



# Red Hat AMQ 6.3

## Installation Guide

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## Abstract

It is easy to install Red Hat AMQ and tailor the installation to a particular environment.

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## Table of Contents

<b>CHAPTER 1. INSTALLATION PREREQUISITES</b> .....	<b>3</b>
1.1. SUPPORTED PLATFORMS	3
1.2. JAVA RUNTIME	3
1.3. SUPPORTED STANDARDS AND PROTOCOLS	3
1.4. HARDWARE REQUIREMENTS	3
<b>CHAPTER 2. INSTALLING</b> .....	<b>4</b>
GETTING THE ARCHIVE	4
UNPACKING THE ARCHIVE	4
<b>CHAPTER 3. ADDING A REMOTE CONSOLE USER</b> .....	<b>5</b>
3.1. ADD A USER	5
<b>CHAPTER 4. VERIFYING THE INSTALLATION</b> .....	<b>6</b>
4.1. VERIFY THE INSTALLATION	6
<b>CHAPTER 5. OFFLINE MODE</b> .....	<b>9</b>
5.1. SUPPORTED FUNCTIONALITY	9
<b>CHAPTER 6. INSTALLING THE MESSAGING CLIENT PACKAGES</b> .....	<b>10</b>
6.1. INSTALLING CLIENTS ON RED HAT ENTERPRISE LINUX	10
6.2. INSTALLING CLIENTS ON ALL OTHER PLATFORMS	11
<b>APPENDIX A. INSTALLING THE APACHE ACTIVEMQ STANDARD DISTRIBUTION</b> .....	<b>12</b>
A.1. APACHE ACTIVEMQ DISTRIBUTION	12
<b>APPENDIX B. RED HAT AMQ MAVEN REPOSITORIES</b> .....	<b>13</b>
B.1. MAVEN REPOSITORIES	13



# CHAPTER 1. INSTALLATION PREREQUISITES

## Abstract

Before attempting to install and use Red Hat AMQ, make sure your system meets the minimum requirements.

## 1.1. SUPPORTED PLATFORMS

Red Hat tests and supports Fuse products in the configurations listed at [Red Hat AMQ Supported Configurations](#).

## 1.2. JAVA RUNTIME

For details of the Java runtimes supported by Red Hat AMQ, see [Red Hat AMQ Supported Configurations](#).

## 1.3. SUPPORTED STANDARDS AND PROTOCOLS

Red Hat AMQ supports the standards and protocols listed at [Red Hat AMQ Supported Standards and Protocols](#).

## 1.4. HARDWARE REQUIREMENTS

The minimum hardware specifications to install Red Hat AMQ are:

- 300 MB 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

### Abstract

Red Hat AMQ is installed by unpacking an archive system on a system. This provides an easy way for a developer to get up and running.

### GETTING THE ARCHIVE

You can download the Red Hat A-MQ archive from the [Red Hat Customer Portal](#)>[Downloads](#)>[Red Hat JBoss Middleware](#)>[Downloads](#) page, after you register and login to your customer account.

Once logged in:

1. Select **A-MQ**, listed under **Integration Platforms**, in the sidebar menu.
2. Select 6.3 from the **Version** drop-down list on the **Software Downloads** page.
3. Click the **Download** button next to the Red Hat AMQ distribution file you want to download.



#### NOTE

Trial kits are also available from the developer Web site, at <http://developers.redhat.com/downloads/>. *These kits are not supported by Red Hat .*

### UNPACKING THE ARCHIVE

Red Hat AMQ is packaged as a **.zip** file. Using a suitable archive tool, such as **Zip** or **Gunzip**, unpack Red Hat AMQ 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\amq**.



#### WARNING

Do not unpack the archive file into a folder that has any of the following special characters in its path name: **#, %, ^, "**.



## CHAPTER 3. ADDING A REMOTE CONSOLE USER

### Abstract

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.

### 3.1. ADD A USER

Red Hat AMQ 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/users.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=admin,admin,manager,viewer,Operator, Maintainer, Deployer, Auditor, Administrator, SuperUser**.

This line specifies a user **admin** with the password **admin** and comma-separated list of roles.

