.</p> <p>3. Confirm that the <i>hadr_remote_host</i> and <i>hadr_remote_svc</i> configuration parameters are set correctly on the primary database and the standby database.</p> <p>4. Ensure that the value of the <i>hadr_timeout</i> configuration parameter is the same on both the primary database and the standby database.</p> <p>5. Ensure that the value of the <i>hadr_peer_window</i> configuration parameter is the same on both the primary database and the standby database.</p> <p>6. Increase the <i>hadr_timeout</i> configuration parameter if the network is slow, or start the primary database using the BY FORCE option</p>	<p>14</p> <p>image from the primary database that includes the new buffer pool size.</p> <p>15</p> <p>Ensure that the <i>hadr_target_list</i> configuration parameter has an entry for the pair specified by the <i>hadr_remote_host</i> and <i>hadr_remote_svc</i> configuration parameters.</p> <p>16</p> <p>Ensure that all of the entries specified by the <i>hadr_target_list</i> configuration parameter are valid host:service pairs.</p> <p>17</p> <p>Ensure that the entries for the <i>hadr_target_list</i> configuration parameter are in the correct format.</p>
9	<p>Ensure that one or more HADR database configuration parameters have a value.</p>	<p>18</p> <p>Either set the <i>hadr_replay_delay</i> configuration parameter to 0 or change the <i>hadr_syncmode</i> configuration parameter to SUPERASYNC.</p>
10	<p>Reconfigure the database to use only file system storage for the log files, instead of using raw I/O (direct disk access) devices. Refer to the discussion of <i>logpath</i> and <i>newlogpath</i> database configuration parameters in the DB2 Information Center.</p>	<p>19</p> <p>Ensure the <i>hadr_replay_delay</i> configuration parameter is set to 0 on the HADR primary database.</p>
11	<p>Address the cause of the HADR shutdown, and if desired, reissue the START HADR command.</p>	<p>98</p> <p>Determine which database should be the primary. Drop the other primary database or try converting it to a standby. If both should be primary, they should be removed from each other's <i>hadr_target_list</i>, so that they are independent.</p>
12	<p>Ensure that the <i>hadr_local_host</i>, <i>hadr_remote_host</i>, and <i>hadr_target_list</i> configuration parameters are in the same IP format (IPv4 or IPv6) or can be resolved to the same format.</p>	<p>99</p> <p>Obtain and install a valid HADR license and resubmit the command.</p> <p>If the problem persists, contact IBM Support.</p>
13	<p>Ensure that the <i>hadr_remote_host</i> configuration parameter can be mapped to an IPv4 or IPv6 address.</p>	<p>SQL1769N Stop HADR cannot complete. Reason code = <i>reason-code</i>.</p> <p>Explanation: The explanation corresponding to the reason code is:</p>
13	<p>Ensure that the <i>dbheap</i> configuration parameter is configured properly and that the system has sufficient memory available for the size of the buffer pool defined. Then retry the operation. If you need to change the size of a buffer pool on the HADR standby, you need to perform a new database restore operation using a backup</p>	<p>1</p> <p>The command was issued on a standard database.</p>
		<p>2</p> <p>The command was issued on an active HADR standby database.</p>
		<p>3</p>

	The command was interrupted by HADR shutdown due to a STOP HADR command, deactivation of the database, or an internal error.	2	<ul style="list-style-type: none"> remote catchup state in super asynchronous (SUPERASYNC) mode.
97	The command was issued in a DB2 pureCluster environment.		The HADR standby database attempted a forced takeover. Forced takeover is not allowed when the standby is reading logs from a local source. This includes local catchup state, where it reads from local log path and overflow path, and remote catchup pending state when log retrieval is in progress. Takeover by force is allowed in remote catchup pending state, when log retrieval is not in progress; peer state; and disconnected peer state.
98	A valid HADR license is not installed. The command did not complete successfully.		
99	The command was issued in a multi-partition instance environment.	3	
	User response: The user response corresponding to the reason code is:		The standby was created from an online backup, and takeover was attempted before the standby had replayed through to the end point of that backup in the log.
1	No action is required as HADR is not running on this database. Verify that the specified database alias is correct.	4	
2	The user should deactivate the database and then reissue the command.	5	The command was issued against a standard or HADR primary database.
3	If the command was interrupted due to another STOP HADR command, no further action is necessary. Otherwise, ensure that the database instance is started and reissue the STOP HADR command.	6	The command was issued against an inactive standby database.
97	The HADR feature is not supported in a DB2 pureCluster environment.	7	An error occurred while switching the primary database to a standby database.
98	Obtain and install a valid HADR license and resubmit the command.	8	A communication error occurred during takeover.
99	The HADR feature is not supported in a multi-partition instance environment.	9	The command was interrupted by HADR shutdown due to a STOP HADR command, deactivation of the database, or an internal error.
<hr/>			
SQL1770N	Takeover HADR cannot complete. Reason code = <i>reason-code</i> .		The HADR standby database attempted a forced takeover with the PEER WINDOW ONLY command parameter specified. The takeover failed because the standby database was not in a peer window when it attempted the forced takeover. Either a peer window is not configured on the standby database, or the forced takeover was attempted outside any peer window that is configured on the standby database.
	Explanation: The explanation corresponding to the reason code is:		
1	An unforced takeover (role switch) can be performed only when the HADR standby database is in one of the following states: <ul style="list-style-type: none"> peer state 	10	The TAKEOVER command was run in a DB2 High Availability Feature environment. The cluster manager returned an error that

<p>prevented the takeover operation from completing. The takeover operation failed. The DB2 High Availability Disaster Recovery (HADR) databases that were involved in the takeover operation remain in the state they were in before the takeover operation was attempted.</p>	3	<p>database, or by disabling the network between the primary and standby databases.</p>
11	4	<p>Allow the standby more time to reach the end of the online backup and reissue the command.</p>
<p>A takeover (either forced or unforced) is not allowed on an HADR standby that has replay delay enabled.</p>	5	<p>This command is not supported on a standard or HADR primary database. Issue the command on an HADR standby database only.</p>
97	6	<p>Activate the standby database, then issue the takeover command.</p>
<p>The command was issued in a DB2 pureCluster environment.</p>	7	<p>Refer to the database logs on both HADR database partitions for possible causes of this message. The roles of the database partitions may not have changed. Check the value of the HADR_DB_ROLE database configuration parameter on both database partitions.</p>
98	8	<p>Refer to the database logs on both HADR database partitions for possible causes of this message. The roles of the database partitions may not have changed. Check the value of the HADR_DB_ROLE database configuration parameter on both database partitions.</p>
<p>A valid HADR license is not installed. The command did not complete successfully.</p>	9	<p>Address the cause of the HADR shutdown, and if desired, reissue the TAKEOVER HADR command.</p>
99	10	<p>To force the standby database to takeover outside a peer window, reissue the TAKEOVER HADR command without the PEER WINDOW ONLY parameter. Although forcing the standby database to takeover outside a peer window is supported, the risk of transaction loss is greater when the takeover happens outside a peer window.</p>
<p>The command was issued in a multi-partition instance environment.</p>	11	<p>If your primary database failed and you do not want to force the standby database to take over outside a peer window because of the risk of data or transaction loss, consider alternative responses to the failure of the primary database than a forced takeover.</p>
<p>User response: The user response corresponding to the reason code is:</p>	12	<p>In a high availability solution with a primary database and a standby database, a common strategy for responding to the failure of the primary database is to have the standby database take over database operations for the failed primary database. However, there are</p>
1	13	<p>Wait for the standby database to reach peer state. An alternative is to use the BY FORCE option of the TAKEOVER command. The BY FORCE option will allow takeover from remote catchup pending state. However, if the standby database can connect to its primary, it may rapidly move from remote catchup pending state to remote catchup state, in which takeover is again not allowed. Also, forcing a takeover from remote catchup pending state may result in transactions that committed on the old primary being missing from the new primary.</p>
<p>If the HADR pair is in SUPERASYNC mode, consider disconnecting clients from the primary database to allow the standby database to catch up by processing the additional log files in the receiving buffer.</p>	14	<p>Reissue the TAKEOVER HADR command when the standby database is in peer or disconnected peer state, or in remote catchup pending state as long as it is not retrieving log files from an archive. You can force the standby database into remote catchup pending or disconnected peer state by breaking the connection between the standby and primary databases. You can do this by running the STOP HADR command or the DEACTIVATE DATABASE command on the primary</p>
2	15	<p>Reissue the TAKEOVER HADR command when the standby database is in peer or disconnected peer state, or in remote catchup pending state as long as it is not retrieving log files from an archive. You can force the standby database into remote catchup pending or disconnected peer state by breaking the connection between the standby and primary databases. You can do this by running the STOP HADR command or the DEACTIVATE DATABASE command on the primary</p>

<p>other strategies for responding to a failure of the primary database, including repairing and restarting the failed primary database instead of failing over to a standby database. Although this repair and restart strategy would have a larger negative impact on the availability of the database solution for user applications than the failover strategy, it has other strengths such as less risk of data or transaction loss.</p>	<p>Explanation: The explanation corresponding to the reason code is:</p>
<p>10</p> <p>Review the cluster manager diagnostic information to determine the error that the cluster manager returned. If possible, repair the cause of the cluster manager error and run the TAKEOVER command again.</p>	<p>1</p> <p>An isolation level other than UR is used and the DB2_STANDBY_ISO registry variable is turned off.</p>
<p>11</p> <p>Disable replay delay by setting the <i>hadr_replay_delay</i> configuration parameter to 0, and reissue the TAKEOVER command.</p>	<p>2</p> <p>The query attempted to access an invalid index.</p>
<p>97</p> <p>The HADR feature is not supported in a DB2 pureCluster environment.</p>	<p>3</p> <p>An attempt was made to execute a query against a read-enabled HADR standby database and there is one of the following problems with the query:</p> <ul style="list-style-type: none"> • The query attempted to use a data types which cannot be used in queries against a read-enabled HADR standby database. • The query attempted to use a LOB or XML value that is not stored as inline data in the database table.
<p>98</p> <p>Obtain and install a valid HADR license and resubmit the command.</p>	<p>4</p> <p>The query attempted to access a created or declared temporary table.</p>
<p>99</p> <p>The HADR feature is not supported in a multi-partition instance environment.</p>	<p>5</p> <p>A write operation was attempted on an HADR standby database.</p>
<hr/> <p>SQL1771N Non-recoverable databases cannot be used as either HADR primary or HADR standby database.</p> <p>Explanation: Circular logging cannot be used on a database in HADR primary or standby role. HADR requires recoverable databases.</p> <p>User response: Either convert the database to standard role or do not use circular logging.</p>	<p>6</p> <p>The operation attempted an implicit rebind on an HADR standby database.</p> <p>User response: The user response corresponding to the reason code is:</p>
<hr/> <p>SQL1772N Infinite active logging cannot be enabled on either HADR primary or HADR standby databases.</p> <p>Explanation: Infinite active logging cannot be enabled on a database in either HADR primary or standby role.</p> <p>User response: Either convert the database to standard role or do not use infinite logging.</p>	<p>1</p> <p>Only the UR isolation level is supported on an HADR standby database. Change the isolation level to UR or set the DB2_STANDBY_ISO registry variable to UR to enable automatic isolation coercion.</p>
<hr/> <p>SQL1773N The statement or command requires functionality that is not supported on a read-enabled HADR standby database. Reason code = <i>reason-code</i>.</p>	<p>2</p> <p>Invalid indexes are not automatically rebuilt on the HADR standby database. Set the LOGINDEXBUILD database configuration parameter to ON on the HADR primary database so the indexes on the HADR standby database will be kept in sync with the indexes on the primary database.</p>
	<p>3</p> <p>Change the query so that it does not use any data types that cannot be read on an HADR standby database, and does not query for XML and LOB values that are not inline.</p>

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4

Change the query so that it does not access a created or declared temporary table.

5

Change the statement or command so that no write operation is required, or connect to the HADR primary database to perform the write operation.

6

Connect to the HADR primary database to rebind the package.

sqlcode: -1773

sqlstate: 51045

SQL1774N Table space restore cannot be issued on an HADR primary or HADR standby database.

Explanation: Table space level restore on either an HADR primary or HADR standby database is not allowed.

User response: Convert the database to standard role and then issue the restore command on the database.

If the goal is to recover lost data on a primary and the data to be restored is available on the standby, consider running the TAKEOVER command to convert the standby database to a primary database rather than restoring the table space on the primary.

SQL1776N The command cannot be issued on an HADR standby database. Reason code = *reason-code*.

Explanation: The explanation corresponding to the reason code is:

1

The command is not supported on an HADR standby database.

2

Connection requests are not allowed while an HADR database is switching roles on takeover.

3

The UPGRADE DATABASE command is not supported on an HADR standby database.

4

Connection requests to an HADR standby database are not allowed while the replay-only window is active. The replay-only window is active when DDL or maintenance operations are being replayed on the standby.

5

Connection requests to an HADR standby are not allowed until the standby reaches the highest replay log position of a previous standby activation.

User response: The user response corresponding to the reason code is:

1

Consider enabling reads on standby to allow client connections, or connect to the primary for the operation.

2

Retry the connection to the intended database after the takeover operation completes. Note that since the takeover operation relocates the primary database role, your intended database may now be active on a different server than where it was prior to the takeover.

3

Issue the UPGRADE DATABASE command on the primary database and then re-create your standby after the database upgrade is successful.

4

Connect to the HADR primary database, or wait until the replay-only window is inactive on the standby database.

5

Reissue the command when replay reaches the highest replay log position of a previous activation of the standby database. Check db2diag.log for this position. Use "db2pd -hadr" command to get current replay position.

sqlcode: -1776

sqlstate: 08004

SQL1777N HADR is already started.

Explanation: This error occurs when the START HADR command is issued on a database which is already running in the desired role.

User response: No action required.

SQL1790W A default table space could not be found with a page size of at least *page size* that authorization ID *authorization-id* is authorized to use.

Explanation: The procedure NNSTAT was not able to create the SYSPROC.FED_STATS table to keep a history of the statement that was run. The table space with

sufficient page size (at least *pagesize*) could not be found.

User response: Ensure that a table space with a page size of at least *pagesize* exists.

sqlcode: +1790

sqlcode: 01670

SQL1791N The specified server definition, schema, or nickname does not exist.

Explanation: The procedure NNSTAT accepts a server definition, schema, and nickname as input and one or more of these objects could not be found.

User response: Specify an existing server definition, schema, or nickname and resubmit the statement.

sqlcode: -1791

sqlstate: 42704

SQL1792W The statistics for the specified nicknames were not updated completely because of schema inconsistencies between the remote and local catalogs.

Explanation: The remote schema has changed. Either the remote table or view, or one of its columns or the column data types have changed since the nickname was created.

User response: Create a new nickname and resubmit the statement.

sqlcode: +1792

sqlcode: 01669

SQL1800N An invalid pointer to structure `sqlc_request_info` was passed to the catalog admin command/api.

Explanation: The pointer to structure `sqlc_request_info` passed as a parameter to the catalog admin command/api was invalid. For Client Configuration Assistance request this pointer must not be NULL.

User response: Specify a valid pointer to `sqlc_request_info` and re-submit the command.

SQL1801N Invalid request type.

Explanation: The specified request type is not supported for this command.

User response: Ensure that the request type is one of the following supported request types:

1. `SQLC_CCA_REQUEST` - CCA catalog node request for catalog and open scan command
2. `SQLC_DAS_REQUEST` - DAS catalog node request for catalog and open scan command

3. `SQLC_CND_REQUEST` - Open scan command for CCA and DAS catalog entries

SQL1802N No entry belongs to the request type.

Explanation: There is no entry in the node directory that is catalogued by the given request type.

User response: Catalog an entry with the same request type and re-submit the command.

SQL1803N The requested operation cannot be executed in "No Package Lock" mode. An affected package is `pkgschema.pkgname 0Xcontoken`.

Explanation: The database manager is currently operating in "No Package Lock" mode. This mode has been activated by setting the `DB2_APM_PERFORMANCE` registry environment variable to "ON".

In this mode, the following classes of operations are prevented from being executed because of their impact on packages:

- An operation that invalidates packages.
- An operation that makes a package inoperative.
- Binding, rebinding (explicitly or implicitly) or dropping a package.

Since the requested operation would affect the package `pkgschema.pkgname 0Xcontoken` in one of these ways, the operation is disallowed.

User response: Do not attempt disallowed operations in "No Package Lock" mode. In order to execute the requested operation, "No Package Lock" mode must be exited. This is accomplished by unsetting the `DB2_APM_PERFORMANCE` environment registry variable. In order for the variable change to take effect, that database manager must be stopped and restarted.

sqlcode: -1803

sqlstate: 57056

SQL1804N The statement could not be executed on the current connection because there is already an active statement on that connection, and the data source has not been enabled for multiple active statements on a single connection. Federated data source name: `data-source-name`.

Explanation: You can configure a federated data source to work with ODBC drivers that only support one active statement on a connection by setting the `DB2_ONE_REQUEST_PER_CONNECTION` server option to 'Y'. In general, if you are using a ODBC driver that supports more than one active statement on a connection, the

SQL1805N • SQL1807N

DB2_ONE_REQUEST_PER_CONNECTION server option should not be set at all, or should be set to 'N'.

This message is returned when an attempt is made to execute multiple statements on one connection against a federated data source for which the DB2_ONE_REQUEST_PER_CONNECTION server option has been set to 'Y'.

User response: Respond to this error in one of the following ways:

- Execute only one statement at once on any connection.
- Enable simultaneous execution of multiple statements on one connection by setting the DB2_ONE_REQUEST_PER_CONNECTION server option to 'N' using the ALTER SERVER statement:

```
ALTER SERVER <server-name> OPTIONS(  
    ADD DB2_ONE_REQUEST_PER_CONNECTION 'N')
```

sqlcode: -1804

sqlstate: 57064

SQL1805N The insert, update, or delete operation was not processed because the operation uses a nickname in a way that is not supported.

Explanation: A nickname is an identifier that an application uses to reference a data source object, such as a table or view. In a federated environment, to refer to objects that are in the federated system but not in the federated database itself you must use nicknames.

There are some restrictions on the use of nicknames in insert, update, or delete operations in federated environments. These restrictions include the following examples:

- An INSERT, UPDATE, or DELETE statement that is nested in a subclause of a larger SQL statement cannot reference a nickname.
- An SQL procedure that performs insert, update, or delete operations cannot reference a nickname.
- Insert, update, or delete operations in the body of a trigger cannot reference a nickname.

This message is returned when an attempt is made to use a nickname in an insert, update, or delete operation in one of these ways that are not supported.

User response: Respond to this message in one of the following ways:

- To update a data source object that is in a federated system but not in the federated database itself, use methods other than compound SQL statements, SQL procedures, or triggers.

- Remove any insert, update, or delete operations against a nickname or federated three-part name from compound SQL statements, SQL procedures, or triggers.

sqlcode: -1805

sqlstate: 429A9

SQL1806N A two-phase commit transaction failed because the transaction is being distributed across a federated server topology that is not valid for two-phase commit transactions.

Explanation: There are multiple components in the X/Open Distributed Transaction Processing (DTP) model for two-phase commit transaction:

- Transaction identifiers
- Transaction managers
- Resource managers

In federated systems there is an additional component:

- The federated server becomes a federated transaction manager

The federated transaction manager performs some transaction management functions on behalf of the transaction manager, and communicates with the transaction manager using an XA interface. A federated transaction manager receives two-phase commit requests in from the client or transaction manager and sends federated two-phase commit requests out to federated data sources.

This message is returned when one federated server, B, receives a federated two-phase commit request from another federated server, A, and federated server B must send a federated two-phase commit request to a data source C.

User response:

1. Review the transaction that failed as well as the topology of the federated server and remote data sources involved in the failed transaction.
2. Modify the topology of the federated server and the remote data sources so that no federated server must both receive federated two-phase commit requests and send federated two-phase commit requests to a data source as part of the same transaction.

SQL1807N Execution of an SQL statement against a federated data source failed because some part of the SQL statement is not supported by the specified data source. Federated data source name: *data-source-name*. Unsupported clause: *clause*.

Explanation: Different federated data sources support different SQL statement syntax. This message is returned when an attempt is made to use SQL syntax or an SQL clause that is not supported by the specified federated data source, or which is incompatible with the current configuration of the the specified federated data source.

This message can be returned for the following reasons:

- An attempt was made to execute an SQL statement that includes the DEFAULT keyword for a value against a federated data source that does not support executing that SQL statement with the DEFAULT keyword in its query language syntax.
- An attempt was made to open an updatable cursor with a federated data source which was configured to disallow insert, update, or delete operations. Specifically, a statement that contains the FOR UPDATE OF clause is executed against a data source for which the DB2_IUD_ENABLE server option is set to 'N'.

User response: Respond to this message according to the reason the message was returned:

- If the statement includes the DEFAULT keyword, rewrite the statement without the DEFAULT keyword and execute the statement again.
- If you are attempting to open a cursor, respond in one of the following ways:
 - If the statement for which the cursor is being created does not insert, update, or delete data, recreate the cursor as read-only.
 - Enable insert, update, and delete operations by setting the DB2_IUD_ENABLE to 'Y' using the following command:

```
ALTER SERVER <server-name> OPTIONS(
  ADD DB2_IUD_ENABLE 'Y')
```

After the data source has been configured to allow insert, update, and delete operation, recreate the cursor.

SQL1808N **The execution of an SQL statement failed because the query optimizer produced an access plan that is invalid for a federated environment. Reason code:** *reason-code*.

Explanation: An access plan specifies an order of operations for accessing data necessary to resolve an explainable statement. The query optimizer produces an access plan whenever an explainable SQL or XQuery statement is compiled.

This message is returned when the optimizer has produced an invalid access plan for a federated environment. The reason code indicates what aspect of the access plan is invalid:

1

A part of the predicate cannot be found.

2

The statement includes a positioned update operation or a positioned delete operation. A positioned update or delete operation is an update or delete operation that modifies the data of a result set. Positioned update and delete operations require cursors to be used.

3

An element cannot be found in the columns of a nickname.

This information about what is invalid about the access plan is useful for IBM support personnel only.

User response: Respond to this error by performing the following steps:

1. Rewrite the statement to cause the optimizer to create a different access plan.
2. Execute the statement again.
3. If the statement continues to fail after it has been rewritten, collect the diagnostic information and contact IBM support for assistance.

sqlcode: -1808

sqlstate: 58004

SQL1809N **An insert, update, or delete operation in a trusted wrapper failed because part of the query in the body of the wrapper must be evaluated locally. Wrapper name:** *wrapper-name*.

Explanation: Performing insert, update, or delete operations referencing a nickname or federated three-part name is not supported on local database partitions.

This message is returned when an attempt is made to open an updatable cursor on the result set of an SQL statement that uses a trusted wrapper to query a table on a local database partition.

User response: Respond to this error in one of the following ways:

- If no insert, update, or delete operations are required, reopen the cursor as read-only.
- Alter the wrapper so that it is no longer trusted using the ALTER WRAPPER statement with the DB2_FENCED wrapper option set to 'Y', and then reopen the cursor.

SQL1810N The insert or update statement was not executed or the cursor could not be opened because the statement contains some elements that must be evaluated locally and some elements that must be evaluated remotely.

Explanation: In a federated environment, many factors affect whether parts of an SQL statement are evaluated locally or remotely, including the following examples:

- Sometimes parts of a SQL statement are executed locally instead of remotely because the query optimizer determines that it is more efficient to do so.
- Other times, parts of a SQL statement are executed locally because they cannot be evaluated at the remote data source. For example:
 - A statement would have to be evaluated locally if an expression in the statement contains a function or syntax that is not supported by the remote data source.
 - An INSERT statement with a VALUES clause and an UPDATE statement with a SET clause must both be evaluated locally.

This message is returned in the following cases:

- An attempt is made to execute a positioned update on a result set of a query that references tables at the federated data source, but an expression in the query can only be evaluated locally.
- An attempt is made to execute a statement that contains some elements that can only be evaluated locally and some elements that can only be evaluated remotely.

User response: Respond to this error in one of the following ways:

- Alter the statement to use neither the INSERT statement with the VALUES clause nor the UPDATE statement with the SET clause, and then execute the statement again.
- If this message is returned when an attempt is made to open a cursor on a result set and update, or delete operations are not required, reopen the cursor as read-only.
- Cause the federated database to send the statement to the federated data source without evaluating the statement locally by alter the statement so that the statement contains no elements that are not supported by the data source.

SQL1815N Federation is not supported for XML data when the Database Partitioning Feature is enabled.

Explanation: You cannot create nicknames for remote tables that have XML data type columns when the Database Partitioning Feature is enabled.

User response: To use federation with XML data, create a new database instance without the Database Partitioning Feature enabled.

sqlcode: -1815

sqlstate: 55076

SQL1816N Wrapper *wrapper-name* cannot be used to access the *type-or-version* of data source (*server-type server-version*) that you are trying to define to the federated database.

Explanation: The wrapper that you specified does not support the type or version of data source that you want to define.

User response: Consult the documentation to find out which wrapper supports the type and version of data source that you want to define. Make sure that the wrapper has been registered to the federated database by the CREATE WRAPPER statement. Then recode the CREATE SERVER statement so that it specifies this wrapper, and run the CREATE SERVER statement again.

sqlcode: -1816

sqlstate: 560AC

SQL1817N The CREATE SERVER statement does not identify the *type-or-version* of data source that you want defined to the federated database.

Explanation: When a CREATE SERVER statement references the wrapper that you specified, it must also identify the *type-or-version* of data source that is to be defined to the federated database.

User response: In the CREATE SERVER statement, code the *type-or-version* option so that it designates the *type-or-version* of data source being defined. Then run the CREATE SERVER statement again.

sqlcode: -1817

sqlstate: 428EU

SQL1818N The ALTER SERVER statement that you submitted could not be processed.

Explanation: The ALTER SERVER statement is preceded in a unit of work by a SELECT statement that references a nickname for a table or view within the data source (or category of data sources) that the ALTER SERVER statement references.

User response: Let the unit of work finish; then resubmit the ALTER SERVER statement.

sqlcode: -1818

sqlstate: 55007

SQL1819N The DROP SERVER statement that you submitted could not be processed.

Explanation: The DROP SERVER statement is preceded in a unit of work by a SELECT statement that references a nickname for a table or view within the data source (or category of data sources) that the DROP SERVER statement references.

User response: Let the unit of work finish; then resubmit the DROP SERVER statement.

sqlcode: -1819

sqlstate: 55006

SQL1820N Action on the LOB value failed. Reason code=*reason-code*.

Explanation: The possible reasons codes are:

1. Not enough buffer space to store the LOB value.
2. The remote data source does not support the current action on LOB data type.
3. Some internal programming limitation exceeded.

User response: Reduce the size of the LOB or replace the function which is being applied on the LOB data type. As a last resort, remove the LOB data type from the statement.

sqlcode: -1820

sqlstate: 560A0

SQL1821W The LOB value retrieved may have changed.

Explanation: The LOB value was evaluated on a deferred retrieval basis. The LOB value may have changed between the time it was first accessed and when it was actually retrieved.

User response: Set the "deferred_lob_retrieval" to "N" in SYSSERVEROPTIONS, resubmit your query, or ignore the warning.

sqlcode: +1821

sqlstate: 01621

SQL1822N Unexpected error code *error-code* received from data source *data-source-name*. Associated text and tokens are *tokens*.

Explanation: While referencing a data source, the federated server received an unexpected error code from the data source that does not map to a DB2 equivalent.

Possible error codes include:

- 4901 Trying to open more than 15 cursors
- 4902 Row size exceeds 32K limit

This error might also be returned if the data source is not available.

User response: Ensure the data source is available, then identify and correct the root cause of the problem by locating the appropriate message text and corrective action for the specified error at the data source.

sqlcode: -1822

sqlstate: 560BD

SQL1823N No data type mapping exists for data type *data-type-name* from server *server-name*.

Explanation: An attempt was made to create a nickname for an object. One or more columns of that object are of a type currently unknown to the federated server. The name of (one of) the unknown type(s) is listed in the message.

User response: Create a mapping for the specified type name on the specified server using the CREATE TYPE MAPPING statement.

sqlcode: -1823

sqlstate: 428C5

SQL1824W Some base tables in the operands of this UNION ALL may be the same table.

Explanation: A nickname can refer to a remote base table, a remote view, a remote alias/synonym, or a remote nickname. If two operands of a UNION ALL view refer to different nicknames, they may potentially be pointing to the same table (if not both of them are known to be remote base tables). This message is issued to warn the user that potentially one remote base table can get updated/deleted twice via updates/deletes through two operands.

User response: Verify if all operands point to different remote tables. If two operands point to the same remote base table, consider issuing a rollback to reverse the update/delete operation.

sqlcode: +1824

sqlstate: 01620

SQL1825N Execution of an SQL statement against a federated data source failed because some part of the SQL statement is not supported in a federated environment. Federated data source name: *data-source-name*. Reason code: *reason-code*.

Explanation: Some restrictions apply to using INSERT, UPDATE, or DELETE statements in a federated system.

The reason code indicates the particular reason this message was returned:

1

SQL1826N • SQL1831N

An attempt was made to insert, update, or delete LOB data through a federated database.

2

An attempt was made to execute an insert, update, or delete operation against a view, which was created with the UNION ALL clause.

User response: Respond to this message according to the reason code:

1

Perform the insert, update, or delete LOB data for the specified data source through native interfaces at the data source.

2

Rewrite the statement so that the insert, update, or delete operation is not using a UNION ALL view, and execute the statement again.

sqlcode: -1825

sqlstate: 429A9

SQL1826N An invalid value *value* was specified for column *column-name* in a system catalog object *object-name*.

Explanation: An invalid value *value* was specified for a column *column-name* in a system catalog object *object-name*.

The statement cannot be processed.

User response: Refer to the *SQL Reference* for valid values for the specified column in the specified system catalog object. Correct the statement and reissue it.

sqlcode: -1826

sqlstate: 23521

SQL1827N No user mapping is defined from local authorization ID *auth-ID* to server *server-name*.

Explanation: An attempt was made to drop or alter a user mapping that is not defined.

User response: If it is an ALTER USER MAPPING statement, first create a user mapping using the CREATE USER MAPPING statement. Then, alter the user mapping. If it is a DROP USER MAPPING statement, no extra action is needed because the user mapping does not exist.

sqlcode: -1827

sqlstate: 42704

SQL1828N No server option *option-name* is defined for remote server *server-name* or for a group of remote servers: server type *server-type*, version *server-version*, and protocol *server-protocol*.

Explanation: An attempt was made to drop or alter a server option that is not defined.

User response: If it is an ALTER SERVER statement, first create a server option using the CREATE SERVER statement. Then, alter the server option. If it is a DROP SERVER statement, no extra action is needed because the server option for the servers does not exist.

sqlcode: -1828

sqlstate: 42704

SQL1829W The federated server received the warning message *warning-code* from the data source *server-name*. The associated text and tokens are *tokens*.

Explanation: An unknown warning *warning-code* occurred at the data source *server-name*. The tokens for the message are *tokens*.

User response: Use the diagnostic information for the data source to determine what, if any, corrective action to take.

sqlcode: +1829

sqlstate: 01680

SQL1830N RETURNS clause must be specified prior to a predicate specification using the EXPRESSION AS clause.

Explanation: The RETURNS clause is not specified before the PREDICATE clause that includes the EXPRESSION AS clause. The RETURNS clause may have been included after the predicate specification or may be missing.

The statement cannot be processed.

User response: Specify the CREATE FUNCTION statement with the RESULTS clause prior to the PREDICATE clause.

sqlcode: -1830

sqlstate: 42627

SQL1831N Table statistics for a subtable *subtable-name* cannot be updated.

Explanation: The statement attempts to update the statistics values of NPAGES, FPAGES, or OVERFLOW, for table *subtable-name*, that is defined as a subtable. For typed tables, these statistics can only be updated using the root table of the table hierarchy.

The statement cannot be processed.

User response: Update the catalog statistics for the root table of the table hierarchy instead of the subtable.

sqlcode: -1831

sqlstate: 428DY

SQL1832N The routine *routine-name* cannot be used to define a filter because it is defined as an SQL function.

Explanation: The routine (function or method) *routine-name* is specified in a FILTER clause for a user defined predicate specification or an index extension definition. The routine can not be defined with LANGUAGE SQL.

The statement cannot be processed.

User response: Specify a routine that is not defined with LANGUAGE SQL.

sqlcode: -1832

sqlstate: 429B4

SQL1833N Connection to remote Extended Search Server *host_name* on port *port_number* could not be established or was terminated.

Explanation: The Extended Search Wrapper tried to connect to the remote Extended Search Server *host_name* on port *port_number* but the connection could not be established or was terminated by the remote Server.

User response: Verify the Host name and Port number of the remote Extended Search server. Also, check that the Extended Search Server is up and running

SQL1834N User-defined column *column_name* is identical to a fixed column for wrapper *Wrapper_name* but uses a different data type.

Explanation: A CREATE NICKNAME statement or ALTER NICKNAME statement contains a user-defined column which has the same name as a fixed column for Wrapper *Wrapper_name* but uses a different data type.

User response: Do not specify the fixed columns for Wrapper *Wrapper_name* in the column definition of an CREATE NICKNAME statement. However, if the fixed columns are specified, then the fixed column name and the data type/data type length must match the fixed column definition. It is not allowed to alter a fixed column name or data type.

SQL1835N Extended Search object *object_name* of type *object_type* could not be found on the remote Extended Search Server *es_host_name*.

Explanation: Extended Search object *object_name* of type *object_type* could not be found on the remote Extended Search Server *es_host_name*.

User response: Verify that the object name is defined on this server and is of type *object_type*.

SQL1836N No column mapping exists between user-defined column *column_name* and a field name on the remote Extended Search Server *es_host_name*.

Explanation: None of the data sources specified in option DATASOURCE or in option CATEGORY contains a field name identical to the user-defined column *column_name*.

User response: Verify that the column name is defined as a field in one of the following:

- any of the data sources specified in option DATASOURCE
- in a data source in a category specified in option CATEGORY.

SQL1837N The required option *option_name* for the *option_type* object *object_name* cannot be dropped.

Explanation: Some options are required for federation. The option cannot be dropped.

User response: See the federation documentation for this data source to determine if the option can be set to another value. It might be necessary to drop the associated object.

sqlcode: -1837

sqlstate: 428GA

SQL1838N The search statement *statement* is not a valid Extended Search query.

Explanation: The Extended Search wrapper attempted to process the listed search statement, however the query failed because the syntax is incorrect.

User response: Correct the search statement and submit the request again. Consult the documentation for information about creating valid SQL search statements when using Extended Search Nicknames.

SQL1839N One or more search parameters are not valid.

Explanation: The Extended Search wrapper tried to use the specified search parameters, but they are not valid for Extended Search.

SQL1840N • SQL1842N

<p>User response: Consult the IBM DB2 Life Sciences Data Connect Planning, Installation, and Configuration Guide (Part: Extended Search Wrapper) for information about how to write valid SQL statements.</p>	05	
	06	Min/max occurrence is not an integer value.
<hr/>		
<p>SQL1840N The <i>option-type</i> option <i>option-name</i> cannot be added to the <i>object-name</i> object.</p>	07	Min/max occurrence out of range.
<p>Explanation: The option cannot be added. Some options are set by the object and cannot be added or overridden by you.</p>	08	Min occurrence greater than max occurrence.
<p>User response: See the federation documentation for this data source. Determine the actions that are valid for the options that are associated with this object.</p>	09	Reference in column template option was not "column".
<p>sqlcode: -1840</p>		'=' delimiter missing from namespace specification.
<p>sqlstate: 428GA</p>	10	
<hr/>		
<p>SQL1841N The value of the <i>option-type</i> option <i>option-name</i> cannot be changed for the <i>object-name</i> object.</p>	11	Opening or closing quotation mark missing from namespace specification.
<p>Explanation: The option value cannot be changed. Some options are set by the object and cannot be added or overridden by you.</p>	12	Duplicate reference in template.
<p>User response: See the federation documentation for this data source. Determine the actions that are valid for the options that are associated with this object. It might be necessary to drop the associated object and create it again with a new option value. If this message is produced in response to a SET SERVER OPTION statement, it might be necessary to use an ALTER SERVER statement.</p>	13	The wrapper option <i>option-name</i> is not allowed when the DB2 instance is 32-bit.
<p>sqlcode: -1841</p>	14	The two wrapper options or option values are not compatible. The wrapper option <i>option-name</i> is only valid when "DB2_FENCED" is set to "Y".
<p>sqlstate: 428GA</p>		The wrapper option <i>option-name</i> is not supported on this particular platform.
<hr/>		
<p>SQL1842N Option <i>option-name</i> of type <i>option-type</i> for object <i>object-name</i> found near <i>text</i> is not valid. Reason code= <i>reason-code</i>.</p>	15	The wrapper cannot be loaded into the DB2 threaded engine on this particular platform as it is not threadsafe.
<p>Explanation: The syntax of the specified option is not valid or the option cannot be set to the specified value. The reason code provides more information about the error. The reason codes are:</p>	16	The minimum valid value for the <i>wait-time</i> parameter is 1000 microseconds.
01		User response: See the federation documentation for this data source. Determine the correct option syntax and recode the statement. The reason codes are:
02		01
03	Unexpected character.	Examine the option value near the specified position and change or remove the invalid character.
04	Element or attribute name expected but not found.	02
05	Min/max occurrence expected after reference.	Examine the option value near the specified position and correct the syntax.
06	More than one colon found in an attribute name.	

03	Ensure that a range specification "[min,max]" follows each reference in the template option value.	sqlstate: 42616
04	Templates support only one level of name qualification. Remove the extra qualifications.	<hr/> SQL1843N The <i>operator-name</i> operator is not supported for the <i>nickname-name.column-name</i> nickname column .
05	Ensure that the min occurrence and max occurrence values of a range specification are integers.	Explanation: Some data sources restrict the operators that can be specified with nickname columns. User response: See the federation documentation for this data source. Recode the statement and remove or change the invalid expression. Then submit the statement again.
06	Ensure that the values for the range specification "[min,max]" are within the allowed ranges for this data source.	sqlcode: -1843 sqlstate: 429BP
07	Correct the range specification. Ensure that the first number is less than or equal to the second.	<hr/> SQL1844W Data for column <i>column-name</i> were truncated between the remote data source and the federated server.
08	Replace the reference in the column template option value with the token 'column'.	Explanation: Characters were truncated when data was transferred between a remote data source and the federated server. Truncation can occur in many situations. Some of these situations include an incorrect nickname column definition (a column is too small for the remote data source column data), or the presence of a conversion or type-cast function that restricts the size of the data returned by the remote data source.
09,10	Recode the namespace option value in the form 'name="specification"'. Recode the template. Ensure that no references are repeated.	User response: To correct this problem, examine the statement for any type-cast or conversion functions that might be restricting the size of data returned from the remote data source. If the statement contains these functions, recode the statement to allow larger data to be returned from the data source. Then submit the statement again. If the statement does not contain these functions, or if correcting the functions does not correct the problem, examine the local column specification in the nickname in the DB2 catalog. Using the ALTER NICKNAME statement or DROP NICKNAME and CREATE NICKNAME statements, change the column specification to ensure that the column size is large enough to accommodate the data returned by the remote data source.
11	Do not specify the <i>option-name</i> wrapper option for a 32-bit DB2 instance.	sqlcode: +1844 sqlstate: 01004
12	Examine the option value for the "DB2_FENCED" wrapper option.	<hr/> SQL1846N The <i>option-type-1</i> option <i>option-name-1</i> for the <i>object-name-1</i> object conflicts with <i>option-type-2</i> option <i>option-name-2</i> for the <i>object-name-2</i> object .
13	Consult the SQL Reference to verify the wrapper option that you want. Install and use the 64-bit client for this data source.	Explanation: You have specified two or more incompatible options or option values. User response: See the federation documentation for this data source. Determine the valid options that can be specified with this object. Then recode and submit the statement again.
14	Specify the value "Y" for the "DB2_FENCED" wrapper option.	
15	Issue the statement again with a valid value for <i>wait-time</i> .	
16		

sqlcode: -1842

sqlcode: -1846

sqlstate: 42867

SQL1847N **Template substitution error for the**
object-name object-type. Reason code =
reason-code. Additional text and tokens
text.

Explanation: While building an XML document a wrapper encountered a problem substituting values into a template. This may be caused by conflicts between templates at the nickname and column level. The reason codes are:

01

Reference name not found in template. The additional text identifies the missing reference.

02

Cannot substitute an attribute reference with element content. The additional text identifies the reference in error.

User response: See the federation documentation for this data source. Further diagnostic information may be logged to the db2diag log file. Correct the template syntax if necessary, using the ALTER NICKNAME statement. Then submit the original statement again.

sqlcode: -1847

sqlstate: 428G9

SQL1860N **Table space *tablespace-name* is not**
compatible with table space
tablespace-name. Reason code =
reason-code.

Explanation: The table spaces specified are not compatible for one of the following reasons:

1

All table spaces (data, long, index) for a partitioned table must be in the same database partition group.

2

The data table spaces for a partitioned table must be either all SMS, all regular DMS, or all large DMS. The index table spaces for a partitioned index must be all regular DMS or all large DMS.

3

The page size for all data table spaces must be the same. The page size for all index table spaces must be the same. The page size for all long table spaces must be the same. However, the page sizes of data table spaces, index table spaces, and long table spaces can be different from each other.

4

The extent size for each data table space must be the same as the extent sizes of other data table spaces. The extent size for each index table spaces must be the same as the extent sizes of other index table spaces. The extent sizes for all table space used storing long data must also be the same. However, the extent sizes of table spaces used for different purposes do not need to match.

5

Long data for a partitioned table must be stored in the same table space as the data for all data partitions or it must be stored in large table spaces, each of which is distinct from the table space of the corresponding data partition. This error will occur if a LONG IN clause is used that specifies a table space that is different from the data table space but is not a large table space. LONG IN can only be used to specify regular table spaces if they are identical to the data table spaces (i.e. in the case where the LONG IN clause is redundant because it merely specifies the data table spaces, which is the same as the default behavior if LONG IN were omitted entirely).

User response: Specify a table space that matches the other table spaces for the table.

sqlcode: -1860

sqlstate: 42838

SQL1870N **A row could not be inserted into a**
range-clustered table because a key
sequence column is out of range.

Explanation: A row could not be inserted into a range-clustered table because the key sequence values fall outside the defined range.

User response: To see the range defined by the range-clustered table query the constraints defined on this table, and find the constraint named "RCT". For example: SELECT * FROM SYSIBM.SYSCHECKS WHERE NAME='RCT' AND TABLE=<rct table-name>

- you can drop and recreate the range-clustered table with the WITH OVERFLOW option enabled. This will create a range-clustered table which can handle out-of-range records, but does not guarantee ordering and has higher locking implications.
- you can drop and recreate the range-clustered table with a new range definition which will include this record.
- you can define a view which is a UNION ALL of the range-clustered table records and create a separate table which contains the out-of-range records. Inserts, updates, deletes, merges, and queries should then be directed at the view.

sqlcode: -1870

17

sqlstate: 23513

SQL1871N This function is not supported on range-clustered tables. Reason code = *reason-code*.

Explanation: Certain functions are not available on range-clustered tables. Reason codes:

1

VALUE COMPRESSION and COMPRESS SYSTEM DEFAULT are not available.

2

A clustering index cannot be created on a range clustered tables.

3

Adding a column is not supported.

4

SET DATA TYPE is not supported.

5

Changing PCTFREE is not supported.

6

Changing APPEND mode is not supported.

7

Column attributes cannot be changed.

8

Typed tables are not supported.

10

The following commands are not supported on a database partition group that was used to define a table space containing a range-clustered table: ALTER TABLESPACE, REDISTRIBUTE DATABASE PARTITION GROUP.

11

The LOAD utility is not supported.

12

Table Reorganization is not supported.

13

Table Truncate is not supported.

14

Columns of type XML cannot be used.

15

COMPRESS YES is not supported.

This reason code is returned when an attempt is made to create a range-clustered table in a partitioned database environment and there is a problem with the relationship between the distribution key and the sequence key specified in the CREATE TABLE statement. The problem is: the distribution key, specified with the DISTRIBUTE BY HASH clause, is not a single column subset of the columns of the sequence key, specified with the ORGANIZE BY KEY SEQUENCE clause.

The following examples illustrate this relationship between the distribution key and the sequence key:

Example 1: the distribution key is a single column subset of the sequence key.

```
CREATE TABLE ...
  ORGANIZE BY KEY SEQUENCE (colA, colB)
  ... DISTRIBUTE BY HASH (colA)
```

Example 2 (error): the distribution key is not a single column subset of the sequence key.

```
CREATE TABLE ...
  ORGANIZE BY KEY SEQUENCE (colA, colB)
  ... DISTRIBUTE BY HASH (colC)
```

18

This reason code is returned when an attempt is made to create a range-clustered, materialized query table, and the DISALLOW OVERFLOW clause is specified in the CREATE TABLE STATEMENT. It is not possible to prevent records that have key values that fall outside the defined range from being inserted into range-clustered, materialize query tables.

User response: If the unavailable function is required on this table, consider creating the table without the ORGANIZE BY KEY SEQUENCE clause. If the table already exists, you will need to drop and then create the table again. Reason codes:

1

Remove the VALUE COMPRESSION clause or the COMPRESS SYSTEM DEFAULT clause.

2

Remove the CLUSTER keyword from the CREATE INDEX statement.

3

To add a column you must drop and create the table again with the additional column.

4

Remove SET DATA TYPE clause from the ALTER TABLE statement.

5

6 Remove PCTFREE clause from the ALTER TABLE statement.

7 Remove the APPEND clause from the ALTER TABLE statement.

8 To change column attributes you must drop and create the table again with the new column attributes.

10 Do not use a typed table definition together with the ORGANIZE BY KEY SEQUENCE clause.

To alter or redistribute a database partition group that was used to define a tablespace containing a range-clustered table, perform the following steps:

1. Drop and recreate the range-clustered table in a table space that does not belong to the database partition group that you want to alter or redistribute.
2. Call the ALTER TABLESPACE command or the REDISTRIBUTE DATABASE PARTITION GROUP command again.

11 Consider using the IMPORT utility instead of the LOAD utility. Multiple IMPORT commands can be issued concurrently using subsets of the data to improve performance. Also consider using parallel insert applications which populate different regions of the key sequence range.

12 Table reorganization is not required for Range Clustered Tables.

13 Drop the table and recreate.

14 Remove the column defined with data type XML or use another supported data type.

15 Remove the COMPRESS YES clause.

17 To create a range-clustered table in a partitioned database environment, make one of the following changes to the CREATE TABLE statement and execute the statement again:

- Use the DISTRIBUTE BY REPLICATION clause instead of the DISTRIBUTE BY HASH clause.
- Specify a single column as the distribution key with the DISTRIBUTE BY HASH clause that is one of the columns specified in the sequence key with the ORGANIZE BY KEY SEQUENCE clause.

18

Execute the CREATE TABLE statement again, without specifying the DISALLOW OVERFLOW clause.

sqlcode: -1871

sqlstate: 429BG

SQL1880N *option-name is not a supported option-type option for cursor object-name by either the wrapper wrapper-name, or the federated data source server-name, or both.*

Explanation: The cursor *cursor-name* accessing a nickname using wrapper *wrapper-name* at the federated data source *server-name* was declared using the option *option-name* of type *option-type*, but either the wrapper or the data source itself does not support this option.

The cursor cannot be opened.

User response: Do not open the cursor with this option.

sqlcode: -1880

sqlstate: 428EE

SQL1881N *option-name is not a valid option-type option for object-name.*

Explanation: The specified option might not exist, or it might not be valid for the particular data source, data source type, or database object that you're working with.

User response: Consult the SQL Reference to verify the option that you want. Then revise and resubmit the statement that you want to run.

sqlcode: -1881

sqlstate: 428EE

SQL1882N *The option-type option option-name cannot be set to option-value for object-name.*

Explanation: The value that you specified either lacks the proper delimiters or is invalid.

User response: Consult the SQL Reference to verify the value that you want. Then revise and resubmit the

statement that you want to run. Be sure to delimit the value in single quotes.

sqlcode: -1882

sqlstate: 428EF

SQL1883N *option-name is a required option-type option for object-name.*

Explanation: You did not specify an option that DB2 requires in order to process the statement that you submitted.

User response: Consult the documentation to find out the options that are required for the statement that you want to run. Then revise and resubmit this statement.

sqlcode: -1883

sqlstate: 428EG

SQL1884N *The option_name option was specified more than once for the object_type object object_name.*

Explanation: You entered a statement that references the same option multiple times.

User response: Recode the statement so that the statement references the option that you want only once. Then submit the statement again.

sqlcode: -1884

sqlstate: 42853

SQL1885N *The option_type option option_name is already defined for object_name.*

Explanation: You entered a value for an option that already has a value.

User response: Query the appropriate catalog view to determine what value the option is currently set to. If the option value differs from the one that you want, recode the statement so that the SET keyword follows the OPTIONS keyword. Determine which catalog view contains the options for this option. Refer to the DB2 Information Center for more information about catalog views.

sqlcode: -1885

sqlstate: 428EH

SQL1886N *The operation-type operation is not valid because the option-type option option-name has not been defined for object-name.*

Explanation: You tried to change or delete a value for an option that has not been defined for the data source, data source type, or database object that you're working with.

User response: If you specified SET in the statement that you want to run, recode the statement, either omitting SET or replacing it with ADD (ADD is the default); remove any incorrect DROP clause. Then submit the statement again.

sqlcode: -1886

sqlstate: 428EJ

SQL1887N *SPECIFICATION ONLY clause required.*

Explanation: A CREATE INDEX statement for a nickname must have a SPECIFICATION ONLY clause.

User response: Add the SPECIFICATION ONLY clause and then resubmit the statement.

sqlcode: -1887

sqlstate: 42601

SQL1888N *The port number port-number is not valid.*

Explanation: The port number as specified on the Update Alternate Server command is not valid. The value is either not numeric or its length is not valid. The value must be 1 to 14 characters in length and cannot be all blanks.

User response: Verify that the port number is specified as a numeric value and that it is no more than 14 characters in length.

Resubmit the command with a valid port number.

SQL1889W *The update alternate server request was ignored.*

Explanation: The request can only be applied to a database server.

User response: Issue the request in a database server.

SQL1890N *The host name host-name is not valid.*

Explanation: The host name as specified on the Update Alternate Server command is not valid. The value must be at least 1 to 255 characters in length and cannot be all blanks.

User response: Verify that the host name is no longer than 255 characters in length.

Resubmit the command with a valid host name.

SQL1891N *The address of the host name parameter is not valid.*

Explanation: The application program used an address that is not valid for the host name parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

SQL1892N • SQL1901N

The command cannot be processed.

User response: Correct the application program so a correct address is used and the input string is null terminated.

SQL1892N The address of the port number parameter is not valid.

Explanation: The application program used an address that is not valid for the port number parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

The command cannot be processed.

User response: Correct the application program so a correct address is used and the input string is null terminated.

SQL1900N The command completed successfully.

Explanation: The command line utility successfully completed the command.

User response: No action is required.

SQL1901N The syntax of the command is not correct.

Explanation: The command line utility could not process the command.

User response: Correct and resubmit the command.

Chapter 5. SQL2000 - SQL2499

SQL2000N The drive specified in the utility command is not a valid diskette drive or fixed disk.

Explanation: The input or output drive specified in the utility command does not exist.

The utility stops processing.

User response: Resubmit the utility command with the correct drive specifier.

SQL2001N The utility was interrupted. The output data may be incomplete.

Explanation: The user may have pressed the interrupt key sequence, or had called the utility with a terminate caller action.

This message can also be returned during a backup or restore operation on a database node when the database catalog node is down.

The utility stops processing.

User response: Restart the application or reissue the command, if needed. The output data from the interrupted command may be incomplete, and should not be used.

SQL2002N The specified database utility command is not valid for remote databases. The database specified in the command must reside on your local workstation.

Explanation: The database utility command is only valid for local databases.

The utility stops processing.

User response: Run the utility locally.

SQL2003C A system error occurred.

Explanation: An operating system error occurred. The return code can be found in the SQLERRD[0] field of the SQLCA.

The utility stops processing.

User response: Look at the error return code in the SQLERRD[0] field of the SQLCA. Correct the error, if possible, and resubmit the command.

SQL2004N An SQL error *sqlcode* occurred during processing.

Explanation: The utility was using an SQL statement when an error occurred.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL2005C An I/O error occurred during a read operation. The data may be incomplete.

Explanation: Incomplete data was read during an I/O operation.

The utility stops processing.

User response: Determine if the I/O error can be corrected and resubmit the command.

SQL2006C An I/O error occurred during a write operation. The data may be incomplete.

Explanation: Incomplete data was written during an I/O operation.

The utility stops processing.

User response: Determine if the I/O error can be corrected and resubmit the command.

SQL2007N Specified buffersize of *buffersize* 4K buffers is too small for *pagesize* page size object.

Explanation: To backup a *pagesize* page size database object one needs a buffer larger than the page size. When backing up a database the data is first copied to an internal buffer. Data is then written from this buffer to the backup media when the buffer is full. The buffersize of *buffersize* 4K buffers that was specified is inadequate.

User response: Use a larger buffersize.

SQL2008N The utility command could not be processed because the callerac parameter is not within valid range or the requested action is out of sequence.

Explanation: Each utility has its own list of valid callerac values.

This message can be returned for one of the following reasons:

- The callerac parameter value is not one of the acceptable values
- The requested action is out of sequence

User response: Resubmit the command with a valid callerac parameter for the utility.

SQL2009C A backup or restore failed due to inadequate memory resources.

Explanation: This problem can occur in the following situations:

1. An attempt to backup or restore a database has failed due to insufficient space in the utility heap.
2. Utilities were left running during an online backup attempt.

User response: To resolve all possible cases described in this message's Explanation, re-issue the command, invoking the autonomic mode by NOT specifying the following parameters:

```
WITH num-buffers BUFFERS
PARALLELISM n
BUFFER buffer-size
```

If you prefer to specify parameters explicitly, appropriate actions for each case are:

1. Increase the UTIL_HEAP_SZ database configuration parameter with the command: UPDATE DB CFG FOR <DBNAME> USING UTIL_HEAP_SZ <VALUE>. For backup and restore, this value must be at least as high as the number of buffers * buffer size. For more information on backup and restore buffers, search the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using phrases such as "optimizing restore performance" or "optimizing backup performance".
NOTE: If the database did not already exist when the RESTORE was attempted, create an empty database, increase its UTIL_HEAP_SZ as described above and retry the restore into the new database.
2. Retry the online backup after ensuring that utilities are not running.

SQL2010N The utility encountered an error *error* while connecting to the database.

Explanation: The utility could not connect to the database.

The utility stops processing.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL2011N The utility encountered an error *error* while disconnecting from the database.

Explanation: The utility could not disconnect from the database.

The utility stops processing.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL2012N Interrupt handling could not be enabled.

Explanation: The utility could not enable interrupt handling. The actual return code can be found in the SQLERRD[0] field of the SQLCA.

The utility stops processing.

User response: Look at the error return code in the SQLERRD[0] field of the SQLCA. Correct the error, if possible, and resubmit the command.

SQL2013N The utility could not access the database directory. Error *error* was returned.

Explanation: An error occurred while the utility was accessing the database directory.

The utility stops processing.

User response: If the path in the *database* parameter is not the database directory path, resubmit the command with the correct path. Otherwise, look at the error number in the message for more information. Make changes and resubmit the command.

SQL2014N A database environment error occurred.

Explanation: The utility received an error from a database environment command. The database manager configuration file and the database configuration file may contain incompatible values.

The utility stops processing.

User response: Check the database manager configuration file and the database configuration file for inconsistent values. Resubmit the command.

SQL2015N The database parameter is not valid. The database name is too long, it was not specified, or the address of the name is not valid.

Explanation: The database name is required. It must contain 1 to 8 characters and the characters must be chosen from the database manager base character set. The name must be located at a valid address for the application.

The utility stops processing.

User response: Resubmit the command with a valid database name.

SQL2016C The PATH command does not contain a path to *program-name*.

Explanation: The utility could not find the required program using the operating system Select Path.

The utility stops processing.

User response: Update the PATH command to include

the path to the indicated program name.

SQL2017N **Too many sessions are already started or OS/2 Start Session did not complete successfully.**

Explanation: The BACKUP or RESTORE utility could not start the new session because:

- The maximum number of sessions is already started.
- The OS/2 Start Session program returned an error.

The utility stops processing.

User response: Wait until some of the current sessions stop processing and resubmit the command. Or, see the SQLERRD[0] field in the SQLCA for more information and resubmit the command.

SQL2018N **The utility encountered an error *error* while attempting to verify the user's authorization ID or database authorizations.**

Explanation: The user attempted to execute a utility and one of the following has occurred:

- The user authorization ID is not valid.
- An error occurred attempting to access the user's authorizations for the database.

The utility stops processing.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL2019N **An error occurred while utilities were being bound to the database.**

Explanation: Because the current level of the utility being executed was not bound to the database, the system attempted to bind all utilities to the database, and this binding process failed. Possible causes for the error include the following situations:

- Insufficient disk space
- Too many open files, or a similar system resource problem
- A missing or invalid list of utility programs to be bound (db2ubind.lst)
- A missing or invalid bind file for one of the utilities (db2uxxxx.bnd)
- Insufficient authorization for binding utilities; the required privileges are BIND for the utility programs and SELECT for the system catalogs

For the RESTORE utility, the database is restored, but at least one utility is not bound to the database. The other utilities stop processing.

User response: Complete all activities that might be

competing for system resources, and resubmit the utility command. If the error continues, perform one of the following actions:

- Have a user with DBADM authority retry the command.
- Reinstall the database manager or reapply any recent updates or do both.
- Bind the utility programs (by binding the db2uxxxx.bnd files listed in the db2ubind.lst file) individually to the database (with no format option) to isolate the problem and possibly enable some utilities to operate successfully.

SQL2020N **The utility is not bound to the database correctly.**

Explanation: All the utilities were rebound to the database because the utility was not bound to the database or the package of the utility that was bound to the database was not compatible with the installed version of the database manager, but there is still a timestamp conflict between the installed version of the database manager and the package so the utility and bind file are not compatible.

The utility stops processing.

User response: Reinstall the database manager or reapply any recent updates or do both. Resubmit the utility command.

SQL2021N **The correct diskette is not in the drive.**

Explanation: The diskette to be used for Backup Database or for Restore Database is not in the drive or is not valid.

The command cannot be processed.

User response: Verify that the correct diskette is in the drive or insert a new diskette.

SQL2023N **The utility encountered an I/O error *code* while accessing the log control file.**

Explanation: There are two log control files:

- Primary log control file SQLOGCTL1.LFH
- Secondary log control file SQLOGCTL2.LFH

The secondary log control file is a mirror copy of the primary log control file for use in the event that there is a problem with the primary log control file.

The DB2 database manager received a read or write error while accessing the primary log control file.

The utility stops processing.

User response: Record the error return code value. Determine whether the I/O error can be corrected.

SQL2024N The utility encountered an I/O error *code* while accessing the file type *file-type*.

Explanation: An I/O error occurred while accessing the specified file.

A file with the extension “.BRG” is used to determine whether a RESTORE operation has terminated abnormally. The file resides in the local database directory of the database for which the RESTORE operation was attempted.

A file with the extension “.BRI” stores information about the progress of an incremental RESTORE operation. The file resides in the local database directory of the database for which the RESTORE INCREMENTAL operation was attempted.

The file name consists of the database token concatenated with the file type extension. For example, if the database “SAMPLE” is assigned the database token “SQL00001”, the BRI file will have the name “instance/NODE0000/sqlbdir/SQL00001.BRI”.

The utility stops processing.

User response: Record the error return code. Determine whether the I/O error can be corrected.

SQL2025N An I/O error occurred. Error code: *code*.
Media on which this error occurred:
dir_or_devices.

Explanation: An I/O error occurred while accessing a file on the specified media.

The utility or operation stopped processing.

If media is “TSM”, there is a problem related to IBM Tivoli Storage Manager. A common TSM-related problem is time-out of a TSM session due to an inadequate COMMTIMEOUT setting.

User response:

1. Collect more information from the db2diag diagnostic log files by using the log analysis tool to search for the particular error code:
db2diag -rc <RC>
2. Respond to this error according to the type of media:
 - If media is TSM, search the IBM Tivoli Information Center for the full text of the error code using phrases such as “API return codes in numeric order”.
 - For other media types, ensure that *dir_or_devices* is accessible and check for media errors. For example for media TAPE, ensure that the tape library is online. If you are attempting to backup to TAPE and you are using tape with variable block size, reduce the buffer size option to within the range that the tape device supports (the

database manager automatically chooses an optimal value for this parameter if it is not specified).

SQL2026N An error *sqlcode* occurred while trying to internally disconnect from the database.

Explanation: The internal disconnect command failed. The SQLCODE is returned in the message.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL2027N An error *sqlcode* occurred while trying to internally connect to the database.

Explanation: The internal connection failed. The SQLCODE is returned in the message. The database manager configuration file and the database configuration file may contain incompatible values.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command. Check that the database manager configuration file values and the backup image's database configuration file values are compatible.

SQL2028N Error *sqlcode* occurred while installing the interrupt handler.

Explanation: The utility could not enable the interrupt handler. The SQLCODE is returned in the message.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL2029N An error *error* occurred while *command-file-name* was processing.

Explanation: An error was returned from either the specified command file, or from the operating system.

User response: The user has either requested a “Backup changes only” of a database enabled for ROLLFORWARD recovery, or has requested a “Backup changes only” while requesting the use of the user exit.

SQL2030N The *name* drive is full. At least *number* free bytes are needed on this drive.

Explanation: The specified drive does not have enough space for creating an internal subdirectory and information file.

The utility stops processing.

User response: Free the indicated space on the specified drive and resubmit the command.

SQL2031W **Warning! Please mount the target or source media on device** *device*.

Explanation: A database utility process either writes data to or reads data from the media on the specified device. The utility returns so that the user may mount the correct media for the operation.

The utility waits for a response to continue.

User response: Mount the media and return to the utility with the *callerac* parameter indicating if processing continues or ends.

SQL2032N **The *parameter* parameter is not valid.**

Explanation: The parameter is incorrectly specified. Either the value is out of range or is incorrect.

User response: Resubmit the command with a correct value for the parameter.

sqlcode: -2032

sqlstate: 22531

SQL2033N **An error occurred while accessing TSM during the processing of a database utility. TSM reason code:** *reason-code*.

Explanation: Some common TSM reason codes are:

106

The specified file is being used by another process. You tried to read from or write to a file that is currently being used by another process.

137

TSM authentication failure.

168

Password file is needed, but user is not root. This message is often generated when the DSMI_DIR environment variable points to a directory that contains a 32-bit version of the dsmtca program, yet the DB2 instance is 64-bit, or vice-versa.

400

An invalid option was specified on the OPTIONS parameter passed to TSM.

406

TSM Cannot find or read its options file.

The utility stops processing.

User response: Responses for common TSM problems are:

106

Ensure that you specified the correct file or directory name, correct the permissions, or specify a new location.

137

If the TSM parameter PASSWORDACCESS is set to GENERATE, ensure that the system administrator has used the dsmapipw utility to set the password. If PASSWORDACCESS is set to PROMPT, ensure that the TSM_NODENAME and TSM_PASSWORD database configuration parameters have been set correctly.

168

Ensure that DSMI_DIR points to a directory containing the correct version of dsmtca, restart the instance, and execute the command again.

400

Ensure that the OPTIONS parameter specified on the BACKUP or RESTORE command is correct.

406

Ensure that the DSMI_CONFIG environment variable points to a valid TSM options file. Ensure that the instance owner has read access to the dsm.opt file. Ensure that the DSMI_CONFIG environment variable is set in the db2profile.

SQL2034N **The address of the *parm* parameter is not valid.**

Explanation: The application program used an address that is not valid for this parameter. Either the address points to an unallocated buffer or the character string in the buffer does not have a null terminator.

User response: Ensure that a valid address is used in the application program and the input string is null terminated.

SQL2035N **The warning condition *warn* was encountered while executing the utility in non-interrupt mode.**

Explanation: The calling application invoked the utility with *no interrupt* mode. During the operation a warning condition was encountered.

User response: Resubmit the operation without specifying the *no interrupt* condition in the *callerac* parameter or take actions to prevent the warning and resubmit the operation.

SQL2036N The path for the file, named pipe, or device *path/device* is not valid.

Explanation: The application calling the utility has supplied a source or target path that is not valid. The path, file, named pipe, or device specified may not exist or is incorrectly specified.

User response: Reissue the utility command with a path that represents a correct path or device.

SQL2037N TSM could not be loaded.

Explanation: A call to a database utility specified TSM as the target or source of the backup. An attempt was made to load the TSM client. Either the TSM client is not available on the system or an error was encountered in the load procedure.

User response: Ensure that the system has TSM available. Resubmit the command after TSM is made available, or resubmit the command without utilizing TSM.

SQL2038N A database system error *errcode* occurred during processing.

Explanation: A database system error was encountered during the processing of one of the utilities.

User response: Examine the error code in the message for more information. Take corrective action and resubmit the command.

SQL2039N The application calling the utility has terminated.

Explanation: The application calling the utility has terminated. The application side of the utility is in the same process as the calling application and terminates with the application. The agent side of the utility terminates as a result.

User response: Reissue the command after determining why the application terminated.

SQL2040N The database alias parameter *dbalias* is not valid or not specified.

Explanation: The application calling the Backup or Restore utility has supplied a database alias parameter that is not valid. The alias must be 1 to 8 bytes and the characters must be chosen from the database manager base character set.

User response: Reissue the Backup or Restore command with a valid database alias.

SQL2041N The buffer size parameter specified is not valid. The buffer size must be specified as 0 or be between 8 and 16384 inclusive.

Explanation: The application calling the utility has supplied a buffer size parameter that is not valid. The buffer size is used to determine the internal buffer size. The value is the number of 4K pages that are obtained for this buffer. The value must be specified as 0 or be between 8 and 16384 inclusive.

When running the backup or restore utility, if 0 is specified, the default buffer size defined in the database manager configuration is used.

If the target media is a diskette, the buffer size must be smaller than the diskette size.

SQL2042W Warning! I/O error *error* accessing device *device*. Additional information (if available): *additional-information*. Please ensure media is mounted and positioned correctly.

Explanation: The application calling the utility has encountered an I/O error while trying to read or write to the tape device. The utility returns so that the user may correctly mount and position the tape.

The message may contain additional information to help diagnose the problem.

The utility waits for a response to continue.

User response: Correctly mount and position the tape and return to the utility indicating if processing continues or ends.

The error, device and the additional information (if present) can be used to diagnose and correct the problem.

SQL2043N Unable to start a child process or thread.

Explanation: Unable to start up the child processes or threads required during the processing of a database utility. There may not be enough available memory to create the new process or thread. The utility stops processing.

User response: Ensure the system limit for number of processes or threads has not been reached (either increase the limit or reduce the number of processes or threads already running). Ensure that there is sufficient memory for the new process or thread. Resubmit the utility command.

SQL2044N An error occurred while accessing a message queue. Reason code: *reason-code*.

Explanation: An unexpected error or bad message was received on one of the message queues during the

processing of a database utility. The following is a list of reason codes:

- 1 Unable to create a message queue. The number of message queues allowed may have been exceeded.
- 2 An error was encountered while reading from a message queue.
- 3 An error was encountered while writing to a message queue.
- 4 An invalid message was received from a message queue.
- 5 An error was encountered while opening a message queue.
- 6 An error was encountered while closing a message queue.
- 7 An error was encountered while querying a message queue.
- 8 An error was encountered while deleting a message queue.

The utility stops processing.

User response: Ensure the number of message queues allowed is not reached. Reduce the number of message queues in use if necessary and resubmit the utility command.

SQL2045W Warning! Error *error* occurred while writing to media *media*.

Explanation: A database utility process encountered error *error* returned by the operating system while writing to the media *media*. The utility returns so that the user may attempt to fix the problem or cancel the operation.

The utility waits for a response to continue.

User response: Consult the troubleshooting documentation for your operating system and correct the *error* condition. Return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL2046N The configuration parameter named *parameter-name* could not be updated because the operation timed out.

Explanation: The cluster caching facility (CF) is an instance-level designation that provides several services that are key to the operation of a DB2 pureCluster environment. The CF structure contains information about elements of the DB2 pureCluster instance, including information about each database in the DB2 pureCluster instance.

The CF structure memory parameters are configurable online and accept resize requests during runtime.

Resize requests for structure memory parameters such as CF_GBP_SZ, CF_SCA_SZ, and CF_LOCK_SZ are collectively bound by the memory limit set for CF_DB_MEM_SZ.

An update operation for a structure memory parameter must be completed within a time limit. This message is returned when the operation has exceeded that time limit. The operation has not completed.

User response: View the total memory allocated for the CF structures using the GET DB CFG command with the SHOW DETAIL clause. Together, the structure memory parameters cannot exceed the value of the parameter CF_DB_MEM_SZ.

Set the value of *parameter-name* to a value that adheres to the relationships defined between all CF structure memory parameters, as recommended in the documentation.

sqlcode: -2046

sqlstate: 5U050

SQL2047N There is not enough available memory in the CF to satisfy the request to increase the database configuration parameter named *parameter-name* to the specified value.

Explanation: The cluster caching facility (CF) is an instance-level designation that provides several services that are key to the operation of a DB2 pureCluster environment. Structures within the CF contain elements that are critical to the operation of each database in a DB2 pureCluster instance.

Overall CF memory is limited by the database manager configuration parameter named CF_MEM_SZ.

CF memory available for each database is limited by the database configuration parameter named CF_DB_MEM_SZ. Note CF_DB_MEM_SZ is an upper limit only and its memory is not reserved.

The available CF memory can be consumed by other active databases (if supported) or for internal CF purposes.

This message is returned when an attempt is made to set *parameter-name* to a value that exceeds the amount of memory that is available for CF_MEM_SZ or CF_DB_MEM_SZ.

User response: View the total memory available for the CF structures using the GET DB CFG command with the SHOW DETAIL clause. The parameter that indicates the amount of memory available for the entire CF is named CF_MEM_SZ. The parameter that indicates the amount of memory available for all CF structures is named CF_DB_MEM_SZ.

Set the value of *parameter-name* to a smaller value.

sqlcode: -2047

SQL2048N

sqlstate: 5U051

SQL2048N An error occurred while accessing object *object*. Reason code: *reason-code*.

Explanation: An error occurred while accessing an object during the processing of a database utility. The following is a list of reason codes:

1

An invalid object type is encountered.

2

A lock object operation failed. The lock wait may have reached the lock timeout limit specified in the database configuration.

3

An unlock object operation failed during the processing of a database utility.

4

Access to an object failed.

5

An object in the database is corrupted.

6

This message is returned with reason code 6 when a table space cannot be accessed for one of multiple reasons, including the following reasons:

- The state of the table space does not support the type of access attempt. Some examples of database states that can prevent some types of database access include: quiesced, offline, and backup in progress.
- One or more of the table space containers are not available.

For example, this message can be returned with reason code 6 when an attempt is made to back up a table space that is already in the processes of being backed up.

7

A delete object operation failed.

8

Trying to load/quiesce into a table that is not defined on this partition.

9

The BACKUP utility encountered an end-of-file in an unexpected place while processing an object. This does not necessarily mean that the data is corrupt, but the BACKUP utility is not able to process the data in its current state.

The utility stops processing.

User response:

1

Ensure that *object* is of valid type.

2

Increase the locktimeout database configuration parameter.

3

Check that there are not any issues while locking *object*, then retry the operation.

4, 7

Check that *object* exists and is accessible. Ensure that you have correct privileges/permissions to access it.

5

If *object* is db2rhist.asc, make sure that the db2rhist file is accessible by the instance owner. If permissions are set correctly, the db2rhist file may be corrupt. Move the existing file from its existing location, or delete it. DB2 will create a new db2rhist file the next time it needs to access it. Note: deleting the db2rhist file will cause historical information in the db2rhist file to be lost.

If *object* is any other database control file, you may need to recover the database.

6

Determine the current state of the table space using the MON_GET_TABLESPACE table function and then perform the following troubleshooting steps:

- If the table space is offline, attempt to determine the underlying problem and correct it. For example:
 - If the file system is not mounted, mount the file system, and then bring the table space online.
 - If table space files have been deleted, perform a restore operation.
- If the table space is quiesced, make the table space available using the QUIESCE TABLESPACES FOR TABLE command with either the RESET clause or the EXCLUSIVE clause. Note that the userid holding the quiesce might be needed to perform the QUIESCE RESET or QUIESCE EXCLUSIVE operation.
- If the table space is in the process of being backed up, wait for the backup operation to complete.

8

9 Ensure that you specify an appropriate table.

Perform a REORG operation on the specified table, and resubmit the BACKUP command.

SQL2049N Database activation failed because there is insufficient CF memory. Reason code = *reason-code*.

Explanation: During database activation, the database manager allocates memory for the structures inside the cluster caching facility (CF) as determined by database manager configuration parameters, database configuration parameters, and DB2 registry variables, including the following parameters and variables:

- CF_GBP_SZ
- CF_SCA_SZ
- CF_LOCK_SZ
- CF_DB_MEM_SZ
- NUMDB
- DB2_DATABASE_CF_MEMORY

Note that use of the DB2_DATABASE_CF_MEMORY registry variable must be coordinated with the CF_DB_MEM_SZ database configuration parameter and the NUMDB database manager configuration parameter.

Example

If there are four databases to be active at once, then the configuration parameters should be coordinated like this:

- The database manager configuration parameter NUMDB should be set to at least 4.
- If the database configuration parameter CF_DM_MEM_SZ is set to AUTOMATIC for each of the four databases, then the registry variable DB2_DATABASE_CF_MEMORY should be set to reflect the percentage of CF memory to be allocated to each database, which would be 25 in this example.

This message is returned when there is not enough memory allocated for the CF to accommodate the memory allocations for the structures inside the CF for one or more databases.

The reason code indicates which aspect of the CF memory allocation was the problem:

- 1 The Group Buffer Pool (GBP).
- 2 The Shared Communication Area (SCA).
- 3

The Global Lock Manager (LOCK).

- 4 The total CF memory required for this database.

- 5 The percentage of total CF memory assigned for this database.

User response: Respond to this message in one or more of the following ways:

General:

- Increase the overall CF memory size by setting a larger value for CF_MEM_SZ
- Use the AUTOMATIC setting for each CF structure configuration parameter and have DB2 calculate appropriate values for these parameters

For reason codes 1 - 4:

- Reduce the individual CF structure configuration parameters depending on the reason code:

- 1 The CF_GBP_SZ database configuration parameter
- 2 The CF_SCA_SZ database configuration parameter
- 3 The CF_LOCK_SZ database configuration parameter
- 4 The CF_DB_MEM_SZ database configuration parameter

For reason codes 4 and 5:

- Determine the amount of CF memory used by other databases and see if any settings need to be changed in order to accommodate the CF memory requirements of this database.

SQL2051N There was a communication failure between a DB2 member and a CF. Reason code = *reason-code*. CF identifier: *CF-id*. Host name: *host-name*.

Explanation: This message is returned when the database manager detects problems that interfere with communications between a DB2 member and cluster caching facility (CF).

The nature of the communication problem is indicated by the reason code:

- 1

The error occurred or was detected in the User-Level Direct Access Programming Library (uDAPL.)

2

The error occurred or was detected in the sockets layer.

3

The nature of the error could not be determined.

User response: Refer to the troubleshooting documentation.

SQL2052N The backup operation failed because the backup utility was unable to collect the required information and metadata for one or more DB2 members.

Explanation: In a DB2 pureCluster environment, when you perform a backup operation from a DB2 member, the backup utility must collect recovery metadata for all other DB2 members in the instance. This message is returned when the backup utility cannot collect the metadata information for one or more members. The backup utility might be unable to carry out the serialization that is necessary to process the metadata.

User response:

1. Check the db2diag log files for any communication or I/O errors that are associated with the backup agent or the logger EDU. Correct the errors and run the backup operation again.
2. If the backup operation continues to fail, perform the following steps:
 - a. Resolve the reason for which the backup utility was unable to collect metadata information.
 - b. Run the backup operation again.

sqlcode: -2052

sqlstate: 5U055

SQL2054N The backup or copy image is corrupted.

Explanation: The backup or copy image in use is corrupted

This can also mean that the Restore utility determined that a compressed image was not decompressed correctly.

The utility stops processing.

User response: Discard the image as it is not a valid image. Resubmit the utility command with a valid image.

SQL2055N Unable to access memory from memory set *memory-heap*.

Explanation: A database utility was unable to access memory during processing.

The utility stops processing.

User response: Stop the database manager, then restart it and resubmit the utility command.

SQL2056N An invalid media type was encountered on media *media*.

Explanation: An invalid media type was encountered during the processing of a database utility.

The utility stops processing.

User response: Ensure the media used is among of the types supported by the utility. Resubmit the command with a valid media list.

SQL2057N The media *media* is already opened by another process.

Explanation: The source or target media specified during the processing of a database utility is already open by another process. The utility does not allow shared access for the operation.

The utility stops processing.

User response: Ensure the media used is not in use currently. Resubmit the command with a valid media list.

SQL2058W An end-of-media warning was encountered on media *media*.

Explanation: An end-of-media warning was encountered during the processing of a database utility. This error can also occur if an invalid tape device block size was specified.

The utility is waiting for a response to continue.

User response: Correct the end-of-media condition and return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

The tape device block size (or blocking factor) used at restore time must be the same as that used during the backup. If a variable block size is used, then the buffer size used must be less than or equal to the maximum block size of the tape device.

SQL2059W A device full warning was encountered on device *device*.

Explanation: An device full warning was encountered during the processing of a database utility.

The utility is waiting for a response to continue.

User response: Correct the device full condition and return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL2060W The device *device* is empty.

Explanation: An empty device was encountered during the processing of a database utility. The utility is waiting for a response to continue.

User response: Mount the media and return to the utility with the caller action parameter to indicate if processing should continue or terminate.

SQL2061N An attempt to access media *media* is denied.

Explanation: An attempt to access a device, file, named pipe, TSM or the vendor shared library is denied during the processing of a database utility. The utility stops processing.

User response: Ensure the device, file, named pipe, TSM or vendor shared library used by the utility allows the access requested and resubmit the utility command.

SQL2062N An error occurred while accessing media *media*. Reason code: *reason-code*.

Explanation: An unexpected error occurred while accessing a device, file, or the vendor shared library during the processing of a database utility. The following is a list of reason codes:

- 1 An attempt to initialize a device, file, or the vendor shared library failed.

Other reason codes refer to vendor api codes.

The utility stops processing.

User response: Ensure the device, file, or vendor shared library used by the utility is available and resubmit the utility command. If the command is still unsuccessful, contact your technical service representative.

For other reason codes, consult the appropriate vendor documentation for further details on the code.

SQL2065W Caller action *caller-action* specified is not allowed when the media *media* specified is the only one left connected to the utility.

Explanation: The caller action specified is not allowed because there is only one device left connected to the database utility.

User response: Return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL2066N Table space name *name* specified does not exist in the database or cannot be used for the utility operation.

Explanation: The table space name specified is syntactically correct, but it does not exist in the database or cannot be used in an utility operation.

A table space might be disallowed for several reasons, including the following reasons:

- If the utility in use is a backup operation, the table space might be disallowed because it is a system or user temporary table space or is in an inconsistent state.
- If the utility in use is a restore operation, the table space might be disallowed because another restore operation or a rollforward operation of the table space is already in progress.
- If the utility is a rollforward operation, the table space might be disallowed because a restore of the table space is already in progress.

User response: Resubmit the utility command, specifying a valid table space.

SQL2068N An invalid image was encountered on media *media*. There was no media header.

Explanation: An invalid image was encountered during the processing of a database utility. The utility was not able to locate a valid media header. The utility stops processing.

User response: Resubmit the command with correct backup or copy images.

SQL2069N An invalid image was encountered on media *media*. The image was created for database alias *dbalias*.

Explanation: An invalid image was encountered during the processing of a database utility. The image provided was from a different database alias. The utility stops processing.

User response: Resubmit the command with correct backup or copy images.

SQL2070N An invalid image was encountered on media *media*. The image contained timestamp *timestamp*.

Explanation: An invalid image was encountered during the processing of a database utility. The image provided was from a backup or copy with a different timestamp. The utility stops processing.

User response: Resubmit the command with correct backup or copy images.

SQL2071N An error occurred while accessing the shared library *shr-lib-name*. Reason code: *reason-code*.

Explanation: An unexpected error occurred while accessing a vendor shared library during the processing of a database utility. The following is a list of reason codes:

1

An invalid shared library path was encountered.

2

The library could not be loaded because it (or a library required by it) does not exist or does not have a valid format. This sometimes means that a 32-bit library is being loaded in a 64-bit instance, or vice-versa.

3

An error was encountered while unloading the shared library.

The utility stops processing.

User response: Responses by reason code:

1

Specify a correct path in the restore or backup command. Make sure the path is valid and contains the correct shared library. For more information on the backup and restore commands, search the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using terms such as "restore database command" or "backup database command".

2

Ensure that you are specifying the correct library. If your system can run 32-bit and 64-bit binaries, ensure that you are instructing DB2 to load a library of the right format.

If the failure occurs while using TSM, verify that the TSM API Client is properly installed.

See the db2diag log file for more information.

3

Ensure that version of TSM client being used is compatible with your DB2 instance. For more information, search the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using terms such as "TSM clients".

SQL2072N Unable to bind the shared library *shr-lib-name*. Reason code: *reason-code*.

Explanation: An error was encountered while binding the shared library during the processing of a database utility. The utility stops processing.

User response: Note the reason code returned from the vendor utility in the message and take corrective action if possible. Resubmit the command with a valid shared library or using another supported media.

SQL2073N DATALINK processing failed because of internal problems at the database server or DB2 Data Links Manager.

Explanation: An unexpected error occurred while processing DATALINK values.

User response: Resubmit the command. If the problem still exists, resubmit the command after shutdown and restart of DB2 and the DB2 Data Links Managers.

The Restore utility can avoid DATALINK processing by specifying WITHOUT DATALINK.

SQL2074N DATALINK processing failed because of internal problems at the database server.

Explanation: An unexpected error occurred while processing DATALINK values.

User response: Resubmit the command. If the problem still exists, resubmit the command after shutdown and restart of DB2.

The Restore utility can avoid DATALINK processing by specifying WITHOUT DATALINK.

SQL2075N DATALINK processing failed because of internal problems at the DB2 Data Links Manager.

Explanation: An unexpected error occurred while processing DATALINK values.

User response: Resubmit the command. If the problem still exists, resubmit the command after shutdown and restart of the DB2 Data Links Managers.

The Restore utility can avoid DATALINK processing by specifying WITHOUT DATALINK.

SQL2076W The DB2 Data Links Manager *server-name* was not registered to the database.

Explanation: The DB2 Data Links Manager *server-name* was not registered to the database with the ADD DATALINKS MANAGER command.

User response: For details on why the ADD DATALINKS MANAGER command failed, check the

administration notification log.

SQL2077W Reconcile processing completed successfully on Data Links Managers that were available. Reconcile processing is pending on Data Links Managers that were not available. Examine the administration notification log for more information.

Explanation: Some or all of the Data Links Managers referred to in the table data were not available during reconcile processing. Reconcile processing completed successfully on Data Links Managers that were available. The table is placed in DataLink Reconcile Pending (DRP) state, because reconcile processing is pending on Data Links Managers that were not available.

User response: The table will be taken out of DataLink Reconcile Pending state when reconcile is completed successfully on all Data Links Managers referred to in the table data. Bring up the Data Links Managers that were not available and run reconcile again.

SQL2078N The DB2 Data Links Manager could not be added or dropped successfully. Reason code = *reason-code*.

Explanation: The DB2 Data Links Manager could not be added or dropped, as indicated by the one of the following reason codes:

- 01 The DB2 Data Links Manager being added is already registered to the database.
- 02 The DB2 Data Links Manager being dropped is not registered to the database.
- 03 The database manager configuration parameter DATALINKS is set to NO.
- 04 The database already has the maximum allowed number of DB2 Data Links Managers registered to it.

User response: The action depends on the reason code as follows:

- 01 Do not attempt to add the DB2 Data Links Manager more than once.
- 02 Do not attempt to drop a DB2 Data Links Manager which is not registered.
- 03 Set the database manager configuration parameter DATALINKS to YES using the UPDATE DATABASE MANAGER CONFIGURATION command and attempt the operation again.
- 04 Do not attempt to add more than the maximum allowed number of DB2 Data Links Managers.

SQL2079N An error was reported by the shared library *shr-lib-name*. Return code: *return-code*.

Explanation: An error was reported from a vendor shared library during the processing of a database utility. The return code displayed corresponds to one of the valid vendor API return codes. The utility stops processing.

Possible API return codes are:

- 3 The DB2 and vendor products are incompatible.
- 4 An invalid action was requested.
- 8 An invalid userid was specified.
- 9 An invalid password was provided.
- 10 Invalid options were specified.
- 12 An invalid device handle was provided.
- 13 An invalid buffer size was specified.
- 30 A severe error was experienced inside the vendor product.
- other** A specific severe error returned by the vendor product.

User response: Ensure the shared library provided is valid. Attempt to make the necessary corrective actions based on the vendor API return code and the corresponding db2diag log file entry and resubmit the utility command.

SQL2080N A snapshot backup failed. The database being backed up is not unique within its volume directory.

Explanation: A snapshot backup enables you to use fast copying technologies for the data copying and movement parts of DB2 database backup and restore operations.

A snapshot backup was attempted on a DB2 database. However, the snapshot backup utilities were unable to uniquely identify all of the elements of the database that are required to be copied because there are one or more other databases cataloged in the same volume

directory as the database being backed up.

If other DB2 databases are cataloged in the same volume directory as a database against which you are trying to run snapshot backup, the backup image might include files from databases other than the one you are trying to back up. If a backup image contains files from multiple databases, you can not successfully use that image to restore any of those databases.

You can only run a snapshot backup or restore on a DB2 database that is unique in its volume directory.

The snapshot backup failed.

User response: To perform a snapshot backup on a DB2 database in a given volume directory that contains multiple databases:

- Drop or move any other databases in the target volume directory.
- Run the BACKUP command again.

SQL2081N A snapshot restore failed because some element or elements of the database to be restored have the same name as some element or elements of existing databases. Reason code = *reason-code*.

Explanation: A snapshot backup enables you to use fast copying technologies for the data copying and movement parts of DB2 database backup and restore operations.

A restore of a DB2 database was attempted from a snapshot backup image. However, the snapshot restore utilities were unable to uniquely identify all of the elements of the database that are required to be copied for the reason indicated by the *reason-code*:

- 1 There are one or more other databases cataloged in the target volume directory.

If another database exists in the target volume directory, the restore will replace the volume directory, causing the existing database to become uncataloged.

- 2 The complete database directory in the backup image cannot be created on disk during restore because some portion of the database directory in the backup image is being used by another database.

For example, when you create a database, the DB2 server creates a directory hierarchy to store metadata for that database: a directory is created with the name of the DB2 instance; below this, there might be directories for database partitions; and below these are directories named using database tokens such as SQL00001 for the first database created, SQL00002 for the second database created, and so on.

You can not restore a snapshot backup image that contains directories named SQL00001, SQL00002, or similar if there exist directories on the target volume directory with the same names.

- 3 The log directories to be restored from the backup image already exist on disk and are not empty.

If the log directories to be restored from the backup image already exist on disk and contain data, DB2 will not restore these directories otherwise data could be unexpectedly overwritten.

The snapshot restore failed.

User response: To restore a DB2 database from a snapshot backup image to a given target volume directory that contains multiple databases, drop or move any other databases in the target volume directory.

To ensure that log directories from a snapshot backup image can be restored, verify that the log directories either do not exist on disk or are empty. Run the RESTORE command again.

SQL2084N Only one work action set can be defined for the following database, workload, or service superclass: *db-or-ssc-name*.

Explanation: There is already a work action set defined for the following specified database, workload, or service superclass: *db-or-ssc-name*. Only one work action set can be defined for any one database, workload, or service superclass at any given time.

User response:

1. Do one of the following:
 - Specify a different database, workload, or service superclass.
 - Drop the work action set currently defined for the database, workload, or service superclass.
2. Issue the request again.

sqlcode: -2084

sqlstate: 5U017

SQL2085N The service subclass specified in the mapping work action *work-action-name* cannot be the default service subclass.

Explanation: The default service subclass cannot be specified when defining a work action to map activities.

User response: Specify a different service subclass that is not the default service subclass and try the request again.

sqlcode: -2085

sqlstate: 5U018

SQL2086N Invalid range specified for work class
work-class-name.

Explanation: The value specified either for the FROM parameter or the TO parameter is not valid. The FROM value must be zero or a positive double-precision value and the TO value must either be a positive double-precision value or UNBOUNDED, to specify no upper bound. If the TO value is not UNBOUNDED, it must be greater than or equal to the FROM value.

User response: Specify a valid value for both the FROM value and the TO value and try the request again.

SQL2088W Automatic statistics profiling has been disabled for the specified connection.

Explanation: You can apply workload management (WLM) configuration settings to a specific database connection using the WLM_SET_CONN_ENV stored procedure. Including the <sectionactuals> name in the "settings" parameter to the stored procedure with a value other than NONE will enable the collection of section actuals for the specified connection.

This message is returned when the WLM_SET_CONN_ENV stored procedure is used to enable section actuals collection.

Section actuals collection and automatic statistics profiling (enabled using the AUTO_STATS_PROF database configuration parameter) cannot be used together. When you enable section actuals collection on a connection, automatic statistics profiling for the connection is disabled.

User response: No response to this message is required.

To restore automatic statistics profiling for this connection, disable section actuals collection by executing the WLM_SET_CONN_ENV stored procedure again and specifying the following name-value pair in the "settings" parameter:
<sectionactuals>NONE</sectionactuals>

sqlcode: +2088

sqlstate: 01HN2

SQL2089N The last connection attribute cannot be dropped from the definition of workload *workload-name.*

Explanation: The ALTER WORKLOAD statement would have resulted in the last connection attribute being dropped from the workload *workload-name*. This operation is not allowed. There must be at least one

connection attribute specified in the definition of the workload.

User response: Ensure that the ALTER WORKLOAD statement leaves at least one connection attribute in the definition of the workload.

sqlcode: -2089

sqlstate: 5U022

SQL2090N The workload *workload-name* **cannot be dropped because it is not disabled, it has active workload occurrences, or it has a threshold or a work action set associated with it.**

Explanation: An attempt to drop workload *workload-name* has failed, for one of the following reasons.

- The workload has not been disabled.
- The workload has active workload occurrences.
- A threshold is associated with the workload.
- A work action set is associated with the workload.

User response: Do one of the following:

- If the workload is not yet disabled, issue the ALTER WORKLOAD statement to disable the workload and keep new workload occurrences from becoming active.
- Wait until there are no more active workload occurrences running on the system and then issue the DROP statement to drop the workload.
- If a threshold is associated with the workload, issue the DROP THRESHOLD statement to drop the associated threshold.
- If a work action set is associated with the workload, issue the DROP WORK ACTION SET statement to drop the associated work action set.

sqlcode: -2090

sqlstate: 5U023

SQL2091N The remaining storage paths do not contain enough storage space to rebalance the data in table space *tablespace-name.*

Explanation: A request has been made to rebalance a table space that has containers on one or more storage paths that are being dropped. The data server will drop these containers as part of the rebalance operation. However, the table space must have sufficient space on its remaining paths to accommodate the data moved from the dropped containers. The data server automatically extends existing containers and creates new containers on the remaining paths as necessary, but the remaining paths do not contain enough available storage to house the data to be moved.

User response: For every table space that you intend to rebalance in this way, determine the number and size of containers that are to be dropped to obtain an estimate of the amount of data that is being moved to the remaining storage paths. At a minimum, the rebalance operation (or operations) requires this amount of free space to succeed. Either increase the amount of free space on the remaining storage paths, or add new storage paths to the database.

sqlcode: -2091

sqlstate: 57011

SQL2092N Storage path *storage-path* is in the drop pending state. The current request cannot be processed.

Explanation: One or more of the storage paths are already in the drop pending state.

User response: Remove the storage paths that are in the drop pending state from the ALTER DATABASE statement or the ALTER STOGROUP statement. Then try the request again.

sqlcode: -2092

sqlstate: 55073

SQL2093N The specified storage paths cannot be dropped. At least one storage path must be associated with the storage group.

Explanation: A storage group must have at least one storage path associated with it. The ALTER STOGROUP statement is attempting to drop all of the storage paths for the storage group (or the remaining paths that are not already in the drop pending state).

User response: Modify the ALTER STOGROUP statement so that at least one of the storage paths is not dropped. If all of the storage paths must be dropped, modify the ALTER STOGROUP statement to add one or more new storage paths at the same time. The new storage paths must have enough free space to accommodate the movement of containers and data from the paths being dropped.

sqlcode: -2093

sqlstate: 428HH

SQL2094W The rebalance of table space *tablespace-name* either did not add or drop containers, or there was insufficient disk space to create all of the containers. Reason code: *reason-code*.

Explanation: A rebalance operation attempts to drop containers from storage paths in the "drop pending" state, and to create new containers on recently added storage paths. The operation also tries to create containers for stripe sets that do not already include all

of the database storage paths. This warning occurred on one or more database partitions as a result of one of the following reason codes:

1

No containers need to be added or dropped.

2

No containers need to be dropped, but some stripe sets in the table space do not contain containers for every storage path. However, the storage paths do not have enough disk space for any of the new containers or the table space has reached its maximum size.

3

No containers need to be dropped, but some stripe sets in the table space do not contain containers for every storage path. Some containers could not be created because some storage paths do not have enough disk space, or the table space has reached its maximum size. The new containers will be added to the table space and the data will be rebalanced.

4

Some containers need to be dropped and some stripe sets in the table space do not contain containers for every storage path. However, the corresponding storage paths do not have enough disk space for any of the containers to be created. The containers on the "drop pending" storage paths will be dropped and the data will be rebalanced.

5

Some containers need to be dropped and some stripe sets in the table space do not contain containers for every storage path. Sufficient disk space exists to create some of these containers, but not all. Containers in the "dropped pending" storage paths will be dropped and new containers will be added as needed to stripe sets. The data will be rebalanced.

User response:

1

No rebalance is necessary.

2

Increase the amount of free space on the storage paths that are full or increase the maximum allowable size of the table space. Then try the request again.

3

Wait for the current rebalance to complete. Then, increase the amount of free space on the storage paths that are full or increase the

maximum allowable size of the table space.
Then try the request again.

4

Wait for the current rebalance to complete.
Then increase the amount of free space on the storage paths that are full and try the request again.

5

Wait for the current rebalance to complete.
Then increase the amount of free space on the storage paths that are full and try the request again.

To increase the amount of free space on a storage path either increase the size of the file system or delete non-database data.

sqlcode: +2094

sqlstate: 01690

SQL2095W Storage path *storage-path* is in the drop pending state because one or more automatic storage table spaces reside on the path.

Explanation: A request has been made to drop storage path *storage-path* from the database. Because one or more automatic storage table spaces have containers on this storage path, it cannot be removed immediately and is in the drop pending state. A storage path cannot be removed until all containers on it have been removed.

If more than one storage path is being dropped, this message might also apply to the other storage paths.

User response: Perform one or more of the following tasks to remove containers from the storage path:

- Drop all automatic storage temporary table spaces. Then, recreate these table spaces. The newly created table spaces will not use the drop pending storage paths.
- Use the REBALANCE clause of the ALTER TABLESPACE statement to move data and containers from storage paths that are being dropped.
- Drop table spaces that you do not need.

You can determine the list of automatic storage table spaces using drop pending storage paths by issuing the following SQL statement:

```
SELECT DISTINCT A.TBSP_NAME, A.TBSP_ID,
A.TBSP_CONTENT_TYPE
```

```
FROM SYSIBMADM.SNAPTBS A,
SYSIBMADM.SNAPTBS PART B
```

```
WHERE A.TBSP_ID = B.TBSP_ID AND
B.TBSP_PATHS_DROPPED = 1
```

sqlcode: +2095

sqlstate: 01691

SQL2096N The threshold *threshold-name* cannot be dropped. The threshold is not disabled, the threshold queue is not empty, or an activity is running under the control of the threshold.

Explanation: An attempt to drop threshold *threshold-name* failed. The threshold is not disabled, the threshold queue is not empty, or an activity is running under the control of the threshold.

User response: If the threshold is not yet disabled, disable it. If the threshold is part of a work action set, you must use the ALTER WORK ACTION SET statement to disable it. If the threshold is not part of a work action set, use the ALTER THRESHOLD statement to disable it. Disabling the threshold prevents new requests from running under the control of the threshold. If the concurrency limit for a queueing threshold has been reached, the DISABLE action prevents new requests from joining the queue. Wait until the currently executing request completes or no more requests are in the queue, then issue the DROP THRESHOLD statement again.

sqlcode: -2096

sqlstate: 5U025

SQL2097N The activity cannot be mapped to the service subclass you specified because at least one of the input parameters to the routine WLM_REMAP_ACTIVITY is not valid. Reason code = *reason-code*.

Explanation: The routine WLM_REMAP_ACTIVITY failed because one or more of the input parameters is not valid. The reason codes are as follows:

1

The activity can be remapped only to a service subclass under the service superclass of the activity. Specify the service superclass name of the activity in the *service_superclass_name* parameter or set it to null. Setting the *service_superclass_name* parameter to null defaults the input parameter to the current service superclass name of the activity.

2

A valid service subclass under the service superclass of the activity must be specified in the *service_subclass_name* parameter.

3

Specify Y in the log_evmon_record parameter to log an event monitor record to the THRESHOLD VIOLATIONS event monitor when the activity is remapped on a partition. Specify N in the log_evmon_record parameter to prevent logging an event monitor record to the THRESHOLD VIOLATION event monitor when the activity is remapped on a partition.

User response: Ensure that the condition in the reason code is satisfied and reinvoke the WLM_REMAP_ACTIVITY routine.

sqlcode: -2097

sqlstate: 5U046

SQL2098N Cannot perform requested operation because the requested operation conflicts with objects currently used by or previously produced by schema transport operation. Reason Code: rc

Explanation: The requested operation is not compatible with the transport operation. The following reason code indicates the error:

- 1
Storage paths cannot be altered when they are being accessed by the transport operation. This conflict can occur when the transport operation is adding or dropping storage paths on the staging database, or when dropping storage paths on the target database.
- 2
The requested operation cannot be performed on a table space that does not have containers and is unusable.
- 3
The table space name is reserved for the transport operation.

User response: Based on the reason code, perform the following actions:

- 1
Wait until schema transport completes, then re-issue the ALTER STORAGE PATH command.
- 2
Drop the unusable table space. Do not perform the operation on the unusable table space.
- 3
Specify a different table space name.

SQL2101N The ADMIN_MOVE_TABLE procedure could not be completed because of an incompatibility with a related database object or configuration. Reason code: reason-code.

Explanation: You can use the SYSPROC.ADMIN_MOVE_TABLE procedure to move data from one table space to a another table space. For example, if you have existing DMS table spaces that do not have reclaimable storage enabled, you can migrate that data to new DMS table spaces that have reclaimable storage enabled using this procedure. The reason this error was returned is indicated by the reason code:

- 1
The DB2_SKIPDELETED registry variable is enabled. Prior to DB2 Version 9.7 Fix Pack 2, an online admin move table operation cannot be performed if the DB2_SKIPDELETED registry variable is enabled.
- 26
The protocol table SYSTOOLS.ADMIN_MOVE_TABLE was not created by this procedure and therefore cannot be used.

User response: First, respond according to the given reason code:

- 1
Disable the DB2_SKIPDELETED registry variable.
- 26
Delete the table SYSTOOLS.ADMIN_MOVE_TABLE.

Then, call the ADMIN_MOVE_TABLE procedure again.

sqlcode: -2101

sqlstate: 5UA0M

SQL2102N The ADMIN_MOVE_TABLE procedure could not be completed because of an internal failure during the execution of the procedure. Reason code: reason-code.

Explanation: You can use the SYSPROC.ADMIN_MOVE_TABLE procedure to move data from one table space to a another table space. For example, if you have existing DMS table spaces that do not have reclaimable storage enabled, you can migrate that data to new DMS table spaces that have reclaimable storage enabled using this procedure. The reason this error was returned is indicated by the reason code:

12	An unexpected internal error has occurred.	22	Retry the operation when there is less insert, update, or delete activity occurring on the table.
13	Load was used as the copy option, and the FORCE option was not set during the swap phase.	28	Statistics cannot be copied; retry the operation specifying the NO_STATS or NEW_STATS option.
18	The procedure attempted to create an index on the table but could not do so because the table only contains columns that cannot be specified as part of an index.	31	The CLUSTER and NON_CLUSTER options cannot be specified at the same time. Choose only one to specify, or none if the default behavior is desired.
19	Some rows in the staging table could not be processed during the replay phase because too many locks are active on the staging table.	32	Retry the ADMIN_MOVE_TABLE SWAP operation without the KEEP option.
22	An error occurred or rows were rejected when the target table was being loaded.		sqlcode: -2102
28	An error occurred while copying statistics from the source table to the target table.		sqlstate: 5UA0M
31	The CLUSTER and NON_CLUSTER options are incompatible with each other.		<hr/> SQL2103N The ADMIN_MOVE_TABLE procedure could not be completed because some aspect of either the source table or target table is not supported by the ADMIN_MOVE_TABLE procedure. Reason code: <i>reason-code</i> .
32	The KEEP option is not supported for system-period temporal tables.		Explanation: You can use the SYSPROC.ADMIN_MOVE_TABLE procedure to move data from one table space to a another table space. For example, if you have existing DMS table spaces that do not have reclaimable storage enabled, you can migrate that data to new DMS table spaces that have reclaimable storage enabled using this procedure. The ADMIN_MOVE_TABLE procedure cannot operate on the source table or the target table as they currently exist in the database. The aspect that is preventing the operation is indicated by the reason code:
User response: Respond according to the given reason code:			
12	To report this unexpected result, contact your DB2 service representative and provide the db2diag log file and the contents of the diagnostic directory path (as specified by the DIAGPATH database manager configuration parameter).	6	The source table type is not supported, or referential constraints are defined on the table.
13	The load operation is non-recoverable. Use the FORCE option, along with COPY_USE_LOAD, so that you are aware of this fact and can create a backup image.	7	The verification operation has found differences between the tables. Either the number of rows or the values for the columns are not consistent between the two tables.
18	Create a column on the table that can be specified as part of an index before attempting to move this table.	14	
19			

SQL2104N

16	The source table is the target of an active event monitor and cannot be moved.	Specify a table that is not a system-period temporal table or an application-period temporal table as the target table.
17	The alterable table flags or indexes in the source and target table are not in synchrony.	sqlcode: -2103 sqlstate: 5UA0M
20	Column definitions or indexes differ when they should be the same.	SQL2104N The ADMIN_MOVE_TABLE procedure could not be completed at this time by this user. Reason code: <i>reason-code</i> .
21	The specified target table is not supported.	Explanation: You can use the SYSPROC.ADMIN_MOVE_TABLE procedure to move data from one table space to a another table space. For example, if you have existing DMS table spaces that do not have reclaimable storage enabled, you can migrate that data to new DMS table spaces that have reclaimable storage enabled using this procedure. The state of a database object or operation conflicts with the attempted move table operation. The reason this error was returned is indicated by the reason code:
33	The specified target table is not empty.	
	A system-period temporal table or an application-period temporal table cannot be specified as a target table.	
	User response: Respond according to the given reason code:	
6	Change the type of the table to one that is supported and remove any referential constraints and text search indexes on the table.	4 The online move table operation is in a state that does not allow the specified operation.
7	Start the online move table operation again, which should fix the error in the protocol table.	8 No online move table operation is in progress; therefore, the specified operation is not allowed.
14	Disable the event monitor before attempting to move the table.	9 An online move table operation is in progress; a parallel online table move operation on the same table is not allowed.
16	Retry the swap phase in order to correct the differences with the alterable table flags or indexes between the source and target table.	15 The table is the target table, staging table, or protocol table of an online table move operation and therefore cannot be moved.
17	Alter the column definition and index definition to be the same on the source table and target table.	29 An inplace reorganization operation is in progress which does not allow the copy phase of the online move table to take place.
20	Change the target table so it is supported, or specify a different, supported target table.	User response: Respond according to the given reason code:
21	Specify a target table that is empty or delete all entries in the target table and retry the operation.	4 Specify an appropriate operation for the current state of the online move table operation.
33		8 Specify an operation that is allowed.
		9 Wait until the conflicting online table move operation has completed.

15	Wait until the online table move operation is completed.	The column could not be added as specified because any column that is being added and defined as NOT NULL must have a DEFAULT value specified.
29	Wait until the inplace reorganization operation has completed.	User response: Respond according to the given reason code:
sqlcode: -2104		10
sqlstate: 5UA0M		Start the online move table operation again, which should fix the error in the protocol table.
<hr/>		
SQL2105N	The ADMIN_MOVE_TABLE procedure could not be completed because a prerequisite for running the procedure was not satisfied. Reason code: <i>reason-code.</i>	11
Explanation: You can use the SYSPROC.ADMIN_MOVE_TABLE procedure to move data from one table space to a another table space. For example, if you have existing DMS table spaces that do not have reclaimable storage enabled, you can migrate that data to new DMS table spaces that have reclaimable storage enabled using this procedure. The ADMIN_MOVE_TABLE procedure requires certain information or objects to exist before it can run successfully. The reason code indicates what was not satisfied:		23
10	Index information cannot be found in the protocol table.	Create a new unique index for the table, remove the column that is to be dropped from the unique index, or do not attempt to drop the column and retry the online move table operation.
11	Expected data cannot be found in the protocol table.	24
23	The column could not be dropped as specified because a unique index must exist before a column can be dropped. The column that is to be dropped cannot exist in that unique index.	25
24	A table space for regular data, large object (LOB) data, or indexes was specified but not all three of these table spaces were specified.	30
25	A table with a LONG, LOB, structured type, or XML column was specified to be moved but a unique index (excluding unique indexes that include an XML column) is not defined on that table.	Specify all three table space parameters (regular data, large object data, and index) or none of these parameters.
30		Create a unique index on the table, or do not attempt to move the table.
		sqlcode: -2105
		sqlstate: 5UA0M
<hr/>		
SQL2150W	The table spaces contained in the backup image were restored. Depending on the request of the caller, one or more of these table spaces might have been skipped.	
Explanation: A RESTORE DATABASE command was issued. The user might have indicated that only a subset of the table spaces in the backup image were to be recovered.		
User response: No action is required.		
<hr/>		
SQL2154N	The RESTORE was not successful. The backup used to restore the table space(s) is not associated with the current log sequence for the database.	
Explanation: For table space restore, the backup must		

have been taken during the current log sequence of the database. The log file sequence is determined by the database that has been restored previously or the log files that have been processed. In addition, the backup must have been taken after the last time the database was enabled for roll forward recovery.

Table space restore has stopped.

User response: Resubmit the command with a correct backup image.

SQL2155W Changes have been made to the recovery history file since the open scan was issued.

Explanation: Changes have been made to the recovery history file since the file was open for a scan. The data read may not be consistent.

User response: If it is essential to have consistent data from the scan, close the recovery history file and resubmit the command.

SQL2157N There are already eight recovery history file scans open.

Explanation: Eight recovery history file scans in this process are already open. No more than eight open scans are allowed.

The command cannot be processed.

User response: Issue one or more CLOSE RECOVERY HISTORY FILE SCAN commands and resubmit the command.

SQL2160W A damaged recovery history file has been replaced. Processing continued.

Explanation: An error was encountered during an access to the recovery history file. The utility is able to recover the file from an alternate copy. The utility continues processing.

User response: The utility continues processing successfully. The user should take appropriate precautions to ensure the recovery history file is not damaged again.

SQL2161N A damaged recovery history file could not be fixed. The specified action failed.

Explanation: An error was encountered during an access to the recovery history file. The utility is not able to recover the file. The utility stops processing.

User response: To continue processing, the user may remove the recovery history file and resubmit the command. The utility will regenerate a new file. Any data from the corrupted file are lost. The user may look at the corrupted file to see if any information can be saved. The user should take appropriate precautions to ensure the recovery history file is not damaged again.

SQL2162N A recovery operation failed because the database manager does not have permission to access log file *log-file-number* for database *database-name* on database partition *dbpartitionnum* and log stream *log-stream-ID*.

Explanation: The database manager cannot access the specified log file because of the file permission settings. Recovery (rollforward or crash recovery) cannot continue.

User response: Check the file system where the log files are stored. Ensure that sufficient permission has been given to the instance owner to access these log files, and attempt the recovery operation again.

SQL2163N DB2 is unable to locate a backup image in the Recovery History File to recover the database to the given point in time on database partition number *partition_number*.

Explanation: DB2 is unable to locate a backup image in the Recovery History File to recover the database to the given point in time. This error may occur when the History File has been pruned.

User response: Try specifying a later point in time. If end of logs is specified, ensure that the History File includes a record of backup events.

SQL2164N The RECOVER utility was unable to find the specified recovery history file *filename* on database partition number *partition_number*.

Explanation: The recovery history file specified for the RECOVER command was not found.

User response: Verify the file name and resubmit the command.

SQL2165W The number of table spaces that are stored in a history file record exceeds the number of allocated table spaces in the `poTablespace` field of the `db2HistoryData` data structure.

Explanation: The value of the `iNumTablespaces` field in `db2HistoryData` is less than the number of table spaces in the history file record being fetched. The table space data has been truncated to the value of `iNumTablespaces`.

User response: Increase the memory allocation of `poTablespace` to allow for more table spaces, and update the value of `iNumTablespaces` to the corresponding higher number. The number of table spaces that is represented by the value of the `oMaxTablespaces` field in the `db2HistoryOpenStruct` data structure (returned by the `db2HistoryOpenScan`

API) is guaranteed to be sufficient to read any entry in the history file.

SQL2166N RECOVER command failed because the database *database* does not exist.

Explanation: The RECOVER command relies on a recovery history file to determine which backup image and log files are needed to recover the database.

DB2 was unable to locate the recovery history file because the specified database does not exist.

User response: Ensure that the specified database name is correct or use the USING HISTORY FILE clause of the RECOVER command to specify a recover history file for the database.

SQL2167W The number of log streams that are stored in a history file record exceeds the number of allocated log streams that were passed into the function.

Explanation: The value of the ioLogRange.iNumLogStreams field in the db2HistoryData data structure is less than the number of log streams in the history file record being fetched. The log stream data has been truncated to the value of ioLogRange.iNumLogStreams.

User response: Increase the memory allocation of ioLogRange.oStream to allow for more log streams, and update the value of ioLogRange.iNumLogStreams to the corresponding higher number. The number of log streams that is represented by the value of the oMaxLogStreams field in the db2HistoryOpenStruct data structure (returned by the db2HistoryOpenScan API) is guaranteed to be sufficient to read any entry in the history file.

SQL2170N The utility encountered entries with the same identifier in the recovery history file. Write fails.

Explanation: The utility has encountered an entry with the same identifier (timestamp to the second) in the recovery history file while writing to it. The write to the recovery history file terminates. Database manager ensures the uniqueness of the recovery history file identifiers and makes provisions for it even if there are more than one request per second. However, there may be cases where it will fail if numerous requests come in within a few seconds.

User response: If the applications are running utilities (such as backup, quiesce, load) that generate numerous entries to the history file, try to pace the utility requests to prevent the problem.

SQL2171N The update of the recovery history file failed because the specified object part does not exist in the file.

Explanation: The entry specified to be updated in the recovery history file does not exist in the file. The utility stops processing.

User response: Resubmit the command with a valid entry.

SQL2172W The utility has completed but it is not able to log the event in the recovery history file due to error *error*.

Explanation: The utility has encountered an error writing to the recovery history file. This warning does not affect processing.

User response: Correct the error condition to prevent future warnings.

SQL2180N Incorrect syntax or incorrect password key used in filtering specification.

Explanation: The filtering specification provided uses one or both of incorrect syntax or an incorrect password key.

User response: Save the diagnostic information. Contact IBM service.

SQL2181N An internal error occurred during filtered recovery.

Explanation: An internal error occurred during filtered recovery. Recovery is terminated.

User response: If the error was on an attempt to change the state for a table, try filtering out the full tablespace. Save the diagnostic information. Contact IBM service.

SQL2200N The qualifier for the table or index name is too long.

Explanation: The authid must be 1 to 128 bytes in length.

The utility stops processing.

User response: Resubmit the command with the correct qualifier.

SQL2203N The tablename parameter is not valid. Either the table name is too long, only an authorization ID was specified, the table name was not specified, or the address of the name is not valid.

Explanation: The table name is required and it must be 1 to 128 characters in length (bytes in MBCS

environments). The table name must be located at a valid application address.

The utility stops processing.

User response: Resubmit the command with the correct table name.

SQL2204N The iname parameter is not valid. The name of the index is too long, only an authorization ID was specified, or the address of the index is not valid.

Explanation: If an index is specified, the name must be 1 to 128 bytes in length. The index must be located at a valid application address.

The utility stops processing.

User response: Resubmit the command with a valid index name.

SQL2205N The requested operation failed because the specified index is not valid. Reason code: *reason-code*.

Explanation: The specified index parameter is not valid for the requested operation. Following is a list of reason codes:

1

The specified index does not exist for the specified *schema.table-name* or *schema.index-name*.

2

The specified index is an extended index. The Reorganize Table utility does not support indexes based on index extensions.

3

All indexes defined on the table must be pseudo delete enabled for the following operations: Inplace Table REORG, Online LOAD, REORG INDEXES with the CLEANUP option.

4

An index other than the clustering index was specified on the table REORG command.

5

Inplace table REORG is not allowed if any indexes exist on the table that are based on index extensions.

6

An index cannot be specified for a REORG TABLE of a table that has one or more dimensions using the ORGANIZE BY clause of the CREATE TABLE command.

7

The specified index for REORG TABLE cannot be an XML regions index, XML column path index, or an index on an XML column.

8

REORG INDEXSCAN can only be used if an index is specified or if a clustering index exists on the table.

9

The specified index for REORG INDEX with the RECLAIM EXTENTS option must be in a database managed space (DMS) table space.

Federated system users: this situation can also be detected by the data source.

The utility or operation stops processing.

User response: Resubmit the command with a valid index or without an index if applicable.

SQL2207N The filepath specified by the datafile parameter is not valid.

Explanation: The datafile parameter is not any of the values that indicate the default filepath. Also the datafile parameter is not a valid non-default value. One of the following may apply:

- The pointer is not valid.
- The pointer points to a string that is too long for a filepath designation.
- The specified path value is not valid (on the server machine).
- The file path does not end with an appropriate separator for the server machine.

The utility stops processing.

User response: Resubmit the command with a valid datafile parameter.

SQL2208N The table space *tablespace-name* specified by the table space or long table space parameter is not valid.

Explanation: The table space or long table space parameter does not contain a valid value. One of the following conditions may exist:

- The pointer is not valid
- The pointer points to a string that is too long for a table space name
- The specified table space does not exist.

The utility stops processing.

User response: Resubmit the command with a valid table space or long table space parameter or do not use these parameters. In the latter case, the Reorganize

Table utility will use the table space(s) in which the table itself resides.

SQL2211N The specified table does not exist.

Explanation: The table does not exist in the database. Either the table name or the authorization ID is incorrect.

The command cannot be processed.

User response: Resubmit the command with a valid table name.

SQL2212N The specified table is a view. The Reorganize Table utility cannot be run against a view.

Explanation: The Reorganize Table utility cannot be run against a view.

The utility stops processing.

User response: Resubmit the command with a valid table name.

SQL2213N The specified table space is not a system temporary table space.

Explanation: The REORG utility requires that any table space specified is a system temporary table space. The table space name provided is not a table space defined to hold system temporary tables.

The utility stops processing.

User response: Resubmit the command with the name of a system temporary table space or do not use the table space name parameter. In the latter case, the REORG utility will use the table space(s) in which the table itself resides.

SQL2214N This user ID does not have the authority to run the REORG utility on table *name*.

Explanation: An attempt was made to reorganize the specified table or its indexes without the appropriate authorization. Appropriate authorization is the CONTROL privilege on the table or one of the following authorities: SYSADM, SYSCTRL, SYSMANT, DBADM, or SQLADM.

The utility stops processing.

User response: Log on as a user with the appropriate authority or privilege, and resubmit the REORG utility command.

SQL2215N SQL error *sqlcode* occurred while committing previous work for the database.

Explanation: The user was already connected to the database specified in the Reorganize Table command.

An error occurred while committing the previous work in progress for the database.

The utility stops processing with no attempt to roll back the work or break the database connection.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL2216N SQL error *sqlcode* occurred while reorganizing a database table or its indexes.

Explanation: An error occurred during the reorganization of a database table or its indexes.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL2217N The page size of the system temporary table space used by the REORG utility must match the page size of the table space(s) in which the table data resides (including the LONG or LOB column data). The cause is based on the following reason codes *reason-code*.

Explanation: Following is a list of reason codes:

- 1 The cause relates to selection of a temporary tablespace for the table's data.
- 2 The cause relates to selection of a temporary tablespace for the table's LONG or LOB data.

If the system temporary table was explicitly specified to the REORG utility then the page size of the system temporary table space used by the REORG utility must match the page size of the table space or table spaces in which the table data, including LONG or LOB column data, resides, or else an appropriate container for long data must be specified. One of the following has violated this restriction:

- The table's data resides in a table space that has a different page size than that of the specified system temporary table space.
- The table contains LONG or LOB columns whose data resides in a table space with a page size that is different than that of the system temporary table space and the table's regular data but no tablespace with the correct page size could be found for the LONG or LOB data objects.

If the system temporary table space or LONG temporary table space was not specified to the REORG utility then the utility was looking internally for a system temporary table space. A system temporary

table space that uses the same page size as the table data either did not exist in the database or was not available at the time.

User response: If a system temporary table space that uses the same page size as the table data does not exist in the database, please create a system temporary table space using a page size that matches the page size of the table data. If the page size of the table data differs from that of the LOB or LONG data, ensure a system temporary tablespace using that page size also exists.

If a system temporary table space that uses the same page size as the table data exists in the database but was not available at the time of your command, please reissue the command when the system temporary table space is available.

SQL2218N One or more parameters specified for the REORG utility is incompatible.

SQL2219N The specified INPLACE table reorganization action on table *table-name* is not allowed on one or more nodes. Reason code: *reason-code*.

Explanation: The statement cannot be processed because it violates a restriction as indicated by the following reason code:

- 1 Table reorganization cannot RESUME as the original data or index object has changed.
- 2 There is no reorganization to RESUME for the specified table.
- 3 An index cannot be specified to RESUME a non-clustering table reorganization.
- 4 Table reorganization cannot RESUME as the original index specified to START the reorganization has been dropped.
- 5 The index specified on RESUME is not the same index that was specified when the table reorganization was paused.
- 6 Unable to RESUME table reorganization as the Status File is corrupted or missing.
- 7 An I/O error occurred when attempting to access the Status File.
- 8

INPLACE table reorganization is already in progress for the specified table.

9 START is not allowed as a prior paused table reorganization has not been stopped.

10 PAUSE or STOP has already been issued. The specified action is asynchronous and may not be effective immediately.

11 There is no table reorganization to PAUSE or STOP.

12 INPLACE table reorganization is not allowed for tables in append mode.

13 INPLACE table reorganization is not allowed for tables with missing row change timestamp columns.

14 INPLACE table reorganization is not allowed for tables compressed with COMPRESS YES ADAPTIVE.

INPLACE table reorganization is also not allowed for tables with data compressed at a page-level, but have had their compression setting altered to either COMPRESS NO, or COMPRESS YES STATIC. For tables that were set with COMPRESS YES ADAPTIVE, if a user alters the table to a different compression setting, data will remain compressed at the page-level until the table is reorganized.

User response:

- 1 Issue a STOP then a START.
- 2 There is no outstanding table reorganization to RESUME. Issue the START action to reorganize the specified table.
- 3 The original table reorganization did not use an index and therefore an index cannot be specified on RESUME. Either continue the reorganization without using an index or STOP the existing reorganization and issue a START with an index name.
- 4 STOP the existing paused table reorganization and issue a START.

- 5 Resubmit the RESUME command with the correct index. If no index is specified on RESUME the original index will be used by default.
- 6 Confirm whether the Status File "<tablespaceID>.<objectID>.OLR" exists under the database directory and is accessible then resubmit the command. If the file is damaged STOP then START the table reorganization.
- 7 Ensure the Status File "<tablespaceID>.<objectID>.OLR" is accessible and resubmit the command.
- 8 START or RESUME is not allowed as table reorganization is already in progress.
- 9 A reorg on the table has been paused. Either RESUME the paused reorg or STOP then START the reorg.
- 10 Wait for the original STOP or PAUSE to complete.
- 11 Ensure reorganization is running for the specified table.
- 12 Either ALTER the table to turn APPEND mode OFF or reorganize the table offline.
- 13 Ensure that there are no missing values for row change timestamp values by running classic table reorganization.
- 14 To reorganize the table, perform either an online table move operation, or run classic table reorganization.

SQL2220W The compression dictionary was not built for one or more data objects.

Explanation: A compression dictionary could not be built for one or more data object. The object(s) either contained no records, or contained no records larger than the minimum record length to be eligible for this page size. A new dictionary was not built. The operation continued to completion. If there was a dictionary prior to the operation, the dictionary is retained and the rows were subject to compression.

User response: Refer to the Administration Log to determine which data object(s) caused the warning.

SQL2221N The REORG command failed because the specified table *table-name* is incompatible with the request to reclaim extents.

Explanation: If the REORG TABLE RECLAIM EXTENTS command was issued, the specified table name is only supported when the table is a multidimensional clustered (MDC) or insert time clustering (ITC) table and the MDC or ITC table is in a database managed space (DMS) table space.

If the REORG INDEXES ALL command with the RECLAIM EXTENTS option was issued, the indexes for the specified table name must be in a database managed space (DMS) table space.

User response: Do one of the following:

- Use a table name that identifies an MDC or ITC table that is in a DMS table space in the REORG RECLAIM EXTENTS command.
- Use a table where the indexes are in a DMS table space for the REORG INDEXES ALL command.

sqlcode: -2221

sqlstate: 5U044

SQL2222N The specified data partition *data-partition-name* is not valid. Reason code: *reason-code*

Explanation: The specified data partition name is not valid for the request as indicated by the following reason code:

- 1 The data partition name does not exist for the specified table.
- 2 The ON DATA PARTITION clause is not supported for the REORG INDEX command.
- 3 The operation cannot be performed because the data partition is in the attached or detached state.

User response: Based on the reason code listed in the message, perform the following actions.

- 1 Resubmit the request with a valid data partition name or without a data partition name.
- 2

Resubmit the command without the ON DATA PARTITION clause.

3

Query the SYSCAT.DATAPARTITIONS catalog view to check the value of the STATUS column for the partition.

If the STATUS is 'A', the partition is newly attached, perform the following steps:

1. Issue the SET INTEGRITY statement to bring the attached partition into the normal status, the STATUS is an empty string.
2. Resubmit the request after SET INTEGRITY completes successfully.

If the STATUS value is 'D', 'L', or 'I', the partition is being detached, but the detach operation has not completed. Reorganization of the data or indexes of a detached partition is not permitted.

Once the detach operation completes the partition will no longer be part of the source table. You can reorganize the data or indexes of the newly created target table after detach completes.

SQL2300N The identifier for the table name is too long or it was not specified as part of the table name.

Explanation: The table name must be fully qualified. The format is *authid.tablename* where *authid* contains 1 to 128 bytes and *tablename* contains 1 to 128 bytes in.

The utility stops processing.

User response: Resubmit the command with the fully qualified table name, including the correct qualifier.

SQL2301N The tablename parameter is not valid. Either it is too long, only an authorization ID was specified, or the address of the name is not valid.

Explanation: The table name must be fully qualified and in the format *authid.name* where *authid* contains 1 to 128 bytes and *name* contains 1 to 128 bytes and must be located at a valid application address.

The utility stops processing.

User response: Resubmit the command with the correct table name.

SQL2302N The index list is not valid. Either the address for the list is not valid, the number of entries in the list is less than the number of indexes specified, or the address for an index in the list is not valid.

Explanation: The address for the list is not valid, the number of entries in the list is less than the number of indexes specified, or the address for an index in the list is not valid.

The utility stops processing.

User response: Resubmit the command with a valid index list.

SQL2303N The statsopt parameter is not valid.

Explanation: The *statsopt* parameter in the Run Statistics command must be one of the following:

- T for basic table only
- I for basic indexes only
- B for both basic table and indexes
- D for table and distribution
- E for table and distribution and basic indexes
- X for extended indexes only
- Y for extended indexes and basic table
- A for all

The utility stops processing.

User response: Resubmit the command with a valid *statsopt* parameter.

SQL2304N The sharelev parameter is not valid. It must be 'R' for reference or 'C' for change.

Explanation: The *sharelev* parameter in the RUN STATISTICS command must be R for reference or C for change.

The utility stops processing.

User response: Resubmit the command with a valid *sharelev* parameter.

SQL2305N The table specified is a view or nickname. The utility cannot be run against a view or nickname.

Explanation: The *tname* parameter specified a view or nickname rather than a table.

The utility stops processing.

User response: Resubmit the command with a valid *tname* parameter.

SQL2306N The table or index *name* does not exist.

Explanation: The table or index identified by *name* does not exist in the database, or the index identified by *name* is not defined on the specified table. The qualifier for the table or one of the indexes may be incorrect.

The utility stops processing.

User response: Resubmit the command with valid table names and indexes.

SQL2307N The table specified is a system table. The Runstats utility cannot be run against a system table.

Explanation: The Run Statistics utility command may not be run against a system table.

The utility stops processing.

User response: Resubmit the command with a valid table name.

SQL2308N The qualifier for the index name *name* is too long or it was not specified as part of the index name.

Explanation: The index name must be a fully qualified name. The format is *authid.name* where *authid* contains 1 to 128 bytes and *name* contains 1 to 128 bytes.

The utility stops processing.

User response: Resubmit the command with a fully qualified name, including the correct qualifier.

SQL2309N The index name *name* is not valid. It is too long or only a qualifier was specified.

Explanation: The index name must be a fully qualified name. The format is *authid.name* where *authid* contains 1 to 128 bytes and *name* contains 1 to 128 bytes.

The utility stops processing.

User response: Resubmit the command with a valid index.

SQL2310N The utility could not generate statistics. Error *sqlcode* was returned.

Explanation: An error occurred while the utility was gathering statistics.

The utility stops processing.

User response: Look at the message error number for more information. Make changes and resubmit the command.

SQL2311N The user does not have the authority to run the RUNSTATS utility on table *name*.

Explanation: The user attempted to run statistics on the specified table without the appropriate authorization. If the table specified for the RUNSTATS command is the root table of a table hierarchy, the table name returned in the message might be a subtable of the specified root table.

For tables, CONTROL privilege on the table or one of

the following authorities is required: SYSADM, SYSCTRL, SYSMAINT, DBADM, SQLADM, or LOAD.

For statistical views, both of the following authorizations are required:

- CONTROL privilege on the table or one of the following authorities: SYSADM, SYSCTRL, SYSMAINT, DBADM, SQLADM
- The appropriate privilege to access rows in the view. This means for each table, statistical view, or nickname referenced in the statistical view, you need one of the following privileges or authorities: SYSADM, DBADM, DATAACCESS, CONTROL or SELECT.

The utility stops processing.

User response: Call the RUNSTATS utility command with appropriate authorization.

SQL2312N Statistics heap size is too small to carry out the operation. Suggested heap size is *num* pages.

Explanation: The setting of the database configuration parameter *stat_heap_sz* is not big enough to collect non-uniform distribution statistics on the table.

User response: Update the database configuration parameter *stat_heap_sz* to the suggested value and try again.

SQL2313W All available memory in the statistics heap has been used. Statistics were collected on the first *n1* rows out of a total of *n2* rows.

Explanation: The setting of the database configuration parameter *stat_heap_sz* is not big enough to collect non-uniform distribution statistics on the table. Only <n1> of <n2> rows could be processed.

User response: Update the database configuration parameter *stat_heap_sz* by 20 percent and try again.

SQL2314W Some statistics are in an inconsistent state. The newly collected *object1* statistics are inconsistent with the existing *object2* statistics.

Explanation: The query optimizer uses statistics to determine the best access plan for a query. When inconsistent statistics are present, the optimizer performs access plan evaluation with information that is less accurate than if a consistent set of statistics was available. This might result in an access plan that is not optimal.

Possible causes of this warning include the following.

1. Issuing RUNSTATS on the table only may result in a situation where the table level statistics are inconsistent with the already existing index level

statistics. Likewise, issuing RUNSTATS for indexes only or during index creation may leave table level statistics in an inconsistent state. For example, if index level statistics are collected on a particular table and later a significant number of rows is deleted from this table, issuing RUNSTATS on the table only may end up with the table cardinality less than FIRSTKEYCARD which is an inconsistent state.

2. If a RUNSTATS is issued with the ALLOW WRITE ACCESS option when many inserts, updates, or deletes are occurring concurrently, then inconsistencies may occur because of table changes between the time that table and index statistics are collected.
3. If a RUNSTATS is issued with the TABLESAMPLE option, then an excessively low sample size may cause statistics to be inaccurately extrapolated, resulting in inconsistencies. The chance of inaccurate extrapolation is higher for SYSTEM sampling than for BERNOULLI sampling.

User response: Address the cause of the inconsistency and then collect statistics again to resolve the inconsistency.

1. Issue a RUNSTATS to collect both table level and index level statistics.
2. Collect statistics when inserts, updates, and deletes are minimal or not occurring at all. Or, if concurrent inserts, updates, and deletes are not essential, issue a RUNSTATS with the ALLOW READ ACCESS option.
3. Increase the sample size, or, if RUNSTATS was issued with TABLESAMPLE SYSTEM, use the TABLESAMPLE BERNOULLI option instead.

sqlcode: +2314

sqlstate: 01650

SQL2315N The RUNSTATS utility was called with the *option-name* option. However, a statistics profile for this table does not exist.

Explanation: The statistics profile for this table does not exist in the catalog table SYSIBM.SYSTABLES.

The utility stops processing.

User response: To create a statistics profile for this table, use the SET PROFILE or SET PROFILE ONLY options. Refer to the RUNSTATS utility documentation for information about the utility options.

option-name is a token which can be "USE PROFILE", "UNSET PROFILE", or "UPDATE PROFILE".

SQL2316W The Runstats command string for the statistics profile has exceeded the maximum size. The Runstats command string will be truncated to the maximum size and stored in the catalog table SYSIBM.SYSTABLES.

Explanation: The maximum size of the STATISTICS_PROFILE column is 32768 bytes. If the size of the statistics profile is greater than this amount, the Runstats command strings is truncated to the maximum size.

The utility continues processing.

User response: Refer to the STATISTICS_PROFILE column in the catalog table SYSIBM.SYSTABLES to review the statistics profile. If the existing statistics profile is not desired, reissue the RUNSTATS utility and specify the UPDATE PROFILE or the UPDATE PROFILE ONLY option to modify the profile. Refer to the RUNSTATS utility documentation for information about the utility options.

SQL2317W SYSTEM SAMPLING was specified for RUNSTATS but is not supported for the statistical view specified. BERNOULLI SAMPLING was done instead.

Explanation: Page-level sampling, or SYSTEM SAMPLING, could not be performed on the statistical view specified for RUNSTATS. Page-level sampling is only possible if the view is defined on one base table. Page-level sampling is also possible if the view contains multiple tables and:

- the tables are joined using equality predicates on all the primary key and foreign key columns included in a referential integrity constraint defined between the tables
- no search condition filters rows in any parent tables in the relationship
- a single child table, that is also not a parent table, can be identified among all the tables

The referential integrity constraints can be informational. If the view meets the previously described criteria, page-level sampling will be done on the child table.

Because the statistical view specified did not satisfy these conditions, row-level sampling, or BERNOULLI SAMPLING, was done instead.

User response: Specify BERNOULLI SAMPLING for the statistical view to avoid having this warning returned.

sqlcode: +2317

sqlstate: 0168V

SQL2406N The BACKUP cannot be performed because the database needs to be rolled forward.

Explanation: The backup failed because the database is in an inconsistent state.

The utility stops processing.

User response: Use the ROLLFORWARD command to make the database usable. Then resubmit the BACKUP command.

SQL2412C A corrupted database page was encountered while running a database utility.

Explanation: During the utility operation a corrupted database page was encountered. The database is in an unpredictable state and the utility cannot continue.

User response: Record the message number (SQLCODE).

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Then contact your technical service representative with the following information:

- Problem description
- SQLCODE or message number
- SQLCA if possible
- Trace file if possible.

SQL2413N Online backup is not allowed because the database is not recoverable or a backup pending condition is in effect.

Explanation: Online backup cannot be performed while the database is not logging for forward recovery as forward recovery will be required at restore time. Forward recovery is placed into effect by setting either the database configuration LOGARCHMETH1 or LOGARCHMETH2 and then performing an offline backup of the database.

User response: Execute an offline backup or reconfigure the database for roll-forward recovery and issue an offline backup so that subsequent online backups will be allowed.

SQL2416W Warning! Device *device* is full. Please mount new media.

Explanation: The tape which the utility is using has become full.

User response: Mount another tape and continue the operation with the *callerac* parameter indicating if processing continues.

SQL2417N Archive log is not allowed on non-recoverable databases.

Explanation: The archive log command can only be used on databases that are in recoverable mode. A database is in recoverable mode if LOGARCHMETH1 is set to DISK, TSM, VENDOR, USEREXIT, or LOGRETAIN, or if LOGARCHMETH2 is set to DISK, TSM, or VENDOR.

User response: Ensure that the specified database is in recoverable mode and reissue the command.

SQL2418N The database specified for Backup does not exist.

Explanation: The database specified in the *dbase* parameter of the Database Backup command could not be found.

User response: Ensure that the correct database alias was specified for the Backup Database utility and that the database exists for this alias. Resubmit the command with the correct alias.

SQL2419N The target disk *disk* has become full.

Explanation: During the processing of a database utility, the target disk became full. The utility has stopped and the target is deleted.

User response: Ensure enough disk space is available for the utility or direct the target to other media, such as tape.

On unix-based systems, this disk full condition may be due to exceeding the maximum file size allowed for the current userid. Use the *chuser* command to update *fsize*. A reboot may be necessary.

On non unix-based systems, this disk full condition may be due to exceeding the maximum file size allowed for the operating system. Direct the target to other media, such as tape, or use multiple targets.

SQL2420N Insufficient space on device *device* to contain initial backup control information.

Explanation: During the Backup operation an initial backup header needs to be created at the start of the backup image. This header must fit on one tape when backing up to tape. There is insufficient space on the tape to contain this header.

User response: Resubmit the Backup operation and either direct the output to a new tape, or reposition the current tape to provide enough space for this header.

SQL2421N Table space level backup is not allowed because the database is not recoverable or a backup pending condition is in effect.

Explanation: This message is returned when a table space level backup cannot be performed because the database is not recoverable or a backup pending condition is in effect. This can happen under the following conditions:

- The database is in an offline backup pending condition. This can be caused by a topology change, or when the database has been made recoverable.
- Table space level backup cannot be performed while the database is not logging for forward recovery as forward recovery will be required at restore time.

User response:

1. Do one of the following:
 - Execute a full database backup
 - Reconfigure the database for roll-forward recovery. Forward recovery is configured by setting either of the database configuration parameters, LOGARCHMETH1 or LOGARCHMETH2, and then performing an offline backup of the database.
2. Issue an offline backup so that subsequent table space level backups will be allowed.

SQL2423N The database cannot be backed up because some index files are missing.

Explanation: Some of the index files required by the backup are missing. These index files must be recreated prior to backing up the database.

User response: Run the 'db2recr' program to recreate the missing index files and then resubmit the backup command.

SQL2424N The backup could not succeed because asynchronous copy operations at DB2 Data Links Managers are not complete.

Explanation: The TSM or vendor supplied archive server might not be in operational state.

User response: Ensure TSM or the vendor supplied archive server is in an operational state and resubmit the backup command.

SQL2425W The log file for the online backup was not truncated.

Explanation: During an online backup, all buffered log records are forced to disk and the last active log file is truncated. During the current backup, truncation of the last active log file has failed. As a result, new log records will continue to be written into the last log file used during the backup.

User response: No user action is required. The last active log file used during the backup will eventually become inactive when it becomes full.

SQL2426N The database has not been configured to allow the incremental backup operation. Reason code = *reason-code*.

Explanation: Incremental backups are not enabled for a table space until after modification tracking has been activated for the database and a non-incremental backup has been performed on the table space.

Possible reason codes:

1. The configuration parameter TRACKMOD has not been set for the database.
2. The TRACKMOD configuration parameter has been set but at least one table space has not had a non-incremental backup taken since the TRACKMOD parameter was set.

User response: The action is based on the reason code as follows:

1. Activate modification tracking for the database by setting the TRACKMOD database configuration parameter to on, then perform a full database backup.
2. Consult the db2diag log file to determine the name of the table space, then perform a full backup of that table space.

SQL2427N Plug-in library *filename* cannot be backed up because it does not contain *entrypoint* *entrypoint*.

Explanation: A compressed backup image is being created with the plug-in library being included in the image. However, the library does not contain all the functions needed to decompress the backup image when it is restored.

The utility stops processing.

User response: Resubmit the command, specifying the name of a library that has all the functions needed to decompress the backup image.

SQL2428N The BACKUP did not complete because one or more of the requested log files could not be retrieved.

Explanation: A backup that includes logs will fail if any of the logs required for the successful rollforward recovery of the image cannot be retrieved and copied into the backup image.

User response: Refer to the administration notification log for additional information about the cause of the failed log retrieval attempt. Correct the error and resubmit the command.

SQL2429N The database backup failed. The following database partitions returned errors: *database-partition-list*.

Explanation: The backup of a partitioned database failed on one or more database partitions.

When the DB2 database server backs up a partitioned database, a failure on any one of the partitions causes the whole backup to fail.

The backup operation terminated. No backup image was generated.

User response:

1. For each partition that returned an error, correct the problems that caused the error.
2. Rerun the BACKUP command.

SQL2430W The database backup succeeded, but the following table spaces do not exist on this database partition: *table-space-list*.

Explanation: The DB2 database server successfully backed up the partitioned database containing this partition.

However, some of the table spaces that were specified in the BACKUP command do not exist on this partition. This might be because the table spaces specified are located on other partitions of this database; or because the list of table spaces specified contains an error.

The backup completed successfully.

User response:

1. Verify that the list of table spaces specified in the BACKUP command is correct.
2.
 - If the list of tables spaces that was specified is correct, no action is required.
 - If the list of tables spaces that was specified contains an error, correct the list and rerun the BACKUP command.

SQL2431W The database backup succeeded. On each database partition, only those log files that were active during the backup operation are included in the backup image.

Explanation: The DB2 database server successfully backed up a partitioned database.

The backup image of each database partition contains only the log files that were active at the time of the backup. It is not possible to rollforward the whole partitioned database using only the log files included in the backup images, if any of those log files does not span a period of time including the database minimum recovery time.

The minimum recovery time (MRT) for a database object is the earliest point in time to which it can be rolled forward.

In a partitioned database, the database MRT is the latest MRT of any one of its database partitions.

You can only roll forward a partitioned database if you have a set of log files on all database partitions that span a period of time that includes the database MRT.

The log files included with the backup image might not satisfy this requirement.

The backup completed successfully.

User response: If your database recovery strategy relies on using only log files included in backup images to rollforward your partitioned database, rerun the backup command with the "ON ALL DBPARTITIONNUMS" parameter. This will ensure the log files included with the backup image will be sufficient to rollforward your database.

SQL2432N A snapshot backup failed because the EXCLUDE LOGS parameter was specified but the following log directories could not be excluded because they are not independent of other database paths and devices: *log-directory-list*.

Explanation: A snapshot backup enables you to use fast copying technologies for the data copying and movement parts of DB2 database backup and restore operations.

The EXCLUDE LOGS parameter was specified for a snapshot backup, but the path for the given log directory or directories shares a path or storage device with other paths or storage devices used by the database being backed up.

When the log directory shares a path or storage device with other paths or storage devices used by the database being backed up, it is not possible for the snapshot backup to include the shared path or storage device without including the log directory.

For example: when you create a DB2 database, the log directory is created under the main database directory by default. Because a snapshot backup will include everything under the main database directory, the log directory will be included in the resulting backup image too. If you use the default log path when you create a DB2 database, you will not be able to exclude the logs from the backup image when you perform a snapshot backup on that database.

The mechanism for grouping database directories varies among the snapshot backup support provided by different storage management software. For more information, see the topic "Configuring DB2 database directories for snapshot backup" in the DB2 Information Center.

SQL2434N • SQL2435N

The snapshot backup failed.

User response: You can do one of:

- Choose not to exclude the logs from the snapshot backup image.
- Resubmit the BACKUP command without the EXCLUDE LOGS parameter.
- Reconfigure the log directory to enable excluding the logs from the snapshot backup image.
- Use the newlogpath database configuration parameter to specify a path for the log directory that is independent of any other database path.
- Reissue the BACKUP command using EXCLUDE LOGS.
- You can use the DBPATHS administrative view to determine the current database paths.

To learn more about using the DBPATHS administrative view, see the topic called "DBPATHS" in the DB2 Information Center.

SQL2434N **The redirected restore operation failed because a table space operation could not be replayed during the rollforward phase of the restore operation.**

Explanation: A redirected restore is a restore in which the set of table space containers for the restored database is different from the set of containers for the original database at the time the backup was done.

When you define new table space containers that are to be used by the restored database, you can define an architecture for the new table space containers that is not the same as the architecture of the original table space containers. For example, you can use a redirected restore operation to change a database that currently uses two table space containers to use a single table space container.

If the architecture of the table spaces to be used by the restored database is different from the architecture of the original database, it is possible that there are table space altering operations in the database log files that will have to be replayed during rollforward that are not valid in the new table space architecture.

This message is returned during a redirected restore operation when the rollforward utility attempts to replay a table space operation that is invalid for the target table space container architecture. Specifically, this message is returned when the rollforward utility attempts to perform a table space operation on a REGULAR or USER TEMPORARY DMS table space that causes the size of the table space to increase beyond the defined maximum allowed size, as determined by the PAGESIZE database configuration parameter.

User response:

1. Begin the redirected restore again using the RESTORE command with the REDIRECT parameter.
2. Define the new table space containers to be used by the restored database using the SET TABLESPACE CONTAINERS command, forcing the rollforward operation to omit replaying table space operations by specifying the IGNORE ROLLFORWARD CONTAINER OPERATION parameter.
3. Complete the restore operation using the RESTORE command with the CONTINUE parameter.

sqlcode: -2434

sqlstate: 58004

SQL2435N **Database activation failed because there is insufficient memory available in the CF for this database. Database name:** *database-name.*

Explanation: This message is returned when an attempt is made to have multiple active databases in a DB2 pureCluster environment, but the activation of one database fails because there is not enough memory in the cluster caching facility, also known as CF, for that database.

You can configure the total amount of memory that is available for the CF using the `cf_mem_sz` database manager configuration parameter. You can configure the percentage of the total CF memory that is assigned to each database that has the `cf_db_mem_sz` database configuration parameter set to AUTOMATIC using the `DB2_DATABASE_CF_MEMORY` registry variable. (Any database that has `cf_db_mem_sz` set to a specific value will ignore the `DB2_DATABASE_CF_MEMORY` registry variable.)

Use of the `DB2_DATABASE_CF_MEMORY` registry variable must be coordinated with the `cf_db_mem_sz` database configuration parameter and the `numdb` database manager configuration parameter.

Example

If there are four databases to be active at once, then the configuration parameters should be coordinated like this:

- The database manager configuration parameter `numdb` should be set to 4
- If the database configuration parameter `cf_dm_mem_sz` is set to AUTOMATIC for each of the four database, then the registry variable `DB2_DATABASE_CF_MEMORY` should be set to 25

One reason this error can occur is because the `DB2_DATABASE_CF_MEMORY` registry variable is set to 100 when `numdb` is greater than 1.

User response: Respond to this error in one of the following ways:

- Determine the amount of CF memory used by other databases and see if any settings need to be changed in order to accommodate the CF memory requirements of this database.
- If the `cf_db_mem_sz` database configuration parameter is set to automatic for this database, increase the amount of memory available in the CF for this database by modifying the value of the `DB2_DATABASE_CF_MEMORY` registry variable.

SQL2436N The table *table-name* failed to meet the prerequisites for data redistribution.
Reason code=*reason-code*.

Explanation: You can use the redistribute utility to rebalance the distribution of data across database partitions after adding or removing database partitions, or to achieve a desired data distribution across partitions. This message is returned when an attempt is made to redistribute data in a database, using the `REDISTRIBUTE DATABASE PARTITION GROUP` command for example, but the redistribute utility determines that there are one or more tables that are not in an appropriate state to be redistributed.

If the `PRECHECK YES OR PRECHECK ONLY` command parameter was specified in the `REDISTRIBUTE DATABASE PARTITION GROUP` command, this error message describes the first check that failed; data redistribution does not commence. In all other cases, the data redistribution was attempted and failed; tables that were partially processed are put in "redistribute pending" state.

The reason that the table failed to meet data redistribution prerequisites is indicated by the reason code:

1

The table is in "set integrity pending" state.

2

The table is in "load in progress" state. The `LOAD` utility is currently operating on this table, no access is allowed until the `LOAD` is finished.

3

The table is in "load pending" state. A previous `LOAD` attempt on this table resulted in failure. No access to the table is allowed until the `LOAD` operation is restarted or terminated.

4

The table is in "read access only" state. This state can occur during on-line `LOAD` processing (`LOAD INSERT` with the `READ ACCESS` option), or after an on-line `LOAD` operation, but before all constraints have been validated in the newly appended portion of

the table using the `SET INTEGRITY` statement. No update activity is allowed on this table.

5

The table is in "reorg pending" state. This can occur after an `ALTER TABLE` statement containing a `REORG`-recommended operation.

6

The table is unavailable.

7

The table is an MDC table with a deferred index cleanup rollout operation in progress.

8

The table is a target table for an active event monitor of type "WRITE TO TABLE".

9

The table is in "not load restartable" state, which is a partially loaded state that will not allow a load restart operation.

10

The table is not in FULL access mode (`ACCESS_MODE='F'` in `SYSCAT.TABLES`).

11

The table has data partitions that are currently being attached (`SYSCAT.DATAPARTITIONS.STATUS = 'A'`).

12

The table has detached data partitions and there are dependent tables that need to be incrementally maintained with respect to these detached data partitions (`SYSCAT.DATAPARTITIONS.STATUS = 'D'`).

13

The table has detached data partitions that are involved with an index cleanup operation that is currently running (`SYSCAT.DATAPARTITIONS.STATUS = 'I'`).

User response: Take corrective action on *table-name*, but be aware that it might not be the only problematic table in the database partition group. By checking all of the tables in the database partition group, you can avoid multiple unsuccessful redistribution attempts. For more information, refer to the documentation about troubleshooting table states during data redistribution.

1

Execute the `SET INTEGRITY` statement with the `IMMEDIATE CHECKED` option on table *table-name* and then issue the `REDISTRIBUTE DATABASE PARTITION GROUP` command again. Alternatively, omit the table by

- specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 2 Wait until the load operation has finished, then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. You can use the LOAD QUERY command to monitor the progress the load operation. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 3 Restart or terminate the previously failed LOAD operation on this table by issuing the LOAD command with RESTART or TERMINATE command parameters, respectively. When the load operation completes, issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 4 Issue the LOAD QUERY command to check whether the table is in the process of being loaded. If yes, wait until the LOAD utility has completed, or if necessary, restart or terminate the previously failed LOAD operation. If LOAD is currently not in progress, issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option, to validate constraints in the newly loaded portion of the table. When the table is no longer in "read access only" state, issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 5 Perform a REORG operation to make the table accessible, then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 6 Drop the table or restore it from a backup, then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 7 Issue the REDISTRIBUTE DATABASE PARTITION GROUP command again once the index cleanup of the rolled out blocks is complete. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 8 Either wait for the event monitor activity to complete or deactivate the event monitor using the SET EVENT MONITOR STATE statement. Re-submit the REDISTRIBUTE DATABASE PARTITION GROUP command, specifying the CONTINUE parameter or the ABORT parameter. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 9 Issue a LOAD TERMINATE or a LOAD REPLACE command to bring the table out of the "not load restartable" state. Re-submit the REDISTRIBUTE DATABASE PARTITION GROUP command using either the CONTINUE or ABORT option. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 10 Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on the dependent immediate materialized query tables and staging tables for *table-name*. Re-submit the REDISTRIBUTE DATABASE PARTITION GROUP command using either the CONTINUE or ABORT option. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 11 Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on table *table-name* and then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.
- 12 Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on the dependent immediate materialized query and staging tables of the tables that still need to be incrementally maintained with respect to the

detached data partitions. Query the SYSCAT.TABDETACHEDDEP catalog view to locate these detached dependent tables. Then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again using either the CONTINUE or ABORT option. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.

13

Wait for the completion of the index cleanup for the detached partition. Re-submit the REDISTRIBUTE DATABASE PARTITION GROUP command using either the CONTINUE or ABORT option. Alternatively, omit the table by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.

sqlcode: -2436

sqlstate: 55019

SQL2437N The data movement command failed because the utility was unable to resolve how implicitly hidden columns should be processed. No data was moved.

Explanation: You can move data into and out of DB2 databases, using utilities such as LOAD, IMPORT, INGEST, and EXPORT.

There are several ways to specify how data movement utilities should handle implicitly hidden columns:

- Explicitly specify the list of columns to include in the data movement operation.
- Specify the hidden column-related parameter in the data movement command.
- Set the hidden column-related DB2 registry variable to indicate how all data movement utilities should handle hidden columns.

This message is returned when an attempt is made to move data into or out of one or more tables that contain implicitly hidden columns, and the data movement utility cannot determine whether the implicitly hidden columns should be included in the data movement operation because none of the methods described have been used to specify how hidden columns should be handled.

User response: Run the utility again, specifying how implicitly hidden columns should be handled using appropriate command parameters or DB2 registry variables.

SQL2438W The data movement command succeeded. However, the utility detected that one or more of the tables that were involved in the data movement operation contain implicitly hidden columns, and the utility was unable to resolve how those implicitly hidden columns should be processed. Any data in implicitly hidden columns was not moved.

Explanation: You can move data into and out of DB2 databases, using utilities such as LOAD, IMPORT, INGEST, and EXPORT.

There are several ways to specify how data movement utilities should handle implicitly hidden columns:

- Explicitly specify the list of columns to include in the data movement operation.
- Specify the hidden column-related parameter in the data movement command.
- Set the hidden column-related DB2 registry variable to indicate how all data-movement utilities should handle hidden columns.

This message is returned when data is being moved into or out of one or more tables that contain implicitly hidden columns, and the data movement utility cannot determine whether the implicitly hidden columns should be included in the data movement operation because none of the methods described have been used to specify how hidden columns should be handled.

Data has been moved, but data in any implicitly hidden columns was not moved.

User response: If the data in the implicitly hidden columns should have been moved, rerun the data movement operation specifying how implicitly hidden columns should be handled using appropriate command parameters or DB2 registry variables.

To avoid this warning in the future: When moving data into or out of tables that contain implicitly hidden columns, specify how implicitly hidden columns should be handled using appropriate command parameters or DB2 registry variables.

Chapter 6. SQL2500 - SQL2999

SQL2501C The database was restored but the data in the restored database was unusable.

Explanation: The RESTORE utility either could not read data from the restored database or only a portion of the database was restored. Both cases indicate that the restored database is not usable.

The database is unusable and the RESTORE utility stops processing.

User response: Resubmit the RESTORE command.

SQL2502C An error occurred while reading the backup files. Either the disk could not physically be read or the specified disk did not contain a valid backup.

Explanation: An operating system error occurred when the RESTORE utility was reading the diskette or disk, or the diskette or disk does not contain a backup of the database directory or does not contain the results of any previous backup.

The utility stops processing.

User response: If the input drive specified is a diskette drive, check the diskette being used. If the input drive is a hard file, verify that it is the correct hard file. Resubmit the command with the correct input drive and the correct diskettes, if applicable.

SQL2503N The RESTORE was not successful. The backup used to restore the database contained the wrong database.

Explanation: The name of the database contained on the backup disk does not match the database name specified on the RESTORE command. The RESTORE utility cannot determine the name until after the database has been restored because a previous release backup image was restored.

The utility stops processing.

User response: If the wrong database name was used in the command, resubmit the command with the correct database name. If the input drive specified is a diskette drive, check the diskette being used. If the input drive is a hard file, verify that it is the correct hard file. Resubmit the command with the correct input drive and the correct diskettes, if applicable.

SQL2504W Insert the first backup diskette into drive *drive*.

Explanation: The RESTORE utility reads the first backup diskette to determine the path of the database

directory that was backed up. If the backup media is a diskette and the diskette is not found in the specified input drive, the utility returns to the caller with this prompt. The calling program is expected to query the user and return to the utility with the user response.

The utility waits for a response from the caller.

User response: Prompt the user for the diskette and return to the utility with the *callerac* parameter, indicating if processing continues or ends.

SQL2505W Warning! Database *name* resides on drive *drive*. The files for this database will be deleted.

Explanation: If the database being restored already exists, its files will be deleted before the restore process starts. The utility returns to the caller with this warning. The caller is expected to query the user and return to the utility with the user response. Once the database is dropped, it cannot be accessed again.

The utility waits for response from the caller.

User response: Warn the user that the database files will be deleted and return to the utility with the *callerac* parameter indicating if processing continues or ends.

SQL2506W The database was restored, but there may be extra files in the database.

Explanation: If changes-only backups were performed and database files were deleted between backups, the RESTORE utility adds these deleted files back into the database. The restore process could not delete the extra files either because of an I/O error or by the failure of an internal connection to an internally stopped database.

The utility ends successfully.

User response: Either use the database as it is or attempt to restore it again. Ensure that the DB2 configuration is compatible with the restored database configuration before rerunning the RESTORE utility.

SQL2507W The RESTORE utility is not bound to the database correctly.

Explanation: Because the RESTORE utility was not bound to the database or the package of the utility that was bound to the database is not compatible with the installed version of DB2, all the utilities have been rebound to the database. But there is a timestamp conflict between the installed version of DB2 and the package so the utility and bind file are not compatible.

SQL2508N • SQL2517W

The database is restored, but the utility is not correctly bound.

User response: Reinstall DB2 or reapply recent updates and resubmit the utility command.

SQL2508N The Database Restore timestamp parameter *timestamp* is not valid.

Explanation: The timestamp parameter must contain either NULL or a portion of a valid timestamp, the portion consisting of complete components of a timestamp.

User response: Resubmit the Restore operation with a valid timestamp value.

SQL2509N The database drive parameter is not valid.

Explanation: The drive specified does not exist, or the database does not exist on this drive or is not cataloged on this drive. RESTORE should use the *db2uexit* command to perform the database restore.

The utility stops processing.

User response: Resubmit the utility command with a valid drive.

SQL2510N An operating system semaphore error occurred.

Explanation: An error occurred in the wait or post semaphore.

The utility stops processing.

User response: Stop the database manager, then restart it and resubmit the utility command.

SQL2511N The utility encountered an error *error* while dropping the database.

Explanation: The utility could not drop the database.

The utility stops processing.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL2512N The utility encountered an error *error* while creating the database.

Explanation: The utility could not create the database.

The utility stops processing.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL2513N The utility encountered an error *error* renaming the database.

Explanation: The utility could not rename the database.

The utility stops processing.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL2514N The RESTORE was not successful. The backup used to restore the database contained a database with a release number that is not compatible with the installed version of the database manager.

Explanation: The release number of the restored database is not compatible with the release number of the installed version of the database manager.

The utility stops processing.

User response: Resubmit the command with a backup that is compatible with the release level of the database manager.

SQL2515N The user does not have the authority to run the RESTORE DATABASE utility against the database.

Explanation: The user attempted to execute the RESTORE DATABASE utility without SYSADM authority.

The utility stops processing.

User response: Ensure that you have the appropriate authorization to run the RESTORE DATABASE command.

SQL2516N The RESTORE utility cannot complete because at least one database on the workstation is in use.

Explanation: In some situations, the RESTORE utility can attempt to move a database to a directory by renaming the directory associated with the database. This cannot be done if any databases are in use in any process on the workstation.

The utility stops processing.

User response: Wait until no databases on the workstation are in use and resubmit the command.

SQL2517W The database was successfully restored and then upgraded to the current release. However, the database operation returned warning or error code *warn-err-code* and runtime tokens *tokens*.

Explanation: You can upgrade a database from one version of DB2 database to a newer version of DB2 database using the restore utility. You can upgrade by recreating your old database manager instance in the new version and then restoring a backup image from the the old instance into the new instance. In this scenario, after restoring the database in the new database instance, the restore utility automatically performs the upgrade operation. This message is returned when the upgrade operation that the restore utility automatically runs returns a warning or error.

User response: Respond to this message by performing the following troubleshooting steps:

1. Review the text of the warning or error code listed in the runtime token *warn-err-code*.
2. Respond to the warning or error code listed in the runtime token *warn-err-code* before accessing the upgraded database.

The user who issued the RESTORE DATABASE command is given DBADM authority to the database. If other users had DBADM authority prior to the restore, work with a user who has SECADM authority, to grant DBADM authorization to these users.

SQL2518N The RESTORE was not successful. An I/O error occurred while trying to restore the database configuration file.

Explanation: The database configuration file could not be restored due to an I/O error.

The utility stops processing.

User response: Determine whether the I/O error can be corrected. Resubmit the command.

SQL2519N The database was restored but the restored database was not upgraded to the current release. Error *sqlcode* with tokens *tokens* is returned.

Explanation: The database backup that you restored is from a previous release of DB2 database product. After the database files were restored, an attempt was made to upgrade the database to the current release. The database upgrade failed.

The database restore was completed but the database was not upgraded.

User response: Review the SQLCODE (message number) returned for more information. Make any corrections and issue the UPGRADE DATABASE command before accessing the database.

SQL2520W The database was restored. The backup version of the configuration file was used.

Explanation: When a database is restored, the current

database configuration file is not always replaced with the backup version. The current database configuration file was not usable. It has been replaced by the backup version.

The utility completed successfully.

User response: Some values in the database configuration file may be different after the restore process. Check that the configuration parameters are set to the desired values.

SQL2521W The database was restored, but an I/O error *code* occurred while deleting file type *file-type*.

Explanation: The restore process ran successfully. The specified file was not deleted due to an I/O error.

A file with the extension “.BRG” is used to determine whether a RESTORE operation has terminated abnormally. The file resides in the local database directory of the database for which the RESTORE operation was attempted.

A file with the extension “.BRI” stores information about the progress of an incremental RESTORE operation. The file resides in the local database directory of the database for which the RESTORE INCREMENTAL operation was attempted.

The file name consists of the database token concatenated with the file type extension. For example, if the database “SAMPLE” is assigned the database token “SQL00001”, the BRI file will have the name “instance/NODE0000/sqldbdir/SQL00001.BRI”.

The utility completed successfully.

User response: Delete the .BRG or .BRI file manually. If the file cannot be deleted, contact your technical service representative.

SQL2522N More than one backup file matches the time stamp value provided for the backed up database image.

Explanation: The backup image file name consists of a database alias and a time stamp component. A file name is constructed from the source database alias and time stamp parameters provided in the Database Restore call. A portion of a time stamp may have been specified so that a match with more than one backup image file name was found. If no time stamp was provided restore implicitly matches any backup image; implying if there are more than one backup images a unique match cannot be made.

User response: Resubmit the operation by specifying a time stamp with sufficient time stamp components to result in a match to a unique backup file.

SQL2523W Warning! Restoring to an existing database that is different from the database on the backup image, but have matching names. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted.

Explanation: The database alias and name of the target database are the same as the backup image database alias and name. The database seeds are not the same indicating that the databases are not the same. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted. The current configuration file will be overwritten with the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2524W Warning! Restoring to an existing database which appears to be the same but the alias *dbase* of the existing database does not match the alias *dbase* of the backup image. The target database will be overwritten by the backup version.

Explanation: The database seeds of the target database and the database image are the same, indicating these are the same databases, the database names are the same, but the database aliases are not the same. The target database will be overwritten by the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2525W Warning! Restoring to an existing database that is different from the database on the backup image, and the alias *dbase* of the existing database does not match the alias *dbase* of the backup image, but the database names are the same. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted.

Explanation: The database aliases of the target database and database image are not the same, the database names are the same, and the database seeds are not the same, indicating these are different databases. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted. The current configuration file will be overwritten with the backup version.

User response: Return to the utility with the *callerac*

parameter indicating processing to continue or end.

SQL2526W Warning! Restoring to an existing database that is the same as the backup image database, and the alias names are the same, but the database name *dbname* of the existing database does not match the database name *dbname* of the backup image. The target database will be overwritten by the backup version.

Explanation: The database aliases of the target database and database image are the same, and the database seeds are the same, however the database names are different. These are the same databases. The target database will be overwritten by the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2527W Warning! Restoring to an existing database that is different from the backup image database, and the database name *dbname* of the existing database does not match the database name *dbname* of the backup image, but the alias names are the same. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted.

Explanation: The database aliases of the target database and database image are the same, the database names are not the same, and the database seeds are not the same, indicating these are different databases. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted. The current configuration file will be overwritten with the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2528W Warning! Restoring to an existing database that is the same as the backup image database, but the alias name *dbase* of the existing database does not match the alias *dbase* of backup image, and the database name *dbname* of the existing database does not match the database name *dbname* of the backup image. The target database will be overwritten by the backup version.

Explanation: The database aliases of the target database and database image are not the same, the database names are not the same, and the database seeds are the same, indicating these are the same

databases. The current database will be overwritten by the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2529W **Warning! Restoring to an existing database that is different from the backup image database, and the alias name *dbase* of the existing database does not match the alias name *dbase* of the backup image, and the database name *dbname* of the existing database does not match the database name *dbname* of the backup image. The target database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted.**

Explanation: The database aliases of the target and database image are not the same, the database names are not the same, and the database seeds are not the same, indicating these are different databases. The current database will be overwritten by the backup version. The Roll-forward recovery logs associated with the target database will be deleted. The current configuration file will be overwritten with the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2530N **The backup image is corrupted. Restore of database from this backup image is not possible.**

Explanation: The backup image being restored is corrupted making the database image non-restorable.

User response: Discard the backup image as it is unusable. Restore from a previous backup if possible.

SQL2531N **The backup image selected for restore is not a valid database backup image.**

Explanation: The file selected for restore is not a valid backup image. Either the file selected has become corrupted or a backup tape is not at the correct position.

User response: Determine the location of the correct backup image file, and resubmit the Restore command.

SQL2532N **The backup file contains the backup image of database *dbalias* taken at timestamp *timestamp*. This is not the backup image requested.**

Explanation: The file selected for restore does not contain the requested backup image. The image is for a different database than that requested.

User response: If using tape, ensure that the correct tape is mounted. If a restore or load is being done from disk, then the file must have been renamed. Rename the file to the correct filename with a match on database name and timestamp. Resubmit the command after taking the appropriate action.

SQL2533W **Warning! The backup file on device *device* contains the image of database *database* taken at timestamp *timestamp*. This is not the backup image requested.**

Explanation: The backup image read from the tape position contains a media header that does not match the header of the image of the first file of the backup file sequence.

User response: Ensure that the tape is positioned at the correct backup, then return to the utility with the *callerac* parameter indicating if processing continues.

SQL2534W **Warning! The media on device *device* is not positioned at a valid backup media header.**

Explanation: The data read from the tape position does not contain a valid backup media header.

User response: Ensure that the tape is positioned at the correct position, then return to the utility with the *callerac* parameter indicating if processing continues.

SQL2535W **Warning! End of media on device *device* has been reached. Please mount the next source media.**

Explanation: The end of tape has been reached and there is still more data to be processed. The remainder of the backup or load source exists on another tape or on several more tapes.

User response: Mount the next tape in sequence that contains the source image and resubmit the Restore or Load command with the *callerac* parameter set to continue or end.

SQL2536W **Warning! The backup image on device *device* contains an incorrect sequence number. Sequence number *number* is expected.**

Explanation: The tape is positioned on a backup image file that is out of sequence. The tape containing the backup image must be positioned to the file of sequence number *sequence* of the backup image.

User response: Position the tape containing the backup image to the correct file and resubmit the Restore command with the *callerac* parameter set to continue or end.

SQL2537N Roll-forward is required following the Restore.

Explanation: SQLUD_NOROLLFWD was specified for the *rst_type* parameter of the Database Restore utility, indicating that a roll-forward is not required to make the restored database usable. If the database to be restored was backed up in online mode or the restore issued was a tablespace level restore, then a roll-forward operation is necessary to make the database usable.

User response: Resubmit the Database Restore command without specifying SQLUD_NOROLLFWD for the *rst_type* parameter.

SQL2538N Unexpected End of File of Backup Image reached on media *media*.

Explanation: While reading and restoring from the Backup Image file, an end of file condition was reached unexpectedly. The backup image is unusable and the restore operation terminates.

User response: Resubmit the Database Restore command with a usable backup image file.

SQL2539W Warning! Restoring to an existing database that is the same as the backup image database. The database files will be deleted.

Explanation: The database aliases, names and seeds of the target database and database image are the same, indicating these are the same databases. The current database will be overwritten by the backup version.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2540W Restore is successful, however a warning *warn* was encountered during Database Restore while processing in No Interrupt mode.

Explanation: The Database Restore utility was invoked in No Interrupt mode, i.e. WITHOUT PROMPTING. During the processing, one or more warnings were encountered but not returned at the time they were encountered. The Restore has completed successfully and the warning messages found are shown at the completion in this message.

User response: Ensure that the action that caused this warning to be generated has not resulted in a condition not wanted.

SQL2541W The utility was successful, however the file containing the backup image could not be closed.

Explanation: The utility was successful, but the file containing the backup image could not be closed.

User response: Attempt to close the file containing the backup image.

SQL2542N No match for a database image file was found based on the source database alias *database-alias* and timestamp *timestamp* provided.

