#### **Oracle® Fusion Middleware**

Administering Oracle Fusion Middleware with Fusion Middleware Control 12*c* (12.1.3) E39138-01

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# 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.

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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:

- Chapter 1, "Manage Oracle Fusion Middleware Infrastructure Components"
- Chapter 4, "Manage Oracle WebLogic Server"
- Chapter 2, "Manage Oracle ADF Applications"
- Chapter 3, "Manage Oracle Metadata Services (MDS)"
- Chapter 6, "Manage Security and Audit Settings"
- Chapter 7, "Manage Oracle Fusion Middleware Web Services"
- Chapter 8, "Manage Oracle User Messaging Service"

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:

- Section 1.1, "Get Help When Managing Oracle Fusion Middleware"
- Section 1.2, "View Oracle Fusion Middleware Log Files"
- Section 1.3, "Configure Oracle Fusion Middleware Log Files"
- Section 1.4, "Add Managed Servers to the Domain"
- Section 1.5, "Create a Cluster in the Domain"
- Section 1.6, "Get Information About Performance Metrics"

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*.

# **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:

- Section 2.1, "View ADF Performance Information"
- Section 2.2, "Modify ADF Configurations and Parameters"

### 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?

# 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:

- Section 3.1, "Configure and Use Oracle Metadata Services Repository"
- Section 3.2, "Develop a Customizable Application that Requires MDS"
- Section 3.3, "Create and Register an MDS Repository"
- Section 3.4, "Manage an MDS Repository for an ADF Application"
- Section 3.5, "Metadata Repositories Page"
- Section 3.6, "MDS Repository Home Page"

#### 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*.

# 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:

- Section 4.1, "Manage Oracle WebLogic Server with Fusion Middleware Control"
- Section 4.2, "Manage Oracle WebLogic Server with the Administration Console"
- Section 4.3, "Manage WebLogic Server Domains"
- Section 4.4, "Configure and Control WebLogic Server Instances"
- Section 4.5, "Manage WebLogic Server Clusters"
- Section 4.6, "Deploy Applications Using Fusion Middleware Control"
- Section 4.7, "Redeploy Applications Using Fusion Middleware Control"
- Section 4.8, "Undeploy an Application Using Fusion Middleware Control"
- Section 4.9, "Manage Application Deployments"
- Section 4.10, "Monitor Managed Servers and the Applications Deployed on Managed Servers"
- Section 4.11, "Monitor Clusters and the Applications Deployed on Clusters"
- Section 4.12, "Create and Manage JDBC Data Sources"
- Section 4.13, "Manage WebLogic Server Messaging"
- Section 4.14, "Manage WebLogic Server Users and Groups"

## 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?
  - Deploy a SOA Composite 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?
  - Redeploy a SOA Composite 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?
  - Undeploy a SOA Composite application using Fusion Middleware Control. How?

# 4.9 Manage Application Deployments

The following describes the steps you can take to manage the applications deployed on your Oracle WebLogic Server domain:

- 1. Understand WebLogic Server application deployment. More
- 2. Monitor application deployments. How?
- 3. Control application deployments. How?
- 4. Configure application deployment. How?

For more information about developing and deploying applications for Oracle WebLogic Server, see:

- Developing Applications for Oracle WebLogic Server
- Deploying Applications to Oracle WebLogic Server

# 4.10 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?
- Monitor an Oracle SOA Suite composite application. 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.* 

# 4.11 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*.

# 4.12 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?

OR

Create a multi data source. How?

- 4. Monitor a data source. How?
- 5. Control a data source. How?
- **6.** Configure 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

# 4.13 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, control, and configure JMS servers. How?
- 2. Monitor and control Store-and-Forward agents. How?

- 3. Monitor and control JMS resources and modules. How?
- 4. Monitor path services. How?
- 5. Monitor and configure messaging bridges. How?
- 6. Monitor and configure JMS bridge destinations. How?
- 7. Monitor and configure persistent stores. 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

# 4.14 Manage WebLogic Server Users and Groups

A security realm comprises mechanisms for protecting WebLogic resources. Each security realm consists of a set of configured security providers, users, groups, security roles, and security policies. A user must be defined in a security realm in order to access any WebLogic resources belonging to that realm.

The following describes the steps you can take to manage WebLogic Server users and groups:

- 1. Monitor WebLogic Server users and groups. How?
- 2. Configure users. How?
- 3. Configure groups. How?

For more information on WebLogic Server users and groups, refer to the following guides:

- "Security Realms" in Understanding Security for Oracle WebLogic Server
- Administering Security for Oracle WebLogic Server

# Manage Oracle Fusion Middleware on IBM WebSphere

This section describes the typical tasks associated with managing Oracle Fusion Middleware on IBM WebSphere:

Manage an IBM WebSphere Cell, Server, or Application Deployment

# 5.1 Manage an IBM WebSphere Cell, Server, or Application Deployment

If you have installed and configured Oracle Fusion Middleware products on IBM WebSphere, then you can manage the IBM WebSphere cell that you configured for Oracle Fusion Middleware.

Perform the following steps to manage an IBM WebSphere cell that has been configured for Oracle Fusion Middleware:

- 1. Learn about the Oracle Fusion Middleware support for third-party servers, such as IBM WebSphere. More
- 2. Install and configure Oracle Fusion Middleware on IBM WebSphere. How?
- 3. Display Fusion Middleware Control. How?
- 4. View the Cell home page. How?
- 5. View the Server home pages. How?
- 6. View the Application Deployment home pages. How?

# **Manage Security and Audit Settings**

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

This chapter includes the following sections:

- Section 6.1, "Manage Security Credentials"
- Section 6.2, "Configure Audit Policies"
- Section 6.3, "Configure the Audit Store"
- Section 6.4, "Configure Application Policies"
- Section 6.5, "Configure Application Roles"
- Section 6.6, "Configure System Policies"
- Section 6.7, "Configure Credentials"
- Section 6.8, "Manage Keystores with the Keystore Service"
- Section 6.9, "Manage Certificates with the Keystore Service"

# 6.1 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?

# 6.2 Configure Audit Policies

Fusion Middleware Audit Framework is a new service in Oracle Fusion Middleware 11g. 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 6.3, "Configure the Audit Store"
- "Configure Your Environment for Audit Reports" section in *Securing Applications* with Oracle Platform Security Services

# 6.3 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 6.2, "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

# 6.4 Configure Application Policies

Use the Application Policies page to manage application policies. For details, see Managing Application Policies.

# 6.5 Configure Application Roles

Use the Application Roles page to manage application roles. For details, see Managing Application Roles.

#### 6.6 Configure System Policies

Use the System Policies page to manage system policies. For details, see Managing System Policies.

# 6.7 Configure Credentials

Use the Credentials page to manage credentials. For details, see Managing Credentials.

#### 6.8 Manage Keystores with the Keystore Service

Use the Keystore page to create and manage keystores using the keystore service.

You can perform the following tasks from this page:

- Create a Keystore
- Delete a Keystore
- Change Keystore Password

#### 6.9 Manage Certificates with the Keystore Service

Use the Manage Certificates page to manage the certificates for a keystore created with the keystore service.

