

WebSphere Event Broker



Managing your Installation

Version 6 Release 0

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Note

Before using this information and the product it supports, read the information in the Notices appendix.

First Edition (September 2005)

This edition applies to IBM® WebSphere® Event Broker Version 6.0 and to all subsequent releases and modifications until otherwise indicated in new editions.

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Contents

About this topic collection. v

Part 1. Installing 1

Installing 3

Installation Guide. 3

Finding the latest information 3

Installing complementary products 3

Setting up a command environment 8

Applying service to runtime components 9

Applying service to the Message Brokers Toolkit 12

Part 2. Uninstalling 15

Uninstalling 17

Uninstalling WebSphere Event Broker runtime components 17

Uninstalling the Message Brokers Toolkit 20

Part 3. Reference 23

Installation 25

Hardware requirements 25

Software requirements. 27

Modes of installation and uninstallation. 33

National language support 36

System changes caused by installation and configuration 38

Part 4. Appendixes. 49

Appendix. Notices. 51

Trademarks 53

Index 55

About this topic collection

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Part 1. Installing

Installing	3
Installation Guide.	3
Finding the latest information	3
Installing complementary products	3
Installing IBM Rational Agent Controller	3
Installing IBM DB2 Universal Database Enterprise Server Edition 8	7
IBM Tivoli License Manager	7
Setting up a command environment	8
Applying service to runtime components	9
Backing up your system	9
Installing service on Windows	10
Installing service on Linux and UNIX	10
Installing service on z/OS	11
Applying service to the Message Brokers Toolkit	12

Installing

This topic covers installing WebSphere Event Broker:

- “Installation Guide”
- “Finding the latest information”
- “Installing complementary products”
- “Setting up a command environment” on page 8
- “Applying service to runtime components” on page 9
- “Applying service to the Message Brokers Toolkit” on page 12

Installation Guide

Installation information for WebSphere Event Broker is provided by the Installation Guide, supplied in hardcopy with your product package.

The Installation Guide (English and translated versions) is available on the Documentation CD. You can also access English and translated books on the IBM Publications Center.

You can view, search, and print PDF files using Adobe Acrobat Reader. To download Acrobat Reader, visit the Adobe Systems Inc. Web site.

Finding the latest information

You are strongly recommended to refer to the readme.html file at the WebSphere MQ family product readmes web page for the very latest information on WebSphere Event Broker.

If you have a problem with installing, you should refer to the install log file (mqsi6_install.log) for information. Refer to the “Installation Guide” for the location of the install log file on your operating system.

Installing complementary products

If your environment requires it, you might need to refer to installation information for these complementary products:

- IBM Rational Agent Controller
- IBM DB2
- IBM Tivoli License Manager

Installing IBM Rational Agent Controller

IBM Rational[®] Agent Controller, (RAC) is a daemon process that provides the mechanism by which client applications either launch new host processes, or attach to agents that coexist within existing host processes. WebSphere Event Broker uses Agent Controller to provide debugging facilities for message flows deployed to a running Broker. Note that other IBM products may also use RAC for services. You must install Agent Controller before you can use the flow debugger.

If you are debugging an execution group locally, Agent Controller must be installed on the local system. If you are debugging an execution group remotely,

Agent Controller must be installed on the remote system on which your broker is running. Also, the RAC component installed on the broker must have TCP/IP connectivity to the system the Message Brokers Toolkit is running on to allow it to communicate with the Rational Agent Controller client which is embedded in the Message Brokers Toolkit.

Rational Agent Controller Versions 6.0.0.1 and 5.0.2.1 are supported for use with WebSphere Event Broker Version 6.0.

If you have previous versions of WebSphere Event Broker installed, and have a domain that includes Version 5 brokers in addition to Version 6 brokers, you must use RAC Version 5.0.2.1. RAC Version 6.0.0.1 cannot be used with Version 5 brokers. Do not update to RAC Version 6.0.0.1 if you want to continue to use RAC with your Version 5 brokers. Version 2.1 brokers do not use RAC.

If you do not have brokers from previous versions, or you do not want to use RAC with them, you can use RAC Version 6.0.0.1. IBM Rational Agent Controller Version 6.0.0.1 is supplied with WebSphere Event Broker on a supplemental CD and DVD.

The table below shows what is supported on the different platforms for use with Version 5 brokers:

	Version 5 Fix Pack 3 Broker and beyond with RAC 5.0.2 ¹	Version 5 Fix Pack 2 Broker and below with RAC 5.0.2	Version 5 Fix Pack 2 Broker and below with RAC 5.0.1
Windows	Yes	Yes	Yes
AIX	Yes	Yes	Yes
Solaris	Yes	Yes	No
HP-UX	Yes	No	No
z/OS	Yes	No	No
Linux	Yes	No	No

To use RAC with WebSphere Event Broker brokers complete the following steps:

1. Install Agent Controller from the supplemental CD or DVD supplied with WebSphere Event Broker using the full instructions provided in the file `install.html` located in the root directory of the RAC component on CD or DVD. In addition to `install.html`, refer to the appropriate topic for your platform from the list below:
 - Windows
 - Linux
 - Solaris, HP-UX, and AIX
 - z/OS

You are highly recommended to install Agent Controller behind a firewall and to stop the Agent Controller service if you do not use the flow debugger.

2. In the workbench, select the option in the Flow Debug preference page that corresponds to your broker configuration, as documented in Setting flow debug preferences.

Installing IBM Rational Agent Controller on Windows

If you already have Agent Controller installed, and want to check what version it is, complete the following steps:

1. Log on as an administrator.
2. Find RAServer.exe in the bin directory of the Agent Controller installation.
3. Right-click and select **Properties**.
4. Select the **Version** tab.
5. The version is listed as "File version". For example, if you already have the required version, this is displayed as 6.0.0.1. (For most versions, the "Product Version" under "Other information" has the same value.)

To install Rational Agent Controller (RAC) 6.0.0.1 from the supplemental CD or DVD supplied with WebSphere Event Broker, refer to install.html supplied in the root directory of the RAC component on the CD or DVD. In addition to the instructions in install.html take note of the following points:

- On the **Java Runtime Environment** page of the installation wizard, you must specify the location of the Java runtime file (java.exe). RAC requires a Java Runtime Environment (JRE) as a prerequisite, do not specify the JRE installed with WebSphere Event Broker for this purpose, you must use an alternative JRE.
- On the **Security** page of the installation wizard, specify whether Agent Controller will require encrypted and authenticated communications. If security is disabled, only the host list is used to control access to Agent Controller. If security is enabled, clients are only able to connect to Agent Controller if they contain the necessary certificates to authenticate Agent Controller for Secure Socket Communications. Also, all clients are required to login to Agent Controller for debugging broker flows.

Stopping and starting the RationalAgent Controller service:

When you have successfully installed Rational Agent Controller, the Rational Agent Controller service is started automatically on Windows. You can stop and start the service using the **Services** window. You are strongly recommended to change the Startup type from **Automatic** to **Manual**. If you do not use the flow debugger, stop the Rational Agent Controller service.

Installing IBM Agent Controller on Linux

If you already have Agent Controller installed, and want to check what version it is, complete the following steps:

1. Log on as root.
2. Invoke the following command:

```
rpm -q ibmrac
```

To install RAC 6.0.0.1 from the supplemental CD or DVD supplied with WebSphere Event Broker, refer to install.html supplied in the root directory of the RAC component on the CD or DVD. In addition to the instructions in install.html take note of the following points:

- On the **Java Runtime Environment** page of the installation wizard, you must specify the location of the Java runtime file (java.exe). RAC requires a Java Runtime Environment (JRE) as a prerequisite, do not specify the JRE installed with WebSphere Event Broker for this purpose, you must use an alternative JRE.
- On the **Security** page of the installation wizard, specify whether Agent Controller will require encrypted and authenticated communications. If security is disabled, only the host list is used to control access to Agent Controller. If security is enabled, clients are only able to connect to Agent Controller if they

contain the necessary certificates to authenticate Agent Controller for Secure Socket Communications. Also, all clients are required to login to Agent Controller for debugging broker flows.

Installing IBM Agent Controller on Solaris, HP-UX, and AIX

If you already have Agent Controller installed, and want to check what version it is, complete the following steps:

1. Log on as root.
2. On Solaris enter:
 - a. `pkginfo -x > pkginfo.txt`
 - b. `vi pkginfo.txt`
 - c. Search for "ibmrac" (if RAC is at 5.1 or later) or "28887f2df81d126aa228a4f84b6051d5" (if RAC is at 5.0.x).
 - d. Find the version displayed on the line following the search string, reverse the third and fourth digits, and ignore trailing characters. For example if the version is displayed as "5.1.0.2DSP", this represents "5.1.2".
3. On HP-UX enter:

```
swlist | grep IBMRAC
```

if RAC is at 6.0 or later or

```
swlist | grep 628282f51593896a6d94a9eee71770f5
```

if RAC is at 5.0.x.
4. On AIX enter:

```
lspp -i ibmrac
```

if RAC is at 5.1 or later or

```
lspp -i e22643e413d203c89236cd92ef065fbc
```

if RAC is at 5.0.x.

To install RAC 6.0.0.1 from the supplemental CD or DVD supplied with WebSphere Event Broker, refer to `install.html` supplied in the root directory of the RAC component on the CD or DVD. In addition to the instructions in `install.html` take note of the following points:

- On the **Java Runtime Environment** page of the installation wizard, you must specify the location of the Java runtime file (`java.exe`). RAC requires a Java Runtime Environment (JRE) as a prerequisite, do not specify the JRE installed with WebSphere Event Broker for this purpose, you must use an alternative JRE.
- On the **Security** page of the installation wizard, specify whether Agent Controller will require encrypted and authenticated communications. If security is disabled, only the host list is used to control access to Agent Controller. If security is enabled, clients are only able to connect to Agent Controller if they contain the necessary certificates to authenticate Agent Controller for Secure Socket Communications. Also, all clients are required to login to Agent Controller for debugging broker flows.

