ADEPTIA

# Adeptia Suite

## JMS Setup Guide

**March 4, 2013**

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# Introduction

This document explains how to setup Adeptia Suite to send and receive messages to and from Active MQ Server. This document covers:


- Setting up Active MQ Server
- Creating Queue in the Active MQ Server
- Configuring JNDI Properties in Adeptia Suite
- Creating JMS Provider
- Creating Process flow to consume message from JMS Queue
- Creating Process flow to populate message to JMS Queue

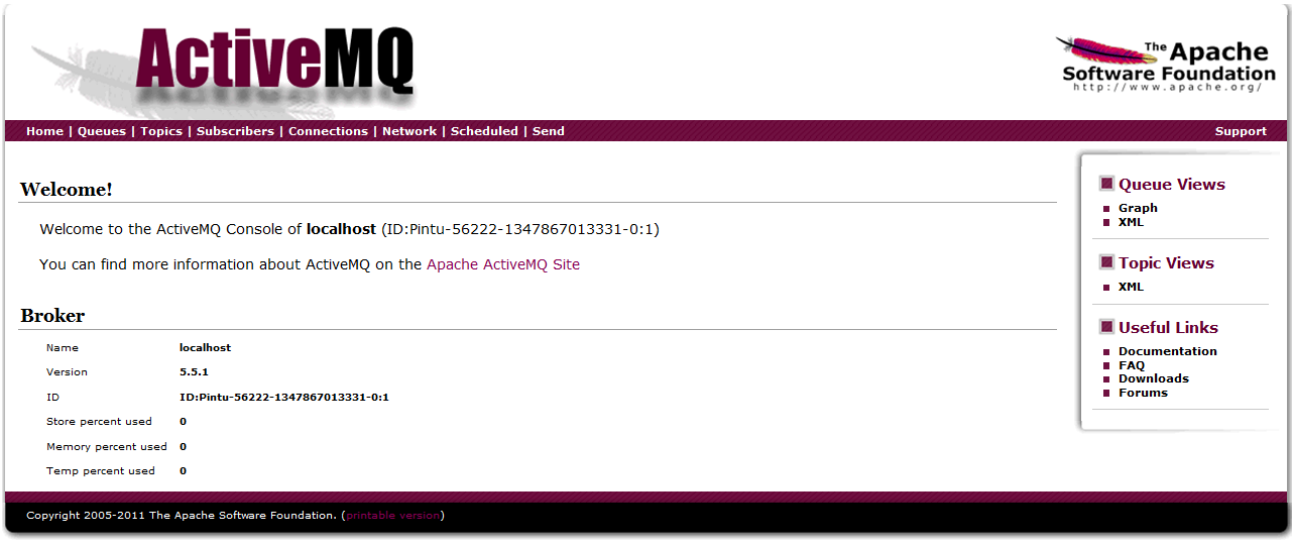

# Setting up Active MQ Server

This section covers the basic steps to setup Active MQ Server. For detailed instruction to setup the Active MQ Server, refer to http://activemq.apache.org/getting-started.html .

**Steps to setup Active MQ Server:**

1. Download Apache Active MQ Server from http://activemq.apache.org/activemq-551-release.html
2. Extract the zip.
3. To start the Active MQ Server, go to the command prompt and change to *<ActiveMQInstallationFolder>/bin* folder.
4. Execute the *activemq.bat* file. This will start the Active MQ Server.
5. To access the UI of Active MQ Server, open the browser and enter the following URL:

   http://localhost:8161/admin

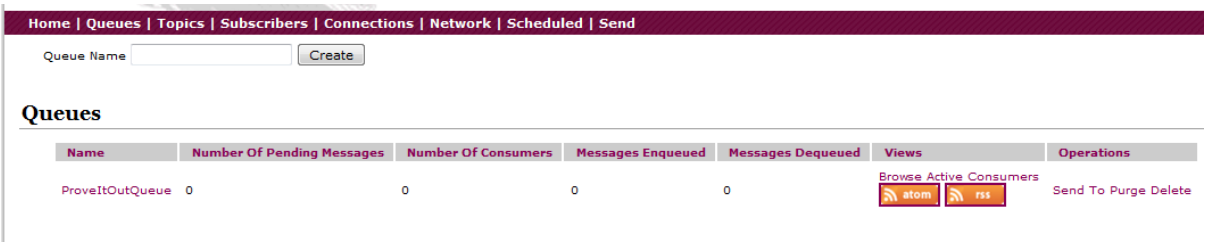



## Creating Queue in Active MQ Server

This section covers how to create a Queue in the Active MQ Server:

