

The logo for FuseSource, featuring the word "FuseSource" in a bold, yellow, sans-serif font. The text is positioned on a black background that has a jagged, torn-paper edge on the right side, revealing a red and white pattern underneath.

FuseSource

Fuse MQ Enterprise  
**Release Notes**

Version 7.1  
December 2012

Integration Everywhere



# **Release Notes**

Version 7.1

Updated: 07 Jan 2014



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# Chapter 1. Security Changes in 7.0.2

## Overview

To ensure that the Fuse MQ Enterprise container is automatically secure after you install it, the default security settings have changed in version 7.0.2. By default in Fuse MQ Enterprise 7.0.2, none of the container's services are remotely accessible.

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## Affected ports and services

The following ports and services are affected by this security change:

- SSH console port (remote administration).
  - JMX port.
  - Apache ActiveMQ JMS broker.
  - Apache ActiveMQ Web console.
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## Impact on Apache ActiveMQ applications

If you deploy any routes that connect to the internal Apache ActiveMQ broker, *you must change the configuration of the ConnectionFactory* so that it is defined with a username and a password. This is necessary, because the Apache ActiveMQ broker is now secure by default.

For example, in Spring XML you could configure the Camel ActiveMQ component as follows:

```
<beans ... >
  ...
  <bean id="activemq"
        class="org.apache.activemq.camel.component.ActiveMQComponent">
    <property name="brokerURL" value="tcp://localhost:61616"/>
    <property name="userName" value="Username"/>
    <property name="password" value="Password"/>
  </bean>
  ...
</beans>
```

Where the *Username* and *Password* are the credentials of a JAAS user with admin privileges.



## Note

If you want to revert to using an insecure broker (similar to versions prior to 7.0.2), see ["Disabling Broker Security"](#) in *Managing and Monitoring a Broker* for instructions on how to disable JAAS authentication in the broker.

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### Migrating your applications to 7.0.2

When migrating your applications to a fresh installation of a Fuse MQ Enterprise 7.0.2 container, you should perform the following steps to configure security on the container:

1. Configure JAAS security in the `InstallDir/etc/users.properties` file to have at least one user entry with `admin` privileges. Each user entry is defined on its own line and has the following format:

```
Username=Password, admin
```

Where the `admin` role gives this user the privileges to access all administration and management functions of the container.

2. Edit the `InstallDir/etc/system.properties` file and modify the `webconsole.jmx.*` and `webconsole.jms.*` properties as follows:

```
webconsole.jmx.user=Username  
webconsole.jmx.password=Password  
webconsole.jms.user=Username  
webconsole.jms.password=Password
```

Where the `Username` and `Password` are the credentials of a JAAS user with `admin` privileges.

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### Reference

For more details about these security changes, see ["Security Basics"](#) in *Managing and Monitoring a Broker*.

# Chapter 2. New Features

## General

The following general features were added:

### Java 7 support

Fuse MQ Enterprise supports Java 7 and Java 6. The runtime is compiled against JDK 1.6 and is verified against JDK 1.7.

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## Message Broker

The new features were added to the messaging layer:

### Secure WebSocket transport

The Stomp-over-WebSocket protocol (`ws`: URL) supports a secure variant (`wss`: URL), which takes its SSL/TLS configuration from the `sslContext` configuration element.

### Broker redelivery

With *broker redelivery* the redelivery logic is implemented on the broker. This has the advantage that messages can be redelivered even after a specific consumer has died, but has the disadvantage that message order cannot be guaranteed.

Broker redelivery can be enabled by installing the `redeliveryPlugin` on the broker.

### Pluggable locking for stores

Message store locking has been refactored so that the locking logic is independent of the particular store implementation. The new architecture allows you to use any kind of locker with any kind of store database. Three locker types are currently provided:

- *shared file locker*
- *database locker*
- *lease database locker*

### Lease database locker

The *lease database locker* is a new locker implementation that is recommended as a replacement for the default database locker. With the default database locker, it could happen that the master broker crashes without releasing the lock, so that the slave remains permanently

locked out and is unable to take over from the master. This problem is solved in the lease database locker, because the master acquires only a temporary lease on the lock and must regularly renew the lease. If the master crashes, the slave can acquire the lock as soon as the lease times out.

#### Redelivery policy per destination

It is now possible to associate redelivery policies with specific destinations, by defining a redelivery map that associates a redelivery policy with each named destination (where the name can include wildcards).

#### LevelDB store

Fuse MQ Enterprise supports the new LevelDB store, which uses Google's LevelDB library to maintain the indexes into the log files.

#### MQTT transport

Fuse MQ Enterprise now supports the [MQTT](http://mqtt.org/)<sup>1</sup> (MQ Telemetry Transport) transport. There are three variations of the MQTT transport:

- plain MQTT (`mqtt: URL`)
- MQTT+NIO (`mqtt+nio: URL`)
- MQTT+NIO+SSL (`mqtt+nio+ssl: URL`)

#### LDAP authorization plug-in

Fuse MQ Enterprise now supports an LDAP authorization plug-in. You can configure the LDAP authorization plug-in by adding the `cachedLDAPAuthorizationMap` element as a child of `authorizationPlugin/map`.

#### Stomp 1.1

Fuse MQ Enterprise now supports Stomp 1.1.

#### Stomp + NIO + SSL

Fuse MQ Enterprise now supports the Stomp+NIO+SSL protocol combination (`stomp+nio+ssl: URL`).

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<sup>1</sup> <http://mqtt.org/>

#### MS SQL JDBC driver 4.0

Fuse MQ Enterprise now supports using MS SQL JDBC driver 4.0 with the JDBC persistence adapter.

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### **Fuse Fabric**

The following features are new in Fuse Fabric:

#### Zookeeper security

Only authenticated users can change profile data in the Fabric registry.

#### Cloud APIs

The jclouds update introduced a cloud APIs that make it easier to connect to cloud providers.



# Chapter 3. Known issues

The following issues are known to exist in 7.1:

Installer's default user conflicts with a system user on Red Hat Enterprise Linux

The installer suggests a default user of `fuse` to be used when installing the product. Red Hat Enterprise Linux already has a `fuse` system user. Thus, you cannot use the suggested default when installing on Red Hat Enterprise Linux.

AIX installers do not work with default group

AIX has an eight character limit for user and group names. The installer default for the group name, `fusesource` is too long. Accepting this on AIX will fail with an error of unable to create user/group. Using a shorter group name addresses resolves this issue.

Cannot use the **help** in the generic Apache Karaf shell

Fuse MQ Enterprise's console is normally launched using the `fusemq` command which is fully functional. However, Fuse MQ Enterprise also includes a generic Apache Karaf shell that can be launched using the `shell` command. In the generic shell, the `help` command throws an exception.

We do not recommend using the generic Apache Karaf shell.

`ls` can cause an exception

The `ls` console command, which is used for inspecting OSGi bundles, will throw an exception when listing the contents of some bundles.

Microsoft Visual C++ Runtime required on Windows 7 64-bit

On certain 64bit Windows platforms you need [Microsoft Visual C++ 2008 Redistributable Package \(x64\)](http://www.microsoft.com/download/en/details.aspx?id=2092)<sup>1</sup> installed or Fuse MQ Enterprise will not start.

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<sup>1</sup> <http://www.microsoft.com/download/en/details.aspx?id=2092>



# Chapter 4. Resolved Issues

## Messaging

Table 4.1 on page 15 lists the issues resolved between 7.0.2 and 7.1.

**Table 4.1. Messaging Issues Resolved in 7.1**

Issue	Description
ENTMQ-11	Remove <b>activemq:create-broker</b> command
ENTMQ-60	<b>/bin/stop</b> fails to stop Fuse MQ Enterprise if it's trying to become a master
ENTMQ-69	Broker configuration <code>persistent="false"</code> ignored when message says it should be persistent
ENTMQ-79	<b>mq-create --create-container</b> tries to create child using wrong parent container
ENTMQ-90	Installing Fuse MQ Enterprise as a service using the command line installer does not work
ENTMQ-94	activemq and mq webconsole listed in the features
ENTMQ-107	Incorrect transaction feature version range
ENTMQ-108	Need to upgrade the xbean version
ENTMQ-115	<code>org.apache.kahadb.index.BTreeIndexTest.testRandomAddRemove</code> fails on AIX
ENTMQ-116	Provide xsd with the distribution in the Maven repository
ENTMQ-120	mq-web-console - 500 and 404 handling needs re-branding
ENTMQ-121	mq-web-console - scheduler and slave .jsp show strange behavior when hovering on Support link
ENTMQ-122	Can't log into mq web console
ENTMQ-123	CNFE when sending message through web console
ENTMQ-124	Regression to durable subscriptions that use <code>pendingDurableSubscriberPolicy</code>
ENTMQ-130	The <code>mq-base</code> profile does not provide security out-of-the-box
ENTMQ-131	Creating a broker with the <code>mq</code> profile fails

Issue	Description
ENTMQ-132	Exception occurs trying to access the web console
ENTMQ-134	<b>mq-create</b> is not working with security introduced
ENTMQ-135	webconsole - exception when selecting Topic Views
ENTMQ-136	Typo in command in readme
ENTMQ-137	Fabric discovery agent cannot connect to secured zookeeper
ENTMQ-139	Authenticated mq-web-console user with invalid <code>activemq.jmx.user</code> credentials error page XML view is problematic
ENTMQ-148	<code>NullPointerException</code> when using <b>mq-create</b> to create master-slave brokers
ENTMQ-152	<code>etc/*-mq.properties</code> included in error
ENTMQ-153	Typo in <code>readme.txt</code>
ENTMQ-154	<b>fabric:create</b> and <code>mq</code> profile - issues at startup - <code>cce</code> and <code>mbean</code> exists
AMQ-1132	activeio test package inclusion and logging properties
AMQ-1706	Out of date javadoc for <code>org.apache.activemq.ActiveMQConnectionFactory.setDispatchAsync@param</code> , the default value is <code>true</code> on trunk
AMQ-1719	Resource adapter stops consuming messages after broker is forcefully stopped/restarted during XA transaction
AMQ-1885	The JDBC <code>lockKeepAlive</code> thread should be started only if current broker instance successfully started and became a master
AMQ-1899	Sending without entering a queue name creates an empty queue with a message in it
AMQ-1902	<code>org.apache.activemq.broker.region.cursor.CursorQueueStoreTest</code> often fails
AMQ-2200	<code>TopicSubscriptionView</code> returns -1 for <code>SessionId</code> and <code>MaxPendingQueueSize</code>
AMQ-2240	Please add validation of unknown or invalid URI parameters for Camel <code>ActiveMQComponent</code>

