Sun Java™ System Message Queue Release Notes for HP-UX

Version 3 2005Q4 (3.6 SP3)

Part Number 819-4254-10

These release notes contain important information available at the time of release of Sun Java System Message Queue 3 2005Q4 (3.6 SP3) for HP-UX. Known issues and limitations, and other information are addressed here. Read this document before you begin using Message Queue.

The most up-to-date version of these release notes can be found at the Sun Java System Message Queue documentation web site: `http://docs.sun.com/app/docs/prod/entsys.05q4#hic`. Check the web site prior to installing and setting up your software and then periodically thereafter to view the most up-to-date release notes and product documentation.

These release notes contain the following sections:

- Release Notes Revision History
- About Message Queue 3 2005Q4 (3.6 SP3)
- Bugs Fixed in This Release
- Important Information
- Known Issues and Limitations
- Redistributable Files
- How to Report Problems and Provide Feedback
- Additional Sun Resources

Third-party URLs are referenced in this document and provide additional, related information.

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Release Notes Revision History

Table 1   Revision History

Date	Description
February 2006	Revenue release.
November 2005	Beta release.

About Message Queue 3 2005Q4 (3.6 SP3)

Sun Java System Message Queue is a full-featured message service that provides reliable, asynchronous messaging that conforms to the Java Messaging Specification (JMS) 1.1. In addition, Message Queue provides a host of features that go beyond the JMS specification to provide for the needs of large-scale enterprise deployments.

This section includes:

- What's New in This Release
- Hardware and Software Requirements

What's New in This Release

New features in Message Queue 3 2005Q4 (3.6) include:

- "Dead Message Queue"
- "No Acknowledge Mode"
- "Client Message Body Compression"
- "Connection Failure Detection (Client Runtime Ping)"
- "Certificate Management: C-API NSS Tools"
- "Support for C-API Basic Authentication"
- "64-bit C-API Support"

These are described in the following sub-sections.

Dead Message Queue

Message Queue automatically creates a specialized destination at broker startup that is used to store dead messages for diagnostic purposes. A *dead message* is one that is removed from the system for a reason other than normal processing or explicit administrator action. A message might be considered dead because it has expired, because it has been removed from a destination due to memory limit overruns, or because of failed delivery attempts.

An administrator can configure destinations to either discard dead messages or place them in the dead message queue. When placed in the dead message queue, additional property information is written into the message, providing an administrator with information about the cause of death. A client developer can also set a property value when creating a message that determines whether the message should be placed in the dead message queue were it to die.

For more information, see the *Message Queue Administration Guide*.

No Acknowledge Mode

The NO_ACKNOWLEDGE acknowledgement mode is an extension to the JMS API. Normally, the broker waits for a client acknowledgement. That acknowledgement must be made programmatically if the client has specified CLIENT_ACKNOWLEDGE or it can be made automatically, by the session, if the client has specified AUTO_ACKNOWLEDGE or DUPS_OK. If a consuming client specifies the NO_ACKNOWLEDGE mode, the broker discards the message as soon as it has sent it to the consuming client. This feature is intended for use by non-durable subscribers consuming non-persistent messages, but it can be used by any consumer.

Using this feature improves performance by reducing protocol traffic and broker work involved in acknowledging a message. This feature can also improve performance for brokers dealing with misbehaving clients who do not acknowledge messages and therefore tie down broker memory resources unnecessarily. Using this mode has no effect on producers.

There is no support for the NO_ACKNOWLEDGE mode in C clients. For more information, see the *Message Queue Developer's Guide for Java Clients*.

Client Message Body Compression

The developer can specify that the body of a message can be compressed. Message compression and decompression is handled entirely by the client runtime and does not affect the broker. Therefore, applications can use this feature with a previous version of the broker, but they must use version 3.6 SP3 2005Q4 (3.6) of the Message Queue client runtime library.

