

Oracle® Fusion Middleware

Administering Oracle WebLogic Server with Fusion Middleware
Control

12c (12.1.2)

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This document describes how to configure, manage, and monitor Oracle WebLogic Server using Fusion Middleware Control.

Oracle Fusion Middleware Administering Oracle WebLogic Server with Fusion Middleware Control, 12c (12.1.2)

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Preface

This preface describes the document accessibility features and conventions used in this guide—*Administering Oracle WebLogic Server with Fusion Middleware Control*.

Documentation Accessibility

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Change and Configuration Management

This chapter describes how to use the Change Center in Fusion Middleware Control. It also describes how to use Fusion Middleware Control to record WLST scripts, create notes, and customize table views.

This chapter includes the following sections:

- [Use the Change Center](#)
- [Record WLST scripts](#)
- [Create notes](#)
- [Customize table views](#)

1.1 Use the Change Center

The Change Center provides a way to lock a domain configuration so you can make changes to the configuration while preventing other accounts from making changes during your edit session.

When locking is enabled, you start the edit process by obtaining a lock. When you finish making changes, you save the changes. The changes do not take effect, however, until you activate them, distributing them to all server instances in the domain.

To make any changes to Oracle WebLogic Server using Fusion Middleware Control:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Changes**, then select **Lock & Edit** to lock the editable configuration hierarchy for the domain.

This enables you to make changes using Fusion Middleware Control.

3. Make the changes you desire on the relevant pages within Fusion Middleware Control and click **Save** on each page where you make a change.
4. When you have finished making all desired changes, return to the Change Center and select **Changes**, then select **Activate Changes**.

For more information, see Configuration Options.

After you finish

Some changes you make in Fusion Middleware Control take place immediately when you activate them. Other changes require you to restart the server affected by the change. See [View pending changes](#).

1.1.1 View pending changes

To view changes that you have saved, but which have not yet taken effect:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Changes**, then select either **View Change List** or **View Restart Checklist**.
The Change List or Restart Checklist page is displayed.
3. From the Change List page, you can view all changes that have been saved, but not yet activated.
4. From the Restart Checklist page, you can view all server instances that must be restarted for configuration changes to take effect.

To restart a server:

In the Restart Checklist table, select the row of the server you want to restart.

Click **Restarts**.

5. Click **Done**.

1.1.2 Enable and disable the domain configuration lock

The Change Center provides a way to lock a domain configuration so you can make changes to the configuration while preventing other accounts from making changes during your edit session.

To enable or disable the domain configuration locking feature in a development domain:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Changes**, then select **Preferences**.
The Change Center Preferences page is displayed.
3. From the Change Center Preference page, select or clear the **Auto-Commit Mode (Automatically Acquire Lock and Activate Changes)** field to enable or disable this feature.
4. Click **OK**.

To verify that domain configuration locking is enabled:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Changes**, then locate **Auto-Commit Mode**.
3. If a blue checkmark appears next to **Auto-Commit Mode**, the domain configuration lock is enabled.
4. If there is no checkmark, select **Auto-Commit Mode** to enable the domain configuration lock.

A confirmation message is displayed on the page.

After you finish

When you enable domain configuration locking, you must use the Change Center to unlock and edit the domain configuration. See [Use the Change Center](#).

1.1.3 Release the configuration lock

When you select **Lock & Edit** in the Change Center, you obtain a lock on the editable configuration hierarchy which prevents other people from making changes until you release the configuration lock.

To release the configuration lock:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Changes**, then select one of the following options:
 - To release the lock explicitly before you make any changes, select **Release Configuration**.
 - To release the lock implicitly after you save any changes, select **Activate Changes** or **Undo All Changes**.

A confirmation message is displayed on the page indicating the configuration lock has been released.

1.1.4 Set Change Center preferences

You can specify individual Change Center preferences.

To specify preferences for the Change Center:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Changes**, then select **Preferences**.

The Change Center Preferences page is displayed.
3. From the Change Center Preference page, you can specify the following options:
 - Activation Timeout
 - Warn User Before Taking Lock
 - Auto-Commit Mode (Automatically Acquire Lock and Activate Changes)
 - Management Operation Timeout
4. Click **OK**.

A confirmation message is displayed on the page.

1.2 Record WLST scripts

To help automate the task of configuring a domain, you can record your configuration actions in Fusion Middleware Control as a series of WebLogic Scripting Tool (WLST) commands and then use WLST to replay the commands.

WLST is a command-line scripting environment that you can use to create, manage, and monitor WebLogic Server domains.

You cannot record WLST commands for the following:

- Changes to the security data that is maintained by a security provider. For example, you cannot record the commands to add or remove users, roles, and policies.
- Changes to deployment plans.
- Deployment operations: deploy, redeploy, undeploy, start, stop.

- Runtime operations found on Control or Monitoring pages, such as starting and stopping applications or server instances.

For more information, see Configuration Options.

This section includes the following tasks:

- [Start WLST recording](#)
- [Stop WLST recording](#)
- [View recorded commands](#)
- [Set WLST recording preferences](#)

1.2.1 Start WLST recording

You can only record actions that modify a domain's configuration document. See [Record WLST scripts](#).

To start recording your Fusion Middleware Control actions as WLST commands:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Recording**, then select **Start Recording**.

A confirmation message is displayed on the page.

After you finish

Fusion Middleware Control starts recording all actions that change the domain's configuration. As it records each command, it writes the command to the script file that you specified in your recording preferences. See [Set WLST recording preferences](#).

1.2.2 Stop WLST recording

To stop recording your Fusion Middleware Control actions as WLST commands:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Recording**, then select **Stop Recording**.

A confirmation message is displayed on the page indicating that Fusion Middleware Control has stopped recording your actions.

1.2.3 View recorded commands

To view the commands that have been recorded in your script file:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Recording**, then select **View Recording**.

The View Recording page shows the commands that have been recorded into the script file in the current and previous recording sessions.

You cannot edit the commands that are displayed on this page. Instead, you can use a text editor to edit the commands in the script file.

3. Click **OK**.

1.2.4 Set WLST recording preferences

You can specify individual preferences for WLST recording.

To set preferences for recording WLST scripts:

1. Locate the **Change Center** above the Target Navigation pane.
2. Select **Recording**, then select **Preferences**.
The Set Preferences for WLST Recording page is displayed.
3. From the Set Preferences for WLST Recording page, you can specify the following options:
 - Base Script Directory
 - Script File Name
 - Append to File
 - Prompt Before Start Recording
 - Generate Prescript and Postscript
 - Prescript Text
 - Postscript Text
4. Click **OK**.

1.3 Create notes

For items you can configure in Fusion Middleware Control, you can attach notes describing the configuration.

This section includes the following tasks:

- [Create domain notes](#)
- [Create server notes](#)
- [Create cluster notes](#)

1.3.1 Create domain notes

To create notes for domain configuration:

1. From the **WebLogic Domain** menu, select **Administration**, then select **Notes**.
2. On the Notes page, enter your notes.
3. Click **Save**.

For more information, see Configuration Options.

1.3.2 Create server notes

To create notes for server configuration:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server for which you want to create notes.

An overview page displays information related to the server.

3. From the **WebLogic Server** menu, select **Administration**, then select **Notes**.
4. On the Notes page, enter your notes.
5. Click **Save**.

For more information, see Configuration Options.

1.3.3 Create cluster notes

To create notes for cluster configuration:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, click the name of the cluster for which you want to create notes.

An overview page displays information related to the server.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **Notes**.
4. On the Notes page, enter your notes.
5. Click **Save**.

For more information, see Configuration Options.

1.4 Customize table views

You can customize tables in Fusion Middleware Control by sorting and filtering the data displayed and managing columns.

To customize a table view:

1. To add or remove table columns:
 - a. Above the table, select **View**, then select **Manage Columns**.
 - b. Add columns to display by moving them from the list of **Hidden Columns** (on the left) to **Visible Columns** (on the right).
 - c. Remove columns displayed by moving them from the list of **Visible Columns** to the list of **Hidden Columns**.
 - d. Click **OK**.
2. To reorder table columns:
 - a. Above the table, select **View**, then select **Reorder Columns**.
 - b. Select a column and use the arrows on the right to reorder the columns.
 - c. Click **OK**.
3. To filter the data that appears in a table:
 - a. Select the column for which you want to filter data.
 - b. Above the column, specify filtering criteria in the text box.

Note: Some columns provide a dropdown menu with filtering criteria instead of a text box.

The table displays only the filtered data.

4. To sort the data that appears in a table:
 - a. Above the table, select **View**, then select **Sort**.
 - b. Select **Advanced**.

- c. From the Advanced Sort page, you can sort individual columns by ascending or descending order.
- d. Click **OK**.

WebLogic Server Domains

An Oracle WebLogic Server administration domain is a logically related group of Oracle WebLogic Server resources. Domains include a special Oracle WebLogic Server instance called the Administration Server, which is the central point from which you configure and manage all resources in the domain. Usually, you configure a domain to include additional Oracle WebLogic Server instances called Managed Servers. You deploy Web applications, EJBs, Web services, and other resources onto the Managed Servers and use the Administration Server for configuration and management purposes only. For more information on WebLogic Server domains, see *Understanding Domain Configuration for Oracle WebLogic Server*.

This chapter describes the tasks you can perform to monitor and control domains.

This chapter includes the following sections:

- [Monitor domains](#)
- [Control domains](#)
- [Configure domains](#)

2.1 Monitor domains

This section describes how to monitor domains. This section includes the following tasks:

- [Monitor domain health](#)
- [Monitor domain server instances](#)
- [Monitor domain clusters](#)
- [Monitor domain migration](#)
- [Monitor domain deployments](#)
- [Monitor domain JDBC data sources](#)
- [Monitor domain messaging](#)
- [Monitor domain asynchronous tasks](#)
- [Monitor domain port usage](#)

2.1.1 Monitor domain health

To monitor the health of a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Health**.

The Health summary page allows you to monitor health information for the domain and its subsystems. The Subsystem Health table displays information about the health of the server instances and subsystems configured in the current domain, such as:

- Server Name
- Server Status
- Server State
- Server Health
- Subsystem Name
- Subsystem Health
- Subsystem Type

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2.1.2 Monitor domain server instances

A server is an instance of WebLogic Server that runs its own Java Virtual Machine (JVM) and has its own configuration.

To monitor the runtime status of all server instances configured in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Servers**.

The Servers table displays information about the Administration Server and any Managed Servers that have been configured in the current domain, such as:

- Name
- Status
- Cluster
- Machine
- State
- Health

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed

- Query by Example
2. In the table, select the name of the server instance to view configuration information, such as the server's default network communications.

2.1.3 Monitor domain clusters

To monitor the runtime status of all clusters configured in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Clusters**.

The Clusters table displays information about the clusters that have been configured in the current domain, such as:

- Cluster Name
- Status
- Server
- Cluster Address
- Cluster Messaging Mode

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the cluster to view configuration information, such as the cluster's default network communications.

2.1.4 Monitor domain migration

To monitor the status of all migration requests in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Migration**.

The Migration table displays information the status of all migration requests, such as:

- Start Time
- End Time
- Status
- Server
- Machines Attempted
- Machine Migrated From
- Machine Migrated To

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2.1.5 Monitor domain deployments

To monitor the status of all deployments in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.

The Deployments (Monitoring) Summary page is displayed.

For more information, see Configuration Options.

To monitor specific deployments that are deployed in the domain, select the appropriate pages:

- **Web Applications:** monitor Web applications; includes information such as the machine and server instance on which the Web application is deployed and statistics about the number of servlets and sessions associated with the Web application
- **Resource Adapters:** monitor the status of the current state of message listener endpoints and outbound connection pools for a resource adapter
- **EJBs:** monitor statistics about stateless, stateful, singleton, entity, and message driven EJBs
- **Web Services:** monitor all the Web services that are deployed to this domain
- **Web Service Clients:** monitor all Web service clients in this domain
- **JAX-RS Applications:** monitor the JAX-RS applications running in this domain
- **Workload:** view statistics for the Work Managers, constraints, and policies that are configured for application deployments in this domain
- **Monitor cluster deployments:** monitor all deployments in a cluster

Optionally, select **View** on any page to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2.1.6 Monitor domain JDBC data sources

To monitor the status of all JDBC data sources created in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **JDBC Data Sources**.

The JDBC Data Sources table lists the JDBC data sources that have been created in the domain and displays related status information, such as:

- Name
- Type
- Server Name
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed

2. To test a data source:

1. In the JDBC Data Sources table, select the row of the JDBC data source instance you want to test. The Test Data Source option is displayed above the table.
2. Click **Test Data Source**.

2.1.7 Monitor domain messaging

To monitor the status of JMS servers created in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Messaging**.

The JMS Servers table displays information about the status of all JMS servers in a domain, such as:

- JMS Server Name
- Health
- Health Reason
- Persistent Store
- Target
- Current Server

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

To monitor the following domain messaging resources or modules, select the appropriate pages:

- **Store-and-Forward Agents:** monitor SAF agent statistics and perform message management operations, such as pausing incoming requests to the agent

- **JMS Resources:** monitor all JMS resources that have been created for all the JMS system modules, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters
- **JMS Modules:** monitor the JMS modules created for this domain
- **Messaging Bridges:** monitor the status of all messaging bridges configured on active server instances in this domain

2.1.8 Monitor domain asynchronous tasks

To monitor the completion status of all tasks in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Asynchronous Tasks**.

The Asynchronous Tasks table displays information about the completion status of all tasks in a domain, such as:

- Description
- Type
- Status
- Begin Time
- End Time
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the description of the task for which you want to view additional status information.

2.1.8.1 Monitor an asynchronous task

To view status information of a specific task:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Asynchronous Tasks**.
2. In the Asynchronous Tasks table, select the description of the task for which you want to view additional status information.

The Task Results page displays status information related to the task, such as:

- Description
- Status
- Begin Time
- End Time

3. If you selected a Deployment Task, select **Targets** to view additional status information, such as:
 - Target Name
 - Target Type
 - Status
 - Exceptions

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2.1.9 Monitor domain port usage

To monitor port usage in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Port Usage**.

The Port Usage table displays the following information:

- Port in Use
- IP Address
- Component
- Channel
- Protocol

To only monitor port usage information about one specific server instance in the domain, select that server instance from the **Show** menu.

2.2 Control domains

This section includes the following tasks:

- [Control domain server instances](#)
- [Control domain clusters](#)

Before you begin:

Control operations on Managed Servers require starting the Node Manager. Starting Managed Servers in *STANDBY* mode requires the domain-wide administration port.

2.2.1 Control domain server instances

You can start, resume, suspend, or shutdown the server instances configured in a domain. For information on how the server instances transition from *STANDBY* or *ADMIN* to the *RUNNING* state, see "Understanding Server Life Cycle" in *Managing Server Startup and Shutdown for Oracle WebLogic Server*.

To change the state of server instances in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Servers**.
The Servers table displays information about the server instances that have been configured in the current domain.
2. In the table, select the row containing the name of the server instance you want to control. The control options are displayed above the table.
3. Select one of the server control options:
 - **Start**: moves server instances from the SHUTDOWN state to RUNNING.
 - **Resume**: moves server instances from the STANDBY or the ADMIN state to RUNNING.
 - **Suspend**: select an option to transition a server instance from the RUNNING state to the ADMIN state:
 - **When work completes**: moves server instances from the RUNNING state to the ADMIN state, allowing work in process to be handled gracefully. While in the SUSPENDING state, Work Managers complete in-flight processing for pending work in application threads.
 - **Force shutdown now**: immediately moves server instances from the RUNNING state to the ADMIN state, without handling work in process gracefully.
 - **Shutdown**: select an option to shutdown a server instance:
 - **When work completes**: gracefully stops server instances in the domain. New requests are rejected but in-flight requests are completed before the server stops.
 - **Force suspend now**: immediately stops server instances in the domain. In-flight requests are dropped, no new requests are accepted, and the server immediately stops.
 - **Restart SSL**: restarts the SSL listen sockets so that keystore changes take effect.

For more information, see Configuration Options.

2.2.2 Control domain clusters

To change the state of clusters in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Clusters**.
The Clusters table displays information about the clusters that have been configured in the current domain.
2. In the table, select the row containing the name of the cluster you want to control. The control options are displayed above the table.
3. Select one of the cluster control options:
 - **Start**: moves server instances in the cluster from the SHUTDOWN state to RUNNING.
 - **Stop**: select an option to shutdown server instances in a cluster
 - **When work completes**: gracefully stops server instances in the cluster. New requests are rejected but in-flight requests are completed before the cluster stops.

- **Force suspend now:** immediately stops server instances in the cluster. In-flight requests are dropped, no new requests are accepted, and the cluster immediately stops.
- **Restart:** restarts the server instances in the cluster.
- **Suspend:** select an option to transition server instances in the cluster from the `RUNNING` state to the `ADMIN` state:
 - **When work completes:** moves server instances in the cluster from the `RUNNING` state to the `ADMIN` state, allowing work in process to be handled gracefully. While in the `SUSPENDING` state, Work Managers complete in-flight processing for pending work in application threads.
 - **Force shutdown now:** immediately moves server instances in the cluster from the `RUNNING` state to the `ADMIN` state, without handling work in process gracefully.
- **Resume:** moves server instances in the cluster from the `STANDBY` or the `ADMIN` state to `RUNNING`.

For more information, see Configuration Options.

2.3 Configure domains

This section describes how to configure domains. This section includes the following tasks:

- [Configure general settings](#)
- [Configure domain JTA settings](#)
- [Configure the default JPA persistence provider](#)
- [Configure domain EJBs](#)
- [Configure domain Web applications](#)

2.3.1 Configure general settings

To configure general settings for a domain:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **General Settings**.

From the General Settings page you can configure administrative options that apply to all server instances in the current domain, such as:

- Enable Administration Port (see [Configure the domain-wide administration port](#))
- Administration Port
- Production Mode
- Exalogic Optimizations
- Cluster Constraints
- On-demand Employment of Internal Applications
- Oracle Guardian Agent

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this domain.

2. Click **Save**.

2.3.1.1 Configure the domain-wide administration port

Before you begin:

The administration port accepts only secure, SSL traffic, and all connections via the port require authentication by a server administrator. Because of these features, enabling the administration port imposes the following restrictions on your domain:

- The Administration Server and all Managed Servers in your domain must be configured with support for the SSL protocol.
- All server instances in the domain, including the Administration Server, enable or disable the administration port at the same time.

Note: The administration port cannot be dynamically enabled on a Managed Server. You must shut down each Managed Server, enable the administration port, then restart.

WebLogic Server provides the option to enable an SSL administration port for use with all server instances in the domain. Using the administration port is strongly recommended. It provides three capabilities:

- Since communication uses SSL, administration traffic (which includes such things as administrator passwords) is more secure.
- It enables you to start a server instance in the *STANDBY* state.
- It enables you to separate administration traffic from application traffic in your domain.

To enable the administration port for a domain:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **General Settings**.
2. Select the **Enable Administration Port** check box to enable the SSL administration for this domain.
3. In the **Administration Port** field, enter the SSL port number that server instances in the domain use as the administration port. You can override an individual server instance's administration port assignment on the **Advanced** options portion of the General Settings page.
4. Click **Save**.

After you finish:

Start all Managed Server instances in the domain. You do not need to restart the Administration Server.

2.3.1.2 Archive domain configuration files

To configure how many archive files are retained:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **General Settings**.
2. Expand **Advanced**, then select the **Configuration Archive Enabled** check box.
3. In the **Archive Configuration Count** field, enter the number of archive files to retain.

4. Click **Save**.

2.3.1.3 Change to production mode

All server instances in a domain run either in development mode or production mode. In general, production mode requires you to configure additional security features.

To configure all server instances in a domain to run in production mode:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **General Settings**.
2. Select the **Production Mode** check box.
3. Click **Save**.
4. Shut down any server instances that are currently running.
5. Invoke the domain's `startWebLogic` script. The Administration Server starts in the new mode.
6. If the domain contains Managed Servers, start the Managed Servers.

2.3.2 Configure domain JTA settings

To configure the Java Transaction API (JTA) of a domain:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **Java Transaction API (JTA)**.

From the JTA page you can define the JTA configuration settings for your domain, such as:

- Timeout Seconds
- Abandon Timeout Seconds
- Before Completion Iteration Limit
- Max Transactions
- Max Unique Name Statistics
- Checkpoint Interval Seconds
- Forget Heuristics
- Unregister Resource Grace Period
- Execute XA Calls in Parallel
- Enable Two Phase Commit

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this domain.

2. Click **Save**.

2.3.3 Configure the default JPA persistence provider

You can specify which Java Persistence API (JPA) persistence provider to use for each persistence entity in the `persistence.xml` file. However, if no persistence provider is specified, the domain-wide default provider is used.

Changing the default provider does not affect applications that are already deployed. The setting takes effect when the server instance is restarted or the application is manually redeployed.

To specify the default JPA provider in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **Java Persistence API (JPA)**.

From the JPA page you can define the JPA configuration for your domain by selecting a JPA provider from the **Default JPA Provider** menu.

For more information, see Configuration Options.

2. Click **Save**.

2.3.4 Configure domain EJBs

To configure the EJBs in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **EJBs**.

From the EJB page you can define domain-wide EJB configuration settings, such as:

- Java Compiler
- Prepend Java Compiler Options
- Append Java Compiler Options
- Extra RMIC Options
- Keep Generated EJBC Source Files
- Force Generation
- Temporary Directory
- Extra EJBC Options

For more information about these fields, see Configuration Options.

2. Click **Save**.

2.3.5 Configure domain Web applications

To configure Web applications in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Administration**, then select **Web Applications**.

From the Web Applications page you can define the domain-wide Web application configuration settings, such as:

- Relogin Enabled
- Allow All Roles
- Filter Dispatched Requests
- Overload Protection Enabled
- X-Powered-By Header
- Mime Mapping File

- Optimistic Serialization
- Error on Name Request Time Value
- Client Cert Proxy Enabled
- HTTP Trace Support Enabled
- WebLogic Plug-in Enabled
- Auth Cookie Enabled
- Change Session ID on Authentication
- WAP Enabled
- Post Timeout
- Maximum Post Timeout
- Maximum Post Size
- Work Context Propagation Enabled
- P3P Header Value
- JSP Compiler Backwards Compatible
- Archived Real Path Enabled

For more information about these fields, see Configuration Options.

2. Click **Save**.

WebLogic Servers

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.

When you create a domain, you also create an Administration Server, which distributes configuration changes to other servers in the domain. In a typical production environment, you create one or more Managed Servers in the domain to host business applications and use the Administration Server only to configure and monitor the Managed Servers.

This chapter describes the tasks you can perform to monitor, control and configure server instances.

This chapter includes the following sections:

- [Monitor servers](#)
- [Control servers](#)
- [Configure servers](#)

3.1 Monitor servers

This section describes how to monitor server instances. This section includes the following tasks:

- [Monitor status of all server instances](#)
- [Monitor server environment](#)
- [Monitor server health](#)
- [Monitor server transactions](#)
- [Monitor server JDBC data sources](#)
- [Monitor server messaging](#)
- [Monitor server deployments](#)
- [Monitor server performance summary](#)
- [Monitor server resource performance](#)
- [Monitor server JVM performance](#)
- [Monitor server asynchronous tasks](#)

3.1.1 Monitor status of all server instances

To monitor the runtime status of all server instances in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the Administration Server and any Managed Servers that have been configured in the current domain, such as:

- Server Name
- Status
- Cluster
- Machine
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. Select the name of the server instance for which you want to view configuration information, such as the server's default network communications.

Note: You can also access this detailed monitoring page directly from the Target Navigation pane:

- From the Target Navigation pane, expand the farm, then expand **WebLogic Domain**.
 - Expand the domain, then select the name of the server instance for which you want to view detailed monitoring information.
-
-

3.1.2 Monitor server environment

To monitor the status of a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. To monitor specific aspects associated with this server instance, select the appropriate pages:
 - **General:** general runtime information about the server
 - **Channels:** monitor channel information for this server
 - **Performance:** monitor performance information about this server; can also force garbage collection or a thread dump from this page

- **Threads:** monitor the status of the thread pool and individual threads for this server
- **Timers:** monitor the timers being used by this server
- **Jobs:** monitor information about jobs scheduled with the job scheduler on a specific clustered server
- **Security:** monitor user lockout management statistics for this server
- **Default Store:** monitor runtime statistics for the default store and all of the active default store connections for this server
For more information on default store connections, see Configuration Options.
- **JMS:** monitor statistics on all the active JMS connections for this server
- **Workload:** monitor Work Managers, constraints, and request classes associated with this server

3.1.2.1 Monitor channel information

To monitor channel connection information for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. Select the **Channels** page.

The Channels table allows you to monitor information about all the channel connections for this server, such as:

- Name
- Connections
- Messages Received
- Messages Sent
- Bytes Received
- Bytes Sent
- Accept Count

For more information about these fields, see Configuration Options.

5. In the Channels table, select the name of a channel to monitor more detailed information.

3.1.3 Monitor server health

To monitor the health of a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.

3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Health**.

The Health summary page allows you to monitor health information for the server instance and its subsystems.

For more information, see Configuration Options.