Issue	Description
AMQ-2430	Embedded RESTful fileserver does not close files when PUT method is called
AMQ-2453	start/control-script is not suitable for professional environments
AMQ-2502	activemq-camel is missing an optional Import-Package for org.apache.activemq.pool
AMQ-2524	Messages are lost and no exception raised when queue is deleted and created by another process
AMQ-2528	<code>org.apache.activemq.broker.region.Queue#removeMatchingMessages(String selector)</code> does not allow an empty string as a selector, but empty string is a valid JMS message selector
AMQ-2584	Massege store is not cleaned when durable topic subscribers are refusing messages
AMQ-2656	<code>ActiveMQInitialConnectionFactory</code> cannot return an <code>XAConnectionFactory</code>
AMQ-2665	Durable subscription re-activation failed when <code>keepDurableSubsActive=true</code>
AMQ-2730	Transport failed: <code>java.io.EOFException</code>
AMQ-2801	On start-up, durable subscriber ignores Selectors when calculating pending queue size
AMQ-3004	Build-up of unwanted messages
AMQ-3012	<code>HttpTunnelServlet</code> incorrectly swallows exceptions during transport creation
AMQ-3014	<code>DemandForwardingBridgeSupport</code> can send <code>BrokerInfo</code> to remote transport before local broker ID is known
AMQ-3023	<code>DestinationView.browseMessages(String)</code> must not call <code>OpenTypeSupport.convert()</code>
AMQ-3031	Time synchronization solution
AMQ-3157	Garbage collecting inactive destinations does not work with queue mirroring

Issue	Description
AMQ-3168	In the broker XSD, boolean attributes should permit value injection via Spring's PropertyPlaceholderConfigurer
AMQ-3214	"InactivityMonitor Async Task" threads leaking
AMQ-3274	Duplicate messages on temporary topics in network of brokers
AMQ-3285	ActiveMQXAConnectionFactory does not respect various parameters for redelivery policy
AMQ-3292	KahaDb Transaction iterator remove doesn't throw Runtime Exception
AMQ-3301	LockFile in-jvm check is not thread-safe
AMQ-3319	A possible browsing concurrency issue in <code>org.apache.activemq.broker.region.Queue</code>
AMQ-3324	ActiveMQ.Advisory.xxxxxx.TempQueue.xxx, AMQ.A.xxx.Queue.xxx and AMQ.A.xxx.Topic.xxx Topics don't get removed when the originating tempQueue, Queue or Topic is removed
AMQ-3342	Shutdown of broker waiting for shared filesystem lock blocks
AMQ-3359	UDP Transport connector listens on a random port number
AMQ-3405	DLQ messages moved/copied into original queue disappear after failing processing for a second time
AMQ-3414	InactivityMonitor Async Task thread overflow when date changes
AMQ-3426	AbstractRegion.java has incorrect null check in constructor
AMQ-3427	Activemq-trunk does not compile with JDK7
AMQ-3434	Contention in PLList creation results in NPE on load - FilePendingMessageCursor
AMQ-3443	checkpoint contention with large transaction write using temp file
AMQ-3445	jdbcPersistenceAdapter will lose existing queues after a broker restart

Issue	Description
AMQ-3455	Broker may deadlock when creating queues under load with wildcard consumers
AMQ-3463	Sync pom and osgi metadata
AMQ-3466	IndexOutOfBounds in kahadb with large number of subscriptions and pending messages
AMQ-3470	Unable to pick up messages anymore, messages are lost - Looking for key xyz but not found in fileMap
AMQ-3488	Temporary destinations' DestinationInfo commands over VM transport prevent connection closure
AMQ-3490	NullPointerException during message processing, using FileCursor
AMQ-3501	Stomp v1.1 support, headers, eg: message-id, are not properly escaped
AMQ-3506	Access to ConnectionPool.createSession needs to be synchronized
AMQ-3513	initialReconnectDelay is ignored for Failover transport
AMQ-3514	MessageListenerServlet does not clear the timer on destroy
AMQ-3516	Failover Transport MessageAck commands aren't filtered in oneway
AMQ-3517	Failover transport will never call transportResumed when it reconnects to a hot backup transport
AMQ-3518	MessageServletSupport request body does not check the content-type in an intelligent way
AMQ-3537	ClassLoaderAwareObjectInputStream cannot handle de-serializing proxies with mixed JDK & non-JDK interfaces
AMQ-3543	STOMP connector: unexpected reply-to value for remote temporary topic
AMQ-3547	Calling Connection.close() on interrupted thread generates InterruptedException and leaks Connection

Issue	Description
AMQ-3556	HTTP transport not playing nice with compression and sending <code>TextMessage</code>
AMQ-3568	Consumer auto acking of duplicate message dispatch can lead to Unmatched acknowledge: and redelivery
AMQ-3576	<code>ProducerBrokerExchange</code> last producer sequenceId initialization needs runtime updates to deal with possible duplicate resends
AMQ-3581	Web Console: escape link urls
AMQ-3590	activemq-web REST servlet support for <code>JMSType</code> is broken due to a typo
AMQ-3599	JaasDualAuthenticationPlugin, java.net.BindException: Address already in use on shutdown with pending connections
AMQ-3600	Failover reconnect bypasses <code>DestinationPathSeparatorBroker</code> generating invalid destinations
AMQ-3601	When using HTTP transport XStream cannot construct <code>org.apache.activemq.util.ByteSequence</code> as it does not have a no-args constructor
AMQ-3606	Features descriptor should define the namespace
AMQ-3607	Setting <code>OptimiseAcknowledge</code> on a queue with a prefetch limit causes normal/fast consumers to miss messages when a slow consumer is blocking
AMQ-3618	When using Openwire with <code>cacheEnabled=false</code> memory is wasted on <code>unmarshallCache[]</code> and <code>marshallCache[]</code>
AMQ-3628	AMQ3567Test doesn't clean up appender after AMQ-3623 update
AMQ-3635	<code>JmsTopicConnector</code> checks for presence of <code>localClientId</code> then uses <code>outboundClientId</code>
AMQ-3649	<code>NullPointerException</code> when KahaDB fails to store to journal with <code>EOFException</code>

Issue	Description
AMQ-3651	If the broker binds RMI registry port when it starts up, the broker should release RMI registry port when it shuts down
AMQ-3653	content-length header should be considered only for SEND frames
AMQ-3664	Not all messages will be acknowledged when <code>optimizeAcknowledge</code> is true
AMQ-3665	Velocity's <code>IntroSpectionCache</code> causes <code>OutOfMemoryError</code> on large AMQ stores when running <b>activem-admin journal-audit</b>
AMQ-3673	Unexpected behavior in failover transport when hosts are unknown
AMQ-3674	<code>TopicRegion</code> removes <code>durableScriber</code> from <code>durableSubscriptions</code> when it is active; but leaves subscription on topic
AMQ-3675	Removing a <code>DurableTopicSubscription</code> leaves subscription in active subscriptions map
AMQ-3678	Active durable topic consumer is not re-assigned to topic after it is deleted and recreated
AMQ-3679	Bad OSGi metadata for <code>activeio-core</code> introduced with fix for AMQ-3461
AMQ-3680	Cleanup of temporary destinations by <code>PooledConnection</code> and <code>ConnectionPool</code> either leaks temp dests or deletes too many
AMQ-3681	<code>DatabaseLocker</code> should first cancel locking SQL statement before closing the SQL connection
AMQ-3684	Potential deadlock in <code>vm</code> transport <code>setListener</code> when sender is blocked pending space
AMQ-3709	Patch to fix invalid XHTML in web-console's 404 and 500 pages
AMQ-3719	Tracked command <code>IOException</code> causes failover transport to hang until failure occurs for untracked command

Issue	Description
AMQ-3727	activemq-web-console: AjaxServlet not working in OSGi container
AMQ-3735	Java service wrapper <code>_\${activemq.conf}</code> not found
AMQ-3737	Possible leak in ManagedRegionBroker unregisterDestination
AMQ-3743	activemq-web-console WAR with SNAPSHOT dependencies breaks osgi Bundle-ClassPath in manifest
AMQ-3753	Exception on stopping the broker - Timer already cancelled
AMQ-3782	Failover transport throws <code>NullPointerException</code>
AMQ-3785	<code>ActiveMQSslConnectionFactory</code> does not detect SSL request in failover URIs when creating transports
AMQ-3791	Flexibility, concurrency, security, and compatibility issues in <code>CachedLDAPAuthorizationMap</code>
AMQ-3797	<code>org.apache.activemq.util.StringArrayEditor</code> causes classloader leaks
AMQ-3802	Successful unsubscribing should not report inactive durable topic subscribers
AMQ-3803	<code>ActiveMQWASInitialContextFactory</code> throws <code>ClassCastException</code> in WebSphere 8
AMQ-3804	<code>NullPointerException</code> logged every 30 seconds while attempting to clear expired messages
AMQ-3807	MBeans are not unregistered under WebSphere
AMQ-3812	activemq-core won't deploy in Karaf, missing fusesource imports
AMQ-3817	Marshaled properties don't get updated if modified during <code>preProcessDispatch</code>
AMQ-3819	High CPU usage with <code>stomp+nio+ssl</code> and many subscriptions
AMQ-3828	<code>URISupport</code> incorrectly handles parenthesis
AMQ-3831	Exit code is not properly returned when using <code>RUN_AS_USER</code>

Issue	Description
AMQ-3835	Stomp 1.0 protocol read ACK broken on ActiveMQ 5.6.0
AMQ-3836	Stomp 1.0 protocol SUBSCRIBE destination broken on ActiveMQ 5.6
AMQ-3841	mKahaDB causes <code>ArrayIndexOutOfBoundsException</code> on restart after deleting existing queues
AMQ-3842	Test units should run discovery mechanism via loopback device
AMQ-3845	<code>CachedLDAPAuthorizationMap</code> doesn't handle the ldap connection dying
AMQ-3849	Typos in protobuf specs + generated Java code for KahaDB
AMQ-3852	Stomp transport allows durable topic subscriber to subscribe to a queue
AMQ-3853	Missing import in <code>activemq-web-console</code>
AMQ-3854	Referencing old Spring XSD in configuration files
AMQ-3855	MQTT doesn't translate wildcards to ActiveMQ wildcards
AMQ-3856	<code>MessageServlet</code> assumes <code>TextMessages</code> contain <code>Text</code>
AMQ-3857	<code>MessageServlet</code> GET messages do not return JMS message Properties
AMQ-3858	Failure to resolve local JMX URL for <code>sunJm</code> can result in <code>NullPointerException</code>
AMQ-3863	XA session is returned twice to the pool
AMQ-3865	<code>AjaxTest</code> fails all tests due to line ending differences
AMQ-3867	Unable to delete messages whose original destination is virtual topic from Web console
AMQ-3879	Temporary queues may be deleted by the wrong connection
AMQ-3885	ActiveMQ java client doesn't scale to thousands of queues
AMQ-3887	Occasional <code>NullPointerException</code> during <code>NetworkConnector</code> connection
AMQ-3889	Body preview of <code>BytesMessages</code> change when browsed multiple times from <code>QueueViewMbean</code>

