



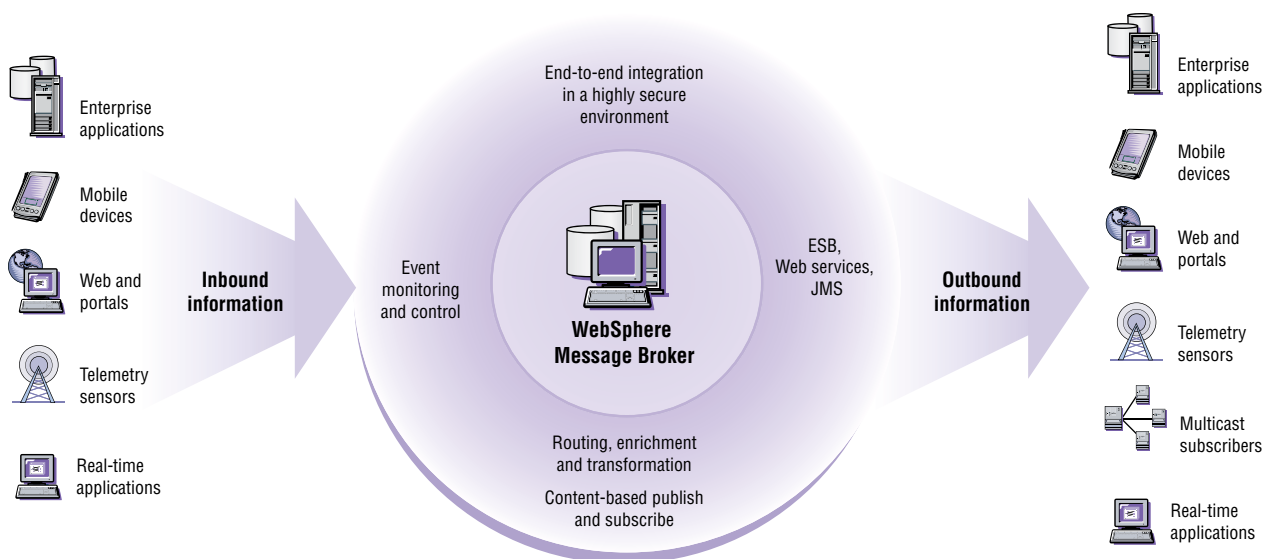
WebSphere® software

IBM WebSphere Message Broker, Version 6.0.2

Highlights

- **Routes, transforms and customizes virtually any content across different systems and applications**
- **Acts as a high-speed message and protocol switch for business and operational systems**
- **Enriches message content through business rules and application or database access**
- **Includes extensive message logging and reporting to help ease operational management**
- **Distributes information to different applications or systems based on informational content or business events**
- **Offers a robust, scalable and high-performance solution for real-time integration**
- **Helps you grow your integration capabilities by powering your SOA with an advanced enterprise service bus**

As the pressure to become more responsive to everyone along your value chain continues to increase, you are charged with making the most of your IT investments. Maybe you want to move to a service oriented architecture (SOA) that can enable you to increase your reuse of assets and improve business flexibility. Or perhaps you just want to maximize the use of your existing applications and the essential data they continue to deliver to your business. Relying on manual, labor-intensive approaches or custom-coded programmatic solutions to bridge between applications is no longer effective.



WebSphere Message Broker intelligently routes and transforms messages and data in real time from multiple device types, business units and locations to virtually all systems and applications throughout your enterprise—and beyond.

Each business unit maintains its own data about its products and services. Employees have to re-enter information as it moves from department to department — potentially creating delays and errors. And your developers are writing custom code to connect it all together. As your integration needs evolve, the time and expense to develop and maintain custom links between applications increases — which has the potential to directly affect your bottom line.

