

Using provided subscriptions with IBM MQ classes for JMS

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+++ Question +++

How do I use a subscription that is manually predefined in the queue manager with an IBM MQ classes for JMS client application, running in either JEE or J2SE environments?

++ Answer ++

IBM MQ subscriptions have two different ways of defining the message destination:

- Managed

In the "managed" destination mode, the queue manager manages the queue used to store messages for the subscriber, automatically creating a dynamic queue when needed, removing the queue when it is no longer required, and removing unconsumed messages as necessary.

- Provided

In the "provided" destination mode, an unmanaged queue is provided by the administrator, and messages for the subscriber are placed upon that queue. That is, the queue manager does not create and does not manage the queue.

If a subscription is deregistered, and the queue and messages are no longer required, the administrator needs to remove the queue from the queue manager (that is, the queue manager will not delete the queue nor the messages in the queue).

The IBM MQ classes for JMS use the managed destination mode when creating a subscription, and do not provide a way to use a predefined subscription, or allow the application to specify the subscription destination to use.

To use predefined subscriptions with IBM MQ classes for JMS, so that the location of the published messages for the subscriber is known and does not change, a combination of JMS point-to-point messaging, and an MQ subscription to a provided queue can be used. This requires a subscription in the queue manager to be defined that places messages onto a provided queue, and then the IBM MQ classes for JMS to be configured to directly read

messages from that queue in point-to-point mode, using a JMS queue destination. From a JMS application perspective, it is not consuming a message published to a topic but reading messages from a JMS queue.

Example steps could include:

- Define an MQ queue to store the messages on, for example "MySUBQ"
- Create a subscription to the required topic that uses a Destination class of PROVIDED, and specify the queue name of "MySUBQ"
- Configure the JMS application to read messages from a IBM MQ classes for JMS Queue object with the Queue field set to "MySUBQ", defined using a tool such as JMSAdmin. Note that the JMS application should not use the JMS Publish/Subscribe features, and only use the JMS Point-to-Point interfaces.

When messages are published to the required topic, the queue manager places a message for the subscription on the destination queue "MySUBQ", and the JMS application reads it from that queue.

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