IBM Java for AIX HowTo: Install or upgrade IBM Java to a specific release (e.g., Service Refresh or Fix Pack)

**Question & Answer**

IBM Java for AIX HowTo: Install or upgrade IBM Java to a specific release (e.g., Service Refresh or Fix Pack)

This document provides step-by-step instructions for installing a specific Service Release or Fix Pack of an ***IBM Java for AIX*** version.

**Jump to section**: ( [Download](https://www.ibm.com/support/pages/ibm-java-aix-howto-install-or-upgrade-ibm-java-specific-release-eg-service-refresh-or-fix-pack#download)) ( [Install](https://www.ibm.com/support/pages/ibm-java-aix-howto-install-or-upgrade-ibm-java-specific-release-eg-service-refresh-or-fix-pack#install)) ( [Confirm](https://www.ibm.com/support/pages/ibm-java-aix-howto-install-or-upgrade-ibm-java-specific-release-eg-service-refresh-or-fix-pack#confirm)) ([Troubleshoot](https://www.ibm.com/support/pages/ibm-java-aix-howto-install-or-upgrade-ibm-java-specific-release-eg-service-refresh-or-fix-pack#troubleshoot))

The instructions in this document make references to generic terms in *Italics* that will need to be replaced with information specific to the support call and the environment. It is very important that consistent and accurate values be used in place of the *Italicized* generic terms when collecting the data to ensure the prompt and correct delivery of the data when uploaded.

Generic Term

Replace with

*TMP\_PATH*

The temporary path or directory containing the downloaded Java software (eg., /home/java7\_64/filesets).

*MM-DD*

The current month and day (e.g. ,01-31).

*PMR*

The full IBM PMR number (e.g. , PMR12345.b678.c000).

*TAR\_GZ\_FILE*

The actual name of the files downloaded.

*JavaX.jre*

The IBM Java 32-bit JRE fileset names (e.g. , Java7.jre, Java71.jre, Java8.jre).

*JavaX.sdk*

The IBM Java 32-bit SDK fileset names (e.g. , Java6.sdk, Java7.sdk, Java8.sdk).

*JavaX\_64.jre*

The IBM Java 64-bit JRE fileset names (e.g. , Java7\_64.jre, Java71\_64.jre).

*JavaX\_64.sdk*

The IBM Java 64-bit SDK fileset names (e.g. , Java7\_64.sdk, Java8\_64.sdk).

**Overview**

**Step-by-Step Instructions**

**Examples / Tips / Hints / Comments / Descriptions**

**Step 1:  
  
Download**

**A.** Download the desired **JRE**and/or **SDK**filesets for the specific *Service Release*or *Fix Pack* release for the desired version(s) from the "**IBM Java for AIX Service Information and Download Guide**" web page:  
  
<http://www-01.ibm.com/support/docview.wss?uid=isg3T1022644>  
  
  
  
**B.** Create a temporary directory, then save a copy of the downloaded files into that directory:  
  
**# mkdir -p** */TMP\_PATH/java\_install*  
  
*{Save a copy of the downloaded files to /TMP\_PATH/java\_install directory}*  
  
  
  
**C**. Extract the contents of the download files in the temporary directory. In a command prompt, execute the commands:  
  
**# cd** /*TMP\_PATH/java\_install*  
**# ls Java\*.tar.gz**  
  
{For each file listed from the last command, execute the commands}  
  
**# gunzip -c <***TAR\_GZ\_FILE***| tar -xvf -**  
  
{Confirm the \*.jre and/or \*.sdk files have been extracted}  
  
**# ls Java\*.sdk Java\*.jre**

**B**. Examples of commands to be executed:  
  
**# mkdir -p /tmp/java\_install**  
  
**# ls \*.tar.gz  
  
Java7.jre.tar.gz  
Java7.sdk.tar.gz**  
  
  
  