Advantages and Limitations of Compression

Although message compression has been added to improve performance, such benefit is not guaranteed. Benefits vary with the size and format of messages, the number of consumers, network bandwidth, and CPU performance. For example, the cost of compression and decompression might be higher than the time saved in sending and receiving a compressed message. This is especially true when sending small messages in a high-speed network. On the other hand, applications that publish large messages to many consumers or who publish in a slow network environment, might improve system performance by compressing messages.

Message consumers deployed with client runtime libraries that precede version 3.6 SP3 2005Q4 (3.6) cannot handle compressed messages. Clients configured to send compressed messages must make sure that consumers are compatible. C clients cannot currently consume compressed messages.

For more information, see the *Message Queue Developer's Guide for Java Clients*.

Connection Failure Detection (Client Runtime Ping)

Message Queue 3.6 SP3 2005Q4 introduces a new `ConnectionFactory` attribute named `imqPingInterval`. The `imqPingInterval` attribute specifies the frequency of a ping operation from the client runtime to the broker. By periodically testing the connection, the client runtime can preemptively detect a failed connection. If the ping operation fails, the client runtime throws an exception to the client application's exception listener object. If the application does not have an exception listener, the application's next attempt to use the connection fails.

For more information, see the *Message Queue Administration Guide*.

Certificate Management: C-API NSS Tools

The C-API uses NSS (Network Security Services) libraries to support SSL. These libraries provide APIs and utilities for developing secure applications. These utilities include tools to manage keys and certificate databases. In Message Queue 3.5, we asked developers to use Mozilla to manage NSS keys and certificates. In Message Queue 3.6 SP3 2005Q4, administrators can use the NSS `certutil` tool to generate the needed keys and certificates.

For more information, see the *Message Queue Developer's Guide for C Clients*.

Support for C-API Basic Authentication

Message Queue 3.6 SP3 2005Q4 C-API supports the `basic` authentication type. Previous releases of Message Queue did not support the `basic` authentication type.

64-bit C-API Support

Message Queue now contains 64-bit C-API support on the Solaris/SPARC platform. For more information about enabling 64-bit C-API support, see the *Message Queue Developer's Guide for C Clients*.

Hardware and Software Requirements

This section specifies the hardware and software required for this release of Message Queue.

The table below lists hardware and software requirements for HP-UX operating systems

Table 2   HP-UX Hardware and Software Requirements

Component	Platform Requirement
Operating System	HP-UX 11i vi
CPU	PA-RISC 2.0
RAM	256 Mbytes
Disk Space	20 Mbytes

Message Queue 3.6 SP3 also depends upon other technologies, as indicated in the table below. This table lists and describes the basic components that you must install in order to be able to develop and run Message Queue clients.

Table 3   Message Queue 3.6 SP3 Basic Product Support Matrix

Platform/Product	Used For	Supported Platform/Product Version
Java Runtime Environment (JRE) (HP-UX versions only)	Message Queue broker (message server) and Message Queue administration tools	Java Runtime Environment 1.5.0.01
Java Software Development Kit (JDK), Standard Edition (HP-UX versions only)	Java client development and deployment (Java SOAP/JAXM clients are supported only on JDK 1.4.2 and 1.5)	JDK 1.5.0.01

The table below lists and describes the components that you can install to provide additional support for a Message Queue client. You might just need some of the components listed. For example, if you are not writing a C client to Message Queue, you will not need any of the components required for C client support.

Table 4 Message Queue 3.6 SP3 Optional Product Support Matrix

Product	Used For	Supported Product Version
LDAP Directory Server	Message Queue user repository and administered object support	Sun Java System Directory Server Version 5.2 SP 3
Web Server	HTTP and HTTPS support	Sun Java System Web Server, Enterprise Edition Version 6.1 SP 4
Application Server	HTTP and HTTPS support	Sun Java System Application Server, Enterprise Edition 8.1
Database	Plugged-in persistence support	PointBase, Version 4.8 Oracle 9i, Version 9.2
JNDI (Java Naming and Directory Interface)	administered object support	• JNDI Version 1.2.1 • LDAP Service Provider Version 1.2.2 • File System Service Provider Version 1.2 Beta 3 (supported for development and testing, but not for deployment in a production environment.)
C Compiler and compatible C++ runtime library	Message Queue C client support	C compiler: /opt/ansic/bin/cc C++ compiler: /opt/aCC/bin/aCC
NSPR (Netscape Portable Runtime)	Message Queue C client support	Version bundled with Java Enterprise System 2005Q1.
NSS (Network Security Service)	Message Queue C client support	Version bundled with Java Enterprise System 2005Q1.