You can perform the following tasks from this page:

Generate a Keypair

- Generate a Certificate Signing Request
- Export a Certificate or Trusted Certificate
- Import a Certificate or Trusted Certificate
- Delete a Certificate
- Change a Certificate Password

7

# 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:

- Section 7.1, "Create a New Policy"
- Section 7.2, "Edit a Policy"
- Section 7.3, "Delete a Policy"
- Section 7.4, "Change the Current Version of a Policy"
- Section 7.5, "Attach a Policy to a Web Service"
- Section 7.6, "Test a Web Service Endpoint"
- Section 7.7, "Configure a Web Service Client"
- Section 7.8, "Manage OWSM Domain Configuration"
- Section 7.9, "View a Policy Set"
- Section 7.10, "Create a New Policy Set"
- Section 7.11, "Edit a Policy Set"
- Section 7.12, "Override the Policy Configuration in a Policy Set"
- Section 7.13, "Delete a Policy Set"

# 7.1 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*.

### 7.2 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*.

#### 7.3 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*.

## 7.4 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.

- **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*.

#### 7.5 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.

### 7.6 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.

- 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*.

# 7.7 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 SOA reference, 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*.

# 7.8 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*.

### 7.9 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*.

#### 7.10 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**

- 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*.

# 7.11 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.* 

### 7.12 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*.

#### 7.13 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*.

# 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:

- Section 8.1, "Configuring Messaging Server"
- Section 8.2, "Deploy Oracle User Messaging Service Drivers"
- Section 8.3, "Configure Oracle User Messaging Service Drivers"
- Section 8.4, "View Registered Client Applications"
- Section 8.5, "Search for a Message"

# 8.1 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 Communication Preferences. More

The steps for this process are:

- 1. Deploy Drivers. How?
- 2. Add business terms from User Communication Preferences. How?
- 3. Remove business terms from User Communication Preferences. How?

### 8.2 Deploy Oracle User Messaging Service Drivers

Oracle User Messaging Service (User Messaging Service) ships with the E-Mail, SMPP, and XMPP drivers already deployed. More

#### 8.3 Configure Oracle User Messaging Service Drivers

Oracle User Messaging Service (User Messaging Service) ships with the E-Mail, SMPP, and XMPP drivers already deployed.

- 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?

# 8.4 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?

# 8.5 Search for a Message

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

- 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?

# **Manage Oracle Enterprise Scheduler**

This chapter describes the set of typical tasks you need to configure Oracle Enterprise Scheduler.

This chapter includes the following sections:

- Section 9.1, "Search Job Requests"
- Section 9.2, "Submit a Job Request"
- Section 9.3, "Create a Job Definition"
- Section 9.4, "Create a Work Assignment"
- Section 9.5, "Configure a Purge Policy"
- Section 9.6, "Configure Web Service Policies"

### 9.1 Search Job Requests

The following provides a summary of the steps required to view, search for, and submit job requests. You can also hold, resume, and cancel a running job request.

The steps for this process are:

- 1. Run a quick predefined search, or enter specific search criteria such as application, request ID, status and so on. How?
- **2.** Optionally, run an advanced search to find job requests within a specified time period. How?
- **3.** After running a search for job requests, you can configure the display of columns in the search results table. How?
- **4.** Once you submit a search for job requests, you can view detailed information about an individual job request by clicking the job request ID or the request parent ID. How?
- 5. Hold, resume or cancel a running job request returned in the search results. How?

#### **Related Topics**

Manage Oracle Enterprise Scheduler

Submit a Job Request

# 9.2 Submit a Job Request

The following provides a summary of the steps for submitting a job request for a particular application, including a job definition and schedule.

#### **Before You Begin**

- 1. Create a job definition. How?
- 2. Optionally, define a job schedule. How?

#### Submitting a Job Request

The steps for this process are:

- **1.** Select the application and job definition you want to use as the basis for your job request. How?
- 2. Specify the job schedule that will govern the submission of the job request.

Alternatively, create a job schedule. More

- **3.** Alternatively, you can submit a job request using an existing request as a template. How?
- **4.** Once you have submitted the request, you can hold, resume or cancel the job request as required. How?

#### **Related Topics**

Manage Oracle Enterprise Scheduler

Create a Job Definition

### 9.3 Create a Job Definition

The following provides a summary of the steps required for creating a job definition. A job definition forms the basis of a job request run by a given application.

The steps for this process are:

- 1. Select the job type for the job definition. Configure job parameters and system properties as required. How?
- **2.** To control access to the job definition, associate the job definition with a particular role. How?
- **3.** Define incompatibilities for the job definition as required. How?
- 4. Create a job set using the job definition. How?
- 5. Submit a job request using the job definition. How?

#### **Related Topics**

Manage Oracle Enterprise Scheduler

Submit a Job Request

# 9.4 Create a Work Assignment

The following provides a summary of the steps required to create a work assignment. A work assignment defines runtime operating constraints associated with a job request processor, and includes one or more workshifts and specialization rules. A workshift specifies a time window during which the job request processor handles job requests. Specialization rules define any restrictions on the job request processor for processing job requests.

#### **Creating a Work Assignment**

The steps for this process are:

- **1.** Create a workshift. How?
- 2. Create or edit a schedule for the workshift. How?
- 3. Create a work assignment and add workshifts to the work assignment. How?

#### **Related Topics**

Manage Oracle Enterprise Scheduler

Search Job Requests

# 9.5 Configure a Purge Policy

The following provides a summary of the steps required to configure a purge policy. Purge policies determine the job requests are to be purged and or retained.

#### **Configuring a Purge Policy**

The steps for this process are:

- 1. Create a new purge policy. How?
- **2.** Select the purge criteria for the policy, such as the application name, job definition, job type, and so on.
- **3.** Enter the retention period for job requests.
- 4. Select a schedule for the purge policy. How?
- **5.** Once you have configured a purge policy, you can update the policy. How?

View all purge policies on a particular scheduler service. How? Delete a specific policy. How?

# Related Topics

Manage Oracle Enterprise Scheduler

Create a Work Assignment

#### 9.6 Configure Web Service Policies

The following provides a summary of the steps required to configure web service policies.

#### **Configuring Web Service Policies**

- **1.** Select an expression from the Constraint dropdown to view the corresponding effective policy references.
- **2.** For a policy set flagged as "Not Valid", click the link to view the validation error details. For security policy references, click the violations count link to view violation details.
- **3.** When policies are attached or detached, the effective policy references are recalculated.

#### **Related Topics**

Create a Job Definition Manage Oracle Enterprise Scheduler

# Part II

# **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:

Chapter 10, "Manage Oracle HTTP Server"

# 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:

- Section 10.1, "Configure Oracle HTTP Server"
- Section 10.2, "Configure the mod\_wl\_ohs Module"

## 10.1 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?

#### 10.2 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.

- 1. Configure mod\_wl\_ohs module routing. How?
- 2. Configure SSL for mod\_wl\_ohs. How?
- **3.** View mod\_wl\_ohs log files. How?

# Part III

# Manage Oracle SOA Suite

Oracle SOA Suite enables you to create, manage, and orchestrate services to produce composite applications and business processes.