Installing IBM Agent Controller on z/OS

If you already have Agent Controller installed, and want to check what version it is, go to `/usr/lpp/IBM/AgentController/config`, review the file `serviceconfig.xml` and check the attribute version.

To install RAC 6.0.0.1 from the supplemental CD or DVD supplied with WebSphere Event Broker, refer to install.html supplied in the root directory of the RAC component on the CD or DVD. In addition to the instructions in install.html take note of the following points:

- At the **Java Runtime Environment** prompt during installation, you must specify the location of the Java runtime file (java.exe). RAC requires a Java Runtime Environment (JRE) as a prerequisite, do not specify the JRE installed with WebSphere Event Broker for this purpose, you must use an alternative JRE.
- At the **Security** prompt during installation, enter **false** because the security feature is not supported.

Note: To enable the z/OS broker to connect to the Agent Controller, add the lib directory (for example, /usr/lpp/IBM/AgentController/lib) to the start of the LIBPATH environment variable in the broker's profile (bipprof), then submit BIPGEN to recreate the broker's ENVFILE. Once this change has been completed, you must restart the broker before any debugging sessions can be connected.

Installing IBM DB2 Universal Database Enterprise Server Edition 8

IBM DB2 Enterprise Server 8.2 is one of the supported databases for use with WebSphere Event Broker, other versions of DB2 are also supported. For a production system you must install one of the supported databases, for example, DB2 Enterprise Server, for a full list of suitable databases, see "Supported databases" on page 28.

Note: For Windows users, Apache Derby (delivered by IBM Cloudscape), is also supplied with WebSphere Event Broker and can be installed from the Launchpad as part of the WebSphere Event Broker product install, this provides sufficient resource for a broker database, and install verification, but is not sufficient for a production system. For information about how to install Derby as part of the WebSphere Event Broker install see .

DB2 Enterprise Server 8.2 is supplied on a CD supplied with the WebSphere Event Broker product and can be installed either before or after you have installed WebSphere Event Broker. To install DB2 see the install.html file on the CD. There is also help built into the Install Wizard following license acceptance.

IBM Tivoli License Manager

IBM Tivoli[®] License Manager enables you to monitor the usage of IBM (and other) software products. It provides you with the following software auditing functionality:

- Monitor the licenses used across different machines.
- Help keep unnecessary licenses to a minimal.
- Guard against software license compliance problems.

This version of WebSphere Event Broker includes support for ITLM V2.1. To find out more about using ITLM to monitor usage of WebSphere Event Broker and other IBM products, or to purchase ITLM, see the IBM Tivoli License Manager Web site.

Setting up a command environment

On distributed systems, you must initialize the environment before you can invoke commands to runtime components. This initialization ensures that all the commands you issue interact with the correct installation of the code.

1. On Windows, open a command console. Click **Start** → **IBM** → **WebSphere Message Brokers 6.0** → **Command Console** for the appropriate installation.

This opens a command window with the correct environment. You are not restricted to invoking runtime commands in this window; you can perform typical actions by issuing operating systems commands, invoking your own utilities, and so on.

See Sample Windows mqsiprofile.cmd file for an example Windows profile

2. On Linux and UNIX systems, run the environment profile. The profile is a file called mqsiprofile, and it is in this directory:

```
install_dir/bin
```

To initialize the environment, run this command:

```
. <install_dir>/bin/mqsiprofile
```

You must include the period and space preceding the location for this invocation to work correctly.

See Sample Linux mqsiprofile file for an example Linux profile

You can also initialize the environment in this way on Windows if you prefer. mqsiprofile is located in the same directory.

You can add this command to your user profile if you choose, so that it is run automatically every time that you log on. The way in which you do this is operating system dependent.

If you intend to create or start a broker, the broker needs access to the broker database and to any user databases that might be accessed from deployed message flows. Access to broker and user databases is through ODBC, therefore you must have created the ODBC connections that are required by these databases, and set the environment to access those connections. For further information, see [Connecting to the databases](#).

If you have installed previous version of this product on the same system, and have defined a broker domain that includes brokers for Version 6 as well as Version 5, or Version 2.1, you are recommended to work with components from different versions on separate user IDs. Run the appropriate profile for that version from that user ID.

The Version 5 and Version 2.1 profiles are provided for each platform, and are named profile.hpux or similar. Check that you run the profile that corresponds to the installation and environment you are working with.

If you use the same user ID, and you run more than one profile, you might get unexpected results. Log off and log on again before you run the second profile.

Each different version (Version 2.1, Version 5, and Version 6) has ODBC definitions that are specific to that version. You cannot use the same ODBC file.

Applying service to runtime components

You cannot back out service without removing the entire product. You are strongly recommended to keep a backup image or previous GA CD or fix pack readily available in case you encounter any problems after installing service.

Maintenance updates for WebSphere Event Broker are available through a download from a web site, in the form of a Program Temporary Fix (PTF), also known as a fix pack. Fix packs are cumulative, therefore you do not need to install Fix Pack 1 before you can install Fix Pack 2. However, the GA code must have been installed first to activate the licensing requirements. You can find the latest information about available fix packs on the WebSphere MQ family support Web page

Fix packs for WebSphere Event Broker are installed using the same technology as for the GA release. This means that product files are consistently tracked and updated appropriately.

You cannot remove individual fix packs without uninstalling the entire product. If you want to restore a system to a previous service level, you must uninstall the entire product, reinstall the GA level of the product, and then install the desired level of fix pack.

If you have any interim fixes applied to your existing installation, contact your IBM Service representative for instructions and possible updated interim fixes for the fix pack level you are installing.

You can download the latest fix pack from the WebSphere MQ family support Web page. Scroll down the page and select the fix pack listed for your WebSphere Event Broker product.

To download maintenance updates:

1. Read the multiplatform memo. To access the memo, scroll down to read the Installation Instructions. Click on the link **Problems fixed (MEMO.PTF)**.
2. To begin the download process, scroll to **Download package** and click the **HTTP** download option. Accept the download terms and conditions and sign in to the download site. Click the link for your desired platform (with name of the form Fix Pack XX *Ummmmmm*, where XX is the number of the fix pack, and *Ummmmmm* is the fix pack file name) and follow the instructions.
3. Select a suitable destination as the target for download.

Choose the relevant platform for instructions about how to apply maintenance updates:

- "Installing service on Windows" on page 10
- "Installing service on Linux and UNIX" on page 10
- "Installing service on z/OS" on page 11

Backing up your system

You cannot back out service without removing the entire product. You are strongly recommended to keep previous GA or update packages readily available in case you encounter any problems after installing service.

Installing service on Windows

Before applying a maintenance update, download the update as described in “Applying service to runtime components” on page 9.

To apply maintenance updates to WebSphere Event Broker:

1. Ensure that the user ID you are logged on with is a member of the Windows Administrator group in the local security domain. You are recommended to use the same ID as the one you used for installing WebSphere Event Broker.
2. Ensure that all WebSphere Event Broker function is stopped. You must:
 - a. Stop execution of the Configuration Manager, the User Name Server, and all brokers on this system using the `mqsisstop` command, or by stopping the Windows services for these components from **Start** → **Settings** → **Control Panel** → **Administrative Tools** → **Services**.
 - b. Stop execution of the workbench
 - c. Ensure that you do not have any WebSphere Event Broker files open.
3. You are also strongly recommended to exit all Windows programs before applying maintenance to WebSphere Event Broker
4. Change to the directory into which you downloaded the fix pack file (Unnnnnn.exe).
5. In Windows Explorer, right-click the fix pack file and select **Open**. Alternatively, enter the following command at a command prompt:
`FixPackLauncher [-s] -a install_arguments`, where
`FixPackLauncher` is the full path to the fix pack executable file, for example `U200208.exe`.

-s is optional and means that the fix pack launcher extracts silently. If you omit this, a progress of extraction panel is displayed.
-a means ‘read in the following install arguments’.
`install_arguments` are the arguments that determine how the installer runs. For more information about install arguments, see “Modes of installation and uninstallation” on page 33.

After successful extraction the installer runs automatically according to the chosen arguments. Follow the instructions on the install panels.

When you have completed installation, review the multiplatform memo supplied in the directory readmes, and complete any manual post-installation tasks required.

Installing service on Linux and UNIX

Before applying a maintenance update, download the update as described in “Applying service to runtime components” on page 9.

To apply maintenance updates to WebSphere Event Broker:

1. Stop all brokers and User Name Servers that are running.
2. Change to the directory where you downloaded the fix pack file, Unnnnnn.tar.z.
3. Replace the .Z file with a .tar file, by entering the following command:
`uncompress -fv filename.tar.Z`

4. Untar the image and extract all the directories, subdirectories, and files required to apply the update, by entering the following command: `tar -xvf filename.tar`.
5. Decide which mode of installation you want to use. The alternatives are explained in “Modes of installation and uninstallation” on page 33.
6. Depending on the mode of installation you have decided to use, run one of the commands described below, where *<installer>* is the appropriate installation program for your platform, listed in the table below.
 - To invoke the installation wizard in graphical mode double-click the file or type its name with no options at a command prompt and press **Enter**. When you invoke the installation wizard, it guides you through a series of panels where you can make choices about where to install the components, and which components you want to install.
 - Enter one of the following commands to invoke the installation wizard in console mode. Enter this command for a default invocation, `<installer> -console`. Alternatively, for improved accessibility enter: `<installer> -accessibility`. Include the absolute or relative path names if you invoke installation from a directory other than the one in which the wizard exists. When you invoke the installation wizard, it guides you through a series of panels where you can make choices about where to install the components, and which components you want to install.
 - The command shown below invokes the installation wizard to complete a typical installation with all default settings. You must include the `-G licenseAccepted=true` flag on the invocation, to ensure the license is accepted. `<installer> -silent -G licenseAccepted=true`. Include the absolute or relative path names if you invoke installation from a directory other than the one in which the wizard exists. If you want to specify non-default settings, you must include a response file on the invocation. For more details of how to do this, and how to create and edit a response file to define your requirements, see “Using response files” on page 35.