Issue	Description
AMQ-3896	AMQ3622Test throws NumberFormatException on ec2/ubuntu 10.04
AMQ-3897	Stomp 1.1 keep alive does not work with <code>stomp+nio</code>
AMQ-3903	Failed to fire fast producer advisory, reason: <code>java.lang.NullPointerException</code>
AMQ-3905	<b>activemq:create-broker</b> Karaf command only results in a locally visible broker
AMQ-3908	<code>StompSslAuthTest.testSubscribeWithReceiptNotAuthorized()</code> fails
AMQ-3912	Durable subscribers store messages in error with broker attribute <code>persistent="false"</code>
AMQ-3920	Performance issue with delay policy in <code>DestinationBridge.onMessage</code>
AMQ-3923	Webconsole should import <code>javax.servlet.*</code> too
AMQ-3925	Advisory messages/topics not generated for <code>ActiveMQ.Advisory.FULL</code> or <code>ActiveMQ.Advisory.FastProducer.Queue</code>
AMQ-3927	Can't connect to Stomp 1.1 using telnet
AMQ-3929	Stomp multiple header handling incorrect per the 1.1 spec
AMQ-3932	<code>receiveNoWait</code> hangs when broker is down, using failover and <code>prefetch=0</code>
AMQ-3934	<code>QueueViewMBean.getMessage</code> throws <code>NullPointerException</code> when message not found
AMQ-3939	FailoverTransport never closes backup connections
AMQ-3953	<code>org.apache.activemq.util.URISupport.isCompositeURI</code> doesn't work properly
AMQ-3954	Intended delivery mode for <code>JMSUsecaseTest</code> is not tested
AMQ-3958	<code>META-INF/spring.schemas</code> does not contain a reference to 5.6.0 schema
AMQ-3961	Durable subscriber only receives part of the persisted messages on re-connect

Issue	Description
AMQ-3976	ActiveMQMessageProducer::send uses == instead of equals to compare destinations
AMQ-3979	AjaxServlet preventing Tomcat Container from shutting down
AMQ-3981	ActiveMQSslConnectionFactory.java now has an Apache commons dependency
AMQ-3988	PooledSession throws an Exception at closing
AMQ-3989	ActiveMQSslConnectionFactory.setKeyAndTrustManagers does not work with failover enabled
AMQ-3994	DefaultDatabaseLocker will leak pooled connections on link failure
AMQ-3997	Memory leak in activemq-pool
AMQ-4001	activemq karaf feature uses different commons-lang than pom
AMQ-4002	Instance of BlobTransferPolicy and its URL are being shared among multiple messages
AMQ-4007	BrokerService TempUsage and StoreUsage default values are incorrect
AMQ-4017	Demand forwarding bridge uses value of asyncDispatch for advisory consumers
AMQ-4020	MessageStore IOExceptionHandler needs to deal in StoreExceptions
AMQ-4021	jdbc TransactionContext close does unnecessary checks on autocommit
AMQ-4031	BrokerFactoryBean logs error when starting a non persistent broker
AMQ-4033	Broker uses custom RMIServerSocketFactory class which cannot be unloaded due socket reuse
AMQ-4035	Null pointer in KahaDBStore
AMQ-4043	Web demo - Receive a message page renders an error page
AMQ-4044	Shutting down AcitveMQ broker started in foreground logs 2 times

Issue	Description
AMQ-4047	activemq-optional should include the JARs it needs
AMQ-4058	HTTP transport should remove options in URI
AMQ-4062	durableTopicPrefetch attribute in policyEntry in activemq.xml does not take effect
AMQ-4070	catstomp.rb does not work anymore
AMQ-4076	sizePrefixDisabled and/or maxFrameSize change in Apache ActiveMQ 5.6 broke FilePendingMessageCursor for big messages
AMQ-4080	Integrate the FuseSource LevelDB module into the Apache ActiveMQ build
AMQ-4084	Linux/Unix files have incorrect EOL when packaged
AMQ-4103	LeaseDatabaseLocker can not be changed from 5 sec poll
AMQ-4104	STOMP 1.1 CONNECTED frame has erroneously encoded headers
AMQ-4108	Cannot receive ActiveMQ.Advisory.MasterBroker messages when master dies and slave takes control
AMQ-4110	Web console can't send messages to the secured broker
AMQ-4115	Make sure there's no XSS in web demos
AMQ-4122	Lease database locker failover broken
AMQ-4142	SimpleAuthenticationPluginTest hangs intermittently
AMQ-4158	BTreeIndexTest hangs when run on Windows
AMQ-4166	Redelivery plug-in causes a deadlock with JobSchedulerImpl
AMQ-4179	Can't install activemq-extra feature
AMQ-4186	Web console XML views have duplicate contenttype headers - jsp errors
AMQ-796	Client may shutdown when failover connection is reconnecting
CAMEL-3458	Bindy should support clipping fields if they exceed maximum length allowed when using fixed length

Issue	Description
MB-1002	<destinationPathSeparatorPlugin/> is not recognized
MB-1008	Exploring JMS examples contains a duplicate type when build all examples in an IDE
MB-1013	Tomcat 6 complains that ActiveMQ doesn't shutdown a thread
MB-1028	NullPointerException when networked broker sends certificate with an invalid user name
MB-1029	Unable to generate unique id when range of ports are blocked
MB-1030	mKahaDB configuration causes activemq-data\mKahaDB\txStore directory to be created from where activemq script is invoked
MB-1032	NullPointerException in LastImageSubscriptionRecoveryPolicy
MB-1035	NullPointerException when starting broker followed by immediate NullPointerException when stopping
MB-1036	ActiveMQ failover Denial of Service
MB-1039	temp queues looping between networked brokers
MB-1040	STOMP "reply-to" headers have extra info prepended by the broker
MB-1041	After receiving exception "Async error occurred: javax.jms.JMSEException: The destination temp-queue://ID-xxxx does not exist", broker tore down network connection and re-created the network bridge
MB-1043	NullPointerException while loading node from kahadb during vmcursor replay
MB-1045	Purge command does not accept message selectors
MB-1046	java.lang.NegativeArraySizeException when starting the broker
MB-1047	Virtual Topic Subscriber and Individual Dead Letter Queue Handling

Issue	Description
MB-1049	Setting <code>ACTIVEMQ_USER</code> may result in permissions error on the some created files
MB-1050	<b>activemq-admin</b> not setting username & password on JMS Connection used by <b>activemq-admin browse</b>
MB-1052	<code>fileQueueCursor</code> does not support message priority
MB-1053	Examine size of temporary transaction files written to disk
MB-1054	Wrapper scripts configuration needs adjusting with respect to <code>chkconfig</code> and <code>wrapper.java.library.path.1</code>
MB-1058	<code>NullPointerException</code> when querying a starting broker use JMX program
MB-1067	Space at end of queue name is not honored by consumers
MB-1070	Failover using a JDBC Message Store and Virtual Topic can result in a lost message if queue is empty
MB-1072	<code>ConcurrentModificationException</code> in <code>org.apache.activemq.broker.region.Queue.iterate()</code>
MB-1073	Durable subscribers on durable topics don't receive messages after network disconnect
MB-1074	Connecting to Fuse MQ Enterprise using stomp from telnet issue
MB-1075	Fix Jetty security hole in ActiveMQ 5.5.x
MB-1085	<code>activemq-all.jar</code> is missing the <code>slf4j-log4j12</code> dependency
MB-1086	Network connector leaks when <code>conduitSubscriptions="true"</code>
MB-1087	<b>activemq-admin browse</b> help prints wrong argument name
MB-1096	Suspicious <code>NullPointerException</code> in log when network bridge cannot be established and <code>loggingBrokerPlugin</code> configured

Issue	Description
MB-1098	Topic subscriber is assumed to be slow consumer when prefetch is set to one
MB-1102	JMX stats are off when a duplicate consumer ID is added when using failover URI
MB-1104	STOMP subscriber does not receive TextMessage with null body sent from JMS
MB-1105	<code>StompNIOTransport doStop</code> should check for null before calling <code>selection.stop()</code>
MB-1106	Repeated call to <code>PooledConnection.setClientID()</code> with the same client Id should not raise a <code>IllegalStateException("Setting clientID on a used Connection is not allowed")</code>
MB-1108	Scheduled/Delayed messages lost during ungraceful broker shutdown
MB-1111	Composite destinations break simple authorisation through role aggregation
MB-1112	<code>DurableSubProcessWithRestartTest</code> intermittently throws <code>java.lang.ClassCastException: org.apache.kahadb.index.BTreeNode cannot be cast to org.apache.kahadb.index.ListNode</code>
MB-1115	Fuse MQ Enterprise JMX stats shows negative queue size
MB-1117	KahaDB journal files retained after delay in "unsubscribing" durable subscriber from topic
MB-1120	<code>NullPointerException</code> exception occurs when stopping broker
MB-1125	Please make <code>bstat</code> more tolerant of <code>InstancesNotFound</code> situations
MB-1129	Duplex option on network connector not supported
MB-1130	Non-persistent messages held in memory are not cleaned up when destination is deleted

Issue	Description
MB-1133	In the <code>DurableSubProcessWithRestartTest</code> acknowledged messages appear to intermittently be redelivered to the subscriber
MB-1134	Why do we need to get the Size/Count of the Topic messages during consumer remove
MB-1136	<code>PendingMessages</code> not being dispatched to <code>DurableSubscriber</code>
MB-1140	Broker performance does not scale with multiple consumers when using JDBC persistence adapter
MB-1144	Invalid error: NACK received but connection is in v1.0 mode using a STOMP client
MB-1152	The defined <code>SslContext</code> is not used by the https transport protocol
MB-1159	The current <code>sslContext</code> element does not provide the ability to define the keystore key password key
MB-1161	<code>CachedLDAPAuthorizationMap</code> can't reconnect to LDAP Server if the LDAP server was temporarily down
MB-1164	The <code>MirroredQueue</code> feature uses the <code>Topic MemoryUsage</code> instead of the <code>Queue MemoryUsage</code> when forwarding the message to the queue after sending it to the <code>Topic</code>
MB-1167	Investigate startup deadlock with vm transport
MB-1169	Broker should not send advisories for slow consumers or fast producers if the destination in question is an advisory destination already
MB-1173	Broker sends a <code>RECEIPT</code> frame although the subscription fails
MB-1174	The JMX message move, copy and remove operation do not take messages in FIFO order
MB-1175	Messages sometimes not received by active subscription
MB-1176	JMX connector does not bind to a specific port when a <code>connectHost</code> is specified on the <code>managementContext</code>
MB-1179	Fuse icon file <code>webapps/favicon.ico</code> is broken

