Quick Beginnings for HP-UX

Contents

Welcome to WebSphere MQ for HP-UX

This book describes IBM® WebSphere® MQ for HP-UX, Version 7.0 and explains how to plan for the product, install it, and verify that the installation has worked.

See the:

- *WebSphere MQ Glossary* for an explanation of terms used in this book
- *WebSphere MQ System Administration Guide* for further information on using the control commands *crtmqm*, *strmqm*, and *endmqm*

Migrating to WebSphere MQ for HP-UX Version 7.0
Follow this information to migrate from previous versions of WebSphere MQ for HP-UX to WebSphere MQ for HP-UX Version 7.0.

Installing a WebSphere MQ server
Information describing how to install a WebSphere MQ Version 7.0 server.

Installing a WebSphere MQ client
Follow these steps to install a WebSphere MQ client.

Installing a client on the same machine as a server

▶Applying maintenance◀
How to maintain WebSphere MQ for HP-UX.

▶Installing and uninstalling GSKit Version 8 on HP-UX◀
You might want to use GSKit Version 8 instead of or in addition to GSKit Version 7. This collection of topics gives you instructions for installing and uninstalling GSKit Version 8.

Uninstalling WebSphere MQ

WebSphere MQ Documentation
Where to find information describing WebSphere MQ.

Notices

This build: January 26, 2011 11:34:24

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10120_

1. Migrating to WebSphere MQ for HP-UX Version 7.0

Follow this information to migrate from previous versions of WebSphere® MQ for HP-UX to WebSphere MQ for HP-UX Version 7.0.

About this task
If you want to migrate to WebSphere MQ Version 7.0, complete this task.

If you migrate from a previous level of this productwithout first backing up your system, you **cannot** revert to your previous level, so back up your system **before** you install WebSphere MQ Version 7.0. This will enable you to back out the upgrade if necessary. If you back out the upgrade, however, you cannot recover any work performed by WebSphere MQ Version 7.0.

Procedure
1. Stop all Websphere MQ applications on the machine and any applications accessing remote machines. This includes any vendor products used to monitor or control WebSphere MQ.
2. End all WebSphere MQ activity.
    a. Log in as a WebSphere MQ administrator.
    b. Use the **endmqm** command to stop all running queue managers.
    c. Stop any listeners associated with the queue managers, using the command:

        endmqlsr -m *QMgrName*

    d. To check that you have stopped all of them, enter the following:

        ps -ef | grep mq

    Check that there are no processes listed that are running command lines beginning `amq` or `runmq`. Ignore any that start with `amqi`.
3. Login as root.
4. Function supplied by the SupportPacs in the table below has been superseded by function in WebSphere MQ Version 7.0. Remove these SupportPacs before installing WebSphere MQ Version 7.0.

Table 1. SupportPacs superseded by WebSphere MQ Version 7.0

SupportPac Number	Description
MA0Y	WebSphere MQ Bridge for HTTP
MA6P	WebSphere MQ - XA libraries for use with TX-series on HP-UX for IPF

Note: If you installed SupportPac MACS, remove the directory `/usr/mqm/inc64` and its contents.
Review any other installed SupportPacs for their applicability to WebSphere MQ for HP-UX Version 7.0.

5. Uninstall any WebSphere MQ service updates and then uninstall WebSphere MQ.

6. Install WebSphere MQ Version 7.0 by following the tasks set out in *Quick Beginnings for HP-UX*.

Important information for Beta driver users
If you have previously installed a WebSphere MQ Version 7.0 Beta driver, you **must** uninstall this driver and clean up any remaining files **before** you install the GA version of WebSphere MQ Version 7.0.

After you have migrated to WebSphere MQ Version 7.0
Perform these tasks immediately after you migrate to WebSphere MQ Version 7.0.

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:25

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10180_

1.1. Important information for Beta driver users

If you have previously installed a WebSphere® MQ Version 7.0 Beta driver, you **must** uninstall this driver and clean up any remaining files **before** you install the GA version of WebSphere MQ Version 7.0.

Parent topic: Migrating to WebSphere MQ for HP-UX Version 7.0

This build: January 26, 2011 11:34:25

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10185_

1.2. After you have migrated to WebSphere MQ Version 7.0

Perform these tasks immediately after you migrate to WebSphere® MQ Version 7.0.

About this task

Immediately after you migrate to WebSphere MQ Version 7.0, you must start your queue managers at least once to migrate your file system structure before you start any WebSphere MQ listeners. Otherwise, you will not be able to start WebSphere MQ listeners after migration.

If you cannot connect to a migrated queue manager using MQ Explorer and receive the error message "SYSTEM.MQEXPLORER.REPLY.MODEL not defined", run the following command on that queue manager:

```
strmqm -c
```

▶This command refreshes existing system objects with default values (for example, setting the MCAUSER attribute of a channel definition to blanks), and creates the queue required by the WebSphere MQ Explorer.◀

Parent topic: Migrating to WebSphere MQ for HP-UX Version 7.0

This build: January 26, 2011 11:34:26

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10186_

2. Installing a WebSphere MQ server

Information describing how to install a WebSphere® MQ Version 7.0 server.

This section describes how to install a WebSphere MQ Version 7.0 server. The information covers topics such as preparing for installation and verifying your installation, as well as installation itself. If you already have an installation of WebSphere MQ, and are migrating to WebSphere MQ Version 7.0 see Migrating to WebSphere MQ for HP-UX Version 7.0 before installing WebSphere MQ Version 7.0.

WebSphere MQ for HP-UX can be installed as a server or a client.

A WebSphere MQ server is an installation of one or more queue managers that provide queueing services to one or more clients. All the WebSphere MQ objects, for example queues, exist only on the queue manager machine (the WebSphere MQ server machine), and not the client. A WebSphere MQ server can also support local WebSphere MQ applications.

A WebSphere MQ client is a component that allows an application running on one system to communicate with a queue manager running on another system. The output from the call is sent back to the client, which passes it back to the application. To install a WebSphere MQ client see, Installing a WebSphere MQ client.

It is possible to have both a server and a client installation on the same machine, for instructions on how to do this see, Installing a client on the same machine as a server.

See the WebSphere MQ System Administration Guide for an introduction to WebSphere MQ concepts and objects.

For information on the components that can be included in the server and client installations see, WebSphere MQ Components.

The installation process is divided into the following group of topics, complete all of these tasks in sequence:

Preparing for installation

Server installation procedure

Verifying the server installation
This is an overview of various methods for verifying a WebSphere MQ installation.

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:26

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10190_

2.1. Preparing for installation

Before you install WebSphere® MQ, complete the following tasks.

Checking hardware and software requirements - PA-RISC platform
Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Checking hardware and software requirements - Itanium platform
Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Setting up the user ID and group ID

Setting the JAVA_HOME environment variable

Creating WebSphere MQ file systems

Displaying messages in your national language

After installing WebSphere MQ you can configure the LANG environment variable to display messages from a different national language message catalog.

Implications of a 64-bit queue manager

Parent topic: Installing a WebSphere MQ server

 This build: January 26, 2011 11:34:26

Notices | Trademarks | Downloads | Library | Support | Feedback

 Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10200_

2.1.1. Checking hardware and software requirements - PA-RISC platform

Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Hardware and software requirements are set out at System Requirements for WebSphere MQ V7.0 on HP-UX PA-RISC on the IBM Web site.

WebSphere MQ does not support host names that contain spaces. If you install WebSphere MQ on a computer with a host name that contains spaces, you are unable to create any queue managers.

Prerequisite software for optional components is detailed in the following sections:

Java Messaging and SOAP transport
If you want to use Java Messaging and SOAP (Simple Object Access Protocol) Support, you need a Java Runtime Environment Version 1.4.2 or later.

For a list of supported JDKs, see:

WebSphere® MQ requirements.

For further information about using Java with WebSphere MQ, see WebSphere MQ Using Java.

For further information about SOAP with WebSphere MQ, see WebSphere MQ Using Web Services .

If you use a JDK that is not in the list of supported JDKs you should be aware that:

- The JDK might not be FIPS level 140-2 compliant and by using it with WebSphere MQ, WebSphere MQ Version 7.0 will not comply with the FIPS 140-2 standards.

- SOAP is not supported.
- ►The WebSphere MQ Web service deployment utility, amqwdeployWMQService, requires IBM Java 2 SDK.◄

To run a 64-bit or 32-bit JVM use the -d64 or -d32 parameters on the command line when running a Java application to ensure the correct JVM is used.

Secure Sockets Layer (SSL)

If you want to use the SSL support with WebSphere MQ for HP-UX, you need to install the IBM® Global Security Kit (GSKit) V7 packages: gsk7bas and gsk7bas64. These are supplied with WebSphere MQ as components available for installation. If you are migrating from WebSphere MQ Version 5.3 and have no other requirement for the IBM Global Security Kit V6 you can uninstall it using the process described in Uninstalling WebSphere MQ. The package name is `gsk6bas`.

To use SSL, WebSphere MQ clients on HP-UX 11i v1 and HP-UX 11i v2 must be built:
- Using the C++ compiler (not the C compiler)
- Using POSIX threads
- With the compiler options: `-W1,+b/opt/ibm/gsk7/lib:/opt/mqm/lib`

Parent topic: Preparing for installation

🏠 This build: January 26, 2011 11:34:26

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10210_

2.1.2. Checking hardware and software requirements - Itanium platform

Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Hardware and software requirements are set out at System Requirements for WebSphere MQ V7.0 on HP-UX Itanium on the IBM Web site.

WebSphere MQ does not support host names that contain spaces. If you install WebSphere MQ on a computer with a host name that contains spaces, you are unable to create any queue managers.

Prerequisite software for optional components is detailed in the following sections:

Java Messaging and SOAP transport
If you want to use Java Messaging and SOAP (Simple Object Access Protocol) Support with WebSphere® MQ, you need Java 5 or later.

►For a list of supported JDKs, see:

WebSphere MQ
requirements.

For further information about using Java with WebSphere MQ, see WebSphere MQ
Using Java.

For further information about SOAP with WebSphere MQ, see WebSphere MQ Using
Web Services .

If you use a JDK that is not in the list of supported JDKs you should be aware that:

- The JDK might not be FIPS level 140-2 compliant and by using it with WebSphere
  MQ, WebSphere MQ Version 7.0 will not comply with the FIPS 140-2 standards.
- SOAP is not supported.
- The WebSphere MQ Web service deployment utility, amqwdeployWMQService,
  requires IBM Java 2 SDK.

To run a 64-bit or 32-bit JVM use the -d64 or -d32 parameters on the command line
when running a Java application to ensure the correct JVM is used.

Secure Sockets Layer (SSL)

If you want to use the SSL support with WebSphere MQ for HP-UX, you need to install
the IBM® Global Security Kit (GSKit) V7 package: gsk7bas64. This is supplied with
WebSphere MQ as one of the components available for installation.

Note: WebSphere MQ for HP-UX on Itanium does not support 32-bit SSL. The
WebSphere MQ documentation generally describes the use of the 32-bit GSKit
commands (**gsk7cmd**, **gsk7ikm** , and **gsk7capicmd**). On the HP-UX for Itanium
platform, you must use the equivalent 64-bit variants **gsk7cmd_64**, **gsk7ikm_64**,
and **gsk7capicmd_64**).

To use SSL, WebSphere MQ clients on HP-UX 11i v2 must be built:

- Using the C++ compiler (not the C compiler)
- Using POSIX threads
- With the compiler options: `-W1,+b/opt/ibm/gsk7/lib:/opt/mqm/lib`

Parent topic: Preparing for installation

This build: January 26, 2011 11:34:27

Notices | Trademarks | Downloads | Library | Support | Feedback

2.1.3. Setting up the user ID and group ID

WebSphere® 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. Create the user ID and group IDs as described in the following topics.

- Creating the user ID and group
- Adding existing user IDs to the group

Creating the user ID and group

Adding existing user IDs to the group

Parent topic: Preparing for installation

This build: January 26, 2011 11:34:29

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10300_

2.1.3.1. Creating the user ID and group

Create the required user ID and group ID **before** you install WebSphere® MQ. Both user ID and group ID must be set to mqm. For stand-alone machines, you can create the new user ID and group IDs locally; for machines administered in a network information services (NIS) domain, an administrator must create the IDs on the NIS master server machine.