3.1.4 Monitor server transactions

To monitor the JTA transactions of a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Java Transaction API (JTA)**.
4. To monitor the following server information, select the appropriate pages:
 - **Summary**: summary of all transaction information for all resource types on this server
 - **Transaction Log Store Statistics**: monitor runtime statistics for the transaction log store used by this server
 - **Transaction Log Store Connections**: summary of all transaction information for all resource types on the server
 - **Transactions by Name**: monitor runtime statistics for all of the active transaction log store connections for this server
 - **XA Resources**: monitor transactions coordinated by this server
 - **Non-XA Resources**: monitor transactions coordinated by this server
 - **Transactions**: monitor information about current transactions coordinated by this server or in which this server's resources participate; you can force a local commit, global commit, local rollback, or global rollback from this page
 - **Recovery Services**: monitor information about transactions that were processed by the server as part of recovery on server startup or after a crash

3.1.5 Monitor server JDBC data sources

To monitor the JDBC data sources associated with a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **JDBC Data Sources**.

The JDBC Data Sources table displays information about the status of all JDBC data sources, such as:

- Name

- Type
- Server Name
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed

3.1.6 Monitor server messaging

To monitor the status of JMS servers associated with a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Messaging**.

The JMS Servers table displays information about the status of all JMS servers in a domain, such as:

- JMS Server Name
- Health
- Health Reason
- Persistent Store
- Target

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

To monitor the following server messaging resources or modules, select the appropriate pages:

- **Store-and-Forward Agents:** monitor SAF agent statistics and perform message management operations, such as pausing incoming requests to the agent
- **JMS Resources:** monitor all JMS resources that have been created for all the JMS system modules, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters
- **JMS Modules:** monitor the JMS modules created for this domain

- **Messaging Bridges:** monitor the status of all messaging bridges configured on active servers in this domain

3.1.7 Monitor server deployments

To monitor all deployments on a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Deployments**.

Under the Summary page, the Deployments table displays information about all active applications and modules deployed to the server, such as:

- Name
- Status
- State
- Health
- Type
- Deployment Order
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

To monitor server deployments, select the appropriate pages:

- **Web Applications:** monitor Web applications deployed to your server; includes information about the application such as the machine and server on which the application is deployed and statistics about the servlets and sessions associated with the Web application
- **Resource Adapters:** monitor the status of inbound listeners and outbound connection pools
- **EJBs:** monitor statistics and information about stateless, stateful, singleton, entity, and message-driven EJBs
- **Web Services:** monitor all the Web services that are deployed to this domain
- **Web Service Clients:** monitor all Web service clients in this server
- **JAX-RS Applications:** monitor all the JAX-RS applications that are running on this server

- **Workload:** monitor statistics for the Work Managers, constraints, and policies that are configured for application deployments in this server

3.1.8 Monitor server performance summary

To monitor the performance summary of a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as performance information about the servlets, JSPs, and data sources associated with this server instance.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

3.1.9 Monitor server resource performance

To monitor the resource performance of a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Resource Performance**.

The Resource Performance page displays general performance information, as well as performance information about the data sources and JMS servers associated with the server instance.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

3.1.10 Monitor server JVM performance

To monitor the JVM performance of a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **JVM Performance**.

The JVM Performance page displays performance information about memory, heap usage, garbage collectors, and threads associated with a server instance.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

3.1.11 Monitor server asynchronous tasks

Because some administrative tasks (such as deployments, service migrations, and attempts to start or stop Managed Servers) are completed immediately and others take varying amounts of time to complete, the Asynchronous Tasks summary page allows you to monitor the completion status of all tasks.

To monitor the status of asynchronous tasks in a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to monitor.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Monitoring**, then select **Asynchronous Tasks**.

The Asynchronous Tasks summary page allows you to monitor the completion status of all tasks by displaying information such as:

- Description
- Type
- Status
- Begin Time
- End Time
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

3.2 Control servers

This section describes how to control server instances. You can start, resume, suspend, or shutdown the server instances in a domain. For information on how the server transitions from *STANDBY* or *ADMIN* to the *RUNNING* state, see "Understanding Server Life Cycle" in *Managing Server Startup and Shutdown for Oracle WebLogic Server*.

Before you begin

Control operations on Managed Servers require starting the Node Manager. Starting Managed Servers in Standby mode requires the domain-wide administration port.

This section includes the following tasks:

- [Control server state](#)
- [Control server JTA transactions](#)
- [Control clustered server migration](#)
- [Control clustered server job scheduling](#)

3.2.1 Control server state

To change the state of a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the server instances that have been configured in the current domain.

2. In the table, select the name of the server instance you want to control.
3. From the **WebLogic Server** dropdown menu, select **Control**, then select **Control Operations**.

The Servers Control table is displayed.

4. In the table, highlight the row containing the name of the server instance you want to control. The control options are displayed above the table.
5. Select one of the server control operations:
 - **Start:** moves server instances from the SHUTDOWN state to RUNNING.
 - **Resume:** moves server instances from the STANDBY or the ADMIN state to RUNNING.
 - **Suspend:** select an option to transition a server instance from the RUNNING state to the ADMIN state:
 - **When work completes:** moves server instances from the RUNNING state to the ADMIN state, allowing work in process to be handled gracefully. While in the SUSPENDING state, Work Managers complete in-flight processing for pending work in application threads.
 - **Force shutdown now:** immediately moves server instances from the RUNNING state to the ADMIN state, without handling work in process gracefully.
 - **Shutdown:** select an option to shutdown a server instance:
 - **When work completes:** gracefully stops server instances in the domain. New requests are rejected but in-flight requests are completed before the server stops.
 - **Force suspend now:** immediately stops server instances in the domain. In-flight requests are dropped, no new requests are accepted, and the server immediately stops.
 - **Restart SSL:** restarts the SSL listen sockets so that keystore changes take effect.

For more information, see Configuration Options.

3.2.2 Control server JTA transactions

To control transactions coordinated by a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the server instances that have been configured in the current domain.

2. In the table, select the name of the server instance you want to control.
3. From the **WebLogic Server** dropdown menu, select **Control**, then select **Java Transaction API (JTA)**.

The JTA table displays information about the transactions coordinated by the server or in which server resources participate.

4. In the table, highlight the row containing the name of the transaction you want to control. The control options are displayed above the table.
5. Click one of the server control operations:
 - **Force Local Commit**
 - **Force Global Commit**
 - **Force Local Rollback**
 - **Force Global Rollback**

For more information, see Configuration Options.

3.2.3 Control clustered server migration

To migrate a clustered server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the server instances that have been configured in the current domain.

2. In the table, select the name of the server instance you want to control.
3. From the **WebLogic Server** dropdown menu, select **Control**, then select **Migration**.

From the Migration page, you can manually restart (migrate) the server instance and its services to another machine. Alternatively, you can migrate the JMS-related services and the JTA Transaction Recovery Service on this server instance to another server instance in the cluster.

4. From the Migrate to Machine dropdown menu, select the machine you want to migrate this server instance and its services to.
5. Click the **Migrate** button.

For more information, see Configuration Options.

3.2.4 Control clustered server job scheduling

To control job scheduling for a clustered server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the server instances that have been configured in the current domain.

2. In the table, select the name of the server instance you want to control.
3. From the **WebLogic Server** dropdown menu, select **Control**, then select **Jobs**.

The Jobs table displays information about jobs scheduled on this server and allows you to remove these jobs from future execution.

For more information, see Configuration Options.

4. In the table, highlight the row containing the name of the job you want to remove. The Cancel button is displayed above the table.
5. Click **Cancel**.

3.3 Configure servers

This section describes how to configure servers. This section includes the following tasks:

- [Define general server configuration](#)
- [Configure cluster settings](#)
- [Configure server services](#)
- [Configure server keystores](#)
- [Configure server SSL settings](#)
- [Configure server migration](#)
- [Configure server SAML Federation Services](#)
- [Configure server deployment staging](#)
- [Configure server tuning](#)
- [Configure server overload](#)
- [Configure server health monitoring](#)
- [Configure server startup](#)
- [Configure server startup and shutdown settings](#)
- [Configure server Web Services](#)
- [Configure server Coherence cluster settings](#)
- [Configure server protocol settings](#)

3.3.1 Define general server configuration

To configure general settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure. An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **General Settings**.

4. From the **General Settings** page, you can define the configuration settings for this server instance, such as:
 - **Template**
 - **Listen Address**
 - **Listen Port Enabled**
 - **Listen Port**
 - **SSL Listen Port Enabled**
 - **SSL Listen Port**
 - **Client Cert Proxy Enabled**
 - **Java Compiler**
 - **Diagnostic Volume**

For more information about these fields, see [Configuration Options](#).
5. Optionally, expand **Advanced** to define advanced configuration settings for this server instance.
6. Click **Save**.

3.3.1.1 Change server template

To change the server template associated with a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the **Servers** table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **General Settings**.
4. Click **Change** and select the server template from the **Server Templates** dropdown menu, then click **Yes**.

3.3.1.2 Specify a startup mode

The startup mode specifies the state in which a server instance should be started. The default is to start in the `RUNNING` state.

To specify the startup mode for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the **Servers** table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **General Settings**.
4. On the **General** page, expand **Advanced** at the bottom of the page to display the advanced configuration options.
5. In the **Startup Mode** field, select:
 - **Running**: In the `RUNNING` state, a server offers its services to clients and can operate as a full member of a cluster.

- **Administration:** In the ADMIN state, the server is up and running, but available only for administration operations, allowing you to perform server and application-level administration tasks without risk to running applications.
- **Standby:** In the STANDBY mode, the server listens for administrative requests only on the domain-wide administration port and only accepts life cycle commands that transition the server instance to either the RUNNING or SHUTDOWN state. Other administration requests are not accepted. If you specify STANDBY, you must also enable the domain-wide administration port.

For more information, see Configuration Options.

6. Click **Save**.

3.3.1.3 Configure listen addresses

To configure the listen address of a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure. An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **General Settings**.
4. On the General Settings page, enter a value in **Listen Address**.

For more information, see Configuration Options.

5. Click **Save**.

3.3.1.4 Configure listen ports

To configure the listen ports of a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure. An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **General Settings**.
4. If you want to disable the non-SSL listen port so that the server listens only on the SSL listen port, deselect **Listen Port Enabled**. If you want to disable the SSL listen port so that the server listens only on the non-SSL listen port, deselect **SSL Listen Port Enabled**.

Note: You cannot disable both the non-SSL listen port and the SSL listen port. At least one port must be active.

5. If you are using the non-SSL listen port and you want to modify the default port number, change the value in **Listen Port**.
6. If you want to modify the default SSL listen port number, change the value in **SSL Listen Port**.

For more information, see Configuration Options.

7. Click **Save**.

3.3.1.5 Change server compiler options

To change the standard Java compiler values for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **General Settings**.
4. On the General Settings page, update the **Java Compiler** field with the full path of the compiler to use for all applications hosted on this server that need to compile Java code.
5. Expand **Advanced** to display advanced configuration options.
6. Update the following compile options as necessary:
 - **Prepend to classpath**: Options to prepend to the Java compiler classpath when compiling Java code.
 - **Append to classpath**: Options to append to the Java compiler classpath when compiling Java code.
 - **Extra RMI Compiler Options**: Options passed to the RMIC compiler during server-side generation.
 - **Extra EJB Compiler Options**: Options passed to the EJB compiler during server-side generation.

For more information about these fields, see Configuration Options.

7. Click **Save**.

3.3.2 Configure cluster settings

A WebLogic Server cluster is a group of servers that work together to provide a scalable and reliable application platform.

To configure cluster settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Clusters**.
4. From the Cluster page, you can define the cluster configuration settings for this server instance, such as:
 - Replication Group
 - Preferred Secondary Group
 - Cluster Weight

- Interface Address
- Replication Ports

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.3 Configure server services

To configure WebLogic service settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Services**.
4. From the Services page, you can define the service configuration settings for this server instance, such as:
 - JMS Configuration
 - Default Store
 - Advanced
 - Transaction Log Store
 - Messaging Bridge Configuration
 - XML Services Configuration

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.4 Configure server keystores

Keystores ensure the secure storage and management of private keys and trusted certificate authorities (CAs). You can view and define various keystore configurations which help you manage the security of message transmissions.

To configure keystore settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Keystores**.
4. To change your keystore configuration:
 1. Click **Change**.
 2. From the Keystores dropdown menu, select the keystore configuration you want to use.
 3. Click **Save**.

5. From the Keystore page, you can define other keystore configuration settings for this server instance, such as:
 - Keystores
 - Demo Identity Keystore
 - Demo Identity Keystore Type
 - Demo Identity Keystore Passphrase
 - Demo Trust Keystore
 - Demo Trust Keystore Type
 - Demo Trust Keystore Passphrase
 - Java Standard Trust Keystore
 - Java Standard Trust Keystore Type
 - Java Standard Trust Keystore Passphrase
 - Confirm Java Standard Trust Keystore PassphraseFor more information about these fields, see Configuration Options.
6. Click **Save**.

3.3.5 Configure server SSL settings

You can view and define various Secure Sockets Layer (SSL) settings for a server instance, which help you manage the security of message transmissions.

To configure SSL settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **SSL**.
4. To change your identity and trust location:
 1. Click **Change**.
 2. From the Identity and Trust Locations dropdown menu, select the location you want to use.
 3. Click **Save**.
5. From the SSL page, you can define the SSL configuration settings for this server instance, such as:
 - Identity and Trust Locations
 - Private Key Location
 - Private Key Alias
 - Private Key Passphrase
 - Certificate Location
 - Trusted Certificate Authorities

For more information about these fields, see Configuration Options.

6. Optionally, expand **Advanced** to define advanced configuration settings for this server instance.
7. Click **Save**.

3.3.6 Configure server migration

To configure migration settings for clustered servers:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Migration**.
4. From the Migration page, you can define the configuration settings for this server instance, such as:
 - Automatic Server Migration Enabled
 - Candidate Machines
 - JMS Service Candidate Servers
 - Automatic JTA Migration Enabled
 - JTA Candidate Servers
 - Pre-Migration Script Path
 - Post-Migration Script Path
 - Post-Migration Script Fail Cancels Automatic Migration
 - Allow Post-Migration Script to Run on a Different Machine
 - Enable Strict Ownership Check

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.7 Configure server SAML Federation Services

You can configure a WebLogic Server instance to function as a producer or as a consumer of SAML assertions that can be used for the following:

- Web single sign-on between online business partners
- Exchange of identity information in Web services security

The general process of configuring Federation Services depends upon the version of SAML you are using. WebLogic Server supports both SAML 1.1 and SAML 2.0.

To configure WebLogic Server to serve as a SAML 1.1 federated partner:

- [Configure SAML 1.1 source services](#)
- [Configure SAML 1.1 destination services](#)
- [Configure SAML 2.0 general services](#)

To configure WebLogic Server to serve as a SAML 2.0 federated partner:

- [Configure SAML 2.0 Identity Provider services](#)
- [Configure SAML 2.0 Service Provider services](#)

3.3.7.1 Configure SAML 1.1 source services

Before you begin

You must first configure a SAML Credential Mapper V2 security provider in the server's security realm.

You can configure a WebLogic Server instance to function as a SAML source site. A SAML source site is a site that provides an Intersite Transfer Service (ITS). A source site generates assertions that are conveyed to a destination site using one of the single sign-on profiles.

To configure a server as a SAML source site:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure. An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Federation Services**.
4. Select the **SAML 1.1 Source Site** page.
5. Select the **Source Site Enabled** attribute to cause this server to act as a source for SAML assertions.
6. From the SAML 1.1 Source Site page, you can also define other desired configuration settings for this server instance, such as:
 - Source Site URL
 - Signing Key Alias
 - Intersite Transfer URIs
 - ITS Requires SSL
 - Assertion Retrieval URIs
 - ARS Requires SSL
 - ARS Requires Two-Way SSL Authentication
 - Assertion Store Class Name
 - Assertion Store PropertiesFor more information about these fields, see Configuration Options.
7. Click **Save**.

3.3.7.2 Configure SAML 1.1 destination services

Before you begin

You must first configure a SAML Identity Asserter V2 security provider in the server's security realm.

You can configure a WebLogic Server instance to function as a SAML destination site. A destination site can receive SAML assertions and use them to authenticate local subjects.

To configure a server as a SAML destination site:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Federation Services**.
4. Select the **SAML 1.1 Destination Site** page.
5. Select the **Destination Site Enabled** attribute to enable the Assertion Consumer Service.
6. From the SAML 1.1 Destination Site page, you can also define other desired configuration settings for this server instance, such as:
 - Assertion Consumer URIs
 - ACS Requires SSL
 - SSL Client Identity Alias
 - POST Recipient Check Enabled
 - POST One-Use Check Enabled
 - Used Assertion Cache Class Name
 - Used Assertion Cache Properties

For more information about these fields, see Configuration Options.
7. Click **Save**.

3.3.7.3 Configure SAML 2.0 general services

You can configure general SAML 2.0 services for a server. If you are configuring SAML 2.0 Web single sign-on services with your federated partners, the site information you configure is published in a metadata file that you send to your federated partners.

To configure the general SAML 2.0 properties of this server:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Federation Services**.
4. Select the **SAML 2.0 General** page.
5. Select the **Replicated Cache Enabled** attribute to use the persistent cache for storing SAML 2.0 artifacts.

This option is required if you are configuring SAML 2.0 services in two or more WebLogic Server instances in your domain. For example, if you are configuring SAML 2.0 services in a cluster, you must enable this option in each Managed Server instance individually.

Note: If you are configuring SAML 2.0 services in two or more WebLogic Server instances in your domain, you must configure the RDBMS security store. The embedded LDAP server is not supported in these configurations.

6. In the **Site Info** section, enter the following information about your SAML 2.0 site:
 - Contact person details
 - Your organization's name and URL
 - The Published Site URL, which is the top-level URL for your site's SAML 2.0 service endpoints. This URL must be appended with the string `/saml2`, which will be automatically combined with constant suffixes to create full endpoint URLs.
7. In the **Bindings** section, enter the common binding information to be used by this SAML 2.0 server instance.

If you do not specify a Transport Layer Security key alias and passphrase, the server's configured SSL private key alias and passphrase from the server's SSL configuration is used for the TLS alias by default.

8. If the Artifact binding is enabled for any SAML 2.0 security provider hosted on this server instance, define the Artifact Resolution Service settings in the **Artifact Resolution Service** section.
9. In the **Single Sign-on** section, enter the keystore alias and passphrase for the key to be used for signing documents sent to federated partners.

If you do not specify a single sign-on signing key alias and passphrase, the server's configured SSL private key alias and passphrase from the server's SSL configuration is used by default.

For more information, see Configuration Options.

10. Click **Save**.

After you finish

After you have configured this server's general SAML 2.0 services, select the **SAML 2.0 Identity Provider** page or the **SAML 2.0 Service Provider** page to configure this server as an Identity Provider or Service Provider, respectively. For more information, see [Configure SAML 2.0 Identity Provider services](#) and [Configure SAML 2.0 Service Provider services](#).

3.3.7.4 Configure SAML 2.0 Identity Provider services

You can configure a server instance in the role of SAML 2.0 Identity Provider. A SAML 2.0 Identity Provider creates, maintains, and manages identity information for principals, and provides principal authentication to other Service Provider partners within a federation by generating SAML 2.0 assertions for those partners.

To configure a server as a SAML 2.0 Identity Provider:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.

An overview page displays information related to the server instance.

3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Federation Services**.
4. Select the **SAML 2.0 Identity Provider** page.
5. Select the **Enabled** attribute to activate this server's SAML 2.0 services in the role of Identity Provider.
6. Select **Only Accept Signed Authentication Requests** if you want to ensure that any incoming authentication requests must be signed.
7. If you are using a custom login Web application to which unauthenticated requests are directed:
 - Select **Login Customized**.
 - Enter the URL of the custom login Web application.
 - Enter the login return query parameter
 The query parameter is a unique string that the SAML 2.0 services uses to hold the login return URL for the local single sign-on service servlet. (Note that, as an alternative, the login return URL can also be specified in the login Web application.)
8. Set the SAML bindings for which this server instance is enabled, and select the preferred binding type.
 For more information, see Configuration Options.
9. Click **Save**.

After you finish

Coordinate with your federated partners to ensure that the SAML bindings you have enabled for this SAML authority, as well as your requirements for signed documents, are compatible with your partners.

3.3.7.5 Configure SAML 2.0 Service Provider services

You can configure a WebLogic Server instances as a SAML 2.0 Service Provider. A Service Provider is a SAML authority that can receive SAML assertions and extract identity information from those assertions. The identity information can then be mapped to local Subjects, and optionally groups as well, that can be authenticated.

To configure a server as a SAML 2.0 Service Provider:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
 An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Federation Services**.
4. Select the **SAML 2.0 Service Provider** page.
5. Select the **Enabled** attribute to SAML 2.0 services in this server instance in the role of Identity Provider.
6. Set the configuration options for the local SAML 2.0 Service Provider services as appropriate. Note the following:

- Choose options for **Always Sign Authentication Requests** and **Only Accept Signed Assertions** as desired and in a manner that is coordinated with your federated partners so that authentication requests and assertions are accepted.
- Communicate the SAML bindings settings for this server instance with your federated partners to ensure compatibility.

For more information, see Configuration Options.

7. Click **Save**.

After you finish

Coordinate with your federated partners to ensure that the SAML bindings you have enabled for this SAML authority, as well as your requirements for signed documents, are compatible with your partners.

3.3.8 Configure server deployment staging

To configure the default deployment staging on a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Deployment**.
4. From the Deployment page, you can define the default deployment staging configuration for this server instance, such as:
 - Staging Mode
 - Staging Directory Mode
 - Upload Directory Name

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.9 Configure server tuning

You can tune the performance and functionality of a server instance by configuring the tuning settings.

To configure tuning settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Tuning**.
4. From the Tuning page, you can define the tuning configuration settings for this server instance, such as:
 - Enable Native IO
 - JavaSocketMuxer Socket Readers

- Enable Gathered Writes
- Enable Scattered Reads
- Maximum Open Sockets
- Stuck Thread Max Time
- Stuck Thread Timer Interval
- Accept Backlog
- Login Timeout
- SSL Login Timeout
- Reserve DNS Allowed

For more information about these fields, see Configuration Options.

5. Optionally, expand **Advanced** to define advanced configuration settings for this server. instance
6. Click **Save**.

3.3.9.1 Enable native IO

To enable native IO for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Tuning**.
4. On the Tuning page, if the Enable Native IO check box is not selected, select the check box.

For more information, see Configuration Options.

5. Click **Save**.

3.3.9.2 Enable NIOSocketMuxer

To enable non-blocking IO for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Tuning**.
4. Expand **Advanced** to access advanced tuning parameters.
5. Enter `weblogic.socket.NIOSocketMuxer` in the **Muxer Class** field.

For more information, see Configuration Options.

6. Click **Save**.

3.3.9.3 Tune connection backlog buffering

You can tune the number of connection requests that a WebLogic Server instance will accept before refusing additional requests.

To tune connection backlog buffering for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Tuning**.
4. Modify the **Accept Backlog** value as necessary to tune the number of TCP connections the server instance can buffer in the wait queue.
 - If many connections are dropped or refused at the client, and no other error messages are on the server, the **Accept Backlog** value might be set too low.
 - If you receive "connection refused" messages when you try to access WebLogic Server, raise the **Accept Backlog** value from the default by 25 percent. Continue increasing the value by 25 percent until the messages cease to appear.

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.9.4 Tune stuck thread detection behavior

WebLogic Server diagnoses a thread as stuck if it is continually working (not idle) for a set period of time. You can tune a server's thread detection behavior by changing the length of time before a thread is diagnosed as stuck, and by changing the frequency with which the server checks for stuck threads.

To configure stuck thread detection behavior for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Tuning**.
4. From the Tuning page, update the following options as necessary:
 - **Stuck Thread Max Time**: Amount of time, in seconds, that a thread must be continually working before a server instance diagnoses a thread as being stuck.
 - **Stuck Thread Timer Interval**: Amount of time, in seconds, after which a server instance periodically scans threads to see if they have been continually working for the configured **Stuck Thread Max Time**.

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.9.5 Replicate domain configuration files for Managed Server independence

The server instance for which you configure Managed Server Independence (MSI) replication does not need to be running.

To configure a Managed Server to replicate a domain's configuration files:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Tuning**.
4. On the Overload page, click **Advanced** at the bottom of the page to display advanced configuration settings.
5. Ensure that the **Managed Server Independence Enabled** check box is selected.
For more information, see Configuration Options.
6. Click **Save**.

After you finish

If the Managed Server is running, restart it.

3.3.10 Configure server overload

You can configure how WebLogic Server should react in the case of an overload or failure condition.

To configure overload settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Overload**.
4. From the Overload page, you can define the overload configuration settings for this server, such as:
 - Shared Capacity for Work Managers
 - Failure Action
 - Panic Action
 - Free Memory Percent High Threshold
 - Free Memory Percent Low Threshold
 - Max Stuck Thread Time
 - Stuck Thread CountFor more information about these fields, see Configuration Options.
5. Click **Save**.

3.3.11 Configure server health monitoring

WebLogic Server provides a self-health monitoring capability to improve the reliability and availability of servers in a WebLogic Server domain. Selected subsystems within each server monitor their health status based on criteria specific to the subsystem.