1. To create queue, click the *Queue* link in Active MQ UI.

2. Enter the name for the queue and click Create. This will create the Queue.




3. To send a message to the created Queue, click the *Send To* link and define the message as per your requirement.

# Configuring JNDI Properties in Adeptia Suite

Once you setup Active MQ Server and create a queue, you need to setup the JNDI properties in Adeptia Suite:

**Steps to configure JNDI Properties**

1. Replace the provided jndi.properties file in <AdeptiaSuiteInstallationFolder>/ServerKernel/etc folder.

2. Edit this jndi.properties file in a text editor (see figure below).

```
# JNDI configuration
#
#  Please refer to the JNDI documentation for further details.
#  You may adapt localhost and port number
#  depending on your configuration.
#
java.naming.factory.initial     com.sun.jndi.rmi.registry.RegistryContextFactory

#######################################################################
# START SNIPPET: jndi

java.naming.factory.initial = org.apache.activemq.jndi.ActiveMQInitialContextFactory

# use the following property to configure the default connector
java.naming.provider.url = vm://localhost

# use the following property to specify the JNDI name the connection factory
# should appear as.
#connectionFactoryNames = connectionFactory, queueConnectionFactory, topicConnectionFactry

# register some queues in JNDI using the form
# queue.[jndiName] = [physicalName]


# register some topics in JNDI using the form
# topic.[jndiName] = [physicalName]

# END SNIPPET: jndi
```

3. Add the entry of the queue, which you have created, as shown the figure below.

```
######################## JNDI configuration
#
#  Please refer to the JNDI documentation for further details.
#  You may adapt localhost and port number
#  depending on your configuration.
#
java.naming.factory.initial     com.sun.jndi.rmi.registry.RegistryContextFactory

#############################################################
# START SNIPPET: jndi

java.naming.factory.initial = org.apache.activemq.jndi.ActiveMQInitialContextFactory

# use the following property to configure the default connector
java.naming.provider.url = vm://localhost

# use the following property to specify the JNDI name the connection factory
# should appear as.
#connectionFactoryNames = connectionFactory, queueConnectionFactory, topicConnectionFactry

# register some queues in JNDI using the form
# queue.[jndiName] = [physicalName]
  queue.ProveItOutQueue = ProveItOutQueue

# register some topics in JNDI using the form
# topic.[jndiName] = [physicalName]

# END SNIPPET: jndi
```

**Note:** You can add as many entries of queue, as you want.

4. Save this file and restart the Kernel and WebRunner. Similarly you can also add entry for Topic.

## Creating JMS Provider

This section explains how to create JMS Provider.

