

The logo for FuseSource, featuring the word "FuseSource" in a bold, yellow, sans-serif font. The text is positioned on a black background that has a jagged, torn-paper edge on the right side, revealing a red and white pattern underneath.

FuseSource

Fuse MQ Enterprise **Installation Guide**

Version 7.1
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Integration Everywhere

Installation Guide

Version 7.1

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- Stax2 API (<http://woodstox.codehaus.org/StAX2>) org.codehaus.woodstox:stax2-api:jar:3.1.1

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- jibx-run - JiBX runtime (<http://www.jibx.org/main-reactor/jibx-run>) org.jibx:jibx-run:bundle:1.2.3

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- JavaAssist (<http://www.jboss.org/javassist>) org.jboss.javassist:com.springsource.javassist:jar:3.9.0.GA:compile

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- HAPI-OSGI-Base Module (<http://hl7api.sourceforge.net/hapi-osgi-base/>) ca.uhn.hapi:hapi-osgi-base:bundle:1.2
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Table of Contents

1. Installation Prerequisites	9
Supported Platforms	10
Java Runtime	11
Hardware requirements	12
2. Installing Fuse MQ Enterprise	13
Getting the Installer	14
Installer Modes	15
Installing in GUI Mode	16
Installing in Text Mode	19
Installing from an Archive File	22
3. Adding a Remote Console User	23
4. Verifying the Installation	25
5. Uninstalling	27

List of Examples

4.1. Test Producer Output	25
4.2. Test Consumer Output	26

Chapter 1. Installation Prerequisites

Before attempting to install and use Fuse MQ Enterprise, make sure your system meets the minimum requirements.

Supported Platforms	10
Java Runtime	11
Hardware requirements	12

Supported Platforms

The Fuse products are tested and supported on the platforms listed at <http://fusesource.com/downloads/platforms-supported/>.

Java Runtime

Fuse runtime platforms need [Java 6](#)¹, JRE 1.6.0_18 or later.

To develop applications for Fuse runtime platforms, you need Java 6, JDK 1.6.0_18 or later.



Non-Oracle Java distributions

Fuse products are *only* guaranteed to run with Java runtimes distributed by, or OEMed from, Oracle and IBM.



Red Hat Linux

On Red Hat-derived Linux systems, gcj is the default Java distribution. In these cases, you must download and install an Oracle Java runtime and set the `JAVA_HOME` environment variable. You can also integrate the Oracle Java runtime into the `alternatives(1)` system. See the `alternatives(1)` man page for details.

¹ <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Hardware requirements

The minimum hardware specifications to install Fuse MQ Enterprise are:

- 100MB of free disk space
- 2GB of RAM

In addition to the disk space required for the base installation, a running system will require space for caching, persistent message stores, and other functions.

Chapter 2. Installing Fuse MQ Enterprise

Fuse MQ Enterprise is installed using a smart installer that tests your system for minimum requirements, performs some basic environment set up, and installs Fuse MQ Enterprise as a system service.

Getting the Installer	14
Installer Modes	15
Installing in GUI Mode	16
Installing in Text Mode	19
Installing from an Archive File	22

Getting the Installer

You can download the installer from the Red Hat Web site at <http://fusesource.com/products>.

Be sure that you select the proper download for the intended platform.



Note

On Linux the installer may not download as an executable file. If that is the case, you can simply use the **chmod** command to make it executable.

Installer Modes

The installer tests your system for minimum requirements and performs basic environment set up. The installer can run in one of the following modes:

- **GUI mode**—useful when the system you are installing on has a windowing system



Note

This is the default installer mode.

- **Text mode**—useful when you do not have a windowing system available because the installer runs in the command terminal



Note

Text mode is not available on Windows.

Alternatively, you can download the archive file and unpack it onto your system. This is a useful approach for developer installations. See ["Installing from an Archive File" on page 22](#).

Installing in GUI Mode

To install in GUI mode:

1. If you are installing on OS X, mount the installer's disk image.
2. Double-click the installer.
 - a. If a dialog appears asking whether the application is safe to open, authorize the application to run.
 - b. If prompted, enter your username and password.
 - c. If you encounter a warning about the system not meeting the recommended requirements, click **OK**.



Note

You should evaluate the decision to install on this system. It is likely not going to perform well for mission critical applications.

If the system meets the minimum installation requirements, the installer opens and displays a welcome page. Otherwise it displays a warning.

3. Click **Next>**.



Note

On Linux systems **Forward>** is used in place of **Next>**.

4. Read the Red Hat license agreement.
5. Click the box next to **I accept the agreement**.
6. Click **Next>**.
7. Read the third party license agreement.
8. Click the box next to **I accept the agreement**.
9. Click **Next>**.

10. Enter a location for the installation.

The default locations are:

OS X	/Applications/FuseMQEnterprise-7.1.x
Unix/Linux	/opt/FuseMQEnterprise-7.1.x



Tip

Clicking the folder icon will open a file explorer.