▶If you intend manually setting a user ID value for user mqm then you must ensure that its value is less than 60 000 to avoid problems with the maintenance update process.◀

It is also suggested that you set the mqm user's home directory to /var/mqm.

You can use the System Administration Manager (SAM) to work with user IDs.

Parent topic: Setting up the user ID and group ID

This build: January 26, 2011 11:34:29

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10310_

2.1.3.2. 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.

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

Parent topic: Setting up the user ID and group ID

This build: January 26, 2011 11:34:29

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10320_

2.1.4. Setting the `JAVA_HOME` environment variable

About this task
You must set the JAVA_HOME environment variable to `/opt/mqm/ssl/jre`. You can set this using the following command:

```
export JAVA_HOME=/opt/mqm/ssl/jre
```

What to do next
Parent topic: Preparing for installation

This build: January 26, 2011 11:34:28

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10255_

2.1.5. Creating WebSphere MQ file systems

The installation directory for the WebSphere® MQ product code is `/opt/mqm`. Working data is stored in `/var/mqm`. You cannot change these locations. The IBM® Global Security Kit (GSKit) must also be installed into its default location. (The GSKit enables you to use SSL security on Windows and UNIX systems.)

The topics contained in this section describe how to prepare your file system for installing WebSphere MQ. Perform these tasks before installation.

Creating a file system for the product code
This topic describes how to prepare the `/opt/mqm` file system into which the WebSphere MQ code will be installed should you not have enough storage space available in the file system.

Creating a file system for the working data

Parent topic: Preparing for installation

This build: January 26, 2011 11:34:28

This topic's URL:
hq10260_

2.1.5.1. Creating a file system for the product code

This topic describes how to prepare the `/opt/mqm` file system into which the WebSphere® MQ code will be installed should you not have enough storage space available in the file system.

About this task
The approximate amount of storage space required for a server installation is detailed below.

Table 1. Storage requirements for a WebSphere MQ server

Storage Requirements	Storage Requirement in MB in /usr	Storage Requirement in MB in /opt
WebSphere MQ Server installation	6	247
IBM® Global Security Kit V7 (32-bit)	0	16
IBM Global Security Kit V7 (64-bit)	0	14

The WebSphere MQ product code is installed in `/opt`. If you cannot install the product code in the `/opt` file system because the file system is too small to contain the product, you can do one of the following:

1. Create a new file system and mount it as `/opt/mqm`. The new file system must be created and mounted before installing the product code.

2. Create a new directory anywhere on your machine, and create a symbolic link from `/opt/mqm` to this new directory. For example:
   ```
   mkdir /bigdisk/mqm
   ln -s /bigdisk/mqm /opt/mqm
   ```
   The new directory must be created and the link created before installing the product code.

The file system into which the code is installed can be a remote network device, for example, NFS. However, you must define the mount options defined on that device to allow **setuid** programs, including those which are **setuid** root, to run.

Parent topic: Creating WebSphere MQ file systems

This build: January 26, 2011 11:34:28

This topic's URL:
hq10270_

2.1.5.2. Creating a file system for the working data

About this task

Before you install WebSphere® MQ for HP-UX, create and mount a file system called `/var/mqm` which is owned by `user` and is of group `mqm`. If possible, use a partition strategy with a separate volume for the WebSphere MQ data. This means that other system activity is not affected if a large amount of WebSphere MQ work builds up.

To determine the size of the `/var/mqm` file system for a server installation, consider:

- The maximum number of messages in the system at one time.
- Contingency for message buildups, if there is a system problem.
- The average size of the message data, plus 500 bytes for the message header.
- The number of queues.
- The size of log files and error messages.
- The amount of SSL trace that is written to the `/var/mqm/trace` directory.

Allow 130 MB as a minimum for a WebSphere MQ server.

Parent topic: Creating WebSphere MQ file systems

Creating separate file systems for working data

➤

About this task
You can also create separate file systems for your log data (`/var/mqm/log`) and error files (`/var/mqm/errors`). If possible, place these directories on different physical disks from the queue manager data (`/var/mqm/qmgrs`) and from each other.

➤If you create separate file systems, the `/var/mqm/errors` directory can be NFS mounted. However, if you choose to NFS-mount `/var/mqm/errors`, the error logs might be lost if the network fails.◄

➤If you are creating separate file systems, allow a minimum of 30 MB of storage for `/var/mqm`, 100 MB of storage for `/var/mqm/log`, and 4 MB of storage for `/var/mqm /errors`. The 100 MB minimum allowance of storage for `/var/mqm/log` is the absolute minimum required for a single queue manager and is not a recommended value. The size of a file system should be scaled according to the number of queue managers that you intend to use, the number of pages per log file, and the number of log files per queue manager.◄

If you want to use individual queues that hold more than 2 GB of data, you must enable `/var/mqm` to use large files.

The size of the log file depends on the log settings that you use. The minimum sizes

above are for circular logging using the default settings. For further information about log sizes, see Calculating the size of the log 3.

❮

🏠 This build: January 26, 2011 11:34:28

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10280_

2.1.6. Displaying messages in your national language

After installing WebSphere® MQ you can configure the LANG environment variable to display messages from a different national language message catalog.

About this task

Messages in U.S. English are automatically installed with WebSphere MQ.

If you require messages in a different language, perform the following steps:

Procedure

1. Install the appropriate message catalog (see WebSphere MQ Components).

2. To select messages in a different language, ensure the **LANG** environment variable is set to the identifier for the language you want to install:

        export LANG=de_De.iso88591

   The message identifiers for the message catalogs are as follows:

Identifier	Language
cs_CZ	Czech
de_DE	German
es_ES	Spanish
fr_FR	French
hu_HU	Hungarian
it_IT	Italian
ja_JP	Japanese
ko_KR	Korean
pl_PL	Polish
pt_BR	Brazilian Portuguese
ru_RU	Russian
zh_CN	Simplified Chinese

Identifier	Language
zh_TW	Traditional Chinese

Parent topic: [Preparing for installation](#)

This build: January 26, 2011 11:34:29

[Notices](#) | [Trademarks](#) | [Downloads](#) | [Library](#) | [Support](#) | [Feedback](#)

This topic's URL:
hq10330_

2.1.7. Implications of a 64-bit queue manager

When using the 64-bit queue manager, the use of the LIBPATH and LD_LIBRARY_PATH environment variable is not advised. Setting these environment variables might result in you not being able to run any WebSphere® MQ commands. By default, the installation will operate as in previous versions of WebSphere MQ, with symbolic links being created from `/usr/lib`, `/usr/bin` and `/usr/include` to the appropriate files within the WebSphere MQ tree structure. In the case of `/usr/lib` the symbolic links will be to the 32-bit WebSphere MQ libraries provided for customer 32-bit applications.

Note: No symbolic links are required for the 64-bit WebSphere MQ libraries required by WebSphere MQ commands.

All WebSphere MQ commands are 64-bit and have a built in path to the WebSphere MQ 64-bit libraries, however, this can be overridden by the use of LIBPATH and thus can cause WebSphere MQ commands to fail to run. The recommended way of using WebSphere MQ commands and your applications is as follows:

- Unset LIBPATH and LD_LIBRARY_PATH and build your applications with a built in path to the appropriate WebSphere MQ libraries, this is detailed in the appropriate WebSphere MQ book for your type of WebSphere MQ application.

- If you need to set LIBPATH or LD_LIBRARY_PATH, consider not including `/usr/lib` in the path you specify in the variable. If you need to include `/usr/lib` in your LIBPATH or LD_LIBRARY_PATH then in order to avoid errors running 64-bit WebSphere MQ applications or WebSphere MQ commands, consider removing the symbolic links from `/usr/lib` to the 32-bit WebSphere MQ libraries using the **dltmqlnk** command. The symbolic links can be restored with the **crtmqlnk** command. You also need to build your applications with a built in path to the appropriate WebSphere MQ libraries.
Note that both the **dltmqlnk** command and the **crtmqlnk** command are scripts, and take no parameters.

- If you cannot use either of the first two options, run your applications in a different environment to the one which issues any WebSphere MQ commands.
Note: WebSphere MQ libraries are in the following locations: `/opt/mqm/lib` (32-bit libraries) and `/opt/mqm/lib64` (64-bit libraries).

Parent topic: Preparing for installation

This build: January 26, 2011 11:34:30

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10340_

2.2. Server installation procedure

This section tells you how to install the WebSphere® MQ for HP-UX server. If you want to install the WebSphere MQ client see Installing a WebSphere MQ client.

Before you start the installation procedure, make sure you have prepared your system as described in Preparing for installation.

The installation method allows you to select which components you would like to install, for a list of the components and their corresponding filesets see WebSphere MQ Components.

See Installation procedure for the standard installation procedure.

Alternatively, see Non-interactive installation.

Kernel configuration

Installation procedure

WebSphere MQ Components
This lists all of the installable MQ components and other IBM products that comprise Websphere MQ.

Parent topic: Installing a WebSphere MQ server

This build: January 26, 2011 11:34:30

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10350_

2.2.1. Kernel configuration

WebSphere® MQ uses semaphores and shared memory. It is possible, therefore, that the default kernel configuration is not adequate.

Before installation, review the configuration of the machine and increase the values if necessary. The minimum recommended values of the tunable kernel parameters are given in Figure 1. These values might need to be increased if you obtain any First Failure Support Technology™ (FFST™) records.

Note:

1. ►On platforms earlier than HP-UX 11i v1.6 (11.22), if you intended to run a high number of concurrent connections to WebSphere MQ, you were required to configure the number of kernel timers (CALLOUTS) by altering the NCALLOUT kernel parameter. On HP-UX 11i v1.6 (11.22) platforms or later, the NCALLOUT parameter is obsolete as the kernel automatically adjusts the data structures.◄

2. Semaphore and swap usage do not vary significantly with message rate or message persistence.

3. WebSphere MQ queue managers are independent of each other. Therefore system tunable kernel parameters, for example `shmmni`, `semmni`, `semmns`, and `semmnu` need to allow for the number of queue managers in the system.

See the HP-UX documentation for information about changing these values.

Figure 1. Minimum recommended tunable kernel parameters values►

```
shmmax          536870912
shmseg          1024
shmmni          1024
semaem          16384
semvmx          32767
semmns          16384
semmni          1024 (semmni < semmns)
semmnu          16384
semume          256
max_thread_proc 66
maxfiles        10000
maxfiles_lim    10000
►nfile           20000◄
```

◄

Note: ►

1. For HP-UX 11.23 (11i V2) and later operating systems, the tunable kernel parameters: **shmem**, **sema**, **semmap**, and **maxusers**, are obsolete. This note applies to the Itanium and PA-RISC platforms.

2. ►For HP-UX 11i V3 and later operating systems, the tunable kernel parameter **nfile** is obsolete.◄

◄

You must restart the system once you have changed any of the tunable kernel parameters.

►

System resource limits

You can set global limits for the size of process data segments and the size of process stack segments for the whole system. These limits are set by altering the tunable kernel parameters.

The tunable kernel parameters are:

Parameter	What it controls	Recommended minimum value
maxdsiz	Maximum size of the data segment for 32–bit processes	1073741824
maxdsiz_64bit	Maximum size of the data segment for 64–bit processes	1073741824
maxssiz	Maximum size of the stack segment for 32–bit processes	8388608
maxssiz_64bit	Maximum size of the stack segment for 64–bit processes	8388608

If other software on the same machine needs higher values, then the operation of WebSphere MQ is not adversely affected if those higher values are used.

For the full documentation for these parameters see the HP-UX product documentation.

