Oracle® Fusion Middleware

Administering Oracle Fusion Middleware with Fusion Middleware Control

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Describes how to configure and manage Oracle Fusion Middleware with Oracle Enterprise Manager Fusion Middleware Control.

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

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A Task-Summary Topics for Selected Fusion Middleware Control Pages

Preface

This guide provides a reference for each of Oracle Fusion Middleware management pages in Oracle Enterprise Manager Fusion Middleware Control.

Audience

This document is intended for administrators responsible for using Fusion Middleware Control to manage their Oracle Fusion Middleware.

Documentation Accessibility

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Related Documents

For more information, see the Oracle Fusion Middleware documentation library.

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.
italic	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.

Part I

Manage Oracle Fusion Middleware Infrastructure

This part describes the set of typical tasks you need to perform when managing the Oracle Fusion Middleware Infrastructure components.

This part includes the following chapters:

1

Manage Oracle Fusion Middleware Infrastructure Components

This chapter describes the typical or core tasks associated with managing an Oracle Fusion Middleware Infrastructure components.

It contains the following topics:

For more information, see:

- *Administering Oracle WebLogic Server with Fusion Middleware Control*
- *Administering Oracle Fusion Middleware*

1.1 Get Help When Managing Oracle Fusion Middleware

To get to the online help while you are using Fusion Middleware Control:

- Select **Help Contents** from the Fusion Middleware Control **Help** menu to display the table of contents for the local online help system.

  From the Online Help Table of Contents, you can click links that connect you directly to the Fusion Middleware Control common tasks page in the Oracle Fusion Middleware documentation library on the Oracle Technology Network (OTN).

  You can also link directly to specific Oracle Fusion Middleware books from the Table of Contents.

- When available, select **Page Reference** from the **Help** menu to display a help topic that describes detailed information about the specific options available on the page.

  Not all pages support the Page Reference command; it is available in most cases for pages that contain configuration fields or elements that need further explanation in reference format.

- Select **How Do I?** from the **Help** menu to learn how to perform the common tasks associated with the current page.

  This command displays specific topics in the Oracle Fusion Middleware documentation library that can help with common administrative or monitoring tasks associated with the current page.

For information about using Fusion Middleware Control to manage your Oracle Fusion Middleware environment, see the Use Fusion Middleware Control Common Tasks page.

1.2 View Oracle Fusion Middleware Log Files

Oracle Fusion Middleware components generate log files containing messages that record all types of events. You can use log files to troubleshoot common problems.

The steps for this process are:

1. Understand the Oracle Diagnostic Logging (ODL) format used by Oracle Fusion Middleware components. More
2. View and search the contents of log files in the farm. How?
3. Correlate messages in log files across components. How?

For more information about viewing log files, see Section 1.3, "Configure Oracle Fusion Middleware Log Files."

1.3 Configure Oracle Fusion Middleware Log Files

The log files generated by Oracle Fusion Middleware components can be configured in several ways.

The steps for this process are:

1. Set the level of messages that are saved to your log files. How?
2. Modify the format of your log files. How?
3. Change the location of log files. How?
4. Modify the log file rotation policies. How?
5. Configure and use a QuickTrace handler. How?
6. Configure and use Selective Tracing. How?

For more information about viewing log files, see Section 1.2, "View Oracle Fusion Middleware Log Files."

1.4 Add Managed Servers to the Domain

The steps for adding a Managed Server to the current domain:

1. Understand the concept of Oracle WebLogic Server domains and the role of Managed Servers in the domain. More
2. Consider the different ways you can scale your Oracle WebLogic Server environment to meet new computing requirements. More
3. Learn about Oracle WebLogic Server Node Managers and machines. More
4. Add a Managed Server to the domain. How?

For more information, see the following:

- "Advanced Administration: Expanding Your Environment" in *Administering Oracle Fusion Middleware*
- "Scaling Out a Topology (Machine Scale Out)" in the *High Availability Guide*

1.5 Create a Cluster in the Domain

The steps for creating a cluster are:

1. Understand the capabilities and features of Oracle WebLogic Server Clusters. More
2. Understand multicast and unicast messaging. More
3. Use Fusion Middleware Control to create the cluster. More

For more information about creating clusters, see:

- "Configuration Roadmap" in *Using WebLogic Server Clusters*
- *Administering Clusters for Oracle WebLogic Server*

1.6 Get Information About Performance Metrics

When you manage or monitor an Oracle Fusion Middleware component or application with Fusion Middleware Control, you will often see performance metrics that provide insight into the current performance of the component or application.

In many cases, these metrics are shown in interactive charts; other times they are presented in tabular format.

The best way to use and correlate the performance metrics is from the Performance Summary page for the component or application you are monitoring.

For more information about monitoring your environment using the Performance Summary pages, see "Viewing the Performance of Oracle Fusion Middleware" in the *Administering Oracle Fusion Middleware*.

To obtain a definition of a specific performance metric, refer to the *Oracle Enterprise Manager Oracle Fusion Middleware Metric Reference Manual*.

2

Manage Oracle ADF Applications

The Oracle Application Development Framework (Oracle ADF) is used to build a Fusion web application that may include Oracle ADF Business Components, Oracle ADF Model, Oracle ADF Controller, and Oracle ADF Faces Rich Client.

This section describes the set of typical tasks you perform to manage Oracle ADF applications:

2.1 View ADF Performance Information

You can view performance information about application module pools and ADF task flows. Application module components can be used to support a unit of work which spans multiple browser pages.

The steps for this process are:

1. View performance information about ADF applications. How?
2. View application module pool performance. How?
3. View task flow performance. How?

2.2 Modify ADF Configurations and Parameters

You can view the current settings of ADF Connection configurations and parameter.