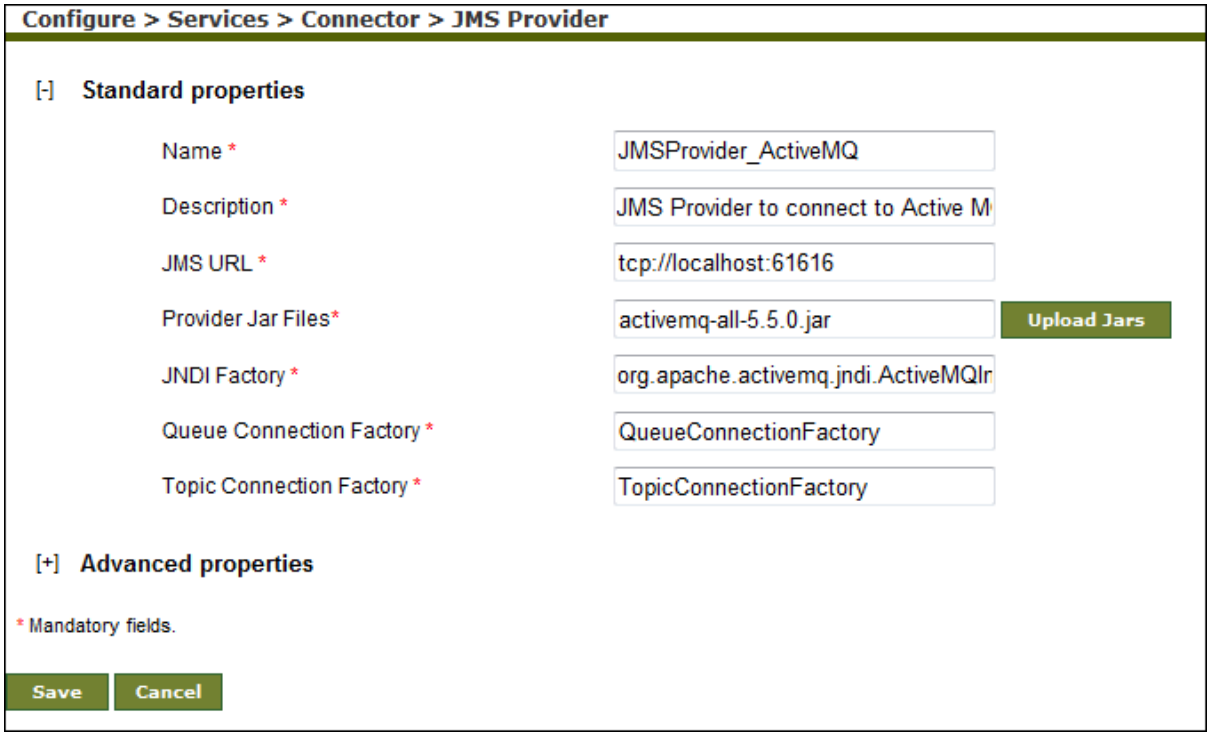
JMS Provider is used to make connection with JMS Sever. JMS Provider is used with JMS Event and Source activity.

To create a JMS Provider, you need the driver jar (activemq-all-5.5.1.jar) of Active MQ. You can find this jar within the folder, where you have installed the Active MQ Server.

**Steps to create JMS Provider:**

1. Login into Adeptia Suite, and go to **Configure > Services > Connectors** and then click **JMS Provider** link.

2. Create **New** link. The create JMS Provider page is displayed (see figure below).




3. Enter Name and Description in *Name* and *Description* field.

4. Enter the other information as per the table below:

| Field Name | Description and Sample Value |
|---|---|
| **JMS URL** | Enter the JMS URL as per syntax given below:<br>tcp://<hostname>:<port><br>For example: tcp://localhost:61616 |
| **Provider Jar Files** | Click *Upload Jar* button and load the *activemq-all-5.5.1.jar* file. |
| **JNDI Factory** | Enter the JNDI Factory as below :<br>*org.apache.activemq.jndi.ActiveMQInitialContextFactory* |
| **Queue Connection Factory** | Enter the Queue Connection Factory as below:<br>*QueueConnectionFactory* |
| **Topic Connection Factory** | Enter the Topic Connection Factory as below:<br>*TopicConnectionFactory* |

5. Click Save.

## Creating Process Flow to Consume Message from JMS Queue

This section explains how to create a process flow to consume message from JMS Queue.