You can configure the frequency of a server's automated health checks and the frequency with which the Node Manager application (optional) checks the server's health state. You can also use this page to specify whether Node Manager automatically stops and restarts the server if the server reaches the "failed" health state.

To configure health monitoring settings for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Health Monitoring**.
4. From the Health Monitoring page, you can define the health monitoring configuration settings for this server instance, such as:
 - Health Check Interval
 - Auto Kill If Failed
 - Auto Restart
 - Restart Interval
 - Max Restarts Within Interval
 - Restart Delay SecondsFor more information about these fields, see Configuration Options.
5. Click **Save**.

3.3.12 Configure server startup

Node Manager is a WebLogic Server utility that you can use to start, suspend, shut down, and restart servers in normal or unexpected conditions. You can configure the startup settings that Node Manager will use to start this server on a remote machine.

To configure the startup options that Node Manager uses to start a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Server Start**.
4. From the Server Start page, you can define the startup configuration settings for this server instance, such as:
 - Java Home

- Java Vendor
- BEA Home
- Root Directory
- Class Path
- Arguments
- Security Policy File
- User Name
- Password
- Confirm Password

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.13 Configure server startup and shutdown settings

To configure the startup and shutdown settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Start/Stop**.
4. From the Start/Stop page, you can define the startup and shutdown configuration settings for this server instance, such as:
 - Ignore Sessions During Shutdown
 - Graceful Shutdown Timeout
 - Startup Timeout
 - Server LifeCycle Timeout

For more information about these fields, see Configuration Options.

5. Click **Save**.

3.3.14 Configure server Web Services

You must install a Web service before you can view and modify its configuration. This section includes the following tasks:

- [Configure message buffering for Web services](#)
- [Configure Web service reliable messaging](#)
- [View logical stores](#)

3.3.14.1 Configure message buffering for Web services

To configure message buffering for Web services:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Web Services**.
4. Select the **Buffering** page.
5. From the Buffering page, you can define the message buffering configuration properties for this server instance, such as:
 - Retry Count
 - Retry Delay
 - Request Queue Enabled
 - Request Queue Connection Factory JNDI Name
 - Request Queue Transaction Enabled
 - Response Queue Enabled
 - Response Queue Connection Factory JNDI Name
 - Response Queue Transaction EnabledFor more information about these fields, see Configuration Options.
6. Click **Save**.

3.3.14.2 Configure Web service reliable messaging

Web service reliable messaging is a framework that enables an application running on one application server to reliably invoke a Web service running on another application server, assuming that both servers implement the WS-Reliable Messaging specification. Reliable is defined as the ability to guarantee message delivery between the two Web services. Use this page to customize reliable messaging configuration on the Web service endpoint.

To configure reliable messaging for Web services:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Web Services**.
4. Select the **Reliable Message** page.
5. From the Reliable Messaging page, you can define the reliable messaging configuration properties for this server instance, such as:
 - Base Retransmission Interval
 - Enable Retransmission Exponential Backoff
 - Non-buffered Source
 - Non-buffered Destination
 - Acknowledgement Interval
 - Inactivity Timeout

- Sequence Expiration

For more information about these fields, see Configuration Options.

6. Click **Save**.

3.3.14.3 View logical stores

A logical store is a named unit of storage that provides the business configuration requirements and connects the Web service to the physical store and buffering queue.

To view the logical stores configured for this server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Web Services**.
4. Select the **Logical Stores** page.
5. From the Logical Stores page, you can view configuration information for each logical store configured for this server instance, such as:
 - Name
 - Persistence Strategy
 - Request Buffering Queue JNDI Name
 - Response Buffering Queue JNDI Name
 - Default

For more information about these fields, see Configuration Options.

3.3.15 Configure server Coherence cluster settings

To configure Coherence for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Coherence**.
4. From the Coherence page, you can specify the Coherence cluster you want to use for this server instance and also define configuration settings such as:
 - Unicast Listen Address
 - Unicast Listen Port
 - Unicast Port Auto Adjust
 - Local Storage Enabled
 - Coherence Web Logical Storage Enabled
 - Site Name

- Rack Name
5. Click **Save**.
For more information, see Configuration Options.

3.3.16 Configure server protocol settings

This section describes how to configure server protocols.

This section includes the following tasks:

- [Configure server protocol general settings](#)
- [Configure server HTTP settings](#)
- [Configure server jCOM settings](#)
- [Configure server IIOp settings](#)
- [Monitor server network channel settings](#)
- [Monitor a specific network channel](#)
- [Configure server network channel settings](#)

3.3.16.1 Configure server protocol general settings

To configure general protocol settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **General Settings** page.
5. From the General Settings page, you can define connections settings for various communication protocols that this server instance uses, such as:
 - Complete Message Timeout
 - Idle Connection Timeout
 - Enable Tunneling
 - Tunneling Client Ping
 - Tunneling Client Timeout
 - Maximum Message Size

For more information about these fields, see Configuration Options.

6. Click **Save**.

3.3.16.2 Configure server HTTP settings

To configure HTTP protocol settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.

An overview page displays information related to the server instance.

3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **HTTP** page.
5. From the HTTP page, you can define the HTTP settings for this server instance, such as:
 - Default WebApp Context Root
 - Post Timeout
 - Max Post Size
 - Enable Keepalives
 - Duration
 - HTTPS Duration
 - Frontend Host
 - Frontend HTTP Port
 - Frontend HTTPS Port
 - WAP Enabled
 - Remote Address Override
 - Send Server Header
 - Accept Context Path in Get Real Path
 - HTTP Max Message Size
 - Enable Tunneling
 - Tunneling Client Ping
 - Tunneling Client Timeout

For more information about these fields, see Configuration Options.

6. Click **Save**.

3.3.16.3 Configure server jCOM settings

To configure Java to COM (jCOM) protocol settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.

An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **jCOM** page.
5. From the jCOM page, you can define jCOM protocol settings for this server instance, such as:
 - Enable COM
 - NT Authentication Host

- Enable Native Mode
- Verbose Logging Enabled
- Enable Memory Logging
- Prefetch Enumeration
- Apartment Threaded

For more information about these fields, see Configuration Options.

6. Click **Save**.

3.3.16.4 Configure server IIOP settings

To configure Internet Inter-ORB Protocol (IIOP) settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **IIOP** page.
5. From the IIOP page, you can define IIOP protocol settings for this server instance, such as:

- Enable IIOP

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this server instance.

6. Click **Save**.

3.3.16.5 Monitor server network channel settings

To monitor network channel protocol settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **Channels** page.
5. The Channels table displays information about each network channel that has been configured for this server instance, such as:
 - Name
 - Protocol
 - Enabled
 - Listen Address
 - Listen Port

- Public Address
- Public Port

For more information about these fields, see Configuration Options.

6. Click **Save**.

3.3.16.6 Monitor a specific network channel

To monitor a specific network channel:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **Channels** page.
5. In the Channels table, select the name of the channel you want to monitor.
6. Select **Monitoring**.
7. From the **Overview** page, you can monitor current statistics for this network channel, such as:
 - Name
 - Connections
 - Messages Received
 - Messages Sent
 - Bytes Received
 - Bytes Sent
 - Accept Count

For more information about these fields, see Configuration Options.

8. From the **Connections** page, you can monitor current connection statistics for this network channel, such as:
 - Connect Time
 - Messages Received
 - Messages Sent
 - Bytes Received
 - Bytes Sent
 - Local Address
 - Local Port
 - Remote Address
 - Remote Port

For more information about these fields, see Configuration Options.

3.3.16.7 Configure server network channel settings

To configure network channel protocol settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.
2. In the Servers table, select the name of the server instance you want to configure.
An overview page displays information related to the server instance.
3. From the **WebLogic Server** dropdown menu, select **Administration**, then select **Protocols**.
4. Select the **Channels** page.
5. In the Channels table, select the name of the channel you want to configure.
6. Select **Configuration**.
7. From the **General** page, you can define general configuration settings for the network channel, such as:
 - Name
 - Protocol
 - Listen Port
 - Listen Address
 - External Listen Address
 - External Listen Port
 - Enabled

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this network channel.

8. Click **Save**.
9. From the **Security** page, you can define security configuration options for the network channel, such as:
 - Two Way SSL Enabled
 - Client Certificate Enforced

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this network channel.

10. Click **Save**.

Note: For information about configuring server template network channel settings, see [Configure server template network channel settings](#).

WebLogic Server Clusters

A WebLogic Server cluster consists of multiple WebLogic Server server instances running simultaneously and working together to provide increased scalability and reliability. A cluster appears to clients to be a single WebLogic Server instance. The server instances that constitute a cluster can run on the same machine, or be located on different machines. You can increase a cluster's capacity by adding additional server instances to the cluster on an existing machine, or you can add machines to the cluster to host the incremental server instances. Each server instance in a cluster must run the same version of WebLogic Server. For more information on clusters, see *Understanding WebLogic Server Clustering*.

This chapter describes how to monitor, control, and configure clusters.

This chapter includes the following sections:

- [Monitor clusters](#)
- [Control server instances in a cluster](#)
- [Configure clusters](#)

4.1 Monitor clusters

This section describes how to monitor clusters. This section includes the following tasks:

- [Monitor status of all clusters](#)
- [Monitor the status of server instances in a cluster](#)
- [Monitor cluster health](#)
- [Monitor server instances in a cluster](#)
- [Monitor cluster deployments](#)
- [Monitor cluster JDBC data sources](#)
- [Monitor cluster messaging](#)
- [Monitor cluster failover](#)
- [Monitor cluster performance summary](#)

4.1.1 Monitor status of all clusters

To monitor the runtime status of all clusters configured in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.

The Clusters table displays information about the clusters that have been configured in the current domain, such as:

- Cluster Name
- Status
- Servers
- Cluster Address
- Cluster Messaging Mode

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. Select the name of the cluster for which you want to view configuration information, such as the cluster's default network communications.

4.1.2 Monitor the status of server instances in a cluster

To monitor the status of servers in a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Summary**.

The Summary table displays information about the status of all servers in a cluster, such as:

- Name
- State
- Machine
- Listen Address
- Listen Port

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4.1.3 Monitor cluster health

To monitor the health of a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Health**.

The Health summary page allows you to monitor health information for the cluster and its subsystems.

For more information, see Configuration Options.

4.1.4 Monitor server instances in a cluster

To monitor the server instances in a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Servers**.

The Servers table displays information about the servers in a cluster, such as:

- Server
- Status
- Cluster
- Machine
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4.1.5 Monitor cluster deployments

To monitor all deployments in a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Deployments**.

The Deployments table on the summary page displays information about all applications and modules deployed to the cluster, such as:

- Name
- Status
- State
- Health
- Type
- Deployment Order
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

To monitor cluster deployment information, select the appropriate pages:

- **Web Applications:** monitor Web applications deployed to your cluster; includes information about the application such as the machine and server instance on which the application is deployed and statistics about the servlets and sessions associated with the Web application
- **Resource Adapters:** monitor the status of inbound listeners and outbound connection pools
- **EJBs:** monitor statistics and information about stateless, stateful, entity, singleton, and message-driven EJBs
- **Web Services:** monitor all the Web services that are deployed to this cluster
- **Web Service Clients:** monitor all Web service clients in this cluster
- **JAX-RS Applications:** monitor all the JAX-RS applications that are running in this cluster
- **Workload:** monitor statistics for the Work Managers, constraints, and policies that are configured for application deployments in this cluster

4.1.6 Monitor cluster JDBC data sources

To monitor the JDBC data sources associated with a specific cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **JDBC Data Sources**.

The JDBC data sources table displays information the status of all JDBC data sources, such as:

- Name
- Type
- Server Name
- State
- Enabled

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed

4.1.7 Monitor cluster messaging

To monitor the status of JMS servers associated with a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Messaging**.

To monitor messaging information for this cluster, select the appropriate pages:

- **Store-and-Forward Agents:** monitor SAF agent statistics and perform message management operations, such as pausing incoming requests to the agent
- **JMS Resources:** monitor all JMS resources that have been created for all the JMS system modules, including queue and topic destinations, connection factories, JMS templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters
- **JMS Modules:** monitor the JMS modules created in this cluster
- **Messaging Bridges:** monitor the status of all messaging bridges configured on active servers in this cluster

Optionally, select **View** to access the following table options on any of the pages:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4.1.8 Monitor cluster failover

To monitor failover information for a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Failover**.

The Failover summary page displays the following information:

- Total primary sessions
- Total session replicas
- Total number of session updates to the backup cluster
- Total number of sessions retrieved from the database
- Communications between clusters is currently...

The Failover table displays further failover and status information for the cluster, such as:

- Server
- Type
- Machine
- State
- Backup Server

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4.1.9 Monitor cluster performance summary

To monitor the performance summary of a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as performance information about the servlets, JSPs, and data sources associated with this cluster.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

4.1.10 Monitor cluster asynchronous tasks

Because some administrative tasks (such as deployments, service migrations, and attempts to start or stop Managed Servers) are completed immediately and others take varying amounts of time to complete, the Asynchronous Tasks summary page allows you to monitor the completion status of all tasks.

To monitor the status of asynchronous tasks in a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to monitor.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** dropdown menu, select **Monitoring**, then select **Asynchronous Tasks**.

The Asynchronous Tasks summary page allows you to monitor the completion status of all tasks by displaying information such as:

- Description
- Type
- Status
- Begin Time
- End Time
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4.2 Control server instances in a cluster

You can start, resume, suspend, or shutdown the servers assigned to a cluster. For information on how the servers in a cluster transition from `STANDBY` or `ADMIN` to the `RUNNING` state, see "Understanding Server Life Cycle" in *Managing Server Startup and Shutdown for Oracle WebLogic Server*.

Before you begin:

Control operations on Managed Servers require starting the Node Manager. Starting Managed Servers in Standby mode requires the domain-wide administration port.

To change the state of servers assigned to a cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.

The Clusters table displays information about the clusters that have been configured in the current domain.

2. In the table, select the name of the cluster you want to manage, and then select one of the following control operations:
 - **Start:** moves server instances from the SHUTDOWN state to RUNNING.
 - **Resume:** moves server instances from the STANDBY or the ADMIN state to RUNNING.
 - **Suspend:** select an option to transition a server instance from the RUNNING state to the ADMIN state:
 - **When work completes:** moves server instances from the RUNNING state to the ADMIN state, allowing work in process to be handled gracefully. While in the SUSPENDING state, Work Managers complete in-flight processing for pending work in application threads.
 - **Force shutdown now:** immediately moves server instances from the RUNNING state to the ADMIN state, without handling work in process gracefully.
 - **Shutdown:** select an option to shutdown a server instance:
 - **When work completes:** gracefully stops server instances in the domain. New requests are rejected but in-flight requests are completed before the server instance stops.
 - **Force suspend now:** immediately stops server instances in the domain. In-flight requests are dropped, no new requests are accepted, and the server instance immediately stops.
 - **Restart SSL:** restarts the SSL listen sockets so that keystore changes take effect.

For more information, see Configuration Options.

4.3 Configure clusters

This section describes how to configure clusters. This section includes the following tasks:

- [Configure general cluster settings](#)
- [Configure cluster JTA settings](#)
- [Configure cluster messaging](#)
- [Configure server instances in cluster](#)
- [Configure cluster replication](#)
- [Configure cluster migration](#)
- [Configure cluster singleton services](#)
- [Configure cluster job scheduling](#)
- [Configure cluster overload settings](#)
- [Configure cluster health monitoring](#)
- [Configure cluster HTTP settings](#)

- [Configure cluster Coherence cluster settings](#)

4.3.1 Configure general cluster settings

To configure general settings for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **General Settings**.

From the General Settings page you can define the general settings for a cluster, such as:

- Default Load Algorithm
- Cluster Address
- Number of Servers in Cluster Address

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this cluster.

4. Click **Save**.

4.3.2 Configure cluster JTA settings

To configure JTA for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Java Transaction API (JTA)**.

From the Java Transaction API (JTA) page you can define the JTA settings for a cluster, such as:

- Timeout Seconds
- Abandon Timeout Seconds
- Before Completion Iteration Limit
- Max Transactions
- Max Unique Name Statistics
- Checkpoint Interval Seconds
- Forget Heuristics
- Unregister Resource Grace Period
- Execute XA Calls in Parallel
- Enable Two Phase Commit
- Enable Tightly Coupled Transactions
- Enable Cluster-Wide Recovery

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this cluster.

4. Click **Save**.

4.3.3 Configure cluster messaging

Clusters use messaging for sharing session, load balancing and failover, JMS, and other information between cluster members. Clusters can use either unicast or multicast messaging. Multicast is a simple broadcast technology that enables multiple applications to subscribe to a given IP address and port number and listen for messages, but requires hardware configuration and support. Unicast does not have these requirements.

To configure messaging for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **Messaging**.

From the Messaging page, you can define the messaging settings for your cluster, such as:

- Messaging Mode
- Unicast Broadcast Channel
- Multicast Port

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this cluster.

4. Click **Save**.

4.3.4 Configure server instances in cluster

To configure server instances in a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **Servers**.

From the Servers page, you can define settings for server instances in the cluster, such as:

- Dynamic Servers Pool
- Server Template
- Maximum Number of Servers
- Enable Calculated Listen Ports
- Enable Calculated Machine Associations
- Machine Name Prefix

For more information about these fields, see Configuration Options.

4. Click **Save**.

4.3.5 Configure cluster replication

To configure replication for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Replication**.

From the Replication page, you can configure how WebLogic Server will replicate HTTP session state across a cluster, including settings such as:

- Cross-cluster Replication Type
- Remote Cluster Address
- Replication Channel
- Data Source for Session Persistence
- Persist Sessions on Shutdown
- Secure Replication Enabled

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this cluster.

4. Click **Save**.

4.3.6 Configure cluster migration

If a clustered server fails, Node Manager can automatically restart the server instance and its services on another machine. You can specify the machines where Node Manager can restart migratable servers and also the data source used during server migration.

To configure server migration in a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Migration**.

From the Migration page, you can specify settings related to cluster migration, such:

- Candidate Machines for Migratable Servers
- Migration Basis
- Data Source for Automatic Migration
- Auto Migration Table Name
- Member Death Detector Enabled
- Member Discovery Timeout
- Leader Heartbeat Period

- Additional Migration Attempts
- Pause Time Between Migration Attempts

For more information about these fields, see Configuration Options.

4. Click **Save**.

4.3.7 Configure cluster singleton services

This section describes how to configure and control singleton services.

This section includes the following sections:

- [Configure cluster singleton services general settings](#)
- [Configure cluster singleton services migration](#)
- [Migrate cluster singleton services](#)

4.3.7.1 Configure cluster singleton services general settings

To configure general settings for a cluster singleton service:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Singleton Services**.
4. Select **Configuration**, then select **General**.

From the General page, you can define settings for the class associations of this singleton service, such as:

- Name
- Class Name
- Additional Migration Attempts
- Sleep Time Between Attempts

For more information about these fields, see Configuration Options.

5. Click **Save**.

4.3.7.2 Configure cluster singleton services migration

To configure migration for a cluster singleton service:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Singleton Services**.
4. Select **Configuration**, then select **Migration**.

From the Migration page, you can define migration settings for this singleton service, such as:

- Name

- User Preferred Server
- Constrained Candidate Servers

For more information about these fields, see Configuration Options.

5. Click **Save**.

4.3.7.3 Migrate cluster singleton services

To migrate a cluster singleton service:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, select the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Singleton Services**.
4. Select the **Control** page.
The Singleton Services table displays information about the singleton services, such as:
 - Name
 - Active
 - Current Server
 - Preferred Server
 - Candidate Servers
 For more information about these fields, see Configuration Options.
5. In the table, select the row of the singleton service you want to migrate.
6. Click **Migrate**.
7. On the **Migrate Singleton Services** page, select a hosting server from the New Hosting Server menu.
8. Click **OK**.

4.3.8 Configure cluster job scheduling

Job scheduling makes Java CommonJ timers cluster-aware and provides the ability to execute jobs periodically anywhere in a cluster without dependency on a particular server instance.

To configure job scheduling in a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, click the name of the cluster you want to configure.
An overview page displays information related to the cluster.
3. From the **WebLogic Cluster** menu, select **Administration**, then select **Scheduling**.
From the Scheduling page, you can define configuration settings that specify how information is shared across servers in a cluster.
4. In the **Data Source for Job Scheduler** field, select the data source to use.

5. In the **Job Scheduler Table Name** field, enter a table name to use for storing timers active with the job scheduler.
6. Click **Save**.

For more information, see Configuration Options.

4.3.9 Configure cluster overload settings

To configure overload for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, click the name of the cluster you want to configure.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **Overload**.

From the Overload page, you can configure the cluster-wide defaults that control how WebLogic Server instances in this cluster should react in the case of an overload or failure condition. The settings you can define include:

- Shared Capacity for Work Managers
- Failure Action
- Panic Action
- Free Memory Percent High Threshold
- Free Memory Percent Low Threshold
- Max Stuck Thread Time
- Stuck Thread Count

For more information about these fields, see Configuration Options.

4. Click **Save**.

4.3.10 Configure cluster health monitoring

WebLogic Server provides a self-health monitoring capability to improve the reliability and availability of servers in a WebLogic Server domain. Selected subsystems within each server instance monitor their health status based on criteria specific to the subsystem

To configure health monitoring characteristics for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, click the name of the cluster you want to configure.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **Health Monitoring**.

From the Health Monitoring page, you can configure health monitoring characteristics for this cluster, such as:

- Inter-Cluster Comm Link Health Check Interval
- Health Check Interval
- Health Check Periods Until Fencing

- Fencing Grace Period

For more information about these fields, see Configuration Options.

4. Click **Save**.

4.3.11 Configure cluster HTTP settings

To configure HTTP settings for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, click the name of the cluster you want to configure.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **HTTP**.

From the HTTP page, you can define the HTTP settings for this cluster, such as:

- Frontend Host
- Frontend HTTP Port
- Frontend HTTPS Port

For more information about these fields, see Configuration Options.

4. Click **Save**.

4.3.12 Configure cluster Coherence cluster settings

To configure Coherence settings for a cluster:

1. From the **WebLogic Domain** menu, select **Environment**, then select **Clusters**.
2. In the Clusters table, click the name of the cluster you want to configure.

An overview page displays information related to the cluster.

3. From the **WebLogic Cluster** menu, select **Administration**, then select **Coherence**.

From the Coherence page, you can select the Coherence cluster you want to use for this cluster and define settings such as:

- Local Storage Enabled
- Coherence Web Local Storage Enabled

For more information about these fields, see Configuration Options.

4. Click **Save**.

WebLogic Server Machines

A machine is the logical representation of the computer that hosts one or more WebLogic Server instances. Each Managed Server must be assigned to a machine. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers.

Node Manager is program that is used to control WebLogic Server instances. A single Node Manager instance is used to control all of the server instances running on the same physical machine. These instances can reside in different clusters, domains, and such. You must configure each machine in your domain to communicate with Node Manager. For more information on Node Manager, see the *Administering Node Manager for Oracle WebLogic Server*.

This chapter describes the tasks you can perform to monitor machines.

This chapter includes the following sections:

- [Monitor Node Manager](#)
- [Configure machines](#)

5.1 Monitor Node Manager

This section describes how to monitor Node Manager. This section includes the following tasks:

- [Monitor Node Manager status](#)
- [Monitor Node Manager logs](#)

5.1.1 Monitor Node Manager status

To monitor Node Manager status:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.

The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.

For more information, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order

- Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the machine for which you want to view the Node Manager status.
 3. Select the **Monitoring** page, then select the **Node Manager Status** page.
If Node Manager is currently running on the machine, the Node Manager Status page displays the following information about the Node Manager process:
 - **Status:** current status of this Node Manager
 - **Version:** version string returned from the Node ManagerFor more information about these fields, see Configuration Options.

5.1.2 Monitor Node Manager logs

Before you begin:

Node Manager must be running to view its logs.

To monitor Node Manager logs:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.
The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.
2. In the table, select the name of the machine for which you want to view the Node Manager status.
3. Select the **Monitoring** page, then select the **Node Manager Log** page.
The contents of the log files are displayed for the currently running Node Manager.

5.2 Configure machines

This section describes how to configure machines. This section includes the following tasks:

- [Configure general machine settings](#)
- [Configure general Unix machine settings](#)
- [Configure Node Manager settings](#)
- [Configure machine server settings](#)
- [Add or remove server instances](#)
- [Create machine notes](#)

5.2.1 Configure general machine settings

To monitor general configuration settings for a machine:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.
The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.

For more information, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the machine for which you want to view general configuration settings.
 3. Select **Configuration**, then select **General**.

From the General page, you can monitor the following configuration information for a machine:

- Name
- Type

For more information about these fields, see Configuration Options.

5.2.2 Configure general Unix machine settings

To monitor general configuration settings for a Unix machine:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.

The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.

For more information, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the Unix machine for which you want to view general configuration settings.
 3. Select **Configuration**, then select **General**.

From the General page, you can configure the following attributes for a Unix machine:

- Type
- Name
- Enable Post-Bind UID
- Post-Bind UID
- Enable Post-Bind GID

- Post-Bind GID

For more information about these fields, see Configuration Options.

5.2.3 Configure Node Manager settings

To configure Node Manager settings for a machine:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.

The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.

For more information, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the machine for which you want to configure Node Manager settings.
 3. Select **Configuration**, then select **Node Manager**.

