

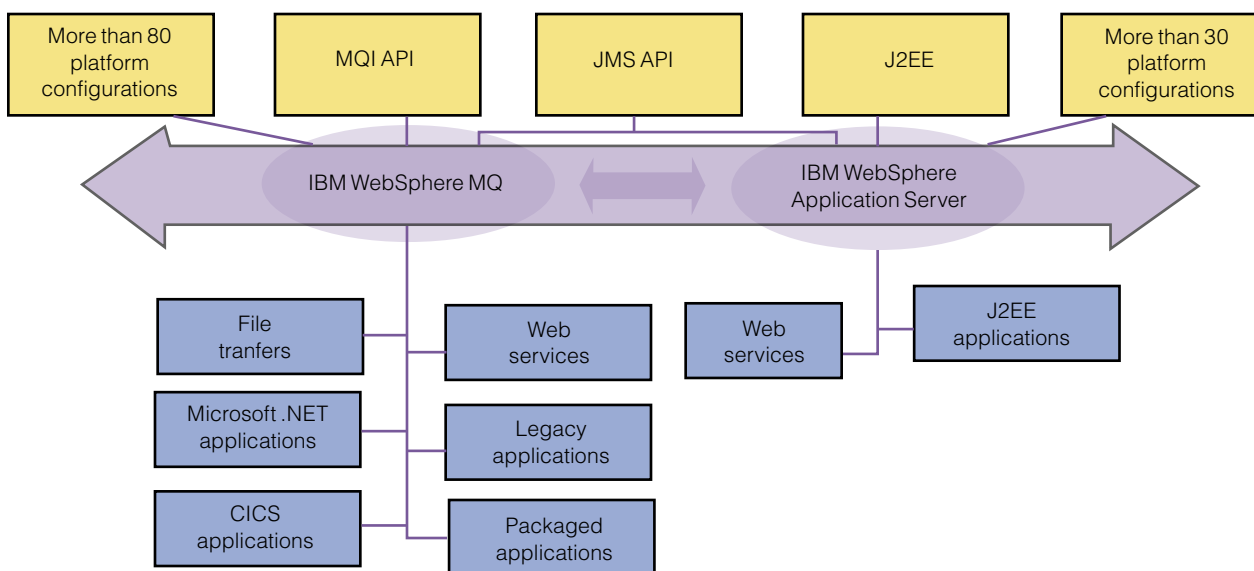


WebSphere® software

## IBM WebSphere MQ for z/OS, Version 6.0

### Highlights

- **Connects applications across more than 80 supported platform configurations**
- **Provides integrated support for Web services, enabling SOAP requests to flow over the reliable WebSphere MQ backbone, helping to connect J2EE, CICS and Microsoft .Net applications**
- **Includes workload balancing and communication failover support**
- **Delivers full support for the de facto standard MQI interface and the industry-standard JMS, Version 1.1 interface**
- **Provides the ability to be configured remotely using new Eclipse technology-based tooling included with WebSphere MQ, Version 6.0**
- **Provides integrated support for simple configuration of messaging using publish-and-subscribe messaging distribution**
- **Supports industry-standard SSL security and offers WebSphere MQ Extended Security Edition for advanced security features**
- **Interoperates seamlessly with the messaging resources of WebSphere Application Server, Version 6.0 to form the basis for your enterprise service bus**



WebSphere MQ, Version 6.0 integrates seamlessly with WebSphere Application Server to provide the foundation for your enterprise service bus.

In today's fast-paced business environment, you need to invest your valuable skills in improving the responsiveness and flexibility of your business instead of wrestling with underlying network complexities. Maintaining homegrown approaches for connecting applications can divert your skills and time away from higher-level integration concerns. And external pressures to increase the trustworthiness of business financial reporting mean that the transparency and auditability of business transactions across your enterprise are more important than ever before.

