

## Using webMethods Integration Server with ActiveMQ

### Abstract

Integration Server (IS) supports sending and receiving messages with the most widely used JMS providers through its JMS features.

This document describes how to configure a JMS connection to an ActiveMQ JMS provider, which is not described in the standard documentation.

### Applicability

Product: Integration Server  
Versions: 7.1.x, 8.0, 8.2

### Important Note

Software AG has not formally tested and explicitly does not support this type of connection with ActiveMQ JMS. The configuration described here has been found to work in the field and anyone using this configuration does so at their own risk.

### Configuration

1. Add activemq-all-5.2.0.jar to <IntegrationServer>/lib/jars
2. Restart the Integration server
3. Create JNDI provider alias by navigating to Settings > Messaging > JNDI Settings in the IS admin console

JNDI Provider Alias	
JNDI Alias Name	ActiveMQ_JNDI_Provider
Description	ActiveMQ JNDI Provider
Initial Context Factory	org.apache.activemq.jndi.ActiveMQInitialContextFactory
Provider URL	tcp://localhost:61616
Security Principal	
Security Credentials	
Other Properties	<div>java.naming.security.authentication=simple</div>

### Settings > Messaging > JNDI Settings > JNDI Provider Alias


- [Return to JNDI Settings](#)
- [Edit JNDI Provider Alias](#)

JNDI Provider Alias	
JNDI Alias Name	ActiveMQ_JNDIProvider
Description	JNDI for Active MQ provider
Initial Context Factory	org.apache.activemq.jndi.ActiveMQInitialContextFactory
Provider URL	tcp://localhost:61616
Security Principal	
Security Credentials	
Other Properties	

4. On using the 'Test Lookup' feature you should be able to see the connection factories and destinations on Active MQ

Settings > Messaging > JNDI Settings

- [Return to Messaging](#)
- [Create JNDI Provider Alias](#)

JNDI Provider Alias Definitions			
JNDI Alias Name	Description	Test Lookup	De
<a href="#">ActiveMQ_JNDIProvider</a>	JNDI for Active MQ provider		
ConnectionFactory: org.apache.activemq.ActiveMQConnectionFactory QueueConnectionFactory: org.apache.activemq.ActiveMQConnectionFactory TopicConnectionFactory: org.apache.activemq.ActiveMQConnectionFactory dynamicQueues: org.apache.activemq.jndi.ActiveMQInitialContextFactory\$1 dynamicTopics: org.apache.activemq.jndi.ActiveMQInitialContextFactory\$2			

5. Create JMS connection alias using the JNDI provider alias create above

Settings > Messaging > JMS Settings > JMS Connection Alias

- [Return to JMS Settings](#)
- [Edit JMS Connection Alias](#)

General Settings	
Connection Alias Name	ActiveMQ_JMS_Connection
Enabled	✓ Yes
Description	JMS connection alias for Active MQ
Transaction Type	NO_TRANSACTION
Connection Client ID	ActiveMQ_Client
User	
Password	
Connection Protocol Settings	
Create Connection Using	JNDI LOOKUP
JNDI Provider Alias	ActiveMQ_JNDIProvider
Connection Factory Lookup Name	ConnectionFactory
Advanced Settings	
Class Loader	INTEGRATION_SERVER
Maximum CSQ Size	UNLIMITED
Drain CSQ In Order	Yes
* Enabled Connection Aliases can not be edited.	