The high level steps are:

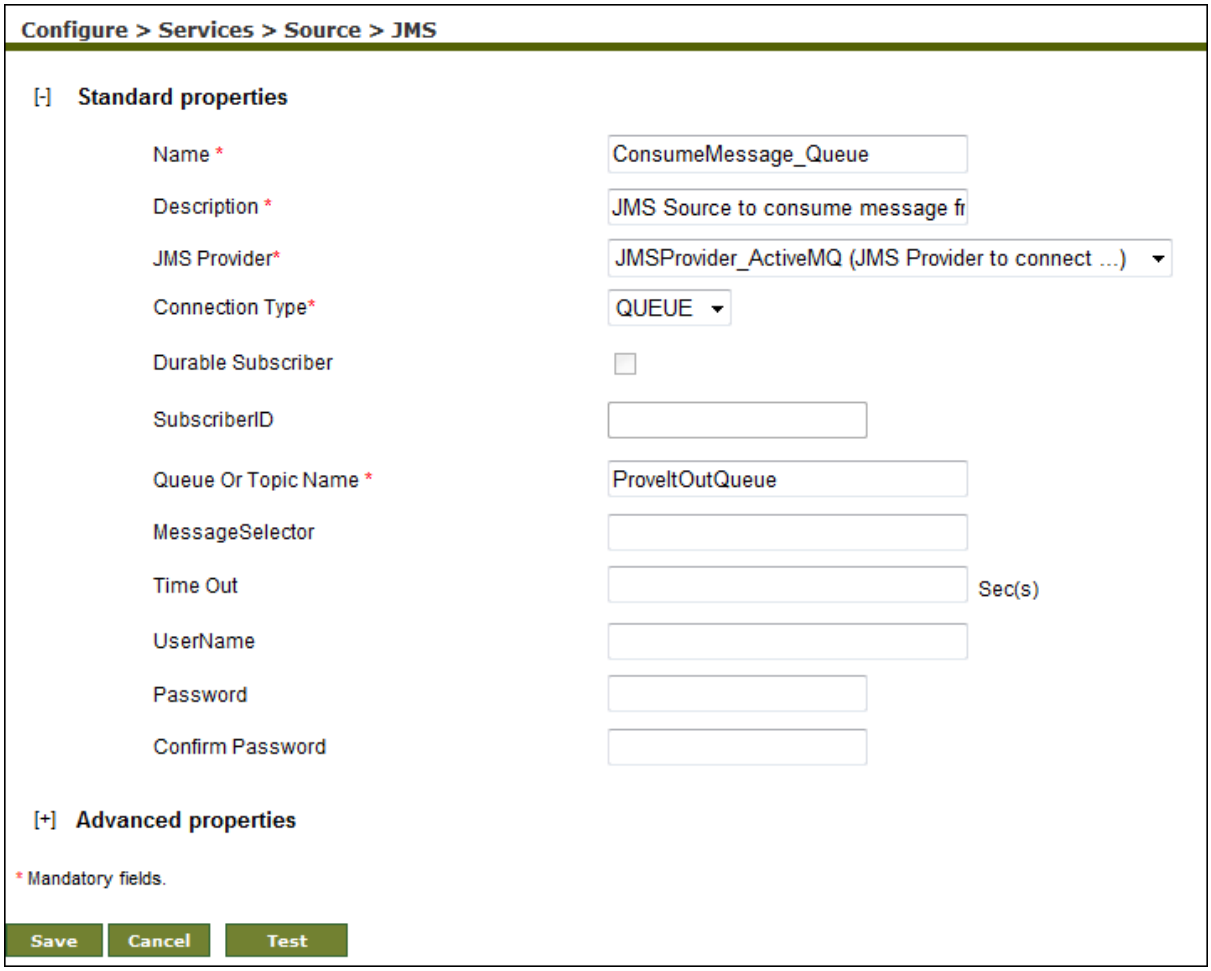
- Create a JMS Source activity
- Create a process flow using this JMS Source activity
- Create JMS Event and bind it with the Process flow

### *Creating JMS Source*

This section covers the steps to create JMS Source:

**Steps to create JMS Source:**

1. Go to **Configure > Services > Source** and then click **JMS Source** link.
2. Click **New** link. The create JMS Source page is displayed (see figure below).




3. Enter the required information and click **Save**.

   **Note**: For more detailed information, refer *to Creating JMS Source* section of Adeptia Suite *Developer Guide*.

## *Create Process flow*

Once you create JMS Source, you need to create the process flow using this JMS Source activity. You can use any other activity (as per you requirement) along with this JMS Source activity to complete this process flow and fulfill your requirement.

