

# Deploying Oracle® Java CAPS JMSJCA on WebLogic

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# Deploying JMSJCA on WebLogic

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The following topics provide instructions on how to deploy JMSJCA on WebLogic in Java CAPS.

- “Overview of Deploying JMSJCA on WebLogic” on page 5
- “Using JMSJCA Adapter” on page 6
- “Deploying JMSJCA on WebLogic” on page 6
- “Updating an Application” on page 11
- “Deleting an Application” on page 12

## Overview of Deploying JMSJCA on WebLogic

JMSJCA is a feature-rich library that abstracts differences between JMS servers and provides a single interface to these JMS servers, and adds a number of additional features on top of this. For more information about Java CAPS JMSJCA, including supported JMS platforms, see *JavaCAPS\_Home\appserver\addons\caps\readme\sun-jms-adapter-readme.html*.

JMSJCA consists of three parts.

- **JCA Container**  
A stand alone JCA container consisting of a powerful connection manager that can be used in combination with a transaction manager. Although specifically developed for JMSJCA, it can also be used separately for other connectors.
- **JMS Adapter to multiple JMS Servers**  
A Resource Adapter that wraps JMS Client Runtimes of various JMS Providers. It can be used with the aforementioned JCA Container, but it can also be used with the JCA container in a Java EE application server.
- **Enterprise Integration Patterns Engine**

## Using JMSJCA Adapter

There are two ways to use a JMSJCA adapter with an EAR file:

- The adapter can be packaged in the EAR file as a *local RAR*
- The adapter can be deployed in the application server as a *global RAR*

In either case, to use outbound connections, a mapping must be made in the deployment descriptor of the EJB or servlet that ties the Java Naming and Directory Interface (JNDI) names of the connection factories to names in the Environment Naming Context (ENC). The application code can then lookup the JMS connection factory and create outbound connections.

## Deploying JMSJCA on WebLogic

Perform the following tasks to deploy JMSJCA to a WebLogic Server:

- “[To Install WebLogic Server 10](#)” on page 6
- “[To Start the WebLogic Server Administration Console](#)” on page 6
- “[To Install a New Application or Module for Deployment Using the Console](#)” on page 7
- “[To Create a JNDI Name for the Respective JMS Provider](#)” on page 8

### ▼ To Install WebLogic Server 10

- 1 Download and Install WebLogic Server 10 from [the Oracle downloads site](#).
- 2 Create a non-CAPS application, which can send or receive a message to any of the JMS providers and can be deployed in WebLogic.

You can create this project using Oracle SOA Suite, for example.

### ▼ To Start the WebLogic Server Administration Console

- 1 Open a supported web browser and type the following URL,  
`http://hostname:port/console`
- 2 When the login page appears, enter the Username and the Password.
- 3 Click Log In to work with the WebLogic Server domain.

## ▼ To Install a New Application or Module for Deployment Using the Console

**1 Locate the Change Center in the upper left corner of the Administration Console.**

**2 Click Lock & Edit to lock the editable configuration hierarchy for the domain.**

This lets you make changes using the Administration Console, and modify, add or delete items in the domain.

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**Note** – Release Configuration in the Change Center allows others to edit the domain and ensures no pending changes exist.

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**3 Choose Deployments from the Domain tree structure on the left panel of the console.**

The standalone application modules and Java EE applications are listed.

**4 Click Install to install a new Enterprise Application or module for deployment to targets in the domain.**

**5 On the Locate Deployment to Install and Prepare for Deployment page, select the file path that represents the application root directory.**

Follow this path to deploy sun-jms-adapter.rar on WebLogic 10.

root\JavaCAPS\_Home\appserver\addons\caps\common\jmsjca

**6 Select sun-jms-adapter.rar and click Next.**

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**Tip** – Use the Next and Forward buttons to navigate forward and backwards during installation.

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**7 Choose the targeting style.**

The targets can be a server, clusters of servers and virtual hosts on which this deployment will function. Choose one of the following targets:

- Install this deployment as an application
- Install this deployment as a library

**Install this deployment as an application** is the default deployment method.

**8 Click Next.**

**9 Provide Optional Settings on this screen. You can modify these settings or accept the default settings.**

**a. Under General, type the Name of the deployment.**

In the current example, it is sun-jms-adapter. By default, the name of the deployment is specified.

**b. Under Source accessibility, choose one of the following locations from where all targets can access the application's files:**

- Use the defaults defined by the deployment's targets
- Copy this application onto every target for me
- I will make the deployment accessible from the following location

Location:

root\JavaCAPS\_Home\appserver\addons\caps\common\jmsjca\sun-jms-adapter.rar

**Use the defaults defined by the deployment's targets** is the default selection.

**c. Click Next.**

**10 Review your choices and click Finish to complete the deployment.**

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**Note** – Make the required changes to the Console and click Save.

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**11 Click Activate Changes in the Change Center.**

The following message appears on the right panel of the screen.

All changes have been activated. No restarts are necessary

**See Also** Some changes you make in the Administration Console take place immediately when you activate them. Other changes require you to restart the server or module affected by the change. Such changes are called non-dynamic changes. Non-dynamic changes are indicated in the Administration Console.

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**Note** – If you edit a non-dynamic configuration setting, no edits to dynamic configuration settings will take effect until the server is restarted.

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## ▼ To Create a JNDI Name for the Respective JMS Provider

- 1 Click Lock & Edit in the Change Center to modify the settings for the sun-jms-adapter.**
- 2 Click Deployments from the Domain tree structure and navigate to the sun-jms-adapter.**



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**Note** – The state of the deployed application changes from the Active state to the Prepared state.

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**3 Click sun-jms-adapter.**

**4 On the Settings for sun-jms-adapter page, click the Configuration- Tab.**

This selection defaults to the Outbound Connection Pools tab.

