

Readme for IBM MQ 9.2 and its maintenance

This document contains the readme information for IBM MQ 9.2.0 Long Term Support release and its maintenance, and also for IBM MQ 9.2.x Continuous Delivery releases.

A PDF copy of this document, in English and in translation, is available for download here: <https://public.dhe.ibm.com/software/integration/wmq/docs/V9.2/Readme/>.

The English version of this document is the most up-to-date version.

Content

The main sections of this document describe product limitations and known problems.

In addition to this document, you can find more information on the IBM MQ website: <https://www.ibm.com/products/mq>.

The SupportPac web page is here: <https://ibm.biz/mqsupportpacs>.

For current information about known problems and available fixes, see the IBM MQ Support page: https://www.ibm.com/mysupport/s/topic/OTO5000000024cJGAQ/mq?language=en_US&productId=01t0z000006zdYXAAY.

Product documentation for all supported versions of IBM MQ is available through IBM Documentation: <https://www.ibm.com/docs/ibm-mq>. Specifically, the IBM MQ 9.2 product information is available in IBM Documentation: <https://www.ibm.com/docs/ibm-mq/9.2>.

Announcement letters

The announcement letters for IBM MQ 9.2 (US English) are available at the following locations. The announcement letters provide these types of information:

- Detailed product description, including description of new function.
- Product-positioning statement.
- Ordering details.
- Hardware and software requirements.
- Hourly pricing.

Announcement letters for Continuous Delivery Releases

IBM MQ 9.2.5 for Multiplatforms, IBM MQ Appliance firmware, and IBM MQ on Cloud
There are no announcement letters for IBM MQ 9.2.5.

IBM MQ 9.2.4 for Multiplatforms, IBM MQ Appliance firmware, and IBM MQ on Cloud
<https://www.ibm.com/docs/en/announcements/221-231/index.html>

IBM MQ for z/OS Value Unit Edition 9.2.4, IBM MQ Advanced for z/OS, 9.2.4, and IBM MQ Advanced for z/OS Value Unit Edition 9.2.4

<https://www.ibm.com/docs/en/announcements/221-355/index.html>

IBM MQ for z/OS, 9.2.4

<https://www.ibm.com/docs/en/announcements/221-356/index.html>

IBM MQ 9.2.3 for Multiplatforms, IBM MQ Appliance firmware, and IBM MQ on Cloud
<https://www.ibm.com/docs/en/announcements/221-186/index.html>

IBM MQ for z/OS Value Unit Edition 9.2.3, IBM MQ Advanced for z/OS, 9.2.3, and IBM MQ Advanced for z/OS Value Unit Edition 9.2.3

<https://www.ibm.com/docs/en/announcements/221-187/index.html>

IBM MQ for z/OS, 9.2.3

<https://www.ibm.com/docs/en/announcements/221-188/index.html>

IBM MQ 9.2.2 for Multiplatforms, IBM MQ Appliance firmware, and IBM MQ on Cloud
<https://www.ibm.com/docs/en/announcements/221-075/index.html>

IBM MQ for z/OS Statement of Direction, 9.2.2

<https://www.ibm.com/docs/en/announcements/221-076/index.html>

IBM MQ 9.2.1, IBM MQ Appliance firmware, and IBM MQ on Cloud

<https://www.ibm.com/docs/en/announcements/220-448/index.html>

IBM MQ for z/OS Value Unit Edition 9.2.1, IBM MQ Advanced for z/OS, 9.2.1, and IBM MQ Advanced for z/OS Value Unit Edition 9.2.1

<https://www.ibm.com/docs/en/announcements/220-449/index.html>

IBM MQ for z/OS, 9.2.1

<https://www.ibm.com/docs/en/announcements/220-450/index.html>

Announcement letters for IBM MQ 9.2.0

IBM MQ Advanced for z/OS includes the Connector Pack

<https://www.ibm.com/docs/en/announcements/223-0578/index.html>

IBM MQ 9.2 and IBM MQ on Cloud

<https://www.ibm.com/docs/en/announcements/220-238/index.html>

IBM MQ for z/OS Value Unit Edition 9.2, IBM MQ Advanced for z/OS, 9.2, and IBM MQ Advanced for z/OS Value Unit Edition 9.2