To apply the settings to an HP-UX 11i system which has the System Administration Manager (SAM) utility, you can use SAM to achieve the following steps:

- Select and alter the parameters

- Process the new kernel

- Apply the changes and restart the system

Other releases of HP-UX might provide different facilities to set the tunable kernel parameters. Consult your HP-UX product documentation for the relevant information.
❮

The ulimit shell command

On a per-shell basis, the available limits can be tuned down from the values stored for the System resource limits preceding parameters. Use the **ulimit** shell command to tune the values of the parameters with a combination of the following switches:

Switch	Meaning
-H	The hard limit
-S	The soft limit
-d	The data segments size
-s	The stack segment size

Verifying that the kernel settings are applied

You can verify that the resource limits have not been lowered by a **ulimit** command and that the queue manager experiences the correct limits. To do so, go to the shell

from which the queue manager is started and enter the following command:

```
ulimit -Ha
ulimit -Sa
```

Amongst the console output you can see:

```
data(kbytes)    1048576
stack(kbytes)   8192
```

If lower numbers are returned, then a **ulimit** command has been issued in the current shell to lower the limits. Consult with your system administrator to resolve the issue.

Parent topic: Server installation procedure

This build: January 26, 2011 11:34:30

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10360_

2.2.2. Installation procedure

Before you begin
Before you start the installation procedure, make sure that you have prepared your system as described in Preparing for installation.

About this task
This section describes the installation of the server.

The installation procedure uses the **swinstall** program, enabling you to choose which components you want to install. The components and file sets are listed in WebSphere MQ Components; you must install at least the Runtime and Server components.

Note: If you are using a screen reader, use the non-interactive installation option Non-interactive installation, so that you can accept the license without viewing it.

If you are installing WebSphere® MQ from a depot that contains service update packages, read Applying maintenance before installing the service update packages.

>

Procedure
1. Log in as root, or switch to the superuser using the **su** command.
2. Make your current directory the location of the installation file. The location might be the mount point of the Server CD-ROM, a network share, or a local file system directory.
3. Accept the license:
    a. Run the `mqlicense` script (for example `./mqlicense.sh`).
       The license is displayed. If you accept the license, you can continue the installation.

> If you are performing a silent or remote install, you can type `./mqlicense.sh -accept` to accept the license without being displayed.

4. Type the following command to start the interactive installation procedure,

   ```
   swinstall -s installation_file
   ```

   installation_file is the absolute path to the installation file. The path must begin with a `/` and end with the name of the installation file. The installation file has the extension `.v11`.

5. In the resulting menu screen, select **MQSERIES**.

   a. If you do not want to install all WebSphere MQ, open **MQSERIES**

      i. Mark the components you want to install. The installer resolves dependencies automatically.

      ii. Review the information displayed by the installer.
         Tip: The installer selects `gsk7bas` and `gsk7bas64`, if they are required.

6. Select **Actions > Install**. The log file tells you if there are any problems that need fixing.

7. Fix any problems, and click **OK** to install. You are informed when the installation is complete.

❮

Example: Starting interactive full install

```
cd /downloads/WMQInstallFiles
./mqlicense.sh -accept
swinstall -s $PWD/hp-Uxxxxx.v11
```

Non-interactive installation

Parent topic: Server installation procedure

This build: January 26, 2011 11:34:31

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10370_

2.2.2.1. Non-interactive installation

On HP-UX, the steps to run an non-interactive install are similar to an interactive install, see Installation procedure. The differences are:

1. Accept the WebSphere MQ license agreement without an interactive prompt by running `./mqlicense.sh -accept`.

2. Add the names of the components to install as parameters of the **swinstall**

command.

a. For example to install all WebSphere components, run:

```
/usr/sbin/swinstall -s installation_file MQSERIES
```

installation_file is the absolute path to the installation file. The path must begin with a `/` and end with the name of the installation file. The installation file has the extension `.v11`.

b. To perform a partial install, provide a list of components; for example, run:

```
/usr/sbin/swinstall -s installation_file
MQSERIES.MQM-RUNTIME MQSERIES.MQM-BASE MQSERIES.MQM-SERVER
MQSERIES.MQM-CL-HPUX MQSERIES.MQM-KEYMAN MQSERIES.MQM-JAVA
```

The installer resolves dependencies for you automatically.

Consult the HP-UX **swinstall** command documentation for details.

Example: Silent full install

The example shows the console output of running a silent full install. Notice that all the language features are installed. Run a partial install to install your chosen languages.

```
cd /downloads/WMQInstallFiles
swinstall -v -x mount_all_filesystems=false -x source_directory=$PWD/hpl
=======  09/22/09 14:26:22 BST  BEGIN swinstall SESSION
         (non-interactive) (jobid=myserver-0542)
     * Session started for user "root@myserver".
     * Beginning Selection
     * Target connection succeeded for "myserver:/".
     * Source:
       /downloads/WMQInstallFiles/hpUxxxxx.v11
     * Targets:                    myserver:/
     * Software selections:
           MQSERIES.MQM-BASE,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-CL-HPUX,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-JAVA,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-JAVASDK,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-KEYMAN,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-MAN,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-MC-CHINES,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBl
 Seven other languages omitted from the example for brevity
           MQSERIES.MQM-MC-SPANISH,r=6.0.1.0,a=HP-UX_B.11_700/800,v=Il
           MQSERIES.MQM-RUNTIME,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-SAMPLES,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-SERVER,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
           MQSERIES.MQM-TXCLIENT,r=6.0.1.0,a=HP-UX_B.11_700/800,v=IBM
         + gsk7bas.gsk7bas,r=7.0.3.18
         + gsk7bas64.gsk7bas64,r=7.0.3.18
     * A "+" indicates an automatic selection due to dependency or
       the automatic selection of a patch or reference bundle.
     * Selection succeeded.
     * Beginning Analysis and Execution
     * Session selections have been saved in the file
       "/.sw/sessions/swinstall.last".
```

Parent topic: Installation procedure

This build: January 26, 2011 11:34:31

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10380_

2.2.3. WebSphere MQ Components

This lists all of the installable MQ components and other IBM® products that comprise Websphere MQ.

When you install WebSphere® MQ for HP-UX, you can choose which components to install.

Table 1. WebSphere MQ packages

Component	Description	Fileset	Server	Client
Runtime	Mandatory component. Needed for application development and provides support for external applications.	MQSERIES.MQM-RUNTIME	X	X
SDK	Required for compiling applications.	MQSERIES.MQM-BASE	X	X
Server	The server feature allows you to run queue managers on your computer and connect to other computers over a network. Provides messaging and queuing services to applications, and support for WebSphere MQ client connections.	MQSERIES.MQM-SERVER	X	
Client	The WebSphere MQ client is a small subset of WebSphere MQ, without a queue manager. Provides remote access to WebSphere MQ. Must be connected to a server. To install a client on the same machine as a server, use the Server CD-ROM; otherwise use the Clients CD-ROM.	MQSERIES.MQM-CL-HPUX	X	X

Sample programs	Sample application programs. Needed if you want to check your WebSphere MQ installation using the verification procedures described in <u>Verifying the installation using the Postcard application</u>.	MQSERIES.MQM-SAMPLES	X	X
Java messaging	▶The files needed for messaging using Java (includes Java Messaging Service).◀	MQSERIES.MQM-JAVA	X	X
SSL support	Support for SSL key management	MQSERIES.MQM-KEYMAN	X	X
HP Java JRE (32-bit)	▶HP JRE for J2SE™ HP-UX 11i platform, adapted by IBM for IBM Software, Version 5.0. ◀	MQSERIES.MQM-JAVAJRE	X	
Brazilian Portuguese Message catalogs	Brazilian Portuguese message catalogs	MQSERIES.MQM-MC-PORT	X	X
Czech Message catalogs	Czech Message catalogs	MQSERIES.MQM-MC-CZECH	X	X
French Message catalogs	French message catalogs	MQSERIES.MQM-MC-FRENCH	X	X
German Message catalogs	German message catalogs	MQSERIES.MQM-MC-GERMAN	X	X
Hungarian Message catalogs	Hungarian Message catalogs	MQSERIES.MQM-MC-HUNGARIAN	X	X

Italian Message catalogs	Italian message catalogs	MQSERIES.MQM-MC-ITALIAN	X	X
Japanese Message catalogs	Japanese message catalogs	MQSERIES.MQM-MC-JAPAN	X	X
Korean Message catalogs	Korean message catalogs	MQSERIES.MQM-MC-KOREAN	X	X
Polish Message catalogs	Polish Message catalogs	MQSERIES.MQM-MC-POLISH	X	X
Russian Message catalogs	Russian Message catalogs	MQSERIES.MQM-MC-RUSSIAN	X	X
Spanish Message catalogs	Spanish message catalogs	MQSERIES.MQM-MC-SPANISH	X	X
Simplified Chinese Message catalogs	Simplified Chinese message catalogs	MQSERIES.MQM-MC-CHINES	X	X
Traditional Chinese Message catalogs	Traditional Chinese message catalogs	MQSERIES.MQM-MC-CHINET	X	X
Man pages	UNIX man pages, in U.S. English, for the following: • Control commands • Message Queue Interface (MQI) commands • MQSC commands	MQSERIES.MQM-MAN	X	X
Extended Transactional Client	WebSphere MQ component that allows a client application, within the same unit of work: • To put messages	MQSERIES.MQM-TXCLIENT	X	

		to, and get messages from, queues that are owned by the queue manager to which it is connected. • To update the resources of a resource manager other than a WebSphere MQ queue manager.			

Table 2. Other products supplied with WebSphere MQ

Component	Description	Fileset	Server	Client
IBM Global Security Kit V7	Certificate and SSL Base Runtime - 32 bit	gsk7bas	X	X
IBM Global Security Kit V7	Certificate and SSL Base Runtime - 64 bit.	gsk7bas64	X	X

Parent topic: <u>Server installation procedure</u>

This build: January 26, 2011 11:34:32

<u>Notices</u> | <u>Trademarks</u> | <u>Downloads</u> | <u>Library</u> | <u>Support</u> | <u>Feedback</u>

This topic's URL:
hq10390_

2.3. Verifying the server installation

This is an overview of various methods for verifying a WebSphere® MQ installation.

The topics in this section describe how to verify that the WebSphere MQ for HP-UX server has been correctly installed and configured. You can verify a WebSphere MQ server installation at different levels:

• To verify a local (standalone) installation that has no communication links with

other WebSphere MQ installations, do the following:

- To verify the installation using a single queue manager with a single queue, see: Verifying a local installation.

- To verify the installation using the Postcard application, see: Using the Postcard application to verify a local installation.

- To verify a server-to-server installation that includes communication links to other WebSphere MQ installations, do the following:

  - To verify the installation using two queue managers, two queues and both a sender channel and a receiver channel, see: Verifying a server-to-server installation.

  - To verify the installation using the Postcard application, see: Using the Postcard application to verify a server-to-server installation.

To verify a client/server installation that includes communication links between a server and a WebSphere MQ client, see Verifying the client installation.

Verifying a local installation

Verifying a server-to-server installation

Verifying the installation using the Postcard application
You can set up and use the Postcard application to verify a local installation or a server-to-server installation.

Parent topic: Installing a WebSphere MQ server

🏠 This build: January 26, 2011 11:34:32

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10400_

2.3.1. Verifying a local installation

Before you begin

About this task
To verify a local installation using a simple configuration of one queue manager and one queue, complete the following steps. Once you have completed the steps below, you must test the installation as described in: Testing the installation.

Note: WebSphere® MQ object definitions are case-sensitive. Any text entered as an MQSC command in lowercase is converted automatically to uppercase unless you enclose it in single quotation marks. Make sure that you type the examples exactly as shown.

The procedures outlined in this section describe how to configure your default queue

manager from the command line.

To verify your installation you must first perform this task. From a shell window, use these steps to create a queue manager and a queue:

Procedure

1. Log in as a user in the `mqm` group

2. Create a default queue manager called `venus.queue.manager` by entering the following command:

   ```
   crtmqm -q venus.queue.manager
   ```

   You will see messages telling you that the queue manager has been created, and that the default WebSphere MQ objects have been created.

3. To start the queue manager, type:

   ```
   strmqm
   ```

   A message tells you when the queue manager has started.

4. Enable MQSC commands by typing:

   ```
   runmqsc
   ```

   A message tells you that an MQSC session has started. MQSC has no command prompt.

5. Define a local queue called `ORANGE.QUEUE` by entering the following command:

   ```
   define qlocal (orange.queue)
   ```

   A message tells you when the queue has been created.