**5 Click New from the Outbound Connection Pool Configuration Table.**

You can create an instance for the resource adapter to display the Outbound Connection Groups.

**6 Choose one of the following Outbound Connection Groups to create an instance:**

- javax.jms.ConnectionFactory
- javax.jms.QueueConnectionFactory
- javax.jms.TopicConnectionFactory

**7 Click Next.**

**8 On the Create a New Outbound Connection page, enter the JNDI name that is needed to obtain the new connection instance.**

For example, SunMQConnectionPool, SunSTCMSCONNECTIONPool, or SunJMSGridConnection Pool.

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**Note** – This field is mandatory.

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**9 Click Finish.**

The Save Deployment Plan page appears. You can save the new deployment plan on this page if the configuration has changed. Select a directory to receive these files (for example, select **jmsjca**) and click **Finish**.

A confirmation message appears on the right panel of the screen.

A new deployment plan has been successfully created in root\JavaCAPs6\appserver\addons\caps\common\jmsjca\Plan.xml

**10 Click Activate Changes in the Change Center.**

The following message appears on the right panel of the screen.

All changes have been activated. No restarts are necessary

**11 Click Lock & Edit in the Change Center to modify the settings for the sun-jms-adapter.**

**12 Click Deployments from the Domain tree structure and navigate to the sun-jms-adapter.**

- 13 Click `sun-jms-adapter`.
- 14 On the **Settings for sun-jms-adapter** page, select the **Configuration- Tab**.  
The selection defaults to the **Outbound Connection Pools** tab.
- 15 In the **Outbound Connection Pool Configuration Table**, expand the type of **Outbound Connection Group** you selected earlier (`javax.jms.QueueConnectionFactory`, `javax.jms.ConnectionFactory`, or `javax.jms.TopicConnectionFactory`) to see the newly created JNDI.
- 16 Click the JNDI name you specified above.
- 17 On the **Settings for SunMQConnectionPool** page, set the following list of parameters with specified values in **Outbound Connection Properties** table (that is, fill values according to the message provider):

- a. **Set the Property Value for the JMQ ConnectionURL property as `mq://host:port|7676/jms`.**  
Provide the Password and UserName to connect to JMQ.

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**Note** – The default Password is *guest* and the default UserName is *guest*.

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- b. **Set the Property Value for the STCMS ConnectionURL property as `stcms://host:port|18007`.**  
Provide the Password and UserName to connect to JMQ.

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**Note** – The default Password is *adminadmin* and the default UserName is *admin*.

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- c. **Set the Property Value for the ConnectionURL property as `tcp://host:port|50607`.**  
Provide the Password and UserName to connect to JMQ.

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**Note** – The default Password is *admin* and the default UserName is *admin*.

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The following message appears on the right panel of the screen after completing the above steps.

Deployment plan has been successfully updated

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**Note** – Provide the same UserName and Password as defined in the **Optional Settings** screen.

Click **Save** after every entry.

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- 18 Follow the Deployments link and update the properties for the sun-jms-adapter. Activate the changes on the WebLogic Server Administration Console.
- 19 Place the following JAR files in the WebLogic lib directory based on the selected message provider:
  - imq.jar (for JMQ)

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**Note** – For example, copy the JAR file from *JavaCAPS\_Home\appserver\imq\lib\imq.jar* to *WebLogic\_Home\server\lib*. This establishes communication with the JMQ provider

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  - wave.jar (for SunJMSGrid)
  - com.stc.jms.stcjms.jar (JMS IQ Manager)
- 20 Restart the WebLogic server.
- 21 Run the non-CAPS application you created earlier and send a message to a particular configured message provider.

#### More Information On WebLogic

As Weblogic 9.2 doesn't support editing a URL in Outbound Connection Properties, the XML file must be edited accordingly.

## Updating an Application

When you update an application, you can specify that WebLogic Server redeploy the original archive file or uncompressed directory, or you can specify that WebLogic Server deploy a new archive file in place of the original one. You can also change the directory that contains the deployment plan that is associated with the application. Update an application if you have made changes to the application and you want to make the changes available to WebLogic Server clients, or if you want to redeploy an entirely new archive file in a new location.

### ▼ To Update an Application

- 1 Click Lock & Edit in the Change Center to modify the settings for the sun-jms-adapter.
- 2 Click Deployments from the Domain tree structure and navigate to the sun-jms-adapter.
- 3 Click Update.

- 4 **On the Locate new deployment files page, choose any one of the following to update the chosen application according to new deployment plan.**
  - a. **Update this application in place with new deployment plan changes**

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**Note** – In this case, the Deployment plan path must be specified.

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  - b. **Redeploy this application using the following deployment files**

In this case, both the Source path and the Deployment plan path are specified. This is the default selection.

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**Note** – In neither case, you can choose the path of your choice.

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- 5 **Review your choices and click Finish to complete the update.**

## Deleting an Application

When you delete (uninstall) an application, WebLogic Server can no longer be started. If you need to deploy and start the application again, you must reinstall it.

Before you can delete an application, you must stop it to ensure that it is not still running and servicing client applications.

### ▼ To Delete an Application

- 1 **Click Lock & Edit in the Change Center to modify the settings for the sun-jms-adapter.**
- 2 **Click Deployments from the Domain tree structure and navigate to the sun-jms-adapter.**
- 3 **Click Delete.**
- 4 **On the Delete Deployments page, click Yes to Continue or No to Cancel**

The following message appears on the right panel of the screen after completing the above steps.

```
Selected Deployments were deleted. Remember to click Activate Changes after you are finished
```
- 5 **Click Activate Changes in the Change Center.**

The following message appears on the right panel of the screen.

```
All changes have been activated, no restarts are necessary.
```