The steps for this process are:

1. Modify configuration parameters for Business Components. How?
2. Modify connection configurations. How?
3. Modify Business Components using System MBean Browser. How?
4. Modify connection configurations using System MBean Browser. How?
5. Modify MDS using System MBean Browser. How?
6. Modify ADF application configurations using System MBean Browser. How?
7. Modify Active Data Service configuration using System MBean Browser. How?
8. Finding versions of ADF runtime JARs. How?

3

Manage Oracle Metadata Services (MDS)

This chapter describes the set of typical tasks you need to manage Oracle Metadata Services (MDS).

It contains the following topics:

3.1 Configure and Use Oracle Metadata Services Repository

This section describes the set of typical tasks you need to perform to configure and use an MDS Repository:

1. Develop a customizable application. How?
2. Create and register an MDS repository. How?
3. Deploy the application. How?
4. Manage an application's MDS repository. How?

3.2 Develop a Customizable Application that Requires MDS

To get started with using Oracle Metadata Services (MDS), perform the following tasks:

1. Understand the concepts of customizable applications and MDS. More
2. Develop a customizable application that requires MDS. How?

For more information, see "Managing the Metadata Repository" in *Administering Oracle Fusion Middleware*.

3.3 Create and Register an MDS Repository

The following instructions describe how to register an Oracle Metadata Services (MDS) repository so you can deploy customizable applications that use the repository:

1. Decide whether you need a file-based or database-based MDS Repository.

In general, file-based repositories are used in the development environment and database-based repositories are used in your production environment.

2. Create and register the file-based MDS repository. How?

   OR

   Create and register a database-based MDS repository:

   a. Use the Repository Creation Utility (RCU) to create the MDS schema in the database. More

   b. Register the MDS repository with Fusion Middleware Control. How?

      Note: You must register the MDS repository with the Oracle WebLogic Server domain before you can deploy an application that uses this MDS repository.

For more information, see "Managing the Metadata Repository" in *Administering Oracle Fusion Middleware*.

3.4 Manage an MDS Repository for an ADF Application

After you deploy an application, there are a number of administration tasks you can perform on the application and its metadata.

The steps for this application-management process are:

1. Change the MDS configuration of an application. How?
2. Configure an application to use a different metadata repository. How?
3. Convert from a file to a DB metadata repository. How?
4. Migrate application metadata from test to production. How?
5. Backup and recover application metadata. How?

For more information, see *Developing Fusion Web Applications with Oracle Application Development Framework*.

3.5 Metadata Repositories Page

Use this page to register and de-register the metadata repositories used by the current domain.

The steps for using an MDS Repository are:

1. Understand the MDS Repository. More
2. Create and register an MDS Repository. How?

For more information, see "Managing the Metadata Repository" in *Administering Oracle Fusion Middleware*.

3.6 MDS Repository Home Page

Use this page to manage a selected MDS Repository and the partitions within the repository.

Typically, a partition is created when an application is deployed. Therefore, MDS repository management is performed in the context of an application's lifecycle.

The steps for the MDS application lifecycle are:

1. Develop a customizable application that requires MDS. How?

2. Create and register an MDS Repository. How?
3. Deploy the application. How?
4. Manage the MDS repository. How?
5. Manage metadata labels. How?

For more information, see "Managing the Metadata Repository" in *Administering Oracle Fusion Middleware*.

4

Manage Oracle WebLogic Server

This chapter describes the typical tasks associated with managing Oracle WebLogic Server and WebLogic Server Domains:

This chapter includes the following sections:

4.1 Manage Oracle WebLogic Server with Fusion Middleware Control

The following describes the steps you can take to manage the WebLogic Domain from Fusion Middleware Control:

1. View the Administration Server and the Managed Server instances in the domain. How?
2. Make any necessary configuration changes to the domain, using the Oracle WebLogic Server Administration Console. How?
3. Use the Change Center and set user preferences in Fusion Middleware Control. How?
4. Monitor the system components and applications deployed to the domain. How?
5. Deploy additional applications to the domain. How?

For more information about managing Oracle WebLogic Server, see:

- *Administering Oracle WebLogic Server with Fusion Middleware Control*

- "Overview of WebLogic Server System Administration" in *Understanding Oracle WebLogic Server*.

4.2 Manage Oracle WebLogic Server with the Administration Console

The following describes the steps you can take to manage the WebLogic Domain from the Oracle WebLogic Server Administration Console:

1. Learn how to view the Oracle WebLogic Server Administration Console. How?

   Alternatively, you can access the Administration Console from Fusion Middleware Control by selecting the **WebLogic Server Administration Console** hyperlink or Dynamic Target menu choice.

2. Refer to the Oracle WebLogic Server online help for more information. More

For more information about managing Oracle WebLogic Server, see "Overview of WebLogic Server System Administration" in *Understanding Oracle WebLogic Server*.

4.3 Manage 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.

The following describes the steps you can take to manage Oracle WebLogic Server domains:

1. Understand WebLogic Server domains and domain configuration. More
2. Monitor WebLogic domains. How?
3. Control WebLogic domains. How?
4. Configure WebLogic domains. How?

For more information about creating and configuring Oracle WebLogic Server domains, see:

- "Creating WebLogic Domains Using WLST Offline" in *Understanding the WebLogic Scripting Tool*
- *Creating WebLogic Domains Using the Configuration Wizard*

4.4 Configure and Control WebLogic Server Instances

When you create a domain, you also create an Administration Server, which runs the WebLogic Server Administration Console and 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.