6. Stop MQSC by typing:

   ```
   end
   ```

   You will see some messages, followed by the command prompt.

What to do next
You have now defined:

- A default queue manager called `venus.queue.manager`

- A queue called `ORANGE.QUEUE`

Now proceed to Testing the installation to verify your installation.

Testing the installation

Parent topic: Verifying the server installation

🏠 This build: January 26, 2011 11:34:32

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10420_

2.3.1.1. Testing the installation

Before you begin
Before completing this task you must have created a queue manager called
`venus.queue.manager` and a local queue called `ORANGE.QUEUE`. For instructions on
how to do this see <u>Setting up the installation</u>.

About this task
To test the queue manager and queue, use the **amqsput** sample program to put a
message on the queue, and the **amqsget** sample program to get the message back
from the queue:

Procedure
1. Log on as a user in group `mqm`, if you are not already.

2. Change into the `/opt/mqm/samp/bin` directory, which contains the sample
   programs.

3. Put a message on the queue using the following command:

   ```
   ./amqsput ORANGE.QUEUE
   ```

   The following messages are displayed:

   ```
   Sample AMQSPUT0 start
   target queue is ORANGE.QUEUE
   ```

4. Type some message text, on one or more lines, followed by a blank line. The
   following message is displayed:

   ```
   Sample AMQSPUT0 end
   ```

   Your message is now on the queue and the command prompt is displayed again.

5. To get the message from the queue, use the following command:

   ```
   ./amqsget ORANGE.QUEUE
   ```

   The sample program starts, and your message is displayed. After a pause, the
   sample ends and the command prompt is displayed again.

What to do next
You have now successfully verified your local installation.

Parent topic: <u>Verifying a local installation</u>

🏠 This build: January 26, 2011 11:34:33

<u>Notices</u> | <u>Trademarks</u> | <u>Downloads</u> | <u>Library</u> | <u>Support</u> | <u>Feedback</u>

This topic's URL:
hq10430_

2.3.2. Verifying a server-to-server installation

To verify a server-to-server installation using two servers, one as a sender and one as

a receiver, complete the following tasks.

- Setting up the sender server
- Setting up the receiver server
- Testing communication between the servers

To verify a server-to-server installation you need to check the communications link between the two machines. Before you can do this, you must ensure that the communications protocol has been installed and configured on both systems. WebSphere® MQ for HP-UX supports both TCP and SNA. The tasks in this section explain how to verify your installation and use TCP in the examples; if you are using an alternative protocol, refer to the WebSphere MQ Intercommunication manual.

The verification procedure assumes that both systems are UNIX machines; if this is not the case, some of the commands are different (for details, refer to the documentation for that system).

Note: WebSphere MQ object definitions are case-sensitive. Any text entered as an MQSC command in lowercase is converted automatically to uppercase unless you enclose it in single quotation marks. Make sure that you type the examples exactly as shown.

Setting up the sender server

Setting up the receiver server

Testing communication between the servers

Parent topic: Verifying the server installation

This build: January 26, 2011 11:34:33

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10440_

2.3.2.1. Setting up the sender server

About this task
In order to verify a server-to-server installation you must first set up a sender server. From a shell window, follow these steps to set up the sender server.

Procedure
1. Log in as a user in the mqm group.
2. Create a default queue manager called saturn.queue.manager with the following command:

       crtmqm -q saturn.queue.manager

Messages tell you that the queue manager has been created, and that the default WebSphere® MQ objects have been created.

3. To start the queue manager, type:

   ```
   strmqm
   ```

   A message tells you when the queue manager has started.

4. Start MQSC commands by typing:

   ```
   runmqsc
   ```

   A message tells you that an MQSC session has started. MQSC had no command prompt.

5. Define a local queue called TRANSMIT1.QUEUE (to be used as a transmission queue) by entering the following command:

   ```
   define qlocal (transmit1.queue) usage (xmitq)
   ```

   A message tells you when the queue has been created.

6. Define a local definition of the remote queue with the following command:

   ```
   define qremote (local.def.of.remote.queue) rname (orange.queue)
   rqmname ('venus.queue.manager') xmitq (transmit1.queue)
   ```

   The name specified by the **rname** parameter must be the same as the name of the queue to which you are sending the message (ORANGE.QUEUE on the receiver workstation).

7. Define a sender channel with the following command:

   ```
   define channel (first.channel) chltype (sdr)
   conname ('con-name(port)') xmitq (transmit1.queue) trptype (tcp)
   ```

   The value *con-name* is the TCP address of the receiver workstation, and *port* is the port number, port 1414 is the default port number.

8. End MQSC by typing:

   ```
   end
   ```

   Some messages are displayed, followed by the shell prompt.

Results

You have now defined the following objects:

- A default queue manager called saturn.queue.manager
- A transmission queue called TRANSMIT1.QUEUE
- A local definition of a remote queue called LOCAL.DEF.OF.REMOTE.QUEUE
- A sender channel called FIRST.CHANNEL

What to do next

Now to set up the receiver server so that you can verify your server-to-server installation, see Setting up the receiver server.

Parent topic: Verifying a server-to-server installation

This build: January 26, 2011 11:34:33

2.3.2.2. Setting up the receiver server

About this task

After you have completed the task, Setting up the sender server, follow these steps to set up the receiver server:

Procedure

1. Log in as a user in the `mqm` group.

2. Create a default queue manager called `venus.queue.manager` by entering the following command:

   ```
   crtmqm -q venus.queue.manager
   ```

   Messages tell you that the queue manager has been created, and that the default WebSphere® MQ objects have been created.

3. To start the queue manager, type:

   ```
   strmqm
   ```

   A message tells you when the queue manager has started.

4. Enable MQSC commands by typing:

   ```
   runmqsc
   ```

   A message tells you that an MQSC session has started. MQSC has no command prompt.

5. Define a local queue called `ORANGE.QUEUE` by entering the following command:

   ```
   define qlocal (orange.queue)
   ```

   A message tells you when the queue has been created.

6. Define a listener by entering the following command:
   Note: If you do not specify the port that the listener should listen on, the default of `1414` is used. If you specified a port other than 1414 in step 7 of Setting up the sender server, you must include the port parameter in the command, as shown below.

   ```
   define listener (listener1) trptype (tcp) control (qmgr) port (port
   ```

   Where

   port_number

       is the name of the port the listener should run on. This must be the same as the number used when defining your sender channel.

7. Start the listener by entering the following command:

   ```
   start listener (listener1)
   ```

   Note: It is not recommended to start the listener in the background from any shell that automatically lowers the priority of background processes.

8. Define a receiver channel with the following command:

```
define channel (first.channel) chltype (rcvr) trptype (tcp)
```

A message tells you when the channel has been created.

9. End MQSC by typing:

```
end
```

Some messages are displayed, followed by the shell prompt.

Results

You have now defined the following objects:

- A default queue manager called `venus.queue.manager`

- A queue called `ORANGE.QUEUE`

- A receiver channel called `FIRST.CHANNEL`

What to do next

Now to test communications between your sender and receiver workstations, see
Testing communication between the servers.

Parent topic: Verifying a server-to-server installation

This build: January 26, 2011 11:34:33

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10460_

2.3.2.3. Testing communication between the servers

About this task

After completing Setting up the sender server and Setting up the receiver server, use
this topic to test communications between sender and receiver workstations using
sample programs. Use the **amqsput** sample program to put a message from the
sender server to a queue at the receiver server, and the **amqsget** sample program
on the receiver server to get the message from the queue:

Procedure

1. Log in to both servers as a user in the `mqm` group.

2. If the queue managers on the two servers have stopped, restart them now by
   typing the following on both servers:

   ```
   strmqm
   ```

3. Enable MQSC commands by typing:

   ```
   runmqsc
   ```

A message tells you that an MQSC session has started. MQSC has no command prompt.

4. On the **sender** server, start the sender channel using the MQSC **START CHANNEL** command and specify the channel name:

```
START CHANNEL(FIRST.CHANNEL)
```

The receiver channel on the receiver server starts automatically when the sender channel starts.

5. End MQSC by typing:

```
end
```

Some messages are displayed, followed by the shell prompt.

6. On the **sender** server, change into the `/opt/mqm/samp/bin` directory, which contains the sample programs.

7. To put a message on the local definition of the remote queue (which in turn specifies the name of the remote queue), use the following command:

```
./amqsput LOCAL.DEF.OF.REMOTE.QUEUE
```

You will see the following messages:

```
Sample amqsput0 start
target queue is LOCAL.DEF.OF.REMOTE.QUEUE
```

8. Type some message text on one or more lines, followed by a blank line. You will see the following message:

```
Sample amqsput0 end
```

Your message is now on the queue and the command prompt is displayed again.

9. On the **receiver** server, change into the `/opt/mqm/samp/bin` directory, which contains the sample programs.

10. To get the message from the queue at the receiver, enter the following command:

```
./amqsget ORANGE.QUEUE
```

The sample program starts, and your message is displayed. After a pause, the sample ends and the command prompt is displayed again.

Results

You have now successfully verified the server-to-server installation.

Parent topic: Verifying a server-to-server installation

This build: January 26, 2011 11:34:38

Notices | Trademarks | Downloads | Library | Support | Feedback

2.3.3. Verifying the installation using the Postcard application

You can set up and use the Postcard application to verify a local installation or a server-to-server installation.

Use the Postcard application to verify that WebSphere® MQ is successfully installed, and that the associated communication links are working properly.

You can use the Postcard application to verify a local installation or a server-to-server installation, as follows:

- To use the Postcard application to verify a *local* installation (which does not have any communication links with other WebSphere MQ installations), see Using the Postcard application to verify a local installation.

- To use the Postcard application to verify communication between your server and the server of another named user, where that server is running WebSphere MQ and using TCP/IP, see Using the Postcard application to verify a server-to-server installation.

Using the Postcard application to verify a local installation
Sending messages successfully between two Postcard applications verifies a local installation.

Using the Postcard application to verify a server-to-server installation
Sending messages successfully between two Postcard applications verifies a server-to-server installation.

Parent topic: Verifying the server installation

This build: January 26, 2011 11:34:38

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10480_

2.3.3.1. Using the Postcard application to verify a local installation

Sending messages successfully between two Postcard applications verifies a local installation.

About this task

To verify that the local installation is working, you can run two instances of the Postcard application on the same server and send messages between the applications. Successful sending and receiving of messages verifies that WebSphere® MQ is installed and working correctly on the server.

Note:
1. The Postcard application has a graphical interface. To view this interface, your system requires the ability to view a graphical display.

2. Before you can run the Postcard application, you must ensure that you are a

member of the WebSphere MQ administrators group (mqm).

Procedure

1. Log on as a user in group mqm.

2. Change directory to `/opt/mqm/java/bin`

3. Run the Postcard shell script.

   ```
   ./postcard
   ```

   If there are no queue managers on your server, you are invited to run the Default Configuration wizard to create a queue manager to use with the Postcard application before signing on to the Postcard application.
   If you already have a queue manager on your server, you will go straight to the Postcard Sign On window.

4. At the Postcard - Sign On window, type in a nickname to use to send messages within the Postcard application (for example, `User1`).

5. Select the queue manager to use as the mailbox:
   - If the only queue manager on your server is the default queue manager that you created by running the Default Configuration wizard, this queue manager is used automatically as your mailbox for Postcards.

   - If you have created one or more of your own queue managers, but you have not run the Default Configuration wizard, select the appropriate queue manager from the list displayed.

   - If you have run the Default Configuration wizard, and you want to use the default queue manager, but there is more than one queue manager on your server, select the **Advanced** checkbox, then select **Use Default Configuration as mailbox**.

   - If you have run the Default Configuration wizard and also created one or more of your own queue managers, and you do not want to use the default queue manager, select the **Advanced** checkbox, select **Choose queue manager as mailbox**, then select the appropriate queue manager from the list displayed.

   When your selection is complete, click **OK** to display your first Postcard window.

6. Run the Postcard shell script again in a different shell window. This opens a second Postcard window.

7. The Postcard - Sign On panel is displayed again. Type in a second nickname to use to send messages within the Postcard application (for example, `User2`).