This part includes the following chapters:

- Chapter 11, "Manage the SOA Infrastructure"
- Chapter 12, "Manage a SOA Composite Application"
- Chapter 13, "Manage Service Components"
- Chapter 14, "Manage Binding Components, Oracle B2B, and Oracle Business Activity Monitoring"
- Chapter 15, "Manage Business Events"
- Chapter 16, "Manage Oracle Service Bus"

# Manage the SOA Infrastructure

The SOA Infrastructure is a Java EE-compliant application running in Oracle WebLogic Server. The application manages composites and their lifecycle, as well as service engines and binding components. This chapter describes the set of typical tasks you need to configure and monitor the SOA Infrastructure.

This chapter includes the following sections:

- Section 11.1, "Monitor SOA Infrastructure Request Processing"
- Section 11.2, "Configure the SOA Infrastructure Common Properties"
- Section 11.3, "Monitor the Service and Reference Binding Components"
- Section 11.4, "Monitor Overall Status of the SOA Infrastructure"
- Section 11.5, "Manage the Partitions in the SOA Infrastructure"
- Section 11.6, "Manage a Partition from the Dashboard Page"
- Section 11.7, "Configure Global Token Variables"
- Section 11.8, "Delete Large Numbers of Instances Automatically"
- Section 11.9, "Manage Error Notification Rules"
- Section 11.10, "Manage Work Manager Groups"
- Section 11.11, "Track Business Flow Instances in the SOA Infrastructure"
- Section 11.12, "Manage Faults in the Error Hospital of the SOA Infrastructure"
- Section 11.13, "Monitor Deployed SOA Composite Applications in the SOA Infrastructure"
- Section 11.14, "Manage Deployed Composites in the Partition"
- Section 11.15, "Track Business Flow Instances in the Partition"
- Section 11.16, "Manage Faults in the Error Hospital in the Partition"

# 11.1 Monitor SOA Infrastructure Request Processing

The following section provides a summary of the steps required to monitor message processing performance through the service engines, Service Infrastructure, and binding components. This section provides links to documentation that describes key concepts and procedures.

The steps for this process are:

1. Understand service engines. More

- 2. Understand the Service Infrastructure. More
- 3. Understand binding components. More
- 4. Monitor request processing. How?

### **11.2 Configure the SOA Infrastructure Common Properties**

The following section provides a summary of the steps required to configure the SOA Infrastructure common properties. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand the SOA Infrastructure application. More
- 2. Configure SOA Infrastructure common properties. How?

# 11.3 Monitor the Service and Reference Binding Components

The following section provides a summary of the steps required to monitor the service and reference binding components of a SOA composite application. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service and reference binding components. More
- **2.** Create service and reference binding components in a SOA composite application in Oracle JDeveloper. How?
- **3.** Monitor service and reference binding components in the SOA Infrastructure. How?

#### 11.4 Monitor Overall Status of the SOA Infrastructure

The following section provides a summary of the steps required to monitor the overall status of the SOA Infrastructure.

The steps for this process are:

- 1. Understand the SOA Infrastructure application. More
- 2. Understand SOA composite applications. More
- 3. Understand SOA business flow instances. More
- Understand service engines. More
- 5. Monitor the overall status of the SOA Infrastructure. How?

## 11.5 Manage the Partitions in the SOA Infrastructure

The following section provides a summary of the steps required for managing the partitions in the SOA Infrastructure. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand partitions. More
- 2. Manage partitions. How?

# 11.6 Manage a Partition from the Dashboard Page

The following section provides a summary of the steps required for managing a partition from its home page. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand partitions. More
- 2. Manage partitions. How?

## 11.7 Configure Global Token Variables

The following section provides a summary of the steps required for managing a partition from its home page. This section also provides links to documentation that describes key concepts and procedures.

The step for this process is:

1. Configure global token variables. How?

## 11.8 Delete Large Numbers of Instances Automatically

The following section provides a summary of the steps required for automatically deleting large numbers of instances. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Plan for database growth More
- 2. Manage database growth More
- 3. Automatically delete large numbers of instances. How?

#### 11.9 Manage Error Notification Rules

The following section provides a summary of the steps required for managing error notification rules. This section also provides links to documentation that describes key concepts and procedures.

The step for this process is:

1. Create error notification rules. How?

# 11.10 Manage Work Manager Groups

The following section provides a summary of the steps required for managing work manager groups. This section also provides links to documentation that describes key concepts and procedures.

The step for this process is:

1. Create work manager groups. How?

# 11.11 Track Business Flow Instances in the SOA Infrastructure

The following section provides a summary of the steps required for tracking business flow instances. This section also provides links to documentation that describes key concepts and procedures.

The step for this process is:

- 1. Understand business flow instances. More
- 2. Track business flow instances. How?

# 11.12 Manage Faults in the Error Hospital of the SOA Infrastructure

The following section provides a summary of the steps required for managing faults in the Error Hospital. This section also provides links to documentation that describes key concepts and procedures.

The step for this process is:

- 1. Understand the Error Hospital. More
- 2. Manage faults in the Error Hospital. How?

# 11.13 Monitor Deployed SOA Composite Applications in the SOA Infrastructure

The following section provides a summary of the steps required for monitoring all deployed SOA composite applications. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand deployment from Oracle JDeveloper. More
- 2. Understand SOA composite applications. More
- 3. Deploy SOA composite applications from Oracle Enterprise Manager. How?
- 4. Monitor the deployed SOA composite applications. How?

## 11.14 Manage Deployed Composites in the Partition

The following section provides a summary of the steps required for managing deployed SOA composite applications in the partition. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand partitions. More
- 2. Understand deployment from Oracle JDeveloper. More
- 3. Understand SOA composite applications. More
- 4. Deploy SOA composite applications from Oracle Enterprise Manager. How?
- 5. Manage the deployed SOA composite applications in partitions. How?

# 11.15 Track Business Flow Instances in the Partition

The following section provides a summary of the steps required for tracking business flow instances. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand partitions. More
- 2. Understand business flow instances. More
- 3. Track business flow instances. How?

### 11.16 Manage Faults in the Error Hospital in the Partition

The following section provides a summary of the steps required for managing faults in the Error Hospital. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand partitions. More
- 2. Understand the Error Hospital. More
- 3. Manage faults in the Error Hospital. How?

# Manage a SOA Composite Application

This chapter describes the set of typical tasks you need to test, monitor, and manage a SOA composite application.

This chapter includes the following sections:

- Section 12.1, "Monitor the SOA Composite Application Dashboard"
- Section 12.2, "View the SOA Composite Application Diagram"
- Section 12.3, "Tracking Business Flow Instances of the SOA Composite Application"
- Section 12.4, "Automate SOA Composite Application Tests"
- Section 12.5, "Manage SOA Composite Application Policies"
- Section 12.6, "Manage Instance Audit Trails and Flows"
- Section 12.7, "Export the Contents of a Running SOA Composite Application"

#### 12.1 Monitor the SOA Composite Application Dashboard

The following section provides a summary of the steps required for monitoring SOA composite applications. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand SOA composite applications. More
- 2. Understand SOA business flow instances. More
- 3. Monitor the SOA composite application dashboard. How?

#### 12.2 View the SOA Composite Application Diagram

The following section provides a summary of the steps required for viewing the SOA composite application diagram. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand SOA composite applications. More
- 2. View SOA composite application diagram. How?

# 12.3 Tracking Business Flow Instances of the SOA Composite Application

The following section provides a summary of the steps required for tracking SOA composite application business flow instances. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand SOA composite applications. More
- 2. Understand business flow instances. More
- 3. Track SOA composite application business flow instances. How?