The following describes the steps you can take to manage WebLogic Server instances:

1. Understand WebLogic Server system administration. More
2. Monitor server instances. How?

3. Control server instances. How?
4. Configure server instances. How?
5. Configure server templates. How?

For more information on controlling and configuring Oracle WebLogic Server instances, see:

- *Administering Server Startup and Shutdown for Oracle WebLogic Server*
- "Using WLST and Node Manager to Manage Servers" in *Understanding the WebLogic Scripting Tool*
- "Using Node Manager to Control Servers" in *Administering Node Manager for Oracle WebLogic Server*
- *Administering Server Environments for Oracle WebLogic Server*

4.5 Manage WebLogic Server Clusters

A WebLogic Server cluster consists of multiple WebLogic 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.

The following describes the steps you can take to manage WebLogic Server clusters:

1. Understand WebLogic Server clusters and cluster configuration. More
2. Monitor WebLogic Server clusters. How?
3. Control server instances in a cluster. How?
4. Configure WebLogic Server clusters. How?

For more information, see these topics in *Administering Clusters for Oracle WebLogic Server*:

- "Communications In a Cluster"
- "Setting up WebLogic Clusters"
- "Clustering Best Practices"
- "Troubleshooting Common Problems"

4.6 Deploy Applications Using Fusion Middleware Control

The following describes the steps to deploy your applications on Oracle WebLogic Server:

1. Understand the application deployment process. More
2. Understand the difference between deploying, redeploying, and undeploying your applications. More
3. Understand the types of applications you can deploy and the different administration tools you can use to deploy those applications. More
4. Based on the type of application you are deploying, refer to the appropriate procedure:

- Deploy a Java EE application using Fusion Middleware Control. How?
- Deploy an ADF application using Fusion Middleware Control. How?

For more information on monitoring and controlling application and module deployments in a WebLogic Server domain, see:

- "Application Deployments" in *Administering Oracle WebLogic Server with Fusion Middleware Control*
- *Deploying Applications to Oracle WebLogic Server*

4.7 Redeploy Applications Using Fusion Middleware Control

Before you redeploy an application, see Restrictions When Redeploying an Application with Fusion Middleware Control.

The following describes the steps to redeploy your applications on Oracle WebLogic Server:

1. Understand the application deployment process. More
2. Understand the difference between deploying, redeploying, and undeploying your applications. More
3. Based on the type of application you are redeploying, refer to the appropriate procedure for instructions on how to redeploy an application:
   - Redeploy a Java EE application using Fusion Middleware Control. How?
   - Redeploy an ADF application using Fusion Middleware Control. How?

Restrictions When Redeploying an Application with Fusion Middleware Control

If you are redeploying an application, note the following:

- The file name and path for the archive you are redeploying must be identical to the file name and path you used when you initially deployed the application.

  For example, if the file name and path of the original application was `/dua0/staging/myApp.ear`, then the revised application must be `/dua0/staging/myApp.ear`.
- If you initially deployed the application using another management tool, such as the Oracle WebLogic Server Administration Console or the WebLogic Scripting Tool (WLST), then you cannot redeploy the application using Fusion Middleware Control.

4.8 Undeploy an Application Using Fusion Middleware Control

The following describes the steps to undeploy your applications on Oracle WebLogic Server:

1. Understand the application deployment process. More
2. Understand the difference between deploying, redeploying, and undeploying your applications. More
3. Based on the type of application you are undeploying, refer to the appropriate procedure for instructions on how to undeploy an application:
   - Undeploy a Java EE application using Fusion Middleware Control. How?
   - Undeploy an ADF application using Fusion Middleware Control. How?

4.9 Monitor Managed Servers and the Applications Deployed on Managed Servers

The following describes how to monitor an Oracle WebLogic Server Managed Server and the applications deployed to the server:

1. Understand Oracle WebLogic Server Managed Servers and clusters. More
2. Monitor Managed Servers. How?
3. Determine the types of applications you have deployed. More

   Depending upon the type of applications you have deployed, do one of the following:

   - Monitor a Java EE Application. How?
   - Monitor an application that takes advantage of Oracle ADF. How?

For more information about monitoring Managed Servers, see "Monitor servers" in *Administering Oracle WebLogic Server with Fusion Middleware Control*.

For more information about monitoring application deployments, see "Monitor application deployments" in *Administering Oracle WebLogic Server with Fusion Middleware Control*.

4.10 Monitor Clusters and the Applications Deployed on Clusters

The following describes how to monitor a cluster and the applications you deploy on the cluster:

1. Understand Oracle WebLogic Server Managed Servers and clusters. More
2. Monitor the cluster. How?
3. Monitor an application deployed to a cluster. How?

For more information about monitoring clusters, see "Monitor clusters" in *Administering Oracle WebLogic Server with Fusion Middleware Control*.

For more information about deploying to a cluster, see "Application Deployment for Clustered Configurations" in *Administering Clusters for Oracle WebLogic Server*.

4.11 Create and Manage JDBC Data Sources

Java Database Connectivity (JDBC) enables you to configure database connectivity through JDBC data sources in your WebLogic domain. WebLogic JDBC data sources provide database access and database connection management.

The following describes how to create and manage JDBC data sources using Fusion Middleware Control:

1. Understand the purpose and types of Oracle Fusion Middleware JDBC data sources. More
2. Understand the capabilities of GridLink data sources. More
3. Create a generic data source. How?

   OR

   Create a GridLink data source. How?
4. Monitor a data source. How?

5. Control a data source. How?

For more information about creating and managing JDBC data sources, see:

- "WebLogic JDBC Data Sources" in *Administering Oracle WebLogic Server with Fusion Middleware Control*.
- *Administering JDBC Data Sources for Oracle WebLogic Server*

4.12 Manage 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.

The following describes the steps you can take to manage WebLogic Server messaging:

1. Monitor and control JMS servers. How?
2. Monitor and control Store-and-Forward agents. How?
3. Monitor JMS resources and modules. How?
4. Monitor path services. How?
5. Monitor messaging bridges. How?
6. Monitor JMS bridge destinations. How?