From the Node Manager page, you can configure Node Manager settings, such as:

- Type
- Listen Address
- Listen Port
- Node Manager Home
- Shell Command
- Debug Enabled

For more information about these fields, see Configuration Options.

5.2.4 Configure machine server settings

To configure server settings for a machine:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.

The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.

For more information, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order

- Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the machine for which you want to view server configuration information.
 3. Select **Configuration**, then select **Servers**.

From the Servers page, you can add or remove servers from the machine. You can also view configuration information for the servers associated with the machine, such as:

- Name
- Type
- Cluster
- Machine
- State
- Health
- Listen Port

For more information about these fields, see Configuration Options.

5.2.5 Add or remove server instances

To add or remove server instances from a machine:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.

The Machines table displays information about the machines that have been configured in the current WebLogic Server domain.

For more information, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the machine for which you want to add or remove server instances.
 3. Select **Configuration**, then select **Servers**.
 4. Select **Add/Remove**.
 5. From the Add/Remove Server page, you can add or remove server instances from this machine by moving server instances between the Available and Chosen lists. Only server instances that are shut down and statically configured may be added or removed from a machine using this page.
 6. Click **Save**.

5.2.6 Create machine notes

To create notes for machines:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Machines**.
2. In the Machines table, select the name of the machine for which you want to create notes.
3. Select **Notes**.
4. On the Notes page, enter your notes.
5. Click **Save**.

For more information, see Configuration Options.

WebLogic Server Virtual Hosts

A virtual host is a set of host names to which WebLogic Server instances (servers) or clusters respond. When you use virtual hosting, you use DNS to specify one or more host names that map to the IP address of a server or cluster. You also specify which Web applications are served by each virtual host. For more information on virtual hosting, see "Configuring Virtual Hosting" in *Configuring Server Environments for Oracle WebLogic Server*.

This chapter describes how to monitor virtual hosts.

This chapter includes the following sections:

- [Monitor virtual hosts](#)

6.1 Monitor virtual hosts

To monitor the status of a virtual host:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Virtual Hosts**.

The Virtual Hosts table displays information about each virtual host that has been configured in the current domain, including:

- Name
- Virtual Host Names
- Network Access Point
- Frontend Host
- Frontend HTTP Port
- Frontend HTTPS Port

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the virtual host for which you want to view configuration information.

Custom WebLogic Server Classes

Startup and shutdown classes are Java programs that you create to provide custom, system-wide services for your applications. You add the classes to the WebLogic Server class path and then configure them to load and run when a server starts or shuts down.

This chapter describes how to monitor startup and shutdown classes.

This chapter includes the following sections:

- [Monitor startup and shutdown classes](#)

7.1 Monitor startup and shutdown classes

To monitor startup and shutdown classes:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Startup & Shutdown Classes**.

The Startup and Shutdown classes table displays information about the startup and shutdown classes that have been configured in the current domain, such as:

- Name
- Type
- Class Name
- Targets
- Deployment Order
- Arguments

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

WebLogic Server Work Managers

WebLogic Server prioritizes work and allocates threads based on an execution model that takes into account administrator-defined parameters and actual run-time performance and throughput.

Administrators can configure a set of scheduling guidelines and associate them with one or more applications, or with particular application components. For example, you can associate one set of scheduling guidelines for one application, and another set of guidelines for other applications. At run time, WebLogic Server uses these guidelines to assign pending work and enqueued requests to execution threads.

To manage work in your applications, you define one or more of the following Work Manager components:

- Fair Share Request Class
- Response Time Request Class
- Min Threads Constraint
- Max Threads Constraint
- Capacity Constraint
- Context Request Class

You can use any of these Work Manager components to control the performance of your application by referencing the name of the component in the application deployment descriptor. In addition, you may define a Work Manager that encapsulates all of the above components and reference the name of the Work Manager in your application's deployment descriptor. You can define multiple Work Managers—the appropriate number depends on how many distinct demand profiles exist across the applications you host on WebLogic Server. You can configure Work Managers at the domain level, application level, and module level in one of the following configuration files, or by using the WebLogic Server Administration Console. For more information, see "Using Work Managers to Optimize Scheduled Work" in *Administering Server Environments for Oracle WebLogic Server*.

This chapter describes the tasks you can perform to monitor Work Managers.

This chapter includes the following sections:

- [Monitor Work Managers](#)

8.1 Monitor Work Managers

To monitor Work Manager status:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Work Managers**.

The Work Managers table displays information about the Work Managers that have been configured in the current domain, such as:

- Work Manager Name
- Type
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the Work Manager for which you want to view configuration information.

8.1.1 Monitor server Work Managers

To monitor the status of Work Managers in a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the Administration Server and any Managed Servers that have been configured in the current domain.

2. In the Servers table, select the name of the server instance you want to monitor.
3. From the **WebLogic Server** dropdown menu, select **Other Services**, then select **Work Manager**.

The Work Managers table displays information about the Work Managers that have been configured in the current server, such as:

- Work Manager Name
- Type
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. In the table, select the name of the Work Manager for which you want to view configuration information.

8.1.2 Monitor cluster Work Managers

To monitor the status of Work Managers in a specific cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.

The Clusters table displays information about the clusters that have been configured in the current domain.

2. In the Clusters table, select the name of the cluster you want to monitor.
3. From the **WebLogic Cluster** dropdown menu, select **Other Services**, then select **Work Managers**.

The Work Managers table displays information about the Work Managers that have been configured in the current cluster, such as:

- Work Manager Name
- Type
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. In the table, select the name of the Work Manager for which you want to view configuration information.

WebLogic Server Migratable Targets

A migratable target is a special target that can migrate from one server in a cluster to another. As such, a migratable target provides a way to group migratable services that should move together. When the migratable target is migrated, all services hosted by that target are migrated. For more information on migratable targets, see "Service Migration" in *Using Clusters for Oracle WebLogic Server*.

This chapter describes the tasks you can perform to monitor migratable targets.

This chapter includes the following sections:

- [Monitor migratable targets](#)
- [Migrate migratable targets](#)

9.1 Monitor migratable targets

To monitor migratable target status:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Migratable Targets**.

The Migratable Targets table displays information about the migratable targets that have been configured in the current domain, such as:

- Migratable Target Name
- Migration Policy
- Cluster
- User Preferred Server
- Current Hosting Server
- Status of Last Migration

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

-
2. In the table, select the name of the migratable target for which you want to view configuration information.

9.2 Migrate migratable targets

To migrate a migratable target:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Migratable Targets**.
2. From the Migratable Targets table, select the row of the target you want to migrate.
3. Click **Migrate**.

The Migrate Migratable Targets page is displayed. From the **New Hosting Server** dropdown menu, select the new hosting server for your migratable target and then click **OK**.

For more information, see Configuration Options.

Application Deployments

Application deployment refers to the process of making an application or module available for processing client requests in a WebLogic Server domain. WebLogic Server implements the Java EE 6 specification. Java EE 6 includes a deployment specification, JSR-88, that describes a standard API used by deployment tools and application server providers to configure and deploy applications to an application server. For more information on application deployment, see *Deploying Applications to Oracle WebLogic Server*.

This chapter describes how to monitor and control various application types deployed to the current domain.

This chapter includes the following sections:

- [Monitor application deployments](#)
- [Control application deployments](#)

10.1 Monitor application deployments

You can monitor all active deployments or a specific application or module.

This section includes the following tasks:

- [Monitor all deployments](#)
- [Monitor enterprise applications](#)
- [Monitor Web applications](#)
- [Monitor a Web application](#)
- [Monitor Web application modules](#)
- [Monitor resource adapters](#)
- [Monitor and control resource adapter modules](#)
- [Monitor Coherence archives](#)
- [Monitor JAX-RS applications](#)
- [Monitor EJB applications](#)
- [Monitor EJB modules](#)
- [Monitor and control EJB components](#)
- [Monitor EJBs](#)
- [Monitor libraries](#)

- [Monitor JMS modules](#)
- [Monitor JDBC modules](#)
- [Monitor Coherence Grid Archive \(GAR\) modules](#)
- [Monitor Web services](#)
- [Monitor Web service clients](#)

10.1.1 Monitor all deployments

To monitor all applications and modules deployed on this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.

On the **Summary** page, the Deployments table displays information about the applications deployed to the current domain, such as:

- Name
- Status
- State
- Health
- Type

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. To monitor the following application deployments, select the appropriate pages:
 - **Web Applications:** monitor Web applications, including the machine and server on which the Web application is deployed and statistics about the number of servlets and sessions associated with the Web application
 - **Resource Adapters:** monitor the status of the current state of message listener endpoints and outbound connection pools for a resource adapter
 - **EJBs:** monitor statistics about stateless, stateful, singleton, entity, and message-driven EJBs
 - **Web Services:** monitor all Web services deployed to this domain
 - **Web Service Clients:** monitor all Web services clients in this domain
 - **JAX-RS Applications:** monitor all JAX-RS applications running this domain
 - **Workload:** view statistics for the Work Managers, constraints, and policies that are configured applications deployed in this domain
 3. In the table, select the name of the application for which you want to view additional configuration information.

10.1.2 Monitor enterprise applications

To monitor a specific enterprise application:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, select the name of the enterprise application you want to monitor.

An overview page displays information related to the enterprise application.

3. From the **Domain Application Deployment** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. On the **Health** page, the table displays health status information about this enterprise application, such as:
 - Name
 - Health
 - Reason

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
5. To view additional monitoring information for this enterprise application, select the appropriate pages:
 - **Query Caching**: monitor statistics for the query caches configured for this enterprise application
 - **Workload**: monitor Work Managers, constraints, and policies configured for this enterprise application
 - **Coherence**: monitor Coherence clusters associated with this enterprise application
 6. Optionally, you can view detailed monitoring information for this enterprise application:
 1. From the **Domain Application Deployment** dropdown menu, select **Home** to return to the overview page.
 2. In the Deployments table, select the name of the enterprise application (ensure that it is targeted to the appropriate server or cluster).

A detailed overview page displays additional monitoring information associated with this enterprise application.

Note: You can also access this detailed monitoring page directly from the Target Navigation pane:

- From the Target Navigation pane, expand **Application Deployments**.
 - Expand the application for which you want to view detailed monitoring information, and select the name of the application (ensure that it is targeted to the appropriate server instance or cluster).
-
-

3. Optionally, you can view the performance summary of this enterprise application:

From the **Application Deployment** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as information about the server, servlets and JSPs, and data sources associated with this application.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

10.1.3 Monitor Web applications

To monitor all Web applications deployed to this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **Web Applications**.

The Web Applications table displays information about all of the Web applications deployed to the current domain, such as:

- Context Root
- Application
- Server
- Machine
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
3. In the table, select the name of the Web application for which you want to view additional configuration information.

10.1.4 Monitor a Web application

To monitor a specific Web application:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, select the name of the Web application you want to monitor.
An overview page displays information related to the Web application.
3. From the **Domain Application Deployment** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. On the **Web Applications** page, the table displays information about the Web application, such as:

- Context Root
- Application
- Server
- Machine
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
5. To view additional monitoring information for this Web application, select the appropriate pages:
 - **Servlets**: monitor servlets associated with this Web application
 - **Sessions**: monitor sessions associated with this Web application
 - **PageFlows**: monitor pageflows used by this Web application
 - **Workload**: monitor Work Managers, constraints, and policies configured for this Web application
 - **Web Service Clients**: monitor Web service clients associated with this Web application
 - **JAX-RS Applications**: monitor the JAX-RS applications associated with this Web application
 6. Optionally, you can view detailed monitoring information for this Web application:
 1. From the **Domain Application Deployment** dropdown menu, select **Home** to return to the overview page.
 2. In the Deployments table, select the name of the Web application (ensure that it is targeted to the appropriate server or cluster).
A detailed overview page displays additional monitoring information associated with this Web application.

Note: You can also access this detailed monitoring page directly from the Target Navigation pane:

- From the Target Navigation pane, expand **Application Deployments**.
 - Expand the application for which you want to view detailed monitoring information, and select the name of the application (ensure that it is targeted to the appropriate server instance or cluster).
-
-

3. Optionally, you can view the performance summary of this Web application: From the **Application Deployment** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as information about the server, servlets and JSPs, and data sources associated with this application.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

10.1.5 Monitor Web application modules

To monitor a Web application module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the module you want to monitor.
3. Select the name of the Web application module you want to monitor.
4. On the **Monitoring** page, the Web Applications table displays information about the Web application module, such as:
 - Context Root
 - Application
 - Server
 - Machine
 - State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

5. To view additional monitoring information for this Web application module, select the appropriate pages:
 - **Servlets:** monitor servlets associated with this Web application module
 - **Sessions:** monitor sessions associated with this Web application module
 - **PageFlows:** monitor pageflows used by this Web application module
 - **Workload:** monitor Work Managers, constraints, and policies configured for this Web application module
 - **Web Service Clients:** monitor Web service clients associated with this Web application module
 - **JAX-RS Applications:** monitor JAX-RS applications associated with this Web application module
 - **Coherence:** monitor Coherence clusters associated with this Web application module

10.1.6 Monitor resource adapters

To monitor a specific resource adapter:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, select the name of the resource adapter you want to monitor.

An overview page displays information related to the resource adapter.

3. From the **Domain Application Deployment** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. To view monitoring information for this resource adapter, select the appropriate pages:
 - **Outbound Connection Pools:** monitor the outbound connection pools for this resource adapter

Optionally, select one of the Current Connections listed in the table to display additional monitoring information for a specific outbound connection pool.

 - Select **Statistics** to display statistics about the pool's connections
 - Select **Outbound Connections** to display information about the status of the connections in the connection pool
 - **Inbound Listeners:** monitor the current state of message listener endpoints in this resource adapter
 - **Workload:** monitor the Work Managers, constraints, and policies configured specifically for this resource adapter
5. Optionally, you can view detailed monitoring information for this resource adapter:
 1. From the **Domain Application Deployment** dropdown menu, select **Home** to return to the overview page.
 2. In the Deployments table, select the name of the resource adapter (ensure that it is targeted to the appropriate server or cluster).

A detailed overview page displays additional monitoring information associated with this resource adapter.

Note: You can also access this detailed monitoring page directly from the Target Navigation pane:

- From the Target Navigation pane, expand **Application Deployments**.
 - Expand **Resource Adapters**, then expand the name of the resource adapter for which you want to view detailed monitoring information.
 - Select the name of the resource adapter (ensure that it is targeted to the appropriate server instance or cluster).
-

3. Optionally, you can view the performance summary of this resource adapter:

From the **Application Deployment** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as information about the server, servlets and JSPs, and data sources associated with this resource adapter.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

10.1.6.1 Monitor message listener endpoints

To monitor the message listener endpoints for all active resource adapters deployed to this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **Resource Adapters**.

On the **Inbound Listeners** page, the table displays information about the current state of message listener endpoints for this resource adapter, such as:

- Message Listener Type
- Message Listener Endpoint
- Server
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

3. In the table, select the name of the inbound message listener for which you want to view additional configuration information.

10.1.6.2 Monitor outbound connection pools

To monitor the outbound connection pools for all active resource adapters deployed to this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **Resource Adapters**, then select **Outbound Connection Pools**.

The Outbound Connection Pools table displays information about the outbound connection pools for this resource adapter, such as:

- Outbound Connection Pool
- Server
- State
- Current Connections
- Created Connections

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
3. Optionally, in the table, select one of the **Current Connections** to display additional monitoring information about a specific outbound connection pool.
 - Select **Statistics** to display statistics about the pool's connections, such as:
 - Outbound Connection Pool
 - Server
 - State
 - Current Connections
 - Created Connections

For more information about these fields, see Configuration Options.

- Select **Outbound Connections** to display information about the status of the connections in the connection pool, such as:
 - User Name
 - Last Usage
 - Active Handles (Current)
 - Active Handles (High)
 - Handles Created

For more information about these fields, see Configuration Options.

10.1.7 Monitor and control resource adapter modules

This section includes the following tasks:

- [Monitor resource adapter modules](#)
- [Control resource adapter modules](#)

10.1.7.1 Monitor resource adapter modules

To monitor a specific resource adapter module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the module you want to monitor.
3. Select the name of the resource adapter module you want to monitor.
4. To view monitoring information for this resource adapter module, select the appropriate pages:
 - **Outbound Connection Pools:** monitor the outbound connection pools for this resource adapter module
Optionally, select one of the Current Connections listed in the table to display additional monitoring information for a specific outbound connection pool.
 - Select **Statistics** to display statistics about the pool's connections
 - Select **Outbound Connections** to display information about the status of the connections in the connection pool
 - **Inbound Listeners:** monitor the current state of message listener endpoints in this resource adapter module
 - **Workload:** monitor the Work Managers, constraints, and policies configured specifically for this resource adapter module

Optionally, select **View** on any of the tables to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

10.1.7.2 Control resource adapter modules

To control a specific resource adapter module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the module you want to control.
3. Select the name of the resource adapter module you want to control.
4. Select **Control**.
5. To control this resource adapter module, select the appropriate pages:

- **Resource Adapter:** start, stop, suspend, or resume the resource adapter module

In the Resource Adapter table, select the row of the resource adapter module you want to control. The control options are displayed above the table.

- **Outbound Connection Pools:** reset or force reset the outbound connection pools associated with this resource adapter module

In the Outbound Connection Pools table, select the row of the resource adapter module you want to control. The control options are displayed above the table.

Optionally, select **View** on any of the tables to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

10.1.8 Monitor Coherence archives

To monitor a specific Coherence archive:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, select the name of the Coherence archive you want to monitor.

An overview page displays information related to the Coherence archive.

3. From the **Domain Application Deployment** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. On the **Health** page, the table displays health status information about this Coherence archive, such as:
 - Name
 - Health
 - Reason

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
5. To view additional monitoring information for this Coherence archive, select the appropriate pages:
 - **Query Caching:** monitor statistics for the query caches configured for this Coherence archive

- **Workload:** monitor Work Managers, constraints, and policies configured for this Coherence archive
 - **Coherence:** monitor Coherence clusters associated with this Coherence archive
6. Optionally, you can view detailed monitoring information for this Coherence archive:
 1. From the **Domain Application Deployment** dropdown menu, select **Home** to return to the overview page.
 2. In the Deployments table, select the name of the Coherence archive (ensure that it is targeted to the appropriate server or cluster).

A detailed overview page displays additional monitoring information associated with this Coherence archive.

Note: You can also access this detailed monitoring page directly from the Target Navigation pane:

- From the Target Navigation pane, expand **Application Deployments**.
- Expand the application for which you want to view detailed monitoring information, and select the name of the Coherence archive (ensure that it is targeted to the appropriate server instance or cluster).

-
-
3. Optionally, you can view the performance summary of this Coherence archive:

From the **Application Deployment** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as information about the server, servlets and JSPs, and data sources associated with this application.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

10.1.9 Monitor JAX-RS applications

To monitor all JAX-RS applications deployed to this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **JAX-RS Applications**.

The JAX-RS Applications table displays information about all of the JAX-RS applications deployed to the current domain, such as:

- JAX-RS Application Name
- JAX-RS Application Context
- Application Name
- Source Information

- Error Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
3. In the table, select the name of the JAX-RS application for which you want to view additional configuration information.

10.1.10 Monitor EJB applications

To monitor a specific EJB application:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, select the name of the EJB application you want to monitor.
An overview page displays information related to the EJB application.
3. From the **Domain Application Deployment** dropdown menu, select **Monitoring**, then select **Environment Monitoring**.
4. To view monitoring information for this EJB application, select the appropriate pages:
 - **Stateless**: monitor performance of stateless session EJBs associated with this EJB application
 - **Stateful**: monitor performance of stateful session EJBs associated with this EJB application
 - **Singleton**: monitor performance of singleton session EJBs associated with this EJB application
 - **Entity**: monitor performance of entity EJBs associated with this EJB application
 - **Message Driven**: monitor performance of message-driven EJBs associated with this EJB application
 - **Workload**: monitor the Work Managers, constraints and policies configured specifically for this EJB application
 - **Web Service Clients**: monitor the Web service clients associated with this EJB application
5. Optionally, you can view detailed monitoring information for this EJB application:
 1. From the **Domain Application Deployment** dropdown menu, select **Home** to return to the overview page.
 2. In the Deployments table, select the name of the EJB application (ensure that it is targeted to the appropriate server or cluster).
A detailed overview page displays additional monitoring information associated with this EJB application.

Note: You can also access this detailed monitoring page directly from the Target Navigation pane:

- From the Target Navigation pane, expand **Application Deployments**.
 - Expand the application for which you want to view detailed monitoring information, and select the name of the application (ensure that it is targeted to the appropriate server instance or cluster).
-
-

3. Optionally, you can view the performance summary of this EJB application:

From the **Application Deployment** dropdown menu, select **Monitoring**, then select **Performance Summary**.

The Performance Summary page displays general performance information, as well as information about the server, servlets and JSPs, and data sources associated with this application.

- Click **Show Metric Palette** to select the metrics you want to view.
- Select **View** to access table options.
- Select **Overlay** to access additional table options.

10.1.11 Monitor EJB modules

To monitor a specific EJB module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the module you want to monitor.
3. Select the name of the EJB module you want to monitor.
4. To view monitoring information for this EJB module, select the appropriate pages:
 - **Stateless:** monitor performance of the stateless session EJBs associated with this EJB module
 - **Stateful:** monitor performance of the stateful sessions EJBs associated with this EJB module
 - **Singleton:** monitor performance of the singleton session EJBs associated with this EJB module
 - **Entity:** monitor performance of the entity EJBs associated with this EJB module
 - **Message Driven:** monitor performance of the message-driven EJBs associated with this EJB module
 - **Web Service Clients:** monitor the Web service clients associated with this EJB module

Optionally, select **View** on any of the tables to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)

- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

10.1.12 Monitor and control EJB components

This section includes the following topics:

- [Monitor EJB components](#)
- [Control EJB components](#)

10.1.12.1 Monitor EJB components

To monitor a specific EJB component:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the EJB component you want to monitor.
3. Select the name of the EJB component you want to monitor.
4. To view monitoring information for this EJB component, select the appropriate pages:
 - **Running**: monitor the state and performance of the EJB component, depending on its type (stateless, stateful, singleton, entity, or message-driven)
 - **Workload**: monitor Work Managers, constraints, and policies configured for this EJB component
 - **Coherence**: monitor Coherence clusters associated with this EJB component

10.1.12.2 Control EJB components

To control a specific EJB component:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the EJB component you want to control.
3. Select the name of the EJB component you want to control.
4. Select **Control**.
5. In the EJB Component control table, select the row of the EJB component you want to control.
The control options are displayed above the table.
6. Click the desired control option:
 - **Initialize**: initialize the idle bean cache
 - **Activate Timers**: activate the timer objects

For more information, see Configuration Options.

10.1.13 Monitor EJBs

To monitor EJBs deployed to the current domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **EJBs**.
3. To monitor EJBs by type, select the appropriate pages:
 - **Stateless**: monitor the performance of stateless session EJBs
 - **Stateful**: monitor the state and performance of stateful session EJBs
 - **Singleton**: monitor the state and performance of singleton session EJBs
 - **Entity**: monitor the performance of entity EJBs
 - **Message Driven**: monitor the performance of message-driven EJBs
4. In one of the EJB tables, select the name of the EJB for which you want to view additional configuration information.

10.1.14 Monitor libraries

To monitor a specific library:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, select the name of the library for which you want to view configuration information.

10.1.15 Monitor JMS modules

To monitor a specific JMS module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the JMS module you want to monitor.
3. Select the name of the JMS module you want to monitor.
4. On the **Overview** page, the table displays information about the JMS module, such as:
 - Name
 - Type
 - Targets

For more information about these fields, see Configuration Options.

10.1.16 Monitor JDBC modules

To monitor a specific JDBC module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the JDBC module you want to monitor.
3. Select the name of the JDBC module.

10.1.17 Monitor Coherence Grid Archive (GAR) modules

To monitor a specific Coherence Grid Archive (GAR) module:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. In the Summary table, expand the name of the application that contains the Coherence archive module you want to monitor.
3. Select the name of the Coherence archive module.

10.1.18 Monitor Web services

To monitor all Web services deployed to this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **Web Services**.

The Web Services table displays information about all of the Web services deployed to the current domain, such as:

- Service Name
- Application
- Module
- Active Server Count
- Error Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
3. In the table, select the name of the Web service for which you want to view additional configuration information.

10.1.19 Monitor Web service clients

To monitor all Web service clients in this domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **Deployments**.
2. Select **Web Service Clients**.

The Web Service Clients table displays information about all of the Web service clients in the current domain, such as:

- Client
- Port
- Active Server Count

- Error Count
- Response Error Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

10.2 Control application deployments

You can start, stop, deploy, redeploy, and undeploy applications deployed to the current domain. You can also fetch deployment plans and perform additional control operations for various application types.

This section includes the following tasks:

- [Start applications](#)
- [Stop applications](#)
- [Deploy applications](#)
- [Redeploy applications](#)
- [Undeploy applications](#)
- [Fetch deployment plans](#)
- [Initialize caches](#)
- [Control data source operations](#)
- [Control resource adapters](#)
- [Control outbound connection pools](#)

10.2.1 Start applications

Starting an application makes it available to WebLogic Server clients. Before you can start an application, you must first deploy it. See [Deploy applications](#).