Bugs Fixed in This Release

Table 5 describes the bugs fixed in Message Queue 3 2005Q4(3.6):

Table 5 Fixed Bugs in Message Queue 3 2005Q4 (3.6)

Bug Number	Description
6326835	Uname -p: illegal option listed during the broke start up

Important Information

This section covers the following topics:

- Installation Notes
- Compatibility Issues
- Documentation Updates for Message Queue 3.6 SP3 2005Q4 (3.6)
- Accessibility Features for People With Disabilities

Installation Notes

For information about patch requirements and installation, see the following section:

Patch Requirement Information

The following table gives the numbers and minimum versions for the alignment patches. All patches referred to in this section are the minimum version number required for upgrade. It is possible that a new version of the patch has been issued since this document was published. A newer version is indicated by a different version number at the end of the patch. For example: 123456-04 is a newer version of 123456-02 but they are the same patch ID. Refer to the README file for each patch listed for special instructions.

To access the patches, go to http://sunsolve.sun.com.

Table 6 Message Queue 3.6 SP3 2005Q4 Alignment Patches Required for HP-UX

Patch Number	Patch Description
121937-01	HP-UX 11.11: Lockhart Localization patch
121936-01	HP-UX 11.11: Sun Java™ System Message Queue 3.6 SP3 2005Q4 (Localization Patch)

For detailed information about Upgrade procedure of the Message Queue from JES3 to JES4 refer *Sun Java Enterprise System 2005Q4 Upgrade Guide for HP-UX* located at http://docs.sun.com/app/docs/doc/819-4460.

Compatibility Issues

This section covers compatibility issues in Message Queue 3 2005Q1 (3.6).

Issues in Message Queue 3 2005Q1 (3.6)

The following sections describe issues that affect HP-UX platforms.

Deprecation of Password Options

The following options have been deprecated for security reasons:

- `-p`
- `-password`
- `-dbpassword`
- `-ldappassword`

If a password is specified as a part of a command such as the following:

    imqcmd query bkr -u admin -p adminpassword

a user could see the administrator password while listing or querying a machine's processes.

Use the `-passfile` option instead. The passfile option is explained in the chapter on security in the *Message Queue Administration Guide*.

For more information, see Appendix A, *"Location of Message Queue Data"*, in the *Message Queue Administration Guide*.

HP-UX Depot Package Names

The table below shows the Names of Message Queue 3.6 SP3 HP-UX Depot packages.

Table 7   Depot Packages in HP-UX Bundle

Depot	Description	Notes
sun-mq-config	/etc files	
sun-mq-var	/var files	

Table 7   Depot Packages in HP-UX Bundle *(Continued)*

Depot	Description	Notes
`sun-mq-ent`	Enterprise Edition license file.	This Depot is only shipped with Message Queue, Enterprise Edition, available with Java Enterprise System.
`sun-mq`	/opt/sun/mq	Contains core binary for Message Queue.
`sun-mq-jaxm`	Message Queue Java API for XML Messaging (JAXM): API	Depends on `sun-saaj`
`sun-mq-capi`	C-API	Depends on `sun-nspr`, `sun-nss`
`sun-javahelp`[1]	JavaHelp: API and runtime	Supports JavaHelp viewer for Admin Console help
`sun-nss`[1]	Network Security Services (NSS) libraries.	Needed to support C language clients
`sun-nspr`[1]	Netscape Portable Runtime (NSPR) libraries	Needed to support C clients
`sun-saaj`[1]	SOAP with Attachments API for Java: API and runtime	Required to support Java clients using SOAP/JAXM API
`sun-jaxp`[1]	Message Queue Java API for XML Processing (JAXP): API and runtime	Required to support Java clients using SOAP/JAXM API
`sun-javamail`[1]	JavaMail: API and runtime	Required to support Java clients using SOAP/JAXM API
`sun-jaf`[1]	JavaBeans Activation Framework: API and runtime	Required to support Java clients using SOAP/JAXM API
`sun-mq-xmlclient`	Message Queue XML client	Required to support Java clients using XML
`sun-mq-jmsclient`	Message Queue JMS client	Required to support Java clients using JMS