Explanation: The backup image file filename consists of a database alias and a timestamp component. A filename is constructed from the source database alias and timestamp parameters provided in the Database Restore call. No filename existed in the source directory that matched based on the source database alias and timestamp provided.

The following situations might apply:

1. The path to the backup was incorrectly specified in the restore command.
2. You do not have permission to access the backup image or the directory within which the backup image resides.
3. You are performing an automatic incremental restore and a required image was not found based on the timestamp and location in the database history.
4. You are restoring a database in a partitioned database environment, the database does not already exist, and the first database partition being restored is not the catalog partition.
5. You are restoring from TSM media, and the TSM API client configuration used by the current instance is not able to access the backup image.

User response: Appropriate responses corresponding to the situations described previously are:

1. Ensure that the database backup image resides on the media source. Resubmit the operation by specifying a correct path to the backup image and correct timestamp to result in a match. For more information on using the restore command, search the DB2 Information Center using phrases such as "using restore database utility".
2. Ensure that you have permission to access the backup image and the directory in which it resides.
3. Check the database history for the corresponding backup entry and verify that the location listed matches the actual location of the backup image. Either update the database history and retry the operation to result in a match or issue a RESTORE INCREMENTAL ABORT command to cleanup any resources that may have been created during processing.
4. Always restore the catalog partition first when restoring a partitioned database. For more information about restoring in a partitioned database environment, search the DB2 Information Center using phrases such as "restore utility partitioned database".

5. Use db2adutl utility with QUERY option to check if the image could be retrieved from TSM. If you are restoring a backup image taken from a different instance on a different server, make sure to use the options NODENAME, OWNER, and optionally PASSWORD corresponding to the TSM settings of the TSM node on which the backup image was originally taken. Once you have verified that the image could be retrieved, you could pass the same options in the options string of the RESTORE command. For more information about the db2adutl utility, search the DB2 Information Center using phrases such as "db2adutl".

DB2 Information Center: <http://publib.boulder.ibm.com/infocenter/db2luw/v9>

SQL2543N The target directory specified for the database is not valid.

Explanation: The application calling the Restore utility has supplied a target directory for the new database to be created. Either this directory does not exist, or is not a valid directory for database creation. An invalid directory for database creation would be a directory of greater than 215 characters in length.

User response: Reissue the Backup or Restore command with a valid target directory.

SQL2544N The directory where the database is being restored has become full.

Explanation: While the database was being restored the directory to which it was being restored had become full. The database being restored is unusable. The Restore terminates and if the database being restored is a new database, then it is deleted.

User response: Free up sufficient space on the directory for the database, and reissue the Restore, or if restoring to a new database supply a directory with sufficient space to contain the database.

SQL2545W Warning! The backup image on the TSM server is currently stored on mountable media. The time required to make it available is unknown.

Explanation: The backup image is not immediately accessible by the TSM server. The restore process can continue and make the request to the server to retrieve the data. The time required is unknown.

User response: Return to the utility with the callerac parameter indicating processing to continue or end.

SQL2546N The image on media *media* is not the first in sequence from the backup or copy.

Explanation: During restore or load recovery, the first image from the backup or copy must be processed first. The image found on the media is not the first in sequence.

The utility waits for a response to continue.

User response: Mount the media with the correct backup or copy image and return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL2547N The database was not restored because the backup image is from a previous release and requires rollforward recovery.

Explanation: The physical log file formats have changed between these releases, making rollforward impossible.

User response: Restore the database using the version of DB2 used to create the database and rollforward to the end of logs. Take an off-line full database backup at this time. This new backup image will be restorable on the new release of DB2.

SQL2548N Database code page indicated within the backup image *code-page* is invalid or not supported. The restore operation has failed.

Explanation:

1. The backup image you are restoring may have been created on a server with a newer FixPak level than the FixPak level that has been applied to this server. In this case, it is possible that the image contains a newer code page that is unsupported.
2. The backup image is corrupt and contains invalid code page information.

User response: If attempting to restore an image from a server with a newer FixPak level to a server with a lesser FixPak level, then ensure that the code page is supported by both servers. Alternatively, consider applying the newer FixPak to the server you are restoring to.

SQL2549N The database was not restored because either all of the table spaces in the backup image are inaccessible, or one or more table space names in list of table space names to restore are invalid.

Explanation: The containers which were used by the table spaces in the backup image are not available, are already in use, or one or more table space names

specified in the list on the restore command do not exist in the backup image.

User response: Use redirected restore to redefine the containers for the table spaces in this backup image, or specify a list of valid table space names to restore. If this error occurs during the transport operation, it might be caused by containers already in use by a staging database from a failed transport operation. This will cause subsequent transport operations to fail when restoring to their staging databases. Drop any transport staging databases and re-issue the RESTORE DATABASE command.

SQL2550N Database backed up on node *node1* cannot be restored to node *node2*.

Explanation: The backup image used for the restore is a backup of a database from a different node. You can only restore a backup to the same node.

User response: Ensure that you have the correct backup image for the node then issue the request again.

SQL2551N Database with catalog node *node1* cannot be restored to a database with catalog node *node2*.

Explanation: In an environment that is not a DB2 pureCluster environment, the catalog node can exist on only one node. This message is returned when there is a discrepancy between the backup image and the node being restored to. This can occur in the following cases:

1. The backup image specified catalog node *node1* and the restore was attempted to an existing database whose catalog node is node *node2*
2. The restore was attempted to a new database and the catalog node has not been restored first.

User response: Verify that the correct backup image is being restored.

If you are restoring to an existing database and want to change the catalog node to *node2*, the existing database must be dropped first.

If you are restoring to a new database, restore the catalog node *node1* first.

SQL2552N Invalid report file name specified in the restore command.

Explanation: The length of the report file name exceeded the allowed limit of 255.

User response: Specify a report file name whose length is within the allowed limit and resubmit the restore command.

SQL2553I The RECONCILE utility completed successfully.

Explanation: The utility completed successfully.

User response: No action necessary.

SQL2554N The RECONCILE utility failed with reason code *reason-code*. Possible problem with *component*.

Explanation: Possible Reason codes:

- 1 Unknown connection to a DB2 Data Links Manager.
- 2 Table/DATALINK column not defined on the DB2 Data Links Manager.
- 3 DB2 Data Links Manager may be down.
- 4 I/O problems.
- 5 The exception table contains datalink columns that are defined with file link control.
- 6 Table is in "Datalink Reconcile Not Possible" state.
- 7 Exception table not allowed for reconcile on typed tables.
- 8 ALTER TABLE failed to put the table into "Datalink Reconcile Pending" or "Datalink Reconcile Not Possible" state, or failed to take the table out of "Datalink Reconcile Pending" or "Datalink Reconcile Not Possible" state.
- 9 Data Links support is not turned on.
- 10 Table is in the Set Integrity Pending state.
- 11 A required DB2 Data Links Manager was not available during exception handling. Table is placed in DataLink Reconcile Pending state.
- 12 Reconcile processing could not complete on the DB2 Data Links Manager(s) in the allotted time period. Check the administration notification log for details.
- 13 Reconcile processing has been terminated as there was no progress for a period of time.

User response: Possible Solutions:

- 1 Make sure that the DB2 Data Links Manager is up and running, and that it has been registered with the database using the ADD DATALINKS MANAGER command. Try connecting to the database and make a sure a corresponding connection has been established on the DB2 Data Links Manager.
- 2 The table does not seem to exist on the DB2 Data Links Manager. Nothing to reconcile.
- 3 DB2 Data Links Manager may be down. Try starting the DB2 Data Links Manager.

- 4 Ensure you have file permissions and enough space for the report file. A fully qualified path is required for the DLREPORT parameter. Ensure that the table being reconciled is not damaged.
- 5 Redefine all datalink columns in the exception table as "NO LINK CONTROL".
- 6 Take the table out of the Datalink Reconcile Not Possible state using the SET INTEGRITY statement. Repeat the RECONCILE utility.
- 7 Do not specify an exception table.
- 8 Try issuing a SET INTEGRITY command to put the table into "Datalink Reconcile Pending" state or to reset the "Datalink Reconcile Pending" or "Datalink Reconcile Not Possible" state.
- 9 The value of the database manager configuration parameter DATALINKS is set to NO. To use RECONCILE, you must set the value of the parameter DATALINKS to YES.
- 10 To run reconcile on a table, the table cannot be in the Set Integrity Pending state. To remove the Set Integrity Pending state, use the SET INTEGRITY statement.
- 11 Run reconcile again.
- 12 The reconcile command has timed out waiting for verification from the DB2 Data Links Manager(s). Try the reconcile command again.
- 13 Resubmit the reconcile command. If the problem persists, contact IBM Support.

SQL2555I **The database was restored and then successfully upgraded to the current DB2 release where you issued the RESTORE DATABASE command.**

Explanation: The backup that you used to restore the database is from a previous DB2 release. After you restored the database, it was upgraded to the DB2 release where you issued the RESTORE DATABASE command.

The user who issued the RESTORE DATABASE command is given DBADM authority to the database. If other users had DBADM authority prior to restore, the security administrator, who has SECADM authority, must grant DBADM authorization to these users.

The RESTORE DATABASE command was completed successfully. The UPGRADE DATABASE command issued automatically after the database restore was also completed successfully.

User response: Refer to the DB2 Information Center for details about post-upgrade tasks that you should perform after upgrading your database.

SQL2560N **The table space restore operation failed because the target database is not identical to the source database.**

Explanation: You can restore a database or restore one or more table spaces in a database from a backup image into a target database using the RESTORE DATABASE command or the db2Restore API.

There are some conditions that must be met to run a restore operation from a table space level backup. For example, the target database that is specified for the restore operation must meet one of the following conditions:

- The specified target database is the original database from which the backup image was taken.
- The specified target database does not exist, and the rebuild option is specified in the restore command or API call.

This message is returned when an attempt is made to perform a database restore operation or a table space-level restore operation to a target database that is neither the original database from which the backup image was created nor a newly-created database.

User response: Respond to this error in one of the following ways:

- Run the restore operation again, specifying a target database that is the original database from which the backup image was taken.
- Run the restore operation again, using the rebuild options and specifying a target database that does not exist.

SQL2561W **Warning! Rebuilding a database from a table space image or using a subset of table spaces. The target database will be overwritten. The restore utility also reports the following sqlcode *sqlcode*.**

Explanation: The RESTORE utility was issued with the REBUILD option and either specified a table space image to restore or specified a list of table spaces to restore from a backup image. If the database does not already exist, it will be created using the table spaces available for restore and the same database attributes as those in the image. If the database already exists, the database will be overwritten using the table spaces available for restore and based on the sqlcode returned with this warning.

If a subset of table spaces is restored from a non-recoverable database, the table spaces that were not part of the restore can never be recovered unless you do a complete database restore.

User response: Return to the utility with the *callerac* parameter indicating processing to continue or end.

SQL2563W The restore process has completed successfully, but one or more table spaces from the backup were not restored.

Explanation: The restore process has completed successfully. One or more table spaces that are in the backup were not restored for one of the following reasons:

- an error was encountered while accessing the containers of the table spaces. If the table spaces have been dropped since the backup was taken, no further action is necessary.
- the restore command was invoked with a list of table spaces so that only a subset of the table spaces in the backup were restored. No further action is necessary.

User response: If this message is not due to a subset restore, use the query table space function to check the states of the table spaces. If a table space is in the "storage definition pending" state, the storage definition for the table space must be corrected for restore to complete successfully. See the Administration Guide for details about recovering the table space.

SQL2565N The option specified for RESTORE is not allowed with the backup image provided.

Explanation: The database contained in the backup image is an existing database and does not match the database to be restored. The option you have specified for restore requires that the database being restored to is new or the same as in the backup image.

The utility stops processing.

User response: Resubmit the command with the correct database name.

SQL2566W The restore process has completed successfully, but one or more table spaces have their tables put in DRP/DRNP state. Check the db2diag log file for details.

Explanation: One or more table spaces have tables in DATALINK Reconcile Pending (DRP) or DATALINK Reconcile Not Possible (DRNP) because of one of the following reasons:

- Restoring to a database that has a different database name, alias, hostname, or instance than the backup image. If no rollforward follows the restore, any tables with DATALINK columns are placed in DRNP state.
- Restore is done specifying the WITHOUT DATALINK option and no rollforward follows the restore. Any tables with DATALINK columns are placed in DRP state.

- Restoring from a backup image that has become unusable. If no rollforward follows the restore, any tables with DATALINK columns are placed in DRNP state.
- DATALINK column information does not exist at the DB2 Data Links Manager(s). Affected tables are placed in DRNP state.
- Restore involving fast reconciliation failed while trying to relink files at the DB2 Data Links Manager(s). Affected tables are placed in DRNP state.

User response: Look in the administration notification log to find out what tables are put in DRP/DRNP state. See the Administration Guide for information on reconciling tables that are in DRP/DRNP state.

SQL2570N An attempt to restore on target OS *target-OS* from a backup created on source OS *source-OS* failed due to the incompatibility of operating systems or an incorrect specification of the restore command. Reason-code: *reason-code*.

Explanation: Possible reason codes are:

- 1 *target-OS* and *source-OS* are not compatible systems.
- 2 A cross-platform restore of a compressed backup was attempted and no decompression library was specified. By default the library in the backup image from *source-OS* is used. This library is not suitable for a restore on *target-OS*.
- 3 A compression library-only restore was attempted on *target-OS*, a different operating system from the one on which the backup was taken (*source-OS*).

User response: Responses for each reason code are:

- 1 To use this particular backup image, restore it on a system that is restore-compatible with the operating system on which the backup was taken. To move a database from one type of operating system to another, use the db2move utility. For details on which platforms are restore-compatible with each other and the db2move utility, search the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using phrases such as "cross-platform backup and restore" or "using different operating systems".
- 2 Retry the Restore operation, specifying a decompression library that was compiled for *target-os*. For example, db2 restore db sample comprlib libdb2compr.a
- 3 Do not attempt to restore a compression library on an operating system where it cannot be used.

SQL2571N An automatic restore is unable to proceed. Reason code: *reason-code*.

Explanation: An error was encountered during the automatic restore process. This error occurred during an incremental restore or during a rebuild of a database from table space images or from a subset of table spaces in a database image. The utility was unable to complete as intended. The utility stops processing.

In the case of an incremental restore, this error is returned after the initial definitions have been restored and the processing of the required incremental restore set cannot be completed successfully.

In the case of a rebuild, this error is returned after the initial target image has been restored and the processing of the remaining required restore set cannot be completed successfully.

The error is a result of one of the following reason codes:

- 1 The backup image corresponding to the specified timestamp could not be found in the database history.
- 2 An error occurred trying to determine which table spaces to restore.
- 3 A required backup image could not be found in the database history.
- 4 The wrong rebuild type was specified for the incremental rebuild intended.
- 5 Cannot automatically restore only temporary table spaces.

User response: If this is an incremental restore or an incremental rebuild, issue a RESTORE INCREMENTAL ABORT command to clean up any resources that may have been created during processing. Perform a manual incremental restore to restore the database from this backup image.

If this is a non-incremental rebuild then complete the rebuild, if necessary, by issuing table space restores against the remaining images required to rebuild the database as intended. Please see the DB2 diagnostics log for additional information.

SQL2572N Attempted an incremental restore of an out of order image. The restore of tablespace *tablespace-name* encountered an error because the backup image with timestamp *timestamp-value* must be restored before the image that was just attempted.

Explanation: When restoring images produced with an incremental backup strategy, restore the images in the following order:

1. Restore the final image first to indicate to DB2 the increment to which you want to restore the database.
2. Restore the full database or tablespace image which precedes the set of incremental images.
3. Restore the set of incremental and delta images in the chronological order in which they were produced.
4. Restore the final image for a second time.

Each tablespace in the backup image is aware of the backup image that must be restored before the backup image that failed can be successfully restored. You must restore the image with the timestamp reported in this message before you can successfully restore the image that invoked this message. There might be additional images to restore before the indicated image, but this was the first tablespace to encounter an error.

User response: Ensure the order of the set of incremental backup images is correct and continue the incremental restore process.

SQL2573N An incremental backup image must be restored as part of an incremental RESTORE operation.

Explanation: A RESTORE operation was attempted using an incremental backup image. An incremental backup cannot be restored on its own; it can be restored only as part of an incremental RESTORE operation.

The utility stops processing.

User response: To restore this backup image, reissue the RESTORE command using the INCREMENTAL modifier. To perform a non-incremental RESTORE operation, specify a non-incremental backup image.

SQL2574N A backup image restored as part of an incremental RESTORE operation cannot be newer than the target image.

Explanation: The target image is the first image to be restored as part of an incremental RESTORE operation. This image contains the tablespace definitions and other control structures for the database that is being restored. The RESTORE utility cannot restore an image that is newer than the target image during an incremental RESTORE operation, because it could corrupt the database.

The incremental RESTORE operation failed because it attempted to restore a backup image with a timestamp that is more recent than the timestamp of the target image.

The utility stops processing.

User response: Reissue the command, specifying a backup image with a timestamp that is older than the timestamp of the target image.

SQL2575N The timestamp of the specified incremental backup image is older than the timestamp of the last image that was restored for tablespace *tablespace-number*. The last backup image has a timestamp of *timestamp*.

Explanation: To perform an incremental RESTORE operation, the backup images must be restored in chronological order of oldest to newest for each tablespace. An incremental RESTORE operation specified a backup image with a timestamp older than the timestamp of the previous image that was restored for the specified tablespace.

The utility stops processing.

User response: Reissue the command, specifying a backup image with a timestamp that is newer than the timestamp of the last image that was restored for the tablespace.

SQL2576N Tablespace *tablespace-name* is being restored as part of an incremental RESTORE operation, but the RESTORE command did not specify the INCREMENTAL clause.

Explanation: To incrementally restore a tablespace, each RESTORE command must specify the INCREMENTAL clause.

The utility stops processing.

User response: Reissue the RESTORE command and include the INCREMENTAL clause.

SQL2577N No library found for decompressing backup.

Explanation: The image being restored is a compressed backup, but no decompression library was specified and no library was found in the image.

The RESTORE utility requires a plug-in library to decompress the backup. This library is typically stored in the backup image itself, but in this case the creator of the backup chose to exclude the library. The library name can also be specified as a parameter to the RESTORE utility.

The utility stops processing.

User response: Resubmit the command, specifying the name of a library that can decompress the data in the image.

SQL2578N The specified object was not found in the backup image.

Explanation: The specific object that was asked to be restored does not exist in the backup image.

The RESTORE utility attempted to restore a single

object from the backup image. No object of this type exists in the backup image.

The backup history file and the decompression library are the objects that can be restored individually.

The utility stops processing.

User response: Resubmit the command, specifying a backup image that does contain the object in question.

SQL2580W Warning! Restoring logs to a path which contains existing log files. Attempting to overwrite an existing log file during restore will cause the restore operation to fail.

Explanation: The specified log target path contains at least one file with a name which matches the log filename format. If the restore operation later attempts to extract a log file of the same name, this will cause the restore to fail.

User response: Either remove the existing log files from the log target path, or otherwise ensure that the files which exist in the log target will not match the filenames of any logs to be extracted from this backup image. Then return the utility with a callerac parameter indicating that restore processing should either continue or terminate.

SQL2581N Restore is unable to extract log files or restore a log directory from the backup image to the specified path. Reason code *rc*.

Explanation: An error occurred while attempting to extract a log file from the backup image. This could be because one of the following reasons:

- 1 The backup image does not include logs.
- 2 The log target path specified could be full or invalid.
- 3 A log file name in the backup image matches a log file which already exists in the log target path.
- 4 There was an I/O error while trying to write the file.
- 5 The primary log directory on disk contains log files that will be destroyed by restore.
- 6 The mirror log directory on disk contains log files that will be destroyed by restore.

User response:

- 1 Check that the backup image contains log files to be restored. If it does not, resubmit the command without specifying the LOGTARGET parameter.
- 2 Check that the specified LOGTARGET path is valid and that there is enough space available

- for all log files in the backup image to be extracted. Resubmit the command.
- 3 Check that there are no existing log files in the log target path with the same name as log files in the backup image being restored. Resubmit the command.
- 4 See the DB2 diagnostics log for additional information. Try to resolve the problem and resubmit the command.
- 5 or 6 You can do one of the following:
- Manually copy or move the log files from the primary log directory so you can archive those log files; and then call the RESTORE DATABASE command again.
 - Call the RESTORE DATABASE command again with the LOGTARGET parameter and either the INCLUDE FORCE parameter or the EXCLUDE FORCE parameter.

SQL2582W **Warning! A new request to rebuild the database from a table space image or using a subset of table spaces has been detected. This will abort the current rebuild in progress and start a new one using this backup image. The target database will be overwritten.**

Explanation: The RESTORE utility was issued with the REBUILD option but it has detected that a rebuild of the database is already in progress. If this operation were to take place then it would abort the current rebuild in progress and start a new one using this backup image as the target. The database will be overwritten.

Subsequent restore commands during the rebuild phase of the database should not be issued with the REBUILD option.

User response: Return to the utility with the callerac parameter indicating processing to continue or end.

SQL2583N **The intended restore command cannot be processed because a previous incremental restore is still in progress.**

Explanation: The RESTORE utility has detected that a previous incremental restore operation has not completed. The intended restore command is not part of the previous incremental restore and cannot be processed unless the previous incremental restore is aborted.

The utility stops processing.

User response: Issue a restore with the INCREMENTAL ABORT option and then reissue the intended restore command.

SQL2584N **A snapshot restore failed because the log directories must be restored but a valid LOGTARGET has not been specified.**

Explanation: Snapshot backup enables you to use fast copying technologies for the data copying and movement parts of DB2 database backup and restore operations.

The snapshot backup image must be restored as a whole. For this reason, when there are database logs in the snapshot backup image, they must be restored with the rest of the image.

There are database logs in the snapshot backup image you are restoring, so they must be restored with the rest of the image. However, the path for the given log directory shares a path or storage device with other paths or storage devices used by the database being restored.

It is not unusual for the path of the log directory to share a path or storage device with other database paths or storage devices. For example: when you create a DB2 database, the log directory is created under the main database directory by default. When a log path shares a path or storage device with other database paths or storage devices, a snapshot restore can not restore the log directory unless you specify the target location for the log directory using the LOGTARGET parameter.

The snapshot restore failed because you did not specify a LOGTARGET, or because you specified an invalid LOGTARGET.

User response: Resubmit the RESTORE command using the LOGTARGET parameter.

SQL2585N **The selected backup image is for database *dbalias* taken at timestamp *timestamp* from instance *instance-name*. This backup image cannot be restored into the current instance.**

Explanation: The backup image selected for restore is from an instance that does not match the current instance.

Snapshot backup images can only be restored to the same instance name they were taken from.

User response: To find snapshot backup images that are available for the current instance, use the db2acsutil utility.

To restore a given snapshot backup image:

1. Move to the instance from which this snapshot backup image was taken.
2. Resubmit the command.

SQL2590N The requested RESTORE operation cannot be completed because a schema transport error has occurred. Reason Code: *rc*.

Explanation: An error occurred while using the RESTORE DATABASE command with the TRANSPORT option to transport table spaces and schemas from a database backup image to a target database. The following reason code indicates the error:

- 1 The list of table spaces and schemas being transported is not a valid transportable set.
- 2 The table spaces and schemas being transported contain tables with columns that are of a data type that is not supported with schema transport.
- 3 Table spaces or schemas already exists on the target database.
- 4 The list of table spaces and schemas being transported contains system catalogs. The system catalogs can not be transported.
- 5 All default staging databases are already in use.
- 6 Rollforward requires user interaction to resolve load copy recovery.
- 7 The backup image must contain the SYSCATSPACE table space.
- 8 Transport is not supported in partitioned database environments or in DB2 pureCluster environments.
- 10 Attempting to increase LSN on target database failed.
- 12 Table space ID for schema transport cannot be reserved because another session of transport is already in progress.
- 13 Storage paths are dropped as table spaces are being reserved for schema transport.
- 14

- 15 A warning occurred when creating the staging database.
- 16 An error occurred on target database while transporting table spaces.
- 17 An error occurred on staging database while transporting table spaces.
- 18 Schema transport stopped because table space ID mapping is not resolved or validated. An error occurred in one of the following situations:
 - Mapping table space IDs between the staging database and the target database.
 - Validating table space IDs provided by the client against the server memory.
 - The mapped table space is not valid.
- 19 An error occurred when validating the compatibility of the source or staging database with the target database.
- 20 Not all DDL objects in the transportable set can be created on the target database.
- 21 The specified backup image was created using an online backup operation, and the LOGTARGET parameter was not specified with the RESTORE command.
- 22 The table spaces and schemas being transported contain range-partitioned tables, which are not supported with schema transport.
- User response:** Based on the reason code, perform the following actions:
 - 1 Ensure that the table space list contains all objects that exist in the schema list and vice versa. See the db2diag log file for the failing object.
 - 2 Respond to reason code 2 by performing the following steps:
 1. Identify the columns that are defined as a data type that is not supported with schema transport by reviewing diagnostic details in the db2diag log files.

2.	Remove the columns that are unsupported with schema transport by performing one of the following actions:	12	
	<ul style="list-style-type: none"> • Drop the columns that are of an unsupported data type. • Drop the tables containing the columns that are of an unsupported data type. • Remove the table spaces and schemas containing the unsupported columns from the list of schemas to be transported. 	13	
	3. Run the restore operation again.	14	
3	You can perform one of the following actions to resolve the conflict with the table spaces or schemas and re-issue the RESTORE DATABASE command.	14	Concurrent transport operations against any target database is not supported. Wait until the existing schema transport completes, then re-issue RESTORE DATABASE command.
	<ul style="list-style-type: none"> • Drop or rename the conflicting table spaces on the target database. • Drop or rename the table spaces from the source database and create another backup image. • Exclude the offending table spaces and schemas from the transportable set. When removing table spaces and schemas, you must ensure the remaining table spaces and schemas define a valid transportable set. 	15	Wait until schema transport completes, then re-issue operations that alter storage paths. Cleanup connections to the target database and drop the staging database. Re-issue the RESTORE DATABASE command.
4	Remove the system table spaces from the table space list and re-issue the RESTORE DATABASE command again.	15	Check db2diag.log for errors during creation of the staging database. Resolve errors, drop the staging database, then re-issue the RESTORE DATABASE command.
5	When re-issuing the RESTORE DATABASE command, you can either specify a non-default staging database name with the STAGE IN option, or wait for other transports to complete to free up a default staging database name.	16	Check db2diag.log for errors on the target database. Resolve errors, drop the staging database, then re-issue the RESTORE DATABASE command.
6	Ensure that the rollforward logs do not include a load copy recovery operation.	17	Check db2diag.log for errors on the staging database. Resolve errors, drop the staging database, then re-issue the RESTORE DATABASE command.
7	Add the SYSCATSPACE tablespace to the backup image.	17	Ensure that the transportable set does not contain any objects that have dependency on table spaces outside of the transportable set. For example, an object in the transportable set cannot have an index defined in another table space that is not included in the transportable set. Check db2diag.log for details on the cause of error. Resolve errors, drop the staging database, then re-issue the RESTORE DATABASE command.
8	Ensure that the database is single node database that is not configured as a partitioned database environment or a DB2 pureCluster environment.	18	The following settings are not supported in a transport operation:
10	Check db2diag.log for errors during attempt to increase LSN on target database.		<ul style="list-style-type: none"> • From a backup image enabled for automatic storage to a target database not enabled for automatic storage. • From a backup image to a target database of different database configurations. The following database configuration parameters must be identical: <ul style="list-style-type: none"> – Database territory – Code page, code set – Country/region code – Collating sequence and alternate collating sequence

<p>19</p> <p>Check db2diag.log for details on the cause of error. Resolve errors, then re-issue the RESTORE DATABASE command.</p>	<p>03</p>	<p>The log record identifier range bounded by the starting and ending log record identifiers is not large enough to span a log record.</p>
<p>20</p> <p>Some objects might be invalid or some dependencies might not exist. Check db2diag.log for details on the cause of error. Resolve errors, then re-issue the RESTORE DATABASE command.</p>	<p>04</p>	<p>The starting log record identifier does not represent the start of an actual log record.</p>
<p>21</p> <p>Call the RESTORE command again, specifying the LOGTARGET parameter.</p>	<p>05</p>	<p>The starting log record identifier's location could not be determined.</p>
<p>Respond to reason code 21 by performing the following steps:</p> <ol style="list-style-type: none"> 1. Identify the range-partitioned tables by reviewing diagnostic details in the db2diag log files. 2. Remove the range-partitioned tables by performing one of the following actions: <ul style="list-style-type: none"> • Drop the range-partitioned tables. • Remove the table spaces that contain the range-partitioned tables from the list of table spaces to be transported. 3. Run the restore operation again. 	<p>06</p>	<p>The ending log record identifier is less than or equal to the starting log record identifier.</p>
<hr/> <p>SQL2600W The input parameter pointer to the authorization block is invalid or the block's size is incorrect.</p> <p>Explanation: The pointer to the authorization structure parameter is NULL, the pointer to the authorization structure points to an area that is smaller than the length indicated in the structure length field, or the authorization structure length field is not set to the correct value.</p> <p>The command cannot be processed.</p> <p>User response: Correct the value of the input parameter and resubmit the command.</p>	<p>07</p> <p>08</p> <p>09</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p>	<p>The buffer is not valid for the indicated size.</p> <p>The buffer is not of sufficient size to store a log record.</p> <p>A pointer is not valid.</p> <p>The filter option is not valid.</p> <p>The logfile path is not valid.</p> <p>The overflow logfile path is not valid.</p> <p>The retrieve logs option is not valid.</p> <p>The specified number of bytes for memory allocation is too small.</p>
<hr/> <p>SQL2650N An invalid parameter <i>parameter_name</i> was passed to the <i>API-name</i> read log API. Reason Code = <i>reason-code</i>.</p> <p>Explanation: An invalid parameter was passed to a read log API. The possible reason codes are as follows:</p>	<p>16</p> <p>17</p>	<p>The log sequence number is larger than can be contained by its respective API field.</p> <p>The log record identifier type for piStartLRI is invalid.</p> <p>The log record identifier types for piStartLRI and piEndLRI are not the same.</p> <p>User response: Based on the reason code, follow the instructions given:</p>
<p>01</p> <p>Invalid action specified.</p>	<p>01</p>	<p>The ending log record identifier is less than or equal to the starting log record identifier.</p>
<p>02</p> <p>The starting log record identifier is greater than the current database active log record identifier.</p>	<p>01</p>	<p>The log record identifier type for piStartLRI is invalid.</p>

02	Ensure that the action is either DB2READLOG_QUERY, DB2READLOG_READ, or DB2READLOG_READ_SINGLE.	14	Increase the number of bytes that can be allocated internally.
03	Reduce the value of the starting log record identifier.	15	Use the latest version or level of the read log API, because the version in use possesses data type limitations for containing the log sequence number.
04	Ensure that the ending log record identifier is sufficiently larger than the starting log record identifier.	16	Ensure that the log record identifier type for piStartLRI is either DB2_READLOG_LRI_1 or DB2_READLOG_LRI_2.
05	Ensure that the starting log record identifier is either the initial log record identifier or the next start log record identifier that is returned in the read log information structure.	17	Ensure that the log record identifier type for piStartLRI matches the log record identifier type for piEndLRI.
06	Ensure that the starting log record identifier resides in a log extent in the database log path.	<hr/> SQL2651N The log records associated with the database can not be asynchronously read.	
07	Ensure that the ending log record identifier is greater than the starting log record identifier.	Explanation: The asynchronous read log API was used against a connected database which does not have LOG RETAIN or USER EXITS ON. Only databases which are forward recoverable may have their associated logs read.	
08	Ensure that the buffer has been allocated and is of the size indicated by the log buffer size parameter.	User response: Update the database configuration for the database, identified to the asynchronous read log API, turning LOG RETAIN and/or USER EXITS ON.	
09	Increase the size of the allocated buffer.	<hr/> SQL2652N Insufficient memory to run the db2ReadLog or db2ReadLogNoConn API.	
10	Ensure that memory has been correctly allocated and the pointers properly initialized.	Explanation: The allocation of internal structures and buffers that are used by the db2ReadLog or db2ReadLogNoConn API has failed.	
11	Ensure that the filter option is either DB2READLOG_FILTER_OFF or DB2READLOG_FILTER_ON.	User response: Increase the amount of available memory that is available to the process (increase real or virtual memory, or remove unnecessary background processes).	
12	Ensure that the log path field is defined and points to a valid directory.	<hr/> SQL2653W A Restore, Rollforward or Crash Recovery might have reused log sequence number ranges. Reason code reason-code.	
13	Ensure that the overflow log path field is defined and points to a valid directory.	Explanation: A Restore, Rollforward or Crash Recovery might have reused log sequence number ranges. The possible reason codes are as follows:	
	Ensure that the retrieve option is either DB2READLOG_RETRIEVE_OFF, DB2READLOG_RETRIEVE_LOGPATH, or DB2READLOG_RETRIEVE_OVERFLOW.	1	Restore has taken place.
		2	Rollforward has taken place.

3

Crash Recovery has taken place.

User response: No action is required.

SQL2654W The database log has been asynchronously read to the end of the current active log.

Explanation: All log records in the database active log have been read by the asynchronous log reader.

User response: No action is required.

SQL2655N The Asynchronous Log Reader encountered log file *name* which is not associated with the database being asynchronously read.

Explanation: The Asynchronous Log Reader attempted to read log records from the specified log file. The specified log file is not associated with the database being asynchronously read.

User response: Remove this log file from the database log directory. Move the correct log file into the database log directory and resubmit the call to the Asynchronous Read Log API.

SQL2656N The Asynchronous Log Reader has encountered log file *name* which cannot be read.

Explanation: The Asynchronous Log Reader attempted to read log records from the specified log file. The specified log file has been corrupted and cannot be read.

User response: Increase the start read log sequence and resubmit the call to the Asynchronous Read Log API to start reading after the specified log file.

SQL2657N The log read operation failed because the log reader cannot find the log file named *log-file-name* in the log stream *log-stream-id*.

Explanation: You can read log records from the DB2 database logs, or query the log manager for information about the current state of logs using the db2ReadLog API.

This message is returned when the db2ReadLog API is called, but the log reader cannot access log records from the indicated log file on the indicated log stream. One reason this can happen is because the log path was recently changed, using the newlogpath database configuration parameter, and the required log file is located in the old log path.

User response:

1. If log archiving is enabled, perform the following troubleshooting steps:

- a. Confirm whether database log files are successfully being archived and retrieved by looking for related errors in the db2diag log files.
- b. If there are error in the db2diag log files that indicate that log archiving is not functioning properly, troubleshoot and resolve the problems with log archiving.

2. Perform the following general troubleshooting steps:

- a. Determine the location of the log file for which the db2ReadLog API was searching, indicated in the run-time token *log-file-name*.
- b. Manually copy the required log file into the database log path (indicated by the logpath database configuration parameter.)

3. Resubmit the call to the db2ReadLog API.

SQL2701N Invalid command line option for *progname*. Reason code: *reason-code*.

Explanation: Command line option for the data splitting utility is not valid. Valid options are:

- -c "Configuration file name"
- -d "Distribution file name"
- -i "Input file name"
- -o "Output file prefix"
- -h Usage message

User response: Given for each reason code:

- 1 There is an option not started with '-' sign.
- 2 Each option except 'h' (or 'H') must be followed by an argument.
- 3 There is an invalid option.
- 4 The argument of an option is too long (maximum 80 characters).

SQL2702N Failed to open the configuration file *config-file*.

Explanation: The utility cannot read the configuration file *config-file*.

User response: Please ensure the configuration file exists and is readable.

SQL2703N Failed to open the log file *log-file*.

Explanation: The utility cannot open the log file *log-file* for writing or appending.

User response: Please ensure the log file exists and is writable.

SQL2704N Failed to open the input data file
input-data-file.

Explanation: The utility cannot read the input data file *input-data-file*.

User response: Please ensure the input data file exists and is readable.

SQL2705N Failed to open the input partitioning map file *in-map-file*.

Explanation: The utility cannot read the input partitioning map file *in-map-file*.

User response: Please ensure the input partitioning map file exists and is readable.

SQL2706N Failed to open the output partitioning map file *out-map-file*.

Explanation: The utility cannot open the output partitioning map file *out-map-file* for writing.

User response: Please ensure the output partitioning map file is writable.

SQL2707N Failed to open the distribution file *dist-file*.

Explanation: The utility cannot open the distribution file *dist-file* for writing.

User response: Please ensure the distribution file is writable.

SQL2708N Failed to open the output data file *out-data-file*.

Explanation: The utility cannot open the output data file *out-data-file* for writing.

User response: Please ensure the output data file is writable.

SQL2709N Syntax error at line *line* of the configuration file.

Explanation: There is a syntax error in the specification of a keyword and its argument.

User response: A keyword and its argument must be delimited by an '=' sign.

SQL2710N Invalid keyword at line *line* of the configuration file.

Explanation: There is an undefined keyword in the configuration file.

User response: Valid keywords (case insensitive) are:

- DESCRIPTION, CDELIMITER, SDELIMITER, NODES, TRACE, MSG_LEVEL, RUNTYPE,

OUTPUTNODES, NODES, OUTPUTNODES, OUTPUTTYPE, PARTITION, MAPFILL, INFILE, MAPFILO, OUTFILE, DISTFILE, LOGFILE, NEWLINE, HEADER, FILETYPE

SQL2711N Invalid column delimiter (CDELIMITER) at line *line* of the configuration file.

Explanation: The column delimiter (CDELIMITER) specified in the configuration file is not valid.

User response: Make sure the column delimiter (CDELIMITER) is a single byte character.

SQL2712N Invalid string delimiter (SDELIMITER) at line *line* of the configuration file.

Explanation: The string delimiter (SDELIMITER) specified in the configuration file is not valid.

User response: The string delimiter (SDELIMITER) cannot be a period.

SQL2713N Invalid run type (RUNTYPE) at line *line* of the configuration file.

Explanation: The value for run type (RUNTYPE) specified in the configuration file is not valid.

User response: Valid run type (RUNTYPE) can be either PARTITION or ANALYZE (case insensitive).

SQL2714N Invalid message level (MSG_LEVEL) at line *line* of the configuration file.

Explanation: The value for message level (MSG_LEVEL) specified in the configuration file is not valid.

User response: Valid message level (MSG_LEVEL) can be either CHECK or NOCHECK (case insensitive).

SQL2715N Invalid check level (CHECK_LEVEL) at line *line* of the configuration file.

Explanation: The value for check level (CHECK_LEVEL) specified in the configuration file is not valid.

User response: Valid check level (CHECK_LEVEL) can be either CHECK or NOCHECK (case insensitive).

SQL2716N Invalid record length (RECLLEN) *reclen* at line *line* of the configuration file.

Explanation: The value for record length (RECLLEN) *reclen* specified in the configuration file is not valid.

User response: The record length (RECLLEN) must be between 1 and 32767.

SQL2717N Invalid node specification (NODES) at line *line* of the configuration file.
Reason code *reason-code*.

Explanation: The node specification (NODES) in the configuration file is not valid.

User response: Given for each reason code:

- 1 NODES has already been defined.
- 2 The format is not valid. A valid example: NODES=(0,30,2,3,10-15,57)
- 3 Each entry must be numeric data between 0 and 999.
- 4 Range specification must be from a lower number to a higher number.

SQL2718N Invalid output node specification (OUTPUTNODES) at line *line* of the configuration file. Reason code *reason-code*.

Explanation: The output node specification (OUTPUTNODES) in the configuration file is not valid.

User response: Given for each reason code:

- 1 OUTPUTNODES has already been defined.
- 2 The format is not valid. A valid example: OUTPUTNODES=(0,30,2,3,10-15,57)
- 3 Each entry must be numeric data between 0 and 999.
- 4 Range specification must be from a lower number to a higher number.

SQL2719N Invalid output type (OUTPUTTYPE) at line *line* of the configuration file.

Explanation: The output type (OUTPUTTYPE) in the configuration file is not valid.

User response: Valid output types (OUTPUTTYPE) are W (write) or S (stdin), case insensitive.

SQL2720N Number of partition keys exceeded the maximum "256". This error was detected at line *line* of the configuration file.

Explanation: The number of partitioning keys defined cannot exceed the maximum limit: 256.

User response: Remove one or more partitioning keys defined in the configuration file.

SQL2721N Invalid partitioning key specification (PARTITION) at line *line* of the configuration file. Reason code *reason-code*.

Explanation: A partitioning key specification

(PARTITION) in the configuration file is not valid.
Valid format:

```
PARTITION=<key name>,  
           <position>,  
           <offset>,  
           <len>,  
           <nullable>,  
           <datatype>
```

If a delimited-data file, <position> must be defined; otherwise, <offset> and <len> must be defined.

User response: Given for each reason code:

- 1 Fields must be delimited by the ',' character.
- 2 <position>, <offset> and <len> must be positive integers.
- 3 <nullable> must take a value from {N,NN,NNWD}.
- 4 Valid <data type> includes: SMALLINT, INTEGER, CHARACTER, VARCHAR, FOR_BIT_CHAR, FOR_BIT_VARCHAR, FLOAT (for binary numerics only), DOUBLE (for binary numerics only), DATE, TIME, TIMESTAMP, DECIMAL(x,y).
- 5 For DECIMAL data type, precision (x) and scale (y) must be specified and they must be positive integers.
- 6 For CHARACTER or VARCHAR data type, <len> must be specified.

SQL2722N Invalid log file specification (LOGFILE) at line *line* of the configuration file.

Explanation: The log file specification (LOGFILE) in the configuration file is not valid.

User response: The log file specification (LOGFILE) must be in one of the following two formats:

- LOGFILE=<log file name>,<log type>
- LOGFILE=<log file name>

<log type> can only be W (write) or A (append), case insensitive.

SQL2723N Invalid trace specification (TRACE) at line *line* of the configuration file.

Explanation: The trace specification (TRACE) in the configuration file is not valid.

User response: The trace specification (TRACE) must be a positive integer between 0 and 65536 (exclusive).

SQL2724N Invalid node list specification.

Explanation: The node list specification is not valid.

User response: One and only one of the two parameters: NODES and MAPFILI (input partition map) must be specified in the configuration file.

SQL2725N Filename for output partition map was not specified.

Explanation: If run type is ANALYZE, a filename for the output partition map must be defined.

User response: Specify a filename for the output partition map.

SQL2726N There is no partitioning key defined.

Explanation: At least one partitioning key must be defined.

User response: Specify one or more partitioning keys.

Altering the distribution key can only be done to a table whose table space is associated with a single-partition database partition group.

You can add or drop distribution keys, using the ALTER TABLE statement.

You can also use the Design Advisor to migrate from a single-partition to a multiple-partition database. Search the Information Center for a topic called: "Using the Design Advisor to migrate from a single-partition to a multiple-partition database".

SQL2727N Partition key *key-name* exceeds the record length *reclen*.

Explanation: For non-delimited data, starting position for a key must be less than the record length.

User response: Make sure starting position for a key is less than the record length.

SQL2728N Output node *out-node* is not defined in the node list.

Explanation: Output node list must be a subset of the node list, which is derived from NODES or the input partition map file.

User response: Make sure all output nodes are defined in the node list.

SQL2729N Invalid partitioning map file. Reason code: *reason-code*.

Explanation: There is at least one error in the partitioning map file.

The specific error is indicated by the reason code:

1

The partitioning map file cannot be read.

2

The number of values in the partitioning map file is not 1 or 32768.

3

The node number in the partitioning map file is not between 0 and 999.

4

The data in the partitioning map file is not in a valid format.

User response:

1

Check file permissions for the partitioning map file. Also, check that another program has not deleted or altered the partitioning map file.

2

Ensure that the partitioning map file contains only a single value (if the resultant database partition group is a single-partition database partition group) or exactly 32768 values (if the resultant database partition group is a multipartition database partition group).

3

Ensure that the node numbers are in the range of greater than or equal to 0 and less than or equal to 999.

4

Ensure that the values in the partitioning map file are integers greater than or equal to 0.

SQL2730N Error while writing header to output data file *out-data-file*.

Explanation: An I/O error occurred while writing the header to an output data file.

User response: Check your operating system documentation for file I/O errors and ensure that there is sufficient space on the output device.

SQL2731N Error while reading from input data file *filename*.

Explanation: An I/O error occurred while reading from input data file.

User response: Check your operating system documentation for file I/O errors.

SQL2732N Line *line* of the input data file contains binary data.

Explanation: Binary data is not permitted on the host versions of this utility program.

User response: Check your input data file.

SQL2733N Run type (RUNTYPE) was not defined in the configuration file.

Explanation: The run type (RUNTYPE) must be defined as either PARTITION or ANALYZE.

User response: Please specify run type (RUNTYPE) in the configuration file.

SQL2734N Invalid specification for parameter 32KLIMIT at line *line* of the configuration file.

Explanation: The specification for parameter 32KLIMIT in the configuration file is not valid.

User response: Parameter 32KLIMIT can be either YES or NO, case insensitive.

SQL2735W The record *rec-no* of the input data file was discarded because it was an empty record.

Explanation: The record *rec-no* of the input data is discarded because it contains nothing but spaces.

User response: Check record *rec-no* in the input data file.

SQL2736N sqlugrpi_api returned an error when processing record at line *line* of the input data file.

Explanation: Partitioning key fields contain invalid data.

User response: Check the input data file at line *line*.

SQL2737N Failed to write output data file for output node *out-node* when processing record at line *line* of input data file.

Explanation: An I/O error occurred while writing a record to the output data file for node *out-node*.

User response: Check your operating system documentation for file I/O errors and ensure that there is sufficient space on the output device.

SQL2738W Record at line *line* of input data file has been truncated when writing to the output data file for node *out-node*. Expected writing length is *reclen* while actual writing length is *real-len*.

Explanation: Expected writing length (RECLEN) does not match the actual writing length.

User response: Adjust record length value defined in the configuration file.

SQL2739N The record length was not specified for a binary numerical data file.

Explanation: If a binary numerical input data file, the record length has to be defined.

User response: Please specify the record length in your configuration file.

SQL2740N Float data type is not allowed in a non-binary input data file.

Explanation: Float data type is only supported when the file type is BIN (binary).

User response: Make sure data types and the type of input data file match.

SQL2741N Invalid file type specification at line *line* of the configuration file.

Explanation: The file type specification (FILETYPE) in the configuration file is not valid.

User response: Valid values for the file type parameter are as follows:

- ASC (positional ascii data file)
- DEL (delimited ascii data file)
- BIN (ASC file with all numeric data in binary format)
- PACK (ASC file with all decimal data in packed decimal format)
- IMPLIEDDECIMAL (DEL file with decimal data in implied decimal format).

All the values are case insensitive.

SQL2742N The length of partition key *partition-key* does not match its precision.

Explanation: In a binary input data file, the length of a partition key with decimal data type must conform to the equation: LENGTH=(PRECISION+2)/2 (integer division), because it is a packed decimal.

User response: Match the length of a decimal-typed partition key with its precision if the input data file is a binary data file.

SQL2743N The length of partition key *partition-key* does not match its data type.

Explanation: In a binary input data file, the length of a partition key with integer, small integer, float, and double data type must be a predefined constant, i.e. 4

for integer, 2 for small integer, 4 for float, and 8 for double.

User response: Check partition key definitions in the configuration file.

SQL2744N **Illegal file name specification for *file* at line *line* of the configuration file.**

Explanation: The maximum length for a file name is 80 bytes.

User response: Check the configuration file.

SQL2745N **Invalid NEWLINE flag at line *line* of the configuration file.**

Explanation: The NEWLINE flag must be either YES or NO, and if not given, it is NO.

User response: Check the specification of NEWLINE flag in the configuration file.

SQL2746N **An incomplete record was found while reading record *record-number* from the input data file.**

Explanation: If a fixed-length positional ASC file or a binary numerical data file, each record has to be exactly the same length as the value of the RECLLEN parameter in the configuration file.

User response: Make sure the input data file is complete.

SQL2747N **A record was too long while reading record *rec-no* from the input data file.**

Explanation: For a positional ASC input data file or a delimited data file with parameter 32KLIMIT on, the maximum record length can not exceed the 32k (bytes) limit.

User response: Check your input data file and make sure the record length is less than 32k bytes.

SQL2748N **Record *record-number* has a length of *length* bytes, which is too short to hold the partitioning key *key*.**

Explanation: For a positional ASC input data file or a binary numerical data file, each record has to be long enough to hold all partitioning keys.

User response: Check the record length of your input data file.

SQL2749N **Partitioning key *key-no* of record *rec-no* was not in the first 32k bytes of the record.**

Explanation: If a record is greater than 32k bytes long in a delimited data file, all partitioning keys of each

record have to be within the first 32k bytes of the record.

User response: Check record *rec-no* in the input data file.

SQL2750N **The length of line *line-number* in the configuration was more than 255 bytes.**

Explanation: The maximum length of a line in the configuration file must be less than 255 bytes.

User response: Check your configuration file and make sure all lines are less than 255 bytes.

SQL2751N **The actual length *actual-reclen* of record *rec-no* did not match the expected length *exp-reclen*.**

Explanation: If new line checking is required for a fixed length ASC data file (NEWLINE parameter is YES and RECLLEN parameter is not zero), the actual length of each record has to match the expected record.

User response: Check record *rec-no* in the input data file.

SQL2752N **Invalid codepage specification *codepage* at line *line* of the configuration file.**

Explanation: The codepage specification is not valid. It must be a positive integer.

User response: Correct the codepage specification in the configuration file.

SQL2753N **Failed to get the territory code and codepage for the application. Return code from function *function-name* is *rc*.**

Explanation: The program failed to get the territory code and codepage of its environment.

User response: Check with your database system administrator.

SQL2754N **Codepage *source-cp* cannot be converted to codepage *target-cp*.**

Explanation: The database does not support codepage conversion between those two codepages.

User response: Please ensure your data is in a convertible codepage.

SQL2755N **Decimal data can not be in both IMPLIEDDECIMAL and PACKEDDECIMAL format.**

Explanation: Valid format of decimal data is SQL_PACKEDDECIMAL_FORMAT, SQL_CHARSTRING_FORMAT, or

SQL2756N • SQL2796N

SQL_IMPLIEDDECIMAL_FORMAT, mutually exclusive.

User response: Verify the format of your decimal data, correct the format value, and resubmit the command.

SQL2756N The configuration parameter named *parameter-name* could not be updated because another request to update the same configuration parameter is currently in progress.

Explanation: A cluster caching facility (CF) structure is a memory resource for a database in a DB2 pureCluster environment. The CF structures include Group Buffer Pool (GBP), Shared Communication Area (SCA), and Lock (LOCK). The corresponding configuration parameters for CF structures are CF_GBP_SZ, CF_SCA_SZ, and CF_LOCK_SZ, respectively.

The database configuration parameter named CF_DB_MEM_SZ controls the total CF memory limit for this database. All CF structure memory is included within this limit.

If the value of the database configuration parameter named *parameter-name* exceeds the parameter value of CF_DB_MEM_SZ, the request cannot be completed and the operation will time-out.

This message is returned when an update to CF structure memory has not completed and another request is made to update the memory for the same CF structure.

User response: View the update request that is pending for the CF structure using the GET DB CFG command with the SHOW DETAIL clause.

Ensure the values for memory of all CF structures are lower than the value of CF_DB_MEM_SZ.

Wait for the update request that is pending to complete or time-out.

sqlcode: -2756

sqlstate: 5U052

SQL2761N Only one of table name or database partition group can be specified.

Explanation: Specify either the table name or the database partition group name, but not both.

User response: Check your command line options.

SQL2762N The utility failed to find the database installation path.

Explanation: The utility needs to know where the database manager is installed, then it can find its bind file.

User response: Make sure your database manager is properly installed.

SQL2763N The table *tbl-name* was not found.

Explanation: The table *tbl-name* cannot be located in sysibm.systables.

User response: Make sure the table exists in the database.

SQL2764N The database partition group *db-partition-group* was not found.

Explanation: The database partition group *db-partition-group* cannot be located in SYSCAT.DBPARTITIONGROUPDEF.

User response: Make sure the database partition group exists in the database.

SQL2765W The utility failed to open output partition map file *out-map-file*.

Explanation: The utility cannot open the output partition map file for writing. It will write the output to stdout.

User response: Check your file access permissions.

SQL2766N The partition map is not of the correct size *map-size*.

Explanation: The size of the partition map is not correct. Data is corrupted in the database.

User response: Contact the Database Administrator to resolve the problem.

SQL2767N A command line option is not valid.

Explanation: There is an invalid command line option.

User response: Make sure to specify the correct command line options.

SQL2768N The *deprecated-API* API is deprecated and is replaced by the *replacement-API* API.

Explanation: The distribution map has been expanded from 4096 entries to 32768 entries, and cannot be returned by the deprecated API.

User response: Use the replacement API instead of the deprecated API.

SQL2796N An incorrectly partitioned record was found.

Explanation: While running the load utility in the LOAD_ONLY partitioning mode, data file records were found that do not match the database partition that the records were being loaded into.

User response: Verify the records in the data file for each database partition and ensure that each record is being loaded in the intended database partition. You

can accomplish this task by placing the records in a separate file and invoking the load utility against it using the PARTITION_ONLY partitioning mode. By doing this, records will be grouped by their destination database partition.

SQL2800N CREATE, DROP, or CHANGE NODE failed. Reason code *reason-code*.

Explanation: The utility failed to add, drop, or change the node because the input parameters specified are invalid as indicated by the following reason codes:

- (1) The node number is not specified
- (2) The TCP/IP host name is not specified
- (3) The computer name is not specified
- (4) The node number is invalid.
- (5) The port number is invalid.
- (6) The TCP/IP host name is invalid.
- (7) The port value is not defined for your instance in the services file.
- (8) The port value is not in the valid range defined for your instance in the services file.
- (9) The node number is not unique.
- (10) The host name/port couple is not unique.
- (11) The host name value has no corresponding port 0.

User response: The action corresponding to the reason code is:

- (1) Ensure that the node number is specified
- (2) Ensure that the TCP/IP host name is specified
- (3) Ensure that the computer name is specified
- (4) Ensure that the node number is between 0 and 999.
- (5) Ensure that the port number is between 0 and 999.
- (6) Ensure that the host name specified is both defined on the system and is operational
- (7) Ensure that the TCP/IP services on your system contains an entry for your instance
- (8) Ensure that you only use port values that are specified in the services file on your system
- (9) Ensure that the node number specified is unique.
- (10) Ensure that the new host name/port is not already defined in the db2nodes.cfg file.
- (11) Ensure that the port value 0 has been defined for host name specified.

SQL2801N The syntax of the DB2NCRT command is incorrect.

Explanation: The DB2NCRT utility creates a new node in a partitioned database system.

```
DB2NCRT /n:node
        /u:username,password
        [/i:instance]
        [/h:host]
        [/m:machine]
        [/p:port]
        [/o:instance owning
        machine]
        [/g:netname]
```

The command arguments are:

- /n Specify the node number
- /u to specify the account name and password for the DB2 service.

The command options are:

- /i Specify the instance if different from the default/current instance
- /h Specify the TCP/IP host name if the host name is not the machine default TCP/IP host name
- /m Specify the workstation name if the node is created on a remote machine
- /p Specify the logical port number if this is not the first node on the machine
- /o Specify the computer name of the instance owning machine when creating the first node on a machine.
- /g Specify the network name or IP Address.

User response: Enter the command again using valid parameters.

SQL2802N The syntax of the DB2NCHG command is incorrect.

Explanation: The DB2NCHG utility changes or updates node configuration for a given node in a partitioned database system.

```
DB2NCHG /n:node
        [/h:host]
        [/m:machine]
        [/p:port]
        [/i:instance]
        [/u:username,
        password]
        [/g:netname]
```

The command options are:

- /h Change the TCP/IP host name
- /m Change the workstation name
- /p Change the logical port number
- /i Specify the instance if different from the default/current instance
- /u Change the Logon Account name and password
- /g Specify the network name or IP Address

User response: Issue the DB2NCHG command with one of the valid command options.

SQL2803N The syntax of the DB2NDROP command is incorrect.

Explanation: The DB2NDROP utility drops a node from a partitioned system.

```
DB2NDROP /n:node
          [/i:instance]
```

The command options are:

- /i Specify the instance if different from the default/current instance

User response: Issue the DB2NDROP command with one of the valid command options.

SQL2804N The syntax of the DB2NLIST command is incorrect.

Explanation: The DB2NLIST utility list all nodes in a partitioned system.

```
DB2NLIST [/i:instance]
          [/s]
```

The command options are:

- /i Specify the instance if different from the default/current instance
- /s Display node status

User response: Issue the DB2NLIST command with one of the valid command options.

SQL2805N A service error has occurred. Reason code *reason-code*.

Explanation: A service error has occurred during CREATE, DROP or ADD NODE processing as indicated by the following reason codes:

- (1) Unable to register the service
- (2) Unable to set the required User Rights Policy
- (3) Unable to set the Logon Account for the service
- (4) Unable to delete the service

User response: The action corresponding to the reason code is:

- (1) If the workstation name is specified during DB2NCRT, ensure that the workstation name is correct.
- (2) Ensure that the user name specified is valid.
- (3) Ensure that the user name and the password specified are valid.
- (4) If the node resides on another machine, ensure that the machine is running.

If the problem persists, contact IBM Service.

SQL2806N Node *node* not found for instance *instance*.

Explanation: DB2NDROP failed because the node does not exist.

User response: Ensure the node number is correct and reissue the command.

SQL2807N Node *node* already exists for instance *instance*.

Explanation: DB2NCRT failed because the node already exists.

User response: Ensure the node number is correct and reissue the command.

SQL2808W Node *node* for instance *instance* has been deleted.

Explanation: The DB2NDROP processing has completed successfully.

User response: No further action is required.

SQL2809W Node: *node* added to instance: *instance*
{Host: *host-name* Machine: *machine-name*
Port: *port-num*}

Explanation: The DB2NCRT processing has completed successfully.

User response: No further action is required.

SQL2810W Node: *node* changed in instance: *instance*
{Host: *host-name* Machine: *machine-name*
Port: *port-num*}

Explanation: The DB2NCHG processing has completed successfully.

User response: No further action is required.

SQL2811N The command is invalid because the instance is not a partitioned database instance.

Explanation: The command is only valid if the instance is a partitioned database instance.

User response: Ensure that the specified instance name is valid. If the instance name is not specified on the command line, ensure that the DB2INSTANCE environment is set to a valid partitioned database instance.

SQL2812N An invalid argument was entered for the db2drvmp command.

Explanation: Usage:

```

db2drvmp add      node_number
                  from_drive to_drive
drop             node_number
                  from_drive
query            [node_number]
                  [from_drive]
reconcile        [node_number]
                  [from_drive]

```

Valid arguments for this command are:

add assign a new database drive map.

drop remove an existing database drive map.

query query a database map.

reconcile repair a database map drive when the registry contents are damaged.

node_number the node number. The parameter is required for add and drop operations.

from_drive the drive letter to map from. This parameter is required for add and drop operations.

to_drive to drive letter to map to. This parameter is required only for add operation. It is not applicable for any other operations.

User response: Enter the command again using valid arguments.

SQL2813I The drive mapping from drive *drive-1* to drive *drive-2* was added for node *node*.

Explanation: The drive mapping was added successfully.

User response: No action necessary.

SQL2814I The drive mapping from drive *drive* was deleted for node *node*.

Explanation: The drive mapping was deleted successfully.

User response: No action necessary.

SQL2815I The drive mapping for node *node* is: *drive-1 - drive-2*.

Explanation: Informational message.

User response: No action necessary

SQL2900W The ingest utility will not be able to pre-partition the input records. Reason code: *reason-code*

Explanation: The ingest utility uses the distribution key to determine the partition number and routes input

records to one of that partition's flushers. Because of the condition that the reason code specifies, the ingest utility will route records to a random flusher. The reason codes are:

1

The NUM_FLUSHERS_PER_PARTITION configuration parameter was to 0, so there is only 1 flusher for all partitions.

2

The target table is a type that does not have a distribution key.

3

At least one of the distribution key columns is of type DB2SECURITYLABEL.

4

The target table has at least one distribution key column that is not specified on the SQL statement.

5

The target table has at least one distribution key column that has no corresponding field or corresponds to more than one field.

6

The WHERE predicate on the UPDATE statement or the ON predicate on the MERGE statement is not of the form *dist-key-col1 = value1 AND dist-key-col2 = value2 AND ...* or does not contain all the distribution key columns.

7

There is at least one distribution key column that has a numeric type, but its corresponding field does not have the exact same numeric type, including the same precision and scale.

User response: If this has a negative performance impact, modify the configuration parameter or INGEST command, depending on the reason code:

1

Set the NUM_FLUSHERS_PER_PARTITION configuration parameter to 1 or greater.

2

Specify a target table that has a distribution key.

3

Specify a table whose distribution key does not contain a column of type DB2SECURITYLABEL.

4

Ensure that all distribution keys are specified on the SQL statement and that each distribution key corresponds to exactly one field.

5

Ensure that all distribution keys are specified on the SQL statement and that each distribution key corresponds to exactly one field.

6

Change the WHERE predicate on the UPDATE statement or the ON predicate on the MERGE statement so that it specifies all distribution key columns and it is of the form *dist-key-col1 = value1 AND dist-key-col2 = value2 AND ...*

7

Change the field definitions so that each field that corresponds to a numeric distribution key column has the exact same type as the distribution key column, including the same precision and scale.

SQL2901I The ingest utility completed at timestamp *timestamp*. Number of errors: *number*. Number of warnings: *number*. Message file: *file-name*.

Explanation: The ingest utility completed successfully, but returned some errors or warnings. Refer to the specified messages file to determine what those errors or warnings are.

The number of errors includes errors from which the utility could not recover, but does not include errors from which the utility recovered.

User response: If you do not want to receive this message in the future, correct the cause of the errors or warnings.

SQL2902I The ingest utility completed at timestamp *timestamp*. Number of errors: *number*. Number of warnings: *number*.

Explanation: The ingest utility completed successfully, but returned some errors or warnings.

The number of errors includes errors from which the utility could not recover, but does not include errors from which the utility recovered.

User response: If you do not want to receive this message in the future, correct the cause of the errors or warnings.

SQL2903W Configuration parameter *parameter* has been automatically adjusted to the following value: *value*. Reason code=*reason-code*

Explanation: The INGEST SET or INGEST command completed successfully, but a user-specified configuration parameter was overridden. If this message is issued for an INGEST SET command, the overriding value remains in effect for the remainder of the CLP session. If this message is issued for an INGEST command, the overriding value remains in effect only for the INGEST DATA command.

The explanation corresponding to the reason code is:

1

The *commit_count* and *commit_period* configuration parameters cannot be set to 0 on the same INGEST command. *commit_period* has been set to 1.

2

The *commit_count* configuration parameter must be set to a multiple of 1000, so it has been rounded to the nearest multiple of 1000.

3

The *commit_count* configuration parameter has been reduced because either the lock list or the transaction log ran out of space. The new value is the number of rows that had been committed right before the lock list or transaction log ran out of space.

4

The *commit_period* configuration parameter has been reduced because either the lock list or the transaction log ran out of space. The new value is the number of seconds between the time of the last commit and the time when the lock list or transaction log ran out of space.

10

The *num_flushers_per_partition* configuration parameter has been adjusted to 0 because one of the following is true:

- For an UPDATE operation, there are no appropriate columns in the search key, or all columns in the search key are also in the update key (specified on the SET clause).
- For a DELETE operation, there are no appropriate columns in the search key.

The search key is the set of all columns *c1*, *c2*, ... specified on a WHERE or ON clause of the form:


```
(c1 = $field1) AND
(c2 = $field2) AND ...
(cn = $fieldn)
[AND (any other conditions)]
```

(The last AND condition enclosed in square brackets is optional.)

11

The *num_flushers_per_partition* configuration parameter has been adjusted to 0 in a partitioned database environment because at least one column in the table's distribution key is also in the update key (specified on the SET clause).

12

The *num_flushers_per_partition* configuration parameter has been adjusted to 1 because there is no index that contains at least one column that is in the search key (specified on the WHERE clause) but not in the update key (specified on the SET clause).

14

The *num_flushers_per_partition* configuration parameter has been adjusted to the value of the *max_connections* database manager configuration parameter because it cannot be greater than *max_connections*.

15

The *num_flushers_per_partition* configuration parameter has been adjusted to the value of the *max_coordagents* database manager configuration parameter because it cannot be greater than *max_coordagents*.

User response: The user response corresponding to the reason code is:

1

To avoid receiving this message, do not set *commit_period* to 0 if you are leaving *commit_count* at its default value of 0.

2

To avoid receiving this message, set *commit_count* to a multiple of 1000.

3

To avoid receiving this message, do one or more of the following:

- If the warning occurred because the lock list ran out of space, increase the *locklist* or *maxlocks* database configuration parameters.
- If the warning occurred because the transaction log ran out of space, increase the *logfilesiz*, *logprimary*, or *logsecond* database configuration parameters.

4

- Reduce the *commit_count* configuration parameter to the new value or a lower value

To avoid receiving this message, do one or more of the following:

- If the warning occurred because the lock list ran out of space, increase the *locklist* or *maxlocks* database configuration parameters.
- If the warning occurred because the transaction log ran out of space, increase the *logfilesiz*, *logprimary*, or *logsecond* database configuration parameters.
- Reduce the *commit_period* configuration parameter to the new value or a lower value

10

To avoid receiving this message, do one of the following:

- Before issuing the INGEST command, issue the following command:
INGEST SET NUM_FLUSHERS_PER_PARTITION 0.
- If there are no appropriate columns in the search key, change the SQL statement on the INGEST command to specify a search key of the following form:
(c1 = \$field1) AND
(c2 = \$field2) AND ...
(cn = \$fieldn)
- If all columns in the search key are also in the update key, change the search key or the update key so that the search key does not contain all the columns in the update key.

11

To avoid receiving this message, do one of the following:

- Before issuing the INGEST command, issue the following command: INGEST SET NUM_FLUSHERS_PER_PARTITION 0.
- Change the SQL statement on the INGEST command so that it does not update any of the columns in the table's distribution key.

12

To avoid receiving this message, do one of the following:

- Before issuing the INGEST command, issue the following command: INGEST SET NUM_FLUSHERS_PER_PARTITION 1.
- Define an index that includes at least one column that is in the search key but not in the update key.

14

To avoid receiving this message, do one of the following:

- Before issuing the INGEST command, issue the INGEST SET command to set the *num_flushers_per_partition* configuration parameter to a value that is less than or equal to the *max_connections* database manager configuration parameter.
- Set the *max_connections* database manager configuration parameter to AUTOMATIC or a value that is greater than or equal to the *num_flushers_per_partition* configuration parameter.

15

To avoid receiving this message, do one of the following:

- Before issuing the INGEST command, issue the INGEST SET command to set the *num_flushers_per_partition* configuration parameter to a value that is less than or equal to the *max_coordagents* database manager configuration parameter.
- Set the *max_coordagents* database manager configuration parameter to AUTOMATIC or a value that is greater than or equal to the *num_flushers_per_partition* configuration parameter.

SQL2904W The field value at line number *line-number* and byte position *byte-position* was truncated because the data is longer than the field length.

Explanation: The specified field has a value that is longer than the field's length. The value has been truncated. For example, if the field is defined as CHAR(3) but the value is "ABCDEF", the value is truncated to "ABC".

User response: If the truncation is acceptable, no further action is required. To avoid this message, specify a longer field length on the INGEST command or edit the input data so that the length of the field value is less than or equal to the length of the field.

SQL2905I The following error occurred issuing the SQL *sql-statement* statement on table *table-name* using data from line *line-number* of input file *file-name*.

Explanation: This message provides the identification of the line and input file where the error occurred for the following message listed.

The table is either the one specified on the SQL statement of the INGEST command or the exception table. If the table is the one specified on the SQL statement, and the SQL statement is INSERT or REPLACE, and the INGEST command specified an exception table, the ingest utility attempts to insert the record into the exception table. Otherwise, the ingest utility discards the record.

User response: If the error occurred issuing the SQL statement on the target table of the INGEST command and the ingest utility successfully inserted the row into the exception table, correct the data in the exception table and copy it from the exception table to the target table. Otherwise, verify that the data on the specified line in the input file is correct. If needed, correct the data in the input file and re-run the ingest utility using an input file with only the corrected lines.

SQL2906I The following error occurred issuing the SQL *sql-statement* statement on table *table-name* using data from line *line-number* of pipe *pipe-name*.

Explanation: This message provides the identification of the line and input pipe where the error occurred for the following message listed.

The table is either the one specified on the SQL statement of the INGEST command or the exception table. If the table is the one specified on the SQL statement, and the SQL statement is INSERT or REPLACE, and the INGEST command specified an exception table, the ingest utility will attempt to insert the record into the exception table. Otherwise, the ingest utility will discard the record.

User response: No action is required.

SQL2907I The following error occurred issuing the SQL *sql-statement* statement on table *table-name* using data from line *line-number* of TCP/IP port *port-number*.

Explanation: This message provides the identification of the line and input TCP/IP port where the error occurred for the following message listed.

The table is either the one specified on the SQL statement of the INGEST command or the exception table. If the table is the one specified on the SQL statement, and the SQL statement is INSERT or REPLACE, and the INGEST command specified an exception table, the ingest utility will attempt to insert the record into the exception table. Otherwise, the ingest utility will discard the record.

User response: No action is required.

SQL2908I The following warning or error occurred while formatting data from line *line-number* received from pipe *pipe-name*.

Explanation: This message provides the identification of the input pipe where the error occurred for the following message listed.

User response: No action is required.

SQL2909I The following warning or error occurred while formatting data from line *line-number* received from TCP/IP port *port-number*.

Explanation: This message provides the identification of the input TCP/IP port where the error occurred for the following message listed.

User response: No action is required.

SQL2910N The use of modifier *modifier* is not consistent across all fields of type *field-type*.

Explanation: When modifiers are specified on a field, they must be specified on all fields that have a similar type. For example: If a decimal field specifies RADIX POINT, the same RADIX POINT character must be specified on all other INTEGER, DECIMAL, DECLFOAT, and FLOAT fields. If a format string is specified on a DATE field, the same format string must be specified on all other DATE fields. If an INTEGER field specifies EXTERNAL, then EXTERNAL must be specified on all other INTEGER, DECFLOAT, and FLOAT fields. (Fields of type DECIMAL, however, can specify PACKED or ZONED. But all fields of type DECIMAL must specify the same EXTERNAL, PACKED, or ZONED modifier as all other DECIMAL fields.)

User response: Reissue the INGEST command, specifying the modifiers on all fields of a similar type.

SQL2911N Binary field types can be specified only when the format is POSITIONAL.

Explanation: The INGEST command specified a binary field type, but the input file format is not POSITIONAL. The command failed.

User response: One of the following:

- If the input data is in delimited format, change the field type to one that specifies character data. For example, if the field type is INTEGER, change it to INTEGER EXTERNAL. If the field type is DB2SECURITYLABEL, change it to DB2SECURITYLABEL NAME or DB2SECURITYLABEL STRING.
- If the input data is in positional format, change the INGEST command to specify FORMAT POSITIONAL. If needed, add the POSITION clause to each field definition.

SQL2912N An INGEST command must specify the RECORDLEN parameter if any field types are binary.

Explanation: INGEST commands that specify a binary field type must also specify the length of each record in bytes, using the RECORDLEN parameter. The command failed.

User response: Reissue the INGEST command with the RECORDLEN parameter.

SQL2913N Field *field-name* does not specify the end position or the length.

Explanation: INGEST commands that specify FORMAT POSITIONAL must specify or imply the field length, or the POSITION parameter must specify the end position. The command failed.

User response: Reissue the INGEST command and specify either the end position of the field or the field length.

SQL2914I The ingest utility has started the following ingest job: *job-ID*.

Explanation: The ingest utility is starting. The job ID is the one specified on the RESTART parameter or if none was specified, a default job ID that the utility generated. The job ID can be used on the INGEST GET STATS command while the INGEST command is running. If the INGEST command fails, the job ID can be used on a later INGEST command with the RESTART CONTINUE or RESTART TERMINATE parameter.

User response: Save the job ID in case it is needed for a later command.

SQL2915N The sum of all the field lengths is *number*, but the specified record length is only *length*.

Explanation: The length specified by RECORDLEN on the INGEST command must be greater than or equal to the sum of the field lengths specified on each field definition. The command failed.

User response: Correct the field lengths or the RECORDLEN parameter.

SQL2916N The INGEST command specifies an SQL statement that does not reference any fields.

Explanation: The INGEST command failed because the SQL statement that it includes must specify at least one field.

User response: Modify the SQL statement so it includes at least one field, and reissue the command.

SQL2917N The SHM_MAX_SIZE configuration parameter is too small.

Explanation: The INGEST has failed because the SHM_MAX_SIZE configuration parameter was not large enough. The minimum setting for this parameter can be computed approximately as follows:

11000 +
 (nTrans x 500) +
 (NUM_FORMATTERS x 500) +
 (nParts x 50) +
 ((NUM_FLUSHERS_PER_PARTITION x nParts) x 4000) +
 (MSG_BUF_COUNT x (100 + MSG_BUF_SIZE)) +
 (numFields x 66300) +
 (1.5 x NUM_FORMATTERS x sumOfAllFieldLengths)

where:

- nTrans is the number of input sources (if the operation is INSERT or REPLACE), or 1 otherwise.
- nParts is the number of database partitions on the server.
- sumOfAllFieldLengths is the total number of bytes in all the field definitions.

User response: Re-issue the INGEST command with a larger setting for SHM_MAX_SIZE.

SQL2918N Invalid combination of keywords, keyword1 and keyword2, specified in the INGEST command.

Explanation: The INGEST command failed because of an invalid combination of keywords.

User response: Remove the conflicting keywords and reissue the command.

SQL2919N The ingest utility does not support tables of type type.

Explanation: The INGEST command specified an unsupported table type. The command failed.

User response: Reissue the INGEST command specifying a supported table type.

SQL2920N The clause clause does not reference any fields.

Explanation: An INGEST command that specifies an SQL statement that uses a WHERE or ON clause must include a search condition that specifies at least one field. The command failed.

User response: Reissue the INGEST command specifying a search condition.

SQL2921N Field field-name is not defined.

Explanation: The specified field appears in the SQL statement on the INGEST command, but it is not defined. The command failed

User response: Correct the field name to one that has been defined on the INGEST command.

SQL2922I The following warning or error occurred while formatting data from line line-number of input file file-name.

Explanation: This message provides the identification of the input file where the error occurred for the following message listed.

User response: No action is required.

SQL2923N Data type data-type is not a valid field type.

Explanation: The specified data type is not a valid field type. For a list of valid field types, see the INGEST command description in the DB2 Information Center.

User response: Correct the field type to one that the ingest utility supports and reissue the command.

SQL2924N Field field-name specifies the DEFAULTIF parameter, but its corresponding column column-name is a generated column.

Explanation: Fields that specify the DEFAULTIF parameter cannot be used in a predicate or in an expression. The command failed.

User response: Change how the field is used in the SQL statement or remove the DEFAULTIF parameter, and reissue the command.

SQL2925N Field field-name specifies the DEFAULTIF parameter, but its corresponding column column-name does not have a default value.

Explanation: If you specify the DEFAULTIF parameter with a field definition, the field's corresponding column must have a default value. The command failed.

User response: Remove the DEFAULTIF parameter from the field definition or change the SQL statement so that the field corresponds to a column that has a default value, and re-issue the INGEST command.

SQL2926N Field field-name specifies the DEFAULTIF parameter, but its corresponding column column-name has a default value that is not constant or NULL.

Explanation: If an INGEST command specifies the DEFAULTIF parameter, the default value of the corresponding target table column must be a constant or NULL.

User response: Change how the field is used in the SQL statement or remove the DEFAULTIF parameter, and reissue the command.

SQL2927N The field value in line *line-number* and field *field-number* cannot be converted to the value type: *value-type*.

Explanation: There might be a data type mismatch because the value in the specified field cannot be converted to the field's data type.

User response: Correct the input file or change the field's type, and reissue the command.

SQL2928N Input source *input-source* is not a named pipe.

Explanation: The INGEST command specified a data source as a named pipe, but it is not a named pipe. The command failed.

User response: Ensure that the input source is identified correctly and reissue the command..

SQL2931N An error occurred opening, reading, or closing named pipe *pipe-name*.

Explanation: The named pipe specified in the INGEST command could not be opened, read from, or closed, possibly because of a user error, environment problem, or internal error. The command failed.

User response: Contact your IBM service representative.

SQL2932N The ingest utility failed to allocate an interprocess communication (IPC) resource after *number* attempts. Resource type *resource-type-code*.

Explanation: The ingest utility failed to allocate an interprocess IPC resource after the specified number of attempts. The resource type can be one of the following:

1. Shared memory
2. Listener queue
3. Semaphore

This message normally follows earlier messages that indicate the error or errors that occurred when trying to allocate the resource.

User response: Examine previous error messages to determine the errors that occurred. Correct the errors and re-run the INGEST command. On Linux and UNIX, if there are not enough system resources to allocate the IPC resource, use the `ipcrm` command to remove existing IPC resources.

SQL2933N The INGEST command has not received any data within *seconds* seconds as required by the configuration parameter *parameter*.

Explanation: The INGEST command failed.

If the configuration parameter is `TCPIP_TIMEOUT`, the INGEST command did not receive any data from the TCP/IP client for at least the specified number of seconds after the client connected.

If the parameter is `PIPE_TIMEOUT`, the INGEST command did not receive any data from the pipe for at least the specified number of seconds after the command opened the pipe.

User response: Verify there is not a problem with the data source (TCP/IP client or pipe) that is preventing it from sending data within the specified time. If the data source needs more time to send data, increase the value of the relevant configuration parameter, or set it to 0 so there is no timeout.

SQL2934N Port number *port-number* to which service name *service-name* maps is outside the following range of allowable values: *start-of-range* to *end-of-range*.

Explanation: The port number specified (or resolved to) in the INGEST command must be within the allowable range. The INGEST command failed.

User response: Reissue the INGEST command, specifying a port within the allowable range or a service name that maps to a port number that is within the range.

SQL2935W The field value at line number *line-number* and field number *field-number* was truncated because the data is longer than the field length.

Explanation: The specified field has a value that is longer than the field's length. The value has been truncated. For example, if the field is defined as `CHAR(3)` but the value is "ABCDEF", the value is truncated to "ABC".

User response: If the truncation is acceptable, no further action is required. To avoid this message, specify a longer field length on the INGEST command or edit the input data so that the length of the field value is less than or equal to the length of the field.

SQL2936N Port number *port-number* at host *host-name* is already in use.

Explanation: The INGEST command cannot use that port because it is being used by another running application. The INGEST command failed.

User response: Reissue the INGEST command, specifying a port that is not in use.

SQL2937N The **DEFAULTIF** clause on field *field-name* specifies a position but the format is not positional.

Explanation: The INGEST command specified the DEFAULTIF clause, but the input file format is not POSITIONAL. The command failed.

User response: One of the following:

- If the input data is in delimited format, remove the position specification from the DEFAULTIF clause.
- If the input data is in positional format, change the INGEST command to specify FORMAT POSITIONAL. If needed, add the POSITION clause to each field definition

SQL2938N The beginning-ending location pair *begin, end* for field *field-name* is not valid. Reason code *reason-code*.

Explanation: The field specification for locating the input data for the indicated database column within the input non-delimited ASCII file is not valid for the reason indicated by the following reason codes:

1

The start position is 0.

2

The end position is less than the start position.

3

The end position is greater than 32 767.

The INGEST command failed.

User response: Follow the action indicated by the reason code and resubmit the command:

1

Specify a start position that is greater than 0.

2

Specify an end position that is greater than the start position.

3

Specify an end position that is less than or equal to 32 767.

SQL2939N The value *value* for command parameter *parameter* is outside the following range of allowable values: *start-of-range* to *end-of-range*.

Explanation: The current value for the indicated command parameter is not valid because it is outside the allowable range.

The command failed.

User response: Reissue the command, specifying a

value for the command parameter that is within the allowable range.

SQL2940N The ingest utility does not support DB2 server versions earlier than version *version*.

Explanation: The ingest utility does not support ingesting data into tables that are on versions of the DB2 server earlier than the version shown in the message.

User response: Connect to a DB2 server whose version is the same as or later than the version shown in the message and re-run the utility.

SQL2941N The length, precision, or scale *value* for field *field-name* is not valid.

Explanation: The field type on the field definition specifies a length, precision, or scale that is not valid. Examples of this error are:

- A field definition that specifies CHAR(70000) is not valid because the maximum length of a field is 32767.

User response: Correct the length, precision, or scale on the field definition.

SQL2942N Field *field-name* specifies the DEFAULTIF clause, but is associated with multiple columns or used in an expression.

Explanation: When a field definition specifies DEFAULTIF, the field must be assigned to one and only one column and cannot be part of an expression that is assigned to that column. For example, consider the following INGEST command:

```
INGEST FROM FILE my_file.txt FORMAT DELIMITED
...
UPDATE my_table
SET (c1, c2, c3, c4, c5) =
    ($field1, $field2, $field2,
     $field3, $field4+$field5)
WHERE $field3 = 1;
```

Only \$field1 can specify DEFAULTIF. \$field2 cannot because it is assigned to multiple columns. \$field3 cannot because it is also used in a predicate. \$field4 and \$field5 cannot because they are used in an expression.

User response: Remove the DEFAULTIF modifier or change the SQL statement so that the field is assigned to one and only one column and is not part of an expression assigned to that column.

SQL2943N The ingest utility cannot update the table because all updated columns in the SQL statement are defined as GENERATED ALWAYS.

Explanation: When either of the following is true, the ingest utility cannot insert into or update the table:

- The SQL statement on the INGEST command is INSERT (including as part of a MERGE statement) and one of the following is true:
 - All the columns specified after the table name are defined as GENERATED ALWAYS.
 - No columns are specified after the table name, but all the table's non-hidden columns are defined as GENERATED ALWAYS.
- The SQL statement on the INGEST command is UPDATE (including as part of a MERGE statement) and all the columns specified on the SET clause are defined as GENERATED ALWAYS.

User response: Change the command to specify at least column that is not defined as GENERATED ALWAYS.

SQL2944N The number of fields is not the same as the number of specified or implied table columns.

Explanation: When the INGEST command specifies the INSERT statement without a VALUES clause, the number of fields must be the same as the number of specified or implied table columns. (The number of implied columns is the number of non-hidden columns in the table.)

For example, the following INGEST command specifies two fields but three columns:

```
INGEST FROM FILE my_file.del FORMAT DELIMITED
($field1 INTEGER EXTERNAL, $field2 CHAR(32))
INSERT INTO my_table(col1, col2, col3);
```

User response: Change the command so that the number of fields is the same as the number of specified or implied table columns or add the VALUES clause to the INSERT statement.

SQL2945N Fields of type DB2SECURITYLABEL must specify NAME or STRING for delimited files.

Explanation: When the INGEST command specifies FORMAT DELIMITED, every field of type DB2SECURITYLABEL must specify the NAME or STRING modifier.

User response: Add the NAME or STRING modifier to every field of type DB2SECURITYLABEL.

SQL2946N The INGEST command must include the field list for this file format.

Explanation: The INGEST command can omit the field list only when the format is delimited. If the format is positional, you must specify the field list.

User response: Add the field list to the INGEST command.

SQL2947N Ingest job with identifier *job-id* not found.

Explanation: The command failed because the ingest job with the specified identifier was not found.

User response:

- If you are issuing the INGEST GET STATS command, specify the identifier of an ingest job that is still running. To display these identifiers, issue the INGEST LIST command.
- If you are issuing the INGEST command with the RESTART parameter, specify the identifier of an ingest job whose restart data is still in the ingest restart table. To display these identifiers, issue the following query:

```
SELECT jobid FROM systools.ingestrestart
```

SQL2948N The INGEST command does not support the data type *data-type* used in column *column-name*.

Explanation: The INGEST command cannot update columns with the specified data type.

User response: Remove the column name from the INGEST command or change the SQL statement on the command so that the specified column is not updated.

SQL2949N The value assigned to a column or used in a predicate is too long or out of range.

Explanation: This message is preceded by a message that identifies the input source name and line number. One of the fields in the specified input record is too long or out of range for the table column.

User response: Specify a different table or edit the input data so that:

- All field values that correspond to a numeric table column are within the range of the column's data type.
- All field values that correspond to a character table column have a length that is less than or equal to the column's length.

SQL2950N The base tables of view *view-name* are protected by more than one security policy.

Explanation: When you ingest into an updateable view and the view has multiple base tables, all the base tables that are protected by a security policy must be protected by the same security policy.

User response: One of the following:

- Specify a different table or view.
- Alter the base tables so that all the base tables that are protected by a security policy are protected by the same security policy.

SQL2951N The security policy *security-policy* was not found.

Explanation: The table specified on the INGEST command is protected by the security policy with the specified ID, but catalog view SYSCAT.SECURITYPOLICIES has no security policy with that ID.

User response: Alter the table so that it is protected by a valid security policy. If the problem persists, contact IBM Technical Support.

SQL2952N Code page *code-page* is not a valid code page, not compatible with the client code page, or not supported by the INGEST command.

Explanation: The INPUT CODEPAGE parameter on the INGEST command specifies a code page number that is not valid for one of the following reasons:

- The number is not a valid code page.
- DB2 or the INGEST command does not support the code page.
- The code page is not compatible with the client code page.

User response: Correct the code page number on the INPUT CODEPAGE parameter and reissue the command.

SQL2953N The field value in line *line-number* starting at byte position *number* cannot be converted to the value type: *field-type*.

Explanation: There might be a data type mismatch because the field value at the specified byte position cannot be converted to the field's data type.

User response: Correct the input file or change the field's type and reissue the command.

SQL2954N The INGEST command can specify at most *number* field definitions.

Explanation: The INGEST command failed because it has more than the allowable number of field definitions.

User response: Remove field definitions from the command so the number of field definitions is less than or equal to than the maximum number specified in the message.

SQL2955N The ingest utility could not find file *filename*.

Explanation: A file that the ingest utility requires could not be found. The installation of the DB2 Data Server Client or DB2 Data Server Runtime client might be incomplete or damaged.

User response: Reinstall the DB2 Data Server client or the DB2 Data Server Runtime client.

SQL2957N The ingest utility could not find the restart log table *table-name*.

Explanation: The INGEST command omitted the RESTART parameter (in which it defaults to RESTART NEW) or specified one of the following:

- RESTART NEW
- RESTART CONTINUE
- RESTART TERMINATE

If you want the INGEST command to be restartable, you must first create the restart log table.

User response:

- If you do not want the INGEST command to be restartable, reissue the command and specify RESTART OFF.
- If you want to clean up the restart information for a previous INGEST command, no action is needed because the restart log table does not exist.
- If you want the INGEST command to be restartable, first create the restart log table and reissue the INGEST command.

- If the server is version 10.1, run procedure SYSPROC.SYSINSTALLOBJECTS with the parameters set as follows:

- *tool-name:* 'INGEST'
- *action:* 'C'
- *tablespace-name:* As described in the DB2 Information Center
- *schema-name:* NULL

- If the server is V9.5, V9.7, or V9.8, issue the following SQL statements:

```
CREATE TABLE SYSTOOLS.INGESTRESTART (
  JOBID          VARCHAR(256) NOT NULL,
  APPLICATIONID  VARCHAR(256) NOT NULL,
```



```

FLUSHERID          INT          NOT NULL,
FLUSHERDISTID     INT          NOT NULL,
TRANSPORTERID     INT          NOT NULL,
BUFFERID          BIGINT       NOT NULL,
BYTEPOS           BIGINT       NOT NULL,
ROWSPROCESSED     INT          NOT NULL,
PRIMARY KEY (JOBID,
             FLUSHERID,
             TRANSPORTERID,
             FLUSHERDISTID))

```

```

IN your-tablespace
DISTRIBUTE BY (FLUSHERDISTID);

```

```

GRANT SELECT, INSERT, UPDATE, DELETE
ON TABLE SYSTOOLS.INGESTRESTART TO PUBLIC;

```

SQL2958N The INGEST command cannot restart because one of the following does not match the original INGEST command: the number of input sources, or the setting of NUM_FLUSHERS_PER_PARTITION. Original number of input sources: *number-of-input-sources*. Original value of NUM_FLUSHERS_PER_PARTITION: *number-of-flushers*. Current number of input sources: *number-of-input-sources*. Current value of NUM_FLUSHERS_PER_PARTITION: *number-of-flushers*.

Explanation: The INGEST command specified RESTART CONTINUE. In order to restart a failed INGEST command, the restarted command must meet the following requirements:

- The NUM_FLUSHERS_PER_PARTITION configuration parameter must be the same as on the original command.
- If the input is from files or pipes, the number of input files or pipes must be the same as on the original command.

For a comprehensive list of requirements, refer to the INGEST command topic in the DB2 Information Center.

User response: One of the following:

- Set the NUM_FLUSHERS_PER_PARTITION configuration parameter to the value it had when the original INGEST command was run.
- Modify the restarted INGEST command to specify the same number of files or pipes as on the original command.
- Remove the RESTART CONTINUE parameter. In this case, the command starts from the beginning instead of resuming from where the failed command left off.

SQL2959W The utility recovered from the following error. Reason code *reason-code*. Number of reconnects: *number*. Number of retries: *number*.

Explanation: The ingest utility received the error that followed this message, but recovered from the error by issuing a COMMIT or issuing a ROLLBACK and reissuing the SQL statements. The utility reissued the statements the number of times specified in the message. The reason code indicates how the utility recovered from the error:

1

The utility recovered by issuing a commit earlier than requested by ingest configuration parameters COMMIT_PERIOD or COMMIT_COUNT. For this reason code, the number of reconnects and number of retries is "0".

2

The utility recovered by issuing a ROLLBACK and reconnecting or retrying the specified number of times.

User response: To avoid receiving this message, refer to the explanation of the error message that follows this message and take any corrective action that is needed.

If the error message is SQL0911N, you can also do one of the following depending on the reason code:

- Reason code 2: Reduce the COMMIT_COUNT, COMMIT_PERIOD, or NUM_FLUSHERS_PER_PARTITION ingest configuration parameters.
- Reason code 68: Reduce the COMMIT_COUNT or COMMIT_PERIOD ingest configuration parameters, or increase the locklist or maxlocks database configuration parameters.

SQL2960N Row *row-number* contains an invalid security label string for the target table.

Explanation: A field definition specifies DB2SECURITYLABEL STRING, but the value of the corresponding field in the input source is not a valid security label string. The row is not loaded.

User response: One of the following:

- If the field definition is correct, modify the field values in the input source to specify a valid security label string.
- If the field values in the input source are security labels in binary, remove the STRING keyword from the field definition.
- If the field values in the input source are security label names, modify the field definition to specify DB2SECURITYLABEL NAME.

SQL2961N The INGEST command can specify at most *number* input file names or pipe names.

Explanation: The INGEST command failed because it has more than the allowable number of input file names or pipe names.

User response: Remove input file names or pipe names from the command so the number is less than or equal to than the maximum number specified in the message.

SQL2962N When restart is on, the nickname specified on the INGEST command must have server option DB2_TWO_PHASE_COMMIT set to 'Y'.

Explanation: The ingest utility issues this message when all of the following are true:

- The INGEST command omits the RESTART parameter or specifies RESTART NEW or RESTART CONTINUE.
- The target table is a nickname.
- When trying to insert into or update the nickname, the utility receives message SQL30090N with reason code 18.

The SQL30090 error occurs because the utility needs to update both the remote table that the nickname refers to and the restart log table, which is local. This requires the two-phase commit protocol, but the server definition that contains the nickname is not defined with server option DB2_TWO_PHASE_COMMIT set to 'Y'.

User response: Any one of the following:

- Alter the the server definition that contains the nickname so it specifies server option DB2_TWO_PHASE_COMMIT 'Y', for example:

```
ALTER SERVER my_server
  OPTIONS(ADD DB2_TWO_PHASE_COMMIT 'Y')
```

Note that you cannot use command SET SERVER OPTION to set the DB2_TWO_PHASE_COMMIT option for the ingest utility because the SET SERVER OPTION command affects only the CLP connection, whereas the ingest utility establishes its own connection. You must set the server option in the server definition in the catalog.

- Specify a nickname that has server option DB2_TWO_PHASE_COMMIT set to 'Y'.
- Specify RESTART OFF so that the ingest utility does not maintain restart information in the restart log table.
- Specify a target table that is not a nickname.

SQL2963N The starting or ending position specified on the POSITION parameter of field *field-name* is not valid.

Explanation: When the field definition does not specify a length, the ingest utility uses a length of end_position - start_position + 1. This length is subject to the following restrictions:

- Fields of type SMALLINT, INTEGER, BIGINT, DECIMAL, REAL, FLOAT, and DECFLOAT with the EXTERNAL modifier have a maximum length of 50.
- If a format string is specified for fields of type DATE, TIME, and TIMESTAMP(p), the field length must be greater than or equal to length of the shortest value that matches the format string.
- If a format string is not specified:
 - For DATE, the field length must be between 8 and 10, inclusive.
 - For TIME, the field length must be between 4 and 8, inclusive.
 - For TIMESTAMP, the field length must be between 19 and 32, inclusive.

User response: For a numeric field, correct the field length or the end position. For a DATE, TIME, or TIMESTAMP field, correct the format string or the end position.

SQL2964N The INGEST command cannot restart because the ingest job *job-ID* is still active.

Explanation: An INGEST command cannot be restarted using the job ID of another INGEST command that is still running.

User response: If the intention was to restart the ingest job with the specified job ID, no action is needed because that job is still running. If the job fails, it can be restarted using the specified job ID.

If the intention was to restart a different ingest job, specify the job ID of that job.

SQL2965I The following warning or error occurred issuing the SQL *sql-statement* statement on table *table-name*.

Explanation: This message identifies the table being operated on when the error in the following message occurred. If the table is the restart table (systools.ingestrestart), the restart table might be corrupted, damaged, or missing.

User response: If the table is the restart table (systools.ingestrestart):

- If the INGEST command gets no other errors and completes successfully, no action is needed. If you do not want to receive this message in the future, correct the error that caused the SQL operation to fail.

- If the INGEST command fails due to additional errors, do the following:
 1. Correct the error that caused the SQL operation to fail.
 2. Run the INGEST command with RESTART TERMINATE '*jobID*' to remove the entries for this job from the restart table. ('*jobID*' is the job ID for the failing INGEST command. This is either the ID that you specified on the RESTART NEW parameter of the INGEST command or the job ID that the INGEST command generated.)
 3. Run the original INGEST command from the beginning. (Do not specify RESTART CONTINUE.)
 4. If the problem still occurs and the restart table does not contain any information about other ingest jobs, run the SYSPROC.SYSINSTALLOBJECTS procedure to drop and re-create the restart table. After you have created the restart table, repeat step 3.
 5. If the problem still occurs, contact IBM Technical Support.

If the table is not the restart table, contact IBM Technical Support.

SQL2966I **The following warning or error occurred connecting to the database. Database name or local alias: *dbname*. User ID: *user-ID***

Explanation: When the ingest utility connects to the database and gets a warning or error, the utility issues this message followed by the warning or error message.

User response: Refer to the user response for the message that follows this message. If the problem still occurs, verify the following:

- The database or alias exists and is cataloged correctly on the machine where INGEST is running. If the database directory entry specifies a node name, verify that the node is cataloged correctly:
 - If the node definition specifies a service name, verify:
 - The service name maps to the correct port number on the machine where INGEST is running.
 - The database server is listening on that port number.
 - If the node definition specifies a port number, verify that the database server is listening on the specified port number.
- Verify that the specified user ID and its corresponding DB2 authorization ID have authority to connect to the database server.

In order to determine whether the problem is with the ingest utility or somewhere else, try connecting directly to the database server using the parameters indicated in the message, as follows:

```
db2 "CONNECT TO dbname USER user USING pwd"
```

SQL2967I **The following warning or error occurred connecting to a database partition. Partition number: *number*. Database name on the server: *dbname*. Host name: *hostname*. Service name or port number: *service-name-or-port-number*. User ID: *user-ID*.**

Explanation: When the ingest utility runs in a DPF environment and it can determine values for each of the target table's distribution keys, it connects directly to each database partition. When the utility connects to the database partition and gets a warning or error, the utility issues this message followed by the warning or error message.

User response: Refer to the user response for the message that follows this message. If the problem still occurs, verify the following:

- The database to which you are connected in the CLP is cataloged correctly on the machine where INGEST is running. If the database directory entry specifies a node name, verify that the node is cataloged correctly.
- The specified host is accessible from the machine where INGEST is running.
- If the message specifies a service name, verify:
 - The service name maps to the correct port number on the machine where INGEST is running.
 - The database server is listening on that port number.
- If the message specifies a port number, verify that the database server partition is listening on the specified port number.
- Verify that the specified user ID and its corresponding DB2 authorization ID have authority to connect to the database server partition.

In order to determine whether the problem is with the ingest utility or somewhere else, try connecting directly to the database server partition using the parameters shown in the message, for example:

```
db2 "SET CLIENT CONNECT_DBPARTITIONNUM num"
db2 "CONNECT TO dbname USER userID USING password"
```

SQL2968N **A non-numeric field value is used where a numeric value is expected.**

Explanation: This message is preceded by a message that identifies the input source name and line number. One of the fields in the specified input record has a non-numeric value, but is used where a numeric value is expected.

User response: One of the following:

- Modify the SQL statement on the INGEST command so that fields whose value could be non-numeric are not used where a numeric value is required.
- Edit the input data so that all fields that are used where a numeric value is expected have a numeric value.

SQL2969N A field that maps to a distribution key column contains a value that is invalid or out of range for the column type. The utility cannot pre-partition the input record. Field value: *field-value*. Column type: *column-type*. Column length: *number*.

Explanation: In a partitioned database environment, the utility examines the values of fields that map to distribution key columns and uses those values to determine the partition to send the record to. The utility issues this message when the field value is invalid or out of range for the corresponding distribution key column type. For example, the utility issues this message if the distribution key column type is INTEGER, but the field contains "ABC". The column type is the type of the distribution key column that corresponds to the field. The column length is the length of the column in bytes.

The utility will not send the record to DB2. If the DUMPFIL parameter is specified, the utility will write the record to the dump file.

User response: To avoid receiving this message, correct the field value in the input data.

SQL2970N Database *db-name* uses node *node-name*, but the utility cannot find the node in the node directory.

Explanation: The database directory contains an entry for the specified database and the entry specifies a node that does not exist.

User response: Define the node or modify the entry in the database directory to specify an existing node.

SQL2972N The INGEST command cannot restart because one or more command parameters or the input data is inconsistent with the original command.

Explanation: The INGEST command specifies RESTART CONTINUE but one or more of the following is true:

1. The target table and the restart table (SYSTOOLS.INGESTRESTART) are in different tablespaces, but the two tablespaces are at different levels.

2. The records in the restart table that belong to the specified ingest job ID have been modified outside of the INGEST utility.
3. The input files or pipes on the restarted INGEST command do not provide the same records in the same order as on the original command.
4. One or more of the following INGEST command parameters are different from the original command:
 - The SQL statement.
 - The field definition list, including the number of fields and all field attributes.
5. One or more of the target table columns that the SQL command updates have a different definition than they had at the time of the original command.
6. In a database partitioning feature environment:
 - Database partitions were added or removed since the original INGEST command was run.
 - Data was redistributed across the partitions since the original INGEST command was run.

User response: The user response depends on which restriction was violated:

1. Restore the tablespaces containing the target table and the restart table so they are at the same level.
2. Restore the contents of the restart table.
3. Specify input files or pipes that provide the same records and in the same order as on the original command.
4. Modify the SQL statement and the field definition list on the INGEST command to match the original command.
5. If the target table name on the INGEST command is not correct, specify the correct name. If the target table on the INGEST command has been altered since the original INGEST command, you cannot restart the failed INGEST command and will need to run the original INGEST command from the beginning.
6. If you have added or removed database partitions or have redistributed data across the partitions, you cannot restart the failed INGEST command and will need to run the original INGEST command from the beginning.

SQL2973N Field *field-name* of type *field-type* specifies an invalid format string *format-string*.

Explanation: The field definition specifies a date, time, or timestamp format string that is not valid.

A description of valid date, time, and timestamp format strings is in the section "File type modifiers for the import utility" in the DB2 Information Center. When the format string is specified on the INGEST command, it must be enclosed in single quotes.

User response: Ensure that the format string is enclosed in single quotes and has a valid format.

Re-run the INGEST command.

SQL2974N The INGEST command cannot continue because the primary database connection has been lost.

Explanation: During initialization of the INGEST command, the primary database connection was lost. The DB2 diagnostic log file might contain additional information.

User response: Resolve the problem that caused the lost connection. Re-establish the connection and re-run the INGEST command

SQL2975N When the INGEST command is restartable, the RECONNECT_COUNT ingest configuration parameter must be set to 0.

Explanation: The RECONNECT_COUNT ingest configuration parameter is set to a value greater than 0 and the INGEST command omits the RESTART parameter (so it defaults to NEW) or specifies RESTART NEW or RESTART CONTINUE.

User response: Set the RECONNECT_COUNT ingest configuration parameter to 0 or specify RESTART OFF on the INGEST command.

SQL2976W Field *field-name* specifies conflicting values for the length and end position. Reason code *reason-code*.

Explanation: There is a conflict between the field length and the field end position. The indicated reason code describes the conflict and how the utility resolves it:

1

The field type is SMALLINT, INTEGER, or BIGINT in binary. The length specified by (end position) - (start position) + 1 is 2, 4, or 8, but does not match the length of the field type. The utility will use the specified end position.

For example, if the field definition is SMALLINT POSITION(1:4), the utility will read 4 bytes even though a SMALLINT is 2 bytes. If the field contains a value outside the range of a SMALLINT, the utility will issue an error when it tries to convert the field value to a SMALLINT.

2

The field type is SMALLINT, INTEGER, or BIGINT in binary, but the length specified by (end position) - (start position) + 1 is not 2, 4, or 8. The utility will adjust the end position to match the length of the field type.

For example, if the field definition is SMALLINT POSITION(1:3), the utility will adjust the end position to 2 (because a SMALLINT is 2 bytes).

3

The field type is DECIMAL, REAL, FLOAT, or DECFLOAT in binary, but the length specified by (end position) - (start position) + 1 conflicts with the length of the field type. The utility will adjust the end position to match the length of the field type.

For example, if the field definition is REAL POSITION(1:5), the utility will adjust the end position to 4 (because a REAL is 4 bytes).

4

The field length specified on the field type conflicts with (end position) - (start position) + 1. If the specified length exceeds (end position) - (start position) + 1, the utility will adjust the length to (end position) - (start position) + 1. If the specified length is less than (end position) - (start position) + 1, the utility will adjust the end position to (start position) + length - 1.

For example, if the field definition is CHAR(10) POSITION(1:8), the utility will adjust the length to 8. If the field definition is CHAR(8) POSITION(1:10), the utility will adjust the end position to 8.

User response: To avoid receiving this message, do one of the following, depending on the reason code and the format of the data in the input source:

1

Change the field type or end position.

2

Change the field type or end position.

3

Change the field type, precision, scale, or end position.

4

Change the field end position or length.

SQL2977I Because of the previous error, the ingest utility will exit.

Explanation: The utility received an error that prevents it from continuing. The utility will exit.

Rows that were committed prior to the error remain in the table.

User response: Refer to the explanation and user response of the previous error message.

If the INGEST command specified RESTART NEW or

omitted the RESTART option (in which case it defaults to NEW), correct the error and re-run the same INGEST command, specifying RESTART CONTINUE.

SQL2978I **The following error occurred and the ingest utility could not recover after *number* reconnects and *number* retries.**
Reason code: *reason-code*

Explanation: Ingest configuration parameter RECONNECT_COUNT or RETRY_COUNT has a value greater than 0 and the utility received a recoverable error. The utility attempted to recover from the error but could not for the reason indicated by the reason code:

1

The number of reconnect attempts reached the value of the RECONNECT_COUNT ingest configuration parameter.

2

The number of retries reached the value of the RETRY_COUNT ingest configuration parameter.

3

The utility was interrupted or a terminating error occurred.

User response: Refer to the explanation of the error message that follows this message and take any needed corrective action.

If the error message is SQL0911N, you can also do one of the following depending on the SQL0911N reason code:

- Reason code 2: Reduce the value for the COMMIT_COUNT, COMMIT_PERIOD, or NUM_FLUSHERS_PER_PARTITION ingest configuration parameters.
- Reason code 68: Reduce the value for the COMMIT_COUNT or COMMIT_PERIOD ingest configuration parameters, or increase the locklist or maxlocks database configuration parameters.

If the error cannot be easily avoided and you want the utility to recover, increase the setting of one or more of the following ingest configuration parameters, depending on the reason code you received for the current message (SQL2978I):

- For reason code 1:
 - RECONNECT_COUNT
 - RECONNECT_PERIOD
- For reason code 2:
 - RETRY_COUNT
 - RETRY_PERIOD

SQL2979I **The ingest utility is starting at *timestamp*.**

Explanation: The ingest utility is starting at the indicated timestamp. The utility will also issue a message indicating the job ID.

User response: No user response is required.

SQL2980I **The ingest utility completed successfully at timestamp *timestamp***

Explanation: The ingest utility completed with no warnings or errors.

User response: No user response required.

SQL2981N **An error occurred calling a system function or system command. Function or command: *function-or-command-name*. Reason code: *reason-code*. Additional tokens: *additional-tokens*.**

Explanation: An unexpected error occurred calling an operating system function or command. The reason codes are:

1

The command was not found in /usr/bin or /bin. For this reason code, the "Additional tokens" field in the message is blank.

2

The function or command failed with the system error code shown in the "Additional tokens" field of the message. On UNIX, error codes are defined in system header file errno.h. For information on Windows error codes, consult Microsoft documentation.

3

The function or command did not return output in the expected format. The "Additional tokens" field of the message shows the last line of output.

User response: The user response depends on the reason code:

1

Verify that the specified command is installed in /usr/bin or /bin and is executable. If this is not the problem, contact IBM Technical Support.

2

If you cannot resolve the problem using the system error code, contact IBM Technical Support.

3

Verify that the command or function is the version that shipped with the operating

system and not a version tailored to your installation. If this is not the problem, contact IBM Technical Support.

SQL2982W Authorization ID *auth-ID* is not currently running any INGEST commands.

Explanation: The INGEST LIST or INGEST GET STATS command was issued, but the authorization ID currently connected to the database is not running any INGEST commands. If the authorization ID recently issued an INGEST command from another session, the command might not have completed initialization or might have already finished.

User response: If the authorization ID recently issued an INGEST command from another session and the command has not yet completed, wait a few seconds for the command to complete initialization. The command will then appear in the output of INGEST LIST or INGEST GET STATS.

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SQL3001C An I/O error (reason = *reason*) occurred while opening the output file.

Explanation: A system I/O error occurred while opening the output file.

The command cannot be processed. No data is processed.

User response: For IMPORT/LOAD, verify that the output file exists. For EXPORT, verify that the output media has enough free space. Resubmit the command with a valid output file name, including the correct path. Look in the message file for additional information.

SQL3002C An I/O error occurred while writing to the output data file.

Explanation: A system I/O error occurred while writing to the output data file. The output may be incomplete or the disk may be full.

The utility stops processing.

User response: If the output data file is incomplete, erase it and resubmit the command.

SQL3003C An I/O error occurred while closing the output data file.

Explanation: A system I/O error occurred while closing the output data file.

The file is not closed.

User response: If the output data file is incomplete, erase it and resubmit the command.

SQL3004N The load, import, or export utility failed because the specified file type is not supported.

Explanation: You can insert data from a file into a DB2 database using the load and import utilities, and you can export data from a DB2 database to a file using the export utility. Only certain file formats are supported for use with these utilities.

This message is returned when an attempt is made to use an unsupported file type with one of the load, import, or export utilities.

The command cannot be processed.

User response: Resubmit the command or API specifying a valid value for the parameter named *filetype*.

SQL3005N Processing was interrupted.

Explanation: An interrupt was received during processing. The user may have pressed the interrupt key sequence.

The utility stops processing. Any database updates not committed are rolled back.

User response: Resubmit the command. If doing an import, see *Command Reference* for information on how to use commitcount and restartcount parameters. If doing a load, see *Command Reference* for information on how to restart the load.

SQL3006C An I/O error occurred while opening the message file.

Explanation: A system I/O error occurred while opening the message file. This error can refer to a problem on either the client or the server.

The command cannot be processed.

User response: Resubmit the command with a valid message file name, including the correct path.

SQL3007C An I/O error occurred while writing to the message file.

Explanation: A system I/O error occurred while writing to the message file.

Processing may not have finished.

User response: If the message file is incomplete, erase it and resubmit the command.

SQL3008N The utility encountered an error *error* while connecting to the database.

Explanation: The IMPORT or EXPORT utility could not connect to the database.

No data is imported or exported.

User response: Look at the error number in the message for more information. Make changes and resubmit the command.

SQL3009N The Action String parameter is not valid or too long.

Explanation: The *Action String* (for example, "REPLACE into ..." for Export or "INSERT into ..." for Import and Load) parameter in the command is not valid. The *Action String* pointer may be incorrect. The *Action String* structure may contain characters that are not valid. The *Action String* structure may contain

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characters that are not valid. Either the deprecated or new parameter may be used for Action String.

The command cannot be processed.

User response: Verify the *Action String* pointer and the structure it points to. Resubmit the command with a valid *Action String*.

SQL3010N The METHOD parameter is not valid.

Explanation: The *METHOD* parameter in the command is not valid. The *METHOD* pointer may be incorrect. The structure that the *METHOD* points to may be incorrect. The *METHOD* structure may contain characters that are not valid.

The command cannot be processed.

User response: Examine the *METHOD* pointer and the structure it points to. Resubmit this command with a valid *METHOD*.

SQL3011C There is not enough storage to process the command.

Explanation: A memory allocation error occurred. Not enough memory is available to process the command, or there was an error freeing storage.

The command cannot be processed.

User response: Stop the application. Possible solutions include:

- Verify that your system has sufficient real and virtual memory.
- Remove background processes.
- Increase the *util_heap_sz* for the database.
- Decrease the size of buffers to use for the LOAD.
- The *util_heap_sz* is shared by the LOAD, BACKUP, RESTORE and REORG utilities, so have fewer concurrent instances of these utilities running.

SQL3012C A system error occurred.

Explanation: An operating system error occurred.

The command cannot be processed.

User response: Check your message file, correct the problem and resubmit the command.

SQL3013N The length of the filemod is out of the acceptable range. It should be greater than or equal to zero and less than or equal to 8000.

Explanation: The *filemod* specified is outside the acceptable range (greater than or equal to zero and less than or equal to 8000).

The command cannot be processed.

User response: Examine the *filemod* pointer and the

structure it points to. Resubmit the command with a valid *filemod*.

SQL3014C An I/O error occurred while closing the message file.

Explanation: A system I/O error occurred while closing the message file.

The message file is not closed.

User response: If the message file is incomplete, resubmit the command.

SQL3015N An SQL error sqlcode occurred during processing.

Explanation: An SQL error occurred during the utility call.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL3016N An unexpected keyword keyword was found in the filemod parameter for the filetype.

Explanation: A keyword that does not apply to the filetype for the utility was found in the filetype modifier (the *filemod* parameter or the phrase following *MODIFIED BY* in a CLP command).

The utility stops processing.

User response: Remove the filetype modifier or specify at least one valid keyword in the filetype modifier. See the Command Reference for more information on filetype modifiers.

SQL3017N A delimiter is not valid or is used more than once.

Explanation: For delimited ASCII files (DEL for the IMPORT or LOAD commands, and FORMAT DELIMITED for the INGEST command), one of two errors occurred:

- The character specified for either the column delimiter, character string delimiter, or decimal point character is not valid.
 - For SBCS or UTF-8 data, the valid range for the delimiters is 0x00 - 0x7F inclusive.
 - For MBCS data, the valid range for the delimiters is 0x00 - 0x3F inclusive.
 - For EBCDIC MBCS data, the valid range for the delimiters is 0x00 - 0x3F inclusive with the exception that the delimiters cannot be the SHIFT-OUT (0x0E) or the SHIFT-IN (0x0F) characters.

- The same character is specified for more than one of the preceding items.

The command cannot be processed.

User response: Examine the specified delimiters for validity and uniqueness. Resubmit the command with valid delimiter overrides.

SQL3018N The period was specified as a character string delimiter.

Explanation: For Delimited ASCII (DEL), the period cannot be specified as the character string delimiter.

The command cannot be processed.

User response: Resubmit the command with valid delimiter overrides.

SQL3019N No Action String parameter was specified in the command.

Explanation: No *Action String* (for example, "REPLACE into ...") parameter is specified for this utility call. This parameter is required.

The command cannot be processed.

User response: Resubmit the command with an *Action String* parameter.

SQL3020N The user does not have the authority to run the specified EXPORT command.

Explanation: The user attempted to export data without having DATAACCESS authority, or either the CONTROL privilege or the SELECT privilege for each table involved in the export.

The export action is not performed.

User response: Request appropriate authorization before exporting data from tables.

SQL3021N The user does not have the authority to run the specified IMPORT command on table *name*.

Explanation: The user attempted to import data without the appropriate authorization for the specified option and table.

Importing by using the INSERT option requires one of the following authorizations:

- DATAACCESS authority
- CONTROL privilege on the table, view, or entire hierarchy
- INSERT and SELECT privileges on the table, view, or entire hierarchy.

Note: "entire hierarchy" refers to all subtables or object views in the hierarchy.

Importing into an existing table or view by using the INSERT_UPDATE, REPLACE, or REPLACE_CREATE option requires one of the following authorizations:

- DATAACCESS authority
- CONTROL privilege on the table, view, or entire hierarchy.

Note: "entire hierarchy" refers to all subtables or object views in the hierarchy.

Importing into a table that does not exist by using the CREATE or REPLACE_CREATE option requires one of the following authorizations:

- DBADM authority
- CREATETAB authority on the database and one of the following authorizations:
 - IMPLICIT_SCHEMA authority on the database, if the schema name of the table does not exist
 - CREATEIN privilege on the schema, if the schema name of the table exists

The import operation is not performed.

User response: Ensure that you are authorized to perform the import operation.

SQL3022N An SQL error *sqlcode* occurred while processing the SELECT string in the Action String parameter.

Explanation: In IMPORT or EXPORT, during processing of the SELECT string from the *Action String* (for example, "REPLACE into ...") structure, an SQL error occurred.

The command cannot be processed.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL3023N The database name parameter is not valid.

Explanation: The database name parameter is not valid. See the SQLERRD[0] field in the SQLCA for more information.

The database name must contain 1 to 8 characters and the characters must be from the database manager base character set.

The command cannot be processed.

User response: Resubmit the statement with a valid database name parameter.

SQL3024N An I/O error occurred while opening the format file.

Explanation: A system I/O error occurred while opening the format file. This error can refer to a problem on either the client or the server.

A possible cause may be that the format file is in use by another application.

The command cannot be processed.

User response: Ensure that the format file is valid, including the path, and that it is not currently in use by another application.

Resubmit the command. Look in the diagnostics log file for additional information.

SQL3025N A parameter specifying a filename or path is not valid.

Explanation: The parameter contains a path, directory, or file name that is not valid.

For IMPORT and EXPORT, verify the *datafile* parameter.

For LOAD, verify that each entry in the parameters of type *sqlu_media_list: datafile* should contain valid filenames; *lobpaths copytarget*, and *workdirectory* should contain valid paths on the server including the final separator and a null terminator.

The pointer to *lobpaths*, *copytarget* and *workdirectory* must be valid or null.

The pointer to the targets in these structures must be valid.

Check that sessions and *media_type* are specified correctly.

Also, if the *lobpaths* parameter is specified, check that the *media_type* is the same as that specified for the datafile structure.

If the *filetype* is IXF, the length of the file name may be too long.

This error is also returned when the DB2 database manager does not have read access permission for the specified file or path.

The command cannot be processed.

User response: Ensure the DB2 database manager has read access permission for the specified file or path.

Resubmit the statement with a valid parameter.

SQL3026N The msgfile or tempfiles path parameter is not valid.

Explanation: For IMPORT or EXPORT, the *msgfile* parameter contains a path, directory, or file name that is not valid.

For LOAD, either the *msgfile* parameter contains a path,

directory, or file name that is not valid on the client, or the tempfiles path is not valid on the server.

If the database to which the application is connected is a remote database, the *msgfile* must be fully qualified. For a local database the utility will attempt to fully qualify the *msgfile* if it is not already fully qualified. Also verify that the pointer to the *msgfile* is valid.

The command cannot be processed.

User response: Resubmit the statement with a valid *msgfile* and/or tempfiles path parameter.

SQL3027N An I/O error occurred while reading from the format file.

Explanation: A system I/O error occurred while reading from the format file. This error can refer to a problem on either the client or the server.

The command cannot be processed.

User response: Verify that the format file is readable.

SQL3028N The export method indicator is not valid. It must be either 'N' or 'D'.

Explanation: The export method indicator must be either N for Names or D for Default.

The command cannot be processed.

User response: Resubmit the statement with a valid method indicator.

SQL3029N No filetype parameter was specified.

Explanation: The *filetype* parameter was either not specified or null. The system does not know which format to use for the data file.

The command cannot be processed.

User response: Resubmit the statement with a valid *filetype*.

SQL3030C An I/O error (reason = reason) occurred while opening the input file.

Explanation: A system I/O error occurred while opening the input file. This error can refer to a problem on either the client or the server.

A possible cause may be that the input file is in use by another application.

The command cannot be processed.

User response: Ensure that the input file is valid, including the path, and that it is not currently in use by another application.

Resubmit the command.

SQL3031C An I/O error occurred while reading from the input file.

Explanation: A system I/O error occurred while reading from the input file. This error can refer to a problem on either the client or the server.

The command cannot be processed.

User response: Verify that the input file is readable.

SQL3032N The LOAD/IMPORT method indicator is not valid for the specified filetype. It must be either 'N', 'P', or 'default'.

Explanation: For the IXF filetype, the LOAD/IMPORT method indicator must be either N for Names, P for Positional, or D for Default.

The command cannot be processed.

User response: Resubmit the command with a valid method indicator.

SQL3033N A keyword such as INSERT, REPLACE, CREATE, INSERT_UPDATE, or REPLACE_CREATE is missing from the target specification or it is misspelled.

Explanation: For IMPORT, the *Action String* (for example, "REPLACE into ...") parameter does not contain the keyword INSERT, REPLACE, CREATE, INSERT_UPDATE, or REPLACE_CREATE. For LOAD, the *Action String* parameter does not contain the keyword INSERT, REPLACE, or RESTART. The keyword must be followed by at least one blank.

The command cannot be processed.

User response: Resubmit the command with a valid *Action String* parameter.

SQL3034N The keyword INTO is missing from the target specification or it is misspelled.

Explanation: The INTO keyword is missing or spelled incorrectly. INTO must be followed by at least one blank.

The command cannot be processed.

User response: Resubmit the command with a valid *Action String* (for example, "REPLACE into ...") parameter.

SQL3035N The tablename parameter in the target specification is not valid.

Explanation: For IMPORT, the *tablename* in the *Action String* (for example, "REPLACE into ...") is not valid. For LOAD, the *tablename* or the *exception tablename* in the *Action String* is not valid.

The command cannot be processed.

User response: Resubmit the command with a valid *tablename*. Also ensure that all command keywords and parameters are entered in the correct order.

SQL3036N The tcolumn-list in the target specification does not have a closed parenthesis.

Explanation: The *tcolumn-list* must be delimited by parentheses. The list was not terminated by the closed parenthesis.

The command cannot be processed.

User response: Resubmit the statement with a valid, complete column list in the *Action String* (for example, "REPLACE into ...") parameter.

SQL3037N An SQL error *sqlcode* occurred during Import processing.

Explanation: An SQL error occurred during processing of the *Action String* (for example, "REPLACE into ...") parameter.

The command cannot be processed.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL3038N The Action String parameter contains unexpected characters.

Explanation: For IMPORT, there are characters other than blanks after the closing parenthesis of the column list in the *Action String* (for example, "REPLACE into ...") parameter. For LOAD, there are characters other than blanks after the closing parenthesis of the column list and/or the exception *tablename* in the *Action String* parameter.

The command cannot be processed.

User response: Resubmit the command with a valid *Action String* parameter.

SQL3039W The memory available to LOAD for DATA BUFFER prohibits full LOAD parallelism. Load parallelism of *value* will be used

Explanation: The LOAD utility attempted to determine the optimal level of CPU parallelism for SMP exploitation based on the system configuration, or the user specified a value for LOAD parallelism when invoking the utility. However, one of the following limitation was encountered:

1. The amount of free memory in the utility heap prohibits this degree of parallelism.
2. The DATA BUFFER parameter was specified with a value too small to allow for the specified or available parallelism.

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A lesser degree of parallelism, requiring less memory, will be used.

User response:

1. Ignore this message, and the LOAD will complete normally using the smaller value for LOAD parallelism. However, Load performance may be less than optimal.
2. Specify a smaller value for LOAD parallelism when invoking the utility.
3. Increase the size of the utility heap.
4. Increase the size of the data buffer parameter, or leave the parameter blank and let the LOAD utility determine a default based on the freespace in the utility heap.

SQL3040N The utility cannot use the file name *file-name* specified in the *option-name* parameter. Reason code: *reason-code*.

Explanation: One of the following reason codes may apply:

1

Either the file *file-name* is not a valid `sqlu_media_list` or the values provided are not valid. The `media_type` must be `SQLU_CLIENT_LOCATION`.

2

There are not enough file names provided. There are more documents to be exported than the number of file names provided multiplied by `SQLU_MAX_SESSIONS`.

3

The combination of a path name and a file name exceeds the maximum length of 255 bytes per file.

4

The file *file-name* cannot be accessed.

5

The file name *file-name* contains a path name but paths should not be included.

6

The sum of the starting position and the length of the input data exceeds the size of the file with file name *file-name*.

User response: Determine which reason code applies, correct the problem, and resubmit your command.

SQL3041N The date value specified is not supported in Sybase.

Explanation: Sybase does not support date values prior to 1753.

User response: Please give a valid date value and issue the command again.

SQL3042N The LINKTYPE specified for a DATALINK column is invalid.

Explanation: The value specified for LINKTYPE for a DATALINK column is invalid.

User response: Check the LINKTYPE specified. Correct the value and resubmit the command.

SQL3043N The DATALINK SPECIFICATION for DATALINK column(s) is invalid.

Explanation: The DATALINK SPECIFICATION for DATALINK column(s) is invalid for one of the following reasons:

- No value is specified for `DL_URL_REPLACE_PREFIX`.
- No value is specified for `DL_URL_DEFAULT_PREFIX`.
- No value is specified for `DL_URL_SUFFIX`.
- Contains keywords other than `DL_URL_REPLACE_PREFIX` or `DL_URL_DEFAULT_PREFIX` or `DL_URL_SUFFIX`.

User response: Correct the specification and resubmit the command.

SQL3044N The DATALINK SPECIFICATION for a DATALINK column has duplicate prefix specification.

Explanation: The DATALINK SPECIFICATION for a DATALINK column has duplicate specifications for `DL_URL_REPLACE_PREFIX` or `DL_URL_DEFAULT_PREFIX`.

User response: Remove the duplicate specification and resubmit the command.

SQL3045N A dcolumn position in the METHOD parameter is less than one or greater than the maximum number of columns (1024) in a Delimited ASCII file.

Explanation: The *dcolumn* position is less than 1 or greater than the maximum number of columns (1024) in a delimited file.

The command cannot be processed.

User response: Resubmit the command with valid *dcolumn* positions.

SQL3046N The number of columns in the METHOD parameter is less than one.

Explanation: For METHOD methods other than Default, the number of columns specified must be a positive number (greater than 0).

The command cannot be processed.

User response: Resubmit the command with a valid number of columns in the METHOD parameter.

SQL3047N The LOAD/IMPORT method specified in METHOD is not valid for Delimited ASCII files. It must be either 'P' or 'default'.

Explanation: The only valid LOAD/IMPORT methods for Delimited ASCII files are P for Positions or D for Default.

The command cannot be processed.

User response: Resubmit the command with a valid import method.

SQL3048N There are fewer columns specified from the input file than database columns, but one of the database columns is not nullable.

Explanation: When fewer columns are specified in the METHOD list than are specified for the target table, the values for the missing input columns are loaded as nulls. Because the columns in the target table that correspond to one or more of these input columns are not nullable, null cannot be inserted.

The file cannot be loaded.

User response: Define a new table that has the same number of columns as the input file or that has nullable columns. Resubmit the command.

SQL3049N The data type *type* of the database column *name* is not compatible with this format file, but the database column is not nullable.

Explanation: The database column type is not valid for this format file. The database column is not nullable so the utility is ended.

The utility stops processing. No data is loaded.

User response: Redefine the database table so the columns are compatible with the columns loaded from the file.

SQL3050W Conversions on the data will be made between the IXF file code page *file-code-page* and the application code page *application-code-page*.

Explanation: If an IMPORT of an IXF data file has been issued and the code page of the character data in the IXF file is different from the code page of the application invoking the import operation, a conversion will be made from the code page of the data file to the code page of the application and the operation will continue.

If a LOAD of an IXF data file has been issued and the code page of the character data in the IXF file is different from the database code page, a conversion will be made from the code page of the data file to the code page of the database and the operation will continue.

User response: If you do not want a conversion to be performed, invoke the utility using the FORCEIN option; otherwise no action is required.

SQL3051W The data to be loaded into *column-name* has been loaded, but conversion from the IXF file code page to the application code page has not been performed.

Explanation: The data that was loaded into the CLOB or DBCLOB column is stored in a separate file and no conversions have been performed on it.

To properly load the data, call the utility from an application that has the same code page as the IXF file.

User response: This is a warning only.

SQL3052N The *type* path parameter is missing but is required. Reason code: *reason-code*.

Explanation: Reason codes:

- 1 The input data files come from different paths, and there are *type* columns in the target table. The *type* path parameter must be specified.
- 2 The load is issued from a remotely connected client and there are files containing the "*type*" data. The "*type*" path parameter must be specified.

User response: Specify the path and resubmit your command.

SQL3053N There are more than 8191 rows to be exported to a worksheet formatted file.

Explanation: The maximum number of rows that can be placed in a worksheet format file (WSF) is 8191.

The EXPORT utility stops processing after placing 8191 rows in the file.

User response: To prevent this error, use a SELECT

statement that results in fewer rows to export, and resubmit the command.

SQL3054N The input file is not a valid PC/IXF file. The file is too short to contain a valid H record.

Explanation: The end of the file was reached before the expected end of the first record. The file may not be a PC/IXF file.

The LOAD/IMPORT utility stops processing. No data is imported.

User response: Verify that the input file is correct.

SQL3055N The input file is not a valid PC/IXF file. The length field in the first record cannot be converted to a numeric value.

Explanation: The value in the length field of the first record is not the ASCII representation of a number. The file may not be a PC/IXF file.

The utility stops processing. No data is loaded.

User response: Verify that the input file is correct.

SQL3056N The input file is not a valid PC/IXF file. The value in the length field of the H record is too small.

Explanation: The value in the length field of the H record is not large enough for a valid H record. The file may not be a PC/IXF file.

The utility stops processing. No data is loaded.

User response: Verify that the input file is correct.

SQL3057N The input file is not a valid PC/IXF file. The type field in the first record is not H.

Explanation: The type field in the first record is not H. The first record is not a valid H record. The file may not be a PC/IXF file.

The utility stops processing. No data is loaded.

User response: Verify that the input file is correct.

SQL3058N The identifier field in the H record is not IXF.

Explanation: The identifier field in the H record does not identify the file as a PC/IXF file.

The utility stops processing. No data is loaded.

User response: Examine the identifier field in the H record.

SQL3059N The version field in the H record is not valid.

Explanation: The version field in the H record contains a value that is not valid.

The utility stops processing. No data is loaded.

User response: Examine the version field in the H record.

SQL3060N The HCNT field in the H record cannot be converted to a numeric value or the value is out of range.

Explanation: The Heading-record-count field in the H record is not an ASCII representation of a number or is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the HCNT field in the H record.

SQL3061N The single-byte and/or double-byte code page field in the H record cannot be converted to a numeric value or the value is out of range.

Explanation: The single-byte and/or double-byte code page field in the H record is not an ASCII representation of a number or is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the single-byte and double-byte code page field in the H record, change them to appropriate values, and resubmit the command.

SQL3062N The double-byte code page field in the H record cannot be converted to a numeric value or the value is out of range.

Explanation: The double-byte code page field in the H record is not an ASCII representation of a number or is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the double-byte code page field in the H record, change it to an appropriate value, and resubmit the command.

SQL3063N The single-byte code page value *value-1* in the H record is not compatible with the single-byte code page value *value-2* for the application. The FORCEIN option was not specified.

Explanation: The single-byte code page value in the H record is not compatible with the application code page

value. When the FORCEIN option is not used, the data cannot be loaded unless conversion from value 1 to value 2 is supported.

The utility stops processing. No data is loaded.

User response: To load this data, resubmit the command with the FORCEIN option.

SQL3064N The double-byte code page value *value-1* in the H record is not compatible with the double-byte code page value *value-2* for the application. The FORCEIN option was not specified.

Explanation: The double-byte code page value in the H record is not compatible with the application code page value. When the FORCEIN option is not used, the data cannot be loaded unless value 1 and value 2 are the same.

The utility stops processing. No data is loaded.

User response: To load data where the double-byte code page values do not match, resubmit the command with the FORCEIN option.

SQL3065C The value for the application codepage cannot be determined.

Explanation: The system encountered an error while determining the code page of the application.

The utility stops processing. No data is loaded or unloaded.

User response: Contact your technical service representative.

SQL3066N While reading or looking for the T record, the end of the file was reached.

Explanation: The end of the file was reached while the system was looking for the T record or while it was reading the T record.

The utility stops processing. No data is loaded.

User response: Examine the T record of the input file. If the PC/IXF file was copied from one medium to another, compare the copy with the original or repeat the copy process.

SQL3067N The length field in the T record cannot be converted to a numeric value.

Explanation: The length field in the T record is not an ASCII representation of a number.

The utility stops processing. No data is loaded.

User response: Examine the length field in the T record.

SQL3068N The value in the length field of the T record is too small.

Explanation: The value in the length field of the T record is not large enough so the T record is not valid.

The utility stops processing. No data is loaded.

User response: Examine the length field in the T record.

SQL3069N The first non-A record following the H record is not a T record.

Explanation: After the H record, the first record not an A record is also not a T record. The H record must be immediately followed by a T record but A records may exist before the T record.

The utility stops processing. No data is loaded.

User response: Examine the records following the H record.

SQL3070N The length field in an A record is out of range.

Explanation: The length field in an A record is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the length field in the A records.

SQL3071N The data-convention field in the T record is not C.

Explanation: The data-convention field in the T record is a value other than C.

The utility stops processing. No data is loaded.

User response: Examine the data-convention field in the T record.

SQL3072N The data-format field in the T record is not M.

Explanation: The data-format field in the T record is a value other than M.

The utility stops processing. No data is loaded.

User response: Examine the data-format field in the T record.

SQL3073N The machine format field in the T record is not PCbbb (where b = blank).

Explanation: The machine format field in the T record is a value other than PC *bbb*, where each *b* is a blank.

The utility stops processing. No data is loaded.

User response: Examine the machine format field in the T record.

SQL3074N The data-location field in the T record is not I.

Explanation: The data-location field in the T record is a value other than I.

The utility stops processing. No data is loaded.

User response: Examine the data-location field in the T record.

SQL3075N The CCNT in the T record cannot be converted to a numeric value or the value is out of range.

Explanation: The C-record count field in the T record is not an ASCII representation of a number or is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the CCNT field in the T record.

SQL3076N The name length field in the T record cannot be converted to a numeric value or the value is out of range.

Explanation: The name length field in the T record is not an ASCII representation of a number or is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the name length field in the T record.

SQL3077N The number of C records specified in the CCNT field in the T record *value* exceeds the maximum allowed *maximum*.

Explanation: The value in the CCNT field of the T record is larger than the maximum allowed for the indicated release.

The utility stops processing. No data is loaded.

User response: Examine the CCNT field in the T record.

SQL3078N The length field in an A record cannot be converted to a numeric value.

Explanation: The length field in an A record is not an ASCII representation of a number.

The utility stops processing. No data is loaded.

User response: Examine the length fields in the A records.

SQL3079N The length field in a C record cannot be converted to a numeric value.

Explanation: The length field in a C record is not an ASCII representation of a number.

The utility stops processing. No data is loaded.

User response: Examine the length field in the C records.

SQL3080N The value in the length field of the C record is too small.

Explanation: The value in the length field of a C record is not large enough so the C record is not valid.

The utility stops processing. No data is loaded.

User response: Examine the length field in the C records.

SQL3081N Not enough C records were found.

Explanation: The number of C records found (in the correct position) is less than the number expected from the C-record-count (CCNT) in the T record.

The utility stops processing. No data is loaded.

User response: Examine the T and C records.

SQL3082N While reading or looking for a C record, the end of the file was reached.

Explanation: The end of the file was reached while the system was looking for a C record or while it was still reading a C record.

The utility stops processing. No data is loaded.

User response: Examine the C records in the input file. If the PC/IXF file was copied from one medium to another, compare the copy with the original or repeat the copy process.

SQL3083N The D-record-id field in the C record for column *name* cannot be converted to a numeric value.

Explanation: The D-record-id field in the C record for the indicated column is not an ASCII representation of a number.

The utility stops processing. No data is loaded.

User response: Examine the D-record-id field in the C record.

SQL3084N The D-record-position field in the C record for column *name* cannot be converted to a numeric value.

Explanation: The D-record-position field in the C

record for the indicated column is not an ASCII representation of a number.

The utility stops processing. No data is loaded.

User response: Examine the D-record-position field in the C record.

SQL3085N The D-record-id and D-record-position fields in the C record for column *name* are out of range or inconsistent with the previous C record.

Explanation: The D-record-id or the D-record-position fields in the C record for the indicated column contain a value that is either out of the value range or is not correct relative to the previous C record.

The utility stops processing. No data is loaded.

User response: Examine the D-record-id and D-record-position fields in the C record.

SQL3086N There was no source column specified to be loaded into database column *name* or the specified source column does not exist, but the database column is not nullable.

Explanation: Either there was not a PC/IXF column specified to be exported into the indicated column or the specified PC/IXF source column does not exist. Nulls cannot be inserted because the database column is not nullable.

The utility stops processing. No data is loaded.

User response: Check the *METHOD* parameter for erroneous names or positions or for fewer entries in the *METHOD* parameter than the *Action String* (for example, "REPLACE into ...") parameter states or implies.

SQL3087N The source column specified to be loaded into database column *name* is not valid, but the database column is not nullable.

Explanation: The PC/IXF column cannot be loaded into the indicated database column and the reason was given in a previous message in the message log. Nulls cannot be inserted because the database column is not nullable.

The utility stops processing. No data is loaded.

User response: Read the previous messages to understand why the column is not valid.

SQL3088N The source column specified to be loaded into database column *name* is not compatible with the database column, but the database column is not nullable.

Explanation: The source PC/IXF column is not compatible with the target database column. The column types or lengths may be incompatible. Nulls cannot be inserted because the database column is not nullable.

The utility stops processing. No data is loaded.

User response: Compare the columns in the source PC/IXF file with the columns in the database.

SQL3089N A non-D record was found where a D record was expected.

Explanation: Some record other than a D record was found where a D record was expected.

The utility stops processing. No data is loaded.

User response: Examine the D records in the file.

SQL3090N The length field in a D record cannot be converted to a numeric value.

Explanation: The length field in a D record is not an ASCII representation of a number.

The utility stops processing. No data is loaded.

User response: Examine the length field in the D records.

SQL3091N The length field in a D record is out of range.

Explanation: The length field in a D record is a number that is not valid for this field.

The utility stops processing. No data is loaded.

User response: Examine the length field in the D records.

SQL3092N The identifier field in a D record does not contain the expected value.

Explanation: The identifier field in a D record is not valid. One or more D records may have been written out of sequence.

The utility stops processing. No data is loaded.

User response: Examine the identifier field in the D records.

SQL3093N The input file is not a valid WSF file.

Explanation: The first record in the worksheet format (WSF) file was not a beginning-of-file (BOF) record, or the version of the WSF file is not supported.

The IMPORT utility stops processing. No data is imported.

User response: Verify that the file is a valid WSF file and that the name was entered correctly.

SQL3094N The input column *name* was not found, but the corresponding database column is not nullable.

Explanation: The specified column was not in the input file. Because the corresponding database column is not nullable, data cannot be loaded into the column.

The utility stops processing. No data is loaded. The column names processed before the error occurred are in the database

User response: Verify that the input file contains the specified column names.

SQL3095N The specified column position *position* is not in the valid range of 1 to 256.

Explanation: A column position was specified that was not within the range of 1 to 256.

The utility stops processing. No data is loaded. The column names processed before the error occurred are in the database.

User response: Verify that the specified column position is within the range 1 to 256.

SQL3096N The data type *type* of the database column *name* is not compatible with any WSF column type, but the database column is not nullable.

Explanation: There is not any worksheet format (WSF) column type that is compatible with the indicated database column. The database column is not nullable so the IMPORT utility stops processing.

No data is imported.

User response: Redefine the database table so the columns are compatible with the columns being imported from the WSF file. Resubmit the command.

SQL3097N The record length field in the WSF record is not valid for its record type.

Explanation: The worksheet format (WSF) records have an expected fixed length or a variable-length range. The record does not contain the fixed length, or the variable length is out of range. Some damage occurred to the WSF file, or it was generated

incorrectly, possibly with a level of the Lotus product not supported by the database manager.

The IMPORT utility stops processing.

User response: Regenerate the WSF file with a supported level of the Lotus product.

SQL3098N The row number from the input file is not in the valid range of 1 to 8192.

Explanation: The maximum number of rows that a worksheet format (WSF) spreadsheet can contain is 8192. The cell coordinate contains a value outside the valid range. Some damage occurred to the WSF file, or it was generated incorrectly, possibly with a level of the Lotus product not supported by the database manager.

The IMPORT utility stops processing.

User response: Regenerate the WSF file with a supported level of the Lotus product.

SQL3099N The column number from the input file is not in the valid range of 1 to 256.

Explanation: The maximum number of columns that a worksheet format (WSF) spreadsheet can contain is 256. The cell coordinate contains a value outside the valid range. Some damage has occurred to the WSF file, or it was generated incorrectly, possibly with a level of the Lotus product that is not supported by the database manager.

The IMPORT utility stops processing.

User response: Regenerate the WSF file with a supported level of the Lotus product.

SQL3100W Column number *column-number* (identified as *name*) in the output DEL format file is longer than 254 bytes.

Explanation: The length or maximum length of the specified output column is greater than 254 bytes. Columns larger than 254 are not supported by some other products.

The entire field is exported without truncation.

Prior to DB2 Version 9.5 only, this message is returned when data is exported in DEL file format and the length of one or more columns in the output file is longer than 254 bytes.

User response: If the output file cannot be processed by another product, export only a substring of the incorrect column, redefine the table, or manually truncate the data in the DEL column.

SQL3101W There is a character string delimiter in column *column-number* in row *row-number*.

Explanation: The system puts character string delimiters around the character strings being exported but it found a character string that already has the delimiter in the character string.

Delimiters will be placed around the character string. Future use of that string leads to an appearance of truncation. Processing can continue.

User response: Review the data for the given column and row in the output table or file. To avoid loss of data, change the character delimiter to some character that is not in the data.

SQL3102W The number of columns in the METHOD parameter is greater than the number of columns in the Action String (e.g. "REPLACE into ...") parameter.

Explanation: The number of columns taken from the input file or table is greater than the number to be put in the output table or file.

Only data for the columns indicated in the output table or file will be processed. Data in the excess input columns is not processed.

User response: Review the data in the output table or file.

SQL3103W The number of columns in the METHOD parameter is less than the number of columns in the Action String (e.g. "REPLACE into ...") parameter.

Explanation: The number of columns taken from the input file or table is less than the number to be put in the output table or file.

Only data for the columns indicated in the input table or file will be processed. Data in the excess output columns is not processed.

User response: Review the data in the output table or file.

SQL3104N The Export utility is beginning to export data to file *name*.

Explanation: This is the normal beginning message.

User response: No action is required.

SQL3105N The Export utility has finished exporting *number rows*.

Explanation: This is the summary message for the export utility which is printed at the end of the message file. This message will state how many rows resulting from the SELECT statement were processed

before the export utility terminated.

User response: If an sqlcode of 0 was returned from the utility, then no response is required. If an sqlcode of 3107 was returned, check the message file for warnings that occurred during the export and resubmit the command if desired. If a negative sqlcode was returned, an error occurred during the export and the data file may not contain all the data requested. The command should be resubmitted with the error corrected.

SQL3106N An error occurred while formatting a message for the message file.

Explanation: The error message may be incomplete or formatted incorrectly.

User response: No action is required.

SQL3107W At least one warning message was encountered during LOAD processing.

Explanation: You can load data into a database from a file, tape, or named pipe using the LOAD command. You can specify that any warnings or errors from the LOAD processing be printed to a message file. If no message file is specified, the warnings or errors are printed to standard out (unless the database manager instance is configured as a partitioned-database environment.)

This message is returned when at least one warning was received during processing. If a message file is being used, the warnings and errors will be printed there.

This warning does not affect processing.

User response: Review the message file warning.

SQL3108W Unable to access file referenced by a DATALINK value in row *row-number* and column *column-number*. Reason code = *reason-code*.

Explanation: The possible causes of this message depend on the value of *reason-code*:

- 1 DATALINK value data location format is not valid.
- 2 DATALINK value DB2 Data Links Manager is not registered with the database.
- 3 DATALINK linktype value is not valid.
- 4 DATALINK value referenced file cannot be found by the DB2 Data Links Manager.
- 5 DATALINK value referenced file is already linked to the database.
- 6 DATALINK value referenced file cannot be accessed for linking. It may be a symbolic link

or a file with permission bit for set user ID (SUID) on or set group ID (SGID) on.

- 7 DATALINK value URL or comment is too long.
- 8 DATALINK value referenced file cannot be linked to the database. The DB2 Data Links Manager does not authorize the DB2 user to link this file.

User response: The action is based on the *reason-code* as follows:

- 1 Correct the data location format. If hostname is not specified, DB2 can use the local hostname as default only if support for FILE LINK CONTROL is enabled. Refer to the Administration Guide for information on enabling this support.
- 2 Ensure that the correct DB2 Data Links Manager is specified and if so have it registered to the database. Registered DB2 Data Links Managers are ignored unless support for FILE LINK CONTROL is enabled. Refer to the Administration Guide for information on enabling this support.
- 3 Correct the linktype value.
- 4 Check that the correct file is specified and that the file exists
- 5 Either unlink the existing reference to the file or do not specify the file in this statement.
- 6 Linking of directories is not allowed. Use the actual file name, not the symbolic link. If SUID or SGID is on, this file cannot be linked using a DATALINK type.
- 7 Reduce the length of the data location value or the comment.
- 8 Contact the DB2 Data Links Manager administrator to get the necessary authorization

SQL3109N The utility is beginning to load data from file *name*.

Explanation: This is the normal beginning message. The message may indicate the name of a temporary file created on the server instead of the source file.

User response: No action is required.

SQL3110N The utility has completed processing. *number* rows were read from the input file.

Explanation: This is the normal ending message.

User response: No action is required.

SQL3111C An I/O error occurred while closing the input data file.

Explanation: A system I/O error occurred while closing the input data file. This error can refer to a problem on either the client or the server.

The file is not closed.

User response: Examine the input file for an I/O error.

SQL3112W There are fewer input file columns specified than database columns.

Explanation: There are fewer columns specified in the input file than in the output table. Because the extra columns in the table are defined as nullable, the values in those columns are filled with nulls.

User response: No action is required.

SQL3113W The data type *type* of the database column *name* is not compatible with this format file. Null values are inserted for the column.

Explanation: The database column type is not valid for this file. Because the column is nullable, nulls are inserted.

Null values are loaded for the indicated column.

User response: If nulls are not acceptable for the column, do one of the following:

- Edit the data in the table.
- If possible, use another compatible column in the database table as the target column and resubmit the command.
- Redefine the database table so the columns are compatible with the columns being loaded and resubmit the command.

SQL3114W Some data following *text* in row *row-number* and column *column-number* was not loaded.

Explanation: Some data in the specified row and column is not loaded, probably because the column contains data as follows:

- A closed string delimiter
- An isolated carriage return or line feed control character
- A non-delimited string value.

The text that was loaded is shown in the *text* token.

The contents of the field may be incomplete.

User response: Compare the value in the output table with the input file. If necessary, correct the input file

and resubmit the command, or edit the data in the table.

SQL3115W The field value beginning *text* in row *row-number* and column *column-number* is longer than the longest allowable table column. The value was truncated.

Explanation: The field value is longer than 32700 bytes.

The value was truncated after 32700 bytes.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table. Check for unmatched character string delimiters.

SQL3116W The field value in row *row-number* and column *column-number* is missing, but the target column is not nullable.

Explanation: A null field value was encountered in the input file. Because the target column in the table is not nullable, it cannot be loaded.

For files other than ASCII files, the value of the column number specifies the field within the row of the missing data. For ASCII files, the value of the column number specifies the byte position within the row of the missing data.

The row is not loaded.

User response: If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3117W The field value in row *row-number* and column *column-number* cannot be converted to a SMALLINT value. A null was loaded.

Explanation: The value in the specified field cannot be converted to a SMALLINT value. There may be a data type mismatch. The value may be larger than a 2-byte integer.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3118W The field value in row *row-number* and column *column-number* cannot be converted to a SMALLINT value, but the target column is not nullable. The row was not loaded.

Explanation: The value in the specified field cannot be converted to a SMALLINT value. There may be a data type mismatch. The value may be larger than a 2-byte integer. A null cannot be loaded because the output column in the table is not nullable.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

The row is not loaded.

User response: Correct the input file and resubmit the command or edit the data in the table.

SQL3119W The field value in row *row-number* and column *column-number* cannot be converted to an INTEGER value. A null was loaded.

Explanation: There may be a data type mismatch because the value in the specified field cannot be converted to an INTEGER value.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3120W The field value in row *row-number* and column *column-number* cannot be converted to an INTEGER value, but the target column is not nullable. The row was not loaded.

Explanation: There may be a data type mismatch because the value in the specified field cannot be converted to an INTEGER value. A null cannot be loaded because the output column in the table is not nullable.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

The row is not loaded.

User response: Correct the input file and resubmit the

command or edit the data in the table.

SQL3121W The field value in row *row-number* and column *column-number* cannot be converted to a FLOAT value. A null was loaded.

Explanation: The value in the specified field cannot be converted to a FLOAT value. There may be a data type mismatch.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3122W The field value in row *row-number* and column *column-number* cannot be converted to a FLOAT value, but the target column is not nullable. The row was not loaded.

Explanation: The value in the specified field cannot be converted to a FLOAT value. There may be a data type mismatch. A null cannot be loaded because the output column in the table is not nullable.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

The row is not loaded.

User response: Correct the input file and resubmit the command or edit the data in the table.

SQL3123W The field value in row *row-number* and column *column-number* cannot be converted to a PACKED DECIMAL value. A null was loaded.

Explanation: The value in the specified field cannot be converted to a PACKED DECIMAL value. There may be a data type mismatch.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3124W The field value in row *row-number* and column *column-number* cannot be converted to a PACKED DECIMAL value, but the target column is not nullable. The row was not loaded.

Explanation: The value in the specified field cannot be converted to a PACKED DECIMAL value. There may be a data type mismatch. A null cannot be loaded because the output column in the table is not nullable.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

The row is not loaded.

User response: Correct the input file and resubmit the command or edit the data in the table.

SQL3125W The character data in row *row-number* and column *column-number* was truncated because the data is longer than the target database column.

Explanation: The length of the field data in the input file was longer than the length of the database field where it is being loaded.

The character data was truncated.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table. The width of the database column cannot be increased. If necessary, define a new table with wider columns and repeat the process.

SQL3126N Remote client requires absolute path for files and directories.

Explanation: Connecting to a database cataloged as remote and issuing a LOAD command requires absolute path for data files.

The pointers to lobpaths, copytarget, tempfiles and part_file_location must be either absolute paths or null.

User response: Resubmit the statement with valid absolute file and pathnames.

SQL3128W The field containing *data* in row *row-number* and column *column-number* was truncated into a DATE field because the data is longer than the database column.

Explanation: The date value in the specified field is longer than the length of the string representation of a date.

The date value is truncated to fit into the table.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3129W A date, time, or timestamp field was padded with blanks. Row number: *row-number*. Column number: *column-number*. Text in the field: *text*.

Explanation: The field data in the input file was shorter than the database column.

The data on the right is padded with blanks.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3130W The field containing *text* in row *row-number* and column *column-number* was truncated into a TIME field because the data is longer than the database column.

Explanation: The time value in the specified field is longer than the length of the string representation of a time.

The time value is truncated to fit into the table.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3131W The field containing *text* in row *row-number* and column *column-number* was truncated into a TIMESTAMP field because the data is longer than the database column.

Explanation: The timestamp value in the specified field is longer than the length of the string representation of a timestamp.

The timestamp value is truncated to fit into the table.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3132W The character data in column *column* will be truncated to size *size*.

Explanation: The character data column has a defined size that is longer than the longest default character column which can be exported; each value will be truncated to the specified size.

For example, by default, only the first SQL_LONGMAX bytes of a LOB column will be exported. If the entire

LOB column is desired, the *LOBSINFIL* keyword must be specified in the filetype modifier and each LOB column will be stored into a separate file.

User response: This is a warning only. No action is required.

SQL3133W The field in row *row-number* and column *column-number* contains invalid DATALINK value. A null was loaded.

Explanation: The DATALINK value in the specified field is invalid. For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3134W The field in row *row-number* and column *column-number* contains invalid DATALINK value, but the target column is not nullable. The row was not loaded.

Explanation: The DATALINK value in the specified field is invalid. For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

User response: Examine the input value. If necessary, correct the input file and resubmit the command.

SQL3135N The number of columns in the METHOD parameter is greater than the number of columns in the target table.

Explanation: The number of data columns in the METHOD parameter must be less than or equal to the number of data columns in the actual table.

User response: Specify the correct number of input columns in the METHOD parameter and resubmit the command.

SQL3137W Row *row-number* is too short. At least one input value being loaded to a non-nullable column is missing. The row was not loaded.

Explanation: If loading from a delimited ASCII file, the row contains too few fields. If loading from a non-delimited ASCII file, the row contains too few bytes of data. There is no input value for at least one non-nullable target column.

The row is not loaded.

User response: Examine the input file and the contents of the target table. Correct the input file and resubmit the command, or edit the data in the table.

SQL3138W The ending character string delimiter was not found before the end of the input data file was reached.

Explanation: The end of the input data file was reached before the terminating character string delimiter was found.

A closing character string delimiter is assumed at the end of the data.

User response: Compare the value in the output table with the input file. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3139W An error *error* occurred while the utility was disconnecting from the database.

Explanation: The IMPORT or EXPORT utility could not disconnect from the database.

The output data may be incomplete.

User response: Use the error number in the message to determine the exact error.

SQL3140W The field value in row *row-number* and column *column-number* cannot be converted to a decimal floating-point value. A null was loaded.

Explanation: The value in the specified field cannot be converted to a decimal floating-point value. There may be a data type mismatch.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3141W The field value in row *row-number* and column *column-number* cannot be converted to a decimal floating-point value, but the target column is not nullable. The row was not loaded.

Explanation: The value in the specified field cannot be converted to a decimal floating-point value. There may be a data type mismatch. A null cannot be loaded because the output column in the table is not nullable.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

The row is not loaded.

User response: Correct the input file and resubmit the command or edit the data in the table.

SQL3142W The column heading for column *column-number* is being truncated to 240 bytes.

Explanation: The LOTUS 1-2-3** and Symphony** programs have a limit of 240 bytes for label records. If a column heading greater than 240 bytes is specified for export, it is be truncated to 240 bytes.

The column heading is truncated. Processing continues.

User response: Verify that the column headings are 240 bytes or less. Check for a possible error in specifying the names for the columns in the output worksheet format (WSF) file.

SQL3143W The maximum length of variable length column *column-number* exceeds the limitation of 240 bytes. Data from the column may be truncated.

Explanation: The LOTUS 1-2-3** and Symphony** programs have a limit of 240 bytes for label records. Whenever a character field longer than 240 bytes is written to a worksheet format (WSF) file, the data will be truncated to 240 bytes.

Continue processing. Subsequent data entries for the column may be truncated.

User response: Verify the output. If significant data from the column is lost because of truncation, investigate selecting the data from the column in several fields by substrings, or redesign the database.

SQL3144W The length of fixed length column *column-number* exceeds the 240-byte limitation. Data from the column may be truncated.

Explanation: The Lotus 1-2-3** and Symphony** programs have a limit of 240 bytes for label records. Whenever a character field longer than 240 bytes is written to a worksheet format (WSF) file, the data will be truncated to 240 bytes.

All data entries for the column are truncated with no additional messages written to the message log.

Continue processing.

User response: Verify output. If significant data from the column is lost because of truncation, investigate selecting the data from the column in several fields by

substringing, or redesign the database.

SQL3145W The data for row *row-number*, column *column-number* is being truncated to 240 bytes.

Explanation: The Lotus 1-2-3** and Symphony** programs have a limit of 240 bytes for label records. Whenever a character field longer than 240 bytes is written to a worksheet format (WSF) file, the data is truncated to 240 bytes. This message is preceded by message SQL3143 associated with the column.

Processing continues. The data is truncated.

User response: Verify the output. If significant data from the column is lost because of truncation, investigate selecting the data from the column in several fields by substringing, or redesign the database.

SQL3146N The DATE or TIMESTAMP value for row *row-number* and column *column-number* is out of range.

Explanation: The value for a date or timestamp is not valid. A date value from 01-01-1900 to 12-31-2099 is valid for worksheet format (WSF) files.

The cell record is not created.

User response: Compare the value in the output file with the input table. If necessary, correct the input value and resubmit the command or edit the data in the table.

SQL3147W More than 2048 rows were exported into a worksheet formatted file.

Explanation: The number of rows exported exceeds 2048. The first generation products cannot support more than 2048 rows.

Continue processing.

User response: The rows beyond 2048 can be read only by second and third generation products.

SQL3148W A row from the input file was not inserted into the table. SQLCODE *sqlcode* was returned.

Explanation: The database operation to insert a row of data read from the input file failed. One or more of the fields in the input file is not compatible with the database field where the field is being inserted.

Processing continues with the next row of input data.

User response: See the next message in the message file for the row number not inserted. Examine the input file and the database contents. If desired, modify the database or modify the input file and rerun the operation.

SQL3149N *number-1* rows were processed from the input file. *number-2* rows were successfully inserted into the table. *number-3* rows were rejected.

Explanation: This summary message tells how many rows of data were read from the input file, how many rows were successfully inserted into the database table, and how many rows were rejected. If using the INSERT_UPDATE option, the number of rows updated is the number of rows processed minus the number inserted and rejected.

User response: None, because this is a summary message. The detail messages may suggest corrective action.

SQL3150N The H record in the PC/IXF file has product *product*, date *date*, and time *time*.

Explanation: Information is given about the product that created the PC/IXF file and when it was created.

User response: No action is required.

SQL3151N No data conversion will be done from the single-byte code page value *code-page* in the H record to the application single-byte code page value *code-page* because the FORCEIN option was specified.

Explanation: No data conversion will be performed from the IXF code page to the application code page because the FORCEIN option was specified.

User response: No action is required. If the conversion from the IXF file code page to the application code page is supported by the database manager, the operation can be resubmitted without the FORCEIN option and the data will be converted.

SQL3152N The double-byte code page value *value* in the H record is not compatible with the double-byte code page value *value* for the application. Data will be inserted because the FORCEIN option was specified.

Explanation: The double-byte code page values in the record and the application are not compatible. Because the FORCEIN option was used, the data is inserted.

User response: No action is required.

SQL3153N The T record in the PC/IXF file has name *name*, qualifier *qualifier*, and source *source*.

Explanation: Optional information is given about the name of the table where data was extracted, the product that created the table, and the original source of the data.

User response: No action is required.

SQL3154W The HCNT value in the H record and the CCNT value in the T record are not compatible. The CCNT value in the T record will be used.

Explanation: The HCNT value in the H record and the CCNT value in the T record do not agree.

The CCNT value in the T record is used.

User response: Verify that the CCNT value is correct. If not, make the necessary changes to the HCNT or CCNT values and resubmit the command.

SQL3155W The name length field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The value in the name length field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the name length field in the C record and resubmit the command.

SQL3156W The null field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The null field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the null field in the C record and resubmit the command.

SQL3157W The type field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The type field in the C record for the indicated column is not valid. The code page values may not be compatible with the column type.

Data from the indicated column is not loaded.

User response: Change the type field in the C record and resubmit the command.

SQL3158W The single-byte code page field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The single-byte code page field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the single-byte code page field in the C record and resubmit the command.

SQL3159W The double-byte code page field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The double-byte code page field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the double-byte code page field in the C record and resubmit the command.

SQL3160W The column length field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The column length field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the column length field in the C record and resubmit the command.

SQL3161W The precision field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The precision field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the precision field in the C record and resubmit the command.

SQL3162W The scale field in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The scale field in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the scale field in the C record and resubmit the command.

SQL3163W The column length field in the C record for floating point column *name* is blank. A value of 00008 will be used.

Explanation: The column length field in the C record for the indicated column is blank.

A column length of 00008 is used.

User response: No action is required.

SQL3164W The column length field in the C record for floating point column *name* is not valid. Data from the column will not be loaded.

Explanation: The column length field in the C record for the indicated column is not valid. The indicated column is a floating point column.

Data from the indicated column is not loaded.

User response: Change the column length field in the C record and resubmit the command.

SQL3165W The column type field *type* in the C record for column *name* is not valid. Data from the column will not be loaded.

Explanation: The column type in the C record for the indicated column is not valid.

Data from the indicated column is not loaded.

User response: Change the column type field in the C record and resubmit the command.

SQL3166W No PC/IXF column was specified to be loaded into database column *name* or the specified PC/IXF column does not exist. Nulls will be inserted.

Explanation: Either there was not a PC/IXF column specified to be loaded into the indicated column, or the specified PC/IXF source column does not exist.

Null values are loaded for the indicated column.

User response: No action is required. If nulls are not acceptable for this column, check the *METHOD* parameter for erroneous names or positions or for fewer entries in the *METHOD* parameter than columns stated in or implied by the *Action String* (for example, "REPLACE into ...") parameter.

SQL3167W The PC/IXF column specified to be loaded into database column *name* is not valid. Nulls will be inserted.

Explanation: Values in the PC/IXF column cannot be loaded into the indicated database column and the reason is given in a previous message in the log.

Null values are loaded for the indicated column.

User response: Read the previous messages to understand why the column is not valid.

SQL3168W The PC/IXF column specified to be loaded into database column *name* is not compatible with the database column. Nulls will be inserted.

Explanation: The source PC/IXF and the target

database column types or lengths may not be compatible.

Null values are loaded for the indicated column.

User response: Compare the columns in the source PC/IXF file and the database.

SQL3169N The FORCEIN option may be used to make the PC/IXF column *name* acceptable for loading into database column *name*.

Explanation: This is for information only about the optional use of the *FORCEIN* option.

User response: No action required.

SQL3170W The end of the file was reached within a row of data. The partial row of data was not loaded.

Explanation: The end of the file was reached before the end of the current row of data. The file may contain only part of the expected data.

The partial row of data is not loaded.

User response: If the PC/IXF file was copied from one medium to another, compare the copy with the original or repeat the copy process.

SQL3171W A non-label record was found in the column header row. The record was not processed.

Explanation: The IMPORT utility expects only label records in the column header row (row one) of the worksheet format (WSF) file.

The system does not process the record and continues to the next record.

User response: Remove all data and information except the column headers from the first row of the spreadsheet file. Resubmit the command.

SQL3172W The specified input column *name* was not found. The corresponding database column will contain null values.

Explanation: The specified input column was not found in the input spreadsheet file. The database column is nullable and contains null values.

User response: Verify the specified input column name.

SQL3173N The inserted data for column *name* will always contain fewer characters than the column width.

Explanation: The database column width is larger

than the maximum worksheet format (WSF) label record.

Continue processing.

User response: No action is required.

SQL3174W The data type *type* of the database column *name* is not compatible with any WSF column type. Null values will be inserted for this column.

Explanation: The database column type is not valid for a worksheet format (WSF) file. Because the column is nullable, nulls are imported for the column.

User response: If nulls are not acceptable for the column, do one of the following:

- Edit the data in the table.
- If possible, use another compatible column in the database table as the target column and resubmit the command.
- Redefine the database table so that the columns are compatible with the columns imported from the WSF file, and resubmit the command.

SQL3175W The input record for database row *row*, column *column* is not valid.

Explanation: The record in the spreadsheet file is not compatible with the data type of the database column. If the database column is a graphic data type, the input data may contain an odd number of bytes.

If the column is nullable, a null is inserted. If the column is not nullable, the row is not imported.

User response: Either edit the data in the table or verify that the data in the spreadsheet file is valid for importing into a database manager database and resubmit the command.

SQL3176W The value for row *row*, column *column* in the WSF file is out of range for a date value.

Explanation: The record in the spreadsheet file contains a value that is too large or too small to represent a valid worksheet format (WSF) date. A valid WSF date is between 1 and 73050, inclusive.

If the column is nullable, a null is inserted. If the column is not nullable, the row is not imported.

User response: Either edit the data in the table or verify that the data in the spreadsheet file is valid for import into a database manager database and resubmit the command.

SQL3177W The value in the WSF file for row *row*, column *column* is out of range for a time value.

Explanation: The record in the spreadsheet file contains a value that is either too large or too small to represent a valid worksheet format (WSF) time. A WSF time is a value equal to or greater than zero, but less than one.

If the column is nullable, a null is inserted. If the column is not nullable, the row is not imported.

User response: Either edit the data in the table or verify that the value to be imported is a time value in the input spreadsheet file and resubmit the command.

SQL3178W The type of record in the WSF file for database row *row-number*, column *column-number* is not valid for representing a time value.

Explanation: The input value is an integer value. A time value must be represented by a floating point number or a fraction of a day in a worksheet format (WSF) spreadsheet file.

If the column is nullable, a null is inserted. If the column is not nullable, the row is not imported.

User response: Either edit the data in the table or verify that the value to be imported is a time value in the input spreadsheet file and resubmit the command.

SQL3179W Row *row* in the input file is missing data for inserting into a non-nullable column in the database. The row was not inserted.

Explanation: The row of data from the input file has missing or not valid data for a non-nullable column. The values in the remaining database columns in that row are not inserted.

Processing continues with the next row. The row is not inserted.

User response: Either edit the data in the table or verify that the data in the spreadsheet file is valid for inserting into a database manager database.

SQL3180W Insert diskette *number* into drive *drive*.

Explanation: This is a request for the application to prompt the user to place the specified diskette in the specified drive.

The utility is waiting to be called again after the user puts the diskette in the drive.

User response: Prompt the user for the diskette and then return to the utility with the *callerac* parameter indicating whether processing continues or ends.

SQL3181W The end of the file was reached before the expected ending record was found.

Explanation: During the load of a PC/IXF file created by the database manager, the A record of subtype E that is expected as the last A record was not found.

The input file probably is damaged.

Continue processing.

User response: Check for data that was not loaded. If data is missing, edit the table or change the input file and resubmit the command. If the PC/IXF file was copied from one medium to another, compare the copy with the original or repeat the copy process.

SQL3182W Insert diskette *number* into drive *drive*. The diskette that is currently inserted is not the right diskette or the continuation diskette is not valid.

Explanation: During the load of a PC/IXF file that is contained on more than one diskette, a request to insert a diskette was sent to the application, a confirmation that the diskette is in the drive was returned but the continuation file is not there or is not valid. This action does not apply to the first diskette.

The utility waits for a response from the application to either continue processing or stop processing.

User response: Have the user verify that the correct diskette is in the drive. If the correct diskette is in the drive, call the utility again with the *callerac* parameter set to stop processing.

SQL3183W Multiple delimiter overrides in the *filetmod* parameter are not separated by blanks.

Explanation: At least one COLDEL, CHARDEL or DECPT keyword in the *filetmod* parameter is not at the beginning of the *filetmod* parameter and does not follow a blank (space). This condition may arise during the LOAD/IMPORT or export of delimited ASCII (DEL) files.

The utility stops processing. The erroneous delimiter overrides are ignored.

User response: Resubmit the command with a correct *filetmod* parameter.

SQL3184W An SQL warning *SQLCODE* occurred while creating the table.

Explanation: The table was created, however, it may be different than the original table.

User response: Compare the table definition of the newly created table and the expected table. Make any necessary corrections using commands such as ALTER TABLE. Look at the *SQLCODE* indicated in the

warning message for more information about what happened.

SQL3185W The previous error occurred while processing data from row *row-number* of the input file.

Explanation: This message provides the identification of the row where the error occurred for the previous message listed in the message file (for example, SQL3306).

User response: No action is required.

SQL3186W Data was not loaded into the database, because the log was full or the lock space was exhausted. *SQLCODE sqlcode* was returned. A commit will be attempted and the operation will continue if the commit is successful.

Explanation: The utility could not insert a row of data into the database because either the database transaction log is full or the lock space available to the application is full.

The completed database transactions are committed and the insert is tried again. If the repeated insert continues to indicate the same failure, the utility stops processing.

User response: Be aware that a subsequent failure of the utility causes the database to roll back to the state after the last commit, not to the state before the utility was initially called.

SQL3187W An error occurred while creating an index. *SQLCODE sqlcode* was returned.

Explanation: The IMPORT utility was creating an index when an error occurred. An index may already exist for some table.

This error occurs only during the import of a PC/IXF file.

The utility continues processing. The file was imported, but the index was not created on the table.

Federated system users: in addition to the previously listed cause, this error can occur when a CREATE NICKNAME statement was issued at federated server and the table at the data source had an index or indexes with too many columns, or the total index row size could not be represented in the federated server catalog. The *sqlcode* in the message provides further information about the problem encountered.