To start an application:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Deployments table, select the row of the deployment you want to start.

The control options are displayed above the table.

3. Click **Start**.

By default, all requests will be serviced by the application. To start servicing only administration requests to the application, select **Start**, then **Servicing only administration requests**.

4. Click **Yes** to confirm your decision.

10.2.2 Stop applications

Stopping a running application makes it unavailable to WebLogic Server clients.

To stop an application:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Deployments table, select the row of the deployment you want to stop.
The control options are displayed above the table.

3. Click **Stop**.

By default, the deployment will be stopped when work completes. To force the deployment to stop immediately, select **Stop**, then **Force stop now**. To stop servicing client requests but continue servicing administration requests, select **Stop**, then **Stop, but continue servicing administration requests**.

4. Click **Yes** to confirm your decision.

10.2.3 Deploy applications

Deploying an application makes its physical file or directory known to WebLogic Server. After you have deployed the application, you can start it so that users can begin using it. See [Start applications](#).

To deploy an application:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.

The Deployments page is displayed.

2. Click **Deploy** to open the Deploy Java EE Application Assistant.
3. On the Select Archive page, locate the application you want to deploy and choose whether to upload a deployment plan or create a new deployment plan.
4. Click **Next**.
5. On the Select Target page, select the server instances and clusters to which you want to deploy the application.
6. Click **Next**.
7. On the Application Attribute page, update the application attributes as desired. These attributes include:
 - Application Name
 - Distribution
 - Source Accessibility
8. Click **Next** to update the deployment settings or **Deploy** to complete deployment of this application.
9. Optionally, on the Deployment Settings page, you can complete common tasks before deploying the application and update deployment settings.
10. Click **Deploy** to complete deployment of this application.

10.2.4 Redeploy applications

Redeploying an application redeploys the archive file or exploded directory. Redeploy an application if you have made changes to it and want to make the changes available to WebLogic Server clients.

To redeploy an application or module:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Deployments table, select the row of the deployment you want to redeploy. The control options are displayed above the table.
3. Click **Redeploy** to open the Redeploy Java EE Application Assistant.
4. On the Select Application page, select the application you want to redeploy.
5. Click **Next**.
6. On the Select Archive page, locate the application you want to deploy and choose whether to upload a deployment plan or create a new deployment plan.
7. Click **Next**.
8. On the Application Attribute page, update the application attributes as desired. These attributes include:
 - Application Name
 - Distribution
 - Source Accessibility
9. Click **Next** to update the deployment settings or **Redeploy** to complete redeployment of this application.
10. Optionally, on the Deployment Settings page, you can complete common tasks before deploying the application and update deployment settings.
11. Click **Redeploy** to complete deployment of this application.

10.2.5 Undeploy applications

Undeploying an application removes it from every target of the domain to which the application is deployed. Once you undeploy an application from the domain, you must deploy it again if you want to make it available to WebLogic Server clients. To temporarily make applications unavailable to WebLogic Server clients, you can stop them instead of undeploying them.

Before you begin

Before you can undeploy an application, you must stop it to ensure that it is not servicing client applications. See [Stop applications](#).

To undeploy an application:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Deployments table, select the row of the application you want to undeploy. The control options are displayed above the table.
3. Click **Undeploy**.

4. On the Undeploy Java EE Application: Confirmation page, click **Undeploy** to confirm your decision and remove the application.

If you later want to deploy the removed application, see [Deploy applications](#).

10.2.6 Fetch deployment plans

A deployment plan is a file that contains the deployment settings as well as post-deployment configuration changes of an application. You can fetch and save the deployment plan of an application, and then deploy or redeploy that application later using the saved deployment plan.

To fetch a deployment plan for an application:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Deployments table, select the row of the application for which you want to fetch the deployment plan.

The control options are displayed above the table.

3. Click **Fetch Deployment Plan**.
4. On the Fetch Deployment Plan page, select the machine on which you want to save the deployment plan: **Machine where this Web browser is running** or **Machine where Enterprise Manager is running**.
5. Click **Fetch**.

10.2.7 Initialize caches

For enterprise applications, Web applications, and Coherence archives, you can manually clear the caches and pools of idle beans in application-level caches.

To initialize caches in a specific application:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Summary table, select the name of the enterprise application, Web application, or Coherence archive for which you want to initialize caches.

An overview page displays information related to the application.

3. From the **Domain Application Deployment** dropdown menu, select **Control**, then select **Initialize Caches**.
4. In the Initialize Caches table, select the row of the application cache you want to initialize.

The Initialize control option is displayed above the table.

5. Click **Initialize**.
6. Click **Yes** to confirm the action.

For more information, see Configuration Options.

10.2.8 Control data source operations

For Web applications and Coherence archives, you can manually control each instance of a JDBC data source.

To control JDBC data source instances:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Summary table, select the name of the Web application or Coherence archive for which you want to control JDBC data source instances.
An overview page displays information related to the application.
3. From the **Domain Application Deployment** dropdown menu, select **Control**, then select **Data Source Operations**.
4. In the Data Source Operations table, select the row of the JDBC data source instances you want to control.
The control options are displayed above the table.
5. Click the desired control option:
 - **Shrink**: manually shrink the pool of database connections in individual instances of a data source to the initial capacity or the current number of connections in use, whichever is greater
 - **Reset**: closes and recreates all available database connections in the pool of connections in the data source
 - **Clear Statement Cache**: clear the prepared and callable statements that are used in each connection in a data source instance
 - **Suspend**: manually suspend or force suspend individual instances of a data source so that applications can no longer get a database connection from the data source
 - **Resume**: manually resume individual data sources that are in a *Suspended* state
 - **Stop**: manually stop or force stop individual instances of a data source
 - **Start**: manually start individual instances of a data source that have a health state of *Shutdown*
6. Click **Yes** to confirm the action.

For more information, see Configuration Options.

10.2.9 Control resource adapters

For Web applications, resource adapters, and Coherence archives, you can start, stop, suspend, or resume a resource adapter connected with the application.

To control a resource adapter:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Summary table, select the name of the Web application, resource adapter, or Coherence archive containing the resource adapter you want to control.
An overview page displays information related to the application.
3. From the **Domain Application Deployment** dropdown menu, select **Control**, then select **Resource Adapter**.
4. In the Resource Adapter table, select the row of the resource adapter you want to control.

The control options are displayed above the table.

5. Click the desired control option:
 - **Start:** By default, all requests will be serviced by the application. To start servicing only administration requests to the application, select **Start**, then **Servicing only administration requests**.
 - **Stop:** By default, the resource adapter will be stopped when work completes. To force the resource adapter to stop immediately, select **Stop**, then **Force stop now**. To stop servicing client requests but continue servicing administration requests, select **Stop**, then **Stop, but continue servicing administration requests**.
 - **Suspend:** By default, the resource adapter will suspend all services. To suspend only inbound services, select **Suspend**, then **Inbound Only**. To suspend only outbound services, select **Suspend**, then **Outbound Only**. To suspend only work services, select **Suspend**, then **Work Only**.
 - **Resume:** By default, the resource adapter will resume all services. To resume only inbound services, select **Resume**, then **Inbound Only**. To resume only outbound services, select **Resume**, then **Outbound Only**. To resume only work services, select **Resume**, then **Work Only**.
6. Click **Yes** to confirm the action.

For more information, see Configuration Options.

10.2.10 Control outbound connection pools

For Web applications, resource adapters, and Coherence archives, you can reset or force reset outbound connection pools associated with the application.

To control outbound connection pools:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **Deployments**.
2. In the Summary table, select the name of the Web application, resource adapter, or Coherence archive for which you want to control outbound connection pools.

An overview page displays information related to the application.
3. From the **Domain Application Deployment** dropdown menu, select **Control**, then select **Outbound Connection Pools**.
4. In the Outbound Connection Pools table, select the row of the outbound connection pool you want to control.

The control options are displayed above the table.
5. Click **Reset** or **Force Reset** to reset the outbound connection pool.
6. Click **Yes** to confirm the action.

For more information about these fields, see Configuration Options.

WebLogic Server Messaging

The WebLogic Server implementation of JMS is an enterprise-class messaging system that is tightly integrated into WebLogic Server. It fully supports the JMS specification, and also provides numerous WebLogic JMS Extensions that go beyond the standard JMS APIs. For more information on WebLogic JMS and other related WebLogic messaging components, refer to the following guides:

- *Developing JMS Applications for Oracle WebLogic Server* for a guide to JMS API programming with WebLogic Server.
- *Administering JMS Resources for Oracle WebLogic Server* for information about configuring and managing JMS resources.
- *Administering the Store-and-Forward Service for Oracle WebLogic Server* for information about the benefits and usage of the Store-and-Forward service with WebLogic JMS.
- "Using the WebLogic Persistent Store" for information about the benefits and usage of the system-wide WebLogic Persistent Store with WebLogic JMS.
- *Configuring and Managing the WebLogic Messaging Bridge* for information about a forwarding mechanism that provides interoperability between WebLogic JMS implementations, as well as between WebLogic JMS and other messaging products.

This chapter describes the typical tasks you need to monitor and control WebLogic messaging components:

- [Monitor and control JMS servers](#)
- [Monitor and control Store-and-Forward agents](#)
- [Monitor and control JMS resources and modules](#)
- [Monitor path services](#)
- [Monitor messaging bridges](#)
- [Monitor JMS bridge destinations](#)

11.1 Monitor and control JMS servers

JMS servers act as management containers for JMS queue and topic resources within JMS modules that are specifically targeted to JMS servers.

This section includes the following tasks:

- [Monitor JMS servers](#)
- [Monitor a JMS server](#)

- [Control JMS server messages](#)
- [Control active JMS destinations](#)
- [Control active JMS transactions](#)
- [Control active JMS connections](#)

11.1.1 Monitor JMS servers

You can monitor statistics for runtime information for active JMS servers in your domain. You can also access runtime information for a JMS server's destinations, transactions, connections, and server session pools.

To monitor JMS servers deployed to this domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.

The JMS Server summary table displays information about the state of each JMS server that has been configured in the current WebLogic Server domain, such as:

- Name
- Health
- Health Reason
- Persistent Store
- Target

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the JMS server for which you want to view configuration information.

11.1.2 Monitor a JMS server

You can monitor a variety of runtime statistics for each JMS server in your domain, such as the JMS server's paging store, active destinations, active transactions, active connections, and session pools. View the statistics for a JMS server to look for unusual activity, such as an abnormal number of messages waiting on a destination.

To monitor a specific JMS server:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.
2. In the JMS Server table, select the name of the server you want to monitor.
3. From the Settings for JMS Server page, select **Monitoring**, then select **Summary**.

The JMS Server summary table displays runtime statistics for this JMS server, such as:

- Name

- Destinations Current
- Messages Current
- Messages Pending
- Messages Received

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. To view monitoring information for this JMS server, select the appropriate pages:
- **Paging Store:** displays runtime statistics for the JMS server's paging store.
 - **Active Destinations:** displays statistics for all active JMS destinations targeted to the JMS server.
 - **Active Transactions:** displays all active JMS transactions running on the JMS server.
 - **Active Connections:** displays all active JMS connections to the JMS server. A JMS connection represents an open communication channel between an application and the messaging system and is used to create a session for producing and consuming messages.
 - **Active Session Pools:** displays all active JMS session pools running on the JMS server.
 - **Active Pooled Connections:** displays all active pooled connections to the JMS server. A pooled JMS connection is a session pool used by EJBs and servlets that use a resource-ref element in their EJB or servlet deployment descriptor to define their JMS connection factories (also known as a *wrapped connection factory*). Use this page to monitor JMS connection and session objects, as well as message producer objects that are automatically created when declaring a wrapped JMS connection factory in your EJB or servlet.

11.1.2.1 Monitor JMS connection session information

A session defines a serial order for both the messages produced and the messages consumed, and can create multiple message producers and message consumers. The same thread can be used for producing and consuming messages.

To monitor session information for a JMS connection:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.
2. In the JMS Server table, select the name of the server you want to monitor.
3. From the Settings for JMS Server page, select **Monitoring**, then select **Active Connections**.
4. In the Active Connections table, select the **Sessions Current Count** for the connection you want to monitor.

5. From the Sessions page, you can view detailed information about the session's consumers and producers, such as:
 - Consumers
 - Consumers High
 - Consumers Total
 - Producers
 - Producers High

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.1.3 Control JMS server messages

You can temporarily pause all runtime message production, insertion (in-flight messages), and consumption operations on all destinations targeted to a JMS server. These message pausing options allow you to assert administrative control of the JMS subsystem behavior in the event of an external resource failure.

For example, by temporarily pausing message production and insertion on destinations, you can effectively drain all the existing messages for troubleshooting purposes, and then resume production and insertions once the issue has been resolved.

To control messages on a JMS server:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.
2. In the JMS Server table, select the name of the server you want to control.
3. From the Settings for JMS Server page, select **Control**, then select **Summary**.
4. In the Summary table, select the row of the JMS server on which you want to control messages.

The control options are displayed above the table.

5. Select one of the following message control operations:
 - Click **Production**, then select **Pause** to stop production of new messages on all destinations targeted to this JMS server.

When a JMS server's destinations are paused for production, it prevents any new message production operations from both new and existing producers attached to those destinations. To resume message production, click **Production**, then select **Resume**.
 - Click **Consumption**, then select **Pause** to stop message consumption on all destinations targeted to this JMS server.

When a JMS server's destinations are paused for consumption, it prevents any further message consumption operations from those destinations. To resume the consumption of messages, click **Consumption**, then select **Resume**.

- Click **Insertion**, then select **Pause** to stop the insertion of in-flight messages on all destinations targeted to this JMS server.

When a JMS server's destinations are paused for insertion, all the messages that are the result of in-flight work completion are prevented from appearing on the destinations. This occurs in addition to pausing the new message production operations. To resume the insertion of in-flight messages, click **Insertion**, then select **Resume**.

For more information, see Configuration Options.

11.1.4 Control active JMS destinations

You can temporarily pause runtime message production, insertion (in-flight messages) and consumption operations on selected destinations targeted to a JMS server.

To control active destinations on a JMS server:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.
2. In the JMS Server table, select the name of the JMS server you want to control.
3. From the Settings for JMS Server page, select **Control**, then select **Active Destinations**.
4. In the Active Destinations table, select the row of the destination you want to control.

The control options are displayed above the table.

5. Select one of the following destination control operations:

- Click **Production**, then select **Pause** to stop production of new messages on this destination.

When a JMS server's destinations are paused for production, it prevents any new message production operations from both new and existing producers attached to those destinations. To resume message production, click **Production**, then select **Resume**.

- Click **Consumption**, then select **Pause** to stop message consumption on this destination.

When a JMS server's destinations are paused for consumption, it prevents any further message consumption operations from those destinations. To resume the consumption of messages, click **Consumption**, then select **Resume**.

- Click **Insertion**, then select **Pause** to stop the insertion of in-flight messages on this destination.

When a JMS server's destinations are paused for insertion, all the messages that are the result of in-flight work completion are prevented from appearing on the destinations. This occurs in addition to pausing the new message production operations. To resume the insertion of in-flight messages, click **Insertion**, then select **Resume**.

For more information, see Configuration Options.

11.1.5 Control active JMS transactions

You can force commits or rollbacks on selected transactions running on a JMS server.

To control active transactions on a JMS server:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.
2. In the JMS Server table, select the name of the JMS server you want to control.
3. From the Settings for JMS Server page, select **Control**, then select **Active Transactions**.
4. In the Active Transactions table, select the row of the transaction you want to control.

The control options are displayed above the table.

5. Select one of the following transaction control operations:
 - Click **Force Commit** to initiate a commit operation.
 - Click **Force Rollback** to initiate a rollback operation.

For more information, see Configuration Options.

11.1.6 Control active JMS connections

A JMS connection represents an open communication channel between an application and the messaging system and is used to create a session for producing and consuming messages. For troubleshooting purposes, you can destroy selected connections on a JMS server.

To destroy a JMS connection on a JMS sever:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Servers**.
2. In the JMS Server table, select the name of the JMS server you want to control.
3. From the Settings for JMS Server page, select **Control**, then select **Active Connections**.
4. In the Active Connections table, select the row of the connection you want to destroy.

The Destroy option is displayed above the table.

5. Click **Destroy** to terminate the JMS connection.

For more information, see Configuration Options.

11.2 Monitor and control Store-and-Forward agents

The Store-and-Forward (SAF) service enables WebLogic Server to deliver messages reliably between applications that are distributed across WebLogic Server instances. If the destination is not available at the moment the messages are sent, either because of network problems or system failures, then the messages are saved on a local server instance and are forwarded to the remote destination once it becomes available.

SAF agents are responsible for store-and-forwarding messages between local sending and remote receiving endpoints. A SAF agent can be configured to have only sending capabilities, receiving capabilities, or both. WebLogic JMS SAF only requires a sending agent on the sending side for JMS messages. Whereas, Web Services Reliable Messaging (WSRM) SAF requires both a sending agent and a receiving agent.

This section includes the following tasks:

- [Monitor SAF agents](#)
- [Monitor a SAF agent](#)
- [Control SAF agents](#)
- [Control SAF remote endpoints](#)
- [Control SAF conversations](#)

11.2.1 Monitor SAF agents

To monitor all SAF agents created for this domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **Store-and-Forward Agents**.

The SAF summary table displays information about the state of each SAF agent that has been configured in the current WebLogic Server domain, such as:

- Name
- Agent Type
- Persistent Store
- Server

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the SAF agent for which you want to view configuration information.

11.2.2 Monitor a SAF agent

You can monitor a variety of runtime statistics for each SAF agent in your domain, including remote endpoints and conversations.

To view the current statistics for a specific SAF agent:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **Store-and-Forward Agents**.
2. In the SAF table, select the name of the SAF agent you want to monitor.
The Settings for Store-and-Forward Agent page displays monitoring information related to this SAF agent.
3. To monitor the following SAF agent information, select the appropriate pages:
 - **Statistics**: displays runtime statistics for this SAF agent.
 - **Remote Endpoints**: displays monitoring information for the remote endpoints associated with this SAF agent. You can view a table of active messages for a

remote endpoint by selecting a remote endpoint. To view the contents of a message, select the message.

- **Conversations:** displays monitoring information for the conversations associated with this SAF agent.

11.2.3 Control SAF agents

You can temporarily pause runtime message activity on SAF agents.

To control message operations on a SAF agent:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **Store-and-Forward Agents**.
2. In the SAF table, select the name of the SAF agent you want to control.
3. From the Setting for Store-and-Forward Agent page, select **Statistics**.
4. In the Statistics table, select the row of the SAF agent on which you want to control messages.

The control options are displayed above the table

5. Select one of the following message control operations:
 - Click **Incoming**, then select **Pause** or **Resume** to control the flow of incoming messages to the SAF agent.
 - Click **Forwarding**, then select **Pause** or **Resume** to control the forwarding of messages to the SAF agent.
 - Click **Receiving**, then select **Pause** or **Resume** to control the receiving of messages to the SAF agent.

For more information, see Configuration Options.

11.2.4 Control SAF remote endpoints

You can control message operations for active remote endpoints associated with a SAF agent.

To control remote endpoints for a SAF agent:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **Store-and-Forward Agents**.
2. In the SAF table, select the name of the SAF agent you want to control.
3. From the Settings for Store-and-Forward Agent page, select **Remote Endpoints**.
4. In the Remote Endpoints table, select the row of the remote endpoint you want to control.

The control options are displayed above the table.

5. Select one of the following remote endpoint control operations:
 - Click **Incoming**, then select **Pause** or **Resume** to control the flow of incoming messages. The table reflects the remote endpoint's new paused or non-paused state.
 - Click **Forwarding**, then select **Pause** or **Resume** to control the forwarding of messages to the SAF agent. The table reflects the remote endpoint's new paused or non-paused state.

- Click **Expire All** to process all pending messages for a remote destination, according to the policy specified by the associated error handling configuration, and then remove them from the remote endpoint.
- Click **Purge All** to destroy all conversations and purge all messages on a remote endpoint.

For more information, see Configuration Options.

11.2.5 Control SAF conversations

You can terminate active conversations associated with a SAF agent.

To destroy SAF conversations:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **Store-and-Forward Agents**.
2. In the SAF table, select the name of the SAF agent you want to control.
3. From the Settings for Store-and-Forward Agent page, select **Conversations**.
4. In the Conversations table, select the row of the conversation you want to destroy.

The Destroy option is displayed above the table.

5. Click **Destroy** to terminate the SAF conversation.

For more information, see Configuration Options.

11.3 Monitor and control JMS resources and modules

JMS system resources are configured and stored as modules similar to standard Java EE modules. Such resources include queues, topics, connection factories, templates, destination keys, quota, distributed queues, distributed topics, foreign servers, and JMS store-and-forward (SAF) parameters. System modules are globally available for targeting to server instances and clusters configured in the domain, and therefore are available to all applications deployed on the same targets and to client applications.

Note: JMS configuration resources can also be managed as deployable application modules, either with a Java EE application as a packaged module, which is available only to the enclosing application, or as a standalone module that provides global access to the resources defined in that module. For more information about configuring JMS application modules, see "Configuring JMS Application Modules for Deployment" in *Administering JMS Resources for Oracle WebLogic Server*.

This section includes the following tasks:

- [Monitor JMS resources](#)
- [Control messages on JMS destination resources](#)
- [Monitor JMS modules](#)

11.3.1 Monitor JMS resources

You can view all the resources from all the JMS system modules created in the current WebLogic Server domain. You can also view monitoring information, including the

resource's system module, JNDI name, targeted subdeployment resources, and the JMS server, WebLogic server, instance or cluster on which the resource is targeted.

For certain resources, you can monitor detailed statistical information or perform control operations.

To monitor all JMS system resources in the current domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources that are defined as part of all JMS system modules configured in the current domain:

- **Connection Factory:** defines a set of connection configuration parameters that enable JMS clients to create JMS connections.
- **Destination Key:** defines a sort order for messages as they arrive on destinations.
- **Foreign Server:** represents a third-party JMS provider that is outside WebLogic Server.
- **Queue:** defines a point-to-point (PTP) destination, which enables one application to send a message to another. See [Monitor queues](#).
- **Quota:** controls the allotment of system resources available to destinations.
- **SAF Error Handler:** specifies the action to be taken when the SAF service fails to forward messages to a remote destination.
- **SAF Imported Destinations:** represents a collection of SAF queues and topics that locally represent JMS queues or topics on a remote server instance or cluster. See [Monitor SAF imported destinations](#).
- **SAF Remote Context:** specifies the SAF login context that the SAF imported queue or topic uses to connect to a remote destination.
- **Template:** provides an efficient means of defining multiple queues and topics with similar configuration settings.
- **Topic:** defines a publish/subscribe (pub/sub) destination, which enables an application to send a message to multiple applications. See [Monitor topics](#).
- **Uniform Distributed Queue:** represents a single unit of JMS queues that is accessible as a single, logical queue to a client. See [Monitor uniform distributed queues](#).
- **Uniform Distributed Topic:** represents a single unit of JMS topics that is accessible as a single, logical topic to a client. See [Monitor uniform distributed topics](#).

From the JMS Resources table, you can monitor information about each JMS system module resource, such as:

- Name
- Type
- JMS Module Name
- JNDI Name
- Subdeployment

- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

3. In the table, select the name of the JMS system resource for which you want to view additional monitoring information.

11.3.1.1 Monitor queues

To monitor runtime statistics on queues in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the queue you want to monitor.

The Monitoring page displays runtime statistics for the queue, including:

- Name
- Messages Current
- Messages Pending
- Messages Total
- Consumers Current

For more information about these fields, see Configuration Options. To control messages, see [Control messages on queues](#).

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.3.1.2 Monitor topics

To monitor runtime statistics on topics in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the topic you want to monitor.

The Statistics page displays runtime statistics for the topic, such as:

- Name
- Messages Current
- Messages Pending
- Messages Total
- Consumers Current

For more information about these fields, see Configuration Options. To control messages, see [Control messages on topics](#).

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4. To view additional monitoring information for this topic, select **Durable Subscribers**.

The Durable Subscribers page displays additional runtime information for the topic, such as:

- Client ID
- Client ID Policy
- Subscription Name
- Active
- Messages Current Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.3.1.3 Monitor uniform distributed queues

To monitor statistics for all of the members of a uniform distributed queue in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the uniform distributed queue you want to monitor.

The Monitoring page displays runtime statistics for the uniform distributed queue, such as:

- Name
- Consumers Current
- Consumers High
- Consumers Total

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.3.1.4 Monitor uniform distributed topics

To monitor statistics for all of the members of a uniform distributed topic in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.

2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the uniform distributed topic you want to monitor.

The Statistics page displays runtime statistics for the uniform distributed topic, such as:

- Name
- Consumers Current
- Consumers High
- Consumers Total

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

4. To view additional monitoring information for this uniform distributed topic, select **Durable Subscribers**.

The Durable Subscribers page displays additional runtime information for the uniform distributed topic, such as:

- Client ID
- Client ID Policy
- Subscription Name
- Active
- Messages Current Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.3.1.5 Monitor SAF imported destinations

SAF imported destinations are collections of SAF queues and topics that locally represent JMS queues or topics on a remote server instance or cluster. Each collection of imported destinations is associated with a remote SAF context. They can also share the same JNDI prefix, time-to-live default (message expiration time), and SAF error handling policy.