In case you want to execute this process flow using JMS Event, you need to enable the *EventContextEnable* propery as *true.*

To enable this property:

1. Within process designer, double click on the JMS Source activity. This will display the property of JMS Source.

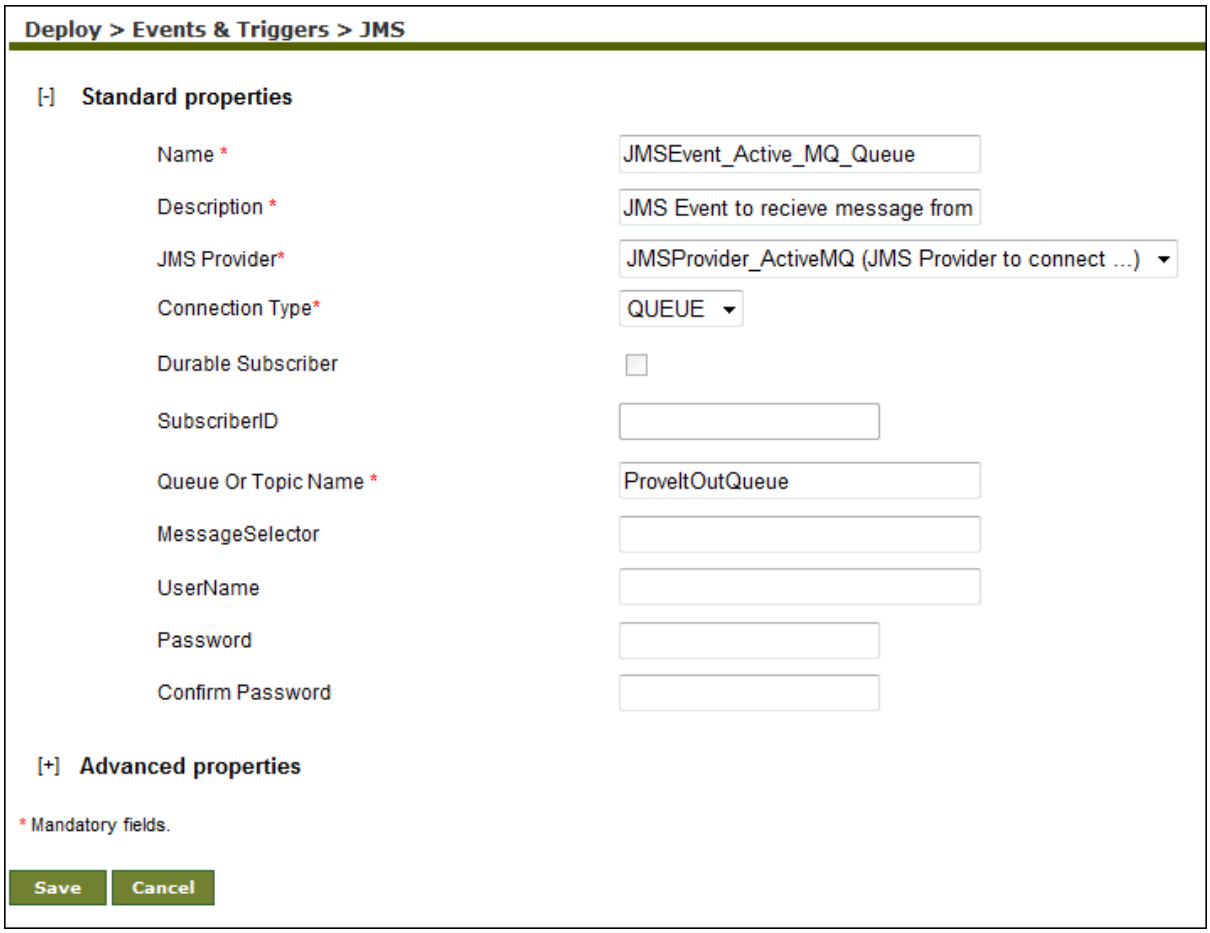
2. Set the value of *EventContextEnable* property as *true.*

## *Creating JMS Event*

Though you can manually execute process flow, to consume the message from JMS Queue, you can also bind the process flow with JMS Event, so that the process flow will be executed automatically, whenever any message is published in JMS Queue.