1. This Depot package is shared by a number of Sun Java System products.

Issues Related to the Next Major Release of Message Queue

The next major release of Message Queue may introduce changes that make your clients incompatible with that release. This information is provided now to allow you to prepare for these changes.

- This is the last feature release of Sun Java System Message Queue that will be backwards compatible with Sun One Message Queue 3.0.1. In particular, future releases of Sun Java System Message Queue will not support the following:

  o   Connection of 3.0.1 clients to brokers of the latest version

- o Upgrading a 3.0.1 persistent store to the latest version

- o Clustering of 3.0.1 brokers with brokers of the latest version

- o Use of 3.0.1 property files, user stores, access control lists, etc. with brokers of the latest version.

- This is the last release of Sun Java System Message Queue that will support being integrated as the "System JMS Messaging Provider" for Sun Java System Application Server 7.X. Future releases of Sun Java System Message Queue will only support Sun Java System Application Server 8.0 and above.

- This is the last release of Sun Java System Message Queue that will include the SOAP runtime and support the Message Queue SOAP Administered Objects.

- Future releases will only support SOAP in conjunction with a Java 2 Standard Edition Platform version that supports SOAP.

- Sun Java System Message Queue client support for all releases of Java 2 Standard Edition 1.3 will be dropped. Java 2 Standard Edition 1.4 will continue to be supported.

- The locations of individual files installed as part of Sun Java System Message Queue might change. This could break existing applications that depend on the current location of certain Message Queue files.

- Sun Java System Message Queue clients that use a version of Message Queue older than the next major version might not have access to the new features offered in that version of the product.

Documentation Updates for Message Queue 3.6 SP3 2005Q4 (3.6)

The following Message Queue documents were updated from Version 3.5 of the product:

Installation Guide

The *Message Queue Installation Guide* was updated to reflect branding changes and platform-specific information. This document now contains installation information relevant to Message Queue, Platform Edition.

Message Queue, Enterprise Edition installation information moved to the *Sun Java System Installation Guide*.

For information on upgrade and migration to Message Queue 3.6 SP3 2005Q4 (3.6), Enterprise Edition, see the *Sun Java System Upgrade and Migration Guide*.

Technical Overview

The *Message Queue Technical Overview* is a new document that describes the Message Queue product, its features, architecture, technology, and terminology. This new book contains overview information previously contained in other books and is meant to be used by Message Queue users--both administrators and developers--and prospective users, as well.

Administration Guide

The *Message Queue Administration Guide* has been updated to reflect branding changes and new features. This document has also been reorganized for better usability by Message Queue administrators. Overview information previously contained in this document has been moved to the *Message Queue Technical Overview*.

Java Client Developer's Guide

The *Java Client Developer's Guide* has been updated to reflect branding changes and new features. The document has also been renamed to *Message Queue Developer's Guide for Java Clients*.

The *Message Queue Developer's Guide for Java Clients* has been reorganized for better usability by Message Queue Java Client Developers. Overview information previously contained in this document has been moved to the *Message Queue Technical Overview*.

C Client Developer's Guide

The *C Client Developer's Guide* was updated to reflect branding changes and new features. The document has also been renamed to *Message Queue Developer's Guide for C Clients*.

The *Message Queue Developer's Guide for C Clients* has been reorganized for better usability by Message Queue C Client Developers. Overview information previously contained in this document has been moved to the *Message Queue Technical Overview*.