Platform	Installation program
AIX	setupaix
HP-UX	setuphp
Linux (x86 platform)	setuplinux32
Linux (zSeries platform)	setuplinux390
Solaris	setupsolaris

After successful extraction the installer runs automatically according to the chosen arguments. Follow the instructions on the installation panels.

When you have completed the installation, review the multiplatform memo supplied in the readme directory, and complete any manual post-installation tasks required.

Installing service on z/OS

If your SMP/E target zones are not on the same file system as your production directories, copy the directories as a whole to the system where they are to be used, and replace the directories currently there. This means that any brokers or the User Name Server use the updated directories when they next restart.

If you do not want all of your brokers to be affected by changing the directories, you need to have at least two copies of the product directories. Copy the updated files to the first copy and run one or more brokers with these directories. When you are satisfied with the updates, copy the updated files to the second copy of the directories for the rest of your brokers to use.

Use the following steps to back up your WebSphere Event Broker directories on z/OS, and restore them on another system or on the same system in a different directory:

1. Tar the code using the command:

```
tar -cvzf wmqi.tar.z /usr/lpp/wmqi
```

where */usr/lpp/wmqi* is the installation path.

2. FTP the tar file to the new file system in binary mode by entering the following commands:

```
ftp machine_name
binary
cd USS_path_for_storing_tar_file
put wmqi.tar.z
quit
```

3. Extract the contents of the file using the following command:

```
tar -xvzf wmqi.tar.z
```

Because the initial tar command used the absolute path

```
/usr/lpp/wmqi
```

you need WRITE access to the root directory for this task. You can use a relative path instead. See the **tar** command in the *UNIX System Services Command Reference Guide* for more details.

Applying service to the Message Brokers Toolkit

The Message Brokers Toolkit uses the Rational Product Updater (RPU) to install service updates. Follow these instructions to install any available updates to the Message Brokers Toolkit. For more detailed information about the RPU, see the Rational Product Updater Help.

1. Launch the RPU, from the toolkit. **Help > Software Updates > IBM Rational Product Updater.**
2. On the Installed Products tab you will see the entry for the IBM WebSphere Message Brokers Toolkit, click on this entry. IBM WebSphere Message Brokers Toolkit will be highlighted.
3. Click the **Find Updates** button. You will be shown a list of updates available for the products you have installed. If any updates are available for the Message Brokers Toolkit these will appear below the product name.
4. For more information about any of the available updates, click on the update. Information about the update will appear in the Detailed information pane.
5. Before applying any of the available updates, read the information and follow any instructions given.
6. By default, all available updates will be ticked. Untick any items that you do not want to install.
7. Click **Install updates** to apply the service update/s. Installation of the update/s will begin.

8. Whether any further input is required will depend on the specific update.
Follow any instructions and answer any questions you are presented with.

Once installation is complete, the service update will appear on the Installed Products tab, under the IBM WebSphere Message Brokers Toolkit.

Part 2. Uninstalling

Uninstalling	17
Uninstalling WebSphere Event Broker runtime components	17
Uninstalling the full product.	17
Uninstalling silently	18
Uninstalling manually.	19
Uninstalling in console mode	19
Uninstalling service.	20
Uninstalling on z/OS	20
Uninstalling the Message Brokers Toolkit	20
Uninstalling the Message Brokers Toolkit in graphical mode	20
Uninstalling the Message Brokers Toolkit in console mode.	21
Uninstalling the Message Brokers Toolkit in silent mode	22
Uninstalling service from the Toolkit	22

Uninstalling

This section describes the following tasks:

- “Uninstalling WebSphere Event Broker runtime components”
- “Uninstalling the Message Brokers Toolkit” on page 20

Uninstalling WebSphere Event Broker runtime components

This section describes the tasks that you must complete to uninstall the WebSphere Event Broker runtime components on the following systems:

- AIX
- HP-UX
- Linux
- Solaris
- Windows

For information about uninstalling WebSphere Business Integration Message Broker on z/OS, refer to the WebSphere Business Integration Message Broker for z/OS Program Directory.

1. Decide which mode of uninstallation you want to use. The alternatives are explained in “Modes of installation and uninstallation” on page 33.
2. Follow the uninstallation instructions provided in the corresponding uninstallation topic:
 - “Uninstalling the full product”
 - “Uninstalling silently” on page 18
 - “Uninstalling manually” on page 19
 - “Uninstalling in console mode” on page 19

For information about removing service updates see “Uninstalling service” on page 20.

Uninstalling the full product

Always use the uninstall wizard to remove this product, do not use the native uninstallation program.

The uninstallation process for the WebSphere Event Broker runtime and the Message Brokers Toolkit requires you to complete different actions. To uninstall the Message Brokers Toolkit, see “Uninstalling the Message Brokers Toolkit” on page 20. To uninstall the runtime components complete the following steps:

1. Stop all running processes that use any part of WebSphere Event Broker (brokers, Configuration Manager and the User Name Server) before uninstalling. Use the `mqsilist` (list resources) command to check which components are running. Stop each component using the `mqsisstop` command.
2. On Windows and Linux (x86 platform) end any active sessions of the Message Brokers Toolkit.
3. If you do not plan to reinstall on this computer, delete all of the runtime components. When you delete a component, all its associated data and resources are deleted; if you want to retain component data, do not delete that component. Use the following commands to delete one or more components: `mqsideletebroker` command, `mqsideleteconfigmgr` command and `mqsideleteusernameeserver` command.

4. If you have created databases on Windows with the `mqscreatedb` command, you can delete them with the `mqsidedeletedb` command. Databases created by the Default Configuration wizard can also be deleted in this way.
5. Use one of the following methods to invoke the uninstallation program. Only Windows users with one instance of the WebSphere Event Broker runtime installed should use the second method.

- Run the following command from outside the installation directory, specifying the full path, this will ensure that the folders will be removed during uninstallation:

```
/install_dir/_uninst_runtime/uninstaller
```

Where *install_dir* is the home directory of your WebSphere Event Broker installation. If you accepted the default location during installation, this directory will be as follows:

- On Windows, C:\Program Files\IBM\MQSI\6.0
- On AIX, HP-UX and Solaris, /opt/IBM/mqsi/6.0
- On Linux, /opt/ibm/mqsi/6.0
- Navigate to **Start** → **Settings** → **Control Panel** → **Add/Remove Programs**. Select WebSphere Event Broker and click **Change/Remove**.

The uninstaller will be launched.

6. Choose the component or components you wish to uninstall and follow the prompts to complete uninstallation.

Uninstalling silently

Always use the uninstall wizard to remove this product, do not use the native uninstallation program.

You can remove WebSphere Event Broker without user interaction. This process is called unattended (or silent) removal. You can use a response file whilst uninstalling silently, this is a text file that contains values for the options you select when you uninstall WebSphere Event Broker. For further information see “Using response files” on page 35.

Note:

This task describes how to run the uninstallation program in silent mode without a response file. If you do so, the program assumes all the default values.

1. Stop all running processes that use any part of WebSphere Event Broker (brokers, Configuration Manager, and the User Name Server) before uninstalling. Use the `mqsolist` (list resources) command to check which components are running. Stop each component using the `mqsistop` command.
2. On Windows and Linux (x86 platform) end any active sessions of the Message Brokers Toolkit.
3. If you do not plan to reinstall on this computer, delete all of the runtime components. When you delete a component, all its associated data and resources are deleted. Use the following commands to do this: `mqsdeletebroker` command, `mqsdeleteconfigmgr` command, and `mqsdeleteusername server` command.
4. Run the uninstallation program using one of the commands below:
 - On Windows, run the command from inside the installation directory.

```
start /w uninstaller
```

- On Linux and UNIX, run the command from outside the installation directory to ensure that the folders will be removed during uninstallation.

Where *install_dir* is the home directory of your WebSphere Event Broker installation. If you accepted the default location during installation, this directory will be as follows:

- On Windows, C:\Program Files\IBM\MQSI\6.0
- On AIX, HP-UX and Solaris, /opt/IBM/mqsi/6.0
- On Linux, /opt/ibm/mqsi/6.0

The uninstallation program runs without interaction.

Uninstalling manually

Always use the uninstall wizard to remove this product, do not use the native uninstallation program.

If, in exceptional circumstances, the uninstall wizard fails to remove the product successfully, you can remove the product manually. Please contact your IBM Service Center for assistance if a failure occurs.

Uninstalling in console mode

Always use the uninstall wizard to remove this product, do not use the native uninstallation program.

For information about console mode and alternative modes available, see “Modes of installation and uninstallation” on page 33. To Invoke the uninstaller in console mode complete the following steps:

1. Stop all running processes that use any part of WebSphere Event Broker (brokers, Configuration Manager, and the User Name Server) before uninstalling. Use the `mqsilist` (list resources) command to check which components are running. Stop each component using the `mqsisstop` command.
2. On Windows and Linux (x86 platform) end any active sessions of the Message Brokers Toolkit.
3. If you do not plan to reinstall on this computer, delete all of the runtime components. When you delete a component, all its associated data and resources are deleted. Use the following commands to do this: `mqsideletebroker` command, `mqsideleteconfigmgr` command, and `mqsideleteusername server` command.
4. Invoke the uninstallation program in console mode from outside the installation directory, specifying the full path, this will ensure that the folders will be removed during uninstallation.

```
/install_dir/_uninst_runtime/uninstaller -console
```

Where *install_dir* is the home directory of your WebSphere Event Broker installation. If you accepted the default location during installation, this directory will be as follows:

- On Windows, C:\Program Files\IBM\MQSI\6.0
- On AIX, HP-UX and Solaris, /opt/IBM/mqsi/6.0
- On Linux, /opt/ibm/mqsi/6.0

Note: For improved accessibility, use the command
`/install_dir/_uninst_runtime/uninstaller -console -accessibility`

5. When invoked, the uninstaller presents text-based screens on the console that you can navigate between using the following options:
 - 1 next
 - 2 previous
 - 3 cancel
 - 4 redisplay

The uninstaller will ask you to confirm that you wish to uninstall the product and that the location it is uninstalling from is correct. Once you have responded to these questions the uninstallation commences.

Uninstalling service

You cannot remove a service package without uninstalling the entire product.

