IBM MQ v9.2

Enterprise-grade messaging wherever you are

IBM MQ

Powerful market-leading messaging solution that reliably moves and secures your data

Highlights

- Simplified, smart management
- Augmented security
- Expanded client application options
- Easier adoption of containers
- More flexible design and deployment

Introduction

In this fast-paced world, businesses are looking to get to value faster and more efficiently, without sacrificing reliability and security. Cloud and containers are providing more options, and are becoming a key part of strategy. At the same time, there is a realization that on-premises solutions continue to be essential.

Applications need to talk to other applications, services and systems of record. They need to do it securely and also handle the fact that different parts of this communication network work at different speeds and may not always be there. Messaging can remove a whole load of the complexity of application development by handling elements such as security, transactionality, varying responsiveness and compatibility between endpoints. This enables innovation to be implemented at a greater rate, as both maintenance and development are simplified, getting to customer value faster!

IBM® MQ is the market-leading queue-based messaging solution, for enterprises of all sizes, with over a quarter of a century of experience across industries worldwide. This history provides a maturity and a robustness that is well trusted, and that sets it apart from other solutions. The combination of this experience paired with continuous innovation has made for a solution that supports day-to-day operations and enables continued business growth and evolution.

Connect, protect, and simplify with IBM MQ V9.2

The challenge of connectivity is not new. As infrastructures evolve, so can their complexity. Not only are applications written in a range of languages and styles, but the environments in which you run are often mixed, with clouds, containers, mainframe, and other on premises elements all possibilities. Leaders are faced with keeping costs low. Standardization, ease of adoption and maintenance can all help reduce costs.

IBM MQ supports a broad range of languages and APIs, so developers are able to write in a way that feels natural to them. IBM MQ also handles a lot of the complexity around transport between applications, so that developers do not need to hardcode them to work together. This in turn simplifies the work of administrators, who must apply maintenance and integrate new applications into their changing infrastructure. With IBM MQ available in a variety of deployment models, administrators managing an infrastructure with a combination of models can benefit from the simplicity of using a common solution across them all.

It is not just getting connected that can be challenging, but what happens should that connectivity be lost. Every moment of downtime can cost large sums, and data might not always be recoverable. Having a solution that helps you plan for these situations is vital and an investment that is worth making. This is why every IBM MQ deployment option has High Availability functionality baked in.

The data that you handle is what drives your business. In these times where security is becoming increasingly important, it is essential to take precautions against internal and external threats. Data accessed in flight or on the disk can be misused, putting you and your customers at risk. IBM MQ provides a range of options to help you feel secure.

Speed of adoption and simplicity of maintenance and usage translates into time and cost saved. With a variety of technologies on the market all making similar promises, how do you invest in the one that will serve you best?

Why IBM MQ stands out

The value of data

Not all data is equal. However, when that data represents a large payment or triggers a key process, its loss or duplication can have far-reaching consequences. Messaging providers offer different assurances about how many times the messages containing that data will be delivered. For those times when those messages are vital, you need to be confident that they will not arrive twice nor fail to arrive completely. What you need is once and once only messaging.

IBM MQ enables the handling of business-critical messages by providing assured message delivery. It enables you to deliver messages once and only once. Not only does this ensure no message loss or duplication, it allows the business to keep the applications focused on

business logic rather than adding complexity through de-duplication logic, or validating that there are no lost messages.

Avoid growing pains

Integrating existing applications with new applications, and applying changes across them all can be a time-consuming effort. Useful benefits like encryption, transactionality, etc, can also be considered extra coding. With the right messaging solution, none of this should be necessary.

IBM MQ enables your newest applications to communicate with those obscure and unloved applications that nobody can remember writing. It also handles encryption, transactionality, and other aspects, meaning that building applications is simpler and that changes happen in one place, rather than in every application.

Messaging, where you need it

Every business is a different shape and size, and each will find a different combination of deployment options sensible. IBM MQ supports customers by ensuring that whether they prefer on- premises software, a preconfigured hardware appliance, mainframe, containers, or cloud and even SaaS deployments that this is possible. IBM MQ runs across all of these environments, and it's always IBM MQ code, so there is compatibility and consistency.