You recognize the need to connect applications using security-rich and reliable delivery mechanisms, such as IBM WebSphere® MQ software, and to help ensure that the data being exchanged is delivered in the right format to the right application at the right time — without complex programming that would reduce flexibility and reuse. Combining all of your IT resources can help maximize operating efficiencies and provide consistent, accurate information to your customers, trading partners and suppliers. Rather than running newer applications in isolation, you can tap into and reuse your existing IT assets to provide the functionality you need to run your business smoothly. Using a comprehensive enterprise service bus (ESB), you can integrate your assets more easily — and potentially get more value from the applications you're currently running.

Meeting the challenge of diverse IT systems

IBM WebSphere Message Broker, Version 6.0.2 delivers a solution to address your application-integration and information-mediation needs, either as an advanced ESB as part of an SOA, or simply to provide flexible and powerful enterprise application integration (EAI) capabilities. With its robust design, scalable architecture, high performance and ease of use, WebSphere Message Broker software provides your business with an advanced ESB that enables you to implement an enterprise-wide SOA in stages, to meet your evolving business needs. You can take advantage of this flexible combination of capabilities to solve your integration challenges from virtually any starting point.

As your business expands, your integration challenges can multiply. WebSphere Message Broker can accommodate the changing needs of your business by enabling you to add to your infrastructure without increasing its complexity. As a result, you can protect your existing and ongoing investments in applications and data structures, as well as respond to changing business needs and new opportunities.

WebSphere Message Broker enables you to connect disparate applications and business data across multiple platforms, using different communications protocols, so that information is available exactly where you want it, in the format you need it, using the transport layer you need. You can use WebSphere Message Broker software to transform any and all of your business data, enriching it according to content and business rules, and route it between applications as it is required. By separating these integration tasks from your application logic, you can help core applications operate more efficiently, increase their reuse — and increase business flexibility in the process.

Your advanced ESB

In an SOA, an *ESB* is a connectivity layer that optimizes information distribution between service requesters and service providers. Your organization needs an ESB as a part of your overall connectivity solution, reflecting how many of your applications conform to common standards and how many have not yet been made into services. WebSphere Message Broker can handle high-performance, multiformat, real-time transformation and routing according

to content and business rules interacting and integrating with databases and other sources of application data, no matter what the data type or application programming style. WebSphere Message Broker can even wrap traditional applications as services to accelerate your SOA deployment.

With WebSphere Message Broker delivering some or all of the transformation required by your business, you can enable in-flight transformation of complex and nonstandard data formats between applications and services without burdening the application logic with custom coding. WebSphere Message Broker can help maximize the value of your IT investments by broadening the range of environments you can reach through your ESB. You can deploy the environment and make capabilities available throughout your IT infrastructure using the robust capabilities of IBM WebSphere Application Server and WebSphere MQ. WebSphere MQ seamlessly extends those messaging resources to non-Java™ 2 Platform, Enterprise Edition (J2EE) environments to integrate virtually anything, across more than 80 platforms. WebSphere Application Server includes an integrated Java Message Service (JMS) implementation for connecting to applications hosted on J2EE systems.

Programming options for WebSphere MQ include the native MQI application programming interface (API) as well as support for JMS, and also programming interfaces designed to provide standardized APIs for non-Java programming environments.

WebSphere Message Broker delivers a full range of integration capabilities, such as content-based message routing and transformation, message enrichment and message logging, as well as support for a range of message-distribution options and protocols to improve the flexibility and performance of these services. These features enable WebSphere Message Broker to provide an advanced ESB capable of encompassing virtually all business systems and applications, as well as services, making full use of the IT assets of your business, and even allowing better integration with the applications and business processes of trading partners.

Create new business value from existing IT assets

WebSphere Message Broker builds on your existing deployment of integration middleware to move your business beyond simple connectivity to enable your business to handle more-complex integration challenges. You can integrate virtually any of your business applications, including standards-

based composite applications as part of your SOA to include seamless real-time links that enable you to use and reuse your production applications and systems. WebSphere Message Broker also helps make it easier to develop and deploy integration logic separate from the applications, so that you can be in production in less time, with simpler and more reusable applications.