User response: Read the next message in the message log (SQL3189) for the name of the index that was not created. Create the index with the CREATE INDEX command.

Federated system users: select from the data source

catalog and the federated server catalog to determine which index or indexes were not created in the federated server catalog. Either:

- Create the indexes using the CREATE INDEX command. Remember to truncate columns as appropriate in order to not violate limits which caused the index to not be created in the first place.
- Do nothing and allow federated server to function without knowledge about the index.

Both of the previously listed options have potential performance implications.

SQL3188N An error occurred while erasing the contents of the table.

Explanation: When running LOAD/IMPORT with the REPLACE option, the specified database table is truncated before inserting the data back into the table. An error occurred during the truncation processing. This error is returned for a system-period temporal table because it can not be truncated.

The utility ends with an error.

User response: Resubmit the command. If the table is a system-period temporal table, resubmit the command without the REPLACE option.

SQL3189N The previous message refers to index *name* with columns *column-list*.

Explanation: This message always follows message SQL3187 when an error occurs while creating an index. *name* is the name of the index where the create failed. *column list* is a string of index column names. Each column name in the string is preceded by a plus (+) or a minus (-) sign indicating ascending or descending order.

The utility continues processing.

User response: Manually create the index with the CREATE INDEX command.

SQL3190N The INDEXIF option is not valid for this Import operation.

Explanation: If INDEXIF is used in the *filemod* parameter of the IMPORT command, each of the following is also required:

- The IMPORT must be replacing the contents of a table.
- The *METHOD* parameter must be null.
- Each IXF column must be targeted to a database column with the same name.

The utility stops processing. No data is imported.

User response: Resubmit the command either without the INDEXIF option or with the other parameters that are valid with the INDEXIF option.

SQL3191N The field in row *row-number*, column *column-number* which begins with string does not match the user specified DATEFORMAT, TIMEFORMAT, or TIMESTAMPFORMAT. The row will be rejected.

Explanation: The data does not match the user specified format. This may be caused by missing fields, mismatched column separators, or a value out of range.

User response: Examine the input value. Correct the input file or specify a DATEFORMAT, TIMEFORMAT, or TIMESTAMPFORMAT that matches the data and resubmit the command.

SQL3192N In the filemod a user specified format *keyword* beginning with the string *string* is not valid.

Explanation: The user specified format is not valid because it may be specified more than once, or it may contain an invalid character.

The formats must be enclosed in double-quotes.

Valid DATEFORMAT specifiers include "YYYY" and the "M", and "D" characters.

Valid TIMEFORMAT specifiers include "AM", "PM", "TT", and the "H", "M", and "D" characters.

Valid TIMESTAMPFORMAT specifiers include all of the specifiers for DATEFORMAT and TIMEFORMAT, as well as "UUUUUU". However, "M" cannot be next to both a date format specifier and a time format specifier.

A field separator is necessary if the corresponding value in the data file can have a variable length.

The utility stops processing.

User response: Examine the format specifier. Correct the format, and resubmit the command.

SQL3193N The specified view or materialized query table cannot be updated. You cannot LOAD/IMPORT into this view or LOAD into this materialized query table.

Explanation: The LOAD/IMPORT utility can be run against a view only if the view can be updated. The specified view is defined such that data in it may not be changed.

The LOAD utility can be run against a materialized query table only if the materialized query table is not replicated. The specified table is a replicated materialized query table.

The IMPORT utility can be run against a materialized query table only if the materialized query table is a user maintained materialized query table. The specified table is a system maintained materialized query table.

The LOAD/IMPORT utility stops processing. No data is inserted.

User response: Resubmit the command with the name of a table or a view that can be updated.

SQL3194N The specified table is a system table. You cannot load a system table.

Explanation: The utility cannot be run against a system table.

The utility stops processing. No data is loaded.

User response: Resubmit the command with a valid table name.

SQL3195W The diskette *number in drive drive* cannot be used for the output file. Insert a formatted diskette with writable free space.

Explanation: The EXPORT utility cannot use the current diskette for exporting to a PC/IXF file for one of the following reasons:

- The output file cannot be opened on the diskette. The diskette may be unformatted.
- Not enough free space is available on the diskette.

This warning code is a request for the application to prompt the user to place another diskette in the specified drive.

The utility is waiting to be called again after the user puts the diskette in the drive.

User response: Prompt the user for the diskette and then return to the utility with the *callerac* parameter indicating whether processing continues or ends.

SQL3196N The input file was not found.

Explanation: The source file to be loaded into a database could not be found in the path indicated by the *datafile* parameter.

The command cannot be processed.

User response: Verify that the input file does exist and that the path to it is correct.

SQL3197N An attempt was made to execute multiple copies of import or export.

Explanation: An attempt was made to execute more than one instance of the import or export utility on a system where this is not supported.

The command cannot be processed.

User response: Resubmit the second operation when no other processes are attempting to execute the same utility.

SQL3201N The specified table cannot be replaced because another table is dependent on it.

Explanation: A table that is a parent in a relationship with another table cannot be replaced.

The command cannot be processed.

User response: Select a different option, such as INSERT, or select a different target for the utility operation.

SQL3202N The Load utility failed to acquire a partition lock.

Explanation: The Load utility failed to acquire a partition lock. Another Load utility is currently loading into the same table and is connected to the same db-partition as the current load.

User response: If you would like to execute multiple Loads into the same table concurrently (assuming a disjoint set of output db-partitions), then you must assure the Load Coordinator Agents reside on different db-partitions by executing each Load from a database connection connected to different db-partitions.

SQL3203N The INSERT_UPDATE option is not permitted for the specified target because it has no primary key or all columns are in the primary key.

Explanation: The INSERT_UPDATE option is only valid when the target table has a primary key and the target columns include all columns of the primary key. In addition, the target column list and the target table should contain at least one column that is not part of the primary key.

The command cannot be processed.

User response: Select a different option such as INSERT, or choose a different target for the utility operation.

SQL3204N The INSERT_UPDATE option may not be applied to a view.

Explanation: The INSERT_UPDATE option is not valid for views and a view has been selected as the target of the utility operation.

The command cannot be processed.

User response: Select a different option such as INSERT, or choose a different target for the utility operation.

SQL3205N The specified view cannot be replaced because the base table has a dependent.

Explanation: A view whose base table is a parent table in a referential relationship with any table (including itself) cannot be replaced.

The command cannot be processed.

User response: Select a different option such as INSERT, or choose a different target for the utility operation.

SQL3206N The specified view cannot be replaced because its definition involves a subquery.

Explanation: A view whose definition involves a subquery cannot be replaced. If the view definition depends on the definition of other views, the other views cannot contain subqueries. The use of a subquery anywhere in the definition of any view on which the target view is based prohibits the REPLACE option.

The command cannot be processed.

User response: Select a different option, such as INSERT, or choose a different target for the utility operation.

SQL3207N Invalid table-list provided. Reason code *reason-code*.

Explanation: The traversal-order-list/subtable-list provided is invalid. The explanation for the reason code is:

1. Tables specified in the traversal-order-list are not in PRE-ORDER fashion.
2. Tables specified in the traversal-order-list are not connected.
3. Mismatch of schema name found in traversal-order-list/subtable-list.
4. With REPLACE option, some subtables are missing in the traversal-order-list.
5. Subtable-list is not equal to or a subset of the traversal-order-list.

User response: The user action, based on the reason code, is:

1. Make sure the traversal-order-list is in PRE-ORDER fashion.
2. Make sure all tables in the traversal-order-list are connected.
3. Make sure schema names are consistent.
4. When REPLACE option is used, make sure all subtables in the hierarchy are included.
5. Make sure subtable-list is equal to or is a subset of the traversal-order-list.

SQL3208W Importing data from typed tables into regular table.

Explanation: User specified to import data from typed tables into regular table. Please note, object_id column will not be cast while importing.

User response: Please make sure such operation is intentional.

SQL3209N Import with CREATE option does not allow renaming subtable name nor attribute names.

Explanation: When CREATE option is used, neither subtable name nor attribute names can be renamed.

User response: Please check your IMPORT command and make sure no subtable-list is specified.

SQL3210N Option *option* is not compatible with hierarchy in *command-name*.

Explanation: *option* is not compatible with hierarchy in EXPORT, IMPORT, or LOAD.

User response: Please check the command syntax for hierarchical support.

SQL3211N LOAD does not support typed tables.

Explanation: LOAD does not support typed tables. Please consider IMPORT instead.

User response: Please use IMPORT to bring hierarchical data into the database.

SQL3212N The TERMINATE option of the LOAD command is not currently supported for tables with DATALINK column(s), or table spaces in delete pending state.

Explanation: An attempt was made to terminate a crashed, interrupted, or forced LOAD operation against a table which contains DATALINK column(s), or a table which resides in table space(s) in delete pending state. These are not currently supported.

User response: Use the RESTART option of the LOAD command to recover a crashed, interrupted, or forced LOAD operation.

SQL3213I The indexing mode is *mode*.

Explanation: The indexing mode values are a follows:

REBUILD
indexes will be completely rebuilt

INCREMENTAL
indexes will be extended

DEFERRED

indexes will not be updated, but will be marked as requiring refresh prior to next access.

User response: No action is required.

SQL3214N The LOAD utility does not support deferred indexing for tables with unique indexes or XML Columns.

Explanation: An indexing mode of DEFERRED was specified for a table that has unique indexes. This is not valid.

User response: Specify an indexing mode of AUTOSELECT, REBUILD or INCREMENTAL, and reissue the command.

SQL3215W The Load utility currently does not support INCREMENTAL indexing when loading into a DMS table space on tables where the table's index object resides in the same table space as any of the other target table's objects, and the COPY option is also specified. The REBUILD indexing mode will be used instead.

Explanation: INCREMENTAL indexing mode is not supported for this operation. REBUILD indexing mode is used instead.

User response: The user can avoid this warning by defining the index in a table space that is not shared by other objects in the table to be loaded. Alternatively, avoid use of the COPY option. Please refer to the DB2 documentation for a full list of alternatives to the COPY option.

SQL3216W The table's index object was not compatible with INCREMENTAL index maintenance at the time the load utility began. INCREMENTAL indexing cannot be performed during this load utility operation. The REBUILD indexing mode will be used instead.

Explanation: INCREMENTAL indexing can only be used on tables that have a compatible index object at the time the load utility begins. Loading with indexing mode REBUILD causes the table index to be rebuilt in a consistent manner.

User response: No action required.

SQL3217W The INCREMENTAL indexing mode is supported only when using LOAD to append data using the INSERT INTO action. The current LOAD action is *action*. The utility will use indexing mode of *mode* instead.

Explanation: INCREMENTAL indexing can only be used when appending data to a table using the load INSERT action. This feature is not supported with when loading with REPLACE, RESTART, or TERMINATE actions.

User response: No action necessary.

SQL3218C The LOAD utility cannot proceed because it has encountered one or more damaged index files. Restart the database and resubmit the LOAD command.

Explanation: The LOAD utility cannot proceed because one or more index on disk data structures for the target table are in an inconsistent state.

User response: Terminate all applications and issue the RESTART DATABASE command for the affected database to rebuild the damaged index or indexes. Then resubmit the LOAD command.

SQL3219N LOAD utility failed to disable constraint checking for the target table.

Explanation: The LOAD utility encountered problems during its attempt to disable constraint checking for the target table.

User response:

- Issue the SET INTEGRITY OFF command on the target table prior to running the LOAD utility.
- If attempting a LOAD in the REPLACE mode after a previously failed LOAD operation, use the LOAD TERMINATE command to put the tablespace into an accessible state prior to issuing a LOAD REPLACE command.

SQL3220W Volume *volume-name* was not found in the *directory-name* directory. Copy the volume into this directory and continue the LOAD/IMPORT.

Explanation: An attempt to LOAD/IMPORT a multiple IXF file was made, but one of the files is missing from the directory specified. LOAD/IMPORT tries to find the parts in the same directory as the first part.

The import will terminate.

User response:

- Find the part and put it in the same directory as the first part. Then call LOAD/IMPORT again with *callerac* of SQLU_CONTINUE. The LOAD/IMPORT will continue processing the file.
- Terminate the LOAD/IMPORT by calling LOAD/IMPORT with a *callerac* of SQLU_TERMINATE.

SQL3221W ...Begin COMMIT WORK. Input Record Count = *count*.

Explanation: The import is about to attempt a COMMIT of the work performed.

User response: If the SQL3222W message is not printed immediately after this message, then the COMMIT failed and you will need to check your table or view to see which records have been imported. You can then start the import again with a RESTARTCOUNT set to the number of records successfully imported to skip those rows and import the rest of the file. (If you had been doing a CREATE or REPLACE_CREATE or REPLACE, call the second import with INSERT option.)

SQL3222W ...COMMIT of any database changes was successful.

Explanation: The COMMIT was successful.

User response: None necessary if you get this message.

SQL3223N The parameter of type pointer to *parameter* is not specified properly.

Explanation: The parameter of type *parameter* is not specified properly. The pointer should be either a NULL pointer or should point to an appropriate value.

The command cannot be processed.

User response: Call the utility again with a proper parameter.

SQL3225N The RESTARTCOUNT value or the SKIPCOUNT value *value* is greater than the number of rows (*rows*) in the file. No rows were loaded.

Explanation: The utility was called with a RESTARTCOUNT value or a SKIPCOUNT value which was greater than the number of rows in the input file resulting in no rows being loaded into the table/view.

User response: Ensure that the RESTARTCOUNT value or the SKIPCOUNT value is correct and call the utility again.

SQL3227W Record token *token1* refers to user record number *token2*.

Explanation: An error or warning was encountered during LOAD, IMPORT or EXPORT of a table. CPU parallelism was greater than 1 at the time the problem was encountered, and an SQL message was written which identified the user record with a special unique token. This message serves to map the unique record token to the record number of the source user data.

User response: Refer to the original SQL message

returned for appropriate action.

SQL3228N DEFERRED INDEXING is not supported for tables with DATALINK columns.

Explanation: The "indexing mode" option for the load utility was specified as "deferred". This option is not supported with tables having DATALINK columns.

User response: Reissue the load command specifying a different indexing mode.

SQL3229W The field value in row *row-number* and column *column-number* is invalid. The row was rejected. Reason code: *reason-code*.

Explanation: The row of data from the input file has invalid data.

Reason codes:

- 1 The file named in the row and column cannot be found.
- 2 The file named in the row and column cannot be accessed.
- 3 Data is too long for the column.

The row was not inserted. Processing continues with the next row.

User response: If necessary, correct the input file and resubmit the command.

SQL3230N Codepage conversion from data file codepage *datafile-codepage* to database codepage *database-codepage* for data type *data-type* is not supported.

Explanation: The datafile codepage indicated by the CODEPAGE file type modifier, or by the header information of the IXF file is incompatible with the database codepage for this data type.

User response: Change the input data to be in a codepage compatible with the data type.

SQL3232W An error occurred while writing to file *file-name*. *file-name* has been used instead.

Explanation: An error occurred while writing LOB or XML documents to the specified file. A new file name has been used. Check the db2diag log file for a record detailing the failure.

Export wasn't able to write to the original file. It assumes that there is a problem with the file, for instance the file size limit being exceeded. It will write using the next filename into the same path. If Export fails again when it writes, Export will then assume there is an error with the path. For instance, the path's

filesystem could be full or there is insufficient access for Export to write or create files in the path. It will then attempt to use the next available path specified in the XML TO / LOBS TO options.

User response: No action is required.

SQL3233W The attribute *attribute-name* in an XML Data Specifier (XDS) was ignored.
Reason code: *reason-code*

Explanation: Reason codes:

- 1 The attribute *attribute-name* is not recognized.
- 2 The attribute *attribute-name* is not applicable to a specific column.

User response: Check the attribute name and correct it if needed.

SQL3234N The XML Data Specifier (XDS) for column *col-number* is invalid. attribute name: *attribute-name*, character number: *char-number*, reason code: *reason-code*

Explanation: An error was encountered attempting to parse an XDS string. *char-number* indicates the position where the error occurred. It is set to 0 if the position could not be determined.

The possible reason codes are as follows:

- 1 The XDS string is malformed.
- 2 A mandatory attribute is missing.
- 3 An attribute name is invalid.
- 4 An attribute value is invalid.
- 5 A duplicate attribute name was found.

User response: Resubmit the command with a valid XML Data Specifier.

SQL3235N The utility cannot use the *type path path-name* parameter as specified. Reason code: *reason-code*.

Explanation: One of the following reason codes may apply:

- 1
Either the path *path-name* is not a valid `sqlu_media_list` or the values provided are not valid. The `media_type` must be `SQLU_LOCAL_MEDIA` and all path names must be terminated with a valid path separator.

- 2
There is not enough space on the paths provided for the EXPORT utility to hold all the data of type *type*.

3

The path *path-name* cannot be accessed.

User response: Determine which reason code applies, correct the problem, and resubmit your command.

SQL3236N A schema *schema-name* is specified in the IGNORE clause of XMLVALIDATE option, but it is also present in the left side of a schema pair in the MAP clause.

Explanation: In the XMLVALIDATE option, If a schema is specified in the IGNORE clause, it cannot also be present in the left side of a schema pair in the MAP clause.

The command cannot be processed.

User response: Resubmit the command with a valid XMLVALIDATE option.

SQL3237N The supplied EXPORT Action String cannot be used with the XMLSAVESCHEMA option. Reason code: *reason-code*

Explanation: Reason codes:

- 1 The Action String is too long due to XML specific processing.
- 2 The Action String contains a "WITH" clause, which is incompatible with the XMLSAVESCHEMA option.

User response: Resubmit the command without the XMLSAVESCHEMA option or modify the Action String.

SQL3238N The WSF file format is incompatible with *feature*.

Explanation: The LOAD, IMPORT, and EXPORT utilities do not support the WSF file format for *feature*.

User response: Use another supported file format.

SQL3239W Schema information will not be included in the XDS for some XML documents.

Explanation: One or more XML schemas were used to validate inserted XML documents but these schemas no longer exist in the database. Therefore, schema information for these XML documents will not be written to the exported data file.

SQL3240N Authorization ID *authorization-id* does not have the LBAC credentials necessary to run the utility against a table that is protected with security policy *policy-name*.

Explanation: To run the utility against a protected table, the authorization ID *authorization-id* must have LBAC credentials that allow inserting new rows into the table.

User response: Have a user with SECADM authority grant the authorization ID *authorization-id* LBAC credentials that allow inserting new rows into the table. If the table has protected rows but no protected columns, then granting any security label that is part of the security policy *policy-name* is sufficient. If the table has protected columns, then the LBAC credentials must allow writing to all of the protected columns.

sqlcode: -3240

sqlstate: 5U014

SQL3241W Row *row* and column *column* in the input source contains an invalid security label for the target table.

Explanation: The value for the column of data type DB2SECURITYLABEL in the input source is not a valid security label for the security policy that is protecting the target table. Any security label inserted into a column of data type DB2SECURITYLABEL must be a part of the security policy that is protecting the table. The row is not loaded.

User response: Check the input source column and make sure that the value is valid for the policy protecting the target table. If the values in the input source are in string form, you must specify a security label related file type modifier. If necessary, correct the input data source and resubmit the command.

sqlcode: +3241

sqlstate: 01H53

SQL3242W Row *row* and column *column* in the input source contains an invalid security label string for the target table.

Explanation: The SECLABELCHAR file type modifier was specified, but the value for the DB2SECURITYLABEL column is not in the proper format for a security label string. The row is not loaded.

User response: Check that the values in the input source for the DB2SECURITYLABEL column are in the correct format. If necessary, correct the input data source and resubmit the command.

sqlcode: +3242

sqlstate: 01H53

SQL3243W The security label string in row *row* and column *column* of the input source contains the element *element*, which is an invalid element for the security label component *component*.

Explanation: The SECLABELCHAR file type modifier was specified, but the security label string contains an invalid element for the specified component. The row is not loaded.

User response: Check the security label string carefully:

- Make sure that the elements are listed in the same order that their components are listed in the security policy protecting the target table.
- Check the spelling of the element.

If necessary, correct the input data source and resubmit the command.

sqlcode: +3243

sqlstate: 01H53

SQL3244W Row *row* and column *column* in the input source contains the security label named *security-label-name*, which cannot be found for the security policy *policy-name* protecting the target table.

Explanation: The SECLABELNAME file type modifier was specified, but the security label named *security-label-name* cannot be found for the security policy *policy-name*. The row is not loaded.

User response: Check the input source column and confirm that the value appears to be valid for the security policy protecting the target table. If necessary, correct the input data source and resubmit the command.

sqlcode: +3244

sqlstate: 01H53

SQL3245W Row *row* and column *column* in the input source cannot be inserted into the target table because the user does not have the necessary LBAC credentials.

Explanation: The user is not allowed to insert a row into a protected table if they do not have appropriate security label and/or exemption credentials. The row is not loaded.

User response: Ask your database security administrator to grant the proper security label or exemptions required for this operation. If necessary, resubmit the command.

sqlcode: +3245

sqlstate: 01H53

SQL3250N **COMPOUND=*value* is invalid. Reason code: *reason-code*.**

Explanation: The COMPOUND=*x* option was specified for the import utility and cannot be processed due to the reason with reason code *reason-code*:

- 1 It is invalid when the INSERT_UPDATE option is used.
- 2 It is invalid with the following file type modifiers: IDENTITYIGNORE, IDENTITYMISSING, GENERATEDIGNORE, GENERATEDMISSING.
- 3 The database being imported to is accessed through a server or gateway of a previous release.
- 4 The value is not within the allowed range of 1 to 100 (On DOS or Windows, the maximum value is 7).
- 5 The table being imported is a hierarchy or typed table.
- 6 The table being imported has generated columns.
- 7 It is invalid when the XMLVALIDATE USING XDS option is used.
- 8 It is invalid when the USEDEFAULTS file type modifier is specified.

User response: The action corresponding to the reason code:

For reason code 1:

- Remove COMPOUND=*x* from the file type modifier option, or use INSERT option.

For reason codes 2, 3, 5, 6, 8:

- Remove COMPOUND=*x* from the file type modifier option.

For reason code 4:

- Set *x* in COMPOUND=*x* to a correct value.

For reason code 7:

- Remove COMPOUND=*x* or remove XMLVALIDATE USING XDS option.

SQL3251N ***error-count* more errors occurred during the import.**

Explanation: The utility encountered more errors than can be relayed in the sqlca (maximum number is 7) while using the COMPOUND option. Messages for these errors will not be printed to the message file.

The utility continues processing.

User response: If you desire all the error messages for each row inserted during an import, do not use the

COMPOUND option or use a COMPOUND value less than or equal to 7.

SQL3252N **The Load METHOD *method* option is incompatible with the specified file format.**

Explanation: The Load utility was invoked with a METHOD option which is incompatible with the file format specified.

User response: Review the documentation for restrictions and incompatibilities and reissue the Load command using a different METHOD option or file format to accommodate this restriction.

SQL3253N **The utility is beginning to load data from the SQL statement *statement* in database *database*.**

Explanation: This is an informational message indicating that a load from an SQL statement fetching from a cataloged database has begun.

User response: No action is required.

SQL3254N **The utility is beginning to load data from the Table *schema.tablename* in database *database*.**

Explanation: This is an informational message indicating that a load from an SQL statement fetching the contents of a table on a cataloged database has begun.

User response: No action is required.

SQL3255N **The Load utility encountered an error while executing the SOURCEUSEREXIT *source user exit*. Reason Code *reason*.**

Explanation: The Load utility has encountered an error while executing or attempting to execute the source user exit. This is because of one of the following reasons:

Reason Codes:

1. The source user exit file specified could not be found.
2. The source user exit ended prematurely or returned a non-zero return code.

User response:

1. Ensure that the source user exit exists, has correct permissions, and resides in the "bin" subdirectory of the "sqlib" path. Then reissue the Load.
2. Debug your source user exit application and ensure that it is working as designed. Then reissue the Load.

SQL3256N The Load utility encountered an error while processing data for the specified file type.

Explanation: The Load utility has encountered an error while processing data for the specified file type. The format of the data is invalid. The utility has stopped processing.

User response: Ensure the data is in the correct file type format.

SQL3257N The Load utility encountered an error while processing data in the specified file type. Reason Code *reason*. If applicable, record number is *record num* and column number is *column num*.

Explanation: The Load utility has encountered an error while processing data in the specified file type. The utility has stopped processing. This is because of one of the following reasons:

Reason Codes:

1. The data file header information is invalid or missing.
2. The record header information for the given *record num* is invalid or missing.
3. The column header information for the given *record num* is invalid or missing.
4. The column data for the given column number *column num* in record number *record num* is invalid or missing.

User response: 1-4. Ensure the data is in the correct file type format.

SQL3260N An unexpected error occurred when accessing the LDAP directory. Error code = *error-code*.

Explanation: An unexpected error occurred when accessing the LDAP directory. The command can not be processed.

User response: Record the message number (SQLCODE) and the error code. Use the Independent Trace Facility to obtain the DB2 trace. Then contact your IBM service representative.

SQL3261N The REGISTER LDAP command did not complete successfully because a required input parameter was not specified. Reason code = *reason-code*.

Explanation: The REGISTER LDAP command did not complete successfully because a required input parameter was not specified as indicated by the following reason codes:

- 1 The Network Id parameter was not specified.

- 2 The Partner LU parameter was not specified.
- 3 The Transaction Program (TP) name parameter was not specified.
- 4 The Mode parameter was not specified.
- 5 The Netbios NNAME parameter was not specified.
- 6 The TCP/IP hostname parameter was not specified.
- 7 The TCP/IP service name parameter was not specified.
- 8 The IPX Address was not specified.
- 9 The computer name was not specified.
- 10 The instance name was not specified.

User response: Re-submit the command with the required input parameter

SQL3262N The TCP/IP service name *name* is not valid.

Explanation: The TCP/IP service name specified is not valid.

User response: Ensure that the TCP/IP service name is configured and reserved in the local etc/services file, then re-submit the command. Alternatively, specify the port number that is assigned to the TCP/IP service name.

SQL3263N The protocol type is not supported.

Explanation: The protocol type specified is not supported for the command.

User response: Re-submit the command using a supported protocol type.

SQL3264N The DB2 server has not been registered in LDAP.

Explanation: The command did not complete successfully because the DB2 server had not been registered in LDAP.

User response: Register the DB2 server in LDAP using the REGISTER LDAP command. Then re-submit the command.

SQL3265N An unexpected error occurred during LDAP authentication.

Explanation: Unable to authenticate the LDAP user due to unexpected LDAP system error.

User response: Use the Independent Trace Facility to obtain the DB2 trace. Then contact your IBM service representative.

SQL3266N The LDAP user password is incorrect.

Explanation: The specified password is not a correct password for the specified user Distinguished Name (DN).

User response: Re-submit the command using the correct password.

SQL3267N *authid* does not have sufficient authority to perform the requested command.

Explanation: The command did not complete successfully because the LDAP user did not have sufficient authority to perform the required task.

User response: Ensure that the LDAP user has the authorization to perform the operation.

SQL3268N The LDAP schema is not compatible with the current release of DB2.

Explanation: The LDAP schema defined at the server does not contain the definition for the DB2 object classes and/or attributes used in the current release of DB2.

User response: Refer to the Administration Guide on how to extend the LDAP schema with DB2 object classes and attributes.

SQL3269N DB2 was not able to access information in the LDAP directory because the LDAP server was not available.

Explanation: DB2 was not able to access information in the LDAP directory because the LDAP server was not available.

User response: Perform the following actions:

1. Ensure that the LDAP server is active.
 2. Verify that TCP/IP is configured correctly on your machine
 3. Verify that the DB2LDAPHOST registry variable is set to the TCP/IP hostname and port number of the LDAP server by running the "db2set DB2LDAPHOST" command. If the DB2LDAPHOST is not set, you can set it by using the "db2set DB2LDAPHOST=<host-name>:<port-number>" command, where <host-name> is the TCP/IP hostname of the LDAP server and <port-number> is the TCP/IP port number of the LDAP server. The default port number is 389.
-

SQL3270N The LDAP user's Distinguished Name (DN) is not valid.

Explanation: The LDAP user's Distinguished Name (DN) is not valid.

User response: Re-submit the command using a valid LDAP user's DN.

SQL3271N The LDAP user's Distinguished Name (DN) and/or password is not defined for the current logon user.

Explanation: When setting user preferences such as CLI configuration or DB2 registry variable, the LDAP user's DN and password must be defined for the current logon user.

User response: Refer to the IBM eNetwork LDAP documentation on how to configure the LDAP user's DN and password for the current logon user.

SQL3272N The node *node-name* was not found in the LDAP directory.

Explanation: The command did not complete successfully because the node *node-name* was not found in the LDAP directory.

User response: Ensure the node name is correct and re-submit the command.

SQL3273N The database *database-alias* was not found in the LDAP directory.

Explanation: The command did not complete successfully because the database *database-alias* was not found in the LDAP directory.

User response: Ensure the database name is correct and re-submit the command.

SQL3274W The database was created successfully. However, the database was not cataloged in the LDAP directory. **SQLCODE = *sqlcode*.**

Explanation: The database was created successfully. However, the database could not be cataloged in the LDAP directory because there was an error occurred during the operation.

User response: Correct the error as indicated in the SQLCODE. Then catalog the database in the LDAP directory using the CATALOG LDAP DATABASE command.

SQL3275W The database was dropped successfully. However, the database was not uncataloged in the LDAP directory. **SQLCODE = *sqlcode*.**

Explanation: The database was dropped successfully. However, the database could not be uncataloged in the LDAP directory because there was an error occurred during the operation.

User response: Correct the error as indicated in the SQLCODE. Then uncatalog the database in the LDAP directory using the UNCATALOG LDAP DATABASE command.

SQL3276N Unable to obtain the LDAP naming context.

Explanation: Unable to query for the LDAP naming context for the LDAP server.

User response: Contact your LDAP directory administrator to obtain the LDAP naming context for the LDAP server that you are using. If you are using IBM eNetwork Directory V2.1, this is the name of the LDAP suffix. Then set the naming context for the current machine using the "db2set DB2LDAP_BASEDN=<naming-context>" command.

SQL3277N The database *database-alias* already exists in the LDAP directory.

Explanation: The command did not complete successfully because another database of the same name already exists in the LDAP directory.

User response: Re-submit the command using a different alias name.

SQL3278N The node *node* already exists in the LDAP directory.

Explanation: The command did not complete successfully because another node of the same name already exists in the LDAP directory.

User response: Re-submit the command using a different alias name.

SQL3279N The command did not complete successfully because LDAP is disabled.

Explanation: The command did not complete successfully because the LDAP support is disabled on the current machine.

User response: If the LDAP support is installed, enable the LDAP support by running the command: "db2set DB2_ENABLE_LDAP=YES".

If the LDAP support is not installed, you need to run the setup program and select to install the LDAP support.

SQL3280N The attempt to connect to a DRDA server failed.

Explanation: The attempt to connect to a DRDA server failed because DB2 Connect is not installed on this IBM Data Server Client and the gateway-node was not specified when cataloging this LDAP database.

User response: Either install DB2 Connect on this IBM Data Server Client or recatalog this LDAP database with a valid gateway-node.

SQL3281N The OSTYPE parameter is not valid.

Explanation: The database server was not registered in LDAP because the OSTYPE parameter specified was not valid. The OSTYPE parameter describes the operating system type of the server.

User response: Resubmit the command specifying an operating system type (OSTYPE) that is supported by DB2.

SQL3282N The supplied credentials are not valid.

Explanation: Either or both the distinguished name (DN) of the user and the password that were specified were not valid.

This error may occur when a user is running in a Windows 2000 domain environment, which supports LDAP, and logs into a local account which may not have sufficient authority.

User response: Resubmit the command using valid values for both the distinguished name (DN) of the user and the password.

If you are working in a Windows 2000 domain environment, ensure that logon with an account that has sufficient authority.

SQL3283W The database manager configuration was updated successfully. However, the protocol information was not updated in the LDAP directory. SQLCODE = *sqlcode-value*.

Explanation: The database manager configuration was updated successfully. However, the protocol information could not be updated in the LDAP directory because an error occurred during the LDAP operation.

User response: Correct the error as indicated in the SQLCODE. Then update the protocol information in the LDAP directory using the UPDATE LDAP NODE command.

SQL3284N The nodetype parameter is not valid.

Explanation: The database server was not registered in LDAP because the nodetype parameter specified was not valid.

User response: Use a valid nodetype when registering the database server in LDAP. Valid values for the nodetype parameter are: SERVER, MPP, and DCS.

SQL3285N The command did not complete successfully because LDAP is not supported.

Explanation: The command did not complete

successfully because LDAP is not supported on this platform.

User response: If LDAP is not supported on this platform, issue the following command to disable LDAP support:

```
db2set DB2_ENABLE_LDAP=NO
```

SQL3300N The records in the input file are not in the correct sequence.

Explanation: The records in the worksheet format (WSF) file are expected to be in ascending order (row 1, col 1 ... row 1, col 256; row 2, col 1 ... row 2, col 256, and so on). Some damage has occurred to the WSF file or it was generated incorrectly, possibly with a level of the Lotus product not supported by the database manager.

The IMPORT utility stops processing.

User response: Regenerate the WSF file with a supported level of the Lotus product.

SQL3301N A BOF record was found in the middle of the input file.

Explanation: A beginning-of-file (BOF) record must be the first record of a worksheet format (WSF) file. It cannot occur at any other location in the file. Some damage has occurred to the WSF file or it was generated incorrectly, possibly with a level of the Lotus product not supported by the database manager.

The IMPORT utility stops processing.

User response: Regenerate the WSF file with a supported level of the Lotus product.

SQL3302N An EOF record was found before any data was imported.

Explanation: The input file is valid, but it did not contain any usable data to be imported.

The IMPORT utility stops processing.

User response: Regenerate the input file with valid data.

SQL3303N The file type must be IXF when using the CREATE or REPLACE_CREATE keywords in the Action String parameter.

Explanation: File types other than IXF are not allowed with the CREATE or REPLACE_CREATE keywords in the *Action String* (e.g. "REPLACE into ...") parameter.

The IMPORT utility stops processing. No data is imported.

User response: Change the file type to IXF, or use INSERT, INSERT_UPDATE or REPLACE.

SQL3304N The table does not exist.

Explanation: The parameters specified on the command require that the table exists.

The utility stops processing. No data is loaded.

User response: Do one of the following:

- Resubmit the command with a table name of an existing table.
- If the input file is a PC/IXF file, resubmit the command with the CREATE option.

SQL3305N The table cannot be created because it already exists.

Explanation: The CREATE keyword indicates that a new table must be created but a table with the specified name already exists.

The IMPORT utility stops processing. No data is imported.

User response: Either erase the existing table or use a keyword other than CREATE and resubmit the command.

SQL3306N An SQL error *sqlcode* occurred while inserting a row into the table.

Explanation: An SQL error occurred while inserting a row into the table.

If the SQL error is not severe the row will be rejected and the utility continues processing; otherwise the utility stops processing.

User response: Examine other messages in the message file for details about the actual error and resubmit the command, if necessary.

SQL3307N The number of columns in the METHOD parameter does not match the number of entries in the Action String parameter or a column specified in the METHOD parameter does not exist.

Explanation: The CREATE or REPLACE_CREATE option was specified on the IMPORT command. Either:

- If the NAMES or POSITIONS method indicator was specified in the *METHOD* parameter, the number of columns explicitly specified in *METHOD* is not equal to the number of columns explicitly specified in the *Action String* (e.g. "REPLACE into ...") parameter.
- If the DEFAULT method indicator was specified in the *METHOD* parameter, the number of columns in the PC/IXF file is less than the number of columns specified in the *Action String* parameter.
- One column specified in the *METHOD* parameter does not exist in the PC/IXF file.

SQL3308N • SQL3311N

The IMPORT utility stops processing. No table is created.

User response: Either correct the columns specified in the *METHOD* and *Action String* parameters or correct the columns specified in the *METHOD* parameter.

SQL3308N The code page values of the PC/IXF column *name* are not compatible with the code page values for the application. The *FORCEIN* parameter was not specified.

Explanation: The code page values for the column and the application are not compatible. When the *FORCEIN* parameter is not specified, the data cannot be loaded if the conversion from the IXF file code page to the application code page is not supported.

The utility stops processing. No data is loaded.

User response: To load data with these code pages, resubmit the command with the *FORCEIN* option.

SQL3309N Column *name* in the PC/IXF file is defined as a graphic column. The *FORCEIN* parameter was not specified.

Explanation: During the load of a PC/IXF file, a graphic data column was encountered. Because the *FORCEIN* parameter was not used, the data cannot be loaded.

The utility stops processing. No data is loaded.

User response: If you want to load the data with the graphic data, resubmit the command with the *FORCEIN* parameter.

SQL3310N Column *name* in the PC/IXF file is not valid.

Explanation: The CREATE or REPLACE_CREATE option was specified on the IMPORT command. A column with an invalid C record was found while importing the PC/IXF file.

The IMPORT utility stops processing. The table is not created.

User response: Verify the column definition information in the input file.

SQL3311N This PC/IXF file is not supported in Import CREATE mode. Reason code =*reason-code*.

Explanation: Reason codes:

1

Index information has not been saved because the index column names contain hexadecimal values of 0x2B or 0x2D.

2

XML columns are not supported.

3

MDC key has not been saved.

4

Table partitioning key has not been saved.

5

Index name has been truncated due to codepage conversion.

6

Protected tables are not supported.

7

Action string other than 'SELECT * FROM <TABLE-NAME>' was used during Export.

8

Method N was used during Export.

9

A column name was too long for the PC/IXF format. It has been truncated to fit.

10

A UDT name was too long for the PC/IXF format. It has been truncated to fit.

11

Typed table information has been truncated due to codepage conversion.

12

The schema associated with the UDT was too long for the PC/IXF format. It has been truncated to fit.

13

Decimal floating-point columns are not supported.

14

IMPLICITLYHIDDENINCLUDE modifier was used during Export.

User response: Data has not been affected during Export but the file cannot be used in Import CREATE operation to recreate the table since some information is missing. For reason codes 1, 3, 4, 5, 7, 8, 9, 11 and 14 the user may use File Type Modifier FORCECREATE to force the CREATE operation with this file. For reason codes 2, 6, 10, 12 and 13 the user may use db2look tool to extract table information and perform Import INSERT or REPLACE operation.

SQL3313N The disk is full. Processing was ended.

Explanation: The disk or diskette is full. During the export to a PC/IXF file, either the PC/IXF data file is on a fixed disk, or the PC/IXF data file and the database are on the same drive, or the PC/IXF data file and the message file are on the same drive.

The EXPORT utility stops processing. The exported data is not complete.

User response: Provide more space on the disk or diskette or specify that the data file be located on a different drive than the database or the message file and resubmit the command.

SQL3314N The date and time fields in an A record do not match the date and time fields in the H record.

Explanation: During the load of a PC/IXF file, an A record was found in the PC/IXF file, that contained run identification information (in the date and time fields) that differs from the run identification information in the header (H) record. This action does not apply to an A record at the start of a continuation file.

The input file has probably been damaged.

The utility stops processing.

User response: Re-create the damaged file, or repair the damaged file to recover as much data as possible. Resubmit the command.

SQL3315N The volume fields in an A record of subtype C are not valid.

Explanation: During the load of a PC/IXF file that was created by Database Services, an A record was found in the PC/IXF file, that contained volume information (in the volume fields) that is not valid.

The input file has probably been damaged.

The utility stops processing.

User response: Re-create the damaged file, or repair the damaged file to recover as much data as possible. Resubmit the command.

SQL3316N An I/O error occurred while closing part of the input file.

Explanation: During the load of a multiple part PC/IXF file, an I/O error occurred while the system was closing one of the files that make up the input PC/IXF file. This action does not apply to the last file in the group of files that make up the PC/IXF file.

The utility stops processing.

User response: Resubmit the command.

SQL3317N The string pointed to by the filemod parameter contains conflicting information.

Explanation: The *filemod* string defines the generation and product family for the output file. More than one generation or product family was defined in the string.

The utility stops processing. The output file is not created.

User response: Change the *filemod* string to define only one generation and product family. Resubmit the command.

SQL3318N There are duplicate keywords in the filemod parameter.

Explanation: A COLDEL, CHARDEL, or DECPT keyword appears more than once in the *filemod* parameter. This condition may arise while using delimited ASCII (DEL) files.

The utility stops processing. No data is loaded or exported.

User response: Resubmit the command with a correct *filemod* parameter.

SQL3319N An SQL error *sqlcode* occurred while creating the table.

Explanation: An SQL error occurred while creating the table.

The IMPORT utility stops processing. The table was not created. No data was imported.

User response: Look at the SQLCODE (message number) in the message for more information. Make changes and resubmit the command.

SQL3320N There is no delimiter or decimal point character after a keyword in the filemod parameter.

Explanation: A COLDEL, CHARDEL, or DECPT keyword is located at the very end of the *filemod* parameter. There is no delimiter or decimal point character following the keyword. This condition may arise while using delimited ASCII (DEL) files.

The utility stops processing. No data is loaded or exported.

User response: Resubmit the command with a correct *filemod* parameter.

SQL3321C Data was not imported into the database because the log was full or the lock space was exhausted. Recovery was not successful. SQLCODE *sqlcode* was returned.

Explanation: The IMPORT utility could not insert a row of data into the database because the database transaction log was full or the lock space available to the application was exhausted. All work was committed, but the utility could not insert the row, because the database transaction log or the lock space remains full.

The utility stops processing. All previous changes were committed, but the current row was not imported.

User response: Check the amount of space remaining on the filesystem containing your database files and the amount of lock space available to the application. Consider increasing the maximum log size, maximum storage for the lock list, or the percent of the locklists available to a single application in the database configuration file.

SQL3322N An operating system semaphore error occurred.

Explanation: An error occurred in the wait/post semaphores.

The utility stops processing. For the EXPORT utility, data may be incomplete on the media. For the IMPORT utility, data not already committed is rolled back.

User response: Stop and restart DB2 and resubmit the utility.

SQL3324N Column *name* has a type of *type* which is not recognized.

Explanation: A column of data returned by the SQL statement is not supported.

Federated system users: The data type of the data that you want is not supported by either the federated server or the data source that you want to access.

User response: Correct the error and retry the command.

Federated system users: Specify a supported data type and resubmit the program.

SQL3325W All the columns in row *row-number* have NULL values; the row will not be included in the WSF data file.

Explanation: When you are doing an export of a WSF file and the SELECT statement results in a row of all NULL values, the row will not be added to the WSF file. The total number of rows specified in message SQL3105N is the number of rows resulting from the SELECT statement and not the number of rows in the WSF file.

The command continues processing.

User response: No action required. This is an informational message.

SQL3326N The column list following the table name in the Action String parameter is invalid.

Explanation: When you call IMPORT or LOAD with an *Action String* (e.g. "REPLACE into ...") parameter which contains a column list after the table name, this message will result if it is invalid. For example, the following *Action String* parameters will fail:

insert into tablea()

no columns within the parenthesis

insert into tablea(two words)

invalid column name

insert into tablea(grant.col1)

column name should not be qualified

insert into tablea(x1234567890123456789)

column name too long

insert into tablea(col1,col2)

missing column name

The command cannot continue.

User response: Change the *Action String* parameter with a valid column list and call the utility again.

SQL3327N A system error occurred (reason code1 = *reason-code-1* and reason code2 = *reason-code-2*).

Explanation: A system error occurred during processing.

The utility stops processing.

User response: Record all error information from the SQLCA, if possible. Retain the message file. Terminate all applications using the database. Reboot the system. Restart the database. Try the command again.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the operating system command prompt.

SQL3330W In row *row-number* a character field has an odd length but its target database column is a graphic column. The row was not loaded.

Explanation: Only even length character fields can be loaded into graphic database columns.

The row is not loaded.

User response: Either load the data to a new table using the CREATE option in the IMPORT command or do not load this column into this table.

SQL3331C The permission setting of a file (or directory) does not allow the specified access.

Explanation: This may accompany another error message. It indicates an attempt was made to get access to a file or directory in a way that is incompatible with the attributes of the file. One of the following may be the source of the difficulty:

- Opening a file for writing on a read-only device
- Opening a file for writing on a read-only file
- Opening a directory instead of a file
- Encountering a locking or sharing violation.

The command cannot be processed.

User response: Retry the utility when the file is not in use, or retry the utility directing the output to a path and file that allows writing.

SQL3332C The maximum number of open files has been reached.

Explanation: This message may accompany another error message. It indicates that the maximum number of open files has been reached.

The command cannot be processed.

User response: Terminate other applications to reduce the number of files open and retry the utility.

SQL3333C The file or directory does not exist.

Explanation: This message may accompany another error message. It indicates that a file or directory to be accessed does not exist or cannot be found.

The command cannot be processed.

User response: Resubmit the command with the correct file name, including a valid path.

SQL3334C There is not enough storage available.

Explanation: This message may accompany another error message. It indicates there is not enough storage available to open the file.

The command cannot be processed.

User response: Stop the application. Possible solutions include:

- Verify that your system has sufficient real and virtual memory.
- Remove background processes.

SQL3335C The file system is full.

Explanation: This message may accompany another error message. It indicates there is no available space for writing on the device.

The command cannot be processed.

User response: To make space available on the device, delete unneeded files or direct the output data to a device with space available.

SQL3337N An I/O error occurred while writing data to the server.

Explanation: An I/O error has occurred while attempting to write data to a temporary file on the server (temporary files are created in the tmp directory under the sqllib directory for the instance of the database manager). The file system on the server may be full.

The utility stops processing. The database is unchanged.

User response: Contact the System Administrator for the server to make space available on the server, and resubmit the command.

SQL3338N An I/O error occurred reading a temporary message file on the server.

Explanation: A system I/O error has occurred while attempting to read the temporary message file on the server.

The IMPORT operation is complete; however, the message file on the database client system may be empty or incomplete.

User response: Query the remote database to determine if the utility operation was successful.

SQL3340N Unable to perform a load with concurrent read access to the table.
Reason code = *reason-code*.

Explanation: The ALLOW READ ACCESS option of the LOAD command is not supported in the following cases as specified in the *reason-code*:

1. When using LOAD REPLACE.
2. When using INDEXING MODE DEFERRED.
3. When the target table is in the Set Integrity Pending state and is not in the Read Access only state.
4. When the indexes are marked invalid.
5. When using LOAD TERMINATE or LOAD RESTART on a load that did not use the ALLOW READ ACCESS option, or when temporary files from the original load are missing.

User response: Resubmit the command using the ALLOW NO ACCESS option.

SQL3341N Invalid table space name provided with the USE option. Reason code = *reason-code*.

Explanation: Only system temporary table spaces can be used for rebuilding the indexes in a table space other than the index table space. The page size of the system temporary table space must match the page size of the index table space.

User response: Resubmit the command with a table space name referring to a system temporary table space with the correct page size. The *reason-code* describes the failure as follows:

1. Table space name in USE clause not found.
2. Table space must be a system temporary table space.
3. Page size in system temporary table space must match page size in index table space.

SQL3342N The user ID has insufficient authority to use the LOCK WITH FORCE option.

Explanation: The LOCK WITH FORCE option of the load utility requires SYSADM or SYSCTRL authority.

User response: Reissue the load command from a user ID with sufficient authority.

SQL3343N Load restart not allowed after a rollforward through a failed load.

Explanation: The load that failed prior to the point in time of the end of a rollforward cannot be restarted after the rollforward has completed.

User response: Use the TERMINATE mode to terminate the load or drop the table.

SQL3346N USE TablespaceName option ignored. Reason code = *reason-code*.

Explanation: USE TablespaceName is only valid for ALLOW READ ACCESS loads with INDEXING MODE REBUILD. If INDEXING MODE AUTOSELECT is specified, load will use the alternate table space only if it chooses to rebuild the indexes.

User response: Refer to the reason code for an explanation.

1. Indexing mode incompatible with USE TablespaceName option.
2. Table has no indexes.
3. LOAD TERMINATE does not need to use a separate table space.
4. USE TablespaceName is only supported for ALLOW READ ACCESS loads.

SQL3400N The method specified in METHOD is not valid for Non-Delimited ASCII files. It must be 'L' for locations.

Explanation: When loading from a non-delimited ASCII file, columns must be selected by locations in the file.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3401N The method specified in METHOD is not valid for any filetype.

Explanation: The method for selecting columns in the file is not a value allowed for any *filetype*. Choose one of the following method indicators:

- P for positions
- N for names
- L for locations
- D for default

Further restrictions are based on *filetype*.

The command cannot be processed.

User response: Resubmit the command with a valid method indicator.

SQL3402N A beginning-ending location pair with both values zero was specified for non-nullable column *name*.

Explanation: A location pair with both the beginning and the ending location set to zero was specified for the indicated column, but the column is not nullable.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3403N The beginning-ending location pair for inserting into column *name* is not valid. (*begin end*)

Explanation: The field specification for locating the input data for the indicated database column within the input non-delimited ASCII file is not valid. The field specification has one of the following errors:

- The beginning location is less than zero.
- The ending location is less than zero.
- The ending location is less than the beginning location.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3404N The beginning-ending location pair for inserting into column *name* is not valid for a number.

Explanation: The field specification for locating the data for the indicated database column within the input non-delimited ASCII file is not valid. The location pair defines a field longer than 50 bytes.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3405N The beginning-ending location pair for inserting into column *name* is not valid for a date.

Explanation: The field specification for locating data for the indicated database column within the non-delimited ASCII file is not valid. The location pair defines a field length that is not valid for an external representation of a date.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3406N The beginning-ending location pair for inserting into column *name* is not valid for a time.

Explanation: The field specification for locating the data in the indicated database column within the input non-delimited ASCII file is not valid. The location pair defines a field length that is not valid for an external representation of a time.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3407N The beginning-ending location pair for inserting into column *name* is not valid for a timestamp.

Explanation: The field specification for locating the data for the indicated database column within the input non-delimited ASCII file is not valid. The location pair defines a field length that is not valid for an external representation of a timestamp.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the file.

SQL3408W The beginning-ending location pair for inserting into column *name* defines a field larger than the target column. Data may be truncated.

Explanation: The field specification for obtaining data from the input non-delimited ASCII file defines a field larger than the size (or maximum size) of the target database column.

The utility continues processing. Truncation occurs when necessary.

User response: No action is required.

SQL3409W The beginning-ending location pair for inserting into column *name* defines a field shorter than the target fixed length column. Data will be padded.

Explanation: The indicated database column is a fixed-length column. The field specification for obtaining data from the input non-delimited ASCII file defines a field smaller than the size of the target database column.

The utility continues processing. Values input to the indicated database column are padded with spaces as necessary, on the right.

User response: No action is required.

SQL3410N The beginning-ending location pair for insert into column *name* is not valid for a graphic column.

Explanation: The field specification for locating the input data in the ASCII file that is to be inserted into the indicated database column defines a field with an odd number of bytes.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3411W The field value in row *row-number* and column *column-number* is not valid for a graphic column. A null was inserted.

Explanation: The value in the field indicated is not an acceptable graphic column value. The value may contain an odd number of bytes. For DEL files, the value of the column number specifies a field in the indicated row. For ASCII files, the value of the column number specifies the byte location within the row where the value begins.

The row is not inserted.

User response: If a null is not acceptable, correct the input file and resubmit the command, or edit the data in the table.

SQL3412W The field value in row *row-number* and column *column-number* is not valid for a graphic column but the target column is not nullable. The row was not inserted.

Explanation: The value in the field indicated is not an acceptable graphic column value. The value may contain an odd number of bytes. A null cannot be inserted because the target column is not nullable. For DEL files, the value of the column number specifies a field in the indicated row. For ASCII files, the value of the column number specifies the byte location within the row where the value begins.

The row is not inserted.

User response: No action is required. If the row is necessary, correct the input file and resubmit the command, or edit the data in the table.

SQL3413W The field value in row *row-number* and column *column-number* is too short for the target column. A null was inserted.

Explanation: The value in the specified field is not acceptable because it is too short for the target column. The value of the column number specifies the byte location within the row where the field begins.

A null value is inserted.

User response: No action is required. If a null is not acceptable, correct the inner field and resubmit the command, or edit the data in the table.

SQL3414N The temporary file *filename* could not be found.

Explanation: At the end of the load phase a temporary file is created with information necessary to restart the load. If the load is interrupted before this point, this file is not created.

This message indicates that this file could not be found during load restart.

The utility stops.

User response: Depending on where the interrupt occurred, it may be possible to restart the load at the build phase.

SQL3415W Failed to convert the field value in row *row-number* and column *column-number* from the codepage of the input data file to the codepage of the database. A null value was loaded.

Explanation: The value in the field indicated cannot be converted from the codepage of the input data file to the codepage of the database.

User response: If a null value is not acceptable, correct

the input data file and resubmit the command, or edit the data in the table.

SQL3416W Failed to convert the field value in row *row-number* and column *column-number* from the codepage of the input data file to the codepage of the database. The row was not loaded.

Explanation: The value in the field indicated cannot be converted from the codepage of the input data file to the codepage of the database.

User response: No action is required. If the row is necessary, correct the input data file and resubmit the command, or edit the data in the table.

SQL3417N A beginning-ending location pair *pair-number* is invalid for the codepage *codepage*.

Explanation: The location pair is invalid for the codepage because the codepage has a pure DBCS encoding. This means that every character in the codepage is 2 bytes long. An even number of bytes should be specified in the location pair.

The command cannot be processed.

User response: Resubmit the command with a valid set of locations for the columns in the source file.

SQL3418W The NOCHARDEL file type modifier should not be specified if the data was exported using DB2. It is provided to support vendor data files that do not have character delimiters.

Explanation: The NOCHARDEL file type modifier is designed to support vendor data files that do not have character delimiters. It was not intended to be used when the data file was created by DB2 EXPORT. In the DEL file format, the character delimiters are used to avoid data loss or corruption and thus are part of the default behaviour.

User response: Verify that NOCHARDEL is the required in the import or load command.

SQL3419W The specified sort option is not supported by the vendor sort. The default DB2 sort will be used to continue with the operation.

Explanation: The vendor sort library is activated by setting the DB2 registry variable DB2SORT. The current sort specification requires a feature that is not supported by this vendor sort library. DB2 will use the default sort to continue with the operation. Possible features not supported by vendor sort:

- Database created using IDENTITY_16BIT collation.

- Database configuration parameter ALT_COLLATE is set to IDENTITY_16BIT.
- Load target table has XML columns.
- Load target table has data partitioning and local indexes.

User response: No action required.

Chapter 8. SQL3500 - SQL3999

SQL3500W The utility is beginning the *phase* phase at time *timestamp*.

Explanation: This is an informational message indicating that a phase is about to begin and that the previous phase has ended. The phases are (in order of appearance):

- LOAD
- BUILD
- DELETE

During the LOAD phase, data is loaded into your table. If there are any indexes to be built, BUILD phase will follow the LOAD phase. If there were any duplicate keys found for a unique index, the DELETE phase will follow the BUILD phase.

If the LOAD is terminated before the end of the LOAD, you need to know the phase at which you should restart the LOAD.

User response: No action is required.

SQL3501W The table space(s) in which the table resides will not be placed in backup pending state since forward recovery is disabled for the database.

Explanation: COPY NO was specified on the invocation of LOAD which results in the table space(s) in which the table resides being placed into backup pending state unless forward recovery is disabled for the database.

The utility continues.

User response: No action is required.

SQL3502N The utility has encountered *number* warnings which exceeds the total number of warnings allowed.

Explanation: The number of warnings issued during the command has exceeded the total number of warnings that the user specified at invocation of the utility.

The utility terminates.

User response: Ensure that the correct data is being loaded with the appropriate options or increase the number of warnings allowed. Resubmit the command.

SQL3503W The utility has loaded *number* rows which equals the total count specified by the user.

Explanation: The number of rows loaded has equaled the total number of rows that the user specified at invocation of the utility.

The utility has successfully completed.

User response: No response required.

SQL3504W A consistency point is being established.

Explanation: Consistency points will be established at times other than the regular interval specified in the SAVECOUNT parameter at invocation when:

- the threshold for the amount of meta-data kept in memory or in temporary files has been reached.
- A device error occurred for the copy image and the load must terminate.

User response: If the LOAD continues after this message, no action is required. If the LOAD terminates, it can be restarted after all errors are corrected (such as activating a device or decreasing the interval at which consistency points are to be established).

SQL3505N The length specified in the filemod for the RECLen option is not in the valid range of 1 to 32767.

Explanation: In the *filemod* parameter, the RECLen option was specified for an ASC file. The length specified is not valid.

User response: Correct the length specified and resubmit the command.

SQL3506W The value specified in the null indicator in row *row-number* and column *column-number* is not valid. A value of 'N' will be assumed.

Explanation: For ASC files, a null indicator column can be specified for each data column and should contain either a 'Y' or a 'N'. A 'Y' indicates that the column is a null value and a 'N' indicates that the column contains data. If neither of these values are in the null indicator column, it is assumed to be a 'N' and data will be loaded into the column.

User response: If the data or the null indicator are incorrect, correct the input file and resubmit the command.

SQL3507N The column number specified for a null indicator is not in the valid range of 0 to 32767 or the null indicator parameter is not valid.

Explanation: In the *null_ind* parameter, columns for null indicators were specified for an ASC file but one of the columns is not valid or the pointer passed in for the null indicators is not valid.

User response: Correct the parameter and resubmit the command.

SQL3508N Error in accessing a file or path of type *file-type* during load or load query.
Reason code: *reason-code*. **Path:** *path/file*.

Explanation: An error occurred while trying to access a file during load or load query processing. The utility stops processing.

User response: If doing a load and the table space is not in load pending state, correct the problem and invoke the load utility again. If the table is in load pending state, then invoke the load utility in RESTART or REPLACE mode, or restore a backup of the table space(s). The state of the table space can be determined using the LOAD QUERY command.

The following is a list of reason codes:

1

Unable to open the file.

This could be caused by an incorrect file name or insufficient authority to access the file/directory. Correct the problem and either restart or rerun the load.

The load temporary file could have been destroyed or the database could have been restored from an earlier backup. Load restart is not supported under these circumstances. Use load terminate to bring the table out of load pending state.

2

Unable to read/scan the file.

This could be the result of a hardware error. If the error is a hardware error, take the appropriate action and restart or rerun the load.

3

Unable to write to or change size of the file.

This could be the result of a disk full condition or a hardware error. Refer to the file type list provided later in this message, and either ensure there is enough space to run the load or specify a different location to be used. Restart or rerun the load. If the error is a hardware error, take the appropriate action and restart or rerun the load.

4

The file contains invalid data.

A file required by the load contains incorrect data. See the action described for TEMPFILES_PATH.

5

Unable to close the file.

If the load cannot be restarted or rerun, contact your IBM service representative.

6

Unable to delete the file.

If the load cannot be restarted or rerun, contact your IBM service representative.

7

Parameter specified incorrectly. Refer to the list of file types to determine the parameter in error and rerun the load with a valid parameter.

The following is a list of file types:

SORTDIRECTORY

Ensure that the workdirectory parameter is specified properly. There must be enough combined space in all the directories to hold twice the size of the index keys for the loaded data. For load insert and load restart there must also be room for twice the size of the index keys of the existing data in the table.

MSGFILE

Ensure that the messagefile parameter is specified properly. There must be enough disk space to write out the messages that occur during the load.

If this is a load query, ensure that the local message file parameter is NOT the same as the messagefile parameter used for the load whose status is being queried.

TEMPFILES_PATH

Ensure that the tempfiles path parameter is specified properly.

SQL3509W The utility has deleted *number rows* from the table.

Explanation: When a table with a unique index is loaded, rows causing violation of uniqueness of an index will be deleted from the table during the delete phase. This message provides information on how many rows have been deleted.

User response: No action is required.

SQL3510N The working directory for the sort phase cannot be accessed.

Explanation: One or more of the specified working directories for the sort phase either does not exist or has no read/write permission.

User response: Ensure that the specified working directories exist and the read/write permission is setup correctly and resubmit the command.

SQL3511W The file named in row *row-number* and column *column-number* cannot be found. A null was loaded.

Explanation: The filename in the specified field cannot be found. There may be a data type mismatch.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

A null value is loaded.

User response: Examine the input value. If necessary, correct the input file and resubmit the command or edit the data in the table.

SQL3512W The file named in row *row-number* and column *column-number* cannot be found, but the target column is not nullable. The row was not loaded.

Explanation: The filename in the specified field cannot be found. A null cannot be loaded because the output column in the table is not nullable.

For delimited ASCII (DEL) files, the value of the column number specifies the field within the row that contains the value in question. For ASCII files, the value of the column number specifies the byte location within the row where the value in question begins.

The row is not loaded.

User response: Correct the input file and resubmit the command or edit the data in the table.

SQL3513N The codepage of the file does not match the codepage of the database. The file cannot be loaded.

Explanation: DB2CS files cannot be loaded into a database with a codepage that differs from the original database.

User response: Change the codepage of the database and resubmit the command or use another filetype (such as PC/IXF) to move your data from the original database to the new database.

SQL3514N A utility system error occurred. Function code: *function*. Reason code: *reason-code*. Error code: *error-code*.

Explanation: A system error occurred during database utility processing.

User response: Different actions are required depending on the value of *function*.

The possible function codes are:

- 1 - An error occurred while Load was sorting.
Try to restart the load. If the error persists, provide the function, reason code and error code to your technical service representative.
- 2 - An error occurred using the vendor sort utility.
Try the load again using the IBM Data Server Client/DB2 Server sort utility instead of the vendor sort. To do this, reset the Profile Registry value at the server to blank. You may have to restart the Database Manager in order to pick up the new Profile Registry value. If the error persists, provide the function, reason code and error code to your vendor sort technical service representative.

SQL3515W The utility has finished the *phase* phase at time *timestamp*.

Explanation: This is an informational message indicating that a phase has finished. The phases are (in order of appearance):

- LOAD
- BUILD
- DELETE

User response: No action is required.

SQL3516N The utility could not restart the load as specified.

Explanation: The Load Utility detected discrepancies in the last consistency point performed by Load before failure occurred. This condition might be caused either by a system error or an invalid log file.

User response: Restart the Load at the Build phase, to bring the table to a consistent state and create indexes (if applicable), or perform Load with the REPLACE option.

SQL3517N An unexpected record was read from the input source.

Explanation: The utility has encountered a record that is in a format that is not valid. The source may have been corrupted when copied from the original source.

Processing terminates.

User response: Copy the record from the original source in binary and restart the LOAD or Import.

SQL3518N The data in the source is not compatible to the table to be loaded.

Explanation: The source cannot be used to load this table because one of the following reasons:

- the table definition does not match the table definition of the source.
- the source was created on a different platform than the table that is being loaded.
- the source was created from a table that had a different codepage from the table that is being loaded.

User response: Ensure that both the table and source are correctly specified. If you want to load data from a table with a different definition or from a different platform or codepage, use another filetype such as IXF or DEL.

SQL3519W Begin Load Consistency Point. Input record count = *count*.

Explanation: The Load Utility is about to attempt to perform a Consistency Point to commit the table data that has already been loaded.

User response: If message SQL3520W is not printed immediately after this message, then the Consistency Point failed. The Load will have to be restarted at the Build phase, to ensure that the table is brought back to a consistent state and all indexes (if any) created. It will then be possible to check which records have been loaded. Start the Load again with a RESTARTCOUNT set to the number of records successfully loaded to skip those rows and load the rest of the file.

If this message is followed by messages SQL3520W, then this message is informational only and no response is required.

SQL3520W Load Consistency Point was successful.

Explanation: The Consistency Point performed by Load was successful.

User response: This is an informational message only. No response is required.

SQL3521N The input source file *sequence-num* was not provided.

Explanation: A load was invoked with multiple input files but not all the files were provided. For the DB2CS filetype, all the input source files that were created originally must be provided. For the IXF filetype, all the input source files must be provided in the correct order.

The utility terminates.

User response: Restart the utility providing all the input source files and setting the RESTARTCOUNT appropriately for the data that was already loaded.

SQL3522N A copy target cannot be provided when both log retain and user exits are disabled.

Explanation: A copy target has been specified on invocation of load for a database that has both log retain and user exits disabled. Copy targets are not valid for such databases.

The utility stops processing.

User response: Verify that the database should have log retain and user exits disabled and invoke the load without specifying a copy target.

SQL3523W There are no messages to be retrieved from the message file. Reason code: *rc*.

Explanation: No messages are returned from a query of the LOAD temporary message file. The possible return codes are:

- 1 No LOAD temporary message file exists.
- 2 There are no messages in the LOAD temporary message file.

User response: Ensure that a valid table name has been specified. If the table name is specified correctly and messages are expected, check the database monitor to verify that the utility is active and it is not waiting for resources such as locks. Note that the LOAD temporary message file will not be created until the LOAD utility is in progress and it will be deleted after the completion of the LOAD utility.

The syntax of the CLP command includes the keyword TABLE, for example:

```
LOAD QUERY TABLE <tablename>
```

Neglecting the TABLE keyword will result in load query opening a binary load message file with the name *tablename*.

SQL3524N Option *option* has an invalid value of *value*.

Explanation: The value provided must be an integer value. Its range for each option is as follows:

1. TOTALFREESPACE: the value must be in the range of 0 to 100, and is interpreted as a percentage of the total pages in the table that are to be appended to the end of the table as free space.
2. PAGEFREESPACE: the value must be in the range of 0 to 100, and is interpreted as a percentage of each data page that is to be left as free space.
3. INDEXFREESPACE: the value must be in the range of 0 to 99, and is interpreted as a percentage of each index page that is to be left as free space when loading indexes.

The utility stops processing.

User response: Correct the value and resubmit the command.

SQL3525N The *option-1* option is incompatible with the *option-2* option. 7

Explanation: Incompatible options have been provided to the utility.

User response: Remove or modify one of the options and resubmit the command. See the Command Reference for more information on valid options. 8

SQL3526N The modifier clause *clause* is inconsistent with the current load command. Reason code: *reason-code*.

Explanation: The load file type mode (modifier) indicated, is incompatible with your load/import/export command. This is because of one of the following reasons:

1

The current option requires you to specify the RECLEN and NOEOFCHAR file type modifiers. One or more of these options are missing from your command.

2

The indicated option, such as DEL or ASC, is inconsistent with the format of the input or output data file.

3

Generated or identity related file type modifiers have been specified but the target table contains no such columns.

4

When a pre-Version 8 client is used, it is not possible to load a table having a non-identity generated column in a unique index, unless the column is specified in the INCLUDE clause of the CREATE INDEX statement or the GENERATEDOVERRIDE file type modifier is used. For pre-Version 8 clients, it is also necessary to specify the GENERATEDOVERRIDE file type modifier when loading a table that has a non-identity generated column in its ORGANIZE BY clause.

5

The IDENTITYOVERRIDE file type modifier cannot be used when loading a table with a GENERATED BY DEFAULT identity column.

6

The LOBSINFILE file type modifier cannot be specified in a partitioned database load when

a generated column, that is part of the partitioning key, is defined in terms of a long field or LOB column.

Use of the GENERATEDMISSING or IDENTITYMISSING modifier in the current load or import command would result in all columns in the table being excluded from the load operation.

If an identity column is part of the partitioning key or a generated column in the partitioning key depends upon an identity column that is not in the partitioning key, the IDENTITYOVERRIDE file type modifier must be specified if the current loading mode is either PARTITION_ONLY, LOAD_ONLY or LOAD_ONLY_VERIFY_PART, or if the value of the SAVECOUNT option is greater than 0.

9

When the target table contains a generated column that is defined in terms of an identity column and the GENERATEDOVERRIDE file type modifier is specified, then the IDENTITYOVERRIDE file type modifier must be specified as well. This ensures that the generated column values are computed in a way that is consistent with the identity column values in the table.

10

The DUMPFILEACCESSALL file type modifier is only valid when the user has SELECT privileges on the load target table, DUMPFILE modifier is specified, and the DB2 server database partition resides on an UNIX based operating system.

11

The USEDEFAULTS file type modifier cannot be used in conjunction with the IXF file type or ASC file type with RECLEN modifier.

12

Security label related file type modifiers have been specified, but the target table contains no such columns.

13

The IMPLICITLYHIDDENINCLUDE file type modifier cannot be specified, when loading a table without implicitly hidden columns.

14

The IMPLICITLYHIDDENINCLUDE file type modifier cannot be specified, when exporting a table without SELECT * query.

SQL3527N • SQL3537N

User response: Check the requirements of the option you are using. Reissue the command using modifier clauses (file type modes) and utility options that are consistent.

SQL3527N The number specified in the FILETMOD parameter for the CODEPAGE option is not valid.

Explanation: In the FILETMOD parameter, the CODEPAGE option was invalid.

User response: Correct the codepage number and resubmit the command.

SQL3528W The delimiter (column delimiter, string delimiter, or decimal point) specified in the CLP command may get translated from the application codepage to the database codepage.

Explanation: When a CLP command is sent from the client to the server, it may get translated from the codepage of client to the codepage of server, if they are different.

User response: To ensure that delimiters are not converted, they should be specified in hex format.

SQL3529N The *operation-name* operation encountered the unsupported data type *data-type* in column *column-number*.

Explanation: The *operation-name* operation does not support data type *data-type* found in column *column-number*.

User response: Please check your table definition and the Data Movement Guide for supported data types.

SQL3530I The Load Query utility is monitoring *agenttype* progress on partition *partitionnumber*.

Explanation: The Load Query utility was invoked in an MPP environment.

User response: No action is necessary.

SQL3531I A LOAD RESTART has occurred.

Explanation: The RESTART option was given for the Load currently being queried.

User response: No action is necessary.

SQL3532I The Load utility is currently in the *phase* phase.

Explanation: This is an informational message indicating the phase of the Load currently being queried.

User response: No action is necessary.

SQL3533I The Load utility is currently building index *number* of *number*.

Explanation: This is an informational message returned if the Load currently being queried is in the BUILD phase.

User response: No action is necessary.

SQL3534I The Load DELETE phase is approximately *number* percent complete.

Explanation: This is an informational message returned if the Load currently being queried is in the DELETE phase.

User response: No action is necessary.

SQL3535W The LOAD command parameter *parameter-name* is no longer supported; its value will be ignored by the LOAD utility.

Explanation: Your LOAD command contains a parameter that is no longer supported.

User response: Please refer to the DB2 documentation for information on temporary sort space for LOAD and suggestions related to LOAD performance tuning.

SQL3536N System temporary table space *table-space-name* is full.

Explanation: The LOAD utility has encountered a table space full condition while sorting index keys.

User response: Ensure that there is enough space allocated to the system temporary table space *table-space-name*, at least two times the total size of the indexes being built. Restart the LOAD utility.

SQL3537N Sort memory could not be allocated during the execution of the LOAD utility.

Explanation: Insufficient process virtual memory is available to the LOAD utility for sort processing.

User response: Terminate the application on receipt of this message. Ensure there is enough virtual memory available for sort processing.

Possible solutions include:

- Disconnect all applications from the database and decrease the size of the sort heap parameter (sorheap) in the corresponding database configuration file.
- Remove background processes and/or terminate other currently executing applications.
- Increase the amount of virtual memory available.

SQL3538N The LOAD QUERY utility failed because multiple LOADs are using the same temporary files path.

Explanation: At least one other LOAD was invoked using the same TEMPFILES PATH as the queried LOAD and is still in progress. The LOAD QUERY utility cannot uniquely determine which LOAD to query.

User response: Use the TABLE parameter of LOAD QUERY instead.

SQL3539N LOAD RESTART cannot proceed because LOAD TERMINATE has been attempted at least once.

Explanation: LOAD TERMINATE can only be followed by LOAD TERMINATE.

User response: User can proceed with LOAD TERMINATE only.

SQL3550W The field value in row *row-number* and column *column-number* is not NULL, but the target column has been defined as GENERATED ALWAYS.

Explanation: A non NULL field value was encountered in the input file. Because the target column is of type GENERATED ALWAYS, the value cannot be loaded. The column number specifies the field within the row of the missing data.

User response: For LOAD, an explicit, non NULL field value can be loaded into a GENERATED ALWAYS identity column only if the identityoverride file type modifier is used. For non-identity GENERATED ALWAYS columns, the generatedoverride file type modifier can be used to load explicit, non NULL values into a row. If using these modifiers is not appropriate, the field value must be replaced with a NULL if LOAD is to accept the row.

For IMPORT there is no way to override a GENERATED ALWAYS column. The field value must be removed and replaced with a NULL if the utility is to accept the row.

SQL3551W The table contains at least one GENERATED ALWAYS column that the utility will override.

Explanation: An "override" file type modifier (for example, IDENTITYOVERRIDE or GENERATEDOVERRIDE) has been specified.

For IDENTITYOVERRIDE, this may violate the uniqueness property of an identity column defined as GENERATED ALWAYS.

For GENERATEDOVERRIDE, this may result in a non-identity GENERATED ALWAYS column containing

a value that does not correspond to its column definition.

User response: No action is required.

SQL3600N The IMMEDIATE CHECKED option of the SET INTEGRITY statement is not valid since the table *table-name* is a user maintained materialized query table or is not in the Set Integrity Pending state.

Explanation: The IMMEDIATE CHECKED option of the SET INTEGRITY statement is only valid if the table has been placed in the Set Integrity Pending state, is not a user maintained materialized query table, or if one of its ancestors that has been placed into the Set Integrity Pending state is also in the invocation list and all intermediate ancestors are also in the list.

User response:

1. Use the SET INTEGRITY statement with the OFF option to place a table in the Set Integrity Pending state.
2. Use the IMMEDIATE UNCHECKED option for a user maintained materialized query table.
3. Include an ancestor of the table to the list of tables to be checked. The ancestor must be in the Set Integrity Pending state and all intermediate ancestors must also be in the list.
4. If the table is in the No Data Movement state but it is not in the Set Integrity Pending state, specify the SET INTEGRITY statement with the FULL ACCESS option to force the table out of the No Data Movement state. Note that all dependent immediate materialized query tables that remain in the Set Integrity Pending state are also forced to be fully recomputed in subsequent REFRESH TABLE statement, and all dependent immediate staging tables that remain in the Set Integrity Pending state can no longer be used to refresh their dependent materialized query tables.

sqlcode: -3600

sqlstate: 51027

SQL3601W The statement caused one or more tables to automatically be placed in the Set Integrity Pending state.

Explanation: Tables have been placed in the Set Integrity Pending state to enforce integrity constraints or to enforce the data relationship between the base table, the descendent immediate materialized query tables, and the descendent staging tables. Specifically, the following statements caused at least one of the listed tables to be placed in the Set Integrity Pending state.

- ALTER TABLE ... ATTACH statement forced the target table of the ATTACH into the Set Integrity Pending state
- ALTER TABLE ... DETACH statement forced descendent immediate materialized query tables or descendent staging tables into the Set Integrity Pending state
- SET INTEGRITY statement forced descendent foreign key tables, descendent immediate materialized or descendent staging tables into the Set Integrity Pending state

A detached partition that is a newly created detached table is not accessible until its detached dependent materialized query tables and staging tables are maintained.

User response: To validate the integrity for tables in the Set Integrity Pending state, execute the SET INTEGRITY statement with the IMMEDIATE CHECKED or IMMEDIATE UNCHECKED option for these tables. To determine which tables are in the Set Integrity Pending state, issue the following query:

```
SELECT TABSCHEMA, TABNAME, STATUS
FROM SYSCAT.TABLES
WHERE STATUS = 'C'
```

To determine which detached tables have been created by the ALTER TABLE ... DETACH statement and are not yet accessible, issue the following query:

```
SELECT TABSCHEMA, TABNAME, TYPE
FROM SYSCAT.TABLES
WHERE TYPE = 'L'
```

sqlcode: +3601

sqlstate: 01586

SQL3602W Check data processing found constraint violations and moved them to exception tables.

Explanation: There are rows that violate constraints that were specified to be checked by the SET INTEGRITY statement execution. These were moved to exceptions tables.

User response: Check the exception tables for rows that violate constraints. The rows have been deleted from the original table but can be corrected and transferred back from the exception tables.

sqlcode: +3602

sqlstate: 01603

SQL3603N Integrity processing through the SET INTEGRITY statement has found an integrity violation involving a constraint, a unique index, a generated column, or an index over an XML column. The associated object is identified by *name*.

Explanation: A row has been found to violate the integrity of a table checked by the SET INTEGRITY statement. The integrity violation was caused by one of the following.

- A table constraint was violated. The table constraint is identified by *name*.
- A unique index was violated. The unique index is identified by *name*.
- The column value of a generated column does not match the result of the generation expression. The generated column is identified by *name*.
- The table contains an index over an XML column that had an integrity violation. The XML column is identified by *name*.

The row has not been deleted from the table. The table remains in Set Integrity Pending state.

User response: Execute the SET INTEGRITY statement again using the FOR EXCEPTION option and use the information from the exception tables to correct the data.

sqlcode: -3603

sqlstate: 23514

SQL3604N Exception table *excp-table-name* corresponding to table *table-name* in the SET INTEGRITY statement, LOAD utility, or INGEST utility does not have the proper structure; has been defined with unique indexes, indexes over XML data, constraints, generated columns, or triggers; is in the Set Integrity Pending state; or is of invalid type. Reason code *reason-code*.

Explanation: The exception table corresponding to a table must have its definition similar to that of the original table. Optional columns that can be defined for an exception table are as specified in the relevant section of the documentation describing the exception tables. There may not be any generated columns in the exception table. There must not be any constraints, triggers, unique indexes, or indexes over XML data defined on the exception table. The exception table itself should not be in the Set Integrity Pending state. The exception table cannot be a data partitioned table, a range clustered table, or a detached table. The exception table cannot have any refresh immediate materialized query tables or dependent propagate immediate staging tables. The exception table cannot be

a materialized query table or a staging table. The exception table must have the same security policy and the same set of protected columns as the table being checked.

Reason code corresponds to:

1

The exception table is in the Set Integrity Pending state.

2

The exception table does not have the proper column structure.

3

The exception table has constraints.

4

The exception table has triggers.

5

The exception table has generated columns.

6

The exception table has unique indexes.

7

The exception table is a materialized query table or is a staging table.

8

The exception table has dependent refresh immediate materialized query tables or dependent propagate immediate staging tables.

9

The exception table is the same as the table being loaded into.

10

The exception table is a range clustered table.

11

The exception table is a data partitioned table.

12

The exception table is a detached table.

13

The exception table does not have the same security policy or does not have the same set of protected columns as the table being checked.

14

The exception table has been defined with indexes over XML data.

15

The table has row or column level access control and the exception table does not.

User response: Create the exception table as indicated in the relevant section of the documentation and re-run the statement or utility.

sqlcode: -3604

sqlstate: 428A5

SQL3605N Table *table-name* named in the SET INTEGRITY statement is either not listed to be checked or is an exception table specified more than once.

Explanation: When the FOR EXCEPTION clause is specified in the SET INTEGRITY statement, this error could be caused by one of the following :

- The table is missing from the list of tables to be checked
- The table to be checked is the same as an exception table
- The exception table is specified for more than one table to be checked

User response: Correct the table names and execute the command again.

sqlcode: -3605

sqlstate: 428A6

SQL3606N There is a mismatch in the number of tables being checked and in the number of exception tables specified in the SET INTEGRITY statement.

Explanation: There must be a one-to-one correspondence between the exception tables and the tables that are not materialized query tables or staging tables provided in the invocation list. The tables in the invocation list that are materialized query tables or staging tables must not have corresponding exception tables.

User response: Create the missing exception table for the table that is not a materialized query table or staging table if it does not already exist and specify it in the invocation list in order to execute the command again. Do not specify exception tables for materialized query tables and staging tables.

sqlcode: -3606

sqlstate: 428A7

SQL3608N Cannot check a dependent table *dependent-table-name* using the SET INTEGRITY statement while the parent table or underlying table *parent-table-name* is in the Set Integrity Pending state or if it will be put into the Set Integrity Pending state by the

SET INTEGRITY statement.

Explanation: The parent table or underlying table must not be in the Set Integrity Pending state either before or after the SET INTEGRITY statement, or it must be included in the invocation list in order to check a dependent table.

User response: Ensure that the parent table is not in the Set Integrity Pending state by executing the SET INTEGRITY statement to check the parent table. If the dependent table is a materialized query table or staging table, ensure that the underlying table is not in the Set Integrity Pending state by executing the SET INTEGRITY statement to check the underlying table.

If the dependent table is not a materialized query table or staging table, it is recommended to check the parent table first. It is also possible to check the dependent table and include the parent table in the invocation list. In this case, the statement could still fail if there are rows in the parent table which violate the constraint and these rows are not deleted and put into an exception table. This can happen if the FOR EXCEPTION option is not used.

If the dependent table is a materialized query table or staging table, it is recommended to check the underlying table first. It is also possible to refresh the dependent materialized query table and include the underlying table in the invocation list. In this case, the statement could still fail if there are rows in the parent table which violate the constraint and these rows are not deleted and put into an exception table. This can happen if the FOR EXCEPTION option is not used.

In the case of a referential cycle, all tables must be included in the invocation list.

sqlcode: -3608

sqlstate: 428A8

SQL3700W **Device *device* is full. There are *active-devices* other active devices. Please mount new media or take appropriate action.**

Explanation: The media on the specified device is full. This device is one of the *active-devices* + 1 target devices to which unloaded data is being directed.

User response: Take ONE of the following actions:

- Mount a new target media on the specified device and continue unloading by invoking unload with caller action 1 (SQLU_CONTINUE).
- OR
- If *active-devices* is not zero, continue the unload without this device by invoking the UNLOAD utility with the caller action 4 (SQLU_DEVICE_TERMINATE).
- OR

- Cancel the unload by invoking the UNLOAD utility with caller action 2 (SQLU_TERMINATE).

SQL3701W **The lobpaths parameter was specified, but the table does not contain any LOB or Long data. This parameter will be ignored.**

Explanation: The lobpaths parameter specifies a separate target for LOB and Long data. The table does not contain any LOB or Long data, so the targets specified by the lobpaths parameter will not be used.

User response: No action required.

SQL3702W **Warning. SQLCODE *sqlcode* was received for device *device*. Unload will attempt to continue without this device.**

Explanation: SQLCODE *sqlcode* was detected for the specified device which is one of the targets for the unload. Unload will continue but will ignore this device.

User response: The media loaded on the specified device will not contain any unloaded data and should not be included with the media supplied to the LOAD utility when the unloaded data is being loaded. In order to fix the problem with the device, look up the returned SQLCODE in the Message Reference.

SQL3703W ***xxx* of *yyy* number of type *type* pages have been unloaded and sent to be written out to the target media.**

Explanation: The table being unloaded consists of *yyy* pages of the specified type of data. *xxx* of these have been processed by the UNLOAD utility and have been sent to a media writer which will write the data to the target media.

type is one of:

- 0 for regular data
- 2 for Long data and allocation information
- 3 for LOB data
- 4 for LOB allocation information

Note that for Long and LOB data, *xxx* may be less than *yyy* when unload is complete, because unused space is not unloaded, but will be recreated when the data is reloaded.

Even for regular data, a final message where *xxx* = *yyy* may not be issued. Instead message 3105 is used to indicate that the unload completed successfully.

User response: This is an informational message. No action is required.

SQL3704N The `num_buffers` parameter specified is invalid.

Explanation: The `num_buffers` parameter determines the number of buffers that the utility will use. The minimum is 2 if the `lobpaths` parameter is not specified and 3 if the `lobpaths` parameter is specified. This is the minimum required to allow the utility to work. There is, however, an optimal number of buffers that the utility will use if this parameter is not specified. This optimal number is based on the number of internal processes that the utility will have running and whether or not the `lobpaths` parameter was specified. If the number of buffers specified is less than the optimal number, some processes will be waiting for buffers to use. Therefore, it is recommended to specify 0 for this parameter and let the utility choose the number of buffers. Only specify this parameter if, due to the size of the utility storage heap, it is necessary to limit the amount of memory that the utility uses.

User response: Resubmit the command using a valid `num_buffers` parameter.

SQL3705N The buffer size parameter specified is not valid. The buffer size must be specified as 0 or be between 8 and 250000 inclusive. For multiple buffers, the total buffer size must not exceed 250000.

Explanation: The application calling the utility has supplied a buffer size parameter that is not valid. The buffer size is used to determine the internal buffer size. The value is the number of 4K pages that are obtained for this buffer. The value must be specified as 0 or be between 8 and 250000 inclusive. If there are multiple buffers, the number of buffers multiplied by the buffer size must not exceed 250000.

When 0 is specified:

- for a table whose regular data is in a database managed storage table space, the default buffer size chosen is the extent size for the table space or 8, whichever is larger.
- for a table whose regular data is in a system managed storage table space, the default buffer size chosen is 8.

User response: Reissue the command with a valid buffer size.

SQL3706N A disk full error was encountered on `path/file`.

Explanation: A disk full error was encountered during the processing of a database utility. The utility stops.

User response: Ensure enough disk space is available for the utility or direct the output to other media such as tape.

SQL3707N The sort memory size parameter specified `size1` is not valid. The minimum size required is `size2`.

Explanation: The sort memory size is not large enough for sorting the keys of the index(es).

User response: Reissue the command with a valid sort memory size.

To ensure that only the minimum amount of storage is used, specify a value of 0 (to let it default). However, using more than the minimum should improve the performance of the sort.

SQL3783N An error was encountered while opening the copy location file. Open file error code is `errcode`.

Explanation: During load recovery, an error was encountered while opening the copy location file. The operating system file open return code is returned.

User response: Look at the error code in the message for more information. Correct the error, if possible, and resubmit the command.

SQL3784W Invalid data was encountered while reading from the copy location file. Failure occurred at line `line-no` with error type `errtype`.

Explanation: During load recovery, invalid data was encountered while reading from the copy location file. The line number and error type are returned. The utility waits for a response to continue.

User response: Correct the data in the copy location file and return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL3785N Load recovery for table `schema.tablename` at time `timestamp` on node `node-number` failed due to error `sqlcode` with additional information `additional-info`.

Explanation: A severe error occurred during load recovery. The utility stops processing.

(Note : if you are using a partitioned database server, the node number indicates which node the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: Examine the error code in the message for more information. Take corrective action and resubmit the command.

SQL3798W An invalid value was used for parameter *parameter* to invoke the roll-forward recovery API to continue load recovery.

Explanation: Load recovery is in progress and one of the parameters passed in is not valid for the current state of load recovery.

User response: Correct the value in error and return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL3799W Load recovery for table *schema.tablename* at time *timestamp* on node *node-number* is pending due to warning *sqlcode* with additional information *additional-info*.

Explanation: A warning condition is encountered during load recovery. The utility waits for a response to continue.

(Note : if you are using a partitioned database server, the node number indicates which node the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: Examine the error code in the message for more information. Take corrective action and return to the utility with the correct caller action parameter to indicate if processing should continue or terminate.

SQL3802N An invalid quiesce mode *quiesce-mode* was encountered.

Explanation: An invalid quiesce mode was passed to the quiesce API.

User response: Resubmit the command with the correct parameters.

SQL3804N The index is invalid.

Explanation: An invalid index was encountered during the processing of a utility command.

User response: Check in the *Administration Guide* to determine the appropriate way to revalidate the index and resubmit the command after the condition is corrected.

SQL3805N The state of the application or of one or more table spaces for the table specified prohibits the loadapi action or quiescemode *action*. Reason code = *reason-code*.

Explanation: The loadapi action (either quiescemode or callerac) passed to the load API is in conflict with either the state of the application or the state of one or more table spaces for the table.

The possible reason codes are as follows:

01

The state of one of the table spaces for the table specified prohibits the loadapi action or quiescemode.

02

The application is not at the start of its logical unit of work. This condition prohibits the load action specified.

03

The state of the application prohibits the load action specified.

04

One or more of the table spaces for the table is already quiesced by the maximum number of quiescers.

05

The system catalog table space cannot be quiesced.

06

A LOAD command with the COPY option is not allowed when a table space is in backup pending state.

07

Attempt to restart a load at an incorrect phase.

08

Attempt to restart a load into a table whose partitioning key depends on an identity column and where not all of the table partitions are restarting from the load phase. Such a load is not allowed as hashing of rows during the restarted load may be different from the hashing in the initial load due to the dependence on the identity column.

09

The QUIESCE TABLESPACES FOR TABLE command failed because the database is in WRITE SUSPEND state.

User response: The user response corresponding to the reason code is as follows:

01

Resubmit the command with the correct loadapi action or quiescemode, or correct the state of the table spaces for the table.

02

Resubmit the command with the correct load action or complete the current logical unit of work by issuing either a COMMIT or ROLLBACK.

03

- 04 Resubmit the command with the correct load action.
- 05 Determine which table spaces for the table have reached the maximum number of quiescers. QUIESCE RESET these table spaces.
- 06 Resubmit the command with a table which is not in the system catalog table space.
- 07 Resubmit the command omitting the copy parameter
- 08 Determine at which phase the load should be restarted and resubmit the command with the correct phase.
- 09 Terminate the load operation using the TERMINATE action then resubmit the original load command.
- Resume I/O write operations for the database, and resubmit the QUIESCE TABLESPACES FOR TABLE command.

SQL3806N Not all table constraints are off for the table to be loaded.

Explanation: One or more constraints for the table to be loaded are still on when the load API is invoked.

User response: Resubmit the command after all table constraints are turned off.

SQL3807N Instance or database *name* quiesce is pending.

Explanation: Another user has submitted the quiesce command and it has not yet completed.

User response: Wait for the quiesce to complete.

SQL3808N Instance or database *name* unquiesce is pending.

Explanation: Another user has submitted the unquiesce command and it has not yet completed.

User response: Wait for the unquiesce to complete.

SQL3901N A non-severe system error occurred. Reason code *reason-code*.

Explanation: Processing ended because of a non-severe system error.

User response: If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Then contact your technical service representative with the following information:

- Problem description
- SQLCODE and embedded reason code
- SQLCA contents if possible
- Trace file if possible.

SQL3902C A system error occurred. Further processing is not possible. Reason code = *reason-code*.

Explanation: A system error occurred.

User response: If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Then contact your technical service representative with the following information:

- Problem description
- SQLCODE and embedded reason code
- SQLCA contents if possible
- Trace file if possible.

SQL3910I Synchronization session completed successfully.

Explanation:

User response:

SQL3911I Test synchronization session completed successfully.

Explanation:

User response:

SQL3912I STOP completed successfully.

Explanation:

User response:

SQL3913I STOP issued, but no synchronization session is currently active.

Explanation:

User response:

SQL3914I A user interrupt was issued. The synchronization session stopped successfully.

Explanation:

User response:

SQL3915I A user interrupt was issued before the results were uploaded to the satellite control server. The results will be uploaded during the next synchronization session.

Explanation:

User response:

SQL3916I A STOP request was received. Synchronization session stopped successfully.

Explanation:

User response:

SQL3917I A STOP request was received before the results were uploaded to the satellite control server. The results will be uploaded during the next synchronization session.

Explanation:

User response:

SQL3918I Synchronization progress information was obtained successfully.

Explanation:

User response:

SQL3919I A STOP request was received before the satellite could contact the satellite control server. Synchronization stopped successfully.

Explanation:

User response:

SQL3920I The application version on this satellite does not match one that is available for the group of this satellite. Synchronization cannot occur.

Explanation: The application version reported by the satellite does not exist at the satellite control server.

User response: Contact the help desk or your system administrator.

SQL3921I This satellite is disabled at the satellite control server. Synchronization cannot occur.

Explanation: When disabled, the satellite cannot synchronize.

User response: Contact the help desk or your system administrator.

SQL3930W There are no synchronization scripts to execute.

Explanation: No synchronization scripts were downloaded to the satellite for execution.

User response: Contact the help desk or your system administrator to ensure that synchronization scripts are available on the satellite control database for this satellite.

SQL3931W The test synchronization session completed successfully. The satellite ID, however, could not be found in the satellite control database.

Explanation: Either the satellite ID is not defined correctly on the satellite or this satellite has not been defined in the satellite control database.

User response: If you use the DB2SATELLITEID registry variable, ensure that it is set to the unique ID for the satellite. If you are using the operating system logon ID as the satellite ID, ensure you log on using it.

SQL3932W The test synchronization session completed successfully. The satellite application version, however, is not set locally, or does not exist for this satellite's group at the satellite control server.

Explanation: The application version on the satellite is different from any that are available for this satellite's group.

User response: Ensure that the application version on the satellite is set to the correct value.

SQL3933W The test synchronization session completed successfully. The release level of the satellite, however, is not supported by the release level of the satellite control server.

Explanation: The release level of the satellite must be within the range of one level above to two levels below that of the satellite control server.

User response: Contact the help desk or your system administrator.

SQL3934W The test synchronization session completed successfully. This satellite, however, is disabled at the satellite control server.

Explanation: The satellite has been placed in the disabled state at the satellite control server.

User response: Contact the help desk or your system administrator.

SQL3935W The test synchronization session completed successfully. This satellite, however, is in the failed state at the satellite control server.

Explanation: The satellite is in the failed state at the control server.

User response: Contact the help desk or your system administrator.

SQL3936W No progress information is available.

Explanation: The synchronization session has not reached a stage where the progress information has been logged, or there is no active synchronization session for this satellite.

User response: Ensure the synchronization session is active, or try querying for progress information later.

SQL3937W The application version for this satellite does not match one that is available for this satellite's group.

Explanation: A satellite can only synchronize with a particular application version for its group. The application version for this satellite is not available for the satellite's group at the control server.

User response: Ensure that the application version on the satellite is set to the correct value.

SQL3938W An interrupt was issued during script execution. The synchronization session was stopped, but the satellite may be in an inconsistent state.

Explanation: An interrupt was issued while the script execution phase of the synchronization process was being performed. The synchronization session was stopped but the satellite may be in an inconsistent state because a script may have been halted at an inappropriate place.

User response: Contact the help desk or your system administrator.

SQL3942I Synchronization session identifier was set successfully for the satellite.

Explanation: The session identifier was set successfully for the satellite.

User response: No action is required.

SQL3943N Synchronization session identifier exceeds the maximum length of *length* characters.

Explanation: The specified synchronization session identifier is longer than the allowed length of *length* characters.

User response: Ensure that the identifier is no more than *nnn* characters.

SQL3944I Synchronization session identifier was reset successfully for the satellite.

Explanation: The session identifier was reset successfully for the satellite.

User response: No action is required.

SQL3945I Synchronization session identifier for the satellite was retrieved successfully.

Explanation: The session identifier for this satellite was found and returned successfully.

User response: No action is required.

SQL3946N Synchronization session identifier operation failed.

Explanation: The synchronization session identifier operation has failed for an unknown reason.

User response: Ensure that the product is installed correctly. If the failure persists, contact DB2 service.

SQL3950N A synchronization session is active. At most one synchronization session can be active.

Explanation: Only one synchronization session can be active at a time.

User response: Wait until the current synchronization session completes successfully before initiating another session.

SQL3951N The satellite ID cannot be found locally.

Explanation: Either the operating system logon was bypassed or the DB2SATELLITEID registry variable was not set.

User response: If you are using the operating system logon ID as the satellite ID, log on to the operating system. If you use the DB2SATELLITEID registry variable, ensure that it is set to the unique ID for the satellite.

SQL3952N The satellite ID cannot be found at the satellite control server.

Explanation: Either the satellite ID is not defined correctly on this satellite or this satellite has not been defined at the satellite control server.

User response: If you use the DB2SATELLITEID registry variable, ensure that it is set to the unique ID for the satellite. If you are using the operating system logon ID as the satellite ID, ensure you log on using it.

SQL3953N • SQL3963N

Otherwise, contact the help desk or your system administrator.

SQL3953N This satellite has been disabled at the satellite control server.

Explanation: The satellite ID has been disabled at the satellite control server.

User response: Contact the help desk or your system administrator.

SQL3954N This satellite is in the failed state at the satellite control server.

Explanation: The satellite is in the failed state because a previous synchronization session failed.

User response: Contact the help desk or your system administrator.

SQL3955N The satellite control database name or its alias could not be found.

Explanation: The satellite control database is not cataloged correctly.

User response: Contact the help desk or your system administrator.

SQL3956N The application version for this satellite is not defined locally.

Explanation: The application version is not defined locally on this satellite or is not defined correctly.

User response: Ensure that the application version is set to the correct value.

SQL3957N Cannot connect to the satellite control database because of a communication failure: **SQLCODE=sqlcode**, **SQLSTATES=sqlstate**, **Tokens =token1, token2, token3**.

Explanation: An error has been detected by the communication subsystem. Refer to *sqlcode* for more details.

User response: Contact the help desk or your system administrator.

SQL3958N Error occurred during synchronization session: **SQLCODE=sqlcode**, **SQLSTATES=sqlstate**, **Tokens =token1, token2, token3**.

Explanation: An unknown error has been detected by the communication subsystem. Refer to *sqlcode* for more details.

User response: Contact the help desk or your system administrator.

SQL3959N Synchronization session cannot start because of a communication failure: **SQLCODE=sqlcode**, **SQLSTATES=sqlstate**, **Tokens =token1, token2, token3**.

Explanation: An error has been detected by the communication subsystem. Refer to *sqlcode* for more details.

User response: Contact the help desk or your system administrator.

SQL3960N Cannot upload results to the satellite control server because of a communication failure: **SQLCODE=sqlcode**, **SQLSTATES=sqlstate**, **Tokens =token1, token2, token3**.

Explanation: An error has been detected by the communication subsystem. Refer to *sqlcode* for more details.

User response: Contact the help desk or your system administrator.

SQL3961N Cannot authenticate with the satellite control server.

Explanation: An authentication error was detected while trying to connect to the satellite control database.

User response: Either the remote administrative user ID or the password required to connect to the satellite control database was not correct, or both. Either provide the correct user ID and password, or contact the help desk or your system administrator.

SQL3962N Synchronization could not be started because of a database error: **SQLCODE=sqlcode**, **SQLSTATES=sqlstate**, **Tokens =token1, token2, token3**.

Explanation: An error preventing synchronization occurred at the satellite control server.

User response: Attempt to synchronize again. If failure persists, contact the help desk or your system administrator.

SQL3963N Results cannot be uploaded because of a database error: **SQLCODE=sqlcode**, **SQLSTATES=sqlstate**, **Tokens =token1, token2, token3**.

Explanation: An error occurred while uploading results to the satellite control server.

User response: Contact the help desk or your system administrator.

SQL3964N Synchronization failed because the release level of the satellite is not supported by the satellite control server.

Explanation: The release level of the satellite must be within the range of one level above to two levels below that of the satellite control server.

User response: Contact the help desk or your system administrator.

SQL3965N Cannot download synchronization scripts because of a satellite control server failure: SQLCODE=*sqlcode*, SQLSTATES=*sqlstate*, Tokens =*token1*, *token2*, *token3*.

Explanation: The satellite cannot download the scripts that are required to synchronize the satellite. One possible reason for this failure is that the control server cannot instantiate parameterized scripts with the attributes of the satellite. Another reason is that the satellite control server was temporarily unable to complete the request because of resource constraints.

User response: Try the request again. If the failure persists, contact the help desk or your system administrator.

SQL3966N Synchronization session failed. Reason code *reason-code*.

Explanation: The synchronization session failed to complete for one of the following reasons:

- (01) Missing authentication information.
- (02) Some scripts required for synchronization are missing.
- (03) System files are corrupted or missing.
- (04) A system error prevented scripts from executing.

User response: Try the request again. If failure persists, contact the help desk or your system administrator.

SQL3967N Progress information cannot be retrieved.

Explanation: Progress on this satellite's synchronization session cannot be retrieved. Either the data is corrupt, or it does not exist.

User response: If a synchronization session is active and no progress information is available, contact the help desk or your system administrator.

SQL3968N Synchronization failed to complete successfully because of a script failure. The results, however, were successfully sent to the satellite control server.

Explanation: One of the synchronization scripts failed

during execution. Either a return code was not in the defined success code set, or the script failed to execute.

User response: Contact the help desk or your system administrator.

SQL3969N Synchronization failed because an interrupt was received during script execution.

Explanation: Script execution fails when an interrupt is received. An abnormal termination of this type will cause the synchronization session to fail because the system may be in an inconsistent state.

User response: Contact the help desk or your system administrator.

SQL3970N Synchronization session failed: SQLCODE *sqlcode*, SQLSTATE *sqlstate*. The error was detected at the location *location*.

Explanation: Script execution failed because of an unknown error.

User response: Contact the help desk or your system administrator.

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SQL4001N The character *character* in column *column* on line *line* is not valid.

Explanation: The specified character is not a valid character in SQL statements.

The statement cannot be processed.

User response: Remove or replace the character that is invalid.

SQL4002N *token-1* and *token-2* are undeclared host variables that cannot both be used as descriptor names in a single SQL statement.

Explanation: The specified identifiers have not been declared as host variables. Descriptor names are not declared before using. Because more than one descriptor name in a single statement is not valid, at least one of the host variables is not valid.

The statement cannot be processed.

User response: Correct the use of descriptor names or undeclared host variables in the statement. Note that the statement can contain additional undeclared host variables.

SQL4003N The SQL statement on line *line* is not supported by this version of the precompiler.

Explanation: The release numbers of the precompiler and the installed version of the database manager are not compatible. The specified statement is supported by the database manager but not the precompiler.

The statement cannot be processed.

User response: Repeat the precompile process with the current version of the precompiler.

SQL4004N The package name is not valid.

Explanation: The package name contains characters that are not valid. Either the name is too long or no name was specified with the PACKAGE option.

No package is created.

User response: Resubmit the command with a valid package name or without the PACKAGE option.

SQL4005N An invalid token *token* was found starting in position *position* on line *line*.

Explanation: A syntax error in the SQL statement was detected at the specified token *token*.

The statement cannot be processed.

User response: Examine the statement, especially around the specified token. Correct the syntax.

SQL4006N The structures are nested too deeply.

Explanation: The number of nested structures exceeded the maximum of 25.

The statement cannot be processed.

User response: Reduce the number of nested structures.

SQL4007N The host structure *host-structure* has no fields.

Explanation: No field can be found within the host structure *host-structure*.

The statement cannot be processed.

User response: Add a field to the host structure.

SQL4008N The host variable *name* cannot be uniquely referenced even with full qualification.

Explanation: The host variable *name* matches with at least one other unqualified or partially qualified host variable even with full qualification.

The command cannot be processed.

User response: Rename the host variable.

SQL4009N The expression for data length is invalid.

Explanation: The expression for data length has syntax errors or is too complex.

The statement cannot be processed.

User response: Check the syntax of the size expression.

SQL4010N Illegal nesting of Compound SQL statements.

Explanation: This error is returned when a BEGIN COMPOUND clause is detected as a sub-statement of a Compound SQL statement.

User response: Resubmit the precompilation without the nested BEGIN COMPOUND.

SQL4011N Invalid SQL sub-statement in a

Compound SQL statement.

Explanation: This error is returned when an invalid sub-statement is detected in a Compound SQL statement. Valid statements are:

- ALTER TABLE
- COMMENT ON
- CREATE INDEX
- CREATE TABLE
- CREATE VIEW
- Positioned DELETE
- Searched DELETE
- DROP
- GRANT
- INSERT
- LOCK TABLE
- REVOKE
- SELECT INTO
- Positioned UPDATE
- Searched UPDATE

User response: Resubmit the precompilation without the invalid sub-statement.

sqlcode: -4011

sqlstate: 42910

SQL4012N Invalid use of COMMIT in a Compound SQL statement.

Explanation: This error is returned when a sub-statement is detected after a COMMIT has been found in a COMPOUND SQL statement.

User response: Make the COMMIT sub-statement the last sub-statement, and resubmit the precompilation.

SQL4013N An END COMPOUND statement was found without a previous BEGIN COMPOUND statement.

Explanation: This error is returned when an END COMPOUND statement has been found without a preceding BEGIN COMPOUND.

User response: Either remove the END COMPOUND, or add a BEGIN COMPOUND, and resubmit the precompilation.

SQL4014N Invalid Compound SQL syntax.

Explanation: This error is returned when a Compound SQL statement contains a syntax error. Possible causes include:

- END COMPOUND is missing
- one of the substatements is empty (zero length or blank).

User response: Fix the syntax error and re-precompile.

SQL4015N An error has occurred during preprocessing.

Explanation: The external preprocessor has terminated with one or more errors.

The command cannot be processed.

User response: Please refer to the ".err" file for the corresponding source file for more details.

SQL4016N The preprocessor specified cannot be found.

Explanation: The preprocessor specified through the PREPROCESSOR option cannot be found.

The command cannot be processed.

User response: Ensure that the preprocessor can be executed from the current directory, and also check the syntax of the PREPROCESSOR option.

SQL4017W Preprocessing has completed successfully.

Explanation: Preprocessing of the input file has completed successfully using the external command specified through the PREPROCESSOR option.

User response: No action is required.

SQL4018W Starting to process the preprocessed file *preprocessed-file*.

Explanation: The precompiler is now processing the preprocessed file.

User response: No action is required.

SQL4019W Completed processing the preprocessed file *preprocessed-file*.

Explanation: The precompiler has completed processing the preprocessed file.

User response: No action is required.

SQL4020N The 'long' host variable *token-1* is not valid. Use 'sqlint32' instead.

Explanation: If the LONGERROR YES precompile option is in effect or the precompile option LONGERROR has not been specified and the platform has 8-byte 'long's, then the INTEGER host variable must be declared with the data type 'sqlint32', not 'long'.

On 64 bit platforms with 8-byte 'long' types the precompile option LONGERROR NO can be used to specify that 'long' host variables are to be used for BIGINT data types. For maximum portability the use of

'sqlint32' and 'sqlint64' are recommended for INTEGER and BIGINT data types respectively.

User response: Replace the current data type of the host variable with the data type specified in the message.

SQL4100I The *sqlflag-type* SQL language syntax is used for syntax checking by the flagger.

Explanation: The SQL statements that have passed the precompiler checking will be subject to checking against the specified syntax by the flagger. Warning message will be issued against the statement when there is a syntax deviation.

Processing continues.

User response: None. This is an informational message only.

SQL4102W An SQL syntax deviation has occurred at the token starting with the text *text*.

Explanation: The flagger has detected a deviation from the SQL language syntax specified in the SQLFLAG precompiler option.

Processing continues.

User response: Correct the SQL statement.

SQL4103W A data definition statement is not within a CREATE SCHEMA statement.

Explanation: The FIPS standard requires that all data definition statements are contained within a CREATE SCHEMA statement.

Processing continues.

User response: Correct the SQL statement.

SQL4104W There is a non-standard embedded comment.

Explanation: A comment embedded in an SQL statement does not meet the requirements of the standard being flagged. The comment does not begin with at least two consecutive hyphens

Processing continues.

User response: Correct the SQL statement.

SQL4105W An SQL syntax deviation has occurred. The statement is not complete.

Explanation: The SQL statement has terminated before all required elements have been found.

Processing continues.

User response: Correct the SQL statement.

SQL4106W The identifier *identifier* is more than 18 characters.

Explanation: Authorization identifier, table identifier, column name, correlation name, module name, cursor name, procedure name, or parameter name has a length of more than 128 bytes.

Processing continues.

User response: Correct the SQL statement.

SQL4107W Column *column* has an invalid length, precision, or scale attribute.

Explanation: One of the following conditions has not been met:

- Length value should be greater than zero.
- Precision value should be greater than zero.
- Scale value should not be greater than precision.

Processing continues.

User response: Correct the SQL statement.

SQL4108W An indicator variable has data type other than exact numeric, or has a non-zero scale.

Explanation: Data type of an indicator variable should be exact numeric with a scale of zero.

Processing continues.

User response: Correct the SQL statement.

SQL4109W The SET FUNCTION SPECIFICATION references column *column*.

Explanation: One of the following conditions has not been met:

- The COLUMN REFERENCE of a DISTINCT SET FUNCTION cannot reference a column derived from a SET FUNCTION SPECIFICATION.
- COLUMN REFERENCES in the VALUE EXPRESSION of an ALL SET FUNCTION cannot reference a column derived from a SET FUNCTION SPECIFICATION.

Processing continues.

User response: Correct the SQL statement.

SQL4110W A VALUE EXPRESSION containing *column* cannot include operators.

Explanation: A VALUE EXPRESSION cannot include operators in an OUTER REFERENCE COLUMN REFERENCE.

Processing continues.

User response: Correct the SQL statement.

SQL4111W The COLUMN REFERENCE is missing or is invalid for the ALL column function *function*.

Explanation: The VALUE EXPRESSION of an ALL SET FUNCTION SPECIFICATION should include a COLUMN REFERENCE.

Processing continues.

User response: Correct the SQL statement.

SQL4112W Column *column* is not unique and requires qualification.

Explanation: The specified column is not unique within the current scope. Qualification must be given to uniquely identify the required column.

Processing continues.

User response: Correct the SQL statement.

SQL4113W A VALUE EXPRESSION may not contain a SET FUNCTION SPECIFICATION.

Explanation: The VALUE EXPRESSION of an ALL SET FUNCTION may not contain SET FUNCTION SPECIFICATION.

Processing continues.

User response: Correct the SQL statement.

SQL4114W Column *column* does not identify a column of a table within the current scope.

Explanation: One of the following conditions has not been met:

- The table or correlation name used as a qualifier does not exist.
- The column name does not exist within the current scope or the scope of the qualifier.

Processing continues.

User response: Correct the SQL statement.

SQL4115W A column function that contains the OUTER REFERENCE column *column* is not in the subquery of a HAVING clause.

Explanation: A column function must be contained in a subquery of a HAVING clause if it contains an OUTER REFERENCE COLUMN REFERENCE.

Processing continues.

User response: Correct the SQL statement.

SQL4116W The result of a SUM or AVG function cannot be a character string.

Explanation: Character string is not valid for the result of a SUM or AVG SET FUNCTION SPECIFICATION.

Processing continues.

User response: Correct the SQL statement.

SQL4117W Operator *operator* is invalid in this context.

Explanation: One of the following conditions has not been met:

- A VALUE EXPRESSION containing a DISTINCT SET FUNCTION cannot include dyadic operators.
- First character following a monadic operator cannot be a plus or minus sign.
- VALUE EXPRESSION should not contain operators if PRIMARY is of type character string.

Processing continues.

User response: Correct the SQL statement.

SQL4118W The *exptype* EXPRESSION is comparing incompatible data types.

Explanation: The data types of one of the following (identified by *exptype*) do not match:

- *exptype* = COMPARISON - Comparison operators must match
- *exptype* = BETWEEN - The three VALUE EXPRESSIONs must match
- *exptype* = IN - VALUE EXPRESSION, subquery and all VALUE SPECIFICATIONs must match
- *exptype* = QUANTIFIED - VALUE EXPRESSION and subquery must match

Processing continues.

User response: Correct the SQL statement.

SQL4119W The operand in the LIKE predicate is not a character string.

Explanation: One of the following conditions has not been met:

- Data type of the column in a LIKE predicate is not a character string.
- Data type of the pattern in a LIKE predicate is not a character string.

Processing continues.

User response: Correct the SQL statement.

SQL4120W The ESCAPE character must be a one-byte character string.

Explanation: Escape character in a LIKE predicate must have the data type of character string with a length of 1.

Processing continues.

User response: Correct the SQL statement.

SQL4121W The WHERE clause, GROUP BY clause or HAVING clause is invalid for the grouped view *schema-name.view*.

Explanation: If the table identified in the FROM clause is a grouped view, then the TABLE EXPRESSION must not contain a WHERE clause, GROUP BY clause, or HAVING clause.

Processing continues.

User response: Correct the SQL statement.

SQL4122W *schema-name.name* occurs more than once in a FROM clause.

Explanation: One of the following conditions has not been met:

- Table name occurs more than once in a FROM clause.
- Correlation name is identical to a table name or to another correlation name in a FROM clause.

Processing continues.

User response: Correct the SQL statement.

SQL4123W Only one table reference is allowed in the FROM clause for a grouped view.

Explanation: If the table identified by table name is a GROUPed view, then the FROM clause must contain exactly one table reference.

Processing continues.

User response: Correct the SQL statement.

SQL4124W A reference to column *column* derived from a column function is invalid in a WHERE clause.

Explanation: A VALUE EXPRESSION directly contained in the SEARCH CONDITION of a WHERE clause must not include a reference to a column derived from a column function.

Processing continues.

User response: Correct the SQL statement.

SQL4125W A HAVING clause must contain the WHERE clause when the WHERE clause has a column function.

Explanation: If a VALUE EXPRESSION directly contained in the SEARCH CONDITION is a column function, then the WHERE clause must be contained in a HAVING clause.

Processing continues.

User response: Correct the SQL statement.

SQL4126W The COLUMN REFERENCE for *column* must be an OUTER REFERENCE.

Explanation: If a VALUE EXPRESSION directly contained in the SEARCH CONDITION is a function, then the COLUMN REFERENCE in the column function expression must be an OUTER REFERENCE.

Processing continues.

User response: Correct the SQL statement.

SQL4127W Column *column* is duplicated within the current scope.

Explanation: The specified column is duplicated within the current scope.

Processing continues.

User response: Correct the SQL statement.

SQL4128W The COLUMN REFERENCE for *column-name* should be a grouping column or should be specified within a column function.

Explanation: Each COLUMN REFERENCE contained in a subquery in the SEARCH CONDITION of a HAVING clause must reference a grouping column or be specified within a column function.

Processing continues.

User response: Correct the SQL statement.

SQL4129W DEGREE of table *schema-name.table* should be 1 when using a SELECT LIST of *.

Explanation: The DEGREE of the TABLE EXPRESSION must be 1 if a SELECT LIST of * is specified in a subquery of any predicate other than an EXISTS predicate.

Processing continues.

User response: Correct the SQL statement.

SQL4130W The column function is not valid for the TABLE EXPRESSION beginning with table *schema-name.table*.

Explanation: One of the following conditions has not been met:

- If the TABLE EXPRESSION is a grouped view, the SELECT LIST of a subquery cannot contain a SET FUNCTION SPECIFICATION.
- If the TABLE EXPRESSION is a grouped view, the SELECT LIST of a QUERY SPECIFICATION cannot contain a column function.

Processing continues.

User response: Correct the SQL statement.

SQL4131W The COLUMN REFERENCE for *column* is invalid.

Explanation: One of the following conditions has not been met:

- For a GROUPed table, the COLUMN REFERENCE must reference a GROUPing column or be specified within a SET FUNCTION SPECIFICATION.
- If not a GROUPed table and VALUE EXPRESSION includes a SET FUNCTION SPECIFICATION, then each COLUMN REFERENCE must be specified within a SET FUNCTION SPECIFICATION.

Processing continues.

User response: Correct the SQL statement.

SQL4132W DISTINCT is specified more than once.

Explanation: One of the following conditions has not been met:

- DISTINCT must not be specified more than once in a QUERY SPECIFICATION, excluding any subquery of that QUERY SPECIFICATION.
- DISTINCT must not be specified more than once in a subquery, excluding any subquery contained in that subquery.

Processing continues.

User response: Correct the SQL statement.

SQL4133W The COMPARISON PREDICATE subquery cannot contain a GROUP BY or HAVING clause.

Explanation: If a subquery is specified in a COMPARISON PREDICATE, then the TABLE EXPRESSION whose FROM clause identifies the named table must not contain a GROUP BY clause or a HAVING clause.

Processing continues.

User response: Correct the SQL statement.

SQL4134W The COMPARISON PREDICATE subquery cannot identify a grouped view.

Explanation: If a subquery is specified in a COMPARISON PREDICATE, then the TABLE EXPRESSION whose FROM clause identifies the named table must not identify a GROUPed view.

Processing continues.

User response: Correct the SQL statement.

SQL4135W There is an invalid AUTHORIZATION IDENTIFIER *authid*.

Explanation: The AUTHORIZATION IDENTIFIER prefixed to the table name is invalid.

Processing continues.

User response: Correct the SQL statement.

SQL4136W Table or view *schema-name.name* already exists.

Explanation: The table name or view name specified already exists in the catalog.

Processing continues.

User response: Correct the SQL statement.

SQL4137W The COLUMN DEFINITION is missing.

Explanation: At least one COLUMN DEFINITION should be specified for a CREATE TABLE.

Processing continues.

User response: Correct the SQL statement.

SQL4138W The data type *type1* of the target is not compatible with the data type *type2* of the source.

Explanation: Data types should match:

- In a FETCH statement, between source and target.
- In a SELECT statement, between source and target.

Processing continues.

User response: Correct the SQL statement.

SQL4139W You must specify a VIEW COLUMN LIST for *schema-name.table*.

Explanation: If any two columns in the table specified by the QUERY SPECIFICATION have the same column name, or if any column of that table is an unnamed column, then a VIEW COLUMN LIST must be specified.

Processing continues.

User response: Correct the SQL statement.

SQL4140W An error has occurred causing the flagger to stop. Module name = *module-name*. Internal error code = *error-code*.

Explanation: The flagger has encountered an internal error. If the syntax, bindfile or package option is also specified, processing continues but flagger operation is discontinued. Otherwise, processing is terminated.

User response: Record this message number (SQLCODE), module name and error code in the message. Contact your technical service representative with the information.

SQL4141W An error has occurred when attempting to produce message *message-number* in module *module-name*.

Explanation: The FLAGGER has attempted to produce an undefined message.

Processing continues.

User response: Record this message number (SQLCODE), module name and error code in the message. Contact your technical service representative with the information.

SQL4142W There is not enough memory for flagger operation. Internal error code = *error-code*.

Explanation: There is not enough memory for the flagger to operate. If the syntax, bindfile or package option is also specified, processing continues but flagger operation is discontinued. Otherwise, processing is terminated.

User response: Ensure that your system has sufficient real and virtual memory, and remove any unnecessary background processes.

SQL4143W An error has occurred when releasing flagger memory. Internal error code = *error-code*.

Explanation: The flagger cannot release allocated memory. If the syntax, bindfile or package option is also specified, processing continues but flagger operation is discontinued. Otherwise, processing is terminated.

User response: Restart precompilation if flagging is required.

SQL4144W Internal error on call to the FLAGGER found in module *module-name*. Internal error code = *error-code*.

Explanation: The FLAGGER encountered an internal error.

Preprocessing continues but FLAGGER operation is discontinued.

User response: Record this message number (SQLCODE), module name and error code in the message. Contact your technical service representative with the information.

SQL4145W Error during FLAGGER access to the system catalog. Flagging continues to check syntax only. SQLCODE = *nnn* SQLERRP = *modname* SQLERRD1 = *nnn* Creator = *creatorname* Table = *tablename*.

Explanation: An internal error has occurred during FLAGGER access to the system catalog.

Processing continues but with flagger syntax checking only.

User response: Record this message number (SQLCODE), module name and error code in the message. Contact your technical service representative with the information.

SQL4146W Internal error occurred causing the semantics processing to stop. Module name = *module-name*. Internal error code = *error-code*.

Explanation: The FLAGGER has encountered a severe internal error in a semantics analysis routine.

Processing continues but with flagger syntax checking only.

User response: Record this message number (SQLCODE), module name and error code in the message. Contact your technical service representative with the information.

SQL4147W Invalid flagger version number.

Explanation: An invalid flagger version number is passed to the Precompiler Services COMPILE SQL STATEMENT API. If the syntax, bindfile or package option is also specified, processing continues but flagger operation is discontinued. Otherwise, processing is terminated.

User response: Provide a valid flagger version number. Refer to the *Command Reference* manual.

SQL4170W You must declare column *column* as NOT NULL.

Explanation: All columns identified as UNIQUE must be defined with the NOT NULL option.

Processing continues.

User response: Correct the SQL statement.

SQL4171W The viewed table *schema-name.table* must be updatable.

Explanation: When the WITH CHECK OPTION clause is specified then the viewed table must be updatable.

Processing continues.

User response: Correct the SQL statement.

SQL4172W Invalid number of column names.

Explanation: The number of column names in the VIEW COLUMN LIST should be the same as the DEGREE of the table specified by the QUERY SPECIFICATION.

Processing continues.

User response: Correct the SQL statement.

SQL4173W You must declare cursor *cursor* before using it.

Explanation: The cursor specified has not been declared in a DECLARE CURSOR statement.

Processing continues.

User response: Correct the SQL statement.

SQL4174W Cursor *cursor* is already declared.

Explanation: Cursor specified has already been declared in a DECLARE CURSOR statement.

Processing continues.

User response: Correct the SQL statement.

SQL4175W Only * or column names are valid in this context.

Explanation: When UNION is specified, the SELECT LIST for the specification of the two TABLE EXPRESSIONs identified by the QUERY EXPRESSION and QUERY TERM should consist of * or COLUMN REFERENCE(s).

Processing continues.

User response: Correct the SQL statement.

SQL4176W The descriptions of tables identified by the QUERY EXPRESSION beginning with *schema-name1.table1* and the QUERY TERM beginning with *schema-name2.table2* should be identical.

Explanation: When UNION is specified, the descriptions of the two tables should be identical, except for the column names.

Processing continues.

User response: Correct the SQL statement.

SQL4177W The SORT SPECIFICATION *number* is outside the DEGREE of cursor *cursor*.

Explanation: If the SORT SPECIFICATION contains an unsigned integer, it should be greater than 0 and not greater than the number of columns in the table.

Processing continues.

User response: Correct the SQL statement.

SQL4178W Table *schema-name.table* is a read-only table.

Explanation: A DELETE, an INSERT, or an UPDATE was specified on a read-only table.

Processing continues.

User response: Correct the SQL statement.

SQL4179W Table *schema-name.table* must not be identified in a FROM clause of any subquery contained in a SEARCH CONDITION.

Explanation: A table specified in a DELETE or an UPDATE cannot be used in a FROM clause of any subquery contained in its SEARCH CONDITION.

Processing continues.

User response: Correct the SQL statement.

SQL4180W Table *schema-name1.table1* is not the first table *schema-name2.table2* specified in the DECLARE CURSOR statement.

Explanation: Table specified in a DELETE or an UPDATE statement should be the first table specified in the FROM clause of the DECLARE CURSOR statement.

Processing continues.

User response: Correct the SQL statement.

SQL4181W The number of TARGET SPECIFICATIONS does not match the DEGREE of cursor *cursor*.

Explanation: The number of TARGET SPECIFICATIONS in the FETCH statement does not match the DEGREE of the table specified.

Processing continues.

User response: Correct the SQL statement.

SQL4182W Target table *schema-name.table* of the INSERT statement is also in the FROM clause or in the subquery.

Explanation: The named table must not be identified in a FROM clause of a QUERY SPECIFICATION or of any subquery contained in the QUERY SPECIFICATION.

Processing continues.

User response: Correct the SQL statement.

SQL4183W The number of columns specified does not match the number of values specified.

Explanation: In an INSERT statement, the number of columns specified does not match the number of values specified.

Processing continues.

User response: Correct the SQL statement.

SQL4184W The number of columns specified does not match the DEGREE of the QUERY SPECIFICATION beginning with table *schema-name.table*.

Explanation: In an INSERT statement, the number of columns specified does not match the DEGREE of the table specified in the QUERY SPECIFICATION

Processing continues.

User response: Correct the SQL statement.

SQL4185W There is a data type or length mismatch between column *column* and the INSERT or UPDATE item.

Explanation: One of the following conditions has not been met:

- If the data type of the column name is character string, then the corresponding item in the INSERT or UPDATE statement should be character string of length equal to or less than the length of the column name.
- If the data type of the column name is exact numeric, then the corresponding item in the INSERT or UPDATE statement should be exact numeric.

- If the data type of the column name is approximate numeric, then the corresponding item in the INSERT or UPDATE statement should be approximate numeric or exact numeric.

Processing continues.

User response: Correct the SQL statement.

SQL4186W You cannot use a GROUP BY or HAVING clause or identify a grouped view in this context.

Explanation: The table identified in the FROM clause of the TABLE EXPRESSION in a SELECT statement should not include a GROUP BY or HAVING clause and should not identify a GROUPed view.

Processing continues.

User response: Correct the SQL statement.

SQL4187W The number of elements specified in the SELECT LIST should match the number in the SELECT TARGET LIST.

Explanation: In the SELECT statement, the number of elements specified in the SELECT LIST should match the number of elements in the SELECT TARGET LIST.

Processing continues.

User response: Correct the SQL statement.

SQL4188W A column function is not allowed in a SET clause of an UPDATE statement.

Explanation: A VALUE EXPRESSION in a SET clause of an UPDATE statement should not include a column function.

Processing continues.

User response: Correct the SQL statement.

SQL4189W You cannot specify NULL for NOT NULL column *column*.

Explanation: If NULL is specified in the SET clause of the UPDATE statement, then the corresponding column should allow nulls.

Processing continues.

User response: Correct the SQL statement.

SQL4190W A host variable of an unrecognized data type is referenced. Host variable position is *position*.

Explanation: The host variable reference at position *position* is of a data type not recognized by the standard.

Processing continues.

User response: Correct the SQL statement.

SQL4191W The data type of column *column-name* is not recognized.

Explanation: The data type of the column is not recognized by the standard.

Processing continues.

User response: Correct the SQL statement.

SQL4192W Table *schema-name.table* is not found in the catalog.

Explanation: The named table or view does not exist in the system catalog.

SQL4300N Java support is not installed or properly configured on this platform.

Explanation: Support for Java stored procedures and user-defined functions is not installed and configured on this server.

User response: Ensure that a compatible Java Runtime Environment or Java Development Kit for the server is installed. Ensure that the "JDK_PATH" configuration parameter is correctly set.

sqlcode: -4300

sqlstate: 42724

SQL4301N Java or .NET interpreter startup or communication failed, reason code *reason-code*.

Explanation: An error occurred while attempting to start or communicate with a Java interpreter. The reason codes are:

- 1 Java environment variables or Java database configuration parameters are invalid.
- 2 A Java Native Interface call to the Java interpreter failed.
- 3 The "db2java.zip" file may be corrupt or missing.
- 4 The Java interpreter has terminated itself and cannot be restarted.
- 5 Unable to load a dependent .NET library.
- 6 A call to the .NET interpreter failed.

User response: For Java, ensure that the Java database configuration parameters (jdk_path and java_heap_sz) are correctly set. Ensure that a supported Java runtime environment is installed. Ensure that internal DB2 classes (COM.ibm.db2) are not overridden by user classes.

For .NET, ensure that the DB2 instance is configured correctly to run a .NET procedure or function

(mscoree.dll must be present in the system PATH). Ensure that db2clr.dll is present in the sqllib/bin directory, and that IBM.Data.DB2 is installed in the global assembly cache.

sqlcode: -4301

sqlstate: 58004

SQL4302N Procedure or user-defined function *name*, specific name *spec-name* aborted with an exception *string*.

Explanation: The procedure or user-defined function aborted with an exception. The administration notification log contains a stack traceback for the aborted routine.

User response: Debug the routine to eliminate the exception.

sqlcode: -4302

sqlstate: 38501

SQL4303N Java stored procedure or user-defined function *name*, specific name *spec-name* could not be identified from external name *string*.

Explanation: The CREATE PROCEDURE or CREATE FUNCTION statement that declared this stored procedure or user-defined function had a badly formatted EXTERNAL NAME clause. The external name must be formatted as follows: "package.subpackage.class!method".

User response: Submit a corrected CREATE PROCEDURE or CREATE FUNCTION statement.

sqlcode: -4303

sqlstate: 42724

SQL4304N Java stored procedure or user-defined function *name*, specific name *spec-name* could not load Java class *class*, reason code *reason-code*.

Explanation: The Java class given by the EXTERNAL NAME clause of a CREATE PROCEDURE or CREATE FUNCTION statement could not be loaded. The reason codes are:

- 1 The class was not found on the CLASSPATH.
- 2 The class did not implement the required interface ("COM.ibm.db2.app.StoredProc" or "COM.ibm.db2.app.UDF") or lacked the Java "public" access flag.
- 3 The default constructor failed or was unavailable.
- 4 Could not load driver for "jdbc:default:connection".

5 Could not establish default context.

User response: Ensure that the compiled ".class" file is installed in the CLASSPATH, for example under "sqllib/function". Ensure it implements the required Java interfaces and is "public".

sqlcode: -4304

sqlstate: 42724

SQL4306N **Java stored procedure or user-defined function** *name*, **specific name** *spec-name* **could not call Java method** *method*, **signature** *string*.

Explanation: The Java method given by the EXTERNAL NAME clause of a CREATE PROCEDURE or CREATE FUNCTION statement could not be found. Its declared argument list may not match what the database expects, or it may not be a "public" instance method.

User response: Ensure that a Java instance method exists with the "public" flag and the expected argument list for this call.

sqlcode: -4306

sqlstate: 42724

SQL4400N *authorization-ID* **does not have the authority to perform the administration task at the DB2 Administration Server.**

Explanation: The user does not have the necessary authority at the DB2 Administration Server to perform the attempted administrative action.

User response: Submit the request to the DB2 Administration Server using a user ID with DASADM authority. DASADM authority is required to perform any administrative actions against the DB2 Administration Server. The DASADM group is a DB2 Administration Server configuration parameter. Verify the current setting of the DASADM group by viewing the DB2 Administration Server configuration parameters using the GET ADMIN CONFIGURATION command. To modify the value of any configuration parameter, use the UPDATE ADMIN CONFIGURATION command.

SQL4401C **The DB2 Administration Server encountered an error during startup.**

Explanation: An error was encountered during startup of the DB2 Administration Server.

User response: Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information. Take the appropriate action as necessary and attempt to restart the DB2 Administration Server.

If the problem persists contact your technical service representative.

SQL4402W **The DB2ADMIN command was successful.**

Explanation: All processing completed normally.

User response: No further action is required.

SQL4403N **The syntax of the command is invalid.**

Explanation: The command was entered using invalid arguments or an invalid number of parameters.

User response: Re-submit the command with valid argument(s).

SQL4404N **The DB2 Administration Server does not exist.**

Explanation: The DB2 Administration Server was not found on the machine.

User response: Create the DB2 Administration Server on the machine.

- On Windows operating systems, issue the following command:
db2admin create
- On UNIX platforms, ensure that you have root authority, and issue the following command from the DB2DIR/instance directory, where DB2DIR is the installation path of DB2. <ASName> represents the name of the Administration Server:
dasrcrt <ASName>

SQL4405W **The DB2 Administration Server already exists.**

Explanation: The DB2 Administration Server already exists on the machine

User response: No further action is required.

SQL4406W **The DB2 Administration Server was started successfully.**

Explanation: All processing completed normally.

User response: No further action is required.

SQL4407W **The DB2 Administration Server was stopped successfully.**

Explanation: All processing completed normally.

User response: No further action is required.

SQL4408N **The DB2 Administration Server was not dropped because it is active.**

Explanation: The DB2 Administration Server must be stopped before it can be dropped.

User response: To stop the DB2 Administration Server, enter the following command:

DB2ADMIN STOP

SQL4409W The DB2 Administration Server is already active.

Explanation: The DB2ADMIN START command cannot be processed because the DB2 Administration Server is already active.

User response: No further action is required.

SQL4410W The DB2 Administration Server is not active.

Explanation: The DB2ADMIN STOP command cannot be processed because the DB2 Administration Server is not active.

User response: No further action is required.

SQL4411N The requested operation is not allowed because the server instance is not the DB2 Administration Server.

Explanation: The requested operation is only valid when issued against the DB2 Administration Server.

User response: The DB2 Administration Server should be set up using the DB2ADMIN command.

SQL4412N The logon user account for the DB2 Administration Server is invalid.

Explanation: To perform the requested task, the DB2 Administration Server must be running under a valid logon user account. This error is either caused by the account not being setup, or the logon user account does not contain a valid DB2 user ID.

User response: If a logon user account has been set up, then ensure that the account uses a valid DB2 user ID.

You can set up the logon user account for the DB2 Administration Server by using the following command:

```
DB2ADMIN SETID <userid>
                <password>
```

SQL4413W Usage: DB2ADMIN creates, drops, starts, or stops the DB2 Administration Server.

Explanation: The DB2ADMIN command syntax is:

```
DB2ADMIN CREATE [
                /USER:<username>
                /PASSWORD:<password>
                ]
                DROP
                START
                STOP [ /FORCE]
```

```
SETID <username>
      <password>
SETSCHEDID <username> <password>
/h
```

The command options are:

CREATE

create the DB2 Administration Server

DROP

delete the DB2 Administration Server

START

start the DB2 Administration Server

STOP

stop the DB2 Administration Server

SETID

set the logon account for the DB2 Administration Server

SETSCHEDID

set the logon account used by the scheduler to connect to the tools catalog database. Only required if the scheduler is enabled and the tools catalog database is remote to the DB2 Administration Server.

/USER

specify the logon account name during DB2ADMIN CREATE

/PASSWORD

specify the logon account password during DB2ADMIN CREATE

/FORCE

stop the DB2 Administration Server during DB2ADMIN STOP regardless of whether or not it is in the process of servicing any requests

/h

display the usage information

User response: Issue the DB2ADMIN command with one of the valid command options.

SQL4414N The DB2 Administration Server is not active.

Explanation: The request cannot be processed unless the DB2 Administration Server is active.

User response: Start the DB2 Administration Server by issuing the command DB2ADMIN START, and reissue the request.

Chapter 10. SQL4500 - SQL4999

SQL4701N Maximal number of data partitions (*max-number*) exceeded.

Explanation: An attempt was made to exceed the maximum number of data partitions.

User response: If the error occurred on a CREATE TABLE statement with an EVERY clause, the interval was not large enough. Specify a larger interval to reduce the number of data partitions required.

If the error occurred on a CREATE TABLE statement without an EVERY clause, too many data partitions were listed. Reduce the number of data partitions specified.

If the error occurred on an ALTER TABLE ... ATTACH PARTITION or an ALTER TABLE ... ADD PARTITION statement, the table already has the maximum number of data partitions allowed. Data partitions must be detached before additional data partitions can be added or attached.

sqlcode: -4701

sqlstate: 54054

SQL4702N The activity identified by application handle *application-handle*, unit of work ID *unit-of-work-id*, and activity ID *activity-id* does not exist.

Explanation: An attempt was made to perform an operation on an activity identified by an application handle, a unit of work identifier, and an activity identifier. Such an activity does not currently exist within this database.

User response: Verify that the arguments that were specified for application handle, unit of work identifier, and activity identifier match those of the activity that was intended. Note that it is possible that an activity could leave the system before an operation can be performed on it.

sqlcode: -4702

sqlstate: 5U035

SQL4703N The activity identified by application handle *application-handle*, unit of work ID *unit-of-work-id*, and activity ID *activity-id* cannot be cancelled. Reason code = *reason-code*.

Explanation: The identified activity cannot be cancelled at this time because of its state or the type of activity it is.

User response: The reason code indicates the situation

and particular action to take.

- 1 The activity is in the initialization state. The activity can be cancelled after the initialization has completed.
- 2 The activity cannot be cancelled because its type is not a supported activity type. If you wish to stop this activity from continuing to execute or queue in this system, you may force the application that issued this activity to stop by using the FORCE APPLICATION command.

sqlcode: -4703

sqlstate: 5U016

SQL4704N Only one work action set can be defined for the database or service superclass *db-or-ssc-name*.

Explanation: There is already a work action set defined for the specified database or service superclass *db-or-ssc-name*. Only one work action set can be defined for any one database or service superclass at any given time.

User response: Either specify a different database or service superclass or drop the work action set currently defined for that database or service superclass and try the request again.

sqlcode: -4704

sqlstate: 5U017

SQL4705N The service subclass specified in the mapping work action *work-action-name* cannot be the default service subclass.

Explanation: The default service subclass cannot be specified when defining a work action to map activities.

User response: Specify a different service subclass that is not the default service subclass and try the request again.

sqlcode: -4705

sqlstate: 5U018

SQL4706N Invalid range specified for work class *work-class-name*.

Explanation: The value specified either for the FROM parameter or the TO parameter is not valid. The FROM value must be zero or a positive double-precision value

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and the TO value must either be a positive double-precision value or UNBOUNDED, to specify no upper bound. If the TO value is not UNBOUNDED, it must be greater than or equal to the FROM value.

User response: Specify a valid value for both the FROM value and the TO value and try the request again.

sqlcode: -4706

sqlstate: 5U019

SQL4707N The workload named *workload-name* cannot service the request because the workload is not allowed to access the database.

Explanation: The named workload was defined or altered using the DISALLOW DB ACCESS option. As a result, connections associated with this workload are not allowed to access the database.

User response: If connections associated with the named workload should not be allowed to access this database, confirm that the connection was intended to be associated with the named workload. If the connection was intended to be associated with a different workload, validate the following:

1. The workload attributes for the intended workload match the connection attributes.
2. The intended workload is enabled.
3. The evaluation order for the intended workload is earlier than the evaluation order for the named workload.

If connections associated with the named workload should be allowed to access this database, alter the named workload using the ALTER WORKLOAD statement with the ALLOW DB ACCESS option.

sqlcode: -4707

sqlstate: 5U020

SQL4708N Only a COMMIT or ROLLBACK statement is allowed at this time for this unit of work.

Explanation: One of the following statements has been issued and it must be committed or rolled back before any other SQL statement can be issued:

- CREATE SERVICE CLASS, ALTER SERVICE CLASS, or DROP (of a SERVICE CLASS)
- CREATE THRESHOLD, ALTER THRESHOLD, or DROP (of a THRESHOLD)
- CREATE TRUSTED CONTEXT, ALTER TRUSTED CONTEXT, or DROP (of a TRUSTED CONTEXT)
- CREATE WORK ACTION SET, ALTER WORK ACTION SET, or DROP (of a WORK ACTION SET)

- CREATE WORK CLASS SET, ALTER WORK CLASS SET, or DROP (of a WORK CLASS SET)
- CREATE WORKLOAD, ALTER WORKLOAD, or DROP (of a WORKLOAD)
- GRANT (Workload privileges) or REVOKE (Workload privileges)
- CREATE AUDIT POLICY, ALTER AUDIT POLICY, or DROP (of an AUDIT POLICY)

The workload assignment that was performed at the beginning of the unit of work failed. Subsequent requests cannot be processed until the current unit of work is ended.

User response: COMMIT or ROLLBACK before issuing another statement.

sqlcode: -4708

sqlstate: 5U021

SQL4709N The last connection attribute cannot be dropped from the definition of workload *workload-name*.

Explanation: The ALTER WORKLOAD statement would have resulted in the last connection attribute being dropped from the workload *workload-name*. This operation is not allowed. There must be at least one connection attribute specified in the definition of the workload.

User response: Ensure that the ALTER WORKLOAD statement leaves at least one connection attribute in the definition of the workload.

sqlcode: -4709

sqlstate: 5U022

SQL4710N The workload *workload-name* cannot be dropped because it is not disabled, it has active workload occurrences, or it has a threshold or a work action set associated with it.

Explanation: An attempt to drop workload *workload-name* has failed for one of the following reasons.

- The workload has not been disabled.
- The workload has active workload occurrences.
- A threshold is associated with the workload.
- A work action set is associated with the workload

User response: Do one of the following:

- If the workload is not yet disabled, issue the ALTER WORKLOAD statement to disable the workload and keep new workload occurrences from becoming active.
- Wait until there are no more active workload occurrences running on the system and then issue the DROP statement to drop the workload.

<ul style="list-style-type: none"> • If a threshold is associated with the workload, issue the DROP THRESHOLD statement to drop the associated threshold. • If a work action set is associated with the workload, issue the DROP WORK ACTION SET statement to drop the associated work action set. 	3	
sqlcode: -4710	4	
sqlstate: 5U023		
<hr/>		
SQL4711N The threshold <i>threshold-name</i> cannot be dropped. The threshold is not disabled, the threshold queue is not empty, or an activity is running under the control of the threshold.	5	The maximum number of connections and queued connections per database partition in a specific service superclass has been reached (QUEUEDCONNECTIONS or TOTALSCMEMBERCONNECTIONS condition).
Explanation: An attempt to drop threshold <i>threshold-name</i> failed. The threshold is not disabled, the threshold queue is not empty, or an activity is running under the control of the threshold.		
User response: If the threshold is not yet disabled, disable it. If the threshold is part of a work action set, you must use the ALTER WORK ACTION SET statement to disable it. If the threshold is not part of a work action set, use the ALTER THRESHOLD statement to disable it. Disabling the threshold prevents new requests from running under the control of the threshold. If the concurrency limit for a queueing threshold has been reached, the DISABLE action prevents new requests from joining the queue. Wait until the currently executing request completes or no more requests are in the queue, then issue the DROP THRESHOLD statement again.	6	The maximum number of workload occurrences per database partition has been reached (CONCURRENTWORKLOADOCCURRENCES condition).
	7	The maximum number of workload activities per database partition has been reached (CONCURRENTWORKLOADACTIVITIES condition).
	8	The maximum number of database coordinator activities and queued database coordinator activities at the specified enforcement scope in the domain has been reached (CONCURRENTDBCOORDACTIVITIES or QUEUEDACTIVITIES condition). In a DB2 pureCluster environment, the enforcement scope is at the member level (MEMBER enforcement scope). In environments other than DB2 pureCluster environments, the enforcement scope is at the database level (DATABASE enforcement scope).
sqlcode: -4711	9	
sqlstate: 5U025		
<hr/>		
SQL4712N The threshold <i>threshold-name</i> has been exceeded. Reason code = <i>reason-code</i> .	10	The estimated cost for the activity exceeds that allowed by the threshold (ESTIMATEDSQLCOST condition).
Explanation: The threshold has been exceeded and the activity or request was stopped for the following reason:		
1	11	The number of rows returned for the activity would exceed that allowed by the threshold (SQLROWSRETURNED condition).
An overflow agent cannot be queued. The activity is using an overflow agent and either the number of coordinator connections is exceeded or the number of database coordinator activities is exceeded (condition set by the max_agents database manager configuration parameter, which determines the maximum number of agents).		The maximum total time for the activity has exceeded that allowed by the threshold (ACTIVITYTOTALTIME condition).
2	12	The amount of temporary system space requested for the activity exceeds that allowed by the threshold (SQLTEMPSPACE condition).
The maximum number of connections per database partition has been reached (TOTALMEMBERCONNECTIONS condition).		The number of rows read by the activity during its lifetime has exceeded that allowed by the threshold (SQLROWSREAD condition).

12

The number of rows read by the activity while executing in the current service subclass has exceeded that allowed by the threshold (SQLROWSREADINSC condition).

13

The amount of CPU time used by the activity during its lifetime has exceeded that allowed by the threshold (CPUTIME condition).

14

The amount of CPU time used by the activity while executing in the current service subclass has exceeded that allowed by the threshold (CPUTIMEINSC condition).

15

The total amount of temporary system space requested for the service subclass exceeds that allowed by the threshold (AGGSQLTEMPSPACE condition).

16

The amount of time used by the unit of work has exceeded that allowed by the threshold (UOWTOTALTIME condition).

17

The data tag of a table referenced by the activity is in the list of data tags specified in the threshold (DATATAGINSC IN condition).

18

The data tag of a table referenced by the activity is in the list of data tags specified in the threshold (DATATAGINSC NOT IN condition).

User response: Corresponding to the reason code take one of the following actions:

- For reason code 1, increase the value of the `max_agents` database manager configuration parameter.
- For other reason codes, increase the value for the failing threshold condition. Alternatively, if the activity violated a concurrency threshold, execute the activity at another time when there are fewer activities executing on the system.

sqlcode: -4712

sqlstate: 5U026

SQL4713N The maximum number of service classes has been exceeded for the database or the service superclass. Service class *service-class-name* cannot be created.

Explanation: The service class *service-class-name* cannot

be created because it exceeds the maximum number of service classes that can be created for the database or the service superclass. If service class *service-class-name* is a service superclass, it exceeds the limit of 64 user-defined service superclasses that can be created per database. If service class *service-class-name* is a service subclass, it exceeds the limit of 61 user-defined service subclasses that can be created per service superclass.

User response: Examine the existing service classes and see if any existing service classes can be merged or dropped to make room for the new service class.

sqlcode: -4713

sqlstate: 5U027

SQL4714N The request cannot complete, because service class *service-class-name* is disabled.

Explanation: The request cannot complete, because it is being mapped or remapped to a disabled service class. Service class *service-class-name* is currently disabled and cannot accept new requests or complete requests that are already executing.

User response: Contact the database administrator to determine when the service class will no longer be disabled. Retry the request at that time. The database administrator can use ALTER SERVICE CLASS to enable the service class.

sqlcode: -4714

sqlstate: 5U028

SQL4715N Cannot create a service subclass under a default service class.

Explanation: Creation of a service subclass under the Default User Class, Default System Class or Default Maintenance Class is not allowed.

User response: Create the service subclass under a user-defined service superclass.

sqlcode: -4715

sqlstate: 5U029

SQL4716N An error occurred while communicating with the external workload manager.

Explanation: The database manager failed to communicate with the external workload manager. The following could have caused the error:

- The external workload manager is not installed
- The external workload manager is installed but is not active

User response: If the instance is running on AIX, ensure AIX WLM is installed and active. If the instance

is running on Linux, ensure Linux WLM is installed and active.

sqlcode: -4716

sqlstate: 5U030

SQL4717N The service class *service-class-name* cannot be dropped because it has subclasses, associated workloads, work action sets, work actions, connections, activities, or thresholds or is not disabled, or is a default service class. Reason code = *reason-code*.

Explanation: DROP SERVICE CLASS failed because one or more of the conditions are not met. The reason codes are as follows:

1

The service superclass cannot be dropped when it has user defined service subclasses. Drop all user defined service subclasses under the service superclass then reissue the DROP statement.

2

The service class cannot be dropped when it has a workload association. Remove the workload association then reissue the DROP statement. See SYSCAT.WORKLOADS to determine the workloads associated with the service class.

3

The service class cannot be dropped when it has a work action set association. Remove the work action set association then reissue the DROP statement. See SYSCAT.WORKACTIONSETS to determine the work action sets associated with the service class.

4

The service class cannot be dropped when it has a work action association. Remove the work action association then reissue the DROP statement. See SYSCAT.WORKACTIONS to determine the work actions associated with the service class.

5

The service class cannot be dropped when it has any connection, workload occurrence or activity associated with it on any partition. Either wait for the connections, workload occurrences or activities to finish or use the FORCE APPLICATION command to force the users or applications to disconnect from the service class or cancel the activities in the service class.

6

The service class cannot be dropped when it has any thresholds associated with it. Drop all thresholds associated with the service class then reissue the DROP statement. See SYSCAT.THRESHOLDS to determine the thresholds associated with the service class.

7

The service class is not disabled. Use the ALTER SERVICE CLASS statement to disable the service class.

8

The service class is a default service class. Specify a user-defined service class.

9

The service class cannot be dropped while it is the target of a threshold REMAP ACTIVITY action. Drop the threshold or alter its REMAP ACTIVITY action to target another service subclass under the same service superclass, then reissue the DROP statement. See the SYSCAT.THRESHOLDS catalog view to determine which thresholds specify a REMAP ACTIVITY action that targets the service class.

User response: Ensure that the condition in the reason code is satisfied and reissue the DROP SERVICE CLASS statement. To prevent new connections or activities from joining the service class, the service class must be disabled before it can be dropped.

sqlcode: -4717

sqlstate: 5U031

SQL4718N Default service class *service-class-name* cannot be altered or associated as specified. Reason code = *reason-code*.

Explanation: The default service class *service-class-name* cannot be altered in the same way user-defined service classes can be altered. The following reason codes indicate the restriction on the default service class encountered:

1

The Default System service class, Default Maintenance service class, and Default User service class cannot be disabled.

2

The Default System service class and the Default Maintenance service class cannot be associated with a workload, work action set, or threshold. In addition, the Default User service class cannot be associated with a work action set.

3

SQL4719N • SQL4721N

- 4 One of the attributes specified cannot be altered for a Default service subclass.
- 5 The Default service subclass cannot be associated with a workload.
- 5 A CPU share or a CPU limit cannot be configured on the SYSDEFAULTSYSTEMCLASS service class or its subclass. A CPU share, or a CPU limit, or both can be configured for any user service class on the database as well as the maintenance service class, but not for the system service class.

User response: Based on the reason code, perform the following actions:

1, 2, 4

Specify a user-defined service class.

3

Alter the attribute for the parent superclass instead.

5

Configure a CPU share, or CPU limit, or both on a user or maintenance service class.

sqlcode: -4718

sqlstate: 5U032

SQL4719N The PREVENT EXECUTION work action *work-action_name* is applied to this activity, and so the activity was not run.

Explanation: A PREVENT EXECUTION work action is preventing the activity from running.

User response: Either remove or disable the PREVENT EXECUTION work action.

sqlcode: -4719

sqlstate: 5U033

SQL4720N The work action type specified is not valid for work action *work-action-name*. Reason code *reason-code*.

Explanation: The type of work action specified is not valid for one of the following reasons:

1

Duplicate work action type specified for the work class of the same work action set.

2

The work action type is MAP ACTIVITY, but the work action set is associated with a database or a workload. Mapping work actions are only valid for work action sets applied to service classes.

3

The work action type is a threshold, but the work action set is associated with a service class. Threshold work actions are only valid for work action sets applied to a database or a workload.

4

The work action type is COLLECT AGGREGATE ACTIVITY DATA, but the work action set is associated with a database. COLLECT AGGREGATE ACTIVITY DATA work actions are only valid for work action sets applied to service classes or workloads.

User response: Specify a different type of work action.

sqlcode: -4720

sqlstate: 5U034

SQL4721N The threshold *threshold-name* cannot be created or altered (reason code = *reason-code*).

Explanation: The threshold cannot be created or altered because it violates a restriction as indicated by the following reason code:

1

The service superclass does not exist.

2

The service subclass does not exist.

3

The workload definition does not exist.

4

This type of threshold is not supported with the specified definition domain and enforcement scope.

5

The value specified for the condition of the threshold is out of range.

6

When maxVal is set to 0 for a queuing threshold, the queueSize must also be 0 and the action must be STOP EXECUTION.

7

The threshold predicate cannot be changed by an ALTER THRESHOLD statement.

8	The service class specified in a REMAP ACTIVITY action does not exist under the service superclass of the threshold.	7	Issue the CREATE THRESHOLD or ALTER THRESHOLD statement with a queueSize of 0 and the action STOP EXECUTION.
9	The service subclass specified in a REMAP ACTIVITY action cannot be the same as the service subclass of the threshold.	8	Drop the threshold and create a new threshold with the predicate you want. Alternatively, you can keep the existing threshold and create a new threshold with the predicate that you want.
10	The REMAP ACTIVITY action is not supported for the specified threshold.	9	Create the service subclass under the service superclass of the threshold, then issue the CREATE THRESHOLD or ALTER THRESHOLD statement again.
11	The threshold specified is not supported for a default service class under a default service superclass.	10	Issue the CREATE THRESHOLD or ALTER THRESHOLD statement with a REMAP ACTIVITY action that specifies a different service subclass under the service superclass of the threshold.
12	The REMAP ACTIVITY action is not supported for work action thresholds.	11	Issue the CREATE THRESHOLD or ALTER THRESHOLD statement with a user defined service subclass specified for the threshold domain.
13	The FORCE APPLICATION action is not supported for the specified threshold.	12	Issue the CREATE WORK ACTION SET or ALTER WORK ACTION SET statement with a different threshold exceeded action for the threshold work action.
14	A section with the the specified executable ID was not found in the package cache or catalog.	13	When you issue the CREATE THRESHOLD or ALTER THRESHOLD statement, specify a different action to be taken if the maximum value for the threshold is exceeded.
1	User response: The action corresponding to the reason code is:	14	If you are using static SQL, ensure that you have specified the correct executable ID. For dynamic SQL, use a PREPARE statement to add a <i>prepared</i> or executable version of the statement to the package cache.
2	Create the service superclass then issue the CREATE THRESHOLD or ALTER THRESHOLD statement again.	5	sqlcode: -4721
3	Create the service subclass then issue the CREATE THRESHOLD or ALTER THRESHOLD statement again.	6	sqlstate: 5U037
4	Create the workload then issue the CREATE THRESHOLD or ALTER THRESHOLD statement again.		
5	Issue the CREATE THRESHOLD or ALTER THRESHOLD statement with a valid definition domain and enforcement scope.		
6	Issue the CREATE THRESHOLD or ALTER THRESHOLD statement with a maximum value in the valid range.		

SQL4722N The threshold was not created because a threshold *object-name* with a matching definition already exists.

Explanation: A CREATE THRESHOLD statement attempted to create a new threshold which matches an existing threshold definition. Two threshold definitions match if they use the same threshold predicate and are applied to the same domain.

The new threshold was not created.

User response: No action is required unless the existing threshold with name *name* is not a suitable threshold. In this case, the threshold must be dropped before the required threshold can be created.

sqlcode: -4722

sqlstate: 5U038

SQL4723N The value *connection-attribute-value* is already defined for connection attribute *connection-attribute* or a duplicate was detected.

Explanation: Either the connection attribute value being added already exists for the connection attribute, or there are duplicates within the list being provided.

User response: Remove the value and resubmit the statement.

sqlcode: -4723

sqlstate: 5U039

SQL4724N The value *connection-attribute-value* cannot be dropped as it is not defined for connection attribute *connection-attribute*.

Explanation: The specified connection attribute value is not defined for the connection attribute and so cannot be dropped.

User response: Specify a connection attribute value that is defined for the connection attribute and resubmit the statement.

sqlcode: -4724

sqlstate: 5U040

SQL4725N The activity has been cancelled.

Explanation: The WLM_CANCEL_ACTIVITY procedure has been used to cancel the activity.

User response: Continue the application.

sqlcode: -4725

sqlstate: 57014

SQL4726N The request cannot complete because the service class with ID *service-class-id* was dropped while the request was executing.

Explanation: The request cannot complete because it is being remapped to a dropped service class. The service class was dropped while the request was executing. Future requests may be unaffected, because they will not be remapped to this service class.

User response: Reissue the request. If the request continues to fail, it may be prevented from executing for a specific reason. Contact your database administrator to determine why.

sqlcode: -4726

sqlstate: 5U045

SQL4727N The activity cannot be mapped to the service subclass you specified because at least one of the input parameters to the routine WLM_REMAP_ACTIVITY is not valid. Reason code = *reason-code*.

Explanation: The routine WLM_REMAP_ACTIVITY failed because one or more of the input parameters is not valid. The reason codes are as follows:

1

The activity can be remapped only to a service subclass under the service superclass of the activity. Specify the service superclass name of the activity in the *service_superclass_name* parameter or set it to null. Setting the *service_superclass_name* parameter to null defaults the input parameter to the current service superclass name of the activity.

2

A valid service subclass under the service superclass of the activity must be specified in the *service_subclass_name* parameter.

3

Specify Y in the *log_evmon_record* parameter to log an event monitor record to the THRESHOLD VIOLATIONS event monitor when the activity is remapped on a partition. Specify N in the *log_evmon_record* parameter to prevent logging an event monitor record to the THRESHOLD VIOLATION event monitor when the activity is remapped on a partition.

User response: Ensure that the condition in the reason code is satisfied and reinvoke the WLM_REMAP_ACTIVITY routine.

sqlcode: -4727

sqlstate: 5U046

SQL4728W A priority setting was assigned to a service class that is higher than the priority setting of the default system service class **SYSDEFAULTSYSTEMCLASS** and this might negatively impact performance.

Explanation: To ensure that system work can take precedence over user work, the priority settings of the default system service class **SYSDEFAULTSYSTEMCLASS** should always be higher than the priorities that were set for all other service classes. Failure to assign higher priority settings to the default system service class can result in a negative impact on performance because system-type activities run in the default system service class.

User response: Raise the priority setting of the default system service class, or lower the priority setting of other service classes that have a higher priority setting than the default system service class.

sqlcode: +4728

sqlstate: 01HN1

SQL4901N Precompiler Services requires reinitialization because of a previous error.

Explanation: On a previous function call, an error occurred. The requested function call cannot be processed until Precompiler Services is reinitialized.

The function cannot be completed.

User response: Call the `sqlinit` function to reinitialize Precompiler Services

SQL4902N At least one of the characters in parameter *n* of function *function* is not valid.

Explanation: The specified parameter in the specified function contains at least one character that is not valid.

The function cannot be completed.

User response: Correct the specified parameter and call the function again.

SQL4903N The length of parameter *n* of function *name* is not valid.

Explanation: The length of the specified parameter in the specified function is not valid.

The function cannot be completed.

User response: Correct the specified parameter and call the function again.

sqlcode: -4903

sqlstate: 42611

SQL4904N The pointer to parameter *n* of function *function* is not valid.

Explanation: The pointer to the specified parameter in the specified function is not valid.

The function cannot be completed.

User response: Correct the specified parameter and call the function again.

SQL4905N The value of parameter *n* of function *function* is not within the valid range.

Explanation: The value of the specified parameter in the specified function is outside the valid range for that parameter. If the specified parameter is a structure, it may contain values that are within the valid range but are not valid when considered together. Some structures contain headers that specify the allocated size and how much of that size is being used. It is not valid for the allocated size to be less than the used size.

The function cannot be completed.

User response: Correct the specified parameter and call the function again.

SQL4906N The list of table space names specified is an incomplete set for the rollforward operation.

Explanation: The list of table space names is incomplete for one of the following reasons:

- For point-in-time table space recovery, a table space list must be specified.
- For point-in-time table space recovery, a self-contained list of table space names must be specified. The table spaces in the list must contain all objects of every table included in the table spaces.
- Point-in-time table space recovery is not allowed for the system catalogs.
- End-of-logs table space recovery is allowed for the system catalogs but it can be the only table space name in the list.
- The CANCEL option for rollforward must have a table space list if there are no table spaces in "rollforward-in-progress" state.

User response: Check the table space list and resubmit the rollforward command with the complete table space list.

SQL4907W Database *name* is recovered but one or more of the tables in the table space list included for the rollforward operation are placed in the Set Integrity Pending state.

Explanation: One or more of the tables involved in the point-in-time tablespace recovery have referential constraints with tables outside of the table space list

used for recovery, or have dependent materialized query tables or dependent staging tables outside of the table space list used for recovery. All these tables are placed in the Set Integrity Pending state. Rollforward operation has otherwise completed successfully.

User response: Check the state for the tables in the table spaces and take appropriate actions if necessary.

SQL4908N The table space list specified for roll-forward recovery on database *name* is invalid on members or nodes *node-list*.

Explanation: Check for one or more of the following conditions:

- The tablespace list contains duplicate names.
- If starting a new table space rollforward, one or more of the table spaces specified in the list to be rolled forward is not in rollforward pending state on the specified members or nodes.
- If continuing a table space rollforward that is already in progress, one or more of the table spaces specified in the list to be rolled forward is not in rollforward in progress state or is offline on the specified members or nodes.

User response: Ensure that there are no duplicate table space names in the list.

Use the `MON_GET_TABLESPACE` table function on the members or nodes specified to find out which table spaces are not ready to be rolled forward. Use the `QUERY STATUS` option of the rollforward command to determine the status of the table space rollforward. If the rollforward status is "TBS pending", a new table space rollforward can be started. If the rollforward status is "TBS working", a table space rollforward is already in progress.

If starting a new table space rollforward, put the tablespaces into rollforward pending state by restoring them.

If continuing a table space rollforward and one or more of the table spaces involved have been restored and put into rollforward pending state, the table space rollforward in progress must be canceled. Submit the rollforward command again with the `CANCEL` option and the same table space list. When the rollforward in progress is canceled, the table spaces will have been put into restore pending state. Restore the table spaces and submit the original rollforward command again.

If continuing a table space rollforward and one or more of the table spaces involved is offline, there are three options:

- Bring the tablespace back online and submit the original rollforward command again.
- Re-submit the rollforward command but remove the offline tablespaces from the tablespace list. These tablespaces will be put into restore pending state.

- Submit the rollforward command again with the `CANCEL` option and the same table space list. When the rollforward in progress is canceled, the table spaces will have been put into restore pending state.

SQL4910N Overflow log path *log-path* is not valid.

Explanation: The overflow log path specified on the `ROLLFORWARD` command is not valid. The overflow log path must be a directory in a file system. This directory must be accessible by the instance owner id.

User response: Resubmit the command with a valid overflow log path.

SQL4911N The host variable data type is not valid.

Explanation: The data type of the host variable is not valid.

The function cannot be completed.

User response: Correct the data type of the host variable and call the function again.

SQL4912N The host variable data length is out of range.

Explanation: The length of the host variable is not valid.

The function cannot be completed.

User response: Correct the length of the host variable and call the function again.

SQL4913N The host variable token ID has already been used.

Explanation: The token ID of the host variable has already been used. The token ID must be unique within the module.

The function cannot be completed.

User response: Correct the token ID of the host variable and call the function again.

SQL4914N The host variable token ID is not valid.

Explanation: The token ID of the host variable is not valid.

The function cannot be completed.

User response: Correct the token ID of the host variable and call the function again.

SQL4915N The "sqlainit" function has already been called.

Explanation: Precompiler Services has already been initialized.

User response: No action is required. Continue processing.

SQL4916N The "sqlainit" function has not been called.

Explanation: Precompiler Services must be initialized before the requested function call can be processed.

The function cannot be completed.

User response: Issue an sqlainit function call to initialize Precompiler Services.

SQL4917N Element *number* in the option array is not valid.

Explanation: The option array contains an element with an *option.type* or *option.value* that is not valid. The element number in the message is the *n*th element in the option portion of the option array.

The function cannot be completed.

User response: Correct the values stored in the option array. Call the function again.

SQL4918N The *term_option* parameter of function "sqlainit" is not valid.

Explanation: The *term_option* parameter is not valid.

The function cannot be completed.

User response: Correct the *term_option* parameter and call the function again.

SQL4919N The *task_array* parameter of function "sqlacmpl" is too small.

Explanation: The task array structure passed to Precompiler Services on the sqlacmpl function call is too short.

The function did not complete successfully.

User response: Increase the size of the precompiler task array structure allocated by the precompiler. Recompile the application program.

SQL4920N The *token_id_array* parameter of function "sqlacmpl" is too small.

Explanation: The token id array structure passed to Precompiler Services on the sqlacmpl() function call is too small.

The function did not complete successfully.

User response: Increase the size of the precompiler token id array structure allocated by the precompiler. Recompile the application program.

SQL4921N The rollforward command failed due to a prior point in time recovery currently in process on all database partitions.

Explanation: The database is currently in the process of a point in time recovery on all database partitions. A subsequent rollforward command cannot be issued until the prior point in time recovery has been completed or canceled.

User response: Re-issue the ROLLFORWARD DATABASE command using the STOP option without specifying the ON database partition clause.

SQL4930N The bind, rebind, alter, or precompile option or option value *option-name* is invalid.

Explanation: Either *option-name* is an invalid bind, rebind, alter, or precompile option or the value specified for this option is invalid. The bind, rebind, alter, or precompile cannot continue.

User response: Correct the bind, rebind, alter, or precompile option or option value and retry the command or statement.

sqlcode: -4930

sqlstate: 56095

SQL4940N The *clause* clause is not permitted or is required.

Explanation: The indicated clause is either not allowed in the context where it appears in the SQL statement or it is required in the statement.

A subquery, an INSERT statement, or a CREATE VIEW statement cannot have INTO, ORDER BY, or FOR UPDATE clauses. An embedded SELECT statement cannot have ORDER BY or FOR UPDATE clauses. An embedded SELECT statement cannot contain a set operator except in a subquery. SELECT statements used in cursor declarations cannot have an INTO clause.

An embedded SELECT statement must have an INTO clause.

The function cannot be completed.

User response: Remove or add the clause to correct the statement.

SQL4941N The SQL statement is blank or empty.

Explanation: The text following EXEC SQL was blank or empty.

The function cannot be completed.

User response: Ensure that a valid SQL statement is provided following the word EXEC SQL.

SQL4942N The statement selects an incompatible data type into host variable *name*.

Explanation: An embedded SELECT statement selects into a host variable *name* but the data type of the variable and the corresponding SELECT list element are not compatible. If the data type of the column is date and time, the data type of the variable must be character with an appropriate minimum length. For a user-defined data type, the host variable might be defined with an associated built-in data type that is not compatible with the result type of the FROM SQL transform function defined in the transform group for the statement.

The function cannot be completed.

User response: Verify that the table definitions are current and that the host variable has the proper data type.

SQL4943W The number of host variables in the INTO clause is not the same as the number of items in the SELECT clause.

Explanation: The number of host variables specified in both the INTO clause and the SELECT clause must be the same.

The function is processed.

User response: Correct the application program to specify the same number of host variables as SELECT list expressions.

SQL4944N An update or insert value is NULL, but the object column cannot contain NULL values.

Explanation: One of the following occurred:

- The update or insert value was NULL but the object column is declared as NOT NULL in the table definition. Therefore, null values cannot be inserted into that column, and values in that column cannot be set to NULL by an update.
- The column name list for the INSERT statement omits a column that was declared as NOT NULL in the table definition.
- The view for the INSERT statement omits a column that was declared as NOT NULL in the base table definition.

The function cannot be completed.

User response: Examine the definition of the object table to determine which columns of the table have the NOT NULL attribute, and correct the SQL statement.

SQL4945N The use of a parameter marker is not valid.

Explanation: Parameter markers can be used only in dynamic SQL statements.

The function cannot be completed.

User response: Use host variables instead of parameter markers for static SQL statements.

SQL4946N The cursor or statement name *name* is not defined.

Explanation: The cursor or statement name *name* specified in the statement is not defined.

The function cannot be completed.

User response: Check the application program for completeness and possible spelling errors in the cursor or statement names.

SQL4947W An INCLUDE SQLDA statement was encountered and ignored.

Explanation: The FORTRAN precompiler shipped by the database manager does not support the INCLUDE SQLDA statement.

The statement is ignored. Processing continues.

User response: No action is required. To prevent this message, remove the INCLUDE SQLDA statement from the program.

SQL4950N Compound SQL statements containing user-defined SQLDAs are not supported in this environment.

Explanation: Compound SQL statements containing user-defined SQLDAs are not supported in a 16-bit application.

User response: Move the statement out of the compound SQL block or replace the statement with one that uses host variables instead of an SQLDA.

SQL4951N The *sqlda_id* parameter of function *name* is not valid.

Explanation: The *sqlda_id* parameter of the specified function in the application program is not valid. The *sqlda_id* parameter cannot be null.

The function cannot be completed.

User response: Correct the *sqlda_id* parameter in the application program.

SQL4952N The `sqlvar_index` parameter of function `name` is not valid.

Explanation: The `sqlvar_index` parameter of the specified function in the application program is not valid. The `sqlvar_index` may be larger than the number of `sqlvar` elements in the SQLDA.

The function cannot be completed.

User response: Correct the `sqlvar_index` parameter in the application program.

SQL4953N The `call_type` parameter of function `name` is not valid.

