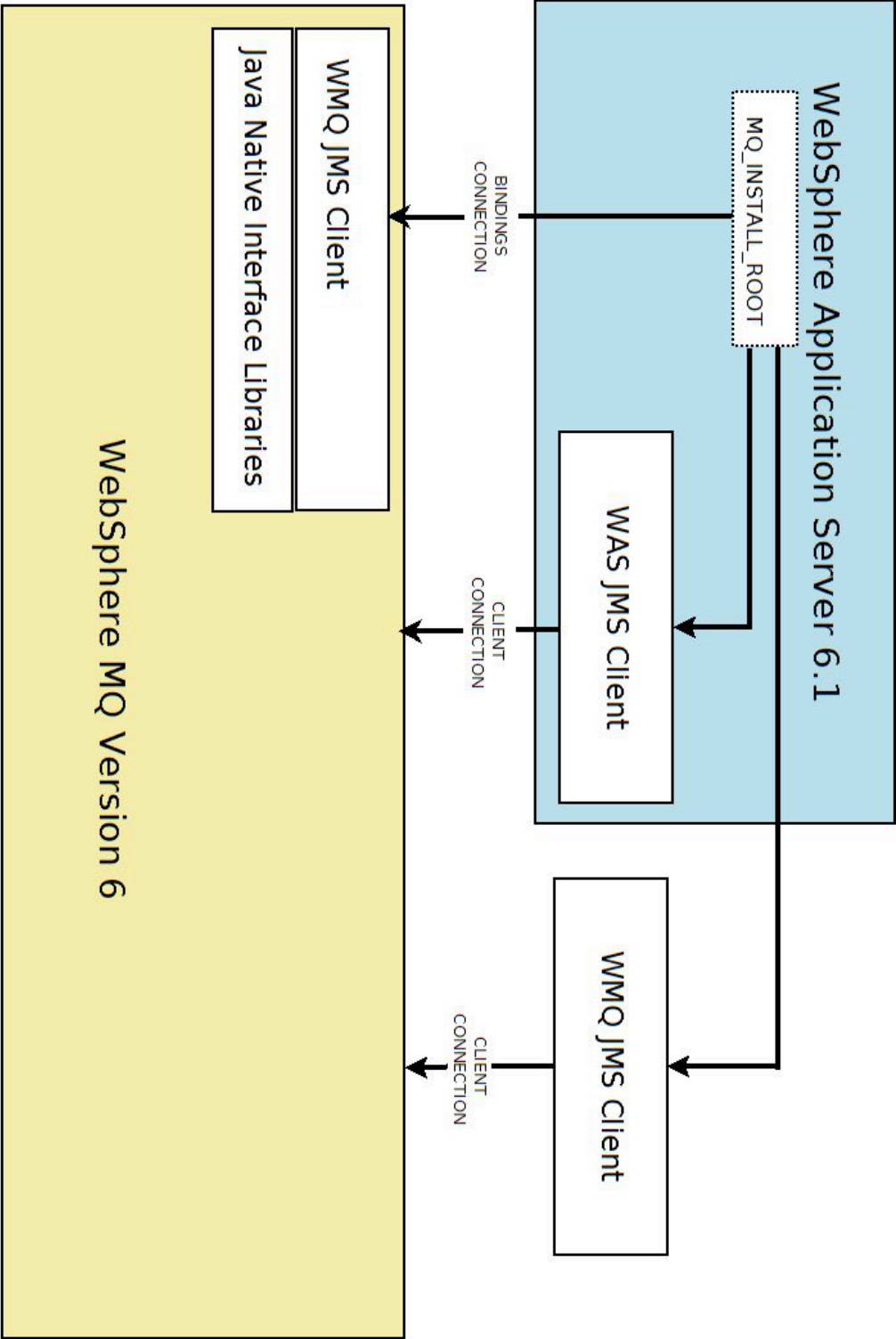


Using WebSphere MQ with WebSphere Application Server and the Liberty Profile





Version 6 Messaging Architecture



The solution now



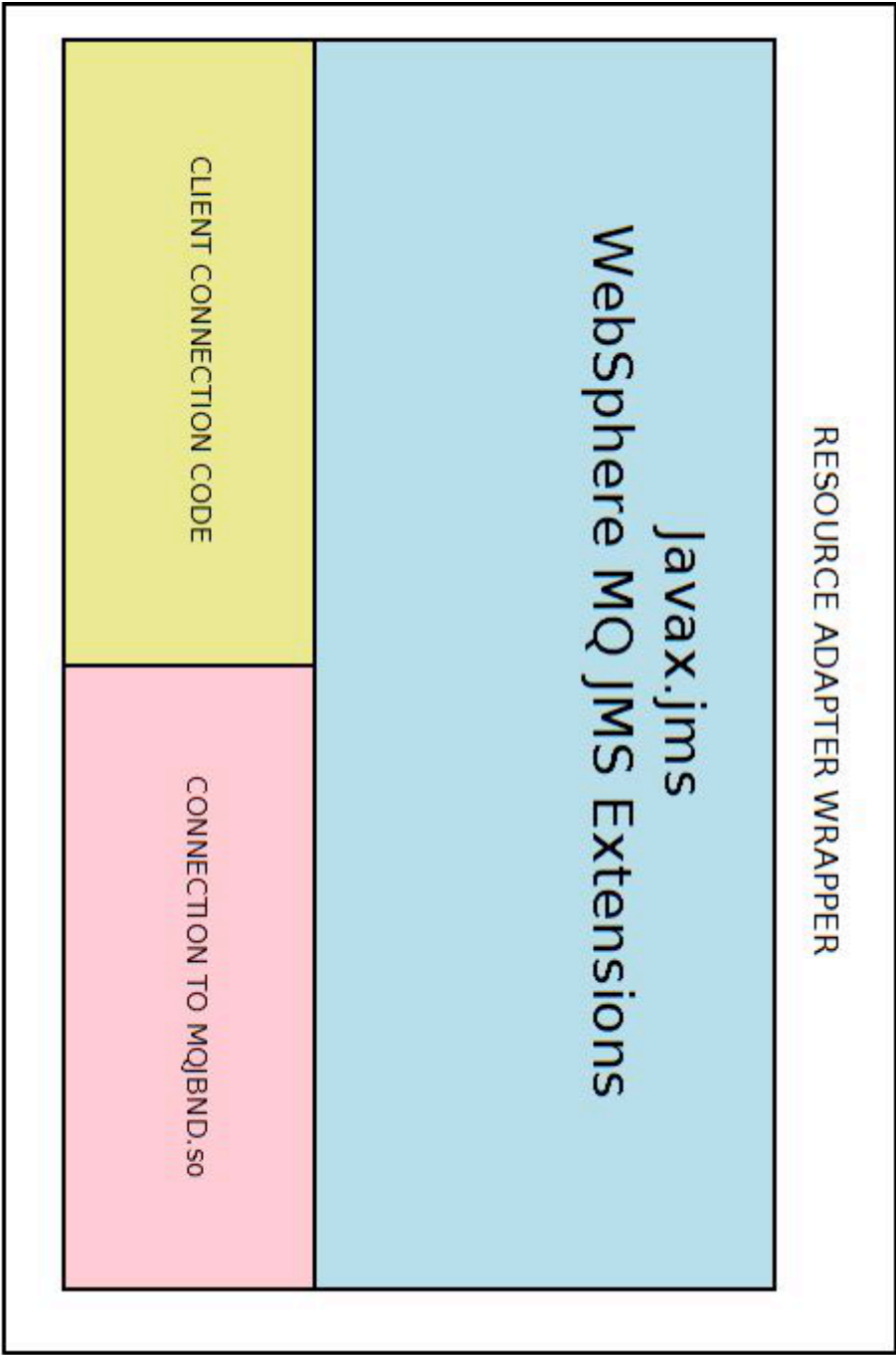
Picture courtesy: public domain

Source: <http://www.livescience.com/20404-gallery-sun-gods-goddesses.html>

RA



Introducing the WebSphere MQ JMS Resource Adapter



wmq.jmsra.rar



Why have a Resource Adapter?

Java Enterprise Edition (Java EE)

Java Connector Architecture (JCA)

Harnessing the Resource Adapter: WAS

Deployed inside WebSphere Application Server

WAS is shipped with a validated RA

RA can be a different version to the Queue Manager!