If you want to restore a system to a previous service level, you must uninstall the product before you reinstall the desired level of service. You do not need to reinstall the GA level of the product first, because the update package does this for you. No data is lost during this process.

It is possible to have more than one instance of WebSphere Event Broker installed on a machine. These different installations can be at different levels. Therefore it is not necessary to uninstall an instance of the product to replace it with an installation at an earlier level. For further information see, Coexistence with previous versions and other products.

Uninstalling on z/OS

For information about uninstalling WebSphere Event Broker on z/OS, refer to the *WebSphere Event Broker for z/OS Program Directory*.

Uninstalling the Message Brokers Toolkit

This section describes the tasks that you must complete to uninstall the Message Brokers Toolkit on the following systems:

- Windows
 - Linux (x86 platform)
1. Decide which mode of uninstallation you want to use. The alternatives are explained in “Modes of installation and uninstallation” on page 33.
 2. Follow the uninstallation instructions provided in the corresponding topic
 - “Uninstalling the Message Brokers Toolkit in graphical mode”
 - “Uninstalling the Message Brokers Toolkit in console mode” on page 21
 - “Uninstalling the Message Brokers Toolkit in silent mode” on page 22

Uninstalling the Message Brokers Toolkit in graphical mode

For information about graphical mode and alternative modes available, see “Modes of installation and uninstallation” on page 33. Invoke and complete the uninstaller to uninstall the Message Brokers Toolkit.

1. Invoke the uninstaller in graphical mode using one of the following methods, Linux users must use the third option:
 - On Windows, find the entry for **IBM WebSphere Event Broker Toolkit Version 6.0** in Add/Remove Programs and click **Remove**.
 - Find the uninstallation wizard in the <installdir>/webt_prod/_uninst directory. Its name is defined in the table below. Double click the file.
 - Navigate to the uninstallation directory, <installdir>/webt_prod/_uninst directory, in a command prompt and type one of the following commands:
 - On Linux type the following command: ./uninstall.bin
 - On Windows type the command: uninstall.exe

Platform	Uninstallation wizard
Windows	uninstall.exe
Linux	uninstall.bin

2. When the uninstaller is invoked, follow the guidance through the series of panels.

To complete the uninstallation of the Message Brokers Toolkit, restart your computer.

Uninstalling the Message Brokers Toolkit in console mode

For information about console mode and alternative modes available, see “Modes of installation and uninstallation” on page 33. Invoke the uninstallation wizard with the options of your choice.

1. Invoke the uninstaller in console mode.
 - On Windows enter this command for default invocation: `uninstall.exe -console`
 - On Windows enter this command for improved accessibility: `uninstall.exe -accessibility`
 - On Linux enter this command for default invocation: `./uninstall.bin -console`
 - On Linux enter this command for improved accessibility: `./uninstall.bin -accessibility`

If you invoke installation from a directory other than the one in which the wizard exists, <installdir>/webt_prod/_uninst directory, include the absolute or relative path with the command name.

2. When invoked, the uninstaller presents text-based screens on the console that you can navigate between using the following options:
 - 1 next
 - 2 previous
 - 3 cancel
 - 4 redisplay

The uninstaller will ask you to confirm that you wish to uninstall the product and that the location it is uninstalling from is correct. Once you have responded to these questions the uninstallation commences.

Uninstalling the Message Brokers Toolkit in silent mode

For information about silent mode and alternative modes available, see “Modes of installation and uninstallation” on page 33. To complete uninstallation without any user interaction use the silent mode.

The command shown below invokes the uninstaller with all the default settings.

- On Linux systems, enter the following command to start a default uninstallation:
`./uninstall.bin -silent`
- On Windows systems, invoke the installation command within a start command with parameter /w to ensure that the installation completes before it returns to the command prompt. Enter the following command to start a default uninstallation:
`start /w uninstall.exe -silent`

If you invoke installation from a directory other than the one in which the wizard exists, <installdir>/webt_prod/_uninst directory, include the absolute or relative path with the command name.

To use non-default settings, you must include a response file on the invocation.
<uninstaller> -silent <responsefile>

Where <uninstaller> is the name of the uninstaller for your platform, and <responsefile> is the full path and name of your chosen response file. For more details of how to do this, and to create and edit a response file to define your requirements, see “Using response files” on page 35.

Uninstalling service from the Toolkit

You can remove WebSphere Event Broker iFix service updates from the Toolkit using the Rational Product Updater (RPU).

1. Launch the RPU, from the toolkit. **Help > Software Updates > IBM Rational Product Updater.**
2. On the Installed Products tab you will see the entry for the IBM WebSphere Message Brokers Toolkit, any updates that have been installed will appear under this entry. If you want to uninstall any of these updates click on the **Rollbacks** tab.
3. Untick the box on the left of the update that you wish to uninstall. Ensure that no products are ticked that you do not wish to uninstall.
4. To remove the update, click **Roll Back Updates.**

Part 3. Reference

Installation	25
Hardware requirements	25
Supported processors	25
Memory and disk space	26
Communications	27
Software requirements	27
Operating system requirements	27
Supported databases	28
Additional software prerequisites	31
Modes of installation and uninstallation	33
Using response files	35
National language support	36
Locales	37
System changes caused by installation and configuration	38
Directory structures after installation	38
Registry changes caused by installation and configuration	43
Environment variables created during installation	44
Default WebSphere MQ resources created during configuration	44
Database contents	45

Installation

Reference information associated with installation is provided to help you to understand how you choose your installation options, and what effects your choices have on the system.

- “Hardware requirements”
- “Software requirements” on page 27
- “Modes of installation and uninstallation” on page 33
- “National language support” on page 36
- “System changes caused by installation and configuration” on page 38

You are also recommended to read the readme.html file, its location is listed in “Finding the latest information” on page 3.

Hardware requirements

This section provides information about the hardware requirements of WebSphere Event Broker.

- “Supported processors”
- “Memory and disk space” on page 26
- “Communications” on page 27

Supported processors

WebSphere Event Broker is supported on the following systems.

Operating system	Requirements ¹
AIX [®]	IBM e(logo)server pSeries [®] IBM RS/6000 [®] processor machines IBM e(logo)server i5
HP-UX (PA-RISC platform)	Hewlett-Packard HP-9000 processor machines ²
Linux [®] (x86 platform)	IBM e(logo)server xSeries [®] or equivalent Intel [®] based systems ³
Linux (zSeries platform)	IBM e(logo)server zSeries [®] 600 or e(logo)server 700 Server
Solaris (SPARC platform)	Sun Microsystems SPARC processor machines
Windows	IBM e(logo)server xSeries or equivalent Intel based systems ³ IBM e(logo)server iSeries [™] Server using the IBM Integrated xSeries Server ⁴
z/OS ⁵	Any server capable of running one of the supported z/OS [®] releases

Notes:

1. Always check the readme.html file for the latest information about supported hardware. A readme file is supplied on the product CD (for runtime components) and on the Message Brokers Toolkit CD, and you can access it from the final panel of the relevant installation program. However, the files are updated occasionally and you must access the WebSphere MQ family product readmes Web page to check that you have the latest level.
2. The '+DAportable' flag cannot be used for 64-bit compilations, therefore WebSphere MQ 64-bit queue managers cannot be supported on the PA-RISC 1.1 chips.

3. The Message Brokers Toolkit requires any Intel Pentium® III (or higher) processor-based IBM PC or compatible, with 700 or more MHz processor speed. This is the minimum supported level; for improved performance use a 2GHz processor.
A minimum display resolution of at least 1024 x 768 is required for some dialogs (for example, the Preferences dialog).
4. You must install OS/400® Version 5 Release 2 or Version 5 Release 3 on the iSeries Server to exploit this support.
5. See the *Program Directory for WebSphere Event Broker for z/OS* or *Program Directory for WebSphere Message Broker with Rules and Formatter Extension Option for z/OS* for further details.

Memory and disk space

WebSphere Event Broker has the following requirements on distributed systems:

- 512 MB of RAM are required to support runtime operations (1 MB equals approximately 1000 000 bytes).
- 512 MB of RAM are required to support Message Brokers Toolkit operations on Linux (x86 platform) or Windows. This is the minimum supported level; for improved performance, provide 1 GB (1 GB equals approximately 1 000 000 000 bytes).
- Disk space requirements are dependent on the components that you install and the working space that is required by those components (for example, for WebSphere MQ queues and persistent messages).

The installation wizard displays the actual requirements for each component that you have selected for installation, excluding temporary space. The table below provides figures for guidance that might vary with different operating systems. If you install just one or two of the runtime components, the storage required is reduced by only a small amount.

Component	Space required on Windows	Space required on Linux (x86 platform)
Broker, Configuration Manager, and User Name Server	315 MB plus 300 MB temporary space	280 MB plus 300 MB temporary space
Event Broker Toolkit	4.2 GB plus 1.5 GB temporary space	4,2 GB plus 1.5 temporary space

- If you install one of the database products supplied with WebSphere Event Broker, you need additional disk space:
 - DB2 Enterprise Server requires approximately 300 MB. This is for a Compact installation which provides sufficient function for WebSphere Event Broker; if you choose a Typical or Custom installation additional storage might be required.
 - On Windows, ODBC (Open Database Connectivity) drivers for Cloudscape require approximately 105 MB.
- On systems on which you create a broker, approximately 10 MB is required for the broker tables. If you create user databases that are accessed by message flows, additional space is required on those systems.
- Temporary disk space is required during installation as shown in the table above. This space is required in the location pointed to by the TEMP system variable, not the folder into which you install the product. The temporary files are deleted when installation has completed.

For all storage requirements on z/OS, see the section about "DASD Storage Requirements" in the *Program Directory for WebSphere Event Broker for z/OS* or the *Program Directory for WebSphere Rules and Formatter Option for z/OS*.

Communications

Your system must have communications hardware that supports at least one of the following protocols:

- NetBIOS
- SNA LU 6.2
- SPX
- TCP/IP

Software requirements

This section provides information about the software requirements of WebSphere Event Broker.