<https://www.ibm.com/docs/en/announcements/220-239/index.html>

IBM MQ for z/OS, 9.2

<https://www.ibm.com/docs/en/announcements/220-240/index.html>

Update history

Date	Summary
26 Apr 2024	Updates for IBM MQ 9.2.0.25
14 Dec 2023	Updates for IBM MQ 9.2.0.21 CSU
30 Oct 2023	Updates for IBM MQ 9.2.0.20
01 Aug 2023	Link to the IBM MQ Advanced for z/OS Connector Pack announcement letter
28 Jun 2023	Updates for IBM MQ 9.2.0.15
28 Feb 2023	Updates for IBM MQ 9.2.0.10
01 Dec 2022	Updates for IBM MQ 9.2.0.7
29 Jun 2022	Updates for IBM MQ 9.2.0.6
24 Feb 2022	Updates for IBM MQ 9.2.5
22 Feb 2022	Updates for IBM MQ 9.2.0.5
18 Nov 2021	Updates for IBM MQ 9.2.4
11 Nov 2021	Updates for IBM MQ 9.2.0.4
22 Jul 2021	Updates for IBM MQ 9.2.3 and 9.2.0.3
18 Mar 2021	Updates for IBM MQ 9.2.2 and 9.2.0.2
07 Dec 2020	Extra item for IBM MQ 9.2.0.1
03 Dec 2020	Updates for IBM MQ 9.2.1
01 Oct 2020	Updates for IBM MQ 9.2.0.1
23 Jul 2020	Created for IBM MQ 9.2.0

Installation instructions

Installation instructions are available as part of the IBM MQ 9.2 product information published in IBM Documentation: https://www.ibm.com/docs/SSFKSJ_9.2.0/com.ibm.mq.ins.doc/q008250_.html

Limitations and known problems for Long Term Support releases

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 25

Support is removed for RSA key exchange in FIPS mode

The IBM Java 8 JRE removes support for RSA key exchange when operating in FIPS mode. This removal applies to the following CipherSuites:

- TLS_RSA_WITH_AES_256_GCM_SHA384
- TLS_RSA_WITH_AES_256_CBC_SHA256
- TLS_RSA_WITH_AES_256_CBC_SHA
- TLS_RSA_WITH_AES_128_GCM_SHA256
- TLS_RSA_WITH_AES_128_CBC_SHA256
- TLS_RSA_WITH_AES_128_CBC_SHA
- TLS_RSA_WITH_3DES_EDE_CBC_SHA

To continue using FIPS mode, the following IBM MQ components should be changed to use a CipherSuite that is still supported:

- AMQP server
- Managed File Transfer (MFT)
- IBM MQ Console / web console
- IBM MQ Explorer
- IBM MQ REST API
- IBM MQ Telemetry service

For details of supported CipherSuites, see [TLS CipherSpecs and CipherSuites in IBM MQ classes for JMS](#) in the IBM MQ product documentation.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0.21 CSU

IBM MQ Bridge to blockchain is removed

The IBM MQ Bridge to blockchain was deprecated across all releases from November 22 2022, and is removed from the product at IBM MQ 9.2.0.21. If your system has the MQSeriesBCBridge component installed, remove it manually after this maintenance update has completed.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACKS 15 AND 20

There are no new limitations or known problems.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 10

IBM MQ AMQP channel does not start automatically with AMQP service after upgrade

When a queue manager with a running AMQP channel is upgraded to IBM MQ 9.2, and the queue manager and associated AMQP service are restarted, the previously running AMQP channel does not start automatically.

This issue is fixed by APAR IT37842, which is included in IBM MQ 9.2.0 Fix Pack 10.

Note that migration runs only once; the first time the queue manager is started after an upgrade. Therefore, after you apply IBM MQ 9.2.0 Fix Pack 10:

- If, prior to installing IBM MQ 9.2.0 Fix Pack 10, you have started the queue manager and AMQP channel on any previous IBM MQ 9.2 level, then the AMQP channel will start automatically. You do not need to take any additional action.

- If, prior to installing IBM MQ 9.2.0 Fix Pack 10, you have not started the queue manager and AMQP channel on any previous IBM MQ 9.2 level, then any previously running AMQP channels must be restarted manually when the queue manager and associated AMQP service are restarted.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 7

There are no new limitations or known problems.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACKS 5 AND 6

On Linux, after installing IBM MQ Explorer, a java.security.SignatureException error is displayed when viewing the error log

To recreate this error on the Linux 64-bit platform, complete the following steps:

1. Install the IBM MQ 9.2 initial release, then apply either Fix Pack 9.2.0.5 or Fix Pack 9.2.0.6.
2. Launch the IBM MQ Explorer using the VNC viewer.
3. Go to **Help tab > About Explorer**, then click "Installation details".
4. Go to **Configuration tab > View error log**.