Harnessing the Resource Adapter: Liberty

- Supported from Liberty version 8.5.5
- Download from IBM Fix Central – search 'Resource Adapter'

```
<server description="new server">
  <!-- Enable features -->

  <featureManager>
    <feature>jsp-2.2</feature>
    <feature>localConnector-1.0</feature>
    <feature>ejblite-3.1</feature>
    <feature>jmsmdb-3.1</feature>
    <feature>jndi-1.0</feature>

    <feature>wmqJmsClient-1.1</feature>
  </featureManager>

  <variable name="wmqJmsClient.rar.location"
    value="C:\MY_RA_FOLDER\wmq.jmsra.rar"/>

  <wmqJmsClient nativeLibraryPath="/opt/mqm/java/lib64"/>
</server>
```


Managing the Resource Adapter

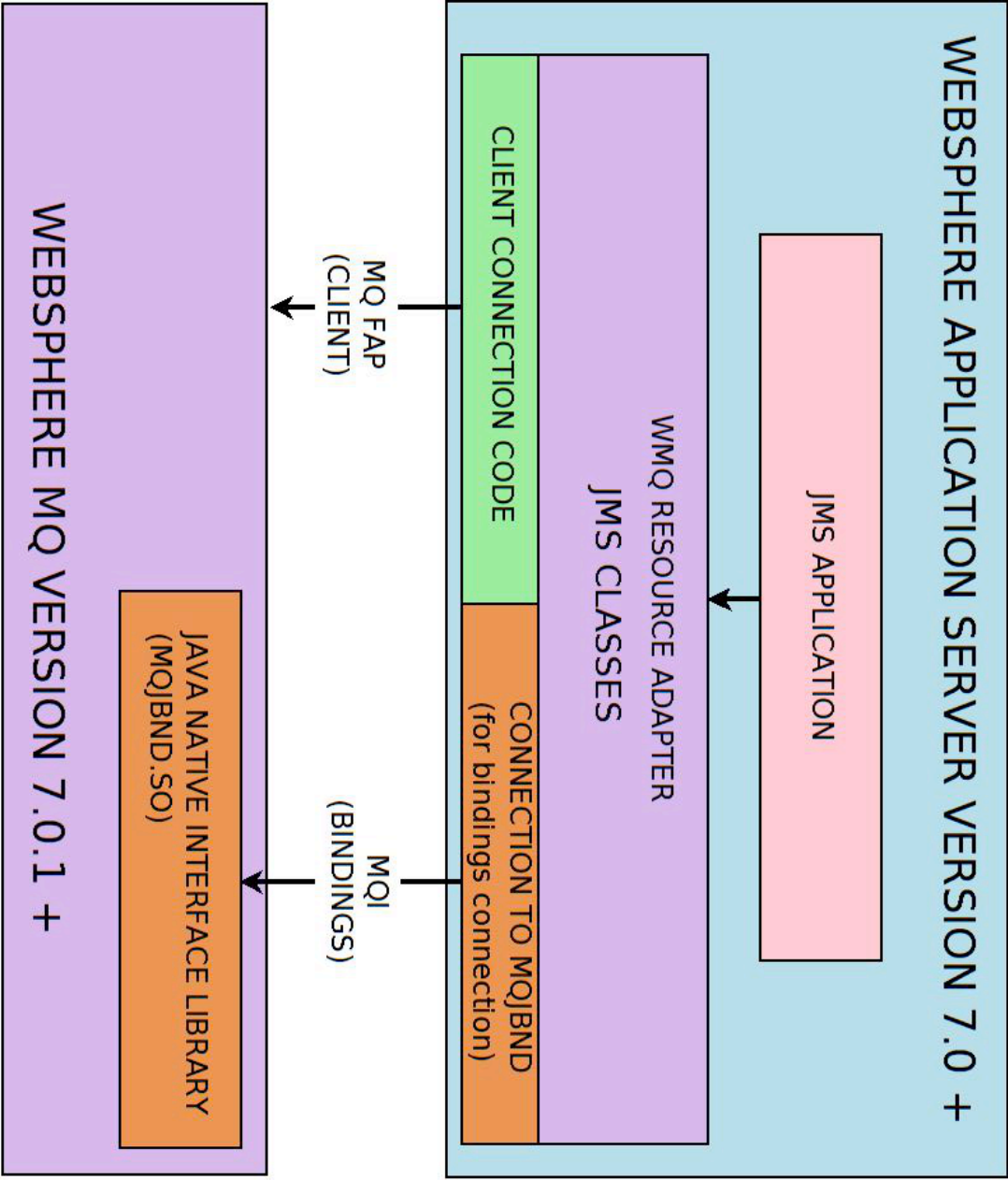
Client mode – no configuration necessary