Explanation: The `call_type` parameter of the specified function in the application is not valid.

The function cannot be completed.

User response: Correct the `call_type` parameter in the application program.

SQL4954N The `section_number` parameter of function `name` is not valid.

Explanation: The `section_number` parameter of the specified function in the application program is not valid. Note that for the following SQL statements, the `section_number` parameter of the function `sqlacall()` is used to pass in the statement type:

- CONNECT
- SET CONNECTION
- RELEASE
- DISCONNECT

The function cannot be completed.

User response: Correct the `section_number` parameter in the application program.

SQL4970N Rollforward recovery stopped on the database named `database-name` because the rollforward utility cannot reach the specified stop point (end-of-log or point-in-time) on the following database partitions: `database-partition-list`.

Explanation: This message is returned in the following situations:

1. The rollforward utility cannot access one or more files because the files are missing or the files have data integrity problems. Here are some examples:
 - A request was made to bring the specified database out of rollforward pending state. However, the rollforward utility cannot find the necessary archive log files in the database log directory or the overflow log directory on the

specified database partitions to reach the stopping point from the previous rollforward operation.

- In a multi-partitioned database environment that is not a DB2 pureCluster environment: the rollforward utility cannot find the necessary archive log files to bring a database partition into synchronization with the catalog partition.
2. This was a point-in-time rollforward in which the specified point-in-time timestamp was not reachable in the log files. This might indicate there are missing log files, or that the point in time was after the end of logs and make the database available. In a partitioned database environment, use the `ROLLFORWARD DATABASE` command with the `QUERY STATUS` option to ensure that the roll-forward is in a normal state.

If "..." is displayed at the end of the database partition list, see the administration notification log for the complete list of database partitions.

Rollforward recovery has stopped. The database is left in rollforward pending state.

User response:

1. Determine the last log file processed by the rollforward by issuing a rollforward command with the `QUERY STATUS` option. Then ensure that any necessary files, following the last log file processed, are made available by moving them to the appropriate location:
 - Check in the database log directory or the overflow log path (if specified).
 - If log archiving is enabled ensure that the necessary files exist in the archive location. Ensure also that the log archiving retrieval method is working: check the administration notification log for the presence of message `ADM0083I` and make corrections to the retrieval method if necessary.

After verifying these two things, re-issue the `ROLLFORWARD DATABASE` command.

If the log files are present and re-issuing `ROLLFORWARD DATABASE` fails (potential data integrity issues with the log files), or the log files cannot be found, restore and rollforward the database to an earlier point in time referenced in one of the processed log files (use a timestamp that is earlier than that of the earliest missing file).

2. If the point-in-time timestamp was correct, and there are no missing log files, then the point-in-time specified may actually be beyond any work performed against the database. In this case, issue the `ROLLFORWARD DATABASE` command with the `STOP` option which will complete the rollforward recovery at the current position in the log files.

SQL4971N Roll-forward recovery on database *name* on node *node-number* failed previously while stopping. Roll-forward recovery must be stopped.

Explanation: A request was made to continue rolling forward the specified database by specifying caller action SQLUM_ROLLFWD. The previous iteration of roll-forward recovery failed while stopping. If rolling forward at the database level, this means that it failed during log truncation. Roll-forward recovery for this database must now be stopped by specifying caller action SQLUM_ROLLFWD_STOP, SQLUM_STOP, SQLUM_ROLLFWD_COMPLETE, or SQLUM_COMPLETE.

Note : if you are using a partitioned database server, the node number indicates which node the error occurred on. Otherwise, it is not pertinent and should be ignored.

User response: Reissue the ROLLFORWARD DATABASE command with caller action SQLUM_ROLLFWD_STOP, SQLUM_STOP, SQLUM_ROLLFWD_COMPLETE, or SQLUM_COMPLETE. Any stoptime specified will be ignored since the previous stoptime is already being processed.

SQL4972N Log extent *extent* on node *node-number* could not be moved to the database logpath.

Explanation: The Rollforward utility was invoked with the STOP option. As part of roll-forward processing, the log extent *extent* has to be truncated. This extent must exist in the database logpath. Currently, the extent exists in the overflow log path. An attempt was made to move the extent from the overflow log path to the database logpath. The attempt failed. Roll-forward processing has been stopped.

Note : if you are using a partitioned database server, the node number indicates which node the error occurred on. Otherwise, it is not pertinent and should be ignored.

User response: Move the extent from the overflow log path to the database logpath and then resubmit the ROLLFORWARD DATABASE command.

SQL4973N Forward recovery on database *name* cannot complete because the log information on database partition(s) *node-list* does not match the corresponding record(s) on the catalog database partition.

Explanation: The Rollforward utility processed all the log files found on each database partition, but the stop points on the specified database partitions do not match the corresponding records on the catalog database partition. This can be caused by missing log

files on either the catalog database partition or on the specified database partitions, or the catalog database partition must be included in the list of database partitions to be rolled forward.

The ROLLFORWARD DATABASE processing stops.

User response: Do one of the following:

- Check if the catalog database partition needs to be rolled forward. If it does, submit the ROLLFORWARD DATABASE command again and include the catalog database partition.
- Use the ROLLFORWARD DATABASE command with the QUERY STATUS option to determine which log files are missing. When you find the log files, put them in the log path or overflow log path and resume forward recovery.
- If you cannot find the missing log files, restore the database on all database partitions, then do point-in-time recovery using a stoptime that is earlier than that of the earliest missing log file.

SQL4974W The ROLLFORWARD DATABASE QUERY STATUS command encountered *sqlcode sqlcode*.

Explanation: The ROLLFORWARD DATABASE QUERY STATUS command encountered an error with the *sqlcode sqlcode*. The query might not be successful on some nodes for various reasons. The most severe error is indicated by *sqlcode*. The roll-forward status is only returned for the successful nodes.

User response: Look up the *sqlcode sqlcode* in the *Message Reference*, or online to determine the problems on the failed nodes. Take the required corrective actions, then continue the forward recovery on these nodes.

SQL4975W Roll-forward operation was canceled successfully. The database or selected table spaces have to be restored on members or nodes *node-list*.

Explanation: A roll-forward operation was canceled before it successfully completed, and the database or selected table spaces are left in an inconsistent state. The database or selected table spaces are in restore pending state on the listed members or nodes.

If "... " is displayed at the end of the member or node list, see the administration notification log for the complete list of members or nodes.

Note: The member or node numbers provide useful information only in DB2 pureCluster environments and partitioned database environments. Otherwise, the information should be ignored.

User response: Restore the database or selected table spaces on the listed members or nodes. The table spaces that are in restore pending state can be identified on the specified members or nodes by the

MON_GET_TABLESPACE table function. In environments other than DB2 pureCluster environments, you can also use the db2dart utility.

SQL4976N This command cannot be submitted on a non-catalog node.

Explanation: The ROLLFORWARD DATABASE command is only accepted on the catalog node.

When the ON DBPARTITIONNUM clause is specified on the BACKUP DATABASE command, the command is accepted only on the catalog node.

User response: Submit the command on the catalog node.

SQL4977N Dropped table export directory *directory* is not valid.

Explanation: The export directory path specified on the ROLLFORWARD command is not valid. The export directory path must be a directory in a file system. This directory must be accessible by the instance owner id.

User response: Resubmit the command with a valid export directory path.

SQL4978N The dropped table can not be accessed.

Explanation: The dropped table can not be accessed. This may be due to the table being put into unavailable state because of a LOAD without copy or a NOT LOGGED INITIALLY operation.

User response: The table can not be recovered using the DROPPED TABLE RECOVERY option.

SQL4979W Unable to export the dropped table data.

Explanation: The command was unable to export the data of the dropped table whose recovery is being attempted. This can happen when the dropped table id specified on the ROLLFORWARD command is invalid, or when not all of the logs are available for roll forward. This warning will be generated when an error occurs during a dropped table recovery using a ROLLFORWARD ... AND STOP command.

User response: Resubmit the command after ensuring that the dropped table id provided is valid, and that all of the logs are available for roll forward.

SQL4980N Recovery on database *name* has encountered a corrupt log file *log-file* on database partition *dbpart-num* and log stream *log-stream-ID*.

Explanation: A corrupt log file has been encountered during recovery of the database.

It is possible that a checksum error occurred on a log page. A checksum error indicates that the information

in a log page on disk does not match the information that is expected by DB2. The content of this log page cannot be trusted.

User response: Possible actions include:

- Run hardware diagnostics to check if the system is experiencing any hardware problems.
- If there is another copy of this log file available, put the file in the database log directory or the overflow log path and reissue the command.
- For a database rollforward operation in a non-partitioned database environment where a copy of the log file is unavailable, issue a rollforward stop command. This will bring the database to a point before the corrupted log file was encountered. It is important to note that log data beyond this point will not be available.
- For a database rollforward operation in a partitioned database environment where a copy of the log file is unavailable, restore each database partition and issue a point in time rollforward to a stop time before the corrupt log file is encountered. It is important to note that log database beyond this point will not be available.
- If the problem persists, save a copy of this corrupted file for analysis by IBM Support. IBM support will be able to determine which page is corrupted.

SQL4981W Data was exported from a dropped table, but the table spaces containing one or more data partitions were not included in the rollforward list. Data for those data partitions will not be present in the export directory.

Explanation: The command was unable to export the data of one or more data partitions for the dropped table. This can happen if not every table space over which the partitioned table is defined was included on the ROLLFORWARD command. This may be intentional if you are recovering the data from the partitioned table in several passes to limit the size of the file(s) in the export directory. See the administration notification log for the full list of data partitions whose data was not exported.

User response: Resubmit the command after ensuring that the table spaces containing the data partitions listed in the administration notification log are included. If recovering only the previously skipped data partitions, specify a different export file path to avoid overwriting the existing export file(s).

SQL4990N A maximum number of *number* literals is supported in an SQL statement. Each literal can be a maximum of *value* bytes in length.

Explanation: The COBOL precompiler only supports a maximum number of *number* literals in an SQL

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statement. Each literal can be a maximum of *value* bytes in length. A literal represents any input element that is not a host variable (that is, string constant, delimited identifier, non-delimited identifier).

The statement cannot be processed.

User response: Reduce the number of literals present in the SQL statement. Ensure that each literal is not greater than *value* bytes in length.

SQL4994N Precompilation was ended because of a user interrupt request.

Explanation: Precompilation was terminated because of an interrupt. The user may have pressed an interrupt key sequence.

Processing is terminated. No package was created.

User response: Resubmit the precompilation if needed.

SQL4997N The authorization ID is not valid.

Explanation: The authorization ID for the application was specified previously but it was defined with more than 8 characters or with characters that are not valid for an authorization ID.

The authorization ID must not be PUBLIC (public) and it must not begin with SYS (sys), IBM (ibm), or SQL (sql). Also, it must not contain the underscore character or any characters outside the database manager base character set.

The function cannot be processed.

User response: Retry the application with a valid authorization ID.

SQL4998C The application state is in error; the database connection has been lost.

Explanation: The connection to the database has been lost.

The function cannot be processed.

User response: Reconnect to the database.

SQL4999N A Precompiler Services or Run-time Services error occurred.

Explanation: A database manager error occurred that prevents Precompiler Services or Run-Time Services from processing function calls.

No Precompiler Services or Run-Time Services function calls can be processed.

User response: Record the message number (SQLCODE) and all error information from the SQLCA if possible.

If trace was active, invoke the Independent Trace

Facility at the operating system command prompt.

- Environment: Outer Precompiler Using Precompiler Services API
- Required information:
 - Problem description
 - SQLCODE
 - SQLCA contents if possible
 - Trace file if possible.

Chapter 11. SQL5000 - SQL5499

SQL5001N *authorization-ID* does not have the authority to change the database manager configuration file.

Explanation: The user attempted to update or reset the database manager configuration file without having SYSADM authority.

The requested change is not made.

User response: Do not attempt to change the database manager configuration file without appropriate authorization. Contact a user with SYSADM authority if a change is required.

SQL5005C The operation failed because the database manager failed to access either the database manager configuration file or the database configuration file.

Explanation: The DB2 database product uses two types of configuration files:

Database manager configuration file

Created when a DB2 database manager instance is created, the database manager configuration file contains parameters that affect system resources at the instance level. There is also one database manager configuration file for each client installation, which contains information about the client enabler for a specific workstation. The database manager configuration file is named db2system and is located in the instance directory.

Database configuration file

Created when a database is created, the database configuration file contains parameters that affect the use of that database. The database configuration file for each database is named SQLDBCONF, and stored along with other control files for that database in the directory named "SQLnnnnn" (where nnnnn is a number assigned when the database was created.)

This message is returned when a DB2 database utility (such as db2start, db2icrt, restore, or many others) requires that the database manager write to or read from either the database manager configuration file or the database configuration file, and the database manager was unable to access the configuration file.

There can be several reasons that the database manager was unable to access the configuration file, including the following reasons:

- After the DB2 database product installation has been upgraded or otherwise changed, some database applications are still trying to link to libraries from the previous installation
- After the DB2 database product installation has been upgraded or otherwise changed, operating system environment variables such as PATH, LIBPATH, or LD_LIBRARY_PATH still refer to paths from the previous installation
- The configuration file does not exist in the location where the database manager expects to find the file
- Operating system file permissions prevent the database manager from accessing the directory in which the configuration file is located
- Operating system file permissions prevent the database manager from writing to or reading from the configuration file or the directory in which the configuration file is located

User response:

1. Determine the specific configuration file that the database manager attempted to access by reviewing diagnostic information in the db2diag log files.
For example, search in the db2diag log files for the following strings:
 - SQLDBCONF
 - db2system
2. Systematically eliminate possible reasons that the database manager was unable to access either the database manager configuration file or the database configuration file:
 - Ensure that operating system environment variables such as PATH, LIBPATH, and LD_LIBRARY_PATH include the correct paths for the current installation of the DB2 database product.
 - Locate the database manager configuration file and the database configuration files, and verify that the DB2 database manager has read and write permissions for the configuration files themselves as well as the directories in which those configuration files are located.

SQL5010N The path name to the database manager configuration file is not valid.

Explanation: An error occurred while determining the path for the database manager configuration file. The database manager directory structure may have been altered.

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The command cannot be processed.

User response: Resubmit the command. If the error continues, reinstall the database manager.

SQL5012N Host variable *host-variable* is not an exact numeric data type.

Explanation: A host variable *host-variable* was specified, but it is not valid in the context in which it was used. Host variable *host-variable* was specified as part of ABSOLUTE or RELATIVE in a FETCH statement, or in a ROWS clause of a FETCH or INSERT statement. The host variable was not usable for one of the following reasons:

- The host variable is not an exact numeric data type. Decimal data types with a scale of zero and integer data types are exact numeric data types.
- The host variable is a decimal data type, but the scale is not zero. Decimal data types must have zero decimal digits to have a scale of zero.

The statement cannot be processed.

User response: Change the host variable to be an exact numeric data type.

sqlcode: -5012

sqlstate: 42618

SQL5018N The entry in the database manager configuration file for the maximum number of remote connections to the workstation (numrc) is not in the valid range.

Explanation: The value for the maximum number of remote connections to the workstation must be between 1 and 255.

The requested change is not made.

User response: Resubmit the command with a valid value for the maximum number of remote connections to the workstation.

SQL5020N The entry in the database manager configuration file for the node name for the workstation (nname) is not valid.

Explanation: The node name specified in the configuration command is not valid. The node name may be 1 to 8 characters. All the characters must be chosen from the database manager base character set.

The command cannot be processed.

User response: Resubmit the command with a valid node name.

SQL5021N The entry in the database manager configuration file for the index recreation parameter (INDEXREC) is not valid.

Explanation: An invalid value was passed to Configuration Services for the Index Recreation parameter (INDEXREC) in the database manager configuration file. The invalid value may have been entered through the Command Line Processor or through a program API call. The valid values for the API call and for the command line processor are 1 (ACCESS), 2 (RESTART), 3 (RESTART_NO_REDO) and 4 (ACCESS_NO_REDO).

The update to the database manager configuration file is rejected.

User response: Repeat the update request, entering one of the possible values.

SQL5022N The entry in the database configuration file for the index recreation parameter (INDEXREC) is not valid.

Explanation: An invalid value was passed to Configuration Services for the Index Recreation parameter (INDEXREC) in a database configuration file. The invalid value may have been entered through the Command Line Processor or through a program API call. The valid values for the API call and for the command line processor are 0 (SYSTEM), 1 (ACCESS), 2 (RESTART), 3 (RESTART_NO_REDO) and 4 (ACCESS_NO_REDO).

The update to the database configuration file is rejected.

User response: Repeat the update request, entering one of the possible values.

SQL5025C The database manager configuration file is not current.

Explanation: The database manager configuration file has been updated since you connected to the database. It is not compatible with the configuration for the database to which you are connected.

No access is allowed to the database manager configuration file.

User response: Wait until all applications disconnect from the databases. Issue the stop database manager command, and then issue the start database manager command.

If installing the sample database, drop it and install the sample database again.

SQL5030C Command processing failed because of release number mismatch.

Explanation: The release number in the database manager or database configuration file does not match the release number of the DB2 copy from which you issue the command.

If you are upgrading an instance or a database, the release number of the database manager or database is not supported for upgrade.

The command cannot be processed.

User response: Verify that the release levels of your database or database manager and the DB2 copy from which you issue the command match by using:

- The GET DB CFG or GET DBM CFG command to determine the release configuration parameter value of the database or database manager.
- The db2level command to determine the release number of your DB2 copy.

If the release levels do not match, you can try one of the following actions:

- Issue the db2iupdt command to update the release level of the database manager.
- Restore the database from a backup.

If you are upgrading an instance or a database, the release number of the database or database manager is not supported for upgrade. You must upgrade to a release level that is supported for upgrade prior to upgrading to the release number of your DB2 copy. Refer to the DB2 Information Center to determine which release levels are supported.

If the error occurred with the sample database, drop it and recreate it using the db2sampl command.

sqlcode: -5030

sqlstate: 58031

SQL5035N The database must be upgraded to the current release.

Explanation: The database was created in a previous release of DB2 database product. You must issue the UPGRADE DATABASE command to upgrade the database to the current release.

The command cannot be processed.

User response: Issue the UPGRADE DATABASE command before attempting to access the database using the current release.

If you receive this message when you issued a database restore, drop the existing database before proceeding.

sqlcode: -5035

sqlstate: 55001

SQL5040N One of the socket addresses required by the TCP/IP server support is being used by another process.

Explanation: One of the socket addresses required by the server either is in use by another program, or has not been freed completely by the TCP/IP subsystem after the database manager has been stopped.

User response: If you have just issued db2stop, wait for a couple of minutes so that the TCP/IP subsystem has enough time to clean up its resources. Otherwise, make sure no other programs on your workstation are using the port numbers reserved for your service name in the /etc/services file. The port number is a component of a socket address.

SQL5042N One of the communication protocol server support processes failed to start up.

Explanation: Due to system call failure, or a communication subsystem call failure, one of the communication protocol server support processes did not start up successfully.

User response: You can investigate the problem by either:

- examine the system log records;
- turning on trace, run db2start again, then examine the trace record.

SQL5043N Support for one or more communications protocols failed to start successfully. However, core database manager functionality started successfully.

Explanation: Communication protocol support did not start successfully for one or more protocols. Possible reasons can include the following:

- Communication subsystem configuration error.
- Communication subsystem call failure.
- Database manager configuration error.
- System call failure.
- Database manager licensing error.
- Cluster manager call failure.

You can still connect to the server with communication protocols that did start successfully. Local clients can also connect to the server.

User response: The database manager attempts to start all communication protocols specified by the DB2COMM environment variable.

Check the administration notification log for details on this error. The log will contain more information on the

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cause of the error and also which communication protocol(s) did not start successfully.

This error only affects communication protocols specified by the DB2COMM environment variable.

SQL5047C Insufficient memory to execute this function.

Explanation: There is not enough memory available to execute this function.

The function cannot be completed.

User response: Stop the application. Possible solutions include:

- Terminate other processes.
- Decrease the values of the configuration parameters that define allocation of memory.
- Ensure that your system has sufficient real and virtual memory.

SQL5048N The release level of the database client is not supported by the release level of the database server.

Explanation: Database clients can only access database servers with a release level which is in the range of one level lower than the client to two levels higher than the client.

User response: One or more of the following:

- Upgrade the client release level to fall within the range of releases supported by the current server release level.
- Upgrade the server release level to a level supported by the current client release level.

SQL5050C The content of the database manager configuration file is not valid.

Explanation: The database manager configuration file is not valid. The file may have been altered by a text editor or a program other than the database manager.

The command cannot be processed.

User response: Reinstall the database manager.

SQL5051N An object qualified by *qualifier* cannot be created in schema *schema-name*.

Explanation: An object created in a CREATE SCHEMA statement is qualified by *qualifier* which is different from the schema name. All objects created in a CREATE SCHEMA statement must be either qualified by the schema name *schema-name* or not qualified. Unqualified objects are implicitly qualified by the schema name.

The statement cannot be processed.

User response: Explicitly qualify the object in the

schema with *schema-name* or remove *qualifier* from the object name.

sqlcode: -5051

sqlstate: 42875

SQL5055C The content of the database configuration file is not valid.

Explanation: The database configuration file for the database is not valid. The file may have been altered by a text editor or a program other than the database manager.

User response: Recreate the database or restore it from a backup version.

sqlcode: -5055

sqlstate: 58031

SQL5060N The configuration parameter token specified is invalid.

Explanation: A token number specified in the sqlfupd structure passed to a Configuration Services API is not valid. It does not represent any of the supported configuration parameters. Alternatively, if an UPDATE was attempted, the token specified may be that of an unmodifiable configuration parameter.

User response: Choose a valid token number from those specified in the description of the Configuration Services API in the DB2 Information Center. Recode the call to the API, and rerun the program.

SQL5061N An invalid pointer to structure sqlfupd was passed to Configuration Services.

Explanation: The pointer to structure sqlfupd passed as a parameter to one of the Configuration Services APIs was invalid. It is either NULL, or does not point to an allocated block of memory of the size indicated by the count parameter.

User response: Correct the code which invokes the Configuration Services API, and retry the API call.

SQL5062N An invalid pointer was passed within the sqlfupd structure to Configuration Services.

Explanation: The structure sqlfupd passed as a parameter to one of the Configuration Services APIs contained an invalid pointer. The pointer is either NULL, or does not point to an allocated block of memory. Each token passed in the structure must have a corresponding pointer to a field that is either passed in or out of the API.

User response: Correct the code which invokes Configuration Services, and rerun the program.

SQL5065C The `nodetype` value in the database manager configuration file is not valid.

Explanation: The `nodetype` parameter in the database manager configuration file is not valid.

The command cannot be processed.

User response: Reinstall the database manager.

SQL5066W The database configuration parameter value for token `token-name` has been truncated.

Explanation: The database configuration parameter value is larger than the specified token can contain.

A new token now represents this database configuration parameter value and should be used if the value is larger than can be contained by the old token.

User response: Use the new token for this database configuration parameter.

SQL5070N The count parameter in the configuration command is not valid. It must be greater than 0.

Explanation: The count value passed as a parameter to a Configuration Services API must be greater than 0.

The command cannot be processed.

User response: Correct the code which invokes Configuration Services, and rerun the program.

SQL5075N The configuration utility was interrupted.

Explanation: An interrupt was received by the configuration utility. The user may have pressed the interrupt key sequence.

The command was not processed. Any requested change is not made.

User response: Resubmit the command.

SQL5076W The update completed successfully. The current value of `NOTIFYLEVEL` will cause some health monitor notifications not to be issued to the notification log.

Explanation: Health Monitor issues notifications to the notification log and to specified e-mail and page contacts. The current value of `NOTIFYLEVEL` is set too low to have notifications be issued for alarms and warnings. `NOTIFYLEVEL` must be set to 2 or higher for alarm notifications and 3 or higher for warning notifications.

User response: Increase the value of the database manager configuration parameter `NOTIFYLEVEL`.

SQL5077N The parameter `parameter` is not supported by the Configuration Advisor for this server release. Supported parameters include `supported-parameters`.

Explanation: The parameter specified is not supported by this server release.

User response: Reissue the command without the parameter or replace it with another supported parameter.

SQL5081N The entry in the database configuration file for the size of the buffer pool (`buffpage`) is not in the valid range.

Explanation: The minimum value for the size of the buffer pool is two times the maximum number of active processes (`maxappls`). The maximum value for the size of the buffer pool is 524288 (number of 4KB pages) and is operating system dependent. The maximum value under AIX is 51000 (204000 for Extended Server Edition) (4KB pages). Under HP-UX, the value must be between 16 and 150000 (4KB pages).

The requested change is not made.

User response: Resubmit the command with a valid value for the size of the buffer pool.

SQL5083N The entry in the database configuration file for the initial log file size (`logfile`) is not in the valid range.

Explanation: The value for the initial log file size must be between 12 and $(2^{32} - 1)$.

The requested change is not made.

User response: Resubmit the command with a valid value for the initial log file size.

SQL5091N The entry in the database configuration file for the size of one log file extension (`logext`) is not in the valid range.

Explanation: The value for the size of one log file extension must be between 4 and 256.

The requested change is not made.

User response: Resubmit the command with a valid value for the size of one log file extension.

SQL5092N The entry in the database configuration file for the maximum allowable number of log file extensions (`logmaxext`) is not in the valid range.

Explanation: The value for the maximum allowable number of log file extensions must be between 0 and $(2 * 10^6)$.

The requested change is not made.

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User response: Resubmit the command with a valid value for the maximum allowable number of log file extensions.

SQL5093N The entry in the database manager configuration file for the size of the agent heap is not in the valid range.

Explanation: The value for the size of the agent heap must be between 2 and 85.

The requested change is not made.

User response: Resubmit the command with a valid value for the agent heap size.

SQL5098W The default log file path has been changed to *logfilepath*.

Explanation: The default log file path has been changed from the database directory to the global database directory.

User response: Ensure that there is enough disk space in the new default log file path for the log files. If a disk or partition was mounted for the old default log file path, consider changing the mount point to the new default log file path.

SQL5099N The value *value* indicated by the database configuration parameter *parameter* is not valid, reason code *reason-code*.

Explanation: The value of the named parameter is not valid for one of the following reasons:

1

The path string is longer than 242 bytes.

2

The path does not exist.

3

The first directory in the path has a name in the form SQLNNNNN, where NNNNN is a value from 00001 to 99999.

4

A file with the correct name was found in the specified path, but is not a log file for this database.

5

The path is currently being used by another database.

6

The path is currently being used by the same database for another purpose.

7

The device specified by the path is not big enough to hold the log files.

8

A raw device cannot be specified as a MIRRORLOGPATH, OVERFLOWLOGPATH, FAILARCHPATH, LOGARCHMETH1, or LOGARCHMETH2.

9

The path cannot be accessed.

10

The path string is longer than 206 bytes.

11

When specifying DISK for a method, the target must be a directory.

12

When specifying VENDOR for a method, the target must be a directory.

13

LOGARCHMETH2 must be set to OFF if LOGARCHMETH1 is set to USEREXIT or LOGRETAIN.

14

When specifying DISK or VENDOR, a target value must be specified.

15

A target value cannot be specified when setting the LOGARCHMETH1 configuration parameter to LOGRETAIN or USEREXIT.

16

Invalid method specified. Valid values include DISK, TSM, VENDOR, USEREXIT, LOGRETAIN, and OFF.

17

Cannot switch to circular logging when database is rollforward pending.

18

MIRRORLOGPATH cannot be specified if the primary log path is a raw device.

19

The specified value for the configuration parameter is not valid. Neither USEREXIT nor LOGRETAIN are valid values for the database configuration parameter LOGARCHMETH2.

The requested change is not made.

User response: Resubmit the command with a valid value for the named parameter.

sqlcode: -5099

sqlstate: 08004

SQL5100N The entry in the database manager configuration file for the number of allowed concurrent databases is too large.

Explanation: The requested change would cause (1) the number of allowed concurrent databases to be too large or (2) the number of segments allowed for DB2 to be too small.

The number of allowed concurrent databases is restricted by the maximum number of segments allowed for DB2. The following condition must always be true:

```
segments >=
  ((number of databases * 5) + 1)
```

The requested change is not made.

User response: Do one of the following:

- Increase the maximum number of segments allowed for DB2.
- Decrease the number of allowed concurrent databases.

SQL5102C The *edition-name* edition of the product does not support the DB2 workload manager (WLM).

Explanation: This edition of DB2 does not offer the WLM utility.

User response: Purchase the license key for the DB2 Performance Optimization Feature from your IBM representative or authorized dealer. Then update your license using the db2licm command.

SQL5103N The entry in the database configuration file for the size of the buffer pool (buffpage) is too small for the maximum number of active applications (maxappls).

Explanation: The requested change would cause the maximum number of active applications to be too large for the size of the buffer pool. The following condition must always be true:

```
bufferpool_size >
  (number of active_processes * 2)
```

The requested change is not made.

User response: Do one or both of the following:

- Increase the size of the buffer pool.
- Decrease the maximum number of active processes allowed.

SQL5112N The value of the configuration parameter *parameter* must be either 0 or 1.

Explanation: The request is not completed because the value given for *parameter* is invalid.

User response: Ensure that the value specified for *parameter* is either 0 or 1, then try the request again.

SQL5113N ALT_COLLATE cannot be updated for a Unicode database.

Explanation: The alternate collating sequence (ALT_COLLATE) database configuration parameter can only be updated for a non-Unicode database. In a Unicode database, all tables must be collated using the collating sequence specified when the database was created.

User response: Do not update the ALT_COLLATE database configuration parameter for a Unicode database.

SQL5120N Old and new log parameters cannot both be modified at the same time.

Explanation: The user is attempting to modify both the previous log parameters and the new parameters. The application should only support the parameters of the current release.

The request is denied.

User response: Modify only the parameters of the current release and retry the command.

SQL5121N The entry in the database configuration file for configuration options is not valid.

Explanation: The value set for database options (SQLF_DETS) is not valid. Valid settings are between 0 and 15. The requested change is not made.

The requested change is not made.

User response: Resubmit the command with a valid database options value.

SQL5122N Access to the database was denied because of a machine dependent check.

Explanation: The database and database configuration file cannot be accessed because of copy protection.

The user request is denied.

User response: Have a user with SYSADM authority return to the original database, modify the configuration file to turn off the copy protection, and create a new backup, which can be used to restore the database. If the original database is no longer available, contact your service representative.

SQL5123N Database *name* cannot be configured because an I/O error occurred while accessing the log control file.

Explanation: There are two log control files:

- Primary log control file SQLOGCTL1.LFH
- Secondary log control file SQLOGCTL2.LFH

The secondary log control file is a mirror copy of the primary log control file for use in the event that there is a problem with the primary log control file.

This error was returned because the DB2 database manager could access neither the primary log control file nor the secondary log control file for the specified database.

If the database manager can access neither of the log control files, you cannot use the database.

The requested change was not made.

User response: Restore the database from a backup copy or recreate the database.

SQL5124N DB2 failed to update or reset the database configuration on one or more partitions. Reason code *reason-code*.

Explanation: DB2 uses fast communication manager (FCM) messages to broadcast an update or reset request. FCM communication can fail just after issuing the db2start command when it is not fully initialized.

Possible reason code values are:

1

The database configuration was not changed because the update or reset failed on at least one partition. See the db2diag log file for more details.

2

The database configuration is inconsistent among the nodes because the update or reset failed on at least one partition. See the db2diag log file for more details.

User response: The user response corresponding to the reason code is as follows:

1

Make sure all partitions are up and running and resubmit the request.

2

Make sure all partitions are up and running. Resubmit the request or review the configuration updates and apply them manually on all partitions.

SQL5125N The update operation on the global database configuration parameter *parameter-name* could not be applied on the specified member.

Explanation: The values of global database configuration parameters are shared across an entire DB2 pureCluster instance.

Global database configuration parameter values must be the same on all members. This error message is returned when an attempt is made to apply a value for a global database configuration parameter to a specific member using the UPDATE DB CFG command with the MEMBER clause.

User response: Issue an update operation using the UPDATE DB CFG command without the MEMBER clause. This value applies to all members in the DB2 pureCluster instance.

sqlcode: -5125

sqlstate: 5U053

SQL5126N An attempt was made to modify the database manager configuration parameter *parm* which is not valid for a node type of *node-type-code*.

Explanation: The user attempted to modify a database manager configuration parameter which is invalid for the given node type. "<node-type-code>" is defined as follows:

- 1 Database server with local and remote clients
- 2 Client
- 3 Database server with local clients
- 4 Partitioned Database Server with local and remote clients
- 5 Satellite Database Server with local clients

The requested change is not made.

User response: Resubmit the request with a valid parameter for the given nodetype.

SQL5130N The value specified for the configuration parameter *parameter* is not in the valid range of *start-of-range* to *end-of-range*.

Explanation: The request is not done because the value of *parameter* is not within the valid range.

User response: Ensure that the value specified for *parameter* is within the valid range, then try the request again.

SQL5131N The value specified for the configuration parameter *parameter* is not in the valid range. The valid range is "-1", or from *start-of-range* to *end-of-range*.

Explanation: The request is not done because the value of *parameter* is not within the valid range.

User response: Ensure that the value specified for *parameter* is within the valid range, then try the request again.

SQL5132N The configuration parameter *parameter* is null or too long. The maximum length is *maximum-length*.

Explanation: The configuration parameter is not set or too long.

User response: Change the value of the configuration parameter to within the maximum length given.

SQL5133N The value *value* for configuration parameter *parm* is invalid. The valid set of values is *value-list*.

Explanation: *value* was the value specified for the configuration parameter *parm*. This value is not one of the allowable values shown in the *value_list*.

Consult the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) for the meanings of these values.

User response: Change the value of the configuration parameter to one of the values shown in the valid list.

SQL5134N The configuration parameter *tpname* contains invalid characters.

Explanation: One or more characters in the *tpname* is not in the valid range. The characters in the *tpname* must be one of the following:

- A - Z
- a - z
- 0 - 9
- \$
- #
- @
- . (period)

User response: Change the *tpname* and retry the command or function call.

SQL5135N The settings of the *maxlocks* and *maxappls* configuration parameters do not use all of the locklist space.

Explanation: The number of active processes (*maxappls*) times the maximum percentage of lock list space for each application (*maxlocks*) must be greater

than or equal to 100. That is:
 $\text{maxappls} * \text{maxlocks} \geq 100$

This ensures that all of the allocated locklist space can be used.

User response: Increase the setting for *maxappls*, *maxlocks*, or both.

SQL5136N The entry in the database manager configuration file for the default database path (*dftdbpath*) is invalid.

Explanation: An invalid value was specified by *dftdbpath*. The rules for the default database path on UNIX-based systems are:

1. the path must follow the operating system's naming conventions
2. the path must exist
3. the path must be less than or equal to 215 characters

The rules for other platforms are:

1. the path must be a drive letter
2. the drive must exist

User response: Change the *dftdbpath* and retry the command or function call.

SQL5137N The entry in the database manager configuration file for the diagnostic directory path (*diagpath*) is invalid.

Explanation: There are a number of reasons why the specified diagnostic directory path might be invalid:

- The specified path does not follow the supported operating system naming convention.
- The path does not exist.
- The path was set to the same path as the alternate diagnostic path.
- The path provided is read-only.

User response: Change the *diagpath* and retry the command or function call.

SQL5140N The entry in the database manager configuration parameter "authentication" must be one of SERVER, CLIENT, DCE, KERBEROS, SERVER_ENCRYPT, DCE_SERVER_ENCRYPT, or KRB_SERVER_ENCRYPT.

Explanation: The allowed values for the configuration parameter "authentication" are:

- SERVER = 0
- CLIENT = 1
- DCE = 3
- SERVER_ENCRYPT = 4

- DCE_SERVER_ENCRYPT = 5
- KERBEROS = 7
- KRB_SERVER_ENCRYPT = 8

The requested change is not made.

User response: Resubmit the command with a valid value for "authentication".

SQL5141N The configuration parameter *avg_appls* is out of range. The valid range is from 1 to the value of *maxappls*.

Explanation: The allowable range for *avg_appls* is from 1 to the value of *maxappls*.

The requested change is not made.

User response: One or more of the following:

- Change the value of *avg_appls* to a value in the valid range.
- Increase the value of *maxappls* to a higher value, then set *avg_appls* again.

SQL5142N The configuration parameter *agentpri* is not in the valid range.

Explanation: The valid values for *agentpri* are -1, or a three digit number of which the first digit is a priority class ranging from 2 to 4 and the last two digits are a priority level within the class in the range of 00 to 31. The priority class is defined as follows:

- | | |
|---|------------------|
| 2 | REGULAR |
| 3 | TIMECRITICAL |
| 4 | FOREGROUNDSERVER |

For example, the number 304 would correspond to a priority class of 3 (TIMECRITICAL), with a priority level of 4.

User response: Change the value of the configuration parameter to a value within the valid range.

SQL5144W The parameter update took effect but self tuning of the automatic parameters will not occur until the database configuration parameter *SELF_TUNING_MEM* is set to ON.

Explanation: Self tuning of the AUTOMATIC memory parameters is not active when *SELF_TUNING_MEM* is set to OFF.

User response: Update the database configuration parameter *SELF_TUNING_MEM* to ON to enable self tuning of the AUTOMATIC memory parameters.

SQL5145W The parameter update took effect however tuning of the AUTOMATIC memory parameters was deactivated because an insufficient number of parameters or buffer pools are set to AUTOMATIC.

Explanation: Self tuning of the AUTOMATIC memory parameters is active when 2 or more tunable parameters or buffer pools are set to AUTOMATIC and *SELF_TUNING_MEM* is ON. Self tuning was active but the configuration update caused its deactivation.

User response: Self tuning of the AUTOMATIC memory parameters will resume when one or more tunable parameters or buffer pools are set to AUTOMATIC.

SQL5146W *Parameter_1* must be set to *Parameter_3* when *Parameter_2* is *Parameter_3*. *Parameter_1* has been set to *Parameter_3*.

Explanation: If *Parameter_2* is AUTOMATIC then *Parameter_1* must be set to AUTOMATIC as well. To this end, *Parameter_1* was set to AUTOMATIC.

User response: *Parameter_1* was set to AUTOMATIC by DB2. To set this parameter to a different value, first set *Parameter_2* to a value and then set *Parameter_1* to a value using the MANUAL option of the db2 update database configuration command.

SQL5147N *Parameter_1* cannot be set to MANUAL if *Parameter_2* is AUTOMATIC.

Explanation: If *Parameter_2* is AUTOMATIC then *Parameter_1* needs to be AUTOMATIC as well.

User response: To set *Parameter_1* to another value, *Parameter_2* must be set to a value other than AUTOMATIC first.

SQL5148W The database configuration parameter *config_param* was successfully updated to AUTOMATIC but self tuning of *config_param* will not take effect until the database manager parameter *SHEAPTHRES* is set to 0.

Explanation: Self tuning of the database configuration parameter *config_param* is only allowed when the database manager configuration parameter *SHEAPTHRES* is set to 0.

User response: If you wish to enable self tuning of the database configuration parameter *config_param* set the database manager configuration parameter *SHEAPTHRES* to 0.

SQL5150N The value specified for the configuration parameter *parameter* is less than the minimum allowable value of *minimum-value*.

Explanation: The request is not completed because the value given for *parameter* is too low. *parameter* may not be less than *minimum value*

User response: Ensure that the value specified for *parameter* is within the valid range, then try the request again.

SQL5151N The value specified for the configuration parameter *parameter* is less than the minimum allowable value of *minimum-value* and is not -1.

Explanation: The request is not completed because the value given for *parameter* is invalid. Except for an allowable value of -1, *parameter* may not be less than *minimum value*.

User response: Ensure that the value specified for *parameter* is within the valid range, then try the request again.

SQL5152N The value specified for the configuration parameter *parameter* is greater than the maximum allowable value of *maximum-value*.

Explanation: The request is not completed because the value given for *parameter* is too high. *parameter* may not be greater than *maximum value*

User response: Ensure that the value specified for *parameter* is within the valid range, then try the request again.

SQL5153N The update cannot be completed because the following relationship would be violated: *condition*.

Explanation: A valid configuration file must maintain the following relationship:

condition.

The update request could not be completed because the resulting configuration would violate that relationship.

User response: Resubmit the request, ensuring that the relationship is satisfied.

SQL5154N The requested combination of configuration values for "authentication" and *parameter* is not allowed. Reason code = *reason-code*.

Explanation: The explanation corresponding to the reason code is:

1. The database manager configuration parameter "authentication" must have the value "CLIENT" if the value of *parameter* is non-default.
2. Unable to update the database manager configuration parameter AUTHENTICATION or SRVCON_AUTH to GSSPLUGIN or GSS_SERVER_ENCRYPT before the database manager configuration parameter *parameter* is set.
3. Unable to update the database manager configuration parameter AUTHENTICATION or SRVCON_AUTH to KERBEROS or KRB_SERVER_ENCRYPT before the database manager configuration parameter *parameter* is set.

The requested change is not made.

User response: The user response corresponding to the reason code is:

1. Resubmit the command with a valid combination of configuration parameter values.
2. Set the database manager configuration parameter *parameter* and then resubmit the statement.
3. Set the database manager configuration parameter *parameter* and then re submit the statement.

SQL5155W The update completed successfully. The current value of SORTHEAP may adversely affect performance.

Explanation: The value of SORTHEAP is currently greater than half the value of the sort threshold. The sort threshold is the value of the database manager configuration parameter SHEAPTHRES or, if SHEAPTHRES is set to 0, it is the value of the database configuration parameter SHEAPTHRES_SHR. This may cause performance to be less than optimal.

User response: Increase the value of the sort threshold and/or decrease the value of SORTHEAP so that the sort threshold is at least twice as large as SORTHEAP.

A larger ratio is desirable in most cases. See the *Administration Guide* for recommendations on configuration parameter tuning.

SQL5156N The value of the database manager configuration parameter "trust_allclnts" must be one of NO, YES, or DRDAONLY.

Explanation: The allowed values for the configuration parameter "trust_allclnts" are:

- NO = 0
- YES = 1
- DRDAONLY = 2

The requested change is not made.

User response: Resubmit the command with a valid value for "trust_allclnts".

SQL5160N Updates to *parameter* are currently disallowed. An operation is currently pending for this parameter. All applications must disconnect from the database and the database must be reactivated before new updates to this parameter can be applied.

Explanation: In a cluster environment, this database configuration parameter can have only one pending operation. Upon database reactivation, cluster resources are updated to ensure consistency between the cluster manager and the database.

User response: To allow another update to the database configuration parameter, ensure that all applications disconnect from the database and issue a DB2 CONNECT TO command. If the database was explicitly activated, deactivate and reactivate it.

SQL5161N Updates to *parameter* are disallowed until the next DB2START command.

Explanation: In a cluster environment, an update to the database manager configuration parameter can be performed when the previous resource has been deleted. Cluster resources are deleted when the database manager is restarted in order to maintain consistency.

User response: To allow updates to the database manager configuration parameter issue DB2STOP and DB2START on the server.

SQL5162N The db2dsdriver.cfg configuration file contains the parameter *parameter1*, which has the same value as the parameter *parameter2*, but these parameters cannot have the same value.

Explanation: The db2dsdriver.cfg configuration file contains database information, and is used by the following drivers and clients:

- IBM Data Server Driver for ODBC and CLI
- IBM Data Server Driver Package
- For DB2 Version 9.7: for CLI and open source applications, the IBM Data Server Client and IBM Data Server Runtime Client

The information in the db2dsdriver.cfg file is similar to the information that is in the system database directory on an IBM Data Server Client or IBM Data Server Runtime Client.

The client driver configuration file cannot contain the same value for parameters. If true is specified for one parameter, false must be specified for the other.

User response:

1. Change the value of one of the parameters in the db2dsdriver.cfg file so that the two parameters do not have the same value.
2. Stop the application process and start it again for the new db2dsdriver.cfg file settings to take effect.

SQL5163N A required configuration parameter *parameter* is missing from the db2dsdriver.cfg configuration file.

Explanation: The db2dsdriver.cfg configuration file contains database information, and is used by the following drivers and clients:

- IBM Data Server Driver for ODBC and CLI
- IBM Data Server Driver Package
- For DB2 Version 9.7: for CLI and open source applications, the IBM Data Server Client and IBM Data Server Runtime Client

The information in the db2dsdriver.cfg file is similar to the information that is in the system database directory on an IBM Data Server Client or IBM Data Server Runtime Client.

The client driver configuration file must contain all required parameters.

User response:

1. Add the required configuration parameter to the db2dsdriver.cfg configuration file.
2. Stop the application process and start it again for the new db2dsdriver.cfg file settings to take effect.

SQL5164N The db2dsdriver.cfg configuration file contains a configuration group *group* that requires at least one parameter, but no parameters are present.

Explanation: The db2dsdriver.cfg configuration file contains database information, and is used by the following drivers and clients:

- IBM Data Server Driver for ODBC and CLI
- IBM Data Server Driver Package
- For DB2 Version 9.7: for CLI and open source applications, the IBM Data Server Client and IBM Data Server Runtime Client

The information in the db2dsdriver.cfg file is similar to the information that is in the system database directory on an IBM Data Server Client or IBM Data Server Runtime Client.

User response:

1. Add parameters to the configuration group in the db2dsdriver.cfg configuration file.
2. Stop the application process and start it again for the new db2dsdriver.cfg file settings to take effect.

SQL5165N The value *value* indicated by the database configuration parameter *parameter* is not valid. Reason code=*reason-code*

Explanation: The update of the indicated database configuration parameter failed. The explanation corresponding to the reason code is:

1

The *hadr_target_list* is invalid for one of the following reasons:

- The host entry is longer than 255 characters.
- The service entry is longer than 40 characters.
- The host entry contains invalid characters. Host entries can contain either alphanumerics, dashes, and underscores, or they can be in a numeric IPv4 or IPv6 address format.

2

More than three entries were specified. The maximum number of host:port pairs for *hadr_target_list* is three.

4

The entries contained duplicate host:port pairs.

User response: The user response corresponding to the reason code is:

1

Update the *hadr_target_list* configuration parameter using a string with a valid length or set of characters. Check the db2diag.log for more details.

2

Update the *hadr_target_list* configuration parameter specifying a maximum of three host:port pairs.

4

Update the *hadr_target_list* configuration parameter using unique host:port combinations.

SQL5180N DB2 is unable to read the federation configuration file *file-name*.

Explanation: The federated configuration file could not be found, or it could not be opened for reading.

User response: Specify the federation configuration file in the DB2_DJ_INI registry variable. Be sure that the file exists and is readable. Ensure a fully qualified path is specified for the location of the file.

SQL5181N The format of line *line-number* in the federation configuration file *file-name* is invalid.

Explanation: The specified line is not in the correct format. Entries must follow the format <evname> = <value>, where <evname> is the name of the environment variable and <value> is the corresponding value.

The entries should comply with the following restrictions:

- The environment variable name has a maximum length of 255 bytes.
- The environment variable value has a maximum length of 765 bytes.
- The maximum length of any line in the file is 1021 bytes. Data beyond this length will be ignored.
- If the environment variable value specifies a file or directory name, then the name should be fully qualified and should not contain any of the following:
 - Filename meta characters such as ~ (tilde).
 - Environment variables such as \$HOME.

User response: Put the specified line in the format described in the preceding paragraph.

SQL5182N A required environment variable, *variable-name*, has not been set.

Explanation: In the federated configuration file db2dj.ini, the environment variable *variable-name* is unlisted, or it is listed but has no value.

User response: Refer to the federation documentation for information about updating the federated configuration file.

SQL5185N Pass-through to *server-type* data sources is not supported.

Explanation: The Pass-Through facility cannot be used to access *server-type* data sources.

User response: None required.

sqlcode: -5185

sqlstate: 428EV

SQL5186N Configuring the DB2 environment failed because the specified DB2 environment variable, DB2 registry variable, or DB2 configuration parameter is discontinued. Variable or parameter name: *variable-or-parameter-name*

Explanation: This message is returned when an attempt is made to configure the DB2 environment by setting a DB2 environment variable, DB2 registry variable, DB2 database manager configuration

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parameter, or DB2 database configuration parameter that has been discontinued.

User response:

1. Determine how to accomplish the same configuration objectives using other variables or parameters by reviewing the related information in the DB2 Information Center.
2. Update automated scripts and applications to use different variables or parameters to accomplish the same configuration objectives.

SQL5187N The *operation-type* operation is not allowed for procedure *procedure-name* because a connection procedure with the same name is defined for the database.

Explanation: Operations are restricted on any procedure with the same name as the connect procedure defined for a database using the database configuration parameter CONNECT_PROC. The connect procedure itself cannot be altered or dropped directly or as a result of CREATE OR REPLACE operation. A new procedure with the same name cannot be created, even if it has a different procedure signature.

User response: If you are creating a new procedure, use a different name for the procedure name or a different schema. If the connect procedure that is currently in use needs to be altered or dropped, the value of CONNECT_PROC database configuration parameter must be changed to another procedure name or the empty string.

sqlcode: -5187

sqlstate: 429C8

SQL5188N The statement failed because object *name* of type *access-control-type* is marked invalid.

Explanation: The SQL statement could not be run as it required row or column access control be applied and either a column mask or row permission is currently marked invalid.

The statement cannot be processed.

User response: A user with SECADM authority must either:

- drop the column mask or row permission then optionally recreate it,
- issue a CREATE or REPLACE statement to recreate the invalid object.

sqlcode: -5188

sqlstate: 560D0

SQL5189N The alternate diagnostic directory path was not set because the specified path is invalid: *alternate-diagpath*

Explanation: You specify an alternate diagnostic directory path with the alt_diagpath configuration parameter, so that diagnostic logging can continue even if the primary diagnostic path specified by the diagpath configuration parameter cannot be used. The alternate diagnostic path is switched to when the primary path is not available; logging resumes in the primary diagnostic path once that path is available again.

There are a number of reasons why the specified alternate diagnostic directory path might be invalid:

- The path does not exist.
- The path was set to the same path as the primary diagnostic path.
- The specified path does not follow the supported operating system naming convention.
- The path provided is read-only.

User response: Verify that the alternate diagnostic directory path you want to use is available and set the path. For greater resiliency, the diagpath and alt_diagpath configuration parameters should always use different file systems.

SQL5190I The primary diagnostic directory path and the alternate diagnostic directory path use the same file system.

Explanation: You specify an alternate diagnostic directory path with the alt_diagpath configuration parameter, so that diagnostic logging can continue even if the primary diagnostic directory path specified by the diagpath configuration parameter cannot be used.

To avoid a failure scenario where both diagnostic directory paths are affected by a single file system problem, specify primary and alternate diagnostic directory paths that point to different file systems.

User response: The parameter was set successfully, but you can improve logging resiliency further by using different file systems for the diagpath and alt_diagpath configuration parameters.

SQL5191W The target of the data change operation is a table *table-name*, which includes a period *period-name*. The operation caused an adjustment to a recorded time value for the period.

Explanation: Table *table-name* is a system-period temporal table. The table includes a period *period-name*. The requested data change operation was performed and resulted in an adjustment to a recorded time value for the period. This can occur for one of the following reasons:

- Two transactions are accessing the same row. The transaction that started first has a statement that is updating or deleting the row after a statement in the second transaction has already changed that row. This results in the timestamp value in the row begin column being the start time of the second transaction. Such a timestamp value is later than the statement in the first transaction can use.
- Data has been loaded into the system-period temporal table with values for the row begin column that override the generated values. The row begin column value that was loaded is in the future relative to the timestamp that the executing transaction would use.

For an update operation, the adjustment can affect both the begin and end columns for the period. For a delete operation, the adjustment only affects the end column for the period.

The statement was processed with an adjustment to the recorded time for the period.

User response: If you did not want the adjustment, issue a rollback and retry the transaction. If data has been loaded into the system-period temporal table with values for the row begin column that override the generated values, clean the data such that the row-begin time values are less than or equal to the value of CURRENT_TIMESTAMP. Otherwise, no action is required.

The *system_period_adj* configuration parameter can be set to block the adjustment of the affected values.

sqlcode: +5191

sqlstate: 01695

SQL5192W A call to ADMIN_SET_INTRA_PARALLEL fails because the application is assigned to a workload that has a value assigned to MAXIMUM DEGREE. Application name: *application-name*

Explanation: The value for the degree of intra-partition parallelism assigned by the MAXIMUM DEGREE workload attribute will override the value assigned by a call to ADMIN_SET_INTRA_PARALLEL.

User response: Avoid trying to control the degree of intra-partition parallelism from both the workload and within the application. Determine the best approach and use only one of them.

SQL5193N The current session user does not have usage privilege on any enabled workloads.

Explanation: The current session user does not have usage privilege on any enabled workloads. All

connections to a DB2 database must be associated with a workload. In order for a connection to be associated with a workload, the connection attributes must match the attributes for the workload, the workload must be enabled, and the session user must have usage privilege on the workload.

User response: If there are user defined workloads in the database, perform the following steps:

1. Determine which workload the connection should be mapped to by examining the attributes of the connection and comparing them with the attributes of the workload definitions.
2. Verify that the workload the connection should be associated with is enabled, and that the current session user has usage privilege on the workload.

If there are no user defined workloads in the database, perform the following steps:

1. Enable the default user workload, which is named SYSDEFAULTUSERWORKLOAD.
2. Grant usage privilege on this workload to the current session user.

sqlcode: -5193

sqlstate: 42524

SQL5194N The driver connection failed because the client is unable to obtain a connection to InfoSphere Optim Configuration Manager. Specified httpControllerURL *token1*. Protocol error code: *token2*

Explanation: The driver connection to the data server failed because the client cannot connect to InfoSphere Optim Configuration Manager to obtain initial driver properties.

User response: In the driver db2dsdriver.cfg configuration file, an InfoSphere Optim Configuration Manager controller can be specified with the httpControllerURL keyword of the connectionSupervisorProperties global parameter.

- Ensure that the InfoSphere Optim Configuration Manager controller is running.
- Ensure that the httpControllerURL value is correct.
- Ensure that the controller port is not blocked by a firewall.
- If the driver is not meant to be controlled by InfoSphere Optim Configuration Manager, remove the httpControllerURL keyword from the db2dsdriver.cfg configuration file.

sqlcode: -5194

sqlstate: 08001

Chapter 12. SQL5500 - SQL5999

SQL5500N DB2 is unable to read the vendor configuration file *file-name*.

Explanation: The vendor configuration file could not be found, or it could not be opened for reading.

User response: Specify the vendor configuration file in the DB2_VENDOR_INI registry variable. Ensure that the file exists and that the file permissions enable it to be opened by DB2. Ensure a fully qualified path is specified for the location of the file.

SQL5501N The format of line *line-number* in the vendor configuration file *file-name* is invalid.

Explanation: The specified line is not in the correct format. Entries must follow the format <evname> = <value>, where <evname> is the name of the environment variable and <value> is the corresponding value.

The entries should comply with the following restrictions:

- The environment variable name has a maximum length of 255 bytes.
- The environment variable value has a maximum length of 765 bytes.
- The maximum length of any line in the file is 1021 bytes. Data beyond this length will be ignored.
- If the environment variable value specifies a file or directory name, then the name should be fully qualified and should not contain any of the following:
 - Filename meta characters such as ~ (tilde).
 - Environment variables such as \$HOME.

User response: Ensure the specified line matches the previously described format.

Chapter 13. SQL6000 - SQL6499

SQL6000N DB2 Conversion of QMF Data.

Explanation: This is the normal termination message.

User response: No action is required.

SQL6001N The abend is not in Database Manager.

Explanation: The user executed a module of the SQLQMF facility directly rather than using the SQLQMF facility command.

The command cannot be processed.

User response: Use the provided SQLQMF facility command.

SQL6002N Both the program name and CS:IP parameters must be specified.

Explanation: Communications Manager encountered an error during the download of the host file.

The command cannot be processed.

User response: Review the Communications Manager message log.

SQL6003N The CS:IP parameter is not valid.

Explanation: The computed row size (the sum of the computed column sizes) exceeds the maximum of 7000 bytes.

The command cannot be processed.

User response: Return to your QMF host session and run a query with fewer data columns selected. EXPORT the data again and then try the SQLQMF facility command again.

SQL6004N *function* returned the unexpected return code *code*.

Explanation: An unexpected error occurred during processing. The Communications Manager or DB2 may not be installed or configured correctly.

The command cannot be processed.

User response: Ensure that Communications Manager has been installed and the appropriate host communications session is active. Retry the command after checking for other errors. If the problem persists, contact your Communications Manager system administrator.

SQL6005N An error occurred while reading the downloaded QMF file.

Explanation: One of the following conditions was encountered:

- The file could not be opened.
- The end of file was encountered prematurely.
- There was an I/O error while reading the file.

The command cannot be processed.

User response: Review the Communications Manager message log. Retry the command. If the error continues, contact your Communications Manager system administrator.

SQL6006N An error occurred while writing to an output file.

Explanation: One of the following conditions was encountered:

- Not enough space exists on the C: drive to write the data.
- An output file could not be opened.
- An I/O error occurred while writing the file.
- An I/O error occurred while closing the file.

Federated system users: there isn't enough space to hold the db2djlink output. Additional space is required for the temporary files that db2djlink creates and uses.

The command cannot be processed.

User response: Check for sufficient disk space on the C: drive. Retry the command.

Federated system users: increase the size of the file system where the federated server is installed. To estimate the amount of free space db2djlink needs on an AIX operating system, enter:

```
ls -e /  
install_directory/lib/libdb2euni.a
```

This command returns the number of bytes used by the listed file. Multiply that number by 3. The result is an estimate of how much free space is needed on the file system. Increase the size of the file system as necessary and retry the command.

SQL6007N The decimal number in row *row*, column *column* cannot be converted to ASCII.

Explanation: The indicated decimal field could not be converted.

The command cannot be processed.

User response: Verify that the host column data type

SQL6008N • SQL6016N

is DECIMAL. Retry the QMF EXPORT and then try the SQLQMF facility command again. If the error continues, rerun the QMF query without the named column.

SQL6008N The file specified in the command is not in QMF data format.

Explanation: The file specified by the *filename* parameter is not in the expected QMF format.

The command cannot be processed.

User response: Verify that you have typed the name correctly. If correct, return to your QMF host session and issue the command EXPORT DATA TO *filename* again. Be sure to export using the QMF data format.

SQL6009N The file exported from QMF contains Column *name* with a width *width* that is too long. The maximum column width is 4000 bytes.

Explanation: The downloaded QMF file has a column width greater than 4000 bytes.

The command cannot be processed.

User response: Return to your QMF host session, rerun the QMF query without the named column, and export the data again. Then run the SQLQMF facility command again.

SQL6010N The downloaded QMF file has more than 255 data columns.

Explanation: The file being processed has more than 255 data columns.

The command cannot be processed.

User response: Return to your QMF host session and rerun a query, selecting 255 or fewer data columns. EXPORT the data again and then run the SQLQMF facility command again.

SQL6011N The data type *number* (*type-text*) of column *name* (positioned at column *number*) cannot be processed.

Explanation: The QMF file contains a column with data type that is not supported.

The SQLQMF facility does NOT support the following data types:

- LONG VARCHAR
- LONG VARGRAPHIC.

Only the SQLQMF facility SQLQMFDB supports graphic data types.

The command cannot be processed.

User response: Return to your QMF host session and

rerun the query without selecting the named column. Then run the SQLQMF facility command again.

SQL6012N Too many parameters were specified for the command.

Explanation: Too many parameters were specified with the command.

The command cannot be processed.

User response: Retry the command with the correct number of parameters.

SQL6013N Host filename *host-filename* is either too long or does not begin with an alphabetic character.

Explanation: The *host filename* does not begin with an alphabetic character; or, if the host is a VM System, the *host filename*, *filetype*, or *filemode* are too long.

The command cannot be processed.

User response: Retry the command with a correct *host filename* syntax.

SQL6014N Invalid command syntax, colon (':') should follow a keyword.

Explanation: Keyword parameters with operands require the keyword to be immediately followed by a ":" character and then the operand.

The command cannot be processed.

User response: Verify the command syntax and retry the command.

SQL6015N The keyword is not recognized.

Explanation: The keyword parameter indicator (" / ") was followed by a value that is not a keyword.

The command cannot be processed.

User response: Retry the command using a different keyword value.

SQL6016N Too many operands for the System/370 filename *name*.

Explanation: If the host is a VM System, the host file name contains more than three space-separate tokens. If the host is an MVS System, the host filename contains embedded blanks.

The command cannot be processed.

User response: Retry the command using a different keyword value.

SQL6017N More information may be contained in the Import message log *name*.

Explanation: The database IMPORT operation terminated with warning or error messages.

The command has left its work files allocated.

User response: Use the message preceding this message and the IMPORT message log, if it exists, to decide if the IMPORT was successful and to determine corrective action. If the import was successful, erase the DEL, CRE, COL, and IML files.

SQL6018N No S/370 filename was specified.

Explanation: The S/370 filename is a required parameter.

The command cannot be processed.

User response: Retry the command with a host filename.

SQL6019N Communications short session ID *ID* is either too long or is invalid.

Explanation: The value provided for the communications short session ID is either longer than one byte or is not alphabetic.

The command cannot be processed.

User response: Retry the command with a valid value.

SQL6020N An import option was specified without also providing a database name.

Explanation: No database name was provided and an import option was specified.

The command has terminated.

User response: Retry the command and include a database name.

SQL6021N Data was successfully imported.

Explanation: This is a normal ending message when the SQLQMF facility imports data to a database.

User response: No action is required.

SQL6022N System database directory is not shared by all nodes.

Explanation: All nodes should be accessing one physical copy of the system database directory.

The command cannot be processed.

User response: Ensure that all nodes are accessing the system database directory that resides in the sqllib directory, then try the request again.

SQL6023N The user does not have the authority to run the Get Table Partitioning Information utility on table *name*.

Explanation: The user attempted to retrieve partitioning information on the specified table without the appropriate authorization (either the DBADM authority or the CONTROL or SELECT privilege on the table).

The utility stops processing.

User response: Do not attempt to run the Get Table Partitioning Information utility without appropriate authorization. Contact your security administrator for assistance with authorization.

SQL6024C Table or index *name* is not defined on node *node-number*.

Explanation: The application is connected to node *node-number*, and the table or index *name* is not defined.

The cause is one of the following:

- The node to which the application is connected is not a member of the nodegroup in which the table or index was created.
- The node is not in use by that nodegroup.

The utility stops processing.

User response: Connect the application to a node on which the table or index is defined. Determine the nodegroup in which the table was created and obtain the list of nodes in the nodegroup by selecting the appropriate rows from the NODEGROUPDEF catalog view. The nodes whose IN_USE value is set to Y are the ones on which the table or index is defined.

SQL6025N Database backed up on node *node1* cannot be restored to node *node2*.

Explanation: The backup image used for the restore is a backup of the database on a different node.

User response: Ensure that you have the correct backup image for the node, then try the request again.

SQL6026N Database with catalog node *node1* cannot be restored to a database with catalog node *node2*.

Explanation: In an environment that is not a DB2 pureCluster environment, the catalog node can exist on only one node and there is a discrepancy between the backup image and the node being restored to. This can occur in the following cases:

- The backup image specified catalog node *node1* and the restore was attempted on an existing database whose catalog node is node *node2*.

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- The restore was attempted to a new database and the catalog node has not been restored first. (Restore the catalog node first to create the database on all nodes).

User response: Verify that the correct backup image is being restored.

If you are restoring to an existing database and want to change the catalog node to *node2*, the existing database must be dropped first.

If you are restoring to a new database, restore the catalog node *node1* first.

SQL6027N The path *path* for the database directory is not valid.

Explanation: The path *path* specified for either the CREATE DATABASE or the CATALOG DATABASE command starts with the character '.' or contains the character string './'.

The command cannot be processed.

User response: Ensure that the specified path is a fully qualified path, does not start with the character '.', and does not contain the character string './'. Then try the request again.

SQL6028N Catalog database failed because database *dbname* was not found in the local database directory.

Explanation: When cataloguing a local database into the system database directory, the command/API has to be issued from a node on the server where the database resides.

User response: Reissue the command/API from a node where the database resides.

SQL6030N START or STOP DATABASE MANAGER failed. Reason code *reason-code*.

Explanation: The reason code indicates the error. The statement cannot be processed.

1

Cannot access the sqllib directory of the instance.

2

The full path name added to the profile filename is too long.

3

Cannot open the profile file.

4

This message is returned with reason code 4 for the following reasons:

- The specified value for DBPARTITIONNUM is not defined in the db2nodes.cfg file in the sqllib directory.
- The specified value for DBPARTITIONNUM or MEMBER is outside of the valid range. The valid range is: 0 - 999.

5

The nodenum parameter must be specified when a command option is specified.

6

The port parameter value is not valid.

7

The new couple hostname/port is not unique.

8

The FORCE option cannot be specified when the QUIESCE option is specified.

9

The hostname and port parameters must be specified when using the ADD DBPARTITIONNUM option.

10

Cannot update the db2nodes.cfg file in the sqllib directory for the ADD DBPARTITIONNUM or RESTART option.

11

The hostname parameter value is not valid.

12

The pointer to the sqledbstrtopt or sqledbstopopt structure is not valid.

13

No port value is defined for your DB2 instance id (/etc/services file on UNIX-based systems).

14

The port value is not in the valid port range defined for your DB2 instance id (/etc/services file on UNIX-based systems).

15

A hostname value has no corresponding port 0 defined in the db2nodes.cfg file in the sqllib directory.

16

The value specified for the command or option parameter is not valid.

17

The DROP option cannot be specified when the NODENUM option is not specified.

18	The value specified for the callerac parameter is not valid.		The identifier does not match the type that is defined in the db2nodes.cfg file in the sqllib directory.
19	Unable to create the UNIX socket directory /tmp/db2_<ver>_<rel> /\$DB2INSTANCE.	34	The value specified for the QUIESCE option is not valid.
20	The node number specified with the ADD DBPARTITIONNUM option already exists in the db2nodes.cfg file or the node has been already been added since the last stop database manager command was issued.	35	The member parameter must be specified when the QUIESCE option is used.
21	The tablespace type specified with the ADD DBPARTITIONNUM option is not valid.	36	You can recover from a failed ADD or DROP operation in the DB2 pureCluster environment using the db2iupdt command with the -fixtopology parameter. This reason code is returned when the db2iupdt command is called with the -fixtopology parameter but the cluster caching facility does not detect any failed ADD or DROP operations. Because there are no topology fixes required, when the db2iupdt utility tried to stop the database, the stop command failed.
22	The tablespace node specified with the ADD DBPARTITIONNUM option is out of range.		
23	The computer name parameter must be specified for the ADD DBPARTITIONNUM option.	37	The transport type of the new member or CF specified does not match the transport type used by existing members and CFs, as defined in the netname field in the db2nodes.cfg file.
24	The user name parameter must be specified for the ADD DBPARTITIONNUM option.	38	Starting a DB2 member failed because of uDAPL configuration problems or uDAPL runtime errors.
25	The computer name is not valid.		
26	The user name is not valid.	User response:	The action corresponding to the reason code is:
27	The password is not valid.	1	Ensure that the \$DB2INSTANCE userid has the required permissions to access the sqllib directory of the instance.
28	The password is expired.	2	Change the profile name to a shorter name so that the total length of the fully qualified path added to the profile name length is smaller than the SQL_PROFILE_SZ defined in the file sqlenv.h.
29	The user account specified is either disabled, expired, or restricted.	3	Ensure that the profile file exists.
31	The cluster interconnect netname parameter is not valid.	4	Call the command again, specifying a value for DBPARTITIONNUM or MEMBER that is in the valid range of 0 - 999. To specify an existing database partition, specify a value for
32	A DB2 database manager call to the cluster manager failed.		
33			

SQL6030N

5	DBPARTITIONNUM that corresponds to a database partition number that is defined in db2nodes.cfg.	17	Ensure that the value specified for the option parameter is within the valid range.
6	Resubmit the command with the nodenum parameter specified.	18	Specify the ADD DBPARTITIONNUM option when you specify the DROP option.
7	Ensure that the port value is between 0 and 999. If a value is not specified, the port value defaults to 0.	19	Ensure that the value specified for the callerac parameter is within the valid range.
8	Ensure that the new couple hostname/port is not already defined in the db2nodes.cfg file in the sqllib directory.	20	Check the permission of the /tmp filesystem to make sure all intermediate directories of /tmp/db2_<ver>_<rel>/ \$DB2INSTANCE can be created.
9	Do not specify the FORCE option when you specify the QUIESCE option.	21	Ensure that the correct node number is being specified. You must stop the database manager to update the db2nodes.cfg file with nodes that have been added to the system since the previous stop database manager command.
10	Ensure that the hostname and the port values are specified when you specify the ADD DBPARTITIONNUM option.	22	Ensure that the value specified for the tablespace type is within the valid range.
11	Ensure that the \$DB2INSTANCE username has write access to the sqllib directory of the instance, that there is sufficient disk space, and the file exists.	23	Ensure that the tablespace node value specified is defined in the db2nodes.cfg and is between 0 and 999.
12	Ensure that the specified hostname is defined on the system.	24	Specify the computer name of the system on which the new node is created using the COMPUTER option.
13	Ensure that the pointer is not NULL and points to the sqledbstrtopt for the sqlepstr() API, or to the sqledbstopopt structure for the sqlepstp() API.	25	Specify a valid domain account user name and password for the new node using the USER and PASSWORD options.
14	Ensure that the services file (/etc/services on UNIX-based systems) contains an entry for your DB2 instance id.	26	Resubmit the command with a valid computer name.
15	Ensure that you only use port values that are specified in the services file (/etc/services file on UNIX-based systems) for your instance.	27	Resubmit the command with a valid user name.
16	Ensure that all the hostname values have a port 0 defined in the db2nodes.cfg file in the sqllib directory including the restart option parameters.	28	Resubmit the command with a valid password.
		29	Change/update the account password and resubmit the command.

31	Resubmit the command with a valid user account.	1.	Identify the uDAPL problems that are preventing the start operation from succeeding, using available diagnostic information in DB2 database logs (such as the db2diag diagnostic log files) and system logs.
32	Ensure that the length of the cluster interconnect netname is not longer than SQL_HOSTNAME_SZ.	2.	Troubleshoot and resolve the source of the uDAPL errors.
33	Correct the problem that caused the cluster manager call to fail and resubmit the command:	3.	Perform the start operation again.
34	<ul style="list-style-type: none"> • Review the db2diag log file for error messages from the cluster manager. • Respond to the cluster manager error messages in the db2diag log file to correct the underlying problem that prevented the cluster manager from removing the path from its configuration. • Resubmit the START or STOP DATABASE MANAGER command. 	SQL6031N Error in the db2nodes.cfg file at line number <i>line</i>. Reason code <i>reason-code</i>.	
35	Ensure that the identifier matches the type defined in the db2nodes.cfg file in the sqllib directory when issuing this command with either the MEMBER or CF option.	Explanation: The statement cannot be processed because of a problem with the db2nodes.cfg file, as indicated by the following reason codes:	
36	Ensure that the value specified for the QUIESCE option is within the valid range.	1	Cannot access the sqllib directory of the instance.
37	Resubmit the command with the member parameter specified.	2	The full path name added to the db2nodes.cfg filename is too long.
38	No action is necessary in order to fix the topology. To view the current topology of the DB2 pureCluster instance, perform the following steps:	3	Cannot open the db2nodes.cfg file in the sqllib directory.
	1. Query the topology of the instance using the following command:	4	A syntax error exists at line <i>line</i> of the db2nodes.cfg file in the sqllib directory.
	db2instance -list	5	The dbpartitionnum value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not valid.
	2. If db2iupdt -fixtopology was issued after an add or drop operation, start the instance using the db2start command.	6	The dbpartitionnum value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is out of sequence.
37	Resubmit the command, specifying a different netname. Ensure that the transport type for the netname specified, as defined in the db2nodes.cfg file, matches the transport type used by existing members and CFs.	7	The dbpartitionnum value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not unique.
38	Respond to reason code 38 by performing the following troubleshooting steps:	8	The port value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not valid.
		9	The hostname/port couple at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not unique.
		10	The hostname at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not valid.

SQL6031N

11	The port value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not defined for your DB2 instance id in the services file (/etc/services on UNIX-based systems).	4	Ensure that the db2nodes.cfg file exists in the sqllib directory and is not empty.
12	The port value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not in the valid port range defined for your DB2 instance id in the services file (/etc/services on UNIX-based systems).	5	Ensure that at least 2 values are defined per line in the db2nodes.cfg file and that the file does not contain blank lines.
13	The hostname value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory has no corresponding port 0.	6	Ensure that the dbpartitionnum value defined in the db2nodes.cfg file is between 0 and 999.
14	A db2nodes.cfg file with more than one entry exists, but the database manager configuration is not MPP.	7	Ensure that all the dbpartitionnum values defined in the db2nodes.cfg file are in ascending order.
15	The computer name at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not valid.	8	Ensure that each dbpartitionnum value defined in the db2nodes.cfg file is unique.
16	The hostname at line <i>line</i> of the db2nodes.cfg file in the sqllib directory conflicts with the value of DB2FCMCOMM registry variable.	9	Ensure that the port value is between 0 and 999.
21	The type value at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not valid.	10	Ensure that the new couple hostname/port is not already defined in the db2nodes.cfg file.
22	The instance defined in the db2nodes.cfg file in the sqllib directory is not a valid DB2 pureCluster instance.	11	Ensure the hostname value defined in db2nodes.cfg at line <i>line</i> is both defined on the system and operational.
31	The cluster interconnect netname at line <i>line</i> of the db2nodes.cfg file in the sqllib directory is not valid.	12	Ensure that the services file (/etc/services on UNIX-based systems) contains an entry for your DB2 instance id.
User response: The action corresponding to the reason code is:		13	Ensure that you only use port values that are specified in the services file (/etc/services file on UNIX-based systems) for your instance.
1	Ensure that the \$DB2INSTANCE userid has the required permissions to access the sqllib directory of the instance.	14	Ensure that the port value 0 has been defined for the corresponding hostname in the db2nodes.cfg file.
2	Make the instance home directory path name shorter.	15	Perform one of the following actions: <ul style="list-style-type: none"> • Remove the db2nodes.cfg file. • Alter the db2nodes.cfg file to contain exactly one entry. • Install Enterprise Server Edition.
3			

- Ensure the computer name defined in db2nodes.cfg at line *line* is both defined on the system and operational.
- 16
- Ensure that the hostname value and the DB2FCMCOMM registry variable are set correctly.
- 21
- Ensure the value is either MEMBER or CF for a DB2 pureCluster instance.
- 22
- Ensure that both MEMBER lines and CF lines are defined in the db2nodes.cfg file.
- 31
- Ensure the cluster interconnect netname value defined in db2nodes.cfg at line *line* is both defined on the system and operational.

SQL6032W Start command processing was attempted on *total-number* node(s). *number-started* node(s) were successfully started. *number-already-started* node(s) were already started. *number-not-started* node(s) could not be started.

Explanation: The database manager did not start successfully on all the nodes. Not all of the data in the database may be accessible. Data on the nodes that started successfully or were already running is accessible.

User response: Check the log file created in the log directory of the sqllib directory for the instance to see which nodes did not start.

SQL6033W Stop command processing was attempted on *total-number* node(s). *number-stopped* node(s) were successfully stopped. *number-already-stopped* node(s) were already stopped. *number-not-stopped* node(s) could not be stopped.

Explanation: The database manager did not stop successfully on all the nodes. The database manager is still active on the nodes that could not be stopped.

User response: Check the log file created in the log directory of the sqllib directory for the instance to see which nodes did not stop.

SQL6034W Database partition *database-partition* is not being used by any databases.

Explanation: During DROP DBPARTITIONNUM VERIFY processing, all databases are scanned to verify that this node does not exist in the database partition

groups of any database, and that no event monitor is defined on this node.

User response: This node can now be removed from the system by issuing the 'db2stop drop dbpartitionnum <db-partition-number>' command.

SQL6035W Database partition *partition-name* is being used by database *database*.

Explanation: During DROP DBPARTITIONNUM VERIFY processing, databases are scanned to verify that this database partition does not exist in the database partition groups of any database, and that no event monitor is defined on this database partition. Database partition *partition-name* is being used by database *database* and cannot be dropped.

User response: You must do the following before dropping the database partition:

1. Redistribute the data to remove it from the database partition using the REDISTRIBUTE DATABASE PARTITION GROUP command. Use the DROP DBPARTITIONNUM option of the ALTER DATABASE PARTITION GROUP statement to drop the database partition from the database partition group. This must be done for all database partition groups in which the database partition to be dropped is a member.
2. Determine if there are any bufferpool size exceptions defined for the database partition by querying SYSCAT.BUFFERPOOLDBPARTITIONS. If rows exist, they can be removed by using the ALTER BUFFERPOOL statement to change the size of the bufferpool on the database partition to match NPAGES for the bufferpool in SYSCAT.BUFFERPOOLS.
3. Drop any event monitors that are defined on the database partition.
4. Issue the 'db2stop drop dbpartitionnum <partition-number>' command to drop the database partition.

SQL6036N START or STOP DATABASE MANAGER command is already in progress.

Explanation: A START DATABASE MANAGER or a STOP DATABASE MANAGER command is already in progress on the system.

User response: Wait for the command in progress to complete, then try the request again.

SQL6037N START or STOP DATABASE MANAGER timeout value was reached.

Explanation: The start_stop_time value defined in the database manager configuration was reached at the node. This value specifies the time, in minutes, in which a node must respond to a Start Database

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Manager, Stop Database Manager or Add Node command.

User response: Do the following:

- Check the administration notification log to see if an error message has been logged for the node which timed out. If an error has not been logged, and timeouts persist, you may need to increase the `start_stop_time` value specified in the database manager configuration file.
- If the timeout occurred during a Start Database Manager command, you should issue a Stop Database Manager command for all nodes which timed out.
- If the timeout occurred during a Stop Database Manager command, you should issue a Stop Database Manager command for all nodes which timed out or for all nodes. Any node which is already stopped will return with a message stating that the node is stopped.

SQL6038N No partitioning key is defined.

Explanation: The user attempted to use the Get Row Partitioning Information utility without specifying a partitioning key.

The utility stops processing.

User response: Ensure that you specify a partitioning key, then try the request again.

SQL6039N Partitioning column *column-number* is currently defined as not nullable.

Explanation: An attempt was made to assign a null value to partitioning column *column-number*, which is not nullable.

The utility stops processing.

User response: Assign a non-null value or change the type of the partitioning column to be nullable.

SQL6040C No FCM buffers are available.

Explanation: No FCM buffer is available.

The statement cannot be processed.

User response: Try the request again.

If the error persists, increase the number of FCM buffers (*fcnum_buffers*) specified in the database manager configuration file, then try the request again.

If `FCM_NUM_BUFFER` is already set to automatic, you should also check the overall memory consumption on your system to determine if other applications are using inappropriate amounts of memory, and preventing the allocation of FCM buffers.

sqlcode: -6040

sqlstate: 57011

SQL6041C No FCM connection entries are available.

Explanation: No FCM connection entry is available. FCM is unable to increase the number of connection entries automatically because the maximum value has been reached.

The statement cannot be processed.

User response: Try the request again after other processes have freed up some of this resource.

sqlcode: -6041

sqlstate: 57011

SQL6042C No FCM message anchors are available.

Explanation: No FCM message anchor is available. FCM is unable to increase the number of message anchors automatically because the maximum value has been reached.

The statement cannot be processed.

User response: Try the request again after other processes have freed up some of this resource.

sqlcode: -6042

sqlstate: 57011

SQL6043C No FCM request blocks are available.

Explanation: No FCM request block is available. FCM is unable to increase the number of request blocks automatically because the maximum value has been reached.

The statement cannot be processed.

User response: Try the request again after other processes have freed up some of this resource.

sqlcode: -6043

sqlstate: 57011

SQL6044N The syntax of the string representation *string* with value of datatype *datatype-value* and length *length* is not correct.

Explanation: The specified string cannot be recognized as the target data type. (The *Application Development Guide* contains information on data types.) Either the syntax is not valid or the value is out of range.

The utility stops processing.

User response: Ensure that the string representation or the data type is correct, then try the request again.

SQL6045N The datatype *datatype-value* of length *datatype-length* is not supported.

Explanation: The data type and data length are not supported for a partitioning key.

The utility stops processing.

User response: See the *Administration Guide* for information about data types. See the *API Reference* for information about the Get Row Partitioning Information API.

SQL6046N Specified DROP NODE action is not valid.

Explanation: The value specified for the action parameter of the DROP NODE command is not valid. Only the verify mode is supported for the DROP NODE command. The parameter must be set to the value SQL_DROPNODE_VERIFY.

The command cannot be processed.

User response: Ensure that the action is set to SQL_DROPNODE_VERIFY, then try the request again.

SQL6047N Database partition group cannot be redistributed because table *name* does not have a partitioning key.

Explanation: At least one table in the single-partition database partition does not have a partitioning key. All tables in the single-partition database must have a partitioning key before the database partition group can be redistributed to a multiple-partition database partition group.

The operation was not performed.

User response: Use the ALTER TABLE statement to specify partitioning keys for tables that do not have one. Then try the request again.

Alternatively, omit the tables that do not have partitioning keys by specifying the EXCLUDE parameter in the REDISTRIBUTE DATABASE PARTITION GROUP command.

SQL6048N A communication error occurred during START or STOP DATABASE MANAGER processing.

Explanation: A TCP/IP communication error occurred while the START or STOP DATABASE MANAGER command was trying to establish connection with all the nodes defined in the sqllib/db2nodes.cfg file including the new node you attempted to add.

This message can also be returned when a password has expired.

User response: Do the following:

- Ensure that the node has the proper authorization defined in the .rhosts or the host.equiv files.

- Ensure that the application is not using more than $(500 + (1995 - 2 * \text{total_number_of_nodes}))$ file descriptors at the same time.
- Ensure all the Enterprise Server Edition environment variables are defined in the profile file.
- Ensure the profile file is written in the Korn Shell script format.
- Ensure that all the host names defined in the db2nodes.cfg file in the sqllib directory are defined on the network and are running.
- Ensure that the DB2FCMCOMM registry variable is set correctly.
- Review the db2diag log files for more information.

SQL6049N The log control file for database *database-name* could not be found on the following database partitions: *database-partition-list*.

Explanation: There are two log control files:

- Primary log control file SQLOGCTL1.LFH
- Secondary log control file SQLOGCTL2.LFH

The secondary log control file is a mirror copy of the primary log control file for use in the event that there is a problem with the primary log control file.

The DB2 database manager could find neither the primary log control file nor the secondary log control file for the specified database in the database directory on the the specified database partitions.

The database was not started.

If "... " is displayed at the end of the database partition list, see the syslog file for the complete list of database partitions.

User response: Either restore the database from a backup on the specified database partitions or re-create the database.

SQL6050N An I/O error occurred while accessing the log control file for database *database-name* on the following database partitions: *database-partition-list*.

Explanation: There are two log control files:

- Primary log control file SQLOGCTL1.LFH
- Secondary log control file SQLOGCTL2.LFH

The secondary log control file is a mirror copy of the primary log control file for use in the event that there is a problem with the primary log control file.

This error was returned because the DB2 database manager could access neither the primary log control file nor the secondary log control file for the specified database on the specified database partitions.

If the database manager can access neither of the log control files, you cannot use the database. 3

If "... " is displayed at the end of the database partition list, see the syslog file for the complete list of database partitions. 4

User response: Either restore the database from a backup on the specified database partitions, or re-create the database. 5

SQL6051N Database *name* is not configured for roll-forward recovery on node(s) *node-list*. 6

Explanation: The specified database is not configured for roll-forward recovery on the specified node(s).

The database is not rolled forward on all nodes.

If "... " is displayed at the end of the node list, see the syslog file for the complete list of nodes. 7

User response: Ensure that recovery is required on the specified node(s), then restore the most recent backup version of the database on these nodes.

The data in the distribution file is not in a valid format.

The database partition number in the partitioning map is not between 0 and 999.

The sum of all the values in the distribution file is greater than 4 294 967 295.

The specified target partition map contains a database partition number that is not defined in SYSCAT.DBPARTITIONGROUPDEF for the specified database partition group.

The specified target partition map is not valid.

User response: Perform the action that corresponds to the reason code:

1

Ensure that the partitioning map file contains only a single value (if the resultant database partition group is a single-partition database partition group) or exactly 32 768 values (if the resultant database partition group is a multipartition database partition group).

2

Ensure that the distribution file contains exactly 32 768 values, one per hash partition.

3

Ensure that the values in the distribution file are integers greater than or equal to 0, and that the sum of all the distribution values is less than or equal to 4 294 967 295.

4

Ensure that the database partition numbers are in the range of greater than or equal to 0 and less than or equal to 999.

5

Ensure that the sum of all the distribution values for the 32 768 partitions is less than or equal to 4 294 967 295.

6

Either issue ALTER DATABASE PARTITION GROUP to add the missing partitions or change the partitioning map file to exclude the partitions not defined in SYSCAT.DBPARTITIONGROUPDEF.

7

SQL6052N Cannot roll forward database *name* because it is not in roll-forward pending state on node(s) *node-list*.

Explanation: The specified database is not in the roll-forward pending state on the specified node(s). This may be because the database has not been restored, or was restored with the WITHOUT ROLLING FORWARD option, or roll-forward recovery is complete on these nodes.

The database is not rolled forward.

If "... " is displayed at the end of the node list, see the syslog file for the complete list of nodes.

User response: Do the following:

1. Ensure that recovery is required on the specified node(s).
2. Restore a backup version of the database on these nodes.
3. Issue the ROLLFORWARD DATABASE command.

SQL6053N Error exists in file *file*. Reason code = *reason-code*.

Explanation: There is an error in the specified file as indicated by the reason code:

1

The number of values in the partitioning map file is not 1 or 32 768.

2

The number of values in the distribution file is not 32 768.

- If the database was created or migrated with the DB2_PMAP_COMPATIBILITY registry variable set to "ON", the target partition map needs to contain eight identical segments of 4096 values.
-
- SQL6054N** The archive file *name* is not a valid log file for the database *name* on node *node-number*. (5)
- Explanation:** An archive log file exists in the log directory on the specified node, but it is not valid.
- The ROLLFORWARD DATABASE processing stops. (7)
- User response:** To determine the correct archive log file, issue the ROLLFORWARD DATABASE command with the QUERY STATUS option. Move the correct archive log file to the database log directory or, if the database is in a consistent state, change the log path to point to the correct archive file and issue the ROLLFORWARD DATABASE command again. (8)
-
- SQL6055N** The archive file *name* does not belong to database *name* on node *node-number*. (9)
- Explanation:** An archive log file in the log directory on the specified node does not belong to the specified database.
- The ROLLFORWARD DATABASE processing stops.
- User response:** To determine the correct archive log file, issue the ROLLFORWARD DATABASE command with the QUERY STATUS option. Move the correct archive log file to the database log directory or, if the database is in a consistent state, change the log path to point to the correct archive file and issue the ROLLFORWARD DATABASE command again. (10)
-
- SQL6056N** Database partition group cannot be redistributed. Reason code = *reason-code*. (11)
- Explanation:** The operation cannot be executed. The reason code indicates the error.
- (1) The database partition group specification is not legal. The resulting database partition group after redistribution would not contain any database partitions. (12)
- (2) A previous redistribution operation did not complete successfully.
- (3) A redistribution operation is already in progress. (13)
- (4)
- There is no previously aborted redistribution command to CONTINUE or ABORT.
- No data redistribution is performed because the data in the database partition group is already distributed as specified.
- The REDISTRIBUTE DATABASE PARTITION GROUP command was not submitted from the catalog database partition.
- The REDISTRIBUTE DATABASE PARTITION GROUP command is not available nor applicable in this non-partitioned version of the product.
- Redistribution is not allowed if there are user temporary table spaces in the database partition group with existing created temporary tables or declared temporary tables.
- The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are table spaces in the database partition group with tables not in FULL access mode (ACCESS_MODE='F' in SYSCAT.TABLES).
- The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are table spaces in the database partition group with tables having attached partition (SYSCAT.DATAPARTITIONS.STATUS = 'A').
- The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are table spaces in the database partition group with tables having detached partitions and there are dependent tables that need to be incrementally maintained with respect to these detached partitions (SYSCAT.DATAPARTITIONS.STATUS = 'D').
- The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are table spaces in the database partition group with tables having detached partitions pending index cleanup (SYSCAT.DATAPARTITIONS.STATUS = 'I').
- The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are

SQL6056N

table spaces in the database partition group with tables in the set integrity pending state (SYSCAT.TABLES.STATUS='C').

(14)

The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are MDC tables in the database partition group which contain rolled out blocks that are pending cleanup.

(15)

The NOT ROLLFORWARD RECOVERABLE keywords have not been specified in the REDISTRIBUTE DATABASE PARTITION GROUP command.

(16)

The REDISTRIBUTE DATABASE PARTITION GROUP command is not allowed if there are table spaces in the database partition group with tables having logically detached partitions (SYSCAT.DATAPARTITIONS.STATUS = 'L').

This reason code is returned when the ALTER TABLE statement was previously executed, specifying the DETACH PARTITION clause, against one or more of the tables in this database partition group and that asynchronous detach operation is not complete.

User response: The action corresponding to the reason code is:

(1)

Do not drop all the database partitions of the database partition group during redistribution.

(2)

Identify why the previous redistribution failed and take the required corrective action. Submit the REDISTRIBUTE DATABASE PARTITION GROUP command using either the CONTINUE or ABORT option. CONTINUE will complete the previously aborted redistribution operation and ABORT will undo the effects of the previously aborted operation.

(3)

Issue the next REDISTRIBUTE DATABASE PARTITION GROUP command after the current one completes.

(4)

You cannot invoke the CONTINUE or ABORT option on a database partition group that is not associated with a failed redistribution operation.

(5)

Try using a different target partitioning map or distribution file. Otherwise, redistribution is not necessary.

(6)

Issue the command again from the catalog database partition.

(7)

Do not issue the REDISTRIBUTE DATABASE PARTITION GROUP command using this version of the product.

(8)

Request redistribution again when there are no created temporary tables or declared temporary tables using the user temporary table spaces in the database partition group.

(9)

Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on the dependent immediate materialized query and staging tables of the tables mode not in FULL access mode, and then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again.

(10)

Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED or IMMEDIATE UNCHECKED option on the tables with attached partitions and then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again.

(11)

Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on the dependent immediate materialized query and staging tables of the tables that still need to be incrementally maintained with respect to the detached partitions. Query the SYSCAT.TABDETACHEDDEP catalog view to locate these detached dependent tables. Then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again.

(12)

Issue the REDISTRIBUTE DATABASE PARTITION GROUP command again once the index cleanup for the detached partition is completed.

(13)

Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on the tables in the set integrity pending state and then issue the REDISTRIBUTE DATABASE PARTITION GROUP command again.

(14) Issue the REDISTRIBUTE DATABASE PARTITION GROUP command again once the index cleanup of the rolled out blocks is complete.

(15) Specify the NOT ROLLFORWARD RECOVERABLE keywords in the REDISTRIBUTE DATABASE PARTITION GROUP command.

(16) Perform the following steps:

1. Wait for the asynchronous partition detach task to complete.
You can monitor the progress of the detach task in the following ways:
 - Monitor the progress of the detach task by using the LIST UTILITIES command and look for the description where the name of the source table matches the name of a table in the database partition group.
 - Confirm that there are no data partitions in the logically detached state by using the SYSCAT.DATAPARTITIONS catalog view. Any data partitions that are still logically detached will have an 'L' in the column named STATUS.
2. Execute the REDISTRIBUTE DATABASE PARTITION GROUP command again.

SQL6057N Archive file *name* is not associated with the database *name* that was restored, or with the log file previously processed on node *node-number*.

Explanation: An archive log file is found in the log directory on the specified node, but does not belong to the specified database.

The ROLLFORWARD DATABASE processing stops.

User response: To determine the correct archive log file, issue the ROLLFORWARD DATABASE command with the QUERY STATUS option. Move the correct archive log file to the database log directory or, if the database is in a consistent state, change the log path to point to the correct archive file and issue the ROLLFORWARD DATABASE command again.

SQL6058N Roll-forward recovery stopped because of error *error* while retrieving log file *name* for database *name* on node *node-number*.

Explanation: Roll-forward processing invokes the *db2uexit* to retrieve the log file for the database on the

specified node. The error may have occurred in the *db2uexit*.

The ROLLFORWARD DATABASE processing stops.

User response: See the user exit documentation in the *Administration Guide* for a description of the error, and either resume or terminate the roll-forward recovery.

SQL6059N The point-in-time passed to the Rollforward utility must be greater than or equal to *timestamp*, because database *name* on node(s) *node-list* contains information later than the specified time.

Explanation: An advanced virtual timestamp is in the database backup.

If "... " is displayed at the end of the node list, see the syslog file for the complete list of nodes.

User response: Do one of the following:

- Issue the command again with a point-in-time that is greater than or equal to *timestamp*.
- Restore an earlier backup on node(s), then issue the ROLLFORWARD DATABASE command again.

SQL6061N Roll-forward recovery on database *name* cannot reach the specified stop point (end-of-log or point-in-time) because of missing log file(s) on node(s) *node-list*.

Explanation: The Rollforward Database utility cannot find the necessary log file(s) in the logpath.

User response: Do one of the following:

- Use the ROLLFORWARD DATABASE command with the QUERY STATUS option to determine which log files are missing. When you find the log files, put them in the log path and resume forward recovery.
- If you cannot find the missing log files, restore the database on all nodes, then do point-in-time recovery using a timestamp that is earlier than that of the earliest missing log file.

SQL6062N Roll-forward recovery on database *name* cannot complete because the log information on node(s) *node-list* does not match the corresponding record(s) on the catalog node.

Explanation: The Rollforward utility processed all the log files found on each node, but the stop points on the specified nodes do not match the corresponding records on the catalog node. This can be caused by missing log files on either the catalog node or on the specified nodes, or the catalog node must be included in the list of nodes to be rolled forward.

The ROLLFORWARD DATABASE processing stops.

User response: Do one of the following:

- Check if the catalog node needs to be rolled forward. If it does, submit the ROLLFORWARD command again and include the catalog node.
- Use the ROLLFORWARD DATABASE command with the QUERY STATUS option to determine which log files are missing. When you find the log files, put them in the log path and resume forward recovery.
- If you cannot find the missing log files, restore the database on all nodes, then do point-in-time recovery using a timestamp that is earlier than that of the earliest missing log file.

SQL6063N Roll-forward recovery on database *name* has stopped on node(s) *node-list* due to a change in log file size.

Explanation: The Rollforward Database utility has stopped rolling forward because the log files have changed in size. It must be restarted to establish the new log file size.

If "... " is displayed at the end of the node list, see the diagnostic log for the complete list of nodes.

Roll-forward recovery has stopped.

(Note : if you are using a partitioned database server, the node number(s) indicate which node(s) the error occurred on. Otherwise, it is not pertinent and should be ignored.)

User response: Reissue the ROLLFORWARD command to continue.

SQL6064N SQL error *sqlcode* occurred during data redistribution.

Explanation: An error occurred during data redistribution.

The utility stops processing.

User response: Look at the SQLCODE (message number) in the message for more information. Make any required changes and try the request again.

SQL6065N An error occurred while writing to file *file*.

Explanation: One of the following conditions was encountered:

- The file could not be opened.
- An I/O error occurred while writing to the file.
- An I/O error occurred while closing the file.

The command or the utility cannot be processed.

User response: Ensure that the file exists and that the file permissions allow write access. Try the command or the utility again.

SQL6067W ROLLFORWARD DATABASE QUERY STATUS command encountered *sqlcode* *sqlcode*.

Explanation: The ROLLFORWARD DATABASE QUERY STATUS command encountered an error with the *sqlcode sqlcode*. The query might not be successful on some nodes for various reasons. The most severe error is indicated by *sqlcode*. The roll-forward status is only returned for the successful nodes.

User response: Look up the *sqlcode sqlcode* in the *DB2 Messages Reference*, or online to determine the problems on the failed nodes. Take the required corrective actions, then continue the forward recovery on these nodes.

SQL6068W Rollforward operation was cancelled successfully. The database has to be restored on node(s) *node-list*.

Explanation: A Rollforward operation was cancelled before it successfully completed, and the database is left in an inconsistent state. The restore pending flag is on for the listed nodes.

If "... " is displayed at the end of the node list, see the syslog file for the complete list of nodes.

User response: Restore the database on the listed nodes.

SQL6069N The ROLLFORWARD DATABASE command cannot be submitted on a non-catalog node.

Explanation: The ROLLFORWARD DATABASE command is only accepted on the catalog node.

User response: Submit the command on the catalog node.

SQL6071N The requested operation cannot be processed because a new node has been added to the system. The system must be stopped and started again before the operation can be done.

Explanation: One of the following:

- The request was issued from the new node, and this node cannot communicate with other nodes.
- A CREATE or DROP DATABASE operation was requested before all nodes were stopped and started again to include the new node.

User response: Issue db2stop to stop all the nodes. When all nodes are successfully stopped, issue db2start to start all the nodes, including the new node, then try the request again.

sqlcode: -6071

sqlstate: 57019

SQL6072N DB2START with the RESTART option cannot proceed because the specified node is already active.

Explanation: The node specified for restart is already active on the system.

User response: If necessary, issue a DB2STOP specifying the node to stop and issue the DB2START command again to restart the node.

SQL6073N Add Database Partition operation failed. SQLCODE = *sqlcode*.

Explanation: The Add Database Partition operation failed with sqlcode *sqlcode*.

User response: Take any required corrective action, then try the request again.

SQL6074N The database partition server cannot be added or dropped because one or more commands, statements, or operations that are not compatible with the online add or drop partition operation are in progress.

Explanation: One or more commands, statements, or operations are in progress that are not compatible with the add or drop database partition server operation. The following instance-level commands are not compatible with the add or drop database partition server operation:

- QUIESCE INSTANCE
- UNQUIESCE INSTANCE
- STOP DATABASE MANAGER (db2stop)
- STOP DATABASE MANAGER DBPARTITIONNUM
- START DATABASE MANAGER (db2start)
- START DATABASE MANAGER DBPARTITIONNUM
- START DATABASE MANAGER with restart options

The following database-level commands or operations are not compatible with the add or drop database partition server operation:

- CREATE DATABASE
- DROP DATABASE
- QUIESCE DATABASE
- UNQUIESCE DATABASE
- ACTIVATE DATABASE
- DEACTIVATE DATABASE
- A Z lock on a database object
- A single-system view backup of all database partitions
- Restoring a database

The following table-space-level statements and operations are not compatible with the add or drop database partition server operation:

- CREATE TEMPORARY TABLESPACE
- Altering a temporary table space
- Dropping a temporary table space
- Updating automatic storage paths

The following storage-group-level statements and operations are not compatible with the add or drop database partition server operation:

- CREATE STOGROUP
- ALTER STOGROUP
- DROP STOGROUP
- RENAME STOGROUP

User response: To respond to this error, perform the following steps:

1. Identify which commands, statements, or operations that are in progress and that are not compatible with the add or drop database partition server operation using the db2pd command with the -addnode parameter.
2. End the identified tasks or wait until they complete.
3. Resubmit the add or drop database partition server request.

sqlcode: -6074

sqlstate: 55072

SQL6075W The Start Database Manager operation successfully added the database partition server. The database partition server is not active until all database partition servers are stopped and started again.

Explanation: The db2nodes.cfg file is not updated to include the new database partition server until all database partition servers are simultaneously stopped by the STOP DATABASE MANAGER (db2stop) command. Until the file is updated, the existing database partition servers cannot communicate with the new one.

User response: Issue db2stop to stop all the database partition servers. When all database partitions are successfully stopped, issue db2start to start all the database partition servers, including the new one.

SQL6076W Warning! This command will remove all database files on the node for this instance. Before continuing, ensure that there is no user data on this node by running the DROP NODE VERIFY command.

Explanation: This procedure will remove all the

database partitions from the specified node.

User response: Ensure that the DROP NODE VERIFY command was run before dropping this node. If using the API, ensure that the callerac parameter is specified correctly.

SQL6077W The db2stop DROP DBPARTITIONNUM procedure ended successfully, but could not remove all the files. See the file *file* for details.

Explanation: The db2stop DROP DBPARTITIONNUM procedure ended successfully, but some user data files are still on the node.

User response: Information in *file* file will indicate the directory structure from which files could not be deleted.

SQL6078N The db2stop DROP DBPARTITIONNUM procedure could not update the database information for database *dbname*.

Explanation: The db2stop DROP DBPARTITIONNUM procedure could not access the catalog node for database *dbname*.

User response: Try the request again. If the problem persists, contact your service representative.

SQL6079W The db2stop DROP DBPARTITIONNUM command was cancelled successfully.

Explanation: The db2stop DROP DBPARTITIONNUM command was stopped before it began processing.

User response: None.

SQL6080W The Start Database Manager operation successfully added the database partition server, but no database partitions have been created on the database partition server. The database partition server is not active until all database partition servers are stopped and started again.

Explanation: The db2nodes.cfg file is not updated to include the new database partition server until all database partition servers are simultaneously stopped by the STOP DATABASE MANAGER (DB2STOP) command. Until the file is updated, the existing database partition server cannot communicate with the new database partition server.

User response: Issue DB2STOP to stop all the database partition servers. When all database partition servers are successfully stopped, issue DB2START to start them all, including the new database partition server. When all database partition servers are

successfully started, the database system can be used.

SQL6081N A communication error caused a DB2STOP FORCE command to time out on this node.

Explanation: A communication error occurred on one or more of the database nodes, causing the DB2STOP FORCE command to time out on the current node, or, DB2STOP FORCE terminated because a severe error occurred during FORCE on one or more nodes. Any node where the communication error occurred will receive the SQL6048N message.

User response: Do the following:

1. Correct the communication error on the node (or nodes) that received the SQL6048N message.
2. Issue a DB2START command and ensure that all nodes that received the SQL6048N message started successfully.
3. Issue the DB2STOP FORCE command again from any node.

SQL6100N The partitioning map in the data file and the partitioning map for the database are not the same.

Explanation: The data to be loaded has either not been partitioned, or was partitioned with a partitioning map other than the current one for the database partition group to which the table belongs. The data cannot be loaded.

User response: If the data was not partitioned, use the db2split program to partition the data, then load the partitioned data.

If the data was partitioned, do one of the following:

- Use the partitioning map from the header of the data file to redistribute the database partition group to which the table belongs. Then try the request again.
- Repartition the data with the current partitioning map for the database partition group. Then try the request again to load the newly partitioned data.

SQL6101N This data file contains data for node *node-1* but the Load utility is connected to node *node-2*.

Explanation: The data to be loaded is associated with a node number that differs from the node number of the node to which the application is connected. The data cannot be loaded.

User response: Either find the data file associated with this node and try the request again with that data file, or connect to the node associated with this data file and issue the request at that node.

SQL6102W The parameter *name* is reserved for future use. Its value should be set to *default-value*.

Explanation: A parameter reserved for future capabilities has been set to a value that is not its default value. It should be set to the default value to ensure future compatibility.

User response: Ensure that the parameter *name* is set to the value, *default-value*, then try the request again.

SQL6103C An unexpected utility error occurred. Reason code = *reason-code*.

Explanation: An unexpected utility error occurred.

User response: Record the message number (SQLCODE) and reason code in the message.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. See the *Administration Guide* for information on how to use this facility. Then contact your technical service representative with the following information:

- Problem description
 - SQLCODE and embedded reason code
 - SQLCA contents if possible
 - Trace file if possible
-

SQL6104N The load utility does not support the creation of indexes.

Explanation: The load utility does not support the creation of indexes, but the table to be loaded has at least one index defined on it. The index may have been explicitly created with the CREATE INDEX statement or implicitly created when a primary key was defined for the table.

User response: Drop all indexes defined on the table with the DROP INDEX statement. Drop the primary key with the ALTER TABLE statement. Resubmit the command.

Use CREATE INDEX and ALTER TABLE as required to recreate indexes and primary key after the load completes successfully.

SQL6105W The Load utility has completed processing. A Rollforward done to a point in time after the load will not succeed. Take a database backup now if database recoverability is required.

Explanation: No logging is done by the Load utility. If you try to roll forward with a backup made before the load, the operation will fail when it encounters references to the data that was loaded.

User response: To ensure database recoverability after the load, do a backup before the data is modified.

SQL6106N The filetype modifier "NOHEADER" was specified, but the database partition group on which the table is defined is not a single-node database partition group.

Explanation: The data to be loaded was specified as having no header information. However the target table specified is not a single-node table. The data cannot be loaded.

User response: The data must be split using db2split, then loaded without the "NOHEADER" option.

SQL6107N The partitioning key information in the data file is not correct.

Explanation: Either the data was not split with db2split or the db2split operation was not successful.

User response: Use the db2split program to partition the data and then try the request again with the partitioned data. If the insert-column option is being used, ensure that all of the partitioning columns are specified in the column list.

If the problem persists, contact your technical service representative with the following information:

- Problem description
 - SQLCODE and embedded reason code
 - SQLCA contents if possible
 - Trace file if possible
-

SQL6108N The number of partitioning keys defined in the data file header(*number-1*) does not match the number of partitioning keys defined for the table (*number-2*).

Explanation: The partitioning columns specified in the db2split configuration file were not correct. The data was not correctly split.

User response: Do the following:

1. Ensure that the correct partitioning columns are specified in the db2split configuration file.
 2. Split the data.
 3. Issue the Load operation with the newly partitioned data.
-

SQL6109N Utility expected partitioning column *column-name-1*, but found partitioning column *column-name-2*.

Explanation: In the db2split configuration file:

- One of the partitioning columns defined for the table was not specified.
- The order of the partitioning columns was incorrect
- A column was specified that is not a partitioning column for the table.

SQL6110N • SQL6112N

User response: Do the following:

1. Ensure that the db2split configuration file is correct.
2. Split the data.
3. Issue the Load operation with the newly partitioned data.

SQL6110N Utility expected partitioning column type *column-type-1* for column *column-name-1*, but the data file lists it as type *column-type-2*.

Explanation: The db2split configuration file is not correct.

User response: Do the following:

1. Ensure that the db2split configuration file is correct.
2. Split the data.
3. Issue the Load operation with the newly partitioned data.

SQL6111N Cannot create a subdirectory under the path specified by newlogpath.

Explanation: When the newlogpath parameter is updated, the system attempts to create a subdirectory under the specified path using the node name as the name of the subdirectory. One of the following operating system errors prevented the creation of the subdirectory:

- The file system or path does not have the appropriate permissions for file creation.
- The file system does not have enough disk space.
- The file system does not have enough file blocks or inodes.

The requested change is not made.

User response: Do one of the following, then try the request again:

- Ensure that the specified path exists and that the filesystem and path have read/write permissions.
- Specify a different newlogpath.

If the problem persists, see your system administrator.

SQL6112N The requested change cannot be made. The resulting configuration parameter settings are not valid. Reason code *reason-code*.

Explanation: Certain rules govern the settings of some configuration parameters. The rule that would be violated is indicated by *reason-code*:

(4)

When using the AUTOMATIC setting for either max_coordagents or max_connections, only the following combinations are valid:

- Both parameters are set to AUTOMATIC.
- Only max_connections is set to AUTOMATIC, and has a value greater than max_coordagents (meaning Connection Concentrator is on).

(5)

SSL_SVCENAME and SVCENAME must not be the same.

(6)

SSL_SVR_KEYDB, SSL_SVR_STASH, SSL_CLNT_KEYDB, or SSL_CLNT_STASH must be a fully qualified path.

(7)

SSL_VERSIONS must be NULL (default) or 'TLSv1'.

(8)

SSL_CIPHERSPECS must be NULL (default), or an appropriate combination of the following cipher specifications, each separated by a comma:

- TLS_RSA_WITH_AES_256_CBC_SHA
- TLS_RSA_WITH_AES_128_CBC_SHA
- TLS_RSA_WITH_3DES_EDE_CBC_SHA

(9)

The CONNECT_PROC value must either be a zero-length string or match an existing unique procedure name with exactly zero parameters.

(10)

When setting the CONNECT_PROC value, both the schema and procedure name must be specified and can only contain the following characters:

- A-Z, a-z, _, 0-9.
- The schema and procedure name need to follow the rules of an ordinary identifier.

(11)

Updating the CONNECT_PROC parameter requires a connection to the database in most cases. A connection is not required to set the parameter to a zero-length string if the database is deactivated.

(12)

DEFERRED updates for the CONNECT_PROC parameter are not allowed. When updating this parameter, specify IMMEDIATE for changes to take effect immediately.

User response: Ensure that the values you specify do not violate the rules, then try the request again.

Chapter 14. SQL6500 - SQL6999

SQL6500W **RESTARTCOUNT in the load command may cause some problems.**

Explanation: Since multiple loading processes for the same table are completely independent, it is almost impossible to have an identical restartcount for those multiple loading processes.

User response: Please make sure you have the correct load command.

SQL6501N **Database name was not given in the load command.**

Explanation: Database name has to be specified in the load command.

User response: Please specify the database name and rerun the command.

SQL6502N **The path name (parameter: data_path) for data file was not specified.**

Explanation: If the input data file is remote, the file will be transferred locally. The path to the file on the remote machine must be supplied.

User response: Please specify the path name to the remote data file and rerun the command.

SQL6504N **There are errors in the output node list specification (parameter: outputnodes) in the configuration file.**

Explanation: The output node list specification is not valid.

User response: Check the sample configuration file, correct your output node list specification, and rerun the command.

SQL6505N **There are errors in the partitioning database partition list specification (parameter: PARTITIONING_DBPARTNUMS) in the load command.**

Explanation: The partitioning database partition list specification is not valid.

User response: Correct your partitioning database partition list specification, and rerun the command.

SQL6506N **The program failed to extract partitioning key information for table *table-name* from the system catalog table.**

Explanation: Either the table is not defined, or it is not

defined in an MPP environment.

User response: Make sure you have the table properly defined.

SQL6507N **Checking level (parameter: check_level) in the configuration file is not valid.**

Explanation: Checking level (parameter: check_level) can be either CHECK or NOCHECK. The default is CHECK.

User response: Correct the parameter in the configuration file, and rerun the command.

SQL6508N **The program failed to create the output pipe for the ftp process.**

Explanation: If input data files are remote, they will be transferred to a local pipe. If this local pipe already exists, the process will fail.

User response: Please ensure your working space is clean.

SQL6509N **The program failed to create input pipes for the partitioning agents.**

Explanation: The program can not create temporary input pipes for the splitter processes.

User response: Please ensure your working space is clean.

SQL6510N **The program failed to create the temporary directory at local non-NFS space of partition *partition-num*.**

Explanation: The program needs a temporary working directory at local non-NFS space of all partitioning and loading partitions.

User response: Please ensure your working space is clean.

SQL6511N **Load failed to create output for the partitioning agent at partition *partition-num*.**

Explanation: The program can not create temporary output pipes for the partitioning agent at partition *partition-num*.

User response: Please ensure your working space is clean.

SQL6512N **Load failed to create input pipes for the**

merging agent at partition *partition-num*.

Explanation: The program can not create temporary input pipes for the merging agent at partition *partition-num*.

User response: Please ensure your working space is clean.

SQL6513N Load failed to create the input pipe for the loading agent at partition *partition-num*.

Explanation: The program can not create temporary input pipe for the loading agent at partition *partition-num*.

User response: Please ensure your working space is clean.

SQL6514N The program can not read the node configuration file: *node-cfg-file*.

Explanation: Either the file does not exist, or it is not readable.

User response: Please check the existence and permissions of the node configuration file.

SQL6515N The program failed to find a load command in the configuration file.

Explanation: A CLP load command must be supplied in the configuration file.

User response: Please specify a CLP load command in the configuration file.

SQL6516N The program failed to connect to database *db-name*.

Explanation: Either the database manager has not been started yet, or it encountered problems.

User response: Check your database manager status.

SQL6517N Load failed to extract the partition list, where the table *tbl-name* is defined, from the system catalog table.

Explanation: Either the table is not defined, or it is not defined in an MPP environment.

User response: Check how the table was defined in the database.

SQL6518N The record length (reclen in the load command) is not valid.

Explanation: Valid record is between 1 to 32768.

User response: Please correct the record length, and rerun the command.

SQL6519N The mode (parameter: mode) *mode* in the configuration file is not valid.

Explanation: The running mode of this program can be: SPLIT_ONLY, LOAD_ONLY, SPLIT_AND_LOAD (default), or ANALYZE.

User response: Please correct the mode in the configuration file.

SQL6520N The program failed to create output pipes for the process, which generates the header information for split file.

Explanation: The program can not create output pipes for the process, which generates the header information for split file.

User response: Please ensure your working space is clean.

SQL6521N The configuration file *cfg-file* for this program doesn't exist.

Explanation: The program needs a configuration file.

User response: Please create a configuration file.

SQL6522N The program found a path name for the input data files in the load command.

Explanation: Path name for input data files in the load command is not allowed. There is a separate parameter (*data_path*) for this purpose.

User response: Please correct the configuration file.

SQL6523N The element *partition-num* in the partitioning database partition list (parameter: PARTITIONING_DBPARTNUMS) is not defined in the node configuration (*db2nodes.cfg*) file.

Explanation: All partitions in the partitioning database partition list must have an entry in the node configuration file.

User response: Please correct your partitioning database partition list.

SQL6524N The element *partition-num* in the output partition list (parameter: OUTPUT_DBPARTNUMS) is not a member of the partition list where the table is defined.

Explanation: All partition in the output partition list must be members of the partition list where the table is defined.

User response: Please correct your output partition list.

SQL6525N The program can not read the input data file *file-name*.

Explanation: Either the input data file was not found, or it is not readable.

User response: Please check the existence and permissions of the input data file.

SQL6526N The program can not write in current working directory *cwd*.

Explanation: The current working directory is not writable.

User response: Please check the permission of current working directory.

SQL6527N The partition where statistic data will be collected, (parameter: **RUN_STAT_DBPARTNUM**), is not a member of the output partition list.

Explanation: The partition where statistic data will be collected must be a member of the output partition list.

User response: Please correct the **RUN_STAT_DBPARTNUM** parameter.

SQL6528N Record length was not specified in the load command.

Explanation: If the **BINARYNUMERIC**s or **PACKEDDECIMAL** modifier is specified in the load command, record length (**reclen**) must be specified in the load command as well.

User response: Please correct the load command.

SQL6529N The **No Header option (noheader)** was not specified in the load command.

Explanation: If a table is defined in a single node database partition group, the **NOHEADER** modifier must be specified in the load command.

User response: Please correct the load command.

SQL6530N The data type of one partitioning key is float or double.

Explanation: If the input file is a non-binary data file, float or double columns can not be defined as partitioning key.

User response: Supply a binary data file, or change the definition of your table.

SQL6531N The program failed to reset tablespace quiesce.

Explanation: There are probably on-going loading processes. Make sure all previous loading processes are completed before another AutoLoader session can be started.

User response: Check the processes status on your machine.

SQL6532N A savecount in the load command can not be set to non-zero.

Explanation: The savecount in the load command can not be set to non-zero if there are multiple partitioning nodes, the mode is **PARTITION_AND_LOAD**, and the command is either a **REPLACE INTO** or **INSERT INTO** load command.

User response: Please correct the load command.

SQL6533N A restartcount in the load command can not be set to non-zero.

Explanation: Because multiple partitioning nodes produce random order of records for loading process(es), using **RESTART INTO** with a restartcount can not guarantee a successful recovery.

User response: Please correct the load command.

SQL6534N There is an error in the netrc file *netrc-file*.

Explanation: Either the *.netrc* file could not be found, or there is no entry for remote host *machine*, or the permissions of the file are not correct.

User response: Please check the existence and permission of the *.netrc* file.

SQL6535N The mode **PARTITION_ONLY** or **ANALYZE** is not valid.

Explanation: If a table is defined in a single node database partition group, either partitioning or analyzing is not necessary.

User response: Please change the mode to **LOAD_ONLY** or **PARTITION_AND_LOAD**.

SQL6536N The program *progname* failed to open file *filename* for reading.

Explanation: An AutoLoader process can not successfully open a file or pipe for reading.

User response: Please ensure everything is correct in the configuration file.

SQL6537N The program *progname* failed to open file *filename* for writing.

Explanation: An AutoLoader process can not successfully open a file or pipe for writing.

User response: Please ensure everything is correct in the configuration file.

SQL6538N Load failed to read the partitioned file *partitioned-file*.

Explanation: When Load is invoked in LOAD_ONLY mode, the input data file must have already been partitioned, and all partitioned files must be readable by the Load.

User response: Check whether or not the input data file has been partitioned, and the access permissions of the resulting partitioned files.

SQL6539N There is at least one command in *cmd-list* not found in the working environment.

Explanation: The execution of this program depends on a number of common Unix commands. The process fails if any one of them is not available in the working environment.

User response: Make sure you have all necessary commands properly installed on your system.

SQL6540N File type *file-type* specified in the load command is not valid.

Explanation: Valid file types are ASC (positional ASCII) or DEL (delimited ASCII).

User response: Correct the load command in the configuration file.

SQL6550N The partitioning map file *map-file-name* could not be opened for writing.

Explanation: The file name and path for the partitioning map could not be opened. An error occurred.

User response: Confirm that the partitioning map file name and file path were specified correctly and that the file can be opened for writing.

SQL6551N An error occurred while attempting to write to the partition map file.

Explanation: A filesystem error occurred when writing to the partitioning map file.

User response: Check that the file path is correct, and that the target device has sufficient space to hold the partitioning map output.

SQL6552N An error occurred while attempting to open a temporary configuration file *filename* for writing.

Explanation: The file name and path for a temporary file could not be opened. An error occurred.

User response: Confirm that the utility temporary file storage path was specified correctly and that the path allows for files to be opened for writing.

SQL6553N An error occurred while attempting to write to a temporary configuration file *filename*.

Explanation: A filesystem error occurred when writing to a temporary file.

User response: Check that the file path is correct, and that the target device has sufficient space for the file data.

SQL6554N An error occurred when attempting to remotely execute a process.

Explanation: The utility attempted to start a child process on a different database partition, but an error occurred.

User response:

- If no user ID or password was provided to the utility for remote access, ensure that the user ID invoking the utility is authorized to execute programs on the target nodes.
 - If a user ID and password were supplied to the utility, confirm that they were supplied correctly.
 - If running on a Windows operating system, make sure the DB2 installation has correctly defined a Windows Service for the splitter operation on all nodes.
 - If you are unable to resolve this problem, contact DB2 service.
-

SQL6555N The load utility encountered an unexpected communications error.

Explanation: The utility encountered an error attempting one of the following operations:

- Attempting to connect to a TCP/IP socket.
- Attempting to read or write a TCP/IP msg.
- Attempting to initialize TCP/IP communications
- Attempting to retrieve a complete host name.
- Attempting to select an active TCP/IP socket.
- Attempting to close an active socket.
- Attempting to retrieve a port number.

User response:

- If service name setup was required for the version of the load utility you are using, ensure that the service names have been defined correctly.
- If you are running concurrent load utility jobs, ensure that you have followed the documented setup requirements to avoid service name conflicts between the concurrent utility jobs.
- If the problem persists, contact your DB2 Service representative.

SQL6556W An incomplete record was detected at the end of file *filename*.

Explanation: An incomplete data record was found at the end of a data file provided to the utility by the user.

User response: Examine the source data for syntactical correctness.

SQL6557N Failed to retrieve the default node number.

Explanation: The utility attempted to determine a default node number, but was unable to.

User response: State source and target node numbers explicitly in the utility configuration file, or contact DB2 Service for assistance.

SQL6558N The utility failed to determine the current working directory and/or drive.

Explanation: The utility attempted to determine the current working directory and/or drive but encountered an error.

User response: Contact DB2 Service for assistance.

SQL6559N An invalid command line option was provided to the AutoLoader utility.

Explanation: The user specified a command line option for the AutoLoader utility which is either not supported, or obsolete.

User response: Refer to the AutoLoader documentation, or online help, for the supported options and features.

SQL6560N Node *node-number* which is an execution node for partitioning does not appear in the *db2nodes.cfg* file.

Explanation: A node specified as an execution node for partitioning does not appear to be a member in the *db2nodes.cfg* file. The work intended to complete on this node can not be started.

User response: Add the node to the node list definition in the *db2nodes.cfg* file, or specify an alternate node for the partition operation which is a

member of the node configuration.

SQL6561N Target node *node-number* for load does not appear in the database partition group.

Explanation: A node was specified as a target node for loading, but this node is apparently not a member of the node group being loaded.

User response: Check the database partition group definition and confirm that the target node specified for loading is part of this database partition group. If the node is not part of the database partition group correct the utility target node specification to include the correct list of nodes. If the node is part of the database partition group, please contact DB2 Service for assistance.

SQL6562N The utility is unable to retrieve the instance name.

Explanation: The utility attempted to retrieve the instance name but encountered an error.

User response: Confirm that the utility is running on a node with DB2 installed, and a valid instance is running. For additional help, please contact DB2 Service.

SQL6563N Failed to retrieve the current user ID.

Explanation: The utility attempted to retrieve the current user ID for the ID, but an error was encountered.

User response: Contact DB2 Service.

SQL6564N The password supplied is not valid.

Explanation: The user supplied an explicit password to the utility, but the password is not valid.

User response: Supply a valid password.

SQL6565I Usage: *db2xxld* [-config *config-file*] [-restart] [-terminate] [-help]

Explanation:

- The '-config' option will run this program using a user specified configuration file; the default is *autoload.cfg*.
- The '-restart' option will run this program in restart mode; the configuration file should not be modified since the last incomplete AutoLoader job.
- The '-terminate' option will run this program in terminate mode; the configuration file should not be modified since the last incomplete AutoLoader job.
- The '-help' option will generate this help message.

The AutoLoader configuration file is a user supplied file which contains the LOAD command to be executed, the target database, and several optional parameters that the user may specify. The sample configuration file, 'AutoLoader.cfg', supplied in the samples directory contains inline comments which describe the available options and their defaults. When running this program with '-restart' and '-terminate' option, user should not modify the configuration file from their last incomplete job.

User response: Refer to the DB2 documentation for further details about the AutoLoader utility.

SQL6566N The LOAD command is missing from the AutoLoader configuration file.

Explanation: The LOAD command is missing from the AutoLoader configuration file. The parameter must be specified.

User response: Ensure that you have specified the correct configuration file for the AutoLoader, and that the LOAD command is specified inside.

SQL6567N The *option-name* option appears multiple times in the AutoLoader configuration file.

Explanation: An option parameter was specified multiple times inside the AutoLoader configuration file.

User response: Correct the configuration file so that each option appears at most only once.

SQL6568I The Load utility is now dispatching all *request-type* requests.

Explanation: The Load utility is now dispatching the *request-type* operation on each of the partitions.

User response: This is an informational message.

SQL6569I The AutoLoader is now issuing all split requests.

Explanation: The AutoLoader is now issuing the split operation on each of the target split partitions.

User response: This is an informational message.

SQL6570I The AutoLoader is waiting for all splitters to complete.

Explanation: The AutoLoader is waiting for all splitters to complete.

User response: This is an informational message.

SQL6571I The Load utility is waiting for all operations to complete.

Explanation: The Load utility is waiting for operations to complete.

User response: This is an informational message.

SQL6572I The LOAD operation has begun on partition *node-number*.

Explanation: The LOAD operation has begun on the specified partition.

User response: This is an informational message.

SQL6573I The remote execution of the splitter utility on partition *node-number* finished with remote execution code *code*.

Explanation: The remote execution of the splitter utility on the specified partition has completed.

User response: This is an informational message.

SQL6574I The utility has read *MB-count* megabytes from the source data.

Explanation: This information is generated periodically to provide status to the user on the progress of large Load jobs.

User response: This is an informational message.

SQL6575I The utility has completed reading *MB-count* megabytes from the user data.

Explanation: This message is written at the completion of the Load to indicate the total volume of user data that has been processed.

User response: This is an informational message.

SQL6576N The AutoLoader utility encountered a threading error. Reason code *reason-code*, return code *ret-code*.

Explanation: The following is an explanation of the reason code *reason-code*:

- 1 - The AutoLoader utility tried to create a thread but failed with return code *ret-code*.
- 2 - The AutoLoader utility tried to wait for a thread to finish, but failed with return code *ret-code*.

User response: Ensure that you are running on an operating system which supports threaded applications, and that your thread limit per process is sufficient. The thread requirements are as follows:

- One thread for every load process which must be started,
- One thread for every splitter process,
- One thread for data feeding to the splitter processes.

SQL6577N The AutoLoader utility does not support the ROWCOUNT option in the load command.

Explanation: The ROWCOUNT option in the load command is not supported in the AutoLoader utility.

User response: Correct your load command in the AutoLoader configuration file, and resubmit your command.

SQL6578N Invalid AutoLoader option. RESTART/TERMINATE option can only be specified with SPLIT_AND_LOAD or LOAD_ONLY mode.

Explanation: RESTART/TERMINATE option in AutoLoader can only work with SPLIT_AND_LOAD or LOAD_ONLY mode.

User response: Please check the AutoLoader configuration file or the autloader option flags.

SQL6579N Invalid LOAD command in the AutoLoader configuration file. RESTART and TERMINATE options of the AutoLoader are used to perform LOAD RESTART and LOAD TERMINATE operation respectively.

Explanation: Users should not specify RESTART nor TERMINATE in the LOAD command. Instead, the RESTART and TERMINATE options of the AutoLoader should be used.

User response: Without modifying the AutoLoader configuration file, users should launch db2xxld with option RESTART or TERMINATE.

SQL6580I LOAD is restarting on node *node-num* in phase *restarting-phase*.

Explanation: AutoLoader has acknowledged that LOAD is restarting in either LOAD/BUILD/DELETE phase.

User response: This is an informational message.

SQL6581I Load cannot restart on node *node-num*.

Explanation: AutoLoader has acknowledged that LOAD cannot be restarted on a given node.

User response: This is an informational message.

SQL6582I Restarting LOAD on node *node-num* is not required.

Explanation: AutoLoader has acknowledged that LOAD does not need to be restarted on a given node.

User response: This is an informational message.

SQL6583N The partitioning key definition is incompatible with partitioned database load mode *load-mode*.

Explanation: An identity column was specified as part of the partitioning key definition, but the load mode specified was not PARTITION_AND_LOAD and the identityoverride modifier was not specified.

User response: Either change the load mode to PARTITION_AND_LOAD, specify the identityoverride modifier, or remove the identity column from the partitioning key definition.

Chapter 15. SQL7000 - SQL7499

SQL7001N Unknown command *command* was requested.

Explanation: The command submitted to REXX could not be recognized.

The command cannot be processed.

User response: Verify that the command is a valid SQL statement and rerun the procedure. Note that all commands must be in uppercase.

SQL7002N The cursor name is invalid.

Explanation: The user specified an incorrect cursor name.

The command cannot be processed.

User response: Verify that the cursor name is one of the form "c1" through "c100".

SQL7003N The statement name is invalid.

Explanation: The user has specified an incorrect statement name.

The command cannot be processed.

User response: Verify that the statement name is of the form "s1" through "s100".

SQL7004N The syntax of the request is invalid.

Explanation: REXX was unable to parse the command string submitted.

The command cannot be processed.

User response: Use proper command syntax.

SQL7005W The cursor used by this OPEN statement has not been declared.

Explanation: An OPEN statement was attempted without a declaring a cursor.

The command cannot be processed.

User response: Insert a DECLARE statement before the OPEN statement and rerun the procedure.

SQL7006N Invalid keyword *keyword* given on request.

Explanation: The statement contains a not valid keyword *keyword*.

The command cannot be processed.

User response: Specify the correct keyword format.

SQL7007N REXX variable *variable* does not exist.

Explanation: A REXX variable that did not exist in the REXX variable pool was passed.

The command cannot be processed.

User response: Verify that all variable names in the host-variable list are assigned before the command that failed. Then run the procedure again.

SQL7008N REXX variable *variable* contains inconsistent data.

Explanation: A variable that contained inconsistent data was passed to REXX.

The command cannot be processed.

User response: If the variable is an SQLDA, verify that the data and length fields have been assigned correctly. If it is a REXX variable, verify that the type of data is appropriate to the command where it is being used.

SQL7009N Truncated REXX variable *variable*.

Explanation: The variable *variable* passed to REXX contained inconsistent data. The data string from *variable* was truncated.

The command cannot be processed.

User response: Verify that the data length is consistent with the length given in the input SQLDA, and run the procedure again.

SQL7010N Invalid scan ID *ID*.

Explanation: The scan ID *variable* passed to REXX did not exist or contained inconsistent or missing data.

The command cannot be processed.

User response: Verify that the data contained in the scan ID has been assigned correctly, and run the procedure again.

SQL7011N Required parameter *parameter* not given.

Explanation: The parameter *parameter* is required by REXX command syntax but was not specified.

The command cannot be processed.

User response: Specify the required parameter value, and run the procedure again.

SQL7012N Attempted ISL change while connected to a database.

Explanation: Isolation level (ISL) may not be changed while connected to a database.

The command is ignored.

User response: If a change in isolation level is necessary, disconnect from the current database, then set the isolation level and connect to the database.

SQL7013N Mismatched cursor and statement name or hold attribute.

Explanation: In REXX, the cursor and statement name form must be 'cnn' and 'snn,' where 'nn' is a number from 1 to 100. The numbers must be the same for a cursor and statement pair. Also, c1 through c50 are declared without hold and c51 through c100 with hold.

The command is ignored.

User response: Verify that the cursor and statement numbers match and rerun the procedure.

SQL7014N Incorrect number of host variable components.

Explanation: In REXX, the first component of a compound host variable lists a number which is not equal to the actual number of components defined.

The command is ignored.

User response: Verify that the number in the first component matches the number of components actually defined and rerun the procedure.

SQL7015N The variable name *variable* is not valid in REXX.

Explanation: The variable name specified is not valid in REXX. The name must conform to the language requirements.

The command cannot be processed.

User response: Change the name to one that conforms to the REXX requirements and resubmit the command.

SQL7016N Invalid syntax provided to the SQLDB2 interface. **Related Error:** *db2-error*.

Explanation: Invalid syntax was provided to the SQLDB2 interface, e.g. both an input file and a command were specified.

User response: Look up the related error code for more information.

SQL7032N SQL procedure *procedure-name* not created. Diagnostic file is *file-name*.

Explanation: SQL Procedure *procedure-name* was not created. One of the following has occurred:

- Support for SQL stored procedures is not installed and configured on this server. You need to have the IBM Data Server Client and a C compiler installed on the server to create SQL procedures. You may need to set the DB2 registry variable `DB2_SQLROUTINE_COMPILER_PATH` to point to a script or batch file that contains environment settings for the C compiler on your platform.
- DB2 failed to precompile or compile the SQL stored procedure. DB2 creates an SQL procedure as a C program that contains embedded SQL. Errors not found during the initial parsing of the CREATE PROCEDURE statement can be found during the precompile or compile stage.

For UNIX platforms, the full path of the file that contains diagnostic information is:

```
$DB2PATH/function/routine/sqlproc/ \
$DATABASE/$SCHEMA/tmp/file-name
```

where `$DATABASE` represents the name of the database, and `$SCHEMA` represents the schema name of the SQL procedure.

For Windows operating systems, the full path of the file that contains diagnostic information is:

```
%DB2PATH%\function\routine\sqlproc\ \
%DATABASE%\%SCHEMA%\tmp\file-name
```

where `%DATABASE%` represents the name of the database, and `%SCHEMA%` represents the schema name of the SQL procedure.

User response: Ensure that both a compatible C compiler and a DB2 Application Development Client are installed on the server. If a precompile or compile error occurred, refer to the messages from the precompiler or compiler in the diagnostic file *file-name*.

Ensure that the DB2 registry variable `DB2_SQLROUTINE_COMPILER_PATH` is set to point to a script or batch file that sets up the C compiler environment. On a UNIX operating system, for example, you may create a script called "sr_cpath" in the `/home/DB2INSTANCE/sql/lib/function/routine` directory. To set the DB2 registry variable `DB2_SQL_ROUTINE_COMPILER_PATH` accordingly, issue the following command:

```
db2set DB2_SQLROUTINE_COMPILER_PATH =
/home/DB2INSTANCE/sql/lib/function/routine/sr_cpath
```

sqlcode: -7032

sqlstate: 42904

SQL7035W The executable of the SQL procedure *procedure-name* is not saved in the database catalog.

Explanation: The executable of the SQL procedure exceeds the limit of 2 megabytes and therefore cannot be stored in the database catalog. It will not be recovered automatically at database restore time or on ROLLBACK of a DROP PROCEDURE statement.

User response: If the warning resulted from a CREATE PROCEDURE statement, ensure that you keep a backup of the executable associated with SQL procedure *procedure-name*. If the warning was issued during a restore operation or a ROLLBACK of a DROP PROCEDURE statement, then the executable associated with *procedure-name* must be manually synchronized with the SQL procedure that is defined in the catalog.

sqlcode: +7035

sqlstate: 01645

SQL7099N Invalid error *error* has occurred.

Explanation: A REXX internal error has occurred.

The command cannot be processed.

User response: Verify that REXX is installed properly and rerun the procedure. If the error continues, note the error number and call the dealer.

Chapter 16. SQL8000 - SQL8499

SQL8000N DB2START processing failed; a valid product license was not found. If you have licensed this product, ensure the license key is properly registered. You can register the license using the db2licm command. The license key can be obtained from your licensed product CD.

Explanation: A valid license key could not be found and the evaluation period has expired.

User response: Install a license key for the fully entitled version of the product. You can obtain a license key for the product by contacting your IBM representative or authorized dealer.

SQL8001N An attempt to connect to the database failed due to a product license problem.

Explanation: The connection attempt failed due to one of the following DB2 licensing issues:

- A license key is not present.
- A license key has not been correctly installed.
- A license key has expired.
- This DB2 product edition does not support a license key.

User response: Instruct your database administrator to verify that a valid license key for the DB2 product is installed correctly, and has not expired.

- Use the db2licm -l command to view licenses.
- Use the db2licm -a command to register a license.
- You can obtain a license key for the product by contacting your IBM representative or authorized dealer.

sqlcode: -8001

sqlstate: 42968

SQL8002N An attempt to connect to a host failed due to a missing DB2 Connect product or invalid license.

Explanation: If connecting directly to a host server, a DB2 Connect product with a valid license may not be present on your machine.

If connecting to a host server through a DB2 Connect gateway, a valid license may not be present on the DB2 Connect gateway.

User response: Instruct your database administrator to check the following:

If connecting directly to the host, first ensure that a DB2 Connect product is present and that the appropriate license key is installed on your machine and is unexpired.

If connecting through a DB2 Connect gateway, ensure that the appropriate license key is installed on the gateway and is unexpired.

- To view licenses, use the db2licm -l command.
- To register a license, use the db2licm -a command.
- You can obtain a license key for the product by contacting your IBM representative or authorized dealer.

Note: Some DB2 product editions may not support connections to a host server.

sqlcode: -8002

sqlstate: 42968

SQL8003N A valid license key was not found for the requested function.

Explanation: The current license key(s) do not allow the requested functionality.

User response: Purchase the license key for this function from your IBM representative or authorized dealer and update your license using the db2licm command.

SQL8004N A valid license key was not found for the requested function.

Explanation: The current license key(s) do not allow the requested functionality.

User response: Examine the administration notification log for more information.

SQL8006W The product *product-name* does not have a valid license key registered. If you have licensed this product, ensure the license key is properly registered. You can register the license by using the `db2licm` command. The license key can be obtained from your licensed product CD. If a license key is not registered, this product will be enabled for a *number* day evaluation period. USE OF THE PRODUCT FOR THE EVALUATION PERIOD CONSTITUTES ACCEPTANCE OF THE TERMS OF THE IBM LICENSE AGREEMENT located in the installation path of this product in the license directory.

Explanation: A valid license key has not been installed for this product. The product will be enabled to operate for a limited period of time for evaluation purposes. THE EVALUATION PERIOD IS CONTROLLED BY A TIME DISABLING DEVICE.

User response: If you have purchased a fully entitled version of this product, install your license key as described in the product installation documentation. If you have already installed the license key, verify your license file for accuracy.

USE OF THE PRODUCT FOR THE EVALUATION PERIOD IS SUBJECT TO THE TERMS OF THE IBM LICENSE AGREEMENT AND LICENSE INFORMATION DOCUMENT FOR THIS PRODUCT. YOUR USE OF THE PRODUCT DURING THE EVALUATION PERIOD CONSTITUTES YOUR ACCEPTANCE OF THESE TERMS.

If you do not accept the terms, you are not authorized to use the product and you must de-install it. You can obtain a license key for the fully authorized program with the product by contacting your IBM representative or authorized dealer.

SQL8007W There are *number* day(s) left in the evaluation period for the product *product-name*. For evaluation license terms and conditions, refer to the License Agreement document located in the license directory in the installation path of this product. If you have licensed this product, ensure the license key is properly registered. You can register the license by using the `db2licm` command line utility. The license key can be obtained from your licensed product CD.

Explanation: A valid license key has not been installed for this product. The evaluation period will expire after the specified number of days.

User response: The product is operating in evaluation mode, and is enabled for a limited period of time.

When the evaluation period has expired it will not execute until a license key for the fully entitled version of the product is installed.

You can obtain a license key for the product by contacting your IBM representative or authorized dealer.

sqlcode: +8007

sqlstate: 0168H

SQL8008N The product *text* does not have a valid license key installed and the evaluation period has expired. Functions specific to this product are not enabled.

Explanation: A valid license key could not be found and the evaluation period has expired.

User response: Install a license key for the fully entitled version of the product. You can obtain a license key for the product by contacting your IBM representative or authorized dealer.

SQL8009W The number of concurrent users of the DB2 Workgroup product has exceeded the defined entitlement of *number*. Concurrent user count is *number*.

Explanation: The number of concurrent users has exceeded the number of defined DB2 concurrent user entitlements.

User response: Contact your IBM representative or authorized dealer to obtain additional DB2 user entitlements and update the DB2 license information using the `db2licm` command.

sqlcode: +8009

sqlstate: 01632

SQL8010W The number of concurrent users of the DB2 Connect product has exceeded the defined entitlement of *number*. Concurrent user count is *number*.

Explanation: The number of concurrent users has exceeded the number of defined DB2 concurrent user entitlements.

User response: Contact your IBM representative or authorized dealer to obtain additional DB2 user entitlements and update the DB2 license information using the `db2licm` command.

sqlcode: +8010

sqlstate: 01632

SQL8011W One or more database partitions does not have a valid DB2 license key installed for the *product-name* product.

Explanation: A valid license key has not been installed for this product on all database partitions. The product will be enabled to operate for a limited period of time for evaluation purposes. THE EVALUATION PERIOD IS CONTROLLED BY A TIME DISABLING DEVICE.

User response: If you have purchased a fully entitled version of this product, please install your license key as described in the product installation documentation. If you have already installed the license key, please verify your license file for accuracy.

USE OF THE PRODUCT FOR THE EVALUATION PERIOD IS SUBJECT TO THE TERMS OF THE IBM EVALUATION AGREEMENT IN THE EVALUATE.ARG FILE. YOUR USE OF THE PRODUCT DURING THE EVALUATION PERIOD CONSTITUTES YOUR ACCEPTANCE OF THESE TERMS.

If you do not accept the terms, you are not authorized to use the product and you must de-install it. You can obtain a license key for the fully authorized program with the product by contacting your IBM representative or authorized dealer.

SQL8012W The number of concurrent users of the DB2 Enterprise product has exceeded the defined entitlement of *number*. Concurrent user count is *number*.

Explanation: The number of concurrent users has exceeded the number of defined DB2 concurrent user entitlements.

User response: Contact your IBM representative or authorized dealer to obtain additional DB2 user entitlements and update the DB2 license information using the db2licm command.

sqlcode: +8012

sqlstate: 01632

SQL8013W The number of concurrent database connections to the DB2 Connect product has exceeded the defined entitlement of *number*. Database connection count is *number*.

Explanation: The license for the DB2 Connect product you are using supports a limited number of concurrent database connections. You have requested a number of connections that exceeds this limit.

User response: Upgrade to a version of the DB2 Connect product with a higher limit of concurrent database connections.

DB2 Connect Enterprise Edition users: obtain licenses for additional users by purchasing Additional User Packs.

sqlcode: +8013

sqlstate: 01632

SQL8014N The version of the DB2 Connect product you are using is not licensed for use with TCP/IP protocol. Upgrade to a full function DB2 Connect product to use TCP/IP.

Explanation: This version of DB2 Connect is limited to SNA connectivity. TCP/IP connections are not supported.

User response: Upgrade to a full function DB2 Connect product such as DB2 Connect Personal Edition or DB2 Connect Enterprise Edition to use TCP/IP.

sqlcode: -8014

sqlstate: 42968

SQL8015N The version of the DB2 Connect product you are using is not licensed for updating multiple databases in the same transaction.

Explanation: This version of DB2 Connect is limited to working with a single database in a transaction. It does not support 2-phase commit protocol.

User response: Upgrade to a full function DB2 Connect product such as DB2 Connect Personal Edition or DB2 Connect Enterprise Edition to be able to update multiple databases in a single transaction.

sqlcode: -8015

sqlstate: 42968

SQL8017W The number of processors on this machine exceeds the defined entitlement of *licensed-quantity* for the product *product-name*. The number of processors on this machine is *processor-quantity*. You should purchase additional processor based entitlements from your IBM representative or authorized dealer and update your license using the db2licm command.

User response:

SQL8018W The number of concurrent users for this product has exceeded the defined entitlement of *number*. Concurrent user count is *number*.

Explanation: The number of concurrent users has exceeded the number of defined concurrent user entitlements.

User response: Contact your IBM representative or authorized dealer to obtain additional user entitlements

SQL8019N • SQL8027N

and update the DB2 license information using the db2licm command.

sqlcode: +8018

sqlstate: 01632

SQL8019N There was an error updating the license for the OLAP Starter Kit. RC = *reason-code*.

Explanation: The license utility could not update the OLAP Starter Kit license because of an unknown error.

User response: Try the command again. If the problem persists, please contact an IBM service representative.

sqlcode: -8019

SQL8020W The number of concurrent connectors for one server has exceeded the defined entitlement of *number-sources*. Current number of connectors is *number-entitled*.

Explanation: The number of concurrent connectors has exceeded the number of defined entitlements.

User response: Contact your IBM representative or authorized dealer to obtain additional entitlements and then update the DB2 license information using the db2licm command.

SQL8022N Database partitioning feature is being used without database partitioning license. DB2 has detected that the database partitioning feature is being used but the database partitioning feature license has not been installed. Ensure that you have purchased database partitioning feature entitlements from your IBM representative or authorized dealer and have updated your license using the db2licm command.

User response:

SQL8023N The number of concurrent users for *product-name* product has exceeded the defined entitlement of *entitlement*. Concurrent user count is *count*. You should purchase additional user based entitlements from your IBM representative or authorized dealer and update your license using the the db2licm command.

User response:

SQL8024N A valid license key was not found for the requested function. The current license key for *product-name* product does not allow the requested functionality. Purchase the license key for this function from your IBM representative or authorized dealer and update your license using the db2licm command.

User response:

SQL8025W The connection to the server *server-name* is not allowed. A valid WebSphere Federated Server license could not be found.

Explanation: Your current WebSphere Federated Server license does not allow connection to the specified data source.

User response: Refer to the Administration Notification log for possible causes of this error. If this problem persist, contact IBM Support.

SQL8026W DB2 server has detected that a valid license for this product has not been registered.

Explanation: Registration of a valid license key is required in order to comply with the terms and conditions of your License Agreement. The license keys for this product are located on this product's media in the 'license' directory.

User response: Use the db2licm command to register the appropriate licenses that you have purchased. The License Agreement text is located in the 'license' directory in the installation directory of this product.

SQL8027N The table partitioning feature is being used without a DB2 Enterprise Server Edition license. DB2 has detected that the table partitioning feature is being used without a DB2 Enterprise Server Edition license. Ensure that you have purchased a valid DB2 Enterprise Server Edition entitlement from your IBM representative or authorized dealer and have updated your license using the db2licm command.

User response:

SQL8028N The *feature* feature is being used without a *license* license. DB2 has detected that this feature is being used without the appropriate entitlements. Ensure that you have purchased appropriate entitlements from your IBM representative or authorized dealer and have updated your license using the db2licm command.

User response:

SQL8029N A valid license key was not found for the requested function. The current license key for this product does not allow the requested functionality. Purchase the license key for this function from your IBM representative or authorized dealer and update your license using the db2licm command.

User response:

SQL8030W The license for the product *product* will expire in *number* day(s). You can register and update your license using the db2licm command. The license key can be obtained from your licensed product CD.

User response:

SQL8100N The table is full.

Explanation: When creating a database the following parameters may be specified:

- maximum number of pages per segment per file
- number of segments

Each table part may now have multiple files within the database segments. The file can grow until it reaches its maximum size in a segment (maximum number of pages per segment) and then it moves to the next segment to add more data. This occurs until it has used the maximum number of pages per segment in all configured segments, and the table becomes full.

Therefore, the total amount of space per database part is the product of the maximum number of pages and the number of segments. The table will be full if any of the table parts use all of their configured space.

Federated system users: this situation can also be detected by the data source.

User response:

- Delete rows from the table
- Reorganize the table to make more space

- Create a new database with larger values for maximum pages per segment and number of segments, back up the original database and restore to the new database.

Federated system users: isolate the problem to the data source failing the request and:

- Take the necessary steps to increase the space in the table at the data source.
- If the table is on the federated server, create a new database with larger values for maximum pages per segment and number of segments. Back up the original database and restore to the new database.

SQL8101N A Database segment may be incorrect.

Explanation: This error could occur in two ways:

1. Every database segment has an identifier file. The file may be missing or the contents of the file may be incorrect.
2. One, or more, previously allocated database segments are missing.

User response:

- Check to ensure that the file systems are mounted correctly
- Restore the database from a backup
- Call your IBM service representative

Chapter 17. SQL9000 - SQL9499

SQL9301N An invalid option is specified or an option parameter is missing.

Explanation: Either the option specified is invalid or an option parameter is not specified.

The command cannot be processed.

User response: Correct the option and resubmit the command.

SQL9302N Invalid option parameter:
option-parameter.

Explanation: The option parameter specified is invalid.

The command cannot be processed.

User response: Correct the option parameter and resubmit the command.

SQL9303N No *option* is specified.

Explanation: The required option *option* is not specified.

The command cannot be processed.

User response: Resubmit the command with the required option.

SQL9304N Unable to open file *filename* for writing.

Explanation: The command cannot be processed.

User response: Ensure that the system can access the file.

SQL9305N The *name* is too long. The maximum length is *max-length*.

Explanation: The <name> is longer than the maximum length of <max-length>.

The command cannot be processed.

User response: Ensure that the <name> does not exceed the maximum length.

SQL9306N One or more of the field names are too long. The maximum length is *max-length*.

Explanation: The total length of a field name includes the specified prefix and/or a column suffix, which can either be its name or its number. This total length must not exceed the maximum length.

The command cannot be processed.

User response: Ensure that all the field names do not exceed the maximum length.

SQL9307N Remarks cannot be retrieved from the database. Error code = *sqlcode*.

Explanation: An error has occurred when attempting to retrieve the remarks of a column from the database.

The command cannot be processed.

User response: Check the error code for more information.

SQL9308W SQL data type *sqltype* of the column *colname* is not supported.

Explanation: The SQL data type *sqltype* is not supported in the specified host language.

No declaration is generated for this column.

User response: Ensure that this is the desired table.

Chapter 18. SQL10000 - SQL10499

SQL1002N The password supplied is too long.

Explanation: The length of the password is expected to be 18 characters or less. However, if the password is to be verified for an APPC conversation, it must be 8 characters or less.

User response: Ensure that the password is not longer than the limit allowed.

sqlcode: -10002

sqlstate: 28000

SQL1003C There are not enough system resources to process the request. The request cannot be processed.

Explanation: The database manager could not process the request due to insufficient system resources. The resources that can cause this error include:

- The amount of memory in the system.
- The number of message queue identifiers available in the system.
- The number of connections at the cluster caching facility (CF).

User response: Stop the application. Possible solutions include:

- Remove background processes.
- Terminate other applications using the resources listed in this message's Explanation.
- If you are using Remote Data Services, increase the Remote Data Services heap size (rsheapsz) in the server and client configuration because at least one block is used per application.

NOTE: This is applicable only for releases of DB2 prior to Version 2.

- Decrease the values of the configuration parameters that define allocation of memory, including ASLHEAPSZ if UDFs are involved in the failing statement.
- Avoid accessing large files or use non-buffered I/O. To use non-buffered I/O, set the DB2 registry variable DB2NTNOCACHE to YES.
- Deactivate another connected database before activating this database.

sqlcode: -10003

sqlstate: 57011

SQL1004C An I/O error occurred while accessing the database directory.

Explanation: Either the system database directory or the local database directory cannot be accessed. This error may occur not only when the system is cataloging or uncataloging a database but also when the system is accessing a database that is cataloged in the directory.

The command cannot be processed.

User response:

- Run LIST DB DIRECTORY ON <path> (where path is where the databases were created).
- If you are successfully able to list the databases with the above command, then only the instance level directory is having problems.
 - Move all the files under <inst_home>/sqllib/sqlldir to another location (note: cataloging information will be lost).
 - Recatalog the databases on the same path. Test by running LIST DB DIRECTORY.
- If you were unable to list databases with the LIST DB DIRECTORY ON <path> command, then the local database directories are the problem. Restore the databases that were cataloged there from backup versions and catalog them.

sqlcode: -10004

sqlstate: 58031

SQL1005N The mode parameter *parameter* in the CONNECT TO statement is not valid. It must be SHARE for shared access, EXCLUSIVE for exclusive use or EXCLUSIVE MODE ON SINGLE NODE for exclusive use on single node. For DB2 Connect connections, only SHARE mode is supported. EXCLUSIVE MODE ON SINGLE NODE is only supported in MPP configuration.

Explanation: The *mode* parameter of the CONNECT TO statement must be SHARE for shared, EXCLUSIVE for exclusive use or EXCLUSIVE MODE ON SINGLE NODE for exclusive use on single node. If connecting to a database using DB2 Connect, only shared access is allowed. EXCLUSIVE MODE ON SINGLE NODE is only supported in MPP configuration.

The command cannot be processed.

User response: Resubmit the command with a valid *mode* parameter.

SQL1007N Message *msgno* could not be retrieved. Reason code: *code*.

Explanation: The requested message <msgno> could not be retrieved from the message file. Reason code <code> is one of the following:

1. The environment variable DB2INSTANCE is either not set, or is set to an invalid instance. Correct it and try again.
2. The message file was found, but the file could not be opened because of permissions. Check the file permissions of the files under the message directory.
3. The message file could not be found. Either the file does not exist, or the directory the message file should be in does not exist. Check that either a default directory or a directory with the same name as the 'LANG' environment variable exists under the message directory.
4. The requested message does not exist in the message file. Either the message file is outdated, or it is the wrong one.
5. Either DB2CODEPAGE is set to a code page which the database does not support, or the client's locale is not supported by the database.
6. An unexpected system error occurred. Try execution again. If problem persists, contact your IBM representative.
7. Not enough memory. An attempt to get private memory failed. Try again.

User response: Reissue the command after verifying the following:

- Ensure that the DB2INSTANCE environment variable is set to the correct literal string for the username attempting this command.
- Ensure that correct home directory is specified for the username attempting this command (i.e., in the /etc/passwd file).
- Ensure that the LANG environment variable is set to the correct value for the installed language, or is set to 'C', on the username attempting this command.
- Even if the message file is outdated, you can still find up-to-date information about the message in the database server documentation.

If all of these things have been verified and the error still occurs, reinstall DB2.

SQL10009N The codeset *codeset* and/or territory *territory* that has been specified is not valid.

Explanation: This version of the database manager does not support the active codeset or territory or both, as specified by the Create Database command.

The command cannot be processed.

User response: Refer to the Create Database command in the *Administration Guide* for details of valid codeset and territory pairs supported by the database manager.

SQL10010N The specified library, *name*, was loaded, but the function *function* could not be executed.

Explanation: The function routine within the library cannot be found.

The command cannot be processed.

User response:

1. Ensure the library is built correctly. Make sure that the function routine is exported through the 'export file'.
2. You might have to reinstall the database manager instance or the database manager product.

Federated system users: If the function name is "UnfencedWrapper_Hook" or "FencedWrapper_Hook", then verify that you specified the correct library name on the CREATE WRAPPER statement. Specify the library name that does not end in "U" or "F". For example, to create the DRDA wrapper on AIX, specify library 'libdb2drda.a', but not 'libdb2drdaU.a' or 'libdb2drdaFa.'. If the wrapper library is supplied by a vendor, then contact the vendor to get an updated version of the wrapper library.

sqlcode: -10010

sqlstate: 42724

SQL10011N An interrupt was received while loading the specified library *name*.

Explanation: When loading the library, the command was interrupted, perhaps by the interrupt key (usually Ctrl+Break or Ctrl+C).

Processing is stopped.

User response: Resubmit the command.

sqlcode: -10011

sqlstate: 42724

SQL10012N An unexpected operating system error was received while loading the specified library *name*.

Explanation: An unexpected error occurred when trying to load the library module specified in the program name field.

User response: Resubmit the current command. If the error continues, stop the database manager and start it again. If the error continues, reinstall the database manager.

If reinstallation does not correct the error, record the message number (SQLCODE) and all information in the SQLCA if possible.

If trace was active, invoke the Independent Trace

Facility at the operating system command prompt.
Then contact IBM as specified in this guide.

sqlcode: -10012

sqlstate: 42724

SQL10013N The specified library *name* could not be loaded.

Explanation: The library module could not be found.

User response: Ensure that the specified library is available.

- If the client application uses a fully qualified path name to specify the library, the library must be stored in the given directory path. If the client application does not use the path name, the library must be stored in the default directory (<InstanceHomeDir>/sqllib/function). Where <InstanceHomeDir> is the home directory of the database manager instance.
- If the error message occurs during database manager start time then the user will have to reinstall the DB2 instance or the database manager product.

If the library identifies a wrapper module, that module must be installed, link-edited (as required), and available in the correct directory. The data source client libraries (used by the wrapper module) must also be installed and available in the correct directory.

sqlcode: -10013

sqlstate: 42724

SQL10014N The invoking program name *name* specified is not valid.

Explanation: The library module or the program name syntax is not correct.

User response: Ensure that the library or program name is specified correctly.

sqlcode: -10014

sqlstate: 42724

SQL10015N There are not enough system resources to load the specified library *name*.

Explanation: There is not enough memory to load the library module.

User response: Stop the application. Possible solutions are:

- Remove background processes.
- Decrease the values of the configuration parameters that define the allocation of memory.
- Install more memory.

sqlcode: -10015

sqlstate: 42724

SQL10017N The SQL CONNECT RESET statement is not allowed in a this context.

Explanation: The remote procedure contains an SQL CONNECT RESET statement.

User response: Remove the SQL CONNECT RESET statement and retry the remote procedure.

sqlcode: -10017

sqlstate: 38003

SQL10018N The disk is full. Processing was ended.

Explanation: The disk is full. During the export to a PC/IXF file, either the PC/IXF data file is on a fixed disk, or the PC/IXF data file and the database are on the same file system, or the PC/IXF data file and the message file are on the same file system.

The EXPORT utility stops processing. The exported data is not complete.

User response: Provide more space on the disk or specify that the data file be located on a different file system than the database or the message file and resubmit the command.

SQL10019N The database cannot be accessed in the specified path.

Explanation: The database cannot be accessed for one of the following reasons:

- The path does not contain a database image.
- Permissions on the path are incorrect.

User response: Ensure that the path references a valid database and that the permissions are correct.

sqlcode: -10019

sqlstate: 58031

SQL10021N The file permissions do not allow write access to the database.

Explanation: A write operation was attempted to a database residing on a file system which does not allow write access.

The statement cannot be processed.

User response: Verify that the file permissions for the file system on which the database resides allow write access.

Chapter 19. SQL16000 - SQL16499

SQL16000N An XQuery expression cannot be processed because the *context-component* component of the static context has not been assigned. Error QName=err:XPST0001.

Explanation: Static analysis of an expression relies on a component of the static context, *context-component*, that has not been assigned a value.

The XQuery expression cannot be processed.

User response: Assign a value to the *context-component*.

sqlcode: -16000

sqlstate: 10501

SQL16001N An XQuery expression starting with token *token* cannot be processed because the focus component of the dynamic context has not been assigned. Error QName=err:XPDY0002.

Explanation: Evaluation of the expression starting with token *token* requires that the focus component of the dynamic context be assigned. The token is being considered as the beginning of a path expression which does not have an associated context item or context sequence. This might be the result of not defining or retrieving a sequence as a context for the path expression. Other common causes for this error:

- The value in token *token* was intended to be a literal string but delimiting quotations characters are missing.
- The value in token *token* was intended to be a function but the opening and closing parentheses are missing.

The XQuery expression cannot be processed.

User response: Investigate occurrences of token *token* in the XQuery expression. Correct the XQuery expression around an occurrence of this token to assign a focus component or make other changes so that the token is no longer expecting an assigned focus component.

sqlcode: -16001

sqlstate: 10501

SQL16002N An XQuery expression has an unexpected token *token* following *text*. Expected tokens may include: *token-list*. Error QName=err:XPST0003.

Explanation: The *token* that follows *text* is not valid where it occurs in the expression. The *token-list* includes one or more possible tokens that are valid replacements for the unexpected token.

The XQuery expression cannot be processed.

User response: Use the correct syntax for the expression.

sqlcode: -16002

sqlstate: 10505

SQL16003N An expression of data type *value-type* cannot be used when the data type *expected-type* is expected in the context. Error QName=err:XPTY0004.

Explanation: An XQuery expression includes a value of the type *value-type* in a context where the expected type is *expected-type*.

The XQuery expression cannot be processed.

The following rules apply to types that are used in expressions:

- The operands of a range expression must each be convertible to a single integer.
- The operands of a union, intersect, or except operator must contain items that are nodes only.
- The operands of an arithmetic expression cannot be sequences of length greater than one.
- The operands of a node comparison must be either single nodes or empty sequences.
- In general, atomization must not result in more than one atomic value.
- When atomization is applied to a comparison expression, the result of atomization must be single atomic values, where the value of the first atomized operand is comparable with the value of the second atomized operand.
- When atomization is applied to a name expression, the result of atomization must be a single atomic value of type *xs:QName*, *xs:string*, or *xdt:untypedAtomic*.
- The content sequence of a document node constructor cannot contain attribute nodes.
- When *(item(), item()+)* appears as the *value-type*, a sequence of 2 or more items is being used in an expression where a single item is expected.
- The orderspec values in an order by clause must be convertible to a common type.
- A value that is bound to a variable must match the declared type (if a type is declared).

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- The cast of a value of source type *value-type* to target type *expected-type* must be a supported cast. In cases where SQL processing invokes XQuery to perform a cast from an XML data type to an SQL data type other than XML, an XQuery cast is performed with a temporary derived XML schema type that is generated using a name based on the SQL data type and associated size restrictions. For example, the *target-type* token value is "VARCHAR_50" for an XMLCAST to VARCHAR(50) and "DECIMAL_9_2" for an XMLCAST to DECIMAL(9,2).

User response: Specify a value of the correct type.

sqlcode: -16003

sqlstate: 10507

SQL16004N The fn:data function cannot be applied explicitly or implicitly to an XQuery node for which the type annotation denotes a complex type with element-only content. Error QName=err:FOTY0012.

Explanation: An XQuery expression attempted to apply the fn:data function to an XQuery node either explicitly or implicitly as a result of atomization. However, because the type annotation of the node denotes a complex type with element-only content, the typed value of the node is undefined. The fn:data function raises a type error when applied to a node whose type is undefined.

XQuery expressions use atomization to convert items into atomic values in expressions such as: arithmetic expressions, comparison expressions, function calls with arguments whose expected types are atomic, cast expressions, constructor expressions for various kinds of nodes, order by clauses in FLWOR expressions, type constructor functions, source expressions in replace value of expressions, and new name expressions in rename expressions. Processing any of these these expressions will implicitly invoke the fn:data function which could result in this error.

The XQuery expression cannot be processed.

User response: Try one of the following actions:

- Replace the call to the fn:data function with a function call that is appropriate for complex types with element only content.
- Call the fn:data function on a node that is annotated as a simple type, or as a complex type that contains mixed content.
- If the context of an XQuery expression requires a sequence of atomic values, ensure that the sequence consists only of items that can be atomized.

sqlcode: -16004

sqlstate: 10507

SQL16005N An XQuery expression references an element name, attribute name, type name, function name, namespace prefix, or variable name *variable-name* that is not defined within the static context. Error QName=err:XPST0008.

Explanation: During the static analysis phase, the static context is used to resolve element names, attribute names, type names, function names, namespace prefixes, and variable names. If an expression uses an *undefined-name* that is not found in the static context, a static error is raised.

The XQuery expression cannot be processed.

User response: Use a name that is defined within the static context. If the QName includes a prefix, verify that the namespace prefix has been bound to a namespace through a namespace declaration. If the error resulted from a variable reference, verify that the variable is in-scope for the expression.

If the value of an SQL Procedural Language (SQL PL) variable is used in an XQuery expression of an XMLTABLE or XMLQUERY function, or XMLEXISTS predicate, verify that the variable name is specified in the PASSING clause that specifies input values for the expression.

sqlcode: -16005

sqlstate: 10506

SQL16006N XML schemas cannot be imported. Error QName=err:XQST0009.

Explanation: DB2 XQuery does not support the Schema Import Feature.

The schema cannot be imported.

User response: Remove the schema import statement from the query prolog.

sqlcode: -16006

sqlstate: 10502

SQL16007N The XQuery path expression references an axis *axis-type* that is not supported. Error QName=err:XQST0010.

Explanation: The *axis-type* that is specified is not supported because DB2 XQuery does not support the Full Axis Feature. The supported axes include: child, attribute, descendant, self, descendant-or-self, and parent.

The XQuery expression cannot be processed.

User response: Specify an axis that is supported.

sqlcode: -16007

sqlstate: 10505

SQL16008N XQuery library modules cannot be declared or imported. Error QName=err:XQST0016.

Explanation: A module declaration or module import exists in an XQuery statement, but DB2 XQuery does not support the Module Feature.

The module cannot be declared or imported.

User response: Remove all module declarations or module imports from the query prolog.

sqlcode: -16008

sqlstate: 10502

SQL16009N An XQuery function named *function-name* with *number-of-parms* parameters is not defined in the static context. Error QName=err:XPST0017.

Explanation: The expanded QName and *number-of-parms* in a call to the function *function-name* do not match the function name and number of parameters of a function signature in the static context.

The XQuery expression cannot be processed.

User response: Try one of the following actions:

- Verify that you are passing the correct number of parameters to the function call.
- If the function call uses a function name with no prefix, verify that the local name of the function matches a function that is in the default function namespace, or use the correct prefix.

sqlcode: -16009

sqlstate: 10506

SQL16010N The result of the last step in an XQuery path expression contains both nodes and atomic values. Error QName=err:XPTY0018.

Explanation: The last step in the XQuery path expression contains at least one XQuery node and one XQuery atomic value. This combination of types is not allowed as the last step in an XQuery path expression.

The XQuery expression cannot be processed.

User response: Ensure that the last step in each XQuery path expression returns only XQuery nodes or only XQuery atomic values.

sqlcode: -16010

sqlstate: 10507

SQL16011N The result of an intermediate step expression in an XQuery path expression contains an atomic value. Error QName=err:XPTY0019.

Explanation: Each intermediate step in an XQuery expression must evaluate to a (possibly empty) sequence of XQuery nodes. Such sequences must not include any XQuery atomic values.

The XQuery expression cannot be processed.

User response: Modify the expression to ensure that each intermediate step in an XQuery expression returns a sequence of nodes.

sqlcode: -16011

sqlstate: 10507

SQL16012N The context item in an axis step must be an XQuery node. Error QName=err:XPTY0020.

Explanation: In an axis step, the context item (the item currently being processed) must be an XQuery node.

The XQuery expression cannot be processed.

User response: Modify the axis step or the input to ensure that the context item is a node.

sqlcode: -16012

sqlstate: 10507

SQL16014N The value of the namespace declaration attribute must be a literal string. Error QName=err:XQST0022.

Explanation: An XQuery expression contains a namespace declaration attribute that is not a literal string. The value of a namespace declaration attribute must be either a literal string containing a valid URI, or a zero-length string.

The XQuery expression cannot be processed.

User response: Specify a literal string for the value of the namespace declaration attribute.

sqlcode: -16014

sqlstate: 10502

SQL16015N An element constructor contains an attribute node named "*node-name*" that follows an XQuery node that is not an attribute node. Error QName=err:*error-name*.

Explanation: The sequence used for constructing element content contains an attribute node named *node-name* that follows an XQuery node that is not an attribute node. The particular context where this occurs is based on the error QName.

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err:XQTY0024

The content sequence of an element constructor contains an attribute node named *node-name* that follows an XQuery node that is not an attribute node. Attribute nodes can only occur at the beginning of the content sequence.

err:XUTY0004

The content of an insertion sequence based on the source expression of an insert expression contains an attribute node named *node-name* that follows an XQuery node that is not an attribute node. Attribute nodes can only occur at the beginning of the insertion sequence.

The XQuery expression cannot be processed.

User response: Modify the content sequence to ensure that attribute nodes follow other attribute nodes.

sqlcode: -16015

sqlstate: 10507

SQL16016N The attribute name *attribute-name* cannot be used more than once in an element constructor. Error QName=err:XQDY0025.

Explanation: An XQuery expression uses an *attribute-name* more than once in an element constructor. This is not allowed because the attribute names that are used in an element constructor must be unique.

The XQuery expression cannot be processed.

User response: Specify a unique name for each attribute.

sqlcode: -16016

sqlstate: 10503

SQL16017N The string "?>" is not allowed in the name expression or content expression of a computed processing instruction. Error QName=err:XQDY0026.

Explanation: The name expression or content expression of a computed processing instruction cannot contain the string "?>" because these characters are reserved for use as end delimiters in XML processing instructions.

The XQuery expression cannot be processed.

User response: Remove the string "?>" from the name expression or content expression.

sqlcode: -16017

sqlstate: 10508

SQL16018N For the target data type *type-name*, a string literal is not specified as the operand of a cast expression or as the argument of a constructor function. Error QName=err:XPST0083.