6. Enable the JMS connection - it should be enabled without errors

Settings > Messaging > JMS Settings

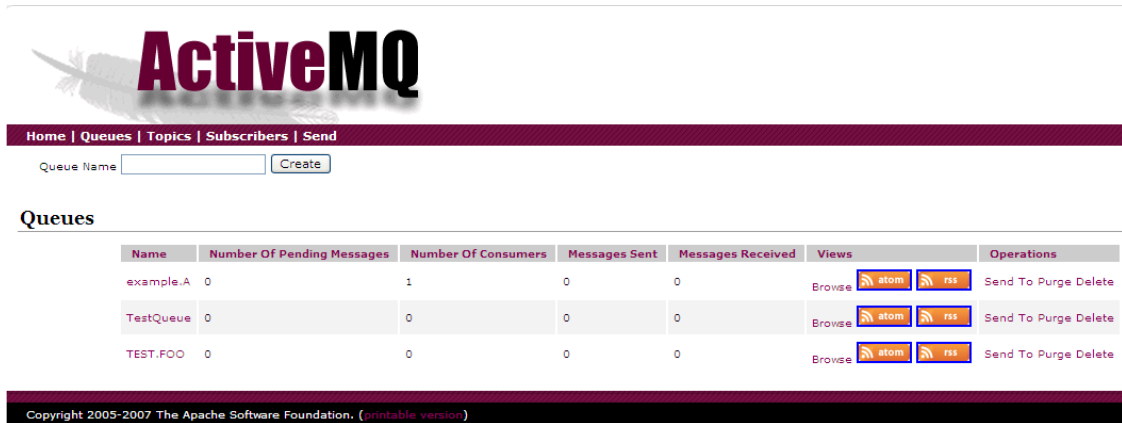
JMS Connection Alias "ActiveMQ\_JMS\_Connection" set to enabled.

- [Return to Messaging](#)
- [Create JMS Connection Alias](#)
- [Refresh Page](#)

JMS Connection Alias Definitions				
Connection Alias Name	Description	Transaction Type	CSQ Count	Enabled
<a href="#">ActiveMQ_JMS_Connection</a>	JMS connection alias for Active MQ	NO TRANSACTION	0	✓ Yes

## Receiving Messages

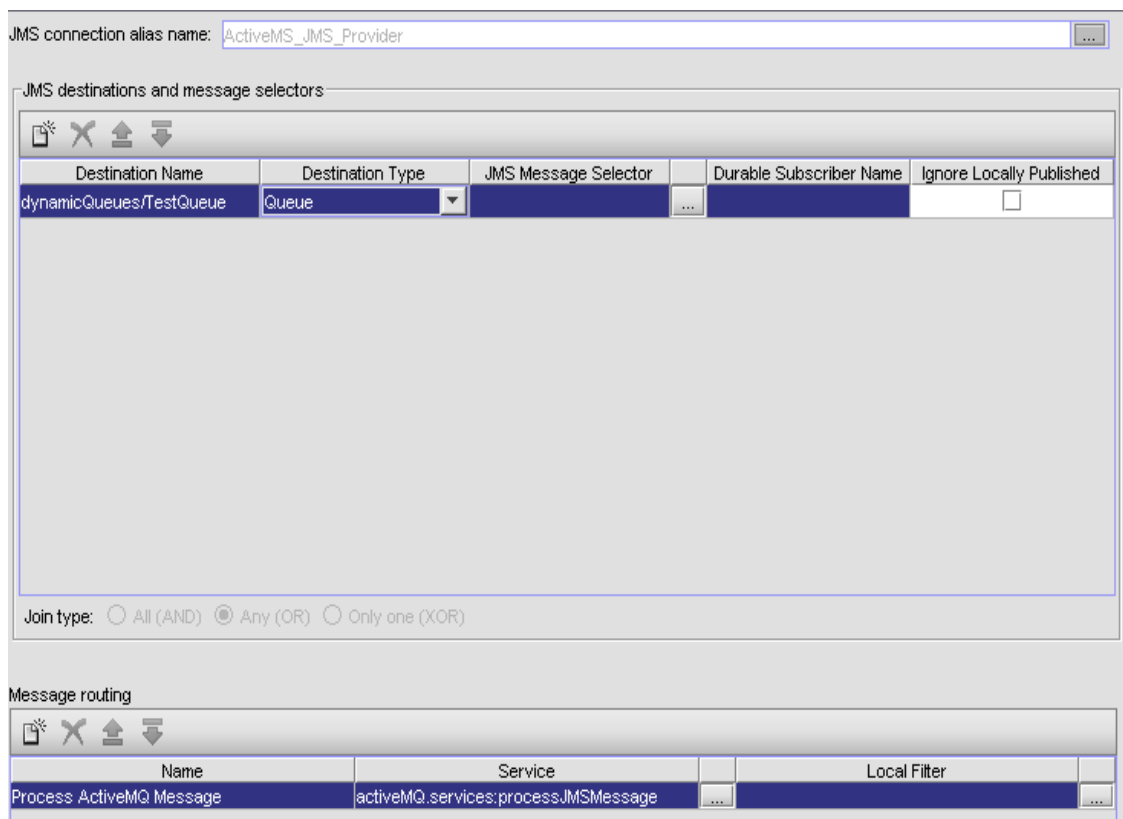
1. Assuming a queue named 'TestQueue' has already been created on Active MQ