Issue	Description
MB-1180	Add ability to set a timeout for the calls made to Broker MBeans
MB-1185	JConsole <code>browse()</code> function does not work if <code>useCache=false</code>
MB-1186	Duplicated durable subscriptions after broker restart with option <code>keepDurableSubsActive=true</code>
MB-1190	<code>data.db</code> size is not included in calculation to monitor <code>systemUsage</code> settings
MB-1196	Remove the synchronized definition from the <code>ActiveMQEndpointWorker</code> <code>anonymous</code> <code>Work</code> instance
MB-1197	Race condition with <code>StompServlet</code> and transport listener for websockets
MB-1198	<code>data.db</code> is not cleaned up properly when durable subscribers come and go off-line
MB-1199	<code>NullPointerException</code> exception in <code>kahadb</code> after index issue
MB-1200	<code>NetworkBridgeFilterFactory</code> should be assigned to <code>Queue</code> not <code>NetworkBridge</code>
MB-1203	Expired msgs not getting acked to broker causing consumer to fill up its prefetch and not getting more msgs
MB-1207	<code>ActiveMQConnection</code> temp advisory consumer should respect <code>asyncDispatch</code> flag - can cause deadlock with slow consumers
MB-1208	Enqueue counts with <code>jms.prefetchPolicy.all=0</code>
MB-1211	When durable subscriber is stopped and then reconnects, messages are consumed but the pending queue count seems to stay 1 plus prefetch size or at prefetch size
MB-1212	<code>BlobJDBCAdapter</code> has invalid SQL for <code>addStatements</code>
MB-1214	Closing a <code>PooledConnection</code> does not seem to return associated sessions to the <code>SessionPool</code>
MB-1220	Web sockets demo fails when using localhost in connect uri

Issue	Description
MB-1224	ExpiredMessages > Prefetch Queue results in messages no longer being dequeued
MB-1226	Infinite TemqQueue advisory messages
MB-1229	Unable to configure memory limit on temporary topics
MB-1231	db.data file exhibiting abnormal growth
MB-1234	Killing ws:// connection after it has timed out (websocket.maxIdleTime=1000) from browser results in MBean Connection-> ws_sockets not being cleaned up
MB-1238	Problem with STOMP NIO + SSL
MB-1239	NIO + SSL: Client certificates are null
MB-1241	Missing some binary files in the release kit
MB-1248	Questionable processing of interruptions in TcpTransport::doStop
MB-851	Authorization failing with Open LDAP
MB-864	Intermittent performance degradation JDBC in the persistence adapter when a durable subscriber of priority messages falls behind
MB-884	Forwarded message cannot be distributed to the original broker
MB-885	Avoid stuck messages in a network of brokers
MB-894	Invalid data sent to nio:// throws OutOfMemoryException and may crash the broker
MB-903	STOMP Connection MBean fails to register
MB-907	Stomp consumer might not receive all msgs of a queue
MB-912	Unable to access Serializable class when receiving ObjectMessage in OSGi environment
MB-914	Fuse MQ Enterprise not stopping via JMX on AIX platform
MB-915	Investigate scalability of JDBC topic store with regards to durable subscriptions
MB-916	Expose isSlowConsumer for SubscriptionView

Issue	Description
MB-918	Connections web console page shows two rows per connection
MB-919	<code>staticallyIncludedDestinations</code> should always be forwarded
MB-922	Broker restart fails with <code>java.io.OptionalDataException</code> when trying to recover <code>ProducerAudit LRUCache</code>
MB-923	Implement eviction strategy based on property value uniqueness
MB-926	Broker may deadlock when creating queues under load
MB-927	Change Transport Failed message from INFO to WARN level
MB-929	Some brokers connections cannot be killed
MB-931	Web console shows incorrect number of messages for topic
MB-932	<code>activemq-web: SessionPool.returnSession()</code> should discard sessions that are closed
MB-934	Cannot publish to a deleted temp-queue destination
MB-936	Change way Broker MBean name is generated so that port is not used
MB-940	Unable to create durable subscriber with JMS selector using admin console
MB-945	Numeric selectors do not work in STOMP
MB-950	The persistent Stomp header is not part of a received <code>StompFrame</code> message
MB-953	Stomp subscription with receipt on an existing queue hangs
MB-954	Incorrect JMX properties after consuming messages using Stomp
MB-957	Stomp RECEIPT frame sent twice for the same msg causing error in STOMP consumer
MB-964	Large number of expiring messages causing <code>QueueSize</code> to grow

Issue	Description
MB-966	DLQ from a durable subscriber filling with expired messages results in non-expired messages not being read
MB-970	Problem with static List ENDED_XA_TRANSACTION_CONTEXTS in org.apache.activemq.TransactionContext
MB-971	Transport scheme NOT recognized: [http] in an osgi environment
MB-974	./activemq script cannot be started on Solaris OS 10
MB-977	ORA-01465: invalid hex number when using Oracle backend in the latest releases
MB-978	NullPointerException in TraceBrokerPath plug-in
MB-979	NetworkConnector MBean unregistration can fail with a transport disconnect and leave a dangling mbean
MB-980	Display issue viewing queues in jmx and admin console when using Oracle DB as a backend
MB-982	Failover issues in network connector
MB-985	TimeStampingBrokerPlugin causes messages to expire in DLQ queue
MB-991	When a producer from a network bridge is blocked by producer flow control, all producers from the network bridge get blocked
MB-992	NullPointerException in KahaDB on stopping during broker restart
MB-996	NullPointerException on websocket connection
MB-998	InterruptedException in InactivityMonitor
MB-778	Deleting a Queue from the console results in lost messages
MB-798	Problem with distributed XA Camel/ActiveMQ recovery
MB-699	Temporary queues create advisory topics without bound
AMQ-3945	QueueBrowser missing messages on first browse

Issue	Description
AMQ-3947	ActiveMQConnectionFactory doesn't set the nestedMapAndListEnabled property on new Connections
MB-1089	Syntax errors are not showing up in the log when the broker is started in the background
AMQ-1853	Optional non-blocking redelivery
AMQ-2834	Producers blocks when global <code>storeUsage</code> is smaller than persistent adapter chunk size; should warn of incorrect configuration

## Container

[Table 4.2 on page 35](#) lists the issues resolved between 7.0.2 and 7.1.

**Table 4.2. Container Issues Resolved in 7.1**

Issue	Description
ARIES-292	Unable to delete the *.eba file from the samples/blog/blog-assembly/target/load folder while it was running
ARIES-523	Misleading message from <code>PersistenceBundleHelper</code>
ARIES-537	Update ScopeAdmin impl to latest ResolverHook API
ARIES-546	SCM references in parent POM still point to incubator
ARIES-547	Fix up wrong or missing licenses in application module
ARIES-548	Remove references to incubator from code base in trunk and in 0.3-RCx branch
ARIES-550	Fix intermittent application itest failure <code>testDemoAppResolveFail</code>
ARIES-554	Aries JNDI bundle breaks remote JMX clients via RMI
ARIES-556	Aries fails to read <code>persistence.xml</code> files larger than 8192 bytes
ARIES-558	Risk of deadlock in <code>BundleQuiescer.run()</code>
ARIES-559	Isolated framework should work off current bundle list
ARIES-563	The <code>NamespaceHandlerRegistryImpl</code> does not actually reuse parsed schemas

Issue	Description
ARIES-564	The <code>cm</code> and <code>ext</code> namespaces should be lazy managers
ARIES-566	<code>NullPointerException</code> when generating bundle repository for invalid bundle location
ARIES-568	More memory leaks
ARIES-572	<code>NamingException</code> in <code>JMXConnectionFactory.connect()</code> calls with JMX over RMI calls
ARIES-573	Java2 security problem in Aries Managed Persistence contexts
ARIES-576	When the grace period is up the error message reports all services as missing, not the missing ones
ARIES-579	Update the name in the proxy-api and proxy-impl
ARIES-584	Blueprint managed service factory instantiates duplicate service
ARIES-586	Isolation based runtime doesn't work when resolving maven generated blueprint bundles
ARIES-591	Application isolation code doesn't cope properly with a warm start
ARIES-593	<code>ManifestHeaderProcessor</code> can't handle directives with spaces before ":@"
ARIES-599	Consistently use SLF4J Logging
ARIES-602	<code>osgi.console</code> port is not handled well
ARIES-604	<code>ClassCastException</code> in Felix bundle repository when generating repository XML
ARIES-608	<code>DefaultWorker</code> fails if loaded during framework shutdown
ARIES-609	<code>AriesFrameworkUtil</code> uses <code>DefaultWorker</code> on Equinox rather than the Equinox worker
ARIES-612	Cannot access referenced service in destroy-method
ARIES-613	Use <code>error()</code> instead of <code>info()</code> log in <code>BeanRecipe.destroy()</code> on exception

Issue	Description
ARIES-622	Close inputstreams in Application utils ManifestProcessor
ARIES-623	Another deadlock in Blueprint service lookup
ARIES-624	Missing version for asm import in proxy impl
ARIES-626	Aries Blueprint namespace handler schema with includes
ARIES-634	No thread safety in Blueprint Quiesce Participant
ARIES-635	Can't find resource for bundle <code>org.apache.aries.application.management.messages.AppManagementMessages</code>
ARIES-637	Woven Proxy does not cope well with inner classes
ARIES-647	JNDI <code>ObjectFactoryHelper</code> and <code>ContextHelper</code> have wide <code>doPriv</code> blocks
ARIES-654	Blueprint annotation scanning generates duplicate elements when annotated class is in fragment
ARIES-661	Deployment manifest <code>Import-Packages</code> ends up in strange format
ARIES-662	More problems with versioning and the application module
ARIES-665	Proxy weaving code must preserve <code>SerialVersionUID</code>
ARIES-666	Proxy weaving code needs to deal better with missing classes and superclasses in other bundles
ARIES-667	<code>OBRariesResolver</code> can return bundle information for bundles with higher version than expected
ARIES-668	Proxy or weaving code should not mark added synthetic methods final
ARIES-669	Proxy or weaving code should mark all its changes synthetic
ARIES-670	blueprint.api bundle exports <code>org.osgi.service.blueprint</code> package at version 0.0.0
ARIES-673	Proxy code changes handleable <code>NoClassDefFoundError</code> into <code>ClassFormatError</code>
ARIES-674	Do not proxy <code>javax.*</code>
ARIES-677	Service references released before bean destroy methods execute during namespace handler unregister

Issue	Description
ARIES-678	Java2 security not working for proxied interface
ARIES-680	Be more careful to use scope provided external dependencies
ARIES-688	ASM package imports are unversioned in proxy-bundle
ARIES-690	<code>ClassCircularityError</code> caused by proxy weaving
ARIES-693	Interface proxy does not delegate <code>Object</code> methods like <code>equals</code> , <code>hashCode</code> or <code>toString</code>
ARIES-694	Proxy manager can return a stale proxy built against a previous classloader for bundles having undergone refresh
ARIES-696	Blueprint container can appear to loose memory when frequently restarted
ARIES-697	Java 2 security permission failure in JNDI - Util code path
ARIES-698	Missing message resource
ARIES-700	MBean Tracker should listen for all services
ARIES-703	<code>JDKProxyManager</code> cannot proxy blueprint beans
ARIES-704	<code>BundleToClassLoaderAdapter</code> does not implement <code>loadClass(String, boolean)</code>
ARIES-705	Proxy code is weaving JPA metamodel classes and can cause JPA errors
ARIES-709	Well behaved shutdown of the application runtime
ARIES-711	JMX core whiteboard doesn't shutdown well
ARIES-714	<code>SimpleBundleInfo.getExportService()</code> returning wrong value
ARIES-720	Improve waiting for namespace handler message
ARIES-721	<code>NullPointerException</code> in <code>BeanRecipe.getDestroyMethod</code>
ARIES-725	Aries Application modeller does not find and model anonymous inner Blueprint reference or service components
ARIES-726	<code>NullPointerException</code> in <code>CompositeClassLoader</code>