Preparation is key

As resilient as your setup may be, network interruptions and application unavailability are realities. Data centers can also suffer major problems. Companies that don't build with these things in mind can find themselves with data loss or service interruption, causing unexpected and sometimes costly challenges.

High Availability and Disaster Recovery is a critical area, which provides business continuity within and between sites. A moment's outage can be costly in terms of the ability to do business, missed opportunities, reputation, fines, and more. If that data is lost during the outage, the impact can be even greater. IBM MQ provides a selection of ways to protect you with seamless failovers and manual options for datacenters.

The cybersecurity threat

As the value of data is becoming more and more clear, attempts to access it without permission are on the increase. Companies that have been breached are the source of media attention and face loss of trust, regulatory fines, and mass re-work. Recovery can be difficult.

Data is sensitive wherever it resides. Protection for data in flight is commonly provided through Transport Layer Security (TLS), and this is the case with IBM MQ. Protection at rest is also critical, and many solutions handle this through disk encryption. Whilst useful, this does not protect against applications with filesystem access because they can clearly read what is stored there. That is why IBM MQ provides end-to-end encryption through its Advanced Message Security technology, available in all but the base IBM MQ software and base z/OS variants. This encryption is defined by policy and protects the message contents, offering more reassurance than alternatives that may only work by encrypting the disk itself.

Integrated file transfer

There are many ways of transporting file data around your business. File Transport Protocol and homegrown solutions have an appeal, but may not be as reliable as other options. File data is still data, and reliability, security, and high availability are all still aspects to consider.

You could of course get all the benefits of IBM MQ for your file data by sending your files across IBM MQ instead. As of version 9.2, even the agents that send the files into IBM MQ are highly available. As IBM MQ Advanced and IBM MQ Appliance include entitlement to the Aspera fasp.io gateway, with these deployments you can also benefit from improved performance across large networks and lossy networks.

Consume IBM MQ your way

IBM MQ is available in several forms, reflecting different business needs and customer preferences. IBM MQ is available in the following forms:

Distributed software:
- **IBM MQ:** IBM MQ software, with inflight security, High Availability and support for multiple protocols and programming languages
- **IBM MQ Advanced:** IBM MQ software with message-level encryption, file transfer capability, quorum-based High Availability, and fasp.io entitlement

Hardware appliance, pre-configured:
- **IBM MQ Appliance:** IBM MQ software and hardware combined. Available as an A model (for large workloads) and a B model (for smaller workloads). With message-level encryption, file transfer capability, replicated data queue managers, and fasp.io entitlement

Cloud:
- **IBM MQ on IBM Cloud:** Managed service on IBM Cloud and AWS, with message-level encryption, and file transfer capability
- **Bring your own license:** Openstack, AWS, Azure

Mainframe:
- **IBM MQ on z/OS:** IBM MQ on the mainframe, with inflight security
- **IBM MQ for z/OS Value Unit Edition:** IBM MQ on the mainframe, with end-to-end encryption and file transfer capabilities

Containers:
- **IBM MQ Advanced:** lightweight certified container for RedHat OpenShift with built-in high availability

Consume IBM MQ at your speed

IBM MQ has two delivery approaches, to give you more choice about when to accept new fixes and functions, allowing you to move forward at your speed. This agile approach enables you to be more flexible in your IBM MQ adoption. IBM MQ's delivery and support model makes it easier for you to use the latest capabilities without having to wait for the next major release.

You can choose one or both of the following:

• **Continuous delivery (CD):** Fixes and new functional enhancements as a set of modification-level updates. This enables you to obtain rapid access to functional enhancements.

• **Long term support (LTS):** Wraps up previously released CD capabilities into a long-term support package.

If you need new function in some parts of your business but do not want to adopt CD throughout, it is possible to run CD in some parts of your business and LTS in others.