# **12.4 Automate SOA Composite Application Tests**

The following section provides a summary of the steps required for automating testing of SOA composite applications with test cases. Test cases enable you to simulate the interaction between a SOA composite application and its Web service partners prior to deployment in a production environment. This section also provides links to documentation that describes key test case concepts and procedures.

The steps for this process are:

- 1. Understand test cases, test suites, emulations, and assertions. More
- 2. Create test cases and test suites in Oracle JDeveloper. How?
- 3. Run test cases and view test results in Oracle Enterprise Manager. How?

# 12.5 Manage SOA Composite Application Policies

The following section provides a summary of the steps required for attaching or detaching policies to or from a SOA composite application. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand SOA composite applications. More
- 2. Understand policies. More
- **3.** Understand the specific types of policies available and which ones to use in your environment. More
- 4. Manage SOA composite application policies. How?

# 12.6 Manage Instance Audit Trails and Flows

The following section provides a summary of the steps required for managing instance audit trails and flows in a BPEL process. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand business flow instances. More
- 2. Manage instance audit trails and flows. How?

# 12.7 Export the Contents of a Running SOA Composite Application

The following section provides a summary of the steps required for exporting the contents of a running SOA composite application to an archive JAR file. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand SOA composite applications. More
- 2. Export the contents of a running SOA composite application. How?

# **Manage Service Components**

Service components provide the business logic of the SOA composite application.

This chapter includes the following sections:

- Section 13.1, "Manage Oracle BPEL Process Manager"
- Section 13.2, "Manage Oracle Mediator"
- Section 13.3, "Manage Decision Service Component (Business Rules)"
- Section 13.4, "Manage Human Workflow"

# 13.1 Manage Oracle BPEL Process Manager

Oracle BPEL Process Manager enables you to orchestrate and execute business process flow. This chapter describes the set of typical tasks you need to configure Oracle BPEL Process Manager.

This chapter includes the following topics:

- Section 13.1.1, "Configure BPEL Process Service Engine Properties"
- Section 13.1.2, "Monitor Deployments in the BPEL Process Service Engine"
- Section 13.1.3, "Monitor BPEL Process Service Engine Pending and Active Requests and Thread Performance Statistics"
- Section 13.1.4, "Recover from BPEL Process Service Engine Message Failure"
- Section 13.1.5, "Monitor BPEL Process Service Component Dashboard"
- Section 13.1.6, "Manage BPEL Process Service Component Policies"

#### **13.1.1 Configure BPEL Process Service Engine Properties**

The following section provides a summary of the steps required to configure BPEL process service engine properties. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand service engines. More
- 2. Understand Oracle BPEL Process Manager sensors and analytics. More
- **3.** Configure BPEL process service engine properties. How?

#### 13.1.2 Monitor Deployments in the BPEL Process Service Engine

The following section provides a summary of the steps required to monitor all BPEL process service components running in the BPEL process service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand deployment in Oracle JDeveloper. More
- 3. Understand deployment in Oracle Enterprise Manager. More
- 4. View details about deployments in the BPEL process service engine. How?

# 13.1.3 Monitor BPEL Process Service Engine Pending and Active Requests and Thread Performance Statistics

The following section provides a summary of the steps required to monitor BPEL process service engine pending and active requests and thread statistics. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Monitor pending and active requests and thread statistics. How?

#### 13.1.4 Recover from BPEL Process Service Engine Message Failure

The following section provides a summary of the steps required to perform manual message recovery in the BPEL process service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Recover from message failure. How?

#### 13.1.5 Monitor BPEL Process Service Component Dashboard

The following section provides a summary of the steps required to monitor BPEL process service component recent instances and faults. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service components. More
- 2. Understand business flow instances. More
- **3.** Monitor the BPEL process service component dashboard. How?

#### 13.1.6 Manage BPEL Process Service Component Policies

The following section provides a summary of the steps required to attach or detach policies to or from BPEL process service components. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

**1.** Understand service components. More

- 2. Understand policies. More
- **3.** Understand the specific types of policies available and which ones to use in your environment. More
- 4. Attach and detach policies to and from BPEL process service components. How?

### 13.2 Manage Oracle Mediator

This chapter describes the set of typical tasks you need to configure and administer Oracle Mediator. Oracle Mediator enables you to route data between service consumers and service providers, both within and outside of an enterprise. You can use Oracle Mediator to evaluate routing rules, perform transformations, and invoke a service or raise a business event.

This chapter includes the following sections:

- Section 13.2.1, "Monitor Mediator Service Component Recent Instances and Faults"
- Section 13.2.2, "Monitor Mediator Service Component Instances"
- Section 13.2.3, "Monitor Mediator Service Component Faults"
- Section 13.2.4, "Recover From Mediator Service Component Faults"
- Section 13.2.5, "Manage Mediator Service Component Policies"
- Section 13.2.6, "Recover and Abort Faults"
- Section 13.2.7, "Monitor Mediator Routing Statistics"
- Section 13.2.8, "Monitor Request Breakdown Statistics"
- Section 13.2.9, "Delete Cross Reference Values"
- Section 13.2.10, "Configure Mediator Service Engine Properties"
- Section 13.2.11, "Monitor Mediator Service Engine Instances"
- Section 13.2.12, "Monitor Deployments in the Mediator Service Engine"
- Section 13.2.13, "Recover from Mediator Service Engine Faults"
- Section 13.2.14, "Monitor Mediator Service Engine Recent Instances and Faults"

#### 13.2.1 Monitor Mediator Service Component Recent Instances and Faults

The following section provides a summary of the steps required to monitor all Mediator service component instances and faults in the service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand SOA composite applications. More
- 3. Understand business flow instances. More
- 4. Monitor Mediator service engine recent instances and faults. How?

#### 13.2.2 Monitor Mediator Service Component Instances

The following section provides a summary of the steps required to monitor Mediator service component instances. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Understand SOA composite application instances. More
- 3. Monitor Mediator service component instances. How?

#### 13.2.3 Monitor Mediator Service Component Faults

The following section provides a summary of the steps required to monitor Mediator service component faults. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Understand a fault policy. More
- 3. Monitor Mediator service component faults. How?

#### 13.2.4 Recover From Mediator Service Component Faults

The following section provides a summary of the steps required to recover from Mediator service component faults. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Understand a fault policy. More
- **3.** Recover from faults. How?

#### 13.2.5 Manage Mediator Service Component Policies

The following section provides a summary of the steps required to attach or detach policies to or from Mediator service components. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Understand policies. More
- **3.** Understand the specific types of policies available and which ones to use in your environment. More
- 4. Attach and detach policies to and from BPEL process service components. How?

#### 13.2.6 Recover and Abort Faults

You can recover and abort single or multiple faults.

- 1. Open the SOA Infrastructure Home page. How?
- 2. Open the Mediator Service Engine Home page. How?
- **3.** Select the **Faults** tab.
- 4. Specify the search criteria. How?

- **5.** Select the faults.
- 6. Select an action. How?

#### 13.2.7 Monitor Mediator Routing Statistics

You can view routing statistics of a source operation or a subscribed event for a Mediator service component.

The steps for this process are:

- 1. Open the Mediator Component Home page. How?
- **2.** Specify a Routing source. How?