Accessibility Features for People With Disabilities

To obtain accessibility features that have been released since the publishing of this media, consult Section 508 product assessments available from Sun upon request to determine which versions are best suited for deploying accessible solutions. Updated versions of applications can be found at http://sun.com/software/javaenterprisesystem/get.html.

For information on Sun's commitment to accessibility, visit http://sun.com/access.

Known Issues and Limitations

This section describes the known issues and limitations of Message Queue 3.6 SP3 for HP-UX. The following product areas are covered:

- General Issues

- Administration/Configuration Issues

- Broker Issues

For a list of current bugs, their status, and workarounds, Java Developer Connection™ members should see the Bug Parade page on the Java Developer Connection web site. Please check that page before you report a new bug. Although all Message Queue bugs are not listed, the page is a good starting place if you want to know whether a problem has been reported.

The relevant page is:

> http://developer.java.sun.com/developer/bugParade.

NOTE	Java Developer Connection membership is free but requires registration. Details on how to become a Java Developer Connection member are provided on Sun's "For Developers" web page.

To report a new bug or submit a feature request, send mail to imq-feedback@sun.com.

General Issues

This section covers general issues in Message Queue 3 2005Q1 (3.6). This section covers the issues apply to Enterprise Editions of Message Queue.

- You cannot edit a broker's instance configuration file without having started the broker instance at least once. This is because the config.properties file does not exist until the broker instance is first started. To configure a broker to use pluggable persistence or to set other configuration properties, run the broker once (with the instance name that should be used to create the broker) to create the config.properties file:

Platform	Location
HP-UX	/var/opt/sun/mq/instances/*instanceName*/props/config.properties

Once the `config.properties` file has been created, edit the file to add any configuration property values and then restart the broker.

- Only fully-connected broker clusters are supported. This means that every broker in a cluster must communicate directly with every other broker in the cluster. If you are connecting brokers using the `imqbrokerd -cluster` command line argument, be careful to ensure that all brokers in the cluster are included.

- A client connected to a broker that is part of a cluster cannot currently use `QueueBrowser` to browse queues that are located on remote brokers in that cluster. The client can only browse the contents of queues that are located on the broker to which it is directly connected. The client may still send messages to any queue or consume messages from any queue on any broker in the cluster; the limitation only affects browsing.

- If a Master Broker is not used in a broker cluster, persistent information stored by a broker being added to the cluster is not propagated to other brokers in the cluster.

- When a JMS client using the HTTP transport terminates abruptly (for example, using `Ctrl-C`) the broker takes approximately one minute before the client connection and all the associated resources are released.

  If another instance of the client is started within the one minute period and if it tries to use the same Client ID, durable subscription, or queue, it might receive a "Client ID is already in use" exception. This is not a real problem; it is just the side effect of the termination process described above. If the client is started after a delay of approximately one minute, everything should work fine.

Administration/Configuration Issues

The -javahome option in all solaris/win scripts does not work if the value has a space (4683029)

The -javahome option is used by the Message Queue commands and utilities to specify an alternate Java 2 compatible runtime to use. However, the path to the alternate Java runtime must be located at a path that does not contain spaces.

Examples of paths that have spaces are:

HP-UX:

/opt/jdk 1.4

Solaris:

/work/java 1.4

Workaround

Install the Java runtime at a location or path that does not contain spaces.

Message Queue output garbage message to syslog in non-C locale (6193884)

Message Queue will send garbage output to the system log when the broker is run in a non-C locale.

Workaround

Run broker in C locale.

Broker Issues

In a broker cluster, a broker will queue messages to a remote connection which may not be started (4951010)

Workaround

The messages will be received by the consumer once the connection is started. The messages will be redelivered to another consumer if the consumer's connection is closed.

When using Ctrl-C to shut down broker, transactions may be cleaned up after store is closed (4934446)

The broker may show errors with the following reason "Store method accessed after the store is closed." if the broker is shutdown while messages or transactions are processed.

Workaround

You can ignore this error message; the broker correctly handles notifying consumers of any error. This error does not affect the reliability of the system.