IBM WebSphere® MQ for z/OS, Version 6.0 connects applications in a consistent, reliable and easy-to-manage way, providing a trustworthy basis for cross-department, enterprise-wide integration. Renowned for its reliable, once-and-once-only delivery of important messages and for its transactionality, WebSphere MQ handles the complexities of communication protocols and dynamically distributes the messaging workload across available resources. It can transport all sorts of messages and data including files, XML and binary

data. And it can manage recovery after system problems and help to make your applications portable. Offloading these time-consuming tasks to WebSphere MQ frees you to apply your skills to higher-level integration challenges that bring further benefits to your team and to the business.

### **The foundation for an enterprise service bus**

In a service-oriented architecture (SOA), an enterprise service bus (ESB) is the connectivity layer that connects and mediates information between service requesters and service providers. These service requesters and providers can include new Web services and existing investments, such as legacy applications, virtualized as Web services. Your organization can develop its own unique enterprise service bus, according to its integration needs and reflecting how far your company has advanced toward becoming an on demand business.

WebSphere MQ for z/OS, Version 6.0 enables Simple Object Access Protocol (SOAP) interactions to flow over its messaging backbone between Web services requesters

and providers. Web services-enabled legacy and batch applications can also benefit from using WebSphere MQ in its asynchronous mode as a buffering mechanism to regulate the flow of requests made to these applications. WebSphere MQ also makes an ideal transport to add reliability and traceability to services to the enterprise service bus connectivity layer of a service-oriented architecture.

With support for Web services now integrated into WebSphere MQ for z/OS, Version 6.0; IBM WebSphere Application Server, Version 6.0; and IBM CICS® Transaction Server, Version 3.1, you can use Web services as a common approach to integrate investments on those platforms in a virtualized, service-oriented manner. This capability represents the next step in IBM enhancing its ability to enable you to deploy an end-to-end enterprise service bus that can integrate almost every component of your environment — and to cost-effectively bring these investments into a service-oriented architecture.

### Integrated tooling for your enterprise service bus

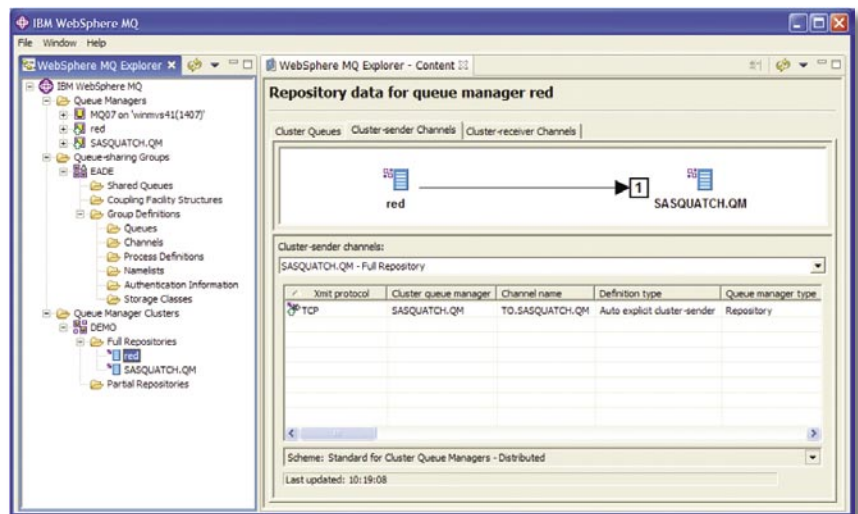
The distributed offering, WebSphere MQ, Version 6.0, introduces new, enhanced configuration tooling based on open-source, award-winning Eclipse Workbench technology. You can use this WebSphere MQ explorer tooling from Microsoft® Windows® and Linux® for Intel® processor-based systems to remotely configure WebSphere MQ for z/OS deployments. (WebSphere MQ for z/OS, Version 5.3 or prior releases cannot be configured with this tooling.)