3. Uncomment the line by removing the leading **#**.
4. Change the first **admin** to the desired user name.
5. Change the second **admin** to the desired password.
6. Leave the role list, **admin,manager,viewer,Operator, Maintainer, Deployer, Auditor, Administrator, SuperUser**, as is.
7. Save the changes.

## CHAPTER 4. VERIFYING THE INSTALLATION

### Abstract

Once the installer has completed running it is a good idea to run a simple test to ensure that Red Hat AMQ was properly installed.

### 4.1. VERIFY THE INSTALLATION

AMQ 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 Fuse Management Console—that the broker processed the messages, then you can be confident that AMQ was installed successfully.

To verify that AMQ is properly installed:

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

Windows	<b>bin\start.bat</b>
Unix	<b>./bin/start</b>

4. Run the producer client with the following command:

#### Linux/UNIX

```
./bin/client "activemq:producer --user Username --password Password"
```

#### Windows

```
.\bin\client.bat "activemq:producer --user Username --password Password"
```

The producer will connect to the broker and produce 1000 messages. [Example 4.1, "Test Producer Output"](#) shows the producer's output.

#### Example 4.1. Test Producer Output

```
$ ./bin/client "activemq:producer --user Username --password Password"
client: JAVA_HOME not set; results may vary
Logging in as admin
1073 [sshd-SshClient[6575deb1]-nio2-thread-3]
WARN org.apache.sshd.client.keyverifier.AcceptAllServerKeyVerifier -
Server at [/0.0.0.0:8101, DSA, af:77:de:7f:c9:32:f0:b0:ed:12:0e:cd:56:35:fe:78] presented
unverified {} key: {}
$
```

**NOTE**

The producer command will only send messages to a broker with default port configuration. So, if you set up more than one AMQ instance on the same machine, the producer will only send messages to the instance that uses the default ports.

- To check that the messages have been enqueued, enter the following command:

**Linux/UNIX**

```
./bin/client activemq:dstat
```

**Windows**

```
.\bin\client.bat activemq:dstat
```

- Run the consumer client with the following command:

**Linux/UNIX**

```
./bin/client "activemq:consumer --user Username --password Password"
```

**Windows**

```
.\bin\client.bat "activemq:consumer --user Username --password Password"
```

The consumer will connect to the broker and consume 1000 messages. [Example 4.2, "Test Consumer Output"](#) shows the consumer's output.

**Example 4.2. Test Consumer Output**

```
$ ./bin/client "activemq:consumer --user Username --password Password"
client: JAVA_HOME not set; results may vary
Logging in as admin
235 [sshd-SshClient[1d6f6a81]-nio2-thread-1]
WARN org.apache.sshd.client.keyverifier.AcceptAllServerKeyVerifier -
Server at [/0.0.0.0:8101, DSA, af:77:de:7f:c9:32:f0:b0:ed:12:0e:cd:56:35:fe:78] presented
unverified {} key: {}
$
```

- To check that the messages have been dequeued, enter the following command:

**Linux/UNIX**

```
./bin/client activemq:dstat
```

**Windows**

```
| .\bin\client.bat activemq:dstat
```

## CHAPTER 5. OFFLINE MODE

### Abstract

You can run the AMQ container in offline mode (that is, without an Internet connection). But if you are planning to deploy custom applications to the container, it might be necessary to download additional dependencies (to a local Maven repository) before you can run the container in offline mode with these applications.

### 5.1. SUPPORTED FUNCTIONALITY

If you want to run the AMQ container in offline mode, it is necessary to distinguish between the following kinds of dependency:

- *Runtime dependencies*—the dependencies required to run the AMQ container, in its default configuration.
- *Build-time dependencies*—the dependencies required to build a custom application (which might include third-party libraries).

Here is a summary of what can be done in offline mode and what needs to be done in online mode (with an Internet connection):

- *Running the AMQ container in its default configuration*—is supported in offline mode. The default configuration of the AMQ container is specified by the **featuresBoot** property in the **etc/org.apache.karaf.features.cfg** file. The requisite dependencies are all provided in the **system/** sub-directory of the installation.
- *Installing additional features*—is, in general, *not* supported in offline mode. In principle, you can use the **features:install** command to install any of the features from the standard feature repositories (as specified by the **featuresRepositories** property in the **etc/org.apache.karaf.features.cfg** file), but the majority of these features must be downloaded from the Internet and are thus not supported in offline mode.
- *Deploying custom applications*—is, in general, *not* supported in offline mode. There may be some cases where an application with a minimal set of build-time dependencies is deployable offline, but in general, custom applications would have third-party dependencies that require an Internet connection (so that JAR files can be downloaded by Apache Maven).