A message similar to the following is displayed:

```
!ENTRY org.eclipse.osgi 4 0 2022-05-23 07:19:44.214
!MESSAGE Either the manifest file or the signature file has been tampered in this
jar: /opt/mqm/mqexplorer/eclipse/plugins/org.apache.ant_1.10.11.v20210720-1445
!STACK 0
java.security.SignatureException: Either the manifest file or the signature file has been
tampered in this jar: /opt/mqm/mqexplorer/eclipse/plugins/
org.apache.ant_1.10.11.v20210720-1445
    at
org.eclipse.osgi.internal.signedcontent.SignatureBlockProcessor.verifyManifestAndSignatureFi
le(SignatureBlockProcessor.java:172)
    at
org.eclipse.osgi.internal.signedcontent.SignatureBlockProcessor.processSigner(SignatureBlock
Processor.java:120)
    at
org.eclipse.osgi.internal.signedcontent.SignatureBlockProcessor.process(SignatureBlockProces
sor.java:76)
    at
org.eclipse.osgi.internal.signedcontent.SignedBundleFile.initializeSignedContent(SignedBundl
eFile.java:47)
    at
org.eclipse.osgi.internal.signedcontent.SignedBundleHook.getSignedContent(SignedBundleHook.j
ava:223)
    at
org.eclipse.osgi.internal.signedcontent.SignedBundleHook.getSignedContent(SignedBundleHook.j
ava:247)
    at org.eclipse.ui.internal.about.AboutBundleData.isSigned(AboutBundleData.java:103)
    at
org.eclipse.ui.internal.about.AboutPluginsPage$BundleTableLabelProvider$1.run(AboutPluginsPa
ge.java:130)
    at org.eclipse.core.internal.jobs.Worker.run(Worker.java:63)
```

The error message can be ignored.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 4

Error message in the IBM MQ Explorer log after IBM MQ 9.2.0.4 is installed on Windows

After IBM MQ 9.2.0, Fix Pack 4 is installed on Windows, you might see the following error message in the IBM MQ Explorer log file the first time the IBM MQ Explorer is started.

The error message can be ignored.

The log file is here:

```
USER_Home\IBM\WebSphereMQ\workspace-installation_name\metadata\.log
```

```
!ENTRY org.eclipse.equinox.http.jetty 4 0 2021-10-22 05:53:58.909
!MESSAGE FrameworkEvent ERROR
!STACK 0
org.osgi.framework.BundleException: Could not resolve module:
org.eclipse.equinox.http.jetty [302]
```

```

Unresolved requirement: Import-Package: org.eclipse.jetty.servlet;
version="[9.4.0,10.0.0)"
  -> Export-Package: org.eclipse.jetty.servlet; bundle-symbolic-
name="org.eclipse.jetty.servlet"; bundle-version="9.4.35.v20201120"; version="9.4.35";
uses="javax.servlet, javax.servlet.descriptor, javax.servlet.http, org.eclipse.jetty.http.path
map, org.eclipse.jetty.security, org.eclipse.jetty.server, org.eclipse.jetty.server.handler, org
.eclipse.jetty.server.handler.gzip, org.eclipse.jetty.server.session, org.eclipse.jetty.util, o
rg.eclipse.jetty.util.annotation, org.eclipse.jetty.util.component, org.eclipse.jetty.util.res
ource"
    org.eclipse.jetty.servlet [385]
      Unresolved requirement: Import-Package: org.eclipse.jetty.jmx;
version="[9.4.35,10.0.0)"; resolution="optional"
      Unresolved requirement: Import-Package: org.eclipse.jetty.util.ajax;
version="[9.4.35,10.0.0)"
        at org.eclipse.osgi.container.Module.start(Module.java:462)
        at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel$2.run(ModuleContainer.java:18
44)
          at
org.eclipse.osgi.internal.framework.EquinoxContainerAdaptor$1$1.execute(EquinoxContainerAdap
tor.java:136)
            at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1837)
              at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1778)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.doContainerStartLevel(ModuleC
ontainer.java:1742)
                  at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1664)
                    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1)
                      at
org.eclipse.osgi.framework.eventmgr.EventManager.dispatchEvent(EventManager.java:234)
                        at
org.eclipse.osgi.framework.eventmgr.EventManager$EventThread.run(EventManager.java:345)

```

This issue is also seen in fix packs 9.2.0.2 and 9.2.0.3.

For Fix Pack 9.2.0.4 this issue is addressed by APAR IT38604.

IBM MQ Explorer installation details are not updated after IBM MQ 9.2.0.4 is uninstalled on Windows

After IBM MQ 9.2.0, Fix Pack 4 is uninstalled on Windows, the information displayed on the **Installed Software** tab of the **IBM MQ Explorer Installation Details** panel still includes the following entry:

```

- HELP Patch (bugzillas
564984, 562440, 562843, 564747, 568292, 569227, 569855, 569406, 573066, 576203)

```

This information is not correct. The HELP patch is no longer installed.

This issue is also seen in fix packs 9.2.0.1 and 9.2.0.2.

For Fix Pack 9.2.0.4, this issue is addressed by APAR IT38604.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 3

Error when you apply IBM MQ 9.2.0, Fix Pack 3 on Windows

When you apply this fix pack from the Windows **Start** button, you get the following message: Unable to access the specified device, path, or file. You might not have the proper permissions to access these items.

To work around this issue, run an elevated command prompt and launch the Apply fix pack option directly.