For more information on WebLogic JMS and other related WebLogic messaging components, refer to the following guides:

- *Developing JMS Applications for Oracle WebLogic Server*
- *Administering JMS Resources for Oracle WebLogic Server*
- *Administering the Store-and-Forward Service for Oracle WebLogic Server*
- "Using the WebLogic Persistent Store" in *Administering Server Environments for Oracle WebLogic Server*
- *Administering the WebLogic Messaging Bridge for Oracle WebLogic Server*

5

Manage Security and Audit Settings

This chapter describes the set of typical tasks you need to manage security.

This chapter includes the following sections:

5.1 Manage Security Credentials

A credential store is the repository of security data that certify the authority of entities used by components and ADF applications. Oracle Platform Security Services includes the Credential Store, a single, consolidated service provider that applications can use to store and manage their credentials.

The steps for this process are:

1. Understand the types of credential supported by Oracle Fusion Middleware. More
2. Learn about wallet-based credential stores. More
3. Manage the credentials of a domain. How?
4. If necessary, re-associate credentials with Oracle Fusion Middleware Control. How?

5.2 Configure Audit Policies

Fusion Middleware Audit Framework is a new service in Oracle Fusion Middleware 11*g*. It provides a centralized audit framework for the middleware family of products. Audit settings for Java components like Oracle Platform Security Services, Oracle Web Services Manager, Oracle Web Services, and others are handled at the domain level as part of security administration.

To configure the security audit policy settings for Oracle Platform Security Services, Oracle Web Services Manager, and other components deployed in the domain, and analyze audit data:

1. Understand the benefits and features of auditing your Oracle Fusion Middleware environment. More
2. View the policy settings for the Java components deployed to the domain. How?
3. Optionally, modify the policy settings for the Java components deployed to the domain. How?

4. View and configure the policy settings for system components associated with the domain. How?

For more information about audit policies, see:

- Section 5.3, "Configure the Audit Store"
- "Configure Your Environment for Audit Reports" section in *Securing Applications with Oracle Platform Security Services*

5.3 Configure the Audit Store

By default, security audit data is saved in a file. It is recommended that you configure auditing to use a database store. This provides better management of the audit data. It also allows audit data to be viewed using out-of-the-box reports in Oracle Business Intelligence Publisher. The reports and Oracle Business Intelligence Publisher are both included in the bundle.

To configure a database for the audit store:

1. Verify that you have installed the audit schema in the database, using the Repository Creation Utility (RCU). How?
2. Create a Data Source using the Oracle WebLogic Server Administration Console. How?
3. View the audit store settings for the domain. How?
4. Configure the domain so it uses the database as the audit store. How?

Note:

- These steps configure the audit store for Java components only. Separate steps are needed to configure the audit store for system components. See Related Topics below for instructions.
- If a database store is configured, you can switch back to file storage using a configuration file. See Related Topics below for instructions.

To view audit reports:

1. Configure a database for the audit store as explained above.
2. Analyze the audit data that you have gathered. How?

Note: Using the same database for Java components and system components ensures that your audit reports can display the audit records for all components together.

For more information about the audit store, see:

- "Configure the Audit Store for System Components" section in *Securing Applications with Oracle Platform Security Services*
- Section 5.2, "Configure Audit Policies"
- "Change from Audit Store to File" section in *Securing Applications with Oracle Platform Security Services*

- "Audit Store Configuration Tasks" section in *Securing Applications with Oracle Platform Security Services*
- "Manage File Storage" section in *Securing Applications with Oracle Platform Security Services*

6

Manage Oracle Fusion Middleware Web Services

This chapter describes the set of typical tasks you need to manage Oracle Web Services Manager (OWSM) policies and secure Oracle Web Services.

This chapter includes the following sections:

6.1 Create a New Policy

This section provides a summary of the steps required to create a new policy. You can create a new policy using one or more assertion templates, or by cloning an existing policy and editing it as desired.

Before You Begin

1. Decide what behavior your policy needs to enforce and determine if you can use one of the predefined policies. More
2. Understand the different categories of policies. More
3. Understand the policy subjects to which policies can be attached. More
4. Decide upon a naming convention for your policies. More

Creating a Policy

The steps for this process are:

1. If you are creating a new policy, then use the Create feature. How?
2. If you are using an existing policy as the starting point for your policy, then use the Create Like feature. How?

For more information about creating policies, see "Managing Web Service Policies with Fusion Middleware Control" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.2 Edit a Policy

This section provides a summary of the steps required to edit a policy. Note that you can only edit a policy that you created, either using assertion templates or by cloning a predefined policy. You cannot edit the predefined policies; these policies are read only.

The steps for this process are:

1. Review the policy details. How?
2. Analyze the impact of editing the policy on the policy subjects. How?
3. Edit the policy. How?

For more information about editing policies, see "Managing Web Service Policies with Fusion Middleware Control" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.3 Delete a Policy

This section provides a summary of the steps required to delete a policy. Note that you can only delete a policy that you created, either using assertion templates or by cloning a predefined policy. You cannot delete the predefined policies; these policies are read only.

The steps for this process are:

1. Review the policy details. How?
2. Analyze the impact of deleting the policy on the policy subjects. How?
3. Delete the policy. How?

For more information about deleting policies, see "Managing Web Service Policies with Fusion Middleware Control" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.4 Change the Current Version of a Policy

This section provides a summary of the steps required to change the current version of a policy.

> **Note:** You can change the current version of a user-created policy only. Version control does not apply to the Oracle predefined policies because they are read only and cannot be modified.