- "Operating system requirements"
- "Supported databases" on page 28
- "Additional software prerequisites" on page 31

Operating system requirements

You must have the correct level of operating system software before you install WebSphere Event Broker. Operating system software requirements are as follows:

Operating system	Requirements ¹
AIX	<ul style="list-style-type: none"> • AIX Version 5.2 with Maintenance Level 3 • AIX Version 5.3 with Maintenance Level 2
HP-UX	<ul style="list-style-type: none"> • HP-UX 11i v1 (B.11.11) (plus December 2003 QPK)
Linux (x86 platform) ²	<ul style="list-style-type: none"> • Linux Intel IA32 Red Hat Enterprise Linux Advanced Server V3.0 (plus Update 2) (Kernel Version 2.4.21) • Linux Intel IA32 SUSE LINUX Enterprise Server (SLES) 9 (Kernel Version 2.6)
Linux (zSeries platform)	<ul style="list-style-type: none"> • Linux zSeries (31-bit) Red Hat Enterprise Linux Advanced Server V3.0 (plus Update 2) (Kernel Version 2.4.21) • Linux zSeries (31-bit) SUSE LINUX Enterprise Server (SLES) 9 (Kernel Version 2.6)
Solaris	<ul style="list-style-type: none"> • Solaris 8 (plus SunSolve recommended Patch Cluster level and Patch ID 111308-05)³ • Solaris 9 (plus SunSolve recommended Patch Cluster level)
Windows [®]	<ul style="list-style-type: none"> • Windows XP Professional⁴ • Windows Server 2003 Standard Edition • Windows Server 2003 Enterprise Edition
z/OS ⁵	<ul style="list-style-type: none"> • z/OS 1.5 or later

Notes:

1. Always check the readme.html file for the latest information about supported software. A readme file is supplied on the product CD (for runtime components) and on the Message Brokers Toolkit CD, and you can access it from the final panel of the relevant installation program. However, the files are updated occasionally and you must access the WebSphere MQ family product readmes Web page to check that you have the latest level.
2. You might require the following additional packages on Linux (x86 platform) These are available with the operating system:
 - If you chose to install in graphical mode, compatibility libraries are required:
 - Red Hat Enterprise Advanced Server 3.0: package `compat-libstdc++`
 - SUSE LINUX Enterprise Server: package `compat` (at version 2002.12.6.0 or later)

These are not required for console or silent installations.
 - If you want to use the package monitor (RPM), the `therpm-build` package is required.
3. This patch provides multithreaded malloc support on Solaris 8. It is required because the standard system malloc library is optimized for single threaded applications, but the broker typically runs many threads and requires the multithreaded `mtmalloc`.
4. Support is for development and test purposes only, not for production.
5. See the *Program Directory for WebSphere Event Broker for z/OS* or the *Program Directory for WebSphere Rules and Formatter Option for z/OS* for further details. In particular, review the information in "Preventative Service Planning".

Supported databases

A broker requires a database to contain operational and state data. Multiple brokers within a single instance can access the same database, if appropriate, because all tables are qualified by the broker name. Brokers in different installation locations on the same system cannot share a database.

The broker tables are created when you invoke the `mqsicreatebroker` command. The tables that are created are listed in "Database contents" on page 30.

The following table indicates which levels of database are supported on which operating systems. In most situations, the broker that accesses the database does not have to be running on the same operating system as the database server. For details about local and remote database use, and existing restrictions, see "Database locations" on page 29.

Operating system	DB2 ^{®1}	Microsoft SQL Server	Oracle ¹	Sybase
AIX	8.2 ²	Not applicable	9i Rel 2 ³ 10G	12.5
HP-UX	8.2 ²	Not applicable	9i Rel 2 ³ 10G	12.5

Operating system	DB2 ^{®1}	Microsoft SQL Server	Oracle ¹	Sybase
Linux (x86 platform)	8.2 ²	Not applicable	9i Rel 2 ³ 10G	12.5
Linux (zSeries platform)	8.2 ²	Not applicable	Not supported	Not supported
OS/400 ⁴	8.2	Not applicable	Not applicable	Not applicable
Solaris	8.2 ²	Not applicable	9i Rel 2 ³ 10G	12.5
Windows	8.2 ²⁺⁵	2000 SP3a	9i Rel 2 ³ 10G	12.5
z/OS	7.1 ⁶ 8.1 ⁶	Not applicable	Not supported	Not applicable

Notes:

- Supported releases of DB2, Oracle, and Sybase can participate as a Resource Manager in a distributed XA transaction, and can be coordinated by WebSphere MQ as the XA Transaction Manager. In WebSphere Event Broker, this is referred to as supporting a globally coordinated message flow. On z/OS, all transactions are coordinated by Recoverable Resource Services (RRS).
XA coordination for messages in the MRM domain on Windows requires DB2 Version 8.2 FixPak 10 or later.
- Check the readme.html file for your product to check if a fix pack or other fix is required.
- Apply Oracle Patch Set 4 (9.2.0.5, patch 3501955) for general improvements in broker interaction with this database.
- You can use the embedded Derby database for verification, evaluation, and test purposes only. Derby refers to IBM Cloudscape™ Version 10.0, a database product that is built on the Derby database from the Apache Software Foundation. Cloudscape does not modify Derby in any way, but provides additional function including installers. Derby database support is embedded in the broker component on Windows only. For a production system, you might want to install and configure your chosen enterprise database.
- On z/OS, DB2 is a mandatory requirement. You must create a unique database for each broker. See the *Program Directory for WebSphere Event Broker for z/OS* or the *Program Directory for WebSphere Rules and Formatter Option for z/OS* for further details.

Database locations

A broker domain requires databases to support its brokers. (The Configuration Manager and the User Name Server have no requirement for database access).

You can choose to create and configure these databases on the local system, or on a remote system, subject to the following restrictions:

- You can use a local or remote database for the broker tables, with the exception that a remote database cannot be accessed on z/OS or OS/400.

- If you choose to use a remote database, you must configure the ODBC connection to the database correctly. Refer to the documentation for the database product that you are using for further information.

See the documentation for your database product using for WebSphere Event Broker to determine the best options for your specific environment and requirements, and information about how to configure remote databases access.

Database contents

WebSphere Event Broker stores configuration and resource information in databases to retain the information and ensure its security and integrity. Each broker creates and maintains information in tables specifically created for that purpose.

When you create a broker, the `mqsicreatebroker` command creates a number of database tables within the database that you specify in the command. You can specify a different database for every broker, or share a database between brokers. The database tables schema inherits its name from the Data Source User ID specified in the create command.

The table below shows the database tables that are created by the `mqsicreatebroker` command in the broker database. The tables are created when you create the first broker. When you create further brokers specifying the same database, new rows are created for each broker. Every row created in the table includes the broker name, therefore each row is unique to a single broker.

Table name	Description
BACLENTRIES	ACL entries
BCLIENTUSER	Maps client identifiers to durable subscriptions
BGROUPNAME	Publish/subscribe principals: groups
BMQEPUBDEST	Contains list of WebSphere MQ Everyplace [®] queues on which messages can be placed
BMQEPUBMSGIN	Holds persistent WebSphere MQ Everyplace publish/subscribe messages waiting to be processed by the broker
BMQEPUBMSGOUT	Holds persistent WebSphere MQ Everyplace publish/subscribe to be placed on an WebSphere MQ Everyplace queue
BMQESTDMSGIN	Holds persistent WebSphere MQ Everyplace non-publish/subscribe messages waiting to be processed by the broker
BMQESTDMSGOUT	Holds persistent messages to be sent to WebSphere MQ Everyplace destinations
BMQPSTOPOLOGY	Publish/subscribe neighbor information
BMULTICASTTOPICS	Multicast topics records
BNBRCONNECTIONS	Inter-broker neighbor connection information
BPUBLISHERS	Registered publishers
BRETAINEDPUBS	Retained publications
BRMINFO	Registered resource managers
BRMPHYSICALRES	Physical resources
BRMRTDDEPINFO	Runtime dictionary dependency values

Table name	Description
BRMRTDINFO	Registered runtime dictionaries
BRMWFDINFO	Registered wire format descriptors
BROKERAA	Broker process details to support recovery
BROKERAAEG	Execution group details to support recovery
BROKERRESOURCES	Broker resources
BSCADADEST	Contains list of SCADA clients to which messages can be sent
BSCADAMSGIN	Holds persistent SCADA messages waiting to be processed by the broker
BSCADAMSGOUT	Holds persistent messages to be sent to SCADA destinations
BSUBSCRIPTIONS	Durable subscription information
BTOPOLOGY	Inter-broker neighbor information
BUSERCONTEXT	Maps client identifiers to context information
BUSERMEMBERSHIP	Publish/subscribe principals: membership
BUSERNAME	Publish/subscribe principals: users

Additional software prerequisites

WebSphere Event Broker requires additional software products to run successfully.

The required software products are shown in the table below. Except where listed, the Java™ Runtime Environment is embedded with WebSphere Event Broker. WebSphere MQ Version 6.0 (with tailored terms and conditions for use with WebSphere Event Broker is supplied on CD or DVD (on Linux (x86 platform) and Windows only). If you have a previous version, you can use the supplied CDs or DVD to upgrade your current installation.

Operating system	Requirements
AIX	WebSphere MQ Version 5.3.0.1 or later ¹⁺²⁺³
HP-UX	WebSphere MQ Version 5.3.0.1 or later ¹⁺²⁺³
Linux (x86 platform)	WebSphere MQ Version 5.3.0.1 or later ¹⁺²⁺³ Mozilla ⁴ 1.4.2 or above
Linux (zSeries platform)	WebSphere MQ Version 5.3.0.1 or later ¹⁺²⁺³
Solaris	WebSphere MQ Version 5.3.0.1 or later ¹⁺²⁺³
Windows	WebSphere MQ Version 5.3.0.1 or later ¹⁺²⁺³
z/OS ⁵	WebSphere MQ Version 5.3.0.1 or later ²⁺³ Java Runtime Environment (JRE) Version 1.4.2 (Fix Pack 2)

Notes:

1. The minimum set of components that you must install are the server and Java Messaging components. You can install WebSphere MQ before or after you install WebSphere Event Broker.

