

IBM IoT Building Insights delivers foundational IoT platform to help owners and operators manage connected buildings and drive optimal performance of entire enterprise

Table of contents

1 Overview	5 Technical information
1 Key prerequisites	6 Ordering information
2 Planned availability date	7 Terms and conditions
2 Description	8 Prices
5 Program number	8 Announcement countries
5 Publications	

Overview

IBM[®] IoT Building Insights is a solution designed for collecting sensor data, performing robust analytics, and enabling better decision making in connected buildings. Through the collection, analysis, and storage of a building's sensor data, owners and operators gain actionable insights to optimize building performance and management for financial and regulatory requirements.

As a robust, scalable, and flexible IoT platform, IoT Building Insights creates value along the entire building transformation journey for both new construction and retrofits.

IoT Building Insights provides services that can be deployed for the following activities:

- Collect, store, and analyze data across an entire global enterprise.
- View accurate contextual map of an enterprise's vitals.
- Develop brand-differentiating experiences in buildings through augmented intelligence.
- Advance extensive experience in real estate and facility management.
- Perform global and large-scale delivery.

Clients can also purchase non-production environment Instances of IBM IoT Building Insights. The non-production Instance can be used to test and prove value in the solution, test connecting devices of any type, and to run proof of concepts. Each non-production Instance can support up to 10 client devices. If the client wishes to increase the number of devices, they must deploy the production offering.

Key prerequisites

IBM IoT Connection Service is a prerequisite for IBM IoT Building Insights. For more information about IBM IoT Connection Service, see Software Announcement [ZP17-0687](#), dated November 28, 2017.

IoT Building Insights also requires the following:

- Internet connection

- Browser

Information about key prerequisites is also available in [IBM Knowledge Center](#).

Planned availability date

June 26, 2018

Description

IoT Building Insights analyzes IoT sensors and meter data, while integrating with building management systems and correlating input from external solutions to learn the behavior of buildings with respect to energy use, occupancy, and asset health through augmented intelligence. IoT Building Insights focuses on energy consumption analytics and diagnostics, AI models for energy prediction, and energy waste cost avoidance.

When electric interval energy data is collected from your buildings' onsite meters and sensors, the data enters through the connect-and-collect layer of the IoT Building Insights platform and onto the secure data storage area of the offering. The platform's unique KITT (Keep IoT Trivial) semantic metadata layer uses the Brick schema, which is a uniform metadata schema for buildings, to build a knowledge graph of your buildings and assets. The KITT semantic metadata layer provides an important and effective business advantage. Typically, an individual engineer within the enterprise creates custom labels for each building and asset, each having a unique name to identify it in a building management system. However, the KITT semantic layer in IoT Building Insights understands to which building or asset the labels refer by learning the semantics and associating words with equipment and physical values, such as temperature, air flow, and pressure. The metadata is tagged to a physical knowledge graph for the building, which links all the systems and assets, giving an energy manager a comprehensive view of an entire building and many buildings across an enterprise.

IoT Building Insights provides augmented intelligence to learn the knowledge graph and predict energy usage, a building's behaviors, and anomalous patterns. This augmented intelligence not only uses data from building systems, but also learns from external factors, such as weather forecasts, occupancy levels, calendar data, and seasonality, which enter the platform through the KITT Semantic Data Platform API.

All of the data that is consolidated, stored, and analyzed by the IoT Building Insights platform is displayed in an elegant, user-friendly dashboard, enabling an energy manager to see energy consumption analytics and diagnostics, augmented intelligence models for energy prediction, and energy waste cost avoidance.

Specifically, with IoT Building Insights' platform and dashboard, an energy manager is able to choose a historical date range and view buildings in an enterprise that are using excessive energy, as well as the average energy consumption for all sites versus average energy consumption for a specific site. The energy manager can see a detailed view of energy consumption across the enterprise and building, and see this correlated with weather data. The energy consumption of the entire enterprise can be viewed on a color-coded map so the energy manager can immediately focus on regions or buildings that need the most attention. From the map, the energy manager can drill down into each site, as well as the priority notifications within that site, which can show which specific assets are driving excessive energy consumption.

In addition to energy consumption analytics and diagnostics, the energy manager can benefit from IoT Building Insights augmented intelligence models for energy prediction, where consumption of both the entire enterprise and individual buildings can be predicted for the next 48 hours.

A further area of insights the energy manager will be able to take action on is around energy waste cost avoidance. With IoT Building Insights, the energy manager can obtain the overall energy savings in the last month and last six months across the enterprise and at the building level. Additionally, the overall energy wastage across the enterprise and within a building can be viewed on the dashboard.

Building managers and owners are facing energy costs that can account for 20% of the operational costs of a building. Therefore, optimizing energy is one of the best ways to impact the bottom line positively. By providing actionable insights, IoT Building Insights gives both energy and building managers a robust and sustainable way to control and optimize buildings' energy consumption, reduce environmental impact to the enterprise, and save time and money by prioritizing issues in buildings that are experiencing efficiency issues.