The steps for this process are:

1. Review the earlier versions of the policy to determine the version you want to restore. How?
2. Review the policy subjects to which this policy is attached. How?
3. Change the current version of the policy. How?

For more information about changing the current version of a policy, see "Versioning Web Service Policies" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.5 Attach a Policy to a Web Service

This section provides a summary of the steps required to attach a standalone policy or globally available policy set to a Web service.

The steps for this process are:

1. Identify the Web service to which you want to attach the policy. How?
2. View the policies or policy sets that are currently attached to the Web service. How?
3. Navigate to the policy that you want to attach to the Web service endpoint. How?
4. If the policy you need does not exist, then create a new one. How?
5. View the policy and verify that it meets your requirements. How?
6. If you need to make changes, then edit the policy. How?

   Note: Editing the predefined policies is not recommended.
7. Attach the policy to the Web service. How?
8. Test the Web service to verify that the policy is being used by the Web service. How?

For more information about attaching policies, see "Attaching Policies" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.6 Test a Web Service Endpoint

This section provides a summary of the steps required to use the Web services test page to verify that the policy is being enforced and that you are getting the expected results.

Note: You can test RESTful Web services by selecting the **GET** or **POST** service port operations. However, because the SOAP protocol is not used with RESTful Web services, the only security options are **HTTP Basic Authentication** or **None**, and the results on the **Response** tab are a simplified version of the standard Web service results. In addition, SOAP action and other Web service policies, such as WS-RM, MTOM, and WS-Addressing are not applicable for REST endpoints.

The steps for this process are:

1. Navigate to the Web service you want to test and review the operations. How?
2. Test one of the operations using a security policy. How?

3. Review the results of the test.
4. Test the operation again, generating a load for the application. How?
5. Review the test results.
6. Review the system parameters and application performance metrics.

For more information about testing Web services, see "Testing Web Services" in *Administering Web Services*.

6.7 Configure a Web Service Client

This section provides a summary of the steps required to use the Web Service Client page to configure policies and HTTP properties for Oracle Infrastructure clients such as ADF DC Web service clients, or the Web Service Callback Client page to configure asynchronous Web service callback clients.

The steps for this process are:

1. Use the **Policy** tab to attach or detach client policies, enable or disable client policy references, and override security configuration. How?
2. Use the **Configuration** tab to configure the client. How?

> **Note:** The **Endpoint Address** and **Maintain Session** properties in the **General** area are not available on the Callback Client page for asynchronous Web service callback clients.

For more information about configuring a Web service client, see "Configuring Web Service Clients Using Fusion Middleware Control" in *Administering Web Services*.

6.8 Manage OWSM Domain Configuration

This section provides a summary of the steps required to manage OWSM configuration at the domain level.

The steps for this process are:

- View and Modify General Information About the Domain. How?

  The **General** tab enables you view the domain name, platform type, and the number of applications and services. You can modify the display name and the description for the domain. It also provides version information for the configuration.

- Configuring Domain-Level Authentication. How?

  The **Authentication** tab provides the ability to configure the authentication settings required for the environment. This includes the ability to configure SAML trust, specify the lifetime of an issued token, and configure the subject created in OWSM. You can also configure the SAML and SAML2 login modules, the Kerberos login module, and the X509 login module, as well as create custom login modules.

- Configure Domain-Level Message Security. How?

  The **Message Security** tab provides the ability to configure the message protection settings required for the environment. This includes configuring the OWSM keystore and tuning security policy enforcement by adjusting the default message

timestamp skews between system clocks, the time-to-live for nonce messages in the cache, the message expiration time, and XPath transformations. You can also specify identity settings such as whether to enforce Web service policies by publishing the X509 certificate in the WSDL. In addition, if the X509 is published, you can also specify whether to ignore host name verification. You can also configure secure conversation settings such as when secure conversations should expire.

- Configure Policy Access. How?

  The **Policy Access** tab provides the ability to configure the policy manager connection, including whether to use the auto-discovery feature. You can also configure the SSL settings for the OWSM domain, and tune the policy cache.

For more information about configuring an OWSM domain, see "Managing OWSM Domain Configuration" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.9 View a Policy Set

This section provides a summary of the steps required to use the View Policy Sets page to review the configuration of a policy set.

The step for this process is:

- Review the policy set details. How?

For more information about viewing a policy set, see "Viewing the Configuration of a Policy Set Using Fusion Middleware Control" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.10 Create a New Policy Set

This section provides a summary of the steps required to create a new policy set or copy an existing policy set and edit it.

> **Note:** When you create a policy set from an existing policy set, all values and attachments are copied into the new one. You can modify the resource scope and the policy attachments in the new policy set, but you cannot change the type of resource to which it applies.

Before You Begin

1. Understand how to attach policies globally using policy sets. More
2. Understand how to define the type and scope of resources in a policy set. More
3. Understand how to specify a runtime constraint. More
4. Familiarize yourself with the policy framework to manage and secure Web services consistently across your organization. More

Creating a Policy Set

The steps for this process are:

1. If you are creating a new policy set, then use the Create feature. How?
2. If you are using an existing policy set as the starting point for your new policy set, then use the Create Like feature. How?

For more information about creating a new policy set, see "Attaching Policies Globally Using Policy Sets" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.11 Edit a Policy Set

This section provides a summary of the steps required to edit a policy set.

The steps for this process are:

1. Review the policy set details. How?
2. Edit the policy set. How?

For more information about editing a policy set, see "Editing a Policy Set" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.12 Override the Policy Configuration in a Policy Set

This section provides a summary of the steps required to override the policy configuration in a policy set.

The steps for this process are:

1. Review the policy set details. How?
2. Override the policy configuration. How?

For more information about overriding the policy configuration in a policy set, see "Overriding Policy Configuration Properties Using Fusion Middleware Control" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

6.13 Delete a Policy Set

This section provides a summary of the steps required to delete a policy set.