8. Repeat the selection of the queue manager that you want to use as the mailbox (as described in step 5). The queue manager you select for this second Postcard must either be the same queue manager, be in the same cluster as the queue manager for the first Postcard, or communication links must have been set up between them. You now have two Postcards, one with the nickname User1 and one with the nickname User2.

9. In one of the Postcards (for example, User1), enter the nickname for the other Postcard application in the **To:** field and the queue manager it is using in the **On:** field.

10. Type a message in the **Message:** field and click **Send**.

11. The **Postcards sent and received** area of the Postcard shows details of the message. In the sending Postcard, the message is displayed as *sent*. In the receiving Postcard, the message is displayed as *received*.

12. From the receiving Postcard, double-click the message in the **Postcards sent and received** area to view it. When this message arrives, this verifies that WebSphere MQ is correctly installed.

What to do next

Depending on your situation, you might want to do the following:

- Install WebSphere MQ on other servers. Follow the same installation procedure that you used for the first server. Ensure that you use the Join Default Cluster window in the Default Configuration wizard to add the other servers to your first server's cluster.

- Install the WebSphere MQ client on other servers. See the Installing a WebSphere MQ client.

- Continue with further administration tasks. See the WebSphere MQ System Administration Guide.

Parent topic: Verifying the installation using the Postcard application

This build: January 26, 2011 11:34:39

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10520_

2.3.3.2. Using the Postcard application to verify a server-to-server installation

Sending messages successfully between two Postcard applications verifies a server-to-server installation.

Before you begin

To verify that a server-to-server installation is working on two servers, the sender of the message and the receiver, you can use an instance of the Postcard application on the sender server, and an instance of the Postcard application on the receiver server, and send messages between the two Postcard applications. Successful sending and receiving of messages verifies that WebSphere® MQ is successfully installed, and that communication between the two servers is working correctly. Both servers must use TCP/IP.

To use the **Postcard** application for this type of verification one of the following must be true:

- Both queue managers must be in the same cluster; this is the simplest method. To ensure that both queue managers are in the same cluster, you can run the **Postcard** application before creating any local queue managers

on each server. The **Postcard** application detects that there are no local queue managers defined for that server, and displays the Default Configuration wizard so that you can create the default queue managers and link them to the default cluster.

You can use the **Postcard** application with existing queue managers, as long as both queue managers belong to the same cluster. If you have already completed the Default Configuration wizard but did not put the two queue managers into the same cluster, you can create your own new queue managers on both servers, create a cluster, and ensure that the queue managers that you create on each server belong to the same cluster.

- Alternatively, if the queue managers are not in the same cluster, you can configure channels to communicate between the two servers. For instructions on how to set up the channels, see Setting up the sender server and Setting up the receiver server. When you have set up communication, you can use the Postcard application, starting at step 5.

Note:

1. The Postcard application has a graphical interface. To view this interface, your systems require the ability to view a graphical display.

2. Before you can run the Postcard application on each server, you must ensure that you are a member of the WebSphere MQ administrators group (mqm) on each server.

Parent topic: Verifying the installation using the Postcard application

On the sender server

Procedure

1. Log on as a user in group mqm.

2. Change directory to `/opt/mqm/java/bin`

3. Run the postcard shell script.

   ```
   ./postcard
   ```

   If there are no queue managers on your server, you are invited to run the Default Configuration wizard to create a queue manager to use with the Postcard application before signing on to the Postcard application.
   If you already have a queue manager on your server you will go straight to the Postcard - Sign On window (step 5). You can use the **Postcard** application with existing queue managers, as long as both queue managers belong to the same cluster. If your existing queue manager does not belong to the appropriate cluster refer to the introduction of this topic for information on how to proceed.

4. Work through the Default Configuration wizard. When you get to the option to join the queue manager to the default cluster, tick the checkbox. On the next screen select **yes, make it the repository for the cluster**. Once you have completed the wizard you are taken back to the Postcard - Sign On window.

5. At the Postcard - Sign On window , type a nickname to use to send messages within the Postcard application (for example, `User1`).

6. Select the queue manager to use as the mailbox:
    - If the only queue manager on your server is the default queue manager that you created by running the Default Configuration wizard, this queue manager is used automatically as your mailbox for postcards.
    - If you have created one or more of your own queue managers, but you have not run the Default Configuration wizard, select the appropriate queue manager from the list displayed.
    - If you have run the Default Configuration wizard, and you want to use the default queue manager, but there is more than one queue manager on your server, select the **Advanced** checkbox, then select **Use Default Configuration as mailbox**.
    - If you have run the Default Configuration wizard, and also created one or more of your own queue managers, and you do not want to use the default queue manager, select the **Advanced** checkbox, select **Choose queue manager as mailbox**, then select the appropriate queue manager from the list displayed.

    When your selection is complete, click **OK** to display your second Postcard window.

On the receiver server

Procedure

1. Log on as a user in group mqm.

2. Change directory to `/opt/mqm/java/bin`

3. Run the postcard shell script.

    ```
    ./postcard
    ```

    If there are no queue managers on your server, you are invited to run the Default Configuration wizard to create a queue manager to use with the Postcard application before signing on to the Postcard application.

    If you already have a queue manager on your server, go straight to the Postcard - Sign On window (step 5). You can use the Postcard application with existing queue managers, as long as both queue managers belong to the same cluster. If your existing queue manager does not belong to the appropriate cluster refer to the introduction of this topic for information on how to proceed.

4. Work through the Default Configuration wizard:
    a. When you get the option to join the queue manager to the default cluster, tick the checkbox.
    b. In the next window, click **No another computer has already joined the cluster as a repository**. Click Next.
    c. When requested, enter the location of the repository, by typing the server name of the sender server. Click Next.
    d. Complete the Default Configuration wizard. When you have completed the wizard, you are taken back to the Postcard - Sign On window.

5. At the Postcard - Sign On window, type a nickname to use to send messages

within the Postcard application (for example, `User2`).

6. Select the queue manager to use as the mailbox:
   ○ If the only queue manager on your server is the default queue manager that you created by running the Default Configuration wizard, this queue manager is used automatically as your mailbox for postcards.
   ○ If you have created one or more of your own queue managers, but you have not run the Default Configuration wizard, select the appropriate queue manager from the list displayed.
   ○ If you have run the Default Configuration wizard, and you want to use the default queue manager, but there is more than one queue manager on your server, select the **Advanced** checkbox, then select **Use Default Configuration as mailbox**.
   ○ If you have run the Default Configuration wizard, and also created one or more of your own queue managers, and you do not want to use the default queue manager, select the **Advanced** checkbox, select **Choose queue manager as mailbox**, then select the appropriate queue manager from the list displayed.

   When your selection is complete, click **OK** to display your first Postcard window.

7. In one of the Postcards (for example, `User1`), enter the nickname for the other Postcard application the **To:** field, and enter the queue manager it is using in the **On:** field.

8. Type a message in the **Message:** field, and click **Send**.

9. The **Postcards sent and received** area of the postcard shows details of the message. In the sending Postcard, the message is displayed as *sent*. In the receiving Postcard, the message is displayed as *received*.

10. In the sent and received area of the Postcard, details of the new message are displayed. The message is displayed as *received*. When this message arrives, this verifies that WebSphere MQ is correctly installed and that your communication link between the two servers is working correctly.

Results

When all installation and verification is complete, you are ready to start using WebSphere MQ (see the WebSphere MQ System Administration Guide).

This build: January 26, 2011 11:34:39

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10530_

3. Installing a WebSphere MQ client

Follow these steps to install a WebSphere® MQ client.

This section describes how to install a WebSphere MQ Version 7.0 client. The information covers topics such as preparing for installation and verifying your

installation, as well as installation itself. If you already have an installation of WebSphere MQ, and are migrating to WebSphere MQ Version 7.0 see Migrating to WebSphere MQ for HP-UX Version 7.0 before installing WebSphere MQ Version 7.0.

WebSphere MQ for HP-UX can be installed as a server or a client.

A WebSphere MQ client is a component that allows an application running on one system to communicate with a queue manager running on another system. The output from the call is sent back to the client, which passes it back to the application.

A WebSphere MQ server is an installation of one or more queue managers that provide queueing services to one or more clients. All the WebSphere MQ objects, for example queues, exist only on the queue manager machine (the WebSphere MQ server machine), and not the client. A WebSphere MQ server can also support local WebSphere MQ applications. To install a WebSphere MQ server see, Installing a WebSphere MQ server.

It is possible to have both a server and a client installation on the same machine, for instructions on how to do this see, Installing a client on the same machine as a server.

See the WebSphere MQ System Administration Guide for an introduction to WebSphere MQ concepts and objects.

For information on the components that can be included in the server and client installations see, WebSphere MQ Components.

The group of topics within this section take you through the process of installing a WebSphere MQ client, complete all of these tasks in sequence.

- Checking hardware and software requirements - PA-RISC platform
- Checking hardware and software requirements - Itanium platform
- Installing the WebSphere MQ client
- Verifying the client installation

Preparing to install

Installing the WebSphere MQ client

Verifying the client installation

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:39

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10540_

3.1. Preparing to install

Before you install WebSphere® MQ, complete the following tasks.

- [Checking hardware and software requirements - PA-RISC platform](#)
- [Checking hardware and software requirements - Itanium platform](#)
- [Creating WebSphere MQ file systems](#)
- [Setting up the user ID and group ID](#)

Additionally, if you require messages in a language other than U.S. English see, [Displaying messages in your national language](#).

Checking hardware and software requirements - PA-RISC platform
Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Checking hardware and software requirements - Itanium platform
Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Creating WebSphere MQ file systems

Setting up the user ID and group ID

Displaying messages in your national language
This describes how to display messages from a different national language message catalog.

Parent topic: [Installing a WebSphere MQ client](#)

This build: January 26, 2011 11:34:40

[Notices](#) | [Trademarks](#) | [Downloads](#) | [Library](#) | [Support](#) | [Feedback](#)

This topic's URL:
hq10550_

3.1.1. Checking hardware and software requirements - PA-RISC platform

Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Hardware and software requirements are set out at [System Requirements for WebSphere MQ V7.0 on HP-UX PA-RISC](#) on the IBM Web site.

WebSphere MQ does not support host names that contain spaces. If you install WebSphere MQ on a computer with a host name that contains spaces, you are unable

to create any queue managers.

Prerequisite software for optional components is detailed in the following sections:

Java Messaging and SOAP transport

If you want to use Java Messaging and SOAP (Simple Object Access Protocol) Support, you need a Java Runtime Environment Version 1.4.2 or later.

➤For a list of supported JDKs, see:

WebSphere® MQ requirements.

◄

For further information about using Java with WebSphere MQ, see WebSphere MQ Using Java.

For further information about SOAP with WebSphere MQ, see WebSphere MQ Using Web Services .

If you use a JDK that is not in the list of supported JDKs you should be aware that:

- The JDK might not be FIPS level 140-2 compliant and by using it with WebSphere MQ, WebSphere MQ Version 7.0 will not comply with the FIPS 140-2 standards.
- SOAP is not supported.
- ➤The WebSphere MQ Web service deployment utility, amqwdeployWMQService, requires IBM Java 2 SDK.◄

To run a 64-bit or 32-bit JVM use the -d64 or -d32 parameters on the command line when running a Java application to ensure the correct JVM is used.

Secure Sockets Layer (SSL)

If you want to use the SSL support with WebSphere MQ for HP-UX, you need to install the IBM® Global Security Kit (GSKit) V7 packages: gsk7bas and gsk7bas64. These are supplied with WebSphere MQ as components available for installation. If you are migrating from WebSphere MQ Version 5.3 and have no other requirement for the IBM Global Security Kit V6 you can uninstall it using the process described in Uninstalling WebSphere MQ. The package name is `gsk6bas`.

To use SSL, WebSphere MQ clients on HP-UX 11i v1 and HP-UX 11i v2 must be built:

- Using the C++ compiler (not the C compiler)
- Using POSIX threads
- With the compiler options: `-W1,+b/opt/ibm/gsk7/lib:/opt/mqm/lib`

Parent topic: Preparing to install

🔖 This build: January 26, 2011 11:34:27

Notices | Trademarks | Downloads | Library | Support | Feedback

hq10210_

3.1.2. Checking hardware and software requirements - Itanium platform

Before you install WebSphere MQ for HP-UX, check that your system meets the hardware and operating system software requirements set for this product and the particular components you intend to install.