Bindings mode – set 'native library path' on Resource Adapter

Updates to RA via WAS Fix Packs and iFixes



Version 7 onwards Messaging Architecture



Practical benefits: standardised, well-versioned connections

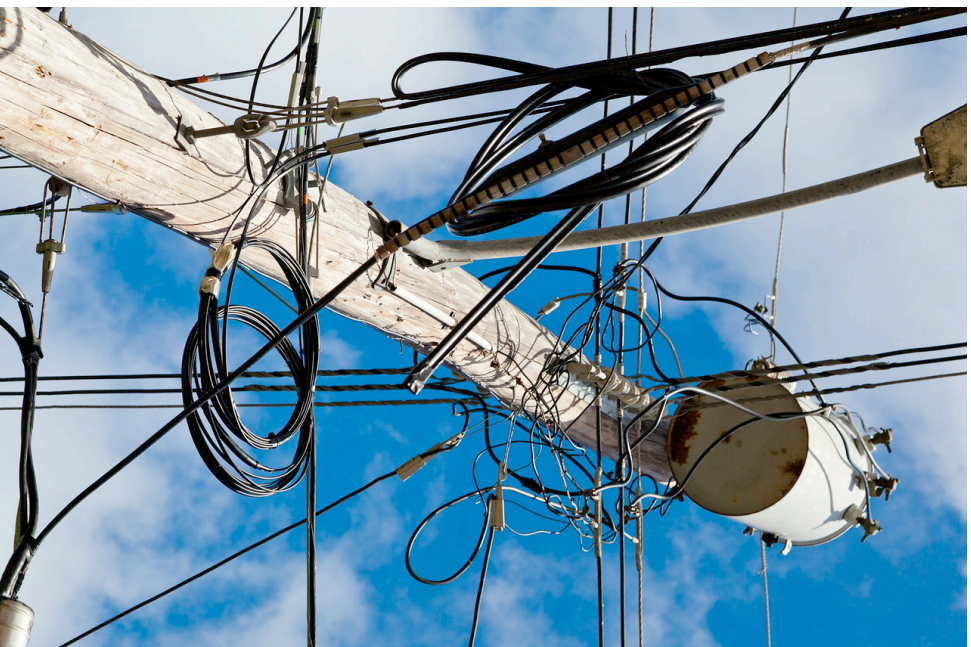


Photo courtesy: public domain
Source: <http://pixabay.com/en/industrial-mess-electric-power-69750/>

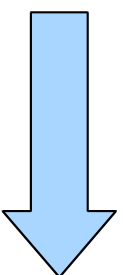
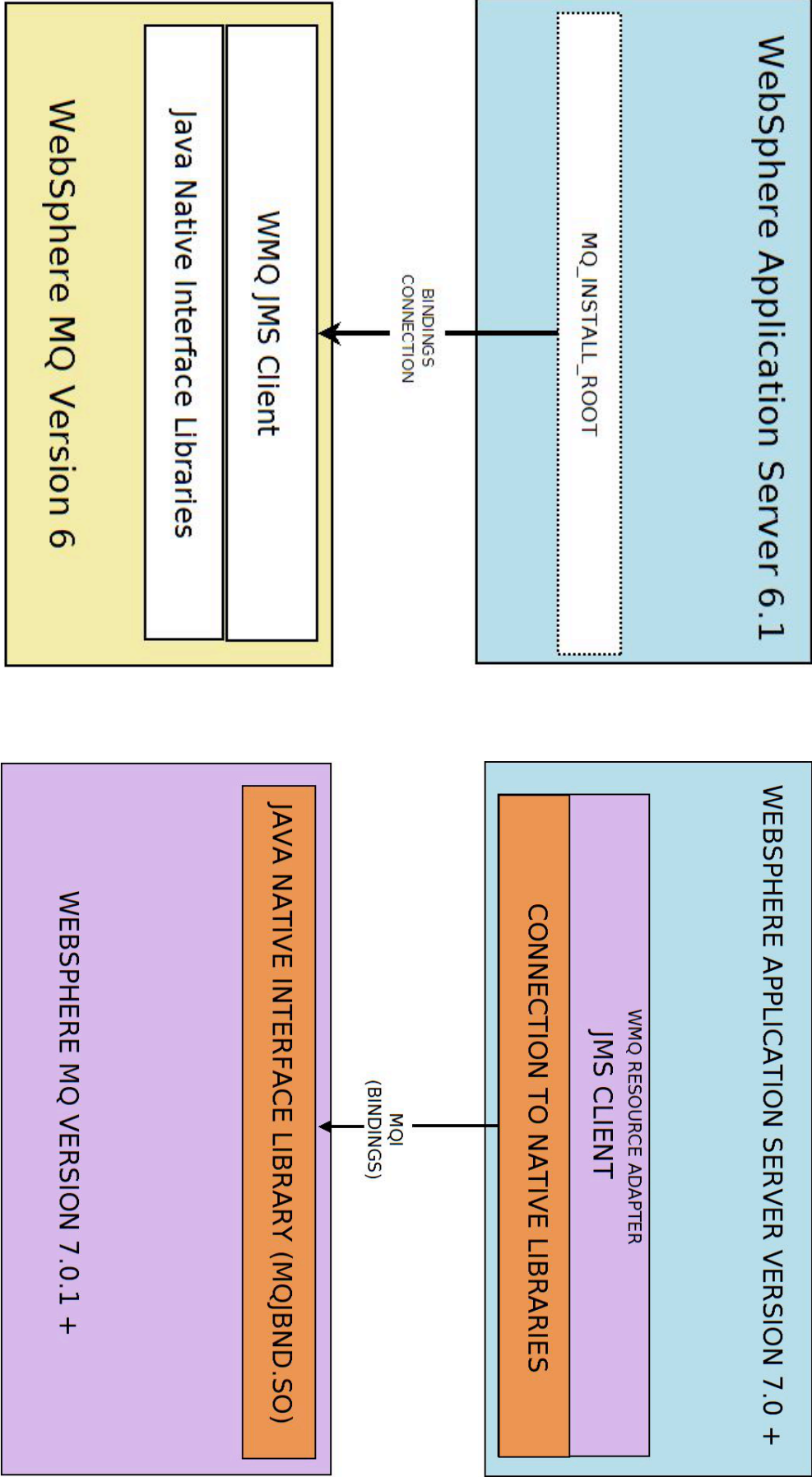