Explanation: The target data type *type-name* is either xs:QName or a type derived from the xs:QName or xs:NOTATION predefined XML schema types. For any of these types, a string literal must be specified as the operand of a cast expression or as the argument of a constructor function.

The XQuery expression cannot be processed.

User response: Perform one of the following actions:

- If *type-name* is the target data type of a cast expression, change the operand to a string literal or specify a different target data type.
- If *type-name* is used as the name of a constructor function, change the argument to a string literal or use a different constructor function.

sqlcode: -16018

sqlstate: 10510

SQL16020N The context node in a path expression does not have an XQuery document node root. Error QName=err:XPDY0050.

Explanation: The root node above the context node in a path expression must be an XQuery document node.

The XQuery expression cannot be processed.

User response: Change the each path expression so that the context node has a root node that is an XQuery document node.

sqlcode: -16020

sqlstate: 10507

SQL16021N The XQuery version declaration specifies a number *version-number* that is not supported. Error QName=err:XQST0031.

Explanation: DB2 XQuery does not support the XQuery *version-number* that is specified in a version declaration.

The XQuery expression cannot be processed.

User response: Specify a *version-number* that is supported by DB2 XQuery. DB2 XQuery currently supports XQuery version 1.0.

sqlcode: -16021

sqlstate: 10502

SQL16022N A value of type *value-type* is not valid in an expression that uses operation *operator*. Error QName=err:XPTY0004.

Explanation: The type *value-type* that is defined for an operand of an XQuery expression is not valid because the expression uses the constructor or operator *operator*.

The XQuery expression cannot be processed.

User response: Specify a value that is the correct type to use with the constructor or operator *operator*.

sqlcode: -16022

sqlstate: 10507

SQL16023N The XQuery prolog cannot contain multiple declarations for the same namespace prefix *ns-prefix*. Error QName=err:XQST0033.

Explanation: The prolog contains multiple declarations for the namespace prefix *ns-prefix*. Although a namespace declaration in a prolog can override a prefix that has been predeclared in the static context, the same namespace prefix cannot be declared more than once in the prolog.

The XQuery expression cannot be processed.

User response: Remove any extra declarations for the prefix from the prolog, or change the prefix that is assigned to the extra declarations. Verify that the prefixes used in the query reference the correct namespaces.

sqlcode: -16023

sqlstate: 10503

SQL16024N The prefix *prefix-name* cannot be redeclared or cannot be bound to the URI <http://www.w3.org/XML/1998/> namespace. Error QName=err:XQST0070.

Explanation: A namespace declaration or a namespace declaration attribute cannot redeclare the predefined namespace prefixes "xml" or "xmlns".

- If the namespace prefix *prefix-name* is one of these predefined namespace prefixes, it is being used in a namespace declaration or namespace declaration attribute, which is not allowed.
- If the prefix name is not "xml" or "xmlns", the declaration of the prefix *prefix-name* specifies the namespace URI associated with the prefix "xml", which can only be bound to the namespace prefix "xml".

The XQuery expression cannot be processed.

User response: Perform one of the following actions:

- If the prefix name is "xml" or "xmlns", change the prefix name to a different namespace prefix.

- If the prefix name is not "xml" or "xmlns", change the namespace URI specified in the declaration of the namespace prefix.
- Remove any namespace declaration or namespace declaration attribute that specifies the prefix *prefix-name*.

sqlcode: -16024

sqlstate: 10503

SQL16025N The result of the content expression of an XQuery computed comment constructor contains two adjacent hyphens or ends with a hyphen character. Error QName=err:XQDY0072.

Explanation: The content specified for an XQuery computed comment constructor includes combinations of characters that are not allowed. This could be two adjacent hyphen (or dash) characters or the last character is a hyphen.

The XQuery expression cannot be processed.

User response: Remove the invalid uses of hyphen characters from the content expression of each XQuery computed comment constructor.

sqlcode: -16025

sqlstate: 10508

SQL16026N The name *attribute-name* is used for more than one attribute in the constructor for the element named *element-name*. Error QName=err:XQST0040.

Explanation: The name *attribute-name* in *element-name* cannot be used more than once because element constructors must use unique names for attributes.

The XQuery expression cannot be processed.

User response: Use unique names for all attributes in *element-name*.

sqlcode: -16026

sqlstate: 10503

SQL16027N The value of the name expression *value* in a computed processing instruction constructor is not valid. Error QName=err:XQDY0041.

Explanation: The atomized value of the name expression *value* is of type xs:string or xdt:untypedAtomic, but the value cannot be cast to xs:NCName.

The XQuery expression cannot be processed.

User response: Change the *value* of the name expression to a value that can be atomized and then

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cast to the type xs:NCName.

sqlcode: -16027

sqlstate: 10508

SQL16029N Two or more namespaces within the same XQuery element constructor use the same namespace prefix *prefix-name*. Error QName=err:XQST0071.

Explanation: The namespace prefix *prefix-name* cannot be used more than once in the same XQuery computed element constructor. If *prefix-name* is "xmlns", then more than one default namespace is specified in the XQuery computed element constructor.

The XQuery expression cannot be processed.

User response: Use unique namespace prefixes for local namespace declarations in the computed element constructor. Also, verify that the expression does not include more than one local namespace declaration that has no prefix.

sqlcode: -16029

sqlstate: 10503

SQL16030N The value *value* returned by the name expression of a computed attribute constructor is in the namespace for the prefix xmlns, or is in no namespace and has the local name xmlns. Error QName=err:XQDY0044.

Explanation: It is an error for the name expression of a computed attribute constructor to return a QName that is in the namespace `http://www.w3.org/2000/xmlns/` (corresponding to namespace prefix xmlns), or return a QName that is in no namespace and has the local name xmlns. The namespace prefix xmlns is used in XQuery to identify namespace declaration attributes.

The XQuery expression cannot be processed.

User response: Modify the name expression of the computed attribute constructor to return a value that is not in the namespace for the prefix xmlns.

sqlcode: -16030

sqlstate: 10508

SQL16031N XQuery language feature using syntax *string* is not supported.

Explanation: The XQuery expression includes the syntax indicated in *string* that is defined by the standard XQuery language specifications but is not supported in DB2 XQuery.

The XQuery expression cannot be processed.

User response: Remove the unsupported expression

starting with the syntax *string* from the XQuery expression.

sqlcode: -16031

sqlstate: 10509

SQL16032N The string *string* is not a valid URI. Error QName=err:XQST0046.

Explanation: A namespace declaration or namespace declaration attribute specifies a string value that is not a valid URI.

The XQuery expression cannot be processed.

User response: Specify a string value that is a valid URI. A valid URI must conform to the generic URI syntax specified by the World Wide Web Consortium (W3C).

sqlcode: -16032

sqlstate: 10504

SQL16033N The target data type *type-name* of a cast or castable expression is not an atomic data type defined for the in-scope XML schema types or is a data type that cannot be used in a cast or castable expression. Error QName=err:XPST0080.

Explanation: The cast or castable expression specifies a target data type *type-name* that cannot be used. The predefined XML schema types xs:NOTATION, xs:anySimpleType, and xdt:anyAtomicType cannot be used as the target type of a cast or castable expression. If *type-name* is not one of these restricted types, then either the data type is not defined for the in-scope XML schema types or the data type is not an atomic type.

The XQuery expression cannot be processed.

User response: Perform one of the following actions:

- If the target data type is xs:NOTATION, xs:anySimpleType, or xdt:anyAtomicType, specify a different target data type or remove the cast or castable expression.
- If the target data type is not defined by the in-scope XML types, specify a data type that is in-scope or change the XML schema to include the data type.
- If the target data type is not atomic, specify a different target data type or remove the cast or castable expression.

sqlcode: -16033

sqlstate: 10507

SQL16034N The QName *qname* is used as an atomic type in a sequence type, but is not defined in the in-scope schema type definitions as an atomic type. Error QName=err:XPST0051.

Explanation: The QName *qname* cannot be used as an atomic type because it is not defined in the in-scope schema type definitions as an atomic type. Error QName=err:XPST0051.

User response: Use a QName that is defined as an atomic type.

sqlcode: -16034

sqlstate: 10503

SQL16035N A validate expression is not supported in DB2 XQuery. Error QName=err:XQST0075.

Explanation: The validation feature is not supported in DB2 XQuery, so a validate expression cannot be used as an XQuery expression.

The XQuery expression cannot be processed.

User response: Remove all validate expressions from the XQuery expression.

sqlcode: -16035

sqlstate: 10509

SQL16036N The URI that is specified in a namespace declaration cannot be a zero-length string. Error QName=err:XQST0085.

Explanation: The URI that is specified in a namespace declaration must be a valid URI that conforms to the generic URI syntax specified by the World Wide Web Consortium (W3C). The URI cannot be a zero-length string.

The XQuery expression cannot be processed.

User response: Specify a valid URI in the namespace declaration.

sqlcode: -16036

sqlstate: 10504

SQL16038N The arguments of fn:dateTime have different timezones. Error QName=err:FORG0008.

Explanation: The function fn:dateTime includes arguments that have different timezones. The timezone of both arguments could be explicitly part of the value or may be result from the use of the implicit timezone for the XQuery execution environment for one of the arguments.

The XQuery expression cannot be processed.

User response: Ensure that the same timezone is used for both arguments of fn:dateTime.

sqlcode: -16038

sqlstate: 10608

SQL16039N The function *function name* expected a string literal for argument *argument-number*.

Explanation: The function identified by *function name* requires that the argument number *argument-number* be specified as a string literal. The XQuery expression includes an invocation of function *function name* that does not use a string literal.

The XQuery expression cannot be processed.

User response: Change argument *argument-number* of function *function name* to a string literal.

sqlcode: -16039

sqlstate: 10608

SQL16040N The argument of function *function name* does not identify a single column with SQL data type XML.

Explanation: The function *function name* requires that the argument specify an SQL result table with a single column of data type XML. For db2-fn:xmlcolumn this is done by specifying a column within a table or view with the SQL data type XML. For db2-fn:sqlquery, the SQL query provided as an argument must specify a single column in the outer fullselect that has an SQL data type of XML.

User response: Correct the argument of function *function name* to return a single column with SQL data type XML.

sqlcode: -16040

sqlstate: 10608

SQL16041N An implicit or explicit invocation of the fn:boolean function in the XQuery expression could not compute the effective boolean value of the sequence. Error QName=err:FORG0006.

Explanation: This error occurs if the effective boolean value of the sequence operand of an explicit or implicit invocation of the fn:boolean function cannot be computed for the sequence operand. The effective boolean value can be computed only if the sequence operand is one of the following sequences:

- An empty sequence
- A sequence where the value of the first item is a node

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- A singleton sequence with a value of type xs:string, xdt:untypedAtomic, or a type derived from one of these types
- A singleton sequence with a value of any numeric type or derived from any numeric type

The XQuery expression cannot be processed.

User response: Determine the possible expressions within the XQuery expression where an effective boolean value is calculated either implicitly or explicitly. An implicit invocation of the fn:boolean function can occur when processing the following types of expressions:

- Logical expressions (and, or)
- An fn:not function invocation
- The where clause of a FLWOR expression
- Certain types of predicates, such as a[b]
- Conditional expressions, such as if
- Quantified expressions (some, every)

Ensure that the sequence operand of each effective boolean value calculation would have a valid sequence operand (one described in the explanation).

sqlcode: -16041

sqlstate: 10608

SQL16042N The name expression in a computed processing instruction constructor cannot be equal to "XML" in any combination of upper and lower case characters. Error QName=err:XQDY0064.

Explanation: The NCName that results from the name expression of a computed processing instruction constructor cannot be equal to the string of characters XML in any combination of upper or lower case characters.

The XQuery expression cannot be processed.

User response: Modify the name expression to result in an NCName that is not equal to XML.

sqlcode: -16042

sqlstate: 10508

SQL16045N An unidentified error was issued from an XQuery expression. Error QName=err::FOER0000.

Explanation: An XQuery expression resulted in an unidentified error.

User response: Fix the problem in the XQuery expression.

sqlcode: -16045

sqlstate: 10611

SQL16046N A numeric XQuery expression attempted to divide by zero. Error QName=err:FOAR0001.

Explanation: A division or modulus operation attempted to divide an integer or decimal value by zero.

The XQuery expression cannot be processed.

User response: Use a value for the divisor that is not equal to zero.

sqlcode: -16046

sqlstate: 10601

SQL16047N An XQuery expression resulted in arithmetic overflow or underflow. Error QName=err:FOAR0002.

Explanation: An arithmetic operation resulted in a number that either exceeded the maximum or was below the minimum value allowed.

The XQuery expression cannot be processed.

User response: Modify the expression to result in a number that does not result in an arithmetic overflow or underflow.

sqlcode: -16047

sqlstate: 10601

SQL16048N An XQuery prolog cannot contain more than one *declaration-type* declaration. Error QName=err:error-qname.

Explanation: Declaring more than one *declaration-type* declaration in a prolog results in an error. The *declaration-type* declaration type is one of the following declarations that can be specified in an XQuery prolog:

- copy-namespaces
- ordering
- default element namespace
- default function namespace
- construction
- boundary-space
- default empty order

This error could be returned for a variety of error QNames such as err:XQST0055, err:XQST0065, err:XQST0066, err:XQST0067, err:XQST0068, and err:XQST0069.

The XQuery expression cannot be processed.

User response: Remove the extra declaration of type *declaration-type* from the prolog.

sqlcode: -16048

sqlstate: 10502

SQL16049N The lexical value *value* is not valid for the *date-type* data type in the function or cast. Error QName=err:FOCA0002.

Explanation: A cast expression or function call includes a *value* that does not have the correct lexical form for the *type-name* data type.

The XQuery expression cannot be processed.

User response: Try one of the following actions:

- If the error results from a function invocation, verify that the string parameters used for QNames or local names have the correct lexical form.
- If the error results from a cast expression, verify that the source value is not one of the special float or double values NaN, INF, or -INF.

sqlcode: -16049

sqlstate: 10602

SQL16051N The value "*value*" of data type "*source-type*" is out of range for an implicit or explicit cast to target data type "*target-type*". Error QName=err:error-name.

Explanation: An XQuery expression requires that the value *value* with a data type of *source-type* be cast, either implicitly or explicitly to the target data type *target-type*. The value is outside the defined range of values for that data type. If the *target-type* is xs:dateTime or a data type derived from xs:dateTime, then the range applies to the value in the specified timezone and to the value converted to UTC using the timezone component of the value.

This error could be returned for a variety of error QNames such as err:FOAR0002, err:FOCA0001, err:FOCA0003, err:FODT0001, err:FODT0002, and err:FORG0001.

The XQuery expression cannot be processed.

User response: Change the XQuery expression to use a target data type with a range that supports the specific value *value*, or change the value to be within the defined range of the target data type *target-type*.

sqlcode: -16051

sqlstate: 10602

SQL16052N NaN cannot be used as a float or double value in a datetime operation. Error QName=err:FOCA0005.

Explanation: NaN was passed as an argument to a datetime operation, but NaN is not a valid parameter

value for datetime operations.

The XQuery expression cannot be processed.

User response: Pass a valid float or double value to the datetime operation.

sqlcode: -16052

sqlstate: 10602

SQL16053N The codepoint *codepoint* is not valid in a character string. Error QName=err:FOCH0001.

Explanation: A value that was passed to the fn:codepoints-to-string function in an XQuery expression contains a *codepoint* that is not a legal XML character.

The XQuery expression cannot be processed.

User response: Modify the argument to pass in valid codepoints only, or remove the expression.

sqlcode: -16053

sqlstate: 10603

SQL16054N The normalization form *form* that is specified as an argument of the function fn:normalize-unicode is not supported. Error QName=err:FOCH0003.

Explanation: The effective value *form* that was passed as the normalization form argument to the fn:normalize-unicode function is not supported. The effective value of the normalization form is computed by removing leading and trailing blanks, if present, and converting to upper case.

The XQuery expression cannot be processed.

User response: Pass a supported normalization form to the fn:normalize-unicode function.

sqlcode: -16054

sqlstate: 10603

SQL16055N An arithmetic operation involving a datetime value resulted in overflow. Error QName=err:FODT0001.

Explanation: An arithmetic operation involving a datetime value resulted in a number that exceeded the maximum value allowed.

The XQuery expression cannot be processed.

User response: Modify the XQuery expression to result in a number that does not exceed the maximum value allowed.

sqlcode: -16055

sqlstate: 10605

SQL16056N An arithmetic operation involving a duration value resulted in overflow. Error QName=err:FODT0002.

Explanation: An arithmetic operation involving a duration value resulted in a number that exceeded the maximum value allowed.

The XQuery expression cannot be processed.

User response: Modify the XQuery expression to result in a number that does not exceed the maximum value allowed.

sqlcode: -16056

sqlstate: 10605

SQL16057N A timezone value *value* is not valid. Error QName=err:FODT0003.

Explanation: An XQuery expression specifies a timezone *value* that is less than -PT14H00M or greater than PT14H00M.

The XQuery expression cannot be processed.

User response: Specify a timezone value that is greater than -PT14H00M or less than PT14H00M.

sqlcode: -16057

sqlstate: 10605

SQL16058N No context item is defined for the function or operation *function-or-operation*. Error QName=err:FONC0001.

Explanation: The function or operation *name* relies on a context item, but no context item is defined.

The XQuery expression cannot be processed.

User response: Modify the XQuery expression to ensure that a context item is defined for the function or operation *name*. If the function or operation uses the context item because an argument is omitted, then modify the expression to ensure that the context item is defined before the function is invoked.

sqlcode: -16058

sqlstate: 10606

SQL16059N No statically known namespace exists for the prefix in the value *value* cast to xs:QName. Error QName=err:FONS0003.

Explanation: An XQuery expression that casts to xs:QName specifies a *value* that uses a prefix, but the prefix cannot be mapped to a URI because there is no statically known namespace for the specified prefix.

The XQuery expression cannot be processed.

User response: In the cast expression, specify a prefix

in the value that exists as a statically known namespace. If the prefix is correct, ensure that there is a namespace declaration for the specified prefix.

sqlcode: -16059

sqlstate: 10607

SQL16060N No namespace was found for the prefix in the QName *qname*. Error QName=err:FONS0004.

Explanation: The expanded QName of an element could not be resolved because no namespace exists for the prefix that is specified in the QName.

The XQuery expression cannot be processed.

User response: Add a namespace declaration to bind the prefix to a URI, or specify a different prefix in the QName.

sqlcode: -16060

sqlstate: 10607

SQL16061N The value *value* cannot be constructed as, or cast (using an implicit or explicit cast) to the data type *data-type*. Error QName=err:FORG0001.

Explanation: An XQuery expression attempted to use the value *value* as a *data-type* value but the value is not valid for the data type. The following situations might cause this error:

- A *value* was passed to a constructor function that required a value of data type *data-type*.
- A *value* was explicitly passed to a cast function or specified in a cast expression with a target data type of *datatype*.
- An expression that included *value* implicitly cast the value to the target data type of *data-type*. Many XQuery expressions use implicit casting to process the expressions. For example, implicit casting is used in general comparisons of numeric values that require the values to be of data type xs:double.
- In cases where SQL processing invokes XQuery to perform a cast from an XML value *value* to an SQL data type other than XML, an XQuery cast is performed with a temporary derived XML schema type that is generated using a name based on the SQL data type and associated size restrictions. For example, the *data-type* token value is "VARCHAR_50" for an XMLCAST to VARCHAR(50) and "DECIMAL_9_2" for an XMLCAST to DECIMAL(9,2).

The XQuery expression cannot be processed.

User response: Try one of the following actions:

- Use a value in the constructor or cast expression that is valid for the data type *data-type*.

- If the error occurs in an expression that casts from one primitive type to another, verify that casting from the source type to the target type is supported. If the cast is not supported, either remove the expression or cast the value to a different data type.
- Check for expressions that would result in implicit casting with values that may not conform to the data type of the implicit cast and add conditions to the expression to avoid the error.

sqlcode: -16061

sqlstate: 10608

SQL16062N The argument passed to the function `fn:zero-or-one` is not valid because the sequence contains more than one item. Error `QName=err:FORG0003`.

Explanation: A sequence that was passed as an argument to the function `fn:zero-or-one` contains more than one item.

The XQuery expression cannot be processed.

User response: Modify the expression to ensure that the sequence passed to the function `fn:zero-or-one` contains only one item or is an empty sequence.

sqlcode: -16062

sqlstate: 10608

SQL16063N The argument passed to the function `fn:one-or-more` is not valid because the sequence is empty. Error `QName=err:FORG0004`.

Explanation: A sequence that was passed as an argument to the function `fn:one-or-more` is empty.

User response: Modify the expression to ensure that the sequence passed to the function `fn:one-or-more` is not an empty sequence.

sqlcode: -16063

sqlstate: 10608

SQL16064N The argument passed to the function `fn:exactly-one` is not valid because the sequence is empty or contains more than one item. Error `QName=err:FORG0005`.

Explanation: A sequence that was passed as an argument to the function `fn:exactly-one` does not contain exactly one item.

User response: Modify the expression to ensure that the sequence passed to the function `fn:exactly-one` contains exactly one item.

sqlcode: -16064

sqlstate: 10608

SQL16065N An empty sequence cannot be constructed as, or cast to, the data type `datatype`. Error `QName=err:FORG0006`.

Explanation: The data type `datatype` that is specified in a constructor or cast expression does not support casting or constructing an empty sequence of the specified type.

User response: Pass a value that is not an empty sequence to the constructor or cast expression.

sqlcode: -16065

sqlstate: 10608

SQL16066N The argument passed to the aggregate function `function-name` is not valid. Error `QName=err:FORG0006`.

Explanation: The argument that was passed to the aggregate function `function-name` is not valid because the argument does not meet any of the conditions that are required for arguments to the function `function-name`.

User response: Try one of the following actions:

- If the function is `fn:avg`, verify that the following conditions are met: If the input sequence contains duration values, the values must be either all `xdt:yearMonthDuration` values or all `xdt:dayTimeDuration` values. If the input sequence contains numeric values, the values must all be promotable to a single common type that is one of the four numeric types, `xdt:yearMonthDuration` or `xdt:dayTimeDuration` or one if its subtypes.
- If the function is `fn:max` or `fn:min`, verify that the following conditions are met: All items in the input sequence must be numeric or derived from a single base type for which the `gt` operator (for `fn:max`) or `lt` operator (for `fn:min`) is defined. If the input sequence contains numeric values, the values must all be promotable to a single common type and the values in the sequence must have a total order. If the input sequence contains duration values, the values must be either all `xdt:yearMonthDuration` values or all `xdt:dayTimeDuration` values.
- If the function is `fn:sum`, verify that the following conditions are met: All items in the input sequence must be numeric or derived from a single base type. The type must support addition. If the input sequence contains numeric values, the values must all be promotable to a single common type. If the input sequence contains duration values, the values must be either all `xdt:yearMonthDuration` values or all `xdt:dayTimeDuration` values.

sqlcode: -16066

sqlstate: 10608

SQL16067N The flags argument *value* passed to the function *function-name* is not valid. Error QName=err:FORX0001.

Explanation: The function *function-name* includes a *value* that was passed to the function as a regular expression flag parameter. However, the string that was passed to the function includes characters that are not defined as flags.

User response: Modify the function call to pass in a string argument that contains only characters that are defined as flags. Valid characters include s, m, i, or x.

sqlcode: -16067

sqlstate: 10609

SQL16068N The regular expression argument *value* passed to the function *function-name* is not valid. Error QName=err:FORX0002.

Explanation: The *value* that was passed to the function *function-name* is not valid according to the rules that are specified for regular expressions in XQuery. These rules are based on the regular expression syntax specified in XML Schema, with some extensions added to the syntax to accommodate XQuery. See the product documentation for a description of XQuery-specific extensions to the regular expression syntax for XML Schema.

User response: Specify a valid *value* for the regular expression.

sqlcode: -16068

sqlstate: 10609

SQL16069N A regular expression argument *value* passed to the function *function-name* matches a zero-length string. Error QName=err:FORX0003.

Explanation: The *value* that was specified for the pattern parameter in a call to the function *function-name* matches a zero-length string. A zero-length string is not a valid pattern for this function because the pattern will never match a substring in the input string.

User response: Pass a valid pattern to the function call, or remove the function call from the expression.

sqlcode: -16069

sqlstate: 10609

SQL16070N The replacement string argument *value* passed to the function *fn:replace* is not valid. Error QName=err:FORX0004.

Explanation: The *value* that was specified for the replacement string parameter in a call to the function *fn:replace* is not valid because the value includes one or more of the following invalid characters:

- A "\$" character that is not immediately followed by a digit 0-9 and not immediately preceded by a "\".
- A "\" character that is not part of a "\\" pair or immediately followed by a "\$" character.

User response: Use a *value* for the replacement string that includes valid characters only.

sqlcode: -16070

sqlstate: 10609

SQL16071N The function *function-name* cannot be processed because the context item assumed to be the argument is not an XQuery node. Error QName=err:FOTY0011.

Explanation: The function *function-name* relies on a context node, but the context item is not a node.

User response: Modify the XQuery expression to ensure that the context item is a node. If the function uses the context item because an argument is omitted, then modify the expression to ensure that the context item is a node before the function is invoked.

sqlcode: -16071

sqlstate: 10610

SQL16072N The items of the sequence argument of function *fn:index-of* are not comparable with the search argument. Error QName=err:FOTY0012.

Explanation: The sequence argument that was passed to the *fn:index-of* function is not valid because the items in the sequence are not comparable with the search argument.

User response: Pass a sequence to the function *fn:index-of* that contains items that are comparable with the search argument.

sqlcode: -16072

sqlstate: 10610

SQL16074N An XQuery atomic value with the lexical representation starting with *value* of type *type-name* cannot be processed in the XQuery operation or function *name* because the length exceeds the operation or function limit of *size* bytes.

Explanation: An XML document contains an atomic value with the lexical representation starting with *value* that exceeds *size* bytes, which is the size limit for the XQuery data type *type-name* when used in the XQuery operation or function indicated by *name*. The statement attempts to use the atomic value in *name*.

The statement cannot be processed.

User response: Possible ways to avoid this length limitation include:

- Change the value in the XML document to a length no greater than *size* bytes, possibly by using the `fn:substring` function.
- Avoid using the value in the XQuery operation or function *name* that limits the length.

sqlcode: -16074

sqlstate: 10902

SQL16075N The sequence to be serialized contains an item that is an attribute node. Error QName=err:SENR0001.

Explanation: A request was made to serialize an XML value. The XML value is a sequence containing an item that is an XQuery attribute node. There is no defined sequence normalization for an attribute node as an item in a sequence and therefore the sequence cannot be serialized.

The statement cannot be processed.

User response: Remove any items in the sequence containing just an attribute node or do not attempt to serialize the sequence.

sqlcode: -16075

sqlstate: 2200W

SQL16076N The internal identifier limit of *limit* has been exceeded for the number of matched XQuery nodes.

Explanation: An XQuery expression that is matching XQuery nodes is limited to *limit* matching nodes. The XQuery expression that returned this error has exceeded the limit for the number of matching XQuery nodes.

The statement cannot be processed.

User response: The XQuery expression should be modified to avoid the use of wildcards, the `node()` kind test, or descendant axes. Alternatively, the XQuery expression should be performed over a value with a reduced number of XQuery nodes, possibly by splitting the value into smaller values.

sqlcode: -16076

sqlstate: 10903

SQL16077N The value of a name expression *name-string* in a computed element constructor, a computed attribute constructor, or a rename expression cannot be converted to an expanded QName. Error QName=err:XQDY0074.

Explanation: The value of *name-string* has a data type

of `xs:string` or `xs:untypedAtomic` that must be converted to an expanded QName. The conversion fails if the string does not conform to the lexical form of an `xs:QName` value or if the namespace prefix of the value is not found in the statically known namespaces of the XQuery.

The XQuery expression cannot be processed.

User response: Ensure that the name expression returns a valid *string-name* in the lexical form of an `xs:QName` that can be converted to an expanded QName in the XQuery expression. If the namespace prefix is not in the statically known namespaces, add a namespace declaration in the XQuery prolog to associate a namespace URI with the namespace prefix in the *string-name*.

sqlcode: -16077

sqlstate: 10508

SQL16080N An XQuery expression includes one or more *expression-type* expressions outside the modify clause of a transform expression. Error QName=err:XUST0001.

Explanation: A basic updating expression is specified in an expression that is not part of the modify clause of a transform expression. One or more *expression-type* expressions results in an updating expression in a context where only a non-updating expression can be specified.

The XQuery expression cannot be processed.

User response: Remove the *expression-type* expression and any other basic updating expressions from any expression that is not contained in the modify clause of a transform expression.

sqlcode: -16080

sqlstate: 10701

SQL16081N An XQuery expression in the modify clause of a transform expression is not an updating expression or an empty sequence expression. Error QName=err:XUST0002.

Explanation: The expression in the modify clause of a transform expression is a non-updating expression other than an empty sequence expression. The expression in the modify clause of a transform expression must be an updating expression or an empty sequence expression.

The XQuery expression cannot be processed.

User response: Ensure that the expression in the modify clause of every transform expression includes a basic updating expression or is the empty sequence expression.

sqlcode: -16081

sqlstate: 10702

SQL16082N A target node in one or more *expression-type* expressions is not a node that was newly created in the copy clause of the transform expression. Error QName=err:XUDY0014.

Explanation: A target node of a basic updating expression must be a node that was newly created by the copy clause of the transform expression. One or more *expression-type* expressions has a target node that is not newly created.

The XQuery expression cannot be processed.

User response: Ensure that the target nodes for every *expression-type* expression and any other basic updating expressions are newly created by the copy clause of the transform expression.

sqlcode: -16082

sqlstate: 10703

SQL16083N Incompatible "*expression-type*" expressions exist in the modify clause of a transform expression. Error QName=err:error-name.

Explanation: The modify clause of a transform expression includes multiple *expression-type* expressions that operate on the same target node. These basic updating expressions are not compatible since the result would be nondeterministic based on the order of processing the *expression-type* expressions.

The following list gives the reason for the error based on the error QName:

err:XUDY0015

If the value of *expression-type* is "rename", then there exists more than one rename expression that applies to the same target node.

err:XUDY0016

If the value of *expression-type* is "replace", then there exists more than one replace expression, without the value of keywords specified, that applies to the same target node.

err:XUDY0017

If the value of *expression-type* is "replace value of", then there exists more than one replace expression, with the value of keywords specified, that applies to the same target node.

The XQuery expression cannot be processed.

User response: Change the expression in the modify clause of the transform expression to ensure that no two *expression-type* expressions have the same target node.

sqlcode: -16083

sqlstate: 10704

SQL16084N An assigned value in the copy clause of a transform expression is not a sequence with exactly one item that is a node. Error QName=err:XUTY0013.

Explanation: The evaluation of the copy clause of a transform expression resulted in one or more invalid assignments. At least one assigned value was an empty sequence, a sequence with multiple items, or an atomic value. The assigned value must be a sequence with exactly one item that is a node.

The XQuery expression cannot be processed.

User response: Ensure that every copy source expression in the copy clause of the transform expression returns a sequence with exactly one item that is a node.

sqlcode: -16084

sqlstate: 10705

SQL16085N The target node of an XQuery *expression-type* expression is not valid. Error QName=err: error-name.

Explanation: The following list describes the reasons why the target node of a basic updating expression is not valid based on the error QName:

err:XUTY0005

The value of *expression-type* is "insert into", "insert as first into", or "insert as last into" and the target node of an insert expression is not a single element node or document node.

err:XUTY0006

The value of *expression-type* is "insert before" or "insert after" and the target node of an insert expression that specifies before or after is not a single element, text, processing-instruction, or comment node whose parent property is not empty.

err:XUTY0007

The value of *expression-type* is "delete" and the target expression does not return a sequence of zero or more nodes.

err:XUTY0008

The value of *expression-type* is "replace" or "replace value of" and the target node of a replace expression does not qualify any node, qualifies a sequence of two or more nodes, or qualifies a document node. It must qualify exactly one node that is not a document node.

err:XUTY0009

The value of *expression-type* is "replace" and the parent property of the target node of a replace expression is empty.

err:XUTY0012

The value of *expression-type* is "rename" and the target node of a rename expression is not a single element, attribute, or processing instruction node.

err:XUDY0020

The value of *expression-type* is "delete" and the parent property of the target node of a delete expression is empty.

err:XUTY0022

The value of *expression-type* is "insert before" or "insert after", the insertion sequence includes attribute nodes and the parent node of the target node is a document node. Otherwise, the value of *expression-type* is "insert into", "insert as first into", or "insert as last into" the insertion sequence includes attribute nodes and the target node of an insert expression is a document node.

The XQuery expression cannot be processed.

User response: Correct the *expression-type* expression to use a valid target node as described in the explanation.

sqlcode: -16085

sqlstate: 10703

SQL16086N The replacement sequence of a replace expression contains invalid nodes for the specified target node. Error QName=err:error-name.

Explanation: A node in the replacement sequence cannot be used to replace the target node. The reason is listed based on the error QName:

err:XUDY0010

The value of keywords are not specified and the target node is not an attribute node. The replacement sequence must contain only element, text, comment, or processing instruction nodes but at least one item in the sequence is an attribute node.

err:XUDY0011

The value of keywords are not specified and the target node is an attribute node. The replacement sequence must contain only attribute nodes but at least one item in the sequence is not an attribute node.

The XQuery expression cannot be processed.

User response: Correct the source expression in the

with clause of the replace expression to ensure that the replacement sequence contains only valid nodes for the target node.

sqlcode: -16086

sqlstate: 10706

SQL16087N The result of an XQuery transform expression is not a valid instance of the XQuery and XPath data model. Additional information: *token1*, *token2*. Error QName=err:XUDY0021.

Explanation: The result of applying the updating expressions contained in a transform expression would result in an invalid instance of the XQuery and XPath data model (XDM). The specific constraint violation in the XDM instance can be identified from the additional information included in the tokens.

If *token1* is "attribute", then *token2* is the name of an attribute that has occurred more than once in a target element, after applying the updating expressions in the transform expression.

The XQuery expression cannot be processed.

User response: Correct the transform expression to ensure that the resulting instance of the XDM is correct.

If *token1* is "attribute" ensure that any updating expressions involving attributes do not use the name of an attribute that already exists in the target element and is not deleted or replaced within the same transform.

sqlcode: -16087

sqlstate: 10707

SQL16088N An *expression-type* expression has a binding of a namespace prefix *prefix-string* to namespace URI *uri-string*, introduced to an element named *element-name*, that conflicts with an existing namespace binding of the same prefix to a different URI in the in-scope namespaces of that element node. Error QName=err:XUDY0023.

Explanation: An *expression-type* expression has introduced a new namespace binding for prefix *prefix-string* using URI *uri-string* into an element node named *element-name* that conflicts with one of the existing namespace bindings of the in-scope namespaces of that node. The element node could be the target in the updating expression or the parent of the target in the updating expression. For example, an insert expression might insert an attribute into an existing element. If the QName of the inserted attribute binds prefix P to some URI, but an in-scope namespace of the element node binds the same prefix P to a different URI, a conflict is detected and this error is raised.

SQL16089N • SQL16101N

User response: If the *expression-type* expression is intentionally introducing a new namespace binding, modify the expression so that it uses a namespace prefix that is different from all existing prefixes of the in-scope namespaces of the element named *element-name*. Alternatively, modify the expression so that the binding of *prefix-string* uses the same URI as the existing namespace binding of the in-scope namespaces of the element named *element-name*.

sqlcode: -16088

sqlstate: 10708

SQL16089N An *expression-type* expression and possibly other updating expressions in the modify clause of a transform expression introduce conflicting namespace bindings into an element named *element-name*. The prefix *prefix-string* is bound to *uri-string1* while another binding of the same prefix uses a different namespace URI. Error QName=err:XUDY0024.

Explanation: The combined effect of the updating expressions in the modify clause of a transform expression has been to introduce conflicting namespace bindings into element node named *element-name*. For example, two attributes might have been inserted whose QNames have the same namespace prefix but different namespace URIs.

If *expression-type* is 'insert' or 'replace' the conflicting namespace bindings may be between 2 attribute nodes in the sequence of attribute nodes in the insertion sequence or replacement sequence. The conflict could also be with a namespace binding introduced to the element *element-name* for an attribute node that was inserted, replaced or renamed by another updating expression in the same modify clause of the transform expression.

If expression type is 'rename', the namespace binding for the new name conflicts with a namespace binding also introduced to the element *element-name* for a node that was inserted, replaced or renamed by another updating expression in the same modify clause of the transform expression.

User response: If the *expression-type* expression is intentionally introducing a new namespace binding, modify the expression so that it uses a namespace prefix that is different from all other prefixes used in the updating expressions of the same transform expression that have the element named *element-name* as the target or parent of an attribute node target. Alternatively, modify the expression so that the binding of *prefix-string* uses the same URI as the other namespace bindings used in the updating expressions of the same transform expression that have the element named *element-name* as the target or parent of an attribute node target.

sqlcode: -16089

sqlstate: 10708

SQL16090N The target of a rename expression is a processing instruction node and the namespace prefix of the QName *qname-string* is not empty. Error QName=err:XUDY0025.

Explanation: A transform expression includes a rename expression that has a target node that is a processing instruction node. The new name expression in the rename expression results in the QName *qname-string* that has a prefix that is not empty. The name of a processing instruction must not include a prefix.

User response: Change the new name expression of the rename expression so that the resulting QName has an empty prefix.

sqlcode: -16090

sqlstate: 10709

SQL16100N XML document contains duplicate declarations for `<!notation notation-name>`.

Explanation: While parsing an XML document the XML parser encountered more than one declaration for the notation with name *notation-name*.

Parsing or validation did not complete.

User response: Remove the duplicate notations from the XML document and try the operation again.

sqlcode: -16100

sqlstate: 2200M

SQL16101N XML schema contains an attribute *attribute-name* that has been declared more than once for element *element-name*.

Explanation: While parsing an XML document, two or more attributes with the same name *attribute-name* were found for an element named *element-name*.

Parsing or validation did not complete.

User response: Correct the XML schema and try the operation again.

sqlcode: -16101

sqlstate: 2200M

SQL16102N XML document contains a notation declaration with name *notation-name* that is not found, is not a valid notation declaration, or does not have a valid QName.

Explanation: While parsing an XML document, the declaration for the identified XML notation identified by *notation-name* was not found in the document or associated schema/DTD, is incorrectly declared, or does not have a valid QName.

Parsing or validation did not complete.

User response: Correct the XML notation identified by *notation-name* and try the operation again.

sqlcode: -16102

sqlstate: 2200M

SQL16103N A character was found in an XML document that is invalid or cannot be represented in the document encoding.

Explanation: While parsing an XML document the parser found a character that was invalid or is not represented in the document encoding.

Parsing did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16103

sqlstate: 2200M

SQL16104N Internal error encountered in XML parser. Parser error is *parser-error*.

Explanation: While parsing an XML document the parser encountered an internal error *parser-error*. The value of *parser-error* is the internal parser error code.

Parsing or validation did not complete.

User response: Try the operation again and if the error persists, contact IBM service.

sqlcode: -16104

sqlstate: 2200M

SQL16105N Incorrect XML data. Expected data of type *type-name* and found value *value* which is not a valid value for that type.

Explanation: While processing an XML document or XML schema the XML parser expected to find data of a certain type and found a value that could not be converted to that type.

If the data type is listed as 'datetime' the data type is one of the date or time data types such as date, time, duration, gDay, gMonth, gMonthDay, gYear.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16105

sqlstate: 2200M

SQL16106N Invalid XML facet specified for data type *type-name* of the node.

Explanation: While parsing an XML document the parser found a facet specified that was not legal or supported for the specified data type of the node.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16106

sqlstate: 2200M

SQL16107N XML schema contains an error in facet *facet-name*. One reason is *reason-code*.

Explanation: While processing an XML schema the XML parser found an error with the specified facet. One or more of the following reasons hold true:

1. The value of the facet is not legal or supported for that facet
2. The facet was specified multiple times for the same object. A given facet may only be specified once per object.
3. The facet name is invalid or unknown
4. The value of that facet of a complex type was invalid. Valid values are '#all' or 'list(restriction, extension)'
5. The value of that facet of an element was invalid. Valid value are '#all' or 'list(restriction, extension)'
6. The only allowable value of the whitespace facet in this context is 'collapse'

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16107

sqlstate: 2200M

SQL16108N XML schema contains an invalid combination of facets *facet1* and *facet2*. One reason is *reason-code*.

Explanation: While parsing an XML document the parser found specified facets identified by *facet1* and *facet2* that are either mutually exclusive or have conflicting or invalid values. The *reason-code* indicates one of the possible reasons as described here.

- | | | | |
|----|--|--|---|
| 1 | The length facet and maxLength facet are both specified and are mutually exclusive. | | derived type is greater than or equal to the value of the maxExclusive facet for the base type. |
| 2 | The length facet and minLength facet are both specified and are mutually exclusive. | | |
| 3 | The maxInclusive facet and maxExclusive facet are both specified and are mutually exclusive. | | 20 The value of the minExclusive facet for a derived type is greater than the value of the maxInclusive facet for the base type. |
| 4 | The minInclusive facet and minExclusive facet are both specified and are mutually exclusive. | | 21 The value of the minExclusive facet for a derived type is less than or equal to the value of the minInclusive facet for the base type. |
| 5 | The value of the maxLength facet must be greater than the value of the minLength facet. | | 22 The value of the minExclusive facet for a derived type is less than or equal to the value of the minExclusive facet for the base type. |
| 6 | The value of the maxExclusive facet must be greater than the value of the minExclusive facet. | | 23 The value of the minInclusive facet for a derived type is greater than or equal to the value of the maxExclusive facet for the base type. |
| 7 | The value of the maxExclusive facet must be greater than the value of the minInclusive facet. | | 24 The value of the minInclusive facet for a derived type is greater than the value of the maxInclusive facet for the base type. |
| 8 | The value of the maxInclusive facet must be greater than the value of the minExclusive facet. | | 25 The value of the minInclusive facet for a derived type is less than the value of the minInclusive facet for the base type. |
| 9 | The value of the maxInclusive facet must be greater than the value of the minInclusive facet. | | 26 The value of the minInclusive facet for a derived type is less than or equal to the value of the minExclusive facet for the base type. |
| 10 | The value of the totalDigits facet must be greater than the value of the fractionDigits facet. | | 27 The value of the maxInclusive facet for a derived type is not equal to the value of the maxInclusive facet for the base type. The maxInclusive facet for the base type was defined with the fixed attribute set to "true". |
| 11 | The value of the maxInclusive facet for a derived type is greater than or equal to the value of maxExclusive facet for the base type. | | 28 The value of the maxExclusive facet for a derived type is not equal to the value of the maxExclusive facet for the base type. The maxExclusive facet for the base type was defined with the fixed attribute set to "true". |
| 12 | The value of the maxInclusive facet for a derived type is greater than the value of the maxInclusive facet for the base type. | | 29 The value of the minInclusive facet for a derived type is not equal to the value of the minInclusive facet for the base type. The minInclusive facet for the base type was defined with the fixed attribute set to "true". |
| 13 | The value of the maxInclusive facet for a derived type is less than the value of the minInclusive facet for the base type. | | 30 The value of the minExclusive facet for a derived type is not equal to the value of the minExclusive facet for the base type. The minExclusive facet for the base type was defined with the fixed attribute set to "true". |
| 14 | The value of the maxInclusive facet for a derived type is less than or equal to the value of the minExclusive facet for the base type. | | 31 The value of the minOccurs attribute exceeds the value of the maxOccurs attribute. |
| 15 | The value of the maxExclusive facet for a derived type is greater than the value of the maxExclusive facet for the base type. | | 32 The totalDigits facet value of a derived type must be less than or equal to the totalDigits facet value for the corresponding base type. |
| 16 | The value of the maxExclusive facet for a derived type is greater than the value of the maxInclusive facet for the base type. | | 33 The fractionDigits facet value of a derived |
| 17 | The value of the maxExclusive facet for a derived type is less than or equal to the value of the minInclusive facet for the base type. | | |
| 18 | The value of the maxExclusive facet for a derived type is less than or equal to the value of the minExclusive facet for the base type. | | |
| 19 | The value of the minExclusive facet for a | | |

type must be less than or equal to the totalDigits facet value for the corresponding base type.

- 34 The fractionDigits facet value of a derived type must be less than or equal to the fractionDigits facet value for the corresponding base type.
- 35 The totalDigits facet value of a derived type must be equal to the value of the totalDigits facet with the fixed attribute set to "true" for the corresponding base type.
- 36 The fractionDigits facet value of a derived type must be equal to the value of the fractionDigits facet with the fixed attribute set to "true" for the corresponding base type.
- 37 The maxLength facet value of a derived type must be equal to the value of the maxLength facet with the fixed attribute set to "true" for the corresponding base type.
- 38 The minLength facet value of a derived type must be equal to the value of the minLength facet with the fixed attribute set to "true" for the corresponding base type.
- 39 The length facet value of a derived type must be equal to the value of the length facet with the fixed attribute set to "true" for the corresponding base type.
- 40 The whiteSpace facet value of a derived type must be equal to the value of the whiteSpace facet with the fixed attribute set to "true" for the corresponding base type.
- 41 A fractionDigits facet value exceeded the totalDigits facet value. The fractionDigits facet value represents the number of digits to the right of the decimal and cannot exceed that totalDigits facet value.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16108

sqlstate: 2200M

SQL16109N XML document contains an invalid comment. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered an invalid comment. Possible values for *reason-code* include:

1. Comment did not start with <!--
2. Comment contained --
3. Comment was not terminated.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16109

sqlstate: 2200M

SQL16110N XML syntax error. Expected to find construct.

Explanation: While parsing an XML document, the parser expected to find a certain construct and did not. The XML is either not well formed, or not valid depending on the operation.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16110

sqlstate: 2200M

SQL16111N XML Document contains an invalid CDATA section. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered an invalid or ill formed CDATA section indicated by *reason-code*. Possible reason codes are:

1. There are nested CDATA sections,
2. A CDATA section is not terminated
3. a CDATA section contains the sequence ']]<'
4. a CDATA section is found outside the root element.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16111

sqlstate: 2200M

SQL16112N XML schema contains an element or attribute definition in error because 'name' or 'ref' was missing and required. Reason code = *reason-code*.

Explanation: While processing an XML schema the XML parser encountered an incorrect element or attribute definition. Value for *reason-code* corresponds to one of the following reasons:

1. A globally declared attribute in an XML schema had no name. All globally declared attributes must have a name.
2. An attribute declared in an XML schema without a name or a ref. All attributes must have a name or a ref.

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3. A globally declared element in an XML schema had no name. All globally declared elements must have a name.
4. An attribute declared in an XML schema without a name or a ref.. All elements must have a name or a ref.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16112

sqlstate: 2200M

SQL16113N XML document or XML schema contains an attribute *attribute-name* that is in error. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered an attribute that is not correctly defined or used. Possible reasons given by *reason-code* are:

- 1 The attribute had both a name and a ref specified. An attribute may have either a name or a ref but not both.
- 2 The attribute has previously been declared within the same scope. Attribute names must be unique within their scope.
- 3 The attribute should be qualified and was not
- 4 The attribute was qualified and should not have been
- 5 The attribute is already defined in a base and should not appear in derivation by extension
- 6 The ID attribute was referenced but never declared
- 7 The attribute does not match its defined enumeration or notation list
- 8 The values for the attribute must be names or name tokens
- 9 The attribute does not support multiple values
- 10 No data type validator was found for this attribute
- 11 The attribute must not be changed by normalization in a standalone document
- 12 The value of the attribute is invalid. Prefixed namespace bindings may not be empty
- 13 This attribute is a top level attribute and it could not be found
- 14 An attribute list in a DTD is missing the type definition for the attribute type, which must be

one of the following: 'CDATA', 'ID', 'IDREF', 'IDREFS', 'ENTITY', 'ENTITIES', 'NMTOKEN', or 'NMTOKENS'.

- 15 The attribute refers to an unknown entity
- 16 The content of the attribute is invalid. The content must conform to the format (annotation?, (simpletype?))
- 17 The attribute has a default value. That value must be specified in a standalone document.
- 18 The attribute has already been used in the element. An attribute name must be unique within it's parent element.
- 19 The attribute has both 'fixed' and 'default' facets specified for it. Either one or the other can be specified but not both.
- 20 The value of the attribute did not match any of the allowable enumerated values for that attribute.
- 21 The attribute is not defined within the element
- 22 The attribute has an invalid value
- 23 The attribute was not defined in the associated schema.
- 24 The attribute was not declared
- 25 There is a bad ID value for this attribute
- 26 The attribute is required but was not found
- 27 The simple type of the attribute is not found
- 28 The value of the attribute does not match a 'fixed' value.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16113

sqlstate: 2200M

SQL16114N XML document contains an ID with a duplicate value *value*.

Explanation: While parsing an XML document the parser encountered an ID value *value* that had previously been declared with the document. ID values must be unique with a document.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16114

sqlstate: 2200M

SQL16115N XML document contains an element or attribute named *name* with an unresolved namespace prefix.

Explanation: While parsing an XML document the parser encountered an element or attribute, identified by the name *name*, whose namespace prefix cannot be resolved to a URI.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16115

sqlstate: 2200M

SQL16116N XML document contains a duplicate value *value* in a type declaration.

Explanation: While parsing an XML document the parser encountered a duplicate value in the type declaration. A type declaration can only specify 'substitution', 'union', 'extension', 'list', or 'restriction' once.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16116

sqlstate: 2200M

SQL16117N XML document declares an entity *entity-name* that is not terminated.

Explanation: While parsing an XML document the parser encountered an entity declaration for *entity-name* without the expected termination character.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16117

sqlstate: 2200M

SQL16118N XML document declares an element with name *element-name* that is not terminated.

Explanation: While parsing an XML document the parser encountered an element declaration with name *entity-name* without the expected termination character.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16118

sqlstate: 2200M

SQL16119N XML document contains an entity reference to *entity-name* that is not terminated.

Explanation: While parsing an XML document the parser encountered an entity reference to *entity-name* without the expected termination character.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16119

sqlstate: 2200M

SQL16120N Document Type Definition (DTD) contains a content model specification for element *element-name* that was not terminated.

Explanation: While processing a DTD, the XML parser encountered a content model that was not terminated for an element named *element-name*.

Parsing or validation did not complete.

User response: Correct the DTD and try the operation again.

sqlcode: -16120

sqlstate: 2200M

SQL16121N XML document contains an entity literal that is not terminated for an entity named *entity-name*.

Explanation: While parsing an XML document the parser encountered an entity literal that was not terminated that is associated with an entity named *entity-name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16121

sqlstate: 2200M

SQL16122N XML document contains an invalid character reference *codepoint*.

Explanation: While parsing an XML document the parser encountered an invalid character reference that has the code point value of *codepoint*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16122

sqlstate: 2200M

SQL16123N XML document contains an element *element-name* with empty content where the content model requires content for this element.

Explanation: While parsing an XML document the parser encountered an element named *element-name* that included no content. The content model for the element does not allow empty content.

Parsing or validation did not complete.

User response: Add content to the element or remove the element from the document and try the operation again.

sqlcode: -16123

sqlstate: 2200M

SQL16124N XML document contains an end tag that is not terminated for a tag with name *tag-name*.

Explanation: While parsing an XML document the parser encountered an end tag that was not terminated that is associated with an tag named *entity-name*.. Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16124

sqlstate: 2200M

SQL16125N XML document contains an invalid character with code point *codepoint* in the internal subset.

Explanation: While parsing an XML document, the parser encountered an invalid character defined with code point *codepoint* in the internal subset.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16125

sqlstate: 2200M

SQL16126N Document Type Definition (DTD) contains an element *element-name* in the content model that was not declared.

Explanation: While parsing a DTD the parser encountered an element with name *element-name* in the content model that was not declared.

Parsing or validation did not complete.

User response: Correct the DTD and try the operation again.

sqlcode: -16126

sqlstate: 2200M

SQL16127N A DTD contains unexpected whitespace before the character '?', '*', or '+'.

Explanation: While parsing a DTD, the parser encountered unexpected whitespace before an occurrence of the character '?', '*', or '+'. Whitespace is not allowed in this context.

Parsing or validation did not complete.

User response: Remove the unexpected whitespace characters and try the operation again.

sqlcode: -16127

sqlstate: 2200M

SQL16128N XML document contains an invalid character with code point *codepoint* in attribute value *attribute-name*.

Explanation: While parsing an XML document the parser encountered an invalid character with code point *codepoint* in an attribute value identified by *attribute-name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16128

sqlstate: 2200M

SQL16129N XML document expected end of tag *tag-name*.

Explanation: While parsing an XML document the parser expected to encounter the end of a tag with name *tag-name* and did not.

Parsing or validation did not complete.

User response: Add or correct the missing end tag and try the operation again.

sqlcode: -16129

sqlstate: 2200M

SQL16130N XML document contains an invalid or not terminated processing instruction. Reason code = *reason-code*.

Explanation: While processing an XML document or XML schema the XML parser encountered an processing instruction that is not valid. One or more of the following reasons make the processing instruction not valid:

1. The processing instruction was not terminated
2. The processing instruction starts with the characters 'xml' (in any combination of upper or lower case), which is prohibited.

Parsing or validation did not complete.

User response: Correct the XML processing instruction and try the operation again.

sqlcode: -16130

sqlstate: 2200M

SQL16131N XML document contains a start tag *tag-name* that is not terminated.

Explanation: While parsing an XML document the parser encountered a start tag identified by *tag-name* that is not terminated. The content following the start tag may be missing the end tag or the content is not well-formed between the start tag and the end tag.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16131

sqlstate: 2200M

SQL16132N XML document contains an invalid document structure.

Explanation: While parsing an XML document, the parser encountered an invalid document structure. The parser encountered non-whitespace character data in the prolog of an instance document or in the external subset of a DTD.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16132

sqlstate: 2200M

SQL16133N XML document contains an invalid namespace declaration.

Explanation: While parsing an XML document, the parser encountered an invalid namespace declaration in a DOM instance. The namespace has the prefix "xmlns" and the URI `http://www.w3.org/2000/xmlns/`.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16133

sqlstate: 2200M

SQL16134N XML document contains an invalid target namespace associated with *name*.

Explanation: While parsing an XML document the parser encountered an attribute declaration with `nname name` with a target namespace that matched the

XML schema namespace for instance documents (`'http://www.w3.org/2001/XMLSchema-instance'`). This URI cannot be used as a target namespace in an attribute declaration.

Parsing or validation did not complete.

User response: Correct the element or attribute name and try the operation again.

sqlcode: -16134

sqlstate: 2200M

SQL16135N XML document contains an attribute list that references an element *element-name* that is not declared.

Explanation: While parsing an XML document the parser encountered an attribute list with a reference to an element named *element-name* that was not declared.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16135

sqlstate: 2200M

**SQL16136N XML schema contains a facet error.
Reason code = *reason-code*.**

Explanation: While parsing an XML document the parser encountered an error with a facet. Possible reasons given by *reason-code* are:

1. The only valid 'constraining' facet for a boolean data type is PATTERN
2. An invalid facet tag was encountered
3. The value of an 'enumeration' facet in a derived object is not from the value space of the corresponding base object.
4. The value of a 'whiteSpace' facet must be one of 'preserve', 'replace', or 'collapse'
5. The value of a 'whiteSpace' facet must not be 'preserve' or 'replace' if the value of the 'whiteSpace' facet of the corresponding base type is 'collapse'
6. The value of a 'whitespace' facet of a derived object must not be 'preserve' if the value of the whitespace facet of the corresponding base object is 'replace'

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16136

sqlstate: 2200M

SQL16137N XML document contains an unknown simpleType *type-name*.

Explanation: While parsing an XML document the parser encountered a type name *type-name* that is an unknown simple type.

Parsing or validation did not complete.

User response: Correct the type name and try the operation again.

sqlcode: -16137

sqlstate: 2200M

SQL16138N XML document contains an unknown complexType *type-name*.

Explanation: While parsing an XML document the parser encountered a type name *type-name* that is an unknown complex type.

Parsing or validation did not complete.

User response: Correct the type name and try the operation again.

sqlcode: -16138

sqlstate: 2200M

SQL16139N XML schema contains an error in the content of simpleType *type-name*.

Explanation: While parsing an XML document the parser encountered an error in the content of simpleType with name *type-name*. The simpleType element definition is only allowed one of restriction, list or union. In some cases, the token may not be available.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16139

sqlstate: 2200M

SQL16140N XML document contains a <group> or <attributeGroup> specification without a name or ref attribute.

Explanation: While parsing an XML document the parser encountered a <group> or <attributeGroup> specification that did not have a name or ref attribute.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16140

sqlstate: 2200M

SQL16141N XML schema contains an invalid derivation by RESTRICTION or EXTENSION. Reason code = *reason-code*.

Explanation: While processing an XML schema the XML parser encountered a problem with a type derived by RESTRICTION or EXTENSION. The possible reasons are described by the *reason-code* values that follow.

- 1 There is an invalid child following the RESTRICTION or EXTENSION element in a simpleContent definition.
- 2 There is an invalid child following the RESTRICTION or EXTENSION element in a complexContent definition.
- 3 The BASE attribute was not specified for the RESTRICTION or EXTENSION. Every derivation by RESTRICTION or EXTENSION must include an identification of the base type for that derivation.
- 4 Derivation by RESTRICTION or EXTENSION is prohibited by the base type or by XML schema.
- 5 The schema contains a forbidden restriction of 'any'. Valid restrictions for 'any' include 'choice', 'sequence', 'all', and 'element'
- 6 The schema contains a forbidden restriction of 'all'. Valid restrictions for 'all' include 'choice', 'sequence', and 'element'
- 7 The schema contains a forbidden restriction of 'choice'. Valid restrictions for 'choice' include 'sequence', 'all', and 'leaf'
- 8 The schema contains a forbidden restriction of 'sequence'. Valid restrictions for 'sequence' include 'element'.
- 9 The schema attempts to use a simple type in a derivation by RESTRICTION for a complexType
- 10 The schema attempts to use a simple type with a value of 'final' in a derivation by EXTENSION.

Parsing or validation did not complete.

User response: Correct the XML schema and try the operation again.

sqlcode: -16141

sqlstate: 2200M

SQL16142N XML document contains an undefined entity *entity-name*.

Explanation: While parsing an XML document the parser encountered an entity identified by *entity-name* that is not defined.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16142

sqlstate: 2200M

SQL16143N XML document contains an unexpected end of entity *entity-name*.

Explanation: While parsing an XML document, the parser encountered an end of entity named *entity-name* that was not expected.

Parsing or validation did not complete.

User response: Correct the entity and try the operation again.

sqlcode: -16143

sqlstate: 2200M

SQL16144N XML document contains an open angle bracket character ('<') in the attribute *attribute-name* without specifying it as an entity.

Explanation: While parsing an XML document, the parser encountered an open angle bracket character ('<') in an attribute value for attribute named *attribute-name*. If the open angle bracket character is desired, it must be specified as the entity '<'. It cannot be specified as the character literal '<'.
Parsing or validation did not complete.

Parsing or validation did not complete.

User response: Correct the attribute value and try the operation again.

sqlcode: -16144

sqlstate: 2200M

SQL16145N XML document contains a hex radix character reference specified using "X" and not "x".

Explanation: While parsing an XML document, the parser encountered a hex radix character reference where the value was specified with upper case "X" instead of lower case "x". A hex radix character reference must use the lower case "x".
Parsing or validation did not complete.

Parsing or validation did not complete.

User response: Correct the hex radix character reference to use lower case "x" and try the operation again.

sqlcode: -16145

sqlstate: 2200M

SQL16146N The main XML document is empty.

Explanation: While parsing an XML document the parser encountered an empty main XML document. The main XML document cannot be empty.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16146

sqlstate: 2200M

SQL16147N XML document contains an invalid use of the namespace for *xmlns* or the namespace prefix '*xmlns*'.

Explanation: While parsing an XML document, the parser encountered either an attempt to explicitly bind a reserved prefix such as 'xml' or 'xmlns' to a namespace, or an attempt to explicitly bind a reserved namespace such as the namespace for xml or xmlns to a prefix. Reserved prefixes cannot be explicitly bound to any namespace but their own, nor can any reserved namespaces be bound to any prefix but their own.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16147

sqlstate: 2200M

SQL16148N XML document contains an invalid element *element-name1* with abstract set to true and substitutionGroup to *element-name2*.

Explanation: While parsing an XML document, the parser encountered element *element-name1* with abstract set to true and defined as a member of a substitution group of element *element-name*. The abstract is required to be false for *element-name1* as a member of the substitution group with head element *element-name2*.
Parsing or validation did not complete.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16148

sqlstate: 2200M

SQL16149N XML document contains an empty targetNamespace attribute value.

Explanation: While parsing an XML document, the parser encountered an empty targetNamespace attribute value. The attribute must be absent or contain a value that is not empty. Parsing or validation did not complete.

SQL16150N • SQL16155N

User response: Correct the XML document and try the operation again.

sqlcode: -16149

sqlstate: 2200M

SQL16150N XML document contains a keyref field *keyref-name* that refers to key field *key-name* with a different cardinality.

Explanation: While parsing an XML document, the parser encountered a mismatch in the cardinality of a keyref field *keyref-name* that refers to key field *key-name*. The cardinality in the keyref must match the key.

Parsing or validation did not complete.

User response: Correct the cardinality of the keyref field or the key field in the XML document and try the operation again.

sqlcode: -16150

sqlstate: 2200M

SQL16151N XML document contains a keyref field *keyref-name* that refers to key with name *key-name* that is not found.

Explanation: While parsing an XML document, the parser encountered a keyref field *keyref-name* that refers to a key field *key-name* that is not known in the document.

Parsing or validation did not complete.

User response: Correct the name of the key field in the XML document and try the operation again.

sqlcode: -16151

sqlstate: 2200M

SQL16152N XML document contains multiple attributes derived from one type ID in the same complex type or attribute group. One of the attributes is *attribute-name*.

Explanation: While parsing an XML document, the parser encountered multiple attributes derived from one type ID in the same complex type or attribute group. One of the attributes with this property is identified by *attribute-name*.

Parsing or validation did not complete.

User response: Correct the attributes of the complex type or attribute in the XML document and try the operation again.

sqlcode: -16152

sqlstate: 2200M

SQL16153N XML schema contains an attribute type definition with a default value or a fixed value that is different from the fixed value constraint of the reference type *type-name*.

Explanation: While parsing an XML document, the parser encountered a mismatch in the value constraint of the attribute and attribute reference type. Either the attribute specified a default and the reference type is fixed or the attribute specified a different fixed value than specified in reference type *type-name*.

Parsing or validation did not complete.

User response: Correct the value constraint of the attribute reference in the XML document and try the operation again.

sqlcode: -16153

sqlstate: 2200M

SQL16154N XML schema contains an element *element-name* that has more than one attribute defined with the ID property.

Explanation: While parsing an XML schema (or DTD), two or more attributes with the ID property were declared for the element named *element-name*.

Parsing or validation did not complete.

User response: Correct the XML schema or DTD and try the operation again.

sqlcode: -16154

sqlstate: 2200M

SQL16155N XML document contains an incorrectly specified or invalid URL. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered an incorrectly specified or invalid URL. The *reason-code* indicates which of the following conditions was found.

- 1 The URL was not correctly formed.
- 2 The URL uses an unsupported protocol.
- 3 Only 'localhost' is supported at this time.
- 4 No protocol prefix is present.
- 5 Expected // after protocol.
- 6 % must be followed by two hex digits.
- 7 The host component is not terminated.
- 8 The base part of the URL cannot be relative.
- 9 A relative URL could not be resolved using the specified base URL because the base URL does not contain enough path segments.

10 The port field must be a 16 bit decimal value.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16155

sqlstate: 2200M

SQL16156N XML document has a primary document entity that could not be opened. System Id=*system-id*.

Explanation: While parsing an XML document, the parser encountered a primary document entity that could not be opened. The document is identified by the system identifier *system-id*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16156

sqlstate: 2200M

SQL16157N XML schema contains invalid relationships involving inclusion or exclusion facet value *value* of a derived type and the value space of the base type. Reason code = *reason-code*.

Explanation: While processing an XML schema the XML parser encountered an invalid relationship between inclusion facet values or exclusion facet values for a derived type and the value space of the base type. The *reason-code* indicates which of the following conditions was found. One or more of the following conditions hold true:

1. The maxInclusion value *value* for the derived type is not in the value space for the base type.
2. The maxExclusion value *value* for the derived type is not in the value space for the base type.
3. The minInclusion value *value* for the derived type is not in the value space for the base type.
4. The minExclusion value *value* for the derived type is not in the value space for the base type.

Parsing or validation did not complete.

User response: Correct the facet value that is outside the value space of the base type and try the operation again.

sqlcode: -16157

sqlstate: 2200M

SQL16158N XML schema contains an invalid relationship involving minLength, maxLength, or length facet value *dt-length* in a derived type compared to the base type value *base-length*. Reason code = *reason-code*.

Explanation: While parsing an XML document, the parser encountered an invalid relationship between facets of a derived type and the base type. The *reason-code* indicates which of the following conditions was found.

1. The length value *dt-length* of the derived type is not equal to the length value *base-length* of the base type.
2. The minLength value *dt-length* of the derived type is less than or equal to the minLength value *base-length* of the base type.
3. The minLength value *dt-length* of the derived type is greater than the maxLength value *base-length* of the base type.
4. The maxLength value *dt-length* of the derived type is greater than the maxLength value *base-length* of the base type.
5. The maxLength value *dt-length* of the derived type is less than or equal to the minLength value *base-length* of the base type.
6. The length value *dt-length* of the derived type is less than the minLength value *base-length* of the base type.
7. The length value *dt-length* of the derived type is greater than the maxLength value of *base-length* the base type.
8. The minLength *dt-length* of the derived type is greater than the length value *base-length* of the base type.
9. The maxLength value *dt-length* of the derived type is less than the length value *base-length* of the base type.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16158

sqlstate: 2200M

SQL16159N XML document contains an anonymous complex type with a name attribute in element *element-name*.

Explanation: While parsing an XML document, the parser encountered an anonymous complex type in an element named *element-name*, yet the complexType had a name attribute. The combination of complexType and name attribute is not permitted in this context.

Parsing or validation did not complete.

SQL16160N • SQL16166N

User response: Correct the XML document and try the operation again.

sqlcode: -16159

sqlstate: 2200M

SQL16160N XML document contains an anonymous simple type in element *element-name* with a name attribute.

Explanation: While parsing an XML document, the parser encountered an anonymous simple type in an element named *element-name*, yet that element had a name attribute. The combination of anonymous type and name attribute is not permitted.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16160

sqlstate: 2200M

SQL16161N XML document contains an element with an information item that is not expected.

Explanation: While parsing an XML document, the parser encountered an information item that does not match (annotation?, (simpletype | complextype)?, (unique | key | keyref)*).

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16161

sqlstate: 2200M

SQL16162N XML document contains an element *element-name* that cannot be part of the substitution group headed by *substitution-name*.

Explanation: While parsing an XML document, the parser encountered an element *element-name* that cannot be part of the specified substitution group *substitution-name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16162

sqlstate: 2200M

SQL16163N XML document contains a duplicate element declaration for *element-name*.

Explanation: While parsing an XML document, the parser encountered duplicate element declaration in the same scope for the specified element.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16163

sqlstate: 2200M

SQL16164N XML document contains duplication <annotation> elements in the content.

Explanation: While parsing an XML document, the parser encountered duplicate <annotation> elements in the contents. At most one <annotation> element is expected.

Parsing or validation did not complete.

User response: Correct the XML document to remove the duplicate <annotation> and try the operation again.

sqlcode: -16164

sqlstate: 2200M

SQL16165N XML document contains unexpected text before the root element.

Explanation: While parsing an XML document, the parser encountered unexpected text before the root element.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16165

sqlstate: 2200M

SQL16166N XML document contained partial markup in an entity value.

Explanation: While parsing an XML document the parser encountered partial markup in an entity value. The parser was expanding an entity in the XML document and the resulting XML mark up is not well-formed XML.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16166

sqlstate: 2200M

SQL16167N XML document contained NDATA for a parameter entity.

Explanation: While parsing an XML document, the parser encountered NDATA for a parameter entity. NDATA is not legal for parameter entities.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16167

sqlstate: 2200M

SQL16168N XML document contained an invalid XML declaration. Reason code = *reason-code*.

Explanation: While processing an XML document or XML schema the XML parser encountered a missing or invalid XML declaration. The *reason-code* indicates which of the following conditions was found.

- 1 The XML declaration strings must be in the order 'version', 'encoding', and 'standalone'.
- 2 The declaration must start <?xml, not <?XML. The string 'xml' must be in lower case.
- 3 The XML or text declaration must start at the first column of the first line.
- 4 The XML declaration must include the 'version=' string.
- 5 The XML declaration is required and not present.
- 6 The specified XML version is unsupported, or invalid.
- 7 The specified document encoding was invalid or contradicts the automatically sensed encoding.
- 8 The XML declaration is not terminated.
- 9 The value of the standalone attribute is invalid or unsupported.
- 10 Only attributes 'version', 'encoding', and 'standalone' are supported.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16168

sqlstate: 2200M

SQL16169N XML document contained an element or attribute name that is invalid with respect to namespaces. Reason code = *reason-code*.

Explanation: While parsing an XML document, the parser encountered an invalid XML element or attribute name caused by namespaces. The *reason-code* indicates which of the following conditions was found.

1. When namespaces are enabled, a name can only have one colon character.
2. When namespaces are enabled the colon cannot be the first or last character.
3. When namespaces are enabled colons are not allowed in names except to separate the name from the namespace prefix.
4. If namespaces are enabled, it is invalid for an attribute of type ID, IDREF, IDREFS, ENTITY, ENTITIES, or NOTATION to contain a colon.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16169

sqlstate: 2200M

SQL16170N XML document contains a type *type-name1* with an unknown base type *type-name2*.

Explanation: While parsing an XML document, the parser encountered a type *type-name1* with an unknown base type *type-name2*.

Parsing or validation did not complete.

User response: Correct the base type for *type-name1* in the XML document and try the operation again.

sqlcode: -16170

sqlstate: 2200M

SQL16171N XML document contained an error in the content of derivation by list for simple type *type-name*.

Explanation: While parsing an XML document, the parser encountered an illegal specification of the 'list' derivation in the declaration of simpleType *type-name*.

Parsing or validation did not complete.

User response: Correct the the type declaration in the XML document and try the operation again.

sqlcode: -16171

sqlstate: 2200M

SQL16172N XML document contains a *declaration-type* declaration that has both a ref attribute and child contents.

Explanation: While parsing an XML document, the parser encountered an *declaration-type* declaration that included a ref attribute and child contents. A ref attribute and child contents cannot both be included in a *declaration-type* declaration.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16172

sqlstate: 2200M

SQL16173N XML document contains an attribute *attribute-name* that is not allowed.

Explanation: While parsing an XML document, an attribute *attribute-name* was encountered that is not allowed in the element.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16173

sqlstate: 2200M

SQL16174N XML document contains an XML schema *uri1* whose target namespace does not match the one specified in the instance document *uri2*.

Explanation: While parsing an XML document, the parser encountered a target namespace mismatch. The target namespace in the XML schema does not match the target namespace in the instance document.

Parsing or validation did not complete.

User response: Correct the target namespace in the XML document and try the operation again.

sqlcode: -16174

sqlstate: 2200M

SQL16175N XML document contains a schema where the root element *element-name* could not be resolved.

Explanation: While parsing an XML document, the parser encountered a problem resolving the root element of a schema document.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16175

sqlstate: 2200M

SQL16176N XML Schema contains an illegal use of List, Union, or Restriction content for type *type-name*.

Explanation: While parsing an XML document, the specified type *type-name* is not permitted to be declared with List, Union, or Restriction. A list or union cannot be used with a type that is not a simple type. A simple type that derives from another type requires that the other type must also be a simple type.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16176

sqlstate: 2200M

SQL16177N XML schema contains a derived type whose base type *type-name* could not be found.

Explanation: While parsing an XML document, a derived type was encountered and the base type *type-name* for that derived type could not be found.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16177

sqlstate: 2200M

SQL16178N XML document contains a derived attribute *attribute-name* that is inconsistent with the definition for the base attribute. Reason code = *reason-code*.

Explanation: While parsing an XML document, a derived attribute was discovered that is inconsistent in some way with the base type for that attribute. Possible reasons given by *reason-code* are:

1. The REQUIRED setting is inconsistent
2. The derived type cannot be validly derived from the base type
3. The value is not fixed or has a different value from the base
4. The target namespace is invalid with respect to a base wildcard constraint, or the base has no wildcard.
5. Cannot modify the 'use' attribute of the derived type if the base attribute use is prohibited.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16178

sqlstate: 2200M

SQL16179N XML document contains an element or attribute *name* with a *derivation-type* declaration that expected a simpleType.

Explanation: While parsing an XML document, a *derivation-type* declaration was expecting a simpleType for the specified element or attribute *name*. A type other than a SimpleType was found.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16179

sqlstate: 2200M

SQL16180N XML document contains empty simpleType content.

Explanation: While parsing an XML document, the parser encountered a simpleType that has no children. There must be one child defined for the simpleType.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16180

sqlstate: 2200M

SQL16181N XML document contains invalid simpleContent.

Explanation: While parsing an XML document, some invalid simpleContent was encountered. The content must be RESTRICTION or EXTENSION.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16181

sqlstate: 2200M

SQL16182N XML document contains invalid complexContent.

Explanation: While parsing an XML document, some invalid complexContent was encountered. The content must be RESTRICTION or EXTENSION.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16182

sqlstate: 2200M

SQL16183N XML document contains an invalid child in a complexType. Reason code = *reason-code*.

Explanation: While parsing an XML document an invalid child was found in a complexType. Possible reasons given by *reason-code* are:

1. Found an invalid child following the simpleContent child in the complexType
2. Found an invalid child following the complexContent child in the complexType

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16183

sqlstate: 2200M

SQL16184N XML document contains duplicate annotation for type *type-name*.

Explanation: While parsing an XML document, duplicate annotation for the type *type-name* was encountered. A type can be annotated at most once.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16184

sqlstate: 2200M

SQL16185N XML document contains a syntax error. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered a syntax error. Possible reasons given by *reason-code* are:

1. Expected [to follow INCLUDE or IGNORE
2. The document contains a top level complexType with no name
3. The 'standalone=' string is only allowed in the main XML entity
4. The 'encoding=' string is required in a text declaration
5. The Root element is different from DOCTYPE
6. ID attributes must be #IMPLIED or #REQUIRED
7. Attributes of type ENTITY/ENTITIES must refer to an external, unparsed, entity
8. No character data is allowed by the content model

- | | | | |
|----|--|----|---|
| 9 | Element types cannot be duplicated in mixed content models | 31 | In an 'all' schema component, the value of minOccurs/maxOccurs of an element must be '0' or '1' |
| 10 | The content attribute must be 'textOnly' if you specify a type attribute | 32 | The intentional intersection of {attribute wildcard}s must be expressible |
| 11 | Next element declarations are only allowed in elementOnly content | 33 | The base type definition does not have any attributes |
| 12 | Element reference are only allowed in mixed or elementOnly content | 34 | An attribute wildcard is present in the derived type, but not in the base |
| 13 | Can only have one of 'type' and 'ref' attributes | 35 | The attribute wildcard in the derived type is not a valid subset of that in the base |
| 14 | The type of the element has already been declared | 36 | The wildcard attribute in the derived type must be identical to, or stronger than, the one in the base |
| 15 | Illegal xml:space declaration | 37 | A simpleType child of a <redefine> must have a restriction element as a child |
| 16 | Error in content of <schema> element information item | 38 | The base attribute of the restriction child of a simpleType must be the same as the redefine simpleType's name attribute. |
| 17 | Attribute declarations may not contain both a type and simpleType declaration | 39 | A complexType child of a <redefine> must have a restriction of extension element as a grandchild. |
| 18 | Ref cannot appear with any of 'type', 'abstract', 'block', 'final', 'nilable', 'default', or 'fixed' | 40 | The base attribute of a restriction/extension must be the same as the complexType |
| 19 | Ref is present and simpleType/form/type found | 41 | If a group child of a <redefine> element contains a group referencing itself, it must have exactly one reference. |
| 20 | The base type specified in the complexContent element must itself be a complexType. | 42 | If an attributeGroup of a <redefine> element contains a reference to itself, such reference must be exactly 1 |
| 21 | 'anyAttribute' elements can contain at most one 'annotation' element in their children | 43 | The content of an identity constraint must match (annotation?, selector, field+) |
| 22 | The namespace of an <import> element must be different from the targetNamespace of the <import>ing schema | 44 | The XPath expression is either missing or empty |
| 23 | If the namespace on an <import> element is not present, the <import>ing schema must have a targetNamespace | 45 | An <xs:all> model group that is part of a complex type definition must constitute the entire content type of the complex type definition. |
| 24 | The content of a complexType that is derived by restriction is empty, but the base type is not empty and cannot be made empty using a derivation by restriction. | 46 | An <annotation> can only contain <appinfo> and <documentation> elements |
| 25 | The content type is not a valid restriction of the content type of the base | 47 | The root element name of an XML schema should be 'schema' |
| 26 | The {item type definition} must have {variety} of atomic or union (where all member types must be atomic) | 48 | Repetition of individual elements is not legal for mixed content models |
| 27 | The {member type definition} must all have {variety} of atomic or list | 49 | Bad default attribute declaration |
| 28 | The child of a model group definition must not specify either the minOccurs or maxOccurs attribute | 50 | Expected default attribute declaration |
| 29 | A group whose content is 'all' must only appear as the content type of a complex type definition. | 51 | Attribute list syntax error |
| 30 | When a model group has {compositor} 'all' which constitutes the {content type} of a complex type, minOccurs=maxOccurs=1 | 52 | Not valid after content |
| | | 53 | No root element in DOCTYPE |

54	Unterminated DOCTYPE declaration	81	The parent element has no content spec node
55	Text declaration not legal here	82	The creation reason enum has an unknown value
56	Conditional section in internal subset	83	The enumerator contain no more element
57	A parameter entity propagated out of the internal or external subset	84	The auto encoding enum has an unknown value
58	Parameter entity references are not allowed inside markup in the internal subset	85	Unbalanced start/end tags found, cannot continue
59	An entity propagated out of the content section into Miscellaneous	86	Wildcard's occurrence range not a restriction of base wildcard's range
60	External entities cannot be referred to from attribute values	87	Wildcard is not a subset of corresponding wildcard in base
61	If 'default' and 'use' are both present, 'use' must have the value 'optional'	88	Group's occurrence range not a restriction of base wildcard's range
62	Only numeric character entities or special character entities are legal here	89	There is not a complete function mapping between the particles
63	The schemaLocation attribute does not contain pairs of values	90	There is not a complete functional mapping between the particles
64	Partial markup in parameter entity replacement text in a complete declaration	91	Invalid content spec node type
65	The start and the end tag were in different entities	92	Empty string encountered
66	The document contained a recursive entity expansion	93	String contains whitespace only
67	Facets are inconsistent with base type	94	More than one decimal points encountered
68	Whitespace must not occur between externally declared elements with element content in a standalone document.	95	Invalid chars encountered
69	Partial markup in parameter entity replacement text.	96	Null pointer encountered
70	Field matches more than one value within the scope of its selector; fields must match unique values	97	Occurrence range of a group is not a valid restriction of occurrence range of base group
71	Non-whitespace characters are not allowed in schema elements other than 'appinfo' and 'documentation'	98	There is not a complete functional mapping between the particles
72	The index given was beyond the max attribute index	99	The document contained an unterminated character reference
73	The passed AttTypes value is not known	100	The number of entity expansions exceeded the allowed limit
74	The passed DefAttType value is not known	101	This type of attribute cannot have an empty value
75	The binary operation node had a unary node type	102	Complex type definition representation is ok - <restriction> must have a <simpleType> child
76	The content type must be mixed or children	103	The element name/uri in the restriction does not match that of the corresponding base element
77	PCDATA nodes are not valid here	104	Selectors cannot select attributes
78	The unary operation node had a binary node type	105	Not allowed to have ' ' at the beginning of an XPath value
79	Unknown content model type	106	Not allowed to have ' ' in an XPath value
80	Unknown content spec type	107	Missing attribute name in XPath
		108	Not allowed to have double colon in the XPath expression

- 109 Expected step following token 'AXISNAME_CHILD:.'
- 110 Expected step following '/' in XPath
- 111 Expected step following '/' in XPath
- 112 '/' not allowed after '/' in XPath
- 113 '/' only allowed after '.' At the beginning of an XPath
- 114 Not allowed to have '/' at the beginning of an XPath value
- 115 Not allowed to select the root of an XPath
- 116 Empty XPath expression
- 117 The XPath expression cannot end with ''
- 118 Invalid character following '.' in XPath
- 119 XPath token not supported
- 120 Enabling the NEL options
- 121 No scheme was found in the URI
- 122 The derived complexType has content while the base type is empty
- 123 The parser expected to find an XML notation name and did not.
- 124 An unterminated notation declaration was found
- 125 The parser did not find a document encoding but one was required.
- 126 The document contained more end tags than start tags

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16185

sqlstate: 2200M

SQL16186N XML document encountered invalid unparsed entity reference *entity-name*.

Explanation: While parsing an XML document, an unparsed entity reference *entity-name* was encountered. That is invalid.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16186

sqlstate: 2200M

SQL16187N XML document contains an abstract type *type-name* used in an xsi:type attribute.

Explanation: While parsing an XML document, the parser encountered use of an abstract type *type-name* in an xsi:type attribute.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16187

sqlstate: 2200M

SQL16188N XML document contains an invalid content annotation specification for type *type-name*.

Explanation: While parsing an XML document, the parser encountered Content (Annotation?...) which is incorrect for the data type *type-name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16188

sqlstate: 2200M

SQL16189N XML document contains a ref element *element-name* not found in the XML schema.

Explanation: While parsing an XML document, the parser encountered a ref element *element-name* that is not found in the XML schema.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16189

sqlstate: 2200M

SQL16190N XML document contains a type "*prefix:type-name*" that is not found in the namespace.

Explanation: While parsing an XML document, the parser encountered a type that is not found in the namespace. The type is identified by *prefix:type-name*.

Parsing or validation did not complete.

User response: Correct the use of the type in the XML document and try the operation again.

sqlcode: -16190

sqlstate: 2200M

SQL16191N XML document contained an invalid child in the complex type *type-name*.

Explanation: While parsing an XML document, the parser encountered an invalid child in the complex type *type-name*. A child of a complexType can be a group, sequence, choice, all, attribute, or attributeGroup.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16191

sqlstate: 2200M

SQL16192N XML document contains a circular attributeGroup reference for *attribute-name*.

Explanation: While parsing an XML document the parser encountered a circular attributeGroup reference. This use is disallowed outside a <redefine>.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16192

sqlstate: 2200M

SQL16193N XML document contains a prefix *prefix-name* that has not been mapped to any URI.

Explanation: While parsing an XML document, the parser encountered a prefix *prefix-name* that has not been mapped to any URI.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16193

sqlstate: 2200M

SQL16194N XML document contains a type *type-name* that is used in an xsi:type attribute but is not derived from the type of the element *element-name*.

Explanation: While parsing an XML document, the parser encountered an xsi:type attribute that specified *type-name* but this type is not derived from the type of the element *element-name*.

Parsing or validation did not complete.

User response: Correct the type used in the xsi:type attribute in the XML document and try the operation again.

sqlcode: -16194

sqlstate: 2200M

SQL16195N XML document contains an invalid redefine. *namespace-uri* has already been included or redefined.

Explanation: While parsing an XML document, the parser encountered an invalid redefine. The namespace *namespace-uri* has already been included or redefined.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16195

sqlstate: 2200M

SQL16196N XML document contains an element *element-name* that is not correctly specified. Reason code = *reason-code*

Explanation: While parsing an XML document the parser encountered an error with an element named *element-name*. Possible reasons given by *reason-code* are:

- 1 The element is nillable in the restriction but not in the base
- 2 The element is either not fixed, or is fixed but does not have the same value as the base
- 3 The disallowed substitutions for the element are not a superset of those of the base
- 4 The element has a type that does not derive from the base
- 5 The element belongs to a group of a variety different from that of the base
- 6 The key for the identity constraint of the element is not found
- 7 The element is declared with a type that is abstract. Use xsi:type to specify a type that is not abstract
- 8 The element has a blocking constraint and does not permit substitution
- 9 The element cannot have both a type attribute and a child with a type that is a simpleType or complexType
- 10 The element must have a fixed or default value and must have a simple or mixed simple content model
- 11 The element must have a schemaLocation attribute specified
- 12 The namespace of the element must be from the schema namespace

- 13 The element has a type which does not derive from the type of the element at the head of the substitution group.
- 14 The element is globally declared and cannot have a ref attribute
- 15 No content specification expression was found for the element
- 16 Expected ',' or ')' characters or close parenthesis in the content model of the element
- 17 The element cannot have 'xmlns' as a prefix
- 18 The element has already been declared
- 19 The element cannot have element children within simple type content.
- 20 The element has a simpletype but no data type validator was found
- 21 The element has a key that matches an element that has nillable set to true
- 22 There is a duplicate key value declared for the identity constraint of the element
- 23 There is a duplicate unique value declared for the identify constraint of the element
- 24 The element has a key with no value
- 25 There are not enough values specified for the unique identify constraint of the element
- 26 The element was used in the DOCTYPE but never declared
- 27 The content model for the element is ambiguous
- 28 The particle of the content type is not emptiable but the content type of the element is mixed.
- 29 Content for the element is different from the fixed attribute value in the schema declaration of the element
- 30 There is a circular substitution group for the element
- 31 The element is not valid for the associated content model
- 32 The value of the element is 'xsi:nil'. This is inconsistent with the elements declaration as non-nillable.
- 33 The element is untyped
- 34 The specified element must be qualified
- 35 The specified element cannot be qualified
- 36 The specified element was not empty yet specified xsi:nil=true. Any element specifying xsi:nil=true should be empty.

- 37 The element is not defined.
- 38 The element has both 'fixed' and 'default' facets specified for it. Either one or the other can be specified but not both.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16196

sqlstate: 2200M

SQL16197N XML document contains key or keyref name *name* identity constraint that does not have enough values specified for element *element-name*.

Explanation: While parsing an XML document the parser encountered an element *element name* where the key or keyref *name* identity constraint does not have enough values specified.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16197

sqlstate: 2200M

SQL16198N XML document contains the declaration of an *object-type* object with an invalid name *name*.

Explanation: While parsing an XML document the parser encountered a declaration for an *object-type* object with a name *name* that is not valid.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16198

sqlstate: 2200M

SQL16199N XML document contains a type *type-name* which has complexContent and cannot be specified as the base in a simpleContent element.

Explanation: While parsing an XML document, the parser encountered a type *type-name* which has complexContent specified as the base in a simpleContent element.

Parsing or validation did not complete.

User response: Correct the XML document to specify a different type as the base and try the operation again.

sqlcode: -16199

sqlstate: 2200M

SQL16200N XML document contains a duplicate reference attribute "*prefix:name*" in a complexType.

Explanation: While parsing an XML document the parser encountered a duplicate reference attribute named *prefix:name* in a complexType.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16200

sqlstate: 2200M

SQL16201N XML document contains invalid Unicode character *hex-value* in a public identifier.

Explanation: While parsing an XML document the parser encountered an invalid Unicode character in a public id. The invalid character is identified by the hexadecimal value *hex-value*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16201

sqlstate: 2200M

SQL16202N XML document contains invalid digit *value* for the associated radix.

Explanation: While parsing an XML document the parser encountered an invalid digit *value* for the associated radix. The radix could be base 10 or base 16.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16202

sqlstate: 2200M

SQL16203N XML document input ended before all started tags were ended. Last tag started was *tag-name*.

Explanation: While parsing an XML document the parser encountered an end of input before all start tags were closed. The last tag that was started is indicated by *tag-name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16203

sqlstate: 2200M

SQL16204N XML document contains reference to an external entity declaration *ext-entity-name* in a standalone document.

Explanation: While parsing an XML document the parser referenced an external entity identified by *ext-entity-name* in a standalone document.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16204

sqlstate: 2200M

SQL16205N XML document contains too few elements to match content model *name*.

Explanation: While parsing an XML document, the parser did not find enough elements to match the content model identified by *name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16205

sqlstate: 2200M

SQL16206N XML document contains reference to a URI *uri-string* for which no grammar is available.

Explanation: While parsing an XML document the parser attempted to locate a grammar for the URI *uri-string*. The grammar is not available.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16206

sqlstate: 2200M

SQL16207N XML document contains an entity *entity-name* that was not defined.

Explanation: While parsing an XML document, the parser found an entity identified by *entity-name* that was not defined.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16207

sqlstate: 2200M

SQL16208N XML document contains an invalid type *type-name* in *xsi:type*.

Explanation: While parsing an XML document, the parser found an invalid type *type-name* in an *xsi:type* definition. Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16208

sqlstate: 2200M

SQL16209N XML document requires specification of a member of the substitution group for abstract element *element-name*.

Explanation: While parsing an XML document the parser encountered a missing member of a substitution group for the abstract element *element-name*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16209

sqlstate: 2200M

SQL16210N XML document contained a value *value* that violates a facet constraint. Reason code = *reason-code*.

Explanation: While processing an XML document, the XML parser encountered a value that failed a facet constraint test. Possible reasons given by *reason-code* are:

- 1 The length of the value exceeds the maxLen facet
- 2 The length of the value was less than the minLen facet
- 3 The length of the value was not equal to the len facet.
- 4 The value was not in the enumeration
- 5 The total digits in the value exceeded the totDigits facet
- 6 The fractal digits in the value exceeded the fractDigits facet
- 7 The value was greater than the maxInclusive facet
- 8 The value was greater than or equal to the maxExclusive facet
- 9 The value was less than the minInclusive facet
- 10 The value was less than or equal to the minExclusive facet
- 11 The value is not whitespace replace

- 12 The value is not whitespace collapsed
- 13 The value does not match the regular expression facet
- 14 The value does not match any member types of the union
- 15 The value exceeds the scale facet
- 16 The value exceeds the precision facet

Parsing or validation did not complete.

User response: Correct the value that violates the constraint facet in the XML document and try the operation again.

sqlcode: -16210

sqlstate: 2200M

SQL16211N XML document contained an invalid URI. Token 1=*token1*. Token 2=*token2*. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered an invalid URI. Possible reasons given by *reason-code* are:

- 1 The URI *token1* must have all required components.
- 2 The URI *token1* contains component *token2* that is only valid for generic URIs
- 3 The URI *token1* contains invalid escape sequence *token2*.
- 4 The URI *token1* contains an invalid character *token2*.
- 5 The URI contains a non-nullable component that is set to null
- 6 The URI *token1* contains a non-conformant component *token2*.
- 7 The URI *token1* contains a component *token2* that is not valid if the 'host' component is not specified
- 8 The URI *token1* contains a component *token2* that is not valid if the 'path' component is not specified.
- 9 The URI *token1* contains component *token2* that cannot be included in a path specification.
- 10 A URI contains a port value *token1* that is not in the range (0, 65535).

Parsing or validation did not complete.

User response: Correct the URI in the XML document and try the operation again.

sqlcode: -16211

sqlstate: 2200M

SQL16212N XML document does not allow circular definitions for *name*.

Explanation: While parsing an XML document, the parser encountered the a use of *name* within the definition of *name*. XML does not allow circular definitions.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16212

sqlstate: 2200M

SQL16213N XML schema contains an element *element-name* that must not have a *constraint-type* constraint because the type is derived from ID.

Explanation: While parsing an XML schema, the parser encountered an element that must not have a *constraint-type* constraint because it is derived from ID.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16213

sqlstate: 2200M

SQL16214N XML document contains an imported schema *import-uri* that has a different *targetNamespace targetns-uri* than what is declared *declared-uri*.

Explanation: While parsing an XML document the parser encountered a namespace mismatch. The XML schema that was imported *import-uri* has a target namespace *targetns-uri* that is different from the declared namespace *declared-uri* in the XML document.

Parsing or validation did not complete.

User response: Correct the mismatch in namespaces for the XML document and try the operation again.

sqlcode: -16214

sqlstate: 2200M

SQL16215N XML document contains an included schema *include-uri* that has a different target namespace *targetns-uri*.

Explanation: While parsing an XML document, the parser encountered a namespace mismatch. The XML schema that was included with URI *include-uri* has a different target namespace URI *targetns-uri*.

Parsing or validation did not complete.

User response: Correct the mismatch in namespaces

for the XML document and try the operation again.

sqlcode: -16215

sqlstate: 2200M

SQL16216N XML document is missing attribute *attribute-name* that must appear in *element-type element-name* declarations.

Explanation: While parsing an XML document the parser encountered an *element-type element-name* declaration that is missing a required attribute *attribute-name*.

Parsing or validation did not complete.

User response: Add the missing attribute to the global or local declaration in the XML document and try the operation again.

sqlcode: -16216

sqlstate: 2200M

SQL16217N XML document contains attribute *attribute-name* that cannot appear in *element-type element-name* declarations.

Explanation: While parsing an XML document the parser encountered an attribute named *attribute-name* that is not allowed in a *element-type element-name* declaration.

Parsing or validation did not complete.

User response: Remove the attribute from the global or local declaration in the XML document and try the operation again.

sqlcode: -16217

sqlstate: 2200M

SQL16218N XML document contains a global declaration for *component* named *name1* that is declared more than once.

Explanation: While parsing an XML document the parser encountered a duplicate global declaration for a *component* identified by *name*. The *component* could be an "element", "group", or "attributeGroup".

Parsing or validation did not complete.

User response: Remove the duplicate declaration from the XML document and try the operation again.

sqlcode: -16218

sqlstate: 2200M

SQL16219N XML document contains a global type declaration for a *type1* named *name* that is declared more than once or also declared as *type2*

Explanation: While parsing an XML document the parser encountered a duplicate global type declaration for a *type1* identified by *name* or *name* is also declared as a *type2*. The global type declarations could be a `simpleType` or a `complexType`.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16219

sqlstate: 2200M

SQL16220N XML document contains an element or attribute *name* where NOTATION was used directly in the schema for that element or attribute.

Explanation: While parsing an XML document, the parser encountered an element or attribute where the schema used NOTATION directly for that element or attribute..

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16220

sqlstate: 2200M

SQL16221N XML document contains a mismatch in the definition of the base type *base-type-name* and the derived type *derived-type-name*.

Explanation: While parsing an XML document, the parser encountered a mismatch in the definition of a base type *base-type-name* and the derived type *derived-type-name*. If the content type of the base type is mixed then the derived type must also be mixed content. If the content of the base type is element-only, then the derived type must also be element-only content.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16221

sqlstate: 2200M

SQL16222N XML document contains a global *declaration-type* declaration without a name

Explanation: While parsing an XML document, the parser encountered a global *declaration-type* declaration without a name. The global declaration must have a name.

Parsing or validation did not complete.

User response: Correct the global declaration in the XML document and try the operation again.

sqlcode: -16222

sqlstate: 2200M

SQL16223N XML document contained a `<redefine>` element with a child of type *type-name* that is not allowed.

Explanation: While parsing an XML document, the parser encountered a `<redefine>` element with a child defined with data type *type-name*. A `<redefine>` element cannot contain a child of that type.

Parsing or validation did not complete.

User response: Correct the `<redefine>` element in the XML document and try the operation again.

sqlcode: -16223

sqlstate: 2200M

SQL16224N XML document contains a mismatch in the definition of the base element *base-element-name* and the derived element *derived-element-name*. Reason code = *reason-code*.

Explanation: While parsing an XML document, the parser encountered a mismatch in the definition of a base element with name *base-element-name* and an associated derived element with name *derived-element-name*. Possible reasons given by *reason-code* are:

1. The derived element has fewer identify constraints than the base element
2. The derived element has an identity constraint that does not appear on the base element.

Parsing or validation did not complete.

User response: Correct the base element or the derived element in the XML document and try the operation again.

sqlcode: -16224

sqlstate: 2200M

SQL16225N XML document contains a namespace of *namespace-uri* that is not allowed by a wildcard in the base type.

Explanation: While parsing an XML document, the parser encountered an invalid namespace caused by a type which is derived from a base type with an "any" element that has an element definition with a namespace URI that does not match *namespace-uri*.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16225

sqlstate: 2200M

SQL16226N XML schema contains an invalid group specification for group *group-name*. Reason code = *reason-code*.

Explanation: While processing an XML schema the XML parser encountered an invalid group specification. Possible reasons given by *reason-code* are:

1. The group must contain (all | choice | sequence)
2. The group contains a reference to a group being redefined that must have minOccurs = maxOccurs = 1.
3. The attribute group specification does not match (annotation?.((attribute | attributeGroup)*, anyAttribute?))

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16226

sqlstate: 2200M

SQL16227N XML document contains object "*object-type*" named "*uri:object-name*" that was not found in the schema.

Explanation: While parsing an XML document, the parser encountered an object of type *object-type* with name *uri:object-name* that could not be found in the XML schema.

User response: Correct the XML document or the XML schema and try the operation again.

Parsing or validation did not complete.

sqlcode: -16227

sqlstate: 2200M

SQL16228N The content of <all> is restricted to <xs:element> but *tag-name* was encountered.

Explanation: While parsing an XML schema document, the parser encountered the element *tag-name*. XML Schema restricts the content of <all> to <xs:element>.

User response: Correct the XML schema document and try the operation again.

sqlcode: -16228

sqlstate: 2200M

SQL16229N XML document contains a redefine schema *schema-uri* with a different target namespace *targetns-uri*.

Explanation: While parsing an XML document, the parser encountered a redefine schema with a different target namespace.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16229

sqlstate: 2200M

SQL16230N XML document contains more than one identity constraint named *constraint-name*.

Explanation: While parsing an XML document, the parser encountered multiple identity constraints that used the name *constraint-name*.

Parsing or validation did not complete.

User response: Change the duplicate identity constraint names in the XML document and try the operation again.

sqlcode: -16230

sqlstate: 2200M

SQL16231N XML document contains a reference to namespace *uri* without an <import> declaration.

Explanation: While parsing an XML document, the parser encountered a reference to namespace *uri* without an import declaration for that namespace.

Parsing or validation did not complete.

User response: Include and import for the namespace in the XML document and try the operation again.

sqlcode: -16231

sqlstate: 2200M

SQL16232N XML document contains a duplicate setting of *attribute-name* in the XML declaration.

Explanation: While parsing an XML document, the parser encountered duplicate declaration settings of *attribute-name* in the XML declaration. The XML declaration can only have one setting of "version", "encoding" and "standalone" attributes.

Parsing or validation did not complete.

User response: Remove the duplicate attribute setting in the XML declaration for the XML document and try the operation again.

sqlcode: -16232

sqlstate: 2200M

SQL16233N XML document contains a duplicate ID value *ID-value*.

Explanation: While parsing an XML document the parser encountered duplicate ID value *ID-value*.

Parsing or validation did not complete.

User response: Change the duplicate ID values to unique ID values in the XML document and try the operation again.

sqlcode: -16233

sqlstate: 2200M

SQL16234N XML document contains an invalid declaration for data type *type-name*. Reason code = *reason-code*.

Explanation: While parsing an XML document, the parser encountered an invalid data type declaration. Possible reasons given by *reason-code* are:

1. There is no validator for the data type *type-name*
2. It is an incorrect data type.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16234

sqlstate: 2200M

SQL16235N XML document contained a value *value* that is out of range. Range value 1=*rvalue1*. Range value 2=*rvalue2*. Reason code = *reason-code*.

Explanation: While parsing an XML document the parser encountered an invalid value. Possible reasons given by *reason-code* are:

1. The value *value* is less than the maximum negative value *rvalue1*.

2. The value *value* is greater than the maximum positive value *rvalue1*.
3. The number *value* is outside the allowed range of *rvalue1* to *rvalue2*.
4. The number *value* is required to have an exponent.

Parsing or validation did not complete.

User response: Correct the out of range value in the XML document and try the operation again.

sqlcode: -16235

sqlstate: 2200M

SQL16236N Error encountered processing regular expression. Reason code = *reason-code*. Possible token = *token*.

Explanation: While processing a regular expression an error was encountered. The *reason-code* provides further information regarding the error along with a description of the possible token *token* if it is not empty.

- 1 There was an invalid category name *token* in the regular expression.
- 2 There was an unknown option in the regular expression.
- 3 There was an unknown keyword *token* in the regular expression.
- 4 ComplementRanges - Argument must be a RangeToken
- 5 Reference number must be more than zero.
- 6 Unknown token type.
- 7 Invalid child index.
- 8 Invalid or zero length replace pattern.
- 9 Invalid Unicode hex notation or Unicode code point.
- 10 The range end code point *token* is less than the start code point.
- 11 Invalid regular expression syntax. Expected to find a string or character listed in *token*.
- 12 Overflow in a hex notation.
- 13 An unexpected character was found in a regular expression.
- 14 Invalid reference number.
- 15 A character is required after the back slash character ('\').
- 16 Unexpected end of the pattern in a modifier group, conditional group, or a character class.
- 17 A back reference, an anchor, a lookahead, or a lookbehind is expected in a conditional pattern.

- 18 There are more than three choices in a conditional group.
- 19 A character in U+0040 to u+005f must follow \c.
- 20 Unexpected meta character.
- 21 Unknown property.
- 22 Unknown name of a POSIX character class.
- 23 Invalid use of '-' character in a regular expression.
- 24 An anchor is not in the correct position in the regular expression.
- 25 An expression is used that is not supported in the current option setting.
- 26 An invalid quantifier was used in *token*. Possible problems are an expected digit, expected '}' character, invalid quantity, a minimum quantity that exceeds the maximum quantity, or a quantity value overflow.
- 27 *token* is not a valid character range.
- 28 *token* is an invalid escape character.
- 29 Internal regular expression processing error. Error code *token*. Retry and if problem occurs again contact IBM support with this message and the value of *token*.

Parsing or validation did not complete.

User response: Correct the regular expression and try the operation again.

sqlcode: -16236

sqlstate: 2200M

SQL16237N XML schema contains an occurrence range for element *element-name* that is not a valid restriction of range for the base element.

Explanation: While parsing an XML schema, the parser encountered an occurrence range in the element *element-name* that is not a valid restriction of the occurrence range for the base element.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16237

sqlstate: 2200M

SQL16238N XML schema contains a prefix *prefix-name* that is not bound to a namespace URI in an XPath value.

Explanation: While processing an XML schema, the XML parser encountered a prefix *prefix-name* without a corresponding URI in an XPath value.

Parsing or validation did not complete.

User response: Correct the XML schema and try the operation again.

sqlcode: -16238

sqlstate: 2200M

SQL16239N XML document contains a redefine for a type *type-name* that does not already have an existing declaration.

Explanation: While parsing an XML document, the parser did not encounter a declaration corresponding to *type-name* in the schema. The redefine request cannot be performed without a prior declaration.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16239

sqlstate: 2200M

SQL16240N XML document contained *tag* which is only allowed in elementOnly content.

Explanation: While parsing an XML document, the parser encountered contents that are only valid in elementOnly content.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16240

sqlstate: 2200M

SQL16241N XML document has *tag* content in a choice model group which is limited to 'element', 'group', 'choice', 'sequence', and 'any'.

Explanation: While parsing an XML document the parser encountered invalid content. A choice model group include the content *tag* that is not one of 'element', 'group', 'choice', 'sequence', or 'any'.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16241

SQL16242N • SQL16247N

sqlstate: 2200M

SQL16242N XML document has *name1* and *name2* which violate the unique particle attribution rule.

Explanation: While parsing an XML document the parser encountered values that violate the unique particle attribution rule.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16242

sqlstate: 2200M

SQL16243N XML document contains keyref *value* referencing a key or unique constraint that is out of scope.

Explanation: While parsing an XML document, the parser encountered an invalid keyref. The keyref *value* is the name of a key or unique constraint that is defined but is not in the scope of the keyref.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16243

sqlstate: 2200M

SQL16244N XML document contains an operation *operation-name* that is invalid for the spec type.

Explanation: While parsing an XML document, the parser encountered an operation that is invalid for the spec type.

Parsing or validation did not complete.

User response: Correct the XML document and try the operation again.

sqlcode: -16244

sqlstate: 2200M

SQL16245N Unqualified SQL identifier *string* found at or near line *lineno* in XML schema document *uri*.

Explanation: The identifier *string* is missing a relational schema name and there is no global annotation db2-xdb:defaultSQLSchema specified in the XML schema. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Either the global annotation db2-xdb:defaultSQLSchema must be defined or any table or nickname used in any mapping must be declared with a db2-xdb:table annotation that specifies a relational schema.

sqlcode: -16245

sqlstate: 225DE

SQL16246N Incomplete annotation mapping at or near line *lineno* in XML schema document *uri*. Reason code = *reason-code*.

Explanation: The annotation mapping the XML schema item near *line* in *uri*, to a database object is missing some information. Possible values for reason code include:

1. A rowset name is not specified or is not fully qualified.
2. Any mapping must specify either a target column or a condition. Neither a target column nor a condition is specified.
3. Processing of XML content is specified, but no target column specified. Mapping indicates that the content from the XML document is to be truncated, normalized or transformed via an expression but the mapping does not indicate where the processed content is to be stored.

The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Modify the annotations in the XML schema. Possible actions based on the *reason-code* include:

1. Specify a rowset name or fully qualify the rowset name.
2. Specify either a target column or a condition.
3. Specify a target column for XML content that has associated processing specified.

Consult annotated XML schema documentation on the specified annotation to make sure that all required components have supplied values.

sqlcode: -16246

sqlstate: 225DE

SQL16247N Source XML type *source-data-type* cannot be mapped to target SQL type *target-data-type* in the annotation at or near line *lineno* in XML schema document *uri*.

Explanation: Annotation at or around line *lineno* in

XML schema document *uri* maps a XML schema type *source-data-type* to an incompatible SQL type *target-data-type*. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Consult annotated XML schema documentation on compatibility between XML schema types and SQL types. Correct the annotation appropriately.

sqlcode: -16247

sqlstate: 225DE

SQL16248N Error in annotation at or near line *lineno* in XML schema document *uri*.
Additional information for the error includes *errordetails*.

Explanation: The annotated XML schema document *uri* contains an error in the annotation at or near line number *lineno*. Types of errors include: invalid value, unknown elements or attributes inside an annotation, mal-formed XML. Any available additional information on the type of error or the erroneous value is provided in *errordetails*.

The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Consult annotated XML schema documentation for list of legal annotations and their syntax. Correct or remove the unknown annotation.

sqlcode: -16248

sqlstate: 225DE

SQL16249N The db2-xdb:expression or db2-xdb:condition annotation *annotation-string* at or near line *lineno* in XML schema document *uri* is invalid according to reason code *reasoncode*.

Explanation: The identified db2-xdb:expression or db2-xdb:condition annotation is not valid, as indicated by one of the following reason codes:

1. String length of the specified expression exceeded the maximum allowed.
2. The number of occurrences of the keyword \$DECOMP_CONTENT or \$DECOMP_ELEMENTID in the expression exceeded the maximum of 10 occurrences.

The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Consult annotated XML schema documentation regarding the syntax and limits for db2-xdb:expression or db2-xdb:condition annotations. Correct the expression appropriately.

sqlcode: -16249

sqlstate: 225DE

SQL16250N The db2-xdb:defaultSQLSchema with value *schema-name* at or near line *lineno* in XML schema document *uri* conflicts with another db2-xdb:defaultSQLSchema specified in one of the XML schema documents within the same XML schema.

Explanation: There can only be one value for the db2-xdb:defaultSQLSchema annotation across all XML schema documents that comprise an annotated XML schema. The specified SQL schema name *schema-name* at or near the line number *lineno* in the XML schema document *uri* conflicts with another value for db2-xdb:defaultSQLSchema annotation in this or another XML schema document of the XML schema. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Correct the annotated XML schema such that all specifications of db2-xdb:defaultSQLSchema are consistent.

sqlcode: -16250

sqlstate: 225DE

SQL16251N Duplicate db2-xdb:table annotation defined for table or nickname *table-name* at or near line *lineno* in XML schema document *uri*.

Explanation: There is more than one db2-xdb:table annotation for the table or nickname *table-name* in the annotated XML schema. A second db2-xdb:table annotation has been found for this table or nickname at or around line *lineno* in XML schema document *uri*. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Correct the annotated XML schema by removing any duplicate db2-xdb:table annotations for the table or nickname *table-name* from the XML schema documents of the XML schema.

sqlcode: -16251

sqlstate: 225DE

SQL16252N The `db2-xdb:rowSet` name *rowset-name* specified at or near line *lineno* in the XML schema document *uri* is already associated with another table or nickname.

Explanation: A rowset in an annotated XML schema must correspond to exactly one table or nickname. The rowset declaration at or near line *lineno* declares an association between rowset *rowsetname* and the table or nickname specified in the enclosing `db2-xdb:table` annotation. The specified rowset has already been associated to a different table or nickname in another `db2-xdb:table` annotation. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Correct the annotated XML schema such that each rowset name is uniquely associated with exactly one table or nickname across the annotated XML schema documents of the XML schema.

sqlcode: -16252

sqlstate: 225DE

SQL16253N The `db2-xdb:condition` annotation *condition* at or near line *lineno* in XML schema document *uri* is too long.

Explanation: The length of the string associated with `db2-xdb:condition` that starts with *condition* exceeds the maximum allowed. The `db2-xdb:condition` is found at or around line number *lineno* in XML schema document *uri*. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Reduce the size of the condition string for `db2-xdb:condition` in the XML schema document. Consult annotated XML schema documentation on the limit for strings specified in `db2-xdb:condition` annotations.

sqlcode: -16253

sqlstate: 225DE

SQL16254N A `db2-xdb:locationPath` *locationpath* at or near line *lineno* in XML schema document *uri* is not valid with reason code *reason-code*.

Explanation: A value specified in the annotated schema for `db2-xdb:locationPath` is not valid. Possible values for reason code include:

1. Some element or attribute has a namespace prefix that is not mapped to a URI. All namespace prefixes used in the location path must have been associated

with a namespace in the XML schema document containing the annotation specifying this location path.

2. Invalid syntax for a location path.
3. The specified path does not match any possible path from a root node to a location where the element or attribute may appear in an instance document.
4. An element or attribute name in the locationPath does not correspond to any element or attribute name in the XML schema.
5. The number of location steps in the location path exceeds the maximum allowed.

The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Modify the annotations in the XML schema. Possible actions based on the *reason-code* include:

1. Ensure that namespace prefixes in the `db2-xdb:locationPath` are correct or add a declaration for the missing namespace.
2. Ensure that the syntax of the value for `db2-xdb:locationPath` is valid syntax for a location path.
3. Ensure that the value for `db2-xdb:locationPath` corresponds to a possible path from the root node to the element or attribute at the end of the location path.
4. Make sure all element and attribute names in the locationPath correspond to valid element and attribute names in the XML schema.
5. Consult annotated XML schema documentation regarding the limits for `db2-xdb:locationPath` and reduce the number of location steps in the location path to within the limit.

sqlcode: -16254

sqlstate: 225DE

SQL16255N A `db2-xdb:rowSet` value *rowset-name* used at or near line *lineno* in XML schema document *uri* conflicts with a `db2-xdb:table` annotation with the same name.

Explanation: The annotated XML schema contains a `db2-xdb:table` annotation which declares a table or a nickname named *rowset-name*, but the annotated XML schema does not have any `db2-xdb:rowSet` annotation declaration to associate *rowset-name* to any table or nickname. If a rowset is not declared in any `db2-xdb:table` annotation, it is implicitly associated to a table or nickname with the same name qualified by the

value of `db2-xdb:defaultSQLSchema`. The annotated XML schema cannot use a `db2-xdb:rowSet` annotation that relies on an implicit association between a rowset and a table or a nickname with the same name of *rowset-name*, and at the same time declare a table or nickname named *rowset-name* using a `db2-xdb:table` annotation. The XML schema document can be determined by matching *uri* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Correct the annotated XML schema by adding a `db2-xdb:rowSet` child element to the `db2-xdb:table` element with name *rowset-name*. This will explicitly associate the rowset to the table or nickname.

sqlcode: -16255

sqlstate: 225DE

SQL16256N XML schema is missing a global complexType required to enable for decomposition.

Explanation: The XML schema has no global elements of complexType which would serve as a potential root element for instance documents. The XML schema must contain at least one global element of complexType in order to be enabled for decomposition.

The XML schema is not enabled for decomposition.

User response: Ensure that the XML schema contains at least one global element of complexType before attempting to enable the XML schema for decomposition.

sqlcode: -16256

sqlstate: 225DE

SQL16257N Feature *feature-number* at or near line *lineno* in XML schema document *uri*, is not supported for decomposition. Any additional information on the error includes *error-details*.

Explanation: An unsupported feature was detected, as indicated by one of the following feature numbers:

1. A mapping to a column of a type not supported by decomposition. Consult annotated XML schema documentation for the allowed target column types.
2. A mapping of an element in a choice model group containing a condition or expression.
3. A mapping of an element or attribute to a nickname identifying a table at a data source that is not DB2 for LUW. Any nickname referenced in an annotated XML schema must identify a table that is at a DB2 for LUW data source.
4. The annotated xml schema contains a reference to a table whose code page is different from the

database code page. Decomposition is not supported in a configuration where any of the target tables are in a different code page from that of the database.

In some cases, the presence of the unsupported feature in the XML schema results in failure to enable for decomposition. In other cases, having annotations in the decomposition namespace on the unsupported feature results in failure to enable for decomposition. Any additional available information pertaining to the error is given in *error-details*.

User response: Remove the feature from the XML schema or remove the decomposition annotations associated with the feature, as appropriate. Consult decomposition documentation on the restrictions on use of the specified XML schema feature.

sqlcode: -16257

sqlstate: 225DE

SQL16258N The XML schema contains a recursive element which is an unsupported feature for decomposition. The recursive element is identified as "*elementnamespace:elementname*" of type "*typenamespace:typename*".

Explanation: XML schemas with recursive elements are not supported for decomposition. At least one recursive element was found identified as *elementnamespace:elementname* of type *typenamespace:typename*.

The XML schema is not enabled for decomposition.

User response: Remove the use of recursion from the XML schema.

sqlcode: -16258

sqlstate: 225DE

SQL16259N Invalid many-to-many mappings detected in XML schema document *uri1* near line *lineno1* and in XML schema document *uri2* near line *lineno2*.

Explanation: The two identified annotations specify an invalid many-to-many relationship between elements that map to the same rowset. If two element declarations have a sequence model group as their lowest common ancestor then only one of the paths from the element declaration up to that model group can have `maxOccurs>1` on one or more elements declarations or modelgroups in that path. The XML schema documents can be determined by matching *uri1* and *uri2* to the SCHEMALOCATION column of catalog view SYSCAT.XSROBJECTCOMPONENTS.

The XML schema is not enabled for decomposition.

User response: Correct the annotations such that there

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are no many-to-many mappings. Consult annotated XML schema documentation for rules on mapping elements and attributes.

sqlcode: -16259

sqlstate: 225DE

SQL16260N XML schema annotations include no mappings to any column of any table or nickname.

Explanation: The XML schema contains no annotations that map an XML element or attribute to any column of any table or nickname.

The XML schema is not enabled for decomposition since it provides no information for performing decomposition.

User response: Add annotations to the XML schema so that at least one XML element or attribute is mapped to a column of a table or nickname.

sqlcode: -16260

sqlstate: 225DE

SQL16261N The number of namespace constraints specified for the wildcard exceeds the limit of *max-namespaces*.

Explanation: The number of namespaces explicitly listed in the namespace attribute of `<xsd:any>` or `<xsd:anyAttribute>` is more than the limit of *max-namespaces* namespaces. If the list contains the special values `##targetNamespace` or `##local`, these also count toward the limit.

The XML schema is not enabled for decomposition.

User response: Reduce the number of namespace constraints specified in the wildcard definition to not more than *max-namespaces* namespaces.

sqlcode: -16261

sqlstate: 225DE

SQL16262N The annotated XML schema has no columns mapped for rowset *rowsetname*.

Explanation: The set of annotations involving rowset *rowsetname* contain no mappings to any column. In order for a rowset to be target for decomposition, at least one column must be mapped to some XML element or attribute.

User response: Add an annotation that maps a column of the specified rowset to some XML element or attribute. If the rowset is not intended to be a target for decomposition, remove references to the rowset from the annotated XML schema.

sqlcode: -16262

sqlstate: 225DE

SQL16263N The rowSet name *string* at or near line *lineno* in the XML schema document *uri* is not used in any mapping.

Explanation: The rowSet name *string* at line *lineno* in the XML schema document *uri* must be specified in at least one mapping in the XML schema.

User response: Ensure that the rowSet name *string* is specified in mapping at least one element or attribute in the XML schema.

sqlcode: -16263

sqlstate: 225DE

SQL16264N The rowSet name *string* at or near line *lineno* in the XML schema document *uri* cannot be used more than once under *annotation-name*.

Explanation: A rowSet name can be used only once under *annotation-name*. It can participate in only one hierarchy of operation orders.

User response: Verify that using the same rowSet name under multiple instances of the element `db2-xdb:order` under *annotation-name* is part of your design.

If by design, combine the affected `db2-xdb:order` elements such that the resulting order is consistent with the required order of insertion.

sqlcode: -16264

sqlstate: 225DE

SQL16265N The XML document cannot be decomposed using XML schema *xsobject-name* which is not enabled or is inoperative for decomposition.

Explanation: The XML schema identified by *xsobject-name* is not in the correct state to perform decomposition. The XML schema could be in one of the following states:

- Not enabled for decomposition (possibly never enabled)
- Disabled for decomposition
- Inoperative for decomposition because of changes to the definitions of one or more tables specified in the annotations.

Decomposition can only be performed using XML schemas that are enabled for decomposition.

XML decomposition was not started.

User response: Ensure that the XML schema is enabled for decomposition before attempting to use it for decomposition of an XML document. The decomposition status of an XML schema can be checked by selecting the DECOMPOSITION column of

SYSCAT.XSROBJECTS for the XML schema identified by *xsobject-name*.

sqlcode: -16265

sqlstate: 225D1

SQL16266N An SQL error occurred during decomposition of document *docid* while attempting to insert data. Information returned for the error includes **SQLCODE** *sqlcode*, **SQLSTATE** *sqlstate*, and message tokens *token-list*.

Explanation: An SQL error occurred during decomposition of an XML document with document identifier *docid*. The error occurred while attempting an SQL insert operation based on some piece of data from the XML document. Some possible causes: format of data is incompatible with the target column's data type; length of data exceeds column size; providing null value for a column defined as non-null. The *sqlcode*, *sqlstate* and message token list (each token is separated by the vertical bar character) are provided. The message tokens may be truncated. See the corresponding message for the *sqlcode* for further explanation of the error.

The XML document *docid* was not decomposed.

User response: Check the message associated with the SQLCODE. Follow the action suggested by that message. See the db2diag log file for complete information about the error condition.

sqlcode: -16266

sqlstate: 225D2

SQL16267N An XML value *string* at or near line *lineno* in document *docid* is not valid according to its declared XML schema type *type-name* or is outside the supported range of values for the XML schema type.

Explanation: The specified XML value *string* is not supported as a value of data type *type-name*. This error could occur for one of the following reasons:

- The XML value is not in the value space of the XML schema type *type-name*. In this case, the XML document is not valid according to the XML schema that is used for decomposition.
- The XML value is outside the range of values supported in DB2 for the XML schema type *type-name*. In this case, the XML value cannot be inserted into its currently mapped column. However, the lexical representation of the XML value can be inserted if the value is mapped to a column of character type.

The XML document *docid* was not decomposed.

User response: Consult the W3C recommendation on XML schema to determine the value space of the XML schema type. Validate that the XML document is consistent with the annotated XML schema you are using for decomposition. If the value appears to be in the value space for the type, check the range limits for the value in DB2 as documented in the XQuery Reference. If the XML value is out of range for the data type, map the elements or attributes that contains such values to a character string column. If the XML schema requires correction, it must be registered again in the XML schema repository (XSR) and enabled for decomposition. Then retry the decomposition.

sqlcode: -16267

sqlstate: 225D3

SQL16268N The special numeric values INF, -INF, or NaN found at or near *lineno* of document *docid* cannot be assigned to a column.

Explanation: Decomposition processing found one of the special numeric values INF, -INF, or NaN at or near line number *lineno* in the document with identifier *docid*. These special values for XML schema floating point types are not valid values for assignment to numeric columns.

The XML document *docid* was not decomposed.

User response: Possible methods of resolution:

- Substitute any occurrence in the instance document of XML schema floating point special values with a valid DB2 floating point value
- Map the XML floating point to a character column, instead of a double or float column
- Write special purpose user-defined functions that can be called using the expression annotation to transform these values into a numeric value that can be assigned to a numeric column.

sqlcode: -16268

sqlstate: 225D4

SQL16269N Element "*namespace:elementname*" at or near line "*lineno*" in document "*docid*" is not recognized.

Explanation: The element *namespace:elementname* at or near line *lineno* in document *docid* is not recognized based on the annotated XML schema in use for decomposition. Possible causes:

- The element was not defined in the registered annotated XML schema
- A member of a substitution group appears in the instance document, in a position where the group head appears in the XML schema

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- Another element of compatible type was substituted in the instance document for the element expected at that position according to the XML schema.

The XML document *docid* was not decomposed.

User response: Check that the XML document *docid* is consistent with the annotated XML schema you are using for decomposition. One method of checking is to run XML decomposition again with validation turned on to ensure that document is valid. You should also check for use of features that are not supported for decomposition, such as substitution groups and `xsi:type`.

If the annotated XML schema requires correction, it must be registered again in the XML schema repository (XSR) and enabled for decomposition.

sqlcode: -16269

sqlstate: 225D5

SQL16270N Element "*namespace:elementname*" at or near line "*lineno*" in document "*docid*" is not valid in the context where it was found.

Explanation: The location with respect to the root element in the XML document of the element *namespace:elementname* at or near line *lineno* in document *docid* does not correspond to its position relative to the root as specified in the annotated XML schema used for decomposition or the element might be unreachable because it violates the cardinality specified in the annotated XML Schema.

The XML document *docid* was not decomposed.

User response: Check that the XML document *docid* is consistent with the annotated XML schema you are using for decomposition. One method of checking is to run XML decomposition again with validation turned on to ensure that document is valid.

If the annotated XML schema requires correction, it must be registered again in the XML schema repository (XSR) and enabled for decomposition.

sqlcode: -16270

sqlstate: 225D5

SQL16271N Unknown attribute "*namespace:attributename*" at or near line "*lineno*" in document "*docid*".

Explanation: The specified attribute encountered in the document is not found in the annotated XML schema you are using for decomposition.

The XML document *docid* was not decomposed.

User response: Check that the XML document is consistent with the annotated XML schema you are using for decomposition. One method of checking is to

run XML decomposition again with validation turned on to ensure that document is valid.

If the annotated XML schema requires correction, it must be registered again in the XML schema repository (XSR) and enabled for decomposition.

sqlcode: -16271

sqlstate: 225D5

SQL16272N Annotated XML schema requires migration from version *xdbversion* to the current version.

Explanation: The generated meta data for the annotated XML schema is from version *xdbversion* which is not valid for the current version of DB2. Decomposition cannot be performed for XML documents using this annotated XML schema until it has been migrated to the current version.

Decomposition of the XML document was not started.

User response: Run `db2xdbmig` to migrate the meta data to the current version and then try the decomposition operation again.

sqlcode: -16272

sqlstate: 225D6

SQL16273N For the XML document, *docid*, the XML schema identifier *xml-schema-id* contains no valid mappings for root element *namespace:element-name* or its descendants.

Explanation: Possible reasons for this error condition include:

1. The root element *namespace:element-name* has a mapping to a rowSet and column, but is of simpleType. In this case, decomposition of a document containing only the root element is trivial and using annotated XML schema decomposition is not necessary.
2. Some mappings for the root element *namespace:element-name* and its descendants specified an incorrect locationPath.
3. None of the element or attribute declarations for the root element *namespace:element-name* and its descendants have annotations.

The XML document *docid* was not decomposed.

User response: Check the annotations in the registered XML schema for the possible errors indicated in this message's Explanation. Additionally, check that the mapped items, as reflected by the data in the column `MAPPINGDESCRIPTION` of the view `SYSCAT.XDBMAPSHREDTREES` for the row corresponding to *xml-schema-id*, are as intended. Correct any erroneous annotations, register the XML schema again, and try decomposing the document again.

sqlcode: -16273

sqlstate: 225D7

SQL16274N An SQL error occurred while preparing to insert data for rowset *rowsetname*. Information returned for the error includes SQLCODE *sqlcode*, SQLSTATE *sqlstate*, and message tokens *token-list*.

Explanation: An SQL error occurred preparing to perform the operation on the table or nickname associated with the specified rowset *rowsetname* based on the annotated XML schema. Some possible causes are:

- The syntax of a db2-xdb:expression or a db2-xdb:condition specified for the rowset is not a valid SQL expression or predicate.
- A declared parameter for an SQL function or user-defined function invoked in an expression or predicate is incompatible with the type of the argument passed to the function.

The sqlcode, sqlstate and message token list (each token is separated by the vertical bar character) are provided. The message tokens may be truncated. See the corresponding message for the *sqlcode* for further explanation of the error.

Decomposition of the XML document was not started.

User response: Check the message associated with the SQLCODE. Follow the action suggested by that message. See the db2diag log file for complete information about the error condition.

sqlcode: -16274

sqlstate: 225D2

SQL16275N A name starting with *string* is not a valid QName. It was intended as a QName for *structure-type*.

Explanation: During parsing of an XML document or XML schema for a QName, a string starting with *string* was encountered that is not a valid QName. It may have started with an invalid character or contained invalid characters for a QName.

Parsing or validation did not complete.

User response: Correct the invalid QName in the XML document or XML schema and try the operation again.

sqlcode: -16275

sqlstate: 2200M

SQL16276N The number of tables and nicknames that are mapped in the annotated XML schema exceeds the limit of *maxtables*.

Explanation: The total number of distinct tables or nicknames referenced in <db2-xdb:table> and db2-xdb:rowSet (where this refers to an actual database table or nickname, rather than a rowSet) annotations in the entire XML schema exceeds the maximum number *maxtables*.

The XML schema is not enabled for decomposition.

User response: Reduce the number of distinct tables and nicknames referenced in these annotations to not more than *maxtables*.

sqlcode: -16276

sqlstate: 225DE

SQL16277N The global annotation *string* appears more than once in the XML Schema. Another occurrence of this annotation appears at or near line *lineno* in xml schema document *uri*.

Explanation: An annotated XML schema can contain at most one occurrence of the annotation *string*.

User response: Combine the contents of the multiple *string* annotations into a single annotation, and ensure that the resulting annotation does not contain any duplicate information.

sqlcode: -16277

sqlstate: 225DE

SQL16278W One or more documents could not be decomposed. The number of documents successfully decomposed was *number-successful*. The number of documents attempted was *number-attempted*.

Explanation: Error conditions prevented one or more documents from being decomposed. For more details on the status of each document, refer to the result_report output parameter.

User response: To decompose the XML documents that were not successfully decomposed:

1. Review the error message information in the result_report output parameter. If necessary, see the db2diag log file for more details about each error. The pertinent entries in the db2diag log file are identified by the document ID.
2. Correct the errors described in the result_report parameter.
3. Rerun the decompose procedure as follows:

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- If you specified a positive `commit_count` value, resubmit the procedure only for the documents that were not successfully decomposed.
 - If you specified a `commit_count` value of 0, use one of the following options:
 - Perform a rollback, and then invoke the procedure for all the documents.
 - Commit the changes, and then invoke the procedure only for the documents that were not successfully decomposed.
4. See the `db2diag` log file for more details about the error if the warning was returned by the `EVMON_FORMAT_UE_TO_TABLES` procedure. The `RESULTREPORT` has been dumped to file "`db2EvmonErrReport_applid.xml`" in the `sqllib/db2dump/evmon` directory. Correct the problems described in the `RESULTREPORT` and try to decompose the document again.

sqlcode: +16278

sqlstate: 01H53

SQL16280N The XSLT processor returned the following error: *error-message*.

Explanation: The XSLT processor returned the error text *error-message* because it cannot transform the XML document. There may be a problem with the XML document itself, with the associated stylesheet document, or with the parameter document.

The statement cannot be processed.

If the error text of *error-message* appears to be truncated and you need to see the rest of the message, set the database manager configuration parameter, `diaglevel`, to 4 using, `db2 update dbm cfg using diaglevel 4`, prior to reissuing the `XSLTRANSFORM` function. Then consult the `db2diag` log file for message `DIA11500E` to find the complete error message.

User response: Examine your input documents as indicated by the error text of *error-message*. Correct the problem and resubmit the statement that invoked the XSLT processor.

sqlcode: -16280

sqlstate: 225X0

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SQL20005N The internal identifier limit of *limit* has been exceeded for object type *object-type*.

Explanation: An internal identifier uniquely identifies objects of type *object-type*. The limit for internal identifiers for this type of object has been exceeded. This can happen during a CREATE DISTINCT TYPE, CREATE TYPE, DECLARE TYPE, CREATE FUNCTION, CREATE PROCEDURE, CREATE ROLE, CREATE SEQUENCE, or CREATE VARIABLE statement, or an ALTER TABLE or CREATE TABLE statement that defines an identity column. This can happen during a CREATE INDEX when the maximum number of indexes on a table has been exceeded.

The statement cannot be processed.

User response: Drop objects of type *object-type* that are no longer being used. If *object-type* is DECLARE TYPE, remove the type declarations within the current compound SQL (compiled) statement for any types that are not being used.

sqlcode: -20005

sqlstate: 54035

SQL20010N Mutation method *method-ID* is not allowed when the instance of the structured type is NULL.

Explanation: The method *method-ID* is a mutator method that is specified with an instance of a structured type that is null. Mutator methods cannot be processed on a null instance. In some cases, the method name is not available.

The statement cannot be processed.

User response: Determine the null instance that is used with a mutator method. Use a constructor function to create a non-null instance of the structured type before using any mutator methods on the instance.

To determine the method name associated with the *method-ID*, use the following query:

```
SELECT FUNCHEMA, FUNCNAME,  
       SPECIFICNAME  
FROM SYSCAT.FUNCTIONS  
WHERE  
       FUNCID = INTEGER(  
           method-ID  
       )
```

sqlcode: -20010

sqlstate: 2202D

SQL20011N Transform group *group-name* is already defined for a subtype or supertype of data type *type-name*.

Explanation: A transform group called *group-name* already exists for a type in the same hierarchy as *type-name*. It may be defined for a supertype or subtype of *type-name*. A transform group name can only be used once within a structured type hierarchy.

The statement cannot be processed.

User response: Change the name of the transform group.

sqlcode: -20011

sqlstate: 42739

SQL20012N Type *type-name* does not have any associated transform groups to drop.

Explanation: There are no transforms defined for *type-name*. There is nothing to drop.

The statement did not drop any transform groups.

User response: Ensure the name of the type (including any required qualifiers) is correctly specified in the SQL statement and that the type exists.

sqlcode: -20012

sqlstate: 42740

SQL20013N The object *super-object-name* is not valid as a supertype, supertable, or superview of object *sub-object-name*.

Explanation: If the statement resulting in the error is creating a type, then *super-object-name* is a type that cannot be a supertype of *sub-object-name* because it is not a user-defined structured type.

If the statement resulting in the error is creating a table, then *super-object-name* is a table that cannot be a supertable of table *sub-object-name* because it is not defined as a typed table or the type of table *super-object-name* is not the direct supertype of the type used in defining table *sub-object-name*.

If the statement resulting in the error is creating a view, then *super-object-name* is a view that cannot be a superview of view *sub-object-name* because it is not defined as a typed view or the type of view *super-object-name* is not the direct supertype of the type used in defining view *sub-object-name*.

The statement cannot be processed.

User response: Specify a valid type, table, or view in

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the UNDER clause of the CREATE statement.

sqlcode: -20013

sqlstate: 428DB

SQL20014N The transform group *group-name* *transform-type* transform function for type *type-name* is not valid. Reason code = *reason-code*.

Explanation: The *transform-type* transform function in transform group *group-name* is not valid. The reason is based on the *reason-code* as follows.

- 1 There can only be one parameter for a FROM SQL transform function.
- 2 The parameter of a FROM SQL transform function must be of type *type-name*.
- 3 The RETURNS data type of a TO SQL transform function must be of type *type-name*.
- 4 The RETURNS type of a FROM SQL transform function that returns a scalar must be a built-in data type other than DECIMAL.
- 5 All of the RETURNS types of a FROM SQL transform function that returns a scalar must be built-in data types other than DECIMAL.
- 6 There must be at least one parameter for a TO SQL transform function.
- 7 The parameter types for a TO SQL transform function must all be built-in data types other than DECIMAL.
- 8 The TO SQL transform function must be a scalar function.
- 9 The FROM SQL transform function must be written using LANGUAGE SQL, or must use another FROM SQL transform function that is written using LANGUAGE SQL.
- 10 The TO SQL transform function must be written using LANGUAGE SQL or use a TO SQL transform function that is written using LANGUAGE SQL.

The statement cannot be processed.

User response:

- 1 Specify a FROM SQL transform function with a signature that has only one parameter.
- 2 Specify a FROM SQL transform function where the type of the parameter is the same as *type-name*.
- 3 Specify a TO SQL transform function where the RETURNS type is the same as *type-name*.
- 4 Specify a FROM SQL transform function with a RETURNS type that is a built-in data type other than DECIMAL.

- 5 Specify a FROM SQL transform function where each element of the row has a RETURNS type that is a built-in data type other than DECIMAL.
- 6 Specify a TO SQL transform function with a signature that has at least one parameter.
- 7 Specify a TO SQL transform function where all the parameter types are built-in data types other than DECIMAL.
- 8 Specify a TO SQL transform function that is a scalar function.
- 9 Specify a FROM SQL transform function that is written using LANGUAGE SQL, or that uses another FROM SQL transform function that is written using LANGUAGE SQL.
- 10 Specify a TO SQL transform function that is written using LANGUAGE SQL or that uses a TO SQL transform function that is written using LANGUAGE SQL.

sqlcode: -20014

sqlstate: 428DC

SQL20015N A transform group *group-name* is not defined for data type *type-name*.

Explanation: A specified transform group *group-name* is not defined for the data type *type-name*. The data type *type-name* may have been explicitly specified in the statement or may be implicit based on the use of a structured type that requires the existence of the transform group for the data type.

If *group-name* is empty, either the TRANSFORM GROUP bind option or the CURRENT DEFAULT TRANSFORM GROUP special register was not specified and therefore there was no transform for *type-name*.

The statement cannot be processed.

User response: Define transform group *transform-type* for data type *type-name* using the CREATE TRANSFORM statement. If the error occurred when dropping the transform, no action is required because the transform group did not exist for the data type.

If *group-name* is empty, specify the TRANSFORM GROUP bind option on the CURRENT DEFAULT TRANSFORM GROUP special register.

sqlcode: -20015

sqlstate: 42741

SQL20016N The value of the inline length associated with type or column *type-or-column-name* is too small.

Explanation: For the definition of structured type *type-or-column-name*, it has an INLINE LENGTH value specified that is smaller than the size returned by the constructor function (32 + 10 * number_of_attributes) for the type and is less than 292. For the altering of column *type-or-column-name*, the INLINE LENGTH specified is smaller than the current inline length.

The statement cannot be processed.

User response: Specify an INLINE LENGTH value that is large enough. For a structured type, that is at least the size returned by the constructor function for the type or is at least 292. For a column, it must be larger than the current inline length. If this error occurs when altering the type (or some supertype of this type) to add an attribute, either the attribute cannot be added or the type must be dropped and re-created with a larger INLINE LENGTH value.

sqlcode: -20016

sqlstate: 429B2

SQL20017N Addition of this subtype exceeds the maximum number of levels of a type hierarchy.

Explanation: The maximum number of levels in a type hierarchy is 99. Adding this type would exceed the maximum.

The statement cannot be processed.

User response: Do not add any more subtypes to this type hierarchy.

sqlcode: -20017

sqlstate: 54045

SQL20018N Row function *function-name* must return at most one row.

Explanation: The function is defined to return a single row. The result of the processing the function is more than one row.

User response: Ensure that the function is defined in such a way that at most one row is returned.

sqlcode: -20018

sqlstate: 21505

SQL20019N The result type returned from the function body cannot be assigned to the data type defined in the RETURNS clause.

Explanation: The data type of each column returned by the function body must be assignable to the

corresponding column specified in the RETURNS clause.

If the function is a scalar function, there is only one column.

User response: Change the RETURNS type or the type returned from the function body so that the data types of corresponding columns are assignable.

sqlcode: -20019

sqlstate: 42866

SQL20020N Operation *operation-type* is not valid for typed tables.

Explanation: The operation identified by *operation-type* cannot be performed on a typed table.

The statement cannot be processed.

User response: Remove the ADD COLUMN clause, ADD PERIOD clause, or SET DATATYPE clause from the ALTER statement. Columns can only be added by re-defining the table with a structured type that includes the new column as an attribute. Similarly, the data type of a column can only be changed by re-defining the table with a type that includes the column with a different data type.

sqlcode: -20020

sqlstate: 428DH

SQL20021N Inherited column or attribute *name* cannot be changed or dropped.

Explanation: The value of *name* identifies either a column name or an attribute name (depending on the statement context) that is inherited from a typed table, typed view, or structured type above it in the table, view, or type hierarchy.

- In the CREATE TABLE statement, the WITH OPTIONS clause cannot be specified for column *name* in the CREATE TABLE statement because it is inherited from a supertable in the table hierarchy.
- In the ALTER TABLE statement, the SET SCOPE clause or COMPRESS clause cannot be specified for column *name* because it is inherited from a supertable in the table hierarchy.
- In the CREATE VIEW statement, the WITH OPTIONS clause cannot be specified for column *name* in the CREATE VIEW statement because it is inherited from a superview in the view hierarchy.
- In the ALTER TYPE statement, the DROP ATTRIBUTE clause cannot be specified for attribute *name* because it is inherited from a supertype in the type hierarchy.

The statement cannot be processed.

User response: The options for a column may only be set or altered for the table or view in the typed table

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hierarchy or typed view hierarchy where the column is introduced. An attribute can only be dropped from the data type in the type hierarchy where the attribute was introduced.

sqlcode: -20021

sqlstate: 428DJ

SQL20022N The scope for the reference column *column-name* is already defined.

Explanation: The scope for the reference column *column-name* cannot be added because it is already defined.

The statement cannot be processed.

User response: Remove the ADD SCOPE clause from the ALTER TABLE statement.

sqlcode: -20022

sqlstate: 428DK

SQL20023N Parameter *parm-number* of the external or sourced function has a scope defined.

Explanation: A reference type parameter should not have a scope defined when used with external or sourced user defined functions.

The statement cannot be processed.

User response: Remove the SCOPE specification from the definition of the parameter.

sqlcode: -20023

sqlstate: 428DL

SQL20024N The scope table or view *target-name* is not defined with structured type *type-name*.

Explanation: The scope table or view *target-name* is not valid for use as the scope of this reference because it is:

- not a typed table or
- not a typed view or
- the type of the table or view is not the same as the target type of the REF type.

The statement cannot be processed.

User response: Specify the scope of the reference using a typed table or typed view with the same type as the target type of the REF type.

sqlcode: -20024

sqlstate: 428DM

SQL20025N SCOPE is not specified in the RETURNS clause of an external function or is specified in the RETURNS clause of a sourced function.

Explanation: There are two possible causes:

- A reference type must have a scope defined when used as the result of a user-defined external function.
- A reference type cannot have a scope defined when used as the result of an user-defined sourced function. The function will use the scope of the source function.

The statement cannot be processed.

User response: When defining an external function with a reference type as a returns type, ensure that the SCOPE clause is specified. When defining SOURCED function with a reference type as a returns type, ensure that the SCOPE clause is not specified.

sqlcode: -20025

sqlstate: 428DN

SQL20026N The type *type-name* is not a structured type or is not an instantiable structured type.

Explanation: The statement requires a structured type that can be instantiated. The type *type-name* is either:

- not a structured type; or
- a structured type that is defined as not instantiable.

The statement cannot be processed.

User response: Verify that the correct type name is used in the statement.

sqlcode: -20026

sqlstate: 428DP

SQL20027N The subtable or subview *sub-object-name* was not created because subtable or subview *object-name* with type *type-name* already exists.

Explanation: Within a typed table or view hierarchy, only one subtable or subview may exist of a particular subtype. The table or view *sub-object-name* cannot be created since there is already a table or view of type *type-name* defined. The table or view that already exists is *object-name*.

The statement cannot be processed.

User response: Verify that the subtable or subview is being created with the correct type and that the subtable is being created under the correct supertable or the subview is being created under the correct superview.

sqlcode: -20027

sqlstate: 42742

SQL20028N The table or view *table-name* cannot have a different schema name from the other tables or views in the same hierarchy.

Explanation: All tables in a typed table hierarchy must have the same schema name and all views in a typed view hierarchy must have the same schema name.

The statement cannot be processed.

User response: Verify that the schema name of the table or view is correct. If a hierarchy name is specified, verify that its schema name matches the schema name of the root table or view. If a subtable is being created, verify that it is being created under the correct supertable. If a subview is being created, verify that it is being created under the correct superview.

sqlcode: -20028

sqlstate: 428DQ

SQL20029N *operation* cannot be applied to a subtable or subview.

Explanation: The operation *operation* was applied to a table or view that is not the root of a table hierarchy or view hierarchy.

The statement cannot be processed.

User response: Specify the root table of the table hierarchy or root view of the view hierarchy in the operation.

sqlcode: -20029

sqlstate: 428DR

SQL20030N Attributes of a structured type *type-name* cannot be added or dropped when a typed table, typed view, or index extension *object-name* is dependent on the type.

Explanation: The attributes of a structured type cannot be added or dropped if a typed table or typed view of the structured type or any of its subtypes currently exists. Attributes of a structured type also cannot be added or dropped when a column exists in the table that directly or indirectly uses *type-name*. Also, attributes of a structured type cannot be added or dropped when the type *type-name* or one of its subtypes is used in an index extension. The table, view, or index extension *object-name* is one table, view, or index extension that is dependent on the structured type *type-name*. There may be other tables, views, or index extensions that are dependent on the type or one of its proper subtypes.

The statement cannot be processed.

User response: Verify that the right type is being altered or drop any tables, views, and index extensions that are dependent on the structured type *type-name*.

sqlcode: -20030

sqlstate: 55043

SQL20031N *Object* may not be defined on a subtable.

Explanation: Primary key and unique constraints can only be defined on the root table of a typed table hierarchy. Similarly, unique indexes can only be defined on the root table of a typed table hierarchy.

The statement cannot be processed.

User response: Unique indexes, Primary key or unique constraints can only be defined on the root table of a table hierarchy.

sqlcode: -20031

sqlstate: 429B3

SQL20032N Index on the specified columns cannot be defined on subtable *table-name*.

Explanation: The columns specified for the index were all introduced at a higher level in the typed table hierarchy than subtable *table-name*. Therefore, the index cannot be created on this subtable.

The statement cannot be processed.

User response: Determine the table in the table hierarchy where all of the columns are included for the first time. Use this as the table name when creating the index.

sqlcode: -20032

sqlstate: 428DS

SQL20033N An expression including *partial-expression* does not include a valid scoped reference.

Explanation: The expression that includes *partial-expression* requires an operand that is reference type with a scope defined. If the expression includes the Deref function, the argument of the function must be a reference type with a scope defined.

For the dereference operator (->), the left operand needs to be a reference type with a scope defined.

The statement cannot be processed.

User response: Correct the SQL statement syntax so the operand or argument is a reference type with a scope defined.

sqlcode: -20033

sqlstate: 428DT

SQL20034N The data type *list-type-name* is not included in a structured data type hierarchy that includes the data type *left-type-name* of the left operand of the TYPE predicate.

Explanation: All the data types listed in the TYPE predicate must be included in a data type hierarchy that includes the data type of the left operand of the TYPE predicate. The data type *left-type-name* is not a structured data type (not part of any type hierarchy) or the data type *list-type-name* is not included in the data type hierarchy that includes *left-type-name*.

The statement cannot be processed.

User response: Ensure that the data type of the expression and all listed data types in the TYPE predicate are structured data types within the same data type hierarchy. If *left-type-name* is SYSIBM.REFERENCE, use Deref to make the result data type of the expression a structured data type.

sqlcode: -20034

sqlstate: 428DU

SQL20035N Invalid left operand of a dereference operator. Path expression starts with *expression-string*.

Explanation: The left operand of the dereference operator in a path expression is not valid. Possible causes are:

- The left operand includes a column function that uses a column function as an argument.
- The left operand expression includes a column function and a reference to a column that is not in the GROUP BY clause.

User response: Correct the left operand of the dereference operator for the path expression that starts with *expression-string*.

sqlcode: -20035

sqlstate: 428DV

SQL20036N The object identifier column *column-name* cannot be referenced using the dereference operator.

Explanation: The dereference operator is used with *column-name* as the right operand. This column is the object identifier column of the target table of the dereference and is not valid for this operator.

The statement cannot be processed.

User response: Correct the name of the column in the dereference operation.

sqlcode: -20036

sqlstate: 428DW

SQL20037N Object identifier column is required to create the root table or root view *object-name* of a typed table or view hierarchy.

Explanation: When creating the root table of a typed table hierarchy, an object identifier (OID) column must be defined (using the REF IS clause) on the CREATE TABLE statement.

When creating the root view of a typed view hierarchy, an object identifier (OID) column must be defined (using the REF IS clause) on the CREATE VIEW statement.

The statement cannot be processed.

User response: Add the required OID column (REF IS clause) to the CREATE TABLE or CREATE VIEW statement.

sqlcode: -20037

sqlstate: 428DX

SQL20038N The *keywords* clause cannot be specified with the EXTEND USING clause.

Explanation: The EXTEND USING clause in the CREATE INDEX statement cannot be specified with the *keywords* clause.

The statement cannot be processed.

User response: Remove the specification of *keywords* clause or the EXTEND USING clause from the CREATE INDEX statement.

sqlcode: -20038

sqlstate: 42613

SQL20039N The definition of index *index-name* does not match the definition of index extension *index-ext-name*.

Explanation: The index definition and the index extension definition do not match. The following lists the possibilities for where the definitions do not match.

- The number of arguments following the index extension name in the EXTEND USING clause is not the same as the number of instance parameters of the index extension.
- The data types of the arguments following the index extension name in the EXTEND USING clause do not match exactly (including length or precision and scale) the data types of the corresponding instance parameters of the index extension.
- The number of columns specified for the index is not same as the number of source key parameters of the index extension.
- The data types of the index columns do not match exactly (including length or precision and scale) the data types of the corresponding source key

parameters of the index extension. There is an exception to exact matching of data types for the case of subtypes. The column of the index may be a subtype of the data type specified as the corresponding source key parameter.

The statement cannot be processed.

User response: Change the index definition so that the index extension matches.

sqlcode: -20039

sqlstate: 428E0

SQL20040N Number or type of the result of the range-producing table function *range-function-name*, is inconsistent with that of key transformation table function *transform-function-name* for index extension *index-ext-name*.

Explanation: The range-producing function must:

- return up to twice as many columns as returned by the key transformation function
- have an even number of columns (the first half of the return columns are the start key values and the second half of the return columns are the stop key values)
- have the each start key column with the same type as the corresponding stop key column
- have the type of each start key column be the same as the corresponding transformation function column.

More precisely, let $a_1:t_{1,\dots}, a_n:t_n$ be the function result columns and data types of the key transformation function. The function result columns of the range-producing function must be $b_1:t_{1,\dots}, b_m:t_m, c_1:t_{1,\dots}, c_m:t_m$, where $m \leq n$ and the "b" columns are the start key columns and the "c" columns are the stop key columns.

The statement cannot be processed.

User response: Specify a range-producing table function that is consistent with the key transformation table function.

sqlcode: -20040

sqlstate: 428E1

SQL20041N Number or the type of target key parameters does not match with the number or type of key transform function *function-name* for index extension *index-ext-name*.

Explanation: The number of target key parameters has to match with the number of results returned by the key transform function. In addition, the type of the

target key parameters must exactly match the corresponding function result types.

The statement cannot be processed.

User response: Specify the correct number and type of parameters as the target key parameters.

sqlcode: -20041

sqlstate: 428E2

SQL20042N The maximum allowable *parm-type* parameters is exceeded in index extension *index-ext-name*. The maximum is *max-value*.

Explanation: Too many parameters were specified. If *parm-type* is INDEX EXTENSION, then up to *max-value* instance parameters may be specified. If *parm-type* is INDEX KEYS, then up to *max-value* key source parameters may be specified.

The statement cannot be processed.

User response: Specify no more than the maximum number of parameters.

sqlcode: -20042

sqlstate: 54046

SQL20043N Argument for routine *routine-name* is not valid. Reason code = *reason-code*.

Explanation: The routine *routine-name* could be the transformation function, the range-producing function, or a routine (function or method) referenced in the FILTER USING clause. The reason code indicates why an argument is not valid:

- 1 For a key transformation function, the argument is not an observer method or an index extension instance parameter.
- 2 The expression used as the argument uses a routine that specifies LANGUAGE SQL.
- 3 The expression used as the argument is a subquery.
- 4 The data type of an expression used as the argument cannot be a structured type.
- 5 The argument of a key transformation function cannot have a data type of structured data type, LOB, DATALINK, XML, LONG VARCHAR, or LONG VARGRAPHIC.
- 6 The expression used as an argument contains an XMLQUERY or XMLEXISTS expression.

The statement cannot be processed.

User response: Specify a valid argument for the function.

sqlcode: -20043

sqlstate: 428E3

SQL20044N The routine *routine-name* or the CASE expression is not valid in a CREATE INDEX EXTENSION or CREATE FUNCTION statement. Reason code = *reason-code*.

Explanation: A routine (function or method) *routine-name* used in the CREATE INDEX EXTENSION or CREATE FUNCTION statement is not valid where it is used. If *routine-name* is empty, then the CASE expression used for filtering is not valid. The reason code indicates the reason.

- 1 The key transformation function is not a table function.
- 2 The key transformation function is not an external function.
- 3 The key transformation function is a variant function.
- 4 The key transformation function is an external action function.
- 5 The range-producing function is not a table function.
- 6 The range-producing function is not an external function.
- 7 The range-producing function is a variant function.
- 8 The range-producing function is an external action function.
- 9 The index-filter function is not an external function.
- 10 The index-filter function is a variant function.
- 11 The index-filter function is an external action function.
- 12 The result type of a filter function or CASE expression is not an integer data type.
- 13 A subquery is used in a CASE expression or as an argument of a filter function.
- 14 The key transformation function does not have the same encoding scheme as the database.
- 15 The range-producing function does not have the same encoding scheme as the database.
- 16 The index-filter function does not have the same encoding scheme as the database.
- 17 The filter function is not an external function.
- 20 An XMLQUERY or XMLEXISTS is used in a CASE expression or as an argument of a filter function.

The statement cannot be processed.

User response: If *routine-name* is not empty, specify a routine that conforms to the rules for a function or method specified in the specific clause of the CREATE INDEX EXTENSION or CREATE FUNCTION statement. Otherwise, specify a CASE expression that conforms to the rules for a CASE expression in the FILTER USING clause.

sqlcode: -20044

sqlstate: 428E4

SQL20045N The data type of instance parameter *parameter-name* is invalid in index extension *index-ext-name*.

Explanation: An instance parameter must be one of the following data types: VARCHAR, VARGRAPHIC, INTEGER, DECIMAL, or DOUBLE.

The statement cannot be processed.

User response: Specify a valid data type for the instance parameter *parameter-name*.

sqlcode: -20045

sqlstate: 429B5

SQL20046N SELECTIVITY clause following *predicate-string* can only be specified for a valid user-defined predicate.

Explanation: The SELECTIVITY clause is specified with a predicate that does not include a valid user-defined function. A valid user-defined function includes a PREDICATES clause with a WHEN clause that matches the predicate. The SELECTIVITY clause cannot be specified except with a user-defined predicate.

The statement cannot be processed.

User response: Remove the SELECTIVITY clause following the predicate.

sqlcode: -20046

sqlstate: 428E5

SQL20047N The search method *method-name* is not found in the index extension *index-ext-name*.

Explanation: The method *method-name* referenced in an exploitation rule of the user-defined predicate has to match one of the search methods specified in the index extension *index-ext-name*.

The statement cannot be processed.

User response: Specify a method defined in the index extension.

sqlcode: -20047

sqlstate: 42743

SQL20048N The search argument of method *method-name* does not match the one in the corresponding search method in the index extension *index-ext-name*.

Explanation: The search argument provided for method *method-name* does not match the argument of the corresponding search method in the index extension *index-ext-name*. Either the number of arguments or the type of the arguments do not match the defined number or type of the parameters.

The statement cannot be processed.

User response: Specify a search argument that matches the parameters defined in the index extension.

sqlcode: -20048

sqlstate: 428E6

SQL20049N Type of an operand following the comparison operator in the AS PREDICATE WHEN clause does not exactly match the RETURNS type.

Explanation: The definition of the user-defined predicate is not valid. In the AS PREDICATE WHEN clause, the type of the operand following the the comparison operator is not an exact match with the RETURNS type of the function.

The statement cannot be processed.

User response: Specify an the operand with the correct data type.

sqlcode: -20049

sqlstate: 428E7

SQL20050N The search target or search argument *parameter-name* does not match a name in the function being created.

Explanation: Each search target in an index exploitation rule has to match some parameter name of the function that is being created. Each search argument in an index exploitation rule must match either an expression name in the EXPRESSION AS clause or a parameter name of the function being created. Parameter names must be specified in the parameter list for the function.

The statement cannot be processed.

User response: Specify only valid names of the function in the search target or search argument.

sqlcode: -20050

sqlstate: 428E8

SQL20051N The argument *parameter-name* cannot appear as both a search target and a search argument in the same exploitation rule.

Explanation: In the exploitation clause, a function parameter cannot be specified as an argument following KEY and as an argument of the method specified following the USE keyword.

The statement cannot be processed.

User response: Specify a parameter name of the function in no more than on of the search target or the search argument.

sqlcode: -20051

sqlstate: 428E9

SQL20052N Column *column-name* is an object identifier column which cannot be updated.

Explanation: The UPDATE statement includes setting a column that is an object identifier (OID) column. An OID column cannot be updated.

The statement cannot be processed.

User response: Remove the SET of *column-name* from the UPDATE statement.

sqlcode: -20052

sqlstate: 428DZ

SQL20053N Fullselect in typed view *view-name* is not valid. Reason code = *reason-code*.

Explanation: The fullselect specified in the definition of typed view *view-name* does not conform to the rules for the fullselect of a typed view. Possible reason codes follow.

- 1 A subview definition contains a common table expression, OR a branch in a subview definition does not range over a single table, view, nickname or an alias.
- 2 The row-set of a branch over a table-hierarchy cannot be proven by the database manager to be distinct from the row-set of all branches over the same table-hierarchy in the rest of the typed view hierarchy.
- 3 The first expression of a branch over a hierarchy in the root view is:
 - not the object identifier column of the typed table or typed view referenced in the FROM clause and the UNCHECKED option in the REF IS clause is not used OR
 - if the table in the FROM clause is not typed, the column is nullable or does not have a

- unique index defined on only that column and the UNCHECKED option in the REF IS clause is not used OR
- not identical to the expression in the branch over the same hierarchy in the subview.
- 4 A table or view over which a branch of a subview ranges is not a subtable or subview of the table or view referenced in any branch of the superview and either the subview uses EXTEND AS or the root view does not have the UNCHECKED option in the REF IS clause turned on.
- 5 The fullselect includes references to the NODENUMBER or PARTITION functions, non-deterministic functions, or functions defined to have external action.
- 6 A branch in a subview cannot range over an OUTER table or view if any branch in its superview ranges over a table or view in the same hierarchy without using OUTER.
- 7 A subview ranges over a view in its own view hierarchy.
- 8 A subview uses a set operation other than UNION ALL in its definition OR UNION ALL is used in the definition without specifying the UNCHECKED option in the REF IS clause of the root view.
- 9 A subview contains two branches of a UNION ALL that range over the same table hierarchy or view hierarchy.
- 10 The subview definition contains a GROUP BY or HAVING clause.
- User response:** Change the fullselect of the view definition based on the *reason-code*.
- 1 Use only one table or view in the FROM clause. Encapsulate complex selects into views that the typed view can range over using the UNCHECKED option of the root view's REF IS clause.
- 2 Specify a different table or view in the FROM clause of each branch that is not the same as one already used in the view hierarchy or use a predicates that clearly define the row-set for each branch as distinct compared to the row-sets for other branches in the typed view hierarchy.
- 3 Ensure that the first column of the root view conforms to the rules to be a valid object identifier column for the typed view. Consider using the UNCHECKED option in the ref is clause.
- 4 Specify a subtable or subview of the table or view specified in the FROM clause of a branch of the superview. Or use the UNCHECKED option in the root view definition in conjunction with the AS (without EXTEND) clause in the subview definition.
- 5 Remove the reference to the function from the fullselect.
- 6 If this is the first subview to use OUTER in a branch over this hierarchy, change the FROM clause so that OUTER is not used. If the superview uses OUTER, include OUTER in the FROM clause of the subview.
- 7 Do not source a subview on other views in the same hierarchy.
- 8 If UNION ALL was used, use the UNCHECKED option in the REF IS clause of the rootview to allow multiple branches in the subview definition. For other set operations encapsulate the set operation into a view and use the UNCHECKED option in the subview to allow sourcing on common views.
- 9 Unify the branches to a select over their common supertable or superview and use predicates (e.g. the type predicate) to filter for the desired rows.
- 10 Encapsulate the GROUP BY and HAVING clause into a view and use the UNCHECKED option in the root view to allow sourcing on common views.
- sqlcode:** -20053
- sqlstate:** 428EA
-
- SQL20054N** The table *table-name* is in an invalid state for the operation. Reason code=*reason-code*.
- Explanation:** The table is in a state that does not allow the operation. The *reason-code* indicates the state of the table that prevents the operation.
- 21 The table is in Datalink Reconcile Pending (DRP) state or Datalink Reconcile Not Possible (DRNP) state.
- 22 The generated column expression cannot be added or altered because the table is not in check pending mode.
- 23 The maximum number of REORG-recommended alters have been performed. Up to three REORG-recommended operations are allowed on a table before a reorg must be performed, to update the tables rows to match the current schema.

- 24 Executing an ALTER TABLE statement with the ADD COLUMN clause on a LOB or LONG column is not allowed in the same unit of work as an ALTER TABLE statement with the DROP COLUMN clause on the last LOB or LONG column in the table.
- In addition, on DB2 database servers Version 9.7 and later, executing an ALTER TABLE statement with the ADD COLUMN clause on an XML column is not allowed in the same unit of work as an ALTER TABLE statement with the DROP COLUMN clause on the last XML column in the table.
- 25 The table is in check pending state.
- 26 Executing the ALTER TABLE ... ATTACH PARTITION or the ALTER TABLE ... DETACH PARTITION statement on a table whose database partition group is currently being redistributed is not allowed.
- 27 The alter table or copy schema operation called an internal procedure to manage database objects. The SYSTOOLS.DB2LOOK_INFO table used by the procedure is not in a valid state for the alter or copy operation. The SYSTOOLS.DB2LOOK_INFO table could be an older version, or totally different from what the procedure expects.
- 29 The operation that empties or truncates a table is not allowed because the table has a partition in one of the following three states:
1. Attached that has not yet been checked for integrity (SYSCAT.DATAPARTITIONS.STATUS = 'A').
 2. Detached partitions and there are dependent tables that need to be incrementally maintained with respect to these detached partitions (SYSCAT.DATAPARTITIONS.STATUS = 'D').
 3. Detached partitions pending index cleanup (SYSCAT.DATAPARTITIONS.STATUS = 'I').
- 30 A LOAD operation cannot be restarted when the following three things are true:
1. The LOAD operation failed in the BUILD, DELETE or INDEX COPY PHASE
 2. The target table contains an XML column
 3. Either one of the following is also true:
 - The table contains a unique index defined on an XML column
 - ALLOW READ ACCESS was specified with the original LOAD command
 - COPY YES was specified
- 43 The partitioned table has detached dependent tables and cannot support the creation of partitioned indexes.
- 44 The table is a source table for an attach partition operation of an ALTER TABLE statement and the table has a deferred index cleanup operation in progress as the result of an MDC rollout. Since MDC rollout using the deferred index cleanup mechanism is not supported for partitioned indexes, the attach operation will not be allowed if there are any RID indexes on the source table that will be kept during the attach operation, not rebuilt, and are pending asynchronous index cleanup of the rolled-out blocks.
- The statement cannot be processed.
- User response:** The action is based on the reason code as follows.
- 21 Refer to the Administration Guide for information on Datalink Reconcile Pending (DRP) and Datalink Reconcile Not Possible (DRNP) states to take appropriate action.
- 22 Use SET INTEGRITY FOR *table-name* OFF before altering the table. Then alter the table and use SET INTEGRITY FOR *table-name* IMMEDIATE CHECKED FORCE GENERATED to generate the values for the new or altered column.
- 23 Reorg the table using the reorg table command.
- 24 Complete the unit of work that dropped the last LOB, LONG, or XML column, and re-issue the command.
- 25 The table must be taken out of check pending state SET INTEGRITY before the alter can be performed.

26

Wait for the REDISTRIBUTE DATABASE PARTITION GROUP command to complete and then reissue the ALTER TABLE statement.

27

Either rename or drop the SYSTOOLS.DB2LOOK_INFO table. The internal procedure will create the correct version of the SYSTOOS.DB2LOOK_INFO table. Resubmit the alter table or copy schema operation.

29

Depending on the state of the table partition which is blocking the operation, take the appropriate action and then issue the command again:

1. SYSCAT.DATAPARTITIONS.STATUS = 'A':
Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED or IMMEDIATE UNCHECKED option on the table with attached partitions
2. SYSCAT.DATAPARTITIONS.STATUS = 'D':
Execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option on the dependent immediate materialized query and staging tables of the tables that still need to be incrementally maintained with respect to the detached partitions. Query the SYSCAT.TABDETACHEDDEP catalog view to locate these detached dependent tables.
3. SYSCAT.DATAPARTITIONS.STATUS = 'I':
Wait until index cleanup for the detached partition is completed. Query the SYSIBM.SYSTASKS to determine progress.

30

Respond to reason code 30 by following these steps:

1. Change the state of the table from "Load in Progress" to "Normal" using the LOAD TERMINATE command.
2. Rerun the original LOAD command.

43

Use the SET INTEGRITY statement with the IMMEDIATE CHECKED option to maintain the dependent tables, then create the partitioned index.

44

Wait for the deferred index cleanup operation to complete on the source table, then reissue the ALTER TABLE statement to attach the partition. To monitor the progress of the rollout cleanup, use the LIST UTILITIES command.

sqlcode: -20054

sqlstate: 55019

SQL20055N A result column data type in the select list is not compatible with the defined data type for column *column-name*.

Explanation: The data type of the select list expression corresponding to *column-name* is not assignable to the data type for the attribute of the structured type.

User response: Examine the current definition for the table and the associated structured type. Ensure the select list expression data type for the specified column is data type that is assignable to the attribute of the structure type.

sqlcode: -20055

sqlstate: 42854

SQL20056N Processing on DB2 Data Links Manager *name* encountered an error. Reason code = *reason-code*.

Explanation: The processing on the DB2 Data Links Manager for the statement encountered an error as indicated by the following reason codes.

- | | |
|-----------|---|
| 01 | An inconsistency was detected between the data on the DB2 Data Links Manager and a DATALINK value in a table. |
| 02 | The DB2 Data Links Manager reached a resource limit during the processing. |
| 03 | The DB2 Data Links Manager does not support file pathnames longer than 128 characters. |
| 99 | The DB2 Data Links Manager encountered an internal processing error. |

The statement cannot be processed.

User response: The action is based on the reason code as follows.

- | | |
|-----------|---|
| 01 | Run the reconcile utility on the table. |
| 02 | The DB2 Data Links Manager administrator should identify the resource from the diagnostic logs and take corrective action. |
| 03 | You should ensure that the file pathname (excluding the file system prefix) to be stored in the DATALINK column does not exceed 128 characters. For example, in the URL "http://server.com/dlfiles/dir1/.../file1" -- assuming the DLFS file system prefix is "/dlfiles" -- the file pathname "/dir1/.../file1" must not exceed 128 characters. |

99 Save the diagnostic logs from the DB2 Data Links Manager and the database manager and contact IBM service.

sqlcode: -20056

sqlstate: 58004

SQL20057N Column *column-name* in subview *view-name* cannot be defined as read only when the corresponding column is updatable in the superview.

Explanation: The column identified by *column-name* in the subview *view-name* is defined (implicitly) as read only. The superview of *view-name* includes the corresponding column that is updatable. A column cannot be changed from updatable to read only in a typed view hierarchy.

The statement cannot be processed.

User response: Change the CREATE VIEW statement so that the column of the subview *view-name* is updatable or drop the superview(s) and recreate them using the READ ONLY clause to force the column to be read only.

sqlcode: -20057

sqlstate: 428EB

SQL20058N The fullselect specified for the materialized query table *table-name* is not valid. Reason code = *reason-code*.

Explanation: The materialized query table definition has specific rules regarding the contents of the fullselect. Some rules are based on the materialized query table options (REFRESH DEFERRED or REFRESH IMMEDIATE) while others are based on whether or not the table is replicated. The fullselect in the CREATE TABLE statement that returned this condition violates at least one of the rules as described in the SQL Reference.

This error may occur during the creation of a staging table. In such a case, the error applies to the query used in the definition of the materialized query table with which the staging table is associated.

The statement cannot be processed because it violates a restriction as indicated by the following reason code:

1

Every select list element must have a name.

2

The fullselect must not reference any of the following object types:

- materialized query table
- staging table

- created global temporary table
- declared global temporary table
- created global temporary table
- typed table
- system catalog table
- view that violates any of the materialized query table restrictions
- A protected table
- A nickname that was created using the DISALLOW CACHING clause in the CREATE NICKNAME or ALTER NICKNAME statement
- A view that depends, either directly or indirectly, on a protected table

3

The fullselect must not contain any column references or expressions of the following data types: LOB, LONG, DATALINK, XML, reference, user defined structured type or any distinct type based on these data types.