Issue	Description
ARIES-730	Generation of the osgi.identity requirement must support version ranges
ARIES-736	Aries does not take into account the concept of complete/incomplete Persistence Units
ARIES-738	The subsystem resolver hook modifies a collection it's iterating over
ARIES-743	Subclass cannot be created by <code>ProxySubclassGenerator</code> when there is static final method
ARIES-745	Miss parsing default properties defined by new blueprint-ext 1.1.0 schema
ARIES-746	Aries Proxy fails to properly proxy <code>Object</code> methods for interfaces
ARIES-750	Minor memory leak for composite frameworks inside applications
ARIES-762	Bundle framework manager bean should be lazy
ARIES-763	Remove OSGi <code>VersionRange</code> dependency
ARIES-764	JNDI can go into an infinite loop
ARIES-765	Attempting to execute an operation on a closed <code>EntityManagerFactory</code> when the persistence unit is re-deployed
ARIES-767	Service property assigned with a service reference gets a <code>ServiceProxyWrapper</code>
ARIES-768	Application manager can take 5 minutes to shutdown
ARIES-769	<code>ClassCastException</code> during JNDI lookup from WAB inside EBA
ARIES-770	<code>BundleFrameworkConfigurationFactoryImpl</code> breaks LDAP syntax of service Filter
ARIES-771	Blueprint config admin pulls in non-exported blueprint internals
ARIES-774	Problem modelling nested bundles
ARIES-775	<code>ClassCircularityError</code> while weaving a class

Issue	Description
ARIES-776	<code>NullPointerException</code> in <code>AriesFrameworkUtil</code> and <code>DefaultWorker</code> static initializers
ARIES-777	<code>AriesFrameworkUtil FelixWorker</code> doesn't work on <code>r4.3 felixes</code>
ARIES-778	<code>RecursiveBundleTracker</code> doesn't work across isolated Regions
ARIES-782	<code>AbstractCompendiumHandler</code> uses <code>ServiceTracker.getTrackingCount</code> in the wrong way
ARIES-787	Class proxying should not be enabled by default
ARIES-788	Possible <code>NullPointerException</code> when destroying the blueprint container
ARIES-796	<code>PropertyPlaceholder</code> does not really like JPA elements
ARIES-797	Ease blueprint 0.2 to 0.4 compatibility changes
ARIES-799	Aries Repository Generation does not respect blueprint collection semantics
ARIES-800	Closing a recursive bundle tracker opens it
ARIES-801	Aries Proxy cannot proxy abstract classes
ARIES-802	Dependent restart causes <code>ComponentNameAlreadyInUseException: Name 'blueprintContainer' is already in use by a registered component</code>
ARIES-803	Versioning problems in JNDI 0.3.1 release bundles
ARIES-804	Unable to delete EBA file if the value of <code>defaultUseCaches</code> is set to <code>false</code> on <code>JarURLConnection</code> on a separate thread during installation
ARIES-808	Problem with <code>JPAWeavingHook</code> in an environment that uses Composite Bundles
ARIES-809	Not possible to configure transaction timeout
ARIES-819	<code>OsgiFriendlyClassWriter.getCommonSuperClass</code> appears to have some errors

Issue	Description
ARIES-820	New <code>org.apache.aries.util-0.5</code> jar exports <code>org.apache.aries.util</code> package at same version as the <code>v0.4</code> jar despite new classes existing in package
ARIES-829	<code>ReferenceListRecepie</code> releases using the wrong <code>BundleContext</code>
ARIES-830	Service registration is not removed when an application is uninstalled
ARIES-831	Java 2 security <code>AccessControlException</code> when using JNDI lookup with java2 security enabled
ARIES-832	JPA load-time enhancement fails for a WAB
ARIES-833	Weaving controller switch does not work on IBM JVM v6
ARIES-834	Unable to convert value <code>ListIndexIterable</code> to type <code>java.lang.Iterable&lt;Something&gt;</code>
ARIES-838	<code>ClassCircularityError</code> in <code>BlueprintContainerImpl</code> when using a security manager
ARIES-843	Bean can not be created if constructor argument use generics
ARIES-846	The Aries transaction manager does not recover transactions correctly
ARIES-847	<code>NullPointerException</code> in <code>org.apache.aries.blueprint.container.BeanRecipe.destroy</code>
ARIES-848	<code>blueprint-annotation-impl</code> should actually make use of it's properties
ARIES-851	<code>BundleTrackerCustomizer</code> in <code>BundleHookBundleTracker</code> is called multiple times for the same event
ARIES-854	<code>NullPointerException</code> in <code>TransactionManager</code> when <code>Felix configAdmin</code> is used
ARIES-856	Possible deadlock when starting the transaction manager

Issue	Description
ARIES-861	Error on retrieving constructor for proxy of Apache Karaf <code>BlueprintCommand</code> class on jdk 6 update 33
ARIES-863	Blueprint container needs to use bundle's permissions, not its own permissions, for looking up services
ARIES-867	Deadlock if stopping a blueprint bundle while the blueprint container is in the create state
ARIES-872	<code>PersistenceDescriptorParserImpl</code> doesn't accept namespace prefixed tags
ARIES-874	Blueprint should treat "value-type" on a map as a default, not a requirement
ARIES-875	<code>ReferenceRecipe</code> may "unget" a service without ever "getting" it
ARIES-877	The <code>BeanRecipe</code> is missing the factory recipe as a dependency
ARIES-878	Threading issues with <code>&lt;cm:managed-properties /&gt;</code>
ARIES-880	When recovering transactions, only recover old branches to avoid rollback of in-progress transactions
ARIES-881	The transaction manager is very slow in low concurrency
ARIES-882	A thread is not stopped when the transaction manager is destroyed
ARIES-884	<code>ClassCastException</code> in JMX when installing some bundles
ARIES-885	In container managed mode, a single non thread safe entity manager is used to service all requests when no transaction is active
ARIES-894	Unable to access public methods overridden/implemented in a protected class
ARIES-895	Missing filter directive on <code>Require-Capability</code> does not translate to a filter value of <code>&lt;namespace&gt;=*</code>
ARIES-896	Deadlock with blueprint services
ARIES-897	The <code>ReferenceRecipe</code> sometimes unget the tracked service for no reason

Issue	Description
ARIES-898	The blueprint container is not correctly cleaned when a mandatory namespace is unregistered
ARIES-899	Possible concurrent access to the namespace handler registry
ARIES-900	Unresolvable root subsystem should have no effect on the system
ARIES-901	Version attribute not applied to multiple package names separated by semicolons in import package header
ARIES-902	Reference counts not being checked before removing constituent relationships between the "provisioned to" subsystem and bundle resources
ARIES-907	Persisted, unscoped subsystems are not being correctly started on restarts
ARIES-918	Start operations on the root subsystem should not affect its constituent bundles
ARIES-921	java.lang.IllegalStateException: Orphaned bundle revision detected: org.eclipse.osgi_3.8.0.v20120529-1548
ARIES-922	NullPointerException in SubsystemResource.findContent
ARIES-923	A service proxy obtained from a reference list can return a null service, leading to NullPointerException
ARIES-930	The abstract reference recipe may end up tracking the same reference multiple times
ESB-1604	Intermittent exception when starting Apache Karaf - org.apache.aries.jmx - 0.3.0   MBean is already registered
ESB-1607	If debug logging is enabled on a clean install a deadlock occurs
ESB-1670	Karaf JMX Config MBean behaves in unpredictable ways
ESB-1683	Configuration of org.apache.aries.transaction.cfg not honored at runtime when Aries TX Manager is created
ESB-1740	The bundles permissions are bypassed when running code from the console

Issue	Description
ESB-1741	Add the needed stuff to ease running karaf in a secured mode
ESB-1756	When Karaf Master lock is lost it should not try to regain the lock during shutdown
FELIX-3760	Clean webconsole startup and disposal
KARAF-1040	Commands should not catch exceptions but should rethrow them
KARAF-1050	<b>osgi:start xxx</b> doesn't print anything
KARAF-1066	Make features XML parser more forgiving
KARAF-1101	Completion does not work when quiesce manager is deployed
KARAF-1117	Log messages appear on stdout when the feature http is installed
KARAF-1122	Feature <configfile/> creates an empty file if the file URL is not resolved
KARAF-1124	Apache Karaf does not work properly with closing brace in the working directory path
KARAF-1133	Error executing command 'start' when starting a child instance
KARAF-1139	Redeploy kar causes the installation of old feature
KARAF-1143	Karaf (Config Mbean) can not recognize the features when installation path contains blank space
KARAF-1144	When running a single remote command through SSH, the SCOPE variable isn't set
KARAF-1161	<b>shell:new</b> does not support the creation of arrays
KARAF-1162	A command that can not be loaded breaks the whole completion
KARAF-1164	Archetypes are not valid
KARAF-1174	The war feature cannot be installed after the cxf feature
KARAF-1175	Duplicate key exception should be handle locally to avoid to affect the whole MBean
KARAF-1179	<b>dev:watch *</b> doesn't notice new bundles added to the container

Issue	Description
KARAF-1182	Apache Karaf features-maven-plugin always selects lowest version in range
KARAF-1199	<b>dev:watch</b> issues "[WATCH]" announcements only to the issuing shell
KARAF-1202	<b>log:tail</b> spins with debug on
KARAF-1212	<code>NullPointerException</code> during update of the <code>FeatureFinder</code>
KARAF-1215	Shell scripts are incompatible with <code>/bin/sh</code> on Solaris
KARAF-1216	<code>add-features-to-repo</code> goal does not reclaim file handles fast enough
KARAF-1220	<code>o.p.karaf.management</code> bundles must stop when its configured keystore is not available
KARAF-1226	Karaf Client cannot run a script
KARAF-1252	Features core bundle should not depend to shell and management bundles
KARAF-1256	Archetypes should use dynamic variables
KARAF-1257	Configuration completers should avoid using <code>getConfiguration</code> method of <code>config admin</code>
KARAF-1260	Console doesn't like it when the console window is too small - no line wrapping for commands
KARAF-1265	Add AIX, HP-UX, Solaris, and "custom" support in the service wrapper
KARAF-1268	Allow multiple commands in karaf script
KARAF-1279	<code>IOExceptions</code> used in an incompatible way with Java 5
KARAF-1284	Karaf bundle archetype maven bundle plugin configuration is missing "instructions" tags
KARAF-1298	<code>dev:watch</code> does not work in some cases
KARAF-1304	Quick help text for <b>features:info</b> is erroneous
KARAF-1305	Error with Basic HTTP Authentication when using karaf realm
KARAF-1318	User bundles are treated as system bundles

