

Configuring WebLogic for Asynchronous Communications

Copyright © 2008, 2011, Oracle and/or its affiliates. All rights reserved.

License Restrictions Warranty/Consequential Damages Disclaimer

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

Warranty Disclaimer

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

Restricted Rights Notice

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

Hazardous Applications Notice

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Trademark Notice

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group in the United States and other countries.

Third Party Content, Products, and Services Disclaimer

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Contents

Configuring WebLogic for Asynchronous Communication	5
Installing the WebLogic Adapter and Asynchronous Samples	5
▼ To Install the WebLogic Adapter	5
▼ To Download the Asynchronous Samples	6
Configuring WebLogic Server 9.2	6
▼ To Configure WebLogic Server 9.2	6
▼ To Start the WebLogic Administration Console	7
▼ To Configure Startup Classes	8
▼ To Stop and Restart the Startup and Shutdown Classes	9
▼ To View the JNDI Tree Structure	10
▼ To Deploy the EJB	11
▼ To Clone a Startup and a Shutdown Class	11
Deleting Startup and Shutdown Classes	12
▼ To Delete a Startup and Shutdown Class Configuration	12

Configuring WebLogic for Asynchronous Communication

The following sections provide instructions on configuring WebLogic Server 9.2 for Asynchronous Communication.

- “Installing the WebLogic Adapter and Asynchronous Samples” on page 5
- “Configuring WebLogic Server 9.2” on page 6
- “Deleting Startup and Shutdown Classes” on page 12

Installing the WebLogic Adapter and Asynchronous Samples

Perform the following steps to download files from Java CAPS Uploader.

▼ To Install the WebLogic Adapter

- 1 **Start the Repository by running the following file:** `JavaCAPS_home\start_repository`
- 2 **Start the Java CAPS Uploader.**
The URL for the uploader is `http://hostname:port`, where *hostname* is the name of the server where Java CAPS is installed and *port* is the Repository port number (by default, 12000).
- 3 **Enter the username and password on the Java CAPS Login page.**

Note – The default username is *admin* and the default password is *adminadmin*.

- 4 **Click Login.**
- 5 **Follow the instructions under “To Upload Additional Repository-Based Java CAPS Components to the Repository” in *Installing Additional Components for Oracle Java CAPS 6.3* to upload the `WebLogicWay.sar` file.**

- 6 Once the installation is complete, follow the instructions under **“To Install Repository-Based Java CAPS Components to the NetBeans IDE”** in *Installing Additional Components for Oracle Java CAPS 6.3* to install the files to NetBeans.

▼ To Download the Asynchronous Samples

- 1 Complete the steps under **“To Install the WebLogic Adapter”** on page 5.
- 2 On the Java CAPS Uploader, click the Downloads tab.
A list of components ready to be downloaded appears.
- 3 Click **WebLogic eWay — Runtime Asynchronous Communication samples**.
- 4 Save the `weblogic.ejb.jms.sample.jar` file to a local directory.
- 5 Extract the contents of `weblogic.ejb.jms.sample.jar`.

Configuring WebLogic Server 9.2

The following procedures describe how to incorporate the sample files downloaded for the WebLogic Adapter into a WebLogic Server.

Note – These files are only for WebLogic Server 9.2. You need to use your own JAR files to establish Asynchronous Communication with WebLogic 8.1 and WebLogic 10.

▼ To Configure WebLogic Server 9.2

- 1 Verify that the system classpath contains the `weblogic.jar` and `weblogic.ejb.example.jar` files.
- 2 Copy the following files from the directory where you extracted JAR file earlier to the `WebLogic_Home\weblogic92\server\lib` directory:
 - `weblogic.ejb.example.jar`
 - `weblogic.startup.jar`
 - `weblogic.startup.properties`
- 3 Copy `com.stc.jms.stcjms.jar` from `JavaCAPS_Home\repository\repository\data\files\InstallManager\javamodules\JMSJCA` to `WebLogic_Home\weblogic92\server\lib`.

Note – Disable security in STCMS for the JMS samples to work properly.