The screenshot shows the ActiveMQ web console interface. At the top, there's a navigation bar with links: Home | Queues | Topics | Subscribers | Send. Below this is a form to create a new queue with a 'Queue Name' input field and a 'Create' button. The main section is titled 'Queues' and contains a table listing existing queues. The table has columns: Name, Number Of Pending Messages, Number Of Consumers, Messages Sent, Messages Received, Views, and Operations. Three queues are listed: 'example.A', 'TestQueue', and 'TEST.FOO'. The 'TestQueue' row is highlighted. Below the table, there's a footer with copyright information: 'Copyright 2005-2007 The Apache Software Foundation. (printable version)'.

Name	Number Of Pending Messages	Number Of Consumers	Messages Sent	Messages Received	Views	Operations
example.A	0	1	0	0	Browse	Send To Purge Delete
TestQueue	0	0	0	0	Browse	Send To Purge Delete
TEST.FOO	0	0	0	0	Browse	Send To Purge Delete

2. Create a trigger. Ensure that you specify the destination name as dynamicQueues/TestQueue.



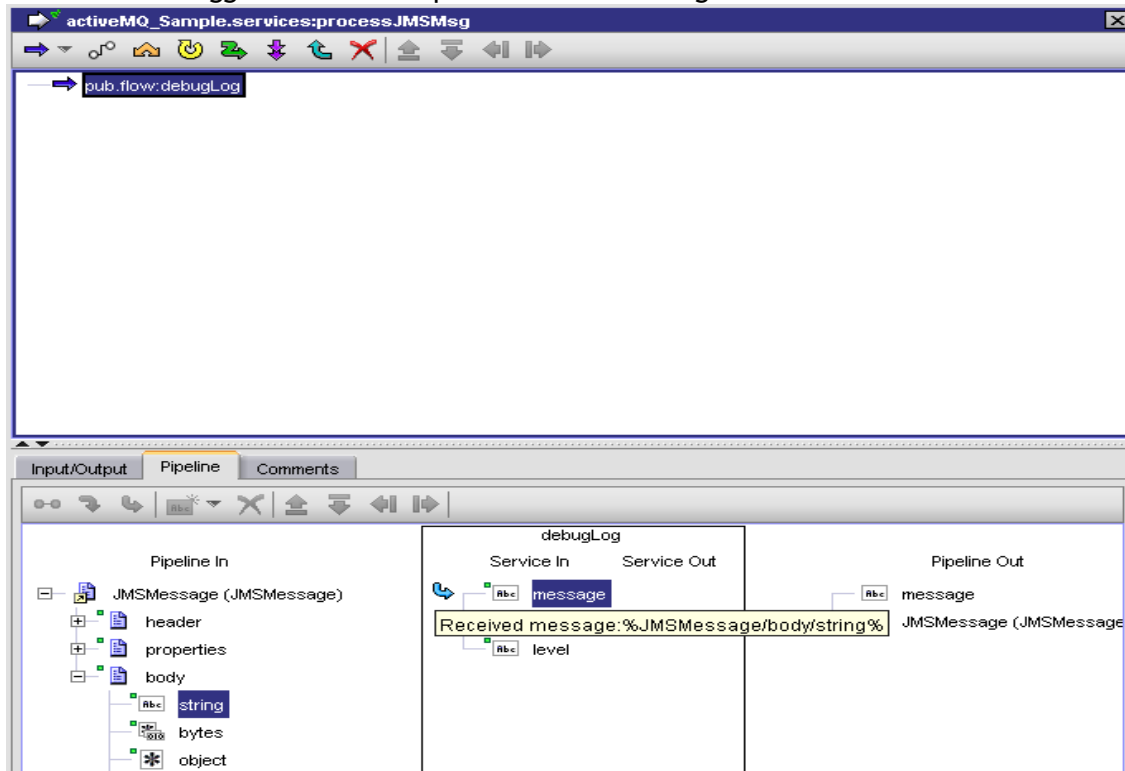