Issue	Description
KARAF-1343	Features repo points to the old pax-wicket app
KARAF-1354	SSH Log-In failes with "Authentication failed" with valid credentials
KARAF-1360	Configration update doesn't work
KARAF-1373	features-maven-plugin, unexpected text in stderr
KARAF-1374	Fileinstaller logging is not enabled by default
KARAF-1387	Warning to missing a feature repository name even when the name is defined
KARAF-1388	SSHD authorized key provider should log in DEBUG
KARAF-1389	SSH doesn't correctly use the karaf.base variable
KARAF-1392	Removing a KAR should uninstall the shipped features
KARAF-1394	Custom login modules not seen with Equinox
KARAF-1416	Blueprint archetype instructions is missing
KARAF-1430	Default child instance config is not the same as the root instance
KARAF-1491	Admin service not able to start child instances when the JDK path contains a space on OS X
KARAF-1496	Bad login when using sufficient modules but when the first fail
KARAF-1529	<b>command-watch</b> messes the output when used with commands that take longer than the interval
KARAF-1538	Exceptions when unregistering MBeans during a restart
KARAF-1541	<b>jaas:realm-manage</b> raises a <code>NullPointerException</code>
KARAF-1564	karaf feature validate plugin should support to load the exports packages from dependency features
KARAF-1566	<b>instance:clone</b> set the source instance in error
KARAF-1573	Potential ZipFile leak at <code>KarArtifactInstaller.install()</code>
KARAF-1585	Installing using wrap protocol fails when specifying bundle version
KARAF-1587	When executing a command through the client, no error is printed in the console in case of errors

Issue	Description
KARAF-1609	<b>command-watch</b> info does not work
KARAF-1617	Blueprint deployer in combination with maven URL deployer creates wrong OSGi/blueprint/ file
KARAF-1666	Default configuration for <code>jetty.xml</code> could create problems
KARAF-1675	Wrapper service requires a shell
KARAF-1683	"no matching cipher found" error connecting via SSH to wrapper Karaf service - on Ubuntu
KARAF-1695	Startup fails on Windows with only JRE installed
KARAF-1699	MBeans should support the same flags as the commands
KARAF-1702	Stopping the console bundle should not shutdown the OSGi framework
KARAF-1706	Features bundle versions are not consistent
KARAF-1715	Occasional freeze on <code>feature:install webconsole</code>
KARAF-1736	Feature spring-struts can't be installed
KARAF-1754	Updating <code>features.xml</code> in auto deploy folder results in duplication
KARAF-1756	No SSH connection possible on Debian 6.0.5
KARAF-1759	No way to start obr dependencies by default
KARAF-1765	The <b>obr</b> shell <b>deploy</b> and <b>start</b> commands always deploy optional dependencies
KARAF-1796	Feature install sequence should be install/install/install...start/start/start
KARAF-1797	<code>NullPointerException</code> thrown from <code>OsgiConfiguration.unregister</code>
KARAF-1809	Feature spring-web-portlet can't be installed
KARAF-1814	Cursor keys do not work when using bin/client on windows
KARAF-1815	When ssh'ing from a Windows box into a Unix box, arrow keys are not correctly interpreted
KARAF-1821	Some etc files are executable whereas it should not be

Issue	Description
KARAF-1822	<code>BundlesMBean</code> should use <code>bundles</code> attribute instead of <code>list()</code> operation
KARAF-1824	<code>tooling-exam</code> contains reference to wrong commons-io artifact
KARAF-1825	<code>SystemMBean</code> should provide <code>startLevel</code> attribute
KARAF-1826	<code>ConfigMBean</code> should use <code>configs</code> attribute instead of <code>list()</code> operation
KARAF-1830	<code>ObrMBean</code> should use attribute for bundles and URLs instead of list operations
KARAF-1831	<code>PackagesMBean</code> should use attributes for imported/exported packages instead of operations
KARAF-1832	<code>ServicesMBean</code> should use attribute instead of <code>list()</code> operation
KARAF-1839	System bundle also should export <code>javax.xml.ws.spi.http</code> package
KARAF-1840	Should also endorse <code>saaj-api</code>
KARAF-1845	Minimal distribution doesn't start
KARAF-1852	OSGi packages are exported with wrong versions
KARAF-1853	Attached kar deploys to a different snapshot build number than the main artifact
KARAF-1879	admin management bundle has unnecessary imports
KARAF-1882	Provide level attribute in the <code>LogMBean</code>
KARAF-1888	Remove aliases by default
KARAF-1905	ASM4 causes the Proxy/Weaving of Xerces, but that then causes validation factories to fail
KARAF-1949	console shutdown -f hang
KARAF-1978	If use script to start a child instance then using <code>karaf console admin:list</code> can't get the instance correct status
KARAF-1986	<code>instance.properties</code> file doesn't get updated if <code>karaf.name</code> is changed

Issue	Description
KARAF-1992	PropertiesLoginModule handles usernames with backslash not correct
KARAF-2051	Duplicate definition of <code>org.ops4j.pax.url.mvn.localRepository</code> in <code>org.ops4j.pax.url.mvn.cfg</code>
KARAF-2052	Progress bar doesn't display properly on 80 char consoles
KARAF-536	Backspace no longer works in Putty after using 'connect' command to connect to other instance, and commands are printed in only 2 columns
KARAF-913	Omitted <code>@Command</code> on Gogo plugin is hard to debug because of <code>NullPointerException</code>
ENTESB-286	<b>admin:list</b> always throws <code>java.io.IOException</code> even if the command is successful
ENTESB-287	Child containers command line gets truncated around at approx 55chars
ENTESB-291	Please make make <code>rmiRegistryHost</code> configurable
ENTESB-292	<code>IllegalStateException</code> when the persistence bundle gets resolved
ENTESB-306	pax web still using uninstalled bundle
ENTESB-307	After starting child container with <b>admin start child</b> , <b>karaf admin:list</b> still shows state stopped, not showing started
ENTESB-419	Cannot install patches as shell script
ENTESB-420	Cannot uninstall patch
ENTESB-450	<b>jaas:manage</b> cannot attach to <code>ZookeeperLoginModule</code>

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## Fuse Fabric

[Table 4.3 on page 50](#) lists the issues resolved between 7.0.2 and 7.1.

**Table 4.3. Fuse Fabric Issues Resolved in 7.1**

Issue	Description
FABRIC-226	aws-ec2 cloud provider attempts to connect before it is configured
FABRIC-245	setting resolver to a value other than localhostname doesn't appear to take effect for cloud containers
FABRIC-248	Asynchronous registration of a cloud provider to zookeeper is broken
FABRIC-254	Can't use <b>profile-edit</b> to set a property than contains equal signs
FABRIC-270	Race condition when creating remote ensemble servers
FABRIC-277	There are cases were the fabric agent falls inside an infinite loop updating itself
FABRIC-279	ClassNotFoundException: org.apache.felix.service.command.Function
FABRIC-282	The fabric-camel component is not accepting options in the URI
FABRIC-286	<b>fabric:container-create-ssh</b> will create the specified number of remote root containers, but only 1 is accessible
FABRIC-290	<b>fabric-ensemble-create</b> has the wrong completer for commands
FABRIC-291	Falling back to the default profile doesn't always work
FABRIC-293	fabric-jclouds restarts the shell
FABRIC-294	NullPointerException in <b>cloud-provider-remove</b>
FABRIC-295	Child containers should reuse their parents resolver and addresses
FABRIC-297	Artifacts stored in the root container's system repo directory do not get updated
FABRIC-300	The patching service should properly handle options on symbolic names
FABRIC-301	Fabric zookeeper digest uses platform dependent <code>String.getBytes()</code>
FABRIC-302	When creating Fuse Management Console, a bunch of jclouds related exceptions appear in the log

Issue	Description
FABRIC-303	The upgrade to karaf-jclouds 1.5.3 causes Fuse Management Console to fail provisioning
FABRIC-307	<b>fabric:create</b> always ask for a login/password
FABRIC-308	The agent downloads jars that are already present in the system folder
FABRIC-309	The <code>mq</code> profile doesn't deploy a broker
FABRIC-310	Installing the zookeeper commands fails
FABRIC-312	<code>IOException</code> when trying to create containers based on <code>example-mq</code> or <code>example-camel</code> profiles
FABRIC-313	When creating a fabric using Fuse Management Console, a lot of jersey related <code>NullPointerException</code> are logged
FABRIC-315	The demo package has changed
FABRIC-318	The fabric features service does handle recreating the ensemble gracefully
FABRIC-323	<code>IllegalStateException</code> : No ssh agent found trying to connect to a child container
FABRIC-324	The response to <b>fabric:create</b> without password options is confusing
FABRIC-325	The <code>--resolver</code> option in <b>fabric:join</b> has incorrect online help
FABRIC-328	Child container with just the <code>default</code> profile fails to provision successfully
FABRIC-330	<b>fabric:join</b> fails with an authentication error
FABRIC-331	<b>fabric:container-create-cloud</b> new-user options are not working
FABRIC-332	<b>fabric:create</b> username/password prompt - Weird Unicode symbols when backspace pressed
FABRIC-333	Typo in error message when installing features on a managed container
FABRIC-334	WARN: listeners are taking too long to process the events
FABRIC-336	<code>fabric-jolokia</code> doesn't compile when using Java 7

Issue	Description
FABRIC-337	Connecting to a container without specifying the <code>--username</code> option causes a <code>NullPointerException</code>
FABRIC-339	Typo in fabric error message
FABRIC-340	<b>fabric:container-create-child</b> can throw a <code>NullPointerException</code>

# Chapter 5. Enhancements

## Messaging

[Table 5.1 on page 53](#) lists the enhancements between 7.0.2 and 7.1.