If you do need to deploy an application with dependencies that are not available offline, you can use the Maven dependency plug-in to download the application's dependencies into a Maven offline repository. This customized Maven offline repository can then be distributed internally to any machines that do not have an Internet connection. For more details of this approach, see [section "Offline Repository for a Maven Project" in "Fabric Guide"](#).

## CHAPTER 6. INSTALLING THE MESSAGING CLIENT PACKAGES

### Abstract

Red Hat AMQ provides messaging clients as individual packages that you download from the [Red Hat Customer Portal](#).

### 6.1. INSTALLING CLIENTS ON RED HAT ENTERPRISE LINUX

#### Required subscriptions

In order to install the A-MQ client packages on Red Hat Enterprise Linux (RHEL), you require subscriptions to both of the following Red Hat products:

- Red Hat AMQ 6.3
- RHEL 5, 6, or 7

#### Qpid JMS AMQP 1.0 Java client

To install the Qpid JMS AMQP 1.0 Java client, enter the following command (as a superuser):

```
# yum install qpid-jms-client qpid-jms-client-docs qpid-jms-client-examples qpid-jms-client-maven-repo
```

#### Qpid C++ client

To install the Qpid C++ client, enter the following command (as a superuser):

```
# yum install qpid-cpp-client qpid-cpp-client-devel
```



#### IMPORTANT

The Qpid C++ client packages are currently *not* available for the following platform (processor) combinations: RHEL 5 (i686) and RHEL 6 (i686).

#### Python language bindings for Qpid Proton

To install the Python language bindings for the Qpid Proton messaging framework, enter the following command (as a superuser):

```
# yum install python-qpid-proton python-qpid-proton-doc
```

#### Compiling the Qpid C++ client from sources on RHEL 6

The Qpid C++ client cannot be compiled from sources through the Client or ComputeNode channels on RHEL 6 (due to a missing dependency on the package, **nss-devel**). In order to compile from sources, it is recommended that you install the Qpid C++ client through the Server channel instead.

## 6.2. INSTALLING CLIENTS ON ALL OTHER PLATFORMS

### Downloading the client packages

You can download the messaging client packages for AMQ, as follows:

1. Navigate to the Red Hat [Software Downloads](#) page on the Red Hat Customer Portal.
2. Select A-MQ under **Integration Platforms** in the sidebar menu (or using the drop-down menu for the **Product** field).
3. Choose 6.3 from the **Version** drop-down list on the Software Downloads page.
4. Click **Download** next to the client package that you want to download.

# APPENDIX A. INSTALLING THE APACHE ACTIVEMQ STANDARD DISTRIBUTION

## Abstract

Red Hat AMQ includes a standard distribution of Apache ActiveMQ in the installation's **extras** directory.

## A.1. APACHE ACTIVEMQ DISTRIBUTION

If you simply want to use a standard distribution of Apache ActiveMQ you can use the archived version in the installation's **extras** directory.

The **apache-activemq-5.11.0.redhat-630<build#>-bin.zip** archive file is provided.

You can copy this archive file to the desired location and decompress it using the appropriate utility for your platform.



### 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**.



## APPENDIX B. RED HAT AMQ MAVEN REPOSITORIES

### Abstract

Red Hat AMQ strongly supports Maven, an open source build system available from [Apache Maven](#). To use Maven to build your projects, you need to specify, in a Maven **settings.xml** file, where required artifacts are located.

### B.1. MAVEN REPOSITORIES

The following repositories contain artifacts your projects may need:

- AMQ repository

Provides access to the artifacts in the Red Hat Maven repository. This repository is required:

**<https://maven.repository.redhat.com/ga>**

- AMQ early access repository

Provides access to the artifacts in the Red Hat Maven repository for early access releases. This repository is optional:

**<https://maven.repository.redhat.com/earlyaccess/all>**