Photo courtesy: public domain
Source: <http://pixabay.com/en/communication-connection-113613/>



Bindings mode architecture





Practical benefits

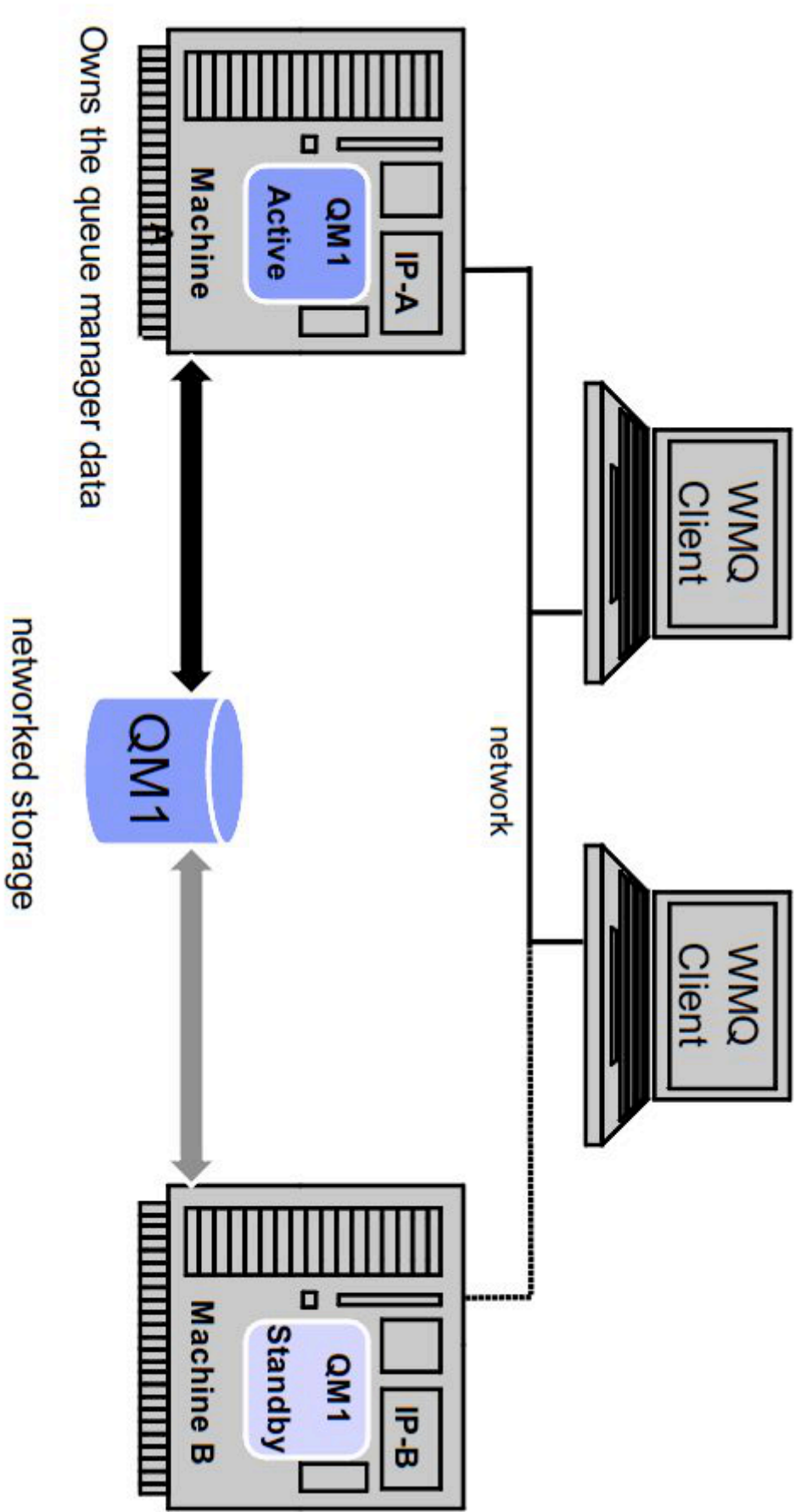
Simplified maintenance