SAF queues are used for asynchronous and disconnected peer communications. Messages delivered to a SAF queue are temporarily stored for future delivery and are forwarded to a JMS queue on a remote server or cluster when it is reachable.

SAF topics are used for asynchronous and disconnected peer communications. Messages delivered to a SAF topic are temporarily stored for future delivery and are forwarded to a JMS topic on a remote server or cluster when it is reachable.

To monitor SAF imported destinations in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the SAF imported destination you want to monitor.
4. To monitor SAF queues, select **Configuration**, then select **Queues**.

The SAF Queues summary page displays the SAF queues created for this SAF imported destination.

For more information, see Configuration Options.

5. To monitor SAF topics, select **Configuration**, then select **Topics**.

The SAF Topics summary page displays the SAF topics created for this SAF imported destination.

For more information, see Configuration Options.

11.3.1.6 View durable subscriber details

To view configuration details of a durable subscriber running on a JMS topic or uniform distributed topic:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the topic or uniform distributed topic you want to monitor.
4. Select **Monitoring**, then select **Durable Subscribers**.
5. In the Durable Subscribers table, select the **Subscription Name** for the durable subscriber on which you want to view configuration details.

The JMS Durable Subscribers page displays additional runtime information for the durable subscriber, such as:

- Subscription Name
- Client ID
- Client ID Policy
- Message Selector
- No Local Messages

For more information about these fields, see Configuration Options.

11.3.2 Control messages on JMS destination resources

For troubleshooting purposes, you can control operations available for JMS destination resources, such as temporarily pausing runtime message production, consumption, and insertion activity on destinations.

The following destination resources have message control capability:

- [Control messages on queues](#)
- [Control messages on topics](#)

11.3.2.1 Control messages on queues

To control messages on queues in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.

The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.

3. In the table, select the name of the queue for which you want to control messages.

4. On the Settings for Queue page, select **Control**.
5. In the Control table, select the row of the queue you want to control.
The control options are displayed above the table.
6. Select one of the following message control operations:
 - Click **Production**, then select **Pause** to stop production of new messages on the selected queue.
When a queue is paused for production, it prevents new message production operations from both new and existing producers attached to that queue. To resume message production, click **Production**, then select **Resume**.
 - Click **Consumption**, then select **Pause** to stop message consumption on the selected queue.
When a queue is paused for consumption, it prevents further message consumption operations from that queue. To resume the consumption of messages, click **Consumption**, then select **Resume**.
 - Click **Insertion**, then select **Pause** to stop the insertion of in-flight messages on the selected queue.
When a queue is paused for insertion, all the messages that are the result of in-flight work completion are prevented from appearing on the queue. This occurs in addition to pausing new message production operations. To resume the insertion of in-flight messages, click **Insertion**, then select **Resume**.

For more information, see Configuration Options.

11.3.2.2 Control messages on topics

For troubleshooting purposes, runtime message production, consumption, and insertion activity can be temporarily paused on topics targeted to a JMS system module.

To control messages on topics in a JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Resources**.
The JMS Resources table lists all the resources defined as part of the JMS system modules configured in the current domain.
3. In the table, select the name of a JMS topic for which you want to control topics.
4. On the Settings for Topic page, select **Control**.
5. In the Control table, select the row of the topic you want to control.
The control options are displayed above the table.
6. Select one of the following message control operations:
 - Click **Production**, then select **Pause** to stop production of new messages on the selected topic.
When a topic is paused for production, it prevents new message production operations from both new and existing producers attached to that topic. To resume message production, click **Production**, then select **Resume**.
 - Click **Consumption**, then select **Pause** to stop message consumption on the selected topic.

When a topic is paused for consumption, it prevents further message consumption operations from that topic. To resume the consumption of messages, click **Consumption**, then select **Resume**.

- Click **Insertion**, then select **Pause** to stop the insertion of in-flight messages on the selected topic.

When a topic is paused for insertion, all the messages that are the result of in-flight work completion are prevented from appearing on the topic. This occurs in addition to pausing the new message production operations. To resume the insertion of in-flight messages, click **Insertion**, then select **Resume**.

For more information, see Configuration Options.

11.3.3 Monitor JMS modules

You can monitor the JMS system modules created for the current domain. The table specifies which resource types are part of each module, as well as the number of assigned resource types, such as 12 queues and one connection factory.

To monitor JMS modules:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Modules**.

The JMS Modules table lists all the JMS system modules configured in the current domain and displays the number of JMS system resource types configured for each module, such as:

- Queues
- Topics
- Connection Factories
- Distributed Queues
- Distributed Topics

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
3. In the table, select the name of the JMS module for which you want to view additional monitoring information.

11.3.3.1 Monitor JMS system module resources

You can monitor general information about the JMS resources that have been created for a specific JMS system module, including queue, topic, connection factories, templates, destination sort keys, destination quota, distributed destinations, foreign servers, and store-and-forward parameters.

To monitor the resources of a specific JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Modules**.
The JMS Modules table lists all the JMS system modules configured in the current domain.
3. In the table, select the name of the JMS module that you want to monitor.
4. On the Settings for JMS System Module page, select **General**.
The overview table displays general information about the JMS system module and its assigned resources, such as:
 - Name
 - Type
 - JNDI Name
 - Subdeployments
 - Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

 - Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
5. Select the name of a JMS resource for detailed statistical information on the selected resource. See [Monitor JMS resources](#).

11.3.3.2 Monitor JMS system module subdeployments

You can monitor the subdeployments created for a JMS system module. A subdeployment is a mechanism by which JMS module resources (such as queues, topics, and connection factories) are grouped and targeted to a server resource (such as JMS servers, server instances, or cluster).

To monitor the subdeployments of a specific JMS system module:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Resources and Modules**.
2. Select **JMS Modules**.
The JMS Modules table lists all the JMS system modules configured in the current domain.
3. In the table, select the name of the JMS module that you want to monitor.
4. On the Settings for JMS System Module page, select **Subdeployments**.
The Subdeployments table displays information about the subdeployments created for a JMS system module in the current WebLogic Server domain, such as:
 - Name
 - Resources

- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.4 Monitor path services

A path service is a persistent map that can be used to store the mapping of a group of messages to a messaging resource, such as a member of a distributed destination or a Store-and-Forward agent. It provides a way to enforce message ordering by pinning messages to a member of a cluster hosting servlets, distributed queue members, or Store-and-Forward agents.

To monitor the path service instances configured in the current domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **Path Services**.

The Path Services summary table displays monitoring information related to the path service instances that have been configured in the current WebLogic Server domain, such as:

- Name
- Target
- Persistent Store

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2. In the Path Services table, select the name of the path service for which you want to view configuration information.

11.5 Monitor messaging bridges

A WebLogic messaging bridge is a forwarding mechanism between any two messaging products. Use a message bridge to provide interoperability between separate implementations of WebLogic JMS, or between WebLogic JMS and another messaging product.

To monitor the messaging bridge instances that have been configured for the current domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Bridges**.

2. Select **Configuration** to display information about the messaging bridge instances that have been configured in the current WebLogic Server domain, such as:

- Name
- Source Bridge Destination
- Target Bridge Destination

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
3. Select **Monitoring** to display statistics for all messaging bridges configured on active servers in this domain, such as:

- Name
- Server
- State
- Description

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.5.1 Monitor a messaging bridge

To monitor the status of a specific messaging bridge instance configured for the current domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Bridges**.
2. In the Messaging Bridges table, select the name of the messaging bridge you want to monitor.
3. On the Settings for Messaging Bridge page, the Messaging Bridge summary table displays monitoring information associated with this messaging bridge, such as:
 - Name
 - Server
 - State
 - Description

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

11.6 Monitor JMS bridge destinations

A JMS bridge destination is a source or target destination in a JMS messaging product. Configure a JMS bridge destination instance for each JMS messaging source and target destination that connects to a messaging bridge.

To monitor the JMS bridge destinations configured in the current domain:

1. From the **WebLogic Domain** menu, select **Messaging**, then select **JMS Bridge Destinations**.

The JMS Bridge Destinations summary table displays monitoring information related to the JMS bridge destinations that have been configured in the current WebLogic Server domain, such as:

- Name
- Adapter JNDI Name
- Adapter Classpath

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the JMS bridge destination for which you want to view configuration information.

WebLogic Server JDBC Data Sources

Java Database Connectivity (JDBC) enables you to configure database connectivity through JDBC data sources in your WebLogic domain. A data source is a Java EE standard method of configuring connectivity to a database. Each WebLogic data source contains a pool of database connections. Applications look up the data source on the JNDI tree or in the local application context and then reserve a database connection with the `getConnection` method. Data sources and their connection pools provide connection management processes that help keep your system running efficiently.

This chapter describes how to create, monitor, control, and configure data sources deployed to the current domain.

This chapter includes the following sections:

- [Create JDBC data sources](#)
- [Monitor JDBC data sources](#)
- [Control JDBC data sources](#)
- [Configure JDBC data sources](#)

12.1 Create JDBC data sources

You must create a data source for each database for which you want to connect. If you need more than one set of configuration options for a database, you can create more than one data source that includes connections to the same database. This section includes the following tasks:

- [Create JDBC generic data sources](#)
- [Create JDBC GridLink data sources](#)
- [Create JDBC multi data sources](#)
- [Create a JDBC data source from an existing data source](#)

12.1.1 Create JDBC generic data sources

Before you begin

Make sure that the JDBC drivers that you want to use to create database connections are installed on all server instances on which you want to deploy the data source. Some JDBC drivers are installed with WebLogic Server, including Oracle Type 4 JDBC drivers for DB2, Informix, MS SQL Server, and Sybase. For more information about working with JDBC drivers, see "Using JDBC Drivers with WebLogic Server."

To create a JDBC generic data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
The JDBC Data Sources page is displayed.
2. Click **Create**, then select **Generic Data Source**.
3. On the **Data Sources Properties** page, define the general configuration options for this JDBC data source.
 - **Data Source Name:** enter a name for this JDBC data source. This name is used in the configuration file (`config.xml`) and whenever referring to this data source.
 - **Driver Class Name:** select the JDBC driver you want to use to connect to the database. The list includes common JDBC drivers for the selected DBMS.

Note: You must install JDBC drivers before you can use them to create database connections. Some JDBC drivers are installed with WebLogic Server, but many are not installed.

- **JNDI Name:** enter the JNDI path to where this JDBC data source will be bound. Applications look up the data source on the JNDI tree by this name when reserving a connection.
 - **Row Prefetch Enabled:** select to enable multiple rows to be "prefetched" (that is, sent from the server to the client) in one server access.
 - **Row Prefetch Size:** if you enabled row prefetching, specify the number of result set rows to prefetch for a client.
 - **Stream Chunk Size:** specify the data chunk size for streaming data types.
4. Click **Next**.
 5. On the **Connection Properties** page, enter values for the following properties in the **Database Connection Information** section:
 - **Database URL:** enter the URL of the database to connect to. The format of the URL varies by JDBC driver.
 - **Password:** enter the database account password to use to create database connections.
 - **Test Table Name or SQL Statement:** enter the name of the database table or SQL statement to use to test physical database connections.

This name is required when you specify a **Test Frequency** and enable **Test Reserved Connections**. The default SQL code used to test a connection is `select count(*) from TestTableName`. If the Test Table Name begins with SQL, then the rest of the string following that leading token will be taken as a literal SQL statement that will be used to test connections instead of the standard query. For example: `SELECT 1 FROM DUAL`.
 6. In the **Properties** section, click **Add** and enter the properties that are required by the data source class. For example: `server=dbserver1`.
 7. In the **Connection Pool Properties** section, enter values for the following properties:
 - **Initial Capacity:** enter the number of physical connections to create when creating the connection pool.

- **Maximum Capacity:** enter the maximum number of physical connections that this connection pool can contain.
 - **Capacity Increment:** enter the number of connections created when new connections are added to the connection pool.
 - **Statement Cache Type:** select the algorithm used for maintaining the prepared statements stored in the statement cache.
 - **Statement Cache Size:** enter the number of prepared and callable statements stored in the cache. (This may increase server performance.)
8. In the **Advanced** section, enter values for the following properties:
- **Test Connections On Reserve:** select whether to enable WebLogic Server to test a connection before giving it to a client. (Requires that you specify a **Test Table Name**.)
 - **Test Frequency (seconds):** enter the number of seconds between when WebLogic Server tests unused connections. (Requires that you specify a **Test Table Name**.) Connections that fail the test are closed and reopened to re-establish a valid physical connection. If the test fails again, the connection is closed.
 - **Seconds to Trust an Idle Pool Connection:** enter the number of seconds within a connection use that WebLogic Server trusts that the connection is still viable and will skip the connection test, either before delivering it to an application or during the periodic connection testing process.
 - **Shrink Frequency (seconds):** enter the number of seconds to wait before shrinking a connection pool that has incrementally increased to meet demand.
 - **Init SQL:** enter the SQL statement to execute that will initialize newly created physical database connections. Start the statement with SQL followed by a space.
 - **Connection Creation Retry Frequency (seconds):** enter the number of seconds between attempts to establish connections to the database.
 - **Login Delay (seconds):** enter the number of seconds to delay before creating each physical database connection. This delay supports database servers that cannot handle multiple connection requests in rapid succession.
 - **Inactive Connection Timeout (seconds):** enter the number of inactive seconds on a reserved connection before WebLogic Server reclaims the connection and releases it back into the connection pool.
 - **Maximum Waiting for Connection (seconds):** enter the maximum number of connection requests that can concurrently block threads while waiting to reserve a connection from the data source's connection pool.
 - **Connection Reserve Timeout (seconds):** enter the number of seconds after which a call to reserve a connection from the connection pool will timeout.
 - **Statement Timeout:** enter the time after which a statement currently being executed will time out.
 - **Ignore In-Use Connections:** enables the data source to be shutdown even if connections obtained from the pool are still in use.
 - **Pinned-To-Thread:** can improve performance by enabling execute threads to keep a pooled database connection even after the application closes the logical connection.

- **Remove Infected Connections Enabled:** specifies whether a connection will be removed from the connection pool after the application uses the underlying vendor connection object.
9. Click **Next**.
 10. On the **Transaction Properties** page, follow these steps. Depending on the driver you selected on the **JDBC Data Source Properties** page, you may not need to specify any of these options.

Supports Global Transactions: select this check box (the default) to enable global transaction support in this data source. Clear this check box to disable (ignore) global transactions in this data source. In most cases, you should leave the option selected. See "Configure Transaction Options."

If you selected **Supports Global Transactions**, select an option for transaction processing (available options vary depending on whether you select an XA driver or a non-XA driver):

 - **One-Phase Commit:** select this option to enable the non-XA connection to participate in a global transaction as the only transaction participant. This option is only available when you select a non-XA JDBC driver to make database connections.
 - **Emulate Two-Phase Commit:** enables a non-XA JDBC connection to emulate participation in distributed transactions using JTA. Select this option only if your application can tolerate heuristic conditions. This option is only available when you select a non-XA JDBC driver to make database connections.
 - **Logging Last Resource:** select this option to enable a non-XA JDBC connection to participate in global transactions using the Logging Last Resource (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit. This option is only available when you select a non-XA JDBC driver to make database connections.
 11. Click **Next**.
 12. On the **Select Targets** page, select the server instances on which you want to deploy the data source.
 13. Click **Next** to review the settings for the data source you are creating.
 14. Click **Create** to save the JDBC data source configuration and deploy the data source to the targets that you selected.

12.1.2 Create JDBC GridLink data sources

Configure database connectivity with your Oracle RAC installation by adding a JDBC GridLink data source to your WebLogic domain. Data sources and their connection pools provide connection management processes that help keep your system running efficiently.

To create a JDBC GridLink data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
The JDBC Data Sources page is displayed.
2. Click **Create**, then select **GridLink Data Source**.
3. On the **Data Sources Properties** page, define the general configuration options for this JDBC data source.

- **Data Source Name:** enter a name for this JDBC data source. This name is used in the configuration file (`config.xml`) and whenever referring to this data source.
- **Driver Class Name:** select the JDBC driver you want to use to connect to the database. The list includes common JDBC drivers for the selected DBMS.

Note: You must install JDBC drivers before you can use them to create database connections. Some JDBC drivers are installed with WebLogic Server, but many are not installed.

- **JNDI Name:** enter the JNDI path to where this JDBC data source will be bound. Applications look up the data source on the JNDI tree by this name when reserving a connection.
 - **Row Prefetch Enabled:** select to enable multiple rows to be "prefetched" (that is, sent from the server to the client) in one server access.
 - **Row Prefetch Size:** if you enabled row prefetching, specify the number of result set rows to prefetch for a client.
 - **Stream Chunk Size:** specify the data chunk size for streaming data types.
4. Click **Next**.
 5. On the **Connection Properties** page, enter values for the following properties in the **Database Connection Information** section:
 - **Database URL:** enter the URL of the database to connect to. The format of the URL varies by JDBC driver.
 - **Password:** enter the database account password to use to create database connections.
 - **Test Table Name or SQL Statement:** enter the name of the database table or SQL statement to use to test physical database connections.

This name is required when you specify a **Test Frequency** and enable **Test Reserved Connections**. The default SQL code used to test a connection is `select count(*) from TestTableName`. If the Test Table Name begins with `SQL`, then the rest of the string following that leading token will be taken as a literal SQL statement that will be used to test connections instead of the standard query. For example: `SELECT 1 FROM DUAL`.
 6. In the **Properties** section, click **Add** and enter the properties that are required by the data source class. For example: `server=dbserver1`.
 7. In the **Connection Pool Properties** section, enter values for the following properties:
 - **Initial Capacity:** enter the number of physical connections to create when creating the connection pool.
 - **Maximum Capacity:** enter the maximum number of physical connections that this connection pool can contain.
 - **Capacity Increment:** enter the number of connections created when new connections are added to the connection pool.
 - **Statement Cache Type:** select the algorithm used for maintaining the prepared statements stored in the statement cache.

- **Statement Cache Size:** enter the number of prepared and callable statements stored in the cache. (This may increase server performance.)
8. In the **Advanced** section, enter values for the following properties:
- **Test Connections On Reserve:** select whether to enable WebLogic Server to test a connection before giving it to a client. (Requires that you specify a **Test Table Name**.)
 - **Test Frequency (seconds):** enter the number of seconds between when WebLogic Server tests unused connections. (Requires that you specify a **Test Table Name**.) Connections that fail the test are closed and reopened to re-establish a valid physical connection. If the test fails again, the connection is closed.
 - **Seconds to Trust an Idle Pool Connection:** enter the number of seconds within a connection use that WebLogic Server trusts that the connection is still viable and will skip the connection test, either before delivering it to an application or during the periodic connection testing process.
 - **Shrink Frequency (seconds):** enter the number of seconds to wait before shrinking a connection pool that has incrementally increased to meet demand.
 - **Init SQL:** enter the SQL statement to execute that will initialize newly created physical database connections. Start the statement with SQL followed by a space.
 - **Connection Creation Retry Frequency (seconds):** enter the number of seconds between attempts to establish connections to the database.
 - **Login Delay (seconds):** enter the number of seconds to delay before creating each physical database connection. This delay supports database servers that cannot handle multiple connection requests in rapid succession.
 - **Inactive Connection Timeout (seconds):** enter the number of inactive seconds on a reserved connection before WebLogic Server reclaims the connection and releases it back into the connection pool.
 - **Maximum Waiting for Connection (seconds):** enter the maximum number of connection requests that can concurrently block threads while waiting to reserve a connection from the data source's connection pool.
 - **Connection Reserve Timeout (seconds):** enter the number of seconds after which a call to reserve a connection from the connection pool will timeout.
 - **Statement Timeout:** enter the time after which a statement currently being executed will time out.
 - **Ignore In-Use Connections:** enables the data source to be shutdown even if connections obtained from the pool are still in use.
 - **Pinned-To-Thread:** can improve performance by enabling execute threads to keep a pooled database connection even after the application closes the logical connection.
 - **Remove Infected Connections Enabled:** specifies whether a connection will be removed from the connection pool after the application uses the underlying vendor connection object.
9. Click **Next**.
10. On the **Transaction Properties** page, follow these steps. Depending on the driver you selected on the **JDBC Data Source Properties** page, you may not need to specify any of these options.

Supports Global Transactions: select this check box (the default) to enable global transaction support in this data source. Clear this check box to disable (ignore) global transactions in this data source. In most cases, you should leave the option selected. See "Configure Transaction Options."

If you selected **Supports Global Transactions**, select an option for transaction processing (available options vary depending on whether you select an XA driver or a non-XA driver):

- **Two-Phase Commit:** select this option to enable standard XA processing. This option is only available when you select an XA JDBC driver to make database connections.
- **Logging Last Resource:** select this option to enable a non-XA JDBC connection to participate in global transactions using the Logging Last Resource (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit. This option is only available when you select a non-XA JDBC driver to make database connections.
- **Emulate Two-Phase Commit:** enables a non-XA JDBC connection to emulate participation in distributed transactions using JTA. Select this option only if your application can tolerate heuristic conditions. This option is only available when you select a non-XA JDBC driver to make database connections.
- **One-Phase Commit:** select this option to enable the non-XA connection to participate in a global transaction as the only transaction participant. This option is only available when you select a non-XA JDBC driver to make database connections.

11. Click **Next**.

12. On the **ONS Properties** page, enter values for the following properties:

- Select **Fan Enabled** to subscribe to Oracle Fan Events.
- Under **ONS Nodes**, click **Add** and enter the ONS host and port for each ONS node.
- To test individual nodes, click **Test ONS Node** for an ONS host and port.
- Optionally, configure an ONS wallet file if you want ONS to use SSL protocol.

13. On the **Select Targets** page, select the server instances on which you want to deploy the data source.

14. Click **Next** to review the settings for the data source you are creating.

15. Click **Create** to save the JDBC data source configuration and deploy the GridLink data source to the targets that you selected.

12.1.3 Create JDBC multi data sources

Multi data sources provide failover and load balancing for connection requests between two or more data sources. Before you create a multi data source, you should create the data sources that the multi data source will manage, and deploy them to the same targets to which you want to deploy the multi data source.

To create a JDBC multi data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
The JDBC Data Sources page is displayed.
2. Click **Create**, then select **Multi Data Source**.

3. On the **Configure Data Sources Properties** page, define the general configuration options for this JDBC multi data source.
 - **Data Source Name:** enter a name for this JDBC multi data source. This name is used in the configuration files (`config.xml` and the JDBC module) and whenever referring to this multi data source.
 - **JNDI Name:** enter the JNDI path to where this JDBC multi data source will be bound. Applications look up the data source on the JNDI tree by this name when reserving a connection.
 - **Algorithm Type:** select an algorithm option:
 - **Failover:** The multi data source routes connection requests to the first data source in the list; if the request fails, the request is sent to the next data source in the list, and so forth.
 - **Load-Balancing:** The multi data source distributes connection requests evenly to its member data sources.
4. Click **Next**.
5. On the **Select Targets** page, select the servers or clusters on which you want to deploy this JDBC multi data source.

The targets you select will limit the data sources that you can select as part of the multi data source. You can only select data sources that are deployed to the same targets as the multi data source.
6. Click **Next**.
7. On the **Select Data Source Type** page, select one of the following options:
 - **XA Driver:** The multi data source will only use data sources that use an XA JDBC driver to create database connections.
 - **Non-XA Driver:** The multi data source will only use data sources that use a non-XA JDBC driver to create database connections.

The option you select limits the data sources that you can select as part of the multi data source in a later step. Limiting data sources by JDBC driver type enables the WebLogic Server transaction manager to properly complete or recover global transactions that use a database connection from a multi data source.
8. Click **Next**.
9. On the **Add Data Sources** page, select the data sources that you want the multi data source to use to satisfy connection requests.
10. Click **Next** to review the settings for the multi data source you are creating.
11. Click **Create** to save the JDBC multi data source configuration and deploy the multi data source to the targets that you selected.

12.1.4 Create a JDBC data source from an existing data source

You can create a new JDBC data source to have the same configuration settings as an existing JDBC data source.

To create a new JDBC data source from an existing JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the row of the data source instance you want to use to create your new data source.

The Create Like option is displayed above the table.

3. Click **Create Like**.

The Creating New JDBC Data Source assistant is displayed with the same configuration settings as the existing JDBC data source you modeled.

4. Review each page of the Creating New JDBC Data Source assistant to ensure the property values match the desired configuration for your new JDBC data source.

5. Click **Create** to save the JDBC data source configuration and deploy the new data source to the targets that you selected.

12.2 Monitor JDBC data sources

After you create a JDBC data source, you can monitor it to look for unusual activity, such as an abnormal number of requests waiting for a connection. You can also test the connection between a data source and the database. This section includes the following tasks:

- [Monitor JDBC data sources](#)
- [Monitor a JDBC data source](#)
- [Monitor a JDBC GridLink data source](#)
- [Monitor a JDBC multi data source](#)
- [Test JDBC data sources](#)

12.2.1 Monitor JDBC data sources

You can monitor a variety of statistics for each data source instance in your domain, such as the current number of database connections in the connection pool, current number of connections in use, the longest wait time for a database connection, and so forth.