- 4** **Modify the `startExamplesServer.cmd` and `setExamplesEnv.cmd` files, located in `WebLogic_Home\user_projects\domain name`, appending `com.stc.jms.stcjms.jar` and `weblogic.startup.jar` to the classpath for each.**

For example, in `startExamplesServer.cmd`:

```
CLASSPATH=%WL_HOME%\server\lib\webservices.jar;
%POINTBASE_CLASSPATH%;%CLIENT_CLASSES%;%SERVER_CLASSES%;%COMMON_CLASSES%;
%CLIENT_CLASSES%\utils_common.jar;
%WL_HOME%\server\lib\com.stc.jms.stcjms.jar;
%WL_HOME%\server\lib\weblogic.startup.jar
```

For example, in `setExampleEnv.cmd`:

```
CLASSPATH=%WL_HOME%\server\lib\webservices.jar
;%CLIENT_CLASSES%;%SERVER_CLASSES%;%POINTBASE_CLASSPATH%;
%POINTBASE_TOOLS%;%COMMON_CLASSES%;%CLIENT_CLASSES%\utils_common.jar;
%WEBLOGIC_CLASSPATH%;%WL_HOME%\server\lib\com.stc.jms.stcjms.jar;
%WL_HOME%\server\lib\weblogic.startup.jar
```

- 5** **Do the following to modify the deployment descriptors:**

Note – The sample EJBs are configured to reference the T3 naming service that is running on the localhost at port 7001. Each WebLogic Server instance is preset to listen on port 7001. If your server instance is running on a different port, modify the deployment descriptors for the EJBs to match this port.

- a. Extract `weblogic.ejb.example.jar` to a temporary file and open `weblogic-ejb-jar.xml` in an editor.
 - b. Find the `Provider_URL` tag of the deployment descriptor for each Bean that is executed. Change the port number from 7001 to the correct value. Also, change `localhost` to the name of your server, if necessary.
 - c. Save the file, re-jar (zip) the file, and replace `weblogic.ejb.example.jar`.
- 6** Start an instance of the application server (in this case, the user defined domain/server).

▼ To Start the WebLogic Administration Console

- 1** Start the WebLogic Server Administration Console in a browser by entering the following URL:
The URL for the WebLogic Server is `http://hostname:port`, where `hostname` is the name of the server where WebLogic is installed and `port` is the WebLogic port number (by default, 7001).

- 2 Enter the Username and the Password, when the login page appears.

Note – The default Username is **weblogic** and the default Password is **weblogic**.

- 3 Click Log In.

▼ To Configure Startup Classes

- 1 Locate the Change Center in the upper-left corner of the Administration Console.
- 2 Click on Lock & Edit to lock the editable configuration hierarchy for the domain.
- 3 From the Domain tree structure on the left panel of the console, expand Environment.
- 4 Select Startup & Shutdown Classes from the tree structure to configure a new startup class.
- 5 Click New from the Summary of Startup and Shutdown Classes page.
The Configure a New Startup or Shutdown Class page appears.
- 6 Select Startup Class from the list and click Next.
- 7 Enter a name for the Startup Class in Startup Class Properties page that you will use to identify the configuration of your Java class.

Note – You can create multiple named configurations for any given class. After you have created a class configuration, you cannot change its name. Instead, delete the configuration and create a new one with a new name.

The following properties identify the class you are configuring. Enter the following values:

- **Name:** SunMicrosystems_Startup
- **Class Name:** com.stc.eways.weblogic.startup.WeblogicStartup

- 8 Click Next.
- 9 Select the newly created target *exampleServer* from the Select Targets page, and then click Finish.

You can select one or more servers or deploy the class to all servers in a cluster.

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

Startup class created successfully.

10 Click on 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 on Lock & Edit in the Change Center to modify the settings for the SunMicrosystems_Startup.**12 On the Startup and Shutdown Classes page, click on the new startup class SunMicrosystems_Startup.****13 On the Settings for SunMicrosystems_Startup page, the following default values are shown.**

- **Name:** SunMicrosystems_Startup
- **Class Name:** com.stc.eways.weblogic.startup.WeblogicStartup
- **Deployment Order:** 1000

Note – This is the default value.

- **Arguments:** sbyn.wlstartup.propsfile=*BEA-HOME*\weblogic92\server\lib\weblogic.startup.properties (where *BEA-HOME* is the home directory of the WebLogic Server).

14 Click Save.

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

Settings updated successfully.

15 Click on Activate Changes in the Change Center to activate these changes.

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

All changes have been activated. No restarts are necessary.

Note – Not all changes take effect immediately, some require a restart.

▼ To Stop and Restart the Startup and Shutdown Classes

- 1 Click on Lock & Edit in the Change Center to modify the settings for the SunMicrosystems_Startup.
- 2 Stop and Restart the server by completing the following steps,
 - a. Click Servers from the left navigation panel.

- b. Click on *exampleServer(admin)* (or the new server instance) from the right panel of the screen.**

The Settings for the exampleServer page appear.