Hardware and software requirements are set out at System Requirements for WebSphere MQ V7.0 on HP-UX Itanium on the IBM Web site.

WebSphere MQ does not support host names that contain spaces. If you install WebSphere MQ on a computer with a host name that contains spaces, you are unable to create any queue managers.

Prerequisite software for optional components is detailed in the following sections:

Java Messaging and SOAP transport

If you want to use Java Messaging and SOAP (Simple Object Access Protocol) Support with WebSphere® MQ, you need Java 5 or later.

▶For a list of supported JDKs, see:

WebSphere MQ requirements.

◀

For further information about using Java with WebSphere MQ, see WebSphere MQ Using Java.

For further information about SOAP with WebSphere MQ, see WebSphere MQ Using Web Services .

If you use a JDK that is not in the list of supported JDKs you should be aware that:

- The JDK might not be FIPS level 140-2 compliant and by using it with WebSphere MQ, WebSphere MQ Version 7.0 will not comply with the FIPS 140-2 standards.
- SOAP is not supported.
- ▶The WebSphere MQ Web service deployment utility, amqwdeployWMQService, requires IBM Java 2 SDK.◀

To run a 64-bit or 32-bit JVM use the -d64 or -d32 parameters on the command line when running a Java application to ensure the correct JVM is used.

Secure Sockets Layer (SSL)

If you want to use the SSL support with WebSphere MQ for HP-UX, you need to install the IBM® Global Security Kit (GSKit) V7 package: gsk7bas64. This is supplied with WebSphere MQ as one of the components available for installation.

Note: WebSphere MQ for HP-UX on Itanium does not support 32-bit SSL. The WebSphere MQ documentation generally describes the use of the 32-bit GSKit

commands (**gsk7cmd**, **gsk7ikm** , and **gsk7capicmd**). On the HP-UX for Itanium platform, you must use the equivalent 64-bit variants **gsk7cmd_64**, **gsk7ikm_64**, and **gsk7capicmd_64**).

To use SSL, WebSphere MQ clients on HP-UX 11i v2 must be built:

- Using the C++ compiler (not the C compiler)
- Using POSIX threads
- With the compiler options: `-W1,+b/opt/ibm/gsk7/lib:/opt/mqm/lib`

Parent topic: Preparing to install

This build: January 26, 2011 11:34:28

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10230_

3.1.3. Creating WebSphere MQ file systems

The installation directory for the WebSphere® MQ product code is `/opt/mqm`. Working data is stored in `/var/mqm`. You cannot change these locations. The GSKit must also be installed into its default location.

The topics contained in this section describe how to prepare your file system for installing WebSphere MQ. Perform these tasks before installation.

Creating a file system for the product code
This topic describes how to prepare the `/opt/mqm` file system into which the WebSphere MQ code will be installed and what to do should you not have enough storage space available in the file system.

Creating a file system for the working data

Parent topic: Preparing to install

This build: January 26, 2011 11:34:40

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10620_

3.1.3.1. Creating a file system for the product code

This topic describes how to prepare the `/opt/mqm` file system into which the WebSphere® MQ code will be installed and what to do should you not have enough storage space available in the file system.

About this task

The WebSphere MQ product code is installed in `/opt/mqm`. If you cannot install the product code in the `/opt/mqm` file system because the file system is too small to contain the product, you can do one of the following:

1. Create a new file system and mount it as `/opt/mqm`. If you choose this option, the new file system must be created and mounted before installing the product code.

2. Create a new directory anywhere on your machine, and create a symbolic link from `/opt/mqm` to this new directory. For example:

   ```
   mkdir /bigdisk/mqm
   ln -s /bigdisk/mqm /opt/mqm
   ```

   If you choose this option, the new directory must be created, and the link created, before installing the product code.

The file system into which the code is installed can be a remote network device, for example, NFS. However, you must define the mount options defined on that device to allow **setuid** programs, including those which are **setuid** root, to run.

What to do next

Parent topic: Creating WebSphere MQ file systems

📖 This build: January 26, 2011 11:34:40

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10630_

3.1.3.2. Creating a file system for the working data

About this task

Before you install WebSphere® MQ for HP-UX, create and mount a file system called `/var/mqm`. For a client installation, the file system can be mounted on a remote network device, for example NFS.

To determine the size of the `/var/mqm` file system for a client installation, consider:

- The size of the error log files written to the `/var/mqm/errors` directory
- The amount of trace that is written to the `/var/mqm/trace` directory

If you are performing both a client and a server installation, the requirements of the server installation take precedence over the requirements of the client installation. For details about the requirements of the server installation, see Creating a file system for the working data.

▶ Allow 130 MB as a minimum for a WebSphere MQ server and 15 MB as a minimum for a WebSphere MQ client. These values are the absolute minimum values for a single queue manager and are not recommended values. The size of a file system

should be scaled depending on the number of queue managers that you intend to use, the number of pages per log file, and the number of log files per queue manager.◄

►A new sample WebSphere MQ client configuration file is created in the `var/mqm` directory, by the C client package, during installation, but only if this file does not already exist. This file contains the `ClientExitPath` stanza. An example mqclient.ini file is shown in <u>WebSphere MQ client configuration file</u> .◄

Note that if you are using a common configuration file for multiple clients, either in the WebSphere MQ installation directory or in another location using the MQCLNTCF environment variable, you should grant read access to all user identifiers under which the WebSphere MQ client applications run. If, for any reason, the file cannot be read, the failure is traced and the search logic continues as if the file had not existed.

Parent topic: <u>Creating WebSphere MQ file systems</u>

🏠 This build: January 26, 2011 11:34:40

<u>Notices</u> | <u>Trademarks</u> | <u>Downloads</u> | <u>Library</u> | <u>Support</u> | <u>Feedback</u>

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10640_

3.1.4. Setting up the user ID and group ID

WebSphere® 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. Create the user ID and group IDs as described in the following topics.

- <u>Creating the user ID and group</u>
- <u>Adding existing user IDs to the group</u>

Creating the user ID and group

Adding existing user IDs to the group

Parent topic: <u>Preparing to install</u>

🏠 This build: January 26, 2011 11:34:40

<u>Notices</u> | <u>Trademarks</u> | <u>Downloads</u> | <u>Library</u> | <u>Support</u> | <u>Feedback</u>

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10660_

3.1.4.1. Creating the user ID and group

Create the required user ID and group ID *before* you install WebSphere® MQ. Both user ID and group ID must be set to `mqm`. For stand-alone machines, you can create

the new user ID and group IDs locally; for machines administered in a network information services (NIS) domain, an administrator must create the IDs on the NIS master server machine.

> If you intend manually setting a user ID value for user `mqm` then you must ensure that its value is less than 60 000 to avoid problems with the maintenance update process. <

It is also suggested that you set the mqm user's home directory to `/var/mqm`.

You can use the System Administration Manager (SAM) to work with user IDs.

Parent topic: Setting up the user ID and group ID

This build: January 26, 2011 11:34:40

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10670_

3.1.4.2. 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.

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

Parent topic: Setting up the user ID and group ID

This build: January 26, 2011 11:34:41

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10680_

3.1.5. Displaying messages in your national language

This describes how to display messages from a different national language message catalog.

About this task

Messages in U.S. English are automatically installed with WebSphere® MQ.

If you require messages in a different language, perform the following steps:

Procedure

1. Install the appropriate message catalog (see WebSphere MQ Components).

2. To select messages in a different language, use the following command with the identifier for the language you want to install:

   ```
   export LANG=de_De.iso88591
   ```

   The message identifiers for the message catalogs are as follows:

   - cs_CZ (Czech)
   - de_DE (German)
   - es_ES (Spanish)
   - fr_FR (French)
   - hu_HU (Hungarian)
   - it_IT (Italian)
   - ja_JP (Japanese)
   - ko_KR (Korean)
   - pl_PL (Polish)
   - pt_BR (Brazilian Portuguese)
   - ru_RU (Russian)
   - zh_CN (Simplified Chinese)
   - zh_TW (Traditional Chinese)

Parent topic: Preparing to install

This build: January 26, 2011 11:34:41

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10690_

3.2. Installing the WebSphere MQ client

This collection of topics tells you how to install the WebSphere® MQ for HP-UX client. If you want to install the WebSphere MQ server see Installing a WebSphere MQ server.

Before you start the installation procedure, make sure you have prepared your system as described in Preparing for installation.

There are two types of WebSphere MQ clients:

Client with SSL

This is the standard WebSphere MQ client with additional code to allow you to use SSL support. You can install the client with SSL from either the client or the server CD.

Extended Transactional Client

This is additional code to allow a client application within the same unit of work to:

- To put messages to, and get messages from, queues that are owned by the queue manager to which it is connected.
- To update the resources of a resource manager other than a WebSphere MQ queue manager.

You can only install this from the server CD.

For more information about SSL, see the WebSphere MQ Security book.

To install a WebSphere MQ server, see Installation procedure.

If you want to install the client on the same machine as a WebSphere MQ server, see Installing a client on the same machine as a server.

Installation procedure
Installing the client on HP-UX

Non-interactive installation

WebSphere MQ Components
This lists all of the installable MQ components and other IBM® products that comprise Websphere MQ.

Parent topic: Installing a WebSphere MQ client

This build: January 26, 2011 11:34:41

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10700_

3.2.1. Installation procedure

Installing the client on HP-UX

Before you begin
Before you start the installation procedure, make sure that you have prepared your system as described in Preparing for installation

About this task
This installation procedure uses the **swinstall** program, enabling you to choose which components you want to install. The components (or filesets) are listed in WebSphere MQ Components; you must install at least the Runtime, Base, and Client components.

Procedure
1. Log in as root.
2. Insert the Server CD-ROM, and make the mount point your current directory.

3. Accept the licence:

   a. Change directory to the location of the mounted CD-ROM or your install location. If you want to install the client with SSL support, change directory to `MQClientwithSSL`, otherwise, change directory to `MQClient`.

   b. Run the `mqlicense` script (for example `./mqlicense.sh`).
   The license is displayed. If you accept the license, you can continue the installation.
   If you are performing a silent or remote install, you can type `./mqlicense.sh -accept` to accept the license without being displayed.

4. Use the following command to start the installation procedure:

   ```
   swinstall -s src_dir src_name
   ```

   where `src_dir` is the source directory for the installation files (similar to: /cdrom /hpux11/mq...) and `src_name` is the name of the file you are installing (similar to: MQSERIES.MQM...). If you do this, *all* components of the WebSphere® MQ client are installed (including message catalogs for all available languages).
   If the files on your CD-ROM appear in uppercase with a ";1" suffix, use this name for the depot.

5. If you want to install all WebSphere MQ components, select **MQSERIES**, then select **Actions > Install**.

6. If you do not want to install all components, select **MQSERIES**:

   a. Select **Actions > Open Item**.

   b. Highlight the components you require and select **Mark for install** from the Actions menu. (The `gsk7bas` and `gsk7bas64` fileset for the IBM Global Security Kit is automatically selected).

   c. Select **go up** and press *Enter* to return to the product list. **MQSERIES** is marked as **Partial** if you did not select all the components.

7. Select **Actions > Install**. The log file tells you if there are any problems that need fixing.

8. When you have fixed any problems, press **OK** to install. You are informed when the installation is complete.

Parent topic: Installing the WebSphere MQ client

This build: January 26, 2011 11:34:41

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10710_

3.2.2. Non-interactive installation

If you do not want to select which components to install, you can install WebSphere® MQ in a non-interactive way.

Before you run the installation, you must run the `mqlicense.sh` script. Use the following command to accept the license without displaying it:

```
    ./mqlicense.sh -accept
```

Then use the following command to start the installation:

```
    swinstall -s src_dir MQSERIES
```

where *src_dir* is the source directory for the installation files and the name of the file you are installing. If you do this, *all* components of the WebSphere MQ server are installed (including message catalogs for all available languages).