4

The fullselect must not contain any column references or expressions or functions that:

- depend on physical characteristics of the data, for example DBPARTITIONNUM, HASHEDVALUE, RID_BIT, RID
- depend on changes to the data, for example a row change expression or a row change timestamp column
- are defined as EXTERNAL ACTION
- are defined as LANGUAGE SQL, CONTAINS SQL, READS SQL DATA or MODIFIES SQL DATA
- are a period specification (for DB2 for z/OS)
- are defined as NOT SECURED if the materialized query table references a table that has row or column access control activated.

5

When REPLICATED is specified, the following restrictions apply.

- Aggregate functions and the GROUP BY clause are not allowed.
- The materialized query table must only reference a single table; that is, it cannot include a join, union or subquery.
- The PARTITIONING KEY clause must not be specified.

6

When REFRESH IMMEDIATE is specified, the fullselect must not contain:

- a reference to a nickname

<ul style="list-style-type: none"> • SELECT DISTINCT • a reference to a special register or a built-in function that depends on the value of a special register • a reference to a global variable • functions that are not deterministic • OLAP functions, sampling functions, and text functions • any expressions using the result of aggregate functions • an aggregate function without the fullselect also containing a GROUP BY clause • a recursive common table expression • subqueries 	9	
	10	When REFRESH IMMEDIATE is specified, the fullselect must be a subselect, with the exception that UNION ALL is supported in the input table expression of a GROUP BY.
	11	When REFRESH IMMEDIATE is specified and the FROM clause references more than one table, only an inner join, without using the explicit INNER JOIN syntax, is supported.
7		When REFRESH IMMEDIATE is specified, then the input table expressions of a UNION ALL or a JOIN must not contain aggregate functions.
	12	
	13	The incremental maintenance of this materialized query table requires a system temporary table with a row width or number of columns that exceeds the limit that can be accommodated by the largest system temporary table space currently available in the database.
	14	The fullselect must not include a CONNECT BY clause.
	15	MAINTAINED BY FEDERATED_TOOL was specified in the CREATE TABLE statement, and the select clause contained a reference to a base table.
8		User response: Change the fullselect in the CREATE TABLE statement so that it conforms to the rules based on the materialized query table options and whether or not the materialized query table is replicated.
		The action corresponding to the reason code is:
	1	Correct the CREATE TABLE statement to ensure that all elements have a name (you can use the AS clause to name expressions, or explicitly name all the columns in the column list of the materialized query table definition).
	2	Correct the CREATE TABLE statement to ensure that no unsupported objects are referenced.
	3	Correct the CREATE TABLE statement to ensure that no unsupported column or expression types are referenced.
		When REFRESH IMMEDIATE is specified, the following restrictions apply when the fullselect contains a GROUP BY clause:
		<ul style="list-style-type: none"> • the select list must contain COUNT(*) or COUNT_BIG(*) • for each nullable column, C, if the select list contains SUM(C), then COUNT(C) is also required • at least one of the following aggregate functions, and no other aggregate function, must appear: SUM(), COUNT(), COUNT_BIG() or GROUPING() • the HAVING clause must not be specified • in a partitioned database environment, the GROUP BY columns must contain the partitioning key of the materialized query table • nesting of aggregate functions is not allowed

4	Correct the CREATE TABLE statement to ensure that no unsupported columns, expressions or functions are referenced.	<ul style="list-style-type: none"> • add COUNT(*) to the select list or remove SUM(C), or alter the column C to be not nullable • remove unsupported aggregate functions or replace them with supported functions • remove the HAVING clause • correct the CREATE TABLE statement to ensure that the GROUP BY clause contains all of the partitioning key columns
5	Create the materialized query table as not replicated, or correct CREATE TABLE statement to ensure that the query refers to a single table and does not contain subqueries, aggregation, or the PARTITIONING clause.	9
6	<p>Create the materialized query table as REFRESH DEFERRED, or</p> <ul style="list-style-type: none"> • remove nickname references • remove DISTINCT • remove special registers and built-in functions that depend on the value of a special register • remove the not deterministic function or replace it with a deterministic function • remove all OLAP, sampling and text functions • remove the aggregate function from the expression or change the expression to be a simple reference to the aggregate function • remove the aggregate functions or add a GROUP BY clause • correct the CREATE TABLE statement to ensure that no recursive common table expression is referenced • remove the subquery 	<p>10</p> <p>Create the materialized query table as REFRESH DEFERRED, or use an inner join without the explicit INNER JOIN syntax.</p> <p>11</p> <p>Create the materialized query table as REFRESH DEFERRED, or remove the aggregate functions from the input table of the UNION ALL or JOIN.</p> <p>12</p> <p>Create the materialized query table as REFRESH DEFERRED, or reduce the total row width, or number of columns, or create a system temporary table space with suitable page size.</p> <p>13</p> <p>A hierarchical query cannot be used to create a materialized query table. Ensure that the fullselect does not include a CONNECT BY clause.</p> <p>14</p> <p>To create a materialized query table that is maintained by the replication tool, rewrite the CREATE TABLE statement so that the select clause does not contain a reference to a base table.</p>
7	<p>Create the materialized query table as REFRESH DEFERRED, or</p> <ul style="list-style-type: none"> • correct the CREATE TABLE statement to ensure all GROUP BY items are in the select list • correct the GROUP BY clause to ensure there are no duplicate grouping sets • remove the nullable column, C, or add GROUPING(C) in the select list • correct the CREATE TABLE statement to ensure at least one unique key from each table referenced in the query appears in the select list 	<p>sqlcode: -20058</p> <p>sqlstate: 428EC</p>
8	<p>Create the materialized query table as REFRESH DEFERRED, or</p> <ul style="list-style-type: none"> • add COUNT(*) or COUNT_BIG(*) to the select list or remove the GROUP BY clause 	<hr/> <p>SQL20059W The materialized query table <i>table-name</i> may not be used to optimize the processing of queries.</p> <p>Explanation: The materialized query table is defined with REFRESH DEFERRED and a fullselect that is currently not supported by the database manager when optimizing the processing of queries. The rules are</p>

based on the materialized query table options (REFRESH DEFERRED or REFRESH IMMEDIATE). The fullselect in the CREATE TABLE statement that returned this condition violates at least one of the rules as described in the SQL Reference.

The materialized query table is successfully created but will only be routed to for queries that reference the materialized query table directly.

User response: No action is required. However, if the materialized query was intended to optimize the processing of queries that do not reference the materialized query table directly, then this can be achieved as follows. Create a view using the fullselect specified for *table-name* and then re-create the materialized query table *table-name* using a fullselect that simply does a "SELECT *" from the view. This way, the materialized query table can be routed to by queries that reference the view.

sqlcode: +20059

sqlstate: 01633

SQL20060N The key transform table function used by the index extension of index *index-id* of table *table-id* in *tbspace-id* generated duplicate rows.

Explanation: The key transform table function specified by the GENERATE USING clause of the index extension used by index *index-id* generated duplicate rows. For a given invocation of the key transform table function, no duplicate rows should be produced. This error is occurred when inserting or updating the key value for the index *index-id* of table *table-id* in table space *tbspace-id*.

The statement cannot be processed.

User response: The code for the key transform table function used by the index extension of index *index-id* must be modified to avoid the creation of duplicate rows.

To determine the index name, use the following query:

```
SELECT IID, INDSHEMA, INDNAME
FROM SYSCAT.INDEXES AS I,
     SYSCAT.TABLES AS T
WHERE IID = <index-id>
     AND TABLEID = <table-id>
     AND TBSPACEID = <tbspace-id>
     AND T.TBASHEMA = I.TBASHEMA
     AND T.TABNAME = I.TABNAME
```

sqlcode: -20060

sqlstate: 22526

SQL20062N Transform function *transform-type* in transform group *group-name* for type *type-name* cannot be used for a function or method.

Explanation: The transform function defined in the transform group *group-name* for type *type-name* cannot be used for a function or method because the transform function is not written in SQL (defined with LANGUAGE SQL). The transform group cannot be used for this function or method.

The statement cannot be processed.

User response: Specify a transform group for type *type-name* that has the transform functions defined with LANGUAGE SQL.

sqlcode: -20062

sqlstate: 428EL

SQL20063N TRANSFORM GROUP clause must be specified for type *type-name*.

Explanation: The function or method includes a parameter or returns data type of *type-name* that does not have a transform group specified.

The statement cannot be processed.

User response: Specify a TRANSFORM GROUP clause with a transform group name that is defined for *type-name*.

sqlcode: -20063

sqlstate: 428EM

SQL20064N Transform group *group-name* does not support any data type specified as a parameter or returned data type.

Explanation: The transform group *group-name* specified in the TRANSFORM GROUP clause is not defined for any data type that is included in the parameter list or the RETURNS clause of a function or method.

The statement cannot be processed.

User response: Remove the transform group from the function or method definition.

sqlcode: -20064

sqlstate: 428EN

SQL20065N Transform group *group-name* for data type *type-name* cannot be used to transform a structured type for use with a client application.

Explanation: The transform group *group-name* for data type *type-name* defines a transform function that cannot be used when performing transforms for client

applications. The possible reasons for this are based on the definition of the transform function that is not supported for client applications. The unsupported transform function may be:

- a FROM SQL function that is a ROW function
- a TO SQL function has more than one parameter

The statement cannot be processed.

User response: For static embedded SQL, specify a different transform group using the TRANSFORM GROUP bind option. For dynamic SQL, specify a different transform group using the SET DEFAULT TRANSFORM GROUP statement.

sqlcode: -20065

SQL20066N The *transform-type* transform function is not defined in the transform group *group-name* for data type *type-name*.

Explanation: The *transform-type* transform function of transform group *group-name* for data type *type-name* is required for a transform group used in a function or method definition.

The statement cannot be processed.

User response: If creating a function or method, specify a different transform group in the function or method definition. If referencing a structured type in a dynamic SQL statement, specify a different transform group for the CURRENT DEFAULT TRANSFORM GROUP special register. Alternatively, add a *transform-type* transform function to the transform group *group-name* for data type *type-name*.

sqlcode: -20066

sqlstate: 42744

SQL20067N The *transform-type* transform function is defined more than once in the transform group *group-name* for data type *type-name*.

Explanation: A TO SQL or FROM SQL transform function can only be specified once in a transform group. The transform group *group-name* for data type *type-name* has at least two FROM SQL or TO SQL (or both) transform functions defined.

The statement cannot be processed.

User response: Delete the TO SQL or FROM SQL definitions from *group-name* in the transform definition so that there is only one of each.

sqlcode: -20067

sqlstate: 42628

SQL20068N The structured type *type-name* may not be defined so that one of its attribute types directly or indirectly uses itself. The attribute *attribute-name* causes the direct or indirect use.

Explanation: Direct use: Type A is said to directly use type B if one of the following is true:

- Type A has an attribute of type B
- Type B is a subtype of A, or a supertype of A.

Indirect use: Type A is said to indirectly use type B if the following is true:

- Type A uses type C, and type C uses type B.

You cannot define a type so that one of its attribute types directly or indirectly uses itself. The type for attribute *attribute-name* is the cause of the direct or indirect use.

User response: Evaluate the type and remove the attribute type that causes the direct or indirect use.

sqlcode: -20068

sqlstate: 428EP

SQL20069N The RETURNS type of the *routine-type* *routine-name* is not the same as the subject type.

Explanation: The method *method-name* specifies SELF AS RESULT. The RETURNS data type of the method must be the same as the subject data type of the method.

User response: Change the RETURNS type of the method *method-name* to match the subject type.

sqlcode: -20069

sqlstate: 428EQ

SQL20075N The index or index extension *index-name* cannot be created or altered because the length of *column-name* is more than 255 bytes.

Explanation: The index could not be created or altered because the key column length is greater than 255.

- *index-name* is the index name.
- *column-name* is the name of the key column. If this error was returned from an ALTER TABLE or ALTER NICKNAME operation, then the value of *column-name* is the column number.

The index extension could not be created because a column returned by the GENERATE KEY function is greater than 255 bytes.

- *index-name* is the index extension name.

SQL20076N • SQL20081N

- *column-name* is the name of a column returned by the GENERATE KEY function.

The statement could not be processed. The specified index or index extension was not created, or the table or nickname could not be altered.

User response: If creating an index, eliminate the column from the index definition. If altering a table, reduce the new column length to the permitted maximum. If creating an index extension, specify a different GENERATE KEY function, or redefine the function to eliminate the column.

sqlcode: -20075

sqlstate: 54008

SQL20076N The instance for the database is not enabled for the specified action or operation. Reason code = *reason-code*.

Explanation: An error has been detected at the instance level. The requested operation cannot be completed because a specified functional area was not installed or because a specified functional area was not enabled to the instance.

The following is the list of reason codes and associated functional areas you can enable at the instance level:

1. The ability to execute distributed request operations against multiple data sources in a single statement.

User response: Enable the instance for the requested action or operation. First, install the specified functional area if it is missing. Then, enable the specified functional area. Enablement steps vary by *reason-code*:

1. For a federated server, set the DBM variable <FEDERATED> to YES and then restart the database manager.

sqlcode: -20076

sqlstate: 0A502

SQL20077N Cannot construct structured type objects that have Datalink type attributes.

Explanation: An attempt was made to invoke the constructor of a structured type which has a Datalink and/or a Reference type attribute. This functionality is currently not supported. In Version 6.1 or earlier, this error may also be issued for a structured type object with a Reference type attribute.

The statement cannot be processed.

User response: The error can be corrected by doing one of the following:

1. Removing the invocation of the constructor of the type from the program.

2. Removing any Datalink (or Reference) type attributes from the definition of the structured type (this may not be possible if there are any tables that depend on this type).

sqlcode: -20077

sqlstate: 428ED

SQL20078N Hierarchy object *object-name* of type *object-type* can not be processed using operation *operation-type*.

Explanation: The operation *operation-type* was attempted using a hierarchy object named *object-name* of type *object-type*. This operation does not support processing of a hierarchy object.

The statement could not be processed.

User response: Verify that the correct object name was used. For objects types TABLE or VIEW, the object must be the name of a subtable in the table or view hierarchy. In some cases, the object must specifically name the root table. For objects of type index, the name must be a name of an index created on a subtable.

sqlcode: -20078

sqlstate: 42858

SQL20080N Method specification for *method-name* cannot be dropped because a method body exists.

Explanation: The method specification *method-name* still has an existing method body that must be dropped before the method specification can be dropped.

The statement cannot be processed.

User response: Use the DROP METHOD statement with the same method specification to drop the method body and then issue the ALTER TYPE statement again to drop the method specification.

sqlcode: -20080

sqlstate: 428ER

SQL20081N The method body cannot be defined for a LANGUAGE *language-type* method specification *method-name*.

Explanation: The method specification *method-name* is defined with LANGUAGE *language-type*. If the LANGUAGE is SQL, the method body must be an SQL control statement. For other languages, the EXTERNAL clause must be specified.

The statement cannot be processed.

User response: Change the method body to match the LANGUAGE specified in the method specification.

sqlcode: -20081

sqlstate: 428ES

SQL20082N The dynamic type *expression-type-id* of the expression is not a subtype of the target data type *target-type-id* in a TREAT specification.

Explanation: The dynamic data type of the result of the expression specified in the TREAT specification is *expression-type-id*. The specified target data type *target-type-id* is a proper subtype of *expression-type-id* which is not allowed.

The statement cannot be processed.

User response: Change the *target-type-id* of the TREAT specification to a supertype of *expression-type-id* or change the expression so that the dynamic data type of the result is a subtype of *target-type-id*.

To determine the data type names for *expression-type-id* and *target-type-id*, use the following query:

```
SELECT TYPEID, TYPESHEMA, TYPENAME
FROM SYSCAT.DATATYPES
WHERE TYPEID IN INTEGER(
    expression-type-id),
    INTEGER(
    target-type-id
    )
)
```

sqlcode: -20082

sqlstate: 0D000

SQL20083N The data type of the value returned by *routine-type routine-id* does not match the data type specified as RESULT.

Explanation: The method *routine-id* specifies SELF AS RESULT and therefore requires that the data type of the value returned must be the same as the subject data type used to invoke the method. The RETURN statement in either the SQL method body or in the TO SQL transform function for the type of an external method resulted in the incorrect data type.

The statement cannot be processed.

User response: Change the RETURN statement of the method or transform function to ensure that the data type of the returned value is always the subject type used to invoke the method.

To determine the routine name associated with the *routine-id*, use the following query:

```
SELECT FUNCSCHEMA, FUNCNAME,
    SPECIFICNAME
FROM SYSCAT.FUNCTIONS
WHERE FUNCID = INTEGER(
    routine-id
    )
```

sqlcode: -20083

sqlstate: 2200G

SQL20084N The *routine-type routine-name* would define an overriding relationship with an existing method.

Explanation: A method MT, with subject type T, is defined to override another method MS, with subject type S, if all of the following conditions are true:

- MT and MS have the same unqualified name and the same number of parameters.
- T is a proper subtype of S.
- The non-subject parameter-types of MT are the same as the corresponding non-subject parameter-types of MS. (Here, "same" applies to the basic type, such as VARCHAR, disregarding length and precision).

A function and a method may not be in an overriding relationship. This means that if the function were a method with its first parameter as subject S, it must not override another method of any supertype of S and it must not be overridden by another method of any subtype of S.

Furthermore, overriding relationships are not supported for:

- table and row methods
- external methods with PARAMETER STYLE JAVA
- system generated mutator and observer methods

The statement cannot be processed.

User response: Change the routine that is being defined to use a different routine name than *routine-name* or change the parameters of the routine.

sqlcode: -20084

sqlstate: 42745

SQL20085N A routine defined with PARAMETER STYLE JAVA cannot have structured type *type-name* as a parameter type or as the returns type.

Explanation: A routine is defined with PARAMETER STYLE JAVA and one of the parameter types or a returns type is defined using the structured type *type-name*. This is not supported by this version of DB2.

The statement cannot be processed.

User response: Change to a different parameter style for the routine or remove the structured type from the routine definition.

sqlcode: -20085

sqlstate: 429B8

SQL20086N Length of the structured type value for a column exceeds the system limit.

Explanation: The value for a structured type column exceeds 1 gigabyte in overall size, including descriptor data for the instance. The column could be one that is being inserted or updated directly or it may be a column that is generated.

The statement cannot be processed.

User response: Reduce the size of the structured type value that is being assigned to the column.

sqlcode: -20086

sqlstate: 54049

SQL20087N DEFAULT or NULL cannot be used in an attribute assignment.

Explanation: The UPDATE statement is using an attribute assignment to set the value of an attribute in a structured type column. This form of assignment statement does not allow the use of the keyword DEFAULT or the keyword NULL as the right hand side of the assignment.

The statement cannot be processed.

User response: Specify an expression for the right hand side of the attribute assignment or change the assignment so it is not using the attribute assignment syntax.

sqlcode: -20087

sqlstate: 428B9

SQL20089N A method name cannot be the same as a structured type name within the same type hierarchy.

Explanation: A specified method name is the same as the structured type which is defined for one of the supertypes or subtypes of the structured type.

The statement cannot be processed.

User response: Specify a different name for the method.

sqlcode: -20089

sqlstate: 42746

SQL20090W The use of the structured type having attribute *attribute-name* of type DATALINK is effectively limited to the type of a typed table or type view.

Explanation: The attribute *attribute-name* is defined with a type of DATALINK or a distinct type based on a DATALINK. A structured type that includes such an attribute can only be used as the type of a table or view. If used as the type of a column of a table or view

it can only be assigned the null value.

The statement continued processing.

User response: Consider the intended use of the structured type. If the type will be used as a column data type, then remove the attribute *attribute-name* from the structured type or use a data type other than DATALINK for the attribute.

sqlcode: +20090

sqlstate: 01641

SQL20092N The statement failed because a table or view was specified in the LIKE clause and the object cannot be used in this context.

Explanation: The LIKE clause for a CREATE GLOBAL TEMPORARY TABLE statement or DECLARE GLOBAL TEMPORARY TABLE statement specified the name of a table that has a column defined as IMPLICITLY HIDDEN. Since the implicitly hidden attribute is not supported for created temporary tables and declared temporary tables, the table cannot be specified in the LIKE clause.

User response: Specify the name of a table that is not defined with an implicitly hidden column.

In order to specify a created temporary table or declared temporary table that includes columns that are defined as IMPLICITLY HIDDEN, use the AS (fullselect) option to explicitly specify those columns in the table. As a result, the IMPLICITLY HIDDEN attribute is not copied to the column being defined.

sqlcode: -20092

sqlstate: 560AE

SQL20093N The table *table-name* cannot be converted to or from a materialized query table. Reason code = *reason-code*.

Explanation: The ALTER TABLE statement is being used to change a table from a materialized query table to DEFINITION ONLY or to convert a regular table to a materialized query table. The ALTER TABLE statement failed as indicated by the following reason codes.

1

The table is a typed table or hierarchy table.

2

The table is not a materialized query table and DEFINITION ONLY was specified.

3

The table is a replicated materialized query table and DEFINITION ONLY was specified.

4

5	The table has at least one trigger defined.	19	The fullselect refers to a nickname on which caching is not allowed.
6	The table has at least one check constraint defined.	20	The table is a system-period temporal table or a history table.
7	The table has at least one unique constraint or unique index defined.		The table has a permission or mask defined by a security administrator.
8	The table has at least one referential constraint defined.		User response: The action is based on the reason code as follows.
9	The table is referenced in the definition of an existing materialized query table.	1	The table cannot be converted to a materialized query table. Create a new materialized query table instead.
10	The table is referenced directly or indirectly (through a view, for example) in the fullselect.	2	There is no need to convert this table. No action required.
11	The table is already a materialized query table.	3	A replicated table can only be a materialized query table. Create a new table instead.
12	The number of columns of the existing table does not match the number of columns defined in the select list of the fullselect.	4	Drop any triggers and try the ALTER TABLE statement again.
13	The data types of the columns of the existing table do not exactly match the corresponding columns in the select list of the fullselect.	5	Drop any check constraints and try the ALTER TABLE statement again.
14	The column names of the columns of the existing table do not exactly match the corresponding column names in the select list of the fullselect.	6	Drop any unique constraints and unique indexes. Try the ALTER TABLE statement again.
15	The nullability characteristics of the columns of the existing table do not exactly match the nullability characteristics of the corresponding columns in the select list of the fullselect.	7	Drop any referential constraints and try the ALTER TABLE statement again.
16	The conversion cannot be performed if there are any other table alterations in the same ALTER TABLE statement.	8	Drop the materialized query table that references the table and try the ALTER TABLE statement again.
17	The table is referenced in the definition of an existing view enabled for query optimization.	9	A materialized query table cannot reference itself. Modify the fullselect to remove the direct or indirect reference to the table being altered.
18	The table is a protected table.	10	The operation is not allowed since the table is already a materialized query table.
		11	

- 12 Modify the fullselect to include the correct number of columns in the select list.
- 13 Modify the fullselect so that the result column data types exactly match the data types of the corresponding existing columns.
- 14 Modify the fullselect so that the result column names exactly match the column names of the corresponding existing columns.
- 15 The table cannot be converted to a materialized query table unless the nullability characteristics can be matched. Create a new materialized table instead.
- 16 Perform the other table alterations in an ALTER TABLE statement that does not include the SET MATERIALIZED QUERY AS clause.
- 17 Disable the view enabled for query optimization that references the table and try the ALTER TABLE statement again.
- 18 Either remove the protection from the table or do not convert it to a materialized query table.
- 19 Correct the fullselect specified in the ALTER TABLE statement so that it does not reference a nickname on which caching is not allowed.
- 20 Either correct the table name to specify a table that is not a system-period temporal table or history table, or alter the system-period temporal table with an ALTER TABLE statement that specifies a DROP VERSIONING clause.
- 20 Either remove the permissions and masks or do not convert it to a materialized query table.

sqlcode: -20093

sqlstate: 428EW

SQL20094N The statement failed because the column *column-name* is a generated column or is defined with the data type DB2SECURITYLABEL and cannot be used in the BEFORE trigger *trigger-name*.

Explanation: The indicated column cannot be named in the column name list of a BEFORE UPDATE trigger or set in a BEFORE trigger because it is one of the following:

- A row-begin column
- A row-end column
- A transaction-start-ID column
- A generated expression column
- A column defined with the data type DB2SECURITYLABEL

The statement cannot be processed.

User response: Remove the column from either the column name list or the SET assignment statement that sets the new transition variable of a generated column and resubmit the statement.

sqlcode: -20094

sqlstate: 42989

SQL20102N The CREATE or ALTER statement for the routine *routine-name* specified the *option-name* option which is not allowed for the routine.

Explanation: The option *option-name* was specified when creating or altering the routine *routine-name*. The option does not apply to the routine because of other characteristics of the routine. For sourced procedures, only ALTER PARAMETER can be specified, and ALTER PARAMETER can only be specified for sourced procedures.

User response: For an ALTER statement, ensure that the correct routine is being specified. Otherwise, remove the failing option and reissue the statement.

sqlcode: -20102

sqlstate: 42849

SQL20108N A result set contains an unsupported data type in position *position-number* for the cursor *cursor-name* opened by the stored procedure *procedure-name*.

Explanation: The stored procedure named by *procedure-name* cannot return at least one of its query result sets named by *cursor-name* because at least one of the columns, column *position-number* contains a data type which is not supported by either the DRDA Application Requestor (client) or the DRDA Application Server (server). As such the call to the stored procedure fails.

User response: Modify the OPEN statement (and subsequent FETCH statements) for cursor *cursor-name* in the stored procedure *procedure-name* on the server to not select the unsupported data type in column *position-number*. The client application which invoked the stored procedure may need to be modified to reflect

the change in the stored procedure.

sqlcode: -20108

sqlstate: 56084

SQL20109W Error in DB2 debugger support. Reason code: *reason-code*.

Explanation: The debugger support had an error situation which will disable debugging, but not affect normal execution. The following is a list of reason codes:

1. The debugger support is not installed.
2. There has been a syntax error in IP address of debugger client in the debugger table.
3. A timeout in the communication between the debugger backend and the debugger client occurred.
4. A problem occurred accessing the debugger table DB2DBG.ROUTINE_DEBUG.

User response:

1. Verify that you install the debugger option on the DB2 server machine.
2. Make sure that the IP address in the debugger table has the correct syntax.
3. Check that the debugger daemon on the client is started and that the ports on the client and server match.
4. Verify that you have created the debugger tables with the correct layout.

sqlcode: +20109

sqlstate: 01637

SQL20111N A SAVEPOINT, RELEASE SAVEPOINT, or ROLLBACK TO SAVEPOINT statement cannot be issued in this context. Reason code = *reason-code*.

Explanation: The statement cannot be processed because it violates a restriction as indicated by the following reason code:

1. Savepoint cannot be issued inside a trigger.
2. Savepoint cannot be issued inside a global transaction.

The statement cannot be processed.

User response: Remove the SAVEPOINT, RELEASE SAVEPOINT, or ROLLBACK TO SAVEPOINT statement in the trigger or global transaction.

sqlcode: -20111

sqlstate: 3B503

SQL20112N A savepoint cannot be set because a savepoint already exists and nested savepoints are not supported.

Explanation: A savepoint is a named entity that represents the state of data and schemas at a particular point in time within a unit of work. You can use savepoints in several ways. For example, you can roll a database back to a savepoint. You can set a savepoint within a transaction using the SAVEPOINT statement. In some environments, you can also set multiple, or nested, savepoints within the same transaction.

This message can be returned when an error occurred in a SAVEPOINT statement or atomic compound SQL statement for the following reasons:

- An attempt has been made to set a nested savepoint, but a savepoint already exists and nested savepoints are not supported in this environment.
- An attempt has been made to set a nested savepoint for a federated data source that does not support nested savepoints.

User response: Respond to this error in one of the following ways:

- Release existing savepoints before attempting to set new savepoints.
- To re-establish an existing savepoint perform the following steps:
 1. Free the existing savepoints using the RELEASE SAVEPOINT statement.
 2. Recreate the savepoint using the SAVEPOINT statement.
- For atomic compound SQL: set the savepoint after the end of the compound statement.

sqlcode: -20112

sqlstate: 3B002

SQL20113N Null cannot be returned from method *method-id* defined with SELF AS RESULT.

Explanation: The method with method identifier *method-id* is defined with SELF AS RESULT. The invocation of the method used a non-null instance of a structured type so the method cannot return a null instance.

User response: Change the method implementation to ensure that a null value is not returned as the return value for the method. One possibility is to set all the attributes of the returned structured type to null value. To determine the name of the method that failed, use the following query:

```
SELECT FUNCSHEMA, FUNCNAME,
       SPECIFICNAME
FROM SYSCAT.FUNCTIONS
WHERE FUNCID = method-id
```

sqlcode: -20113

sqlstate: 22004

SQL20114W Column *column-name* in table *table-name* is not long enough for the defined length of the USER default value.

Explanation: The column *column-name* is defined with a length that is less than 128 bytes. The clause DEFAULT USER has been specified for this column. Since the USER special register is defined as VARCHAR(128), any attempt to assign the default value for *table-name* by a user with a user ID longer than the column length results in an error. A user with a user ID longer than the column length would never be able to insert or update this column to the default value.

User response: If your system standards would not allow a user ID to exceed the length of the column, then this warning may be ignored. To prevent this warning from occurring, the length of the column must be at least 128 bytes. You can change the column length by dropping and creating the table again, or, if the data type is VARCHAR, by using ALTER TABLE to increase the length of the column.

sqlcode: +20114

sqlstate: 01642

SQL20115N The *routine-type* *routine-name* cannot be used as a *transform-type* transform function in transform group *group-name*.

Explanation: If *routine-type* is FUNCTION, then the function defined by *routine-name* cannot be used as a transform function because it is a built-in function. If *routine-type* is METHOD, then the method defined by *routine-name* cannot be used as a transform function because it is a method.

The statement cannot be processed.

User response: Specify a different function for the *transform-type* transform function of transform group *group-name*.

sqlcode: -20115

sqlstate: 428EX

SQL20116N The data type of the search target *parameter-name* does not match that of the source key specified in the index extension *index-extension-name*.

Explanation: If the search target is of a built-in or distinct data type, its type must exactly match that of the source key specified in the index extension. If the data type of the search target is a structured type, it must be in the same structured type hierarchy as the data type of the source key in the index extension.

The statement cannot be processed.

User response: Specify a search target with a data type that matches that of the source key in the index extension.

sqlcode: -20116

sqlstate: 428EY

SQL20117N A window specification for an OLAP function is not valid. Reason code = *reason-code*.

Explanation: The window specification (OVER clause) of an OLAP function invocation is not correctly specified. The incorrect specification is indicated by the *reason-code*.

- 1 RANGE or ROWS is specified without an ORDER BY in the window specification.
- 2 RANGE is specified and the window ORDER BY clause includes more than one sort-key-expression.
- 3 RANGE is specified and the data type of the range value cannot be used in a subtraction expression with the data type of the sort-key-expression in the window ORDER BY clause.
- 4 UNBOUNDED PRECEDING is specified after CURRENT ROW or UNBOUNDED FOLLOWING is specified before CURRENT ROW.

The statement cannot be processed.

User response: Change the window specification to correct the invalid specification indicated by the *reason-code*.

- 1 Add a window ORDER BY clause to each window specification that specifies RANGE or ROWS.
- 2 Ensure that each window specification that includes RANGE has exactly one sort-key-expression in the window ORDER BY clause.
- 3 For each window specification that includes RANGE, ensure that the range value can be subtracted from the sort-key-expression in the window ORDER BY clause, which must be a numeric type or a datetime type. For datetime sort-key-expressions, the range value must be the specific datetime duration DECIMAL type with the correct precision and scale.
- 4 Ensure that any window specification using "BETWEEN" and "CURRENT ROW" has the "UNBOUNDED PRECEDING" before "AND CURRENT ROW" or "UNBOUNDED FOLLOWING" after "CURRENT ROW AND".

sqlcode: -20117

sqlstate: 428EZ

SQL20118N Structured type *type-name* has more than the maximum number of allowable attributes. The maximum is *max-value*.

Explanation: The maximum number of attributes, including inherited attributes, allowed for each structured type has been exceeded with the definition of structured type *type-name*. The maximum number of attributes, including inherited attributes, is *max-value*.

The statement cannot be processed.

User response: Ensure that the number of attributes for the structured type does not exceed the limit.

sqlcode: -20118

sqlstate: 54050

SQL20119N A ROW function must define at least two columns.

Explanation: A function that specifies ROW in the RETURNS clause must include a column list with at least two columns.

User response: Either remove the ROW keyword from the RETURNS clause to make it a scalar function or specify multiple columns in the column list of the RETURNS clause.

sqlcode: -20119

sqlstate: 428F0

SQL20120N An SQL TABLE function must return a table result.

Explanation: An SQL function that specifies TABLE in the RETURNS clause must return a result that is a table. With the exception of a scalar fullselect, a scalar expression cannot be returned as the result of an SQL TABLE function.

User response: Either remove the TABLE keyword from the RETURNS clause to make it a scalar function or specify a fullselect in the RETURN statement of the TABLE function body.

sqlcode: -20120

sqlstate: 428F1

SQL20121N Only one of WITH RETURN or SCROLL can be specified for cursor *cursor-name*.

Explanation: Both WITH RETURN and SCROLL were specified for cursor *cursor-name*, but this is not allowed.

The statement cannot be processed.

User response: Change the DECLARE CURSOR statement to either specify NO SCROLL (or remove the SCROLL keyword), or remove the WITH RETURN clause.

sqlcode: -20121

sqlstate: 428F3

SQL20123N Call to stored procedure *procedure* failed because the result set returned for a scrollable cursor is not positioned before the first row.

Explanation: A scrollable result set has been returned by a CALL to stored procedure *procedure*, and one or more of these cursors is not positioned before the first row.

The CALL to the stored procedure was not successful. All result set cursors defined in the stored procedure were closed before returning to the caller. The scrollable cursor cannot be used to FETCH from the result set. Actions done by the stored procedure are not rolled back, and any external actions initiated by the stored procedure have completed because the error was detected at the end of the execution of the stored procedure.

User response: Modify the content of the stored procedure to make sure that the result set cursors are positioned before the first row before returning to the caller.

sqlcode: -20123

sqlstate: 560B1

SQL20128N Cursor *cursor-name* is scrollable, but the result table cannot include output from a table function.

Explanation: The cursor *cursor-name* is defined to be scrollable, but the result table includes output from a table function. This combination is not supported.

The statement cannot be processed.

User response: Either modify the definition of the cursor so it is not scrollable, or ensure that the result table does not include output from a table function.

sqlcode: -20128

sqlstate: 428F6

SQL20131N Object number *object-number* of type *object-type* was specified more than once in a list of objects.

Explanation: In a list of object names of type *object-type*, the object numbered *object-number* was specified more than once. The operation of the statement cannot be performed on the object more than once.

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User response: Correct the duplicated object in the list removing duplicate occurrences. (In the MDC case, the object type will be “dimension”.)

sqlcode: -20131

sqlstate: 42713

SQL20133N Operation *operation-name* cannot be performed on external routine *routine-name*. The operation can only be performed on SQL routines.

Explanation: You attempted to perform operation *operation-name* on external routine *routine-name*. However, you can only perform that operation on SQL routines. The operation did not complete successfully.

User response: Ensure the name you provide identifies an SQL routine.

sqlcode: -20133

sqlstate: 428F7

SQL20134N The SQL Archive (SAR) file for routine *routine-name* could not be created on the server.

Explanation: The creation of the SQL archive (SAR) for routine *routine-name* failed because DB2 could not find either the library or the bind file for the specified routine. Bind files are only available for SQL routines created with DB2 Version 7.1, FixPak 2 or later.

User response: Recreate the procedure on a server with DB2 Version 7.1, FixPak 2 or later, and try the operation again.

sqlcode: -20134

sqlstate: 55045

SQL20135N The specified SQL archive does not match the target environment. Reason code = *reason-code*.

Explanation: The specified SQL archive does not match the target environment for one of the following reasons:

- 1 The operating system of the target environment is not the same as the operating system on which the SQL archive was created.
- 2 The database type and level of the target environment is not the same as the database type and level on which the SQL archive was created.

User response: Ensure that the environment on which the SQL archive was created matches the target environment and reissue the command. If the environments do not match, you must manually create the SQL routine using the target environment.

sqlcode: -20135

sqlstate: 55046

SQL20136N Routine *routine-name* (specific name *specific-name*) attempted to access a federated object.

Explanation: An SQL statement in an external function or method attempted to access one or more federated objects. This statement is executed from routine *routine-name* (specific name *specific-name*). It is currently not supported to access a federated object from an external function or method.

User response: Remove the references to federated objects from the routine.

sqlcode: -20136

sqlstate: 55047

SQL20138N The statement may not be explained because the routine *routine-name* (specific name *specific-name*) is not defined as MODIFIES SQL DATA.

Explanation: The routine *routine-name* (specific name *specific-name*) is defined as either CONTAINS SQL or READS SQL DATA and attempted to explain an SQL statement. Explaining an SQL statement requires writing to the explain tables, which is only permitted in a MODIFIES SQL DATA routine.

User response: Do not attempt to explain SQL statements from a routine defined as either CONTAINS SQL or READS SQL DATA.

sqlcode: -20138

sqlstate: 42985

SQL20139N SQL statements may not be issued in routine *routine-name* (specific name *specific-name*) because of a previous statement failed or was interrupted.

Explanation: During the execution of routine *routine-name* (specific name *specific-name*), or a nested routine, either a statement failed and requires a roll back or an interrupt occurred. It is necessary for all routines invoked from the outer-most statement to finish executing and for control to be passed back to the outer-most statement so that the database manager may perform the necessary recovery. Until this recovery has been completed, SQL statements may not be issued.

User response: The routine continues to execute. The routine should not execute any further SQL statements and should return control to the invoking statement as quickly as possible.

The recovery for the initial failure of interrupt will be automatically performed by the database manager once all routines have completed.

sqlcode: -20139

sqlstate: 51038

SQL20140W COMPRESS column attribute ignored because VALUE COMPRESSION is deactivated for the table.

Explanation: One of the following situations occurred.

1. The COMPRESS SYSTEM DEFAULT specified for the column was ignored because VALUE COMPRESSION is deactivated for the table.
2. DEACTIVATED VALUE COMPRESSION was specified and columns are defined with COMPRESS SYSTEM DEFAULT.

User response: To allow COMPRESS to be specified for the column, ALTER the table and activate VALUE COMPRESSION for the table.

sqlcode: +20140

sqlstate: 01648

SQL20142N Sequence *sequence-name* cannot be used as specified.

Explanation: *sequence-name* was referenced in a context in which it cannot be used. *sequence-name* is a sequence generated by the system for an identity column. These sequences cannot be referenced in a COMMENT ON SEQUENCE, DROP SEQUENCE, GRANT or REVOKE statement, or in a NEXT VALUE or PREVIOUS VALUE expression.

User response: Specify the name of a user-defined sequence object in this context.

sqlcode: -20142

sqlstate: 428FB

SQL20143N The encryption or decryption function failed, because the ENCRYPTION PASSWORD value is not set.

Explanation: The ENCRYPTION PASSWORD value is not set.

User response: Issue the SET ENCRYPTION PASSWORD statement to set the ENCRYPTION PASSWORD value. The length of the password must be a minimum of 6 bytes and a maximum of 127 bytes.

sqlcode: -20143

sqlstate: 51039

SQL20144N The encryption password is invalid because the length of the specified password was less than 6 bytes or greater than 127 bytes.

Explanation: The data must be encrypted with a password length between 6 and 127.

User response: Ensure that the password length is between 6 and 127.

sqlcode: -20144

sqlstate: 428FC

SQL20145N The decryption function failed. The password used for decryption does not match the password used to encrypt the data.

Explanation: The data must be decrypted using the same password that was used to encrypt the data.

User response: Ensure that the same password is used to encrypt and decrypt the data.

sqlcode: -20145

sqlstate: 428FD

SQL20146N The decryption function failed. The data is not encrypted.

Explanation: The data must be a result of the ENCRYPT function.

User response: Ensure that the data type is a result of the ENCRYPT function.

sqlcode: -20146

sqlstate: 428FE

SQL20147N The ENCRYPT function failed. Multiple pass encryption is not supported.

Explanation: Data that has already been encrypted cannot be encrypted again.

User response: Ensure that the data has not already been encrypted.

sqlcode: -20147

sqlstate: 55048

SQL20148N Routine *routine-name* with specific name *specific-name* must have the RETURN statement as the last SQL statement of the compound body.

Explanation: The RETURN statement must be the last SQL statement of the compound body in an SQL ROW or TABLE function. No other RETURN statement is allowed within the routine body.

User response: Ensure there is only one RETURN statement and it is the last SQL statement of the compound body.

sqlcode: -20148

sqlstate: 429BD

SQL20149W The buffer pool operation has been completed but will not take effect until the next database restart.

Explanation: The buffer pool has been successfully created or altered, but the changes will not take effect immediately. The changes will take effect when the database is restarted.

The changes have been deferred for one of the following reasons:

- The DEFERRED option was specified.
- If an alter was specified and the operation changed either NUMBLOCKPAGES or BLOCKSIZE, then the request was deferred because all such alters are always deferred.
- If an alter was specified, a previous alter of the block based area has not taken effect yet (no database restart has been done), and the new proposed size of the buffer pool is smaller than the current size of the block area of the buffer pool, then the alter must be deferred so that it takes effect when the changes to the block area also come into effect.

User response: To have the changes take effect at next database restart time, no further action is required.

sqlcode: +20149

sqlstate: 01649

SQL20150N The number of block pages for a buffer pool is too large for the size of the buffer pool.

Explanation: The number of block pages, as specified by NUMBLOCKPAGES, must not be greater than 98 percent of the number of pages for the buffer pool, as specified by SIZE.

User response: Either disable block-based I/O for this buffer pool by setting NUMBLOCKPAGES to zero or ensure the value of NUMBLOCKPAGES is not greater than 98 percent of the value for SIZE.

sqlcode: -20150

sqlstate: 54052

SQL20151N The value specified for BLOCKSIZE is not in the valid range.

Explanation: The valid range for the value of BLOCKSIZE is 2 to 256.

User response: Change the value for BLOCKSIZE to be greater than or equal to 2 and less than or equal to 256. An optimal value would be the extent size.

sqlcode: -20151

sqlstate: 54053

SQL20152N The specified buffer pool is not currently block-based.

Explanation: The BLOCKSIZE option was used without specifying the number of pages to use in the block area of the buffer pool.

User response: Specify a value for NUMBLOCKPAGES along with the BLOCKSIZE option.

sqlcode: -20152

sqlstate: 428FF

SQL20153N The split image of the database is in the suspended state.

Explanation: The database split image cannot be used while it is in the suspended state.

User response: To resume I/O for this database split image, issue one of the following db2inidb commands:

- db2inidb <db-name> as mirror
- db2inidb <db-name> as snapshot
- db2inidb <db-name> as standby

In a DB2 pureCluster environment, you can issue this command from any member and need to issue the command only once.

In a partitioned database environment, you must execute the db2inidb command on each database partition. You can run the command concurrently on each database partition.

sqlcode: -20153

sqlstate: 55040

SQL20154N The requested insert or update operation into view *view-name* is not allowed because no target table can be determined for a row. Reason code = *reason-code*.

Explanation: The specified view contains a UNION ALL query. The *reason-code* indicates that a given row either:

1. does not satisfy the check constraint of any underlying base table, or
2. satisfies all the check constraints for more than one underlying base table.

Federated system users: Some other data source specific limitation may be preventing the row from being inserted.

User response: Ensure that the check constraints used by the underlying base tables to partition their rowsets cover the set of rows to be inserted. Also, ensure that

for a view defined with UNION ALL for its fullselect that WITH ROW MOVEMENT is also specified if updates are to move rows from one underlying table to another. For example, given the check constraints (T1.c1 in (1,2)) on T1, and (T2.c1 in (2,3)) on T2, and view V1 as a union of T1 and T2,

1. the row c1 = 4 does not satisfy the check constraints of either underlying base table and
2. the row c1 = 2 satisfies the check constraints of both underlying base tables.

Federated system users: If the reason is unknown, isolate the problem to the data source failing the request and examine the object definition and the update restrictions for that data source.

sqlcode: -20154

sqlstate: 23513

SQL20155N The specified event monitor target tables are invalid. Reason code = *reason-code*.

Explanation: While processing a CREATE EVENT MONITOR statement, or while activating an event monitor, it was determined that a target table is not valid. The reason code indicates more specifically what the problem is:

1. At least one column name does not match an event monitor data element identifier.
2. At least one column has a data type that is incompatible with the data type for an event monitor data element identifier.
3. At least one column name matches an event monitor data element identifier, but that element is not allowed in the target table.
4. The row size for the table is too large for the page size of the table space.
5. A mandatory column is missing.
6. The table must not be declared with CCSID UNICODE if the database is not a Unicode database.
7. The table is partitioned.
8. The name of the table specified for storing event monitor output is already in use by another event monitor.
9. An event monitor target table exists for a logical data group that is not supported in the current release.

User response: Check the administration notification log for detailed information and correct the table definition.

sqlcode: -20155

sqlstate: 55049

SQL20156W The event monitor was activated successfully, however some monitoring information may be lost.

Explanation: An event monitor activated successfully, however it was determined that the event monitor may lose some information because of one of the following:

- The data type for a column is smaller than the data type required to hold an event monitor element identifier. This data will be truncated.
- A target table was found in the SYSCAT.EVENTTABLES, but that table does not exist in the database. All monitor information for the corresponding table will not be recorded.
- A target table was found in the SYSCAT.EVENTTABLES, but that table does not reside on all database partitions. Monitor information on some partitions will not be recorded
- The buffer size of a statistics event monitor that writes to a file is too small to accommodate the largest record.

User response: Check the administration notification log for detailed information. If this is a statistics event monitor, check the buffer size; if it is too small, recreate the event monitor with a buffer size of at least 4. For other types of event monitors, recreate the event monitor to create all target tables if necessary.

sqlcode: +20156

sqlstate: 01651

SQL20157N User with authorization ID *authorization-ID* failed to attach to a quiesced instance, or connect to a quiesced database or a database in a quiesced instance which is in the following quiesce mode: *quiesce-mode*

Explanation: The specified authorization ID does not have the authority to attach to a quiesced instance or connect to a database in a quiesced instance when the instance is in QUIESCE RESTRICTED ACCESS mode. To be able to attach to the instance or connect to the database, the authorization ID must satisfy one of the following listed criteria:

- Hold SYSADM, SYSCTRL, or SYSMAINT authority
- Be the user that was specified using the USER option of the QUIESCE INSTANCE or START DATABASE MANAGER commands (or db2InstanceQuiesce or db2InstanceStart APIs)
- Be a member of the group that was specified using the GROUP option of the QUIESCE INSTANCE or START DATABASE MANAGER commands (or db2InstanceQuiesce or db2InstanceStart APIs)

In the event the quiesced database is in QUIESCE DATABASE mode, then the authorization ID must satisfy one of the previously listed criteria or hold

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either the DBADM authority or QUIESCE_CONNECT privilege before the user can successfully connect to a quiesced database.

In the event the database in a quiesced instance is in QUIESCE INSTANCE mode, then the authorization ID must satisfy one of the above listed criteria or hold the DBADM authority before the user can successfully connect to a database in a quiesced instance.

In the event the instance is in QUIESCE INSTANCE mode, then the authorization ID must satisfy one of the above listed criteria before the user can successfully attach to the quiesced instance.

User response: You can take one of the following actions to successfully connect to a quiesced database or a database of a quiesced instance, or attach to a quiesced instance:

- To connect to the database, wait for the database to be unquiesced.
- To attach to the instance or connect to a database in the instance, wait for the instance to be unquiesced.
- Retry connecting to the database or attaching to the instance using an authorization ID that has sufficient authority.

sqlcode: -20157

sqlstate: 08004

SQL20158N DB2 Data Links Manager is not supported in this DB2 copy version.

Explanation: The DB2 Data Links Manager is not supported in this DB2 copy version and an attempt was made to perform one of the following actions:

- Restore a database backup image for a database enabled for Data Links.
- Upgrade a database which uses the DATALINK data type.
- Create a database object which uses the DATALINK data type. Database objects that use a DATALINK data type include tables, views, functions, methods, distinct types and structured data types.

User response: Perform one of the following actions:

- RESTORE the database backup image in a DB2 copy of a previous release that supports Data Links, disable the use of Data Links, back up the database, and then re-issue the RESTORE DATABASE command using the DB2 copy version to which you want to upgrade the database.
- Using a DB2 copy of a previous release that supports Data Links, disable the use of Data Links and then re-issue the UPGRADE DATABASE command.
- Remove all references to the DATALINK data type and then re-issue the statement to create the database object.

sqlcode: -20158

sqlstate: 42997

SQL20159W The isolation clause is ignored because of the statement context.

Explanation: The isolation clause is specified on a statement that is included in a compound statement that is processed as inline SQL. The isolation clause is ignored and the default isolation level is used for all statements in the compound statement.

User response: No response required. Remove the isolation clause to prevent this warning.

sqlcode: +20159

sqlstate: 01652

SQL20160W The authorizations were granted to USER *userid*. Groups were not considered because the authorization name is more than 8 bytes.

Explanation: The authorization name has a length of more than 8 bytes. The privilege is granted to the user with authorization name *userid* without considering groups defined in the system that might have a matching name. Processing continues.

User response: If the grant was intended for a user, no action is required. If the grant was intended for a group, consider choosing an alternate group because group names greater than 8 bytes are not supported. To avoid this warning message, specify the USER keyword before the authorization name.

sqlcode: +20160

sqlstate: 01653

SQL20161W The column name *column-name* is not a valid column for an event monitor table.

Explanation: The column name specified in the INCLUDES or EXCLUDES clause does not match any valid column for the event monitor table(s) being created.

User response: Examine and correct the specified column name.

sqlcode: -20161

sqlstate: 428AA

SQL20165N An SQL data change statement within a FROM clause is not allowed in the context in which it was specified.

Explanation: An SQL data change statement can be specified in the FROM clause in specific contexts. The SQL data change statement must be the only table-reference in the FROM clause that is used in:

- the outer fullselect of a SELECT statement
- a SELECT INTO statement
- the outer fullselect of a common table expression
- the only fullselect in an assignment statement.

If any input variables are used in other parts of the query, a multiple row INSERT in the FROM clause must not include the USING DESCRIPTOR clause. A multiple row INSERT statement in the FROM clause cannot specify NOT ATOMIC. A SQL fullselect within an XQuery statement cannot include an SQL data change statement in the FROM clause. An SQL fullselect in the default clause of a global variable definition cannot include an SQL data change statement in the FROM clause.

The statement cannot be processed.

User response: Change the statement so that the SQL data change statement within a FROM clause is used in a supported context and is the only table-reference in the FROM clause.

sqlcode: -20165

sqlstate: 428FL

SQL20166N An SQL data change statement within a SELECT specified a view *view-name* which is not a symmetric view or could not have been defined as a symmetric view.

Explanation: The target view of the SQL data change statement within a SELECT statement must be defined WITH CASCADED CHECK OPTION or the fullselect in the view definition (or the fullselect of a view definition of a referenced view) must be able to be defined using WITH CASCADED CHECK OPTION.

A symmetric view is a view defined implicitly or explicitly with the WITH CASCADED CHECK OPTION.

The statement cannot be processed.

User response: Do not use the SQL data change statement within a SELECT with the specified view.

sqlcode: -20166

sqlstate: 428FM

SQL20167N The shared memory set is not large enough to process the request.

Explanation: There is insufficient memory in a shared memory set for one of the following resource requests:

- FCM connection entries
- FCM message anchors
- FCM request blocks

User response: Try the request again. If the error

persists, stop and restart the instance to allow the larger shared memory set size (automatically updated by DB2) to take effect and try the request again.

sqlcode: -20167

sqlstate: 57011

SQL20168N The ALTER BUFFERPOOL statement is currently in progress.

Explanation: A buffer pool cannot be dropped or altered if an ALTER operation is already in progress.

User response: Wait until the ALTER operation has completed. Use the snapshot monitor to check the progress of the ongoing ALTER operation.

sqlcode: -20168

sqlstate: 55051

SQL20169W The buffer pool is not started.

Explanation: The statement was successful, but it will only take effect when the buffer pool is started.

User response: The statement has completed successfully, and will take effect when the database is activated. This happens after all applications disconnect. For the statement to take effect immediately, re-submit it when the buffer pool is started. To start the buffer pool, it is possible in some cases to drop and re-create the buffer pool using the IMMEDIATE option.

sqlcode: +20169

sqlstate: 01654

SQL20170N There is not enough space in the table space *tablespace-name* for the specified action. Reason code = *reason-code*.

Explanation: Space is being removed from a tablespace using one or more of the DROP, REDUCE, and RESIZE container actions resulting in one of the following scenarios:

- 1 The amount of space being removed is greater than the amount of space above the high-water mark.
- 2 The amount of space being removed would result in the tablespace having less than the required 5 extents.

User response:

- 1 Use the snapshot monitor to find the number of useable pages in the tablespace and the tablespace high-water mark. The difference between these values is the maximum number of pages that can be removed.
- 2 Use the snapshot monitor to find the number of useable pages in the tablespace and the

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tablespace extentsize. The number of useable extents in the tablespace is equal to the useable pages divided by the extentsize. There must be at least 5 extents worth of useable pages in the tablespace.

sqlcode: -20170

sqlstate: 57059

SQL20173W The event monitor was created successfully but at least one event monitor target table already exists.

Explanation: While an event monitor was being created, the database manager tried to create one or more target tables but determined that tables with those names already exist. The event monitor was successfully created and target tables were not created to replace tables of the same name that already exist. When the event monitor is activated, it will attempt to use these tables. Event monitor activation may fail if activation processing determines these tables are not suitable.

User response: Check the administration notification log for detailed information. If necessary, drop all target tables and recreate the event monitor to create all target tables.

sqlcode: +20173

sqlstate: 01655

SQL20178N View *view-name* already has an INSTEAD OF *trigger* trigger defined.

Explanation: The view *view-name* already has an INSTEAD OF trigger defined for the indicated operation (UPDATE, DELETE, INSERT). Only one INSTEAD OF trigger can be defined for each operation on the view.

The statement cannot be processed. The INSTEAD OF trigger was not created.

User response: If a new INSTEAD OF trigger is required, drop the existing trigger and then create the new trigger.

sqlcode: -20178

sqlstate: 428FP

SQL20179N An INSTEAD OF trigger cannot be created because of how the view *view-name* is defined.

Explanation: An INSTEAD OF trigger cannot be defined on:

- a view defined using WITH CHECK OPTION
- a view on which such a view has been defined either directly or indirectly

- a view on which such a view has been defined either directly or indirectly
- a view that references an unfenced nickname and the Database Partitioning Feature is enabled

An INSTEAD OF UPDATE trigger cannot be defined on:

- A view nested in a view defined with the WITH ROW MOVEMENT clause
- The view may be the target view of the INSTEAD OF trigger or it may be a view that depends directly or indirectly on the target view of the trigger.
- The statement cannot be processed. The INSTEAD OF trigger was not created.

User response:

- If the view is defined using WITH CHECK OPTION, remove the WITH CHECK OPTION clause.
- If the view is nested in a view defined with the WITH ROW MOVEMENT clause, remove the WITH ROW MOVEMENT clause.
- If the view references an unfenced nickname, specify a different view.

sqlcode: -20179

sqlstate: An INSTEAD OF trigger cannot be created because of how the view is defined

SQL20180N column *column-name* in table *table-name* cannot be altered as specified

Explanation: Column *column-name* cannot be altered for one of the following reasons:

- ADD COLUMN cannot be specified on ALTER TABLE if the table is defined as a history table.
- ALTER COLUMN cannot be specified on ALTER TABLE if the table is defined as a history table.
- ALTER COLUMN with SET GENERATED cannot be specified on ALTER TABLE for a column of a history table.
- ALTER COLUMN with SET GENERATED AS cannot be specified on ALTER TABLE for a column that already is a generated column or has a defined default.
- DROP COLUMN cannot be specified on ALTER TABLE if the table is defined as a history table.
- DROP COLUMN with DROP NOT NULL cannot be specified on ALTER TABLE for a column defined as part of a BUSINESS_TIME period.
- DROP COLUMN with DROP GENERATED cannot be specified on ALTER TABLE for a column defined as row-begin or row-end on a system-period temporal table.

The statement cannot be processed.

User response: Change the name of the column to a

column that can be altered or dropped, and recreate the table with the necessary attributes.

sqlcode: -20180

sqlstate: 428FR

SQL20183N The table *table-name* is not compatible with the specified table partitioning operation.

Explanation: The partitioning clause for table *table-name* is not valid because:

ADD PARTITION BY was specified on an ALTER TABLE statement CREATE INDEX statement or CREATE TABLE statement, but the table is already a partitioned table.

ADD PARTITION, ALTER PARTITION, DROP PARTITION, or DROP DISTRIBUTION was specified on an ALTER TABLE statement, but the table is not a partitioned table, the table is a materialized query table, or a materialized query table is defined on this table.

ADD PARTITION for HASH partitions was specified on an ALTER TABLE statement, but the table is not partitioned using hashing.

DROP PARTITION of a RANGE partition was specified on the ALTER TABLE statement, but the PRESERVE ROWS clause was used. The PRESERVE ROWS clause is only valid for partitioned tables that have HASH partitioning.

User response: Change the statement to one that is valid or specify a different table and reissue the statement.

sqlcode: -20183

sqlstate: 428FT

SQL20188N The primary key or a unique key identified by *name* is a subset of the columns in the ORGANIZE BY clause.

Explanation: All the columns in a primary or unique key are included in the table's ORGANIZE BY clause. This is not allowed, since each block of pages in the table would contain just one row, wasting all the rest of the space in the block.

name is the constraint name, if specified, of the primary key or unique constraint. If a constraint name was not specified, *name* is the first column name specified in the primary key or unique constraint clause followed by three periods. If a unique index is being created, *name* is the name of the unique index.

The statement cannot be processed.

User response: Modify the primary or unique key definition, the unique index definition or the ORGANIZE BY clause, if possible, so that the key is not a subset of the dimensions.

sqlcode: -20188

sqlstate: 429BE

SQL20189W The buffer pool operation (CREATE/ALTER) will not take effect until the next database startup due to insufficient memory.

Explanation: The CREATE or ALTER BUFFERPOOL statement was issued and completed successfully, however due to insufficient memory the create/alter was done DEFERRED. The changes will take effect on the next database startup.

User response: If you do not want to wait until the next startup to activate or resize the buffer pool, you can free memory resources and try again (with the same or different size). Memory resources that can be reduced include other buffer pools, the database heap, the catalog cache, the package cache, and the utility heap. These can be reduced using the ALTER/DROP BUFFERPOOL or UPDATE DATABASE CONFIGURATION command depending on the resource. In the future, to reserve extra memory for the dynamic allocation of buffer pool memory, you can increase the DATABASE_MEMORY database configuration parameter.

If you do not try again:

1. If it is an ALTER BUFFERPOOL that failed, you will continue to run with the current runtime size of the buffer pool. You can use the database monitor to see the current runtime size of the buffer pool.
2. If it is a CREATE BUFFERPOOL that failed, any table spaces that are created in the buffer pool will temporarily (until next startup) be put in a hidden buffer pool with the matching pagesize. Since the hidden buffer pools are small, this can result in lower than desired performance.

To try again:

1. For ALTER BUFFERPOOL, resubmit the command.
2. For CREATE BUFFERPOOL drop the buffer pool and then resubmit the command.

sqlcode: +20189

sqlstate: 01657

SQL20190N Federated insert, update, or delete operation cannot be compiled because of potential data inconsistency.

Explanation: When the data source does not provide application savepoint support and the server option 'iud_app_svpt_enforce' is set to 'Y', the federated insert, update, or delete operation is blocked during precompile. This will prevent potential data inconsistency, which may occur at runtime execution if an error is encountered in the middle of federated

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insert, update, or delete processing.

User response: Possible solutions include:

- Change server option 'iud_app_svpt_enforce' to 'N'.
- Apply the insert, update, or delete directly on the data source.

sqlcode: -20190

sqlstate: 0A503

SQL20191N For an INOUT parameter in a dynamically prepared CALL statement, the same host variable must be used in both the USING and INTO clauses.

Explanation: In a CALL statement, an INOUT parameter must correspond to a single host variable. When executing a dynamically prepared CALL statement, it is necessary to specify the same host variable in both the USING and INTO clauses of the EXECUTE statement.

User response: When specifying a host variable that corresponds to a parameter marker for an INOUT parameter, use the same host variable in both the USING and INTO clauses of the EXECUTE statement. When using SQLDAs to specify a host variable that corresponds to a parameter marker for an INOUT parameter, then the SQLDATA pointers of the corresponding SQLVARs must point to the same host variable.

sqlcode: -20191

sqlstate: 560BB

SQL20192N The specified modes are only supported in a partitioned database environment.

Explanation: Either RECOMMEND PARTITIONINGS or EVALUATE PARTITIONINGS was not invoked in a partitioned database environment. These two modes are only supported in a partitioned database environment.

User response: Invoke RECOMMEND PARTITIONINGS or EVALUATE PARTITIONINGS in a partitioned database environment.

sqlcode: -20192

sqlstate: 56038

SQL20193N An error has occurred when accessing the file *file-name*. Reason code: *reason-code*.

Explanation: An attempt was made to access the file *file-name* on the server but an error occurred. For reason codes 4 to 10, *file-name* may be in the directory specified by the DB2_UTIL_MSGPATH registry variable, or possibly in the directory which is the tmp

directory of the instance. The specified error encountered is indicated by the reason code as follows:

- 1 File format error.
- 2 Communication error.
- 3 Memory allocation error.
- 4 The directory path indicated by the DB2_UTIL_MSGPATH registry variable does not exist.
- 5 The file does not exist.
- 6 The fenced user ID cannot create the file (no execute access to the directory).
- 7 The fenced user ID cannot read the file (no read access).
- 8 The fenced user ID cannot write to the file (no write access).
- 9 Out of disk space (disk full).
- 10 The file cannot be removed.

User response: Use the reason code information to determine how to make the file accessible and resubmit the statement.

sqlcode: -20193

sqlstate: 560BC

SQL20194N Buffer pool *bufferpool-name* does not exist on database partition *dbpartitionnum*.

Explanation: The ALTER BUFFERPOOL statement is specifying a buffer pool, *bufferpool-name*, that does not exist on the database partition *dbpartitionnum*.

User response: Using the ALTER DATABASE PARTITION GROUP statement, add the database partition *dbpartitionnum* to a database partition group that has the buffer pool *bufferpool-name* already defined for it. If the buffer pool is not associated with any specific database partition group, then add the database partition to any database partition group or create a new database partition group for this database partition. Issue the ALTER BUFFERPOOL statement again.

sqlcode: -20194

sqlstate: 53040

SQL20195N An error was encountered while processing line number *line-number* in the path rename configuration file *config-file*. Reason code = *reason-code*.

Explanation: The path rename configuration file *config-file* is being used to rename containers during the current crash or rollforward recovery process. However, while processing the statements in this file, an error was encountered at line *line-number* that is preventing

the recovery process from proceeding. An explanation of the error is indicated by the following reason code:

1. Invalid syntax.
2. The length of the container path exceeds the maximum allowed length for a container path.
3. The container path specified has already been listed on a previous line.
4. The length of the database path exceeds the maximum allowed length for a database path.
5. The database path specified has already been listed on a previous line.
6. The database path must be an absolute path.
7. The database path is specified incorrectly.
8. The wildcard character ("*") is being used incorrectly.

User response: Make the corresponding change to the configuration file as described in the following instructions, and reissue the command:

1. Correct the syntax error.
2. Specify a shorter container path.
3. Remove the duplicate container path from the file.
4. Specify a shorter database path.
5. Remove the duplicate database path from the file.
6. Use an absolute database path instead of a relative one.
7. Specify the database path in the form of a drive letter followed by a colon (for example C:).
8. If using the wildcard character, it must be the last character in both the old and new paths.

sqlcode: -20195

sqlstate: 08504

SQL20196N The one or more built-in types which are returned from the FROM SQL function or method does not match the corresponding built-in types which are parameters of the TO SQL function or method.

Explanation: The built-in types which are returned by a FROM SQL transform function or method have to match the types in the parameter list of the corresponding TO SQL transform function or method.

User response: Choose a different FROM SQL transform function or method or TO SQL transform function or method or alter either the FROM SQL transform function or method or TO SQL transform function or method to make sure that each built-in type returned from the FROM SQL function or method matches the corresponding built-in type that is a parameter of the TO SQL transform function or method.

sqlcode: -20196

sqlstate: 428FU

SQL20197N Cannot define *method-name* as an overriding method. Reason code *reason-code*.

Explanation: An attempt was made to define *method-name* as an overriding method. An overriding relationship between this method and an original method cannot be created because of one of the following reasons, as specified by *reason-code*:

- 1 Cannot find an original method with the same name.
- 2 The original method and the overriding method do not have the same number of parameters.
- 3 The data type of the parameter of the overriding method does not match the data type of the corresponding parameter of the original method.
- 4 The parameter name of the parameter of the overriding method does not match the parameter name of the corresponding parameter of the original method.
- 5 The locator indication of the parameter of the overriding method does not match the locator indication of the corresponding parameter of the original method.
- 6 The FOR BIT DATA indication of the parameter of the overriding method does not match the FOR BIT DATA indication of the corresponding parameter of the original method.
- 7 The RETURNS clause of the overriding method contains an AS LOCATOR clause, a CAST FROM clause or a FOR BIT DATA clause.
- 8 One of the following inherited method attributes is specified: SELF AS RESULT, SQL routine characteristics, or external routine characteristics.
- 9 Return type of the overriding method does not match the return type of the original method.
- 10 The return type of the overriding method is a structured type that is not a subtype of either:
 - the return type of the original method or
 - every return type for all methods that already override the original method.

User response: Modify the method definition based on the reason specified by the *reason-code* as follows:

- 1 Use a method name that identifies an existing method for the supertype of the structured type.

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- 2 Define the same number of parameters for the overriding method as exists for the original method.
- 3 Change the data type to match the data type of the corresponding parameter of the original method.
- 4 Change the parameter name to match the name of the corresponding parameter of the original method.
- 5 Change the locator indication to match the locator indication of the corresponding parameter of the original method.
- 6 Change the FOR BIT DATA indication to match the FOR BIT DATA indication of the corresponding parameter of the original method.
- 7 Remove the AS LOCATOR clause, CAST FROM clause and FOR BIT DATA clause for the overriding method.
- 8 Remove the SELF AS RESULT method attribute and any SQL routine characteristic or external routine characteristic.
- 9 Change the return type to match the return type of the original method.
- 10 Change the return type so that it is a subtype of the original method and all methods that already override the original method.

sqlcode: -20197

sqlstate: 428FV

SQL20198N Method *method-name* calls itself recursively.

Explanation: A method attempted to call itself recursively. The recursion might be direct or indirect in nature.

User response: Modify the method definition.

sqlcode: -20198

sqlstate: 55054

SQL20199N The key transform table function used by the index extension of index *index-id* of table *table-id* in *tbspace-id* generated duplicate rows.

Explanation: The key transform table function specified by the GENERATE USING clause of the index extension used by index *index-id* generated duplicate rows. For a given invocation of the key transform table function, no duplicate rows should be produced. This error is occurred when inserting or updating the key value for the index *index-id* of table *table-id* in table space *tbspace-id*.

The statement cannot be processed.

User response: The code for the key transform table function used by the index extension of index *index-id* must be modified to avoid the creation of duplicate rows.

To determine the index name, use the following query:

```
SELECT IID, INDSHEMA, INDNAME
FROM SYSCAT.INDEXES AS I,
     SYSCAT.TABLES AS T
WHERE IID = <index-id>
      AND TABLEID = <table-id>
      AND TBSpaceID = <tbspace-id>
      AND T.TBASchema = I.TBASchema
      AND T.TABName = I.TABName
```

sqlcode: -20199

sqlstate: 22526

SQL20200N The install or replace of *jar-id* failed as *url* could not be located.

Explanation: The URL specified on the install or replace jar procedure did not identify a valid jar file.

User response: Reissue the install or replace jar procedure with a URL that identifies a valid jar file.

sqlcode: -20200

sqlstate: 46001

SQL20201N The install, replace or remove of *jar-id* failed as the jar name is invalid.

Explanation: The jar name specified on the install, replace or remove jar procedure was invalid. For example, the jar id may be of the improper format, may not exist to be replaced or removed, or can not be installed as it already exists.

User response: Ensure the jar id is of the correct format. If the jar id exists, it may need to be removed before it can be installed. For the remove or replace procedures, ensure the jar id exists.

sqlcode: -20201

sqlstate: 46002

SQL20202N The replace or remove of *jar-id* failed as *class* is in use by routine *routine-name* (specific name *specific-name*).

Explanation: The specified class in the jar file is currently in use by a defined procedure, or the replacement jar file does not contain the specified class for which a procedure is defined.

User response: Ensure all procedures referencing the classes being removed are dropped and resubmit the replace or remove procedure.

sqlcode: -20202

sqlstate: 46003

SQL20203N User defined function or procedure *function-name* has a Java method with an invalid signature.

Explanation: The signature of the java method used to implement the function or procedure was invalid. For example, the method may have parameters that are not mappable to the parameters on the corresponding create statement or the method for a procedure may specify a return value.

User response: Reissue the corresponding CREATE statement specifying parameters that match the Java method, or correct the parameters or return type of the Java method and rebuild the class.

sqlcode: -20203

sqlstate: 46007

SQL20204N The user defined function or procedure *function-name* was unable to map to a single Java method.

Explanation: The identified function or procedure either failed to find a matching Java method, or found more than 1 matching Java method.

User response: Correct either the Java method or corresponding create statement so that the function or procedure call resolves to a single Java method.

sqlcode: -20204

sqlstate: 46008

SQL20205N The user defined function or procedure *function-name* has an input argument with a null value that could not be passed to the method.

Explanation: A function created with "CALLED ON NULL INPUT" or procedure has an input parameter with a null value but the Java datatype of this argument does not support null values. Examples of Java datatypes that do not support null values are BOOLEAN, BYTE, SHORT, INT, LONG or DOUBLE.

User response: If the method is to be called with null values, ensure the input Java types are capable of accepting a null value. For functions, the function could also be created with "RETURNS NULL ON NULL INPUT".

sqlcode: -20205

sqlstate: 39004

SQL20206W The procedure *function-name* returned too many result sets.

Explanation: The specified procedure returned more results sets than were specified on the CREATE PROCEDURE statement.

User response: Modify the procedure to return fewer result sets, or drop and recreate the procedure specifying the correct number of result sets.

sqlcode: +20206

sqlstate: 0100E

SQL20207N The install or remove jar procedure for *jar-id* specified the use of a deployment descriptor.

Explanation: The DEPLOY or UNDEPLOY parameter of the install or replace jar procedure was non-zero; this parameter is not supported and must be zero.

User response: Reissue the procedure with the DEPLOY or UNDEPLOY parameter set to zero.

sqlcode: -20207

sqlstate: 46501

SQL20208N Table *table-name* cannot be created. Reason code = *reason-code*.

Explanation: The table cannot be created because it violates a restriction as indicated by the following reason code:

1. The table used to define a staging table is not a materialized query table with the REFRESH DEFERRED option.
2. The table used to define the staging table already has a staging table associated with it.
3. A materialized query table that references nicknames cannot be created if the CREATE TABLE statement is issued from a non-catalog database partition.
4. A materialized query table that references a protected table, a view that depends on a protected table, or a nickname on which caching is not allowed cannot be created.
5. A security policy cannot be added to a materialized query table or to a staging table.

The statement cannot be processed.

User response: The action corresponding to the reason code is:

1. Specify a materialized query table with the REFRESHED DEFERRED option to define the staging table.
2. Specify a materialized query table that is not associated with a staging table.

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3. Issue the CREATE TABLE statement from the catalog database partition.
4. Correct the fullselect specified in the CREATE TABLE statement so that it does not reference a nickname on which caching is not allowed.
5. Remove the SECURITY POLICY clause from the CREATE TABLE statement

sqlcode: -20208

sqlstate: 428FG

SQL20209N The *option-type* option is not valid for table *table-name* with reason code *reason-code*.

Explanation: The specified option is not valid as indicated by the following reason codes:

1

The READ ACCESS option cannot be specified on a table that is in the Set Integrity Pending No Access state.

2

The FULL ACCESS option is not valid if the table still has integrity types that are not checked.

3

The FULL ACCESS option is only valid on a table in the Normal No Data Movement state or on a detached table.

4

The FULL ACCESS option cannot be specified with the IMMEDIATE UNCHECKED option if the table is in the Normal No Data Movement state.

5

The PRUNE option is not valid on a table that is not a staging table.

6

The PRUNE and INCREMENTAL options cannot be specified simultaneously.

7

The ALL option cannot be specified with the IMMEDIATE UNCHECKED option if the table needs integrity checking due to an operation that involved data partitioning.

8

The ALL or GENERATED COLUMN option cannot be specified with the IMMEDIATE UNCHECKED option if the table's database partitioning key, table-partitioning key, multidimensional clustering key, or

range-clustering key references a generated column whose expression has been altered through an ALTER TABLE statement or the table contains attached data partitions.

9

Neither the ALLOW READ ACCESS option nor the ALLOW WRITE ACCESS option can be specified on a table that is to have its identity column values generated for all rows nor on a materialized query table that is to be fully refreshed nor on a table that has been loaded and is to have its generated column or identity column values computed.

10

The ALLOW QUERY OPTIMIZATION USING REFRESH DEFERRED TABLES option can only be specified on a REFRESH DEFERRED materialized query table.

11

The option is not valid on a text-maintained summary table.

12

The option is not valid on a text-maintained staging table.

13

The ALL option cannot be specified with the IMMEDIATE UNCHECKED option when the SET INTEGRITY statement has more than one target table and any one of the target tables is a partitioned table that has both an attached data partition and a nonpartitioned user index.

14

The GENERATE IDENTITY option cannot be specified in a SET INTEGRITY statement if the specified table is a system-period temporal table.

15

The FORCE GENERATED option cannot be specified if the table is a system-period temporal table.

16

The FOR EXCEPTION clause cannot be specified if the table is a system-period temporal table.

User response:

1

Do not specify the READ ACCESS option.

2

Use the FULL ACCESS option with the IMMEDIATE CHECKED option, or specify

3	ALL as the integrity option with the IMMEDIATE UNCHECKED option.	Reissue the SET INTEGRITY statement with a supported combination of options and target table. For example, issue the SET INTEGRITY statement with the ALL and IMMEDIATE UNCHECKED options while specifying only the affected partitioned table as a target; or issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option and multiple target tables instead.
4	Use the FULL ACCESS option with the IMMEDIATE CHECKED option.	14
5	Use the FULL ACCESS option without the IMMEDIATE UNCHECKED option.	15
6	Remove the table that is not a staging table from the statement.	Omit the GENERATE IDENTITY option when the NOT INCREMENTAL option is specified for a system-period temporal table.
7	Specify only one of PRUNE or INCREMENTAL.	16
8	Instead of specifying the ALL option, specify explicitly those integrity-options that are desired to be unchecked with the IMMEDIATE UNCHECKED option. Then issue another SET INTEGRITY statement with the IMMEDIATE CHECKED option to check the integrity of data partitioning for the table.	Remove the FORCE GENERATED option if the table is a system-period temporal table.
9	Omit the ALL or GENERATED COLUMN option from those integrity-options that are desired to be unchecked with the IMMEDIATE UNCHECKED option. Then issue another SET INTEGRITY statement with the IMMEDIATE CHECKED and FORCE GENERATED options to recompute the generated column values based on the new expression. The FORCE GENERATED option can be omitted if the data in the table are guaranteed to satisfy the new generated column expressions.	Remove the FOR EXCEPTION clause if the table is system-period temporal table.
10	Specify the ALLOW NO ACCESS option on a table.	sqlcode: -20209
11	Remove the ALLOW QUERY OPTIMIZATION USING REFRESH DEFERRED TABLES option.	sqlstate: 428FH
12	Remove the text-maintained summary table from the statement.	<hr/> SQL20211N The specification ORDER BY or FETCH FIRST n ROWS ONLY is invalid.
13	Remove the text-maintained staging table from the statement or specify the IMMEDIATE CHECKED option.	Explanation: An ORDER BY or FETCH FIRST n ROWS ONLY is not allowed in: <ul style="list-style-type: none"> • the outer fullselect of a view • the outer fullselect in the RETURN statement of an SQL Table function • a materialized query table definition • a subselect which is not enclosed in parenthesis User response: In case of: <p>subselect</p> Enclose the subselect including the ORDER BY or FETCH FIRST n ROWS ONLY in parenthesis. <p>FETCH FIRST n ROWS ONLY</p> Use the ROW_NUMBER() OVER() clause in conjunction with a predicate in the where clause. Example: <pre>SELECT name FROM (SELECT ROW_NUMBER() OVER() AS m, name FROM emp) AS e WHERE m < 10</pre> <p>ORDER BY</p> Use ORDER BY in the query using the view, the materialized query table, or the SQL table function instead.

sqlcode: -20211

sqlstate: 428FJ

SQL20212N User defined routine *function-name* encountered an exception attempting to load Java class *class-name* from JAR *JAR-name*. Original exception *underlying-exception*.

Explanation: A ClassNotFoundException has occurred. The ClassNotFoundException may reference an original Java exception which further describes why the class wasn't found. For example, the underlying exception might be an I/O error that occurred trying to read a JAR file, or an SQL error occurred reading the JAR from the data dictionary. As much of the following tokens that will fit within the SQLCA limits will be returned, as appropriate.

The *function-name* identifies the specific name of the external Java function or procedure whose execution encountered the ClassNotFoundException.

The *class-name* identifies the Java class whose definition could not be found.

The *JAR-name* optionally identifies the installed JAR expected to contain the identified class. '(none)' will be present unless the external Java function or procedure is defined to be in an installed JAR.

The *underlying-exception* optionally contains the toString() of the underlying exception that resulted in this ClassNotFoundException, if any. '(none)' will be present if there is no underlying exception.

User response: Execute an ALTER PROCEDURE to specify where the class is to be found, make sure the class is in the specified JAR or the system classpath, or correction the condition reported by the *underlying-exception*.

sqlcode: -20212

sqlstate: 46103

SQL20223N The ENCRYPT or DECRYPT function failed. Encryption facility not available.

Explanation: The encryption facility is not available to service the encryption or decryption request.

User response: If the encryption facility is not installed, then install it before using the ENCRYPT or DECRYPT functions. If the encryption facility is installed, then verify that it is working correctly.

sqlcode: -20223

sqlstate: 560BF

SQL20225W The buffer pool operation (DROP) will not take effect until the next database startup because the buffer pool is in use.

Explanation: The DROP BUFFERPOOL statement was issued and completed successfully, however a table space is still using this buffer pool. Even though a table space may be reassigned to a different buffer pool, the table space reassignment may only take effect on the next database restart. If the table space in question is dropped by the time this operation commits, then this buffer pool will be removed from memory at that time. Until the next database restart, this buffer pool may remain in memory and a CREATE or ALTER of any other buffer pool that would reuse this buffer pool ID may be deferred.

User response: Restart the database to delete the buffer pool from memory.

sqlcode: 20225

sqlstate: 01657

SQL20227N Required clause is missing for argument *number* of *expression*.

Explanation: *expression* expression requires that a clause be specified for argument number *number*. If *expression* is XMLATTRIBUTES, then an AS clause is required for the XML attribute name. If *expression* is XMLFOREST, then an AS clause is required for the XML element name. The statement cannot be processed.

User response: Correct the statement by providing the required clause for the argument.

sqlcode: -20227

sqlstate: 42633

SQL20230N The procedure name may not be specified by a host variable in the CALL statement and the arguments may not be specified with a USING DESCRIPTOR clause.

Explanation: The procedure name must be specified as an identifier in the CALL statement and the arguments must be explicitly provided. A host variable may not be used for the procedure name. The USING DESCRIPTOR clause may not be used to specify the arguments.

User response: The CALL statement must be rewritten to provide an identifier for the procedure name and to explicitly list the arguments. If either the procedure name or the arguments are not known until run time, use a dynamically prepared CALL statement.

For applications being migrated from a release previous to V8, the CALL_RESOLUTION DEFERRED precompile option can be used until the applications

are rewritten to use the dynamically prepared CALL statement.

sqlcode: -20230

sqlstate: 42601

SQL20238N The table *table-name* is defined as CCSID UNICODE and cannot be used in an SQL function or SQL method.

Explanation: In a non-Unicode database, only tables with the ASCII encoding scheme may be referenced inside an SQL function or SQL method. Since the table *table-name* is defined as CCSID UNICODE, it may not be used in an SQL function or an SQL method.

User response: Do not use CCSID UNICODE tables in an SQL function or SQL method.

sqlcode: -20238

sqlstate: 560C0

SQL20239N Tables created in the Unicode encoding scheme cannot be a typed table, or contain graphic types, the XML type, or user-defined types.

Explanation: In a non-Unicode database, tables created in the Unicode encoding scheme cannot be a typed table and also cannot contain columns defined with any graphic type, the XML type, or user-defined type.

User response: Remove the CCSID UNICODE clause from the table definition or remove the graphic type, the XML type, or user-defined type from the table definition.

sqlcode: -20239

sqlstate: 560C1

SQL20240N Invalid specification of a column *column-name* of type DB2SECURITYLABEL. Reason code: *reason-code*.

Explanation: For a column of type DB2SECURITYLABEL the specification of an attribute in a CREATE TABLE or ALTER TABLE statement may be invalid for the following reason.

4

A security label column cannot be defined for a created temporary table or a declared temporary table.

10

A column of type DB2SECURITYLABEL cannot be defined as a generated column.

User response: Correct the specification of the column

of type DB2SECURITYLABEL and resubmit the statement.

sqlcode: -20240

sqlstate: 42963

SQL20241N Writing a history file entry for dropped table *table-name* failed.

Explanation: Dropped table recovery is enabled on the table space in which the dropped table *table-name* resides. When a table space has dropped table recovery enabled, a history file entry is created as part of a table drop. This history file is contains data which is useful during the recovery of a dropped table. The writing of the new history file entry for the dropped table failed. As a result, the table drop could not be completed.

A possible cause for such a failure is a full file system where the history file is located.

User response: Ensure that the history file can be written to by the database manager. If you are not concerned about dropped table recovery, disable this feature and reissue the drop table statement.

sqlcode: -20241

sqlstate: 560C2

SQL20242N The sample size specified in the TABLESAMPLE clause is not valid.

Explanation: The sample size specified in the TABLESAMPLE clause must be a positive numeric value greater than zero and less than or equal to 100.

The statement was not processed.

User response: Change the sample size specified in the TABLESAMPLE clause to a valid numeric value greater than zero and less than or equal to 100.

sqlcode: -20242

sqlstate: 2202H

SQL20243N The view *view-name* is the target in the MERGE statement, but is missing the INSTEAD OF trigger for the *operation* operation.

Explanation: The view *view-name* is a direct or indirect target in the MERGE statement and has an INSTEAD OF trigger defined for it, but does not have INSTEAD OF triggers defined for all operations. The trigger for the *operation* operation is not present.

User response: Create INSTEAD OF triggers for the UPDATE, DELETE and INSERT operations on view *view-name*, or drop all INSTEAD OF triggers for the view.

sqlcode: -20243

sqlstate: 428FZ

SQL20247N Table *table-name* cannot be partitioned and contain a column with data type DATALINK.

Explanation: An attempt was made to create or alter table *table-name* in such a way that would create a partitioned table that contained a column with data type DATALINK. A table cannot be both partitioned and contain such a column.

User response: Create or alter the table to be either partitioned or to include a column of data type DATALINK, but not both.

sqlcode: -20247

sqlstate: 429BH

SQL20249N The package *package-name* must be explicitly rebound.

Explanation: The package *package-name* contains a section that must be rebound.

The statement cannot be processed.

User response: Explicitly rebind the package using either the REBIND command or the BIND command. To preserve function and data type resolution, specify the RESOLVE CONSERVATIVE option on the REBIND command.

sqlcode: -20249

sqlstate: 560C5

SQL20250N The number of data partitions exceeds the number of table spaces for the table.

Explanation: The partitioned table was defined with NO CYCLE and there are not enough table spaces defined for the number of specified table partitions.

The statement cannot be processed.

User response: In the CREATE TABLE statement, either specify additional table spaces for the table or remove the NO CYCLE specification for the table.

sqlcode: -20250

sqlstate: 428G1

SQL20251N The last data partition cannot be detached from the table *table-name*.

Explanation: The ALTER TABLE statement would have resulted in the the last remaining data partition being detached from the table. This operation is not allowed. A partitioned table must have at least one data partition whose status is normal or attached. A partitioned table cannot have only data partitions whose status is detached. To determine the status of partitions, query the catalog view, SYSCAT.DATAPARTITIONS.

The statement cannot be processed.

User response: Ensure that the ALTER TABLE statement leaves at least one data partition in the table.

sqlcode: -20251

sqlstate: 428G2

SQL20253N The BEFORE trigger or generated column *name* cannot be created or altered because doing so would cause the table on which the BEFORE trigger or generated column is defined to be delete-connected to at least one of its ancestor tables through multiple relationships with conflicting delete rules. The conflict is between the delete rules of constraints *constraint-name1* and *constraint-name2*. Reason code = *reason-code*.

Explanation: The definition for the BEFORE trigger or generated column *name* in the CREATE TRIGGER, CREATE TABLE or ALTER TABLE statement is not valid for the reason specified by the *reason-code* as follows:

1. The execution of the delete rule of constraint *constraint-name1* will fire the BEFORE trigger *name* and the body of this BEFORE trigger modifies a column that is part of the foreign key of constraint *constraint-name2* or modifies a column that is referenced by a generated column which is part of the foreign key of constraint *constraint-name2*.
2. The execution of the delete rule of constraint *constraint-name1* will trigger the update of the generated column *name* and the generated column itself is part of the foreign key of constraint *constraint-name2*.
3. With the addition of the BEFORE trigger or generated column, *name*, the execution of both constraints *constraint-name1* and *constraint-name2* would cause an update of the same column.

The statement cannot be processed.

User response: The action corresponding to the reason code is:

1. Change the BEFORE trigger definition so that the BEFORE trigger will not be fired when the delete rule of constraint *constraint-name1* is executed, or change the body of the BEFORE trigger so that it does not modify a column that is part of the foreign key of constraint *constraint-name2* nor modify a column that is referenced by a generated column which is part of the foreign key of constraint *constraint-name2*.
2. Change the generated column expression so that the generated column will not be updated when the delete rule of constraint *constraint-name1* is executed

or change foreign key of constraint *constraint-name2* so that it does not include the generated column.

3. Change the BEFORE trigger definition or generated column expression so that the execution of both constraints *constraint-name1* and *constraint-name2* would not cause an update of the same column.

sqlcode: -20253

sqlstate: 42915

SQL20254N FOREIGN KEY *name* is not valid since it would cause table *table-name* to be delete-connected to itself through a cycle that contains a delete rule of either RESTRICT or SET NULL. Reason code = *reason-code*.

Explanation: A referential cycle must not contain a delete rule of RESTRICT or SET NULL. The delete rule specified for FOREIGN KEY *name* in the CREATE TABLE or ALTER TABLE statement is not valid for the reason specified by the *reason-code* as follows:

1. The delete rule specified is RESTRICT or SET NULL and the referential relationship would cause table *table-name* to be delete-connected to itself.
2. The delete rule specified is CASCADE but the referential relationship would cause table *table-name* to be delete-connected to itself by a cycle that contains a delete rule of either RESTRICT or SET NULL.

name is the constraint name, if specified, in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods.

The statement cannot be processed.

User response: The action corresponding to the reason code is:

1. Change the delete rule to CASCADE or NO ACTION or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
2. Change the delete rule to NO ACTION, RESTRICT, or SET NULL or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.

sqlcode: -20254

sqlstate: 42915

SQL20255N FOREIGN KEY *name* is not valid because it would cause a descendent table *descendent-table-name* to be delete-connected to its ancestor table *ancestor-table-name* through multiple relationships with conflicting delete rules. The conflict is between the delete rules of constraints *constraint-name1* and *constraint-name2* on the descendent table. Reason code = *reason-code*.

Explanation: The referential constraint definition specified for FOREIGN KEY *name* in the CREATE TABLE or ALTER TABLE statement is not valid for the reason specified by the *reason-code* as follows:

1. The relationship is self-referencing and is specified with a delete rule of RESTRICT or SET NULL and the table is a dependent in a relationship with a delete rule of CASCADE.
2. The relationship is specified with a delete rule of CASCADE, and a self-referencing relationship with the delete rule of RESTRICT or SET NULL already exists on the table.
3. The foreign key overlaps with a foreign key of an existing relationship and their delete rules are either not the same or one of them is SET NULL.
4. The relationship is specified with a delete rule of CASCADE which would cause the descendent table to be delete-connected to its ancestor table through multiple relationships where at least two such relationships have overlapping foreign keys and their delete rules are either not the same or one of them is SET NULL.
5. At least one of the conflicting referential constraints is specified with a delete rule of SET NULL and its foreign key definition overlaps with either the partitioning key, or a dimension of an MDC table.
6. The relationship is specified with a delete rule of CASCADE which would cause the descendent table to be delete-connected to its ancestor table through multiple relationships where at least one of the relationships is specified with a delete rule of SET NULL and its foreign key definition overlaps with either the partitioning key, or a dimension of an MDC table.
7. The new referential constraint definition conflicts with existing referential constraints when BEFORE triggers and generated columns are considered.
8. The new referential constraint will cause another pair of conflicting referential constraints to co-exist in the delete-connected graph when BEFORE trigger and generated columns are considered.

name is the constraint name, if specified, in the FOREIGN KEY clause. If a constraint name was not specified, *name* is the first column name specified in the column list of the FOREIGN KEY clause followed by three periods. The same convention applies to *constraint-name1* and *constraint-name2*.

The statement cannot be processed.

User response: The action corresponding to the reason code is:

1. Change the delete rule to CASCADE or NO ACTION or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
2. Change the delete rule to NO ACTION, RESTRICT, or SET NULL or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
3. Do not specify a column in the foreign key definition that is already contained in the existing foreign key definition or if the delete rule of the existing referential constraint is not SET NULL, change the delete rule of the new constraint to be the same.
4. Change the delete rule to NO ACTION, RESTRICT, or SET NULL or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
5. Do not specify a column in the foreign key definition that is already contained in the existing partitioning key definition or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
6. Change the delete rule to NO ACTION, RESTRICT, or SET NULL or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
7. Change the delete rule to NO ACTION or remove the triggers fired by the referential constraint or do not create the new referential constraint.
8. Change the delete rule to NO ACTION, RESTRICT, or SET NULL or eliminate the particular FOREIGN KEY clause from ALTER TABLE statement.

sqlcode: -20255

sqlstate: 42915

SQL20256N FOREIGN KEY *name* is not valid because it would cause two tables *table-name1* and *table-name2* to be delete-connected to each other while they are delete -connected to the same ancestor table *ancestor-table-name* through CASCADE relationships. Reason code = *reason-code*.

Explanation: When two tables are delete-connected to the same table through CASCADE relationships, the two tables must not be delete-connected to each other where the delete rule of the last relationship in each path is RESTRICT or SET NULL. The delete rule specified in a FOREIGN KEY clause of the CREATE TABLE or ALTER TABLE statement is not valid for the reason specified by the *reason-code* as follows:

1. The relationship is specified with a delete rule of RESTRICT or SET NULL and would cause the two tables to be delete-connected to each other.
2. The relationship is specified with a delete rule of CASCADE and would cause two tables to be delete-connected to each other where the delete rule of the last relationship in each path is RESTRICT or SET NULL. The statement cannot be processed.

User response: The action corresponding to the reason code is:

1. Change the delete rule to CASCADE or NO ACTION or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.
2. Change the delete rule to NO ACTION, RESTRICT, or SET NULL or eliminate the particular FOREIGN KEY clause from the CREATE TABLE or ALTER TABLE statement.

sqlcode: -20256

sqlstate: 42915

SQL20257N FINAL TABLE is not valid when the target view *viewname* of the SQL data change statement in a fullselect has an INSTEAD OF trigger defined.

Explanation: The fullselect includes an INSERT or UPDATE statement that targets a view that has an INSTEAD OF trigger defined for the SQL data change operation. The FINAL TABLE results of an INSTEAD OF trigger cannot be returned.

The statement cannot be processed.

User response: Change FINAL TABLE to NEW TABLE or drop the INSTEAD OF trigger.

sqlcode: -20257

sqlstate: 428G3

SQL20258N Invalid use of INPUT SEQUENCE ordering.

Explanation: The ORDER BY clause specifies INPUT SEQUENCE and the FROM clause of the fullselect does not specify an INSERT statement.

The statement cannot be processed.

User response: Use INPUT SEQUENCE when the FROM clause of the fullselect specifies an INSERT statement.

sqlcode: -20258

sqlstate: 428G4

SQL20259N Column *column-name* cannot be selected from the target of the data change statement in the FROM clause of the fullselect.

Explanation: A column has been selected that cannot be specified in the select list of this query. This column is based on a column in a view or fullselect that is the target of an INSERT or UPDATE statement that is specified in a FROM clause using either NEW TABLE or FINAL TABLE. The column selected is based on:

- A subquery
- A function that reads or modifies SQL data
- A function that is deterministic or has external action
- An OLAP function
- A next value for a sequence.

The statement cannot be processed.

User response: Change the select list to remove the column.

sqlcode: -20259

sqlstate: 428G6

SQL20260N The assignment clause of the UPDATE statement must specify at least one column that is not an INCLUDE column.

Explanation: The UPDATE statement has specified INCLUDE columns and the only assignments are made to INCLUDE columns. At least one of the assignments in an UPDATE statement must be to a column of the target of the UPDATE statement.

The statement cannot be processed.

User response: Change the statement to specify an assignment to a column of the target of the UPDATE statement.

sqlcode: -20260

sqlstate: 428G5

SQL20261N Invalid row movement to table *table-name* within the UNION ALL view *view-name*.

Explanation: A check-constraint on table *table-name* caused an updated row to be rejected. When attempting to insert the row into another underlying table of *view-name*, the table *table-name* accepted the row. The destination table of a moved row cannot be identical to the table from which it originated.

The statement cannot be processed.

User response: Verify the interaction between before update and before insert triggers on the target table. When performing row movement, DB2 executes before update triggers first, which may modify the row. The

rejected row may then be processed by before insert triggers which may again modify the row in a way that it is now accepted by the check constraints of the target table.

Change the triggers so that this does not happen.

sqlcode: -20261

sqlstate: 23524

SQL20262N Invalid usage of WITH ROW MOVEMENT in view *view-name*. Reason code = *reason-code*.

Explanation: The view *view-name* has been defined with the WITH ROW MOVEMENT clause. This clause is not applicable for the view because of one of the following:

1. The view's outermost fullselect is not a UNION ALL.
2. The view contains nested UNION ALL operations other than in the outermost fullselect.
3. Not all view columns are updatable.
4. Two columns of the view are based on the same column of the base table.
5. One of the underlying views has an INSTEAD OF UPDATE trigger defined on it.
6. The view contains references to system-period temporal tables or application-period temporal tables.

The view cannot be created.

User response: Depending on the reason code, do the following:

1. Omit the WITH ROW MOVEMENT clause. It is not applicable for views without UNION ALL.
2. Rewrite the view body so that UNION ALL only occurs on the outermost fullselect.
3. Omit columns that are not updatable from the view definition.
4. Rewrite the view body so that each column of a base table is only referenced once in the view definition.
5. Omit the WITH ROW MOVEMENT clause and use an INSTEAD OF UPDATE trigger on the newly defined view.
6. Remove any reference to a system-period temporal table or an application temporal table.

sqlcode: -20262

sqlstate: 429BJ

SQL20263N Invalid attempt to update view *view-name1* because view *view-name2* is defined WITH ROW MOVEMENT.

Explanation: The attempt to update *view-name1* failed because it directly or indirectly contains a UNION ALL operation involving view *view-name2* which is defined with the WITH ROW MOVEMENT clause.

The statement cannot be executed.

User response: Drop the view *view-name2* and recreate it without the WITH ROW MOVEMENT clause.

sqlcode: -20263

sqlstate: 429BK

SQL20264N For table *table-name*, authorization ID *auth-id* does not have *access-type* access to the column *column-name*.

Explanation: While accessing the table named *table-name*, the authorization ID *auth-id* is attempting *access-type* access on column *column-name*. The authorization ID does not have the LBAC credentials necessary to access the column in that way.

If a generated column is being created, LBAC credentials for reading the column are required to include the column in a generation-expression.

User response: Contact a user who has SECADM authority and ask the user to grant the authorization ID *authid* LBAC credentials that allow *access-type* access to the column *column-name*.

sqlcode: -20264

sqlstate: 42512

SQL20267N The function *function-name* (specific *specific-name*) modifies SQL data and is invoked in an illegal context. Reason code = *reason-code*.

Explanation: The function *function-name* with specific name *specific-name* is defined with the MODIFIES SQL DATA property. Functions with this property are only allowed as the last table reference in a select-statement, common-table-expression, RETURN statement that is a subselect, SELECT INTO statement, or row-fullselect in a SET statement. As well, each argument to the table function must be correlated to a table reference in the same FROM clause as the table function, and every table reference must be correlated to by some argument in the table function. An argument is correlated to a table reference when it is a column of that table reference.

Reason-code:

1. There are table references following the table function.

2. The table function is not referenced in the outer most subselect.
3. The table function is preceded by a table reference which is not referenced by a function argument.
4. The table function is used in the body of a view definition.
5. The table function is used in a fullselect within an XQuery context.
6. The table function is referenced by an OUTER JOIN operator or is nested within other explicit joins (using parentheses in a joined-table clause).
7. The function is referenced in the default clause for a global variable or parameter of a procedure definition.

The statement cannot be processed.

User response:

1. Rewrite the query so that the table function is the last table reference in the FROM clause.
2. Move the table function to be in the outermost subselect.
3. Remove the table reference not correlated to in the table function or include an argument in the table function that correlates to the table reference.
4. Remove the table function from the body of the view definition.
5. Remove the table function from the fullselect in the XQuery context.
6. Remove the OUTER JOIN operator or do not place table function in a nested explicit join.
7. Remove the function from the default clause for the global variable or parameter of a procedure definition.

For reason codes 1, 2, and 3, the query can be rewritten using a common table expression to isolate the table function invocation. For example:

```
SELECT c1 FROM
  (SELECT c1 FROM t1, t2,
   TABLE(tf1(t1.c1) AS tf), t3)
  AS x, t4
```

Can be rewritten as:

```
WITH cte1 AS (SELECT c1 FROM t1,
  TABLE(tf1(t1.c1)) AS tf),
  x AS (SELECT c1 FROM t2, cte1, t3)
  SELECT c1 FROM x, t4;
```

sqlcode: -20267

sqlstate: 429BL

SQL20268N Collation cannot be applied. Reason code = *reason-code*.

Explanation: The collation cannot be applied for reason code *reason-code*. The reason codes and their meanings are:

- 1 The result of applying the collation is greater than 32,742 bytes.
- 2 The collation cannot be applied to the functions LOCATE, POSITION, and POSSTR.
- 3 The collation cannot be applied to a LIKE predicate or %WLDCRD function.
- 4 The collation cannot be applied to a FOR BIT DATA string.

User response: For each reason code:

- 1 The generated collation key is longer than the source string and is dependent on the collation selected. Either reduce the length of the source string, or choose a different collation.
- 2 Either omit the function or specify a non-UCA collation.
- 3 Either omit the function or specify a non-UCA collation.
- 4 Do not use a FOR BIT DATA string.

sqlcode: -20268

sqlstate: 429BM

SQL20269N The nickname *nickname* cannot be referenced in an enforced referential constraint.

Explanation: A referential constraint in the CREATE TABLE statement is invalid. The constraint definition specifies ENFORCED but refers to a nickname.

The statement cannot be processed.

User response: Change the referential constraint to specify NOT ENFORCED or remove the reference to the nickname.

sqlcode: -20269

sqlstate: 428G7

SQL20271W The name at ordinal position *number* in the statement, with name *name*, was truncated.

Explanation: At least one name in the described statement was truncated. The first name that was truncated is identified by the name *name* and ordinal position *number*. If performing a describe output of a prepared query, the ordinal position is relative to the select list column of the query. If performing a describe output of a CALL statement, the ordinal position is

relative to the OUT or INOUT parameters of the procedure to which the CALL resolved. If performing a describe input of a CALL statement, the ordinal position is relative to the IN or INOUT parameters of the procedure to which the CALL resolved.

The column name, parameter name, user defined type name or user defined type schema name was either too long, or became too long after code page conversion.

Note that the length of the column name, parameter name, user defined type name, and user defined type schema name are limited when using the SQLDA structure.

User response: If the exact name or schema is significant, do one of the following:

1. Use a client whose code page does not cause expansion beyond the supported maximum length.
2. For a column name, change the table, view, or nickname so the column has a shorter name.
3. For a parameter name, change the procedure so the parameter has a shorter name.
4. For a user defined type name or user defined type schema name, drop and recreate the user defined type with a shorter name.
5. For a schema name, change the table, view, procedure, or user defined type.

sqlcode: +20271

sqlstate: 01665

SQL20273N The nickname statistics cannot be updated because the database is not enabled for federation.

Explanation: An error has been detected at the instance level. The requested operation cannot be completed because federation was not enabled for the instance.

User response: Set the DBM variable FEDERATED to YES and then restart the database manager.

sqlcode: -20273

sqlstate: 55056

SQL20274W Some of the nickname statistics cannot be updated.

Explanation: Either DB2 cannot execute a query against a nickname to gather the statistics, or DB2 cannot write the results of the updates to the federated database system catalog.

User response: The nickname statistics update errors are listed in the log file, if a log file path was specified.

sqlcode: +20274

sqlstate: 550C8

SQL20275N The XML name *xml-name* is not valid.
Reason code = *reason-code*.

Explanation: The statement cannot be processed because it violates a constraint as indicated by the following reason code:

1. xmlns is used as an attribute name, or prefix for an element or attribute name.
2. The namespace prefix in a qualified name is not declared within its scope.
3. The name for an element or attribute is not an XML QName.
4. The name of the XML processing instruction is not an XML NCName.
5. The name of the XML processing instruction cannot contain "xml" (in any combination of upper or lower case).
6. The name for an argument of XMLTABLE, XMLQUERY or XMLEXISTS expression is not an XML NCName.

User response: Correct the XML name and resubmit the statement.

sqlcode: -20275

sqlstate: 42634

SQL20276N The XML namespace prefix *xml-namespace-prefix* is not valid. Reason code = *reason-code*.

Explanation: The statement cannot be processed because it violates a constraint as indicated by the following reason code:

1. The namespace prefix is not an XML NCName.
2. xml or xmlns cannot be re-declared as a namespace prefix.
3. Duplicate namespace prefixes were declared.

User response: Correct the XML namespace prefix and resubmit the statement.

sqlcode: -20276

sqlstate: 42635

SQL20277W Characters were truncated while performing conversion from code page *source-code-page* to code page *target-code-page*. The maximum size of the target area was *max-len*. The source string length was *source-len* and its hexadecimal representation was *string*.

Explanation: During the execution of the SQL statement, a code page conversion operation has resulted in a string that is longer than the maximum size of the target object. Characters were truncated so the result would fit in the target area.

User response: If the truncation has caused an

unexpected consequence, then expand the length of the target column and issue the statement again.

sqlcode: +20277

sqlstate: 01004

SQL20278W The view *viewname* may not be used to optimize the processing of queries.

Explanation: The fullselect of the view includes elements that prohibit the use of the statistics on the view for optimization when the view is not referenced directly in a query. These elements of the fullselect may include:

- aggregations functions
- distinct operations
- set operations (union, except or intersect).

The view is successfully altered to enable query optimization.

User response: No action is required. If the intent of the view is to optimize queries that do not directly reference the view, then the view could be dropped or have query optimization disabled. You could also consider defining the fullselect of the view to remove the elements that prevent optimization.

sqlcode: +20278

sqlstate: 01667

SQL20279N The view *view-name* cannot be enabled for query optimization. Reason code = *reason-code*.

Explanation: The view cannot allow the ENABLE QUERY OPTIMIZATION option because the fullselect does not conform to the set of queries that can take advantage of this capability. The statement failed for one of the following reasons:

1. The view directly or indirectly references an existing materialized query.
2. The view is a typed view.
3. The view references a function with external action.

The statement cannot be processed.

User response: The action is based on the reason code as follows:

1. Remove the reference to the materialized query table.
2. There is no way to specify statistics on a typed view. It may be possible to define a similar view that is not a typed view to enable optimization using the statistics.
3. Remove the reference to any function with external action from the view query.

sqlcode: -20279

sqlstate: 428G8

SQL20280W Insufficient permission to create or write to the *log-file-path* file.

Explanation: The statement completed successfully, but the user does not have permission to create or write to the specified log file, *log-file-path*.

User response: To write the details to the log file, make sure that you have write access to the log file path specified. Alternatively, omit the optional log file path.

sqlcode: -20280

sqlcode: 42501

SQL20282N .NET procedure or user-defined function *name*, specific name *specific-name* could not load .NET class *class*. Reason code *reason-code*.

Explanation: The .NET class given by the EXTERNAL NAME clause of a CREATE PROCEDURE or CREATE FUNCTION statement could not be loaded. The reason codes are:

1. The assembly of the .NET routine was not found.
2. Class was not found in the assembly specified.
3. A method with types matching those specified in the database catalogs could not be found in the class specified.

User response:

1. Ensure that correct assembly file is given, including any file extensions. If the full path is not specified, ensure that only one instance of the assembly exists in the system PATH, as the first instance of the assembly found in the PATH will be loaded.
2. Ensure that the assembly was specified correctly as described in response 1. Ensure that the case sensitive class name was specified correctly and that it exists in the specified assembly.
3. Ensure that the class was specified correctly as described in response 2. Ensure that the case sensitive method name was specified correctly, and that it exists in the specified class as a "public static void" method.

sqlcode: -20282

sqlstate: 42724

SQL20284N No plan was possible to create for federated data source *server-name*. Reason = *reason-code*.

Explanation: While building a federated query access plan, the query fragment for one or more data sources cannot be processed because of a missing predicate or a

problem with the query syntax as indicated by the following reason code:

1. A required predicate is missing.
2. A predicate that can be processed by the data source is combined with another predicate either using the OR operator or a BETWEEN predicate.

User response: See the federation documentation for this data source. Correct the query syntax as needed and resubmit the statement. The action corresponding to the reason code is:

1. Supply the missing predicate.
2. Change the statement syntax so that predicates for one data source are separated from predicates for another data source using the AND operator and not the OR operator.

sqlcode: -20284

sqlcode: 429BO

SQL20285N The statement or command is not allowed because the table named *table-name* has detached dependents or the asynchronous partition detach operation is not complete. Reason code = *reason-code*.

Explanation: The statement or command is not allowed due to a previously issued ALTER TABLE statement that detached a data partition. The specific situation is described based on the reason code *reason-code*.

Reason code 1

The table is the target table of a detach operation and has detached dependents which are required to be incrementally maintained with respect to the current content of this table in order to preserve the integrity of the detached dependents. The statement or command is not allowed because execution of the statement or command would prevent the detached dependents from being incrementally maintained.

Reason code 2

The table is the target table of a detach operation and is not available because the asynchronous partition detach task has not completed.

Reason code 3

The table is the source table of a detach operation and has logically detached partitions. The statement or command is not allowed because the asynchronous partition detach task has not completed.

User response: Take the following action based on the reason code.

Reason code 1

To maintain the detached dependents before issuing the statement or command, perform the following steps:

1. Query the SYSCAT.TABDETACHEDDEP table to identify the detached dependents of the table.
2. Issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option for the detached dependents.
3. Re-issue the statement or command.

To issue the statement or command immediately without maintaining the detached dependents, perform the following steps:

1. Issue the SET INTEGRITY statement with the FULL ACCESS option on the table to reset its detached property.
2. Re-issue the statement or command.

Note: The second set of steps will force remaining detached dependents to require full integrity processing on subsequent SET INTEGRITY statements.

To identify the detached dependents of a table, issue the following query replacing <schema-name> and <table-name> with the values returned in the message for the token *table-name*:

```
SELECT DEPTABSCHEMA, DEPTABNAME
FROM SYSCAT.TABDETACHEDDEP
WHERE TABSCHEMA=<schema-name> AND
TABNAME=<table-name>
```

Reason code 2

Perform the following steps:

1. Wait for the asynchronous partition detach task to complete.
2. Re-issue the statement or command.

Reason code 3

Perform the following steps:

1. Wait for the asynchronous partition detach task to complete.
2. Verify that the table does not have any logically detached partitions.
3. Re-issue the statement or command.

To identify all the logically detached partitions, issue the following query replacing the <schema-name> and <table-name> with the values returned in the message for the token *table-name*:

```
SELECT DATAPARTITIONNAME
FROM SYSCAT.DATAPARTITIONS
WHERE TABSCHEMA=<schema-name> AND
TABNAME=<table-name> AND
STATUS='L'
```

To monitor the progress of the asynchronous partition detach task, use the LIST UTILITIES command and look for the description containing the unqualified name of the table, as returned in the message for the token *table-name*.

sqlcode: -20285

sqlstate: 55057

SQL20287W The environment of the specified cached statement is different than the current environment. The current environment will be used to reoptimize the specified SQL statement.

Explanation: The Explain facility has been invoked to explain a statement that has been previously reoptimized with REOPT ONCE, but the current environment is different than the environment in which the cached statement was originally compiled. The current environment will be used to reoptimize the specified statement.

The statement will be processed.

User response: In order to ensure that the plan matches the plan in the cache, reissue the EXPLAIN in an environment that matches the one in which the original statement was reoptimized and cached.

sqlcode: -20287

sqlstate: 01671

SQL20288N Statistics could not be updated for object *object-name* of type *object-type*. Reason code = *reason-code*.

Explanation: Statistics could not be set for the target object of RUNSTATS or UPDATE for the reason given by the reason code. Possible reason codes are as follows:

1. Statistics are not supported for the target object type.
2. The RUNSTATS options specified are prohibited on a view.
3. Update on certain statistics of the target object type is not supported. Data page statistics is not applicable for XML paths indexes. For more information on certain statistics that cannot be updated please see SYSSTAT.INDEXES catalog view description in the SQL Reference.

The statement cannot be processed.

User response:

1. Verify that the object name specified as the target of the RUNSTATS or UPDATE can have statistics.
2. Remove RUNSTATS options that are prohibited on a view enabled for optimization.
3. Verify that the statistics of the target object type can be updated.

sqlcode: -20288

sqlstate: 428DY

SQL20289N Invalid string unit *unit* in effect for function *function-name*.

Explanation: The statement invoked a built-in function using a string unit that is not valid with the type of data that is provided to the function. This can occur for the following reasons:

1. non-string data that is specified with an explicit string length unit *unit* for the LENGTH function. A string unit cannot be specified for non-string data.
2. bit data or binary data was specified with a string unit other than OCTETS. CODEUNITS16 or CODEUNITS32 are not valid with bit data or binary string data.
3. OCTETS was used with graphic data and the *start* parameter is not odd or the *length* parameter is not even.
4. OCTETS was used with graphic data and the *start* parameter is not odd.
5. OCTETS was used with graphic data and the code-units parameter is not even.

The statement cannot be executed.

User response: Change the invocation of the function to remove the invalid string length unit or change it to a unit valid for the data type and values being processed.

sqlcode: -20289

sqlstate: 428GC

SQL20290N The SQL statement references routine *routine-name* (specific name *specific-name*) which cannot be run on partition *partition-number*.

Explanation: The routine *routine-name* (specific name *specific-name*) was called with an invalid partition number *partition-number*.

User response: Specify -1 for the partition number parameter to run the routine on the current partition.

sqlcode: -20290

sqlstate: 560CA

SQL20296N The ALTER TABLE statement is not allowed as it modifies some physical attribute of the table *table-name* that has detached partitions and there are dependant tables that need to be incrementally maintained with respect to these detached partitions.

Explanation: The table has detached partitions and there are dependent tables that need to be incrementally maintained with respect to these detached partitions. Modifying any physical attribute of the table is not allowed as doing so would invalidate the incremental maintenance of the dependent tables. The restricted physical attribute modification may include: adding a column, altering a column; or altering one of the following values: data capture, value compression, append, compact, logged, activate not logged initially.

User response: Identify the dependent tables that require incremental maintenance and issue the SET INTEGRITY statement with the IMMEDIATE CHECKED option on these dependent tables before re-issuing the failing ALTER TABLE statement.

The following query can be used to identify the dependent tables that require incremental maintenance, where <schema name> is the qualifier of *table-name* and <table name> is the table name portion of *table-name*.

```
WITH
DEP_CNT(TOTAL_DEP) AS (SELECT COUNT(*) FROM
SYSCAT.TABDEP),
DEP_TAB(SCHEMA, NAME, TYPE, PROPERTY, REFRESH,
STATUS, CONST_CHECKED, LEVEL) AS
(SELECT TABLES.TABSCHEMA, TABLES.TABNAME,
TABLES.TYPE, TABLES.PROPERTY,
TABLES.REFRESH, TABLES.STATUS,
TABLES.CONST_CHECKED, 0
FROM SYSCAT.TABLES TABLES
WHERE TABLES.TABSCHEMA='<schema name>'
AND TABLES.TABNAME='<table name>'
UNION ALL
SELECT TABDEP.TABSCHEMA, TABDEP.TABNAME,
TABDEP.DTYPE, TABLES.PROPERTY,
TABLES.REFRESH, TABLES.STATUS,
TABLES.CONST_CHECKED,
DEP_TAB.LEVEL + 1
FROM SYSCAT.TABDEP TABDEP, DEP_TAB,
SYSCAT.TABLES TABLES
WHERE TABDEP.DTYPE IN ('S', 'V', 'W', 'T')
AND TABDEP.BSCHEMA = DEP_TAB.SCHEMA
AND TABDEP.BNAME = DEP_TAB.NAME
AND TABLES.TABSCHEMA = TABDEP.TABSCHEMA
AND TABLES.TABNAME = TABDEP.TABNAME
AND DEP_TAB.LEVEL < (SELECT
DEP_CNT.TOTAL_DEP FROM DEP_CNT))
SELECT DISTINCT * FROM
(SELECT DEP_TAB.SCHEMA, DEP_TAB.NAME
FROM DEP_TAB
WHERE STATUS='C'
AND (DEP_TAB.TYPE = 'S'
AND DEP_TAB.REFRESH = 'I'
AND SUBSTR(DEP_TAB.CONST_CHECKED,5,1)<>'F'
```

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```
OR DEP_TAB.TYPE = 'T'  
AND SUBSTR(DEP_TAB.PROPERTY,2,1) = 'Y'  
AND SUBSTR(DEP_TAB.CONST_CHECKED,7,1)<>'F')  
) X;
```

sqlcode: -20296

sqlstate: 55057

SQL20301W The table space *tablespace-name1* does not have the same prefetch size as *tablespace-name2*.

Explanation: All data table spaces used by a partitioned table should have the same prefetch size for optimal query performance.

Query performance will usually be enhanced by assuring that all data table spaces used by a partitioned table have the same prefetch size. This allows the optimizer to more accurately estimate the cost of alternative query plans and thus more effectively select the best plan. Significantly different prefetch sizes reduce the optimizer's ability to accurately estimate the cost of alternative query plans. The optimizer picks the most frequently occurring prefetch size to cost alternative query plans.

User response: The prefetch size for a table space can be found in SYSCAT.TABLESPACES. To find all of the data table spaces used by a table 'table-name', and their corresponding prefetch sizes, issue the query:

```
SELECT  
  SUBSTR(DATAPARTITIONNAME,1,15)  
    DATAPARTITIONNAME,  
  SUBSTR(TBSPACE,1,15) TBSPACE,  
  SYSCAT.DATAPARTITIONS.TBSPACEID TBSPACEID,  
  PREFETCHSIZE  
  FROM  
  SYSCAT.TABLESPACES,  
  SYSCAT.DATAPARTITIONS  
  WHERE  
  SYSCAT.TABLESPACES.TBSPACEID =  
  SYSCAT.DATAPARTITIONS.TBSPACEID  
  AND TABNAME = 'table-name'
```

In order to match the prefetch size across all table spaces used by the table, the following options are available, depending on the statement issued that caused this warning:

- Alter the table space to set the prefetch size to match other table spaces for the table.
- If you issued a CREATE TABLE statement, drop the table and recreate the table with a set of compatible table spaces.
- If you issued an ALTER TABLE statement with the ADD PARTITION clause, detach the newly added partition and resubmit the ALTER TABLE statement with a partition in a compatible table space.
- If you issued an ALTER TABLE statement with the ATTACH clause, detach the newly attached partition

and resubmit the ALTER TABLE statement with a table in a compatible table space.

sqlcode: +20301

sqlstate: 01674

SQL20302W More table spaces than required were specified in the IN or LONG IN clause. The extra table spaces are ignored.

Explanation: If the table being created is a non-partitioned table, then more than one table space is specified in the IN or LONG IN clause. The first table space specified is used to store the table data or long data. Only one table space should be specified in the IN or LONG IN clause for a non-partitioned table.

If the table being created is a partitioned table, then the number of table spaces specified in the IN or LONG IN clause was more than the number of partitions defined for the table. When adding partitions to a partitioned table that was created with the long data in the same table space as regular data, the LONG IN clause provided in the ADD PARTITION clause is ignored.

The statement was processed successfully, but the extra table spaces were ignored.

User response: None.

sqlcode: +20302

sqlstate: 01675

SQL20303N A unique partitioned index must contain all partitioning columns of the partitioned table.

Explanation: To create a unique partitioned index on a partitioned table, the index key must contain all of the partitioning columns.

User response: Ensure that all the partitioning columns are specified in the index key.

sqlcode: -20303

sqlstate: 42990

SQL20304N Invalid index definition involving an XMLPATTERN clause or a column of data type XML. Reason code = *reason-code*.

Explanation: A column defined with a data type of XML is included (or missing) in the columns for the index. The index definition is not valid for one of the following possible reason codes.

1

There is one column specified that is defined with a data type of XML, but the definition is

	missing the XMLPATTERN clause to specify the index keys to generate for each XML value.	The argument of a function in the pattern expression does not follow the requirements as specified in the syntax, or the index data type is not correct.
2	An XMLPATTERN clause is present but there are multiple index columns specified.	User response:
3	The index is defined as UNIQUE and the XMLPATTERN includes descendant, descendant-or-self axes, '//', xml-wildcards, node(), or processing-instruction().	1
4	An XMLPATTERN clause is present but the single index column specified is not defined with data type XML.	Specify the XMLPATTERN clause.
5	The path expression specified in the XMLPATTERN clause does not start with '/' or '//'.	2
6	The pattern expression does not include a name test or kind test following '/'.	If the index is intended as a key for XML data, ensure that only one column defined with a data type of XML is specified. Otherwise, remove the XMLPATTERN clause.
7	The pattern expression uses an unsupported axis in an axis step. Only the following forward axes are supported: child, attribute, descendant, self, and descendant-or-self.	3
8	The pattern expression specifies an invalid kind test, or some syntax that is not a valid name test or kind test as supported in a pattern expression.	Either remove the UNIQUE specification or change the XMLPATTERN definition to remove descendant, descendant-or-self axes, '//', xml-wildcards, node(), or processing-instruction().
9	The pattern expression specifies a predicate (an expression enclosed in square brackets), but predicates are not supported for pattern expressions in an XMLPATTERN clause.	4
10	The pattern expression includes other XQuery syntax not supported in an XMLPATTERN clause to which the preceding reason codes do not apply.	Either remove the XMLPATTERN clause or change the specified column to a single column defined with a data type of XML.
11	On a z/OS database server, the number of steps in the pattern expression exceeds the limit of 50 steps when it does not contain a function, or 44 steps when it does contain a function.	5
12		Ensure that the pattern expression begins with '/' or '//'. The XQuery syntax for which '/' or '/' is an abbreviation is not supported for the XMLPATTERN clause of the CREATE INDEX statement.
		6
		Add a name test or a kind test to the pattern expression following '/'.
		7
		Remove any reverse axes from the pattern expression. For example, the parent axis must not be used in a pattern expression.
		8
		Check the pattern expression for kind tests or name tests that do not match the syntax specification for the XMLPATTERN clause of the CREATE INDEX statement. Correct or remove unsupported syntax.
		9
		Remove any predicates from the pattern expression in the XMLPATTERN clause.
		10
		Change the pattern expression to remove any syntax that is not supported for the XMLPATTERN clause of the CREATE INDEX statement. If the pattern expression includes an asterisk (*), ensure that the name tests in

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the pattern expression correctly use the wildcard. If used with a QName, there must be a colon before or after the wildcard character, otherwise it becomes a multiplication operator. The asterisk cannot be used as a multiplication operator in the pattern expression. You should also ensure that the XMLPATTERN clause does not include any other XQuery operators, XQuery functions or XQuery FLWR expressions (for, let, where, return).

11

Reduce the number of steps in the pattern expression. If the value to be indexed in the XML documents requires more than 50 steps, the index cannot be created.

12

Check the argument of the function in the pattern expression to determine whether it matches the syntax specification of the XMLPATTERN clause of the CREATE INDEX statement, and check the data type of the indexed values. Also, check that the function you specified is supported in the XMLPATTERN clause. Correct or remove unsupported syntax.

sqlcode: -20304

sqlstate: 429BS

SQL20305N An XML value cannot be inserted or updated because of an error detected when inserting or updating the index identified by *index-id* on table *table-name*. Reason code = *reason-code*. For reason codes related to an XML schema the XML schema identifier = *xml-schema-id* and XML schema data type = *xml-schema-data-type*.

Explanation: The statement cannot proceed and the table and index remain unchanged because of one of the following reason codes. The schema data type and schema identifier are not applicable for all reason codes. See specific reason codes for details.

1

At least one XML node value in an XML value being inserted or updated exceeds a length constraint imposed by the identified index. The index on an XML column is defined to use the SQL type VARCHAR with a specific length specified. The length of one or more XMLPATTERN result values exceeds the user-specified length constraint for the VARCHAR data type.

2

On DB2 database servers Version 9.5 and earlier, at least one XML node value in an XML value being inserted or updated is a list data type node that cannot be indexed by the identified index. List data type nodes are not supported in the index.

3

On DB2 database servers Version 9.5 and earlier, at least one XML node value is a valid XML value but cannot be cast to the schema data type because it is outside the supported range of values. See "Data type conversion for indexes over XML data" in the DB2 Information Center.

4

At least one XML node value is a valid XML value but cannot be cast to the index data type for the identified index because it is outside the supported range of values. See "Data type conversion for indexes over XML data" in the DB2 Information Center.

5

At least one XML node value is an invalid XML value for the target index data type for the identified index and the index definition specifies that invalid XML values must return an error (REJECT INVALID VALUES). See "Invalid XML values" in the DB2 Information Center.

User response: Determine the index name and the XML pattern clause.

The index name (<index-name>,<index-schema>) can be obtained from SYSCAT.INDEXES by issuing the following query using index-id:

```
SELECT INDNAME, INDSHEMA
FROM SYSCAT.INDEXES
WHERE IID =index-id AND
      TABSCHEMA = 'schema ' AND TABNAME = 'table-name'
```

After the index name (<index-name>,<index-schema>) is found, it can be used to obtain the index data type and XML pattern from SYSCAT.INDEXES by issuing the following query:

```
SELECT DATATYPE, PATTERN
FROM SYSCAT.INDEXXMLPATTERNS
WHERE INDSHEMA = 'index-schema' AND
      INDNAME = 'index-name'
```

If the <xml-schema-id> is not "*"N", obtain the name of the XML schema containing the identified schema data type by issuing the following query using <xml-schema-id>:

```
SELECT OBJECTNAME
FROM SYSCAT.XSROBJECTS
WHERE OBJECTID = 'xml-schema-id'
```

1

Use the XML pattern to identify the set of matching XML nodes to determine which string values exceed the length constraint specified by the index. If the XML pattern contains an fn:upper-case function, it is possible that for certain languages the string value after uppercase conversion exceeds the length constraint specified by the index.

2

On DB2 database servers Version 9.5 and earlier, use the XML schema name and XML pattern to identify the set of matching XML nodes to inspect and compare against the identified schema data type *xml-schema-data-type* found in the corresponding schema. Determine which node values are list data type nodes.

3

On DB2 database servers Version 9.5 and earlier, use the XML schema name and XML pattern to find the set of matching XML nodes to inspect and compare against the identified schema data type *xml-schema-data-type* found in the corresponding schema. Determine which node values exceed the supported range of values for the XML schema data type.

4

Use the XML pattern to identify the set of matching XML nodes to inspect and compare against the data type specified for the identified index. Determine which node values exceed the supported range of values for the index data type.

5

Use the XML pattern to identify the set of matching XML nodes to inspect and compare against the data type specified for the index being created. Determine which node values are invalid for the index data type.

See "Common XML indexing issues" in the DB2 Information Center for information on how to troubleshoot the problem. If the error message is issued by the load utility, see "Resolving indexing errors when loading XML data" in the DB2 Information Center for additional information.

sqlcode: -20305

sqlstate: 23525

SQL20306N An index on an XML column cannot be created because of an error detected when inserting the XML values into the index. Reason code = *reason-code*. For reason codes related to an XML schema the XML schema identifier = *xml-schema-id* and XML schema data type = *xml-schema-data-type*.

Explanation: The statement cannot proceed and the table remains unchanged because of one of the following reason codes. The schema data type and schema identifier are not applicable for all reason codes.

1

At least one XML node value in an XML value being inserted exceeds a length constraint imposed by the index that is being created. The index on an XML column is defined to use the SQL type VARCHAR with a specific length specified. The length of one or more XML pattern result values exceeds the user-specified length constraint for the VARCHAR data type.

2

On DB2 database servers Version 9.5 and earlier, at least one XML node value in an XML value being inserted into the index during index creation is a list data type node that cannot be indexed by the specified index. List data type nodes are not supported in the index.

3

On DB2 database servers Version 9.5 and earlier, at least one XML node value is a valid XML value but cannot be cast to the schema data type because it is outside the supported range of values. See "Data type conversion for indexes over XML data" in the DB2 Information Center.

4

At least one XML node value is a valid XML value but cannot be cast to the index data type for the identified index because it is outside the supported range of values. See "Data type conversion for indexes over XML data" in the DB2 Information Center.

5

At least one XML node value is an invalid XML value for the target index data type for the identified index and the index definition specifies that invalid XML values must return an error (REJECT INVALID VALUES). See "Invalid XML values" in the DB2 Information Center.

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User response: Determine the XML pattern clause from the index definition.

If the <xml-schema-id> is not "*"N", obtain the name of the XML schema containing the identified schema data type by issuing the following query using <xml-schema-id>:

```
SELECT OBJECTNAME
      FROM SYSCAT.XSROBJECTS
      WHERE OBJECTID = 'xml-schema-id'
```

1

Use the XML pattern to identify the set of matching XML nodes to determine which string values exceed the length constraint specified by the index. If the XML pattern contains an fn:upper-case function, it is possible that for certain languages the string value after uppercase conversion exceeds the length constraint specified by the index.

2

On DB2 database servers Version 9.5 and earlier, use the XML pattern to identify the set of matching XML nodes to inspect and compare against the identified schema data type *xml-schema-data-type* found in the corresponding schema. Determine which node values are list data type nodes.

3

On DB2 database servers Version 9.5 and earlier, use the XML pattern to find the set of matching XML nodes to inspect and compare against the identified schema data type *xml-schema-data-type* found in the corresponding schema. Determine which node values exceed the supported range of values for the XML schema data type.

4

Use the XML pattern to identify the set of matching XML nodes to inspect and compare against the data type specified for the index. Determine which node values exceed the supported range of values for the index data type.

5

Use the XML pattern to identify the set of matching XML nodes to inspect and compare against the data type specified for the index. Determine which node values are invalid for the index data type.

If the index is partitioned and there are newly attached partitions (that is, partitions with the value of 'A' in the STATUS column in the SYSDATAPARTITIONS catalog table), you might not be able to find the invalid node values for the index data type. In this

situation, run the SET INTEGRITY statement to bring the newly attached partitions online. The invalid node values might be removed by the SET INTEGRITY statement for violating other constraints, so issue the statement again. If the statement cannot be processed again, then check for invalid node values for the index data type.

See "Common XML indexing issues" in the DB2 Information Center for information on how to troubleshoot the problem.

sqlcode: -20306

sqlstate: 23526

SQL20307N Table *source-tablename* cannot be attached to table *target-tablename*. Reason code = *reason-code*.

Explanation: The characteristics of the target table do not sufficiently match the characteristics of the source table in the ALTER TABLE...ATTACH statement. The *reason-code* indicates the type of mismatch.

1

The number of columns (the COLCOUNT column in SYSCAT.TABLES) of the source and target table does not match.

2

The compression clauses in the source and target tables do not match. There are two possible mismatches: VALUE COMPRESSION and COMPRESSION SYSTEM DEFAULT do not match; and COMPRESS YES STATIC and COMPRESS YES ADAPTIVE do not match.

3

The APPEND mode of the tables does not match.

4

The code pages of the source and target table do not match.

5

The source table is a partitioned table with more than one data partition or with ATTACHED or DETACHED data partitions. A source table that is partitioned can only be attached if it has only one data partition and no ATTACHED or DETACHED data partitions.

6

The source table is a system table, a view, an MQT, a typed table, a table ORGANIZED BY KEY SEQUENCE, a created temporary table, a

7	declared temporary table, a system-period temporal table, or a history table. The source table must be a base table that does not correspond to any of the listed tables.	21	The source table has row access control activated but the target table does not have row access control activated.
8	The target and source table are the same. You cannot attach a table to itself.	99	The source table has column access control activated with at least one enabled column mask but the target table does not have column access control activated.
9	The NOT LOGGED INITIALLY clause was specified for either the source table or the target table, but not both.	11	The target table exists in a table space that has been converted to a large table space, and its indexes have not yet been reorganized or rebuilt to support large RIDs.
10	The DATA CAPTURE CHANGES clause was specified for either the source table or the target table, but not both.	15	User response: Correct the mismatch between the tables by modifying the source table to match the characteristics of the target table, or by modifying the target table to match the characteristics of the source table.
11	The distribution clauses of the tables do not match. The distribution key must be the same for the source table and the target table.	16	For reason codes 4, 5, 6 and 11 the characteristics of neither the source or target table can be easily modified for compatibility. (For reason code 5, <i>source-tablename</i> is partitioned, so it must have exactly one visible (neither attached or detached) data partition.)
15	The ORGANIZE BY DIMENSIONS clauses of the tables do not match. Only one of the tables has an ORGANIZE BY DIMENSIONS clause specified or the organizing dimensions are different.	17	In cases where it is difficult to modify the characteristics of either the source or target table for compatibility, you can create a new table that is compatible with the target table, and copy the data from <i>source-tablename</i> to this new table. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.
16	The security protection on the tables is not identical. The tables are protected by different security policies.	18	1 You can add columns to the table which is missing one or more columns using the statement: <pre>ALTER TABLE ... ADD COLUMN ... DEFAULT ...</pre>
17	Compress clause (COMPRESS NO or COMPRESS YES) does not match.	19	Make sure that the default value of the added column is the same as the default value of the column in the table where the column already exists. Query SYSCAT.COLUMNS.IMPLICITVALUE for the column in the table where the column already exists. If the value is not NULL, then use the default clause of the ALTER TABLE ADD COLUMN statement to set the default value to match the value in SYSCAT.COLUMNS.IMPLICITVALUE.
18	The source table does not have an index that is compatible with the index on the target partitioned table. The index on the target table is either unique or defined on an XML column with the REJECT INVALID VALUES clause.	20	Note: You can only add columns after the last existing column of the table. If the missing column is not the last column, create a new source table. Alternatively, you can drop a column from the table that has the extra column:
19	The source table does not have an index that is compatible with the index on the partitioned table and the REQUIRE MATCHING INDEXES clause is specified on the ALTER TABLE statement.		
20	The record format of the XML column of source table being attached is not compatible with the record format of the target partitioned table.		

2	ALTER TABLE ... DROP COLUMN To achieve agreement between value compression values use one of the following statements: ALTER TABLE ... ACTIVATE VALUE COMPRESSION ALTER TABLE ... DEACTIVATE VALUE COMPRESSION	statement, or make the table which is logged be not logged initially by entering the statement: ALTER TABLE ACTIVATE NOT LOGGED INITIALLY
3	To achieve row compression agreement use one of the following statements: ALTER TABLE ... COMPRESS YES ALTER TABLE ... COMPRESS NO To achieve adaptive compression agreement use one of the following statements: ALTER TABLE ... COMPRESS YES ADAPTIVE ALTER TABLE ... COMPRESS YES STATIC	9 To enable data capture changes on the table that does not have data capture changes turned on, run the statement: ALTER TABLE ... DATA CAPTURE CHANGES To disable data capture changes on the table that does have data capture changes turned on, run the statement: ALTER TABLE ... DATA CAPTURE NONE
4	To achieve append mode agreement use one of the following statements: ALTER TABLE ... APPEND ON ALTER TABLE ... APPEND OFF	10 It is recommended that you create a new source table in this case, because you cannot change the distribution key of a table spanning multiple database partitions. To change a distribution key on tables in single-partition database, run the statements: ALTER TABLE ... DROP DISTRIBUTION ALTER TABLE ... ADD DISTRIBUTION (key-specification)
5	Create a new source table. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.	11 Create a new source table which matches the target table with respect to the ORGANIZE BY DIMENSIONS clause. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.
6	Detach data partitions from the source table until there is a single visible data partition using the statement: ALTER TABLE ... DETACH PARTITION Include any necessary set integrity statements. Otherwise, create a new source table. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.	15 The two tables must be protected using the same security policy, have the same column defined as type SYSPROC.DB2SECURITYLABEL, and have the same set of protected columns.
7	Create a new source table that is not one of the disallowed types. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.	16 Use ALTER TABLE <i>tablename</i> COMPRESS [YES NO], to ensure that the COMPRESS attributes of the source and target table match.
8	Determine the correct table to use as the source or target table.	17 To find the list of indexes on the target partitioned table that do not have a compatible index on the source table, see the administration notification log. Create the unique or XML index on the source table that is compatible with the target partitioned table.
8	Either make the table which is not logged initially be logged by issuing the COMMIT	18 Do one of the following:

- To find the list of indexes on the target table that do not have a compatible index on the source table, see the administration notification log. Create the missing index on the source table and try the request again.
- Remove the REQUIRE MATCHING INDEXES clause from the ALTER TABLE statement and try the request again.

19

Update the XML record format of the source table to match the record format of the target table. There are several methods you can use to update the XML record format of a table. Either of the following two methods updates the XML record format of a table:

- Perform an online table move on table using the ADMIN_MOVE_TABLE procedure.
- Perform the following steps:
 1. Use the EXPORT command to create a copy of the table data.
 2. Use the TRUNCATE statement to delete all the rows from the table and release the storage allocated to the table.
 3. Use the LOAD command to add the data into the table.

20

Ensure the table to attach to has the required access controls or deactivate the access controls on the table being attached.

21

Ensure the table to attach to has the required access controls or deactivate the access controls on the table being attached.

99

Convert the indexes on the target table to support large RIDs by issuing the command: REORG INDEXES ALL FOR TABLE *target-tablename* ALLOW NO ACCESS.

sqlcode: -20307

sqlstate: 428GE

SQL20308N Parsing with the STRIP WHITESPACE option is not allowed when the input includes a text node string value with only whitespace characters that is more than 1000 bytes long.

Explanation: The option to STRIP WHITESPACE during XML parsing will fail if a text node string value is encountered that consists only of whitespace characters and has a length of more than 1000 bytes.

The statement cannot be processed.

User response: Use the PRESERVE WHITESPACE option or modify the input to remove whitespace in excess of 1000 bytes from any text nodes with a string value consisting of only whitespace characters.

sqlcode: -20308

sqlstate: 54059

SQL20309N Invalid use of an error tolerant nested-table-expression.

Explanation: An error tolerant nested-table-expression (a nested-table-expression that specifies the RETURN DATA UNTIL clause) cannot be referenced in the following places:

- The fullselect of a materialized-query-definition.
- The same statement or compound statement that contains an insert, update, or delete operation.
- The SELECT statement for a cursor of a positioned DELETE or positioned UPDATE statement.

The statement cannot be processed.

User response: Remove the RETURN DATA UNTIL clause of the nested-table-expression and resubmit the statement.

sqlcode: -20309

sqlstate: 428GG

SQL20316N Invalid compilation environment.
Reason code = *reason-code*.

Explanation: The compilation environment provided is invalid for the reason specified in the accompanying reason code.

1. The format of the compilation environment provided is not correct.
2. The version of the compilation environment provided is not supported.
3. The size of the compilation environment provided is not valid.
4. The codepage used by the compilation environment provided is not compatible with this database.

The statement cannot be executed.

User response: The action is based on the reason codes as follows:

1. Acquire the compilation environment again and ensure that it is not altered in any fashion prior to use.
2. Acquire the compilation environment again using a compatible level of software.
3. Acquire the compilation environment again and ensure that it is not altered in any fashion prior to use.

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- Acquire the compilation environment again using a database with the same codepage as this one.

sqlcode: -20316

sqlstate: 51040

SQL20317N The command or statement failed because the operation is only supported when there is at least one storage group defined for the database against which the command or statement was executed.

Explanation: Automatic storage simplifies storage management for table spaces. When you create a storage group, you specify the storage paths where the database manager will place your data. After a storage group is created in a database, there is always a default storage group for the database. As you create and populate automatic storage table spaces, the database manager will manage the container and space allocation for those automatic storage table spaces to use the default or specified storage group.

This message is returned when an attempt is made to perform an action that requires a storage group against a database that has no storage groups defined, such as the following examples:

- Creating an automatic storage table space
- Altering a table space to use automatic storage
- Using automatic storage for a restore operation by running the SET TABLESPACE CONTAINERS command with the USING AUTOMATIC STORAGE clause
- Dropping storage paths from the database

For versions of DB2 database prior to Version 10:

Prior to Version 10, a DB2 database had to be defined to use automatic storage in order for table spaces in that database to be able to use automatic storage. This message is returned by DB2 database servers prior to Version 10 when an attempt is made to perform an action that requires automatic storage in a database that has not been enabled for automatic storage.

User response: Respond to this message in one of the following ways:

- To use automatic storage functionality with this database, perform one of the following actions:
 - For DB2 database servers prior to Version 10: convert the database to use automatic storage.
 - For DB2 Version 10 and later: create at least one storage group.
- To create a table space that is not managed by automatic storage, use either one of the following clauses with the CREATE TABLESPACE statement:
 - MANAGED BY SYSTEM

– MANAGED BY DATABASE

- To perform a restore operation without using automatic storage, call the SET TABLESPACE CONTAINERS command without specifying the USING AUTOMATIC STORAGE clause.

sqlcode: -20317

sqlstate: 55060

SQL20318N The ALTER TABLESPACE statement failed because the change is not allowed for the type of table space. Table space name: *tablespace-name*. Table space type: *tablespace-type*. Incompatible clause: *clause*.

Explanation: The following are operations that are incompatible with a corresponding table space type, as indicated.

- A table space defined as MANAGED BY AUTOMATIC STORAGE has its containers managed by the database manager. This means that the database manager will automatically extend existing containers or create new containers based on the storage paths defined for the storage group with which the table space is associated. Containers for table space defined as MANAGED BY AUTOMATIC STORAGE cannot be altered by the ALTER TABLESPACE statement.
- The INHERIT option cannot be specified for the DATA TAG, OVERHEAD, or TRANSFERRATE clauses with DMS or SMS table spaces
- The clause 'USING STOGROUP' cannot be used with DMS or SMS table spaces
- STOGROUP cannot be changed for temporary automatic storage table spaces
- DATA TAG cannot be set for a temporary table space or a system catalog table space

User response: Rewrite the ALTER TABLESPACE statement to ensure that the operations are compatible with the table space type.

sqlcode: -20318

sqlstate: 42858

SQL20319N The SET TABLESPACE CONTAINERS command is not allowed on an automatic storage table space.

Explanation: Containers associated with automatic storage table spaces are under the control of the database and cannot be redefined via the SET TABLESPACE CONTAINERS command.

User response: To specify a new set of paths for all automatic storage table spaces in the database, use the ON option of the RESTORE DATABASE command and specify one or more paths.

sqlcode: -20319

sqlstate: 55061

SQL20320N The maximum size specified for the table space is not valid.

Explanation: The maximum size specified in the CREATE TABLESPACE or ALTER TABLESPACE statement is not valid. If creating the table space, the maximum size must be greater than or equal to the initial size specified. If altering an existing table space, the maximum size must be greater than or equal to the current size of the table space.

User response: Specify a larger value for the maximum size as described in this message's Explanation.

sqlcode: -20320

sqlstate: 560B0

SQL20321N The command failed because storage paths cannot be provided when there are no storage groups in the database.

Explanation: The database in the backup image does not define a storage group but storage paths are being provided in one of the following ways:

- Storage paths are being included in a call to the RESTORE DATABASE API.
- Storage paths are being specified with the ON option of the RESTORE DATABASE command.
- Storage paths are being specified with the SET STOGROUP PATHS command.

For versions of DB2 database prior to Version 10:

Prior to Version 10, a DB2 database in the backup image had to be defined to use automatic storage in order to specify storage paths. This message is returned by DB2 database servers prior to Version 10 when an attempt is made to perform an action that requires automatic storage in a database backup image that has not been enabled for automatic storage.

User response: Resolve the problem using the appropriate action:

- Do not include any storage paths when calling the RESTORE DATABASE API.
- Do not specify the ON option of the RESTORE DATABASE command.
- Do not specify the SET STOGROUP PATHS command.

sqlcode: -20321

sqlstate: 55062

SQL20322N The database name provided does not match *server-name*, the name of the database that the application is connected to.

Explanation: The database name does not match *server-name*, the name of the database that the application is currently connected to. The database name was either explicitly specified or determined by the specified database alias name.

User response: If the intention is to alter the database that you are currently connected to, either remove the database name from the statement or specify the correct name. If the intention is to alter the database with the given name, and not the database you are currently connected to, disconnect from the current database and connect to the specified database before resubmitting the statement. If you are backing up or restoring a database, connect to that database and provide the correct database name or database alias name.

sqlcode: -20322

sqlstate: 42961

SQL20323N The storage path *storage-path* already exists for the storage group or is specified more than once.

Explanation: Either a storage path being added already exists for the storage group, or there are duplicates within the list being provided.

User response: Remove the path from the command or statement and resubmit the command or statement.

sqlcode: -20323

sqlstate: 42748

SQL20324N The operation *operation* is already in progress.

Explanation: The operation *operation* has already been issued in this transaction or it has been issued as part of a separate uncommitted transaction.

User response: Commit the transaction with the outstanding operation and reissue the statement.

sqlcode: -20324

sqlstate: 25502

SQL20325N Adding, extending, or setting containers for table space *tablespace-name* would exceed the maximum size *max-size*.

Explanation: Table space *tablespace-name* has AUTORESIZE set to YES with a defined maximum size. However, the amount of space being added to the table space by the ALTER TABLESPACE statement or set by the SET TABLESPACE CONTAINERS command is

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resulting in the size of the table space being greater than this maximum size.

User response: If executing an ALTER TABLESPACE statement then before resubmitting the statement, increase MAXSIZE for the table space such that it is greater than or equal to the current size of the table space plus the amount of space being added. Alternately, set AUTORESIZE to NO for the table space. Note that disabling auto-resize will result in the current values of MAXSIZE and INCREASESIZE being lost.

If executing the SET TABLESPACE CONTAINERS command then specify a set of containers that has a total size less than or equal to the maximum size of the table space.

sqlcode: -20325

sqlstate: 54047

SQL20326N An XML element name, attribute name, namespace prefix or URI ending with *string* exceeds the limit of 1000 bytes.

Explanation: The system is processing an element name, attribute name, namespace prefix or a URI to generate an internal identifier for the string. The length of the string exceeds the limit of 1000 bytes for the string when represented in UTF8. The value of *string* gives the ending characters of the string that exceeded the limit.

The statement cannot be processed.

User response: Try to use shorter element names, attribute names, namespace prefixes or URIs and then try the operation again.

sqlcode: -20326

sqlstate: 54057

SQL20327N The internal representation of an XML path exceeds the limit of 125 levels.

Explanation: The system is generating an internal representation of an XML path. The path may exist in an XML document that is being parsed or validated or in an XML value that is being constructed. The limit is reached because the document is nested too deep.

The statement cannot be processed.

User response: For a document or constructed XML value, reduce the number of levels of elements and attributes that are used.

sqlcode: -20327

sqlstate: 54058

SQL20328N The document with target namespace *namespace* and schema location *location* already has been added for the XML schema identified by *schema-name*.

Explanation: This error can occur while invoking the XSR_ADDSCHEMADOC stored procedure. Within an XML schema, there cannot be two documents with the same targetnamespace and schemalocation.

The statement cannot be processed.

User response: Change either the namespace or schemalocation of the document that is being added.

sqlcode: -20328

sqlstate: 42749

SQL20329N The completion check for the XML schema failed because one or more XML schema documents is missing. One missing XML schema document is identified by *uri-type* as *uri*.

Explanation: The XML schema registration completion processing determined that more than one XML schema document is required for a complete XML schema and at least one XML schema document is missing from the XML schema repository. The missing XML schema document is identified by the either targetnamespace or schemalocation *uri-type* and the value for the namespace or XML schema location *uri*. The reference to the missing XML schema document may be included in one of the XML schema documents that is defined for the XML schema.

The statement cannot be processed.

User response: Add any missing XML schema documents for the XML schema to the XML schema repository. The document identified by *uri-type* as *uri* must be added.

sqlcode: -20329

sqlstate: 428GI

SQL20330N The *xsobject-type* identified by the XML *uri-type1 uri1* and XML *uri-type2 uri2* is not found in the XML schema repository.

Explanation: Processing of the statement or command required the use of an XSROBJECT from the XML schema repository that could not be found.

If the *xsobject-type* is XMLSCHEMA, then an XML schema is required for validation of an XML value. The *uri-type1* is NAMESPACE and the XML schema target namespace *uri1* may have been identified explicitly in the statement using the ACCORDING TO XMLSCHEMA URI clause or may be identified in the XML value. If the optional LOCATION clause is also specified, then *uri-type2* is LOCATION and *uri2*

indicates this value, otherwise it is an empty string.

If the *xsobject-type* is EXTERNAL ENTITY, then an XML external entity is required for parsing or validation of an XML value. The identification of the external entity is based on *uri-type1* of SYSTEM ID with the system identifier as *uri1* and *uri-type2* of PUBLIC ID with the public identifier as *uri2*. If *uri2* is empty, then no public identifier was available.

The statement or command cannot be processed.

User response: Register the XML schema or XML external entity identified by *uri1* and *uri2* before processing the XML value.

sqlcode: -20330

sqlstate: 22532, 4274A

SQL20331N The XML comment value *string* is not valid.

Explanation: The XML comment cannot contain two adjacent hyphens and cannot end in a hyphen.

User response: Ensure the value for the XML comment is valid.

sqlcode: -20331

sqlstate: 2200S

SQL20332N The XML processing instruction value *string* is not valid.

Explanation: The XML processing instruction must not contain the substring '?>'.

User response: Ensure the value for the XML processing instruction is valid.

sqlcode: -20332

sqlstate: 2200T

SQL20333N The operation could not be performed because it violated an integrity constraint at data source *data-source*. Associated text and tokens are *tokens*.

Explanation: The insert, update, or delete operation violated an integrity constraint defined at a federated data source. The violation could be due to the interaction of a trigger at the data source.

The statement could not be executed. The contents of the object table are unchanged.

Some data sources do not provide specific information about the constraint that was violated. Other data sources provide more information in the db2diag log file.

User response: Examine the constraints on the object referenced by the operation to determine the cause of the violation. Look in the db2diag log file for more

information about the constraint that was violated.

sqlcode: -20333

sqlstate: 23527

SQL20334N A SOAP Fault was received from the web services data source *tokens*. Associated text and tokens are *text-and-tokens*.

Explanation: The web services data *sourcedata-source-name* that is using the Simple Object Access Protocol (SOAP) sent a SOAP Fault to the federated server. Further information about this error situation is in *tokens*.

User response: Use the information provided in *tokens* to identify and correct the root cause of the SOAP Fault at the data source, *data-source-name*.

sqlcode: -20334

sqlstate: 560CB

SQL20335N More than one *xsobject-type* exists identified by XML *uri-type1 uri1* and *uri-type2 uri2* exists in the XML schema repository.

Explanation: There is more than one registered XSROBJECT that matches the URI used to identify an XML schema or external entity.

If *xsobject-type* is XMLSCHEMA, then identification for the XML schema is based on *uri-type1* of NAMESPACE with the XML schema target namespace as *uri1* and *uri-type2* of LOCATION with XML schema location as *uri2*. If *uri2* is empty, then no schema location was specified.

If *xsobject-type* is EXTERNAL ENTITY, then identification for the external entity is based on *uri-type1* of SYSTEM ID with the system identifier as *uri1* and *uri-type2* of PUBLIC ID with the public identifier as *uri2*. If *uri2* is empty, then no public identifier was specified.

The statement cannot be processed.

User response: If both *uri1* and *uri2* are indicated, then either drop duplicate XSROBJECTs of type *xsobject-type* from the XML schema repository or, for XML schemas, explicitly specify the XMLSCHEMA ID for one of these XML schemas. If the schema location (*uri2*) is empty, it may also be possible to explicitly specify XMLSCHEMA URI and LOCATION to uniquely identify an XML schema.

sqlcode: -20335

sqlstate: 22533, 4274B

SQL20336N A value with data type *source-data-type* cannot be XMLCAST to type *target-data-type*.

Explanation: The statement contains a CAST with the first operand having a data type of *source-data-type* to be cast to the data type *target-data-type*. This cast is not supported.

User response: Change the data type of either the source or target so that the cast is supported. For predefined data types these are documented in the SQL Reference. For a cast involving a user-defined distinct type, the cast can be between the base data type and the user-defined distinct type or from a data type that is promotable to the base data type to the user-defined distinct type.

sqlcode: -20336

sqlstate: 42846

SQL20337N The BY REF clause is missing or used incorrectly. Reason code=*reason-code*.

Explanation: The following explain the error based on possible values for *reason-code*.

1. The BY REF clause cannot be specified when the corresponding data type is other than XML for an argument of a XMLQUERY, XMLEXISTS, or XMLTABLE function. This error may also occur when the BY REF clause is issued within an XMLTABLE column definition and the type of the column is not XML.
2. The BY REF clause must be specified when XMLTABLE clause defines a column with data type XML.
3. The BY REF clause must be specified in an XMLQUERY function that returns an XML sequence. The BY REF clause can be specified explicitly following the RETURNING SEQUENCE clause or in the PASSING clause.

User response: Take the following action based on the *reason-code*.

1. Remove the BY REF clause where it is associated with a data type other than XML.
2. Specify the BY REF clause where the data type argument of an XMLTABLE function is XML.
3. Specify the BY REF clause following the RETURNING SEQUENCE keywords or specify a PASSING BY REF clause.

sqlcode: -20337

sqlstate: 42636

SQL20338N The data type of either the source or target operand of an XMLCAST specification must be XML.

Explanation: The XMLCAST specification must have one operand that has the data type XML. The XMLCAST operation can be from an XML type value to an SQL type value or from an SQL type value to an XML type value. The XMLCAST specification also accepts having both the source and target operands as XML but no actual casting operation is performed in this case.

User response: If both operands are SQL data types other than XML, use the CAST specification. Otherwise, change the XMLCAST specification so that at least one operand is the XML data type.

sqlcode: -20338

sqlstate: 42815

SQL20339N The XML schema *xmlschema-name* is not in the correct state to perform operation *operation*.

Explanation: The operation specified by *operation* cannot be performed on the XML schema identified by the XML schema identifier *xmlschema-name* because it is not in the correct state. For example, the XML schema has already been completed and the operation is attempting to add additional XML schema documents.

The statement cannot be processed.

User response: Check the current state of the XML schema to determine the operations that are valid for the XML schema. If the XML schema is completed, no further XML schema documents can be added.

sqlcode: -20339

sqlstate: 55063

SQL20340N The XML schema *xmlschema-name* includes at least one XML schema document in namespace *namespace* with component ID *component-id* that is not connected to the other XML schema documents in the same namespace using an include or redefine.

Explanation: The XML schema identified by identifier *xmlschema-name* includes multiple XML schema documents in the namespace *namespace*. At least one of these XML schema documents is not connected to the other XML schema documents in the same namespace using an include or redefine. One such XML schema document is identified in the XML schema repository with component identifier *component-id*.

The statement cannot be processed.

User response: Correct the XML schema documents so that all XML schema documents within a namespace

are connected using an include or a redefine. The *component-id* can be used to query SYSCAT.XSROBJECTCOMPONENTS for further information about the specifically reference XML schema document that is not connected within the namespace.

sqlcode: -20340

sqlstate: 22534

SQL20341W Transfer operation ignored since *auth-ID* is already the owner of the database object.

Explanation: The TRANSFER statement specified to transfer the database object to authorization ID *auth-ID*. The authorization ID is already the owner of the database object. There is no need to transfer the database object.

User response: No action is required.

sqlcode: +20341

sqlstate: 01676

SQL20342N *auth-ID* does not have one or more required privileges *privilege-list* on object *object-name* of type *object-type* necessary for ownership of the object.

Explanation: The TRANSFER statement attempted to transfer ownership of the object to authorization ID *auth-ID* which does not have the necessary privileges to be the owner of the object. The privileges *privilege-list* on the object *object-name* are the privileges that are missing.

The statement cannot be processed.

User response: Grant the authorization ID *auth-ID* all the privileges necessary, as indicated by *privilege-list*, on object *object-name*, for the authorization ID to be the owner of the object being transferred.

sqlcode: -20342

sqlstate: 42514

SQL20344N Transfer ownership of *object-name1* failed because of a dependency involving *object-name2*. Reason code = *reason-code*.

Explanation: Transfer ownership failed because of a dependency as indicated by the following reason code:

- 1 The table *object-name1* in table hierarchy *object-name2* cannot be transferred because it is a subtable.
- 2 The view *object-name1* in view hierarchy *object-name2* cannot be transferred because it is a subview.
- 3 The index *object-name1* cannot be transferred

because the table *object-name2* that the index is defined on is a declared global temporary table.

- 4 The method body or function *object-name1* cannot be transferred because it was implicitly generated when user-defined type *object-name2* was created.
- 5 The package *object-name1* cannot be transferred because it depends on SQL procedure *object-name2*.
- 6 The event monitor *object-name1* cannot be transferred because it is active.

User response: The action corresponding to the reason code is:

- 1 Transfer the whole table hierarchy.
- 2 Transfer the whole view hierarchy.
- 3 Drop the declared global temporary table.
- 4 Drop the type that created this method or function.
- 5 Transfer the SQL procedure.
- 6 Set the event monitor state to inactive.

sqlcode: -20344

sqlstate: 429BT

SQL20345N The XML value is not a well-formed document with a single root element.

Explanation: The XML value is not a well-formed document. An XML value that is being stored in a table or validated must be a well-formed XML document with a single root element. The document node of the XML value must not have any text node children, although it can have comment node or processing instruction node children.

The statement cannot be processed.

User response: Storing or validating the XML value requires that the XML value be modified so that it is a well-formed document with a single root element. If the document is well-formed, ensure that the document node of the XML value has only a single element node as a child and no text node child. Otherwise, do not attempt store or validate the XML value.

sqlcode: -20345

sqlstate: 2200L

SQL20346N The XML schema *xmlschema-id* does not contain a global element named *element-local-name* in namespace *namespace-uri*.

Explanation: A validation operation specified that an

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explicit element local name *element-local-name* in namespace *namespace-uri* should be the root element of the XML document to be validated. However, the XML schema with SQL identifier *xmlschema-id* does not have *element-local-name* declared as a global element in namespace *namespace-uri*.

The statement cannot be processed.

User response: Check that the element local name *element-local-name* in namespace *namespace-uri* is correct for the XML schema and the XML document that is being validated. Change the element local name, namespace or the XML schema and try the validation again.

sqlcode: -20346

sqlstate: 22535

SQL20347N The XML value does not contain a root element named *element-local-name* in namespace *namespace-uri*.

Explanation: The root element of the XML document does not match the required element local name *element-local-name* in namespace *namespace-uri* specified for validation.

The statement cannot be processed.

User response: Provide an XML value where the root element matches with the specified element local name and namespace. If the XML value is correct, change the specified element local name or namespace.

sqlcode: -20347

sqlstate: 22536

SQL20349N The user mappings from the user mapping repository for plugin *plugin-name* cannot be accessed. Reason code *reason-code*.

Explanation: The user mapping from the user mapping repository for plugin *plugin-name* cannot be accessed. The cause of the error is indicated by the *reason-code*:

1

The user mapping plugin cannot be loaded.

2

The version of the user mapping plugin API reported by the user mapping plugin is not compatible with the version federation supports.

3

A connection to the user mapping repository cannot be established or the connection request timed out.

4

The user mapping entry cannot be found on the user mapping repository.

5

A decryption error occurred while processing the user mapping entry from the user mapping repository.

6

Disconnection from the user mapping repository has failed.

7

Invalid parameter has been passed to the user mapping plugin.

8

Unauthorized invocation of the user mapping plugin has been detected.

9

Terminating the user mapping plugin has failed.

10

Unexpected error detected.

User response: See the federation documentation for details on user mapping plugins. The action is based on the *reason-code* as follows:

1

Verify that the user mapping plugin exists and is in the correct location.

2

Ensure that the user mapping plugin is using a federation supported version of the user mapping plugin API and that it is reporting the correct version number.

3

Verify that the user mapping repository is up and running and that the repository connection parameters of the user mapping plugin are correct.

4

Create a corresponding user mapping entry on the user mapping repository.

5

Ensure that the decryption logic in the user mapping plugin is implemented correctly.

6

Check if the user mapping repository and network are up and running.

7

- 8 Ensure that all the parameter values passed onto the user mapping plugin are correct.
- 9 Verify that federation has the authority to invoke the user mapping plugin.
- 10 Verify if plugin level global resources can be released.
- 10 Ensure the plugin maps the error to one of the defined errors. Trace information for the error may be available in the db2diag log file.

sqlcode: -20349

sqlstate: 429BU

SQL20350N Authentication at the user mapping repository for plugin *plugin-name* failed.

Explanation: The user mapping from the user mapping repository for plugin *plugin-name* cannot be accessed because authentication at the user mapping repository failed.

User response: See the federation documentation for details on user mapping plugins. Correct the repository connection credential parameters of the plugin.

sqlcode: -20350

sqlstate: 42516

SQL20351W Wrapper options were ignored for servers of wrapper *wrapper-name* that already have the plugin defined.

Explanation: The existing DB2_UM_PLUGIN related options specified for a server are not overwritten when DB2_UM_PLUGIN related options of the corresponding wrapper are created or altered.

User response: To change the DB2_UM_PLUGIN related options that are already specified for a server, alter the server options directly.

sqlcode: +20351

sqlstate: 01677

SQL20352W Changes to the user mapping apply only to the federated catalog table and not to the external user mapping repository.

Explanation: The DB2_UM_PLUGIN option has been set for the server. User mappings for this server are read from the external user mapping repository, however CREATE USER MAPPING, ALTER USER MAPPING, and DROP (USER MAPPING) statements

only affect user mappings in the federated catalog table.

User response: Use another interface to the external user mapping repository to create, alter, or drop the user mappings.

sqlcode: +20352

sqlstate: 01678

SQL20353N An operation involving comparison cannot use operand *name* defined as data type *type-name*.

Explanation: The use of the value identified by *name* defined as data type *type-name* is not permitted in operations involving comparisons. An expression resulting in a *type-name* data type is not permitted in:

- A SELECT DISTINCT statement
- A GROUP BY clause
- An ORDER BY clause
- An aggregate function with DISTINCT
- A SELECT or VALUES statement of a set operator other than UNION ALL.

The statement cannot be processed.

User response: The requested operation on the data type *type-name* is not supported. You may be able to change the data type of the value to a data type that is supported using a cast or some other function.

sqlcode: -20353

sqlstate: 42818

SQL20354N Invalid specification of a row change timestamp column for table *table-name*.

Explanation: The specification of a row change timestamp column is invalid for one of the following reasons. A row change timestamp column cannot:

- be a column of a primary key.
- be a column of a foreign key.
- be a column of a functional dependency DEPENDS ON clause.
- be a column of a database partitioning key.
- be defined for a temporary table.

The statement cannot be executed.

User response: Correct the syntax and resubmit the statement.

sqlcode: -20354

sqlstate: 429BV

SQL20356N The table *table-name* cannot be truncated because DELETE triggers exist for the table, or the table is the parent in a referential constraint.

Explanation: The TRUNCATE statement could not be processed for one of the following reasons:

- The TRUNCATE statement would result in the activation of DELETE triggers. However, the statement specifies RESTRICT WHEN DELETE TRIGGERS (implicitly or explicitly). This can occur when DELETE triggers exist for the table to be truncated, and the result of the TRUNCATE statement would activate the triggers.
- The table to be truncated is the parent table in a referential constraint.

The statement cannot be processed.

User response: If the statement failed because of the existence of DELETE triggers, specify the IGNORE DELETE TRIGGERS clause on the TRUNCATE statement. If the statement failed because of referential constraints, use the ALTER TABLE statement to drop the referential constraints, and then re-issue the TRUNCATE statement.

sqlcode: -20356

sqlstate: 428GJ

SQL20357N One or more federated one-phase commit data source sites have failed commit or rollback processing. As a result, the transaction outcome might not be consistent across all sites. Subsequent SQL statements can be processed. Reason code *reason-code*.

Explanation: A federated server has sent a transaction commit or rollback request and one or more of the federated one-phase commit data source sites cannot complete the request. This may be caused by a server failure, communication link failure, or other failure. The transaction is not completely committed or rolled back.

The reason code indicates the specific situation.

1. Commit failure does not involve an update federated data source.
2. Commit failure involves an update federated data source.
3. Rollback failure does not involve an update federated data source.
4. Rollback failure involves an update federated data source.
5. Commit or rollback processing encountered an error due to db2fmp process abnormal termination at the federated server, error '-430'.

User response: Check the administration notification log for details. Compensating actions may need to be

applied manually at the federated one-phase commit data source sites. It may be necessary to contact the system administrator for assistance.

For reason 5, disconnect the application from the federated server, e.g. issue a 'connect reset' clp command and reconnect.

sqlcode: -20357

sqlstate: 40003

SQL20358N Commit or rollback processing encountered an error. The transaction at some federated two-phase commit data source sites could be indoubt. Subsequent SQL statements can be processed. Reason code *reason-code*.

Explanation: A federated server has sent a transaction commit or rollback request and one or more of the federated two-phase commit data source sites cannot complete the request. This may be caused by a server failure, communication link failure, or other failure. The transaction might be indoubt at the federated two-phase commit data source site.

The reason code indicates the specific situation.

1. Missing commit acknowledgement from federated data source site.
2. Missing abort acknowledgement from federated data source site.
3. Rollback processing encountered an error. The transaction might be indoubt at the federated two-phase commit data source site.
4. Commit or rollback processing encountered an error due to db2fmp process abnormal termination at the federated server, error '-430'.

User response: Determine the cause of the error. It may be necessary to contact the system administrator for assistance since the most common cause of the error is a federated server failure, federated data source site failure, or connection failure. For a federated server failure, the RESTART DATABASE command will complete the commit or rollback processing for this transaction. For a federated data source site failure, restart the failed data source. For a connection failure, consult with your network administrator and/or communication expert to determine the cause of the problem.

For reason 3, check possible indoubt transactions on the federated data source site, and manually resolve them if existing.

For reason 4, disconnect the application from the federated server, e.g. issue a 'connect reset' clp command and reconnect.

sqlcode: -20358

sqlstate: 08007

SQL20360W A trusted connection cannot be established for the specified authorization ID.

Explanation: A trusted connection cannot be established for the specified authorization ID. A matching trusted context is not currently defined or the server does not support trusted context.

The attempt to create a trusted connection was not successful and a normal connection was created.

Federated system users: If this message is returned during a federated request, then the attempt to create a trusted connection between the federated database and the remote server was not successful, and a normal connection was created instead.

User response: Ensure that the server supports trusted contexts and that the trusted context has been correctly defined, and try to re-establish a trusted connection.

Federated system users: Ensure that the remote server supports trusted contexts and that the trusted context has been correctly defined on the remote server.

sqlcode: +20360

sqlstate: 01679

SQL20361N The switch user request using authorization ID *authorization-name* within trusted context *context-name* failed with reason code *reason-code*.

Explanation: The switch user request within the trusted context *context-name* failed. The trusted connection is in an unconnected state.

User response: Use the authorization ID *authorization-name* and the following explanations for reason code *reason-code* to determine what action to take.

- 1 The authorization ID is not an allowed user of the trusted context. Provide an authorization ID that is an allowed user of the trusted context as described in the trusted context definition.
- 2 The switch user request did not include the authentication token. Provide the authentication token for the authorization ID.
- 3 The trusted context object is either disabled, dropped, or its system authorization ID altered. Only the authorization ID that established the trusted connection is allowed. Provide this authorization ID.

sqlcode: -20361

sqlstate: 42517

SQL20362N Attribute *attribute-name* with value *value* cannot be dropped or altered because it is not part of the definition of trusted context *context-name*.

Explanation: Attribute *attribute-name* was specified for a trusted context, but the trusted context is not defined with an attribute with this name. The statement could not be processed.

User response: Remove the name of the unsupported attribute and re-issue the statement.

sqlcode: -20362

sqlstate: 4274C

SQL20363N Attribute *attribute-name* with value *value* is not unique for trusted context *context-name*.

Explanation: During the create or alter of trusted context *context-name*, a duplicate value *value* was specified for the *attribute-name* attribute. Each pair of attribute name and value must be unique for a trusted context.

The statement cannot be processed.

User response: Remove the non-unique specification of *attribute-name* and re-issue the statement.

sqlcode: -20363

sqlstate: 4274D

SQL20364N The identifier with the name *name* at ordinal position *number* in the statement is too long.

Explanation: At least one identifier in the described statement is too long to fit in the destination buffer. The first name that is too long is identified by the name name and ordinal position number. If performing a describe output of a prepared query, the ordinal position is relative to the select list column of the query. If performing a describe output of a CALL statement, the ordinal position is relative to the OUT or INOUT parameters of the procedure to which the CALL resolved. If performing a describe input of a CALL statement, the ordinal position is relative to the IN or INOUT parameters of the procedure to which the CALL resolved.

The column name, parameter name, user defined type name or user defined type schema name was either too long, or became too long after code page conversion. Note that the lengths of the column name, parameter name, user defined type name, and user defined type schema name are limited when using the SQLDA structure.

User response: Do one of the following:

1. Use a client whose code page does not cause expansion beyond the supported maximum length.

SQL20365W • SQL20374N

2. For a column name, change the table, view, or nickname so the column has a shorter name.
3. For a parameter name, change the procedure so the parameter has a shorter name.
4. For a user defined type name or user defined type schema name, drop and recreate the user defined type with a shorter name.
5. For a schema name, change the table, view, procedure, or user defined type.

sqlcode: -20364

sqlstate: 42622

SQL20365W A signaling NaN was encountered in an arithmetic operation or function involving DECFLOAT

Explanation: A signaling NaN (sNaN) was encountered in an expression, arithmetic operation, or function involving a DECFLOAT column or value. The result is NaN

User response: To stop the warning from being returned, find the tuple or tuples containing a signaling NaN and exclude them from the query.

sqlcode: +20365

sqlstate: 01565

SQL20371W The ability to use trusted context *context-name* was removed from some, but not all authorization IDs specified in the statement.

Explanation: An ALTER TRUSTED CONTEXT statement for *context-name* contained a DROP USE FOR clause with multiple authorization IDs or PUBLIC, but one or more authorization IDs were not defined to use the trusted context. One or more users were removed from the definition of the trusted context, but one or more other users were not previously allowed to use the trusted context.

The statement was processed.

User response: Verify that the ability to use the trusted context was removed from all of the authorization IDs that was intended.

sqlcode: +20371

sqlstate: 01682

SQL20372N The trusted context *context-name* specified authorization ID *authorization-name* which is already specified for another trusted context.

Explanation: A CREATE TRUSTED CONTEXT or ALTER TRUSTED CONTEXT statement for *context-name* specified SYSTEM AUTHID

authorization-name, but this authorization ID is already defined to use a different trusted context. A system authorization ID that is defined as the SYSTEM AUTHID for a trusted context cannot be associated with any other trusted context as the SYSTEM AUTHID.

Use the following query to determine which trusted context is already using the authorization ID:

```
SELECT CONTEXTNAME FROM SYSCAT.CONTEXTS  
WHERE SYSTEMAUTHID = <authorization-name>
```

The statement could not be processed.

User response: Change the authorization ID to be the system authorization ID for the trusted context and reissue the CREATE or ALTER statement.

sqlcode: -20372

sqlstate: 428GL

SQL20373N A CREATE TRUSTED CONTEXT or ALTER TRUSTED CONTEXT statement specified *authorization-name* more than once or the trusted context is already defined to be used by this authorization ID or PUBLIC.

Explanation: The statement specified that *authorization-name* be allowed to use the trusted context, but the specified authorization ID or PUBLIC is already defined to use the trusted context, or the authorization ID was specified more than once in the statement. The authorization ID or PUBLIC must not already be allowed to use the trusted context, and it can only be specified once within a statement for a trusted context.

The statement could not be processed.

User response: If the authorization ID or PUBLIC was specified more than once, remove the extra specifications of *authorization-name*, and re-issue the statement. If an ALTER TRUSTED CONTEXT statement contained an ADD USE FOR clause, and the trusted context already was defined for use by that authorization ID or PUBLIC, use the REPLACE USE FOR clause instead to redefine the usage characteristics for the specified users to use the trusted context.

sqlcode: -20373

sqlstate: 428GM

SQL20374N An ALTER TRUSTED CONTEXT statement for *context-name* specified *authorization-name* but the trusted context is not currently defined to be used by this authorization ID or PUBLIC.

Explanation: An ALTER TRUSTED CONTEXT statement for *context-name* attempted to replace or remove the ability for *authorization-name* to use the trusted context, but the specified authorization ID or

PUBLIC is not currently defined to use the trusted context.

The statement could not be processed.

User response: If an ALTER TRUSTED CONTEXT statement contained a REPLACE USE FOR clause, and the trusted context was not already defined for use by that authorization ID or PUBLIC, use the ADD USE FOR clause instead to define the trusted context to be used by the specified users. If the ALTER TRUSTED CONTEXT statement contained the DROP USE FOR clause, none of the specified authorization IDs or PUBLIC were currently defined to use the trusted context.

sqlcode: -20374

sqlstate: 428GN

SQL20377N An illegal XML character *hex-char* was found in an SQL/XML expression or function argument that begins with string *start-string*.

Explanation: An SQL/XML expression or function attempted to convert an SQL string value from one of the arguments to an XML string, but the string included a character at Unicode code point *hex-char* that is not a legal XML 1.0 character. The character is included in a string that begins with the string *start-string*. The value for *hex-char* represents the illegal character as a Unicode code point in the form "#xH", where H is one or more hexadecimal characters. The following set of Unicode characters (defined using a regular expression) are allowed: #x9 | #xA | #xD | [#x20-#xD7FF] | [#xE000-#xFFFF] | [#x10000-#x10FFFF]. Examples of the SQL/XML expression or function that may encounter this error are XMLCAST, XMLELEMENT, XMLFOREST, XMLAGG, XMLDOCUMENT, XMLTEXT, XMLATTRIBUTES, XMLQUERY, or XMLTABLE.

The statement cannot be processed.

User response: Remove the illegal character *hex-char* or replace it with a character that is allowed.

sqlcode: -20377

sqlstate: 0N002

SQL20379N An authorization ID cannot use its SECADM authority to transfer the ownership of an object to itself.

Explanation: An authorization ID that has the SECADM authority cannot transfer the ownership of an object it does not already own to itself. It can, however, transfer the ownership of the object to another authorization ID.

The statement cannot be processed.

User response: Choose a different authorization ID as

the new owner of the object.

sqlcode: -20379

sqlstate: 42502

SQL20383W Errors were encountered and tolerated as specified by the RETURN DATA UNTIL clause.

Explanation: At least one error as specified by the RETURN DATA UNTIL clause was encountered and tolerated, with execution continuing for the query. The results of the query might not be the same as they would be if the error had not occurred.

User response: Be aware that the query results might not be complete. If appropriate, check the source of the tolerated error and correct the situation.

sqlcode: +20383

sqlstate: 02506

SQL20384W The specified locale is not supported. The message was returned in the English locale.

Explanation: The specified locale is not supported by the database manager.

User response: Refer to the Administration Guide: Planning for the "Supported code pages and territories" or refer to the DB2 infocenter for the supported server languages and the corresponding locale values.

sqlcode: +20384

sqlstate: 01684

SQL20386N An XQuery expression cannot be specified in a DECLARE CURSOR statement.

Explanation: The DECLARE CURSOR statement does not allow an XQuery expression to be specified directly following the FOR keyword. An XQuery expression can only be associated with a cursor using a prepared statement name.

User response: Remove the XQuery expression from the DECLARE CURSOR statement and replace it with a statement name. Prepare the XQuery expression by issuing a PREPARE statement using the same statement name.

sqlcode: -20386

sqlstate: 42637

SQL20387N Two or more elements are specified for the security label component *component-name*.

Explanation: A security label cannot have multiple elements for a component of type ARRAY.

SQL20388N • SQL20392N

User response: Specify only one element for the security label component *component-name*.

sqlcode: -20387

sqlstate: 428GP

SQL20388N Too many elements are specified for the security label component *component-name*.

Explanation: A security label component of type SET or TREE can have no more than 64 elements. More than this number are specified for security label component *component-name*.

For a security label component of type ARRAY, the maximum number of elements is 65 535. If elements are added via the ALTER SECURITY LABEL COMPONENT statement, the actual limit may be lower than this maximum due to the way DB2 assigns an encoded value to each new element.

User response: For TREE and SET security label components, remove elements so that there are no more than 64. For ARRAY security components, if the maximum has not been reached, drop and create the component again with all the desired elements specified.

sqlcode: -20388

sqlstate: 54061

SQL20389N The component element *element* is not defined in the security label component *component-name*.

Explanation: The component element *element* does not exist in the definition of security label component *component-name*.

User response: Provide a valid element for the component. You can submit the following query to list the valid elements for the security label components:

```
SELECT ELEMENTVALUE FROM
  SYSCAT.SECLABELCOMPONENTELEMENTS
  WHERE COMPID=(SELECT COMPID FROM
  SYSCAT.SECLABELCOMPONENTS
  WHERE COMPNAME = component-name)
```

If you get this error when executing the scalar function SECLABEL, then also check the security label string to make sure that the values are listed in the same order that their components are listed in the security policy.

sqlcode: -20389

sqlstate: 4274F

SQL20390N The security label component *component-name* is not defined in the security policy *security-policy* so that component cannot be used in the security label *security-label*.

Explanation: Security labels can only contain values for those components that are defined in the security policy that the label is part of. The security label component *component-name* is not part of the security policy *security-policy*. The security label *security-label* is part of that security policy so the component *component-name* cannot be used in that security label.

User response: Provide a security label component that is part of the security policy *security-policy*. You can execute the following query to list the security label components that are part of the security policy:

```
SELECT COMPNAME FROM
  SYSCAT.SECURITYLABELCOMPONENTS
  WHERE COMPID=(SELECT COMPID FROM
  SYSCAT.SECURITYPOLICYCOMPONENTRULES
  WHERE SECPOLICYID = (SELECT
  SECPOLICYID FROM
  SYSCAT.SECURITYPOLICIES
  WHERE SECPOLICYNAME =
  '<security-policy>') )
```

sqlcode: -20390

sqlstate: 4274G

SQL20391N Label-based access control cannot be applied to the column *column-name* because there is no security policy associated with the table.

Explanation: In order to use the SECURED WITH clause with column *column-name* or to define it with a data type of DB2SECURITYLABEL, a security policy must be associated with the table.

User response: Add a security policy to the table using the SECURITY POLICY clause of the CREATE TABLE statement or the ADD SECURITY POLICY clause of the ALTER TABLE statement.

sqlcode: -20391

sqlstate: 55064

SQL20392N The table *table* already has a security policy.

Explanation: A table can have at most one security policy. Once associated, a security policy cannot be changed for a table.

User response: Do not try to assign another security policy to the table.

sqlcode: -20392

sqlstate: 55065

SQL20393N The maximum number of components in security policy *security-policy* has been exceeded.

Explanation: A security policy can have maximum of 16 components.

User response: Reduce the number of components specified for the security policy *security-policy*.

sqlcode: -20393

sqlstate: 54062

SQL20394N The access rule *access-rule* does not exist in the rule set used by the security policy *policy-name*.

Explanation: The access rule *access-rule* specified in the GRANT EXEMPTION or REVOKE EXEMPTION statement is not part of the LBAC rule set that is used by the security policy *policy-name*.

User response: The specified access rule does not exist in the rule set used by the specified security policy.

sqlcode: -20394

sqlstate: 4274H

SQL20395N The GRANT of security label *security-label1* conflicts with security label *security-label2* that is also granted to authorization ID *authorization-name*.

Explanation: If the user, group, or role is granted two distinct labels, one for WRITE access and another for READ access, they must satisfy the following rules:

1. For security label components of type ARRAY, the value must be the same in both security labels.
2. For security label components of type SET, the values given in the security label used for WRITE access must be a subset of the values given in the security label used for READ access.
3. For security label components of type TREE, either the values must be the same, or the values given in the security label used for WRITE access must be one of the sub tree values of the security label used for READ access.

User response: Grant a different security label or make one of these modifications to the security label that is being granted:

1. For security label components of type ARRAY, make sure the value given is the same in both security labels.
2. For security label components of type SET, make sure the values given in the security label used for WRITE access are a subset of the values given in the security label used for READ access.

3. For security label components of type TREE, make sure either the values are the same or the value given in the security label used for WRITE access is one of the sub tree values of the security label used for READ access.

sqlcode: -20395

sqlstate: 428GQ

SQL20396N The security label named *security-label-name* cannot be found for the security policy *policy-name*.

Explanation: The security label named *security-label-name* cannot be found for the security policy *policy-name*. This caused execution of the built-in function SECLABEL_BY_NAME to fail.

User response: Check the spelling of *security-label-name*. Make sure you are using the correct security policy name.

sqlcode: -20396

sqlstate: 4274I

SQL20397W Routine *routine-name* execution has completed, but at least one error, *error-code*, was encountered during the execution. More information is available.

Explanation: Routine *routine-name* execution has completed. At least one error was encountered during the internal execution of the requested function. The last error encountered was *error-code*. More detailed information on the errors encountered is available.

For the ADMIN_CMD routine, its output parameter and result set, if any, have been populated.

User response: Retrieve the output parameter and result set, if any, for more information on the errors encountered. If message files were generated during the execution, examine their content and resolve the error situations. If appropriate, reinvoke the routine again.

sqlcode: +20397

sqlstate: 01H52

SQL20401N The table cannot be protected by a security policy because an MQT or staging table named *object-name* depends on the table.

Explanation: The table cannot be protected with LBAC because, a materialized query table (MQT) or staging table depends on the table.

User response: If appropriate, drop the MQT or staging table *object-name* and resubmit the statement.

sqlcode: -20401

sqlstate: 55067

SQL20402N Authorization ID *auth-id* does not have the LBAC credentials to perform the operation-name operation on table *table-name*.

Explanation: The authorization ID *auth-id* is not allowed to perform operation *operation-name* on the table *table-name*. A user is not allowed to insert, update or delete a row in a protected table or alter the table to become a protected table if they do not have appropriate security label and/or exemption credentials.

User response: Ask your database security administrator to grant the authorization ID *auth-id* the proper security label or exemptions required to perform the insert, update or delete operation. To alter the table to become a protected table, a grant of a security label for WRITE access is required.

sqlcode: -20402

sqlstate: 42519

SQL20403N The authorization ID *auth-id* already has a security label (*security-label*) for *access-type* access.

Explanation: Each authorization ID can have at most one security label for WRITE access and at most one for READ access. The security label *security-label* has already been granted to the authorization ID *auth-id* for *access-type* access.

User response: If you want to change the security label used for *access-type* access you must first use the REVOKE SECURITY LABEL statement to revoke the security label *security-label* from authorization ID *auth-id*.

sqlcode: -20403

sqlstate: 428GR

SQL20404N The security label object *policy-name.object-name* cannot be dropped because it is currently in use. Reason code *reason-code*.

Explanation: The security label object *object-name* could not be dropped. The reason it could not be dropped is specified by the reason code *reason-code*:

1. It is granted to one or more users, groups, or roles.
2. It is being used to protect one or more columns.

User response: The user response corresponding to the reason code is:

1. Revoke this label from all users, groups, or roles who have been granted this security label for this

security policy. The following query can be used to find all the users who has been granted with this label.