Error message in the IBM MQ Explorer log after IBM MQ 9.2.0.3 is installed on Windows

After IBM MQ 9.2.0, Fix Pack 3 is installed on Windows, you might see the following error message in the IBM MQ Explorer log file the first time the IBM MQ Explorer is started.

The error message can be ignored.

The log file is here:

```
USER_Home\IBM\WebSphereMQ\workspace-installation_name\.metadata\.log
```

```
!ENTRY org.eclipse.equinox.http.jetty 4 0 2021-06-24 17:18:34.417
!MESSAGE FrameworkEvent ERROR
!STACK 0
org.osgi.framework.BundleException: Could not resolve module:
org.eclipse.equinox.http.jetty [302]
    Unresolved requirement: Import-Package: org.eclipse.jetty.servlet;
version="[9.4.0,10.0.0)"
    -> Export-Package: org.eclipse.jetty.servlet; bundle-symbolic-
name="org.eclipse.jetty.servlet"; bundle-version="9.4.40.v20210413"; version="9.4.40";
uses:="javax.servlet,javax.servlet.descriptor,javax.servlet.http,org.eclipse.jetty.http.path
map,org.eclipse.jetty.security,org.eclipse.jetty.server,org.eclipse.jetty.server.handler,org
.eclipse.jetty.server.handler.gzip,org.eclipse.jetty.server.session,org.eclipse.jetty.util,o
rg.eclipse.jetty.util.annotation,org.eclipse.jetty.util.component,org.eclipse.jetty.util.res
ource"
        org.eclipse.jetty.servlet [385]
            Unresolved requirement: Import-Package: org.eclipse.jetty.jmx;
version="[9.4.40,10.0.0)"; resolution="optional"
            Unresolved requirement: Import-Package: org.eclipse.jetty.util.ajax;
version="[9.4.40,10.0.0)"
                at org.eclipse.osgi.container.Module.start(Module.java:462)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel$2.run(ModuleContainer.java:18
44)
                    at
org.eclipse.osgi.internal.framework.EquinoxContainerAdaptor$1$1.execute(EquinoxContainerAdap
tor.java:136)
                        at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1837)
                            at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1778)
                                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.doContainerStartLevel(ModuleC
ontainer.java:1742)
                                    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1664)
                                        at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1)
                                            at
org.eclipse.osgi.framework.eventmgr.EventManager.dispatchEvent(EventManager.java:234)
                                                at
org.eclipse.osgi.framework.eventmgr.EventManager$EventThread.run(EventManager.java:345)
```

This issue is also seen in Fix Pack 9.2.0.2.

For Fix Pack 9.2.0.3, this issue is addressed by APAR IT37166.

GTK+ Messages issued by IBM MQ Explorer

In some Linux environments, messages from the GTK+ graphical user interface library might be seen in the UNIX console window from which IBM MQ Explorer was started. These messages are caused by errors in the gtk3 libraries, and do not cause any functional failures in IBM MQ Explorer.

This issue was discovered during testing of the initial IBM MQ 9.2.0 release, and also affects Fix Pack 9.2.0.2. For more information, see the readme entry for the initial IBM MQ 9.2.0 release.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 2

GTK+ Messages issued by IBM MQ Explorer

In some Linux environments, messages from the GTK+ graphical user interface library might be seen in the UNIX console window from which IBM MQ Explorer was started. These messages are caused by errors in the gtk3 libraries, and do not cause any functional failures in IBM MQ Explorer.

This issue was discovered during testing of the initial IBM MQ 9.2.0 release. For more information, see the readme entry for the initial IBM MQ 9.2.0 release.

Channel names are blank in MQSC and IBM MQ Explorer after direct migration from IBM MQ 8.0.0.1, 8.0.0.2, or 8.0.0.3

For more information, see LIMITATIONS AND KNOWN PROBLEMS FOR THE INITIAL IBM MQ 9.2.0 RELEASE.

This issue is fixed by APAR IT34332, which is included in IBM MQ 9.2.0 Fix Pack 2. You must apply the fix before you start a migrated queue manager for the first time.

Error messages in the IBM MQ Explorer log after IBM MQ 9.2.0.2 is installed on Windows

After IBM MQ 9.2.0, Fix Pack 2 is installed on Windows, you might see one of the following error messages in the IBM MQ Explorer log file the first time the IBM MQ Explorer is started.

In both cases, the error message can be ignored.