#### 13.2.8 Monitor Request Breakdown Statistics

You can view the request breakdown statistics such as minimum, maximum or average time taken for each stage of completing a request.

The steps for this process are:

- 1. Open the SOA Infrastructure Home page. How?
- 2. Open the Mediator Service Engine Home page. How?
- 3. Monitor the Request Breakdown Statistics. How?

#### 13.2.9 Delete Cross Reference Values

You can delete values from single or multiple cross reference tables. More

The steps for this process are:

- 1. Open the SOA Infrastructure Home page. How?
- 2. Open the Cross Reference page. How?
- 3. Specify values to be deleted. How?

#### 13.2.10 Configure Mediator Service Engine Properties

The following section provides a summary of the steps required to configure Mediator service engine properties. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Configure Mediator service engine properties. How?

#### 13.2.11 Monitor Mediator Service Engine Instances

The following section provides a summary of the steps required to monitor all Mediator service component instances running in the service engine. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand service engines. More
- 2. Understand SOA composite application instances. More
- 3. Monitor Mediator service engine instances. How?

#### 13.2.12 Monitor Deployments in the Mediator Service Engine

The following section provides a summary of the steps required to monitor all deployed Mediator service components running in the Mediator service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand deployment in Oracle JDeveloper. More
- 3. Understand deployment in Oracle Enterprise Manager. More
- 4. View details about deployments in the Mediator service engine. How?

#### 13.2.13 Recover from Mediator Service Engine Faults

The following section provides a summary of the steps required to recover from Mediator service engine faults. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- **2.** Understand fault recovery. More
- 3. Recover from faults. How?

#### 13.2.14 Monitor Mediator Service Engine Recent Instances and Faults

The following section provides a summary of the steps required to monitor Mediator service engine recent instances and faults. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand SOA composite applications. More
- 3. Understand SOA composite application instances. More
- 4. Monitor Mediator service engine recent instances and faults. How?

# 13.3 Manage Decision Service Component (Business Rules)

A Decision service component enables you to use business rules in a SOA application. This chapter describes the typical tasks you need to monitor and manage the Business Rules service engine and SOA composites with Decision service components:

This chapter includes the following sections:

- Section 13.3.1, "Manage Decision Service Components"
- Section 13.3.2, "Monitor Business Rules Service Engine Statistics"
- Section 13.3.3, "Monitor Deployed Decision Service Components"

#### 13.3.1 Manage Decision Service Components

The following section provides a summary of the steps required to manage Decision service components. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Understand SOA composite application instances. More
- 3. Monitor Business Rules service engine statistics. How?

#### 13.3.2 Monitor Business Rules Service Engine Statistics

The following section provides a summary of the steps required to monitor Business Rules service engine recent instances, components, and recent faults. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand SOA composite applications. More
- 3. Understand SOA composite application and service component instances. More
- 4. Monitor Business Rules service engine statistics. How?

#### 13.3.3 Monitor Deployed Decision Service Components

The following section provides a summary of the steps required to monitor Decision service components deployed in the Business Rules service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand deployment in Oracle JDeveloper. More
- **3.** Understand deployment in Oracle Enterprise Manager Fusion Middleware Control Console. More
- **4.** View details about deployments of Decision service components in the Business Rules service engine. How?

## 13.4 Manage Human Workflow

This chapter describes the set of typical tasks you need to configure Human workflow. Human workflow enables you to interleave human functions with connectivity to systems and services within the BPEL process flow. A human task assigns a task, such as an approval for an order, to a user or role and waits for a response. The users act on the task using the Oracle BPM Worklist. This integration of human tasks with a business process creates a tight integration between process and task.

This chapter includes the following sections:

- Section 13.4.1, "Configure Workflow Notification Properties"
- Section 13.4.2, "Configure Workflow Task Service Properties"
- Section 13.4.3, "Monitor Deployments in the Human Workflow Service Engine"

- Section 13.4.4, "Monitor Human Workflow Service Engine Active Requests and Operation Statistics"
- Section 13.4.5, "Manage Human Workflow Service Engine Incoming and Outgoing Notifications"
- Section 13.4.6, "Manage Human Task Service Component Policies"
- Section 13.4.7, "Manage the URI of the Human Task Service Component Task Details Application"

#### **13.4.1 Configure Workflow Notification Properties**

The following section provides a summary of the steps required to configure the notification mode and incoming and outgoing message addresses. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand the notification service for human workflows. More
- 2. Understand the role of the User Messaging Service in notifications. More
- **3.** Specify notification preferences in the Human Task Editor of Oracle JDeveloper. How?
- **4.** Configure the notification mode and incoming and outgoing message addresses in Oracle Enterprise Manager. How?

For more information about using the notification service, see the "Using the Notification Service" chapter in *Developing SOA Applications with Oracle SOA Suite*.

#### 13.4.2 Configure Workflow Task Service Properties

The following section provides a summary of the steps required to configure the task service actionable incoming e-mail account, additional workflow properties, and dynamic assignment and task escalation functions. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand the task service. More
- 2. Understand the dynamic assignment and task escalation functions. More
- **3.** Configure the task service actionable e-mail account, additional workflow properties, and dynamic assignment and task escalation functions. How?

For more information about how notifications are sent, see the "Notifications from Human Workflow" section in *Developing SOA Applications with Oracle SOA Suite*.

#### 13.4.3 Monitor Deployments in the Human Workflow Service Engine

The following section provides a summary of the steps required to monitor all human task service components running in the human workflow service engine. The service components are part of deployed SOA composite applications. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand deployment from Oracle JDeveloper. More
- 2. Understand service engines. More

- 3. Understand service component and service component instances. More
- 4. Understand SOA composite applications. More
- 5. Deploy SOA composite applications from Oracle Enterprise Manager. How?
- 6. Monitor deployments in the human workflow service engine. How?

# 13.4.4 Monitor Human Workflow Service Engine Active Requests and Operation Statistics

The following section provides a summary of the steps required to monitor active requests, average request processing times, and operation statistics in the human workflow service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- **2.** Monitor human workflow service engine active requests, average request processing times, and operation statistics. How?

#### 13.4.5 Manage Human Workflow Service Engine Incoming and Outgoing Notifications

The following section provides a summary of the steps required to manage incoming and outgoing notification messages for the human workflow service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand the notification service for human workflows. More
- **3.** Specify notification preferences in the Human Task Editor of Oracle JDeveloper. How?
- 4. Manage outgoing and incoming notifications in Oracle Enterprise Manager. How?

For more information about the notification service, see the "Using the Notification Service" chapter in *Developing SOA Applications with Oracle SOA Suite*.

#### 13.4.6 Manage Human Task Service Component Policies

The following section provides a summary of the steps required to manage policy attachments in human task service components. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand service component and service component instances. More
- 2. Understand policies. More
- **3.** Understand the specific types of policies available and which ones to use in your environment. More
- 4. Manage human task service component policies. How?

## 13.4.7 Manage the URI of the Human Task Service Component Task Details Application

The following section provides a summary of the steps required to manage the URI of the task details application of the human task service component. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Manage the task details application URI of human task service components. How?

For more information about using human workflow services in Oracle SOA Suite, see the "Introduction to Human Workflow Services" chapter in *Developing SOA Applications with Oracle SOA Suite*.

# Manage Binding Components, Oracle B2B, and Oracle Business Activity Monitoring

Binding components establish a connection between a SOA composite application and the external world.