If you have WebSphere MQ Version 5.3 already installed, the Java Messaging component is not installed by default. Check that your installation includes it; add this component from the WebSphere MQ Version 5.3 CD if it is not installed.

If you choose to install WebSphere MQ Version 6 from the Windows Launchpad, Express installation installs all required components for

you. If you use Advanced installation, you must select a custom installation and include the server and Java Messaging components.

If you start the WebSphere MQ Version 6 installation program directly on any platform, including Windows, you must select a custom installation and include the server and Java Messaging components.

Other components are optional for use with WebSphere Event Broker.

2. WebSphere Event Broker requires a full WebSphere MQ product and cannot function correctly with the WebSphere MQ product that is included with WebSphere Application Server Version 5 (known as Embedded Messaging).

You cannot install WebSphere MQ if you already have WebSphere Application Server Version 5 installed, because you cannot upgrade the Embedded Messaging component to the full WebSphere MQ product. You must uninstall WebSphere Application Server Version 5, install WebSphere MQ, then reinstall WebSphere Application Server Version 5.

WebSphere Event Broker is fully compatible with WebSphere Application Server Version 6. You do not have to take any special action for these products to interact successfully.

3. For some specific broker functions, later levels are recommended:
 - If you are running publish/subscribe applications that use WebSphere MQ Real-time transport, WebSphere MQ Version 5.3.0.10 or later might be required if you experience problems in a heavily loaded broker system.
 - If you develop message flows that include the MQOptimizedFlow node, you must install WebSphere MQ Version 5.3.0.10 or later on each affected broker system.
 - If you develop message flows that use WebSphere MQ Real-time Transport with Multicast PGM support, you must install WebSphere MQ Version 6.0 or later on each affected broker system. An iFix is also required; see the readme.html file for the latest information.
 - To exploit the Native POSIX Threading Library (NPTL) performance gains on Linux systems (available with Kernel 2.6 and above), which support multiple threads running within one process, you must install WebSphere MQ Version 6.0. Performance gains might be achieved where you have multiple message flows assigned to a single execution group.

For z/OS, see the *Program Directory for WebSphere Event Broker for z/OS* or the *Program Directory for WebSphere Rules and Formatter Option for z/OS* for further details about required levels of WebSphere MQ.

4. Some Linux offerings do not install Mozilla by default. If you plan to install the Message Brokers Toolkit on your Linux system, check that a supported version of Mozilla is already installed. If not, install Mozilla from your Linux operating system media.
5. On z/OS, WebSphere MQ is a mandatory requirement and must be installed before you install WebSphere Event Broker. See the *Program Directory for WebSphere Event Broker for z/OS* or the *Program Directory for WebSphere Rules and Formatter Option for z/OS* for further details.

For best results when viewing the information center from the Message Brokers Toolkit, you are recommended to use Internet Explorer Version 6.0 or higher.

Modes of installation and uninstallation

This topic describes the 3 modes that can be used during installation and uninstallation, both of the runtime components, and the Message Brokers Toolkit:

- graphical mode
- console mode
- silent mode

In this topic <installer> and <uninstaller>, used in example commands, denote where the specific names of the install or uninstall wizard should be entered. For the names of the install and uninstall wizards, and full details of these tasks, see “Installation Guide” on page 3 and “Uninstalling” on page 17.

Graphical mode

The installation and uninstallation wizards start in graphical mode if you invoke them with no options (this is the default mode). The wizards guide you through the installation or uninstallation process with a series of dialogs that present options and defaults. You can accept the default values, or change them to suit your environment and requirements.

This mode provides the highest level of information and guidance to help you complete an installation. Use this mode when you are unfamiliar with the product, or if you want to monitor the installation or uninstallation progress.

If you click **Cancel** before the Install Progress or Uninstall Progress panel appears, you can exit the setup. If you choose to exit, your system returns to its state before launching the wizard. However, if you cancel the installation wizard after installation or uninstallation has completed, and the summary panel is displayed, your system is not restored to its previous state: the installation wizard stops immediately. If you want to remove any program that has been installed, you must invoke the uninstallation program.

When you use the wizards, you might have to wait a few seconds to move to the next panel after clicking **Next >**. Progress is not always displayed on all panels. If you click **Next >** twice, you might skip an entire panel. To ensure the installer or uninstaller is progressing, you can monitor your CPU usage: CPU usage increases greatly during both installation and uninstallation.

Console mode

Console mode presents a text based interface with which you interact in a command window. It presents the same options as the graphical interface, and you can choose values and navigate through the process using the keyboard only.

Use this mode if you prefer a command line interface to a graphical based interface, or if you require additional audible information for visually-impaired users which is available when you specify an accessibility option.

Use these prompts to navigate through the installation:

- 1 Move to the next panel
- 2 Return to the previous panel
- 3 Cancel and terminate the install program
- 4 Redisplay the current screen

The default option is always displayed within brackets, for example [1]. If this is the correct choice, press Enter to continue.

Action	Invocation
Invoke the installation wizard in console mode. Messages are displayed on the console during installation.	<installer> -console
Invoke the installation wizard in console mode with additional audible information for visually-impaired users. (This option sets the installation automatically to console mode so you do not need the -console option as well.)	<installer> -accessibility

Silent mode

If you invoke a silent installation, the installation wizard runs without any interaction. In this mode, installation is completed with default options, or according to a predefined set of options, as described below.

Use this unattended interface for automated installations over a large number of identical systems.

You can perform a silent installation:

- With default settings. For example, for installation this results in these actions:
 - Check that prerequisite software is installed (runtime components only).
 - Install to the default directory.
 - Install all selectable features.

Because the installation wizard for the runtime components checks for prerequisite software in silent mode, the program fails if the prerequisite software is not already installed. You can override this check if you use a response file (see “Using response files” on page 35), or include the appropriate parameter with a non-default value on the command invocation.

To run a default silent installation, specify the

```
-silent
```

option on the installation command. In this mode, you must also include the parameter `-G licenseAccepted=true` which accepts the license agreement (if you omit this parameter the license is not accepted and installation terminates). For example, to install runtime components on Linux (x86 platform), enter the following command:

```
<installer> -silent -G licenseAccepted=true
```

- With one or more non-default settings. If you want the installation wizard to use non-default values for one or more values, you can either specify non-default options on the command invocation or specify a response file, see “Using response files” on page 35.

A sample response file for installation of the runtime components is provided in the sample scripts directory of root CD directory. It includes detailed information about the options that you can change, and the values you must enter to change them. You can tailor this file to your requirements, or you can generate a new response file, as described below.

To run a tailored silent installation using a response file called `response1.txt`, specify the `-silent` option and the filename on the installation command. For example, on Linux (x86 platform), enter the following command:

```
<installer> -silent -options response1.txt
```

Using response files

This topic describes how to use response files.

Note: Before performing an operation such as installing service or uninstalling, refer to the instructions specific to the task you are performing in addition to this topic.

For uninstallation you are advised to use the “Sample response files” supplied with WebSphere Event Broker.

Response files can also be used during the installation of service updates, for further information see:

- “Generating response files”
- “Recording a response file” on page 36
- “Calling response files in commands” on page 36

If you want to install or uninstall in silent mode (see “Modes of installation and uninstallation” on page 33), but want to use values other than the defaults, you can pass a response file to the program. A response file is a text file that contains options that define the choices that the wizard makes. For example, you can tailor several options in the installation and uninstallation wizards to cause the operation to be completed in a particular way.

- Specify a non-default installation location
- Choose a custom installation (typical is the default) (runtime components only)
- Choose which components to install (runtime components only)
- Specify if the program is to check for prerequisite software (runtime components only)

Note: Commands in this topic illustrate the use of response files whilst installing service, however, this information is equally relevant to uninstalling the product. To use response files whilst uninstalling, substitute *uninstaller* for *installer* where it occurs in the example commands. In the example commands, *uninstaller* and *installer* denote where the specific names of the uninstallation or installation wizards should be entered. For the names of the uninstallation and installation wizards, and full details of these tasks, see “Installation Guide” on page 3, “Applying service to runtime components” on page 9 and “Uninstalling” on page 17.

Sample response files

Sample response files are supplied with WebSphere Event Broker. You are advised to use these response files when uninstalling the product. The sample response file includes detailed information about the options that you can change, and the values you must enter to change them. You can tailor this file to your requirements. The sample response files are located in the `sample_scripts` directory of root CD directory.

Generating response files

The command for generating a template uninstallation response file, without installation being performed is:

```
installer -options-template responsefile
```

where *responsefile* is the full path and name of your chosen response file. The generated template response file contains full instructions on how to edit it to specify your required options. Uninstallation is not performed.

You can edit the file to change the options to define the operation that you want to be performed.

If you are uninstalling, ensure the response file is not deleted as part of the uninstallation, by creating it in another directory.

Recording a response file

The command for recording a response file during uninstallation is:

```
installer -options-record responsefile
```

where *responsefile* is the full path and name of your chosen response file. You are recommended to create this in a directory different to the one in which the product is installed.

The uninstallation wizard starts in graphical mode, and requires your input as it progresses. Your responses are recorded during uninstallation. When uninstallation is complete, the response file contains all the choices you have made during uninstallation.

If you want to record a response file during a console mode uninstallation, use the following command:

```
installer -options-record responsefile -console
```

If you are uninstalling, ensure the response file is not deleted as part of the uninstallation, by creating it in another directory.

Calling response files in commands

To run a program specifying the silent options and the response file that you want to use, use the following command:

```
installer -options responsefile -silent
```

where *responsefile* is the full path and name of your chosen response file. The program runs without interaction according to the options selected when you recorded the response file.

National language support

The user interface and message catalogs are provided in the following languages on distributed systems:

- Brazilian Portuguese
- French
- German
- Italian
- Japanese
- Korean
- Simplified Chinese
- Spanish
- Traditional Chinese
- US English

The message catalogs are provided in the following languages on z/OS:

- Japanese
- Simplified Chinese
- US English

The messages written to the z/OS operator console (which are a subset of the messages written to the syslog) are in US English only, and are written in mixed case or in uppercase depending on your chosen system configuration.