Because WebSphere Message Broker is designed to respond to your changing needs through an open and extendable set of interfaces, it can grow with your business, enabling you to add components to your IT infrastructure while reusing critical application functions as your business needs evolve. As a result, you can take advantage of next-generation innovation—and protect, exploit and extend your investments in existing business applications. WebSphere Message Broker plays a key role in delivering an ESB without limits, helping to ensure that your business can not only use the assets it has today, but also adapt to use new assets as they are developed as part of an overall connectivity solution for your business.

New in this release

WebSphere Message Broker, Version 6.0.2 includes new functions designed to enable you to integrate virtually all applications:

- *Flexible transformation capabilities*
- *Improved performance*
- *Simplified installation and migration*
- *Enhanced support for Web services*
- *An improved development toolkit*
- *New ways of driving flows*
- *Improved management*
- *Improved security*
- *Integration with WebSphere Service Registry and Repository*
- *One-click install for key WebSphere Message Broker, Version 6.0.2 extensions, samples and demos*
- *Extended platform support*

Flexible transformation capabilities

WebSphere Message Broker enables you to author transformations using tools that match both your skills and the data being transformed. The improved graphical mapping editor allows simple drag-and-drop transformations. Mapping messages and databases becomes as easy as using a spreadsheet. You can develop maps iteratively as either top-down (building the target format as part of map creation) or bottom-up (building the source as part of map creation) map-development

scenarios, along with the existing support for meet-in-the-middle map development. Drag-and-drop operations enable you to debug and test for the required result of the transformation. Novice users are guided through mapping by templates that generate an initial mapping using drag-and-drop techniques. New features include the ability to split source messages into a number of output messages, message header mapping and easy mapping of repeating elements.

A new Java compute node enables you to write routing and transformation logic in Java, using existing programming skills. WebSphere Message Broker provides a Java 2 Standard Edition (J2SE), Version 1.4.2 environment that includes a standard Eclipse technology-based Java editor with a color highlighting feature and code assist. With this option, no Embedded Structured Query Language (ESQL) skill or experience is required. Java archive (JAR) files can be deployed to the broker run time using the standard broker-deployment facilities.

WebSphere Message Broker extends the existing ESQL support to make transforming and routing messages using ESQL even easier.

Improvements include:

- *An in-memory cache to avoid access to databases for read-only routing or validation data*
- *Improved support for creating DATETIME variables*
- *Access to multiple databases from the same compute node*
- *Dynamic database schemas*
- *New user-defined properties that can pass parameters to ESQL to modify standard behavior*
- *Access to environment information, such as flow and broker name*
- *Improved support for result sets returned by database stored procedures*
- *Improved error recovery by the use of SQL handlers*
- *Multiple out terminals to combine the function of compute and filter nodes*

WebSphere Message Broker also improves the performance of Extensible Stylesheet Language Transformations (XSLT) through support for compiled style sheets. You can also deploy the style sheets using the standard broker-deployment facilities.

Improved performance and scalability

Performance of the broker run time has been improved through several enhancements:

- *Reduction of the path length of the major broker functions*
- *The ability to parse and stream messages at less cost*
- *Optimization of ESQL and publish-subscribe functions*
- *Reimplementation of aggregation nodes to save state by using queues, rather than a database, to significantly improve throughput, particularly of nonpersistent requests*
- *The new in-memory cache to enable more-efficient flow of data*
- *Reduction in the storage requirements for the Message Repository Manager (MRM) and XML parsers to WebSphere Message Broker to handle larger messages*
- *Improved tools performance and scalability through the use of Eclipse, Version 3.0 multithreaded builders to quickly return control to the user*

Simplified installation and migration

Installation of WebSphere Message Broker has been simplified by reducing the prerequisite products required. The configuration manager no longer requires a database, and other broker requirements have been reduced. A default configuration wizard is provided to quickly build a full environment for development or other simple configurations on Microsoft® Windows® and Linux® platforms. WebSphere Message Broker supports upgrading from previous releases by providing utilities that make version-to-version upgrades a simpler operation. This new feature enables you to run previous and current releases in parallel or in any configuration across multiple machines, helping to ensure a smooth transition from deployment on the previous release to the new release.