**C**. Examples of commands to be executed:  
  
**# cd /tmp/java\_install  
  
# ls Java\*.tar.gz  
  
Java7.jre.tar.gz  
Java7.sdk.tar.gz  
  
# gunzip -c < Java7.jre.tar.gz | tar -xvf -  
# gunzip -c < Java7.sdk.tar.gz | tar -xvf -  
  
# ls Java\*.sdk Java\*.jre  
  
Java7.sdk  
Java7.jre**

**Step 2:  
  
Install**

**A. Command line installation**  
  
1. From a command prompt, and while logged in as the root user, execute the commands:  
  
#**cd***/TMP\_PATH/java\_install*  
  
**# installp -agXYd .***JavaX.jre JavaX.sdk* **2>&1 | tee installp.log**  
  
or  
  
**# installp -agXYd .***JavaX\_64.jre JavaX\_64.sdk* **2>&1 | tee installp.log**

**B. SMIT (or smitty) installation**  
  
1. From a command prompt, and while logged in as the root user, execute the commands:  
  
  
**# cd***/TMP\_PATH/java\_install*  
  
**# smittty install\_all**

2. Follow these instructions while using the ***SMIT***utility

**a. Menu #1** (Install and Update from ALL Available Software)  
  
**Option:**:\* INPUT device / directory for software  
  
**Input**: Type "**./**" in the field  
  
*{Press the****ENTER****key to proceed to next menu}*

**b. Menu #2**(Install and Update from ALL Available Software)  
  
**Option**: \* SOFTWARE to install  
  
**Input**: Press the ***F4***key (or***ESC+4*** keys) to view the list of installed software. Then scroll to the desired filesets and select the filesets by pressing the the ***F7***key (or ***ESC+7***keys) for each filesets. Press the ***ENTER***key once all of the filesets have been selected.  
  
  
**Option**: ACCEPT new license agreements?  
  
**Input**: Press the TAB key to change the value from "no" to "yes"  
  
*{Press the****ENTER****twice to begin the installation}*  
  
*{Press the****F10****key (or****ESC+0****keys) to exit the****SMIT****utility}*

**A**. Examples of commands to be executed:  
  
**# cd /tmp/java\_install  
# installp -agXYD . Java7.jre Java7.sdk** **2>&1 | tee installp.log**  
  
  
  
**B**. Examples of commands to be executed:  
  
**# cd /tmp/java\_install  
# smitty install\_all**

**Step 3:  
  
Confirm**

Confirm that ***IBM Java for AIX***has been installed using the following methods.  
  
  
**A.** From a command prompt, execute the command:

**# lslpp -l "Java\*"**

In the output listed, the *JavaX*and/or *JavaX\_64* versions selected during the installation should be listed as ***COMMITTED***.

**B.**From a command prompt, execute the command:

**# /usr/***javaX***/jre/bin/java -version**  
  
and/or  
  
**# /usr/***javaX\_64***/jre/bin/java -version**

A. Examples of commands to execute:  
  
**# lslpp -l "Java\*" | grep Java7**  
  
**Fileset Level State Description  
----------------------------------------------------------------------------  
Path: /usr/lib/objrepos  
Java7\_64.sdk 7.0.0.210 COMMITTED Java SDK 64-bit Development Kit**

**B**. Examples of commands to execute:  
  
**# /usr/java7/jre/bin/java -version**

**java version "1.7.0"**

**Java(TM) SE Runtime Environment (build pap3270sr9fp1-20150602\_01(SR9 FP1))**

**IBM J9 VM (build 2.6, JRE 1.7.0 AIX ppc32-64 Compressed References 20150406\_242981 (JIT enabled, AOT enabled)**

**J9VM - R26\_Java726\_SR9\_20150406\_1443\_B242981**

**JIT - tr.r11\_20150401\_88894**

**GC - R26\_Java726\_SR9\_20150406\_1443\_B242981\_CMPRSS**

**J9CL - 20150406\_242981)**

**JCL - 20150601\_01 based on Oracle 7u79-b14**

**Step 4:  
  
Troubleshoot**

A. If the install of***IBM Java for AIX*** failed and the issue could not be resolved, it is recommended that the following data be collected and uploaded to a new IBM support call which has been routed to the "**AIX Install**" team or "**AIX Java**" team.  
  
1. Collect and package the SMIT log files or installp log file by executing the following commands from a command prompt using the user id used in **Step 2. Install**:  
  
**# mkdir -p */****TMP\_PATH/MM-DD***/java\_install/data  
# cd***/TMP\_PATH/MM-DD***/java\_install/data  
# cp ${HOME}/smit.\****/TMP\_PATH***/java\_install/installp.log ./  
# cd***/TMP\_PATH/MM-DD***/java\_uninstall  
# tar -cf - data | gzip -c >***PMR.MM-DD***.tgz**  
  
2. Upload the packaged data using one of the IBM secure upload methods listed on the **"IBM Java for AIX** **MustGather: How to upload diagnostic data and testcases to IBM**" web page:  
  
<http://www-01.ibm.com/support/docview.wss?uid=isg3T1022619>

Document Type:

Instruction

**Downloading MQ**

You can **download** a free 90-day **trial** of the latest version from here: [https://www.**ibm**.com/account/reg/uk-en/signup?formid=urx-17867](https://www.ibm.com/account/reg/uk-en/signup?formid=urx-17867)

# Installing IBM MQ server on AIX

You can install an IBM® MQ server on AIX® either interactively or silently.

# Setting up the user and group on AIX

On AIX® systems, IBM® MQ requires a user ID of the name mqm, with a primary group of mqm. The mqm user ID owns the directories and files that contain the resources associated with the product.