The steps for this process are:

1. Review the policy set details. How?
2. Delete the policy set. How?

For more information about deleting a policy set, see "Deleting Policy Sets Using Fusion Middleware Control" in *Securing Web Services and Managing Policies with Oracle Web Services Manager*.

7

Manage Oracle User Messaging Service

Oracle User Messaging Service (User Messaging Service) enables you to create applications that send notifications to user devices. This chapter describes the set of typical tasks you need to configure User Messaging Service.

This chapter includes the following sections:

7.1 Configuring Messaging Server

You can configure the Messaging Server by setting a deployment type for the Messaging Server (that is, select the storage method for runtime and management data) and adding or removing the business terms used to construct the message filters in User Messaging Preferences. More

The steps for this process are:

1. Set a deployment type for the Messaging Server. How?
2. Add business terms from User Messaging Preferences. How?
3. Remove business terms from User Messaging Preferences. How?

7.2 Deploy Oracle User Messaging Service Drivers

Oracle User Messaging Service (User Messaging Service) ships with the E-Mail, SMPP, XMPP, VoiceXML, and Proxy drivers already deployed. To deploy multiple instances of these drivers that connect to multiple gateways, you must deploy the driver EAR (Enterprise Archive) files to the instance that hosts User Messaging Service using Fusion Middleware Control or the WLST command `deployUserMessagingDriver`.

Fusion Middleware Control provides a wizard that steps you through deploying, undeploying, and redeploying drivers.

The steps for this process are:

1. Access the Oracle WebLogic Server Administration Console to deploy drivers. How?
2. Select a targeting style for the application and accept the default values. How?

3. Activate your changes to complete the deployment. How?

7.3 Configure Oracle User Messaging Service Drivers

Oracle User Messaging Service (User Messaging Service) ships with the E-Mail, SMPP, XMPP, VoiceXML, and Proxy drivers already deployed. To deploy multiple instances of these drivers that connect to multiple gateways, you must deploy the driver EAR (Enterprise Archive) files to the instance that hosts User Messaging Service using Fusion Middleware Control or the WLST command `deployUserMessagingDriver`.

The steps for this process are:

1. Access Associated Drivers from the User Messaging Service home page. How?
2. Select a driver in the list and configure it. How?
3. Expand the Driver-Specific configuration section and configure the driver parameters. How?

7.4 View Registered Client Applications

Use the Messaging Client Application page to view the client applications that have (self-) registered to the Messaging Server. (Client applications auto-register when sending messages).

You can manually de-register Messaging Client Applications after the applications have been undeployed and are holding onto access points that must be made available to other applications.

The steps for this process are:

1. Access Messaging Client page from the User Messaging Service home page. How?
2. Select the messaging client application that you want to de-register. How?
3. Review and confirm your selection. How?

7.5 Search for a Message

You can check the delivery status of messages sent and received, and re-send selected messages.

The steps for this process are:

1. Access Message Status page from the User Messaging Service home page. How?
2. Select the messages using the default search criteria. How?
3. Customize the search by adding more search fields and setting the desired operator and search value. How?

Part II

Manage Oracle Data Integrator

This section of the online help contains the following:

8

Manage Oracle Data Integrator

Oracle Data Integrator provides a fully unified solution for building, deploying, and managing complex data warehouses or as part of data-centric architectures in an SOA or business intelligence environment. In addition, it combines all the elements of data integration - data movement, data synchronization, data quality, data management, and data services - to ensure that information is timely, accurate, and consistent across complex systems.

This section describes the set of typical tasks you need to perform when managing Oracle Data Integrator:

- Section 8.1, "Configure Oracle Data Integrator"
- Section 8.2, "Manage Oracle Data Integrator"

8.1 Configure Oracle Data Integrator

Oracle Data Integrator Console is a web-based console for managing and monitoring an Oracle Data Integrator run-time architecture and for browsing design-time objects.

The following provides a summary of the steps required to configure Oracle Data Integrator Console. It also provides links to documentation that describes key concepts and prerequisites.

Before You Begin

Understand the ODI domain architecture. More

Configuring Oracle Data Integrator

1. Configure an ODI domain. How?
2. Configure Oracle Data Integrator Console. How?

8.2 Manage Oracle Data Integrator

Oracle Data Integrator Console is a web-based console for managing and monitoring an Oracle Data Integrator run-time architecture and for browsing design-time objects.

The following provides a summary of the tasks performed when managing Oracle Data Integrator Console.

1. Start and stop Oracle Data Integrator Console. How?
2. Start and stop ODI agents. How?
3. Search sessions. How?

4. Search Load Plan executions. How?
5. View log messages. How?

8.3 Start and Stop Oracle Data Integrator Console

You can start and shut down Oracle Data Integrator Console from Fusion Middleware Control.

The steps for this process are:

1. Navigate to the **Oracle Data Integrator Console** home page.
2. From the **Oracle Data Integrator Console** menu, select **Control**.
3. Perform one of the following actions:
   - Select **Start Up** to start Oracle Data Integrator Console.
   - Select **Shut Down...** to stop Oracle Data Integrator Console.

8.4 Start and Stop ODI Agents

You can start and shut down Java EE Agents from Fusion Middleware Control when the Java EE Agents are deployed on the same domain.

The steps for this process are:

1. Navigate to the Application Deployments page.
2. Click the target link corresponding to your Java EE Agent. The J2EE Application Page for this agent displays.
3. From the **Application Deployment** menu, select **Control**.
4. Perform one of the following actions:
   - Select **Start Up** to start the agent.
   - Select **Shut Down...** to stop the agent.