Enhanced support for Web services

Web services support is extended to include SOAP, Version 1.2 and HTTP, Version 1.1. You can also verify that Web services comply with the Web Services Interoperability (WS-I) Basic Profile. WebSphere Message Broker also simplifies modeling and transformation of SOAP messages and provides the ability to import Web Services Description Language (WSDL) definitions to enable you to use the generated WSDL more easily. As your organization increasingly implements new applications and

services based on rapidly evolving Web services standards, WebSphere Message Broker can provide support for the most up-to-date standards to help you integrate new services with your existing diverse implementations.

Improved development toolkit

The WebSphere Message Broker development toolkit is based on the latest release of IBM Rational® Application Developer and Eclipse technology. New XML editors are provided to help you more easily create and modify XML data structures. Visual debugging of flows, ESQL, Java and graphical mappings are simplified by reducing Eclipse perspective switching. This capability allows for greater reuse of skills across your business. And the powerful features of these tools enable faster development and deployment of your integration solutions.

With Version 6.0.2, more enhancements have been made to the WebSphere Message Broker development toolkit. An extended navigator makes all new wizards working-set-aware, helping to reduce development effort through simplified artifact creation when incorporating new message targets and sources, and helping to reduce the learning curve when dealing with new wizards. These capabilities enable you to start building flows directly from existing WSDL definitions and XML Schema Definitions (XSDs).

The WebSphere Message Broker development toolkit also includes a new quick-start wizard that enables you to become productive quickly, and helps guide you with context-aware options. New toolkit support for dragging and dropping WSDL helps quickly build your message flows, simplifying the work needed to implement Web service proxy flows. Using this capability enables you to automatically create an HTTP output node, or create an HTTP input node and a subflow to parse an inbound Web service call into a specific message operation. Also, debugging and application deployment has been improved to enable you to move from development, to test, to deployment more rapidly and efficiently.

New ways of driving flows

Message flows can now be driven by JMS transports as well as WebSphere MQ. Supported JMS providers include the embedded JMS provider in WebSphere Application Server, Version 6.0. A new timer node enables message flows to be driven periodically rather than by an external event. A new MQGET node enables messages to be retrieved in the middle of a flow, and at the beginning and end of a flow. This

new function enables groups of messages to be handled together or queues to be used to save temporary-state information. These capabilities can extend your organization's flexibility so that you can integrate virtually any type of information flow into your business. The ability to integrate information directly from JMS applications, as well as WebSphere MQ messages, enables you to allow more applications to directly benefit from the capabilities of WebSphere Message Broker.

Improved management

WebSphere Message Broker further provides robust versioning capabilities that extend to the runtime environment. You can tag all resources deployed to version, author and other useful information, as well as the standard compiled-time and deployment-time attributes. WebSphere Message Broker displays the new information in the administration interface—making it easy to see which resources have been deployed to production systems.

Also, extended command-line utilities enable you to fully automate the deployment of new resources to production environments. And a systems-management application

interface enables WebSphere Message Broker to be managed completely by products and utilities other than the administration interface. With this release, WebSphere Message Broker provides additional support for one-button testing of message flows.

Also available with Version 6.0.2 is a downloadable utility to extend your Eclipse console to allow administration of your WebSphere MQ and WebSphere Message Broker applications side by side from a single console.

Improved security

IBM has extended the HTTP transport in WebSphere Message Broker to support HTTP Secure (HTTPS) to enhance privacy and security. Communication between the toolkit and configuration manager extend to using Secure Sockets Layer (SSL) for even more security. As a result, you can be sure that HTTP calls can provide the flexibility to drive WebSphere Message Broker in a highly secure environment.