To monitor the activity of the JDBC data source instances deployed to the current domain:

1. From the **WebLogic Domain** dropdown menu, select **Monitoring**, then select **JDBC Data Sources**.

The JDBC Data Sources (Monitoring) table displays statistics about the JDBC data source instances deployed to the current domain, such as:

- Name
- Type
- Resource
- Server Name
- State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order

- Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the JDBC data source for which you want to view configuration information.

12.2.2 Monitor a JDBC data source

To monitor the activity of a specific JDBC data source instance deployed to the current domain:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to monitor.
3. Select **Monitoring**.
4. The Monitor JDBC Data Source page displays statistics about this JDBC data source instance, such as:
 - Type
 - Resource
 - Scope
 - Server Name
 - State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

12.2.3 Monitor a JDBC GridLink data source

To monitor the activity of a specific JDBC GridLink data source instance deployed to the current domain:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC GridLink data source you want to monitor.
3. Select **Monitoring**.

The Monitoring page displays statistics about this JDBC GridLink data source.

4. Optionally, in the Monitoring table, select the GridLink data source instance you want to monitor.

The Instances page displays statistics about this GridLink data source instance, such as:

- Instance Name
- State

- Current Capacity
- Number Available
- Active Connections Current Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

5. Optionally, in the Monitoring table, select the GridLink data source ONS client you want to monitor.

The ONS page displays statistics about this GridLink data source ONS client, such as:

- Host
- Port
- Status

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

12.2.4 Monitor a JDBC multi data source

To monitor the activity of a specific JDBC multi data source instance deployed to the current domain:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC multi data source you want to monitor.
3. Select **Monitoring**.
4. The Monitor JDBC Multi Data Source page displays statistics about all the JDBC data sources participating in this JDBC multi data source, such as:
 - Name
 - Type
 - Resource
 - Server Name
 - State

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

12.2.5 Test JDBC data sources

You can manually test individual instances of a data source. When you test a data source, WebLogic Server reserves a connection from the data source, tests it using the standard testing query or the query specified in Test Table Name, and then returns the database connection to the pool of connections. Test results are displayed at the top of the page.

The manual connection test relies on the Test Reserved Connections and Test Table Name attributes of the data source. Those attributes are set by default. However, if you changed either attribute, the changes will affect the database connection test.

To test a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to monitor.
3. Select **Monitoring**.
4. Click **Test Data Source**. Test results are displayed.

12.3 Control JDBC data sources

After you create a JDBC data source, you can perform administrative tasks on instances of the data source, including resetting all database connections, suspending use of the data source, and shutting down the data source. This section includes the following tasks:

- [Start JDBC data sources](#)
- [Stop JDBC data sources](#)
- [Resume suspended JDBC data sources](#)
- [Suspend JDBC data sources](#)
- [Shrink JDBC data source connection pools](#)
- [Reset JDBC data source connections](#)
- [Clear JDBC data source statement caches](#)
- [Delete JDBC data sources](#)
- [Control a JDBC multi data source](#)

12.3.1 Start JDBC data sources

You can manually start data source instances that have a health state of Shutdown.

To start a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance you want to start.
The control options are displayed above the table.
3. Click **Start**, then select **Yes** to confirm the action.

12.3.2 Stop JDBC data sources

You can manually stop individual instances of a data source. When you stop a data source, behavior depends on the type of stop that you select:

- **Stop:** shuts down a data source that has a health state of *Running*. If any connections from the data source are currently in use, the *Shutdown* operation fails and the health state remains *Running*.
- **Force Stop:** shuts down a data source that has a health state of *Running*, including forcing the disconnection of all current connection users.

To stop a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance you want to stop.
The control options are displayed above the table.
3. Click **Stop** or **Force Stop**, and then select **Yes** to confirm the action.

12.3.3 Resume suspended JDBC data sources

You can manually resume data source instances that are in a *Suspended* state.

To resume a suspended JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance you want to resume.
The control options are displayed above the table.
3. Click **Resume**, then select **Yes** to confirm the action.

12.3.4 Suspend JDBC data sources

You can manually suspend individual instances of a data source. When you suspend a data source, applications can no longer get a database connection from the data source. For connections that are already reserved by an application, behavior depends on the type of suspension that you select:

- **Suspend:** marks the data source as disabled and blocks any new connection requests. If there are any reserved connections, the operation will wait for `InactiveTimeout` seconds, if configured. Otherwise, the operation waits 60 seconds before suspending all connections. If successful, the health state is set to *Suspended*.

- **Force Suspend:** marks the data source as disabled, blocks any new requests for a connection from the connection pool, and closes and recreates connections currently in use.

Most connections in a suspended data source remain intact. The connections are not recreated when you resume the data source, except for the connections in use when the data source is Force Suspended.

To suspend a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance you want to suspend.

The control options are displayed above the table.

3. Click **Suspend** or **Force Suspend**, then select **Yes** to confirm the action.

12.3.5 Shrink JDBC data source connection pools

You can manually shrink the pool of database connections in individual instances of a data source to the initial capacity or the current number of connections in use, whichever is greater.

To shrink the connection pool in a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance for which you want to shrink the connection pool.

The control options are displayed above the table.

3. Click **Shrink**, then select **Yes** to confirm the action.

12.3.6 Reset JDBC data source connections

When you reset the database connections in a JDBC data source, WebLogic Server closes and recreates all available database connections in the pool of connections in the data source.

To reset database connections in a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance for which you want to reset connections.

The control options are displayed above the table.

3. Click **Reset**, then select **Yes** to confirm the action.

12.3.7 Clear JDBC data source statement caches

If statement caching is enabled for a data source, WebLogic Server caches prepared and callable statements that are used in each connection in the data source. Each connection has its own cache, but the caches for each connection are configured and managed as a group. When you clear the statement cache for a data source, you clear

the statement cache for all connections in the instance of the data source you select. For more information, see "Increasing Performance with the Statement Cache."

To clear the statement cache in a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **Control**, then select **JDBC Data Sources**.
2. In the JDBC Data Sources (Control) table, select the row of the data source instance for which you want to clear the statement cache.

The control options are displayed above the table.

3. Click **Clear Statement Cache**, then select **Yes** to confirm the action.

12.3.8 Delete JDBC data sources

Before you begin

Ensure that the data source you want to delete is not used by a multi data source. If the data source you want to delete is used by a multi data source, you must remove the data source from the multi data source before the data source can be deleted. The delete operation will fail if the data source you are attempting to delete is used by a multi data source.

To delete a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the row of the JDBC data source you want to delete.

The Delete option is displayed above the table.

3. Click **Delete**, then select **Yes** to confirm the action.

12.3.9 Control a JDBC multi data source

To control a specific JDBC multi data source instance deployed to the current domain:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC multi data source you want to control.
3. Select **Control**.
4. From the Control JDBC Multi Data Source page you can perform the following actions:
 - Start
 - Stop
 - Force Stop
 - Resume
 - Suspend
 - Force Suspend
 - Shrink Connection Pools
 - Reset
 - Clear Statement Cache

For more information about these actions, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

12.4 Configure JDBC data sources

When you create a JDBC data source, most data source attributes are configured so that the data source will work in your environment. However, you may need to modify a data source configuration to enable or disable specific features or to tune performance.

This section includes the following tasks:

- [Define general configuration settings](#)
- [Bind a JDBC data source to the JNDI tree with multiple names](#)
- [Configure connection pool properties](#)
- [Configure JDBC data source testing options](#)
- [Configure statement cache](#)
- [Configure connection pool capacity](#)
- [Enable connection requests to wait for a connection](#)
- [Configure Oracle parameters](#)
- [Configure ONS client parameters](#)
- [Configure SSL for the ONS client using a Oracle wallet file](#)
- [Configure global transaction options](#)
- [Configure JDBC data source diagnostic profiling](#)
- [Configure JDBC data source identity options](#)
- [Enable identity-based connection pooling](#)
- [Target JDBC data sources](#)
- [Configure JDBC multi data sources](#)

12.4.1 Define general configuration settings

Applications connect to databases from a data source by looking up the data source on the Java Naming and Directory Interface (JNDI) tree and then requesting a connection. The data source provides the connection to the application from its pool of data base connections.

To define general configuration settings for a specific JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Source table, select the JDBC data source you want to configure.

3. Select **Configuration**, then select **General**.
4. From the General Configuration page, you can define configuration settings for this JDBC data source, such as:
 - Data Source Name
 - Type
 - Database Type
 - Driver Class Name
 - JNDI Name
 - Row Prefetch Enabled
 - Row Prefetch Size
 - Stream Chunk Size

For more information about these fields, see Configuration Options.

5. Click **Save**.

After you finish

After you activate your changes, you will need to redeploy the data source or restart your server before the changes will take effect.

12.4.1.1 Bind a JDBC data source to the JNDI tree with multiple names

Before you begin

You can configure a data source so that it binds to the JNDI tree with multiple names. You can use a multi-JNDI-named data source in place of legacy configurations that included multiple data sources that pointed to a single JDBC connection pool. You must either restart the system after making your change or undeploy the data source before making the change, and then redeploy it after making the change.

To add JNDI names to an existing JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **General**.
4. In the **JNDI Name** field, enter the names you want to use to bind the data source to the JNDI tree with each name on a separate line.

For more information about these fields, see Configuration Options.

5. Click **Save**.

After you finish

After you activate your changes, you will need to redeploy the data source or restart your server before the changes will take effect.

12.4.2 Configure connection pool properties

The connection pool within a JDBC data source contains a group of JDBC connections that applications reserve, use, and then return to the pool. The connection pool and the connections within it are created when the connection pool is registered, usually when starting WebLogic Server or when deploying the data source to a new target.

To configure the connection pool for a specific JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Connection Pool**.
4. From the Connection Pool page, you can define connection properties for this JDBC data source, such as:
 - Data Source Name
 - Type
 - Driver Class Name
 - Database URL
 - Password
 - Confirm Password
 - Properties
 - System Properties
 - Initial Capacity
 - Maximum Capacity
 - Capacity Increment
 - Statement Cache Type
 - Statement Cache SizeFor more information about these fields, see Configuration Options.
5. Optionally, expand **Advanced** to define advanced connection properties for this JDBC data source.
6. Click **Save**.

12.4.2.1 Configure JDBC data source testing options

You can set database connection testing options in a data source to make sure that the database connections remain healthy, which helps keep your applications running properly.

To configure testing options for a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Connection Pool**.
4. Expand **Advanced** to display the advanced connection pool options.
5. Select one or more of the following options:
 - **Test Connections on Reserve**: select this check box to test the database connection before giving it to your application when your application requests a connection from the data source.
 - **Test Frequency**: enable periodic background connection testing by entering the number of seconds between periodic tests.

You can use these options to achieve the right mix of performance and fault tolerance for your system.

6. In the **Test Table Name** field, enter the name of a small table to use in a query to test database connections. The standard query is `select 1 from table_name`. If you prefer to use a different query as a connection test, enter `SQL` followed by a space and the SQL code you want to use to test database connections.
7. Optionally, in the **Seconds to Trust an Idle Pool Connection** field, enter the number of seconds within which, if the database connection has been used or tested, WebLogic Server will skip the connection test. This option can help reduce the overhead of connection testing and improve application performance.
For more information about these fields, see Configuration Options.
8. Click **Save**.

12.4.2.2 Configure statement cache

To improve performance, WebLogic Server can cache prepared and callable statements used in your applications (enabled by default). When an application or EJB calls any of the statements stored in the cache, WebLogic Server reuses the statement stored in the cache. Each database connection in a data source has its own statement cache.

To configure the statement cache for a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Connection Pool**.
4. In the **Statement Cache Type** field, select one of the following options:
 - **LRU**: after the Statement Cache Size is met, the Least Recently Used statement is removed when a new statement is used.
 - **Fixed**: the first Statement Cache Size number of statements is stored and stay fixed in the cache. No new statements are cached unless the cache is manually cleared or the cache size is increased.
5. In the **Statement Cache Size** field, enter the number of statements to cache per connection per data source instance.
For more information about these fields, see Configuration Options.
6. Click **Save**.

12.4.2.3 Configure connection pool capacity

You can configure the initial and maximum capacity for a JDBC connection pool.

To configure the connection capacity for a JDBC connection pool:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Connection Pool**.
4. In the **Initial Capacity** field, enter the number of physical connections to create when creating the connection pool.
5. In the **Maximum Capacity** field, enter the maximum number of physical connections that this connection pool can contain.

Note: An easy way to boost performance of JDBC in WebLogic Server applications is to set the value of **Initial Capacity** equal to the value for **Maximum Capacity** when configuring connection pools in your data source.

For more information about these fields, see Configuration Options.

6. Click **Save**.

12.4.2.4 Enable connection requests to wait for a connection

To enable connection requests to wait for a connection from a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Connection Pool**.
4. Expand **Advanced** to display the advanced connection pool options.
5. In the **Maximum Waiting for a Connection** field, enter the maximum number of connection requests that can wait for a connection from the connection pool while blocking threads.
6. In the **Connection Reserve Timeout** field, enter the number of seconds that connection requests can wait for a connection.

For more information about these fields, see Configuration Options.

7. Click **Save**.

12.4.3 Configure Oracle parameters

Before you begin

Additional configuration may be required to support Oracle parameters. See "Using GridLink Data Sources" in *Administering JDBC Data Sources for Oracle WebLogic Server*.

To configure Oracle parameters:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Oracle**.
4. From the Oracle Parameters page, you can define Oracle parameters for this JDBC data source, such as:
 - Oracle Enable JavaNet Fastpath
 - Oracle Optimize UTF8 Conversion
 - Connection Initialization Callback
 - Oracle Proxy Session
 - Use Database Credentials
 - Replay Initiation Timeout
 - Active GridLink Data Source
 - Affinity Policy

For more information about these fields, see Configuration Options.

5. Click **Save**.

12.4.4 Configure ONS client parameters

Before you begin

Additional configuration may be required to support Oracle client parameters, see "Using GridLink Data Sources" in *Administering JDBC Data Sources for Oracle WebLogic Server*.

To configure ONS client parameters:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **ONS Client**.
4. From the ONS Client Configuration page, you can define ONS configuration options, such as:
 - Fan Enabled
 - ONS Nodes
 - ONS Wallet File Directory
 - ONS Wallet Password
 - Confirm ONS Wallet Password

For more information about these fields, see Configuration Options.

5. Click **Save**.

12.4.4.1 Configure SSL for the ONS client using a Oracle wallet file

Before you begin

A wallet file is only required when the ONS client is configured to communicate with ONS daemons using SSL. Additional configuration is required to support this feature. See "Using GridLink Data Sources" in *Administering JDBC Data Sources for Oracle WebLogic Server*.

To configure an Oracle wallet file when using SSL:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **ONS Client**.
4. On the ONS Client Configuration page, configure the following attributes:
 - **ONS Wallet File:** enter the location of the Oracle wallet file in which the SSL certificates are stored.
 - **ONS Wallet Password:** enter and confirm the ONS wallet password.

For more information about these fields, see Configuration Options.

5. Click **Save**.

12.4.5 Configure global transaction options

The transaction protocol for a JDBC data source determines how connections from the data source are handled during transaction processing. For more information, see "JDBC Data Source Transaction Options" in *Administering JDBC Data Sources for Oracle WebLogic Server*.

Note: If the data source uses an XA JDBC driver to create database connections, connections from the data source will support the two-phase commit transaction protocol only. No other transaction options are available for data sources that use an XA JDBC driver.

To configure transaction options for a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Transaction**.
4. From the Transaction Options page, select the **Supports Global Transactions** checkbox to enable global transaction support in this data source. Clear this checkbox to disable (ignore) global transactions in this data source. In most cases, you should select this option.

If you select Supports Global Transactions, select an option for transaction processing.

- **One-Phase Commit:** Select this option to enable the non-XA connection to participate in a global transaction as the only transaction participant.
- **Emulate Two-Phase Commit:** Enables a non-XA JDBC connection to emulate participation in distributed transactions using JTA. Select this option only if your application can tolerate heuristic conditions.
- **Logging Last Resource:** Select this option to enable a non-XA JDBC connection to participate in global transactions using the Logging Last Resource (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit.

For more information about these fields, see Configuration Options.

5. Click **Save**.

12.4.6 Configure JDBC data source diagnostic profiling

If the monitoring statistics indicate that there is a problem in your WebLogic Server domain, you can configure any data source to collect profile information to help you pinpoint the source of the problem. The collected profile information is stored in records in the WLDF Archive.

To configure diagnostic profiling for a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Diagnostics**.
4. From the Diagnostic Profiling Options page, you can configure diagnostic profiling options, such as:

- Profile Connection Usage
- Profile Connection Reservation Wait
- Profile Connection Leak
- Profile Connection Reservation Failed
- Profile Statement Cache Entry
- Profile Statement Usage
- Profile Connection Last Usage
- Profile Connection Multithreaded Usage
- Profile Connection Unwrap
- Profile Harvest Frequency Seconds
- Driver Interceptor

For more information about these fields, see Configuration Options.

5. Click **Save**.

12.4.7 Configure JDBC data source identity options

You can choose the security option you want to use when mapping WebLogic Server user credentials to database user credentials. This section includes the following tasks:

- [Enable credential mapping](#)
- [Enable identity-based connection pooling](#)

12.4.7.1 Enable credential mapping

When an application requests a database connection from the data source, WebLogic Server determines the current WebLogic Server user ID and then sets the mapped database ID as a lightweight client ID on the database connection.

Note: This feature relies on features in the JDBC driver and DBMS. It is only supported for use with Oracle and DB2 databases and with the Oracle Thin and DB2 UDB JDBC drivers, respectively.

To enable credential mapping for a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Identity Options**.
4. Select the **Set Client ID On Connection** checkbox.

Note: **Set Client ID On Connection** and **Enable Identity Based Connection Pooling** are mutually exclusive. If you think you need both mechanisms to pass security credentials in your application environment, create separate data sources—one for use with **Set Client ID On Connection** and one for use with **Enable Identity Based Connection Pooling**.

For more information about this field, see Configuration Options.

5. Click **Save**.

12.4.7.2 Enable identity-based connection pooling

Identity-based connection pooling allows applications to use a JDBC connection with a specific DBMS credential based on the end user application by pooling physical connections.

To enable identity-based connection pooling for a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to configure.
3. Select **Configuration**, then select **Identity Options**.
4. Select the **Enable Identity Based Connection Pooling** checkbox.

Note: **Set Client ID On Connection** and **Enable Identity Based Connection Pooling** are mutually exclusive. If you think you need both mechanisms to pass security credentials in your application environment, create separate data sources—one for use with **Set Client ID On Connection** and one for use with **Enable Identity Based Connection Pooling**.

For more information about this field, see Configuration Options.

5. Click **Save**.

12.4.8 Target JDBC data sources

Before you begin

Ensure that the JDBC drivers you want to use to create database connections are installed on all server instances on which you want to deploy the data source. Some JDBC drivers are installed with WebLogic Server, including WebLogic Type 4 JDBC drivers for DB2, Informix, MS SQL Server, and Sybase. For more information about working with JDBC drivers, see "Using JDBC Drivers with WebLogic Server."

When you target a JDBC data source, a new instance of the data source is created on the target. When you select a server as a target, an instance of the data source is created on the server. When you select a cluster as a target, an instance of the data source is created on all member server instances in the cluster.

To target a JDBC data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC data source you want to target.
3. Select **Targets**.
4. On the Target page, select the server instances or clusters on which you want to deploy the data source.
5. Click **Save** to save the JDBC data source configuration and deploy the data source to the targets that you selected.

12.4.9 Configure JDBC multi data sources

Multi data sources provide failover and load balancing for connection requests between two or more data sources. Before you create a multi data source, you should create the data sources that the multi data source will manage, and deploy them to same targets on which you want to deploy the multi data source. Note that the underlying databases must have some kind of data synchronization or replication. WebLogic Server does not handle that replication.

To configure a specific JDBC multi data source:

1. From the **WebLogic Domain** dropdown menu, select **JDBC Data Sources**.
2. In the JDBC Data Sources table, select the JDBC multi data source you want to configure.
3. To configure general settings, select **Configuration**, then select **General**.

From the General Configuration page, you can define configuration options for this JDBC multi data source, such as:

- Name
- JNDI Name
- Algorithm Name
- Failover Request if Busy
- Failover Callback Handler
- Test Frequency Seconds

For more information about these fields, see Configuration Options.

4. To select the JDBC data sources that you would like to include as part of this JDBC multi data source, select **Configuration**, then select **Data Sources**.
5. To deploy this JDBC multi data source to targeted server instances, select **Targets**.
6. To monitor this JDBC multi data source, see [Monitor a JDBC multi data source](#).
7. To control this JDBC multi data source, see [Control a JDBC multi data source](#).
8. To create notes that describe the configuration of this JDBC data source, select **Notes**.
9. Click **Save**.

WebLogic Server Persistent Stores

A persistent store is a physical repository for storing subsystem data. The WebLogic persistent store provides a built-in, high-performance storage solution for WebLogic Server subsystems and services that require persistence. For example, it can store persistent JMS messages or temporarily store messages sent using the Store-and-Forward feature. The persistent store supports persistence to a file-based store or to a JDBC-accessible store in a database. For more information, see "Using the WebLogic Persistent Store" in *Administering Server Environments for Oracle WebLogic Server*.

This chapter describes how to monitor persistent stores created for this domain.

- [Monitor persistent stores](#)
- [Monitor file stores](#)
- [Monitor JDBC stores](#)

13.1 Monitor persistent stores

To monitor all persistent stores created for the current domain:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **Persistent Stores**.

The Persistent Store table displays information about the persistent stores that have been created for the current domain, such as:

- Name
- Type
- Target

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the persistent store for which you want to view configuration information.

13.1.1 Monitor server persistent stores

To monitor all persistent stores created for a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the Administration Server and any Managed Servers that have been configured in the current domain.

2. In the Servers table, select the name of the server instance for which you want to monitor persistent stores.
3. From the **WebLogic Server** dropdown menu, select **Other Services**, then select **Persistent Stores**.

The Persistent Store table displays information about the persistent stores that have been created for the current server instance, such as:

- Name
- Type
- Target

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. In the table, select the name of the persistent store for which you want to view configuration information.

13.1.2 Monitor cluster persistent stores

To monitor all persistent stores created for a specific cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.

The Clusters table displays information about the clusters that have been configured in the current domain.

2. In the Clusters table, select the name of the cluster for which you want to monitor persistent stores.
3. From the **WebLogic Cluster** dropdown menu, select **Other Services**, then select **Persistent Stores**.

The Persistent Store table displays information about the persistent stores that have been created for the current cluster, such as:

- Name
- Type
- Target

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. In the table, select the name of the persistent store for which you want to view configuration information.

13.2 Monitor file stores

A file store is a file-based repository for storing subsystem data, such as persistent JMS messages or durable subscriber information.

To monitor a specific persistent file store:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **Persistent Stores**.
2. In the Persistent Store table, select the name of the file store you want to monitor.
3. Select **Monitoring**, then select **Statistics**.

The Statistics table displays runtime statistics for this persistent file store, such as:

- Create Count
- Read Count
- Update Count
- Delete Count
- Physical Write Count
- Allocated Window Buffer Bytes
- Allocated IO Buffer Bytes

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. Select **Monitoring**, then select **Connections**.

The Connections table displays runtime statistics for all active file store connections, such as:

- Name
- Create Count
- Read Count

- Update Count
- Delete Count
- Object Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

13.3 Monitor JDBC stores

A JDBC store is a JDBC-accessible database for storing subsystem data, such as persistent JMS messages and durable subscriber information.

To monitor a specific JDBC store:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **Persistent Stores**.
2. In the Persistent Store table, select the name of the JDBC store you want to monitor.
3. Select **Monitoring**, then select **Statistics**.

The Statistics table displays runtime statistics for this JDBC store, such as:

- Create Count
- Read Count
- Update Count
- Delete Count
- Physical Write Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. Select **Monitoring**, then select **Connections**.

The Connections table displays runtime statistics for all active JDBC store connections, such as:

- Name
- Create Count

- Read Count
- Update Count
- Delete Count
- Object Count

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

WebLogic Server XML Entity Caches

You can specify that WebLogic Server cache external entities that are referenced with a URL or a pathname relative to the main directory of the EAR archive, either at server startup or when the entity is first referenced. You specify this by first creating an XML entity cache and then specifying for the particular entity when it should be cached.

Caching the external entity saves the remote access time and provides a local backup in the event that the Administration Server cannot be accessed while an XML document is being parsed, due to the network or the Administration Server being down.

This chapter describes how to monitor XML entity caches configured in the current domain:

- [Monitor XML entity caches](#)
- [Monitor an XML entity cache](#)

14.1 Monitor XML entity caches

To monitor all XML entity caches configured in the current domain:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **XML Entity Caches**.

The XML Entity Caches table displays information about the XML entity caches that have been configured in the current domain, such as:

- Name
- Cache Location
- Cache Memory Size
- Cache Disk Size
- Cache Timeout Interval

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2. In the table, select the name of the XML entity cache for which you want to view configuration information.

14.2 Monitor an XML entity cache

For each XML entity cache, you can monitor a set of statistics that describes how the cache is being used and its effectiveness.