This chapter includes the following sections:

- Section 14.1, "Manage Binding Components"
- Section 14.2, "Manage Oracle B2B"
- Section 14.3, "Manage Oracle Business Activity Monitoring"

## 14.1 Manage Binding Components

This section describes the set of typical tasks you need to configure binding components. Binding components enable your SOA composite application to communicate with the outside world. Services provide the outside world with an entry point to the SOA composite application. References enable messages to be sent from the SOA composite application to external services in the outside world.

This section contains the following topics:

- Section 14.1.1, "Monitor Services and References Binding Component Instances and Faults"
- Section 14.1.2, "Manage Service and Reference Binding Component Policies"
- Section 14.1.3, "Configure Service and Reference Binding Component Properties"

#### 14.1.1 Monitor Services and References Binding Component Instances and Faults

The following section provides a summary of the steps required to monitor binding component instances and faults and recently rejected messages. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand binding components. More
- 2. Monitor binding component instances and faults. How?

#### 14.1.2 Manage Service and Reference Binding Component Policies

The following section provides a summary of the steps required to manage policy attachments in binding components. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand binding components. More
- 2. Understand policies. More
- **3.** Understand the specific types of policies available and which ones to use in your environment. More
- 4. Manage binding component policies. How?

#### 14.1.3 Configure Service and Reference Binding Component Properties

The following section provides a summary of the steps required to modify values of binding component properties. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand binding components. More
- 2. Configure binding component properties. How?

#### 14.1.4 View Adapter Reports

The following section provides a summary of the steps required to view Adapter reports. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. From the SOA Composite page, click on a Service or Reference page.
- 2. Click on the Adapters Tab on the Service or Reference page.
- **3.** Click on Enable Reports. Fusion Middleware Control displays the Configuration, Monitoring and Snapshot Reports.

For more information see "Monitoring JCA Adapters," in the *Administering Oracle SOA Suite and Oracle Business Process Management Suite*.

#### 14.1.5 Schedule Adapter Endpoint Activation and Deactivation

The following section provides a summary of the steps required to schedule Adapter endpoint activation and deactivation. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. From the SOA Infrastructure menu, select **Define Schedules** to navigate to the **Scheduling Services** page.
- From the Scheduling Services menu that is available on that page, select Job Requests > Define Schedules. There, you can enter items such as the Schedule Name, Description, Frequency, and Start Date.
- 3. You can edit or delete these schedules from the Create Schedules page.
- **4.** Use the Adapter Schedules dialog to choose among schedules you have already established through **Job Requests -> Define Schedules**.

For more information see "Monitoring JCA Adapters," in the *Administering Oracle SOA Suite and Oracle Business Process Management Suite*.

# 14.2 Manage Oracle B2B

Oracle B2B enables secure and reliable e-business transaction exchanges between an organization and its external trading partners. This chapter describes the set of typical tasks you need to monitor Oracle B2B.

This section includes the following topics:

Monitor B2B Infrastructure-SOA Binding

#### 14.2.1 Monitor B2B Infrastructure-SOA Binding

The following section provides a summary of the steps required to monitor the B2B binding component. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand document types. More
- 2. Understand trading partners. More
- 3. Understand endpoints. More

Use the B2B Server Properties link and the B2B Console link under Related Links.

# 14.3 Manage Oracle Business Activity Monitoring

Oracle BAM enables you to monitor business processes in real time.

This section describes the set of typical tasks you need to perform to configure Oracle BAM.

The sections are:

- 1. Understand the Oracle BAM Property Page.
- 2. Monitor the Oracle BAM Performance Summary Page.
- 3. Control the Start Up and Shut Down of the Oracle BAM server.
- **4.** View Log Messages.
- 5. Configure Log Messages.
- 6. Understand Application Policies.
- 7. Understand Application Roles.
- 8. Understand System MBean Browser.
- **9.** Use Target Information to view additional information about the Oracle BAM server, including the version, Oracle Home path, Middleware Home path, Domain Home path, and host name.

#### **Related Topics**

"Understand Oracle BAM Monitoring and Management" in *Monitoring Business* Activity with Oracle BAM

"Monitoring Oracle BAM Performance" in *Monitoring Business Activity with Oracle BAM* 

"Monitoring Oracle BAM Logs" in Monitoring Business Activity with Oracle BAM

"Understanding Oracle BAM Security" in Monitoring Business Activity with Oracle BAM

"Using the Oracle WebLogic Server Administration Console" in *Oracle Fusion Middleware Administering Oracle Fusion Middleware* 

"Using the System MBean Server" in Oracle Fusion Middleware Administering Oracle Fusion Middleware

# **Manage Business Events**

Business events enable you to raise events when a situation of interest occurs. Business events consist of message data sent as the result of an occurrence in a business environment. When a business event is published, other service components can subscribe to it.

This chapter includes the following sections:

- Section 15.1, "Subscribe to Business Events"
- Section 15.2, "Manage Business Event Subscribers"

### 15.1 Subscribe to Business Events

The following section provides a summary of the steps required to manage the business events of a SOA composite application. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand business events, including subscriptions, event names, event namespaces, consistency levels, and XPath filters. More
- 2. Create business events in Oracle JDeveloper. How?
- 3. Subscribe to business events in Oracle Enterprise Manager. How?

# 15.2 Manage Business Event Subscribers

The following section provides a summary of the steps required to manage the business event subscribers in a SOA composite application. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand business events, including subscriptions, event names, event namespaces, consistency levels, and XPath filters. More
- 2. Create business events in Oracle JDeveloper. How?
- 3. Manage business event subscribers in Oracle Enterprise Manager. How?

# Manage Oracle Service Bus

This chapter describes the set of typical tasks you need to configure and monitor Oracle Service Bus projects and instances.

This chapter includes the following sections:

- Section 16.1, "Monitor Service Bus SLA Alerts"
- Section 16.2, "Monitor Service Bus Pipeline Alerts"
- Section 16.3, "Monitor Service Bus Services with Errors"
- Section 16.4, "Configure Operational Settings for a Single Service"
- Section 16.5, "Configure Operational Settings for Multiple Services Across the Domain"
- Section 16.6, "Configure Operational Settings for Multiple Services in a Project"
- Section 16.7, "Configure Service Bus Global Operational Settings"
- Section 16.8, "Monitor Service Health Across a Service Bus Domain"
- Section 16.9, "Monitor Service Health for a Service Bus Project"
- Section 16.10, "Monitor Health for a Service Bus Service"
- Section 16.11, "Monitor Service Bus Resequencing Groups"
- Section 16.12, "Skip Resequencing Messages or Recover from Faults"
- Section 16.13, "View and Update Security Policies"
- Section 16.14, "View Service Bus Log Files"
- Section 16.15, "View Service Bus Message Reports"
- Section 16.16, "Import Service Bus Projects and Resources"
- Section 16.17, "Export Service Bus Projects and Resources"

# 16.1 Monitor Service Bus SLA Alerts

The following provides a summary of the steps required to view SLA alerts generated for all services across a Service Bus domain and to search for specific alerts. This section provides links to documentation that describes key concepts and procedures. More

- 1. Understand SLA alerts. More
- 2. Create SLA alerts for Service Bus services. How?