Ease of migration

Easier consumption of Multi-Version WMQ

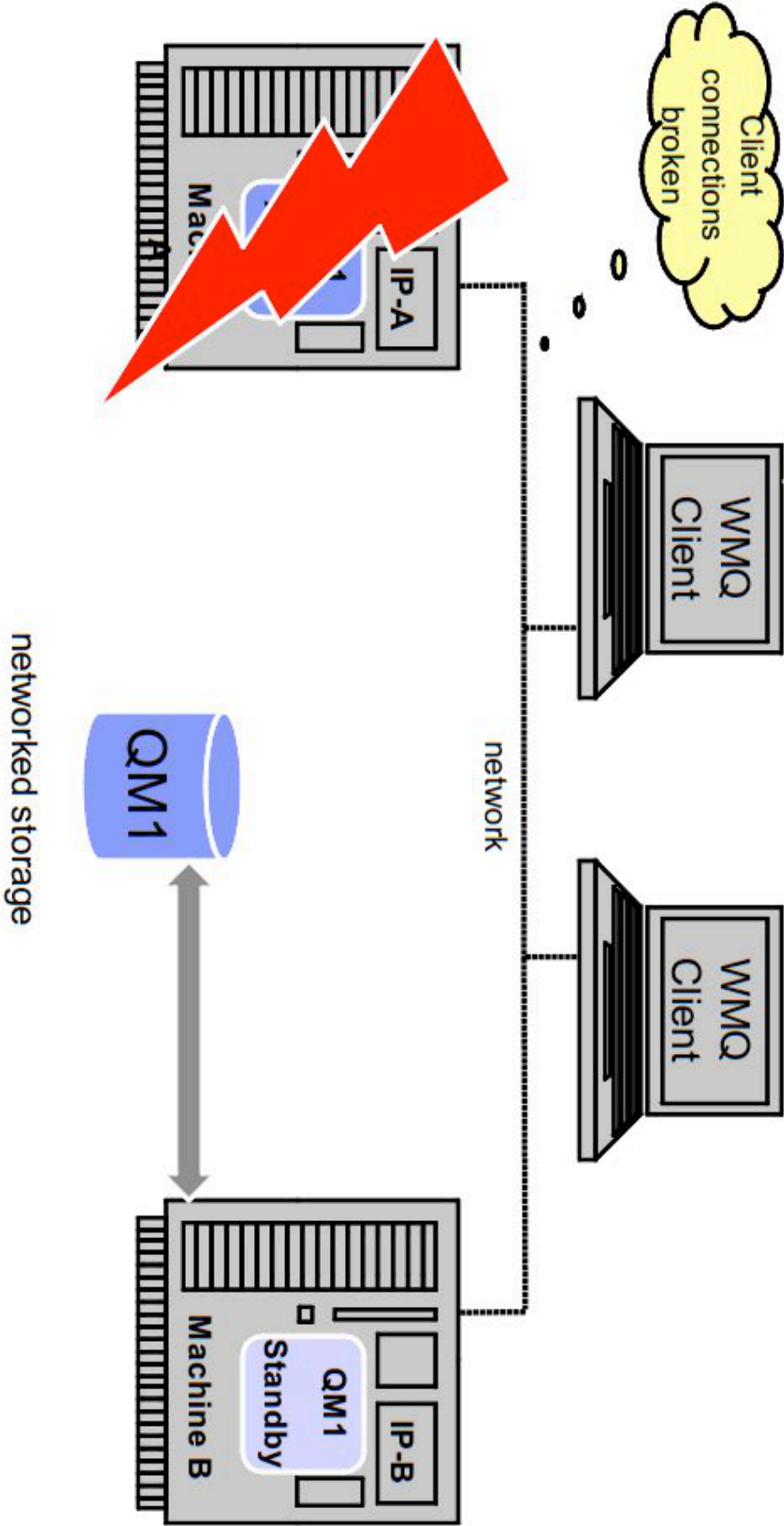


Multi-instance queue manager



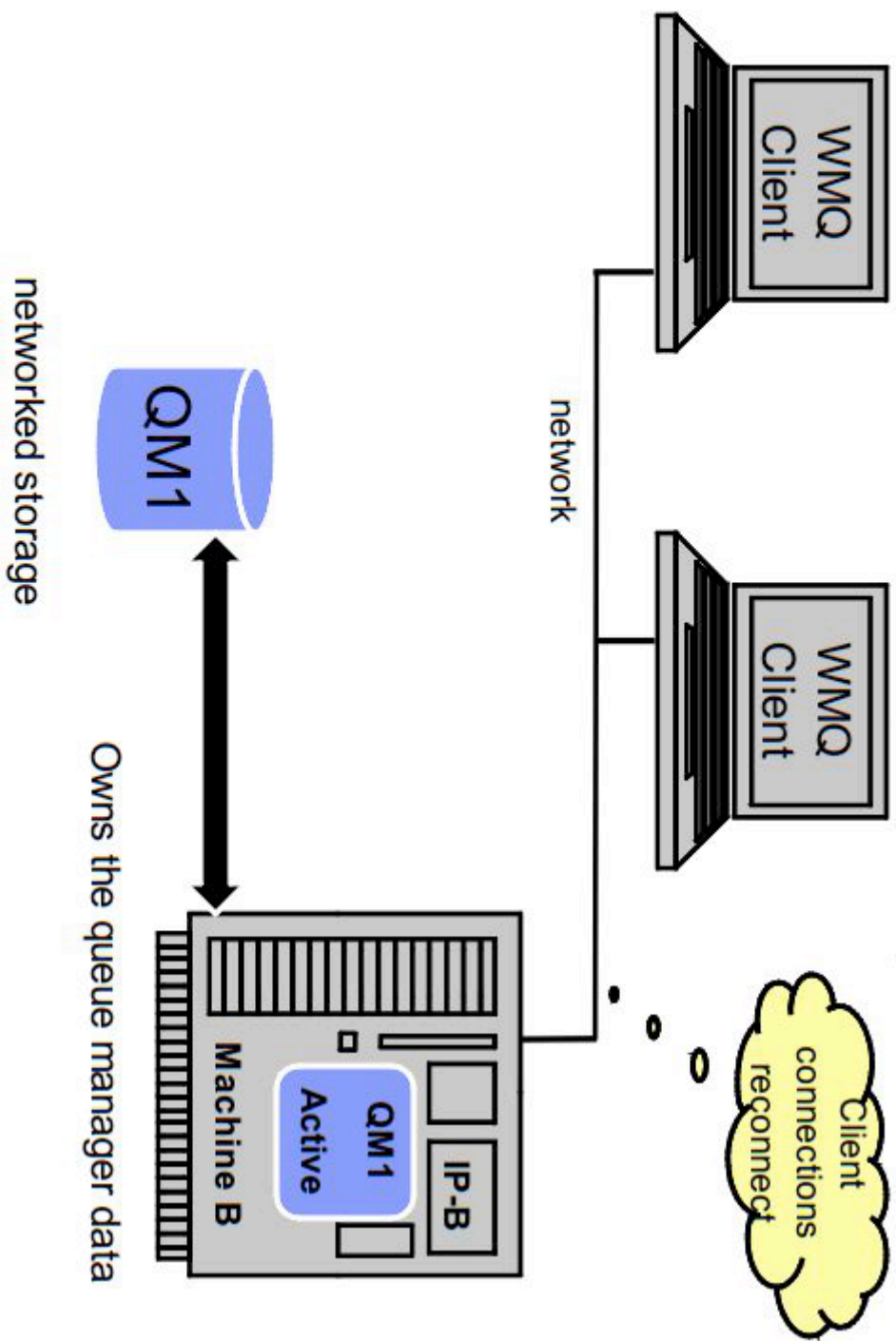


Multi-instance queue manager





Multi-instance queue manager



High availability with Multi-Instance Queue Managers

WebSphere MQ Automatic Client Reconnect is NOT supported with
Java EE Application Servers

Configure WAS to automatically reconnect instead!