You can find more information here: http://ibm.biz/CDvsLTfaq

What's new in IBM MQ version 9.2?

Simplified, smart management

Ease of use means user satisfaction, and the ability to move faster. From vibrant online communities with education and samples, to in-product innovations, IBM MQ is continuing to evolve to simplify the experience.

A big part of IBM MQ is being able to work in the way that works for you, which is why it supports so many, languages, protocols, and deployment options. Its REST API means that tasks that were previously only achievable through the command line are open to those who prefer a REST approach. The new web console - now standard across IBM MQ and across the IBM Cloud Pak for Integration – creates an engaging experience that new users will find natural, with links to help and education should they want it. Existing users will continue to be able to find features that they are used to, as well as additional benefits, and the consistency of design across deployment options and IBM's integration capabilities should ease administration.

Workload balancing can be a tricky task, so IBM MQ makes this simple and smart. Uniform Clusters is an innovative load-balancing solution that we introduced in 9.2. It is a time-saver, and removes a lot of complexity from what could otherwise be a laborious process.

Augmented security

Security is something that needs updating to keep current. IBM MQ now gives you more flexibility when choosing cipherspecs, and the capability to dynamically select what is current, meaning that you can feel more secure. Additionally, TLS 1.3 and PKCS #11 are now supported.

Through Internet Pass Through (IPT), IBM MQ enables secure connections over the internet to reach IBM MQ, even through a firewall. Prior to v9.2, this capability has been available as a popular SupportPac download. With v9.2, IPT has now been brought into the main IBM MQ product, so customers can access IPT from FixCentral.

Expanded client application options

Infrastructure can be diverse, with applications in many languages, and integrations with many products. IBM MQ has long supported a large range of clients and integration options, and continues to do so. V9.2 expands on this by offering support to customers running on .NET Core, better integration with WebSphere Liberty, and augmented REST messaging. Blockchain and Salesforce integration have been enhanced, and AMQP can now consume data from subscriptions and shared subscriptions.

With all of these options, it is important to be able to get started quickly. IBM MQ has provided new samples and education on GitHub and in IBM Developer, which can also be reached from the new web console.

Easier adoption of containers

Containers are becoming more popular, owing to the flexibility that they provide. You can run IBM MQ in pre-packaged IBM MQ Advanced and IBM MQ containers. With v9.2, IBM MQ has improved container resiliency in Kubernetes environments, with multi-instance and single resilient queue managers. In addition to IBM Cloud Private and Kubernetes, RedHat Openshift is now supported, with zipped images for Development and Production.

More flexible design and deployment

To help you innovate, you need a flexible solution that performs. In v9.2, queue manager restart and client reconnect times are improved. Our 3-way High Availability solution, RDQM, has been extended to allow asynchronous disaster recovery between 3-way Highly Available sets. And for those running on Linux, we have removed some of the steps required for upgrading, simplifying that process for you in the future.

Conclusion

In this fast-paced world, the ability to innovate with agility is more important than ever. Knowing that you have a solid foundation that you can rely upon to securely support you means that you can focus on driving the business. With IBM MQ, you have years of experience that you can trust to reliably move the data that underpins your business. IBM MQ gives you the flexibility to re-shape your environment, and is always evolving to help you be more efficient and effective.

Why IBM?

IBM is a leading provider of messaging-oriented middleware software. With messaging middleware, IBM specialists have helped business leaders at organizations in various countries, sectors and of different sizes achieve value. IBM specialists have provided messaging solutions for over 25 years. Globally, IBM messaging solutions have been deployed at more than 12000 organizations.

IBM has active communities and responsive support channels, so you can keep up with the latest information and get the help that you need.

For more information

To learn more about the IBM MQ, please contact your IBM representative or IBM Business Partner, or visit the following website: www.ibm.com/products/MQ

Try IBM MQ for Free at: ibm.biz/ibmmqtrial

For Getting Started information and tutorials, explore here: ibm.biz/learn-MQ

Join the community at ibm.biz/MQCommunity