IBM TRIRIGA Building Insights, formerly known as IBM IoT Building Insights, delivers foundational IoT platform to help owners and operators manage connected buildings and drive optimal performance of the entire enterprise

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Overview

IBM® TRIRIGA® Building Insights, formerly known as IBM IoT Building Insights, is a cloud service 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 solution, TRIRIGA Building Insights creates value along the entire building transformation journey for both new construction and retrofits.

TRIRIGA 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 nonproduction environment instances of TRIRIGA Building Insights. The nonproduction 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 nonproduction instance can support up to 10 client devices. If the client wishes to increase the number of devices, the production offering must be deployed by the client.

With this announcement, both the production and nonproduction TRIRIGA Building Insights instances now include entitlement to IBM Watson® IoT Platform with a maximum capacity per device of 1,440 messages sent per day at a size of 0.25KB per message. This capacity is aggregated across all devices. This means that if some devices are generating more data while others are generating less data each month, with the volume of data spread out across all devices over the course of a month, there will be no additional charges. If the client's use of the entitled cloud service

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exceeds the included capacity for the device subscription, the client will be charged monthly for the additional resource packs to cover excess capacity by using a Pay Per Use part number. IBM Watson IoT Platform is hosted in the same data center as the TRIRIGA Building Insights cloud service.

### Key requirements

- Internet connection
- Browser

### Planned availability date

March 26, 2019

### Description

**IBM TRIRIGA Building Insights** with IoT Platform analyzes IoT sensor data, which can come from existing asset systems or building management systems, and correlates input from external environmental factors to learn the behavior of buildings and surface insights with respect to energy consumption and space occupancy, through the use of artificial intelligence (AI). For energy management, the cloud service uses analytics and diagnostic 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 TRIRIGA Building Insights platform and onto the secure data storage area of the offering. The platform’s unique 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 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 with a unique name to identify it in a building management system. However, the semantic layer in TRIRIGA 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 of the systems and assets, giving an energy manager a comprehensive view of an entire building and many buildings across an enterprise.

TRIRIGA Building Insights provides AI to learn the knowledge graph and predict energy usage, a building's behavior, and anomalous patterns. This AI uses data from building systems and can learn from external factors, such as weather forecasts, occupancy levels, calendar data, and seasonality, which enter the platform through the semantic data platform.

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

Specifically, with TRIRIGA Building Insights, an energy manager can 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, enabling the energy manager to 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 the specific assets that are driving excessive energy consumption.

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

TRIRIGA Building Insights also provides insights into energy waste cost avoidance. With TRIRIGA 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.

Depending on building use, facility managers 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, TRIRIGA Building Insights gives both energy and facility 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.

TRIRIGA 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.

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

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

TRIRIGA 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-in the customer. TRIRIGA Building Insights helps clients to future proof their enterprise by easily extending to include new sensors and data sources as they become available.

**Business advantages of integrating TRIRIGA Building Insights**

Building Managers, including energy managers, workplace planners, or strategists, are challenged to meet budget and energy usage goals. Often, they are under pressure to drive operational costs down, managing offered incentives through increasing government initiatives for smart building projects. Additionally, external opportunities that drive demand include green building initiatives and environmental concerns of the enterprise and its employees and tenants. TRIRIGA Building Insights addresses these concerns and offers the integration of various systems throughout buildings to achieve a comprehensive view, which offers users a competitive advantage.

*Energy managers in all industries can benefit from TRIRIGA Building Insights*
TRIRIGA Building Insights provides the capability to connect disparate systems across an enterprise to understand energy consumption down to the building and asset level. It uses data from IoT sensors, main meters, and sub meters, as well as data originating 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 AI through analytical models to predict energy use, displaying the overall health of the enterprise and individual buildings in a simple dashboard, highlighting buildings across the enterprise that are consuming the most energy.

Without this comprehensive view, long-term planning and predictions for budgeting purposes are cumbersome. TRIRIGA 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.

*Easy-to-understand action-oriented visualizations enable energy managers and building managers to identify areas of potential cost savings and usage reductions*

By using TRIRIGA Building Insights, energy managers, retail store managers, workspace planners, building managers, and other enterprise users are empowered with insights that help them make better business decisions. TRIRIGA Building Insights includes purpose-built visualizations; these ready-to-use capabilities help energy managers optimize their spending on the costliest 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. The visualizations in TRIRIGA Building Insights remove the need for a highly trained technical staff member to analyze data or build custom solutions, enabling users to easily decipher the sites within the enterprise that are consuming the most energy.

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

*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 that are seeking space in commercial buildings, TRIRIGA 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 assets 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.

*Space planners and workplace strategists can benefit from TRIRIGA Building Insights*

Real estate costs are considered one of the highest expenditures for any corporate real estate team. With TRIRIGA Building Insights, space planners can leverage insights and intelligence from near real-time data in their critical space planning and strategy decisions. These insights help them understand usage patterns and whether they have the right mix of space assigned.

Space planners and IT teams have a variety of options when choosing their IoT sensors. In many cases, data already exists in the enterprise with ID badge data to determine simple building level occupancy, reservation systems and other building management systems. From there, clients can expand their intelligence and glean additional insights by adopting IoT sensors or in some cases, leveraging data from WiFi Access Points when infrastructure is available. Having this knowledge allows
users to make strategic decisions on what to do with the space which has the potential for cost savings.

The TRIRIGA Building Insights 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

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<th>VRM</th>
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<tbody>
<tr>
<td>5900-A0F</td>
<td>Cloud Service</td>
<td>IBM TRIRIGA Building Insights</td>
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### Offering Information

Product information is available on the IBM Offering Information website.

More information is also available on the Passport Advantage® and Passport Advantage Express® website.

### Publications

No publications are shipped with this program.

Documentation is published in IBM Knowledge Center.

### Services

**Software Services**

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services, contact your Lab Services Sales or Delivery Leader.

### 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.

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

Passport Advantage

IBM TRIRIGA Building Insights (5900-A0F)

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<td>IBM TRIRIGA Building Insights 100 Client Devices per Month</td>
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Charge metric

Definitions of the charge metrics for this cloud service can be found in the following Service Description document:

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<tbody>
<tr>
<td>5900-A0F</td>
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</tr>
</tbody>
</table>

Select your language of choice and scroll down to the Charge Metrics section.

Follow-on levels of this cloud service, if any, may have updated charge metrics. See the Cloud Services terms website. Search using the four-digit base Service Description number and scroll down to the Charge Metric section.

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.
**Technical support**

Technical support is provided for cloud services and enabling software, as applicable, during the subscription period. Any enhancements, updates, and other materials provided by IBM as part of any such technical support are considered to be part of the cloud service, as applicable, and therefore governed by the applicable agreement as defined in Client's quote or transaction document. Technical support is included with the cloud service and is not available as a separate offering.

Additional technical support information for this cloud service offering may be found in the IBM Support Handbook or in service-specific documentation.

**Service Description**

The following Service Description document applies to the offering in this announcement.

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Follow-on levels of this cloud service, if any, may have updated terms. See the Cloud Services terms website and search using the four-digit base Service Description number.

**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.

**Educational allowance available**

No

**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.

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