High availability with Multi-Instance Queue Managers

Connection Factory

Connection Name List – host(port) for Active instance, host(port) for standby instance
CCDT (Client Channel Definition Table)

Resource Adapter

Reconnection Retry Count – default is 5
Reconnection Retry Interval – default is 5 minutes

Activation Specification

Connection Name List – host(port) for Active instance, host(port) for standby instance
Stop endpoint if message delivery fails
Number of sequential delivery failures before suspending endpoint

Listener Port

Maximum Retries – default is 0
Custom property: MAX.RECOVERY.RETRIES – default is 5
Custom property: RECOVERY.RETRY.INTERVAL – default is 60 seconds



Product Connectivity Scenarios Information Centre

- Hands on, scenario based education for MQ:WAS and MQ:Liberty inter-operation

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Patterns

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IBM Product Connectivity Scenarios and Patterns Version 1.0 Information Center

Contains information that leads you through the key tasks required to connect IBM® product offerings in a variety of scenarios and patterns.
A scenario provides a worked example of using several products connected together. Each scenario description contains the instructions to implement a solution in a business context, and learn as you go, without needing to make use of other information resources.
A pattern provides a repeatable topology that can be deployed to a cloud. Each pattern description contains information to learn about the pattern, and to download and use the pattern with IBM Workload Deployer or IBM PureApplication® System.

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Tasks

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Scenarios are included in themed bookshelf sets. Similarly, patterns are included in a Patterns bookshelf. To see the scenarios or patterns in a set, expand the bookshelf in the Contents view of the navigation pane.

If you have an interest in a new scenario, or have comments about the scenarios and patterns provided, please send us your feedback.

WebSphere® Application Server with WebSphere MQ

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Getting started

Information center tips

Go Back and Go Forward: Navigate through your information center topic history.

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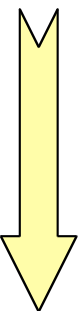
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IBM Product Information

- We're here for you today
- We'd love to talk to you about your experiences, views and needs for IBM product information



- Come and chat; our table is next to the WAS Liberty table
- See the new **IBM Knowledge Center** – *No more infocenters from 2014!*
- Look for the badges



Summary

- WebSphere MQ JMS RA provides MQ messaging to WAS
- RA meets Java EE, JCA standard
- RA is shipped with WAS and updated by WAS
- Separate download for Liberty
- Break between WMQ and WAS uses MQFAP and MQI
- Easier maintenance and upgrading
- Multi Instance Queue Managers – configure your Application Server!
- Scenarios infocentre – go and visit it!

Source: If applicable, describe source origin



Links:

Product Connectivity Scenarios Information Centre

<http://pic.dhe.ibm.com/infocenter/prodconn/v1r0m0/index.jsp>

IBM Knowledge Centre:

<http://www-01.ibm.com/support/knowledgecenter/>

7.1 and 7.5 RA statement of support

<http://www-01.ibm.com/support/docview.wss?uid=swg27023129>

Using WebSphere MQ automatic client reconnect with the WebSphere MQ classes for JMS:

<http://www-01.ibm.com/support/docview.wss?uid=swg21508357>

Obtaining the WebSphere MQ Resource Adapter for the Liberty profile:

<http://www-01.ibm.com/support/docview.wss?uid=swg21633761>

Introduction to WebSphere MQ Multi-Instance Queue Managers:

<http://www-01.ibm.com/support/docview.wss?uid=swg27017382&aid=1>

Links:

Product Connectivity Scenarios Information Centre

<http://pic.dhe.ibm.com/infocenter/prodconn/v1r0m0/index.jsp>

Resource Adapter configuration properties:

<http://pic.dhe.ibm.com/infocenter/wasinfo/v8r5/index.jsp?topic=/com.ibm.websphere.ihns.doc/ihns/tihns>

Activation Specification Properties:

<http://pic.dhe.ibm.com/infocenter/wasinfo/v8r5/index.jsp?topic=%2Fcom.ibm.websphere.nd.multiple>

Listener Port Properties:

<http://pic.dhe.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=%2Fcom.ibm.websphere.express.doc>

http://pic.dhe.ibm.com/infocenter/wasinfo/v8r5/index.jsp?topic=%2Fcom.ibm.websphere.nd.multipleplatform.doc%2Fae%2Fumb_prolscp.html