11. Click **Next>**.
12. Enter the name of the user who will own the installation.

The default user is `fuse`.



Note

If the specified user does not exist, the installer will create it.



Important

On OS X, you need to set the password for this user in **System Preferences**.



Warning

On RHEL the default user name conflicts with the preconfigured `fuse` user. You will need to change the user name.

13. Enter the name of the user group who will have read, write, and execute privileges for the installation.

The default group is `fusesource`.



Note

If the specified group does not exist, the installer will create it and add the owner to it.

14. Click **Next>**.
15. Select whether or not to install server as a system service.
16. Click **Next>**.
17. If installing on Windows, enter the password for the user you specified in [Step 12](#).
18. Click **Next>**.
19. When the installation completes, you can choose to view the README file.
20. Click **Finish** to exit the installer.

Installing in Text Mode



Note

Text mode is not available on Windows.

To install in a command terminal:

1. Open a command terminal.
2. If you are using OS X, mount the installer's disk image.
3. If you are using Unix or Linux, change to the directory into which you downloaded the installer.
4. Enter the appropriate command for your platform:

OS X

```
sudo /Volumes/Fuse-MQ-Enterprise-X.X.X.fuse-xxx-osx-installer.dmg/Fuse-ESB-Enterprise-7.0.0.fuse-00-061-osx-installer.app/Contents/MacOS/osx-intel --mode text
```

Unix/Linux 32-bit

```
./Fuse-MQ-Enterprise-X.X.X.fuse-xxx-linux-installer.run --mode text
```

Unix/Linux 64-bit

```
./Fuse-MQ-Enterprise-X.X.X.fuse-xxx-linux-x64-installer.run --mode text
```

5. If you encounter a warning about recommended system requirements, press **Enter** to continue.



Note

You should evaluate the decision to install on this system. It is likely not going to perform well for mission critical applications.

6. Read the Red Hat license agreement.

Press **Enter** for a new screen of text. Repeat this until you reach the end of the license.

7. Enter **y** when asked to accept the license agreement.
8. Press **Enter** to accept the agreement and continue with the installation.
9. Read the Third Party license agreement.

Press **Enter** for a new screen of text. Repeat this until you reach the end of the license.

10. Enter **y** when asked to accept the license agreement.
11. Press **Enter** to accept the agreement and continue with the installation.
12. Specify the location for the installation.

The default locations are:

OS X	/Applications/FuseMQEnterprise-7.1.x
Unix/Linux	/opt/FuseMQEnterprise-7.1.x

13. Specify the user account that will own the installation.

The default user is `fuse`.



Note

If the specified user does not exist, the installer will create it.



Important

On OS X, you need to set the password for this user in **System Preferences** before this user can start up and run Fuse MQ Enterprise.



Warning

On RHEL the default user name conflicts with the preconfigured `fuse` user. You will need to change the user name.

14. Enter the name of the user group who will have read, write, and execute privileges for the installation.

The default group is `fusesource`.



Note

If the specified group does not exist, the installer will create it and add the owner to it.

15. Specify if you would like to install the server as a system service.
 - a.
 - Press **y** to install the server as a system service.
 - Press **n** to install the server as a system service.
 - b. Press **Enter** to confirm your choice.
16. Press **Enter** to start installing on your computer.
17. When the installer finishes:
 - Press **y** then **Enter** to exit the installer and view the README file.
 - Press **n** then **Enter** to exit the installer without viewing the README file.

Installing from an Archive File

Important

Installing with the archive does not ensure that your environment is properly configured or install Fuse MQ Enterprise as a system service.

Fuse MQ Enterprise is packaged either as a `.zip` file (Windows) or a `.tar.gz` file. Using a suitable archive tool, such as Zip or Gunzip, unpack Fuse MQ Enterprise into a directory to which you have full access.

Warning

Do not unpack the archive file into a folder that has spaces in its path name. For example, do not unpack into `C:\Documents and Settings\Greco Roman\Desktop\fusesrc`.

Chapter 3. Adding a Remote Console User

The server's remote command console is not configured with a default user. Before you can connect to the server's console remotely, you must add a user to the configuration.

Fuse MQ Enterprise is not installed with a default user for the remote console. Before you can remotely manage a server, you must add a user by editing `InstallDir/etc/user.properties`.



Important

The information in this file is unencrypted so it is not suitable for environments that require strict security.

To add a user:

1. Open `InstallDir/etc/users.properties` in your favorite text editor.
2. Locate the line `# admin=somepass,admin`.

This line specifies a user `admin` with the password `somepass` and the role `admin`.