**Steps to create JMS Event and bind it with the process flow:**

1. Go to **Deploy > Events and Trigger >** and then click **JMS** link.
2. Create **New** link. The create JMS Event page is displayed (see figure below).

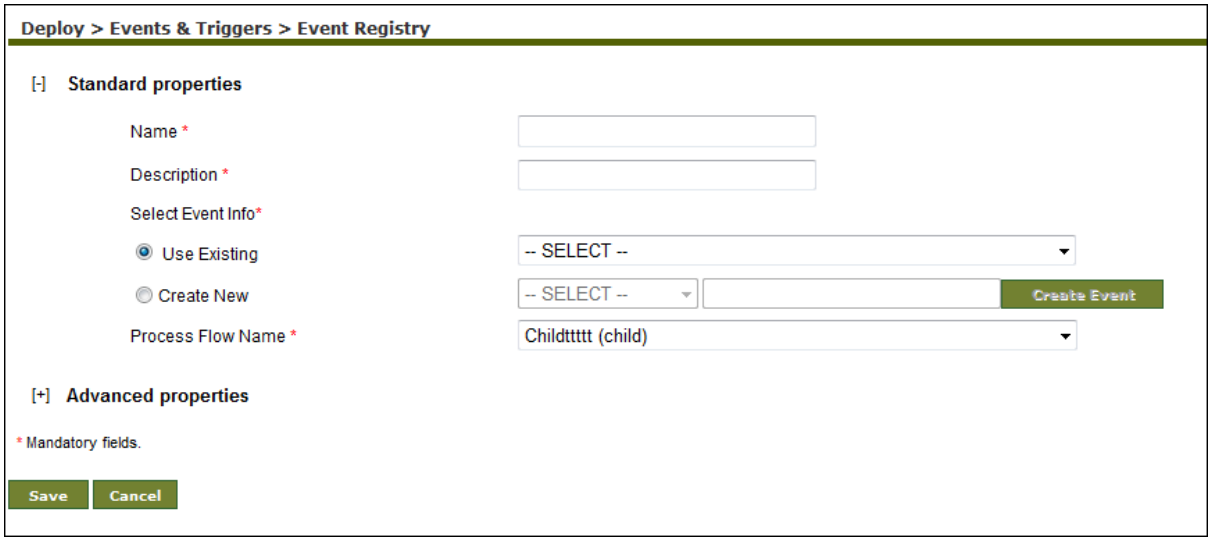



3. Enter the required information and click **Save**.

   **Note**: For more detailed information, refer *to Creating JMS Event* section of Adeptia Suite *Developer Guide*.

3. Once you have created the Process Flow and JMS Event, you need to create Event Registry to bind them.
4. To create an Event Registry, go to Go to **Deploy > Events and Trigger >** and then click **Event Registry** link.

5. Click **New** to link. This will open the *Create Event Registry* page (see figure below).




6. Enter the name and description in *Name* and *Description* field.

7. Select the *Use Existing* radio button and select the JMS Event, which you have created.

8. Select the process flow, which you have created, from the *Process Flow Name* drop-down list.

9. Click **Save**.

10. Go to Manage JMS Event page, and activate the JMS Event, that you have created. Now this JMS Event will start polling the JMS Queue and will trigger the process flow if any message will be available in the JMS Queue.

## Creating Process Flow to Populate Message to JMS Queue

To populate any message to JMS Queue, you need to create JMS target activity. Once you have created the JMS target activity, you create a process flow using this JMS target activity along with other activities as per your requirement.