```
SELECT GRANTEE FROM SYSCAT.SECURITYLABELACCESS
WHERE SECLABELID = (SELECT SECLABELID FROM
SYSCAT.SECURITYLABELS
WHERE SECLABELNAME = '<object-name>' AND
SECPOLICYID = (SELECT SECPOLICYID FROM
SYSCAT.SECURITYPOLICIES
WHERE SECPOLICYNAME = '<policy-name>' ) )
```

2. For all the tables that use this security label to protect a column, either alter the table to drop this security label or drop the table. The following query can be used to find all protected tables and all the columns that are protected with this label.

```
SELECT TABNAME, COLNAME FROM SYSCAT.COLUMNS
WHERE SECLABELNAME = '<object-name>' AND
TABNAME = (SELECT TABNAME FROM
SYSCAT.TABLES
WHERE SECPOLICYID = (SELECT SECPOLICYID FROM
SYSCAT.SECURITYPOLICIES
WHERE SECPOLICYNAME = '<policy-name>' ) )
```

sqlcode: -20404

sqlstate: 42893

SQL20405N The security policy object *object-name* cannot be dropped because it is currently in use. Reason code *reason-code*.

Explanation: The security object *object-name* could not be dropped. The reason it could not be dropped is specified by the reason code *reason-code*:

1. It is being used to protect one or more tables.
2. There are one or more security labels that use it.
3. There are one or more exemptions granted on one or more of its rules.

User response: The user response corresponding to the reason code is:

1. Drop the security policy from the tables protected by it using the ALTER TABLE statement. The following query can be used to find all the tables protected by this security policy:

```
SELECT TABNAME FROM SYSCAT.TABLES
WHERE SECPOLICYID=(SELECT SECPOLICYID FROM
SYSCAT.SECURITYPOLICIES
WHERE SECPOLICYNAME = '<object-name>' )
```

2. Drop all the security labels that are part of this security policy. The following query can be used find all security labels that belongs to this security policy:

```
SELECT SECLABELNAME FROM SYSCAT.SECURITYLABELS
WHERE SECPOLICYID=(SELECT SECPOLICYID FROM
SYSCAT.SECURITYPOLICIES
WHERE SECPOLICYNAME = '<object-name>' )
```

3. Revoke all the exemptions granted on rules used by this security policy from all users. The following

<p>query can be used find all users that have been granted exemptions on rules used by this security policy.</p> <pre>SELECT GRANTEE, ACCESSRULENAME FROM SYSCAT.SECURITYPOLICYEXEMPTIONS WHERE SECPOLICYID=(SELECT SECPOLICYID FROM SYSCAT.SECURITYPOLICIES WHERE SECPOLICYNAME = '<object-name>')</pre> <p>sqlcode: -20405</p> <p>sqlstate: 42893</p> <hr/> <p>SQL20406N The security label component object <i>object-name</i> cannot be dropped because it is part of a security policy.</p> <p>Explanation: The security label component object <i>object-name</i> cannot be dropped because one or more security policies refer to it.</p> <p>User response: Drop all the security policies that refer to this security component. The following query can be used find all the security policies that refer to this security component:</p> <pre>SELECT SECPOLICYNAME FROM SYSCAT.SECURITYPOLICIES WHERE SECPOLICYID = (SELECT SECPOLICYID FROM SYSCAT.SECURITYPOLICYCOMPONENTRULES WHERE COMPID = (SELECT COMPID FROM SYSCAT.SECURITYLABELCOMPONENTS WHERE COMPNAME = '<object-name>'))</pre> <p>sqlcode: -20406</p> <p>sqlstate: 42893</p> <hr/> <p>SQL20408N Table <i>source-tablename</i> cannot be attached to table <i>target-tablename</i> because column <i>source-columnname</i> of the source table and its associated column <i>target-columnname</i> of the target table do not match. Reason code = <i>reason-code</i>.</p> <p>Explanation: An attribute of the target table column does not match the attribute of the corresponding column (aligned by ordinal position) in the source table in the ALTER TABLE ... ATTACH PARTITION statement. The <i>reason-code</i> indicates the type of mismatch and in which column of the SYSCAT.COLUMNS view to find the table attribute.</p> <p>In cases where it is difficult or impossible to modify the characteristics of either the source or target table for compatibility, you can create a new table that is compatible with the target table, and copy the data from <i>source-tablename</i> to this new table. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.</p>	<p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p>	<p>The data type of the columns (TYPENAME) does not match.</p> <p>The nullability of the columns (NULLS) does not match.</p> <p>The implicit default value (IMPLICITVALUE) of the columns are incompatible.</p> <p>Implicit defaults must match exactly if both the target table column and source table column have implicit defaults (if IMPLICITVALUE is not NULL). Refer to the SQL Reference Manual for details on interpreting the values in IMPLICITVALUE.</p> <p>The code page (COMPOSITE_CODEPAGE) of the columns does not match.</p> <p>The system compression default clause (COMPRESS) does not match.</p> <p>The security label protecting the <i>source-columnname</i> for the source table is not identical to that of <i>target-columnname</i> for the target table. The two tables must have the same set of protected columns and each pair of corresponding columns must be protected with same security label.</p> <p>The row change timestamp attribute of the columns does not match.</p> <p>For structured, XML, or LOB data types, the inline length of the columns (INLINE LENGTH) do not match.</p> <p>If a column mask on <i>source-columnname</i> for the source table exists and is enabled, a column mask on <i>target-columnname</i> for the target table must also exist and be enabled.</p> <p>The ROW BEGIN system-generated attributes of the columns do not match.</p> <p>The ROW END system-generated attributes of the columns do not match.</p>
--	---	--

The TRANSCATION START ID system-generated attributes of the columns do not match.

User response: Correct the mismatch in the tables.

1

To correct a mismatch in data type, issue the statement:

```
ALTER TABLE ... ALTER COLUMN ...
SET DATA TYPE ...
```

2

Alter the nullability of the column that does not match for one of the tables by issuing one of the following statements:

```
ALTER TABLE... ALTER COLUMN...
DROP NOT NULL ALTER TABLE...
ALTER COLUMN... SET NOT NULL
```

3

Create a new source table. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.

4

Create a new source table. For details on creating a compatible source table, see the task, "Creating a new source table" in the DB2 Information Center.

5

To alter the system compression of the column issue one of the following statements to correct the mismatch:

```
ALTER TABLE ... ALTER COLUMN ...
COMPRESS SYSTEM DEFAULT
ALTER TABLE ... ALTER COLUMN ...
COMPRESS OFF
```

6

To alter the security protection of a column, issue one of the following statements:

```
ALTER TABLE ... ALTER COLUMN ...
SECURED WITH ... ALTER TABLE ...
ALTER COLUMN ...
DROP COLUMN SECURITY
```

7

When the target-columnname of the target table is defined as a row change timestamp column, the source-columnname must also be defined as a row change timestamp column.

8

Alter the inline length of the column that does not match by issuing the following statement:

```
ALTER TABLE ... ALTER COLUMN ...
SET INLINE LENGTH ...
```

9

Create an enabled mask on the column target-columnname by issuing the following statement, and then try ALTER again.

```
CREATE MASK ON target-table...
FOR target-columnname... ENABLE
```

10

When the target-columnname of the target table is defined as a ROW BEGIN system-generated column, the source-columnname must also be defined as a ROW BEGIN system-generated column.

11

When the target-columnname of the target table is defined as a ROW END system-generated column, the source-columnname must also be defined as a ROW END system-generated column.

12

When the target-columnname of the target table is defined as a TRANSCATION START ID system-generated column, the source-columnname must also be defined as a TRANSCATION START ID system-generated column.

sqlcode: -20408

sqlstate: 428GE

SQL20409N An XML document or constructed XML value contains a combination of XML nodes that causes an internal identifier limit to be exceeded.

Explanation: An internal identifier that must be associated with each XML node of an XML value cannot be generated because the combination of the number of levels of XML nodes and the number of children nodes within these levels causes the identifier to overflow.

User response: For a document or constructed XML value, reduce the number of levels of XML nodes or the number of children nodes especially at the deeper levels of XML nodes.

sqlcode: -20409

sqlstate: 560CG

SQL20410N The number of children nodes of an XML node in an XML value has exceeded the limit of *limit-number* children nodes.

Explanation: An expression generated an XML value with an XML node that has a number of children nodes

which exceeds the limit of *limit-number* children nodes.

User response: Rewrite the expression generating the XML value such that the number of children nodes does not exceed the limit.

sqlcode: -20410

sqlstate: 560CH

SQL20412N **Serialization of an XML value resulted in characters that could not be represented in the target encoding.**

Explanation: Serialization of XML data may require conversion to an encoding different from the source UTF-8 encoding. If characters exist in the source encoding that cannot be represented in the target encoding, code page conversion produces substitution characters which are not allowed in the result of XML serialization.

User response: Choose a target encoding that can represent all characters in the XML value. Unicode encodings are recommended as they can represent all characters.

sqlcode: -20412

sqlstate: 2200W

SQL20413N **The built-in function SECLABEL_TO_CHAR could not be executed because authorization ID *auth-id* has had its security label for READ access revoked.**

Explanation: To execute the built-in function SECLABEL_TO_CHAR, the authorization ID must have a security label for READ access. The security label for READ access has been revoked from authorization ID *auth-id*.

User response: Contact the database security administrator or a user with SECADM authority and ask that the security label be granted again.

sqlcode: -20413

sqlstate: 42520

SQL20414N **The *authority-or-privilege* authority or privilege cannot be granted to authorization ID *authorization-ID*.**

Explanation: The GRANT statement attempted to grant an authority or privilege to an authorization name that is not allowed to receive that authority or privilege.

The statement cannot be processed

User response: Grant a different authority or privilege or grant it to an authorization ID that can receive the authority or privilege.

sqlcode: -20414

sqlstate: 42521

SQL20415N **Update, delete, or Insert into a UNION ALL view failed because one of the underlying tables is protected.**

Explanation: Updates, deletes, and Inserts are not allowed into a UNION ALL view if that view is created on one or more protected tables.

The statement cannot be processed

User response: Do not update, delete, or insert into the UNION ALL view.

sqlcode: -20415

sqlstate: 429BZ

SQL20416N **The value provided (*seclabel*) could not be converted to a security label. Labels for the security policy with a policy ID of *policy-id* should be *correct-length* characters long. The value is *value-length* characters long.**

Explanation: An INSERT or UPDATE statement specified a value for a column of type DB2SECURITYLABEL. The value cannot be converted to a valid security label because it is not the correct length for security labels that are part of the security policy that is protecting the table. If the *seclabel* value is *N, then the actual value has been written in the db2diag log file.

User response: Check the INSERT or UPDATE statement and make sure that the value being set in the security label column is valid for the security policy protecting the table. Sometimes an invalid value can be generated as a result of a SELECT done from a table that is not protected with the same security policy as the target table. You should only copy security labels between tables protected by the same security policy. To get the security policy name for the given policy ID use this SQL query. Replace *policy-id* with the policy ID number given in the error message.

```
SELECT SECPOLICYNAME
      FROM SYSCAT.SECURITYPOLICIES
      WHERE SECPOLICYID = policy-id
```

sqlcode: -20416

sqlstate: 23523

SQL20417W **The SQL compilation completed without connecting to the data source *data-source-name*. Connection error *error-text* was encountered.**

Explanation: The federated server could not connect to the data source *data-source-name* during SQL

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compilation to determine which features the data source supports. The SQL query has been compiled using default settings. At runtime an error may be received because the remote server's capabilities were not correctly determined at compilation time. The *error-text* contains information about what connection error was encountered.

User response: Recompile the statement or bind the package again when the data source is available, or if an error tolerant nested table expression is used in the SQL statement, execute the package immediately after the compilation to reduce the chance of the connection state changing between compilation and runtime. Use the information in *error-text* to resolve the error connecting to the data source, if necessary. For information on testing the connection to a data source server, search for "testing connection server" in the Information Center.

sqlcode: +20417

sqlstate: 01689

SQL20418N The database partition group is already assigned to the buffer pool.

Explanation: The database partition group that you are attempting to add has already been assigned to the buffer pool.

User response: Choose another database partition group and try again.

sqlcode: -20418

sqlstate: 4274J

SQL20419N For table *table-name*, authorization ID *auth-id* does not have LBAC credentials that allow using the security label *security-label-name* to protect column *column-name*.

Explanation: A user cannot use a security label to protect a column unless that user has LBAC credentials that allow writing to a column protected by the security label. Authorization ID *auth-id* does not have LBAC credentials that allow write access to data protected by the security label *security-label-name* and therefore cannot use it to protect column *column-name* in table *table-name*.

User response: Ask a database security administrator to grant the authorization ID *authid* LBAC credentials that allow write access to a column protected by security label *security-label-name*.

sqlcode: -20419

sqlstate: 42522

SQL20420N For table *table-name*, authorization ID *auth-id* does not have LBAC credentials that allow removing the security label *security-label-name* from column *column-name*.

Explanation: To be able to drop or replace a security label that is protecting a column, an authorization ID must have LBAC credentials that allow both reading from and writing to a column. The authorization ID *auth-id* does not have LBAC credentials that allow both reading from and writing to a column protected by the security label *security-label-name* and therefore cannot drop or replace that security label.

User response: Ask a database security administrator to grant the authorization ID *authid* LBAC credentials that allow both read and write access to a column protected by security label *security-label-name*.

sqlcode: -20420

sqlstate: 42522

SQL20421N The table *table-name* is not protected with a security policy.

Explanation: A security policy cannot be dropped from a table that is not protected with a security policy.

User response: Specify a table that is protected with a security policy.

sqlcode: -20421

sqlstate: 428GT

SQL20422N The statement failed because the table *table-name* would only contain hidden columns.

Explanation: A CREATE TABLE or ALTER TABLE statement attempted to create or alter table *table-name* in which all the columns are considered implicitly hidden. This can occur when:

- A CREATE TABLE statement specifies IMPLICITLY HIDDEN as part of the definition of all columns.
- An ALTER TABLE statement alters any not hidden columns to implicitly hidden

Change the column definition ensuring it includes at least one column that is defined as not hidden.

User response: Ensure that the table definition includes at least one column that is not defined as implicitly hidden.

sqlcode: -20422

sqlstate: 428GU

SQL20423N Error occurred during text search processing on server *server-name* using index *index-name*. The error message is *text-search-error-msg*.

Explanation: An error described by *text-search-error-msg* occurred during the processing of a text search function that used the text search index *index-name*.

User response: Use *text-search-error-msg* to determine the cause of the error. If the error message is truncated, you can see the complete message in the db2diag log file.

The first word in *text-search-error-msg* is an error identifier. If the error identifier starts with 'CIE', use the db2ts command to obtain more details, for example, db2ts help *error-identifier*.

If the error identifier does not start with 'CIE', use the DB2 Text Search documentation to obtain more details about *text-search-error-msg*.

sqlcode: -20423

sqlstate: 38H10

SQL20424N Text search support is not available. Reason code = *reason-code*.

Explanation: An error occurred while attempting to use text search.

The reason code provides more information about the error:

11

Socket communication with the search server failed.

12

Unrecoverable error during a search system operation.

User response: Restart the text search instance service and try the operation again. If the error reoccurs, contact your system administrator to ensure that support for text searching has been installed, properly configured, and has been started on your system.

sqlcode: -20424

sqlstate: 38H11

SQL20425N The statement failed because the column named *column-name* in the table named *table-name* was specified as an argument to a text search function, but an active text search index does not exist for the specified column.

Explanation:

1. A text search function, such as CONTAINS or SCORE, specified a column as an argument but a text search index does not exist for this column.
2. The text search index is inactive.
3. The text search index is invalid. A text search index may be invalidated automatically, for example, if the underlying base table was dropped and recreated.
4. The query combines different types of text search indexes.

Text search processing cannot be performed for the specified column.

User response:

1. Ensure that the database is enabled for text search and a text search index has been created on the specified column.
2. Activate the text index with the ALTER INDEX command, with the ACTIVATE option.
3. If the table column has an invalid text search index, drop the text index and create a new one.
4. If the query combines multiple text search indexes, make sure that all indexes are active and of the same type.

sqlcode: -20425

sqlstate: 38H12

SQL20426N Conflicting text search administration procedures or commands running on the same index.

Explanation: Two or more conflicting administration procedures or commands are running on the same index.

User response: Invoke the administration procedure or command after the currently running procedure or command completes. If the operation attempted is DISABLE, retry this operation later or use the FORCE option of the command.

sqlcode: -20426

sqlstate: 38H13

SQL20427N An error occurred during a text search administration procedure or command. The error message is *text-search-error-msg*.

Explanation: A text search administration operation failed with an error message *text-search-error-msg*.

User response: Use the error message *text-search-error-msg* to determine the cause of the error. If the message is truncated, you can see the db2diag log file.

The first word in *text-search-error-msg* is an error

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identifier. If the error identifier starts with 'CIE', use the db2ts command to obtain more details, for example, db2ts help *error-identifier*.

If the error identifier does not start with 'CIE', use the DB2 Text Search documentation to obtain more details about *text-search-error-msg*.

sqlcode: -20427

sqlstate: 38H14

SQL20428N URI specified in the the ACCORDING TO XMLSCHEMA clause is an empty string.

Explanation: The target namespace URI specified following the URI keyword or the schema location URI specified following the LOCATION keyword is an empty string.

User response: Ensure that every target namespace URIs and every schema location URI in the ACCORDING TO XMLSCHEMA clause is a valid URI that is not an empty string.

sqlcode: -20428

sqlstate: 428GV

SQL20429N The XML operation *operation-name* is not allowed on strings that are not FOR BIT DATA on this database.

Explanation: The specified operation could not be performed on the string because it is not FOR BIT DATA. *operation-name* is either XMLPARSE or another prohibited operation.

User response: The database configuration parameter ENABLE_XMLCHAR is set to NO. To allow XMLPARSE on strings that are not FOR BIT DATA, set ENABLE_XMLCHAR to YES. Note that character substitution may occur if the database is not Unicode and the XML value being parsed contains characters that are not present in the database code page.

Alternatively, rework the statement to use a host variable, expression or parameter marker of type XML.

sqlcode: -20429

sqlstate: 428GW

SQL20430N Global variable *variable-name* cannot be set or referenced in this context.

Explanation: In some contexts a global variable cannot be set and in other contexts it cannot be referenced. This message can be returned in the following situations:

- A statement attempted to set the named global variable in one of the following contexts:
 - compound SQL (inline) statements

- functions where the body is not a compound SQL (compiled) statement
- methods
- triggers where the body is not a compound SQL (compiled) statement
- A global variable is being referenced in a procedure that is defined as AUTONOMOUS

The statement cannot be processed.

User response: Remove the unsupported setting or reference of the global variable.

sqlcode: -20430

sqlstate: 428GX

SQL20431N ROW CHANGE TIMESTAMP FOR *table-designator* cannot be returned for the table designator.

Explanation: A ROW CHANGE TIMESTAMP FOR *table-designator* expression is not valid for a table which does not have a column defined as a row change timestamp column.

The statement cannot be processed.

User response: Remove the ROW CHANGE TIMESTAMP FOR expression from the statement or alter the table and add the row change timestamp column.

sqlcode: -20431

sqlstate: 55068

SQL20432N The original XML schema contains *schema-component* that is enclosed within or referenced by *enclosing-schema-component* which is not compatible with the updated XML schema. The reason for the incompatibility is: *reason-code* (*reason-string*).

Explanation: The XML schema specified to update another existing XML schema does not meet the criteria for a compatible XML schema update. The original XML schema contains an element, attribute, or type *schema-component* that is enclosed within or referenced by the element or attribute *enclosing-schema-component* which is not compatible with the updated XML schema. The specific reason for the incompatibility is given by *reason-code* (*reason-string*).

1 (ATTRIBUTE CONTENT)

An attribute declared or referenced inside a complex type has been removed or some required attributes have been added as part of the content model. The value of *schema-component* is the name of the enclosing complex type in the original XML schema and the value of *enclosing-schema-component* is the

name of the element that refers to the complex type. In the case of an anonymous complex type the value of *schema-component* is empty.

2 (ELEMENT CONTENT)

An element declared or referenced inside a complex type has been removed or some required elements have been added as part of the content model. The value of *schema-component* is the name of the enclosing complex type in the original XML schema and the value of *enclosing-schema-component* is the name of the element that refers to the complex type. In the case of an anonymous complex type the value of *schema-component* is empty.

3 (FACET CONFLICT)

The facet value of the simple type has been changed in a way that is not compatible with the range of values for the simple type. The value of *schema-component* is the name of the simple type that defines this facet in the original XML schema and the value of *enclosing-schema-component* is the name of the element or attribute that refers to the simple type. In the case of anonymous simple type the value of *schema-component* is empty.

4 (INCOMPATIBLE TYPE)

The type of an element or attribute has been changed in a way that results in instance document validation failure or that is not compatible because of a simple type annotation change. The value of *schema-component* is the name of the type in the original XML schema and the value of *enclosing-schema-component* is the name of the element or attribute that refers to the type. In the case of an anonymous type the value of *schema-component* is empty.

5 (MIXED INTO NOT MIXED CONTENT)

The content model of a complex type which is declared as mixed in the original XML schema has been changed to not mixed content in the updated XML schema. The value of *schema-component* is the name of the complex type in the original XML schema and the value of *enclosing-schema-component* is the name of the element that refers to the complex type. In the case of an anonymous complex type the value of *schema-component* is empty.

6 (NILABLE INTO NOT NILABLE)

The nillable attribute in an element declaration is turned on in the original XML schema but gets turned off in the updated XML schema. The value of *schema-component* is the name of the element in the original XML schema and the value of *enclosing-schema-component* is empty.

7 (REMOVED ELEMENT)

A global element declared in *schema-component* has either been removed from the updated XML schema or made abstract. The value of *enclosing-schema-component* is empty.

8 (REMOVED TYPE)

The original XML schema contains a global type in *schema-component* that is derived from another type and the global type gets removed from the updated XML schema. The value of *enclosing-schema-component* is empty.

9 (SIMPLE TO COMPLEX)

A complex type that contains simple content in the original XML schema cannot be redefined to contain complex content in the updated XML schema. The value of *schema-component* is the name of the complex type in the original XML schema and the value of *enclosing-schema-component* is the name of the element that refers to the complex type. In the case of an anonymous complex type the value of *schema-component* is empty.

10 (SIMPLE CONTENT)

The simple type defined in the original XML schema and the updated XML schema have different base types. The value of *schema-component* is the name of the simple type in the original XML schema and the value of *enclosing-schema-component* is the name of the element or attribute that refers to the simple type. In the case of an anonymous simple type the value of *schema-component* is empty.

User response: Compare the explanations provided with *reason-code* (*reason-string*) and identify the cause of the incompatibility. Next, correct the problem and then resubmit the command to update the XML schema.

sqlcode: -20432

sqlstate: 22538

SQL20435N The SELECT clause includes an ARRAY_AGG function and all invocations of ARRAY_AGG, LISTAGG, XMLAGG, and XMLGROUP functions in the same SELECT clause do not have the same order.

Explanation: The SELECT clause includes an ARRAY_AGG and one of the following conditions exists:

- The ARRAY_AGG function invocation includes an ORDER BY clause and the specified sort key is different from the sort key of at least one occurrence

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of an ARRAY_AGG, LISTAGG, XMLAGG, or XMLGROUP function invocation in the same SELECT clause.

- The ARRAY_AGG function invocation does not include an ORDER BY clause and the specified sort keys are not the same for all invocations of ARRAY_AGG, LISTAGG, XMLAGG, or XMLGROUP functions in the same SELECT clause.

User response: Change the sort-keys to make them identical, or remove the specification of sort-key in all but one of the function invocations.

sqlcode: -20435

sqlstate: 428GZ

SQL20436N The data type specified for an array is not valid.

Explanation: The data type specified for an array in the CREATE TYPE statement, array constructor, argument to UNNEST, argument to ARRAY_AGG, or target of ARRAY_AGG is not valid. The following restrictions apply when specifying a data type.

- The following data types are not supported:
 - LONG VARCHAR
 - LONG VARGRAPHIC
 - REFERENCE
 - XML
 - BOOLEAN (prior to Version 9.7.5)
 - user-defined data types other than row data type and array data type
- The array index data type for an associative array must be INTEGER or VARCHAR.
- An argument to UNNEST cannot be a nested array.
- An argument to ARRAY_AGG and the target of ARRAY_AGG cannot be a nested array.
- The target of an ARRAY_AGG cannot be a nested array.
- ARRAY types or ROW types can be nested as elements in other ARRAY types, but there is a maximum nesting level which must not be exceeded.

User response: Ensure that the data type specified in a CREATE TYPE (array) statement, an array constructor, the argument to UNNEST, the argument to ARRAY_AGG, or as the target of ARRAY_AGG is supported.

sqlcode: -20436

sqlstate: 429C2

SQL20437N The array index operation cannot be applied to an object of a data type that is not ARRAY.

Explanation: The array index operation of the form

object[array index] cannot be applied to an object whose type is not ARRAY.

User response: Change the variable or parameter to be of type ARRAY.

sqlcode: -20437

sqlstate: 428H0

SQL20438N The data type of an array index expression is not assignable to the array index type.

Explanation: The type of an array index expression in an expression of the form object[array_index] must be assignable to INTEGER if the object is an ordinary array. If the object is an associative array, then the type of the array index expression must be assignable to the data type of the array index (INTEGER or VARCHAR).

User response: Change the data type of the array index expression to be one that is supported.

sqlcode: -20438

sqlstate: 428H1

SQL20439N Array index with value *value* is out of range or does not exist.

Explanation: The value of an array index for an array element specification or the second argument to TRIM_ARRAY is out of range or the null value. If the array index is specified in an array element specification for an associative array and is valid for the array index data type, the element with array index value *value* does not exist in the array.

User response: For an associative array:

- Specify a value that is not the null value.
- If the array index data type is integer, specify a value that is a number within the range of integers.
- Specify an array index value that exists in the array.

For an ordinary array:

- If the value is an array index used in an array element specification that is the target of an assignment statement, change the value to be not the null value, not less than 1 and not greater than the maximum cardinality defined for the array.
- If the value is an array index used in an array element specification that is part of an expression or the value is the second argument to the TRIM_ARRAY function, change the value to be not less than 0 and not greater than the cardinality of the array.

sqlcode: -20439

sqlstate: 2202E

SQL20440N Array value with cardinality *cardinality* is too long. The maximum cardinality allowed is *max-cardinality*.

Explanation: The array value required truncation from its cardinality of *cardinality* to a maximum cardinality of *max-cardinality*. A system (built-in) cast or adjustment function was called to transform the value in some way. The truncation is not allowed where the value is used.

The array value being transformed is one of the following:

- An argument to a stored procedure call
- The result of a call to the ARRAY_AGG function
- The result of an array constructor used in the right side of a SET statement
- An argument to a cast function

User response: Examine the SQL statement to determine where the transformation is taking place. Either the input to the transformation is too long, or the target is too short. Explicitly reduce the cardinality of the input, or increase the cardinality that the target can support.

sqlcode: -20440

sqlstate: 2202F

SQL20441N A *type-name* data type is not supported in the context where it is being used.

Explanation: The data type can be specified in multiple contexts, including the following.

- Parameters to SQL functions:
 - Defined in a module
 - With a compound SQL (compiled) statement as function body not defined in a module
- Return types from SQL functions:
 - Defined in a module
 - With a compound SQL (compiled) statement as function body not defined in a module
- Parameters to SQL procedures
- Local variables declared in SQL functions:
 - Defined in a module
 - With a compound SQL (compiled) statement as function body not defined in a module
- Local variables declared in SQL procedures
- Local variables declared in triggers with a compound compiled SQL statement as trigger body
- Expressions in SQL statements within compound compiled SQL statements
- Global variables

The following is a list of some invalid contexts:

- Parameters or variables in external routines

- Return type of a function with a function body definition defined by a compound SQL (inlined) statement
- Columns in tables
- Data types in SQL statements outside of SQL PL contexts
- Global variable (includes module-variable) being referenced outside of an SQL PL context.
- Input or output parameter to a procedure or function being invoked from outside of an SQL PL context.
- In a partitioned database environment (DPF) or symmetric multiprocessor (SMP) environment, only top level SET and CALL statements can reference objects defined in nested types. A sub-query cannot reference objects with nested types.

User response: Refer to the documentation for the most up to date list of supported contexts and for restrictions on the use of this data type. Remove any data types used in unsupported contexts.

If referencing the data type in a routine reference from a command interface, invoke the routine from within an SQL PL context or provide a global variable of the specified data type as the routine argument.

sqlcode: -20441

sqlstate: 428H2

SQL20442N There is not enough storage to represent the array value.

Explanation: The amount of memory required to represent an array value is larger than the maximum allowed for the system.

User response: Possible solutions may include:

- Correct the statement that is attempting to create the array value
- Reduce the number of elements in the array or the sizes of some of the elements
- Increase the value of APPLHEAPSZ or APPL_MEMORY if they are not set to AUTOMATIC
- Increase the amount of physical memory available to the system.

sqlcode: -20442

sqlstate: 57011

SQL20443N The value for attribute *attribute-name* cannot exceed *length*.

Explanation: An attribute specified for a trusted context or workload definition is too long. Attribute *attribute-name* was specified, but the value exceeds the maximum length of *length*.

User response: Specify a valid value with a length no longer than *length*.

sqlcode: -20443

sqlstate: 42907

SQL20445N The security label name *name* is not valid as specified.

Explanation: In the context where it is specified, the security label name must be explicitly qualified with an existing security policy name.

User response: Provide a security label name that is explicitly qualified with an existing security policy name.

sqlcode: -20445

sqlstate: 42704

SQL20447N Format string *format-string* is not valid for the *function-name* function.

Explanation: The given format string *format-string* is invalid for the function named *function-name*.

The function identified as *function-name* could be VARCHAR_FORMAT or TIMESTAMP_FORMAT, even if the name used to invoke the function was TO_CHAR, TO_DATE, or TO_TIMESTAMP.

This message is returned when there is one of the following problems with the format-string argument:

1. There are unsupported format elements.
2. The format does not contain a format element, is the empty string, or is all blanks.
3. A format element is specified more than once.
4. The length of the format string argument exceeds the maximum allowable length.
5. There are unsupported separator characters.
6. There are too many format elements.
7. A prefix or suffix format element is specified in the wrong place in the string (See DECFLOAT_FORMAT and VARCHAR_FORMAT for more details).
8. There are multiple format elements that represent the same component. For example, the TIMESTAMP_FORMAT function YYYY and YY (format element to indicate the YEAR) must not both be specified in the format string.

The statement cannot be processed.

User response: Change the format string argument and call the *function-name* function again.

For more information of valid format string arguments see the SQL reference for the *function-name* function in the DB2 Information Center.

sqlcode: -20447

sqlstate: 22007

SQL20448N *string-expression* cannot be interpreted using format string *format-string* for the TIMESTAMP_FORMAT function.

Explanation: The TIMESTAMP_FORMAT function was invoked with *string-expression* and *format-string*. The name used to invoke the function could also be TO_DATE or TO_TIMESTAMP. The value *string-expression* cannot be interpreted with the format string *format-string* to produce a timestamp value. This error can occur for any of the following reasons:

- *string-expression* is too short for the specified format string
- *string-expression* is too long for the specified format string
- *string-expression* does not conform to the template specified in the format string. For example:
 - too many digits were specified in *string-expression* for the corresponding format element in the format string, such as in the specific case where 92007 is not a valid value for YYYY
 - a value in *string-expression* is not valid for the corresponding format element in the format string, such as in the specific case where 45 is not a valid value for DD

The statement cannot be processed.

User response: Change the format string argument of the TIMESTAMP_FORMAT function. For more information, see the TIMESTAMP_FORMAT function in the SQL Reference.

sqlcode: -20448

sqlstate: 22007

SQL20449N Tree element *element-value* is not valid where specified.

Explanation: The tree element *element-value* is an existing element in the tree, but is not valid where it is specified in the statement. The tree structure of the tree component must be maintained.

For example, in an ALTER SECURITY LABEL COMPONENT statement, the *element-name* specified in the OVER clause of the ADD ELEMENT clause is not an immediate child element of the tree element specified immediately after the UNDER keyword.

User response: Specify a valid tree element that would maintain the tree structure. For example, only specify existing tree elements that are immediate children elements of the tree element specified immediately after the UNDER keyword.

sqlcode: -20449

sqlstate: 428H3

SQL20450N Recursion limit exceeded within a hierarchical query.

Explanation: Hierarchical queries using the CONNECT BY clause are limited to a recursive depth of 64 levels. The query has exceeded this level.

User response: Validate the correctness of the START WITH and CONNECT BY clauses. If recursions deeper than 64 levels are expected, rewrite the query using a recursive common table expression. Recursive common table expressions support arbitrary recursive depth.

sqlcode: -20450

sqlstate: 54066

SQL20451N Cycle detected in a hierarchical query.

Explanation: The hierarchical query using the CONNECT BY clause has found a row which is a direct or indirect parent to itself, given the CONNECT BY search condition.

The statement cannot be processed.

User response: Validate the correctness of the CONNECT BY clause, paying particular attention to the PRIOR operator.

- If no cycles are expected, validate that the result table provided by the FROM clause does contain cyclic data based on the search condition specified in the CONNECT BY clause.
- If the presence of cycles is expected, add the NOCYCLE keyword to the CONNECT BY clause. For example:

```
SELECT PK FROM T START WITH PK = 5
CONNECT BY NOCYCLE PRIOR PK = FK
```

sqlcode: -20451

sqlstate: 560CO

SQL20452N Hierarchical query construct *name* is used out of context.

Explanation: One of the following constructs has been found outside of the context of a hierarchical query:

- the LEVEL pseudocolumn
- the PRIOR or CONNECT_BY_ROOT unary operator
- the SYS_CONNECT_BY_PATH() function
- the ORDER SIBLINGS BY clause

The reason can be one of the following:

- Within the subselect where *name* is specified no CONNECT BY clause is present. Note that *name* cannot be correlated.
- ORDER SIBLINGS BY has been specified, but there is a DISTINCT, GROUP BY or HAVING clause present which has destroyed the partial order provided by the hierarchical query

- One of the arguments of *name* is an aggregate function or an OLAP function
- *name* is itself an argument to a hierarchical query construct
- PRIOR has been specified outside of the context of a CONNECT BY clause
- *name* has been specified in an implicit join predicate in the WHERE clause
- *name* has been specified in the START WITH clause.

The statement cannot be processed.

User response:

- If no hierarchical query is intended and *name* is LEVEL, validate that columns or variables matching *name* do exist and can be resolved within the query. These identifiers are considered pseudocolumns only after the usual identifier resolution has failed.
- Verify that the CONNECT BY clause is present within the subselect containing *name*
- When combining aggregate functions and hierarchical queries, consider using *name* as an argument to the aggregate function instead of the reverse. For example, use MAX(CONNECT_BY_ROOT *name*) instead of CONNECT_BY_ROOT MAX(*name*)
- Remove *name* from the query.

sqlcode: -20452

sqlstate: 428H4

SQL20453N The task *task-name* cannot be removed because it is currently executing.

Explanation: An attempt to remove task *task-name* failed because it is currently executing.

User response: Wait until the task completes and then use the SYSPROC.ADMIN_TASK_REMOVE procedure to remove the task. The SYSTOOLS.ADMIN_TASK_STATUS view can be used to check the execution status of the task.

sqlcode: -20453

sqlstate: 5UA01

SQL20454N Invalid use of an outer join operator. Reason code = *reason-code*.

Explanation: The outer join operator (specified as "(+)") was used incorrectly in an SQL statement. The meaning of the invalid use is given by the reason code *reason-code*.

- 1 The outer join operator is used in a subselect that uses the JOIN syntax in the FROM clause.

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- 2 The outer join operator is used in an AND-factor that has a correlated reference to another subselect.
- 3 The outer join operator is used on columns from more than one table-reference within an AND-factor.
- 4 The outer join operator is used in an AND-factor that references columns from more than two table-references.
- 5 The outer join operator is missing from some column references for the NULL-producer within an AND-factor.
- 6 The outer join operator is specified in an AND-factor where the column references are from only one table-reference and there are no other AND-factors that perform an outer join using the same NULL-producer table-reference.
- 7 The same table-reference is used as the NULL-producer in more than one outer join.
- 8 The same table-reference is used as the NULL-producer and the outer table in separate outer joins that form a cycle.
- 9 The outer join operator is used with an identifier that is not the name of a column. The identifier could be a global variable, local variable, transition variable, or parameter name.

The statement cannot be processed.

User response: Replace the use of the outer join operator with explicit OUTER JOIN syntax in the FROM clause. Alternatively, correct or remove the invalid use of the outer join operator based on the reason code.

sqlcode: -20454

sqlstate: 428H5

SQL20456N An insert or update operation of multiple rows failed because both DEFAULT and explicit values cannot be specified for a column defined as ROW CHANGE TIMESTAMP and GENERATED BY DEFAULT.

Explanation: An insert or update operation on multiple rows of data attempted to insert or update rows specifying DEFAULT for some rows and explicit values for some rows for a column that is defined with both the ROW CHANGE TIMESTAMP attribute and GENERATED BY DEFAULT attribute.

User response: Modify the statement so that only DEFAULT is specified for the column for all of the rows, or explicit values are provided for the column for all of the rows. Alternatively, use two statements for

this operation, one to set the column values to DEFAULT, and the other to set the column values to the explicitly provided values.

sqlcode: -20456

sqlstate: 560CP

SQL20457N The procedure *procedure-name* has encountered an unsupported version, *version*, for parameter *number*.

Explanation: The version, *version*, specified for the parameter in ordinal position *number* is not supported by the procedure *procedure-name*.

User response: Call the procedure and specify a supported version number for the parameter. The highest supported version number for the parameter can be obtained by calling the procedure and specifying NULL for the value of this parameter.

sqlcode: -20457

sqlstate: 38554

SQL20458W The procedure *procedure-name* has encountered an internal parameter processing error in parameter *number1*. The value for parameter *number2* contains further information about the error.

Explanation: The format or content of the parameter in ordinal position *number1* in the call to the procedure *procedure-name* is invalid. The output parameter specified in ordinal position *number2* contains information on how to respond to the error.

User response: Use the information in the output parameter specified in ordinal position *number2* to correct the format or content of the parameter value and call the procedure again.

sqlcode: +20458

sqlstate: 01H54

SQL20459W The procedure *procedure-name* has encountered an internal processing error. The value for parameter *number* contains further information about the error.

Explanation: An error occurred when the procedure *procedure-name* was processing a request. The output parameter specified in ordinal position *number* contains information on how to respond to the error.

User response: Use the information in the output parameter specified in ordinal position *number* to correct the error and call the procedure again.

sqlcode: +20459

sqlstate: 01H55

SQL20460W The procedure *procedure-name* supports a higher version, *version1*, than the specified version, *version2*, for parameter *number*.

Explanation: A higher version, *version1*, for the parameter in ordinal position *number* is supported by the procedure *procedure-name*. The specified version, *version2*, is supported for the parameter.

User response: Check the documentation for the procedure to understand the additional features supported by the newer version of the parameter. Upgrade to the current version to take advantage of these additional features.

sqlcode: +20460

sqlstate: 01H56

SQL20461W The procedure *procedure-name* returned output in the alternate locale, *locale1*, instead of the locale, *locale2*, specified in parameter *number*.

Explanation: The locale, *locale2*, specified in the parameter in ordinal position *number* was not available for the output of the procedure *procedure-name*. The output is returned using locale *locale1*.

User response: Install the message file support on the server for the specified locale, *locale2*, or specify a supported locale.

sqlcode: +20461

sqlstate: 01H57

SQL20462W Unable to return distinct row change columns. Reason code = *reason-code*.

Explanation: WITH ROW CHANGE COLUMNS ALWAYS DISTINCT was specified as a prepare attribute, but the database manager is unable to return distinct row change columns.

The statement was prepared successfully.

User response: If distinct row change columns are desired, use the following *reason-code* values to determine what to do.

- 1 The prepared select-statement is not eligible for row change columns. For example, it includes a GROUP BY, join, or UNION. Modify the select-statement so that it supports the returning of distinct row change columns.
- 2 A column defined AS ROW CHANGE TIMESTAMP does not exist in the table. Alter the table so it has a column with the AS ROW CHANGE TIMESTAMP attribute.
- 3 A column defined AS ROW CHANGE

TIMESTAMP was added to the table, but the table has not yet been reorganized. Reorganize the table.

sqlcode: +20462

sqlstate: 0168T

SQL20464N An attempt to revoke the SECADM authority from *authorization-ID* was denied because it is the only external authorization ID of type user with SECADM authority.

Explanation: The SECADM authority must be held by at least one external authorization ID of type user, and the REVOKE statement is attempting to revoke the authority from the last authorization ID of type user that holds this authority. The statement cannot be executed. The SECADM authority is not revoked.

User response: Grant the SECADM authority to another external authorization ID of type user to allow the SECADM authority to be revoked from *authorization-ID*.

sqlcode: -20464

sqlstate: 42523

SQL20465N The binary XML value is incomplete or contains unrecognized data at location *position* starting with the hex data *text*. Reason code = *reason-code*.

Explanation: An error occurred when processing a binary XML value. The first eight bytes of XML data in hexadecimal at *position* bytes is *text*. If the unrecognized data is located within the last eight bytes of the binary XML data, only the data starting at location *position* up to the end of the binary XML data is displayed. The reason code indicates the specific problem:

1. The XDBX data specified is incomplete.
2. An XML sequence was specified for an insert operation and this is not supported.
3. The XDBX data specified for an insert operation contains an unsupported tag.
4. The referenced string ID is not previously defined.
5. The length specified is not correct.

The statement cannot be processed.

User response: Fix the problem in your XML data or change your application to use textual XML format for data transfer.

sqlcode: -20465

sqlstate: 22541

SQL20467N The statement was not executed because an expression cannot be computed as a single value for the query. The invalid expression is in the statement near the syntax element *text*.

Explanation: The expression in the statement near the syntax element *text* must result in a single value and must consist of one of the following elements:

- A constant
- A special register
- A parameter marker
- A variable
- A deterministic function with no external action
- An expression whose operands are any of the previously listed elements

The expression cannot include any of the following elements:

- A column name
- A non-deterministic function
- A function with external action
- An expression whose operands are any of the previously listed elements

User response: Run the statement again, after changing the expression to remove any elements that cannot be included.

sqlcode: -20467

sqlstate: 428H7

SQL20469N Row or column access control activation for table *table-name* has failed due to reason code *reason-code*.

Explanation: Row access control cannot be activated explicitly or implicitly, or column access control cannot be activated explicitly for table *table-name* for one of the following reasons:

37

A trigger, *object-name*, is defined for the table and the trigger is not defined as secure.

38

A view is defined on the table, a trigger, *object-name*, is defined for that view, and the trigger is not defined as secure.

40

The table is either a typed table, or a catalog table.

41

The table is referenced by a materialized query table and the materialized query table references functions with NOT SECURED attribute.

The statement cannot be processed.

User response: Correct the error and retry the activation of the row or column access control for the table.

sqlcode: -20469

sqlstate: 55019

SQL20470N The CREATE or ALTER statement failed because *object-type1 object-name1* was not defined as secure and *object-type2 object-name2* is dependent on it.

Explanation: *object-type1 object-name1* must be defined as secure because *object-type2 object-name2* depends on it for row or column access control.

The statement cannot be processed.

User response: The object needs to remain secure as long as a row permission or a mask depends on it, or a materialized query table that references tables with row or column access control activated depends on it. To complete the CREATE or ALTER statement, drop the dependent object after ensuring that it is not needed.

sqlcode: -20470

sqlstate: 428H8

SQL20471N The INSERT or UPDATE statement failed because a resulting row did not satisfy row permissions.

Explanation: Row access control is enforced for the object of the INSERT or UPDATE operation. All attempts to INSERT or UPDATE rows in the table are checked to ensure that the resulting rows conform to the row permissions defined for that table.

The statement cannot be processed. No INSERT or UPDATE operation was performed, and the contents of the table remain unchanged.

User response: Examine the definitions of the row permissions to determine why the requested INSERT or UPDATE operation failed. This may be a data-dependent condition.

sqlcode: -20471

sqlstate: 22542

SQL20472N The ALTER statement on the permission or mask *object-name* failed due to reason code *reason-code*.

Explanation: The ALTER MASK or ALTER

PERMISSION statement cannot be processed for one of the following reasons:

- 1 A default row permission cannot be altered.
- 2 ENABLE cannot be specified because the object is invalid.

The statement cannot be processed.

User response:

- 1 Specify the name of a row permission or column mask that can be changed.
- 2 For the invalid state, disable the row permission or column mask, then drop and recreate it.

sqlcode: -20472

sqlstate: 428H9

SQL20473N The function *function-name*, created with the NOT SECURE option failed. The function referenced column *column-name* which has a column mask with column access control activated for the table.

Explanation: The input argument of an insecure function must not reference a column which has a column mask defined with column access control activated for the table.

The statement cannot be processed.

User response:

- Do not reference such a column as the input argument to the function.
- Disable or drop the column mask then invoke the function again.

sqlcode: -20473

sqlstate: 428HA

SQL20474N The CREATE PERMISSION or CREATE MASK statement failed on the database object *object-name* of object type *object-type* due to reason code *reason-code*.

Explanation: The CREATE PERMISSION or CREATE MASK statement could not be processed because the definition in the CREATE PERMISSION or CREATE MASK statement references:

- 1 the table for which the row permission or the column mask is being defined.
- 2 a table function.
- 3 a user-defined function that is not secure.
- 4 a function that is defined as not deterministic or is defined to have an external action.
- 5 an OLAP specification.
- 6 an XMLEXISTS predicate.
- 7 a ROW CHANGE expression.
- 8 a sequence reference.
- 9 a created or declared temporary table.
- 10 a table that was implicitly created for an XML column.
- 11 a * or name.* in a SELECT clause.
- 12 a column that is defined with a FIELDPROC.
- 13 a language element that requires multiple encoding scheme processing.
- 14 an ordinary SQL identifier that contains a dash (-).
- 15 a row permission or column mask includes a period specification.
- 16 the row permission or column mask references a history table or a table defined within a period.
- 17 an aggregate function without specifying SELECT clause.
- 18
- 19

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20 a nickname.

21 a method.

22 a pseudocolumn.

33 an XMLQUERY scalar function.

34 a data type of the return expression that is not the same as the data type of the column that the column mask is defined on.

35 a length attribute of the return expression that is not the same as the length attribute of the column that the column mask is defined on.

36 a null attribute of the return expression that is not the same as the null attribute of the column that the column mask is defined on .

37 a subtype or encoding scheme that is not the same as the corresponding attribute of the column that the column mask is defined on.

51 an attribute of the return expression other than the attributes covered.

52 the column is referenced in an expression that defines a generated column.

51 a row permission cannot be created for a table that has a security label column.

52 a row permission cannot reference a table that has a security label column.

The statement cannot be processed.

User response: Correct the error and run the CREATE statement again.

sqlcode: -20474

sqlstate: 428HB

SQL20475N The CREATE MASK statement failed because a column mask is already defined for the specified column. Column name: *column-name*. Table name: *table-name*. Existing mask name: *mask-name*.

Explanation: Only a single mask can be defined for a column.

The statement cannot be processed.

User response:

1. Drop the existing column mask by issuing the DROP MASK SQL statement.
2. Then create the new column mask by issuing the CREATE MASK statement again.

sqlcode: -20475

sqlstate: 428HC

SQL20476N The *function-name* function was invoked with an invalid format string *format-string*.

Explanation: An invalid format string was specified for the *function-name* function. The value for *function-name* could be VARCHAR_FORMAT or DECFLOAT_FORMAT, even if the name used to invoke the function was TO_CHAR or TO_NUMBER. A valid format string for the VARCHAR_FORMAT function must:

- Have an actual length of the data type that is not greater than 254 bytes
- Only contain supported format elements
- Not result in a string with an actual length that is greater than the length attribute of the result

A valid format string for the DECFLOAT_FORMAT function must:

- Have an actual length of the data type that is not greater than 254 bytes
- Contain at least one format element
- Only contain supported format elements

The statement cannot be processed.

User response: Change the format string argument of the *function-name* function. For more information, see the corresponding description of the function in the SQL Reference.

sqlcode: -20476

sqlstate: 22018

SQL20477N The *function-name* function is not able to use format string *format-string* to interpret the argument *string-expression*.

Explanation: The *function-name* function was invoked with *format-string* and *string-expression*. The value for *function-name* would be DECFLOAT_FORMAT, even if the name used to invoke the function was TO_NUMBER. The value of the argument *string-expression* cannot be interpreted with the format string *format-string* to produce a DECFLOAT(34) value.

This error can occur for any of the following reasons:

- *string-expression* is too long for the specified format string
- *string-expression* does not conform to the template specified in the format string; for example:
 - Too many digits were specified in *string-expression* for the corresponding format element in the format string, such as in the specific case where 1234 is not a valid value for 999
 - A value in *string-expression* is not valid for the corresponding format element in the format string, such as in the specific case where \$ is not a valid value for S

The statement cannot be processed.

User response: Change the arguments of the *function-name* function to valid values. For more information, see the corresponding description of the function in the SQL Reference.

sqlcode: -20477

sqlstate: 22018

SQL20478N The statement failed because the column mask *mask-name* defined for column *column-name* exists and the column mask cannot be applied or the column mask conflicts with the failed statement. Reason code *reason-code*

Explanation: A reference to a column mask is not supported. The cause of the error is described by the following reason codes:

1

The result table of the select is derived from a set operation that involves a EXCEPT ALL, or INTERSECT ALL set operator. Change the query to not reference the column in the select list or do not use the set operation in this context.

4

Each column that is in the same table as the *column-name* column that is referenced in the *mask-name* mask must also be referenced as a simple column reference in the GROUP BY

clause. Such columns must not be referenced in a grouping expression in the GROUP BY clause. Change the query to not reference the column in the select list or change the GROUP BY clause to include only a simple column reference for each column of the same table that is referenced in the *mask-name* mask.

22

The column *column-name* is input to a table or row function in the statement. Some references to the function result require the column mask *mask-name* be applied to the function input, and some references to the function result do not require the column mask. If the specified column is input to a table or row function, all references to the function result must have the same mask requirement.

30

An INSERT or UPDATE operation uses a masked value returned from the column mask *mask-name* for *column-name*. The expression specified in the THEN or ELSE clause of the column mask definition that is used to return the masked value is not a simple reference to the column *column-name*. For the specified INSERT or UPDATE operation, the return expression in the column mask definition must be a simple reference to the column for which the mask is defined.

The statement cannot be processed.

User response:

- Remove the reference to the column in the INSERT or UPDATE operation and retry the operation.
- Contact the Security Administrator to have the return expression in the column mask definition modified.

sqlcode: -20478

sqlstate: 428HD

SQL20479N The ALTER or RENAME statement failed on the table *table-name* because the table is part of row or column access control definitions. Reason code *reason-code*.

Explanation: The table *table-name* in an ALTER or RENAME statement cannot be altered as specified for one of the following reasons:

1

The table is referenced in one or more column mask or row permission definitions.

2

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A column in the table is referenced in one or more column mask or row permission definitions.

The statement cannot be processed.

User response:

- Drop the permission or mask and recreate them after the alter or rename operation is completed.
- Consider temporarily protecting the table on which the permission or mask was defined at the row level to ensure there is no window in which the table remains without row and column access control protection.

sqlcode: -20479

sqlstate: 42917

SQL20480W The newly defined object *object-name* is marked as invalid because it references an object *object-name2* which is not defined or is invalid, or the definer does not have privilege to access it.

Explanation: The object *object-name* was successfully defined, but has been marked as invalid. Objects such as views, triggers, SQL procedures, and SQL functions, can be defined successfully even though they reference an object, such as *object-name2*, that is either not defined at the application server, or is in the invalid state, or the definer does not have privilege to access it. Invalid objects can be automatically revalidated implicitly the next time they are accessed or explicitly by using the procedure SYSPROC.ADMIN_REVALIDATE_DB_OBJECTS.

User response: If *object-name2* was expected to be defined or valid, then create or revalidate the object and then redefine *object-name*. Ensure that all objects referenced by *object-name* are valid and the definer has the privilege to access them before the first access to the object, so it will be revalidated successfully.

sqlcode: +20480

sqlstate: 0168Y

SQL20481N The creation or revalidation of object *object-name* would result in an invalid direct or indirect self-reference.

Explanation: The definition of the object being created or replaced contains a direct or indirect reference to itself. This self-reference can either be explicit in the definition, or implicit by a reference to another object that explicitly or implicitly references the object. An object definition can only contain a valid reference to itself when it is created using the CREATE SCHEMA statement. Such an object can only be replaced or revalidated if the new definition does not contain the self-reference.

User response: Remove the self-reference or use the CREATE SCHEMA statement to create the object that has a valid reference to itself.

sqlcode: -20481

sqlstate: 429C3

SQL20482N Revalidation failed for all objects that were specified to be revalidated. One object, *object-name1*, could not be revalidated because it references object *object-name2*.

Explanation: All of the objects specified to be revalidated by the SYSPROC.ADMIN_REVALIDATE_DB_OBJECTS procedure were not able to be revalidated successfully because at least one object that they reference does not exist or continues to be invalid. One of the objects, *object-name1*, could not be revalidated because it references object *object-name2* which either does not exist or continues to be invalid.

User response: Create any objects that should exist and correct any objects that continue to be invalid that are referenced by the objects to be revalidated. The SYSCAT.INVALIDOBJECTS catalog view contains information on invalid objects.

sqlcode: -20482

sqlstate: 429C4

SQL20483N Invalid use of named argument *parameter-name* when invoking routine *routine-name*. Reason code: *reason_code*.

Explanation: This error can occur for the following reasons:

1

The procedure invocation of *routine-name* includes a named argument *parameter-name* which does not exist in the procedure definition. Change *parameter-name* to one that exists in the procedure definition. This reason code does not apply to Version 9.7 Fix Pack 1 or later.

2

The routine invocation of *routine-name* includes a named argument *parameter-name* which is followed by one or more unnamed arguments. All arguments following a named argument must also be named. Change the routine invocation so that all arguments following a named argument are also named.

3

The routine invocation of *routine-name* specifies the named argument *parameter-name* more than once (either explicitly or implicitly). Change

the routine invocation so that there is only one reference to argument *parameter-name*.

4

The procedure invocation of an uncataloged routine *routine-name* uses a named argument *parameter-name*. Named parameters are not supported for uncataloged procedures. Change the procedure invocation so that it does not include named arguments.

5

The function invocation of *routine-name* specifies the named argument *parameter-name* and the ordinal position of the corresponding parameter is different for at least two candidate functions. Function resolution cannot proceed using this argument name and the associated set of candidate functions. Change the function invocation so that it is more specific and reduces the set of candidate functions or change the set of candidate functions considered by adjusting the SQL path or replacing function definitions.

The statement cannot be processed.

User response: Correct the routine invocation in the SQL statement.

sqlcode: -20483

sqlstate: 4274K

SQL20484N The invocation of routine *routine-name* omits a parameter *parameter-name* which is not defined with a DEFAULT.

Explanation: A parameter value is omitted from a procedure invocation. This is invalid unless the parameter is defined to have a DEFAULT value. The statement cannot be processed.

User response: Correct the procedure invocation to provide a parameter value for the omitted parameter.

sqlcode: -20484

sqlstate: 428HF

SQL20485N The CREATE statement for routine *routine-name* defines a parameter without a DEFAULT after a parameter that has been defined with a DEFAULT.

Explanation: During the creation of procedure routine-name, a parameter is specified without a defined DEFAULT value after the specification of a parameter with a defined DEFAULT value. All parameters without a defined DEFAULT must be specified before those which have a defined DEFAULT value. The statement cannot be processed.

User response: Provide a DEFAULT value for all

parameters that follow the first parameter that is defined with a DEFAULT value or re-order the parameter list such that all parameters defined with a DEFAULT value are after all parameters defined without a DEFAULT value.

sqlcode: -20485

sqlstate: 428HG

SQL20490N The statement failed because a VERSIONING clause was specified for table *table-name*, but the table cannot be used as a system-period temporal table. Reason code *reason-code*.

Explanation: The CREATE or ALTER TABLE statement attempted to make the table into a system-period temporal table, but the table definition is invalid for reason code indicated:

1

The table is already defined as a system-period temporal table or history table.

2

The table does not have a SYSTEM_TIME period or a transaction-start-ID column. A system-period temporal table must have a SYSTEM_TIME period and a transaction-start-ID column.

3

The table is a materialized query table.

4

For a DB2 for z/OS server, the table has a column mask or row permission defined.

5

The transaction-start-ID column must be defined with the same data type, length, precision, and scale as the row-begin column and row-end column of the SYSTEM_TIME period in the table.

6

The table or the associated history table has the NOT LOGGED INITIALLY attribute activated.

7

The table has a security policy associated with it.

The statement cannot be processed.

User response: Correct the syntax and resubmit the statement.

sqlcode: -20490

sqlstate: 428HM

SQL20491N The statement failed because the specification of a period *period-name* is not valid. Reason code *reason-code*.

Explanation: The specification of a period attribute in a CREATE or ALTER statement is invalid for the reason code indicated:

1

The row-begin column name must not be the same as the row-end column name for the period.

2

The name of a column in a period must not be the same as a column used in the definition of another period for the table.

3

The data type, length, precision, and scale for the row-begin column must be the same as for the row-end column.

4

The type of timestamp specified for the row-begin column must be the same as the type of timestamp specified for the row-end column.

5

For a BUSINESS_TIME period, the column must not be a column defined with a GENERATED clause.

6

For a SYSTEM_TIME period, the row-begin column must be defined as ROW-BEGIN and the row-end column must be defined as ROW-END.

The statement cannot be processed.

User response: Correct the syntax and resubmit the statement.

sqlcode: -20491

sqlstate: 428HN

SQL20494N A public alias name, *name*, can be qualified only with SYSPUBLIC and not the schema name *schema-name*.

Explanation: A qualified name was specified for a public alias but the qualifier was not SYSPUBLIC.

User response: Change the two-part name to a one-part name or specify the qualifier SYSPUBLIC. If a public alias was not intended and PUBLIC was specified in the statement, remove the keyword PUBLIC.

sqlcode: -20494

sqlstate: 428EK

SQL20495N The definition of the module initialization procedure SYS_INIT is not valid. Reason code *rc*.

Explanation: Initialization procedure definitions can be invalid for the following reasons:

1

The SYS_INIT procedure definition contains parameters.

2

The SYS_INIT procedure definition returns result sets.

3

The SYS_INIT procedure cannot be published.

User response: Modify the initialization procedure definition so that it conforms to the valid syntax.

sqlcode: -20495

sqlstate: 428HP

SQL20496N The routine *name* cannot be invoked because it is only a routine prototype.

Explanation: Routine *name* is defined as a prototype in a module, but is not fully implemented. A routine prototype with the specified routine name was found in the module, but without a routine body. The routine definition is incomplete and therefore cannot be invoked.

User response: Alter the module and add a full routine definition. Try again.

sqlcode: -20496

sqlstate: 55019

SQL20498N The data type that was specified for the following field is not supported: *field-name* Specified data type *type-name*.

Explanation: The data type specified for a row in the CREATE TYPE statement is not valid. The following restrictions apply when specifying a data type.

- The following data types are not supported:
 - XML
 - LONG VARCHAR
 - LONG VARGRAPHIC
 - User-defined type based on any of these previously listed types
 - REF (an OID-column-name reference)
 - BOOLEAN (prior to Version 9.7.5)
 - CURSOR
 - SYSPROC.DB2SECURITYLABEL

- User-defined structured data type
- Anchor to a table column or a variable of a data type not supported in row data types
- Anchor to a row of a weakly-typed cursor
- ARRAY types or ROW types can be nested as elements in other ROW type field types, but the maximum nesting level has been exceeded.

User response: Ensure that the data types specified for fields in the CREATE TYPE (row) statement or the fields defined by the columns of the anchor table or anchor view are supported

sqlcode: -20498

sqlstate: 429C5

SQL20499N The data type *typename* is not valid for the operand of the *keywords* predicate.

Explanation: The predicate indicated by *keywords* does not support the data type *typename* as the operand of the predicate.

User response: Change the operand to have a data type that is supported by the predicate or remove the predicate with the invalid operand data type.

sqlcode: -20499

sqlstate: 428HQ

Chapter 21. SQL20500 - SQL20999

SQL20500N Invalid use of row data type value in a list of values.

Explanation: The use of a row type in a list is invalid.

Invalid uses of a row variable in a list include:

- In a list of source variables for an assignment statement or the assignment clause of an update operation.
- In a list of target variables for a simple assignment statement or an assignment statement in a SELECT INTO, FETCH, or VALUES INTO statement.
- In a list of expressions representing a row in the VALUES clause of an insert operation.

The statement cannot be executed.

User response: Rewrite the statement so that the list contains no row variable or replace the list with a single row variable value.

sqlcode: -20500

sqlstate: 428HR

SQL20501N The explain facility failed because the specified section could not be found. Reason code = reason-code.

Explanation: The explain facility was invoked to provide access plan information from a section, and the specified section could not be found. The reason codes are as follows:

1

The section identified by the specified executable ID could not be found in the specified source location.

2

The section identified by the specified activity information could not be located in the specified activity event monitor.

3

The section identified by the specified package and section information could not be located in the catalogs.

4

The section was not captured by the activity event monitor.

User response: The user response corresponding to the reason code is:

1

Verify that the executable ID and section source location were specified correctly. Confirm that the section with the specified executable ID is still present in the source location. If the source location is the in-memory package cache, the section may already have been removed from the cache, in which case, no further action can be taken.

2

Verify that the specified activity information is correct and corresponds to an activity captured by the specified activity event monitor.

3

Verify that the specified package and section information corresponds to a section in the catalogs.

4

Ensure that section collection has been enabled for the activities of interest using the COLLECT ACTIVITY WITH DETAILS, SECTION clause on a workload management object. Refer to the information center for details.

sqlcode: -20501

sqlstate: 4274L

SQL20502N The explain facility failed because the specified activity event monitor evmon_name is not a write-to-table event monitor.

Explanation: The Explain facility has been invoked to provide access plan information from a section captured by an activity event monitor. The event monitor must be a write-to-table event monitor type. The activity event monitor specified as the section source location is not a write-to-table event monitor.

User response: Provide the name of a write-to-table activity event monitor. The CREATE EVENT MONITOR ...WRITE TO TABLE statement can be used to create a write-to-table event monitor.

sqlcode: -20502

sqlstate: 55074

SQL20503N The explain facility is not supported for the specified section. Reason code = reason-code.

SQL20504N • SQL20505N

Explanation: The explain facility has been invoked to provide access plan information from a section and the section does not support this action. The reason codes are as follows:

1. The section specified as input was captured in a release prior to DB2 Version 9.7. The explain facility cannot be used on a section captured from a release prior to DB2 V9.7.
2. The section specified as input was captured in a release prior to the current DB2 version and the explain facility is no longer supported on sections in that release.
3. The section specified as input was captured in a release later than the current DB2 version. The explain facility cannot be used on a section captured from a release later than the current release.
4. The section specified as input is not recognized as a valid section.
5. The section does not contain access plan information. Some sections for statements such as DDL do not contain an access plan. The explain facility cannot be used on these sections.
6. The section does not exist because the statement is invalid. The statement was in error when the package was bound.
7. The section does not exist because the statement is an incremental bind statement. Incremental bind statements do not have a section stored in the catalogs. These statements are bound during the execution of an application process.

User response: The user response corresponding to the reason code is:

1. Invoke the explain facility specifying a section captured from a valid release.
2. Invoke the explain facility specifying a section captured from a valid release.
3. Invoke the explain facility specifying a section captured from a valid release.
4. Invoke the explain facility specifying a valid section as input.
5. Invoke the explain facility specifying a section that contains access plan information.
6. If the statement is supposed to execute at this database server, correct the problem found and reissue the PRECOMPILE or BIND command using the ACTION REPLACE option. After correcting the problem, retry the explain facility.
7. To use the explain facility on the section for an incremental bind statement, follow a process similar to dynamic statements: identify the statement in the package cache after it has been bound, and invoke the explain facility specifying the executable ID corresponding to the section for the statement.

sqlcode: -20503

sqlstate: 55075

SQL20504N The target object of the anchored data type is not supported in the context where it is being used

Explanation: An anchored data type can reference any of the following objects:

- A global variable
- A SQL variable, but only for another SQL variable
- A module variable
- A table column
- A view column
- A row in a table
- A row in a view
- A row definition associated with a cursor variable having a strongly typed cursor data type
- A row definition associated with a variable having a weakly typed cursor data type but defined with a CONSTANT clause specifying a select-statement where all the result columns are named.

Examples of objects that an anchored data type cannot reference include:

- a nickname
- a column in a nickname
- a typed table
- a column in a typed table
- a typed view
- a column in a typed view
- a declared global temporary table
- a column in a declared global temporary table
- a row definition associated with a weakly typed cursor.
- objects with a codepage or collation different from the database codepage or database collation.

See the documentation for the complete list of supported object references.

User response: Remove any anchored data type references used in contexts other than the ones specified above or in the documentation.

sqlcode: -20504

sqlstate: 428HS

SQL20505N The WITH ORDINALITY clause is not valid with UNNEST of an associative array.

Explanation: The WITH ORDINALITY clause must not be specified when the argument of the UNNEST table function is an associative array. An associative

array is not organized according to ordinal position.

User response: Remove the WITH ORDINALITY clause or change the argument of the UNNEST function to an ordinary array. Try the statement again.

sqlcode: -20505

sqlstate: 428HT

SQL20506N The cursor variable could not be used in an OPEN statement in the current scope because the cursor constructor value was assigned in a different scope.

Explanation: A cursor variable cannot be used in an OPEN statement that is outside the scope in which the cursor constructor value is assigned to the cursor variable.

User response: Use the cursor variable in an OPEN statement that is in the same scope as the assignment of the cursor constructor to the cursor variable.

sqlcode: -20506

sqlstate: 51044

SQL20507N The query associated with the cursor variable used in an OPEN or FETCH statement recursively invokes another cursor operation using the same cursor.

Explanation: The query associated with a cursor variable used in an OPEN or FETCH statement includes an invocation of a function that is passed a cursor variable as an argument and that cursor argument is used to perform some cursor operation within the function. If the query specifies the same variable name as specified in the cursor operation, or specifies a cursor variable that references the same cursor, then the function would be recursively operating on the same cursor. Such recursive cursor operations are not supported.

The statement cannot be processed.

User response: Change the query associated with the cursor variable used in the OPEN or FETCH statement so that the function which is passed a cursor variable argument is using a different cursor variable that does not reference the same cursor as the OPEN or FETCH statement. Try the statement again.

sqlcode: -20507

sqlstate: 24525

SQL20508N An error occurred during the revalidation of object *object-name*. Operation *operation* failed with SQLCODE *sqlcode*, SQLSTATE *sqlstate*, and message tokens *token-list*.

Explanation: The processing of statement *operation* by

the SYSPROC.ADMIN_REVALIDATE_DB_OBJECTS procedure failed. During this processing an error was encountered. The SQLCODE, SQLSTATE and message token list (each token is separated by the vertical bar character) are provided. The message tokens might be truncated. See the corresponding message for the *sqlcode* for further explanation of the error.

User response: Check the message associated with the SQLCODE of the SQL statement that failed. Follow the action suggested by that message.

sqlcode: -20508

sqlstate: 5UA03

SQL20509N The module alias *alias-name* cannot be used as the target module of the DDL statement.

Explanation: The ALTER MODULE statement, COMMENT statement, and DROP statement cannot specify module alias *alias-name* as the target module in order to alter, comment on, or drop the module to which the alias refers.

User response: Specify the module name to which the alias *alias-name* refers and submit the SQL statement again.

sqlcode: -20509

sqlstate: 560CT

SQL20510N Invalid context of use for a compound SQL (compiled) statement.

Explanation: Compound SQL (compiled) statements can be used in contexts including the following:

- As a standalone statement
- As the body of a SQL procedure
- As the body of a SQL scalar function
- As the body of a trigger when the trigger is not defined using the:
 - FOR EACH STATEMENT clause
 - REFERENCING OLD TABLE clause
 - REFERENCING NEW TABLE clause

User response: Do one of the following and try the request again:

- Remove the invalid compound SQL (compiled) statement.
- Replace the invalid compound SQL g(compiled) statement with a compound SQL (inlined) statement.
- If used within a trigger definition, modify the trigger definition so that the clause that restricts the use of the compound SQL (compiled) statement is removed.

sqlcode: -20510

sqlstate: 429C6

SQL20511N The attempt to put data into the message buffer failed because there is not enough available space in the message buffer. Message buffer name: *buffer-name*.

Explanation: The attempt to put data into the message buffer failed because the available free space in the buffer is not large enough for the data.

User response: Respond to this message in one of the following ways:

- For the DBMS_OUTPUT buffer, take one of the following actions:
 - Call the DBMS_OUTPUT.GET_LINE procedure or DBMS_OUTPUT.GET_LINES procedure to retrieve the data from the local message buffer to free up space.
 - Increase the size of the buffer using the DBMS_OUTPUT.ENABLE procedure.
- For the DBMS_PIPE buffer, invoke DBMS_OUTPUT.SEND_MESSAGE function to send the content in the message buffer through the pipe.
- For the UTL_TCP.READ_LINE buffer, decrease the amount of data per line transmitted by the sender.

sqlcode: -20511

sqlstate: 5UA0P

SQL20512N No alert has been registered previously with the DBMS_ALERT.REGISTER procedure.

Explanation: No alert has been registered previously with the DBMS_ALERT.REGISTER procedure for the current session.

User response: Call the DBMS_ALERT.REGISTER procedure to register an alert.

sqlcode: -20512

sqlstate: 5UA04

SQL20513N The UTL_FILE procedure *procedure-name* failed to delete or rename the file *file-name*. Operating system error = *error-text*.

Explanation: The procedure *procedure-name* in module UTL_FILE failed to either delete or rename the specified file, *file-name*, and received the error *error-text* from the operating system.

User response: The system error *error-text* provides more details on the error situation and an appropriate response might be: Verify that the arguments of the procedure are valid. Verify that the file *file-name* exists and has the appropriate attributes. If renaming the file *file-name*, verify that the target file does not exist or set the OVERRIDE parameter to TRUE.

sqlcode: -20513

sqlstate: 5UA0C, 5UA0D

SQL20514N A UTL_SMTP module routine encountered an SMTP server error. SMTP error code = *error-code*.

Explanation: A UTL_SMTP module routine encountered either a transient or permanent SMTP server error.

User response: The error code *error-code* provides more details on the specific SMTP error encountered. If the error code value is in the range 400 to 499, the error is a transient error and the same request may be successful at a later time. If the error code value is in the range 500 to 599, the error is a permanent error and the exact error code can help to determine how to resolve the error situation. You might need to contact the person responsible for the SMTP server to have them fix the error with the SMTP server or you might choose a different SMTP server.

sqlcode: -20514

sqlstate: 5UA0E, 5UA0F

SQL20515N A dynamic statement name cannot be used in the cursor value constructor.

Explanation: A dynamic statement name is specified in a cursor value constructor that:

- also specifies one or more named parameters in a cursor value constructor parameter list.
- is assigned to a variable with a strongly typed cursor data type.

The statement cannot be processed.

User response: Do one of the following and try the request again:

- Replace the dynamic statement name with a SELECT statement.
- Remove the parameter list from the cursor value constructor.
- Change the cursor variable to a weakly typed cursor data type.

sqlcode: -20515

sqlstate: 428HU

SQL20516W The statement compilation was successful but the access plan for this statement could not be preserved. Reason code = *reason-code*.

Explanation: The statement was compiled successfully during a BIND, REBIND, or PRECOMPILE, but the

previous access plan could not be preserved. The reason codes are as follows:

101

The package was last bound or rebound in a version prior to DB2 Version 9.7. The access plan of a section generated by a version prior to DB2 Version 9.7 cannot be preserved.

102

The package was last bound or rebound in a version of DB2 previous to the version installed, but access plans from that version cannot be preserved in the version installed.

103

The package was last bound or rebound in a version of DB2 later than the version installed, but access plans from later versions might not be able to be preserved in earlier versions of DB2. This can occur when the installed version of DB2 is reverted back to an earlier fix pack level or version of DB2.

104

A section within the package is not recognized as a valid section.

105

The query could not be found in the existing package. New statements may have been introduced, the statement text may have changed or new host variables may have been created in the source file.

106

The internal representation of the query changed in such a way that the previous access plan is no longer applicable. Examples of changes that might have occurred are: changes to referenced database objects, changes to the database manager's configuration, and changes to the DB2 SQL query compiler.

107

The query compiler could no longer produce the same access plan due to changes in the circumstances under which a query is compiled. Examples of this are: the previous access plan accesses an index which no longer exists, or the query is being compiled at a different optimization level than before and the new optimization level does not allow the access plan strategy that was previously chosen.

User response: In most situations, you can choose to ignore this warning because the failure to preserve the previous access plan can be the result of normal and expected database object changes or database

configuration changes. In some circumstances, you might want to monitor the performance of the queries or use the explain facility to examine the access plans and compare them to the access plans generated in the past for the same query. You can then follow accepted query performance tuning and monitoring procedures to verify that the query performs well, or if necessary, improve the performance. To avoid having this warning returned, take one of the following actions based on the reason code:

101

Bind or rebound the package with a DB2 version of at least DB2 Version 9.7 before enabling the access plan reuse option of the BIND, REBIND, or PRECOMPILE command.

102

Bind or rebound the package with the installed DB2 version before enabling the access plan reuse option of the BIND, REBIND, or PRECOMPILE command.

103

Bind or rebound the package with the installed DB2 version or a DB2 version whose access plans are supported for access plan reuse by the installed DB2 version before enabling the access plan reuse option of the BIND, REBIND, or PRECOMPILE command.

104

To report this unexpected result, contact your DB2 service representative and provide the db2diag.log file and the contents of the diagnostic directory path (as specified by the DIAGPATH database manager configuration parameter).

105

If preserving existing access plans for this query is essential, do not reformat or change the queries, or refer to new host variables. Alternatively you can confirm that the new access plan is satisfactory.

106

If preserving existing access plans for this query is essential, do not change referenced database objects or the database manager configuration (in some cases, an access plan cannot be reused because of changes to the database manager code). Alternatively you can follow accepted query performance tuning and monitoring procedures to verify that the query performs as expected.

107

If preserving existing access plans for this query is essential, do not change referenced

SQL20518N • SQL20521N

database objects, the database manager configuration, or optimization options. Alternatively you can follow accepted query performance tuning and monitoring procedures to verify the query performs as expected or use the explain facility diagnostics to examine why the previous access plan could not be preserved.

sqlcode: +20516

sqlstate: 01602

SQL20518N The operation is invalid because the UTL SMTP module routine *routine_name* is called out of sequence.

Explanation: The SMTP protocol requires that the operations be performed in a particular order. The routine *routine-name* was called but the SMTP protocol requires that another operation be performed before the operation this routine was attempting to perform can complete successfully. For example, the UTL SMTP.WRITE_DATA routine must be called after the UTL SMTP.OPEN_DATA routine completes successfully, and the UTL SMTP.RCPT routine must be called after the UTL SMTP.MAIL routine completes successfully.

User response: Refer to the SMTP protocol and ensure that the UTL SMTP module routines are called in the correct order.

sqlcode: -20518

sqlstate: 5UA0N

SQL20519N There is no data in the local message buffer to unpack.

Explanation: You can call one of the DBMS_PIPE.UNPACK_MESSAGE procedures to receive the next data item from the local message buffer and assign that data to a variable. This message is returned when there is no more data in the local message buffer to receive.

User response: Change the application logic to check if DBMS_PIPE.NEXT_TYPE() returns a non-zero value before calling one of the DBMS_PIPE.UNPACK_MESSAGE procedures.

sqlcode: -20519

sqlstate: 55019

SQL20521N Error occurred processing a conditional compilation directive near *string*. Reason code=*rc*.

Explanation: The SQL compiler was processing a statement that included conditional compilation directives. An error occurred at or near the statement

text given in the token *string*. Possible reasons are given by the reason code.

1

A global variable reference in a selection directive is not a valid data type. Valid data types are BOOLEAN, INTEGER, or VARCHAR.

2

A global variable reference in a selection directive is not defined as a constant.

3

A global variable reference in a selection directive is defined as a constant, but requires the evaluation of an expression.

4

A constant was found that is not a BOOLEAN, INTEGER, or VARCHAR constant.

5

The search condition specifies an unsupported expression or predicate.

6

An invalid conditional compilation directive was specified. A single underscore character (or dollar character) is used as a prefix, but the characters that follow do not match a supported conditional compilation directive.

7

A conditional compilation directive was specified in a context where conditional compilation directives are not supported.

8

A new selection directive is specified in the code fragment of a selection directive. Nesting of selection directives is not supported.

9

Keywords for a selection directive are incorrectly specified. A required keyword is missing or a keyword is used in the incorrect order.

10

An inquiry directive could not be processed because the value of the SQL_CCFLAGS database configuration parameter is not valid.

User response: Correct the error based on the reason code.

1

2	Change or remove the global variable reference from the selection directive or replace the global variable so that it has a supported data type.	10	by a corresponding <code>_THEN</code> keyword. Also, ensure that the <code>_END</code> keyword completes the selection directive.
3	Change or remove the global variable reference from the selection directive or replace the global variable so that it is defined using a <code>CONSTANT</code> clause.	10	Perform the following steps: 1. [Optional] Temporarily override the <code>SQL_CCFLAGS</code> database configuration parameter using the <code>CURRENT SQL_CCFLAGS</code> special register. 2. Set the <code>SQL_CCFLAGS</code> database configuration parameter to a valid value.
4	Change or remove the global variable reference from the selection directive or replace the global variable so that it is defined using a <code>CONSTANT</code> clause with a simple literal value.	10	sqlcode: -20521 sqlstate: 428HV
5	Replace the constant with a <code>BOOLEAN</code> , <code>INTEGER</code> , or <code>VARCHAR</code> constant.	10	<hr/> SQL20522N The statement failed because of an invalid specification of the <code>WITHOUT OVERLAPS</code> clause. Reason code <i>reason-code</i> .
6	Ensure that there are no expressions in the search condition and that only basic predicates or <code>NULL</code> predicates are used. Remove any unsupported expressions or predicates.	10	Explanation: The specification of the <code>WITHOUT OVERLAPS</code> clause is invalid for one of the following reasons: 1 A partitioned index must not specify <code>BUSINESS_TIME WITHOUT OVERLAPS</code> if the table partitioning key includes the begin column or end column of the <code>BUSINESS_TIME</code> period.
7	Ensure that the conditional compilation prefix character is used only with supported directives. If an inquiry directive was intended, the prefix character must be doubled. If use of conditional compilation was not intended, an identifier must be delimited with double quotation mark characters or have the underscore character (or dollar character) removed.	10	2 The columns of the specified period must not be specified in the constraint clause.
8	Ensure that the context in which the compilation directive is used is valid. Valid contexts include: SQL procedure definitions, compiled SQL function definitions, compiled trigger definitions, and PL/SQL package definitions.	10	3 For a DB2 Database for Linux, UNIX, and Windows server, <code>WITHOUT OVERLAPS</code> can only be specified in a <code>CREATE INDEX</code> statement and only if the index is defined as <code>UNIQUE</code> . For a DB2 for z/OS, <code>WITHOUT OVERLAPS</code> can only be specified in a <code>CREATE</code> or <code>ALTER INDEX</code> statement if the index is defined as <code>UNIQUE</code> or <code>UNIQUE WHERE NOT NULL</code> .
9	Ensure that no selection directive is started before an already started selection directive is ended. Use separate selection directives without nesting, or make use of additional <code>_ELSEIF</code> or <code>_ELSE</code> blocks to determine the code fragments that are to be selected for compilation.	10	4 A unique index must not specify <code>BUSINESS_TIME WITHOUT OVERLAPS</code> if the table distribution key includes the begin column or end column of the <code>BUSINESS_TIME</code> period.
9	Check the syntax for the selection directive to ensure that each <code>_IF</code> and <code>_ELSEIF</code> is followed	10	5 The columns of the specified period must not be specified in the index specification.

The statement cannot be processed.

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User response: Correct the syntax and resubmit the statement.

sqlcode: -20522

sqlstate: 428HW

SQL20523N Table *table-name* was specified as a history table, but the table definition is not valid for a history table. Reason code *reason-code*.

Explanation: For a table specified as a history table in a CREATE or ALTER statement, the table definition is invalid for the reason code indicated:

1

The table must not be an existing system-period temporal table, history table, declared global temporary table, created global temporary table, materialized query table, typed table, or view. For a DB2 for z/OS server, the table must also not be an auxiliary table, clone table, table with a clone defined on it, or a table that was implicitly created for an XML column.

2

For a DB2 for z/OS server, the table must not have an incomplete table definition.

3

For a DB2 for z/OS server, the table must be the only table in the table space.

4

The table must not contain an identity column, row change timestamp column, row-begin column, row-end column, transaction-start-ID column, or generated expression column.

5

The table must not include a period definition.

6

The table must not be involved in any referential integrity constraints.

7

The history table must have the same number and order of columns as the table used as the system-period temporal table.

8

The table must not contain a security label column or have a security policy associated with it.

9

For a DB2 for z/OS server, if a column of the system-period temporal table is defined as

ROWID, then the corresponding history column should be defined as ROWID with the same generation attribute (GENERATED ALWAYS or GENERATED BY DEFAULT).

10

The corresponding columns of the system-period temporal table and associated history table must have these same attributes:

- name
- data type
- length (including inline LOB length, precision, and scale)
- null attribute
- hidden attribute
- field procedure (DB2 for z/OS only)
- subtype (FOR BIT, SBCS, or MIXED DATA attribute) and CCSID

11

For a DB2 for z/OS server, the table must not have a column mask or row permission defined on it.

The statement cannot be processed.

User response: Correct the syntax and resubmit the statement.

sqlcode: -20523

sqlstate: 428HX

SQL20524N The statement failed because of an invalid period specification or period clause for period *period-name*. Reason code *reason-code*.

Explanation: A period specification or period clause is invalid for the reason code indicated:

1

The period name was specified more than once for the table reference.

2

The SYSTEM_TIME period was specified, but the table is not a system-period temporal table.

3

Each expression must return a value that has:

- a date data type
- a timestamp data type
- a valid data type for a string representation of a date or timestamp

and can contain any of the following supported operands:

- constant

- special register
- variable (host-variable, SQL parameter, or SQL variable)
- parameter marker
- built-in scalar function whose arguments are supported operands (though nested function invocations or user-defined functions cannot be used)
- CAST specification where the cast operand is a supported operand
- expression using arithmetic operators and operands

4

For a DB2 for LUW server, the period specification was specified with a view where the view definition includes a compiled function or external function with a data indication other than NO SQL.

5

For a DB2 for z/OS server, an expression must not include a time zone and must not have a precision greater than the precision of the columns of the period.

6

FOR SYSTEM_TIME was specified but the value of the CURRENT TEMPORAL SYSTEM_TIME special register is not null and the SYSTIMESENSITIVE bind option is set to YES.

7

FOR BUSINESS_TIME was specified but the value of the CURRENT TEMPORAL BUSINESS_TIME special register is not null and the BUSTIMESENSITIVE bind option is set to YES.

8

The period clause was specified for a table that is not an application-period temporal table, or for a view for which an application-period temporal table is not referenced in the outermost FROM clause of the view definition, or an instead of trigger is defined on the view.

9

A period specification or period clause was specified for a nickname or a remote object.

The statement cannot be processed.

User response: Correct the syntax and resubmit the statement.

sqlcode: -20524

sqlstate: 428HY

SQL20525N The requested action is not valid for table *table-name* because the table is of the wrong type. Reason code *reason-code*.

Explanation: The table cannot be used as specified for the reason code indicated:

1

An ALTER TABLE statement was specified with an ADD PERIOD clause, but the table is a history table and a period cannot be defined for a history table.

2

An ALTER TABLE statement was specified with a DROP PERIOD clause, but the table is a system-period temporal table and the period cannot be dropped.

3

An ALTER TABLE statement was specified with an ALTER VERSIONING clause, but the table is not a system-period temporal table.

4

An ALTER TABLE statement was specified with a DROP VERSIONING clause, but the table is not a system-period temporal table.

5

An ALTER TABLE statement was specified with a DROP VERSIONING clause with the RESTRICT keyword, but system data versioning cannot be dropped if there are any triggers, functions, procedures, views, or materialized query tables that reference historical versions of rows in the table.

6

An ALTER TABLE statement was specified with a DROP PARTITION clause for a system-period temporal table or history table.

7

For DB2 for z/OS, an ALTER TABLE statement was specified with a ROTATE PARTITION clause for a system-period temporal table or history table.

8

For DB2 for z/OS, an ALTER TABLE statement was specified with an ADD CLONE clause was specified for a table that is a system-period temporal table or a history table.

9

A TRUNCATE statement attempted to truncate a table, but the table is a system-period temporal table.

10

For DB2 for z/OS, an ALTER TABLESPACE statement attempted to alter the CCSID of a table space that contains a system-period temporal table or history table.

11

A CREATE or ALTER TABLE statement attempted to define a referential constraint where either the parent or child table is a history table.

12

For DB2 for Linux, UNIX, and Windows, an ALTER TABLE statement with a DETACH PARTITION clause was specified for a system-period temporal table.

13

An ALTER TABLE statement with an ADD COLUMN clause was specified for a history table.

16

An ALTER TABLE statement was specified to add a generated column to a system-period temporal table.

17

For DB2 for Linux, UNIX, and Windows, an ALTER TABLE statement was specified with ACTIVATE NOT LOGGED INITIALLY for a system-period temporal table or a history table.

18

For DB2 for Linux, UNIX, and Windows, an ALTER TABLE statement was specified with ADD SECURITY POLICY for a system-period temporal table or a history table.

The statement cannot be processed.

User response: Change the statement to specify the name of table for which the action is valid, or specify a different action for the table.

sqlcode: -20525

sqlstate: 428HZ

SQL20526N The variable *variable-name* is the target of two or more assignments with no defined order of assignment.

Explanation: A variable is the target of two or more assignments with no defined order of assignment. Multiple assignments of a variable can occur when a

variable on the left hand side of a SET variable statement is also used as an output parameter to a function on the right hand side of the SET variable statement.

In the following example, assume that the function *my_function* was declared with one OUT parameter. The variable called *my_variable* is the target of two assignments in the example:

```
CREATE VARIABLE my_variable INTEGER;
```

```
SET my_variable = my_function( my_variable );
```

User response: Change one or more of the variable references to a different variable.

sqlcode: -20526

sqlstate: 42810

SQL20527N The statement failed because referenced period *period-name* is not a period in table *table-name*

Explanation: No period with the specified *period-name* occurs in the table *table-name*.

The statement cannot be processed.

User response: Verify that the period and table names are specified correctly (including any required qualifiers) in the SQL statement. Resubmit the statement.

sqlcode: -20527

sqlstate: 4274M

SQL20528N The target of the data change operation is a table *table-name*, which includes a period *period-name*. The data change operation failed because a row that it attempted to modify was also modified by another transaction.

Explanation: Table *table-name* is a system-period temporal table. The table includes a period *period-name*. The requested data change operation attempted to change a row that has been modified by another transaction, and would result in a situation where the row-begin column value of the associated row in the history table is greater than the end column value. This can occur for one of the following reasons:

- Another transaction updated or inserted a row after the transaction of the failing statement had started. This resulted in a later timestamp value in the row begin column than the failing statement would use when it updated or deleted that same row.
- Data has been loaded into the system-period temporal table with values for the row begin column that override the generated values. The row begin column value that was loaded is in the future relative to the timestamp that the failing transaction would use.

The requested operation cannot be performed.

User response: Retry the statement. The `system_period_adj` configuration parameter can be set to allow the affected values to be adjusted so that they are unique. Contact the system administrator.

sqlcode: -20528

sqlstate: 57062

SQL20530N An obfuscated statement is not valid.
Reason code= *rc*.

Explanation: An error occurred processing a data definition statement that includes the WRAPPED clause. Possible reasons are:

1

The statement was wrapped on a platform or version that is not supported.

2

The obfuscated portion of the statement is corrupted.

User response: Ensure that the statement was wrapped on a supported platform, and that the statement is not corrupted.

sqlcode: -20530

sqlstate: 42638

SQL20531N The version number *flowed-version* specified in a binary XML value is not supported. The highest supported version is *highest-version*.

Explanation: The version specified does not support binary XML format. A value of 0 (zero) for the highest supported version indicates that the platform does not support binary XML format. A value of *N for the version number specified indicates that the version cannot be determined, because the server could not read binary XML format.

User response: Use a server that supports binary XML format.

sqlcode: -20531

sqlstate: 22544

SQL20532N The command or API function call failed because the command or API function is discontinued. Command or API function name: *command-or-function-name*.

Explanation: This message is returned when an attempt is made to run a command or call an API function that has been discontinued.

User response: Determine how to accomplish the

same task using other commands or API functions by reviewing the related information in the DB2 Information Center.

Update automated scripts and applications to use different commands or API functions to accomplish the same task.

sqlcode: -20532

sqlstate: 560CZ

SQL20533N The SELECT statement failed because an unsupported data type was specified in the typed-correlation clause. Column with unsupported data type: *column-name*.

Explanation: The typed-correlation clause in the sub-select of a SELECT statement is used to define the appearance and contents of the table generated by a generic table function.

This message is returned when the data type specified in the typed-correlation clause is not supported.

User response: Execute the SELECT statement again, specifying only supported data types in the typed-correlation clause.

sqlcode: -20533

sqlstate: 429BB

SQL20534W The schema *schema-name* includes one or more tables with the attribute *data-capture-option1* which is different from the schema attribute *data-capture-option2*.

Explanation: The DATA CAPTURE setting for one or more tables in the schema are different from the schema-level setting.

You can set different DATA CAPTURE attribute at the table and schema levels because the setting of the DATA CAPTURE attribute for a table is independent of the setting at the schema level.

After the DATA CAPTURE attribute is set at the schema level, newly created tables inherit the schema-level setting if one is not specified at the table level.

User response: To find the list of tables that have DATA CAPTURE attribute set to CHANGES, issue the following query:

```
SELECT TABNAME, TABSCHEMA FROM SYSCAT.TABLES
WHERE TYPE IN ('T','S','L')
AND DATACAPTURE <> 'N'
```

To find the list of tables that have DATA CAPTURE attribute set to NONE, issue the following query:

SQL20535N

```
SELECT TABNAME, TABSCHEMA FROM SYSCAT.TABLES
WHERE TYPE IN ('T','S','L')
AND DATACAPTURE = 'N'
```

sqlcode: +20534

sqlstate: 01696

SQL20535N The data change operation *operation* is not supported for the target object *object-name* because of an implicit or explicit period specification involving *period-name*. Reason code: *reason-code*.

Explanation: The data change operation is not supported because the target of the operation references a temporal table and a period specification was specified. The period specification was either implicitly specified by using a special register, or explicitly specified in the fullselect specified as the target. More information is provided by the reason code indicated:

1

The CURRENT TEMPORAL SYSTEM_TIME special register contains a non-null value and the target of the data change operation is a system-period temporal table (directly or indirectly). The data in a system-period temporal table cannot be changed when a period specification is in effect. The target of the data change statement is one of the following:

- a system-period temporal table
- a view that is defined with an outer fullselect that references a system-period temporal table in the FROM clause (directly or indirectly) and that does not have an INSTEAD OF trigger defined for the data change operation
- a fullselect that references a system-period temporal table in the FROM clause (directly or indirectly)

2

The CURRENT TEMPORAL SYSTEM_TIME special register contains a non-null value and the target of the data change statement is a view defined with the WITH CHECK OPTION. The data change statement cannot be processed because the view definition includes a WHERE clause containing one of the following syntax elements:

- a subquery that references a system-period temporal table (directly or indirectly)
- an invocation of an SQL routine that has a package associated with it
- an invocation of an external routine with data access indication other than NO SQL

3

The target of the data change statement is specified as a fullselect that references a view in the FROM clause which is followed by a period specification for SYSTEM_TIME. The referenced view is defined with the WITH CHECK OPTION. The data change statement cannot be processed because the view definition includes a WHERE clause containing one of the following syntax elements:

- a subquery that references a system-period temporal table (directly or indirectly)
- an invocation of an SQL routine that has a package associated with it
- an invocation of an external routine with data access indication other than NO SQL

4

The CURRENT TEMPORAL BUSINESS_TIME special register contains a non-null value and the target of the data change statement is a view defined with the WITH CHECK option. The data change statement cannot be processed because the view definition includes a WHERE clause containing one of the following syntax elements:

- a subquery that references an application-period temporal table (directly or indirectly)
- an invocation of an SQL routine that has a package associated with it
- an invocation of an external routine with data access indication other than NO SQL

5

The target of the data change statement is specified as a fullselect that references a view in the FROM clause which is followed by a period specification for BUSINESS_TIME. The referenced view is defined with the WITH CHECK OPTION. The data change statement cannot be processed because the view definition includes a WHERE clause containing one of the following syntax elements:

- a subquery that references an application-period temporal table (directly or indirectly)
- an invocation of an SQL routine that has a package associated with it
- an invocation of an external routine with data access indication other than NO SQL

The statement cannot be processed.

User response: Take an appropriate action for the reason-code:

1

Set the CURRENT TEMPORAL SYSTEM_TIME special register to the null value and try the data change operation again. If the statement is included in an application package that should not be sensitive to the setting of the CURRENT TEMPORAL SYSTEM_TIME special register, then bind the package using SYSTIMESENSITIVE NO.

2

Set the CURRENT TEMPORAL SYSTEM_TIME special register to the null value and try the data change operation again. If the statement is included in an application package that should not be sensitive to the setting of the CURRENT TEMPORAL SYSTEM_TIME special register, then bind the package using SYSTIMESENSITIVE NO. Another possible alternative could be to replace the reference to the view with another view that is defined without the WITH CHECK OPTION if the associated checking of data changes is not required.

3

Remove the period specification in the target fullselect of the data change operation. Another possible alternative could be to replace the reference to the view with another view that is defined without the WITH CHECK OPTION if the associated checking of data changes is not required.

4

Set the CURRENT TEMPORAL BUSINESS_TIME special register to the null value and try the data change operation again. If the statement is included in an application package that should not be sensitive to the setting of the CURRENT TEMPORAL BUSINESS_TIME special register, then bind the package using BUSTIMESENSITIVE NO.

5

Remove the period specification in the target fullselect of the data change operation and use explicit predicates in the WHERE clause of the fullselect to specify the target rows for the data change operation.

sqlcode: -20535

sqlstate: 51046

SQL20536N The operation cannot be processed because it involves a text index. Reason code = *reason-code*.

Explanation: The operation either targets a text index directly or has a text index that depends on the result

of the operation. The operation cannot proceed because of the text index. The specific reason is indicated by the reason code.

1. A text index exists on the table that the operation requested to drop.
2. A text index is the target of a RUNSTATS command.
3. A text index is the target of a REORG command.

User response:

1. If the table must be dropped, then first drop the the text indexes on the table.
2. Remove the reference to the text index from the RUNSTATS command. Statistics cannot be collected on text indexes.
3. Remove the reference to the text index from the REORG command. Text indexes cannot be reorganized.

SQL20537W Multiple row fetch into host variable arrays can proceed using the minimum array size *minimum-array-size* from the set of host variable arrays and indicator arrays as the maximum number of rows that can be fetched.

Explanation: The COMPATIBILITY_MODE ORA precompile option allows the use of host variable arrays and indicator arrays in the FETCH statement to enable the retrieval of multiple rows into the array elements using a single FETCH statement. The number of rows that can be retrieved is determined by the size of the arrays. Usually the same size is used when the arrays are declared in the host variable declare section.

This message is returned when using the COMPATIBILITY_MODE ORA precompile option and the host variable arrays and indicator arrays specified in a FETCH statement are declared with different array sizes. The minimum array size for the set of host variable arrays and indicator arrays is used as the maximum number of rows that can be fetched. The host variable arrays and indicator arrays will only include data up to the size of the smallest array.

User response: To avoid getting this warning returned during precompiling, change the host variable arrays and indicator arrays declared in the host variable declare section and used in the FETCH statement so that all the array sizes are the same.

sqlcode: +20537

sqlstate: 01697

SQL20538W A permission or mask was changed for the table named *table-name*. This change might require a change to the permissions or masks of a materialized query table (MQT) based on this table to maintain the security of the data.

SQL20539N • SQL20547N

Explanation: A permission or mask was created, altered, or dropped for table *table-name*. At least one MQT is based on this table that has access controlled using masks or permissions, other than the default permission. The MQT includes data from the base table *table-name*. In order to maintain data security, the access control change made to the base table of the MQT must be reflected in the permissions and masks of the MQT.

User response: Verify the permissions and masks of each MQT that is based on table *table-name* is consistent with the access control on the base table *table-name*.

sqlcode: +20538

sqlstate: 01698

SQL20539N The query failed because a negative value or the null value is used in the clause keywords.

Explanation: A query can also include an OFFSET clause to begin fetching rows starting at a specified row number. A query can include a FETCH FIRST clause or a LIMIT clause (with or without an associated OFFSET clause) to control the number of rows that are returned from a query. The row count value for these clauses can be specified as an expression that is evaluated at query open time and must result in a positive numeric constant value for the query.

The expression specified for the indicated clause returns a negative value or the null value.

User response: Change the expression so that it returns a positive number and reissue the query.

sqlcode: -20539

sqlstate: 2201W, 2201X

SQL20540N An autonomous transaction executing a procedure has been terminated abnormally. Routine name: *routine-name*. Specific name: *specific-name*. Reason code: *reason-code*.

Explanation: A procedure can be defined as AUTONOMOUS, to make its execution occur within a separate autonomous transaction. The execution of the procedure may encounter an error that required the procedure to terminate and the autonomous transaction to be rolled back without rolling back the parent or calling transaction. This message is returned when the autonomous procedure terminated with an error that normally causes a transaction to roll back. In this case, the autonomous transaction for the autonomous procedure is rolled back but without affecting the calling transaction. Possible reason codes for this message are the SQLCODEs that terminated the autonomous procedure.

User response: Check the message associated with the SQLCODE in the reason code and use the information

there to determine the reason that the autonomous procedure was terminated. Correct any problems in the autonomous procedure or the calling application and run the procedure again.

SQL20542N The statement was not executed because the maximum number of client reroute seamless failover attempts has been exceeded.

Explanation: If a connection to a database server is dropped, automatic client reroute (ACR) will attempt to reconnect to the database using an alternate server and then reconstruct the execution environment. If the seamless automatic client reroute feature is being used, the reconnection and failover is transparent to the database application. If the first attempt to seamlessly fail over is not successful, ACR will continue to try to fail over repeatedly until either failover is successful or until the maximum number of failover attempts has been made.

This message is returned when ACR has tried to perform a seamless failover more times than the maximum number of allowed attempts.

When this message is returned, the database connection is in an open state.

User response: Execute the statement again.

If the error persists, perform the following troubleshooting steps:

1. Collect information from diagnostic logs on the client and the server.
2. Investigate why the connection to the database server is being lost.

sqlcode: -20542

sqlstate: 54068

SQL20547N The statement failed because the target of an assignment is a read-only global variable. Variable name: *variable-name*.

Explanation: Global variables can generally be used as the target of an assignment in various SQL statement with the appropriate write access. However, the definition of some global variables makes them read only. This applies to some built-in global variables and also to user-defined global variables that are defined using the CONSTANT clause,

A global variable that is read only cannot be used in an SQL statement as the target of an assignment.

User response: Change the name of the target variable so that it does not refer to a read-only global variable.

sqlcode: -20547

sqlstate: 428I3

Chapter 22. SQL21000 - SQL21499

SQL21000N A text search option is not installed or not properly configured.

Explanation:

1. DB2 Text Search or DB2 Net Search Extender is not installed or not correctly configured on this server. One of the text search features must be correctly configured and started on your system if you want to use a text search function such as CONTAINS, SCORE, or NUMBEROFMATCHES, or the DESCRIBE TEXT SEARCH INDEXES command.
2. DB2 Text Search is not supported in a DB2 pureCluster environment.

User response:

1. Ensure that either DB2 Text Search or DB2 Net Search Extender is correctly installed and configured and that the database is enabled for text search.
2. Disable the DB2 pureCluster Feature to use DB2 Text Search.

sqlcode: -21000

sqlstate: 42724

SQL21002N A snapshot backup failed. The database being backed up is configured to use raw logs, but raw logs are not supported with snapshot backups.

Explanation: You cannot perform a snapshot backup on a database that uses a raw device for database logging.

The snapshot backup failed.

User response: You have two choices:

- Even though you cannot perform a snapshot backup on a database that uses a raw device for database logging, you can perform a traditional backup on a database that uses a raw device for database logging.
- You can reconfigure the database log path to be a file path instead of a raw device and then run a snapshot backup.

Chapter 23. SQL22000 - SQL22499

SQL22000W Cannot find the requested configuration for object *object-name*. Returning default configuration for *object-type*.

Explanation: The object does not have a specific configuration of its own so the default configuration for that object type will be returned.

User response: If the behavior of the default configuration is correct, no action has to be taken.

SQL22001W Cannot find the default configuration for object *object-name*. Returning install configuration for *object-type*.

Explanation: The object does not have a specific configuration of its own so the install configuration for that object type will be returned.

User response: If the behavior of the install configuration is correct, no action has to be taken.

SQL22004N Cannot find the requested configuration for the given object. Returning default configuration for *object-name*.

Explanation: The object does not have a specific configuration of its own so the default configuration for that object type will be returned.

User response: If the behavior of the default configuration is correct, no action has to be taken.

SQL22005N Cannot find the default configuration for the given object, returning install configuration for *object-name*.

Explanation: The object does not have a specific configuration of its own so the install configuration for that object type will be returned.

User response: If the behavior of the install configuration is correct, no action has to be taken.

SQL22006N Cannot update *object-action-or-contact-name* because it does not exist.

Explanation: The API was requested to update the configuration of an element which does not exist.

User response: Create the element and then re-issue the API call.

SQL22007N The specified Health Indicator identifier or name, *Health-Indicator-name*, is invalid.

Explanation: The requested action can only be performed against a valid Health Indicator. The

supplied Health Indicator does not exist.

User response: Determine the correct the identifier or name, and resubmit the request.

SQL22008N The value *parameter-value* of parameter *parameter-name* is not of the correct format, type, or value.

Explanation: The requested action can not be taken because the supplied value for this parameter is not of an acceptable format, type, or value.

User response: Determine the correct format and type of, or value for, this parameter, and resubmit the request.

SQL22009N There is no health contact information for this instance.

Explanation: There is no health contact information for this instance.

User response: If the current contact information is correct, no action has to be taken.

SQL22010N The value *parameter-value* of parameter *parameter-name* is not within the acceptable range of values for this parameter, which is greater than *parameter-max-value* and/or less than *parameter-min-value*.

Explanation: The requested action can not be taken because the supplied value for this parameter is not within the acceptable range of values.

User response: Resubmit the request with an acceptable value for this parameter.

SQL22011W Cannot find the configuration for *object-name-or-type*.

Explanation: The object or object type does not have a specific or default configuration of its own.

User response: No action required.

SQL22012W Implicit instance attach failed.

Explanation: An explicit instance attachment does not exist and an implicit attachment to the default instance failed. The command cannot be executed.

User response: Make sure that DB2 is started and that environment variables are set properly.

SQL22013N Cannot add *obj-act-contact* because it already exists.

Explanation: The API was requested to add an action or notification which already exists.

User response: Modify or delete the existing actions and notifications.

SQL22014W The health monitor returned no health related data.

Explanation: There is no health data for this instance or the health monitor is off.

User response: Verify that the health monitor is running on this instance.

SQL22015N The specified Health Indicator identifier or name, *Health-Indicator-name*, is invalid for this object type.

Explanation: The supplied Health Indicator does not exist for this object type.

User response: Verify the object type and identifier or name, and resubmit the request.

SQL22016N The health monitor returned no recommendations for health indicator *Health-Indicator-name*. Reason code = *reason-code*.

Explanation: The health monitor was unable to return any recommendations. The explanation corresponding to the reason code is:

1. The health indicator is not in an alert state.
2. The health indicator has not yet been evaluated.
3. The health indicator is disabled.

User response: The action corresponding to the reason code is:

1. Verify that the health indicator is in an alert state. The problem may have already been resolved. It is also possible that the health indicator is fluctuating between alert and normal states. If the indicator is fluctuating, the sensitivity for the health indicator may be set too low and the health indicator may be reacting to changes in system usage. If this is the case, consider increasing the sensitivity using the UPDATE ALERT CONFIGURATION command.
2. Wait for at least one full refresh interval for the health indicator, to ensure that the health indicator has been evaluated. Resubmit the request.
3. Enable the health indicator using the UPDATE ALERT CONFIGURATION command. Wait until the health indicator has been evaluated, then resubmit the request.

If the problem persists, contact IBM Support.

SQL22017N A non-severe error occurred while generating recommendations at the health monitor. SQLCODE = *sqlcode*.

Explanation: The health monitor encountered a non-severe error while trying to retrieve recommendations for the specified health indicator.

User response: Correct the error as indicated in the SQLCODE. Resubmit the recommendation request.

If the problem persists, contact IBM Support.

SQL22018W The collection data for this health indicator could not be retrieved.

Explanation: Collection data is stored in tables in the database. The table data could not be retrieved either because the table could not be accessed or the table has been altered from its original definition and the correct columns no longer exist.

User response: If the problem persists, contact IBM Support.

SQL22019N Health monitor processing was halted due to an unexpected error. Reason code = *reason-code*.

User response: If the problem persists, contact IBM Support.

SQL22020N Health monitor processing was halted because its shared memory segment upper limit was reached. The current size is *size*.

User response: If the problem persists, contact IBM Support.

SQL22021N Automation is turned off.

Explanation: The required utility cannot be performed because the automation switch is turned off currently.

User response: Attempt one of the following:

- Resolve the problem according to the recommendation provided by the health monitor.
 - Turn on the corresponding automation switch.
-

SQL22022N The duration of the maintenance window is not long enough to run the maintenance activity.

Explanation: The required utility cannot be performed because the maintenance window defined in the automatic maintenance configuration does not have an adequate duration.

User response: Attempt one of the following:

- Resolve the problem according to the recommendation provided by the health monitor.

- Increase the duration of the maintenance window for the corresponding automatic maintenance activity.

SQL22025N An invalid input argument was specified for the reorgchk stored procedure.

Explanation: Only 'T' and 'S' are supported for the first argument of the stored procedure. If 'T' is specified as the first argument, the second argument to the stored procedure must be a fully qualified table name as <schema.table-name>.

User response: Resubmit with valid input arguments.

SQL22200N The DB2 Administration Server cannot be stopped.

Explanation: The DB2 Administration Server cannot be stopped because it is currently handling at least one request from a client.

User response: Issue the DB2ADMIN STOP command with the /FORCE option to cancel all current requests being handled by the DB2 Administration Server and force the DB2 Administration Server to stop.

SQL22201N The DB2 Administration Server failed to authenticate the user *authorization-ID* on the host *hostname*. Reason code *reason-code*.

Explanation: The DB2 Administration Server was unable to authenticate the user *authorization-ID* for the following reason:

1. Invalid user ID or password.
2. Password expired.
3. User account is disabled.
4. User account is restricted.
5. The DB2 Administration Server is unable to process requests submitted as the root user.
6. Authorization failed.

User response: Depending on the reason code, try the following:

1. Verify that a valid user ID and password were specified for the host *hostname*.
2. Change the password on host *hostname* for user *authorization-ID*. Contact your system administrator for assistance. Attempt the request again once the password has been changed.
3. Contact your system administrator to unlock the account.
4. Contact your system administrator to find out the restrictions placed on the account.
5. Resubmit the request as a user other than root.
6. An internal authentication error has occurred.

If you continue to receive this message after attempting the suggested solutions, contact IBM Support.

SQL22202W The DB2 Administration Server cannot be quiesced. Reason code *reason-code*.

Explanation: The DB2 Administration Server quiesce operation failed for one of the following reasons:

1. The DB2 Administration Server is already quiesced.
2. The DB2 Administration Server is currently processing requests on behalf of DB2 clients.

User response: Depending on the reason for the failure, attempt one of the following:

1. No action required.
2. Wait until the DB2 Administration Server is not processing any requests, or resubmit the quiesce request and specify the force option. Forcing a quiesce will terminate any requests that are currently being processed.

SQL22203W The DB2 Administration Server cannot be unquiesced. Reason code *reason-code*.

Explanation: The DB2 Administration Server unquiesce operation failed for one of the following reasons:

1. The DB2 Administration Server is not quiesced.
2. There is at least one administration request in progress.

User response: Depending on the reason for the failure, attempt one of the following:

1. No action required.
2. Wait until the DB2 Administration Server has completed processing all administration requests, or resubmit the unquiesce request and specify the force option. Forcing the unquiesce operation will allow normal requests to be handled concurrently with the administration requests, which may prevent the administration requests from completing successfully.

SQL22204N The DB2 Administration Server encountered a non-severe error while executing a request.

Explanation: A non-severe error occurred in the DB2 Administration Server while it was processing a request.

User response: Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact IBM Support with the following required information:

- Problem description

SQL22205C • SQL22208N

- SQLCODE or message number
- SQLCA contents if possible
- Trace file if possible

SQL22205C The DB2 Administration Server encountered an unexpected error while executing a request.

Explanation: An unexpected error occurred in the DB2 Administration Server while it was processing a request.

User response: Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact IBM Support with the following required information:

- Problem description
- SQLCODE or message number
- SQLCA contents if possible
- Trace file if possible

SQL22206N An error occurred while accessing a message queue. Reason code *reason-code*.

Explanation: An unexpected error or bad message was received on a message queue. The following is a list of reason codes:

1. Unable to create a message queue. The number of message queues allowed may have been exceeded.
2. An error was encountered while reading from a message queue.
3. An error was encountered while writing to a message queue.
4. An invalid message was received from a message queue.
5. An error was encountered while opening a message queue.
6. An error was encountered while closing a message queue.
7. An error was encountered while querying a message queue.
8. An error was encountered while deleting a message queue.

User response: Ensure the number of message queues allowed is not reached. Reduce the number of message queues in use if necessary and resubmit the request.

If you continue to receive this error message after attempting the suggested solutions, please contact IBM Support.

SQL22207N The DB2 Administration server cannot execute the script at host *hostname*. Reason code *reason-code*.

Explanation: The DB2 Administration Server failed to execute the script for one of the following reasons:

1. The user specified an existing script and the script does not exist.
2. The script working directory is invalid.
3. The last line of the script failed to run because a statement termination character could not be found.
4. A system error occurred while attempting to execute the script.

User response: Depending on the reason for the failure, attempt one of the following:

1. Verify that the script specified exists on host *hostname* at the path provided.
2. Verify that the working directory is valid on host *hostname*.
3. Verify the script contents and resubmit the request.
4. Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information.

If you continue to receive this error message after attempting the suggested response, refer to the DB2 Administration Server's First Failure Data Capture Log for additional information or contact IBM Support.

SQL22208N The DB2 Administration Server failed to execute function/method *function-name* in library/class *library-name* at host *hostname*. Reason code *reason-code*.

Explanation: The DB2 Administration server encountered an error while trying to execute a function/method in a library/class for one of the following reasons:

1. The library/class *library-name* could not be found.
2. The function/method *function-name* could not be found in the library/class *library-name*.
3. The version of the function/method invoked at the DB2 Administration Server is not supported.

User response: Depending on the reason for the failure, attempt one of the following:

1. Verify that the library *library-name* exists on host *hostname*.
2. Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information. If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact IBM Support with the following required information:
 - Problem description
 - SQLCODE or message number

- SQLCA contents if possible
 - Trace file if possible
3. See response for reason code 2.

SQL22209N The DB2 Administration Server encountered an unexpected Java error on host *hostname*.

Explanation: An error occurred while the DB2 Administration Server was attempting to start or communicate with a Java Interpreter. The following could be the cause of the problem:

1. Java has been improperly installed or configured on host *hostname*.
2. The DB2 Administration Server `jdk_path` configuration parameter has been set incorrectly.

User response: Attempt the following:

1. Contact the system administrator for host *hostname* to verify that Java is properly installed and configured.
2. Verify that the DB2 Administration Server `jdk_path` configuration parameter has been set correctly. The `jdk_path` configuration parameter can be viewed using CLP. The parameter should point to the location where Java is installed on the host *hostname*.

If you continue to receive this error message after attempting the suggested response, please contact IBM Support.

SQL22210N The DB2 Administration server cannot execute the specified request while quiesced.

Explanation: The DB2 Administration Server failed to execute the request because the DB2 Administration Server is currently quiesced. Only administrative requests can be executed while the DB2 Administration Server is quiesced.

User response: Try the request again when the DB2 Administration Server is no longer quiesced. Contact your database administrator to determine when the DB2 Administration Server will be unquiesced.

SQL22211N An error occurred setting or retrieving the DB2 Administration Server configuration parameter *parameter-token*. Reason code *reason-code*.

Explanation: The following error occurred while updating or reading the DB2 Administration Server configuration:

1. Configuration parameter is unknown.
2. Configuration parameter value is not in the correct range.

3. A system error occurred while updating the DB2 Administration Server configuration parameters.

User response: Depending on the reason code, verify the following:

1. The configuration parameter exists.
2. The value specified for the configuration parameter is in the correct range. See the description of the configuration parameter in the DB2 Administration Guide: Performance volume for the range of allowable values.
3. Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information or contact IBM Support.

SQL22212N A DB2 Administration Server communication error has been detected. Client system: *client-ip-address*. Server system *server-ip-address*.

Explanation: A DB2 Administration Server communication error has been detected. Possible causes include the following:

1. The DB2 Administration Server at the server system was shut down by the system administrator.
2. The DB2 Administration Server at the server system was terminated due to an internal or system error.
3. The DB2 Administration Server is not installed at the server system.
4. The DB2 Administration Server has not been cataloged correctly at the client system.
5. The communication subsystem at the client system or server system has not been configured correctly, or has not been started successfully.
6. A network error has caused the connection to go down.
7. An internal error in the DB2 Administration Server caused the connection to go down.

User response: Verify the following:

1. The DB2 Administration Server has not been shut down.
2. The DB2 Administration Server has not been terminated.
3. The DB2 Administration Server has been installed at the server system.
4. The remote DB2 Administration Server is cataloged properly on the client system.
5. The communication subsystems on both client and server systems are configured and started up properly.
6. The network is operating properly.
7. Nothing to verify.

If the problem persists, consult with your network administrator or contact IBM Support.

SQL22213N DB2ADMIN processing was successful. The scheduler was not started successfully.

Explanation: The DB2ADMIN command successfully started the DB2 Administration Server, but the DB2 Administration Server was unable to start the scheduler.

User response: Perform the following actions:

- Ensure that the tools catalog database configuration parameters are set to the correct values. For instructions on configuring the Tools Catalog Database, refer to the section on the DB2 Administration Server in the DB2 Administration Guide.
- Ensure the database manager containing the tools catalog database has been started.
- If the tools catalog database is remote to the tools catalog database instance, ensure the scheduler user ID and password are set correctly. The scheduler user ID must have SYSADM authority on the tools catalog database. You can change the scheduler user ID and password by using the db2admin setschedid command.
- Ensure the tools catalog database is not being used by another scheduler.

After performing the suggested actions, try stopping and then restarting the DB2 Administration Server. If you continue to receive the error message after performing the suggested actions, contact IBM Support.

SQL22214N The admin node *node-name* does not exist in the DB2 node directory.

Explanation: The admin node *node-name* is invalid. The node name does not exist in the DB2 node directory.

User response: Verify that the node name *node-name* is cataloged in the admin node directory using the LIST ADMIN NODE DIRECTORY command. If the admin node is not listed in the admin node directory, submit a CATALOG ADMIN ... NODE command to catalog the admin node. If you continue to receive this error message after attempting the suggested response, please contact IBM Support.

SQL22215W The DB2 Administration Server configuration parameters were updated successfully.

Explanation: The configuration parameters were updated successfully, however, you must restart the DB2 Administration Server to have the changes become effective.

User response: Restart the DB2 Administration Server to have the changes become effective.

SQL22216N An error occurred while performing an extended console operation. Reason code = *reason-code*.

Explanation: While performing the operation, an unexpected error occurred. The possible reason codes are as follows:

- 1 The console name used to active the console has more than 8 characters.
- 2 The operator command that was issued is longer than the allowed 126 characters.
- 3 For an activate request, the issuer does not have read authority to resource name, MVS.MCSOPER.*, where * is the name of the console.
- 4 For an activate request, the console was already active.

User response: The action corresponding to the reason code is:

- 1 Check if the user name supplied as the console name has more than 8 characters.
- 2 Check if the operator command is more than 126 characters in length.
- 3 Provide the required read authority to the resource MVS.MCSOPER.*, where * is the name of the console.
- 4 Ensure that the extended console you want to activate is not active.

SQL22220N The DB2 Administration Server encountered a script error. Script error code *error-code*.

Explanation: A script error was encountered while the DB2 Administration server was executing the script. The script exited with error code *error-code*.

User response: Verify that the script is correct.

If you continue to receive this error message after attempting the suggested response, refer to the DB2 Administration Server's First Failure Data Capture Log for additional information or contact IBM Support.

SQL22221N The scheduler is not active. Reason code *reason-code*.

Explanation: The scheduler was unable to handle the request because the scheduler is not active for one of the following reasons:

1. The scheduler is not enabled.
2. The scheduler is not configured properly.

User response: Check the following:

1. Verify that the scheduler has been enabled. The scheduler is enabled using the SCHED_ENABLE DB2 Administration Server configuration parameter.

Verify the current setting of the SCHED_ENABLE parameter by viewing the DB2 Administration Server configuration parameters using the GET ADMIN CONFIGURATION command. To modify the value of any configuration parameter, use the UPDATE ADMIN CONFIGURATION command.

2. Verify that the scheduler is properly configured. To configure the scheduler, refer to the section on the DB2 administration server in the DB2 Administration Guide.

If you continue to receive this error message after attempting the suggested response, refer to the DB2 Administration Server's First Failure Data Capture Log for additional information or contact IBM Support.

SQL22222N The logon user account for the Scheduler is invalid.

Explanation: The scheduler requires a valid logon account to connect to the tools catalog database if the tools catalog database is remote to the DB2 Administration Server. This error is caused by the account not being setup, or the logon user account does not contain a valid DB2 user ID.

User response: If a logon user account has been set up, then ensure that the account uses a valid DB2 user ID. You can set up the logon user account for the Scheduler by using the following command:
DB2ADMIN SETSCHEDID <userid> <password>

SQL22223N The instance *instance-name* does not exist on host *hostname*.

Explanation: The DB2 Administration Server on host *hostname* failed to execute a request because the instance *instance-name* provided in the request does not exist on the host.

User response: Verify the following:

- The remote instance field of the node entry in the local node directory corresponding to the instance *instance-name* is correct.
- The instance *instance-name* exists on host *hostname*.

If you continue to receive this error message after attempting the suggested response, refer to the DB2 Administration Server's First Failure Data Capture Log for additional information or contact IBM Support.

SQL22230N The data set *dataset* could not be located on the system.

Explanation: One of the following reasons may apply:

1. The data set has not been cataloged.
2. The volume on which the data set is located is not mounted.
3. The data set does not exist on the volume specified in the catalog.

4. A data set or PDS/E member name required for this operation was not specified.
5. The data set or PDS/E member name contains invalid characters or is longer than the maximum length allowed by the system.

For more information on the first three of these reasons refer to the MVS system messages IGW01021T, IGW01508T and IGW01511E.

User response: Ensure that the name of the data set is entered correctly, that the data set has been cataloged and that the volume on which it is located is mounted on the system.

SQL22231N The requested operation is not supported for the data set *dataset*.

Explanation: Certain properties of the specified data set prevent it from being used in conjunction with the requested operation, which may include an inapplicable record format or data set type. For example, a member name cannot be specified for a PS data set.

User response: Ensure that the data set has properties that are appropriate for the selected operation. Refer to the DB2 Administration Server's (DAS) First Failure Data Capture Log for additional information.

SQL22232N The job ID *jobid* was not found on the Job Entry Subsystem (JES).

Explanation: Possible reasons include:

1. The job with the specified job ID has not been submitted to the JES.
2. The job with the specified job ID has been purged from the JES.

User response: Ensure that the job ID belongs to a job that has been submitted to the JES and that has not been purged yet.

SQL22236N A file I/O error occurred. Reason code *reason-code*.

Explanation: An error occurred while accessing the file system. The reasons codes are as follows:

1. An invalid directory was specified.
2. An attempt was made to open a non-existent file.
3. An attempt was made to create an existing file.

User response: The action is based on the reason code as follows.

1. Specify a valid directory.
2. Specify a file that exists.
3. Specify a file that does not already exist.

SQL22237N A file system error occurred when performing an operation on path *path*. Reason code = *reason-code*.

Explanation: An error occurred while accessing the file system. The explanation corresponding to the reason code is:

- 1 The specified path already exists.
- 2 The specified path does not exist.
- 3 An attempt was made to modify the specified file or directory which is currently read-only.
- 4 An attempt was made to modify or delete the specified file or directory which is currently in use by another application.
- 5 The specified file or directory is not accessible.
- 6 The specified path or device is not available.
- 7 The specified non-empty directory was mentioned in an inappropriate context. For example trying to non-recursively delete a non-empty directory.
- 8 The specified path does not refer to a directory.
- 9 The specified path is invalid.
- 10 The specified path name is too long.
- 11 There is no more space available on the file-system.
- 12 The maximum number of files that can be open has been reached.
- 13 The end of the specified file has been reached.
- 14 A physical I/O error occurred.
- 15 An unidentified error occurred.
- 16 A directory with the new directory name already exists.

User response: The user response corresponding to the reason code is:

- 1 Specify a path that does not exist.
- 2 Specify a path that does exist.
- 3 Verify the specified file or directory is not read-only.
- 4 Verify the specified file or directory is not in use by any other applications.
- 5 Verify the specified file or directory is accessible to the current user.
- 6 Verify the specified path or device is still available.
- 7 Verify the specified directory is empty.
- 8 Verify the specified path refers to a directory.

- 9 Verify the specified path is valid.
- 10 Verify the specified path is within the maximum limit for path names on the specific operating system.
- 11 Verify there is space available on the file-system.
- 12 Close one or more files and re-try the operation.
- 13 Verify the operation is not trying to read or seek beyond the end of file.
- 14 Retry the operation. If the problem persists, contact IBM Support.
- 15 Retry the operation. If the problem persists, contact IBM Support.
- 16 Specify a directory name that does not exist.

SQL22245N JCL generation failed. Reason (code[, token]) = *reason-code*.

Explanation: JCL generation failed as indicated by the following reason code:

- 01 A card with the reserved JCL skeleton parameter &JOB is not found or is misplaced in the main JCL skeleton. This card should be the first non-comment card in the main JCL skeleton after the TEMPLATE card.
- 02 Incorrect use of a reserved JCL skeleton parameter. The token in this message contains the name of the parameter that caused the problem.
- 03 There are more occurrences of the reserved JCL skeleton parameter &CTLSTMT in the main JCL skeleton than expected. The token in this message is set to the expected number of the &CTLSTMT parameters.
- 04 There are more occurrences of the reserved JCL skeleton parameter &STEPLIB in the main JCL skeleton than expected. The token in this message is set to the expected number of the &STEPLIB parameters.
- 05 The main JCL skeleton does not begin with the TEMPLATE statement. This statement should be the first non-comment statement in the main JCL skeleton.
- 06 The jobname or stepname in the JCL skeleton does not contain the JCL skeleton built-in function &SEQ required for job or step sequencing. The JCL skeleton built-in function &SEQ should be specified in the jobname or stepname of the JCL skeleton. The token in this message contains a fragment of the incorrect JCL statement.
- 07 The keyword JOB is not found in the first

non-comment statement in the JCL skeleton for //JOB-statement. It might be commented out, mistyped, or missed delimiting spaces, especially after the keyword.

- 08 The main JCL skeleton is incomplete or has incorrect structure. The required standard JCL statements may be commented out, missed or misplaced, especially if in-stream JCL procedures are being used in this JCL skeleton.
- 09 The syntax of jobname, stepname, or ddname in the JCL skeleton is invalid. Possible reasons for this: incorrect length of the name field, or the field includes some non-alphanumerical characters. The token in this message contains a fragment of the incorrect JCL statement.
- 10 An incorrect use of ampersand in the JCL skeleton. The JCL skeleton contains one or more stand-alone ampersand characters. An ampersand is the first symbol of any JCL skeleton parameter and should not be used without an accompanying identifier. The token in this message contains a fragment of the incorrect JCL statement.
- 11 The reserved JCL skeleton parameter &OBJECT was not found in the JCL skeleton.
- 12 A user-defined JCL skeleton parameter should not appear in the JCL skeleton. The token in this message contains the name of the JCL skeleton parameter that caused the problem.
- 13 A reserved JCL skeleton parameter should not appear in the JCL skeleton. The token in this message contains the name of the reserved JCL skeleton parameter that caused the problem.
- 14 The generated JCL is too long and the buffer for it cannot be allocated. The token in this message contains requested size that caused the problem. To avoid this problem, decrease the number of database objects selected for processing.

User response: Correct the problem according to the given explanation. If the problem persists, contact your Database Administrator or IBM Support.

SQL22247N The known discovery operation failed.

Explanation: Discovery is disabled on the target DB2 Administration Server.

User response: Enable discovery by modifying the value of the DISCOVER configuration parameter on the DB2 Administration Server. Change the value to KNOWN if you only want known discovery enabled. Change the value to SEARCH if you want both known and search discovery enabled. To modify the value of the configuration parameter, use the UPDATE ADMIN CONFIGURATION command.

SQL22250N Usage: DASMIGR is a utility to migrate the DB2 Administration Server to run under the DB2 Copy from which the utility was invoked.

Explanation: The DASMIGR command syntax is:

```
DASMIGR [-h | -p [DAS Profile Path]]
```

The command options are:

-h Prints this message.

-p Moves the DAS working directory under the install directory of the current DB2 Copy.

DAS Profile Path

Overrides the default location where the DAS working directory is to be moved. This option takes affect only if "-p" option is specified.

Example:

```
dasmigr -p "C:\DB2 PROFILES"
```

User response: Issue the DASMIGR command with one of the valid command options.

SQL22251N Migration of the DB2 Administration Server from *source-dasname* to *target-dasname* failed. Reason code *reason-code*.

Explanation: The DB2 Administration Server *source-dasname* could not be migrated for one of the following reasons:

1. The Tools Catalog Database has not been created at the target DB2 Administration Server.
2. The Tools Catalog Database has been configured improperly at the target DB2 Administration Server.

User response: Attempt the following at the target DB2 Administration Server *target-dasname*:

1. Verify that the Tools Catalog Database exists.
2. Verify the TOOLSCAT_DB and TOOLSCAT_SCHEMA DB2 Administration Server configuration parameters are correct. They should be set to the name and schema of the Tools Catalog Database. View the current settings of TOOLSCAT_DB and TOOLSCAT_SCHEMA using the GET ADMIN CONFIGURATION command. To modify the value of any DB2 Administration Server configuration parameter, use the UPDATE ADMIN CONFIGURATION command

If you continue to receive this error message after attempting the suggested response, please contact IBM Support.

SQL22252N DAS migration failed with reason code *reason-code*.

Explanation: An error has occurred while migrating the DB2 Administration Server. The reason codes are as follows:

1. The system resources available were insufficient to complete the migration.
2. The DB2 Administration Server's configuration parameters do not identify a valid tools catalog.
3. A non-severe error occurred during migration.

User response:

1. Verify that enough system resources are available for DAS migration.
2. Verify that a tools catalog is created and is identified correctly by the DB2 Administration Server's configuration parameters.
3. Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information.

SQL22255W Usage: `dasauto [-h|-?] -on|-off`

Explanation: An incorrect argument was entered. Valid arguments for this command are:

`-h|-?` display the usage information

`-on|-off` enables or disables autostarting of the DB2 Administration Server

User response: Enter the command again as follows:
`dasauto [-h|-?] -on|-off`

SQL22256W The `dasauto` command was successful.

Explanation: All processing completed normally.

User response: No further action is required.

SQL22260I The DB2 Administration Server has been updated successfully.

SQL22261N The DB2 Administration Server update command has encountered an unexpected error.

Explanation: An unexpected error occurred while attempting to update the DB2 Administration Server.

User response: Contact IBM Support and, if possible supply a trace file.

SQL22262N Update of the DB2 Administration Server between major releases is not supported.

Explanation: You can only update the DB2 Administration Server between minor releases of DB2.

User response: Please Use DB2 Administration Server migrate command (`dasmigr`) to update between major releases.

SQL22263I The DB2 Administration Server has been migrated successfully.

SQL22264N The DB2 Administration Server migrate command has encountered an unexpected error.

Explanation: An unexpected error occurred while attempting to migrate the DB2 Administration Server.

User response: Contact IBM Support and, if possible supply a trace file.

SQL22265N Migration of the DB2 Administration Server between minor releases is not supported.

Explanation: You can only migrate the DB2 Administration Server between major releases of DB2.

User response: Use DB2 Administration Server update command (`dasupdt`) to update between minor releases.

SQL22266N The DB2 Administration Server is already installed under the current DB2 Copy.

Explanation: The DB2 Administration Server is already installed under the DB2 Copy from which the DB2 Administration Server update command was run.

User response: Run the DB2 Administration Server update command from the DB2 Copy to which you would like the DB2 Administration Server to be moved.

SQL22267W Usage: `DASUPDT` is a utility to update the DB2 Administration Server to run under the DB2 Copy from which the utility was invoked.

Explanation: The `DASUPDT` command syntax is:
`DASUPDT [-h | -p [DAS Profile Path]]`

The command options are:

- `-h` Prints this message.
- `-p` Moves the DAS working directory under the install directory of the current DB2 Copy.

DAS Profile Path

Overrides the default location where the DAS working directory is to be moved. This option takes affect only if "-p" option is specified.

Example:

`dasupdt -p "C:\DB2 PROFILES"`

User response: Issue the `DASUPDAT` command with

one of the valid command options.

SQL22270N The contact, or contact group, with name *name* cannot be added to the contact list.

Explanation: The contact, or contact group, already exists in the contact list.

User response: Create a new contact, or contact group, with a unique name.

SQL22271N The contact, or contact group, information with name *name* could not be found.

Explanation: The contact, or contact group, could not be found in the contact list.

User response: Check and correct the name, and try again.

SQL22272N The record with key *key* cannot be inserted.

Explanation: The system tried to insert a record and the new record's key *key* already exists in the system.

User response: Remove the duplicate from the system; or, insert a new record with another key.

SQL22273N The record with key *key* could not be found.

Explanation: The record with key *key* could not be found because the record does not exist.

User response: Check and correct the key, and try again.

SQL22280N This action cannot be performed because the scheduler is quiesced.

Explanation: No action can be performed until the scheduler is activated again.

User response: Activate the scheduler.

SQL22281N The scheduler is already active.

Explanation: The scheduler cannot be made active because it is already active.

User response: No further action is required.

SQL22282N The scheduler is unable to access the Tools Catalog Database. Reason code = *reason-code* and SQLCODE *sqlcode*.

Explanation: The scheduler function cannot be processed because the scheduler is unable to access the Tools Catalog Database for the reason specified by the *reason-code* as follows:

1. The given user ID, or password, is incorrect.

2. Incorrect Tools Catalog Database configuration in the DB2 Administration Server configuration parameters. One or more of the following DB2 Administration Server configuration parameters is incorrect:

- TOOLSCAT_DB
- TOOLSCAT_SCHEMA

3. The Tools Catalog Database is already being used by another scheduler on the same system.
4. The Tools Catalog Database is only supported through TCP/IP as a communication protocol.
5. Unexpected errors. Refer to SQLCODE *sqlcode* for more details.

User response: The action corresponding to the reason code is:

1. Check your user ID and password and try again.
2. Verify that the DB2 Administration Server TOOLSCAT_DB and TOOLSCAT_SCHEMA configuration parameters have been set correctly. View the current settings of TOOLSCAT_DB and TOOLSCAT_SCHEMA using the GET ADMIN CONFIGURATION command. To modify the value of any DB2 Administration Server configuration parameter, use the UPDATE ADMIN CONFIGURATION command. If you continue to receive this error message after attempting the suggested response, please contact IBM Support.
3. Contact your system administrator.
4. Attempt the following:
 - If the tools catalog database is local to the scheduler, then set up the instance specified by the DB2 Administration Server configuration parameter `toolscat_inst` to use TCP/IP communications.
 - If the tools catalog database is remote to the scheduler, then ensure that the node used by the `toolscat_db` admin configuration parameter supports TCP/IP as the communication protocol.
5. Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information.

Contact IBM Support if you continue to receive this message after attempting the suggested solutions.

SQL22283N Task *taskid.suffix* does not exist in the Tools Catalog Database.

Explanation: The scheduler cannot retrieve the task from the Tools Catalog Database. The task might have been removed from the Tools Catalog Database or never existed.

User response: Check for the existence of the task using the Task Center.

SQL22284N Task *taskid.suffix* is not scheduled.

Explanation: The requested action, Run a scheduled task now, cannot be performed because the task is not currently scheduled to run.

User response: Attempt one of the following:

- Perform a Run now instead
- Activate all of the task's schedules and perform Run a scheduled task now again.

SQL22285N The scheduler is unable to get the corresponding hostname from the partitioned database on partition number *partition-number*.

Explanation: The requested partition number does not exist in the partitioned database.

User response: Verify that the partition number exists by displaying the list of nodes using the LIST DBPARTITIONNUMS command.

SQL22286N Unable to execute the required task.

Explanation: The scheduler failed to run the task because an unexpected error occurred.

User response: Refer to the DB2 Administration Server's First Failure Data Capture Log for additional information.

If trace was active, invoke the Independent Trace Facility at the operating system command prompt.

SQL22287N User *userid* does not have permission to execute Task *taskid.suffix*.

Explanation: The task failed to execute because the user does not have sufficient authority to run the task.

User response: Users must be granted run permission by the owner of the task before they can run the task.

SQL22295N Unable to communicate successfully with the SMTP server at host *host-name* using port *port-number*. Reason code = *reason-code*.

Explanation: The SMTP server at host *host-name* using port *port-number* failed to successfully negotiate the protocol to send mail. An explanation of the error is indicated by the following reason code:

1. There is no SMTP server running at *host-name* on port *port-number*.
2. An unexpected error was encountered while communicating with the SMTP server.

User response:

1. Verify that the SMTP server name is specified correctly and that the SMTP port specified in the services file corresponds to the port number being used by the SMTP server.
2. Invoke the Independent Trace Facility at the operating system command prompt. Contact IBM Support if the problem persists.

sqlcode: -22295

sqlstate: 08001

SQL22296N Unable to send mail using the SMTP protocol due to invalid recipient addresses.

Explanation: The SMTP server failed to successfully negotiate the send mail protocol for all the specified recipients.

User response: Verify that the recipient addresses are specified correctly.

This error might also be returned if the SMTP server is unable to reach the recipient addresses. This can be independently verified by using any other mail client to send mail to the recipients using the same SMTP server. If this is successful, invoke the Independent Trace Facility at the operating system command prompt. Contact IBM Support if the problem persists.

SQL22297I Configuration changes will not be effective until the DB2 Administration Server is restarted.

Explanation: The DB2 Administration Server has been successfully configured, but the changes will not take effect immediately. The changes will take effect when the DB2 Administration Server is restarted.

User response: To have the change take effect at the next DB2 Administration Server restart, no further action is required.

SQL22400N The function or feature name *function-or-feature-name* is not valid.

Explanation: The function or feature name *function-or-feature-name* is not valid. For valid function and feature names, search the DB2 documentation.

User response: Specify a valid function or feature name, then try the request again.

sqlcode: -22400

sqlstate: 5U001

SQL22401N The application with agent ID *agent-ID* does not exist.

Explanation: The application with agent ID *agent-ID* does not currently exist. To see all active database applications, use LIST APPLICATIONS command.

User response: Specify an agent ID for an active application, then try the request again.

sqlcode: -22401

sqlstate: 5U002

SQL22402N No activity monitor reports can be found.

Explanation: No activity monitor reports can be found because either the report ID or the report type specified is invalid.

User response: Specify a valid report ID or a valid report type, then try the request again.

sqlcode: -22402

sqlstate: 5U003

SQL22403N One or more values provided when saving or dropping the monitoring task *monitoring-task-name* are invalid. Reason code: *code*.

Explanation: One or more values provided when saving the monitoring task *monitoring-task-name* are invalid for the reason given by reason code *code*. The possible reason codes are as follows:

- The action mode *action-mode* is invalid.
- The request to create the monitoring task failed because the specified monitoring task name *monitoring-task-name* is not valid.
- The request to create the monitoring task failed because another monitoring task with the same name *monitoring-task-name* was found.
- The request to save the monitoring task failed because the value specified for the availability of application lock chains is not valid.
- The request to save the monitoring task failed. One or more report IDs in *report-IDs* are invalid because there are no associated reports.
- The request to modify or drop the monitoring task failed because the specified monitoring task ID *monitoring-task-ID* is not valid. The associated monitoring task either does not exist or is a built-in monitoring task. A built-in monitoring task cannot be modified or dropped.

User response: The action corresponding to the reason code is:

- To create a new monitoring task, specify action mode C. To modify an existing monitoring task, specify action mode M. Try the request again.

- A monitoring task name cannot be null, blank, or exceed 128 characters in length. Specify a valid monitoring task name, then try the request again.
- Monitoring tasks must have unique names. Specify a unique name for the new monitoring task, then try the request again.
- To make application lock chains available for this monitoring task, specify 'Y'; otherwise, specify 'N'. Try the request again.
- Specify one or more IDs for activity monitor reports that exist, then try the request again.
- Specify an existing user-defined monitoring task ID, then try the request again.

sqlcode: -22403

sqlstate: 5U004

SQL22404N The action mode *action-mode* specified when creating or dropping the database objects for function or feature *function-or-feature-name* is not valid.

Explanation: The action mode *action-mode* is invalid. To create the database objects for *function-or-feature-name*, specify action mode C. To drop the database objects for *function-or-feature-name*, specify action mode D.

User response: Specify a valid action mode, then try the request again.

sqlcode: -22404

sqlstate: 5U005

SQL22405N The Activity Monitor is unable to collect the required snapshot data because the monitor switch *monitor-switch* is not turned on at the database manager level.

Explanation: The Activity Monitor is unable to collect the required snapshot data because the monitor switch *monitor-switch* is not turned on at the database manager level.

User response: Turn on the specified monitor switch using the monitor switch database manager configuration parameter, then try the request again.

sqlcode: -22405

sqlstate: 5U006

Chapter 24. SQL27500 - SQL27999

SQL27902N LOAD RESTART/TERMINATE is not allowed on a table that is not in LOAD PENDING state.

Explanation: No RESTART or TERMINATE is necessary. The RESTART and TERMINATE modes of the LOAD utility should be used to resume or cancel a previously failed/interrupted LOAD operation. They are only supported on tables where a previous load operation failed and the table is in LOAD PENDING state. For tables that are not in LOAD PENDING state, only the INSERT and REPLACE modes of the LOAD utility are supported.

User response: To populate the table with the contents of the input source re-issue your LOAD command using the INSERT or REPLACE mode. You can use the LOAD QUERY utility to find out the current state of the table.

SQL27903I *agenttype* has started on partition *partitionnumber* at time *timestamp*.

Explanation: This is an informational message indicating that a DB2 agent is about to begin on a given partition.

User response: No action is required.

SQL27904I The input file was not found. Using standard input as the input.

Explanation: This is an informational message indicating that an DB2 agent is about to begin on a given partition.

User response: No action is required.

SQL27907I Maximum input record length *record-length*.

Explanation: This is an informational message indicating the record length used for the Load operation.

User response: No action is required.

SQL27908I The utility is running with check level: *check-level*.

Explanation: This is an informational message indicating whether truncation checking is enabled or not.

User response: No action is required.

SQL27909I Tracing *numberofrecords* non-delimited record(s).

Explanation: This is an informational message indicating that tracing is enabled for the first *numofrecords* record(s).

User response: No action is required.

SQL27910I The string delimiter is *chardel*, the column delimiter is *coldel*, and the decimal point is *decept*. Tracing *numofrecords* delimited record(s).

Explanation: This is an informational message indicating what delimiters are used for string, column and decimal point. In addition, this message also shows tracing is enabled for the first *numofrecords* record(s).

User response: No action is required.

SQL27911I The input partition map file *filename* was opened successfully for reading.

Explanation: This informational message indicates the input partition map file was opened successfully for reading.

User response: No action is required.

SQL27912I Reading of input partitioning map is in progress.

Explanation: This informational message indicates that reading of the input partition map file is in progress.

User response: No action is required.

SQL27913I Input partitioning map was successfully read.

Explanation: This informational message indicates that the input partition map file was successfully read.

User response: No action is required.

SQL27914I The mode of operation is *mode*.

Explanation: This informational message indicates the mode of operation for the partitioning agent.

There are two different modes of operation:

- Partition
- Analyze

User response: No action is required.

SQL27915I Output partitioning map file not used.

Explanation: This is an informational message indicating that the output partitioning map file is not used.

User response: No action is required.

SQL27916I The output partitioning map file *filename* was opened successfully.

Explanation: This is an informational message indicating that the output partitioning map file was opened successfully.

User response: No action is required.

SQL27918I Distribution file name: *filename*.

Explanation: This is an informational message indicating the name of the distribution file used in the utility.

User response: No action is required.

SQL27919I The distribution file *filename* was opened successfully for writing.

Explanation: This informational message indicates the distribution file was opened successfully for writing.

User response: No action is required.

SQL27920I This utility is using *numkeys* partitioning keys.

Explanation: This informational message indicates the number of partitioning keys used in the utility.

User response: No action is required.

SQL27921I *keyname* **Start:***index* **Len:***length* **Position:***position* **Type:***type*.

Explanation: This informational message describes attributes of a partitioning key.

User response: No action is required.

SQL27922I Output data files are not created because the run type is ANALYZE.

Explanation: This is an informational message indicating that the output data files are not created because the mode of operation is ANALYZE.

User response: No action is required.

SQL27926I Output data for partition *partitionnum* will be sent to standard output.

Explanation: This is an informational message indicating that the output data on partition *partitionnum* will be sent to standard output.

User response: No action is required.

SQL27927I Processed *numofrecords* records (or lines).

Explanation: This is an informational message indicating that *numofrecords* records (or lines) were processed.

User response: No action is required.

SQL27928I Processing record number *num*.

Explanation: This informational message indicates which record is being processed. This message will only be reported when the TRACE option is specified.

User response: No action is required.

SQL27929I Partitioning number returned from hash function: *hexvalue* (hex) *decvalue* (decimal).

Explanation: This informational message reports the result of the hashing function in both hex and decimal format.

User response: No action is required.

SQL27930N A record was rejected during partitioning with reason code *reason-code* and partition-relative record number *rec-num*.

Explanation: A record was rejected during load while attempting to determine what partition the record belongs to. If the 'dumpfile' load modifier was specified, the rejected record can be found in the partition-relative dumpfile at the partition-relative record number *rec-num* listed in this message.

An explanation of the error specified by the *reason-code* is as follows:

1. The string representation of the data type of a partitioning column is invalid. Either the syntax is invalid or the value is out of range.
2. The column values corresponding to the partitioning keys are not contained within the first 32K of the record.
3. The record is empty (all space characters).
4. The record length does not match the expected length.
5. The record is incomplete.
6. An error occurred while processing a generated column value.

User response: The action corresponding to the *reason-code* is:

1. Ensure that the string representation or the datatype is correct.

2. The column values comprising the partitioning keys must be contained within the first 32KB of the record.
3. If you are concerned that the record is empty, check your data for correctness.
4. Ensure the record length is not larger or smaller than the expected length.
5. Ensure the input data file is complete.
6. Ensure the generated column value is correct and compliant.

SQL27931I Writing output partition map to file *filename*.

Explanation: This is an informational message indicating that the output partition map is written to *filename*.

User response: No action is required.

SQL27932I Writing distribution map to *filename*.

Explanation: This is an informational message indicating that the distribution map is written to *filename*.

User response: No action is required.

SQL27935I *agenttype* has ended on partition *partitionnumber* at time *timestamp*.

Explanation: This is an informational message indicating that an DB2 agent has just completed operation on a given partition.

User response: No action is required.

SQL27936I Elapsed time: *hr* hours, *min* minutes, *sec* seconds.

Explanation: This informational message reports the total time elapsed.

User response: No action is required.

SQL27937I Throughput: *throughput* records/sec.

Explanation: This is an informational message indicating the throughput of a given DB2 agent.

User response: No action is required.

SQL27939I Record counts for output partitions: partition number *partitionnum*. Record count: *numofrecords*.

Explanation: This informational message indicates the number of records processed for a given partition.

User response: No action is required.

SQL27941I Program terminated abnormally.

Explanation: This informational message indicates the utility program has terminated abnormally.

User response: No action is required.

SQL27942I There are *number-of-warnings* warning message(s) and *number-of-rejected-records* rejected records.

Explanation: This informational message reports there are *number-of-warnings* warning message(s) and *number-of-rejected-records* rejected record(s) encountered during the operation.

User response: No action is required.

SQL27945I Key Index: *index*. Data: *data1 data2 data3 data4 data5*.

Explanation: This informational message reports the attributes of a given partition key.

User response: No action is required.

SQL27947I The input data file specified at line *linenum* of the configuration file is ignored.

Explanation: The input data file specified at line *linenum* of the configuration file is ignored. The command line option will be used if it is specified; otherwise, the first specification of input data file in the configuration file will be used.

User response: No action is required.

SQL27948I The output data file specified at line *linenum* of the configuration file is ignored.

Explanation: The output data file specified at line *linenum* of the configuration file is ignored. The command line option will be used if it is specified; otherwise, the first specification of output data in the configuration file will be used.

User response: No action is required.

SQL27949I The distribution data file specified at line *linenum* of the configuration file is ignored.

Explanation: The distribution file specified at line *linenum* of the configuration file is ignored. The command line option will be used if it is specified; otherwise, the first specification of distribution file in the configuration file will be used.

User response: No action is required.

SQL27950I The type of the input data file is *filetype*.

Explanation: This is an informational message indicating that the format of the input data is *filetype*.

- 0-ASC
- 1-DEL
- 2-BIN
- 3-CUR

User response: No action is required.

SQL27951I The NEWLINE flag is ignored in case of binary or delimited input data files.

Explanation: This informational message reports that the NEWLINE flag is ignored for binary or delimited input data files.

User response: No action is required.

SQL27952I The NEWLINE flag is turned on.

Explanation: This informational message reports that the NEWLINE flag is in effect.

User response: No action is required.

SQL27953I Usage: `db2split [-c configuration-file-name] [-d distribution-file-name] [-i input-file-name] [-o output-file-name] [-h help message]`

Explanation:

- c option will run this program using a user specified configuration file
 - d option specifies the distribution file
 - i option specifies the input file
 - o option specifies the output file
 - h option will generate the help message
-

SQL27959N The partitioned database configuration option *option-name* is invalid. Reason code = *reason-code*.

Explanation: The partitioned database configuration option named in the error message is incorrectly specified or is incompatible with one of the other load options specified.

The possible reason codes are as follows:

- 1 Partitioned database configuration options cannot be specified in a non-partitioned database environment or when the DB2_PARTITIONEDLOAD_DEFAULT registry variable is set to OFF.
- 2 Partitioned database configuration options may not be specified more than once.

3 Invalid pointer detected in the piPartLoadInfoIn input structure passed to the db2Load API.

4 Invalid pointer detected in the poPartLoadInfoOut output structure passed to the db2Load API.

5 The argument supplied to the MODE option must be one of the following:

- PARTITION_AND_LOAD
- PARTITION_ONLY
- LOAD_ONLY
- LOAD_ONLY_VERIFY_PART
- ANALYZE

6 The maximum number of partitioning agents must be less than or equal to the maximum number of partitions allowable in a cluster.

7 The maximum number of partition numbers in a partition list must be less than or equal to the maximum number of partitions allowable in a cluster.

8 The arguments supplied to the ISOLATE_PART_ERRS option must be one of the following:

- SETUP_ERRS_ONLY
- LOAD_ERRS_ONLY
- SETUP_AND_LOAD_ERRS
- NO_ISOLATION

9 The value supplied to the STATUS_INTERVAL option must be in the range 1-4000.

10 The maximum port number must be greater than or equal to the minimum port number.

11 The only legal arguments for the CHECK_TRUNCATION, NEWLINE and OMIT_HEADER options are TRUE and FALSE.

12 The argument supplied to RUN_STAT_DBPARTNUM must be a legal partition number.

13 If the mode is ANALYZE, the MAP_FILE_OUTPUT option must be specified.

14 If the mode is PARTITION_ONLY or LOAD_ONLY and a remote client is being used, then the PART_FILE_LOCATION option must be specified. If the mode is PARTITION_ONLY or LOAD_ONLY then if the file type is CURSOR, the PART_FILE_LOCATION option must be used and must specify a file name.

15 The load actions RESTART and TERMINATE can only be used when the mode is PARTITION_AND_LOAD, LOAD_ONLY or LOAD_ONLY_VERIFY_PART.

- 16 The HOSTNAME option cannot be specified unless the FILE_TRANSFER_CMD option is also specified.
- 17 The partition isolation error modes LOAD_ERRS_ONLY and SETUP_AND_LOAD_ERRS cannot be used when both the ALLOW_READ_ACCESS or COPY_YES options of the load command are used.
- 18 The LOAD_ONLY and LOAD_ONLY_VERIFY_PART modes are not compatible with the CLIENT option of the load command.

User response: Resubmit the LOAD command with the correct partitioned database configuration options.

SQL27960N PART_FILE_LOCATION must specify a fully qualified base filename when the file type is CURSOR.

Explanation: When loading from an input file of type CURSOR, the PART_FILE_LOCATION option must specify a fully qualified base filename instead of a directory.

User response: Resubmit the LOAD command with a proper argument for the PART_FILE_LOCATION partitioned database configuration option.

SQL27961N ROWCOUNT cannot be specified in a partitioned database environment unless the mode is ANALYZE.

Explanation: The ROWCOUNT option of the load command is not supported except when the mode is ANALYZE.

User response: Resubmit the load command without the ROWCOUNT option.

SQL27965N The DB2_LOAD_COPY_NO_OVERRIDE registry variable value *value* is not valid.

Explanation: A Load was issued with the COPY_NO recoverability property, but the value of the DB2_LOAD_COPY_NO_OVERRIDE registry variable was not valid.

User response: Refer to the DB2 Information Center for information about the registry variable or unset the registry variable to stop overriding Loads which have COPY_NO recoverability.

SQL27966W The DB2_LOAD_COPY_NO_OVERRIDE registry variable value *value* overrides the COPY_NO parameter specified in the Load.

Explanation: A Load command was issued with the COPY_NO recoverability parameter, however the DB2_LOAD_COPY_NO_OVERRIDE registry variable overrides the parameter.

User response: Refer to the DB2 Information Center for information about the DB2_LOAD_COPY_NO_OVERRIDE registry variable or unset the registry variable to stop overriding Loads which have COPY_NO recoverability.

SQL27967W The COPY_NO recoverability parameter of the Load has been converted to NONRECOVERABLE within the HADR environment.

Explanation: The COPY_NO recoverability parameter of the Load has been converted to NONRECOVERABLE. This occurred because the Load was issued within an HADR environment and the DB2_LOAD_COPY_NO_OVERRIDE registry variable was not set.

User response: The COPY_NO Load parameter is not valid within an HADR environment. The DB2_LOAD_COPY_NO_OVERRIDE registry variable can be set to override the COPY_NO parameter or you can accept that the COPY_NO parameter will be converted to NONRECOVERABLE.

SQL27970N An incompatible combination of import options is specified. Reason code = *reason-code*.

Explanation: An incompatible combination of import options is specified by the user.

The command cannot be processed.

An explanation of the error specified by the *reason-code* is as follows:

1. The SKIPCOUNT and RESTARTCOUNT options are mutually exclusive.
2. Online import mode (ALLOW_WRITE_ACCESS) is not compatible with the REPLACE, CREATE and REPLACE_CREATE import options.
3. Online import mode (ALLOW_WRITE_ACCESS) was specified for the import command using buffered inserts.
4. Online import mode (ALLOW_WRITE_ACCESS) was specified for the import command inserting into a view.
5. Online import mode (ALLOW_WRITE_ACCESS) was specified for the target table using table lock size.
6. Commitcount AUTOMATIC was specified for the import command using buffered inserts.
7. Commitcount AUTOMATIC was specified for the import command, but the server does not support this option. The servers supporting automatic

commitcount are DB2 UDB on Linux, Unix and Windows V8.1 FixPak 4 and higher DB2 versions.

8. Online import mode (ALLOW WRITE ACCESS) was specified for the import command, but the server does not support this option. The servers supporting online import are Linux, Unix and Windows, zSeries and iSeries.

User response: The action corresponds to the following reason codes:

1. Reissue the command using either the SKIPCOUNT or RESTARTCOUNT option.
2. Reissue the command without specifying ALLOW WRITE ACCESS, or use INSERT or INSERT_UPDATE import option.
3. Reissue the command without specifying ALLOW WRITE ACCESS, or rebind the import packages (bind files db2uimtb.bnd and db2uimpb.bnd) without using the INSERT BUF option.
4. Reissue the command without specifying ALLOW WRITE ACCESS.
5. Reissue the command without specifying ALLOW WRITE ACCESS, or alter the table using LOCKSIZE ROW.
6. Reissue the command without specifying automatic commitcount, or rebind the import packages (bind files db2uimtb.bnd and db2uimpb.bnd) without using the INSERT BUF option.
7. Do not attempt to use this command option against an incompatible server.
8. Do not attempt to use this command option against an incompatible server.

SQL27971N The target table has changed since the start of the import utility.

Explanation: This message can be returned for several reasons. For example, this message could be returned if application dropped the target table and created a new table with the same name while an online import was running.

The utility stops processing.

User response: If desired, rerun the operation.

SQL27972N A range of rows from the input file, starting at *first-failed-row* and ending at *last-failed-row*, was not inserted into the table. **SQLCODE** = *sqlcode*.

Explanation: The atomic compound database operation failed to insert a sequence of rows of data read from the input file. One or more of the fields in the input file is not compatible with the database field where the field is being inserted.

Processing continues with the next row of input data.

User response: Examine the input file and the database contents. If desired, modify the database or

modify the input file and rerun the operation.

SQL27980W The utility encountered attached or detached data partitions in the target table or the source table.

Explanation: Some of the data partitions are in the attached or detached state. The utility treats these data partitions as invisible. Any input source records belonging to those data partitions will be rejected by the import utility or the load utility. The rows rejected by the load utility can be recovered from the exception table, if one was specified. The export utility will not process any data that might exist in those data partitions.

User response: No action is required.

SQL27981W The utility could not verify presence of attached or detached data partitions in the target table or the source table.

Explanation: Some of the data partitions might be in the attached or detached state, but the utility was unable to confirm this. The utility treats these data partitions as invisible. Any input source records belonging to those data partitions will be rejected by the import utility or the load utility. The rows rejected by the load utility can be recovered from the exception table, if one was specified. The export utility will not process any data that might exist in those data partitions.

User response: No action is required.

SQL27982N Vendor Load API (sqluvtld) is no longer supported.

Explanation: Vendor Load API (sqluvtld) is no longer supported. DB2 Load utility is the only supported bulk loader. DB2 Load utility can be executed via db2Load API.

User response: Do not use the sqluvtld API or any applications that invoke it.

SQL27983N The LOAD utility is unable to rebuild the index.

Explanation: The LOAD target table has detached data partitions and has dependent materialized query tables or dependent staging tables that have not been incrementally refreshed with respect to the detached data partition. This condition prevents the LOAD utility running in insert mode or restart mode from rebuilding a unique index.

User response: Do not specify indexing mode REBUILD with LOAD insert until the dependent materialized query tables or dependent staging tables are refreshed. Use a different LOAD indexing mode, or execute the SET INTEGRITY statement with the IMMEDIATE CHECKED option to maintain the

dependent materialized query tables or dependent staging tables with respect to the detached data partition. If a LOAD restart cannot incrementally maintain indexes, the previously failed LOAD operation must be terminated before dependent materialized query tables or dependent staging tables can be refreshed.

SQL27984W The export command completed successfully. Some recreate information has not been saved to the PC/IXF file during Export. This file will not be supported in Import CREATE mode. Reason code=*reason-code*.

Explanation: Reason codes:

- 1 Index information has not been saved because the index column names contain hexadecimal values of 0x2B or 0x2D.
- 2 XML column definitions are not saved for recreation.
- 3 MDC key definition has not been saved.
- 4 Table partitioning key definition has not been saved.
- 5 Index name has been truncated due to codepage conversion.
- 6 Protected tables are not supported.
- 7 Action strings other than 'SELECT * FROM <TABLE-NAME>' are not supported.
- 8 Method N is not supported.
- 9 A column name was too long for the PC/IXF format. It has been truncated to fit.
- 10 A UDT name was too long for the PC/IXF format. It has been truncated to fit.
- 11 Typed table information has been truncated due to codepage conversion.
- 12 The schema associated with the UDT was too long for the PC/IXF format. It has been truncated to fit.
- 13 Decimal floating-point column definitions are not saved for recreation.

User response: Data has not been affected during Export but the file cannot be used in Import CREATE operation to recreate the table since some information is missing. For reason codes 1, 3, 4, 5, 7, 8, 9, and 11 the user may use File Type Modifier FORCECREATE to force the CREATE operation with this file. For reason codes 2, 6, 10, 12, and 13 the user may use the db2look tool to extract table information and perform Import INSERT or REPLACE operation.

SQL27985N Autoloader executable (db2atld) is no longer supported.

Explanation: Autoloader executable (db2atld) is no longer supported. The Load utility is the only supported bulk loader. The Load utility is executed via a db2Load API, LOAD CLP command, or SYSPROC.ADMIN_CMD stored procedure.

User response: Do not use the db2atld executable.

SQL27986W A column name has been truncated in the PC/IXF file during Export. This file will not be supported in Import using Method N.

Explanation: Data has not been affected during Export but the file cannot be used in Import with Method N because some column information is missing.

User response: If Method N will not be used in Import, then no action is necessary. If Method N will be used, then export using Method N again, but explicitly specify shorter column names. Even though the PC/IXF file will contain the shorter column names, this will not affect the import of the data into an existing table. Alternatively, rename the columns in the original table to be shorter and export the data again.

sqlcode: +27986

sqlstate: 5U036

SQL27987N This PC/IXF file is not supported in Import using Method N.

Explanation: Data has not been affected during Export but the file cannot be used in Import using Method N since some column information is missing.

User response: Import using another Method other than N. Alternatively, export using Method N again, but explicitly specify shorter column names. Even though the PC/IXF file will contain the shorter column names, this will not affect the import of the data into an existing table. Alternatively, rename the columns in the original table to be shorter and export the data again.

sqlcode: -27987

sqlstate: 5U015

SQL27990W During loading, at least one row was found to be on the wrong partition.

Explanation: When loading a partitioned database using the load utility with LOAD_ONLY_VERIFY_PART mode, any rows in the input file that are found to be on the wrong partition will be discarded. If the "dumpfile" modifier is specified, the discarded rows will be saved to the dump file. This message will appear only once per

partition per load job, even when there are multiple partition violations present.

User response: If the discarded rows are saved to a dump file, they can be loaded to the correct partition by simply issuing another load command with the MODE option set to PARTITION_AND_LOAD.

SQL27991W Too many partitioning agents specified in the load command.

Explanation: Too many partitioning agents have been specified in the PARTITIONING_DBPARTNUMS partitioned database configuration option of the load command. The maximum number of partitioning agents is specified by the MAX_NUM_PART_AGENTS load option, which defaults to 25 if not specified.

User response: Resubmit the command with the correct number of partitioning agents. Alternatively, the PARTITIONING_DBPARTNUMS option can be omitted and the load utility will automatically select an appropriate number of partitioning agents.

SQL27992N The data file contains a valid partitioning map, but the load mode is not LOAD_ONLY.

Explanation: Load has detected a valid partitioning map at the beginning of the file. The Load mode specified would cause the utility to treat this as user data, possibly causing undesired results.

User response: If the reason the data file begins with a partitioning map header is that the data in the file has already been partitioned, then use LOAD_ONLY mode to load the file. In this case it will also be necessary to use the OUTPUT_DBPARTNUMS option to specify the single partition to which the data should be loaded.

If the partitioning map detected by load at the beginning of the file is actually user data, then use the IGNOREHEADER modifier to disable the partition map detection and load the entire data file.

SQL27993W The STATISTICS USE PROFILE option of the Load utility was specified, however, a statistics profile does not exist.

Explanation: The statistics profile does not exist in the catalog table SYSIBM.SYSTABLES. The statistics profile must be created before the load is executed.

The load utility continues processing.

User response: To create a statistics profile, use the SET PROFILE or SET PROFILE ONLY options of the RUNSTATS utility. Refer to the RUNSTATS documentation for a detailed description of the utility options.

SQL27994W The length of a special register default column is smaller than the target column length. Load may truncate the values corresponding to this column (column-num).

Explanation: The clause SESSION_USER, CURRENT_USER, SYSTEM_USER, or CURRENT_SCHEMA has been specified for column *column-num*, but this column was either defined with a length that is less than 128 bytes (SESSION_USER only) or the column-value inserted into this column may exceed the target length after codepage conversion. Load may truncate the column-value.

User response: If your system standards would not allow a user ID (SESSION_USER) to exceed the length of the column, then this warning may be ignored. To prevent this warning from occurring, the length of the column must be at least 128 bytes. If codepage conversion resulted in the growth of this register default column, increase the length of the column to accommodate the growth.

SQL27999N The requested IMPORT operation into a remote target (nickname) cannot be performed. Reason code = reason-code.

Explanation: The target of the requested IMPORT operation resides in a remote database and is referenced locally by a nickname. The options specified for the IMPORT command do not meet the constraints required to allow the operation. The operation was rejected.

The explanation corresponding to the reason code is:

- 1
The federated wrapper which manages the operations on the nickname is non-relational. Only nicknames managed by relational wrappers are supported. The ODBC wrapper is also not supported.
- 2
The DATALINK SPECIFICATION clause was specified, but is not supported.
- 3
One of the following unsupported filetype modifiers was specified: indexxf or indexschema.
- 4
The dldelfiletype modifier, which is unsupported, was specified.
- 5
One of the following unsupported filetype modifiers was specified: nodefaults or usedefaults.

6

The `no_type_idfiletype` modifier, which is unsupported, was specified.

7

One of the following unsupported filetype modifiers was specified: `generatedignore`, `generatedmissing`, `identityignore`, `identitymissing`, `periodignore`, `periodmissing`, `transactoidignore`, or `transactionidmissing`.

8

The `COMMITCOUNT` clause was not specified or was specified with the value `AUTOMATIC`. If the `COMMITCOUNT` clause is used, a non zero number must be specified.

9

The `ALLOW WRITE ACCESS` clause, which is required, was not specified.

10

An unsupported filetype was specified. Only files of type `IXF`, `ASC`, or `DEL` are supported.

11

An unsupported import action was specified. Only the `INSERT INTO` or `INSERT_UPDATE INTO` actions are supported.

12

Target table contains one of unsupported column types: `LOB` columns, `XML` columns, `generated` columns, `datalink` columns, or target table is a hierarchy table (typed table).

13

The `lobsinfile` filetype modifier, which is unsupported, was specified.

14

Either the remote target is not a table, or insufficient privileges prevent the utility from accessing the nickname. Import operation is only permitted when nickname is defined on a table, and `PASSTHRU` privilege is granted on the user.

15

The necessary stored procedures do not exist against the target database. Run the `db2updv8` utility program against the target database to create the stored procedure.

User response: Correct the options specified and retry the `IMPORT` command.

Chapter 25. SQL29000 - SQL29499

SQL29000N The value specified for DYN_QUERY_MGMT is not valid. DB2 Query Patroller is not installed on this server.

Explanation: The attempt to update the database configuration parameter DYN_QUERY_MGMT to ENABLE failed because the DB2 Query Patroller server is not installed.

User response: Install the DB2 Query Patroller server.

SQL29001N This database client level is not compatible with the level of DB2 Query Patroller server you are running on.

Explanation: The client and server code are not compatible.

SQL29002N DB2 Query Patroller is not installed on this server.

Explanation: DB2 Query Patroller server tables do not exist on the server.

User response: Install the DB2 Query Patroller server.

SQL29003N DB2 Query Patroller could not load Java class *class-name*, reason code *reason-code*.

Explanation: An error occurred while trying to load the Java class *class-name*. The reason codes are:

1 The class was not found on the CLASSPATH.

User response: Ensure the *class-name* is installed in the CLASSPATH.

SQL29004N DB2 Query Patroller class *class-name* cannot call method *method-name* with signature *signature*.

Explanation: The Java method *method-name* cannot be found.

User response: Ensure that the correct version of the DB2 Query Patroller client is installed.

SQL29005N User *user-ID* does not have an effective Query Patroller submitter profile.

Explanation: The user *user-ID* does not have an effective Query Patroller submitter profile. This may occur due to one or more of the following reasons:

1. The user may not have a submitter profile.
 2. The user and/or group submitter profile(s) belonging to the user may have been suspended.
-

User response: Request that the database administrator create a submitter profile or have the submitter profile reactivated.

SQL29006N A Java exception *exception-string* was encountered.

Explanation: Java exception *exception-string* was thrown.

User response: If the problem persists contact your technical service representative.

SQL29007N Unable to communicate with the Query Controller.

Explanation: The Query Controller may not be running or the communication has timed out.

User response: Request that the database administrator start the Query Controller.

SQL29008N Error encountered during job sequence number generation.

Explanation: An error was encountered during job sequence number generation.

User response: If the problem persists contact your technical service representative.

SQL29009N The query has been rejected. Reason code *reason-code*.

Explanation: The query has been rejected. The reason codes are as follows:

1. DB2 does not allow the query to generate result set, or the query contains host variables, parameter markers, special registers, created temporary tables, declared temporary tables, session variables, IDENTITY_VAL_LOCAL function, NEXT VALUE expression, and/or PREVIOUS VALUE expression. Therefore the query cannot be put on hold or run in the background, as the state might not be valid at the time the query is actually executed.
2. The query would update a DB2 table, therefore it cannot be put on hold or run in background, as the state might no longer be valid at the time the query is actually executed.
3. The query cannot be queued because it contains nested routines.
4. The query cannot be put on hold or run in the background because it contains nested routines.
5. DB2 does not allow this query to be queued. This may occur when the query contains array inserts.

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6. DB2 does not allow a query to be queued when the concentrator is turned on.
7. DB2 does not allow a query to be queued when the REOPT ALWAYS option is enabled for the query.

User response: Contact the database administrator to examine the reason code and increase the appropriate cost threshold accordingly.

SQL29010N The query submission has been cancelled.

Explanation: The user has cancelled the query submission. No query was submitted.

SQL29011I Query *query-ID* will be run in the background.

Explanation: The user has chosen to run the query in the background.

SQL29012N Query *query-ID* has been aborted.

Explanation: Query *query-ID* has been aborted.

Explanation: Launch the Query Patroller Center or issue the qp command to determine the reason that the query was aborted.

SQL29013I Query *query-ID* has been held.

Explanation: The query has been put in held state by Query Patroller.

User response: Contact the database administrator to have the query released.

SQL29014N The value specified for DB2 registry variable *registry-variable* is invalid.

Explanation: The value specified for *registry-variable* is invalid because of the following restrictions by *registry-variable*:

DQP_NTIER

The value must be one of OFF, RUN[:timeout], or CHECK[:timeout].

DQP_LAST_RESULT_DEST

The length must not exceed 32 characters.

DQP_TRACEFILE

The length must not exceed 256 characters.

User response: Correct the value of the DB2 registry variable *registry-variable* with the db2set command and resubmit the query.

SQL29015N Error encountered during job cancellation. Reason code = *reason-code*.

Explanation: An error was encountered while trying

to cancel a job. The reason code maps to an SQL or DB2 message.

User response: Examine the reason code, correct the error, and retry the action again.

SQL29016N The data source on the client does not match the data source on the DB2 Query Patroller server.

Explanation: The data source to which the client is connected does not match the data source that is used by the DB2 Query Patroller server.

User response: Ensure that the DB2DBDFT profile variable on the DB2 Query Patroller server matches the client data source name.

SQL29017N Query *query-id* has been cancelled.

Explanation: The user has cancelled the query.

SQL29018N The DB2 Query Patroller Client is not installed.

Explanation: The user is querying a database which has enabled the database configuration parameter DYN_QUERY_MGMT. However, the DB2 Query Patroller client code is not installed on the client machine.

User response: Install the QueryEnabler component of the DB2 Query Patroller client.

SQL29019N Jobs have been scheduled on the DB2 Query Patroller server.

Explanation: Jobs have been scheduled on the DB2 Query Patroller server.

User response: None.

SQL29020N An internal error has occurred. Error = *error*.

Explanation: An error has occurred during internal processing.

User response: Contact IBM Support and provide the db2diag log file and the qpdiag.log file.

SQL29021N User *user-ID* is suspended.

Explanation: The user *user-ID* is suspended from submitting a query to the database.

User response: Contact the database administrator to have the user's submitter profile reactivated.

Chapter 26. SQL30000 - SQL30499

SQL30000N Execution failed because of a Distributed Protocol Error that will not affect the successful execution of subsequent commands or SQL statements: Reason Code *reason-code(subcode)(text)*.

Explanation: A system error occurred that prevented successful processing of the current environment command or SQL statement. This message (SQLCODE) is produced at statement compilation or execution time.

The command or statement cannot be processed. The current transaction is not rolled back and the application remains connected to the remote database.

User response: Record the message number and the reason code. Record all error information from the SQLCA, if possible. Attempt to rerun the application.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the operating system command prompt.

Required information:

- Problem description
- SQLCODE and reason code
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30000

sqlstate: 58008

SQL30002N The SQL statement cannot be executed due to a prior condition in a chain of statements.

Explanation: An SQL statement was chained to PREPARE, but the PREPARE statement has received a warning SQLCODE that requires the program or end user to either re-issue the chained statement or issue a different SQL request. This error can occur only in a client/server environment.

- A distributed client using DRDA has chained an OPEN statement to a PREPARE, but the PREPARE statement received SQLCODE +1140.

The statement cannot be executed as chained.

User response: The statement must be sent again as a separate request.

sqlcode: -30002

sqlstate: 57057

SQL30005N Execution failed because function not supported by the server: location *location* product ID *pppvrrm* reason code *reason-code(subcode)*.

Explanation: The current SQL statement failed because the SQL statement was routed to a server that does not support the requested function. The error was such that it will not preclude the successful execution of further SQL statements.

The statement cannot be executed. The SQLCA is formatted.

User response: Notify the DBA for assistance in analyzing the SQL statement that prompted this SQL code.

location identifies the name of the server that could not support the required database protocols to perform the requested function. The product identifier is in the form <pppvrrm>. It is an eight-byte field with alphanumeric characters, and identifies the product that could not support the function. *ppp* identifies the specific database product. *vv* identifies the product version. *rr* identifies the product release. *m* identifies the product modification level.

Possible values for *pppvrrm*:

ppp DSN for zOS, ARI for VM/VSE, SQL for Linux/Unix/Windows, QSQ for iSeries, and JCC for Java.

vv Version number

rr Release level

m Modification level

To correct the problem, identify the function that is not supported. To determine what function was not supported and why, refer to the *reason-code* that was specified. Here are the possible values for the *reason-code*, and the functions they correspond to:

0010 LONG_STMTS

0020 LONG255_IDS

0030 EXTENDED_DESCRIBE

0040 EXTENDED_DIAGNOSTICS

0050 KEEP_DYNAMIC

0060 MULTI_ROW_FETCH

0070 MULTI_ROW_INSERT

0080 SQL_CANCEL

0090 SCROLLABLE_CURSORS

SQL30020N

0100 CURSOR_ATTRIBUTES
0110 MONITORING
0120 SELECT_WITH_INSERT
0130 DATA_ENCRYPTION
0140 PACKAGE_PATH
0150 2PC_INCOMPATIBILITY

Lastly, you may use the *subcode* value to further identify the problem. When non-zero, the *subcode* consists of a one-byte code to indicate how the error was detected in the network:

- If '01'x, then the local DB2 that is acting as the requestor detected the error. The location and PRDID identify the server in error.
- If '02'x, then the server detected the error. The location and PRDID identify the location and level of the local DB2 server.
- If '03'x, then an intermediate server (hop site) detected the error and the error and the location and PRDID identify the server in error.
- If '04'x, then an intermediate server (hop site) detected the error and the error and the location and PRDID identify the server in error.
- If '05'x, then an intermediate server (hop site) detected the error. SYNCLOG mapping error. Unable to map the end server's IPv6 address to a IPv4 address.

sqlcode: -30005

sqlstate: 56072

SQL30020N Execution of the command or SQL statement failed because of a syntax error in the communication data stream that will affect the successful execution of subsequent commands and SQL statements: Reason Code
reason-code(subcode).

Explanation: The command or statement cannot be processed. The current transaction is rolled back and the application is disconnected from the remote database.

Some possible reason codes include:

121C

Indicates that the user is not authorized to perform the requested command.

124C

The DRDA data stream for the request contains a syntax error.

1232

The command could not be completed because of a permanent error. In most cases, the server will be in the process of an abend.

1254

A command sent from the client has resulted in an unarchitected and implementation specific condition on the remote server for which there is no architected message to return to the client.

If the remote server is DB2 UDB for OS/390,zOS then check the console log for information about this error.

If the remote server is DB2 UDB for iSeries, the job log of the server job, and/or a first failure data capture (FFDC) spooled file is usually necessary to determine the cause of the error.

If the remote server is DB2 Database for Linux, UNIX, and Windows, then check the remote database server's administration notification log for information regarding this error.

220A

The target server has received an invalid data description. If a user SQLDA is specified, ensure that the fields are initialized correctly. Also, ensure that the length does not exceed the maximum allowed length for the data type being used.

If you are using the DB2 Connect product in a gateway server environment with downlevel clients, this error may occur if your application's host variables and the queried table's column descriptions do not match.

User response:

- For reason code 121C, contact your DBA to see if you are authorized to perform requested command.
- For reason code 220A, if programming the SQLDA directly, ensure that fields are initialized correctly and the length does not exceed the maximum allowed length for the data type being used. If you are using DB2 Connect as described in Explanation, check that application host variables and table's column descriptions match.
- For reason code 124C, one common case involves executing a stored procedure. If this case applies, ensure that you have correctly defined the stored procedure parameters, with type and length matching the types of the corresponding table columns.

If you are unable to resolve the problem (or if you have received reason codes not explained in this message), refer your DBA to the following instructions:

- Search <http://www.ibm.com/software/data/support/> for APARs which might cover the situation you are experiencing.
- Attempt to connect the remote database and rerun the application. Record the following information and contact IBM support:
 - For DB2 for z/OS Data Server, invoke the Independent Trace Facility and retry the scenario to collect the trace information. Provide the z/OS trace, the z/OS console log, the db2support output from the DB2 Connect server, and the db2support output from the IBM Data Server Client located with the application (if not coresident with the DB2 Connect Server).
 - For DB2 for iSeries Data Server, collect any FFDC data generated by the failing DRDA server job, the db2support output from the DB2 Connect Server, and the db2support output from the IBM Data Server Client located with the application (if not coresident with the DB2 Connect Server).
 - Problem description
 - SQLCODE and reason code
 - SQLCA contents, if possible
 - IBM Data Server Client and DB2 Connect Server trace file if possible.

sqlcode: -30020

sqlstate: 58009

SQL30021N Execution failed because of a **Distributed Protocol Error that will affect the successful execution of subsequent commands and SQL statements: Manager *manager* at Level *level* not supported.**

Explanation: A system error occurred that prevented successful connection of the application to the remote database. This message (SQLCODE) is produced for SQL CONNECT statement. *manager* and *level* are numeric values that identify the incompatibility between the client and the server.

The command cannot be processed.

User response: Record the message number, the *manager*, and *level* values. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database again.

If the problem persists, invoke the Independent Trace Facility at the operating system command prompt. Then, contact your service representative with the following information:

- Problem description
- SQLCODE and reason code
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30021

sqlstate: 58010

SQL30040N Execution failed because of unavailable resources that will not affect the successful execution of subsequent commands and SQL statements: Reason *reason*, Type of Resource *resource-type*, Resource Name *resource-name*, Product ID *product-ID*.

Explanation: The application cannot process the command or SQL statement because the specified resource has run out. The current transaction is not rolled back and the application remains connected to the remote database.

The command cannot be processed.

User response: Increase the size of the specified resource and resubmit the command.

sqlcode: -30040

sqlstate: 57012

SQL30041N Execution failed because of unavailable resources that will affect the successful execution of subsequent commands and SQL statements: Reason *reason*, Type of Resource *resource-type*, Resource Name *resource-name*, Product ID *product-ID*.

Explanation: The application cannot process the command or SQL statement because resources are not available at the remote database. This SQLCODE is produced at statement compilation or processing time.

Federated system users: this situation can also be detected by the data source.

If the *resource-name* is "Encrypt" or "Decrypt", the user exits for password encryption or decryption are unavailable or had an error.

The command or statement cannot be processed.

User response: Investigate the remote database system environment.

Federated system users:

- If the password encryption or decryption user exit failed, *reason* is the integer value that the federated server received when invoking the user exit. Ensure that no errors occurred when the encryption and decryption user exits were link-edited with the federated server.

If using a user-supplied user exit, check the user exit source code to determine why the *reason* was returned. If the error is found in the user exit source code, fix the error, link-edit the object code with the federated server, and reissue the failing command or statement.

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- For all other cases, isolate the problem to the data source failing the request, correct the problem at the data source, and reissue the failing command or statement.

sqlcode: -30041

sqlstate: 57013

SQL30050N *number* command or SQL statement invalid while bind is in progress.

Explanation: An application attempted to issue a command or SQL statement that is not valid while a precompile/bind operation is in progress. <number> is a numeric value that identifies the erroneous command or SQL statement.

The command or statement is not processed.

User response: If the application is not the database manager precompiler/binder, verify that bind is not active before issuing the command or SQL statement.

If the application is the database manager precompiler/binder, record the message number (SQLCODE) and the <number> value. Record all error information from the SQLCA, if possible. Attempt to perform the bind operation again.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the operating system command prompt.

Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE and reason code
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30050

sqlstate: 58011

SQL30051N Bind process with specified package name and consistency token not active.

Explanation: An attempt has been made to issue a precompile/bind operation when precompile/bind is not active or an attempt was made to use an invalid package name and/or consistency token during an active precompile/bind operation.

The command or statement cannot be processed.

User response: If the application is not the database manager precompiler/binder, verify that precompile/bind is active before issuing the bind operation and that correct information is being passed on the bind operation.

If the application is the database manager precompiler/binder, record the message number (SQLCODE) and all error information from the SQLCA, if possible. Attempt to perform the operation again.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the operating system command prompt.

Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE and reason code
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30051

sqlstate: 58012

SQL30052N Program preparation assumptions are incorrect.

Explanation: The SQL statement being compiled is not recognized by the precompiler and cannot be processed by the database.

The statement cannot be processed.

User response: Ensure that the statement is correct and attempt to perform the operation again. If the problem continues, remove the statement from the program.

sqlcode: -30052

sqlstate: 42932

SQL30053N The value for OWNER failed the authorization check at the remote database.

Explanation: The value specified for the OWNER option on the precompile/bind failed the authorization check at the remote database. This SQLCODE is produced during precompile/bind. It is not produced by the database manager precompiler/binder.

The precompile/bind operation cannot be processed.

User response: Ensure that you are authorized to use the ID specified for the OWNER option, or do not use the OWNER option.

sqlcode: -30053

sqlstate: 42506

SQL30060N *authorization-ID* **does not have the privilege to perform operation** *operation*.

Explanation: Authorization ID <authorization-ID> attempted to perform the specified <operation> without having been granted the proper authorization to do so. This SQLCODE is produced at statement compilation or processing time.

The statement cannot be processed.

User response: Ensure that the <authorization-ID> has been granted the authorization necessary to perform the desired operation.

sqlcode: -30060

sqlstate: 08004

SQL30061N **The database alias or database name name was not found at the remote node.**

Explanation: The database name is not an existing database at the remote database node.

The statement cannot be processed.

User response: Resubmit the command with the correct database name or alias.

Federated system users: check to ensure that the entry in SYSCAT.SERVERS correctly specifies the database name of the data source.

sqlcode: -30061

sqlstate: 08004

SQL30070N *command-identifier* **Command is not supported.**

Explanation: The remote database received a command that it does not recognize. The current environment command or SQL statement cannot be processed successfully, nor can any subsequent commands or SQL statements.

The current transaction is rolled back and the application is disconnected from the remote database. The statement cannot be processed.

User response: Record the message number (SQLCODE) and the command identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the operating system command prompt.

Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE and command identifier

- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30070

sqlstate: 58014

SQL30071N *object-identifier* **Object is not supported.**

Explanation: The remote database received data it does not recognize. The current environment command or SQL statement cannot be processed successfully, nor can any subsequent commands or SQL statements.

The current transaction is rolled back and the application is disconnected from the remote database. The command cannot be processed.

User response: Record the message number (SQLCODE) and the object identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application.

If sufficient memory resources exist and the problem continues,

If trace was active, invoke the Independent Trace Facility at the operating system command prompt.

Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE and object identifier
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30071

sqlstate: 58015

SQL30072N *parameter-identifier* **Parameter is not supported.**

Explanation: The remote database received data it does not recognize. The current environment command or SQL statement cannot be processed successfully, nor can any subsequent commands or SQL statements.

The command cannot be processed.. The current transaction is rolled back and the application is disconnected from the remote database.

User response: Record the message number (SQLCODE) and the parameter identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the

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operating system command prompt.

Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE and parameter identifier
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30072

sqlstate: 58016

SQL30073N *parameter-identifier* **Parameter value value is not supported.**

Explanation: The remote database received data it does not recognize. The current environment command or SQL statement cannot be processed successfully, nor can any subsequent commands or SQL statements.

The current transaction is rolled back and the application is disconnected from the remote database. The command cannot be processed.

User response: Record the message number (SQLCODE) and the parameter identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application.

If sufficient memory resources exist and the problem continues,

If trace was active, invoke the Independent Trace Facility at the operating system command prompt. Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE, parameter identifier, and value
- SQLCA contents if possible
- Trace file if possible.

Some possible parameter identifiers include:

002F The target server does not support the data type requested by the application requester. For example, when DB2 Connect is used to connect to DB2 2.3, this error will be returned unless the proper PTF is applied to DB2 2.3. Ensure that the level of the server is supported by the requester.

119C, 119D, 119E

The target server does not support the CCSID requested by the application requester. Ensure the CCSID used by the requester is supported by the server.

- 119C - Verify the single-byte CCSID.
- 119D - Verify the double-byte CCSID.
- 119E - Verify the mixed-byte CCSID.

sqlcode: -30073

sqlstate: 58017

SQL30074N *reply-identifier* **Reply is not supported.**

Explanation: The client received a reply it does not recognize. The current environment command or SQL statement cannot be processed successfully, nor can any subsequent commands or SQL statements.

The current transaction is rolled back and the application is disconnected from the remote database. The statement cannot be processed.

User response: Record the message number (SQLCODE) and the reply identifier. Record all error information from the SQLCA, if possible. Attempt to connect to the remote database and rerun the application.

If sufficient memory resources exist and the problem continues, invoke the Independent Trace Facility at the operating system command prompt.

Contact your technical service representative with the following information:

Required information:

- Problem description
- SQLCODE and reply identifier
- SQLCA contents if possible
- Trace file if possible.

sqlcode: -30074

sqlstate: 58018

SQL30080N **A communication error** *reason-code* **occurred sending or receiving data from the remote database.**

Explanation: The *reason-code* contains the original error codes reported by Communications Manager.

For APPC error codes, the format is *pppp-sssssss-dddddddd* where *pppp* is the primary return code, *sssssss* is the secondary return code and *dddddddd* is the sense data. Each of these error code values is represented in hexadecimal notation. Possible primary and secondary error codes include 0003-00000004 and 0003-00000005, which indicate that a conversation with the Database Server could not be allocated. Sense data will only be displayed for an APPC ALLOCATE error.

The command cannot be processed. The connection attempted to the database is unsuccessful or the current transaction to the connected database is rolled back and

the application is disconnected from the remote database.

Refer to the document *IBM Communications Manager 1.0 APPC Programming Guide and Reference (SC31-6160)* for explanation of the APPC primary and secondary return codes. For details of APPC sense data, refer to the *IBM Communications Manager 1.0 Problem Determination Guide (SC31-6156)*.

User response: Ensure that both the database manager and Communications Manager are started at the Database Server and that all Communications Manager configuration parameters are correct.

Note: If the reason code embedded in your message is 0003-084C0001 one possible cause for this message is that you are trying to make a remote connection to a workstation that is not a server. Verify that the remote workstation is a server. If it is not a server, install the database manager as a server.

sqlcode: -30080

sqlstate: 08001

SQL30081N A communication error has been detected. Communication protocol being used: *protocol*. Communication API being used: *interface*. Location where the error was detected: *location*. Communication function detecting the error: *function*. Protocol specific error code(s): *rc1*, *rc2*, *rc3*.

Explanation: An error has been detected by the communication subsystem.

The following is a description of the token values:

protocol, *location*

Communication protocol used and information that uniquely identifies the node that detected the error. If the location information is not available at the time that the error occurred, then the *location* token is not filled in. Valid token values are:

- protocol TCP/IP; location is the IPv4 or IPv6 address.
- protocol APPC; location is the fully qualified LU name (networkID.LUname).
- protocol MQ; location is the MQ queue name.
- protocol SOAP, SSL, SOCKS, HTTP; location is the Internet address in dot notation.

interface

The application programming interface used to invoke the protocol services in the previous list item. Valid token values are: SOCKETS, SOCKS, CPI-C, MQI-CLIENT, GSKit, HTTP.

function

The name of the communication subsystem function that returned the error code or codes.

If *protocol* is TCP/IP:

- Reason codes *rc1*, *rc2*, *rc3* represent:
 - If present, *rc1* contains the errno returned by the TCP/IP function. On Windows, this is a WSA errno.
 - If present, *rc2* contains the h_errno value returned by a TCP/IP name resolution function. On Windows, this is a WSA error number.
 - If *rc3* is present and contains "0", the remote side has terminated the connection. If the error was received on the client, then the remote side could be a server or gateway. If the error was received on the gateway, the remote side could be the client or server.
- If *protocol* = TCP/IP, *rc1*=*, *rc2*=*, and *rc3*=0, possible causes include:
 - The database agent at the server was forced off by the system administrator.
 - A database agent could not be started at the server because a memory limitation was reached on the system.
 - The connection might have been closed by the remote server at the TCP/IP level.
 - The database agent at the server was terminated due to an abnormal termination of a key database manager process.
- On Windows, if *protocol* = TCP/IP, *function* = WSASStartup, and *rc1* = 0, then *rc2* contains the Windows Sockets Specification version level requested by DB2, and *rc3* contains the Windows Sockets Specification version level supported by the Windows Sockets DLL. Cause: There was a version level mismatch.
- If *protocol* = TCP/IP, *function* = connect, *rc1* = ECONNREFUSED/WSAECONNREFUSED, AIX (79), Windows (10061), linux (111), SUN (146), HP (239), the attempt to connect was rejected. Possible causes:
 - The remote database server has not been cataloged correctly at the client. In a client-gateway-server scenario, ensure the host entries are cataloged correctly on the gateway.
 - The database manager configuration file at the server has not been configured properly with the proper communication parameters. Check that the SVCENAME database manager configuration parameter has been configured properly with the TCP/IP service name or port number and that the port number is unique. If database manager configuration parameters have been updated at the server, the database manager must be stopped and re-started for the changes to take effect. There might be a mismatch between the TCP/IP service name or port number specified on the server and

on the client. Ensure the service name maps to the correct port number by checking the services file. You can check this by reading the services file or checking the output from running the command "netstat -a".

- A firewall at the remote database server has prevented the connection from being established. Verify that the firewall is properly configured to accept connection requests from the client.
 - The DB2COMM environment variable at the server does not specify the communication protocol used by the client. Check that TCPIP has been specified. Issue db2set to see what has already been set. Run the command "db2set DB2COMM=TCPIP" to set the value.
 - The database manager at the server has not been started, or has not been started successfully, or has gone down. The server should have returned SQL1063N, and not SQL5043N. If you set the database manager configuration parameter DIAGLEVEL to 4 using the command "db2 update dbm cfg using diaglevel 4" prior to issuing the "db2start" command, then the administration notification log will provide detailed information on which protocols were started successfully. Check the administration notification log.
 - The server might be too busy to handle the volume of incoming connections at this time.
 - Network failure, contact your network administrator. You can try a test using the protocol tester, pctt, to verify this is not a DB2 problem.
 - If *protocol = TCP/IP, function = connect, rc1 = ETIMEDOUT/WSAETIMEDOUT*, AIX (78), Windows (10060), linux (110), SUN (145), HP (238), attempt to connect timed out before a connection was made. Possible causes:
 - An incorrect host name or IP address was cataloged in the hostname field of the node directory on the client and/or gateway.
 - The network is slow, or the server might be too busy to respond to the connect request within a reasonable amount of time, you might need to adjust your system TCP connect timeout value and/or the DB2TCP_CLIENT_CONTIMEOUT value.
 - If *protocol = TCP/IP, function = recv, rc1 = ECONNRESET/WSAECONNRESET*, AIX (73), Windows (10054), linux (104), SUN (131), HP (232), the connection was reset by the remote side executing a "hard" or "abortive" close. Possible causes:
 - The connection might have been closed by the remote gateway or server at the TCP/IP level (eg. firewall problem, power failure, network failure).
 - Client side connection pooling is enabled and is not handling connection failures. Code the application to retry a connection if a failure is received when connecting to the database and connection pooling is enabled.
 - Might have been caused by a thread timeout on the host machine. Check the system log on the host for the presence of the IDTHTOIN message. Adjust the setting if applicable. If this cannot be adjusted, either disable connection pooling on the gateway, or ensure all objects are properly closed (eg. cursors with hold when the application completes its operation).
 - The database agent at the server was forced off by the database administrator.
 - The database agent at the server was terminated due to an abnormal termination of a key database manager process.
 - If *protocol = TCP/IP, function = recv, rc1 = ETIMEDOUT/WSAETIMEDOUT*, AIX (78), Windows (10060), linux (110), SUN (145), HP (238), the connection was dropped because the remote system failed to respond. Possible causes:
 - SQLCancel() was called from a CLI application because the application set the Query Timeout value or there was an explicit cancel request. Adjust the Query Timeout value set by the application. If this is not possible, adjust the QueryTimeoutInterval setting in the db2cli.ini file. Use QueryTimeoutInterval=0 (no timeout) in the db2cli.ini file to test whether QueryTimeout is the cause of your application's failure. The failure of an existing connection is expected in this scenario.
 - The network is slow, or the server might be too busy to respond to the recv request within a reasonable amount of time, you might need to adjust your system TCP recv timeout value.
 - If *protocol = TCP/IP, function = selectForConnectTimeout, rc1 = EINPROGRESS/0*, AIX (55), Windows (0), linux (115), SUN (150), HP (245), the connect request timed out before it could complete successfully. Possible causes:
 - Either the system connect timeout or the timeout value set by DB2TCP_CLIENT_CONTIMEOUT caused the timeout. Try adjusting these values.
 - If *protocol = TCP/IP, function = selectForRecvTimeout, rc1 is irrelevant*, the recv request timed out before it could complete successfully. Possible causes:
 - Either the system recv timeout or the timeout value set by DB2TCP_CLIENT_RCVMTIMEOUT caused the timeout. Try adjusting these values.
- The list of TCP/IP errors and causes just described is not exhaustive, search the DB2 Information Center for more information about the specific TCP/IP communication error codes, searching on phrases such as "-30081 errors".
- If *protocol* is APPC
- *rc1* contains the return code from the CPI-C function.

- If present, *rc2* contains the global errno value from the CPI-C function call.
- *rc3* is not applicable.

If *protocol* is MQ

- *rc1* contains the function completion code, 1 for a warning and 2 for an error.
- *rc2* contains the MQ-specific error code.
- *rc3* is not used for MQ.

If *protocol* is SOAP, *rc1* contains the return code from the SOAP communication function.

If *protocol* is SSL, *rc1* contains the return code from the Secure Sockets Layer (GSKit).

If *protocol* is SOCKS

- *rc1* contains the return code from the SOCKS proxy server.
- *rc2* contains the version (4 or 5) of the protocol.
- *rc3* contains the authentication method used (SOCKS v5.)

If *protocol* is HTTP, *rc1* contains the HTTP return code from the remote HTTP server.

User response: Correct the problem indicated by the combination of reason code and token values returned.

sqlcode: -30081

sqlstate: 08001, 5UA0G, 5UA0H

SQL30082N Security processing failed with reason
reason-code (reason-string).

Explanation: An error occurred during security processing. The cause of the security error is described by the *reason-code* and corresponding *reason-string* value.

The following is a list of reason codes and corresponding reason strings:

0 (NOT SPECIFIED)

The specific security error is not specified.

1 (PASSWORD EXPIRED)

The password specified in the request has expired.

2 (PASSWORD INVALID)

The password specified in the request is not valid.

3 (PASSWORD MISSING)

The request did not include a password.

4 (PROTOCOL VIOLATION)

The request violated security protocols.

5 (USERID MISSING)

The request did not include a userid.

6 (USERID INVALID)

The userid specified in the request is not valid.

7 (USERID REVOKED)

The userid specified in the request has been revoked.

8 (GROUP INVALID)

The group specified in the request is not valid.

9 (USERID REVOKED IN GROUP)

The userid specified in the request has been revoked in the group.

10 (USERID NOT IN GROUP)

The userid specified in the request is not in the group.

11 (USERID NOT AUTHORIZED AT REMOTE LU)

The userid specified in the request is not authorized at the remote Logical Unit.

12 (USERID NOT AUTHORIZED FROM LOCAL LU)

The userid specified in the request is not authorized at the remote Logical Unit when coming from the local Logical Unit.

13 (USERID NOT AUTHORIZED TO TP)

The userid specified in the request is not authorized to access the Transaction Program.

14 (INSTALLATION EXIT FAILED)

The installation exit failed.

15 (PROCESSING FAILURE)

Security processing at the server failed.

16 (NEW PASSWORD INVALID)

the password specified on a change password request did not meet the server's requirements.

17 (UNSUPPORTED FUNCTION)

the security mechanism specified by the client is invalid for this server. Some typical examples:

- The client sent a new password value to a server that does not support the change password function.
- The client sent SERVER_ENCRYPT authentication information to a server that does not support password encryption. Authentication type catalog information must be the same at the server and the client.

- The client sent a userid (but no password) to a server that does not support authentication by userid only.
- The client has not specified an authentication type, and the server has not responded with a supported type. This might include the server returning multiple types from which the client is unable to choose.
- The CLIENT AUTHENTICATION type is not supported by "IBM Data Server Driver for ODBC and CLI" and "IBM Data Server Driver package"

18 (NAMED PIPE ACCESS DENIED)

The named pipe is inaccessible due to a security violation.

19 (USERID DISABLED or RESTRICTED)

The userid has been disabled, or the userid has been restricted from accessing the operating environment at this time.

20 (MUTUAL AUTHENTICATION FAILED)

The server being contacted failed to pass a mutual authentication check. The server is either an imposter, or the ticket sent back was damaged.

21 (RESOURCE TEMPORARILY UNAVAILABLE)

Security processing at the server was terminated because a resource was temporarily unavailable. For example, on AIX, no user licenses may have been available.

24 (USERNAME AND/OR PASSWORD INVALID)

The username specified, password specified, or both, are invalid. Some specific causes are:

1. If you have recently changed permissions on DB2 critical files such as db2ckpw or moved to a new Fixpak, the db2iupdt command which updates the instance might not have been run.
2. The username being used might be in an invalid format. For example, on UNIX and Linux platforms, usernames must be all be lowercase.
3. An error might have been made in specifying the catalog information. For example, the correct authentication type might not have been specified or, if applicable, the remote server might not have been cataloged on the local system. For more information on authentication, search the DB2 Information Center (<http://publib.boulder.ibm.com/infocenter/db2luw/v9>) using terms such as "authentication".

25 (CONNECTION DISALLOWED)

The security plugin has disallowed the connection.

26 (UNEXPECTED SERVER ERROR)

The server security plugin encountered an unexpected error. The administration notification log file on the server contains more specific problem information. The following are examples of issues that can cause problems:

- The security service was not started.
- The userid starting the DB2 service did not have admin privileges.

27 (INVALID SERVER CREDENTIAL)

The server security plugin encountered an invalid server credential.

28 (EXPIRED SERVER CREDENTIAL)

The server security plugin encountered an expired server credential.

29 (INVALID CLIENT SECURITY TOKEN)

The server security plugin encountered an invalid security token sent by the client.

30 (CLIENT PLUGIN MISSING API)

The client security plugin is missing a required API.

31 (WRONG CLIENT PLUGIN TYPE)

The client security plugin is of the wrong plugin type.

32 (UNKNOWN CLIENT GSS-API PLUGIN)

The client security plugin does not have a matching GSS-API security plugin available for connection to the database.

33 (UNABLE TO LOAD CLIENT PLUGIN)

The client security plugin cannot be loaded.

34 (INVALID CLIENT PLUGIN NAME)

The client security plugin name is invalid.

35 (INCOMPATIBLE CLIENT PLUGIN API VERSION)

The client security plugin reports an API version that is incompatible with DB2.

36 (UNEXPECTED CLIENT ERROR)

The client security plugin encountered an unexpected error.

37 (INVALID SERVER PRINCIPAL NAME)

The server security plugin encountered an invalid principal name.

38 (INVALID CLIENT CREDENTIAL)

The client security plugin encountered an invalid client credential.	
39 (EXPIRED CLIENT CREDENTIAL)	
The client security plugin encountered an expired client credential.	
40 (INVALID SERVER SECURITY TOKEN)	
The client security plugin encountered an invalid security token sent by the server.	
41 (SWITCH USER INVALID)	
The client is configured to request a trusted connection and switch user in the trusted connection. A trusted connection was not established and so the switch user request is invalid.	
42 (ROOT CAPABILITY REQUIRED)	
Authentication using local client or server passwords is not currently enabled.	
43 (NON-DB2 QUERY MANAGER PRODUCT DISALLOWED CONNECTION)	
A non-DB2 query manager product has disallowed the connection.	
User response: Ensure that the proper userid and/or password is supplied.	
The userid may be disabled, the userid may be restricted to accessing specific workstations, or the userid may be restricted to certain hours of operation.	
17	
Retry the command with a supported authentication type. Ensure that catalog information specifies the correct authentication type. For more information on authentication, search the DB2 Information Center (http://publib.boulder.ibm.com/infocenter/db2luw/v9) using terms such as "authentication".	
20	
Make sure the authentication mechanism for the server is started, and retry.	
24	
Solutions to specific problem causes described previously in this message are: 1. Run DB2IUPDT <InstName> to update the instance. 2. Ensure that the username created is valid. Review the DB2 General Naming Rules. 3. Ensure that catalog information is correct.	
25	
	Change the database name used for the connection or the TCP/IP address used to connect to this database.
	26
	Fix the problem identified by the plugin error message text in the administration notification log. For more information on using security plugins, examples of security plugins, and additional troubleshooting information search the DB2 Information Center (http://publib.boulder.ibm.com/infocenter/db2luw/v9) using phrases such as "security plugins". If you are unable to correct the problem, invoke the Independent Trace Facility and retry the scenario to collect information for IBM support.
	27
	Verify that the server credential is provided during security plugin initialization and that it is in a format recognized by the security plugin. As the credential will be used to accept contexts, it must be an ACCEPT or BOTH credential.
	28
	Contact your DBA. The server's credential must be renewed before the command is resubmitted. If renewing alters the credential handle, then a db2stop and db2start will be necessary. For information on how to renew your server's credential, consult the documentation available for the authentication mechanism used by the security plugin.
	29
	Resubmit the statement. If the problem still exists, then verify that the client security plugin is generating a valid security token.
	30
	Check the administration notification log file for the name of the required missing API. Add the missing API to the security plugin.
	31
	Specify the right type of security plugin in the appropriate database manager configuration parameter. For example, do not specify a userid-password based security plugin for the SRVCON_GSSPLUGIN_LIST database manager configuration parameter.
	32
	Install the matching security plugin that the database server used on the client. Ensure that the indicated security plugin is located in the client-plugin directory.

33	Check the administration notification log file on the client for more information. Fix the problem identified by the error message text in the administration notification log.		administrator must run the db2rfe script. Alternatively, authentication can be done using a security plugin.
34	Specify a valid security plugin name. The name should not contain any directory path information.	43	If additional explanation is required, contact your administrator for the query manager product.
35	Ensure that the security plugin is using a supported version of the APIs and that it is reporting a correct version number. For more information about supported versions, see the DB2 information center (http://publib.boulder.ibm.com/infocenter/db2luw/v9) and search for "Security plug-in API versioning".		sqlcode: -30082 sqlstate: 08001
36	Check the administration notification log file on the client for more information. Fix the problem identified by the error message text in the administration notification log.		<hr/> SQL30083N Attempt to change password for user id uid failed with security reason reason-code (reason-string). Explanation: The attempt to change password was rejected due to invalid or incorrect security information. The cause of the security error is described by the <i>reason-code</i> and corresponding <i>reason-string</i> values. The following is a list of reason codes and corresponding reason strings:
37	Check the administration notification log file for the principal name. Make sure the principal name is in a format that is recognized by the security plugin.		0 (NOT SPECIFIED) The specific security error is not specified.
38	Verify that the client credential (generated by db2secGenerateInitialCred or provided as an inbound delegated credential) is in a format recognized by the security plugin. As the credential will be used to initiate contexts, it must be an INITIATE or BOTH credential.		1 (CURRENT PASSWORD INVALID) The old password specified in the request is not valid.
39	The user issuing the statement must obtain the appropriate credentials (or re-obtain their initial credentials) and then resubmit the statement.		2 (NEW PASSWORD INVALID) The password specified in the request is not valid under the password rules imposed by the system where password was to be changed.
40	Resubmit the statement. If the problem still exists, then verify that the server security plugin is generating a valid security token.		3 (CURRENT PASSWORD MISSING) The request did not include an old password.
41	Re-establish a trusted connection with valid credentials and re-submit a switch user request.		4 (NEW PASSWORD MISSING) The request did not include a new password.
42	To enable local client or server authentication for non-root installations, the system		5 (USERID MISSING) The request did not include a userid.
764	Message Reference Volume 2		6 (USERID INVALID) The userid specified in the request is not valid.
			7 (USERID REVOKED) The userid specified in the request has been revoked. Passwords can not be changed for revoked userids.
			14 (INSTALLATION EXIT FAILED) The installation security exit failed.
			15 (PROCESSING FAILURE) Security processing at the server failed.
			17 (UNSUPPORTED FUNCTION) Change password function is not supported by the system, or change password function is not supported at this time because of the user account restrictions.

19 (USERID DISABLED or RESTRICTED)

The userid has been disabled, or the userid has been restricted from accessing the operating environment at this time.

23 (CHGPWD_SDN in DCS entry is not configured)

To change an MVS password on a host system connected via SNA, the DCS database must be cataloged with the `,,,,,CHGPWD_SDN` parameter string. The `,,,,,CHGPWD_SDN` parameter string identifies the symbolic destination name for Password Expiration Management (PEM).

24 (USERNAME AND/OR PASSWORD INVALID)

The username specified, password specified, or both, are invalid.

User response: Ensure that the proper userid, current and new passwords are supplied.

The userid may be disabled, the userid may be restricted to accessing specific workstations, or the userid may be restricted to certain hours of operation.

Instructions for some specific reason codes follow:

14 Check the file `db2pem.log` in the instance subdirectory (typically "db2") for a detailed description of the problem encountered.

23 Catalog the DCS database using the `,,,,,CHGPWD_SDN` parameter, as specified in the *DB2 Connect User's Guide*.

sqlcode: -30083

sqlstate: 08001

SQL30090N Operation invalid for application execution environment. Reason code = *reason-code*.

Explanation: The operation is invalid for the application execution environment. For example, an operation might be invalid for applications that have special restrictions on statements or APIs - applications such as those that operate in an XA Distributed Transaction Processing environment, such as CICS; those that operate with CONNECT type 2 connection settings; or those that use federated system functionality to update multiple heterogeneous data sources. The operation was rejected.

Possible reason codes are:

01

an SQL request that changes data (such as an INSERT or a CREATE) was issued against a read-only database; or, a stored procedure was invoked against a read-only database. Read-only databases include the following types:

- Databases accessed using DRDA when operating in a unit of work which has connection setting SYNCPOINT TWOPHASE and executing in a non-XA/DTP environment when either a Synchronpoint Manager is not being used or the remote DRDA database does not support level 2 DRDA protocol.
- Databases accessed by DRDA in an XA/DTP environment when either a Synchronpoint Manager gateway is unavailable or the remote DRDA database does not support level 2 DRDA protocol.
- Databases which were not the first database updated when the SYNCPOINT ONEPHASE connection setting is in effect for the unit of work.

02

an API such as Precompile, Bind, or Reorganize Table which causes internal commits was issued in an application which has the setting CONNECT type 2 or is operating in an XA/DTP environment.

03

an SQL OPEN for a held cursor was issued while in an XA/DTP environment when using an ENCINA or TUXEDO transaction processing monitor.

04

a DISCONNECT statement was issued while in an XA/DTP environment.

05

A compound SQL statement which contains a COMMIT statement was issued in a CONNECT type 2 or XA/DTP environment.

06

The SET CLIENT API was issued in an XA/DTP environment.

07

A second database is being accessed within a unit of work for which two-phase commit coordination is not being supplied by the transaction manager. To ensure data integrity, the operation has been disallowed.

08

An attempt was made to access a database for use of commit coordination from a source different from a concurrently connected database. The two types of coordination cannot be mixed, and operations against the current database are rejected.

09

10	<p>An attempt was made to execute an XA/DTP local transaction against a database accessed under Synchpoint Manager coordination.</p> <p>An SQL OPEN for a held cursor was issued in either of these cases:</p> <ul style="list-style-type: none"> • XA/DTP environment, or • federated server accessing a nickname defined on a two phase commit datasource <p>Cursor hold is not supported in these environments.</p>				
11	<p>An operation is not supported for pass-through.</p>				
12	<p>The insert/update/delete operation requires the existence of a timestamp column and a unique index due to the restriction on the data source .</p> <p>For an update/delete operation accessing data sources:</p> <ul style="list-style-type: none"> • Fujitsu RDB2 requires the existence of a unique index. 		19		<p>The application host variable data type is not supported by the data source in a pass-through session.</p>
13	<p>A positioned UPDATE or DELETE operation requires the existence of a column in the SELECT list of the cursor, but that column does not exist in the SELECT list of the cursor.</p>		20		<p>SET CLIENT INFORMATION was issued while a Unit of Work is in progress.</p>
14	<p>An illegal combination of updatable cursors, cursor hold, and isolation level of Repeatable Read exists. Invalid combinations are:</p> <ul style="list-style-type: none"> • Isolation level Repeatable Read and a WITH HOLD cursor • A WITH HOLD cursor with FOR UPDATE 		21		<p>The operation that you want performed at the specified data sources is not supported by the wrapper by which DB2 accesses the data sources. Consult the documentation to find out what operations this wrapper supports.</p>
15	<p>Reserved for future use</p>		22		<p>A federated insert, update, or delete operation, or a call to federated procedure with an SQL data access indication of MODIFIES SQL DATA is invalid in a function, a data-change-table-reference, a dynamic compound statement, a trigger, and an application execution environment where a</p> <ul style="list-style-type: none"> • SAVEPOINT is in effect • scrollable cursor is used • target view contains multiple tables or nicknames
16	<p>Illegal type column and protocol column value combination in SYSCAT.SERVERS.</p>		23		<p>The API, data structure, or setting is not supported.</p>
17	<p>The REORG utility cannot be issued against a nickname.</p>		24		<p>Data type mappings are not supported by the specified wrapper.</p>
18	<p>An update request (or, a DDL operation that results in the update of a system catalog table) has been issued that would result in multiple data sources being updated when one or more</p>				

25

Function mappings are not supported by the specified wrapper.

26

In a trusted connection where SPM is used and the concentrator is enabled, the application can only switch the trusted userid after the commit/rollback has been processed.

27

Use of multiple 2-phase commit servers of the same wrapper library in the same connection where the client library restricts such usage

28

Mix of 1-phase commit server and 2-phase commit server of the same wrapper library in the same connection where the client library restricts such usage

29

An application attempted to issue a switch user request from within a stored procedure.

User response: Correct the problem by doing one of the following steps:

For reasons 01, 02, 03, 04, 06, 19, or 29,

remove the statement or API which is not supported.

Alternately, for reasons 01, 02, 03, 04, 06, or 29,

execute the application in a different environment which supports the failing statement or API.

For reason 05,

move the COMMIT request outside of the compound statement.

For reason 07,

ensure that only one database is accessed within a unit of work for which EXEC SQL COMMIT or EXEC SQL ROLLBACK will be issued in place of syncpoint requests to an external transaction manager. If multiple databases must be accessed within the unit of work, utilize the commitment control interface provided by the external transaction manager product.

For reason 08,

ensure that all databases being accessed within a unit of work are under the commitment control of the same type of request: external transaction processing monitor (such as CICS SYNCPOINT) or local COMMIT and ROLLBACK EXEC SQL.

For reason 09,

do one of the following steps:

- Execute the transaction as an XA/DTP global transaction.
- Access the database in a non-XA/DTP environment.
- Do not use the services of the Synchpoint Manager for the database connection if the transaction is read-only.

For reasons 10 through 17 (federated server users),

isolate the problem to the data source failing the request and examine the restrictions for that data source.

For reason 18,

do one of the following steps:

- Submit a COMMIT or ROLLBACK before issuing an update to a different data source.
- If multiple data sources need to be updated within a unit of work, make sure the db2_two_phase_commit server option has been set to 'Y' for all the data sources that need to be updated.
- If the data source to be updated supports only one-phase commit and the application is operating with a CONNECT type 2 connection setting, change the application to operate with a CONNECT type 1 connection setting.

For reason 20,

submit a Commit or Rollback before invoking the API.

For reason 22,

Either remove the federated insert, update or delete operation, or the call to the federated procedure with an SQL data access indication of MODIFIES SQL DATA or:

- execute the federated insert, update, or delete operation outside of the function, the data-chagne-table-reference, they dynamic compound statement or trigger
- execute the call to the federated procedure with an SQL data access indication of MODIFIES SQL DATA outside of the function, the dynamic compound statement or trigger
- release the savepoint that is in effect
- remove the use of the scrollable cursor
- redefine the target view to refer to only one table or nickname
- execute the federated insert, update, or delete operation outside of the trigger.

For reason 23,

Refer to the DB2 Information Center for a list of supported APIs, data structures, and settings.

For reason 24,

If the failing statement was CREATE TYPE MAPPING, do not resubmit the statement. If the failing statement was CREATE SERVER, examine the federation catalog for type mappings for the server type and drop these mappings. In either case, consult the data source documentation for information about types and type mappings supported by the data source.

For reason code 25,

If the failing statement was CREATE FUNCTIONMAPPING, do not resubmit the statement. If the failing statement was CREATE SERVER, examine the federation catalog for function mappings for the server type and drop these mappings. In either case, consult the data source documentation for information about functions and function mappings supported by the data source.

For reason code 26,

Ensure that the trusted userid is not switched during a transaction.

For reason code 27,

An application cannot access multiple 2-phase commit servers of this data source in the same connection. Execute the application in a different environment.

For reason code 28,

An application cannot access 1-phase commit server while a connection to 2-phase commit server is active, or vice versa. Execute the application in a different environment.

sqlcode: -30090

sqlstate: 25000

SQL30101W Bind options specified on REBIND request are ignored.

Explanation: Bind options were specified on the REBIND request however the database server does not support respecification of any bind options. The bind options specified will be ignored and the options from the original BIND request will be used.

User response: No action is required. This is a warning situation only.

If the database server returned an additional warning SQLCA, the "sqlerrmc" tokens will indicate the

following information about this additional SQLCA in this order:

- sqlcode (SQL return code)
- sqlstate (universal SQL return code)
- sqlerrp (product name)
- sqlerrmc (SQL message tokens)

sqlcode: +30101

sqlstate: 01599

SQL30104N Error in BIND or PRECOMPILE option *option-name* with value *value-name*.

Explanation: While processing the BIND or PRECOMPILE parameters, either the BIND or PRECOMPILE option or the value is not acceptable, or the option and value pair is not appropriate.

The statement cannot be processed.

User response: Examine the command options and values to determine the error and resubmit the command.

sqlcode: -30104

sqlstate: 56095

SQL30106N Invalid input data detected for a multiple row INSERT operation.

Explanation: An error was detected with the input data for one row of a multiple row INSERT operation. No further rows will be inserted. For an atomic operation, all inserted rows are rolled back. For a non-atomic operation, rows inserted successfully before the row containing the invalid input data was encountered are not rolled back.

User response: Correct the row containing the invalid input data and submit the multiple row INSERT again for the rows that did not get inserted.

sqlcode: -30106

sqlstate: 22527

SQL30108N A connection failed but has been re-established. Special register settings might have been replayed. Host name or IP address of the new connection: *host-name*. Service name or port number of the new connection: *service-name*. Reason code: *reason-code*.

Explanation: The connection has been re-established to the host name or IP address *host-name* and service name or port number *service-name*. All session resources are set to their initial default values except for certain special registers. See the Administration Guide for details. The application is rolled back to the previous COMMIT.

Special register settings may have been returned by the original server prior to the point of failure as indicated by the following reason codes:

- 1 and 3: All special register settings up to the point of failure have been returned.
- 2 and 4: All special register settings up to the previous commit point have been returned. All such settings have been replayed on the new connection.

The connection may have been re-established within the current group or in a new group as indicated by the following reason-codes:

- 1 and 2: The connection was re-established within the current group.
- 3 and 4: The connection was re-established in a new group.

User response: The application is responsible for re-building session resources. The application must re-issue all the operations that have been rolled back.

sqlcode: -30108

sqlstate: 08506

connection. The release level of the server in the alternate group to which the last connect attempt was made is not compatible with the release level of the original server in the original group.

User response: The action corresponding to the reason code is as follows:

1

If failover is occurring within a mixed DB2 for z/OS data sharing group manually reconnect to the database. If failover is to an alternate server, verify that the alternate server is set up to handle the failover.

2

Manually reconnect to the database.

sqlcode: -30109

sqlstate: 08507

SQL30109N A connection could not be re-established because the release level of any database server within the current group of servers or within an alternate group is not compatible with the release level of the original server. **New host name or IP address:** *host-name*. **New server name or port number:** *service-name*. **Release level of the new connection:** *new-release-level*. **Release level of the original connection:** *old-release-level*. **Reason code:** *reason-code*.

Explanation: There was an attempt to re-establish the connection on a different database server from within the current group of servers or on a database server in an alternate group. The reason code indicates which of these applies.

1

A connection to the database server failed and a connection could not be re-established to an alternate server in the group as none of the available servers in the group had a release level compatible with the initial connection. The release level of the alternate server in the group to which the last connect attempt was made is not compatible with the release level of the original connection.

2

A connection to the database server failed and a connection could not be re-established to a server in an alternate group of servers as none of the available servers in the alternate group had a release level compatible with the initial

Chapter 27. SQL32500 - SQL32999

SQL32765W Warning or informational message information from non-DB2 product:
token-list.

Explanation: A software product that interacts with DB2, but is not part of DB2, is returning information about a warning or informational situation in *token-list*.

User response: Use the information in *token-list* along with any documentation available for the product that is returning the information to understand the situation being reported on.

sqlcode: +32765

sqlstate: (any SQLSTATE might be returned)

SQL32766N Error message information from non-DB2 product: *token-list.*

Explanation: A software product that interacts with DB2, but is not part of DB2, is returning information about an error situation in *token-list*.

User response: Use the information in *token-list* along with any documentation available for the product that is returning the information to determine how to handle this error situation.

sqlcode: -32766

sqlstate: (any SQLSTATE might be returned)

Part 3. SQLSTATE Messages

This section lists the SQLSTATEs and their meaning. The SQLSTATEs are grouped by class code; for subcodes, see the corresponding tables.

Table 1. SQLSTATE Class Codes

Class Code	Meaning	For subcodes, refer to...
00	Unqualified Successful Completion	Table 2 on page 774
01	Warning	Table 3 on page 774
02	No Data	Table 4 on page 779
07	Dynamic SQL Error	Table 5 on page 779
08	Connection Exception	Table 6 on page 779
09	Triggered Action Exception	Table 7 on page 780
0A	Feature Not Supported	Table 8 on page 780
0D	Invalid Target Type Specification	Table 9 on page 780
0F	Invalid Token	Table 11 on page 781
0K	Invalid RESIGNAL Statement	Table 12 on page 781
0N	SQL/XML mapping error	Table 13 on page 781
20	Case Not Found for CASE Statement	Table 15 on page 782
21	Cardinality Violation	Table 16 on page 783
22	Data Exception	Table 17 on page 783
23	Constraint Violation	Table 18 on page 785
24	Invalid Cursor State	Table 19 on page 785
25	Invalid Transaction State	Table 20 on page 786
26	Invalid SQL Statement Identifier	Table 21 on page 786
28	Invalid Authorization Specification	Table 23 on page 787
2D	Invalid Transaction Termination	Table 24 on page 787
2E	Invalid Connection Name	Table 25 on page 787
34	Invalid Cursor Name	Table 26 on page 787
36	Cursor Sensitivity Exception	Table 27 on page 787
38	External Function Exception	Table 28 on page 787
39	External Function Call Exception	Table 29 on page 789
3B	Invalid SAVEPOINT	Table 30 on page 789
40	Transaction Rollback	Table 31 on page 789
42	Syntax Error or Access Rule Violation	Table 32 on page 790
44	WITH CHECK OPTION Violation	Table 33 on page 803
45	Unhandled User-Defined Exception	Table 34 on page 804
46	Java DDL	Table 35 on page 804
51	Invalid Application State	Table 36 on page 804
53	Invalid Operand or Inconsistent Specification	Table 37 on page 805

Table 1. SQLSTATE Class Codes (continued)

Class Code	Meaning	For subcodes, refer to...
54	SQL or Product Limit Exceeded	Table 38 on page 805
55	Object Not in Prerequisite State	Table 39 on page 807
56	Miscellaneous SQL or Product Error	Table 40 on page 809
57	Resource Not Available or Operator Intervention	Table 41 on page 810
58	System Error	Table 42 on page 812
5U	Utilities	Table 43 on page 812

Class Code 00 Unqualified Successful Completion

Table 2. Class Code 00: Unqualified Successful Completion

SQLSTATE Value	Meaning
00000	Execution of the operation was successful and did not result in any type of warning or exception condition.

Class Code 01 Warning

Table 3. Class Code 01: Warning

SQLSTATE Value	Meaning
01002	A DISCONNECT error occurred.
01003	Null values were eliminated from the argument of a column function.
01004	The value of a string was truncated when assigned to another string data type with a shorter length.
01005	Insufficient number of entries in an SQLDA.
01007	A privilege was not granted.
0100C	One or more adhoc result sets were returned from the procedure.
0100D	The cursor that was closed has been re-opened on the next result set within the chain.
0100E	The procedure generated more than the maximum allowed number of result sets. Only the first integer result sets have been returned to the caller.
01503	The number of result columns is larger than the number of host variables provided.
01504	The UPDATE or DELETE statement does not include a WHERE clause.
01506	An adjustment was made to a DATE or TIMESTAMP value to correct an invalid date resulting from an arithmetic operation.
01509	Blocking was cancelled for a cursor because there is insufficient storage in the user virtual machine.
01515	The null value has been assigned to a host variable, because the non-null value of the column is not within the range of the host variable.
01516	An inapplicable WITH GRANT OPTION has been ignored.
01517	A character that could not be converted was replaced with a substitute character.

Table 3. Class Code 01: Warning (continued)

SQLSTATE Value	Meaning
01519	The null value has been assigned to a variable, because a numeric value is out of range.
01524	The result of a column function does not include the null values that were caused by evaluating an arithmetic expression.
01526	Isolation level has been escalated.
01527	A SET statement references a special register that does not exist at the AS.
01539	Connection is successful but only SBCS characters should be used.
01543	A duplicate constraint has been ignored.
01545	An unqualified column name has been interpreted as a correlated reference.
01550	The object was not created, because an object with the specified description already exists.
01560	A redundant GRANT has been ignored.
01562	The new path to the log (newlogpath) in the database configuration file is invalid.
01563	The current path to the log file (logpath) is invalid. The log file path is reset to the default.
01564	The null value has been assigned to a host variable, because division by zero occurred.
01565	The value sNaN which was encountered in the query was replaced by the value NaN before the processing of the query resumed.
01586	The statement caused one or more tables to automatically be placed in the Set Integrity Pending state.
01589	A statement contains redundant specifications.
01592	In a CREATE FUNCTION statement that references a SOURCE function, either: <ul style="list-style-type: none"> • an input parameter has a larger length, precision, or scale than that of the corresponding parameter of the source function; or • the RETURNS or CAST FROM parameter has a smaller length, precision, or scale than that of the source function; or • the CAST FROM parameter in the CREATE FUNCTION statement has a larger length, precision, or scale than that of the RETURNS parameter. Truncation may occur at run time (and may result in an error at that time).
01594	Insufficient number of entries in an SQLDA for ALL information (i.e. not enough descriptors to return the distinct name).
01595	The view has replaced an existing, invalidated view.
01596	Comparison functions were not created for a distinct type based on a long string data type.
01598	An attempt has been made to set the state of an event monitor or usage list to its current state.
01599	Bind options were ignored on REBIND.
01602	Optimization processing encountered a restriction that might have caused it to produce a sub-optimal result.
01603	CHECK DATA processing found constraint violations and moved them to exception tables.
01604	The SQL statement was explained and not executed.

Table 3. Class Code 01: Warning (continued)

SQLSTATE Value	Meaning
01605	A recursive common table expression may contain an infinite loop.
01606	The node or system database directory is empty.
01607	The difference in the times on members in a read-only transaction exceeds the defined threshold.
01608	An unsupported value has been replaced.
01609	The procedure generated more than the maximum allowed number of result sets. Only the first integer result sets have been returned to the caller.
01610	One or more ad hoc result sets were returned from the procedure.
01611	The cursor that was closed has been re-opened on the next result set within the chain.
01614	There are fewer locators than the number of result sets.
01616	The estimated CPU cost exceeds the resource limit.
01618	The database partitioning must be changed by redistributing the database partition group.
01620	Some base tables of UNION ALL may be the same table.
01621	The retrieved LOB value may have been changed.
01622	Statement completed successfully but a system error occurred after the statement completed.
01623	Value of DEGREE is ignored.
01625	The schema name appears more than once in the CURRENT PATH.
01626	The database has only one active buffer pool.
01627	The DATALINK value may not be valid because the table is in reconcile pending or reconcile is not possible state.
01632	The number of concurrent connections has exceeded the defined entitlement for the product.
01633	The materialized query table may not be used to optimize the processing of queries.
01636	Integrity of non-incremental data remains unverified by the database manager.
01637	Debugging is not enabled.
01639	The federated object may require the invoker to have necessary privileges on data source objects.
01641	Datalink type attributes limit the use of the structured type.
01642	Column not long enough for the largest possible USER default value.
01643	Assignment to an SQLSTATE or SQLCODE variable in an SQL routine may be over-written and does not activate any handler.
01645	The executable for the SQL procedure is not saved in the database catalog.
01648	COMPRESS column attribute ignored because VALUE COMPRESSION is deactivated for the table.
01649	The buffer pool operation has been completed but will not take effect until the next database restart.
01650	Index and table statistics are inconsistent.

Table 3. Class Code 01: Warning (continued)

SQLSTATE Value	Meaning
01651	The event monitor was activated successfully, however some monitoring information may be lost.
01652	The isolation clause is ignored because of the statement context.
01653	The authorizations were granted to USER. Groups were not considered because the authorization name is more than 8 bytes.
01654	The buffer pool is not started.
01655	The event monitor was created successfully but at least one event monitor target table already exists.
01657	The buffer pool operation will not take effect until the next database startup.
01665	A column name or label was truncated.
01667	The view may not be used to optimize the processing of queries.
01669	The statistics for the specified nicknames were not updated completely because of schema inconsistencies between the remote and local catalogs.
01670	No default primary table space exists for the new table.
01671	The environment of the cached statement is different than the current environment. The current environment will be used to reoptimize the specified statement.
01674	Table space attributes are not optimal for query performance.
01675	More table spaces than required were specified. The extra table spaces are ignored.
01676	Transfer operation ignored since the authorization ID is already the owner of the database object.
01677	Wrapper options were ignored for servers that already have the plugin defined.
01678	Changes to the user mapping apply only to the federated catalog table and not to the external user mapping repository.
01679	A trusted connection cannot be established for the specified authorization ID.
01682	The ability to use the trusted context was removed from some but not all authorization IDs specified in statement.
01684	The specified locale is not supported. The message was returned in the English locale.
01686	The table space is being converted from REGULAR to LARGE. Indexes on tables in this table space must be reorganized or rebuilt to support large RIDs.
01689	The SQL compilation completed without connecting to the data source.
0168A	The package body for the source procedure at the data source was not found or is invalid.
0168B	An operation was partially successful and partially unsuccessful. Use GET DIAGNOSTICS for more information.
0168C	A decimal float operation produced an inexact result.
0168D	A decimal floating point operation was invalid.
0168E	A decimal float operation produced an overflow or underflow.
0168F	A decimal float operation produced division by zero.

Table 3. Class Code 01: Warning (continued)

SQLSTATE Value	Meaning
0168H	The product is running in evaluation mode. A valid license key is not installed.
0168M	Changing the database configuration parameter DECFLT_ROUNDING may have unintended consequences.
0168O	The federated server received an unknown warning from a data source.
0168Q	The wrapper supports current data source server versions as listed. Using the wrapper with later versions might result in errors or unexpected results.
0168S	A task was not removed.
0168T	WITH ROW CHANGE COLUMNS ALWAYS DISTINCT was specified, but the database manager is unable to return distinct row change columns.
0168V	SYSTEM SAMPLING was specified for RUNSTATS but is not supported for the statistical view specified. BERNOLLI SAMPLING was done instead.
0168Y	The newly defined object is marked invalid because it references an object which is not defined, or is invalid, or the definer does not have privilege to access it.
01690	The rebalance operation did not need to move any data, or data is being moved but not all stripe sets have a container on each storage path.
01691	The storage path was not dropped but is in the drop pending state because one or more automatic storage table spaces reside on the path.
01695	Adjustment made to a value for a period as a result of a data change operation.
01696	One or more tables in the schema have different attributes than the schema itself.
01697	No text
01698	Permissions or masks of a materialized query table might require changes as a result of changes to permissions or masks of the table on which it is based.
01H51	An MQSeries Application Messaging Interface message was truncated.
01H52	Routine execution has completed, but at least one error or warning was encountered during the execution. More information is available.
01H53	The routine has encountered a warning. Refer to the SQLCODE for details.
01H54	The procedure has returned successfully but encountered an error in the format or content of a parameter. Information about the error in the parameter value is returned in an output parameter.
01H55	The procedure has returned successfully but encountered an internal processing error. Information about the internal error situation is returned in an output parameter.
01H56	The procedure has returned successfully but supports a higher version for a parameter than the one that was specified.
01H57	The procedure has returned output in an alternate locale instead of the locale specified.
01HN0	An enabled workload is associated with a disabled service class.
01HN1	A priority setting was assigned to a service class that is higher than the priority setting for the default system service class SYSDEFAULTSYSTEMCLASS and this might negatively impact performance.
01HN2	Automatic statistics collection has been disabled because section actuals collection has been enabled.

Table 3. Class Code 01: Warning (continued)

SQLSTATE Value	Meaning
01HXX	Valid warning SQLSTATEs returned by a user-defined function, external procedure CALL, or command invocation.

Class Code 02 No Data

Table 4. Class Code 02: No Data

SQLSTATE Value	Meaning
02000	One of the following exceptions occurred: <ul style="list-style-type: none"> The result of the SELECT INTO statement or the subselect of the INSERT statement was an empty table. The number of rows identified in the searched UPDATE or DELETE statement was zero. The position of the cursor referenced in the FETCH statement was after the last row of the result table.
02501	The cursor position is not valid for a FETCH of the current row.
02502	Delete or update hole detected
02506	Errors were encountered and tolerated as specified by the RETURN DATA UNTIL clause.

Class Code 07 Dynamic SQL Error

Table 5. Class Code 07: Dynamic SQL Error

SQLSTATE Value	Meaning
07001	The number of host variables is not correct for the number of parameter markers.
07002	The call parameter list or control block is invalid.
07003	The statement identified in the EXECUTE statement is a select-statement, or is not in a prepared state.
07004	The USING clause or the INTO clause is required for dynamic parameters.
07005	The statement name of the cursor identifies a prepared statement that cannot be associated with a cursor.
07006	An input host variable cannot be used, because of its data type.

Class Code 08 Connection Exception

Table 6. Class Code 08: Connection Exception

SQLSTATE Value	Meaning
08001	The connection was unable to be established to the application server or other server.
08002	The connection already exists.
08003	The connection does not exist.
08004	The application server rejected establishment of the connection.

Table 6. Class Code 08: Connection Exception (continued)

SQLSTATE Value	Meaning
08007	Transaction resolution unknown.
08502	The CONNECT statement issued by an application process running with a SYNCPOINT of TWOPHASE has failed, because no transaction manager is available.
08504	An error was encountered while processing the specified path rename configuration file.
08505	Initialization of the continuous availability environment failed.
08506	A connection failed but has been re-established.
08507	A connection to the server failed to be re-established because of mismatched release levels.
08508	The remote host was not found.

Class Code 09 Triggered Action Exception

Table 7. Class Code 09: Triggered Action Exception

SQLSTATE Value	Meaning
09000	A triggered SQL statement failed.

Class Code 0A Feature Not Supported

Table 8. Class Code 0A: Feature Not Supported

SQLSTATE Value	Meaning
0A001	The CONNECT statement is invalid, because the process is not in the connectable state.
0A502	The action or operation is not enabled for this database instance.
0A503	Federated insert, update, or delete operation cannot be compiled because of potential data inconsistency.

Class Code 0D Invalid Target Type Specification

Table 9. Class Code 0D: Invalid Target Type Specification

SQLSTATE Value	Meaning
0D000	The target structured data type specification is a proper subtype of the source structured data type.

Class Code 0E Invalid Target Type Specification

Table 10. Class Code 0E: Invalid Schema Name List Specification

SQLSTATE Value	Meaning
0E000	The path name list is not valid.

Class Code 0F Invalid Token

Table 11. Class Code 0F: Invalid Token

SQLSTATE Value	Meaning
0F001	The LOB token variable does not currently represent any value.

Class Code 0K Invalid RESIGNAL statement

Table 12. Class Code 0K: Invalid RESIGNAL statement

SQLSTATE Value	Meaning
0K000	RESIGNAL statement is not within a handler.

Class Code 0N SQL/XML mapping error

Table 13. Class Code 0N: SQL/XML mapping error

SQLSTATE Value	Meaning
0N002	A character cannot be mapped to a valid XML character.

Class Code 10 XQuery error

Table 14. Class Code 10: XQuery error

SQLSTATE Value	Meaning
10000	XQuery error.
10501	An XQuery expression is missing the assignment of a static or dynamic context component.
10502	An error was encountered in the prolog of an XQuery expression.
10503	A duplicate name was defined in an XQuery or XPath expression.
10504	An XQuery namespace declaration specified an invalid URI.
10505	A character, token or clause is missing or invalid in an XQuery expression.
10506	An XQuery expression references a name that is not defined.
10507	A type error was encountered processing an XPath or XQuery expression.
10508	An XQuery expression includes an invalid name expression or content expression.
10509	An unsupported XQuery language feature is specified.
10510	A string literal is not specified as the operand of a cast expression or as the argument of a constructor function.
10601	An arithmetic error was encountered processing an XQuery function or operator.
10602	A casting error was encountered processing an XQuery function or operator.
10603	A character handling error was encountered processing an XQuery function or operator.
10604	A document context was not provided for processing an XQuery function.
10605	A datetime error was encountered processing an XQuery function or operator.

Table 14. Class Code 10: XQuery error (continued)

SQLSTATE Value	Meaning
10606	There is no context item for processing an XQuery function or operator.
10607	A namespace error was encountered processing an XQuery function or operator.
10608	An error was encountered in the argument of an XQuery function or operator.
10609	A regular expression error was encountered processing an XQuery function or operator.
10610	A type error was encountered processing an XQuery function or operator.
10611	An unidentified error was encountered processing an XQuery function or operator.
10701	An XQuery updating expression is used outside of the modify clause of a transform expression.
10702	An XQuery expression in the modify clause of a transform expression is not an updating expression or empty sequence expression.
10703	The target node of an XQuery basic updating expression is not valid.
10704	An XQuery transform expression includes incompatible basic updating expressions.
10705	An XQuery transform expression includes an assigned value in the copy clause that is not a single XML node.
10706	The replacement sequence of an XQuery replace expression contains invalid nodes.
10707	The result of an XQuery transform expression is not a valid instance of the XQuery and XPath data model.
10708	An XQuery updating expression introduces a new namespace binding that conflicts with another updating expression or the in-scope namespaces of an element node.
10709	A rename of a processing instruction node specified a QName with a prefix that is not empty.
10901	The length of a QName in an XQuery expression exceeds a product limit.
10902	An XQuery atomic value exceeds the length limit for a DB2 XQuery operator or function.
10903	An internal limit has been exceeded for the number of matched XQuery nodes.

Class Code 20 Case Not Found for Case Statement

Table 15. Class Code 20: Case Not Found for Case Statement

SQLSTATE Value	Meaning
20000	The case was not found for the CASE statement.

Class Code 21 Cardinality Violation

Table 16. Class Code 21: Cardinality Violation

SQLSTATE Value	Meaning
21000	The result of a SELECT INTO is a result table of more than one row, or the result of the subquery of a basic predicate is more than one value.
21501	A multiple-row INSERT into a self-referencing table is invalid.
21502	A multiple-row UPDATE of a primary key is invalid.
21504	A multiple-row DELETE from a self-referencing table with a delete rule of RESTRICT or SET NULL is invalid.
21505	A row function must return not more than one row.
21506	The same row of a table cannot be the target for more than one of an update, delete or insert operation.
21507	The result of the SQL statement specified for the administrative task results in more than one row or the wrong number of columns.

Class Code 22 Data Exception

Table 17. Class Code 22: Data Exception

SQLSTATE Value	Meaning
22001	Character data, right truncation occurred; for example, an update or insert value is a string that is too long for the column, or a datetime value cannot be assigned to a host variable, because it is too small.
22002	A null value, or the absence of an indicator parameter was detected; for example, the null value cannot be assigned to a host variable, because no indicator variable is specified.
22003	A numeric value is out of range.
22004	A null value cannot be returned either from a procedure defined as PARAMETER STYLE GENERAL, or from a type-preserving method invoked with a non-null argument.
22007	An invalid datetime format was detected; that is, an invalid string representation or value was specified.
22008	Datetime field overflow occurred; for example, an arithmetic operation on a date or timestamp has a result that is not within the valid range of dates.
2200G	The most specific type does not match.
2200L	An XML value is not a well-formed document with a single root element.
2200M	A value failed to parse as a well-formed XML document or validate according to the XML schema.
2200S	The XML comment is not valid.
2200T	The XML processing instruction is not valid.
2200W	An XML value contained data that could not be serialized.
22011	A substring error occurred; for example, an argument of SUBSTR is out of range.
22012	Division by zero is invalid.
22018	The character value for a CAST specification or cast scalar function is invalid.
22019	The LIKE predicate has an invalid escape character.

Table 17. Class Code 22: Data Exception (continued)

SQLSTATE Value	Meaning
2201W	The row count in the FETCH FIRST clause or LIMIT clause is invalid.
2201X	The row count in the result OFFSET clause is invalid.
22021	A character is not in the coded character set.
22024	A NUL-terminated input host variable or parameter did not contain a NUL.
22025	The LIKE predicate string pattern contains an invalid occurrence of an escape character.
2202D	Null instance used with a mutator method.
2202E	Array element error.
2202F	Array data, right truncation.
2202H	The sample size in the TABLESAMPLE clause is invalid.
22501	The length control field of a variable length string is negative or greater than the maximum.
22504	A mixed data value is invalid.
22506	A reference to a datetime special register is invalid, because the TOD clock is malfunctioning or the operating system timezone parameter is out of range.
22522	A CCSID value is not valid at all, not valid for the data type or subtype, or not valid for the encoding scheme.
22524	Character conversion resulted in truncation.
22525	Data partitioning key value is not valid.
22526	A key transform function generated no rows or duplicate rows.
22527	Invalid input data detected for a multiple-row insert.
22531	The argument of a built-in or system provided routine resulted in an error.
22532	An XSROBJECT is not found in the XML schema repository.
22533	A unique XSROBJECT could not be found in the XML schema repository.
22534	An XML schema document is not connected to the other XML schema documents using an include or redefine.
22535	The XML schema does not declare the specified global element.
22536	The XML value does not contain the required root element.
22538	The XML schema update is not compatible with the existing XML schema.
22541	The binary XML value contains unrecognized data.
225D1	The specified XML schema is not enabled for decomposition.
225D2	An SQL Error occurred during decomposition of an XML document.
225D3	Decomposition of XML document encountered a value that is not valid for the XML schema type.
225D4	Decomposition of XML document encountered a value that is not valid for the target SQL type.
225D5	Decomposition of XML document encountered an XML node that is unknown or not valid in context.
225D6	The specified XML schema requires migration to current version to support decomposition.
225D7	Decomposition of XML document encountered root element that is not a global element of complexType in the XML schema.

Table 17. Class Code 22: Data Exception (continued)

SQLSTATE Value	Meaning
225DE	An XML schema cannot be enabled for decomposition.
225X0	The XSLT processor returned an error.

Class Code 23 Constraint Violation

Table 18. Class Code 23: Constraint Violation

SQLSTATE Value	Meaning
23001	The update or delete of a parent key is prevented by a RESTRICT update or delete rule.
23502	An insert or update value is null, but the column cannot contain null values.
23503	The insert or update value of a foreign key is invalid.
23504	The update or delete of a parent key is prevented by a NO ACTION update or delete rule.
23505	A violation of the constraint imposed by a unique index or a unique constraint occurred.
23510	A violation of a constraint on the use of the command imposed by the RLST table occurred.
23511	A parent row cannot be deleted, because the check constraint restricts the deletion.
23512	The check constraint cannot be added, because the table contains rows that do not satisfy the constraint definition.
23513	The resulting row of the INSERT or UPDATE does not conform to the check constraint definition.
23514	Check data processing has found constraint violations.
23515	The unique index could not be created or unique constraint added, because the table contains duplicate values of the specified key.
23520	The foreign key cannot be defined, because all of its values are not equal to a parent key of the parent table.
23521	The update of a catalog table violates an internal constraint.
23522	The range of values for an identity column or sequence is exhausted.
23523	An invalid value has been provided for the security label column.
23524	Invalid row movement within the UNION ALL view.
23525	An XML value could not be inserted or updated because an error was detected during insertion or update of an index on an XML column.
23526	An index on an XML column could not be created because an error was detected during insertion of an XML value into the index.

Class Code 24 Invalid Cursor State

Table 19. Class Code 24: Invalid Cursor State

SQLSTATE Value	Meaning
24501	The identified cursor is not open.

Table 19. Class Code 24: Invalid Cursor State (continued)

SQLSTATE Value	Meaning
24502	The cursor identified in an OPEN statement is already open.
24504	The cursor identified in the UPDATE, DELETE, SET, or GET statement is not positioned on a row.
24506	The statement identified in the PREPARE is the statement of an open cursor.
24510	An UPDATE or DELETE operation was attempted against a delete hole or update hole.
24512	The result table does not agree with base table.
24513	FETCH NEXT, PRIOR, CURRENT or RELATIVE is not allowed because the cursor position is not known.
24514	A previous error has disabled this cursor.
24516	A cursor has already been assigned to a result set.
24517	A cursor was left open by an external function or method.
24525	An OPEN or FETCH on a cursor attempted another recursive operation on the same cursor.

Class Code 25 Invalid Transaction State

Table 20. Class Code 25: Invalid Transaction State

SQLSTATE Value	Meaning
25000	An insert, update, or delete operation or procedure call is invalid in the context where it is specified.
25001	The statement is only allowed as the first statement in a unit of work.
25501	The statement is only allowed as the first statement in a unit of work.
25502	Operation cannot occur multiple times in a single transaction.

Class Code 26 Invalid SQL Statement Identifier

Table 21. Class Code 26: Invalid SQL Statement Identifier

SQLSTATE Value	Meaning
26501	The statement identified does not exist.

Class Code 27 Triggered Data Change Violation

Table 22. Class Code 27: Triggered Data Change Violation

SQLSTATE Value	Meaning
27000	An attempt was made to change the same row in the same table more than once in the same SQL statement.

Class Code 28 Invalid Authorization Specification

Table 23. Class Code 28: Invalid Authorization Specification

SQLSTATE Value	Meaning
28000	Authorization name is invalid.

Class Code 2D Invalid Transaction Termination

Table 24. Class Code 2D: Invalid Transaction Termination

SQLSTATE Value	Meaning
2D521	SQL COMMIT or ROLLBACK are invalid in the current operating environment.
2D522	COMMIT and ROLLBACK are not allowed in an ATOMIC Compound statement.
2D528	Dynamic COMMIT is invalid for the application execution environment.
2D529	Dynamic ROLLBACK is invalid for the application execution environment.

Class Code 2E Invalid Connection Name

Table 25. Class Code 2E: Invalid Connection Name

SQLSTATE Value	Meaning
2E000	Connection name is invalid.

Class Code 34 Invalid Cursor Name

Table 26. Class Code 34: Invalid Cursor Name

SQLSTATE Value	Meaning
34000	Cursor name is invalid.

Class Code 36 Invalid Cursor Specification

Table 27. Class Code 36: Invalid Cursor Specification

SQLSTATE Value	Meaning
36001	A SENSITIVE cursor cannot be defined for the specified select-statement.

Class Code 38 External Function Exception

Table 28. Class Code 38: External Function Exception

SQLSTATE Value	Meaning
38XXX	Valid error SQLSTATEs returned by an external routine, or trigger.
38001	The external routine is not allowed to execute SQL statements.
38002	The routine attempted to modify data, but the routine was not defined as MODIFIES SQL DATA.

Table 28. Class Code 38: External Function Exception (continued)

SQLSTATE Value	Meaning
38003	The statement is not allowed in a routine.
38004	The routine attempted to read data, but the routine was not defined as READS SQL DATA.
38501	Error occurred while calling a user-defined function, external procedure, or trigger (using the SIMPLE CALL or SIMPLE CALL WITH NULLS calling convention).
38502	The external function is not allowed to execute SQL statements.
38503	A user-defined function has abnormally terminated (abend).
38504	A user-defined function has been interrupted by the user to stop a probable looping condition.
38505	An SQL statement is not allowed in a routine on a FINAL CALL.
38506	Function failed with error from OLE DB provider.
38552	A function in the SYSFUN schema (supplied by IBM) has abnormally terminated. One of the following reason codes can be found in the message text: <ul style="list-style-type: none"> 01 Numeric value out of range 02 Division by zero 03 Arithmetic overflow or underflow 04 Invalid date format 05 Invalid time format 06 Invalid timestamp format 07 Invalid character representation of a timestamp duration 08 Invalid interval type (must be one of 1, 2, 4, 8, 16, 32, 64, 128, 256) 09 String too long 10 Length or position in string function out of range 11 Invalid character representation of a floating point number
38553	A routine in a system schema has terminated with an error.
38554	The procedure has encountered an unsupported version number for a parameter.
38H01	An MQSeries function failed to initialize.
38H02	MQSeries Application Messaging Interface failed to terminate the session.
38H03	MQSeries Application Messaging Interface failed to properly process a message.
38H04	MQSeries Application Messaging Interface failed in sending a message.
38H05	MQSeries Application Messaging Interface failed to read/receive a message.
38H06	An MQSeries Application Messaging Interface (un)subscription request failed.
38H07	MQSeries Application Messageing Inteface failed to commit the unit of work.
38H08	MQSeries Application Messaging Interface policy error.
38H09	MQSeries XA (two phase commit) API call error.
38H0A	MQSeries Application Messaging Interface failed to roll back the unit of work.

Table 28. Class Code 38: External Function Exception (continued)

SQLSTATE Value	Meaning
38H10	Error occurred during text search processing.
38H11	Text search support is not available.
38H12	Text search is not allowed on a column because a text search index does not exist on the column.
38H13	A conflicting search server administration procedure or command is running on the same text search index.
38H14	Search server administration procedure or command error.

Class Code 39 External Function Call Exception

Table 29. Class Code 39: External Function Call Exception

SQLSTATE Value	Meaning
39001	A user-defined function has returned an invalid SQLSTATE.
39004	A null value is not allowed for an IN or INOUT argument.
39501	The eye-catcher associated with an argument was modified.

Class Code 3B Invalid SAVEPOINT

Table 30. Class Code 3B: Invalid SAVEPOINT

SQLSTATE Value	Meaning
3B001	The savepoint is not valid.
3B002	The maximum number of savepoints has been reached.
3B501	A duplicate savepoint name was detected.
3B502	A RELEASE or ROLLBACK TO SAVEPOINT was specified, but a savepoint does not exist.
3B503	A SAVEPOINT, RELEASE SAVEPOINT, or ROLLBACK TO SAVEPOINT is not allowed in a trigger or global transaction.

Class Code 40 Transaction Rollback

Table 31. Class Code 40: Transaction Rollback

SQLSTATE Value	Meaning
40001	Deadlock or timeout with automatic rollback occurred.
40003	The statement completion is unknown.
40504	A system error has caused the unit of work to be rolled back.
40506	The current transaction was rolled back because of an SQL error.
40507	The current transaction was rolled back as a result of a failure creating an index.

Class Code 42 Syntax Error or Access Rule Violation

Table 32. Class Code 42: Syntax Error or Access Rule Violation

SQLSTATE Value	Meaning
42501	The authorization ID does not have the privilege to perform the specified operation on the identified object.
42502	The authorization ID does not have the privilege to perform the operation as specified.
42504	A specified privilege, security label, exemption, or role cannot be revoked from a specified authorization-name.
42506	Owner authorization failure occurred.
42508	The specified database privileges cannot be granted to PUBLIC.
42509	SQL statement is not authorized, because of the DYNAMICRULES option.
42511	Unable to retrieve a DATALINK value.
42512	The authorization ID does not have access to the protected column.
42514	The authorization ID does not have the privileges necessary for ownership of the object.
42516	Authentication at the user mapping repository failed.
42517	The specified authorization ID is not allowed to use the trusted context.
42519	This authorization ID is not allowed to perform the operation on the protected table.
42520	A built-in function could not be executed because the authorization ID does not have a security label.
42521	The authority or privilege cannot be granted to the specified authorization ID.
42522	The authorization ID does not have the credentials to protect a column or remove protection from a column.
42523	A specified privilege, security label, or exemption cannot be revoked from a specified authorization-name.
42524	Current session user does not have usage privilege on the workload.
42601	A character, token, or clause is invalid or missing.
42602	A character that is invalid in a name has been detected.
42603	An unterminated string constant has been detected.
42604	An invalid numeric or string constant has been detected.
42605	The number of arguments specified for a scalar function is invalid.
42606	An invalid hexadecimal constant has been detected.
42607	An operand of a column function is invalid.
42608	The use of NULL or DEFAULT in VALUES or an assignment statement is invalid.
42609	All operands of an operator or predicate are parameter markers.
42610	A parameter marker or a null value is not allowed.
42611	The column, argument, parameter, or global variable definition is invalid.
42612	The statement string is an SQL statement that is not acceptable in the context in which it is presented.
42613	Clauses are mutually exclusive.
42614	A duplicate keyword is invalid.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
42615	An invalid alternative was detected.
42616	Invalid options are specified.
42617	The statement string is blank or empty.
42618	A host variable is not allowed.
42620	Read-only SCROLL was specified with the UPDATE clause.
42621	The check constraint is invalid.
42622	A name or label is too long.
42623	A DEFAULT clause cannot be specified.
42625	A CASE expression is invalid.
42627	RETURNS clause must be specified prior to predicate specification using the EXPRESSION AS clause.
42628	A TO SQL or FROM SQL transform function is defined more than once in a transform definition.
42629	Parameter names must be specified for SQL routines.
42630	An SQLSTATE or SQLCODE variable declaration must not be in a nested compound statement.
42631	A RETURN statement in an SQL function or method must include a return value.
42633	An AS clause is required for an argument of XMLATTRIBUTES or XMLFOREST.
42634	The XML name is not valid.
42635	The XML namespace prefix is not valid.
42636	The BY REF clause is missing or used incorrectly.
42637	An XQuery expression cannot be specified in a DECLARE CURSOR statement.
42638	An obfuscated statement is not valid.
42701	A duplicate column name in an insert or update operation or the SET transition-variable statement was detected.
42702	A column reference is ambiguous, because of duplicate names.
42703	An undefined column, attribute, parameter name, or period was detected.
42704	An undefined object or constraint name was detected.
42705	An undefined server-name was detected.
42707	A column name in ORDER BY does not identify a column of the result table.
42709	A duplicate column name was specified in a key column list.
42710	A duplicate object or constraint name was detected.
42711	Duplicate column, period, or attribute name was detected in the object definition or ALTER statement.
42712	A duplicate table designator was detected in the FROM clause.
42713	A duplicate object was detected in a list of objects.
42720	The nodename for the remote database was not found in the node directory.
42723	A routine with the same signature already exists in the schema, module or compound block where it is defined.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
42724	Unable to access an external program used for a user-defined function or a procedure.
42725	A routine was referenced directly (not by either signature or by specific instance name), but there is more than one specific instance of that routine.
42726	Duplicate names for named derived tables were detected.
42727	No default primary tablespace exists for the new table.
42728	A duplicate member number or database partition number was detected in the list of member numbers or database partition numbers.
42729	The specified member number or database partition number is not valid.
42730	The container name is already used by another table space.
42731	The container name is already used by this tablespace.
42732	A duplicate schema name in the SET CURRENT PATH statement was detected.
42734	A duplicate parameter-name, SQL variable-name, cursor-name, condition-name, or label was detected.
42735	The database partition group for the table space is not defined for the buffer pool.
42736	The label specified on the LEAVE statement is not found or not valid.
42737	The condition specified is not defined.
42738	A duplicate column name or unnamed column was specified in a DECLARE CURSOR statement of a FOR statement.
42739	A duplicate transform was detected.
42740	No transforms were found for the specified type. No transforms were dropped.
42741	A transform group is not defined for a data type.
42742	Subtable or subview of the same type already exists in the typed table or typed view hierarchy.
42743	The search method is not found in the index extension.
42744	A TO SQL or FROM SQL transform function is not defined in a transform group.
42745	The routine would define an overriding relationship with an existing method.
42746	A method name cannot be the same as a structured type name within the same type hierarchy.
42748	The storage path already exists for the database or is specified more than once.
42749	An XML schema document with the same target namespace and schema location already exists for the XML schema.
4274A	An XSROBJECT is not found in the XML schema repository.
4274B	A unique XSROBJECT could not be found in the XML schema repository.
4274C	The specified attribute was not found in the trusted context.
4274D	The specified attribute already exists in the trusted context.
4274F	The component element is not defined in security label component.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
4274G	The security label component is not defined in the security label policy used by the given security label.
4274H	The specified access rule does not exist for the specified security policy.
4274I	The security label does not exist for the specified security policy.
4274J	The database partition group is already used by this buffer pool.
4274K	Invalid use of a named argument when invoking a routine.
4274L	The explain facility failed because the specified section could not be found.
4274M	An undefined period name was detected.
42802	The number of insert or update values is not the same as the number of columns.
42803	A column reference in the SELECT or HAVING clause is invalid, because it is not a grouping column; or a column reference in the GROUP BY clause is invalid.
42804	The result expressions in a CASE expression are not compatible.
42805	An integer in the ORDER BY clause does not identify a column of the result table.
42806	A value cannot be assigned to a host variable, because the data types are not compatible.
42807	The data-change statement is not permitted on this object.
42808	A column identified in the insert or update operation is not updateable.
42809	The identified object is not the type of object to which the statement applies.
42810	A base table is not identified in a FOREIGN KEY clause.
42811	The number of columns specified is not the same as the number of columns in the SELECT clause.
42813	WITH CHECK OPTION cannot be used for the specified view.
42814	The column cannot be dropped, because it is the only column in the table.
42815	The data type, length, scale, value, or CCSID is invalid.
42816	A datetime value or duration in an expression is invalid.
42817	The column cannot be dropped because there is a dependency on the column.
42818	The operands of an operator or function are not compatible or not comparable.
42819	An operand of an arithmetic operation or an operand of a function that requires a number is invalid.
42820	A numeric constant is too long, or it has a value that is not within the range of its data type.
42821	A data type for an assignment to a column or variable is not compatible with the data type.
42823	Multiple columns are returned from a subquery that is allowed only one column.
42824	An operand of LIKE is not a string, or the first operand is not a column.
42825	The rows of UNION, INTERSECT, EXCEPT, or VALUES do not have compatible columns.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
42826	The rows of UNION, INTERSECT, EXCEPT, or VALUES do not have the same number of columns.
42827	The table identified in the UPDATE or DELETE is not the same table designated by the cursor.
42828	The table designated by the cursor of the UPDATE or DELETE statement cannot be modified, or the cursor is read-only.
42829	FOR UPDATE OF is invalid, because the result table designated by the cursor cannot be modified.
42830	The foreign key does not conform to the description of the parent key.
42831	Null values are not allowed in a column of a primary key, a column of a unique key, a ROWID column, a row change timestamp column, a row-begin column, a row-end column, or a column of an application period.
42832	The operation is not allowed on system objects.
42834	SET NULL cannot be specified, because no column of the foreign key can be assigned the null value.
42835	Cyclic references cannot be specified between named derived tables.
42836	The specification of a recursive, named derived table is invalid.
42837	The column cannot be altered, because its attributes are not compatible with the current column attributes.
42838	An invalid use of a table space was detected.
42839	Indexes and long columns cannot be in separate tablespaces from the table.
42840	An invalid use of the AS CAST option was detected.
42841	An untyped expression cannot be a user-defined type or reference type.
42842	A column, period, or parameter definition is invalid, because a specified option is inconsistent with the column or period description.
42845	An invalid use of a VARIANT or EXTERNAL ACTION function was detected.
42846	Cast from source type to target type is not supported.
42849	The specified option is not supported for external routines.
42852	The privileges specified in GRANT or REVOKE are invalid or inconsistent. (For example, GRANT ALTER on a view.)
42853	Both alternatives of an option were specified, or the same option was specified more than once.
42854	A result column data type in the select list is not compatible with the defined type in a typed view or materialized query table definition.
42855	The assignment of the LOB to this host variable is not allowed. The target host variable for all fetches of this LOB value for this cursor must be a locator or a LOB variable.
42858	Operation cannot be applied to the specified object.
42860	The constraint cannot be dropped because it is enforcing a primary key, ROWID, or period.
42863	An undefined host variable in REXX has been detected.
42866	The data type in either the RETURNS clause of the CAST FROM clause in the CREATE FUNCTION statement is not appropriate for the data type returned from the sourced function or RETURN statement in the function body.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
42867	Conflicting options have been specified.
42872	FETCH statement clauses are incompatible with the cursor definition.
42875	The object to create within CREATE SCHEMA must have the same qualifier as the schema name.
42877	The column name cannot be qualified.
42878	An invalid function or procedure name was used with the EXTERNAL keyword.
42879	The data type of one or more input parameters in the CREATE FUNCTION statement is not appropriate for the corresponding data type in the source function.
42880	The CAST TO and CAST FROM data types are incompatible, or would always result in truncation of a fixed string.
42881	Invalid use of a row based function.
42882	The specific instance name qualifier is not equal to the function name qualifier.
42883	No routine was found with a matching signature.
42884	No routine was found with the specified name and compatible arguments.
42885	The number of input parameters specified on a CREATE FUNCTION statement does not match the number provided by the function named in the SOURCE clause.
42886	The IN, OUT, or INOUT parameter attributes do not match.
42887	The function is not valid in the context where it occurs.
42888	The table does not have a primary key.
42889	The table already has a primary key.
42890	A column list was specified in the references clause, but the identified parent table does not have a unique constraint with the specified column names.
42891	A duplicate UNIQUE constraint already exists.
42893	The object or constraint cannot be dropped, altered or transferred, or authorities cannot be revoked from the object, because other objects are dependent on it.
42894	The DEFAULT value is invalid.
42895	For static SQL, an input host variable cannot be used, because its data type is not compatible with the parameter of a procedure or user-defined function.
42898	An invalid correlated reference or transition table was detected in a trigger.
428A0	An error occurred with the sourced function on which the user-defined function is based.
428A1	Unable to access a file referenced by a host file variable.
428A2	The table cannot be created in the multi-partition database partition group because no column exists that can be used as the distribution key.
428A3	An invalid path has been specified for an event monitor.
428A4	An invalid value has been specified for an event monitor option.
428A5	An exception table named in a SET INTEGRITY statement either does not have the proper structure, or it has been defined with generated columns, constraints, or triggers.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
428A6	An exception table named in a SET INTEGRITY statement cannot be the same as one of the tables being checked.
428A7	There is a mismatch in the number of tables being checked and in the number of exception tables specified in the SET INTEGRITY statement.
428A8	Cannot reset the Set Integrity Pending state using the SET INTEGRITY statement on a descendent table while a parent table or underlying table is in the Set Integrity Pending state.
428A9	The specified member number or database partition number, or range of member numbers or database partition numbers is invalid.
428AA	The column name is not a valid column for an event monitor table.
428B0	Illegal nesting inside ROLLUP, CUBE, or GROUPING SETS.
428B1	The clause specifying table space containers that are not designated for specific database partitions is either missing or specified more than once.
428B2	The path name for the container is not valid.
428B3	An invalid SQLSTATE was specified.
428B7	A number specified in an SQL statement is out of the valid range.
428B0	No plan was possible to create for the federated data source.
428C0	The database partition cannot be dropped because it is the only database partition in the database partition group.
428C1	The column data type or attribute can only be specified once for a table, and a period may only exist once in the table.
428C2	Examination of the function body indicates that the given clause should have been specified on the CREATE FUNCTION statement.
428C4	The number of elements on each side of the predicate operator is not the same.
428C5	No data type mapping was found for a data type from the data source.
428C8	Data definition operations are not allowed on procedures with the same name as the connect procedure.
428C9	A ROWID, IDENTITY, ROW-BEGIN, ROW-END or TRANSACTION-START-ID column cannot be specified as the target column of an INSERT or UPDATE.
428CA	A table in append mode cannot have a clustered index.
428CB	The page size for a table space must match the page size of the associated buffer pool.
428D1	Unable to access a file referenced by a DATALINK value.
428D4	A cursor specified in a FOR statement cannot be referenced in an OPEN, CLOSE, or FETCH statement.
428D5	The ending label does not match the beginning label.
428D6	UNDO is not allowed for NOT ATOMIC statements.
428D7	The condition value is not allowed.
428D8	The declaration or use of the SQLSTATE or SQLCODE variable is not valid.
428DB	An object is not valid as a supertype, supertable, or superview.
428DC	The function or method is not valid as the transform for this type.
428DD	A required transform is not defined.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
428DE	PAGESIZE value is not supported.
428DF	Data types specified in CREATE CAST are not valid.
428DG	Function specified in CREATE CAST is not valid.
428DH	Operation is not valid for typed tables.
428DJ	Inherited column or attribute cannot be changed or dropped.
428DK	The scope for the reference column is already defined.
428DL	Parameter of external or sourced function has a scope defined.
428DM	The scope table or view is not valid for the reference type.
428DN	SCOPE is not specified in the RETURNS clause of an external function or is specified in the RETURNS clause of a sourced function.
428DP	The type is not a structured type.
428DQ	A subtable or subview cannot have a different schema name than its supertable or superview.
428DR	Operation cannot be applied to a subtable or a subview.
428DS	Index on the specified columns cannot be defined on subtable.
428DT	Operand of expression is not a valid scoped reference type.
428DU	A type is not included in the required type hierarchy.
428DV	Invalid left operand of a dereference operator.
428DW	Object identifier column cannot be referenced using the dereference operator.
428DX	Object identifier column is required to define the root table or root view of a typed table or typed view hierarchy.
428DY	Statistics cannot be updated for the target object type.
428DZ	An object identifier column cannot be updated.
428E0	Definition of index does not match the definition of the index extension.
428E1	Result of the range-producing table function is inconsistent with that of the key transformation table function for the index extension.
428E2	Number or the type of key-target parameters does not match with the number or type of key transform function for the index extension.
428E3	Argument for function in index extension is not valid.
428E4	Function is not supported in CREATE INDEX EXTENSION statement.
428E5	SELECTIVITY clause can only be specified with a user-defined predicate.
428E6	The search argument of method in the user-defined predicate does not match the one in the corresponding search method of the index extension.
428E7	Type of the operand following the comparison operator in the user-defined predicate does not match the RETURNS data type.
428E8	A search target or search argument parameter does not match a parameter name of the function being created.
428E9	An argument parameter name cannot appear as both a search target and search argument in the same exploitation rule.
428EA	A fullselect in a typed view is not valid.
428EB	A column in a subview cannot be read only when the corresponding column in the superview is updatable.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
428EC	The fullselect specified for the materialized query table is not valid.
428ED	Structured types with Datalink or Reference type attributes cannot be constructed.
428EE	Option is not valid for this data source.
428EF	Value for the option is not valid for this data source.
428EG	Missing required option for this data source.
428EH	Cannot ADD an option that is already defined.
428EJ	Cannot SET or DROP an option that has not been added.
428EK	The qualifier for a declared global temporary table name must be SESSION.
428EL	A transform function is not valid for use with a function or method.
428EM	The TRANSFORM GROUP clause is required.
428EN	A transform group is specified that is not used.
428EP	A structured type cannot depend on itself either directly or indirectly.
428EQ	The returns type of the routine is not the same as the subject type.
428ER	A method specification cannot be dropped before the method body is dropped.
428ES	A method body does not correspond to the language type of the method specification.
428EU	TYPE or VERSION is not specified in the server definition.
428EV	Pass-through facility is not supported for the type of data source.
428EW	The table cannot be converted to or from a materialized query table.
428EX	Routine cannot be used as a transform function because it is either a builtin function or a method.
428EY	The data type of the search target in a user-defined predicate does not match the data type of the source key of the specified index extension.
428EZ	A window specification for an OLAP function is not valid.
428F0	A ROW function must include at least two columns.
428F1	An SQL TABLE function must return a table result.
428F2	The data type of the RETURN statement value in an SQL procedure must be INTEGER.
428F3	SCROLL and WITH RETURN are mutually exclusive.
428F4	The SENSITIVITY specified on FETCH is not allowed for the cursor.
428F5	The invocation of a routine is ambiguous.
428F6	Cursor is scrollable, but the result table involves output from a table function.
428F7	An operation that applies only to SQL routines was attempted on an external routine.
428F9	A sequence expression cannot be specified in this context.
428FA	The scale of the decimal number must be zero.
428FB	The sequence-name must not be a sequence generated by the system for an identity column.
428FC	The length of the encryption password is not valid.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
428FD	The password used for decryption does not match the password used to encrypt the data.
428FE	The data is not a result of the ENCRYPT function.
428FF	The buffer pool specification is not valid.
428FG	The staging table or materialized query table definition is not valid.
428FH	The SET INTEGRITY option is not valid
428FI	ORDER OF was specified, but the table-designator does not contain an ORDER BY clause.
428FJ	ORDER BY is not allowed in the outer fullselect of a view or materialized query table.
428FL	An SQL data change statement is not allowed in the context in which it was specified.
428FM	An INSERT statement within a SELECT specified a view which is not a symmetric view.
428FP	One INSTEAD OF trigger is allowed for each kind of operation on a subject view.
428FQ	An INSTEAD OF trigger must not specify a view that is defined using WITH CHECK OPTION, a view that is defined on another view that is defined WITH CHECK OPTION, or a view that is nested in a view that is defined with the WITH ROW MOVEMENT clause.
428FR	A column cannot be altered as specified.
428FT	The table is not compatible with the specified data partitioning operation.
428FU	Built-in type returned from the FROM SQL transform function or method does not match the corresponding built-in type for the TO SQL transform function or method.
428FV	Cannot define the method as an overriding method.
428FZ	A view that has INSTEAD OF triggers defined only for some operations cannot be used as a target in the MERGE statement.
428G1	The number of data partitions exceeds the number of table spaces for the table.
428G2	The last data partition cannot be dropped from the table.
428G3	FINAL TABLE is not valid when the target view of the SQL data change statement in a fullselect has an INSTEAD OF trigger defined.
428G4	Invalid use of INPUT SEQUENCE ordering.
428G5	The assignment clause of the UPDATE statement must specify at least one column that is not an INCLUDE column.
428G6	A column is specified that cannot be selected from the target of the data change statement in the FROM clause of the fullselect.
428G8	The view cannot be enabled for query optimization.
428GA	Federated option cannot be added, dropped, or altered.
428GC	An invalid string unit was specified for a function.
428GD	The PARTITION BY clause must specify a single column and it must be the same as the first column of the ORGANIZE BY clause.
428GE	The source table cannot be attached to the partitioned target table.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
428GF	The grant of the role is not valid as it would create a cycle.
428GG	Invalid use of an error tolerant nested-table-expression.
428GI	An XML schema is not complete because an XML schema document is missing.
428GJ	The table cannot be truncated because DELETE triggers exist for the table or the table is a parent table of a referential constraint that would be affected by the statement.
428GL	The system authorization ID specified for a trusted context is already specified in another trusted context.
428GM	The trusted context is already defined to be used by this authorization ID or PUBLIC.
428GN	The specified authorization ID or PUBLIC is not defined in the specified trusted context.
428GO	A column option is invalid in a transparent DDL statement.
428GP	Multiple elements cannot be specified for a component of type ARRAY.
428GQ	The security label granted conflicts with another security label already granted.
428GR	A security label with the same access type (READ or WRITE) has already been granted to the authorization ID.
428GS	The option value specified for the procedure does not match the corresponding option of the source procedure.
428GT	The table is not protected with a security policy.
428GU	A table must include at least one column that is not implicitly hidden.
428GV	URI is an empty string.
428GX	A global variable cannot be set or referenced in this context.
428GZ	All specified instances of sort-keys in the SELECT clause are not identical.
428H0	The subindexing operation cannot be applied to an object whose type is not ARRAY.
428H1	The data type of a subindexing expression is not valid for the array.
428H2	Data type is not supported in the context where it is being used.
428H3	The tree element is not valid where specified.
428H4	A hierarchical query construct is used out of context.
428H5	Invalid use of the outer join operator.
428H7	Expression cannot be computed as a single value for the query.
428H8	The object must be defined as secure because another object depends on it for row-level or column-level access control.
428H9	PERMISSION or MASK cannot be altered.
428HB	A permission or mask cannot be created on the specified object.
428HD	The statement cannot be processed because a column mask cannot be applied or the definition of the mask conflicts with the statement.
428HE	The user mapping or federated server option conflicts with an existing user mapping or federated server option.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
428HF	The invocation of the routine omits a parameter which is not defined with a DEFAULT.
428HG	Parameter definition for the routine includes an option that is invalid in the context where it is used.
428HH	The drop storage path failed because the storage group must have at least one storage path associated with it.
428HM	The system-period data versioning clause specified on CREATE or ALTER is invalid.
428HN	The period specification is invalid.
428HP	The definition of the module initialization procedure SYS_INIT is not valid.
428HQ	Invalid data type for the operand of a predicate.
428HR	Invalid use of row data type value in a list of values.
428HS	The target object of the anchored data type is not supported in the context where it is being used.
428HT	The WITH ORDINALITY clause is not valid with the specified UNNEST argument.
428HU	Invalid use of dynamic statement name in a cursor value constructor.
428HV	Error occurred processing a conditional compilation directive.
428HW	The period specification in an index or constraint is invalid.
428HX	The table is not valid for a history table.
428HY	The period specification or period condition is invalid.
428HZ	The temporal attribute of the table is invalid for the specified operation.
428I2	A clause is not supported in a transparent DDL statement.
428I3	A global variable identified as the target of an assignment is a read only global variable.
42901	A column function does not include a column name.
42903	Invalid use of an aggregate function or OLAP function.
42904	The SQL procedure was not created because of a compile error.
42907	The string is too long.
42908	The statement does not include a required column list.
42910	The statement is not allowed in a Compound statement.
42911	A decimal divide operation is invalid, because the result would have a negative scale.
42912	A column cannot be updated, because it is not identified in the UPDATE clause of the select-statement of the cursor.
42914	The DELETE is invalid, because a table referenced in a subquery can be affected by the operation.
42915	An invalid referential constraint has been detected.
42916	The alias cannot be created, because it would result in a repetitive chain of aliases.
42917	The object cannot be explicitly dropped or altered.
42918	A user-defined data type cannot be created with a built-in data type name (for example, INTEGER).

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
42919	Nested compound statements are not allowed.
42921	Containers cannot be added to the tablespace.
42925	Recursive named derived tables cannot specify SELECT DISTINCT and must specify UNION ALL.
42928	WITH EMPTY TABLE cannot be specified for the table.
42932	The program preparation assumptions are incorrect.
42939	The name cannot be used because the specified identifier is reserved for system use.
42961	The server name specified does not match the current server.
42962	A column was specified in a context where its data type is not valid.
42963	Invalid specification of a security label column.
42968	The connection failed, because there is no current software license.
42969	The package was not created.
42972	An expression in a join-condition or ON clause of a MERGE statement references columns in more than one of the operand tables.
42985	The statement is not allowed in a routine.
42986	The source object in a rename operation is referenced in a context where it is not supported.
42987	The statement is not allowed in a procedure or trigger.
42989	A generated column (except for an identity column) cannot be used in a BEFORE trigger.
42990	A unique index or unique constraint is not allowed because the key columns are not a superset of the partitioned key columns.
42991	The BOOLEAN, BINARY, and VARBINARY data types are currently only supported internally.
42993	The column, as defined, is too large to be logged.
42994	Raw device containers are not supported.
42995	The requested function does not apply to global temporary tables.
42997	Capability is not supported by this version of the DB2 application requester, DB2 application server, or the combination of the two.
429A1	The database partition group is not valid for the table space.
429A9	SQL statement cannot be processed in a federated environment.
429B2	Specified inline length value for the structured type or column is too small.
429B3	Object may not be defined on a subtable.
429B4	Data filter function cannot be a LANGUAGE SQL function.
429B5	Data type of instance parameter in index extension is not valid.
429B8	A routine defined with PARAMETER STYLE JAVA cannot have a structured type as a parameter or returns type.
429B9	DEFAULT or NULL cannot be used in an attribute assignment.
429BA	The FEDERATED keyword must be used with a reference to a federated database object.
429BB	The data type of a column, parameter, or SQL variable is not supported.

Table 32. Class Code 42: Syntax Error or Access Rule Violation (continued)

SQLSTATE Value	Meaning
429BC	There are multiple container actions in the ALTER TABLESPACE statement.
429BE	The primary key or unique key is a subset of the columns in the dimensions clause.
429BG	The function is not supported for range-clustered tables.
429BH	A partitioned table definition contains an unsupported column definition which could be an identity column, datalink column, or XML column.
429BJ	Invalid usage of WITH ROW MOVEMENT in a view.
429BK	Invalid attempt to update a view because of because of row movement involving underlying views.
429BL	A function which modifies SQL data is invoked in an illegal context.
429BM	The collation cannot be used in this context.
429BO	No plan was possible to create for the federated data source.
429BP	Invalid nickname column expression.
429BS	Invalid index definition involving an XMLPATTERN clause or a column defined with a data type of XML.
429BT	Transfer ownership failed because of a dependency.
429BU	The user mappings from the user mapping repository for a plugin cannot be accessed.
429BV	Invalid specification of a ROW CHANGE TIMESTAMP column.
429BZ	Update, delete, or Insert into a UNION ALL view failed because one of the underlying tables is protected.
429C0	The query must contain a predicate using the indicated column.
429C2	The data type specified for an array is not valid in the context where it is specified.
429C3	The creation or revalidation of an object would result in an invalid direct or indirect self-reference.
429C4	Revalidation failed for all objects that were specified to be revalidated.
429C5	Data type is not supported for a field in a row type.
429CA	ANALYZE_TABLE expression is not supported in the context where it is specified.

Class Code 44 WITH CHECK OPTION Violation

Table 33. Class Code 44: WITH CHECK OPTION Violation

SQLSTATE Value	Meaning
44000	The insert or update operation is not allowed, because a resulting row does not satisfy the view definition.

Class Code 45 Unhandled User-Defined Exception

Table 34. Class Code 45: Unhandled User-Defined Exception

SQLSTATE Value	Meaning
45000	Unhandled user-defined exception.

Class Code 46 Java DDL

Table 35. Class Code 46: Java DDL

SQLSTATE Value	Meaning
46001	Java DDL - Invalid URL.
46002	Java DDL - Invalid jar name.
46003	Java DDL - Invalid class deletion.
46007	Java DDL - Invalid signature.
46008	Java DDL - Invalid method specification.
46103	A Java routine encountered a ClassNotFound exception.
46501	Java DDL - Optional component not implemented.

Class Code 51 Invalid Application State

Table 36. Class Code 51: Invalid Application State

SQLSTATE Value	Meaning
51002	The package corresponding to an SQL statement execution request was not found.
51003	Consistency tokens do not match.
51004	An address in the SQLDA is invalid.
51005	The previous system error has disabled this function.
51008	The release number of the precompiled program is not valid.
51015	An attempt was made to execute a section that was found to be in error at bind time.
51017	The user is not logged on.
51018	An error has left the application in an unconnected state.
51021	SQL statements cannot be executed until the application process executes a rollback operation.
51022	A CONNECT that specifies an authorization name is invalid when a connection (either current or dormant) already exists to the server named in that CONNECT statement.
51023	The database is already in use by another instance of the database manager.
51024	A view cannot be used, because it has been marked inoperative.
51025	An application in the XA transaction processing environment is not bound with SYNCPOINT TWOPHASE.
51026	An event monitor cannot be turned on, because its target path is already in use by another event monitor.

Table 36. Class Code 51: Invalid Application State (continued)

SQLSTATE Value	Meaning
51027	The IMMEDIATE CHECKED option of the SET INTEGRITY statement is not valid since a table is a user maintained materialized query table or is not in the Set Integrity Pending state.
51028	A package cannot be used, because it is marked inoperative.
51030	The procedure referenced in a ALLOCATE CURSOR, or an ASSOCIATE LOCATORS statement has not yet been called within the application process.
51034	A routine defined with MODIFIES SQL DATA is not valid in the context in which it is invoked.
51035	A PREVIOUS VALUE expression cannot be used because a value has not been generated for the sequence yet in this session.
51038	SQL statements may no longer be issued by the routine.
51039	The ENCRYPTION PASSWORD value is not set.
51040	Invalid compilation environment.
51041	The SQL statement cannot be issued within an XA transaction.
51042	Statistics could not be collected because there is no active statistics event monitor.

Class Code 53 Invalid Operand or Inconsistent Specification

Table 37. Class Code 53: Invalid Operand or Inconsistent Specification

SQLSTATE Value	Meaning
51044	The cursor variable cannot be used in an OPEN statement in the current scope.
51045	The request is not supported for a read-only database.
51046	The data change operation is not allowed for the target object because of an implicit or explicit period specification.
53038	The number of key limit values is zero or greater than the number of columns in the key.
53040	The buffer pool cannot be changed as specified.
53045	The data type of the key limit constant is not the same as the data type of the column.
53090	Only data from one encoding scheme, either ASCII, EBCDIC or Unicode, can be referenced in the same SQL statement.
53091	The encoding scheme specified is not the same as the encoding scheme currently in use for the containing object.

Class Code 54 SQL or Product Limit Exceeded

Table 38. Class Code 54: SQL or Product Limit Exceeded

SQLSTATE Value	Meaning
54001	The statement is too long or too complex.
54002	A string constant is too long.

Table 38. Class Code 54: SQL or Product Limit Exceeded (continued)

SQLSTATE Value	Meaning
54004	The statement has too many table names or too many items in a SELECT or INSERT list.
54006	The result of concatenation is too long.
54008	The key is too long, a column of the key is too long, or the key has too many columns or periods.
54010	The record length of the table is too long.
54011	Too many columns were specified for a table or view.
54023	The limit for the number of parameters or arguments for a function or a procedure has been exceeded.
54028	The maximum number of concurrent LOB handles has been reached.
54029	The maximum number of open directory scans has been reached.
54030	The maximum number of event monitors are already active.
54031	The maximum number of files have already been assigned the event monitor.
54032	The maximum size of a table has been reached.
54033	The maximum number of partitioning maps has been reached.
54034	The combined length of all container names for the tablespace is too long.
54035	An internal object limit exceeded.
54036	The path name for the container or storage path is too long.
54037	The container map for the tablespace is too complicated.
54038	Maximum depth of nested routines or triggers was exceed.
54040	Too many references to transition variables and transition tab columns or the row length for these references is too long.
54045	Maximum levels of a type hierarchy exceeded.
54046	The maximum allowable parameters is exceeded in an index extension.
54047	The maximum size of a table space is exceeded.
54048	A temporary table space with sufficient page size does not exist.
54049	Length of an instance of a structured type exceeds system limit.
54050	The maximum allowable attributes is exceeded in a structured type.
54052	The number of block pages for a buffer pool is too large for the size of the buffer pool.
54053	The value specified for BLOCKSIZE is not in the valid range.
54054	The number of data partitions, or the combination of the number of table space partitions and the corresponding length of the partitioning limit key is exceeded.
54057	An XML element name, attribute name, namespace prefix or URI is too long.
54058	The internal representation of an XML path is too long.
54059	A text node string value with only whitespace characters is too long for STRIP WHITESPACE processing.
54061	Too many elements are specified for the security label component.
54062	The maximum number of components in a security policy has been exceeded.
54063	The PCTDEACTIVATE limit has been reached for the event monitor.
54064	More than 65533 instances of a cursor have been opened.

Table 38. Class Code 54: SQL or Product Limit Exceeded (continued)

SQLSTATE Value	Meaning
54066	Recursion limit exceeded within a hierarchical query.
54067	The maximum number of connections has been exceeded.
54068	Seamless automatic client reroute retry limit exceeded.

Class Code 55 Object Not in Prerequisite State

Table 39. Class Code 55: Object Not in Prerequisite State

SQLSTATE Value	Meaning
55001	The database must be upgraded.
55002	The explanation table is not defined properly.
55006	The object cannot be dropped, because it is currently in use.
55007	The object cannot be altered, because it is currently in use by the same application process.
55009	The system attempted to write to a read-only file or a write-protected storage medium.
55011	Virtual storage or database resource is not available.
55012	A clustering index already exists on the table.
55019	The object is in an invalid state for the operation.
55022	The file server is not registered with this database.
55023	An error occurred calling a routine.
55024	The tablespace cannot be dropped, because data related to a table is also in another tablespace.
55025	The database must be restarted.
55026	A temporary tablespace cannot be dropped.
55031	The format of the error mapping file is incorrect.
55032	The CONNECT statement is invalid, because the database manager was stopped after this application was started.
55033	An event monitor or usage list cannot be activated in the same unit of work in which it is created or modified.
55034	The event monitor is in an invalid state for the operation.
55035	The table cannot be dropped, because it is protected.
55037	The distribution key cannot be dropped because the table is in a multi-partition database partition group.
55038	The database partition group cannot be used because it is being rebalanced.
55039	The access or state transition is not allowed, because of the current state of the table space.
55040	The database's split image is in the suspended state.
55041	Containers cannot be added to a tablespace while a rebalance is in progress.
55043	Attributes of a structured type cannot be altered when a typed table or typed view based on the type exists.
55045	The SQL Archive (SAR) file for the routine cannot be created because a necessary component is not available at the server.

Table 39. Class Code 55: Object Not in Prerequisite State (continued)

SQLSTATE Value	Meaning
55046	The specified SQL archive does not match the target environment.
55047	An external function or method attempted to access a federated object.
55048	Encrypted data cannot be encrypted.
55049	The event monitor table is not properly defined.
55051	The ALTER BUFFERPOOL statement is currently in progress.
55054	Cannot define the method as an overriding method.
55056	The nickname statistics cannot be updated because the database is not enabled for federation.
55057	The statement or command is not allowed while the table has detached dependents or until the asynchronous partition detach task completes.
55060	There are no storage groups defined for the database.
55061	Table space storage cannot be changed for an automatic storage table space.
55062	Storage paths cannot be provided because there are no storage groups defined for the database.
55063	The XML schema is not in the correct state for the operation.
55064	Label-based access control cannot be applied to the column because the table has no security policy.
55065	A table can have at most one security policy.
55066	The table cannot allocate a new page because the index does not yet support large RIDs.
55067	The table cannot be made a protected table because an MQT or a staging table depend on it.
55068	A row change timestamp expression cannot be used because the table does not have a row change timestamp.
55069	Creating or invoking a sourced procedure using a wrapper defined as fenced is not supported.
55070	The administration task table is not properly defined.
55071	The request cannot be performed because a database partition is being added.
55072	A database partition cannot be added because an incompatible command is already in progress.
55073	Request failed because a storage path is in the drop pending state.
55074	The explain facility failed because the specified activity event monitor is not a write-to-table event monitor.
55075	The explain facility is not supported for the specified section.
55076	Federation is not supported for XML data when the Database Partitioning Feature is enabled.
55077	The operation on the database partition group cannot be performed until all applications in the instance are aware of the new database partition server.

Class Code 56 Miscellaneous SQL or Product Error

Table 40. Class Code 56: Miscellaneous SQL or Product Error

SQLSTATE Value	Meaning
56016	The ranges specified for data partitions are not valid.
56023	An invalid reference to a remote object has been detected.
56031	The clause or scalar function is invalid, because mixed and DBCS data are not supported on this system.
56033	The insert or update value of a long string column must be a host variable or NULL.
56038	The requested feature is not supported in this environment.
56072	Execution failed due to the function not supported by a downlevel server that will not affect the execution of subsequent SQL statements.
56084	An unsupported SQLTYPE was encountered in a select list or input list.
56090	The alter of an index or table is not allowed.
56091	Multiple errors occurred as a result of executing a compound SQL statement.
56092	The type of authorization cannot be determined, because the authorization name does not uniquely identify a user id, a group id or a role.
56095	A bind option is invalid.
56097	LONG VARCHAR and LONG VARGRAPHIC fields are not permitted in TABLESPACES which are built on DEVICES.
56098	An error occurred during implicit rebind, recompile, or revalidation.
56099	The REAL data type is not supported by the target database.
560A0	Action on a LOB value failed.
560AA	The use of this data type, clause, or scalar function is supported only for a Unicode database.
560AC	Wrapper definition cannot be used for the specified type or version of data source.
560AE	The specified table or view is not allowed in a LIKE clause.
560AF	PREPARE statement is not supported when using gateway concentrator.
560B0	Invalid new size value for table space or table space container resizing.
560B1	Invalid cursor specification in stored procedure.
560B7	For a multiple row INSERT, the usage of a sequence expression must be the same for each row.
560BB	For an INOUT parameter in a dynamically prepared CALL statement, the same host variable must be used in both the USING and INTO clauses.
560BC	An error has occurred when accessing a file.
560BD	A federated server received an unexpected error code from a data source.
560BF	Encryption facility not available.
560C0	Tables created in the Unicode encoding scheme cannot be used in SQL functions or SQL methods.
560C1	Tables created in the Unicode encoding scheme cannot be a typed table, or contain graphic types or user-defined types.
560C2	Writing a history file entry for a dropped table failed.
560C3	An AFTER trigger cannot modify a row being inserted for an INSERT statement.

Table 40. Class Code 56: Miscellaneous SQL or Product Error (continued)

SQLSTATE Value	Meaning
560C5	The package must be rebound to be successfully executed.
560C6	A referential constraint cannot modify a row that was modified by an SQL data change statement within a fullselect.
560C8	Some of the nickname statistics cannot be updated.
560C9	The specified statement cannot be explained.
560CB	A federated server received a SOAP Fault from a web services data source.
560CD	One or more values specified when retrieving alert configuration settings are invalid.
560CE	An SQL variable is not available for reference due to a recent commit or rollback operation.
560CF	The table space cannot be converted to be a LARGE table space.
560CG	An XML value contains a combination of XML nodes that causes an internal identifier limit to be exceeded.
560CH	The maximum number of children nodes for an XML node in an XML value is exceeded.
560CI	The result set specified to be returned to the client is invalid.
560CJ	The table space must be created in the IBMCATGROUP database partition group.
560CL	Creating or altering the sourced procedure is not supported at this data source.
560CN	The wrapper is not compatible with the release of DB2 installed at the federated server.
560CO	Cycle detected in a hierarchical query.
560CP	An insert or update operation of multiple rows failed because both DEFAULT and explicit values cannot be specified for a column defined as ROW CHANGE TIMESTAMP and GENERATED BY DEFAULT.
560CS	The event monitor may not have started or may not have started with full restart capability.
560CT	The module alias cannot be used to specify the module name as the target module for the DDL statement.
560CW	Operation cannot be performed on a host where a cluster caching facility (CF) is located.
560CZ	A discontinued command, API function, or SQL statement was specified.
560D0	An invalid object cannot be implicitly revalidated.

Class Code 57 Resource Not Available or Operator Intervention

Table 41. Class Code 57: Resource Not Available or Operator Intervention

SQLSTATE Value	Meaning
57001	The table is unavailable, because it does not have a primary index.
57003	The specified buffer pool has not been activated.
57007	The object cannot be used, because a DROP or ALTER is pending.
57009	Virtual storage or database resource is temporarily unavailable.

Table 41. Class Code 57: Resource Not Available or Operator Intervention (continued)

SQLSTATE Value	Meaning
57011	Virtual storage or database resource is not available.
57012	A non-database resource is not available. This will not affect the successful execution of subsequent statements.
57013	A non-database resource is not available. This will affect the successful execution of subsequent statements.
57014	Processing was cancelled as requested.
57016	The table cannot be accessed, because it is inactive.
57017	Character conversion is not defined.
57019	The statement was not successful, because of a problem with a resource.
57020	The drive containing the database is locked.
57021	The I/O device is not ready.
57022	The table could not be created, because the authorization ID of the statement does not own any suitable dbspaces.
57030	Connection to application server would exceed the installation-defined limit.
57032	The maximum number of concurrent databases have already been started.
57033	Deadlock or timeout occurred without automatic rollback.
57036	The transaction log does not belong to the current database.
57046	A new transaction cannot start because the database or instance is quiesced.
57047	An internal database file cannot be created, because the directory is not accessible.
57048	An error occurred while accessing a storage group or a table space.
57049	The operating system process limit has been reached.
57050	The file server is not currently available.
57051	The estimated CPU cost exceeds the resource limit.
57052	The database partition is unavailable because it does not have containers for all temporary table spaces.
57053	The operation cannot be performed on the table because of conflicting operations.
57055	A temporary table space with sufficient page size was not available.
57056	Package is not available because the database is in NO PACKAGE LOCK mode.
57057	The SQL statement cannot be executed due to a prior condition in a DRDA chain of SQL statements.
57059	There is not enough space in the table space for the specified action.
57060	The statement cannot be processed because no transports are available.
57061	The current state of a member prevents processing of the statement.
57062	Adjustment not permitted for a period as a result of a data change operation.
57063	The current member cannot process data change statements because of an error on another member.
57064	Multiple active statements are not supported on the connection to the federated data source.

Class Code 58 System Error

Table 42. Class Code 58: System Error

SQLSTATE Value	Meaning
58004	A system error (that does not necessarily preclude the successful execution of subsequent SQL statements) occurred.
58005	A system error (that prevents the successful execution of subsequent SQL statements) occurred.
58008	Execution failed due to a distribution protocol error that will not affect the successful execution of subsequent DDM commands or SQL statements.
58009	Execution failed due to a distribution protocol error that caused deallocation of the conversation.
58010	Execution failed due to a distribution protocol error that will affect the successful execution of subsequent DDM commands or SQL statements.
58011	The DDM command is invalid while the bind process is in progress.
58012	The bind process with the specified package name and consistency token is not active.
58014	The DDM command is not supported.
58015	The DDM object is not supported.
58016	The DDM parameter is not supported.
58017	The DDM parameter value is not supported.
58018	The DDM reply message is not supported.
58023	A system error has caused the current program to be canceled.
58024	An error has occurred in the underlying operating system. Named condition: UTL_FILE.INVALID_OPERATION.
58030	An I/O error has occurred.
58031	The connection was unsuccessful, because of a system error.
58032	Unable to use the process for a fenced mode user-defined function.
58034	An error was detected while attempting to find pages for an object in a DMS tablespace.
58035	An error was detected while attempting to free pages for an object in a DMS tablespace.
58036	The internal storage group or table space ID specified does not exist.
58038	Execution failed due to a cluster manager error that will not affect the successful execution of subsequent SQL statements.

Class Code 5U Utilities

Table 43. Class Code 5U: Utilities

SQLSTATE Value	Meaning
5U001	The specified function or feature is not supported.
5U002	The specified application does not currently exist.
5U003	No activity monitor reports can be found.
5U004	One or more values provided when saving the monitoring task are invalid.
5U005	The specified action mode is invalid.

Table 43. Class Code 5U: Utilities (continued)

SQLSTATE Value	Meaning
5U006	Required monitor switch is not turned on.
5U007	CLP error was returned. Refer to the CLP message documentation for details.
5U008	The utility operation ID is not valid.
5U009	Maximum number of storage paths has been reached.
5U010	The restore operation on a non-catalog database partition cannot specify automatic storage paths.
5U011	The restore operation must specify automatic storage paths.
5U012	Invalid or incorrect use of a database partition expression in the path.
5U013	The restore cannot continue because a database partition is not available.
5U014	The authorization ID does not have the LBAC credentials necessary to run the LOAD command against the table.
5U015	The PC/IXF file is not supported in Import using Method N.
5U016	The identified activity cannot be cancelled at this time.
5U017	Only one work action set can be defined for a database or service superclass.
5U018	The service subclass specified in the mapping work action cannot be the default service subclass.
5U019	Range specified in the FROM and TO parameters is invalid.
5U020	The workload cannot service the request because it is either disabled or its access to the database is disallowed.
5U021	SQL statements cannot be executed until the application process executes either a commit or rollback operation.
5U022	The last connection attribute cannot be dropped from the definition of the workload.
5U023	The workload cannot be dropped because it is not disabled or it has active workload occurrences.
5U024	Event monitor not activated because an event monitor of the same type is already active.
5U025	The threshold cannot be dropped because it is not disabled, it has a queue that is not empty, or an activity is running under the control of the threshold.
5U026	A threshold has been exceeded. The execution has been stopped.
5U027	The maximum number of service classes has been exceeded for the database or the service superclass.
5U028	Request cannot be executed because the service class is disabled.
5U029	Cannot create a service subclass under a default service class.
5U030	An error occurred while communicating with the external workload manager.
5U031	The service class cannot be dropped because it has subclasses, associated workloads, work action sets, work actions, connections, activities, or thresholds or is not disabled or is a default service class.
5U032	The default service class cannot be altered as specified.
5U033	A PREVENT EXECUTION work action is applied to the activity, and so the activity was not run.
5U034	The work action type specified is not valid for the work action.
5U035	The activity does not exist.

Table 43. Class Code 5U: Utilities (continued)

SQLSTATE Value	Meaning
5U036	A column name was truncated in the PC/IXF file during Export.
5U037	The threshold cannot be created because it violates a restriction.
5U038	The threshold was not created because a threshold with a matching definition already exists.
5U039	The connection attribute value already exists for the connection attribute or a duplicate was detected.
5U040	The specified connection attribute value cannot be dropped as it is not defined for the connection attribute.
5U041	An audit policy is already in use for the specified object.
5U042	An audit policy is not associated with the specified object.
5U043	The specified clause is not supported for service superclasses.
5U044	The specified clause is not supported for service subclasses.
5U045	The request cannot complete because the referenced service class has been dropped.
5U046	The activity cannot be mapped to the specified service subclass because at least one of the input parameters to the routine is not valid.
5U047	The option specified for the reorganization operation is not valid.
5U048	The SYSINSTALLOBJECTS procedure failed to migrate the explain tables.
5U049	The specified option to the load utility is not supported for the specified load operation.
5U050	The configuration parameter specified could not be updated because the operation timed out.
5U051	There is not enough available memory in the cluster caching facility to satisfy the request to increase the specified database configuration parameter to the specified value.
5U052	The configuration parameter specified could not be updated because another request to update the same configuration parameter is currently in progress.
5U053	The update operation on the global database configuration parameter specified could not be applied on the specified member.
5U054	There is an invalid value in the database manager configuration file.
5U055	The backup operation failed because the backup utility was unable to collect the required information and metadata for one or more DB2 members.
5U056	Execution failed due to a cluster manager error. SQL statements against this database will fail until manual clean-up.
5U057	Redirecting storage group paths is not allowed because of the current state of the storage group.
5U0ZZ	The routine has encountered an error. Refer to the SQLCODE for details.
5UA01	The task cannot be removed because it is currently executing.
5UA03	An error occurred during the explicit revalidation of an object.
5UA04	No alert has been registered previously with the DBMS_ALERT.REGISTER procedure.
5UA05	An invalid filename was specified for a UTL_FILE module routine. Named condition: UTL_FILE.INVALID_FILENAME.

Table 43. Class Code 5U: Utilities (continued)

SQLSTATE Value	Meaning
5UA06	An invalid path was specified for a UTL_FILE module routine. Named condition: UTL_FILE.INVALID_PATH.
5UA07	An invalid file handle was specified for a UTL_FILE module routine. Named condition: UTL_FILE.INVALID_FILEHANDLE.
5UA08	An invalid mode was specified for the UTL_FILE.FOPEN function. Named condition: UTL_FILE.INVALID_MODE.
5UA09	An invalid maximum line size was specified for the UTL_FILE.FOPEN function. Named condition: UTL_FILE.INVALID_MAXLINESIZE.
5UA0A	A read error was encountered by a UTL_FILE module routine. Named condition: UTL_FILE.READ_ERROR.
5UA0B	A write error was encountered by a UTL_FILE module routine. Named condition: UTL_FILE.WRITE_ERROR.
5UA0C	The UTL_FILE.REMOVE procedure failed to delete the specified file. Named condition: UTL_FILE.DELETE_FAILED.
5UA0D	The UTL_FILE.RENAME procedure failed to rename the specified file. Named condition: UTL_FILE.RENAME_FAILED.
5UA0E	A UTL_SMTP module routine encountered a transient SMTP server error. Named condition: UTL_SMTP.TRANSIENT_ERROR.
5UA0F	A UTL_SMTP module routine encountered a permanent SMTP server error. Named condition: UTL_SMTP.PERMANENT_ERROR.
5UA0G	TCP timeout has occurred. Named condition: UTL_TCP.TRANSFER_TIMEOUT.
5UA0H	TCP/IP network error. Named condition: UTL_TCP.NETWORK_ERROR.
5UA0I	The data type, length, scale, value, or CCSID is invalid for a UTL_TCP routine. Named condition: UTL_TCP.BAD_ARGUMENT.
5UA0J	The data type, length, scale, value, or CCSID is invalid for a DBMS_LOB routine. Named condition: DBMS_LOB.INVALID_ARGVAL.
5UA0K	Access was denied to a file when executing a UTL_FILE module routine. Named condition: UTL_FILE.ACCESS_DENIED.
5UA0L	An internal error, out of memory or system error, occurred in the UTL_FILE module. Named condition: UTL_FILE.INTERNAL_ERROR.
5UA0M	The ADMIN_MOVE_TABLE procedure has terminated with an error.
5UA0N	The operation is invalid because the UTL_SMTP module routine is called out of sequence. Named condition: UTL_SMTP.INVALID_OPERATION.
5UA0O	The argument to the WRAP function or to the CREATE_WRAPPED procedure is not valid.
5UA0P	Message buffer size exceeded. Named condition: UTL_TCP.BUFFER_TOO_SMALL.

Part 4. Communication errors (message SQL30081N)

If your application returns an error message SQL30081N (sqlcode -30081), it means that a communications error has been detected. The actual error encountered by the communications subsystem is returned in the list of error tokens for the -30081 error message.

The following section lists possible communications errors that can be returned.

The error codes are grouped by protocol as follows:

- “TCP/IP”
- “SOAP” on page 822
- “MQ” on page 822
- “SSL” on page 823
- “SOCKS” on page 824
- “HTTP” on page 824

TCP/IP

When using TCP/IP in a UNIX environment, the following table lists some of the error numbers (*errno*s) which the user may encounter most frequently. It is *not* a complete list of errors. *Errnos* can be found in the file `/usr/include/sys/errno.h`. On Linux, the *errno*s are located in `/usr/include/asm/errno.h`. The *errno* number itself is indicated for each operating system.

Table 44. UNIX TCP/IP *errno*s.

Errno	AIX® <i>errno</i> number	HP-UX <i>errno</i> number	Solaris <i>errno</i> number	Linux <i>errno</i> number	Description
EINTR	4	4	4	4	The function specified was interrupted by a signal.
EBADF	9	9	9	9	Bad socket. The socket may have been corrupted.
EAGAIN	11	11	11	11	Resource temporarily unavailable.
EFAULT	14	14	14	14	Bad address. On connect, bad address. On receive, the data was directed to be received into a nonexistent or protected part of the process address space. The buffer is not valid.
EBUSY	16	16	16	16	Resource busy.
EINVAL	22	22	22	22	Invalid argument passed to the function specified or the socket has been closed. This may be returned if there has been a memory overwrite, buffer overflow problem.

Table 44. UNIX TCP/IP errors. (continued)

Errno	AIX® errno number	HP-UX errno number	Solaris errno number	Linux errno number	Description
ENFILE	23	23	23	23	Too many open files in the system.
EMFILE	24	24	24	24	The per-process file descriptor table is full. Number of file descriptors/sockets for the process has been exceeded.
ENOSPC	28	28	28	28	No space left on a device or system table.
EPIPE	32	32	32	32	Broken pipe.
EWOULDBLOCK	54	246	11	11	On the connect function, the range allocated for TCP/UDP ephemeral ports has been exhausted. (On some platforms, returns the same errno as EAGAIN.)
ENOTSOCK	57	216	95	88	Socket operation on a non-socket.
ENOPROTOPT	61	220	99	92	Option is unknown.
EADDRINUSE	67	226	125	98	The specified address is already in use. Perhaps the previous process that established the connection was terminated abnormally or has not been cleaned up properly.
EADDRNOTAVAIL	68	227	126	99	The specified hostname or IP address is not available from the local machine.
ENETDOWN	69	228	127	100	The network is down.
ENETUNREACH	70	229	128	101	No route to the network or host is available.
ENETRESET	71	230	129	102	The network has dropped the connection on reset.
ECONNRESET	73	232	131	104	Connection has been reset by the partner.
ENOBUFS	74	233	132	105	Insufficient memory or resources were available in the system to complete the call.
EISCONN	75	234	133	106	The socket is already connected.
ENOTCONN	76	235	134	107	The socket is not connected.
ETIMEDOUT	78	238	145	110	The connection timed out.

Table 44. UNIX TCP/IP errors. (continued)

Errno	AIX® errno number	HP-UX errno number	Solaris errno number	Linux errno number	Description
ECONNREFUSED	79	239	146	111	The connection has been refused. If you are trying to connect to the database, check that the database manager and TCP/IP protocol support at the server have been started successfully. If using SOCKS protocol support, also ensure that TCP/IP protocol support at the SOCKS server has been started successfully.
EHOSTDOWN	80	241	147	112	The host is down.
EHOSTUNREACH	81	242	148	113	No route to the host is available.

For more information on UNIX TCP/IP communication errors, refer to the technical reference manuals for the appropriate operating system. You can also issue the following command:

```
man function-name
```

where *function-name* represents the name of the function that returned an error. The man pages might provide you with additional information about errors returned by specific functions.

When using TCP/IP on a Windows operating system, the following is a list of error codes which the user may encounter most frequently. It is *not* a complete list of errors. Errors returned can be found in the file `winsock2.h`. This file may not be installed on your system if you do not have a development environment installed. Detailed information about errors returned by specific functions are documented in the Windows Sockets 2 Application Programming Interface. You can get a copy of this specification from the following website: <http://www.sockets.com/winsock2.htm>

- WSAEINTR (10004): Interrupted function call. A blocking operation was interrupted.
- WSAEFAULT (10014): Bad address. The system detected an invalid pointer address during the function call. This error occurs if an application passes an invalid pointer value, or if the length of the buffer is too small.
- WSAEINVAL (10022): An invalid argument was passed to the function. This error can also mean that the socket is no longer valid, or that the current state of the socket is not compatible with the TCP function being called (for example, trying to issue a SQL statement before connecting to the database.)
- WSAEMFILE (10024): Too many open files. Too many open sockets. Each implementation may have a maximum number of socket handles available, either globally, per process, or per thread.
- WSAEWOULDBLOCK (10035): Resource temporarily unavailable. This error is returned from operations on non-blocking sockets that cannot be completed immediately.

- WSAEINPROGRESS (10036): A blocking Windows Sockets operation is in progress. Windows Sockets only allows a single blocking operation to be outstanding per task (or thread), and if any other function call is made, the function fails with WSAEINPROGRESS.
- WSAENOTSOCK (10038): Socket operation on a non-socket. An operation was attempted on something that is not a socket. Either the socket parameter did not reference a valid socket, or for select(), a member of an fd_set was not valid.
- WSAENOPROTOOPT (10042): Bad protocol option. An unknown, invalid, or unsupported option or level was specified in a getsockopt() or setsockopt() call.
- WSAEADDRINUSE (10048): Address already in use. Only one usage of each socket address (protocol/IP address/port) is normally permitted. This error occurs if an application attempts to bind() a socket to an IP address/port that has already been used for an existing socket, or a socket that wasn't closed properly, or one that is still in the process of closing.
- WSAEADDRNOTAVAIL (10049): Cannot assign requested address. The requested address is not valid in its context. Normally results from an attempt to bind() to an address that is not valid for the local machine. This may also result from connect(), sendto() when the remote address or port is not valid for a remote machine.
- WSAENETDOWN (10050): Network is down. A socket operation encountered a dead network. This could indicate a serious failure of the network system (i.e. the protocol stack that the WinSock DLL runs over), the network interface, or the local network itself.
- WSAENETUNREACH (10051): Network is unreachable. A socket operation was attempted to an unreachable network. This usually means the local software knows no route to reach the remote host.
- WSAENETRESET (10052): Network dropped connection on reset. The connection has been broken due to "keep-alive" activity detecting a failure while the operation was in progress. May also be returned by stsockopt() if an attempt is made to set SO_KEEPALIVE on a connection that has already failed.
- WSAECONNABORTED (10053): Software caused connection abort. An established connection was aborted by the software on your machine, possibly due to a data transmission timeout or protocol error.
- WSAECONNRESET (10054): Connection reset by peer. An existing connection was forcibly closed by the remote peer. This normally results if the peer application on the remote machine is suddenly stopped, the machine is rebooted, or the peer application used a "hard close" on the remote socket. This error may also result if a connection was broken due to "keep-alive" activity detecting a failure while one or more operations are in progress. Operations in progress fail with WSAENETRESET. Subsequent operations fail with WSAECONNRESET.
- WSAENOBUFS (10055): No buffer space available. An operation on a socket could not be performed because the system lacked sufficient buffer space or because a queue was full. ¹
- WSAEISCONN (10056): Socket is already connected. A connect request was made on a socket that is already connected.
- WSAENOTCONN (10057): The socket is not connected.
- WSAETIMEDOUT (10060): Connection timed out. A connection attempt failed because the connected party did not properly respond after a period of time, or an established connection failed because the remote node failed to respond. Failure to respond could be due to a network failure or a failure on the remote system.

- WSAECONNREFUSED (10061): Connection refused. No connection could be made because the target machine actively refused it. This usually results from trying to connect to a service that is inactive on the remote host (for example, one with no server application running.) If trying to attach to the instance or to connect to the database, check that the database manager and TCP/IP protocol support at the server have been started successfully. This error could also occur if a firewall at the target machine refused the connection. To correct the problem, verify that the firewall is properly configured to accept the connection request.
- WSAEHOSTUNREACH (10065): No route to host. A socket operation was attempted to a machine that is currently unreachable.
- WSASYSNOTREADY (10091): The underlying network subsystem is not ready for network communication. The error is returned by WSASocket() when the Windows Sockets implementation cannot function at this time because the underlying system it uses to provide network services is unavailable. Check that the appropriate Windows Sockets DLL is in the current path, and that there is not more than one WinSock implementation being used simultaneously. If there is more than one WinSock DLL on the system, confirm the one that appears first in the path is appropriate for the network subsystem currently loaded, and that all necessary components are currently installed and configured correctly.
- WSAVERNOTSUPPORTED (10092): The version of Windows Sockets API support requested is not provided by this particular Windows Sockets implementation. Check that no old Windows Sockets DLL files are being accessed.
- WSANOTINITIALISED (10093): Either the application has not called WSASocket(), or WSASocket() failed. The application may be accessing a socket which the current active task does not own (i.e. trying to share a socket between tasks), or WSACleanup() has been called too many times. Or, the connection was terminated.
- WSA_E_NO_MORE (10110), WSAENOMORE (10102): There is no more data available. In Windows Sockets Version 2, conflicting error codes are defined for WSAENOMORE and WSA_E_NO_MORE. The error code WSAENOMORE will be removed in a future version and only WSA_E_NO_MORE will remain.
- WSAHOST_NOT_FOUND (11001): Host not found.
- WSATRY_AGAIN (11002): Host not found. Request to retrieve the hostname's IP address from the name server failed because the local machine did not receive a response from the name server.
- WSANO_DATA (11004): Valid name, no data record of requested type. The name server or hosts file does not recognize the hostname, or the service name is not specified in the services file.

Note:

1. The WSAENOBUFFS (10055) error code can also be generated when no TCP ports are available. You can update the Windows registry variable **MaxUserPort** to access more ports. You can find details about setting Windows registry variables on the Microsoft Help and Support Web site at <http://support.microsoft.com/>.

For more information on TCP/IP communication errors under Windows, refer to the Windows Sockets documentation.

SOAP

Following is a list of the protocol errors that you might encounter when using SOAP. The number in parentheses indicates the defined number corresponding to the return code.

- SOAP_UNEXPECTED_NULL (38301): One of the inputs (SOAP action, SOAP endpoint or SOAP body) to the SOAP communication functions was NULL.
- HTTP_INITSOCKET (38303): Error initializing socket.
- HTTP_ERROR_UNKNOWN_PROTOCOL (38304): The protocol used in the URL is unknown.
- HTTP_INVALID_URL (38305): The URL syntax is invalid.
- HTTP_ERROR_CREATE_SOCKET (38306): Error creating socket.
- HTTP_ERROR_BIND_SOCKET (38307): Error binding socket (bind function).
- HTTP_ERROR_RESOLVE_HOSTNAME (38308): The specified hostname could not be resolved.
- HTTP_ERROR_SOCKET_CONNECT (38309): Error connecting to socket.
- HTTP_ERROR_GET_PROTO (38310): Error getting TCP protocol name (getprotobyname function).
- HTTP_ERROR_SET_SOCKETOPT (38311): Error setting socket options (setsockopt function).
- HTTP_ERROR_UNEXPECTED_RETURN (38312): Unexpected HTTP return code.
- HTTP_ERROR_RETURN_CONTENTTYPE (38313): Unexpected HTTP Content-type header attribute value.
- SOAP_SAX_INIT (38314): Error initializing SAX parser.
- SOAP_SAX_CREATE_PARSER (38315): Error creating SAX parser.
- SOAP_SAX_CREATE_HANDLER (38316): Error creating SAX parser handler.
- SOAP_SAX_ERROR (38317): Exception during XML parsing of SOAP.
- SOAP_SAX_OUTENCODING (38318): Error during codepage translation of XML message.
- HTTP_ERROR_WRITE_SOCKET (39820): Error writing to socket.
- HTTP_ERROR_READ_SOCKET (38322): Error reading from socket.
- HTTP_ERROR_SELECT_WAITREAD (38323): Socket error in select function.
- SOAP_ERROR_XML_SERIALIZE (38324): Error writing XML SOAP message.
- SOAP_ERROR_NO_NS_END (38325): Error in namespace processing.
- SOAP_ERROR_FAULT (38326): SOAP fault has been returned from web service.

MQ

The following is a list of some of the protocol error codes that you might encounter while using MQ. This list is *not* exhaustive. The number in parentheses indicates the defined number corresponding to the return code. Refer to the MQ protocol documentation for further details.

- MQRC_CHAR_ATTR_LENGTH_ERROR (2006)
- MQRC_CONNECTION_BROKEN (2009)
- MQRC_HANDLE_NOT_AVAILABLE (2017)
- MQRC_HCONN_ERROR (2018)
- MQRC_HOBJ_ERROR (2019)
- MQRC_MSG_TOO_BIG_FOR_Q (2030)

- MQRC_MSG_TOO_BIG_FOR_Q_MGR (2031)
- MQRC_NO_MSG_AVAILABLE (2033)
- MQRC_OBJECT_CHANGES (2041)
- MQRC_Q_FULL (2053)
- MQRC_Q_SPACE_NOT_AVAILABLE (2056)
- MQRC_Q_MGR_NAME_ERROR (2058)
- MQRC_Q_MGR_NOT_AVAILABLE (2059)
- MQRC_UNKNOWN_OBJECT_NAME (2085)

SSL

When using Secure Sockets Layer (SSL), errors might be discovered by the SSL support software, GSKit. The following is a list of errors that might be found.

- 4: Insufficient memory.
- 6: Specified key label not found in the keyfile.
- 7: Certificate not received from partner.
- 8: Error validating certificate.
- 102: I/O error reading keyfile.
- 103: Keyfile has incorrect format. Recreate keyfile.
- 104: Keyfile contains duplicate keys.
- 105: Keyfile contains duplicate labels.
- 106: Invalid keyfile password or keyfile has been corrupted.
- 107: The default key in the keyfile has an expired certificate.
- 108: Error loading GSKit libraries. Ensure that GSKit is properly installed.
- 201: Keyfile password not provided.
- 202: Error opening keyfile. Ensure that keyfile path is correct.
- 401: System date was set to an invalid value.
- 403: A required certificate was not received from a partner.
- 404: A required certificate was received from a partner, but the format of the certificate was wrong.
- 405: The received certificate was of an unsupported type.
- 406: An I/O error was encountered while communicating with a partner.
- 407: The specified client certificate label was not found in the keyfile.
- 408: The supplied password for the keyfile was not correct.
- 409: In valid key length (too long.)
- 410: An incorrectly formatted SSL message was received from a partner.
- 412: An unsupported protocol or certificate type was received from a partner.
- 413: The received certificate contained an invalid signature.
- 414: Incorrectly formatted certificate was received from a partner.
- 415: An invalid SSL protocol was received from a partner.
- 417: A self-signed certificate was invalid.
- 420: The partner closed the communication socket before the SSL protocol was complete.
- 428: The specified key did not contain a private key.

SOCKS

When using the SOCKS protocol, the following errors might be encountered:

- 01: General SOCKS server failure
- 02: Connection not allowed by the ruleset defined at SOCKS server
- 03: Destination network is unreachable
- 04: Destination host is unreachable
- 05: Connection refused by the remote host
- 06: TTL expired (the remote host is too far away)
- 07: Command not supported. (Internal error)
- 08: Address type not supported. (Internal error)
- 91: The request was rejected or failed. The user or source program is not authorized to access the proxy server.
- 92: The request was rejected because the SOCKS server could not contact "identd" (the IDENT server.)
- 93: The request was rejected because the client program and identd reported different user identities.

The following values identify the authentication method used:

- 00: No authentication.
- 01: GSSAPI
- 02: USERNAME/PASSWORD
- FF: No acceptable methods were found.

HTTP

When using the HTTP protocol, the following are the most common errors that might be encountered:

- 400: Bad request
- 401: Not authorized.
- 403: Forbidden
- 404: Not found
- 407: Proxy authentication required
- 408: Request timed out
- 413: Request entity too large
- 414: Request URL too long
- 502: Bad gateway. Indicates that the server or proxy received an invalid response from another server (or proxy).
- 503: Service unavailable. Indicates a temporary resource shortage.
- 504: Gateway timed out.
- 505: HTTP version not supported.

Part 5. Appendixes

Appendix A. Overview of the DB2 technical information

DB2 technical information is available in multiple formats that can be accessed in multiple ways.

DB2 technical information is available through the following tools and methods:

- DB2 Information Center
 - Topics (Task, concept and reference topics)
 - Sample programs
 - Tutorials
- DB2 books
 - PDF files (downloadable)
 - PDF files (from the DB2 PDF DVD)
 - printed books
- Command-line help
 - Command help
 - Message help

Note: The DB2 Information Center topics are updated more frequently than either the PDF or the hardcopy books. To get the most current information, install the documentation updates as they become available, or refer to the DB2 Information Center at ibm.com.

You can access additional DB2 technical information such as technotes, white papers, and IBM Redbooks® publications online at [ibm.com](http://www.ibm.com). Access the DB2 Information Management software library site at <http://www.ibm.com/software/data/sw-library/>.

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We value your feedback on the DB2 documentation. If you have suggestions for how to improve the DB2 documentation, send an email to db2docs@ca.ibm.com. The DB2 documentation team reads all of your feedback, but cannot respond to you directly. Provide specific examples wherever possible so that we can better understand your concerns. If you are providing feedback on a specific topic or help file, include the topic title and URL.

Do not use this email address to contact DB2 Customer Support. If you have a DB2 technical issue that the documentation does not resolve, contact your local IBM service center for assistance.

Displaying SQL state help from the command line processor

DB2 products return an SQLSTATE value for conditions that can be the result of an SQL statement. SQLSTATE help explains the meanings of SQL states and SQL state class codes.

Procedure

To start SQL state help, open the command line processor and enter:

```
? sqlstate or ? class code
```

where *sqlstate* represents a valid five-digit SQL state and *class code* represents the first two digits of the SQL state.

For example, ? 08003 displays help for the 08003 SQL state, and ? 08 displays help for the 08 class code.

Accessing different versions of the DB2 Information Center

Documentation for other versions of DB2 products is found in separate information centers on ibm.com[®].

About this task

For DB2 Version 10.1 topics, the *DB2 Information Center* URL is <http://publib.boulder.ibm.com/infocenter/db2luw/v10r1>.

For DB2 Version 9.8 topics, the *DB2 Information Center* URL is <http://publib.boulder.ibm.com/infocenter/db2luw/v9r8/>.

For DB2 Version 9.7 topics, the *DB2 Information Center* URL is <http://publib.boulder.ibm.com/infocenter/db2luw/v9r7/>.

For DB2 Version 9.5 topics, the *DB2 Information Center* URL is <http://publib.boulder.ibm.com/infocenter/db2luw/v9r5>.

For DB2 Version 9.1 topics, the *DB2 Information Center* URL is <http://publib.boulder.ibm.com/infocenter/db2luw/v9/>.

For DB2 Version 8 topics, go to the *DB2 Information Center* URL at: <http://publib.boulder.ibm.com/infocenter/db2luw/v8/>.

DB2 tutorials

The DB2 tutorials help you learn about various aspects of DB2 database products. Lessons provide step-by-step instructions.

Before you begin

You can view the XHTML version of the tutorial from the Information Center at <http://publib.boulder.ibm.com/infocenter/db2luw/v10r1/>.

Some lessons use sample data or code. See the tutorial for a description of any prerequisites for its specific tasks.

DB2 tutorials

To view the tutorial, click the title.

“pureXML[®]” in *pureXML Guide*

Set up a DB2 database to store XML data and to perform basic operations with the native XML data store.

DB2 troubleshooting information

A wide variety of troubleshooting and problem determination information is available to assist you in using DB2 database products.

DB2 documentation

Troubleshooting information can be found in the *Troubleshooting and Tuning Database Performance* or the Database fundamentals section of the *DB2 Information Center*, which contains:

- Information about how to isolate and identify problems with DB2 diagnostic tools and utilities.
- Solutions to some of the most common problem.
- Advice to help solve other problems you might encounter with your DB2 database products.

IBM Support Portal

See the IBM Support Portal if you are experiencing problems and want help finding possible causes and solutions. The Technical Support site has links to the latest DB2 publications, TechNotes, Authorized Program Analysis Reports (APARs or bug fixes), fix packs, and other resources. You can search through this knowledge base to find possible solutions to your problems.

Access the IBM Support Portal at http://www.ibm.com/support/entry/portal/Overview/Software/Information_Management/DB2_for_Linux,_UNIX_and_Windows

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