- 3. Enable monitoring and alerting. How?
- 4. Specify an alert level. How?
- 5. View all SLA alerts on the Service Bus Dashboard. How?
- 6. Search for SLA alerts. How?

# 16.2 Monitor Service Bus Pipeline Alerts

The following provides a summary of the steps required to view pipeline alerts generated for all pipelines across a Service Bus domain and to search for specific alerts. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand pipeline alerts. More
- 2. Add alert actions to pipelines. How?
- 3. Enable monitoring and alerting. How?
- 4. View all pipeline alerts on the Service Bus Dashboard. How?
- 5. Search for pipeline alerts. How?

# 16.3 Monitor Service Bus Services with Errors

The following provides a summary of the steps required to view services with the most errors across a Service Bus domain. This section provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. View services with the most errors on the Service Bus Dashboard. How?
- 2. View the service metrics for services with errors. How?

# 16.4 Configure Operational Settings for a Single Service

The following provides a summary of the steps required to view and configure operational settings for a service in a Service Bus domain. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand operational settings. More
- 2. Access the Properties page for the service. How?
- 3. Modify the operational settings for the services.
- 4. If necessary, modify the corresponding global settings. How?

# 16.5 Configure Operational Settings for Multiple Services Across the Domain

The following provides a summary of the steps required to view and configure operational settings for a multiple services in a Service Bus domain. This section provides links to documentation that describes key concepts and procedures. More The steps for this process are:

- 1. Understand operational settings. More
- 2. Search for services to configure. How?
- **3.** Modify the operational settings for the services. How?
- 4. If necessary, modify the corresponding global settings. How?

## 16.6 Configure Operational Settings for Multiple Services in a Project

The following provides a summary of the steps required to view and configure operational settings for a multiple services within a Service Bus project. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand operational settings. More
- **2.** Search for services to configure. How?
- **3.** Modify the operational settings for the services. How?
- 4. If necessary, modify the corresponding global settings. How?

# 16.7 Configure Service Bus Global Operational Settings

The following provides a summary of the steps required to view and configure operational settings at the domain level in a Service Bus domain. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand operational settings. More
- **2.** Modify the operational settings globally. How?

#### 16.8 Monitor Service Health Across a Service Bus Domain

The following provides a summary of the steps required to view statistics that indicate the health of the services running on a Service Bus domain. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand service health metrics. More
- 2. Search for services to monitor their health. How?

## 16.9 Monitor Service Health for a Service Bus Project

The following provides a summary of the steps required to view statistics that indicate the health of the services in a Service Bus project. This section provides links to documentation that describes key concepts and procedures. More

- 1. Understand service health metrics. More
- 2. Search for services to monitor their health. How?

# 16.10 Monitor Health for a Service Bus Service

The following provides a summary of the steps required to view statistics that indicate the health of a service running on a Service Bus domain. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand service health metrics. More
- 2. View a service's health metrics on its Dashboard. How?

## 16.11 Monitor Service Bus Resequencing Groups

The following provides a summary of the steps required to view the status of resequencing groups on a Service Bus domain. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand resequencing in Service Bus. More
- 2. Search for resequencing messages to monitor. How?
- 3. View status information for a resequencing message. How?

# 16.12 Skip Resequencing Messages or Recover from Faults

The following provides a summary of the steps required to skip the processing for a message in a resequencing group that has timed out and is blocking other messages from being processed. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand resequencing in Service Bus. More
- 2. Search for resequencing groups to monitor. How?
- **3.** Skip a stuck message or recover from a fault in a resequencing group. How?

# 16.13 View and Update Security Policies

The following provides a summary of the steps required to view and update security policies for Service Bus services. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand security policies. More
- 2. View policies attached to a service. How?
- **3.** Attach or detach policies, or define policy overrides. How?

## 16.14 View Service Bus Log Files

The following provides a summary of the steps required to view Service Bus log files in Fusion Middleware Control. This section provides links to documentation that describes key concepts and procedures. More

- 1. Understand logging in Service Bus. More
- 2. (Optional) Configure Service Bus logging. How?
- **3.** View log file entries. How?

# 16.15 View Service Bus Message Reports

The following provides a summary of the steps required to view Service Bus message reports in Fusion Middleware Control. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand Service Bus message reports. More
- 2. Create reporting actions. How?
- 3. Enable message reporting for the service. How?
- 4. Enable message reporting globally. How?
- 5. View message reports. How?

# 16.16 Import Service Bus Projects and Resources

The following provides a summary of the steps required to import Service Bus projects and resources into a Service Bus domain using Fusion Middleware Control. This section provides links to documentation that describes key concepts and procedures. More

The steps for this process are:

- 1. Understand the import process. More
- 2. Import a configuration JAR file. How?

# 16.17 Export Service Bus Projects and Resources

The following provides a summary of the steps required to export Service Bus projects and resources from Fusion Middleware Control. This section provides links to documentation that describes key concepts and procedures. More

- 1. Understand the export process. More
- 2. Export Service Bus resources. How?

# Part IV

# Manage Oracle Business Process Management Suite

This part includes the following chapter:

Chapter 17, "Manage Oracle Business Process Management Suite"

# Manage Oracle Business Process Management Suite

This chapter describes the set of typical tasks you need to configure Oracle Business Process Management Suite. Oracle Business Process Management Suite enables you to orchestrate and execute business process flow.

This chapter includes the following sections:

- Section 17.1, "Configure BPMN Process Service Engine Properties"
- Section 17.2, "Monitor BPMN Process Service Engine Performance Statistics"
- Section 17.3, "Monitor Deployments in the BPMN Process Service Engine"
- Section 17.4, "Manage BPMN Process Service Component Policies"
- Section 17.5, "Recover from BPMN Process Service Engine Message Failure"

# 17.1 Configure BPMN Process Service Engine Properties

The following section provides a summary of the steps required to configure BPMN process service engine properties. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Configure BPMN process service engine properties. How?

# 17.2 Monitor BPMN Process Service Engine Performance Statistics

The following section provides a summary of the steps required to monitor BPMN process service engine pending and active requests and thread statistics. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Monitor pending and active requests and thread statistics. How?

# 17.3 Monitor Deployments in the BPMN Process Service Engine

The following section provides a summary of the steps required to monitor all BPMN process service components running in the BPMN process service engine. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service engines. More
- 2. Understand deployment in Oracle JDeveloper. More
- 3. Understand deployment in Oracle Enterprise Manager. More
- 4. View details about deployments in the BPMN process service engine. How?

# 17.4 Manage BPMN Process Service Component Policies

The following section provides a summary of the steps required to attach or detach policies to or from BPMN process service components. This section also provides links to documentation that describes key concepts and procedures.

The steps for this process are:

- 1. Understand service component and service component instances. More
- 2. Understand policies. More
- **3.** Understand the specific types of policies available and which ones to use in your environment. More
- 4. Attach and detach policies to and from BPMN process service components. How?

# 17.5 Recover from BPMN Process Service Engine Message Failure

The following section provides a summary of the steps required to perform manual message recovery in the BPMN process service engine. This section also provides links to documentation that describes key concepts and procedures.

- 1. Understand service engines. More
- 2. Recover from message failure. How?