The log file is here:

```
<USER_Home>\IBM\WebSphereMQ\workspace-<installation_name>\.metadata\.log
```

The following error is being addressed by APAR IT36319:

```
!ENTRY org.eclipse.equinox.http.jetty 4 0 2021-03-24 15:01:50.304
!MESSAGE FrameworkEvent ERROR
!STACK 0
org.osgi.framework.BundleException: Could not resolve module:
org.eclipse.equinox.http.jetty [302]
    Unresolved requirement: Import-Package: org.eclipse.jetty.servlet;
version="[9.4.0,10.0.0)"
    -> Export-Package: org.eclipse.jetty.servlet; bundle-symbolic-
name="org.eclipse.jetty.servlet"; bundle-version="9.4.35.v20201120"; version="9.4.35";
uses:="javax.servlet,javax.servlet.descriptor,javax.servlet.http,org.eclipse.jetty.http.path
map,org.eclipse.jetty.security,org.eclipse.jetty.server,org.eclipse.jetty.server.handler,org
.eclipse.jetty.server.handler.gzip,org.eclipse.jetty.server.session,org.eclipse.jetty.util,o
rg.eclipse.jetty.util.annotation,org.eclipse.jetty.util.component,org.eclipse.jetty.util.res
ource"
        org.eclipse.jetty.servlet [385]
            Unresolved requirement: Import-Package: org.eclipse.jetty.jmx;
version="[9.4.35,10.0.0)"; resolution="optional"
            Unresolved requirement: Import-Package: org.eclipse.jetty.util.ajax;
version="[9.4.35,10.0.0)"
                at org.eclipse.osgi.container.Module.start(Module.java:462)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel$2.run(ModuleContainer.java:18
44)
                at
org.eclipse.osgi.internal.framework.EquinoxContainerAdaptor$1$1.execute(EquinoxContainerAdap
tor.java:136)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1837)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1778)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.doContainerStartLevel(ModuleC
ontainer.java:1742)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1664)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1)
                at
org.eclipse.osgi.framework.eventmgr.EventManager.dispatchEvent(EventManager.java:234)
                at
org.eclipse.osgi.framework.eventmgr.EventManager$EventThread.run(EventManager.java:345)
```

The following error is being addressed by APAR IT34927:

```
!MESSAGE FrameworkEvent ERROR
!STACK 0
org.osgi.framework.BundleException: Could not resolve module:
org.eclipse.equinox.http.jetty [298]
    Unresolved requirement: Import-Package: org.eclipse.jetty.servlet;
version="[9.4.0,10.0.0)"
```

```

-> Export-Package: org.eclipse.jetty.servlet; bundle-symbolic-
name="org.eclipse.jetty.servlet"; bundle-version="9.4.33.v20201020"; version="9.4.33";
uses:="javax.servlet,javax.servlet.descriptor,javax.servlet.http,org.eclipse.jetty.http.path
map,org.eclipse.jetty.security,org.eclipse.jetty.server,org.eclipse.jetty.server.handler,org
.eclipse.jetty.server.handler.gzip,org.eclipse.jetty.server.session,org.eclipse.jetty.util,o
rg.eclipse.jetty.util.annotation,org.eclipse.jetty.util.component,org.eclipse.jetty.util.res
ource"
org.eclipse.jetty.servlet [615]
  Unresolved requirement: Import-Package: org.eclipse.jetty.jmx;
version="[9.4.33,10.0.0)"; resolution:="optional"
  Unresolved requirement: Import-Package: org.eclipse.jetty.security;
version="[9.4.33,10.0.0)"
    at org.eclipse.osgi.container.Module.start(Module.java:444)
    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1634)
    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1613)
    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.doContainerStartLevel(ModuleC
ontainer.java:1585)
    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1528)
    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1)
    at
org.eclipse.osgi.framework.eventmgr.EventManager.dispatchEvent(EventManager.java:230)
    at
org.eclipse.osgi.framework.eventmgr.EventManager$EventThread.run(EventManager.java:340)

```

IBM MQ Explorer installation details are not updated after IBM MQ 9.2.0.2 is uninstalled on Windows

After IBM MQ 9.2.0, Fix Pack 2 is uninstalled on Windows, the information displayed on the **Installed Software** tab of the **IBM MQ Explorer Installation Details** panel still includes the following entry:

```
- HELP Patch (bugzilla 538020,547101,509819,568292)
```

This information is not correct. The HELP patch is no longer installed.

This issue is also seen in Fix Pack 9.2.0.1.

For Fix Pack 9.2.0.2, this issue is addressed by APAR IT35052.

An error message is displayed in the IBM MQ Explorer console after IBM MQ 9.2.0.2 is installed with RDQM on Linux 64

When IBM MQ Explorer is launched for the first time and you click the Help contents, the following Error sending IPC message: Broken pipe error is displayed:

```

2021-03-29 02:54:10.526:INFO::Start Help Server: Logging initialized @158546ms to
org.eclipse.jetty.util.log.StdErrLog
2021-03-29 02:54:10.739:INFO:oejs.session:Start Help Server: DefaultSessionIdManager
workerName=node0
2021-03-29 02:54:10.739:INFO:oejs.session:Start Help Server: No SessionScavenger set, using
defaults
2021-03-29 02:54:10.742:INFO:oejs.session:Start Help Server: node0 Scavenging every 660000ms
2021-03-29 02:54:10.804:INFO:oejs.session:Start Help Server: node0 Scavenging every 726000ms
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe
Error sending IPC message: Broken pipe