- c. Click the Control tab.**

- The Start/Stop tab is the default selection on this screen.

Note – Use this page to change the state of the current server. You can specify particular shutdown settings or view the current status of this server.

Click Save if you have modified any settings.

- Select When work completes (under the Server Status) from the Shutdown drop-down menu.

This action shuts down the server.

- d. To restart the server from the Windows Programs menu, select BEA Products, point to Examples, choose WebLogic Server, and then select Start Examples Server.**

Note – For Example, WebLogic Server Examples and Launch WebLogic Server Examples.

- e. Enter User Name and Password, when prompted.**

If the startup class is successfully invoked, you should see the following text in the Start Server command window:

```
weblogicstartup - Sun Microsystems startup class invoked - SunMicrosystems_Startup
weblogicstartup - Topic name: Topic.Sample3
weblogicstartup - Topic name: Topic.Sample2
weblogicstartup - Topic name: Topic.Sample1
weblogicstartup - Queue name: Queue.Sample3
weblogicstartup - Queue name: Queue.Sample2
weblogicstartup - Queue name: Queue.Sample1
weblogicstartup - Successfully invoked Sun Microsystems startup.
```

3 Start the Administration Console.

▼ To View the JNDI Tree Structure

- 1 Expand Environment from the Domain tree structure on the left panel of the console.**

- 2 Select Servers from the tree structure.**

This displays the Summary of Servers page.

- 3 Click on *exampleServer(admin)*.
This displays the Settings for *exampleServer* page.
- 4 Click on **View JNDI Tree** to open the JNDI Tree window. Expand the **SunMicrosystems** node to verify that all Sun Microsystems JMS objects are available.
- 5 Click on **Examples**, select **Deployments**, and click on **EJB**. Click on **Configure a new EJB** from the left navigation panel.

Note – Before deploying the EJB, make sure that the JMS IQ Manager is running in Enterprise Manager.

▼ To Deploy the EJB

- 1 Click open the **Deployments** node, in the left pane of the WebLogic Server Home.
- 2 Right-click the **EJB Deployments** node and select **Deploy a new EJB Module** from the menu.
- 3 Select *BEA-Home\weblogic92\server\lib*.
- 4 Click on **upload your file(s)** link, click **Browse**, and then select *BEA-Home\weblogic92\server\lib\weblogic.ejb.example.jar*. Click **Upload**.
- 5 Select the uploaded *weblogic.ejb.example.jar* and click **Target Module**.
- 6 Select the server instance under **Available Servers**. Click the right-arrow to move the new server instance to **Target Servers**.
- 7 Enter *weblogic.ejb.example* as the name for this application (EJB).
- 8 Click **Deploy**.
This installs the EJB on the WebLogic Administration Server.

▼ To Clone a Startup and a Shutdown Class

- 1 Expand **Environment** from the Domain tree structure on the left panel of the console and select **Startup and Shutdown Classes**.
- 2 On the **Startup and Shutdown Classes** page, check the class you want to clone. Click **Clone**.

- 3 On the Clone a Startup or Shutdown Class page, identify the class by entering another name (to create duplicate).**
- 4 Click OK to save changes.**

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

```
Startup Class created successfully.
```
- 5 Click on 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.
```

Deleting Startup and Shutdown Classes

Deleting a startup or shutdown class configuration permanently removes it from the domain's configuration and prevents it from running on all servers to which it has been deployed. If you only want to temporarily stop a startup or shutdown class from running, undeploy it from a server. For more details, see [“To Stop and Restart the Startup and Shutdown Classes” on page 9](#).

▼ To Delete a Startup and Shutdown Class Configuration

- 1 Click on Lock & Edit in the Change Center to modify the settings for the SunMicrosystems_Startup.**
- 2 Expand Environment from the Domain tree structure on the left panel of the console and select Startup and Shutdown Classes.**
- 3 On the Startup and Shutdown Classes page, check the class you want to delete.**
- 4 Click Delete and confirm the deletion.**
- 5 Click on Activate Changes in the Change Center of the Administration Console, to activate these changes.**

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

```
All changes have been activated. No restarts are necessary.
```

Note – Not all changes take effect immediately. Some require a restart .

WebLogic Server undeploys the class from the targeted servers and removes the class from the domain's configuration file.

Next Steps ✓ Remove the class from the server's classpath.

- ✓ Restart the servers from which you have deleted the class.

Note – After you delete a shutdown class, it will run the first time you shut down the server. When you shut down the server subsequently, it will no longer run.