Using this new tooling with WebSphere MQ for z/OS, Version 6.0 means you can, for example, configure WebSphere MQ for z/OS, Version 6.0 running on IBM @server® zSeries® systems from your personal Linux notebook, without having to run a WebSphere MQ server locally. You can also now configure WebSphere MQ resources across the network using intermediate queue managers. To prevent unauthorized changes, you can protect connections from the tooling to your WebSphere MQ network with Secure Sockets Layer (SSL) technology.

Although the new WebSphere MQ explorer tooling retains much of the look and feel for users familiar with the previous tooling, it also provides more features to make it easier than ever to manage WebSphere MQ networks. For example, you can filter your view of WebSphere MQ resources to show only those that match certain criteria, such as queue depth or how many applications are using a queue.

You can tune the refresh rates of these filtered views to update them at a machine or queue-manager level. You can also compare the attributes of objects, for example to see whether two queues have the same characteristics.

The new WebSphere MQ explorer tooling is also extensible. Using the documented interfaces to WebSphere MQ objects and resources in the tooling, you can create your own extensions to the tooling that are tightly integrated with the WebSphere MQ explorer console.



From one Eclipse technology-based console, you can configure your WebSphere MQ network remotely.

## **Consistent interfaces simplify integration**

WebSphere MQ provides a consistent application programming interface (API), called the Message Queue Interface (MQI), across all its supported platforms and programming environments to help make your programs portable. Along with providing this de facto standard interface, WebSphere MQ also fully implements the industry standard Java™ technology-based interface—Java Message Service (JMS), Version 1.1—including the publish-and-subscribe approach to directing flows of messages.

WebSphere Application Server also supports JMS, Version 1.1. Although JMS doesn't provide a standard for interoperability between messaging implementations, the messaging resources of WebSphere Application Server and WebSphere MQ are designed to interoperate seamlessly. As a result, you can combine these products to form an enterprise service bus to integrate hosted Java 2 Platform, Enterprise Edition (J2EE) applications with the rest of the enterprise.

## **Enhanced manageability**

WebSphere MQ, Version 6.0 includes enhanced management capabilities, making it easier to determine and avoid problems, and to monitor your WebSphere MQ network, gather statistics and raise alerts. You can also now easily see important information returned from status commands because programmable command format (PCF) and MQ Script Commands (MQSC) now have a WHERE clause that filters queries. You can use this feature in commands that inquire about status, to see potential problems before they cause a significant outage. New support for PCF messages enables you to write administration and monitoring programs that are common to both z/OS and distributed platforms.

To make it easier to monitor the WebSphere MQ network and change the way it is working, WebSphere MQ for z/OS, Version 6.0 provides new commands such as `DISPLAY CONN` to show which applications are connected to a queue manager and which queues they have opened, and `STOP CONN`, which forces a disconnection from a queue manager, allowing a WebSphere MQ administrator to disable a problem

application. Also, WebSphere MQ can now track the route that a message is expected to take through its network. And new flags can request activity reports from queue managers processing a message (such as which channel, queue manager and transmission queue have been used).

## **Increased availability**

WebSphere MQ for z/OS, Version 6.0 delivers enhancements to further increase availability by reducing constraints and enabling more configuration changes to be made on the fly. For shared queues, the maximum message size has been increased from 63KB to 100MB, the same as for other queues. You can modify more system resources online than before, including page sets, buffers pools and buffers, as well as channel initiator (CHIN) configuration parameters and SSL configurations. You can also dynamically expand page sets up to 64GB before they become full, and you can dynamically add and remove the, along with buffer pools. The log extract program (previously product extension M012) has been integrated into WebSphere MQ for z/OS, Version 6.0, and you can now use multiple TCP/IP stacks.