IoT Building Insights can help owners and tenants in the following primary categories of buildings:

- Office buildings are used primarily for the conduct of business that relates to administration, clerical services, consulting, and other client services that are not related to retail sales. Office buildings can hold single or multiple firms.
- Retail buildings are public trading locations that have a range of forms, including main street stores, supermarkets, department stores, convenience stores, and restaurants.
- Hybrid buildings host different kinds of activity (multipurpose) and show a diversified range of needs. These buildings include malls, airports, and so on.

IoT Building Insights has some unique capabilities not available to other solutions in the market:

- Building semantic model (KITT)
- Building Knowledge Graph
- Integration with the Weather Company data
- Predictive analytics and machine learning or augmented intelligence models

IoT Building Insights is characterized by interoperability: it is compatible and can be integrated with any legacy system in the market, including sensors, building automation systems (BAS), building management systems (BMS) and specialized point solutions. Most competitors, especially BAS or BMS, tend to provide walled garden solutions that lock the customer in. IoT Building Insights helps you future proof your enterprise by easily extending to include new sensors and data sources as they become available.

Also, the offering is natively compatible with IBM TRIRIGA^(R) and IBM Maximo^(R).

Business advantages of integrating IoT Building Insights with your building and asset management processes

Actionable information improves monitoring the people and things within buildings

By using IoT Building Insights cloud services offering, energy managers, retail store managers, workspace planners, and multiple other enterprise users are empowered with insights that help them make better business decisions. IoT Building Insights comes with the ready capabilities to help energy managers optimize their spending on the most costly areas of the enterprise, by providing a seamless view of their disparate systems' energy usage across both the entire enterprise, and at an individual site level.

Energy managers in all industries can benefit from budget and usage reduction

Energy managers and leadership within their enterprise are challenged to meet budget and energy usage goals because they lack a way to view the energy usage

of multiple buildings and the various disparate systems and equipment within those buildings on a day-to-day basis. Without this comprehensive view, long-term planning and predictions for budgeting purposes are cumbersome. IoT Building Insights not only provides that comprehensive view of all systems, but can also predict usage and detect anomalies, which can save enterprises time and money.

IoT Building Insights uses data from IoT sensors, main meters and sub meters, as well as data coming from any Building Management System, to learn the behavior of the things and people in the building with respect to energy usage. The analysis of the data is unique in the industry, because it leverages augmented intelligence through analytical models to predict energy use, displaying the overall health of the enterprise and individual buildings in a simple dashboard.

Clients in the commercial real estate industry can gain a competitive advantage

Because knowledge of energy usage and prediction of future usage is appealing to tenants seeking space in commercial buildings, IoT Building Insights can offer a competitive advantage to commercial real estate clients. These clients can show potential tenants that the building is aware, through IoT devices that monitor both things and people, as well as external data such as weather, to measure energy usage and detect anomalies that can cause excessive energy use. Not only does this represent a competitive advantage, but acting on these insights can reduce overall operating cost of the buildings.

Various systems throughout buildings become integrated and achieve a comprehensive view

Driving the accelerated growth of integrated systems in buildings are both internal enterprise factors and external market opportunities. Building managers and owners are under pressure to decrease operational cost, while being incentivized by increasing government initiatives on smart building projects. Additionally, external opportunities that drive demand include green building initiatives and environmental concerns of both the enterprise and its employees and tenants. IoT Building Insights addresses these concerns and offers the integration of various systems throughout buildings to achieve a comprehensive view.

Your building and asset data analysis becomes effective insights through action-orientated visualizations that are easy to understand and perform

While implementation of IoT devices within buildings and connecting those to building automation technology on a single cloud based IoT platform is a critical need, the data created in solution, as well as the skills needed to develop such a solution from the ground-up can be a challenge for even the most sophisticated of enterprises. In essence, big data does not equate to insights unless an offering, such as IoT Building Insights, is in place to analyze and display the data in action-orientated visualizations that are easy to understand and action. The visualizations in IoT Building Insights remove the need for a highly trained technical staff member to analyze data or build custom solutions. Rather, both energy managers and building owners using IBM's offering can easily decipher which sites within the enterprise are driving excessive energy consumption and quickly identify the anomalies within those sites.

Robust building insights architecture leverages partner IoT device ecosystem to reduce management time and costs

IoT Building Insights leverages its ecosystem of partner IoT devices, ranging from elevators, HVAC, electrical, lighting, chillers, refrigerators, and so on, to collect, consolidate, store, analyze, and display insights through its cloud-based IoT platform, augmented-intelligence-based analytics layer, and web application. Using this robust cloud service, IBM's clients can reduce management time and costs associated with deploying a custom solution involving multiple partners.