To monitor a specific XML entity cache:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **XML Entity Caches**.
2. In the XML Entity Caches table, select the name of the XML entity cache you want to monitor.
3. Select the **Current** page to view information about the current state of this XML entity cache, such as:
 - Server Name
 - Memory Usage
 - Disk Usage
 - Total Current Entries
 - Total Persistent Current Entries
 - Total Transient Current Entries

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. To view cumulative or historical information about this XML entity cache, select the appropriate pages:
 - **Cumulative:** view cumulative (for the current session) information about this XML entity cache for all of the currently running server instances that make use of it.
 - **Historical:** view historical (since the XML entity cache was created) information about this XML entity cache for all of the currently running server instances that make use of it.

Coherence Servers and Clusters

Oracle Coherence is a component of Oracle Fusion Middleware that enables organizations to predictably scale mission-critical applications by providing fast and reliable access to frequently used data. By automatically and dynamically partitioning data in memory across multiple servers, Oracle Coherence enables continuous data availability and transactional integrity, even in the event of a server failure. As a shared infrastructure, Oracle Coherence combines data locality with local processing power to perform real-time data analysis, in-memory grid computations, and parallel transaction and event processing. Oracle Coherence comes in three editions.

This chapter describes the tasks you can perform to monitor Coherence servers and Coherence clusters.

This chapter includes the following sections:

- [Monitor Coherence servers](#)
- [Start or shut down Coherence servers](#)
- [Monitor Coherence clusters](#)

15.1 Monitor Coherence servers

To monitor Coherence server status:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Coherence Servers**.

The Coherence Servers table displays information about the Coherence servers that have been configured in the current domain, such as:

- Server name
- Cluster
- Machine
- Unicast Listen Address
- Unicast Listen Port

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order

- Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the Coherence server for which you want to view configuration information.

15.2 Start or shut down Coherence servers

To start or shut down Coherence servers:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Coherence Servers**.
2. In the Coherence Servers table, select row containing the Coherence server that you want to start or shut down.

The control options are displayed above the table.
3. Click **Start** to start the server or **Shutdown** to shut down the server.

15.3 Monitor Coherence clusters

To monitor Coherence cluster status:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Coherence Clusters**.

The Coherence Servers table displays information about the Coherence clusters that have been configured in the current domain, such as:

- Cluster Name
- Version
- Logging Enabled
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
2. In the table, select the name of the Coherence cluster for which you want to view configuration information.

WebLogic Server Templates

A server template is a prototype server, allowing administrators to easily configure shared settings for homogenous servers.

This chapter describes how to monitor and configure server templates.

This chapter includes the following sections:

- [Monitor server templates](#)
- [Configure server templates](#)

16.1 Monitor server templates

To monitor the status of all server templates configured in a domain:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain, such as:

- Name
- Cluster
- Machine
- Listen Port
- Listen Address

For more information about these fields, see Configuration Options.

16.2 Configure server templates

This section describes how to configure server templates. This section includes the following tasks:

- [Configure general settings](#)
- [Configure server template cluster settings](#)
- [Configure server template services](#)
- [Configure server template keystores](#)
- [Configure server template SSL settings](#)
- [Configure server template Federation Services](#)

- [Configure server template deployment settings](#)
- [Configure server template tuning](#)
- [Configure server template overload settings](#)
- [Configure server template health monitoring](#)
- [Configure server startup](#)
- [Configure server template Web services](#)
- [Configure server template Coherence cluster settings](#)

16.2.1 Configure general settings

Changes to your general settings for a template will apply to every server that references the template unless explicitly overridden.

To configure general settings for a sever template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **General Settings**.
4. From the General Settings page, you can configure general features of this server template, such as:

- Machine
- Cluster
- Listen Address
- Listen Port Enabled
- Listen Port
- SSL Listen Port Enabled
- SSL Listen Port
- Client Cert Proxy Enabled
- Java Compiler
- Diagnostic Volume

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this server template.

5. Click **Save**.

16.2.2 Configure server template cluster settings

A WebLogic Server cluster is a group of servers that work together to provide a scalable and reliable application platform.

To configure cluster configuration settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Cluster**.
4. From the Cluster page, you can define a cluster configuration for your server template, such as:
 - Replication Group
 - Preferred Secondary Group
 - Cluster Weight
 - Interface Address
 - Replication Ports

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.3 Configure server template services

To configure service settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Services**.
4. From the Services page, you can set WebLogic service configuration settings, such as:
 - JMS
 - Default Store
 - Transaction Log
 - Messaging Bridge
 - XML Services

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.4 Configure server template keystores

Keystores ensure the secure storage and management of private keys and trusted certificate authorities (CAs). You can view and define various keystore configurations which help you manage the security of message transmissions.

To configure keystore settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Keystores**.
4. To change your keystore configuration:
 1. Click **Change**.
 2. From the Keystores dropdown menu, select the keystore configuration you want to use.
 3. Click **Save**.
5. From the Keystore page, you can define the keystore configuration settings for this server template, such as:
 - Identity settings
 - Trust settingsFor more information about these fields, see Configuration Options.
6. Click **Save**.

16.2.5 Configure server template SSL settings

You can view and define various Secure Sockets Layer (SSL) settings for a server template, which help you manage the security of message transmissions.

To configure SSL settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **SSL**.
4. To change your identity and trust location:
 1. Click **Change**.
 2. From the Identity and Trust Locations dropdown menu, select the location you want to use.
 3. Click **Save**.
5. From the SSL page, you can define the SSL configuration settings for this server template, such as:
 - Identity and Trust Locations
 - Private Key Location
 - Private Key Alias
 - Private Key Passphrase

- Certificate Location
- Trusted Certificate Authorities

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this server template.

6. Click **Save**.

16.2.6 Configure server template Federation Services

You can configure a WebLogic Server instance to function as a producer or as a consumer of SAML assertions that can be used for the following:

- Web single sign-on between online business partners
- Exchange of identity information in Web services security

The general process of configuring Federation Services depends upon the version of SAML you are using. WebLogic Server supports both SAML 1.1 and SAML 2.0.

To configure WebLogic Server to serve as a SAML 1.1 federated partner:

- [Configure SAML 1.1 source services](#)
- [Configure SAML 1.1 destination services](#)
- [Configure SAML 2.0 general services](#)

To configure WebLogic Server to serve as a SAML 2.0 federated partner:

- [Configure SAML 2.0 Identity Provider services](#)
- [Configure SAML 2.0 Service Provider services](#)

16.2.6.1 Configure SAML 1.1 source services

Before you begin

You must first configure a SAML Credential Mapper V2 security provider in the server's security realm.

You can configure a WebLogic Server instance to function as a SAML source site. A SAML source site is a site that provides an Intersite Transfer Service (ITS). A source site generates assertions that are conveyed to a destination site using one of the single sign-on profiles.

To configure a server as a SAML source site:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**.
4. Select **Federation Services**, then select **SAML 1.1 Source Site**.
5. Select the **Source Site Enabled** attribute to cause this server to act as a source for SAML assertions.
6. From the SAML 1.1 Source Site page, you can also define other configuration settings for this server, such as:
 - Source Site URL

- Signing Key Alias
- Intersite Transfer URIs
- ITS Requires SSL
- Assertion Retrieval URIs
- ARS Requires SSL
- ARS Requires Two-Way SSL Authentication
- Assertion Store Class Name
- Assertion Store Properties

For more information about these fields, see Configuration Options.

7. Click **Save**.

16.2.6.2 Configure SAML 1.1 destination services

Before you begin

You must first configure a SAML Identity Asserter V2 security provider in the server's security realm.

You can configure a WebLogic Server instance to function as a SAML destination site. A destination site can receive SAML assertions and use them to authenticate local subjects.

To configure a server as a SAML destination site:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**.
4. Select **Federation Services**, then select **SAML 1.1 Destination Site**.
5. Select the **Destination Site Enabled** attribute to enable the Assertion Consumer Service.
6. From the SAML 1.1 Destination Site page, you can also define other desired configuration settings for this server, such as:
 - Assertion Consumer URIs
 - ACS Requires SSL
 - SSL Client Identity Alias
 - POST Recipient Check Enabled
 - POST One-Use Check Enabled
 - Used Assertion Cache Class Name
 - Used Assertion Cache Properties

For more information about these fields, see Configuration Options.

7. Click **Save**.

16.2.6.3 Configure SAML 2.0 general services

You can configure general SAML 2.0 services for a server. If you are configuring SAML 2.0 Web single sign-on services with your federated partners, the site information you configure is published in a metadata file that you send to your federated partners.

To configure the general SAML 2.0 properties of this server:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
2. In the Server Templates table, select the name of the server you want to configure.
3. Select **Configuration**.
4. Select **Federation Services**, then select **SAML 2.0 General**.
5. Select the **Replicated Cache Enabled** attribute to use the persistent cache for storing SAML 2.0 artifacts.

This option is required if you are configuring SAML 2.0 services in two or more WebLogic Server instances in your domain. For example, if you are configuring SAML 2.0 services in a cluster, you must enable this option in each Managed Server instance individually.

Note: If you are configuring SAML 2.0 services in two or more WebLogic Server instances in your domain, you must configure the RDBMS security store. The embedded LDAP server is not supported in these configurations.

6. In the **Site Info** section, enter the following information about your SAML 2.0 site:
 - Contact person details
 - Your organization's name and URL
 - The Published Site URL, which is the top-level URL for your site's SAML 2.0 service endpoints. This URL must be appended with the string `/sam12`, which will be automatically combined with constant suffixes to create full endpoint URLs.

7. In the **Bindings** section, enter the common binding information to be used by this SAML 2.0 server instance.

If you do not specify a Transport Layer Security key alias and passphrase, the server's configured SSL private key alias and passphrase from the server's SSL configuration is used for the TLS alias by default.

8. If the Artifact binding is enabled for any SAML 2.0 security provider hosted on this server instance, define the Artifact Resolution Service settings in the **Artifact Resolution Service** section.
9. In the **Single Sign-on** section, enter the keystore alias and passphrase for the key to be used for signing documents sent to federated partners.

If you do not specify a single sign-on signing key alias and passphrase, the server's configured SSL private key alias and passphrase from the server's SSL configuration is used by default.

10. Click **Save**.

For more information, see Configuration Options.

After you finish

After you have configured this server's general SAML 2.0 services, select the **SAML 2.0 Identity Provider** page or the **SAML 2.0 Service Provider** page to configure this server as an Identity Provider or Service Provider, respectively. For more information, see [Configure SAML 2.0 Identity Provider services](#) and [Configure SAML 2.0 Service Provider services](#).

16.2.6.4 Configure SAML 2.0 Identity Provider services

You can configure a server in the role of SAML 2.0 Identity Provider. A SAML 2.0 Identity Provider creates, maintains, and manages identity information for principals, and provides principal authentication to other Service Provider partners within a federation by generating SAML 2.0 assertions for those partners.

To configure a server as a SAML 2.0 Identity Provider:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**.
4. Select **Federation Services**, then select **SAML 2.0 Identity Provider**.
5. Select the **Enabled** attribute to activate this server's SAML 2.0 services in the role of Identity Provider.
6. Select **Only Accept Signed Authentication Requests** if you want to ensure that any incoming authentication requests must be signed.
7. If you are using a custom login Web application to which unauthenticated requests are directed:
 - Select **Login Customized**.
 - Enter the URL of the custom login Web application.
 - Enter the login return query parameter
The query parameter is a unique string that the SAML 2.0 services uses to hold the login return URL for the local single sign-on service servlet. (Note that, as an alternative, the login return URL can also be specified in the login Web application.)
8. Set the SAML bindings for which this server is enabled, and select the preferred binding type.
9. Click **Save**.

For more information, see Configuration Options.

After you finish

Coordinate with your federated partners to ensure that the SAML bindings you have enabled for this SAML authority, as well as your requirements for signed documents, are compatible with your partners.

16.2.6.5 Configure SAML 2.0 Service Provider services

You can configure a WebLogic Server instances as a SAML 2.0 Service Provider. A Service Provider is a SAML authority that can receive SAML assertions and extract identity information from those assertions. The identity information can then be mapped to local Subjects, and optionally groups as well, that can be authenticated.

To configure a server as a SAML 2.0 Service Provider:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**.
4. Select **Federation Services**, then select **SAML 2.0 Service Provider**.
5. Select the **Enabled** attribute to SAML 2.0 services in this server in the role of Identity Provider.
6. Set the configuration options for the local SAML 2.0 Service Provider services as appropriate. Note the following:
 - Choose options for **Always Sign Authentication Requests** and **Only Accept Signed Assertions** as desired and in a manner that is coordinated with your federated partners so that authentication requests and assertions are accepted.
 - Communicate the SAML bindings settings for this server with your federated partners to ensure compatibility.
7. Click **Save**.

For more information, see Configuration Options.

After you finish

Coordinate with your federated partners to ensure that the SAML bindings you have enabled for this SAML authority, as well as your requirements for signed documents, are compatible with your partners.

16.2.7 Configure server template deployment settings

To configure deployment settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Deployment**.
4. From the Deployment page, you can define the default deployment staging configuration for a server template, such as:
 - Staging Mode
 - Staging Directory Name
 - Upload Directory Name
 For more information about these fields, see Configuration Options.
5. Click **Save**.

16.2.8 Configure server template tuning

To configure tuning settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Tuning**.
4. From the Tuning page, you can define tuning performance and functionality settings of this server template, such as:

- Enable Native IO
- JavaSocketMuxer Socket Readers
- Enable Gathered Writes
- Enable Scattered Reads
- Maximum Open Sockets
- Stuck Thread Max Time
- Stuck Thread Timer Interval
- Accept Backlog
- Login Timeout
- SSL Login Timeout
- Reverse DNS Allowed

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced settings for this server template.

5. Click **Save**.

16.2.9 Configure server template overload settings

To configure overload settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Overload**.
4. From the Overload page, you can configure how WebLogic Server should react in the case of an overload or failure condition, including settings such as:
 - Shared Capacity for Work Managers
 - Failure Action
 - Panic Action
 - Free Memory Percent High Threshold
 - Free Memory Percent Low Threshold

- Max Stuck Thread Time
- Stuck Thread Count

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.10 Configure server template health monitoring

WebLogic Server provides a self-health monitoring capability to improve the reliability and availability of servers in a WebLogic Server domain. Selected subsystems within each server monitor their health status based on criteria specific to the subsystem.

To configure health monitoring settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Health Monitoring**.
4. From the Health Monitoring page, you can configure the frequency of a server's automatic health checks and the frequency with which the Node Manager application (optional) checks the server's health state by defining settings such as:
 - Health Check Interval
 - Auto Kill if Failed
 - Auto Restart
 - Max Restarts Within Interval
 - Restart Delay Seconds

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.11 Configure server startup

Node Manager is a WebLogic Server utility that you can use to start, suspend, shut down, and restart servers in normal or unexpected conditions.

To configure startup settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Server Start**.
4. From the Server Start page, you can configure the startup settings that Node Manager will use to start this server on a remote machine, including settings such as:

- Java Home
- Java Vendor
- BEA Home
- Root Directory
- Class Path
- Arguments
- Security Policy File
- User Name
- Password
- Confirm Password

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.12 Configure server template Web services

This section describes how to configure Web services for a server template.

This section includes the following tasks:

- [Configure server template buffering settings](#)
- [Configure server template reliable messaging](#)
- [View server template logical stores](#)

16.2.12.1 Configure server template buffering settings

To configure messaging buffering settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**.
4. Select **Web Services**, then select **Buffering**.
5. From the Buffering page, you can define message buffering settings for Web services on a server template, such as:
 - Retry Count
 - Retry Delay
 - Request Queue Enabled
 - Request Queue Connection Factory JNDI Name
 - Request Queue Transaction Enabled
 - Response Queue Enabled
 - Response Queue Connection Factory JNDI Name

- Response Queue Transaction Enabled

For more information about these fields, see Configuration Options.

6. Click **Save**.

16.2.12.2 Configure server template reliable messaging

Web service reliable messaging is a framework that enables an application running on one application server to reliably invoke a Web service running on another application server, assuming that both servers implement the WS-Reliable Messaging specification. Reliable is defined as the ability to guarantee message delivery between the two Web services.

To configure reliable messaging settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**.
4. Select **Web Services**, then select **Reliable Message**.
5. From the Reliable Messaging page, you can customize reliable messaging configuration settings on the Web service endpoint, such as:
 - Base Retransmission Interval
 - Enable Retransmission Exponential Backoff
 - Non-buffered Source
 - Non-buffered Destination
 - Acknowledgement Interval
 - Inactivity Timeout
 - Sequence Expiration

For more information about these fields, see Configuration Options.

6. Click **Save**.

16.2.12.3 View server template logical stores

A logical store is a named unit of storage that provides the business configuration requirements and connects the Web service to the physical and buffering queue.

To view logical stores configured for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to view.
3. Select **Configuration**.

4. Select **Web Services**, then select **Logical Stores**.
5. From the Logical Stores page, you can view information about each logical store that has been configured in the current WebLogic domain, such as:
 - Name
 - Persistence Strategy
 - Request Buffering Queue JNDI Name
 - Response Buffering Queue JNDI Name
 - Default

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

16.2.13 Configure server template Coherence cluster settings

To configure Coherence settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Configuration**, then select **Coherence**.
4. From the Coherence page, you can select the Coherence cluster you want to use in this server template.

For more information, see Configuration Options.

5. Click **Save**.

16.2.14 Configure server template protocols

This section describes how to configure server template protocols.

This section includes the following tasks:

- [Configure server template protocol general settings](#)
- [Configure server template HTTP settings](#)
- [Configure server template jCOM settings](#)
- [Configure server template IIOP settings](#)
- [Monitor server template network channel settings](#)
- [Configure server template network channel settings](#)

16.2.14.1 Configure server template protocol general settings

To configure general protocol settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Protocols**, then select **General Settings**.
4. From the General Settings page, you can define connections settings for various communication protocols that this server template uses, such as:
 - Complete Message Timeout
 - Idle Connection Timeout
 - Enable Tunneling
 - Tunneling Client Ping
 - Tunneling Client Timeout
 - Maximum Message Size

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.14.2 Configure server template HTTP settings

To configure HTTP protocol settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Protocols**, then select **HTTP**.
4. From the HTTP page, you can define the HTTP settings for this server template, such as:
 - Default WebApp Context Root
 - Post Timeout
 - Max Post Size
 - Enable Keepalives
 - Duration
 - HTTPS Duration
 - Frontend Host
 - Frontend HTTP Port
 - Frontend HTTPS Port

- WAP Enabled
- Remote Address Override
- Send Server Header
- Accept Context Path in Get Real Path
- HTTP Max Message Size
- Enable Tunneling
- Tunneling Client Ping
- Tunneling Client Timeout

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.14.3 Configure server template jCOM settings

To configure Java to COM (jCOM) protocol settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Protocols**, then select **jCOM**.
4. From the jCOM page, you can define jCOM protocol settings for this server template, such as:

- Enable COM
- NT Authentication Host
- Enable Native Mode
- Verbose Logging Enabled
- Enable Memory Logging
- Prefetch Enumeration
- Apartment Threaded

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.14.4 Configure server template IIOP settings

To configure Internet Inter-ORB Protocol (IIOP) settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Protocols**, then select **IIOP**.

4. From the IIOp page, you can define IIOp protocol settings for this server template, such as:

- Enable COM

For more information, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this server template.

5. Click **Save**.

16.2.14.5 Monitor server template network channel settings

To monitor network channel protocol settings for a server template:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.

The Server Templates table displays information about each server template that has been configured in the current WebLogic Server domain.

2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Protocols**, then select **Channels**.
4. The Channels table displays information about each network channel that has been configured for this server template, such as:

- Name
- Protocol
- Enabled
- Listen Address
- Listen Port
- Public Address
- Public Port

For more information about these fields, see Configuration Options.

5. Click **Save**.

16.2.14.6 Configure server template network channel settings

To configure network channel protocol settings for a server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Server Templates**.
2. In the Server Templates table, select the name of the server template you want to configure.
3. Select **Protocols**, then select **Channels**.
4. In the Channels table, select the name of the channel you want to configure.
5. Select **Configuration**.
6. From the **General** page, you can define general configuration settings for the network channel, such as:

- Name

- Protocol
- Listen Port
- Listen Address
- External Listen Address
- External Listen Port
- Enabled

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this network channel.

7. Click **Save**.

8. From the **Security** page, you can define security configuration options for the network channel, such as:

- Two Way SSL Enabled
- Client Certificate Enforced

For more information about these fields, see Configuration Options.

Optionally, expand **Advanced** to define advanced configuration settings for this network channel.

9. Click **Save**.

WebLogic Server OSGi Frameworks

OSGi is a Java modularity system developed and maintained by the OSGi Alliance, of which Oracle is a member. For general information on OSGi, see "Understanding OSGi" in *Developing Applications for Oracle WebLogic Server*.

An OSGi framework provides an OSGi runtime environment to support applications that make use of OSGi features, such as packaging, lifecycle management, and an active registry. For more information, see "Developing OSGi Bundles for WebLogic Server Applications" in *Developing Applications for Oracle WebLogic Server*.

This chapter describes how to monitor and configure OSGi frameworks created in this domain.

- [Monitor OSGi frameworks](#)
- [Configure OSGi frameworks](#)

17.1 Monitor OSGi frameworks

To monitor all OSGi frameworks configured in the current domain:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **OSGi Frameworks**.

The OSGi Frameworks table displays information about the OSGi frameworks that have been configured in the current domain, such as:

- Name
- Factory Implementation Class
- Register Global Work Managers
- Register Global Data Sources
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
- Detach: detach the table (viewing option)
- Sort: sort the columns in ascending or descending order
- Reorder: change the order of the columns displayed
- Query by Example

2. In the table, select the name of the OSGi framework for which you want to view configuration information.

17.1.1 Monitor server OSGi frameworks

To monitor all OSGi frameworks configured in a specific server instance:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Servers**.

The Servers table displays information about the Administration Server and any Managed Servers that have been configured in the current domain.

2. In the Servers table, select the name of the server instance for which you want to monitor OSGi frameworks.
3. From the **WebLogic Server** dropdown menu, select **Other Services**, then select **OSGi Frameworks**.

The OSGi Frameworks table displays information about the OSGi frameworks that have been configured in the current server instance, such as:

- Name
- Factory Implementation Class
- Register Global Work Managers
- Register Global Data Sources
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. In the table, select the name of the OSGi framework for which you want to view configuration information.

17.1.2 Monitor cluster OSGi frameworks

To monitor all OSGi frameworks configured in a specific cluster:

1. From the **WebLogic Domain** dropdown menu, select **Environment**, then select **Clusters**.

The Clusters table displays information about the clusters that have been configured in the current domain.

2. In the Clusters table, select the name of the cluster for which you want to monitor OSGi frameworks.
3. From the **WebLogic Cluster** dropdown menu, select **Other Services**, then select **OSGi Frameworks**.

The OSGi Frameworks table displays information about the OSGi frameworks that have been configured in the current cluster, such as:

- Name
- Factory Implementation Class
- Register Global Work Managers
- Register Global Data Sources
- Targets

For more information about these fields, see Configuration Options.

Optionally, select **View** to access the following table options:

- Columns: add or remove the columns displayed in the table
 - Detach: detach the table (viewing option)
 - Sort: sort the columns in ascending or descending order
 - Reorder: change the order of the columns displayed
 - Query by Example
4. In the table, select the name of the OSGi framework for which you want to view configuration information.

17.2 Configure OSGi frameworks

This section describes how to configure OSGi frameworks created in the current domain. This section includes the following tasks:

- [Configure an OSGi framework](#)
- [Target OSGi frameworks](#)
- [Create OSGi framework notes](#)

17.2.1 Configure an OSGi framework

To modify the configuration of an OSGi framework in the current domain:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **OSGi Frameworks**.

The OSGi Frameworks table displays information about each OSGi framework that has been configured in the current WebLogic Server domain.

2. In the OSGi Frameworks table, select the name of the OSGi framework you want to configure.
3. From the **Configuration** page, you can configure general settings of this OSGi framework, such as:
 - Factory Implementation Class
 - Register Global Work Managers
 - Register Global Data Sources
 - Boot delegation
 - System Packages Extra
 - Deploy Installation Bundles
 - Init Properties

For more information about these fields, see Configuration Options.

4. Click **Save**.

17.2.2 Target OSGi frameworks

You can assign server instances or clusters for an OSGi framework. The OSGi framework is deployed on the server instances or clusters that you select.

To target OSGi frameworks:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **OSGi Frameworks**.

The OSGi Frameworks table displays information about each OSGi framework that has been configured in the current WebLogic Server domain.

2. In the OSGi Frameworks table, select the name of the OSGi framework you want to assign to a server instance or cluster.
3. Select **Targets**.
4. From the Targets page:
 - Select the checkbox next to the server instance or cluster to which you want to assign to the OSGi framework.
 - To remove an OSGi framework from a server instance or cluster, deselect the checkbox next to the server instance or cluster from which you want to remove the OSGi framework.

For more information, see Configuration Options.

5. Click **Save**.

17.2.3 Create OSGi framework notes

To create notes for OSGi framework configuration:

1. From the **WebLogic Domain** dropdown menu, select **Other Services**, then select **OSGi Frameworks**.
2. In the OSGi Frameworks table, select the name of the OSGi framework for which you want to create notes.
3. Select **Notes**.
4. On the Notes page, enter your notes.
5. Click **Save**.

For more information, see Configuration Options.