### **Grows at your pace**

Whatever your starting point for integration, you can grow your enterprise service bus incrementally according to your needs and at your own pace. You can add WebSphere MQ servers one at a time to create a unified messaging backbone, where messages can be passed directly between messaging servers and through servers. You can combine WebSphere MQ servers, WebSphere Application Server deployments and WebSphere Business Integration Message Broker software to deploy an enterprise service bus. This combined network of servers can then seamlessly exchange information across your enterprise, regardless of whether the original communication began as a JMS message from WebSphere Application Server or WebSphere MQ, a native MQI message from WebSphere MQ or even a file transfer. You can further enhance your WebSphere MQ for z/OS deployment by downloading many official product extensions at no charge from:

[ibm.com/software/integration/support/supportpacs/](http://ibm.com/software/integration/support/supportpacs/)

### **Sophisticated security to protect your valuable data**

WebSphere MQ for z/OS provides sophisticated security environment through 128-bit SSL technology, the Internet standard for secure communication. IBM WebSphere MQ Extended Security Edition further enhances WebSphere MQ for z/OS with end-to-end, application-level data-protection features. It enables enterprise-wide, remote management of security policies on your WebSphere MQ network and can be deployed to existing production environments without changes or modifications to existing WebSphere MQ applications. WebSphere MQ Extended Security Edition is based on and integrates with IBM Tivoli® technology, enabling you to deploy it as part of your enterprise-wide governance strategy.

### **Your key to integrating critical business applications and processes**

WebSphere MQ forms the key integration layer of the IBM WebSphere software platform, helping you reach your on demand business goals. Together with WebSphere Application Server and WebSphere Business Integration Message Broker,

WebSphere MQ provides an ideal basis for deploying your enterprise service bus. To learn more about how an enterprise service bus can help you integrate the diverse elements of your IT environment, visit:

[ibm.com/software/integration/esb](http://ibm.com/software/integration/esb)

### **For more information**

To learn more about how IBM WebSphere MQ for z/OS, Version 6.0 can help you integrate your investments and reach your business and IT goals, contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/software/integration/wmq](http://ibm.com/software/integration/wmq)

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## IBM WebSphere MQ for z/OS, Version 6.0 at a glance

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### Hardware requirements

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#### System

- Any IBM S/390® or @server zSeries 900 processor capable of running the required level of a compatible operating system with enough storage to meet the combined requirements of the programming prerequisites, WebSphere MQ for z/OS, the access methods and the application programs

### Software requirements

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For software requirements, the program directory shipped with the product contains the latest level of information, particularly concerning APAR or program temporary fix (PTF) levels of supported products. The following products or equivalents represent specified minimum levels.

#### Operating environment

- IBM z/OS, Version 1.4

#### Shared queues

- z/OS, Version 1.4 with Resource Recovery Services (RRS) activated
- Coupling Facility Level 9
- IBM DB2® Universal Database™, Version 7.1

#### SSL requirements

- z/OS cryptographic services system SSL function

#### CICS applications

- IBM CICS Transaction Server, Version 1.3

#### IBM IMS™ applications

- IBM IMS, Version 7.1

#### IBM DB2® applications

- DB2 Universal Database, Version 7.1 with APAR PQ71179

### Other requirements

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#### Other communication clients

- If you choose to replace IBM TCP/IP, Version 5.2 for OESockets, use Unicenter TCPAccess Communications Server, Version 4.1 from Computer Associates, Inc.

#### PL/I applications

- Any PL/I compiler that generates calls to WebSphere MQ using the standard linkage convention

#### COBOL applications

- Any COBOL compiler that generates calls to WebSphere MQ using the standard linkage convention

#### Java technology users

- IBM Developer Kit for z/OS, Java 2 Technology Edition, Version 1.3.1

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**Note:** z/OS includes appropriate levels of IBM Language Environment®, TCP/IP, IBM Virtual Telecommunications Access Method (IBM VTAM®), System Modification Program Extended (SMP/E), Time Sharing Option Extended (TSO/E), Job Entry Subsystem (JES), C/C++, IBM Data Facility Storage Management Subsystem/Data Facility Product (IBM DFSMSdfp™), IBM z/OS Security Server, High Level Assembler, Interactive System Productivity Facility (ISPF) and Internet Connection Secure Server (ICSS).



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