The screenshot shows a configuration window for JMS destinations and message selectors. At the top, there's a text field for 'JMS connection alias name' with the value 'ActiveMS\_JMS\_Provider'. Below this is a section titled 'JMS destinations and message selectors' which contains a table with columns: Destination Name, Destination Type, JMS Message Selector, Durable Subscriber Name, and Ignore Locally Published. One entry is shown: 'dynamicQueues/TestQueue' with 'Queue' as the destination type. Below the table, there are radio buttons for 'Join type': 'All (AND)', 'Any (OR)' (which is selected), and 'Only one (XOR)'. At the bottom, there's a section titled 'Message routing' with a table that has columns: Name, Service, and Local Filter. One entry is shown: 'Process ActiveMQ Message' with 'activeMQ.services:processJMSMessage' as the service.

Destination Name	Destination Type	JMS Message Selector	Durable Subscriber Name	Ignore Locally Published
dynamicQueues/TestQueue	Queue			<input type="checkbox"/>

Join type: ☐ All (AND) ☒ Any (OR) ☐ Only one (XOR)

Name	Service	Local Filter
Process ActiveMQ Message	activeMQ.services:processJMSMessage	

### 3. Use a trigger service that prints out the message



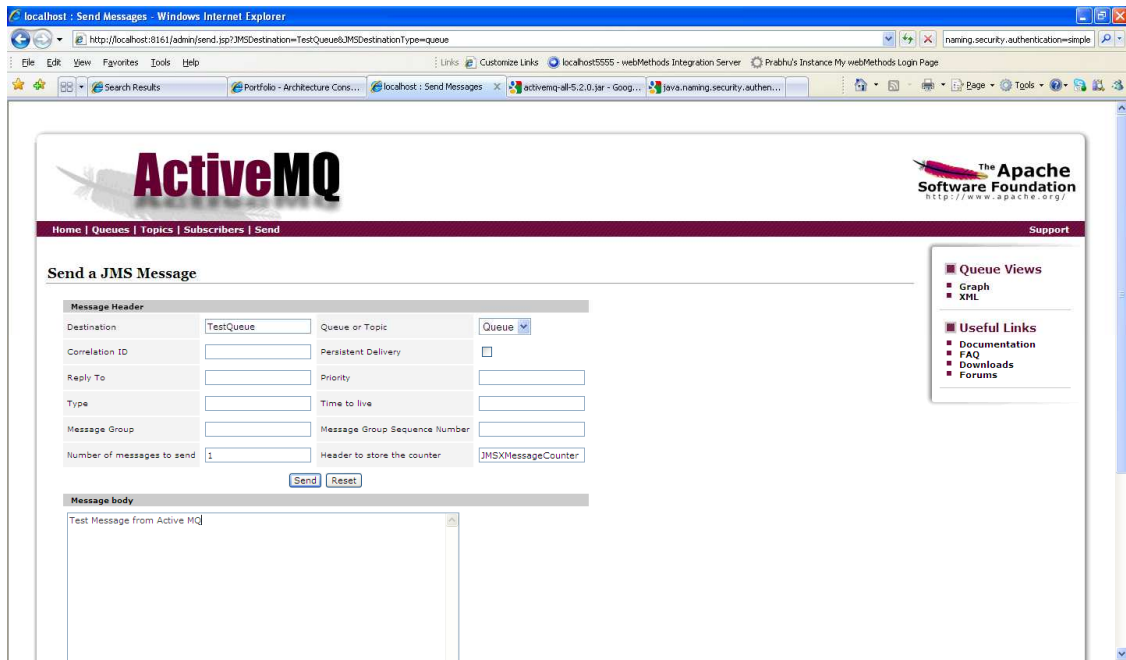
### 4. Click on "Send To" on the Active MQ UI