WebSphere Event Broker provides a selection of message catalogs that are used by the product components to report any problems that occur. Products that are used in conjunction with WebSphere Event Broker might cause WebSphere Event Broker to report errors using its message catalogs, or might report problems using their own techniques.

You must refer to the documentation supplied with any other products that you use to determine the process they employ. In particular, you must check the documentation supplied by the databases that you use and documentation provided with any user-defined node or parser that you integrate into the WebSphere Event Broker environment.

You can install WebSphere Event Broker and WebSphere MQ in any supported language; all language versions for each product are compatible with all language versions for the other product. All languages for the WebSphere MQ messaging products are included on the WebSphere MQ server CD supplied with WebSphere Event Broker.

All messages generated for internal inter-component message exchange (for example, deployed configuration messages and log files for **mqsireadlog**) are generated in code page 1208 (utf-8).

Locales

WebSphere Event Broker supports messages for at least the following locales:

Windows	AIX	Solaris	HP-UX (1)	Linux (2)	z/OS
English (United States)	en_US	en_US	en_US.iso88591, en_US.roman8	en_US	En_US.IBM-1047, En_US.IBM-037
German (Standard)	de_DE, De_DE	de	de_DE.ISO88591, de_DE.roman8	de_DE	not supported
Spanish (Modern Sort)	es_ES, Es_ES	es	es_ES.ISO88591, es_ES.roman8	es_ES	not supported
French (Standard)	fr_FR, Fr_FR	fr	fr_FR.ISO88591, fr_FR.roman8	fr_FR	not supported
Italian (Standard)	it_IT, It_IT	it	it_IT.ISO88591, it_IT.roman8	it_IT	not supported
Portuguese (Brazilian)	pt_BR, Pt_BR	pt_BR	pt_BR.ISO88591, pt_BR.utf8	pt_BR	not supported
Japanese	Ja_JP, ja_JP	ja_JP.PCK, ja	ja_JP.SJIS, ja_JP.eucJP	ja_JP	Ja_JP.IBM-939, Ja_JP.IBM-930
Simplified Chinese (China)	Zh_CN, zh_CN	zh, zh.GBK	zh_CN.hp15CN	zh_CN	Zh_CN.IBM-1388, Zh_CN.IBM-935

Windows	AIX	Solaris	HP-UX (1)	Linux (2)	z/OS
Traditional Chinese (Taiwan)	Zh_TW, zh_TW	zh_TW, zh_TW.BIG5	zh_TW.big5, zh_TW.eucTW	zh_TW	not supported
Korean	ko_KR	ko	ko_KR.eucKR	ko_KR	not supported

Notes:

1. Due to limited syslog support on HP-UX, messages are written to the log in US English only.
2. These values are the same for Linux (x86 platform) and Linux (zSeries platform).

System changes caused by installation and configuration

When you install WebSphere Event Broker, the installation program causes certain changes to be made to your system. Resources are also affected by how you configure your system (for example, the brokers that you create).

- Directory structures
- Registry contents
- Environment variables
- Default WebSphere MQ resources
- Database contents

Directory structures after installation

When you install WebSphere Event Broker, the installation program creates a structure of subdirectories under the directory that you specified as the installation directory. The exact structure depends on the platform on which you have installed, and the components that you have installed.

Windows

Directory name	Contents
_uninst	Uninstallation programs
bin	Executable files; .exe, .dll, .lil
catalina	Web Services support files
classes	Java class files
config	License files
common\dbinstmgr	Derby database files
docs	Java API files
eclipse	Toolkit files
errors	Error files
evdeps	Event Broker extension point
event	Event Broker license files
evtoolkit	Event Broker extension point
include	Header and other files for samples
installdocs	Product installation documents

Directory name	Contents
itlm	IBM Tivoli License Manager files
jplugin	Java plug-in files
jre	IBM Runtime Environment for the Java Platform
lib	Shared library files
log	Trace files
messages	Description files for messages and exceptions
migration	Migration files
primitives	Message flow node files
prt	Product registration files
readmes	Product readme files
sample	C, C++, and Java sample files
studio	Toolkit files
broker work path	Broker, XML and XSL resources

Linux

Directories are created in two locations:

Directories under /opt/mqsi	Contents
_uninst	Uninstallation programs
bin	Executable binary files
catalina	Web Services support files
classes	Java class files
docs	Java API files
errors	Error files
event	Event Broker license files
include	Header and other files for samples
installdocs	Product installation documents
itlm	IBM Tivoli License Manager files
jplugin	Java plug-in files (user-created)
jre	IBM Runtime Environment for the Java Platform
lib	Shared library files
lil	Executable binary files
message	Message Broker license files
readmes	Product readme files
sample	C, C++, and Java sample files
template	Templates and examples

Directories under /var/mqsi	Contents
brokers	Broker resources

Directories under /var/mqsi	Contents
config	License files
errors	Error files
itlm	IBM Tivoli License Manager files
lib	Shared library files
locks	Resource locks
log	Trace files
odbc	ODBC files
registry	Registry information
users	User's directory
XSL	User's style sheet resources
XML	User's XML file resources

After installation on Linux, the userID root in group root owns the directories, user mqm owns the files in /opt/mqsi and user bin owns the files in /var/mqsi.

Solaris

Directories are created in two locations:

Directories under /opt/mqsi	Contents
_uninst	Uninstallation programs
bin	Executable binary files
catalina	Web Services support files
classes	Java class files
docs	Java API files
errors	Error files
event	Event Broker license files
include	Header and other files for samples
installdocs	Product installation documents
itlm	IBM Tivoli License Manager files
jplugin	Java plug-in files (user-created)
jre	IBM Runtime Environment for the Java Platform
lib	Shared library files
lil	Executable binary files
message	Message Broker license files
readmes	Product readme files
sample	C, C++, and Java sample files
template	Templates and examples

Directories under /var/mqsi	Contents
brokers	Broker resources
config	License files

Directories under /var/mqsi	Contents
errors	Error files
lib	Shared library files
locks	Resource locks
log	Trace files
odbc	ODBC files
registry	Registry information
users	User's directory
XSL	User's stylesheet resources
XML	User's XML file resources

After installation on Solaris, the userID root in group root owns the directories, user mqm owns the files in /opt/mqsi and user bin owns the files in /var/mqsi.

HP-UX

Directories are created in two locations:

Directories under /opt/mqsi	Contents
_uninst	Uninstallation programs
bin	Executable binary files
catalina	Web Services support files
classes	Java class files
docs	Java API files
errors	Error files
event	Event Broker license files
include	Header and other files for samples
installdocs	Product installation documents
itlm	IBM Tivoli License Manager files
jplugin	Java plug-in files (user-created)
jre	IBM Runtime Environment for the Java Platform
lib	Shared library files
lil	Executable binary files
message	Message Broker license files
readmes	Product readme files
sample	C, C++, and Java sample files
template	Templates and examples

Directories under /var/mqsi	Contents
brokers	Broker resources
config	License files
errors	Error files
lib	Shared library files

Directories under /var/mqsi	Contents
locks	Resource locks
log	Trace files
odbc	ODBC files
registry	Registry information
users	Users directory
XSL	User's stylesheet resources
XML	User's XML file resources

After installation on HP-UX, the userID root in group root owns the directories, user mqm owns the files in /opt/mqsi and user bin owns the files in /var/mqsi.

AIX

Directories are created in two locations:

Directories under usr/opt/mqsi	Contents
_uninst	Uninstallation programs
bin	Executable binary files
catalina	Web Services support files
classes	Java class files
docs	Java API files
errors	Error files
event	Event Broker license files
include	Header and other files for samples
installdocs	Product installation documents
itlm	IBM Tivoli License Manager files
jplugin	Java plug-in files (user-created)
jre	IBM Runtime Environment for the Java Platform
lib	Shared library files
lil	Executable binary files
message	Message Broker license files
readmes	Product readme files
sample	C, C++, and Java sample files
template	Templates and examples

Directories under /var/mqsi	Contents
brokers	Broker resources
config	License files
errors	Error files
lib	Shared library files
locks	Resource locks
log	Trace files

Directories under /var/mqsi	Contents
odbc	ODBC files
registry	Registry information
users	Users directory
XSL	User's stylesheet resources
XML	User's XML file resources

After installation on AIX, the userID root in group root owns the directories, user mqm owns the files in /opt/mqsi and user bin owns the files in /var/mqsi.

Registry changes caused by installation and configuration

When you install WebSphere Event Broker, the installation program creates a number of entries in a registry. Further changes are made by some configuration updates (for example, when you create a broker).

On Windows, the system registry is used; on Linux and UNIX systems, equivalent values are stored within the installation directory structure. Do not alter or remove these entries unless instructed to do so by IBM Service.

The table below describes the main Windows registry entries. These are created under HKEY_LOCAL_MACHINE\SOFTWARE\IBM\WebSphereMQIntegrator.

Location	Entry	Description
	InstallDir	The home directory of the installation
\2	FilePath	Default: C:Program Files/IBM/WebSphere Message Broker
\2	ProgramFolder	Default: IBM WebSphere Message Broker
\2	WorkPath	Default: C:Program Files/IBM/WebSphere Message Broker
\Components		Contents depend on components installed and configuration created
\CurrentVersion	WebSphereBroker	6
\CurrentVersion	WebSphereBrokerRelease	Contents depend on service installed
\CurrentVersion	WebSphereBrokerUpdate	Contents depend on service installed
\CurrentVersion\PID		Contents depend on product installed

Entries are also created under HKEY_LOCAL_MACHINE\SOFTWARE\ODBC\ODBCINST.INI for the installed database drivers for Oracle and Sybase, which contain driver locations and parameters, and an entry is added under HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Eventlog\Application\WebSphere Broker v**** for Event Log information, where v**** is the current four-digit product version number.