If you do this, all components of WebSphere MQ are installed (including message catalogs for all available languages).

Parent topic: [Installing the WebSphere MQ client](#)

This build: January 26, 2011 11:34:41

[Notices](#) | [Trademarks](#) | [Downloads](#) | [Library](#) | [Support](#) | [Feedback](#)

This topic's URL:
hq10720_

3.2.3. WebSphere MQ Components

This lists all of the installable MQ components and other IBM® products that comprise Websphere MQ.

When you install WebSphere® MQ for HP-UX, you can choose which components to install.

Table 1. WebSphere MQ packages

Component	Description	File set	Server	Client
Runtime	Mandatory component. Needed for application development and provides support for external applications.	MQSERIES.MQM-RUNTIME	X	X
SDK	Required for compiling applications.	MQSERIES.MQM-BASE	X	X
Client	The WebSphere MQ client is a small subset of WebSphere MQ, without a queue manager. Provides remote access to WebSphere MQ. Must be connected to a server. To install a client on the same machine as a server, use the Server CD-ROM; otherwise use the Clients CD-ROM.	MQSERIES.MQM-CL-HPUX	X	X
Sample programs	Sample application programs. Needed if you want to check your WebSphere MQ installation using the verification procedures described in Verifying the installation using the Postcard	MQSERIES.MQM-SAMPLES	X	X

	application.			
Java messaging	The files needed for messaging using Java (includes Java Messaging Service).	MQSERIES.MQM-JAVA	X	X
SSL support	Support for SSL key management	MQSERIES.MQM-KEYMAN	X	X
Brazilian Portuguese Message catalogs	Brazilian Portuguese message catalogs	MQSERIES.MQM-MC-PORT	X	X
Czech Message catalogs	Czech Message catalogs	MQSERIES.MQM-MC-CZECH	X	X
French Message catalogs	French message catalogs	MQSERIES.MQM-MC-FRENCH	X	X
German Message catalogs	German message catalogs	MQSERIES.MQM-MC-GERMAN	X	X
Hungarian Message catalogs	Hungarian Message catalogs	MQSERIES.MQM-MC-HUNGARIAN	X	X
Italian Message catalogs	Italian message catalogs	MQSERIES.MQM-MC-ITALIAN	X	X
Japanese Message catalogs	Japanese message catalogs	MQSERIES.MQM-MC-JAPAN	X	X
Korean Message catalogs	Korean message catalogs	MQSERIES.MQM-MC-KOREAN	X	X
Polish Message catalogs	Polish Message catalogs	MQSERIES.MQM-MC-POLISH	X	X
Russian Message catalogs	Russian Message catalogs	MQSERIES.MQM-MC-RUSSIAN	X	X
Spanish Message catalogs	Spanish message catalogs	MQSERIES.MQM-MC-SPANISH	X	X
Simplified Chinese Message	Simplified Chinese message	MQSERIES.MQM-MC-CHINES	X	X

catalogs	catalogs			
Traditional Chinese Message catalogs	Traditional Chinese message catalogs	MQSERIES.MQM-MC-CHINET	X	X
Man pages	UNIX man pages, in U.S. English, for the following: • Control commands • Message Queue Interface (MQI) commands • MQSC commands	MQSERIES.MQM-MAN	X	X

Table 2. Other products supplied with WebSphere MQ

Component	Description	File set	Server	Client
IBM Global Security Kit V7	Certificate and SSL Base Runtime Environment - 32 bit	gsk7bas	X	X
IBM Global Security Kit V7	Certificate and SSL Base Runtime Environment- 64 bit.	gsk7bas64	X	X

Parent topic: Installing the WebSphere MQ client

This build: January 26, 2011 11:34:42

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10725_

3.3. Verifying the client installation

The group of topics within this section describes how to verify that the WebSphere® MQ for HP-UX client has been correctly installed and configured.

To verify your WebSphere MQ client installation, you need a WebSphere MQ server with communication links with your client workstation. You can then complete the following tasks in order:

• Setting up the server workstation

- Setting up the client workstation
- Testing communication between workstations

The verification procedure assumes that:

- TCP/IP is configured and initialized on both the server and the client machines. If you are using SNA, refer to the WebSphere MQ Intercommunication manual.
- The WebSphere MQ server is installed on a Linux or UNIX machine; if this is not the case, some of the commands will be different (for details, refer to the WebSphere MQ Clients book).

Note: WebSphere MQ object definitions are case-sensitive. Any text entered as an MQSC command in lowercase is converted automatically to uppercase unless you enclose it in single quotation marks. Make sure that you type the examples exactly as shown.

Setting up the server workstation

Setting up the client workstation

Testing communication between workstations

Parent topic: Installing a WebSphere MQ client

This build: January 26, 2011 11:34:42

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10730_

3.3.1. Setting up the server workstation

Before you begin

About this task

In order to verify your installation you must first perform this task. These instructions assume that the server workstation is a UNIX machine. From a shell window, use these steps to install a queue manager and a queue on the server:

Procedure

1. Create a default queue manager called `saturn.queue.manager` by entering the following command:

       crtmqm -q saturn.queue.manager

   You will see messages telling you that the queue manager has been created, and that the default WebSphere® MQ objects have been created.

2. To start the queue manager, type:

   ```
   strmqm
   ```

   A message tells you when the queue manager has started.

3. Enable MQSC commands by typing:

   ```
   runmqsc
   ```

   A message tells you that an MQSC session has started. MQSC has no command prompt.

4. Define a local queue called QUEUE1 by entering the following command:

   ```
   define qlocal (queue1)
   ```

   A message tells you when the queue has been created.

5. Define a server-connection channel by entering the following command on one line:

   ```
   define channel (channel1) chltype (svrconn) trptype (tcp) mcauser (
   ```

   Note: Once you have set the **mcauser** attribute to mqm, you MUST set the attribute back to its default value after you have verified the installation to prevent any security vulnerabilities, as described in: Testing communication between workstations.
   A message tells you when the channel has been created.

6. Define a listener by entering the following command:
   Note: If you do not specify the port that the listener should listen on, by omitting the port parameter from the command below, the default of 1414 is used. If you want to specify a port other than 1414, you must include the port parameter in the command, as shown.

   ```
   define listener (listener1) trptype (tcp) control (qmgr) port (port
   ```

   Where

   port_number

   is the name of the port the listener should run on. This must be the same as the number used when defining your client-connection channel in Setting up the client workstation.

7. Start the listener by entering the following command:

   ```
   start listener (listener1)
   ```

8. Stop MQSC by typing:

   ```
   end
   ```

   You will see some messages, followed by the command prompt.

Results

You have now defined the following objects on the server:

- A default queue manager called saturn.queue.manager

- A local queue called QUEUE1

- A server-connection channel called CHANNEL1

What to do next
To continue with the verification process, see Setting up the client workstation.

Parent topic: Verifying the client installation

This build: January 26, 2011 11:34:43

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.

This topic's URL:

hq10740_

3.3.2. Setting up the client workstation

Before you begin
Before you complete this task you must have completed, Setting up the server workstation.

About this task
When a WebSphere® MQ application is run on the WebSphere MQ client, the following information is required:

- The name of the MQI channel that connects the client to the server
- The communications protocol
- The address of the server

You provide this information by defining a client-connection channel with the name used for the server-connection channel defined on the server. This example uses the MQSERVER environment variable to define the client-connection channel.

Procedure
1. Before starting, use the **ping** command to check that your TCP/IP software is correctly configured, and that your WebSphere MQ client and server TCP/IP sessions have been initialized. From the client, enter:

```
    ping server-hostname
or
    ping n.n.n.n
```

   where

   server-hostname

   Is the host name of the server

   n.n.n.n

   Is the network address of the server

2. Press Ctrl-C to stop the **ping** command.

3. To create a client-connection channel, set the MQSERVER environment variable as follows:

```
export MQSERVER='CHANNEL1/TCP/server-hostname(port)'
```

where

CHANNEL1

Is the name of the server-connection channel already defined on the server

TCP

Is the communications protocol.

server-address

Is the TCP/IP host name of the server.

port

Is optional and is the port number that the server is listening on, you specified this in step 6 of Setting up the server workstation. If you do not give a port number, WebSphere MQ uses:

- The one specified in the `qm.ini` file.

- If no value is specified in the `qm.ini` file, WebSphere MQ uses the port number identified in the TCP/IP services file for the service name WebSphere MQ. If this entry in the services file does not exist, a default value of `1414` is used.

The client-connection channel and server listener program must use the same port number.

What to do next

To continue with the verification process, see Testing communication between workstations.

Parent topic: Verifying the client installation

🔧 This build: January 26, 2011 11:34:43

Notices | Trademarks | Downloads | Library | Support | Feedback

This topic's URL:
hq10750_

3.3.3. Testing communication between workstations

Before you begin

Before you complete this task you must have completed, Setting up the client workstation.

About this task

On the WebSphere® MQ client workstation, use the **amqsputc** sample program to put a message on the queue at the server workstation. Use the **amqsgetc** sample program to get the message from the queue back to the client:

Procedure

1. Change into the `/opt/mqm/samp/bin` directory, which contains the sample programs.

2. Put a message on the queue at the server using the following command:

   ```
   ./amqsputc QUEUE1 saturn.queue.manager
   ```

   amqsputc displays the following messages:

   ```
   Sample amqsput0 start
   target queue is QUEUE1
   ```

3. Type some message text on one or more lines, followed by a blank line. You see the following message:

   ```
   Sample amqsput0 end
   ```

   Your message is now on the queue and the command prompt is displayed again.

4. To get the message from the queue located on the server, enter the following command:

   ```
   ./amqsgetc QUEUE1 saturn.queue.manager
   ```

   The sample program starts and your message is displayed. After a pause, the sample ends and the command prompt is displayed again.

Results

You have now successfully verified the client installation.

What to do next

Run the following steps on the server installation.

You must now set the **mcauser** attribute back to its default value:

1. Start MQSC commands by entering the following command:

   ```
   runmqsc
   ```

   A message tells you that an MQSC session has started. MQSC has no command prompt.

2. In the MQSC window, set the **mcauser** attribute to its default value by entering the following command:

   ```
   alter channel(channel1) chltype (svrconn) mcauser(' ')
   ```

3. Stop MQSC by typing:

   ```
   end
   ```

   You see some messages, followed by the command prompt.

You have now set the **mcauser** attribute back to its default value.

Parent topic: Verifying the client installation

This build: January 26, 2011 11:34:43

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.

This topic's URL:
hq10760_

4. Installing a client on the same machine as a server

To install a WebSphere® MQ for HP-UX client on a server machine, use the WebSphere MQ Server CD-ROM. Choose the Client component on the Server CD-ROM to install the client code on the server machine, and use the installation procedure described in Installation procedure.

If you install a WebSphere MQ client on the same machine as a WebSphere MQ server, the client is not connected to the server automatically. Configure the communication channel (an MQI channel) between the client and the server, as described in Verifying the client installation.

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:43

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10770_

5. Applying maintenance

How to maintain WebSphere® MQ for HP-UX.

> **Applying maintenance**<
How to apply maintenance updates by stopping WebSphere MQ and using **swinstall**.

> **Applying maintenance to a running queue manager**<
Use multi-instance queue managers to reduce the outage caused by applying maintenance updates. Follow these steps to apply maintenance to a multi-instance queue manager.

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:43

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10780_
>

5.1. Applying maintenance

How to apply maintenance updates by stopping WebSphere MQ and using **swinstall**.

➤

Before you begin

1. If the base WebSphere® MQ Version 7.0 package is included in the depot with the maintenance updates packages you are installing, the `autoselect_dependencies=false` flag is required with the `swinstall` option when you install the maintenance packages

2. If you want to install both the base package and the maintenance update packages, install the base package separately first. Then install the maintenance update packages.

3. If you are using the interactive installer, click **Options > Change Options**. Then clear the "autoselect dependencies when marking software" check box before selecting the maintenance update package for installation.

4. If `autoselect_dependencies` is turned off, the GSKit package is not automatically installed. If the maintenance update package requires the updated version of the GSKit package, it fails at the installation preview. To correct the failure, you must manually select the GSKit package for installation.