**Table 5.1. Messaging Enhancements in 7.1**

Enhancement	Description
MB-1024	Revert the Oracle jdbc adapter to a variant of the default jdbc adapter in place of the one supporting blobs
AMQ-1191	JDBC based Master/Slave not supported for TransactSQL based databases (SQL Server and Sybase)
AMQ-1492	SET AUTOCOMMIT TO OFF is no longer supported Postgre8.1 Error
AMQ-1514	Patch HTTP connector to support proxy authentication if proxyUsername and proxyPassword provided
AMQ-1540	Patch to trim spaces from entry fields in web console app
AMQ-1905	Method required: ObjectName[] ConnectionViewMBean.getConsumers()
AMQ-1907	Method required: ObjectName SubscriptionViewMBean.getConnection()
AMQ-2229	Remove warnings from CSS file
AMQ-2535	Jetty SSL configuration
AMQ-2741	Provide visibility onto destination SlowConsumerStrategy via JMX
AMQ-2845	log4j conf reload via JMX ignores log4j.configuration setting
AMQ-2911	Option to make all consumers retroactive
AMQ-2961	Audit, test and update libraries in latest Apache ActiveMQ distribution
AMQ-3074	Expose TransportConnection.stopping
AMQ-3116	Unicode characters are not shown correctly in message body

Enhancement	Description
AMQ-3135	<code>ActiveMQ.Advisory.Connection</code> messages should contain client ip/host
AMQ-3137	Outbound bridges should handle remote connectivity problems at startup
AMQ-3173	Better representation of <code>ActiveMQMessage</code> messages on server page <code>message.jsp</code>
AMQ-3224	Redelivery per destination
AMQ-3227	Support synchronous sending in ActiveMQ streams
AMQ-3322	Minor code improvements in security module
AMQ-3326	Synchronization point in <code>RegionBroker</code> adding and removing producers and consumers
AMQ-3339	Allow for an option to bound the number of GC'd Destinations when using <code>gcInactiveDestinations=true</code>
AMQ-3383	Add a string property (token) to <code>ConnectionControl</code> so the broker could potentially communicate a security token to a client after it authenticates
AMQ-3406	Enable <code>BrokerServiceAware</code> support for <code>DiscoveryAgent</code>
AMQ-3410	<code>AbstractAmqCommand</code> should allow the connection factory to be changed
AMQ-3412	<code>activemq-camel</code> bundle doesn't need to export the package of <code>META-INF.services.org.apache.camel</code>
AMQ-3415	Show message timestamp in the RSS <code>pubDate</code> field in Web console
AMQ-3436	Support prioritization of messages pending dispatch
AMQ-3439	<code>NetworkConnectorViewMBean</code> doesn't expose <code>suppressDuplicateQueueSubscriptions</code> and <code>suppressDuplicateTopicSubscriptions</code>
AMQ-3449	Add Stomp v1.1 support
AMQ-3464	XML view for subscribers in admin console

Enhancement	Description
AMQ-3474	Investigate further <code>onUsageChange</code> flushing for <code>FilePendingMessageCursor</code>
AMQ-3482	Make <code>PooledConnectionFactory</code> 's <code>sessionPool</code> non-blocking in case its full
AMQ-3483	Cleanup TODOs "Auto-generated catch block" to improve the quality of Tag List Report
AMQ-3486	Add check to prevent Durable Subscriptions on Session that are in Individual Ack mode
AMQ-3500	Setting destination options should validate against typos
AMQ-3508	SSL and TLS - Support list of included and excluded protocols
AMQ-3512	Using browse command fails when a message with an array of bytes is encountered
AMQ-3533	mKahaDB, allow the directory of a filtered destination to be specified, such that destination journals can be split across disks
AMQ-3554	<b>activemq:create</b> should use name as argument in place of option
AMQ-3558	Allow the base network consumer priority to be configured on a <code>networkConnector</code>
AMQ-3573	Hardcoded defaults for <code>systemUsage</code> not suitable for out of the box
AMQ-3574	Enable <code>systemUsage</code> configuration in <code>activemq.xml</code> out of the box
AMQ-3609	Turn inactivity monitor thread off by default
AMQ-3615	Advisory broker replay of destination advisories needs to distinguish temp destination from regular destination
AMQ-3638	Add LFU page cache as an option for kahaDB
AMQ-3639	Modify MKahaDB To support using one adapter per destination without explicitly listing every destination in the configuration
AMQ-3646	Allow KahaDB to run without disk syncs, higher throughput without the JMS persistence guarantee

Enhancement	Description
AMQ-3667	Use 1G heap by default and <code>UseDedicatedTaskRunner=false</code>
AMQ-3682	Karaf commands should try using <code>--jmxlocal</code> by default
AMQ-3683	Enhance the <code>InactivityMonitor</code> shutdown logic
AMQ-3696	Slave broker cannot be stopped in a JDBC Master/Slave configuration within OSGi
AMQ-3703	Replace use of class <code>Valve</code> with standard JDK <code>ReentrantReadWriteLock</code> in class <code>Topic</code>
AMQ-3705	When a destination is removed all the advisory topics for that destination should also be removed
AMQ-3714	<code>getScheduler() : Scheduler</code> of class <code>org.apache.activemq.ActiveMQConnection</code> should use lazy initialisation
AMQ-3718	Thread pool turnover is too heavy due to <code>Executor</code> configuration
AMQ-3750	Add a hint when storing a message so a message store can optimise message storage if the message is likely to be consumed quickly
AMQ-3770	Generalize LDAP group processing / LDAP group expansion
AMQ-3772	Add levelDB store support to Fuse MQ Enterprise
AMQ-3786	Add support for MQTT
AMQ-3788	<code>getStatus</code> on <code>ActiveMQConnectionFactory</code> is not implemented
AMQ-3813	Limit the number of producers and consumers created by a <code>Connection</code>
AMQ-3847	Optional import for <code>org.apache.activemq.pool</code> in <code>activemq-camel</code> should be required
AMQ-3859	Too tight version range in <code>activemq</code> features file
AMQ-3861	Offer a way to not set a transaction manager in <code>activemq-camel</code>

Enhancement	Description
AMQ-3878	Reset stats automatically without dependency on JMX / Java APIs
AMQ-3893	Adjust topic policy entry in default configuration
AMQ-3913	Stomp Spec allows for stomp headers to have spaces in key or value we currently trim
AMQ-3914	Add support for MS SQL JDBC driver 4.0
AMQ-3971	Remove <code>System.out.println</code> from <code>ActiveMQConnection</code>
AMQ-3972	Add an <code>isDisposed</code> check before calling <code>propagateFailureToExceptionHandler</code> in <code>FailoverTransport</code>
AMQ-3983	Fix OSGi dependency
AMQ-3986	Allow <code>optimizeDurableTopicPrefetch</code> to be set using resource adapter properties
AMQ-3991	Output version number in started log line to be consistent
AMQ-4003	Add option to <code>PooledConnectionFactory</code> to control if connection should be created on start-up or not
AMQ-4004	activemq-pool - Rename <code>maximumActive</code> option <code>maximumActiveSessionPerConnection</code>
AMQ-4008	Tomcat WARN on shutdown about <code>ThreadLocal</code> not cleared from <code>log4j</code>
AMQ-4011	Refactor <code>IntrospectionSupport</code> to avoid using Java bean property editors
AMQ-4012	Use english locale for introspection support when discovering setter/getter method names
AMQ-4015	Add uptime to broker mbean and when stopping broker to report its uptime
AMQ-4016	Seems like static thread pool is not used in <code>org.apache.activemq.ActiveMQConnectionFactory</code>
AMQ-4019	Make better use of commons-pool in <code>activemq-pool</code>

Enhancement	Description
AMQ-4026	Refactor logic to shutdown thread pools using a single API to ensure better shutdown and offer logging et all
AMQ-4027	Add support for Java 7 in AbstractJmxCommand
AMQ-4029	Unregistering mbean should handle null mbean names
AMQ-4049	Polish the start stop logging
AMQ-4063	Trim RAR to not included Derby JAR
AMQ-4067	Prefix Thread names with ActiveMQ
AMQ-4177	<code>browseMessages()</code> fails when using Jolokia to browse JMX
AMQ-1928	Limit the maximum number of connections to a broker
AMQ-2455	Need a facility to retry JMS connections to a foreign provider by the ActiveMQ JMS bridge
AMQ-2570	Apache Karaf support
AMQ-3236	In the case of DLQ processing due to an exception from <code>onMessage</code> , provide the exception string as a message property
AMQ-3298	Cannot create bridge to WebSphere queue using default messaging provider
AMQ-3623	Add <code>DefaultTestAppender</code> utility abstract class
AMQ-3632	Allow easy creation of purely static bridges
AMQ-3769	Support doing non-blocking sends that uses an async callback that gets notified when the send has been received by the broker
AMQ-3917	Apache ActiveMQ should support multiple durable subscriptions per Stomp client
AMQ-4005	Implement pluggable broker lockers
AMQ-4162	Provide JMX visibility into options applied via destination name query parameters
MB-1031	Contention on a mutex during a stress when using <code>SimpleAuthenticationPlugin</code>
MB-1077	Improve failover clustering so we can better support active-active setups

Enhancement	Description
MB-1092	Add troubleshooting, diagnostic script to capture commonly needed broker runtime environment data
MB-1094	Add authenticated username info in <code>ConnectionViewMBean</code> and <code>SubscriptionViewMBean</code>
MB-1103	<code>activemq feature.xml</code> use old <code>org.apache.aries.transaction.manager</code> bundle cause intermittent hang on some platform
MB-1128	ActiveMQ dynamic failover randomizes client connect string causing imbalance
MB-1145	Incorrect paths used in <code>wrapper.conf</code>
MB-1150	Create a wrapper for use in a 64bit environment
MB-1155	The broker's message group feature should rebalance the message distribution when new consumers added
MB-1156	Add support for lease based lock to jdbc persistent adapter
MB-1157	Support for more sophisticated redelivery semantics
MB-1158	Support for secure websockets transport connector
MB-1187	Allow REST API to connect to the secured broker
MB-1188	REST API support for application/json as content type
MB-1193	Allow compression of messages across network of brokers
MB-1195	Reduce <code>maxRows</code> default value from 10,000 to a lower value like 200 in JDBC persistence adapter
MB-1210	Websocket transport: support increasing the max size of websocket messages
MB-1219	Enable <code>IndividualDeadLetterStrategy</code> to be able to use a suffix option
MB-707	Distribute a 64-bit version of Java Service Wrapper
MB-844	Please add the user name in the "User name or password is invalid" error line
MB-848	Please enhance STOMP message logging so that only STOMP Frames may be redirected to another file
MB-887	Implement nio+ssl transport

Enhancement	Description
MB-896	Pooled connections causes Temporary Destination leaks since connections don't get closed
MB-902	Broker does not check for expired persistent topic messages
MB-911	Exposing subscription statistics through Statistics plug-in
MB-930	Guard debug logging in message expiry task in AcitveMQ to avoid unnecessary loading the messages into memory
MB-942	Update activemq-admin usage to include info on how to change JMX access
MB-943	Confusion around discoveryAgent - Rendez-Vous
MB-952	Fuse MQ Enterprise cannot determine between Queue and Topic for Weblogic destination
MB-969	Change prefetch size limit for topics from 32766 to 32767
MB-973	The rar distribution is missing the slf4j-log4j jar file
MB-975	Upgrade our http transport implementation from using HttpCommon v3.1 to HttpCore/HttpClient v4.x
MB-984	Improve ActiveMQ's XSD to allow elements to appear in any order
MB-986	Add IP address of clients to ERROR messages created within transport layer
MB-988	Enhance HTTP transport connector to support message compression
MB-994	Exclude network connectors from <code>sendFailIfNoSpace</code> on producer flow control
MB-995	Added <code>masterslave</code> configuration for <code>networkConnectors</code> to simplify master/slave pair configuration
MB-1022	Please create an inactivity monitor on STOMP 1.0
MB-1076	Add ability to do priority failover and fallback, using the backup facility in the Failover transport
MB-859	Add support for wildcards for LDAP authorization map

Enhancement	Description
MB-905	Durable subscribers that are disconnected and haven't tried connecting for some time could get unsubscribed automatically
MB-920	Add ability for KahaDB log files to be created on a per-destination basis
MB-962	Please add support for JMS option <code>consumer.exclusive</code>
MB-967	Broker to persist <code>JMSRedelivered</code> flag
MB-990	Allow virtual topic interceptor to ignore messages that are received over network connector

## Container

[Table 5.2 on page 61](#) lists the enhancements between 7.0.2 and 7.1.