Integration with WebSphere Service Registry and Repository

As part of the WebSphere Message Broker, Version 6.0.0.3 runtime release, and the Version 6.0.2 release of the WebSphere Message Broker developer toolkit, IBM provides integration with IBM WebSphere Service Registry and Repository as a foundation for supporting SOA governance.

You can take advantage of the capabilities of WebSphere Service Registry and Repository through a series of nodes that are designed to integrate with WebSphere Service Registry and Repository directly from a WebSphere Message Broker environment. These new nodes offer improved flexibility when managing services, help reduce your risk and deliver improved services life-cycle management through integration with WebSphere Service Registry and Repository, supporting the broader goal of improved SOA governance surrounding your ESB applications.

The WebSphere Service Registry and Repository nodes enable you to:

- *Use metadata from the registry and repository to govern WebSphere Message Broker behavior and help ensure that runtime changes are governed by approved policies.*
- *Query service end-point information from WebSphere Service Registry and Repository without redevelopment and redeployment.*
- *Look up service end points and perform message routing based on WebSphere Service Registry and Repository policies.*

One-click install for key WebSphere Message Broker, Version 6 extensions, samples and demos

Included with the media pack for this release of the WebSphere Message Broker Toolkit is an additional CD that you can upload as an enhancement to your WebSphere Message Broker installation through a single-click option. This CD includes a number of popular supportpacs that provide additional product function and capabilities. These product extensions, which were previously available only by downloading them from the IBM Supportpacs Web site, provide enhancements to WebSphere Message Broker in the areas of manageability, connectivity, development and performance. Also included on the CD are a number of samples and demos, depicting WebSphere Message Broker capabilities and how the product might be used in various industry scenarios.

Extended platform support

The WebSphere Message Broker configuration manager is supported on all the broker platforms, including UNIX®, Linux and Windows. In the latest release of WebSphere Message Broker, the configuration manager and the user-name server are now supported on HP-UX Itanium servers.

The development toolkit can be installed on Linux and Windows servers. Database support on Linux for Intel® includes Oracle and IBM DB2® Universal Database™ support. This extended platform support enables you to deploy the components of WebSphere Message Broker in a more flexible and customizable manner, offering you greater flexibility in choosing which database you want WebSphere Message Broker to use.

For more information

To learn more about IBM WebSphere Message Broker, Version 6.0.2, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/websphere/wbimessagebroker

To join the Global WebSphere Community, visit:

www.websphere.org

IBM WebSphere Message Broker, Version 6.0.2 at a glance

Product names

New name

IBM WebSphere Message Broker
IBM WebSphere Event Broker
IBM WebSphere Message Broker
with Rules and Formatter Extension

Former name

IBM WebSphere Business Integration Message Broker
IBM WebSphere Business Integration Event Broker
IBM WebSphere Business Integration Message Broker
with Rules and Formatter Extension

Hardware requirements

Any vendor hardware explicitly compatible with and fully capable of running the specified operating system, the corresponding supporting software and the associated applications, unmodified. Responsibility to provide a statement of full compatibility between machines lies with the original equipment provider.

Server requirements (one of the following)

- IBM System p™ or IBM RS/6000® processor machine
 - Sun SPARC processor machine
 - Hewlett-Packard HP-9000 processor machine (PA-RISC or Itanium)
 - IBM System x™ and Intel technology-based machine (or equivalent)
 - IBM System i™ machine (using the IBM Integrated System x platform)
 - IBM System z™ 600 or 700 machine (for Linux on System z)
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For IBM WebSphere Message Broker Toolkit

- Any Intel Pentium® III (or later) processor-based PC or compatible, with 700 MHz processor speed and a minimum of 512 MB RAM
 - Display: 1024x768 minimum
 - IBM WebSphere MQ, Version 6.0 or later
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IBM WebSphere Message Broker, Version 6.0.2 at a glance (continued)

Software requirements

Windows

Operating systems (one of the following)