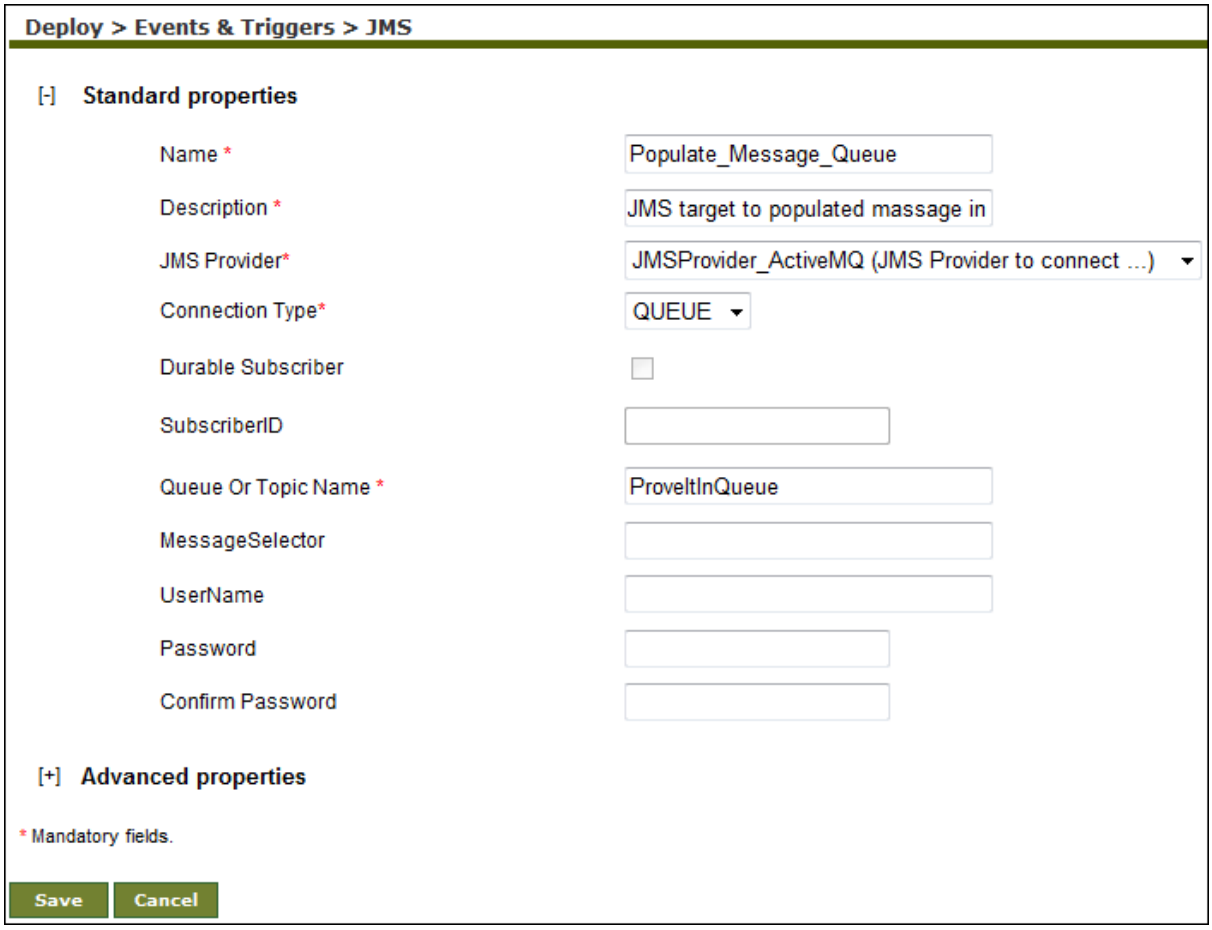
### *Creating JMS Target Activity*

This section covers the steps to create JMS target activity.

**Steps to create JMS Target:**

1. Go to **Configure > Services > Target** and then click **JMS Target** link.

2. Click **New** link. The create JMS Target page is displayed (see figure below).




4. Enter the required information and click **Save**.

   **Note**: For more detailed information, refer *to Creating JMS Target* section of Adeptia Suite *Developer Guide*.