The screenshot shows the ActiveMQ web user interface. At the top, the "ActiveMQ" logo is displayed. Below it, a navigation bar contains links for "Home", "Queues", "Topics", "Subscribers", and "Send". A "Queue Name" input field and a "Create" button are also present. The main section is titled "Queues" and contains a table with the following data:

Name	Number Of Pending Messages	Number Of Consumers	Messages Sent	Messages Received	Views	Operations
example.A	0	1	0	0	Browse	Send To Purge Delete
TestQueue	0	1	0	0	Browse	Send To Purge Delete
TEST.FOO	0	0	0	0	Browse	Send To Purge Delete

An arrow points to the "Send To" button in the "Operations" column for the "TestQueue" row, which is circled in red. The footer of the page contains the text "Copyright 2005-2007 The Apache Software Foundation. (printable version)".

5. Enter a message in the body and press 'Send'

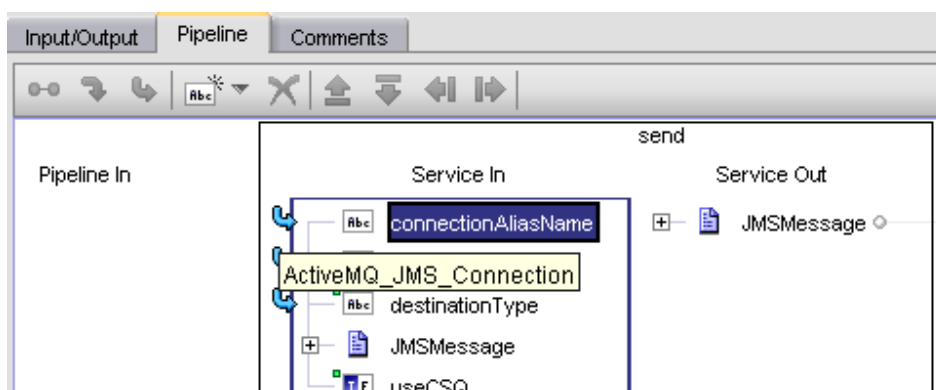


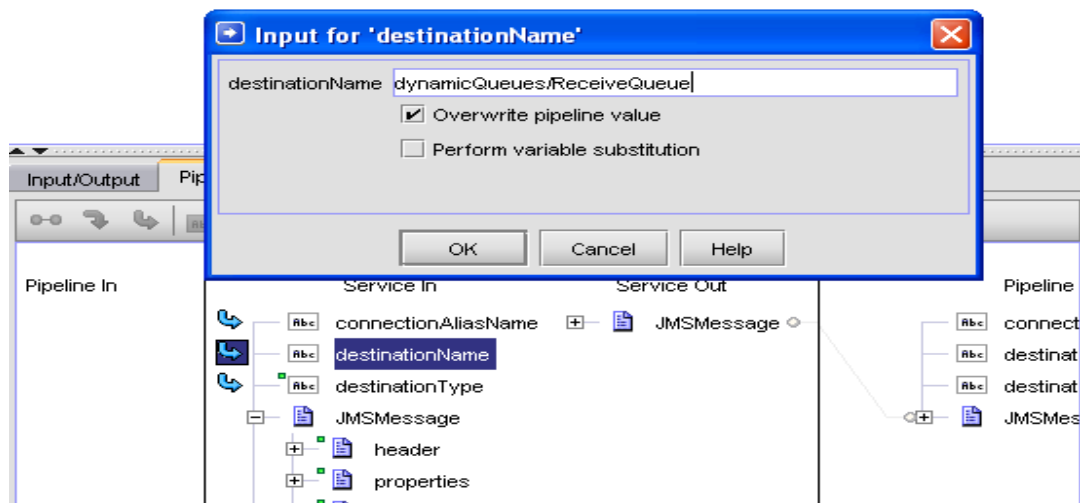
6. You should see a message in the IS server log, indicating successful subscription from IS



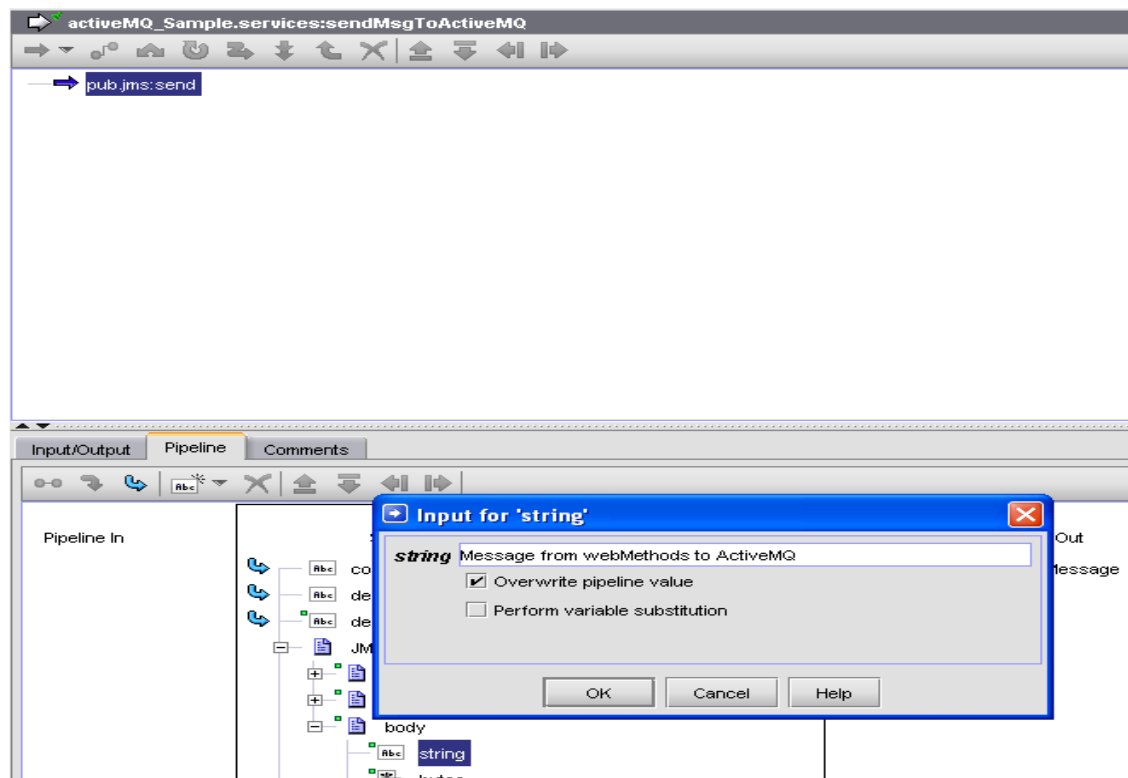
## Sending Messages

1. Create a flow service which uses the built-in service pub:jms:send to send a message to the ActiveMQ queue
2. Specify the connection alias and destination name and type