Energy is one of the main cost drivers in building management. Controlling and optimizing energy usage and associated costs allows corporate real estate companies and enterprises to increase profitability. IoT Building Insights is a cloud

service offering that focuses on energy consumption analytics and diagnostics, prediction of energy consumption, and electric-meter-based energy waste cost avoidance analytics. Deep insights through data analysis enable improved monitoring and management of the vitals of your buildings across an entire enterprise. Key metrics include energy waste reduction and annual energy savings.

The offering is compatible with leading building and asset management systems, such as IBM TRIRIGA and IBM Maximo, as well as third-party solutions. Office buildings and retail buildings in all industries can benefit from this solution, because it can scale to an unlimited number of buildings in a global market.

Accessibility by people with disabilities

A US Section 508 Accessibility Compliance Report containing details on accessibility compliance can be found on the [Product accessibility information](#) website.

Program number

Program number	VRM	Program name
5900-AOF	Cloud Service	IBM IoT Building Insights

Education support

IBM training provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers can be found on [IBM authorized training](#) website.

Contact your IBM representative for course information.

Offering Information

Product information is available on the [IBM Offering Information](#) website.

More information is also available on the [Passport Advantage^{\(R\)} and Passport Advantage Express^{\(R\)}](#) website.

Publications

No publications are shipped with this program.

Documentation is published in [IBM Knowledge Center](#).

Services

Global Technology Services

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings for the efficient installation, implementation, or integration of this product.

Technical information

Specified operating environment

Hardware requirements

None

Software requirements

- Internet connection
- Browser

Planning information

Packaging

This offering is delivered through the internet. There is no physical media.

Ordering information

For ordering information, consult your IBM representative or authorized IBM Business Partner, or go to the [Passport Advantage](#) website.

This product is only available through Passport Advantage. It is not available as shrinkwrap.

Product group: Internet of Things

Product: IBM IoT for Buildings

Product category: Internet of Things

Passport Advantage

IBM IoT Building Insights (5900-A0F)

Part number description	Part number
IBM IoT Building Insights 100 Client Devices per Month	D00L2ZX
IBM IoT Building Insights 100 Client Devices Pay per Use	D00L3ZX
IBM IoT Building Insights Non Production Environment Instance per Month	D00NUZX

Charge metric

Program name	PID number	Charge metric
IBM IoT Building Insights	5900-A0F	Client Device, Instance

Client Device

Client Device is a unit of measure by which the Cloud Service can be obtained. A Client Device is a single user computing device or special purpose sensor or telemetry device that requests the execution of, or receives for, execution a set of commands, procedures or applications from or provides data to another computer system that is typically referred to as a server or is otherwise managed by the server. Multiple Client Devices can share access to a common server. A Client Device can have some processing capability or be programmable to allow a user to do work. Client must obtain entitlements for every Client Device which runs, provides data to, uses services provided by, or otherwise accesses the Cloud Service during the measurement period specified in Client's PoE or Transaction Document.

Instance

Instance is a unit of measure by which the Cloud Service can be obtained. An Instance is access to a specific configuration of the Cloud Service. Sufficient entitlements must be obtained for each Instance of the Cloud Service made available to access and use during the measurement period specified in Client's PoE or Transaction Document.

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction for the acquisition of Cloud Services from IBM consist of either the IBM Cloud™ Services Agreement and the applicable offering Service Description or the IBM International Passport Advantage Agreement or the International Passport Advantage Express Agreement and the IBM Terms of Use -- General Terms for Cloud Offerings and the applicable offering Service Description.

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Additional technical support information for this Cloud Service offering may be found in the [IBM Support Handbook](#) or in service-specific documentation.

Terms of Use

Cloud Service offering-specific terms are available on the [Cloud Service terms](#) website.

Limited warranty

See the warranty defined in the applicable agreement governing client's acquisition for this offering.

Money-back guarantee

No

Volume orders (IVO)

No

Passport Advantage applies

Yes, information is available on the [Passport Advantage and Passport Advantage Express](#) website.

Software Subscription and Support applies

No

Variable charges apply

No

Educational allowance available

Education allowance does not apply. Education software allowance does not apply. Special education prices are available for qualified clients through Passport Advantage.

Statement of good security practices

IT system security involves protecting systems and information through intrusion prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a regulatory compliant, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective.

Important: IBM does not warrant that any systems, products, or services are immune from, or will make your enterprise immune from, the malicious or illegal conduct of any party.

Prices

Business Partner information

If you are an IBM Business Partner acquiring products from IBM, you may link to Passport Advantage Online for resellers where you can obtain Business Partner pricing information. An IBMid and password are required to access the [IBM Passport Advantage](#) website.

For all local charges, contact your IBM representative.

Passport Advantage

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Announcement countries

All European, Middle Eastern, and African countries, except Islamic Republic of Iran, Sudan, and Syrian Arab Republic.

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