Message Brokers Toolkit

On Windows, the system registry is used; on Linux systems, equivalent values are stored within /etc/IBM/WebSphereMessageBrokersToolkit/. Do not alter or remove these entries unless instructed to do so by IBM Service. The table below

shows the main Windows registry entries, created under HKEY_LOCAL_MACHINE\SOFTWARE\IBM\WebSphere Message Brokers Toolkit.

Location	Description
\product\come.ibm.webt	Installation location and version details
\components\com.ibm.webt.shared	Location of files shared with Event and Message Broker
\components\com.ibm.webt.specific	Location of files specific to Event Broker

Environment variables created during installation

On Windows, environment variables PATH, INCLUDE, and LIB are updated by the installation program; the exact updates made depend on the components that you have installed and the directories into which you have installed them.

On Linux and UNIX systems, the installation program does not update variables. Sample profile files are provided with WebSphere Event Broker, and you must check their content to ensure the variables are set correctly for your environment before you use the product or configure any resources. The path and filename of the profile is dependent on your platform:

For AIX: usr/opt/mqsi/sample/profiles/profile.aix

For HP-UX: /opt/mqsi/sample/profiles/profile.hpux

For Linux: opt/mqsi/sample/profiles/profile.lnx

For Solaris: /opt/mqsi/sample/profiles/profile.sol

Check the readme file (readme.html) to ensure you have the latest version of the profile.

Default WebSphere MQ resources created during configuration

When you install WebSphere Event Broker and create components, WebSphere MQ resources are created for use by those components.

The resources created have names that begin with the reserved characters SYSTEM. The table below lists the resources and indicates the component queue manager with which they are associated.

Resource name	Type	Queue manager	Description
SYSTEM.BROKER.ADMIN.QUEUE	Queue	Broker	Target for messages sent by the Configuration Manager and commands to modify the broker's configuration and operation.
SYSTEM.BROKER.ADMIN.REPLY	Queue	Configuration Manager	Target for messages sent by the Configuration Manager to the broker.

Resource name	Type	Queue manager	Description
SYSTEM.BROKER.CLIENTS.DATA	Queue	Broker	Used internally for publish/subscribe data.
SYSTEM.BROKER.CONFIG.QUEUE	Queue	Configuration Manager	Target for messages sent to the Configuration Manager from the toolkit.
SYSTEM.BROKER.CONFIG.REPLY	Queue	Configuration Manager	Target for messages sent to the toolkit by the Configuration Manager.
SYSTEM.BROKER.CONTROL.QUEUE	Queue	Broker	Target for publish/subscribe control requests sent to the broker by applications.
SYSTEM.BROKER.EXECUTIONGROUP.QUEUE	Queue	Broker	Target for messages sent by the Configuration Manager to the broker.
SYSTEM.BROKER.EXECUTIONGROUP.REPLY	Queue	Broker	Target for response messages from the User Name Server to the broker.
SYSTEM.BROKER.INTERBROKER.MODEL.QUEUE	Queue	Broker	Model for dynamic publication queues.
SYSTEM.BROKER.INTERBROKER.QUEUE	Queue	Broker	Target for publish/subscribe messages sent by neighbor brokers.
SYSTEM.BROKER.MODEL.QUEUE	Queue	All	Model for dynamic response queues.
SYSTEM.BROKER.SECURITY.QUEUE	Queue	User Name Server	Target for messages to the User Name Server from the Configuration Manager, brokers, and the toolkit.
SYSTEM.BROKER.SECURITY.REPLY	Queue	Configuration Manager and brokers	Target for response messages from the User Name Server to its requestor.
SYSTEM.BROKER.SUBSCRIPTIONS.DATA	Queue	Broker	Used internally for publish/subscribe data
SYSTEM.BKR.CONFIG	SVRCONN	Configuration Manager	A connection channel for toolkit clients.

These resources are defined in addition to the default WebSphere MQ objects created when that product is installed.

Database contents

WebSphere Event Broker stores configuration and resource information in databases to retain the information and ensure its security and integrity. Each broker creates and maintains information in tables specifically created for that purpose.

When you create a broker, the `mqsicreatebroker` command creates a number of database tables within the database that you specify in the command. You can specify a different database for every broker, or share a database between brokers. The database tables schema inherits its name from the Data Source User ID specified in the create command.

The table below shows the database tables that are created by the `mqsicreatebroker` command in the broker database. The tables are created when you create the first broker. When you create further brokers specifying the same database, new rows are created for each broker. Every row created in the table includes the broker name, therefore each row is unique to a single broker.

Table name	Description
BACLENTRIES	ACL entries
BCLIENTUSER	Maps client identifiers to durable subscriptions
BGROUPNAME	Publish/subscribe principals: groups
BMQEPUBDEST	Contains list of WebSphere MQ Everyplace queues on which messages can be placed
BMQEPUBMSGIN	Holds persistent WebSphere MQ Everyplace publish/subscribe messages waiting to be processed by the broker
BMQEPUBMSGOUT	Holds persistent WebSphere MQ Everyplace publish/subscribe to be placed on an WebSphere MQ Everyplace queue
BMQESTDMSGIN	Holds persistent WebSphere MQ Everyplace non-publish/subscribe messages waiting to be processed by the broker
BMQESTDMSGOUT	Holds persistent messages to be sent to WebSphere MQ Everyplace destinations
BMQPSTOPOLOGY	Publish/subscribe neighbor information
BMULTICASTTOPICS	Multicast topics records
BNBRCONNECTIONS	Inter-broker neighbor connection information
BPUBLISHERS	Registered publishers
BRETAINEDPUBS	Retained publications
BRMINFO	Registered resource managers
BRMPHYSICALRES	Physical resources
BRMRTDDEPINFO	Runtime dictionary dependency values
BRMRTDINFO	Registered runtime dictionaries
BRMWFDFINFO	Registered wire format descriptors
BROKERA	Broker process details to support recovery
BROKERAEG	Execution group details to support recovery
BROKERRESOURCES	Broker resources
BSCADADEST	Contains list of SCADA clients to which messages can be sent
BSCADAMSGIN	Holds persistent SCADA messages waiting to be processed by the broker
BSCADAMSGOUT	Holds persistent messages to be sent to SCADA destinations
BSUBSCRIPTIONS	Durable subscription information
BTOPOLOGY	Inter-broker neighbor information
BUSERCONTEXT	Maps client identifiers to context information
BUSERMEMBERSHIP	Publish/subscribe principals: membership

Table name	Description
BUSERNAME	Publish/subscribe principals: users

Part 4. Appendixes

Appendix. Notices

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Index

B

- backup
 - system 9
- brokers
 - database contents 30, 45

C

- code pages
 - support 36
- communication hardware
 - supported 27
- communications hardware,
 - supported 27

D

- databases
 - contents 30, 45
 - local 29
 - location 29
 - remote 29
 - supported 28
- DB2 7
- directory structures 38

E

- environment variables 44

H

- hardware, supported 25

I

- IBM Tivoli License Manager 7
- installation 3
 - AIX
 - service 10
 - command line options 33
 - DB2 7
 - default WebSphere MQ resources 44
 - directory structures 38
 - environment variables 44
 - HP-UX
 - service 10
 - IBM Agent Controller 3
 - Linux 5
 - Solaris, HP-UX, and AIX 6
 - Windows 4
 - z/OS 6
 - IBM Tivoli License Manager 7
 - latest information 3
 - Linux
 - service 10
 - maintenance updates
 - AIX 10

installation (*continued*)

- maintenance updates (*continued*)
 - HP-UX 10
 - Linux 10
 - Solaris 10
 - Windows 10
 - z/OS 11
- readme.html file 3
- registry contents 43
- requirements
 - communications hardware 27
 - disk space 26
- response file 35
- service
 - AIX 10
 - HP-UX 10
 - Linux 10
 - Solaris 10
 - Windows 10
 - z/OS 11
- Solaris
 - service 10
- system changes 38
- Windows
 - service 10
- z/OS
 - service 11

L

- locales 37

M

- maintenance updates
 - installing
 - AIX 10
 - HP-UX 10
 - Linux 10
 - Solaris 10
 - Windows 10
 - z/OS 11
 - uninstalling
 - AIX 20
 - HP-UX 20
 - Linux 20
 - Solaris 20
 - UNIX 20
 - Windows 20
- message catalogs
 - national language support 36
 - user-defined node or parser 36

N

- National Language Support
 - code page support 36
 - locales 37
 - message catalog 36
 - WebSphere MQ 36

O

- operating environments
 - supported 25

R

- registry contents 43
- response files 35

S

- service
 - installing
 - AIX 10
 - HP-UX 10
 - Linux 10
 - Solaris 10
 - Windows 10
 - z/OS 11
 - uninstalling
 - AIX 20
 - HP-UX 20
 - Linux 20
 - Solaris 20
 - UNIX 20
 - Windows 20
- system, backup 9

T

- trademarks 53

U

- uninstalling
 - AIX 17
 - console mode 19
 - manual 19
 - silent 18
 - console mode
 - AIX 19
 - HP-UX 19
 - Linux 19
 - Solaris 19
 - UNIX 19
 - HP-UX 17
 - console mode 19
 - manual 19
 - silent 18
 - Linux 17
 - console mode 19
 - manual 19
 - silent 18
 - maintenance updates
 - AIX 20
 - HP-UX 20
 - Linux 20, 22
 - Solaris 20
 - UNIX 20

- uninstalling *(continued)*
 - maintenance updates *(continued)*
 - Windows 20
 - manual
 - AIX 19
 - HP-UX 19
 - Linux 19
 - Solaris 19
 - UNIX 19
 - Windows 19
 - service
 - AIX 20
 - HP-UX 20
 - Linux 20, 22
 - Solaris 20
 - UNIX 20
 - Windows 20
 - silent
 - AIX 18
 - HP-UX 18
 - Linux 18
 - Solaris 18
 - UNIX 18
 - Windows 18
 - Solaris 17
 - console mode 19
 - manual 19
 - silent 18
 - UNIX 17
 - console mode 19
 - manual 19
 - silent 18
 - Windows 17
 - manual 19
 - silent 18
 - z/OS 20
- updates, finding the latest 3
- user databases
 - location 29
 - supported 28

W

- WebSphere MQ
 - default resources 44



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