- Windows XP Professional (for development and test purposes only, not production)
- Windows Server 2003 Standard Edition
- Windows Server 2003 Enterprise Edition

Databases (one of the following)

- DB2 Universal Database Enterprise Edition, Version 8.2
 - DB2 Universal Database Enterprise Server Edition, Version 8.2
 - Oracle 9i, Release 2 with Patch Set 4 (Version 9.2.0.5) with Oracle Patch 3501955
 - Oracle 10g
 - Sybase Adaptive Server Enterprise (ASE), Version 12.5 (non-XA only)
 - Microsoft SQL Server 2000 with SP3A
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IBM AIX

Operating systems (one of the following)

- IBM AIX®, Version 5.2 with Maintenance Level (ML) 3
- AIX, Version 5.3 with ML2

Databases (one of the following)

- DB2 Universal Database Enterprise Edition, Version 8.2
 - DB2 Universal Database Enterprise Server Edition, Version 8.2
 - Oracle 9i, Release 2 with Patch Set 4 (Version 9.2.0.5) with Oracle Patch 3501955
 - Oracle 10g
 - Sybase ASE, Version 12.5 (non-XA only)
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IBM WebSphere Message Broker, Version 6.0.2 at a glance (continued)

Software requirements (continued)

HP-UX PA-RISC

Operating system

- HP-UX 11i, Version 1 (B.11.11) with December 2003 Quality Pack

Databases (one of the following)

- DB2 Universal Database Enterprise Edition, Version 8.2
 - DB2 Universal Database Enterprise Server Edition, Version 8.2
 - Oracle 9i, Release 2 with Patch Set 4 (Version 9.2.0.5) with Oracle Patch 3501955
 - Oracle 10g
 - Sybase ASE, Version 12.5 (non-XA only)
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HP-UX Itanium

Operating system

- HP-UX 11i, Version 2 for Integrity (June 06)

Databases (one of the following)

- DB2 Universal Database Enterprise Edition, Version 8.2
 - DB2 Universal Database Enterprise Server Edition, Version 8.2
 - Oracle 9i, Release 2 with Patch Set 4 (Version 9.2.0.5) with Oracle Patch 3501955
 - Oracle 10g
 - Sybase ASE, Version 12.5 (non-XA only)
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Sun Solaris Operating Environment

Operating systems (one of the following)

- Sun Solaris Operating Environment, Version 8 with SunSolve recommended Patch Cluster level and required Solaris Patch ID 111308
- Sun Solaris Operating Environment, Version 9 with SunSolve recommended Patch Cluster level

Databases (one of the following)

- DB2 Universal Database Enterprise Edition, Version 8.2
 - DB2 Universal Database Enterprise Server Edition, Version 8.2
 - Oracle 9i, Release 2 with Patch Set 4 (Version 9.2.0.5) with Oracle Patch 3501955
 - Oracle 10g
 - Sybase ASE, Version 12.5 (non-XA only)
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IBM WebSphere Message Broker, Version 6.0.2 at a glance (continued)

Software requirements (continued)

Linux

Operating systems (one of the following)

- Linux on Intel IA32: Red Hat Enterprise Linux (RHEL) AS, Version 3.0 with Update 2, Kernel, Version 2.4.21
- Linux on Intel IA32: SUSE Linux Enterprise Server (SLES), Version 9, Kernel, Version 2.6
- Linux on System z (31-bit): RHEL, Version 3.0 with Update 2, Kernel, Version 2.4.21
- Linux on System z (31-bit): SLES, Version 9, Kernel, Version 2.6

Databases (one of the following)

- DB2 Universal Database Enterprise Edition, Version 8.2
 - DB2 Universal Database Enterprise Server Edition, Version 8.2
 - Oracle 9i, Release 2 with Patch Set 4 (Version 9.2.0.5) with Oracle Patch 3501955
 - Oracle 10g
 - Sybase ASE, Version 12.5 (non-XA only); not available on Linux on System z
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