Note: You can start and stop standalone agents from Fusion Middleware Control if they are managed by OPMN or CAM. If the standalone agents are not managed by OPMN or CAM, you must use startup and shutdown scripts to start and stop them. See "Managing Agents" in the *Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator* for more information about how to start and shut down agents.

8.5 Search Sessions

You can search for sessions that have been executed in the managed ODI domain.

The steps for this process are:

1. Navigate to the Agent or Master Repository home page.
2. From the **Agent** menu, select **Search Sessions**.
3. The Search Sessions page opens. Enter the search criteria.
4. Click **Search**. The results display in the **Sessions** section.

8.6 Search Load Plan Executions

You can search for Load Plan runs that have been executed in the managed ODI domain.

The steps for this process are:

1. Navigate to the Agent or Master Repository home page.
2. From the **Agent** menu, select **Search Load Plan Executions**.
3. The Search Load Plan Executions page opens. Enter the search criteria.
4. Click **Search**. The results display in the **Load Plan Executions** section.

8.7 Configure Oracle Data Integrator Console

You can configure Oracle Data Integrator Console from Fusion Middleware Control to define the linking between Fusion Middleware Control and Oracle Data Integrator Console.

By default, the fields on this page are populated with the Oracle Data Integrator Console host, the Oracle Data Integrator Console managed server port, and the default context root. If your Oracle Data Integrator Console must be accessed with a different configuration, you can change the configuration on this page.

The steps for this process are:

1. Navigate to the ODI Agent home page.
2. From the **Agent** menu, select **Administration > ODI Console Administration**.
3. Enter the following parameters:
   - **Host:** The name of the server where your application is deployed
   - **Port:** The HTTP listener port number
   - **Context Root:** The Web application's context root
   - **Protocol**: The protocol for the connection
4. Select **Enable ODI-ESS Integration features in EM** to activate the ODI-ESS Integration features in Fusion Middleware Control.

8.8 Configure ODI Standalone Agents

You can modify Oracle Data Integrator Standalone Agent information. By default, the fields on this page are populated with information about the standalone agent.

The steps for this process are:

1. Navigate to the Standalone Agent home page.
2. From the **Agent** menu, select **Administration > ODI Standalone Agent Configuration**.
3. Enter the following parameters:
   - **Name:** The name of the standalone agent.
   - **Port:** The port where the standalone agent is started.
   - **Protocol:** The incoming listening protocol for the standalone agent.

- **Master Repository:** The Master Repository, which the standalone agent is connected to.

4. Click **Apply** to modify the configuration or click **Revert** to revert to the previous settings.

8.9 Configure Master Repository

You can modify Master Repository Configuration parameters for standalone agents.

The steps for this process are:

1. Navigate to the Standalone Agent home page.
2. From the **Agent** menu, select **Administration > Master Repository Configuration**.
3. Enter new values to modify the Master Repository configuration. More.
4. Click **Apply** to modify the configuration or click **Revert** to revert to the previous settings.

8.10 View Log Messages

You can view log messages in Fusion Middleware Control.

The steps for this process are:

1. Navigate to the Oracle Data Integrator Console home page.
2. From the **Oracle Data Integrator Console** menu, select **Logs > View Log Messages**.

Part III

Manage Oracle Web Tier Components

This part describes the set of typical tasks you need to perform when managing the Oracle Web Tier.

This part includes the following chapters:

9

Manage Oracle HTTP Server

Oracle HTTP Server is the Web server component for Oracle Fusion Middleware. It provides a listener for Oracle WebLogic Server and the framework for hosting static pages, dynamic pages, and applications over the Web.

This chapter includes the following sections:

9.1 Configure Oracle HTTP Server

The following procedure provides a summary of the steps required to configure Oracle HTTP Server.

The steps for this process are:

1. Set the listening port. How?
2. Configure SSL for a listening port. How?
3. Specify server configuration properties. How?
4. Configure MIME settings. How?
5. Configure error and access logs. How?
6. Configure the mod_wl_ohs module. How?

9.2 Configure the mod_wl_ohs Module

The following procedure provides a summary of the steps required to configure the `mod_wl_ohs` module for routing requests from Oracle HTTP Server to Oracle WebLogic Server.

The steps for this process are:

1. Configure mod_wl_ohs module routing. How?
2. Configure SSL for mod_wl_ohs. How?
3. View mod_wl_ohs log files. How?

A

Task-Summary Topics for Selected Fusion Middleware Control Pages

This appendix provides **container topics** for the Fusion Middleware Control online help system. Container topics (or **task-summary topics**) are online help topics that provide a list of tasks that are associated with a single management page in Fusion Middleware Control. These topics are displayed when you can accomplish multiple tasks from as single Fusion Middleware Control page.

This appendix provides the following topics:

A.1 Fusion Middleware Components Page

Use this page to create a new Managed Server or cluster in the Oracle WebLogic Server domain.

You can perform the following tasks on this page:

- Add Managed Servers to the Domain

- Create a Cluster in the Domain

A.2 Ports Configuration and SSL Configuration Pages

Use this the Port Configuration page to view, add, or modify ports for the Oracle Fusion Middleware component.

Use the SSL Configuration page to modify ports Oracle Web Cache and specify SSL settings.

These pages enable you to perform the following specific tasks for Oracle Web Cache and Oracle HTTP Server:

- Configure an Oracle HTTP Server Listening Port

A.3 Create Port or Edit Port Page

Use the Create Port or Edit Port page to create a new port or edit the characteristics of an existing port.

These pages enable you to perform the following specific tasks for Oracle HTTP Server:

- Configure an Oracle HTTP Server Listening Port

A.4 Oracle WebLogic Server Domain Home Page

Use the Oracle WebLogic Server Domain home page to view general information about the domain associated with this farm.

