



Highlights

- Optimize messaging for wireless connections
 - Gain reliable near-real-time messaging with various levels of quality of service
 - Achieve bidirectional communication between devices and your enterprise
 - Offer a developer-friendly solution with support for JavaScript APIs, WebSockets and native mobile apps
 - Includes built-in IBM® WebSphere® MQ and Integration Bus connectivity
 - Provide large-scale concurrent connectivity and high transaction rates for machine-to-machine and mobile use
 - Promote faster and simplified deployment
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IBM IoT MessageSight

Secure gateway to the Internet of Things

Interactions with the Internet no longer happen solely by individuals using a computer. Users connect to the Internet with a mesh of devices such as mobile phones, sensors and machines because the ubiquity of TCP/IP over 3G, 4G and wireless networks enables different types of devices to send and receive data. The Internet is transitioning to the “Internet of Things,” where “things” interact with “things” with reduced, if any, human intervention. With the number of sensors and devices increasing, you require a scalable, reliable and cost-effective solution for connecting these devices to your enterprise.

IBM IoT MessageSight helps deliver the performance, value and simplicity that organizations need to accommodate the multitude of devices, helping to process large volumes of events in near-real time.

IDC estimates that 9.1 billion Internet of Things (IoT) units installed.¹ IDC also projected this to grow at a 17.5 percent CAGR over the forecast period to 28.1 billion IoT units installed in 2020.² An astonishing amount of data is generated by mobile phones, sensors and machines every day. Application owners and consumers, therefore, require large-scale connectivity and a high-speed communication solution to enable and capture near-real-time interactions between a multitude of connected devices and applications.



Scaling communication infrastructure for future business needs

Ten years ago mobile phones only communicated with other mobile phones and only sent data when prompted. Today, mobile phones can connect to almost any device, sharing and receiving information automatically. However, the future of connections in the IoT is not just about connecting people, it is also about machine-to-machine (M2M) communication that helps foster a smarter planet. IBM IoT MessageSight routes data from these new sources so that analytics can be applied and smarter decisions can be made.

The ability of IBM IoT MessageSight to handle and route tremendous volumes of messages makes it ideal for use by governments and organizations. This is because government and organizational leaders seek to connect and infuse intelligence into cities and across industries such as automotive, healthcare and finance.

For instance, real-time weather and traffic conditions can be used by trucking companies to re-route drivers when necessary. Early warning and detection of issues with a dam can alert neighbors before an issue occurs and patient health can be monitored remotely, thereby decreasing hospital visits and increasing quality of care.

With IBM IoT MessageSight organizational leaders can gain value with:

- Informed and near-real-time decisions to modify energy use or driving behavior
- Security-rich, bidirectional messaging that supports smarter, more rapid decision-making
- More efficient messaging protocol to reduce bandwidth requirements and data plan costs
- Reduced cost of managing communications to devices

IoT MessageSight helps organizations implement a wide variety of other cases, including:

- Event-driven sensor networks
- Interactive mobile applications that include notifications
- WebSocket HTML5-based web applications
- Data collection for big data analytics
- Scalable alerts and notification systems
- Higher-scale asynchronous publish and subscribe options for service-oriented architectures



Figure 1. IoT MessageSight provides a secure, channel for lightweight, rapid, bidirectional messaging.

Key features of IBM IoT MessageSight

IBM IoT MessageSight is suitable for both on premise and cloud deployment. It is available as Linux RPMs and can be installed on CentOS or RedHat Enterprise linux. It can be easily deployed to VMware and Docker environments. It can be support running in public cloud environments including SoftLayer, Microsoft Azure and Amazon.

IoT MessageSight can help provide the following benefits.

Providing security-rich messaging using a policy-based approach

You can manage and better secure multitudes of devices more easily with IoT MessageSight, which uses a policy-based approach. Fine-grained authorization policies restrict access based on a combination of:

- User or group
- Client ID
- Protocol
- Network interface
- Listening address or port, or both
- Client IP address or range
- Destination name of topic or queue

IoT MessageSight supports messaging protocols that enable authentication through LDAP servers or OAuth. Support for TLS 1.0, 1.1 and 1.2 are standard with a FIPS 140-2 level 1 certified cryptographic module.

Employing open standards and protocols for greater flexibility

IoT MessageSight supports the MQTT V3.1 and Oasis Standard MQTT V3.1.1 specification, MQTT over HTML5 WebSockets and JMS 1.1 for inbound and outbound messaging. IoT MessageSight also supports conversion between protocols.

MQTT is a messaging protocol designed for wireless networks and devices where conserving device battery life, reducing network traffic and delivering reliable message over unreliable networks are key. MQTT is an open protocol with many free MQTT clients available for a wide range of mobile platforms.

With JMS support, IoT MessageSight can connect to the enterprise using either a publish-and-subscribe or a point-to-point messaging model. Both protocols support persistent and non-persistent messaging. You can find clients available to download at <http://www.eclipse.org/paho/>

Enabling integration with your enterprise

Support is provided to connect to and to extend IBM WebSphere MQ infrastructure. Through simple mapping, IoT MessageSight can be easily set up to exchange messages with one or multiple WebSphere MQ Queue Managers. In addition, connectivity to IBM Integration Bus is supported through either the JMS or MQTT nodes.

Providing higher reliability and performance

High-availability configurations are supported by using a pair of IoT MessageSight instances. In addition, high-message throughput for a huge number of connected devices can be supported for each IoT MessageSight instance.

Conclusion

IBM IoT MessageSight is designed to help transform your organization into an engaging enterprise that supports extensive communication with various mobile devices and sensors, and concurrently connected points, expanding your reach beyond the enterprise. By employing advanced connectivity features, your organization can better manage and optimize the flow of information in a complex business environment and enhance the quality of your customer engagements.

Why IBM?

IBM combines advanced capabilities in messaging and mobile business enablement to provide a more holistic solution to enhance your communication infrastructure. With IBM MobileFirst Platform Foundation, you can create and manage your mobile applications that connect to IBM IoT MessageSight. In addition, you can conduct near-real-time data analysis by using IBM big data offerings such as IBM InfoSphere® streams and connect to your existing enterprise through WebSphere MQ and IBM Integration Bus.

For more information

To learn more about IBM IoT MessageSight, please contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/messagesight

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