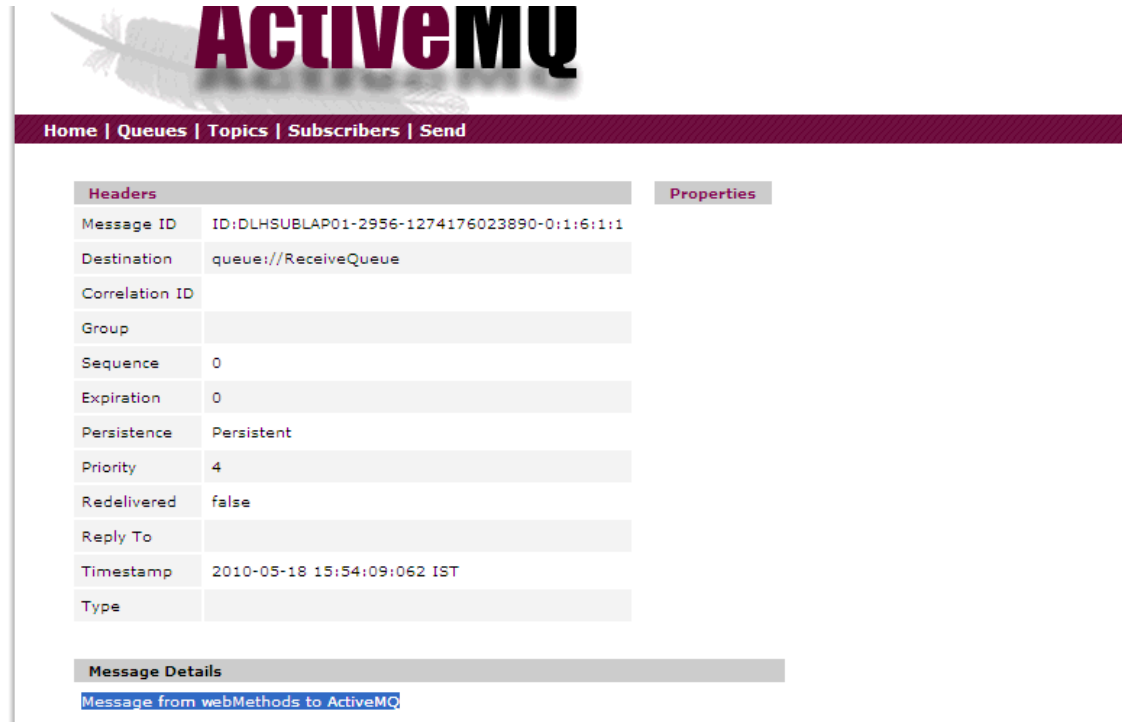




### 3. Add Test message and run the service



4. Browse the 'ReceiveQueue' on Active MQ UI, you should see the message with the appropriate content in the body



The screenshot displays the ActiveMQ web console interface. At the top, the 'ACTIVE MQ' logo is visible. Below the logo is a navigation bar with links: Home | Queues | Topics | Subscribers | Send. The main content area is divided into two tabs: 'Headers' (selected) and 'Properties'. The 'Headers' tab shows a table of message metadata:

Headers	
Message ID	ID:DLHSUBLAP01-2956-1274176023890-0:1:6:1:1
Destination	queue://ReceiveQueue
Correlation ID	
Group	
Sequence	0
Expiration	0
Persistence	Persistent
Priority	4
Redelivered	false
Reply To	
Timestamp	2010-05-18 15:54:09:062 IST
Type	

Below the headers, there is a 'Message Details' section with a single entry: 'Message from webMethods to ActiveMQ'.

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