Broker becomes inaccessible when persistent store opens too many destinations (4953354)

Workaround

This condition is caused by the broker reaching the system open-file descriptor limit. On Solaris and

Linux use the ulimit command to increase the file descriptor limit.

Unknown Destination:temporary_destination sometimes seen at shutdown (5055667)

When a broker is shutdown while processing messages to a temporary queue, the following error message may show up in the logs:

```
WARNING [B2011]: Storing of JMS message from <connection> failed:

com.sun.messaging.jmq.jmsserver.util.BrokerException: Unknown

Destination:temporary_destination:<destinationid>
```

Workaround

You can ignore this error message. This error does affect the reliability of the broker.

Message selection using JMSMessageID doesn't work (6196233)

Message selection using the selector "JMSMessageID = '<message_id>'" does not work.

1. Send a message to a Queue

2. Read the `JMSMessageID` of the sent `message - <message_id>`

3. Create a consumer on the Queue using the selector set to `"JMSMessageID ='<message_id>'"`

    Message will not be received.

    Workaround

    Change the selector from:

    `JMSMessageID = "ID:message-id-string"`

    to:

    `JMSMessageID IN ('ID:message-id-string', 'message-id-string')`

Redistributable Files

Sun Java System Message Queue 3.6 SP3 2005Q4 contains the following set of files which you may use and freely distribute in binary form:

*   `jms.jar`

*   `imq.jar`

*   `imqxm.jar`

*   `fscontext.jar`

*   `providerutil.jar`

*   `jndi.jar`

*   `ldap.jar`

*   `ldapbp.jar`

*   `jaas.jar`

- `jsse.jar`
- `jnet.jar`
- `jcert.jar`
- In addition, you can also redistribute the `LICENSE` and `COPYRIGHT` files.

How to Report Problems and Provide Feedback

If you have problems with Sun Java System Message Queue, contact Sun customer support using one of the following mechanisms:

- Sun Software Support services online at
  http://www.sun.com/service/sunone/software

  This site has links to the Knowledge Base, Online Support Center, and ProductTracker, as well as to maintenance programs and support contact numbers.

- The telephone dispatch number associated with your maintenance contract

So that we can best assist you in resolving problems, please have the following information available when you contact support:

- Description of the problem, including the situation where the problem occurs and its impact on your operation

- Machine type, operating system version, and product version, including any patches and other software that might be affecting the problem

- Detailed steps on the methods you have used to reproduce the problem

- Any error logs or core dumps

Sun Java System Software Forum

There is a Sun Java System Message Queue forum available at the following location:

http://swforum.sun.com/jive/forum.jspa?forumID=24.

We welcome your participation.

Java Technology Forum

There is a JMS forum in the Java Technology Forums that might be of interest.

http://forum.java.sun.com.

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions.

To share your comments, go to http://docs.sun.com and click Send Comments. In the online form, provide the document title and part number. The part number is a seven-digit or nine-digit number that can be found on the title page of the guide or at the top of the document.

Additional Sun Resources

Useful Sun Java System information can be found at the following Internet locations:

- Documentation for Message Queue
  http://docs.sun.com/app/docs/coll/1307.1

- Sun Java System Documentation
  http://docs.sun.com/app/docs/prod/entsys.05q4

- Sun Java System Professional Services
  http://www.sun.com/service/sunps/sunone

- Sun Java System Software Products and Service
  http://www.sun.com/software

- Sun Java System Software Support Services
  http://www.sun.com/service/sunone/software

- Sun Java System Support and Knowledge Base
  http://www.sun.com/service/support/software

- Sun Java System Software Support Services
  http://www.sun.com/support/

- Sun Java System Consulting and Professional Services
  http://www.sun.com/service/sunps/sunone

- Sun Java System Developer Information
  http://developers.sun.com

- Sun Developer Support Services
  http://www.sun.com/developers/support

- Sun Java System Software Training
  http://www.sun.com/software/training

- Sun Software Data Sheets
  http://wwws.sun.com/software