3. Uncomment the line by removing the leading `#`.
4. Change the first `admin` to the desired user name.
5. Change the `somepass` to the desired password.
6. Save the changes.
7. If you intend to use the ActiveMQ Web console, you must specify the credentials for it. Open `InstallDir/etc/system.properties` in your favorite text editor and search for the following lines:

```
#  
# Authentication - must match an entry in user.properties  
# with the admin privilege  
#
```

```
#activemq.jmx.user=admin  
#activemq.jmx.password=admin
```

Uncomment the `activemq.jmx.user` and `activemq.jmx.password` settings (by removing the leading `#`) and change the username and password values to be the same as the values you just defined in the `etc/users.properties` file.

Chapter 4. Verifying the Installation

Once the installer has completed running it is a good idea to run a simple test to ensure that Fuse MQ Enterprise was properly installed.

Fuse MQ Enterprise ships with a simple client utility that can be used to verify that the software was successfully installed. You use it to create a message producer and a message consumer that connect to the broker. If they run successfully, and you see—by checking the Web console—that the broker processed the messages, then you can be confident that Fuse MQ Enterprise was installed successfully.

To verify that Fuse MQ Enterprise is properly installed:

1. Log in as the user with ownership permissions for the Fuse MQ Enterprise installation.
2. Open a command shell at *InstallDir*.
3. Start the broker using the **start** command.

Windows	bin\start.bat
Unix	./bin/start

4. Run the producer client using `java -jar lib/mq-client.jar producer`.

The producer will connect to the broker and produce 100 messages. [Example 4.1 on page 25](#) shows the producer's output.

Example 4.1. Test Producer Output

```
$ java -jar lib/mq-client.jar producer
Using destination: queue://TEST, on broker: failover://tcp://localhost:61616
[org.apache.activemq.transport.failover.FailoverTransport] :
Successfully connected to tcp://localhost:61616
[org.fusesource.mq.ProducerThread] : Sent 'test message: 0'
[org.fusesource.mq.ProducerThread] : Sent 'test message: 1'
[org.fusesource.mq.ProducerThread] : Sent 'test message: 2'
[org.fusesource.mq.ProducerThread] : Sent 'test message: 3'
[org.fusesource.mq.ProducerThread] : Sent 'test message: 4'
```

```
...
[org.fusesource.mq.ProducerThread] : Sent 'test message: 99'
[org.fusesource.mq.ProducerThread] : Producer thread finished
Produced: 100
$
```

5. Run the consumer client using `java -jar lib/mq-client.jar consumer`.

The consumer will connect to the broker and consume 100 messages. [Example 4.2 on page 26](#) shows the consumer's output.

Example 4.2. Test Consumer Output

```
$ java -jar lib/mq-client.jar consumer
Using destination: queue://TEST, on broker: failover://tcp://localhost:61616
[org.apache.activemq.transport.failover.FailoverTransport] :
Successfully connected to tcp://localhost:61616
Waiting for: 100 messages
[org.fusesource.mq.ConsumerThread] : Received test message: 0
[org.fusesource.mq.ConsumerThread] : Received test message: 1
[org.fusesource.mq.ConsumerThread] : Received test message: 2
[org.fusesource.mq.ConsumerThread] : Received test message: 3
[org.fusesource.mq.ConsumerThread] : Received test message: 4
...
[org.fusesource.mq.ConsumerThread] : Received test message: 99
[org.fusesource.mq.ConsumerThread] : Consumer thread finished
Consumed: 100 messages
$
```

6. In a Web browser, navigate to `http://localhost:8181/activemqweb` to open the Fuse MQ Enterprise Web console.
7. Select **Queues** from the main menu.

If Fuse MQ Enterprise was successfully installed, the console lists one queue named `TEST` with 100 messages enqueued and 100 messages dequeued.

Chapter 5. Uninstalling

Fuse MQ Enterprise uses a smart uninstaller to remove itself from a system.

If you used the installer, you can run the uninstaller in GUI or console mode to automate the removal of Fuse MQ Enterprise.

If you installed from an archive file, you can simply delete the installation directory from your system.

Caution

Removing Fuse MQ Enterprise from a system also removes all data associated with the Fuse MQ Enterprise installation, including persistence stores and log files.

To uninstall:

1. Run the uninstaller.

- In GUI mode:

a. Locate the uninstaller in

```
installDir/FuseMQEnterprise-X.X.X/uninstall.app/Contents/MacOS/uninstall
```

b. Double-click the uninstaller.

- In text mode enter the appropriate command for your platform:

OS X	<pre>sudo <i>installDir/FuseMQEnterprise-X.X.X/uninstall.app/Contents/MacOS/uninstall</i> osx-intel --mode text</pre>
Unix/Linux	<pre>sudo <i>installDir/FuseMQEnterprise-X.X.X/uninstall</i> --mode text</pre>

2. If prompted, provide the necessary credentials to run the uninstaller.

3. Confirm that you want to uninstall Fuse MQ Enterprise and all of its modules.
 - In GUI mode, click **Yes**.
 - In text mode:
 - a. Press **y**.
 - b. Press **Enter**.