5. You must not uninstall any maintenance packages when `autoselect_dependencies` is turned off.

6. Error messages might be seen when running **swinstall**, even when successfully updating an installation.
   Many of the insignificant errors are caused by **swinstall** trying to apply updates to components that are not installed. Consider whether there are any significant errors reported with the insignificant ones.

   ○ The following errors might not indicate a serious problem. They are written to the console, or to the **swinstall** panel.

     ```
     ERROR:    "hpux11.mycompany.com:/":
     The software dependencies for 15 products or filesets cannot

     ERROR:    "hpux11.mycompany.com:/":
     17 filesets were determined to be skipped in the analysis pha
     The execution phase failed for "hpux11.mycompany.com:/".
     Analysis and Execution had errors.
     ```

   ○ The following errors might not indicate a serious problem. They are written to the `swjob` output for a **swinstall** session.

     ```
     ERROR:    17 of 20 filesets had Errors.
     3 of 20 filesets had no Errors or Warnings.

     ERROR:    The Execution Phase had errors.
     See the above output for details.
     ```

   There are two approaches you can take to handling errors in the application of maintenance.

   a. Aim for an error-free update by applying maintenance only to those components that are installed.

   b. Apply the whole maintenance package and check the error logs, error by

error, ignoring the insignificant errors.

Both approaches are described.

◄

About this task

A maintenance update requires hard disk space for installation. In addition, the installation process might require a similar amount of disk space to save the previous level. For example, a 16 MB update might require 32 MB of space. The additional space allows a maintenance level to be removed, and the previous level to be restored automatically.

To apply the maintenance update:

Procedure

1. Stop all WebSphere MQ applications on the machine and the applications accessing remote machines. ▶Any applications on the machine that are linked with the WebSphere MQ shared libraries must also be stopped before applying WebSphere MQ maintenance.◄ ▶The topic, Applying maintenance to a running queue manager, describes how to apply maintenance to a multi-instance queue manager. You can keep a multi-instance queue manager running on a different server while applying maintenance.◄

2. End all WebSphere MQ activity:

   a. ▶Log in as a user from `group mqm`.◄

   b. Use the `endmqm` command to stop all running queue managers.

   c. Stop any listeners associated with the queue managers, using the command:

      `endmqlsr -m QMgrName`

   d. To check that you have stopped all of them, enter the following:

      `ps -ef | grep mq`

      Check that there are no processes listed that are running command lines beginning `amq` or `runmq`. Ignore any that start with `amqi`.

3. Log in as root, or switch to the superuser using the **su** command.

4. ▶Make your current directory the location of the *Service_update_package*.◄ The file name of the *Service_update_package* follows the pattern `hp-Uxxxx.v11`. You must prefix *Service_update_package* with the absolute path to the installation file. To save typing, construct the path using the `$PWD` variable.

5. Choose whether to install the updates interactively, and if you want to control which components are updated. Choose from one of the following:

○ Silently update all the installed WebSphere MQ components by installing the whole maintenance package.

```
swinstall -s $PWD/service_update_package MQSERIES
```

The **swinstall** command attempts to find an installed component for every component in the update package, and updates it. **swinstall** writes out error messages for components that it cannot find.

○ Silently update some WebSphere MQ components by installing only the required updates from the maintenance package.
If you specify *update_components* correctly, the update procedure can be error-free. **swinstall** only updates components that you have listed and components that are dependent on components you have listed.

a. Run the HP-UX command **swlist** MQSERIES to list of all the WebSphere MQ components that are installed.

b. Using the list of installed WebSphere MQ components, create a space separated list of the components you want to update (*update_components*).

c.   ```swinstall -s $PWD/service_update_package update_components```

○ Interactively update some WebSphere MQ components from the maintenance package, selecting only the update components that are required.

```
swinstall -s $PWD/service_update_package
```

a. Open **MQSERIES** and mark the update components you want to apply. Correctly marked, there are no errors when the updates are applied. The installer resolves dependencies automatically.

b. Select **Actions > Install**. The log file tells you if there are any problems that need fixing.

Parent topic: ➤Applying maintenance◀

🔧 This build: January 26, 2011 11:34:44

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10790_

◀

5.2. Applying maintenance to a running queue manager

Use multi-instance queue managers to reduce the outage caused by applying maintenance updates. Follow these steps to apply maintenance to a multi-instance queue manager.

➤

Before you begin

Maintenance is applied to the WebSphere® MQ installation on a server and not to individual queue managers. You need to stop all the queue managers, and any WebSphere MQ service, on a server before you apply maintenance.

If you want a queue manager to keep running while maintenance is applied, you need to configure it as a *multi-instance* queue manager, and have a standby instance running on another server. If a queue manager is an existing single instance queue manager, you need to convert it to a multi-instance queue manager. See the topic, Multi-instance queue managers for pre-requisites and guidance how to create a multi-instance queue manager.

You can create a multi-instance queue manager from v7.0.1 onwards. If you are running multi-instance queue managers, you then can apply a maintenance update to a *running* queue manager by switching the active instance to a different server.

Typically active and standby installations are maintained at the same maintenance level. Consult the maintenance instructions for each upgrade. Check if it is possible to run the active and standby instances at different maintenance levels. Check if fail over from higher to lower, or only lower to higher maintenance level is possible.

The instructions for applying a maintenance update might require you to stop a multi-instance queue manager completely.

If you have a primary server for running active queue manager instances, and a secondary server that runs standby instances, you have a choice of updating the primary or secondary server first. If you update the secondary server first, you need to switch back to the primary server once both servers have been updated.

If you have active and standby instances on several servers, you need to plan in what order you update the servers to minimize the disruption caused by ending the active instances on each server you update.

◄

About this task

Combine the steps in this task with the maintenance update procedure for applying maintenance to a WebSphere MQ server installation.

Procedure

1. Where the maintenance update procedure instructs you to use the **endmqm** command to stop all running queue managers, do the following instead:

    a. If the queue manager is running as standby, end the standby with the **endmqm** *-x QMgrName* command.

    b. If the queue manager is running as the active instance, end the instance and transfer control to the standby instance with the **endmqm** *-shutdown_option -s QMgrName* command. If there is no standby instance running, the command fails, and you need to start a standby instance on a different server.

    c. If a queue manager is running as a single instance queue manager, you have no alternative but to stop the queue manager before applying the maintenance update.

When you complete this step, no queue manager instances are left running on the server you intend to update.

2. Continue with the maintenance update procedure, following the step to issue the **endmqm** command, and apply maintenance to the WebSphere MQ server.

3. When you have completed the maintenance update, restart all the queue managers on the WebSphere MQ server, permitting standby instances, using the **strmqm** -x *QmgrName* command.

4. Repeat the procedure on the standby server, to update its maintenance level.

5. If necessary, switch the active instances back to the primary servers, using the **endmqm** -*shutdown_option* -s *QMgrName* command, and the restart the instances using the **strmqm** -x *QmgrName* command.

Parent topic: ❯Applying maintenance❮

🏠 This build: January 26, 2011 11:34:18

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
cr00060_
❯

6. Installing and uninstalling GSKit Version 8 on HP-UX

You might want to use GSKit Version 8 instead of or in addition to GSKit Version 7. This collection of topics gives you instructions for installing and uninstalling GSKit Version 8.

The subcomponent that provides support for SSL and TLS on Windows, UNIX, and Linux systems is called GSKit. If you select SSL and TLS support when you install WebSphere® MQ V7.0.1, GSKit Version 7 is installed and run by default. Versions of WebSphere MQ V7.0.1 from Fix Pack 7.0.1.4 and later also contain an alternative, separate copy of GSKit, at Version 8. You can install and run this version instead of, or in addition to, GSKit Version 7.

❯**Installing GSKit Version 8 on HP-UX**❮
Compressed versions of the GSKit V8 packages are supplied. Uncompress and install them.

❯**Uninstalling GSKit Version 8 on HP-UX**❮
If you no longer need the functions provided by GSKit Version 8, and are not using it to provide the SSL or TLS infrastructure for products other than WebSphere MQ, you can uninstall it.

Parent topic: Welcome to WebSphere MQ for HP-UX

Related information
Alternative SSL and TLS support for Windows, UNIX, and Linux systems

This build: January 26, 2011 11:34:44

‹ ›

6.1. Installing GSKit Version 8 on HP-UX

Compressed versions of the GSKit V8 packages are supplied. Uncompress and install them.

About this task
Compressed versions (`.tar` files) of the GSKit Version 8 runtime packages are placed in the directory into which you expand your WebSphere MQ fix pack. Files providing both 32-bit and 64-bit support are provided. Uncompress and install all these files.

Procedure
1. Log in as root.

2. Change to the directory into which you expanded the Fix Pack.

3. Uncompress the .tar files by using the following commands:

   ```
   zcat gskcrypt32-8.0.14.6.hpux.ia64.tar.Z | tar -xf -
   zcat gskssl32-8.0.14.6.hpux.ia64.tar.Z | tar -xf -
   zcat gskcrypt64-8.0.14.6.hpux.ia64.tar.Z | tar -xf -
   zcat gskssl64-8.0.14.6.hpux.ia64.tar.Z | tar -xf -
   ```

   The string *8.0.14.6* represents the version number of GSKit being installed and can vary as new modifications of GSKit are released.

4. Install GSKit v8 by using the following commands:

   ```
   swinstall -s /tmp/MQ/gskcrypt32 gskcrypt32
   swinstall -s /tmp/MQ/gskssl32 gskssl32
   swinstall -s /tmp/MQ/gskcrypt64 gskcrypt64
   swinstall -s /tmp/MQ/gskssl64 gskssl64
   ```

   /tmp/MQ represents the directory into which you expanded the fix pack.

Parent topic: ❯Installing and uninstalling GSKit Version 8 on HP-UX❮

This build: January 26, 2011 11:34:44

‹ ›

6.2. Uninstalling GSKit Version 8 on HP-UX

If you no longer need the functions provided by GSKit Version 8, and are not using it

to provide the SSL or TLS infrastructure for products other than WebSphere® MQ, you can uninstall it.

Procedure

Uninstall GSKit v8 by using the following command:

```
swremove gskcrypt32 gskssl32 gskcrypt64 gskssl64
```

Parent topic: ❯Installing and uninstalling GSKit Version 8 on HP-UX❮

🏠 This build: January 26, 2011 11:34:44

Notices | Trademarks | Downloads | Library | Support | Feedback

© Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10890_
❮

7. Uninstalling WebSphere MQ

About this task

To uninstall (server or client), use the HP-UX `swremove` program.

Procedure

1. Stop all WebSphere® MQ applications on the machine and the applications accessing remote machines.

2. Before starting to uninstall, end all WebSphere MQ activity.

    a. ❯Log in as a user in `group mqm`.❮

    b. Use the **dspmq** command to display the state of all the queue managers on the system (not applicable for a client installation).

    c. Use the **endmqm** command to stop all running queue managers.

    d. Stop any listeners associated with the queue managers, using the command:

        ```
        endmqlsr -m QMgrName
        ```

    e. To check that you have stopped all of them, enter the following:

        ```
        ps -ef | grep mq
        ```

    f. Check that there are no processes listed that are running command lines beginning `amq` or `runmq`. Ignore any that start with `amqi`.

3. Log in as root.

4. Enter `swremove MQSERIES` to uninstall the MQSERIES package.

5. After uninstalling WebSphere MQ, you can delete the `/var/mqm` directory tree, (this will destroy all queue managers and their associated data).

6. If no other products require the Global Security Kit Version 7, you can uninstall packages `gsk7bas` and `gsk7bas64` by typing:

        ```
        swremove gsk7bas
        ```

or

```
swremove gsk7bas64
```

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:44

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10810_

8. WebSphere MQ Documentation

Where to find information describing WebSphere MQ.

See the main information center page.

Parent topic: Welcome to WebSphere MQ for HP-UX

This build: January 26, 2011 11:34:44

Notices | Trademarks | Downloads | Library | Support | Feedback

Copyright IBM Corporation 1999, 2009. All Rights Reserved.
This topic's URL:
hq10821_