```

After you close and relaunch IBM MQ Explorer, then click the Help contents, only the following messages are displayed:

```

2021-03-29 02:58:57.631:INFO::Start Help Server: Logging initialized @37325ms to
org.eclipse.jetty.util.log.StdErrLog
2021-03-29 02:58:57.782:INFO:oejs.session:Start Help Server: DefaultSessionIdManager
workerName=node0

```

```
2021-03-29 02:58:57.782:INFO:oejs.session:Start Help Server: No SessionScavenger set, using defaults
2021-03-29 02:58:57.783:INFO:oejs.session:Start Help Server: node0 Scavenging every 600000ms
2021-03-29 02:58:57.835:INFO:oejs.session:Start Help Server: node0 Scavenging every 600000ms
```

These error messages can be ignored.

Changes to default values for some ciphers

The JRE embedded into IBM MQ 9.2.0.2 is updated under APAR IT35540 to the following Java version:

- 8.0.6.26 - AIX, Linux (x86-64, ppcLE, zLinux), Windows

In this JRE, cipher suites that match "DES_CBC" have been disabled. For example, the following cipher suite is disabled:

- SSL_RSA_FIPS_WITH_DES_CBC_SHA

If an application is using this JRE, the application will no longer be able to use this cipher suite, for example if the application is connecting to the queue manager over an SSL/TLS secured channel.

This includes users own applications that use this JRE, and components of IBM MQ that use this JRE, such as:

- IBM MQ Explorer
- MQTT service
- AMQP service
- Managed File Transfer

If you understand the security risk associated with using these disabled cipher suites, and want to re-enable them, then update the following file:

AIX, Linux:

```
MQ_INSTALL_ROOT/java/jre64/jre/lib/security/java.security
```

Windows:

```
MQ_INSTALL_ROOT\java\jre\lib\security\java.security
```

and edit the entry for the following property:

```
jdk.tls.disabledAlgorithms
```

to remove the last entry:

```
", DES_CBC"
```

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.0, FIX PACK 1

IBM MQ Explorer installation details are not updated after IBM MQ 9.2.0.1 is uninstalled on Windows

After IBM MQ 9.2.0, Fix Pack 1 is uninstalled on Windows, the information displayed on the **Installed Software** tab of the **IBM MQ Explorer Installation Details** panel still includes the following entry:

```
- HELP Patch (bugzillas 564984)
```

This information is not correct. The HELP patch is no longer installed.

This issue is addressed by APAR IT35052.

Limitations and known problems for Continuous Delivery releases

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.5

There are no new limitations or known problems.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.4

On z/OS, QPST_MSGP020_PUTTIME is added to the QPST control block

As part of the z/OS System Management Facility (SMF) enhancements for IBM MQ 9.2.4, the **QPST_MSGP020_PUTTIME** parameter is added to the QPST control block. However **QPST_MSGP020_PUTTIME** is an internal parameter, and QPST is an externalized control block. In a future release, the **QPST_MSGP020_PUTTIME** parameter will move to an internal control block.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.3

Channel names are blank in MQSC and IBM MQ Explorer after direct migration from IBM MQ 8.0.0.1, 8.0.0.2, or 8.0.0.3

For more information, see LIMITATIONS AND KNOWN PROBLEMS FOR THE INITIAL IBM MQ 9.2.0 RELEASE.

This issue is fixed by APAR IT34332, which is included in IBM MQ 9.2.3. You must apply the fix before you start a migrated queue manager for the first time.

Error messages in the IBM MQ Explorer log after IBM MQ 9.2.3 is installed on Windows

After IBM MQ 9.2.3 is installed on Windows, you might see one of the following error messages in the IBM MQ Explorer log file the first time the IBM MQ Explorer is started.

In both cases, the error message can be ignored.

The log file is here:

```
<USER_Home>\IBM\WebSphereMQ\workspace-<installation_name>\.metadata\.log
```