## **Creating the user ID and group**

Set the primary group of the mqm user to the group mqm.

If you are installing IBM MQ on multiple systems you might want to ensure each UID and GID of mqm has the same value on all systems. If you are planning to configure multi-instance queue managers, it is essential the UID and GID are the same from system to system. It is also important to have the same UID and GID values in virtualization scenarios.

**AIX**

You can use the System Management Interface Tool ( smit ), for which you require root authority.

1. To create the mqm group, display the required window using this sequence:

Security & Users

Groups

Add a Group

Set the group name field to mqm.

1. To create the user mqm, display the required window using this sequence:

Security & Users

Users

Add a User

Set the user name field to mqm.

1. To add a password to the new user ID, display the required window using this sequence:

Security & Users

Passwords

Change a User's Password

Set the password as required.

## **Adding existing user IDs to the group**

If you want to run administration commands, for example **crtmqm** (create queue manager) or **strmqm** (start queue manager), your user ID must be a member of the mqm group. This user ID must not be longer than 12 characters.

Users do not need mqm group authority to run applications that use the queue manager; it is needed only for the administration commands.

**AIX**

You can use smit to add an existing user ID to the mqm group. Display the required menu using this sequence:

Security & Users

Users

Change / Show Characteristics of a User

Type the name of the user in the **User Name** field and press **Enter**. Add mqm to the **Group SET** field, which is a comma-separated list of the groups to which the user belongs. Users do not need to have their primary group set to mqm. If mqm is in their set of groups, they can use the administration commands.

# Installing the IBM MQ server silently on AIX

You can carry out a non-interactive installation of the IBM® MQ server from the command line using the AIX® **installp** command. A non-interactive installation is also known as a silent, or unattended installation.

## **Before you begin**

Before you start the installation procedure, make sure that you have completed the necessary steps outlined in [Preparing the system on AIX](https://www.ibm.com/docs/en/SSFKSJ_9.0.0/com.ibm.mq.ins.doc/q128490_.html).

**Note:** During installation, errors relating to **errupdate** or **trcupdate** might occur. This can caused by installing to a non-default location, if so these errors can be safely ignored. However, native trace for IBM MQ is only supported when installed in the default location.

## **About this task**

You can use this method to install to a non-default location, and can select which components you want to install. The components and filesets are listed in [IBM MQ components and features](https://www.ibm.com/docs/en/SSFKSJ_9.0.0/com.ibm.mq.ins.doc/q008320_.html).

## **Procedure**

1. Log in as root, or switch to the superuser using the **su** command.
2. Set your current directory to the location of the installation file. The location might be the mount point of the CD, a network location, or a local file system directory.
3. Install the product in one of the following ways:
   * Install the whole product in the default location:

installp -acgXYd . all

* + Install selected file sets in the default location:

installp -acgXYd . list of file sets

* + Install the whole product in a non-default location using the -R flag:

installp -R USIL\_Directory -acgXYd . all

* + Install selected file sets in a non-default location using the -R flag:

installp -R USIL\_Directory -acgXYd . list of file sets

where USIL\_Directory is a directory which exists before the command is run; it must not contain any spaces or usr/mqm. IBM MQ is installed underneath the directory specified. For example, if /USIL1 is specified, the IBM MQ product files are located in /USIL1/usr/mqm. This location is known as the MQ\_INSTALLATION\_PATH.

## **What to do next**

* If you have chosen this installation to be the primary installation on the system, you must now set it as the primary installation. Enter the following command at the command prompt:

MQ\_INSTALLATION\_PATH/bin/setmqinst -i -p MQ\_INSTALLATION\_PATH

where MQ\_INSTALLATION\_PATH represents the directory where IBM MQ is installed.

You can have only one primary installation on a system. If there is already a primary installation on the system, you must unset it before you can set another installation as the primary installation. For more information, see [Changing the primary installation](https://www.ibm.com/docs/en/SSFKSJ_9.0.0/com.ibm.mq.con.doc/q015180_.html).

* You might want to set up the environment to work with this installation. You can use the **setmqenv** or **crtmqenv** command to set various environment variables for a particular installation of IBM MQ . For more information, see [setmqenv](https://www.ibm.com/docs/en/SSFKSJ_9.0.0/com.ibm.mq.ref.adm.doc/q083560_.html) and [crtmqenv](https://www.ibm.com/docs/en/SSFKSJ_9.0.0/com.ibm.mq.ref.adm.doc/q083100_.html).
* If you want to confirm that the installation was successful, you can verify your installation. See [Verifying an IBM MQ installation on AIX](https://www.ibm.com/docs/en/SSFKSJ_9.0.0/com.ibm.mq.ins.doc/q009211_.html), for more information.