



IBM Software Group

WebSphere® MQ V7.0

How MQ JMS provider uses MQI features

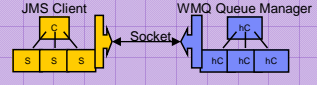
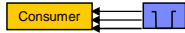


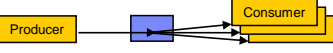



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This presentation describes how MQ JMS provider uses MQI features.

New WMQ7 features linking to JMS

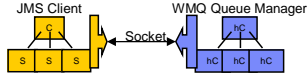



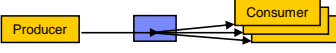
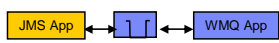
<p>Multiplexed Connections allowing JMS sessions to be shared on a socket (Client Changes)</p>	
<p>Asynchronous Consumers provided through use of MQI Callback functionality</p>	
<p>Selectors – Message Selection now in MQI</p>	
<p>Asynchronous Puts through use of put options and queue properties (Client Changes)</p>	
<p>New Pub/Sub engine aligned with JMS Topic domain</p>	
<p>Interaction between MQINQ/MQSET for JMS properties. Access MQMD and MQ Message Body from JMS programs.</p>	



The MQ JMS implementation code is one of the main users of the new feature that allows multiple connections to be carried over a single TCP/IP socket pair.

Each JMS session is still represented as an MQ connection, but these connections no longer require their own TCP/IP socket. This leads to a possible reduction in the memory and processor resources on both the server side and the client side.

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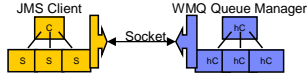



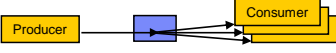
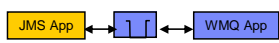


JMS applications were previously able to set up message listeners and operate with an asynchronous message consuming model.

However in previous versions the JMS client code had to poll the MQ server to see if messages were available.

In version 7.0 the JMS client code is greatly simplified by using the Call Back features of the MQ API.

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In previous versions of MQ, selectors used in JMS applications had to be interpreted by the MQ JMS provider code. Messages were fetched by the JMS client and then tested against the selection string. For client applications connected over a network this could be a large overhead.

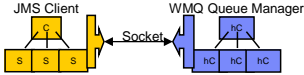



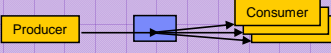

In version 7.0 because the base MQ API supports selectors, the JMS client code has only to OPEN a queue, or subscribe to a topic, using the appropriate selector. This leads to a simpler JMS implementation, fewer API boundary crossings and less network traffic.

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JMS applications that are connected over a TCP/IP network can make use of the MQ client changes to perform asynchronous puts of messages when these are performed within syncpoint. Or if the JMS quality of service required is low.

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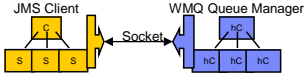



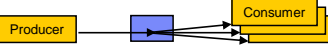

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In previous versions the JMS topic domain was fully supported but publish/subscribe was done in an indirect manner. The version 7.0 implementation uses the new MQ publish subscribe API. This means that the MQ security and administrative console features can be used to see subscriptions and topic status for topics used by JMS clients.

The new implementation is a simpler, cleaner implementation and easier to manage and administer.

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Previous interaction between JMS and MQ API applications was not straight forward. The MQ Applications needed to parse the MQRFH2 headers and JMS applications did not have access to all the fields of the MQMD or to the message body.

The new support for message properties in MQ version 7.0 allows MQ API applications easier access to the JMS properties. The same feature allows JMS applications to manipulate special message properties that map all the MQMD fields and to the message body.

Unit summary

Now that you have completed this unit, you should be able to:

- Compare JMS and MQI capabilities
- Understand the interoperability of JMS and MQI in WebSphere MQ V7



In summary you should see that the JMS API and the MQ base functions now map very closely together. This leads to a simpler JMS implementation and makes it easier for MQ API applications to interoperate with JMS applications.

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