The following error is being addressed by APAR IT36319:

```
!ENTRY org.eclipse.equinox.http.jetty 4 0 2021-06-24 15:01:50.304
!MESSAGE FrameworkEvent ERROR
!STACK 0
org.osgi.framework.BundleException: Could not resolve module:
org.eclipse.equinox.http.jetty [302]
    Unresolved requirement: Import-Package: org.eclipse.jetty.servlet;
version="[9.4.0,10.0.0)"
    -> Export-Package: org.eclipse.jetty.servlet; bundle-symbolic-
name="org.eclipse.jetty.servlet"; bundle-version="9.4.35.v20201120"; version="9.4.35";
uses="javax.servlet,javax.servlet.descriptor,javax.servlet.http,org.eclipse.jetty.http.path
map,org.eclipse.jetty.security,org.eclipse.jetty.server,org.eclipse.jetty.server.handler,org
.eclipse.jetty.server.handler.gzip,org.eclipse.jetty.server.session,org.eclipse.jetty.util,o
rg.eclipse.jetty.util.annotation,org.eclipse.jetty.util.component,org.eclipse.jetty.util.res
ource"
        org.eclipse.jetty.servlet [385]
            Unresolved requirement: Import-Package: org.eclipse.jetty.jmx;
version="[9.4.35,10.0.0)"; resolution="optional"
            Unresolved requirement: Import-Package: org.eclipse.jetty.util.ajax;
version="[9.4.35,10.0.0)"
                at org.eclipse.osgi.container.Module.start(Module.java:462)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel$2.run(ModuleContainer.java:18
44)
                at
org.eclipse.osgi.internal.framework.EquinoxContainerAdaptor$1$1.execute(EquinoxContainerAdap
tor.java:136)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1837)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1778)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.doContainerStartLevel(ModuleC
ontainer.java:1742)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1664)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1)
                at
```

```
org.eclipse.osgi.framework.eventmgr.EventManager.dispatchEvent(EventManager.java:234)
    at
org.eclipse.osgi.framework.eventmgr.EventManager$EventThread.run(EventManager.java:345)
```

The following error is being addressed by APAR IT37166:

```
!ENTRY org.eclipse.equinox.http.jetty 4 0 2021-06-24 17:18:34.417
!MESSAGE FrameworkEvent ERROR
!STACK 0
org.osgi.framework.BundleException: Could not resolve module:
org.eclipse.equinox.http.jetty [302]
    Unresolved requirement: Import-Package: org.eclipse.jetty.servlet;
    version="[9.4.0,10.0.0)"
    -> Export-Package: org.eclipse.jetty.servlet; bundle-symbolic-
    name="org.eclipse.jetty.servlet"; bundle-version="9.4.40.v20210413"; version="9.4.40";
    uses:="javax.servlet,javax.servlet.descriptor,javax.servlet.http,org.eclipse.jetty.http.path
    map,org.eclipse.jetty.security,org.eclipse.jetty.server,org.eclipse.jetty.server.handler,org
    .eclipse.jetty.server.handler.gzip,org.eclipse.jetty.server.session,org.eclipse.jetty.util,o
    rg.eclipse.jetty.util.annotation,org.eclipse.jetty.util.component,org.eclipse.jetty.util.res
    ource"
        org.eclipse.jetty.servlet [385]
            Unresolved requirement: Import-Package: org.eclipse.jetty.jmx;
            version="[9.4.40,10.0.0)"; resolution:="optional"
            Unresolved requirement: Import-Package: org.eclipse.jetty.util.ajax;
            version="[9.4.40,10.0.0)"
                at org.eclipse.osgi.container.Module.start(Module.java:462)
                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel$2.run(ModuleContainer.java:18
44)
                    at
org.eclipse.osgi.internal.framework.EquinoxContainerAdaptor$1$1.execute(EquinoxContainerAdap
tor.java:136)
                        at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1837)
                            at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.incStartLevel(ModuleContainer
.java:1778)
                                at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.doContainerStartLevel(ModuleC
ontainer.java:1742)
                                    at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1664)
                                        at
org.eclipse.osgi.container.ModuleContainer$ContainerStartLevel.dispatchEvent(ModuleContainer
.java:1)
                                            at
org.eclipse.osgi.framework.eventmgr.EventManager.dispatchEvent(EventManager.java:234)
                                                at
org.eclipse.osgi.framework.eventmgr.EventManager$EventThread.run(EventManager.java:345)
```

Native HA with replication over TLS 1.3: After a failover, replicas might repeatedly connect and disconnect from the active instance

When you run with TLS 1.3, after a failover you might get pairs of messages similar to the following pair:

```
2021-06-24T12:06:14.148Z AMQ3214I: Native HA inbound secure connection accepted from
'<hostname>'. [CommentInsert1(<hostname>), CommentInsert2(<ipaddress>),
CommentInsert3(TLS_CHACHA20_POLY1305_SHA256)]
```

```
2021-06-24T12:06:14.613Z AMQ3222E: Native HA network connection from '<hostname>' ended
unexpectedly. [CommentInsert1(<hostname>), CommentInsert2(<qmgrname>),
CommentInsert3(rrcE_SSL_BAD_RETURN_FROM_GSKIT (14) (????) (gsk_secure_soc_read)
(<ipaddress>))]
```

This issue is being investigated. Until a fix is available, use a plain text or TLS 1.2 connection for replication.

To configure TLS 1.2 for replication traffic, add the following setting to the NativeHALocalInstance stanza of `qm.ini` in each queue manager instance:

```
CipherSpec=ANY_TLS12
```

You can add this information by using the IBM MQ Operator and an ini configmap. See <https://www.ibm.com/docs/ibm-mq/9.2?topic=manager-example-supplying-mqsc-ini-files>.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.2

Changes to default values for some ciphers

The JRE is updated to 8.0.6.25 in this release. By default, this level of the JRE disables ciphers whose algorithms match DES_CBC. For example:

```
SSL_RSA_FIPS_WITH_DES_CBC_SHA
```

To re-enable these ciphers, update your `java/lib/security/java.security` file to remove the algorithm that your cipher uses from the `jdk.tls.disabledAlgorithms` name:value pair.