This page enables you to perform the following tasks:

Before You Begin

- Manage Oracle WebLogic Server with Fusion Middleware Control
- Manage Oracle WebLogic Server with the Administration Console

Managing the Farm Domain from Fusion Middleware Control

- Use the Change Center and set user preferences
- Deploy Applications Using Fusion Middleware Control
- Manage Oracle Fusion Middleware Web Services
- View Oracle Fusion Middleware Log Files

Managing Security for the Domain

- Manage Security Credentials
- Configure Audit Policies

A.5 Oracle WebLogic Server Cluster Home Page

Use Oracle WebLogic Server Cluster home page to monitor an Oracle WebLogic Server cluster.

This page enables you to perform the following tasks:

Before You Begin

- Manage Oracle WebLogic Server with Fusion Middleware Control
- Manage Oracle WebLogic Server with the Administration Console

Managing the Cluster

- Monitor Clusters and the Applications Deployed on Clusters
- Deploy Applications Using Fusion Middleware Control

A.6 Server Home Page

Use the Server home page to view information about the Administration Server or Managed Servers in the Oracle WebLogic Server domain.

This page enables you to perform the following tasks:

Before You Begin

- Manage Oracle WebLogic Server with Fusion Middleware Control
- Manage Oracle WebLogic Server with the Administration Console

Managing the Server

- Monitor Managed Servers and the Applications Deployed on Managed Servers
- View Oracle Fusion Middleware Log Files
- Deploy Applications Using Fusion Middleware Control

A.7 Java EE Application Home Page

Use the Java EE application home page to view information about the selected application. You can perform the following tasks from this page.

This page enables you to perform the following tasks:

Before You Begin

- Manage Oracle WebLogic Server with Fusion Middleware Control
- Manage Oracle WebLogic Server with the Administration Console

Managing the Application

- Monitor Managed Servers and the Applications Deployed on Managed Servers
- Deploy Applications Using Fusion Middleware Control
- Redeploy Applications Using Fusion Middleware Control
- Create and Register an MDS Repository

A.8 Cluster Application Home Page

Use this page to view information about the selected application that is deployed on an Oracle WebLogic Server cluster.

This page enables you to perform the following tasks:

Before You Begin

- Manage Oracle WebLogic Server with Fusion Middleware Control
- Manage Oracle WebLogic Server with the Administration Console

Managing the Cluster Application

- Monitor Clusters and the Applications Deployed on Clusters

A.9 Deployment Settings Page

When you deploy an application with Fusion Middleware Control, you can use the Deployment Settings page of the Deployment Wizard and its related deployment task pages modify the deployment plan settings for the application.

From the Deployment Settings page, you can perform the following tasks:

- Use the Deployment Plan section of the Deployment Settings page to view, modify, or save all the deployment plan settings for this specific application deployment. More
- Or, use one or more of the Deployment Tasks to modify typical deployment plan settings, specific to the application you are deploying. More

  Only the tasks that apply to the contents of the selected archive are displayed on the Deployment Settings page.

For more information about managing deployment settings, see Section 4.6, "Deploy Applications Using Fusion Middleware Control."

A.10 Deployment/Redeployment Wizard

Depending upon the menu command you selected, you can perform one of the following tasks from the pages of this wizard:

- Deploy Applications Using Fusion Middleware Control
- Redeploy Applications Using Fusion Middleware Control

A.11 Wallets Page

Use the Wallets page to create and manage Oracle wallets.

You can perform the following tasks from this page:

- Create a Wallet
- Create a Self-Signed Wallet
- Export a Wallet
- Import a Wallet
- Delete a Wallet

A.12 Keystores Page

Use the Keystores page to create and manage Java (JKS) keystores.

You can perform the following tasks from this page:

- Create a Keystore

- Export a Keystore
- Delete a Keystore
- Import a Keystore
- Change the Keystore Password

A.13 Manage Certificates (for Oracle Wallets) Page

Use the Manage Certificates page to create and manage certificates for Oracle wallets.

You can perform the following tasks from this page:

- Add a Certificate Request
- Export a Certificate, Certificate Request, or a Trusted Certificate
- Import a Certificate or a Trusted Certificate
- Delete a Certificate Request, a Certificate, or a Trusted Certificate
- Convert a Self-Signed Certificate into a Third-Party Certificate

A.14 Manage Certificates (for JKS Keystores) Page

Use the Manage Certificates page to create and manage certificates for Java (JKS) keystores.

You can perform the following tasks from this page:

- Generate a New Key for the Keystore
- Generate a Certificate Signing Request
- Import a Certificate or Trusted Certificate into a Keystore
- Export a Certificate or Trusted Certificate from the Keystore
- Delete a Certificate or Trusted Certificate from the Keystore
- Convert a Self-Signed Certificate to a Third-Party Certificate

A.15 Oracle HTTP Server Home Page

Use the Oracle HTTP Server Home page to view general information about Oracle HTTP Server.

From this page, you can perform the following tasks:

Configure Oracle HTTP Server

- Set the Listening Port
- Configure SSL for a Listening Port
- Specify Server Configuration Properties
- Configure MIME Settings
- Configure mod_wl_ohs
- Configure mod_perl
- Configure Error and Access Logs
- Configure a Virtual Host

Manage Oracle HTTP Server

- Start Oracle HTTP Server
- Stop Oracle HTTP Server
- Restart Oracle HTTP Server
- View Port Numbers
- View Oracle HTTP Server Logs

Monitor Oracle HTTP Server Performance

- Monitoring Server Performance
- Set Performance Directives

A.16 ODI Console Home Page

Use this page to configure and manage the Oracle Data Integrator. From this page, you can perform the following tasks:

- Configure Oracle Data Integrator
- Manage Oracle Data Integrator