**Table 5.2. Container Enhancements in 7.1**

Enhancement	Description
ARIES-315	Blueprint-cm and the cm-properties element
ARIES-467	Internationalization of Apache Aries
ARIES-542	Use of <code>PlatformRepository</code> in resolvers needs to be more flexible
ARIES-545	Modelling classes are missing <code>equals()</code> methods
ARIES-557	Resolver exception should include more information about nature of missing requirements
ARIES-567	Create common utility method for service unregistration
ARIES-574	Expose <code>ModelledBundleResource</code>
ARIES-581	Provide a java6 parent
ARIES-583	Update the application components to use the <code>ext:default</code> capability for default service implementations
ARIES-601	Add service ranking to re-registered XA data source
ARIES-638	Logging improvements in <code>AriesApplicationManagerImpl</code>
ARIES-649	Move <code>ServicePair</code> from <code>jndi</code> to <code>util</code> so it can be used more widely

Enhancement	Description
ARIES-652	Improvements to IFile API
ARIES-657	Enhanced support for custom scopes
ARIES-671	Proxy code memory usage is high for generated interface proxys
ARIES-676	Make Aries bundle modelling API consumable by non-OSGi clients
ARIES-686	Implement the JMX spec MBeans using the whiteboard pattern
ARIES-701	Use <code>IdentityHashMap&lt;Object, MBeanHolder&gt;</code> to map registered services to <code>MBeanHolders</code>
ARIES-702	Use introspection to find the <code>MBean</code> interface
ARIES-713	Support using a <code>ScheduledExecutorService</code> for blueprint that is in the service registry
ARIES-715	Add support for <code>InputStream</code> based <code>IDirectory</code>
ARIES-716	Allow plugins to extend the Aries Application Modeller
ARIES-722	Enabling debug for blueprint itests is too hard
ARIES-740	Add method to resolve without repositories to <code>AriesApplicationResolver</code>
ARIES-741	JPA container should auto-enlist JTA XADatasources
ARIES-779	<code>AbstractPropertyPlaceholder</code> should be exported by blueprint-core
ARIES-786	Ability to control the list of woven classes using system properties
ARIES-790	Add a public API for injecting properties into a pre-created object
ARIES-792	Add EJB Modeller code to the Standalone Application Modeller
ARIES-806	Align <code>Bundle-Name</code> of the JMX Whiteboard bundle with other JMX bundles
ARIES-821	Allow mixtures of interfaces and classes in proxys
ARIES-823	Cope with badly written <code>ObjectFactoryS</code>

Enhancement	Description
ARIES-826	Provide a hook into the proxy weaver to enable smart decision making
ARIES-837	Modify default of Export-EJB: header to be ALL when empty string
ARIES-845	Support unwrap and <code>isWrappedFor</code> functions with older JDBC drivers in <code>ConnectionWrapper</code>
ARIES-855	Blueprint should attempt to load static nested classes when the initial attempt to load a class has failed
ARIES-873	Allow transactionManager Identity to be specified via configuration <code>aries.transaction.tmid=MyUniqueId</code>
ARIES-536	Have a way to specify a blueprint bundle should be started in sync with the start level service as much as possible
ARIES-578	Provide hook point for different Blueprint transaction interceptor similar to JPA hook point for persistence units
ARIES-633	Improve proxy support for final classes and final methods
ARIES-636	Support load-time weaving and Annotation scanning in the JPA container when running on OSGi 4.3
ARIES-644	Replace Scope Admin with Region Digraph
ARIES-718	EJB support in Apache Aries
ARIES-727	support syntax : <code>_\${a+b}</code> in blueprint-cm
ARIES-732	The ability to exclude bundles from the archive while still having them listed in <code>Application-Content</code> header
ARIES-733	Add <code>Use-Bundle</code> header to the <code>APPLICATION.MF</code> using <code>maven-eba-plugin</code>
ARIES-737	Provide initial support for embedded subsystems
ARIES-739	Update code based on latest resource, resolver, repository, and subsystem APIs
ARIES-757	Contribute semantic versioning check tool
ARIES-773	Usage of a Configuration Admin service within an isolated application framework
ARIES-825	Update subsystems to latest Subsystem, Resolver, and Repository APIs

Enhancement	Description
ARIES-888	Add a bundle to support JMS with the transaction manager
ARIES-890	Add support for recovery of JDBC XA transactions
ESB-1657	Add schema definition support for Spring/Blueprint deployer
FELIX-908	Unsyncronize access to bundle state inside <code>BundleInfo</code> by making the variable volatile
KARAF-1010	Add 64Bit service wrapper
KARAF-1023	Add karaf activators for jars in the lib folder
KARAF-1045	Improved help system
KARAF-1072	Provide man command as an alias to help
KARAF-1129	Allow configuring rmi Registry host as well as port
KARAF-1153	Jetty feature should also install the jetty-websocket bundle
KARAF-1191	Switch back to milliseconds per default on <b>shell:sleep</b> and introduce <code>-s</code> option
KARAF-1245	Blueprint deployer and Spring deployer should get started before <code>features.core</code> bundle
KARAF-1261	JAAS commands should allow you to distinguish between to realms that have the same name
KARAF-1271	Feature service should log in DEBUG instead of INFO
KARAF-1280	Add wrap third party jar example
KARAF-1283	Add a simple OSGi bundle demo to deployer examples
KARAF-1292	Add a feature demo
KARAF-1295	<code>serviceUrl</code> in <code>org.apache.karaf.management.cfg</code> should use <code>0.0.0.0</code> but not <code>localhost</code>
KARAF-1300	Features management should be more robust if customer features descriptor file has duplicated feature name
KARAF-1328	jclouds feature repo url has been changed after version 1.0
KARAF-1385	Be able to disable the default <code>PropertiesLoginModule</code>

Enhancement	Description
KARAF-1396	<code>config:list</code> command description should be enhanced
KARAF-1410	Error in stop script if <code>KARAF_DEBUG</code> is enabled
KARAF-1499	InfoAction shell command should sort the properties from InfoProvider instances
KARAF-1500	Forgot a space between hours and minutes in <code>InfoAction.java</code>
KARAF-1521	<code>add-features-to-repo</code> goal should define a correct default value for repository
KARAF-1558	Instance clone should be able to clone the root instance
KARAF-1562	Improve message displayed when the JAAS login module doesn't have a backing engine
KARAF-1574	When two karaf containers are started locally, an exception is displayed at startup. A nicer message would be better.
KARAF-1575	Features provided by Apache Karaf do not have any description
KARAF-1586	<code>wrapper:install</code> command should be usable outside OSGi too
KARAF-1600	Avoid duplicate feature and bundle resolution when installing cascading features
KARAF-1640	Make sure the local console is fully working before the user can type commands
KARAF-1657	<code>org.ops4j.pax.url.mvn.proxySupport=false</code>
KARAF-1676	OBR URL's in Apache Karaf have no simple identifier
KARAF-1693	Rename <code>command-watch</code> to <code>watch</code>
KARAF-1749	The command <code>packages:imports</code> should work on unresolved bundles
KARAF-1752	Hard coded features uri in features deployer feature discovery
KARAF-1757	Welcome message incorrect during ssh session or using bin/client
KARAF-1810	Provide alias for <code>feature:repo-add</code>

Enhancement	Description
KARAF-1812	Use Felix properties and remove <code>org.apache.karaf.util.Properties</code>
KARAF-1813	Add <code>osgi:name</code> and <code>name</code> attribute in <code>SystemMBean</code>
KARAF-1833	Reintroduce the <code>-p</code> option in the client
KARAF-1834	Make <code>KarafTestSupport</code> available externally
KARAF-1836	Provide a login module class name completer
KARAF-1844	Add command aliases for migration purpose between 2.3.x and 3.x
KARAF-1850	<b>feature:list</b> should use alphabetical order
KARAF-1878	Feature bundle start up order by <code>startLvl</code>
KARAF-1924	Fix the WARN logs from starting a vanilla Karaf 2.3.0
KARAF-1951	Remove workaround for KARAF-1117
KARAF-447	Add JDBC lock implementation for PostgreSQL
KARAF-693	<code>features:addurl</code> raises "Premature end of file" when network is not available
KARAF-916	Use <code>org.apache.aries.jmx.core</code> instead of <code>org.apache.aries.jmx</code>
KARAF-999	local-repo folder shouldn't be used
KARAF-1132	Introduce new command <code>feature:chooseurl</code> to make it easy to install well known feature files
KARAF-1196	Implement a <b>watch</b> command so we can watch the output of a karaf command like the unix 'watch' mechanism
KARAF-1334	Use the new servicemix spec to allow the use of both the JRE implementations and implementations from bundles
KARAF-1475	Support SSH agent forwarding and use the agent authentication when connecting to other instances
KARAF-1546	Add <code>-i/--install-all</code> option to <b>feature:add-url</b>
KARAF-1792	Add <code>karaf-pax-exam</code>
KARAF-1806	Add version attribute in the <code>SystemMBean</code>

Enhancement	Description
KARAF-1910	Provide Spring 3.1.2.RELEASE features
KARAF-32	Support ssh public key authentication and agent forwarding
KARAF-581	Also make <code>rmiRegistryHost</code> configurable
KARAF-866	New <b>dev:wait-for-service</b> command to wait for a given OSGi service
KARAF-908	Provide a way to access system properties easily in the shell
KARAF-977	<b>config propset</b> , <b>propappend</b> & <b>propdel</b> could use some autocompletion

## Fabric

[Table 5.3 on page 67](#) lists the enhancements between 7.0.2 and 7.1.

**Table 5.3. Fabric Enhancements in 7.1**

Enhancement	Description
FABRIC-255	Allow configuration of default JVM options that can be applied to new child containers
FABRIC-256	Provide fabric commands to list and display OSGi features
FABRIC-260	Resolver handling needs to be more flexible and configurable
FABRIC-271	Fabric dosgi should respect the container resolver
FABRIC-284	Ensure that features in a profile are deployed before bundles
FABRIC-296	Provide a Fabric profile out-of-the-box that deploys all relevant Camel JMS and ActiveMQ features/bundles
FABRIC-314	Remove <b>container-create</b> command
FABRIC-329	Secure jolokia
FABRIC-281	Secure ZooKeeper
FABRIC-289	Add support for deploying Apache Directory in Fabric
FABRIC-316	Make sure that no default credentials and no default key are present in the distros



# Chapter 6. Apache Dependencies

The following Apache projects are used in 7.1:

Apache ActiveMQ

Fuse MQ Enterprise is based on Apache ActiveMQ 5.7

Apache Karaf

Fuse MQ Enterprise includes Apache Karaf 2.3