On Windows, clicking 'IBM MQ Explorer Help' might not open the help system

On Windows systems, some users cannot open IBM MQ Explorer Help, either by clicking **IBM MQ Explorer Help** in the main landing page, or by clicking **Help > Help Contents**.

If the user starting IBM MQ Explorer has write permissions on `MQ_INSTALLATION\MQExplorer\eclipse\configuration\org.eclipse.equinox.simplec`
`onfigurator\bundles.info`, IBM MQ Explorer can resolve the underlying issue.

CCDT Generation within the IBM MQ Console is not available on z/OS

Generating a client channel definition table (CCDT) file in the IBM MQ Console occasionally fails on z/OS when the system attempts to get a list of listeners, requiring the web console to be reloaded in the browser.

Generation of the CCDT file is disabled in the IBM MQ Console on z/OS systems.

LIMITATIONS AND KNOWN PROBLEMS FOR IBM MQ 9.2.1

IBM MQ Messaging Pool Blocking behavior can cause high CPU usage and impact functionality

If the Messaging Pool is configured with "blocking" behavior and the pool size is exhausted, incoming requests enter a "busy-wait" state, polling the pool continually for free connections. If messaging operations performed by requests take significant time, this busy-wait state might be maintained for a significant time. This is because fewer connections are returned to the pool than there are threads waiting.

Depending on operating system time sharing policies, this behavior could lead to excessive CPU consumption by the waiting threads, to the detriment of other activity on the system.

If sufficient requests enter this state, other operations might be impacted. For example, the Liberty server might become unresponsive to new requests, it might not detect and act on configuration changes, or other applications in the server might not be initialized successfully.

Unless you are confident that your pool size is sufficiently large and your messaging requests will complete in suitably short times, you should configure a full pool behavior other than BLOCK. Available options are ERROR and OVERFLOW.

On z/OS systems, if a queue manager restarts during an MFT transfer, the transfer does not complete

When a Managed File Transfer agent on z/OS is connecting to a queue manager on z/OS, and the queue manager is stopped, a connection broken error is received by the agent. However, the agent does not reconnect when the queue manager is restarted.

To resolve this issue, restart the MFT agent.

Limitations and known problems for the initial IBM MQ 9.2.0 release

GTK+ Messages issued by IBM MQ Explorer

In some Linux environments, messages from the GTK+ graphical user interface library might be seen in the UNIX console window from which IBM MQ Explorer was started. For example:

```
(:16073): Gtk-CRITICAL **: 17:09:00.159: gtk_box_gadget_distribute: assertion 'size >= 0' failed in GtkScrollbar  
(:4652): Gtk-WARNING **: 11:28:52.072: Negative content width -1 (allocation 1, extents 1x1) while allocating gadget (node scrolledwindow, owner GtkScrolledWindow)
```

These messages can be ignored. They are caused by errors in the gtk3 libraries, and do not cause any functional failures in IBM MQ Explorer.

Channel names are blank in MQSC and IBM MQ Explorer after direct migration from IBM MQ 8.0.0.1, 8.0.0.2, or 8.0.0.3

When you migrate from IBM MQ 8.0.0 Fix Pack 1, 2 or 3 directly to IBM MQ 9.1.5 or later, channel objects are not migrated correctly when the queue manager is started at the new code level. Channels continue to work normally, but channel names are not displayed by runmqsc or IBM MQ Explorer.

This issue is fixed by APAR IT34332, which is included in IBM MQ 9.2.0 Fix Pack 2 and IBM MQ 9.2.3. You must apply the fix before you start a migrated queue manager for the first time.

IBM MQ AMQP channel does not start automatically with AMQP service after upgrade

When a queue manager with a running AMQP channel is upgraded to IBM MQ 9.2, and the queue manager and associated AMQP service are restarted, the previously running AMQP channel does not start automatically.

This issue is fixed by APAR IT37842, which is included in IBM MQ 9.2.0 Fix Pack 10.

Note that migration runs only once; the first time the queue manager is started after an upgrade. Therefore, after you apply IBM MQ 9.2.0 Fix Pack 10:

- If, prior to installing IBM MQ 9.2.0 Fix Pack 10, you have started the queue manager and AMQP channel on any previous IBM MQ 9.2 level, then the AMQP channel will start automatically. You do not need to take any additional action.
- If, prior to installing IBM MQ 9.2.0 Fix Pack 10, you have not started the queue manager and AMQP channel on any previous IBM MQ 9.2 level, then any previously running AMQP channels must be restarted manually when the queue manager and associated AMQP service are restarted.

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