# Part V

# Manage Oracle Data Integrator

This section of the online help contains the following:

Manage Oracle Data Integrator

# 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 18.1, "Configure Oracle Data Integrator"
- Section 18.2, "Manage Oracle Data Integrator"

### 18.1 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?

# 18.2 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. Configure ODI Standalone agents. How?

- 4. Configure Master Repository. How?
- 5. Search sessions. How?
- 6. Search Load Plan executions. How?
- 7. View log messages. How?

# 18.3 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.** Expand the Application Deployments folder in the Target Navigation pane and click **odiconsole**. The odiconsole page is displayed.
- 2. From the Domain Application Deployment menu, select Control.
- **3.** Perform one of the following actions:
  - <sup>n</sup> Select **Start Up** to start Oracle Data Integrator Console.
  - <sup>n</sup> Select **Shut Down...** to stop Oracle Data Integrator Console.

# 18.4 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. Expand the ODI folder in the Target Navigation pane and click the target link corresponding to your J2EE Agent. The J2EE Agent home page is displayed.
- 2. From the Agent menu, select Control.
- **3.** Perform one of the following actions:
  - <sup>n</sup> Select **Start Up** to start the agent.
  - <sup>n</sup> 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 *Oracle Fusion Middleware Administering Oracle Data Integrator* for more information about how to start and shut down agents.

# 18.5 View Log Messages

You can view log messages in Fusion Middleware Control.

- **1.** Navigate to the Agent home page.
- 2. From the Agent menu, select Logs > View Log Messages.

# Part VI Container Topics

This part includes the following appendix:

 Appendix A, "Task-Summary Topics for Selected Fusion Middleware Control Pages"

# 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:

- Section A.1, "Fusion Middleware Components Page"
- Section A.2, "Ports Configuration and SSL Configuration Pages"
- Section A.3, "Create Port or Edit Port Page"
- Section A.4, "Oracle WebLogic Server Domain Home Page"
- Section A.5, "Oracle WebLogic Server Cluster Home Page"
- <sup>n</sup> Section A.6, "Server Home Page"
- Section A.7, "Java EE Application Home Page"
- Section A.8, "Cluster Application Home Page"
- <sup>n</sup> Section A.9, "Deployment Settings Page"
- <sup>n</sup> Section A.10, "Deployment/Redeployment Wizard"
- <sup>n</sup> Section A.11, "Wallets Page"
- <sup>n</sup> Section A.12, "Keystores Page"
- <sup>n</sup> Section A.13, "Manage Certificates (for Oracle Wallets) Page"
- Section A.14, "Manage Certificates (for JKS Keystores) Page"
- Section A.15, "Oracle HTTP Server Home Page"
- <sup>n</sup> Section A.16, "Oracle SOA Suite"
- <sup>n</sup> Section A.17, "Oracle Business Process Management Suite"
- <sup>n</sup> Section A.18, "Oracle Data Integrator Console Home Page"
- <sup>n</sup> Section A.19, "Oracle Service Bus"

# 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
- <sup>n</sup> Manage Oracle WebLogic Server with the Administration Console

#### Managing the Farm Domain from Fusion Middleware Control

- <sup>n</sup> Use the Change Center and set user preferences
- <sup>n</sup> Deploy Applications Using Fusion Middleware Control
- <sup>n</sup> Manage Oracle Fusion Middleware Web Services
- <sup>n</sup> 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
- n 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
- <sup>n</sup> 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
- <sup>n</sup> 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
- <sup>n</sup> 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:

- <sup>n</sup> 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
- <sup>n</sup> 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:

- <sup>n</sup> Deploy Applications Using Fusion Middleware Control
- <sup>n</sup> 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:

- n Create a Wallet
- <sup>n</sup> Create a Self-Signed Wallet
- n Export a Wallet
- n Import a Wallet
- <sup>n</sup> 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:

- <sup>n</sup> Create a Keystore
- Export a Keystore
- <sup>n</sup> Delete a Keystore
- <sup>n</sup> Import a Keystore
- <sup>n</sup> 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
- <sup>n</sup> Export a Certificate, Certificate Request, or a Trusted Certificate
- <sup>n</sup> Import a Certificate or a Trusted Certificate
- <sup>n</sup> Delete a Certificate Request, a Certificate, or a Trusted Certificate
- <sup>n</sup> 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:

- <sup>n</sup> Generate a Certificate Signing Request
- <sup>n</sup> Import a Certificate or Trusted Certificate into a Keystore
- <sup>n</sup> Export a Certificate or Trusted Certificate from the Keystore
- <sup>n</sup> Delete a Certificate or Trusted Certificate from the Keystore
- <sup>n</sup> 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**

- <sup>n</sup> Set the Listening Port
- <sup>n</sup> Configure SSL for a Listening Port
- <sup>n</sup> Specify Server Configuration Properties
- <sup>n</sup> Configure MIME Settings
- <sup>n</sup> Configure mod\_wl\_ohs

- <sup>n</sup> Configure mod\_perl
- <sup>n</sup> Configure Error and Access Logs
- Configure a Virtual Host

#### Manage Oracle HTTP Server

- Start Oracle HTTP Server
- <sup>n</sup> Stop Oracle HTTP Server
- n Restart Oracle HTTP Server
- <sup>n</sup> View Port Numbers
- <sup>n</sup> View Oracle HTTP Server Logs

#### Monitor Oracle HTTP Server Performance

- <sup>n</sup> Monitoring Server Performance
- <sup>n</sup> Set Performance Directives

# A.16 Oracle SOA Suite

Use this page to manage Oracle SOA Suite.

#### A.16.1 SOA Infrastructure

Use this page to manage the SOA Infrastructure.

#### A.16.1.1 Manage the SOA Infrastructure

Use the SOA Infrastructure page to configure, monitor, and manage deployed SOA composite applications.

This page enables you to perform the following tasks:

- n Monitor Overall Status of the SOA Infrastructure
- <sup>n</sup> Monitor Deployed SOA Composite Applications in the SOA Infrastructure
- <sup>n</sup> Track Business Flow Instances in the SOA Infrastructure
- Manage Faults in the Error Hospital of the SOA Infrastructure

#### A.16.2 SOA Partitions

Use the SOA partition to manage and monitor deployed SOA composite application.

This page enables you to perform the following tasks:

- <sup>n</sup> Manage a Partition from the Dashboard Page
- <sup>n</sup> Manage Deployed Composites in the Partition
- <sup>n</sup> Track Business Flow Instances in the Partition
- <sup>n</sup> Manage Faults in the Error Hospital in the Partition

#### A.16.3 SOA Composite Application

Use this page to manage the SOA composite application.

#### A.16.3.1 Oracle SOA Composite Page

Use the Oracle SOA Composite page to monitor, manage, and run SOA composite applications.

This page enables you to perform the following tasks:

- Monitor the SOA Composite Application Dashboard
- Note: View the SOA Composite Application Diagram
- Tracking Business Flow Instances of the SOA Composite Application
- Automate SOA Composite Application Tests
- Manage SOA Composite Application Policies

#### A.16.4 Oracle BPEL Process Manager

Use this page to manage Oracle BPEL Process Manager.

#### A.16.4.1 BPEL Component Page

Use the BPEL Component page to monitor and manage BPEL process service components.

This page enables you to perform the following tasks:

- Monitor BPEL Process Service Component Dashboard
- Manage BPEL Process Service Component Policies

#### A.16.4.2 BPEL Engine Page

Use the BPEL Engine page to monitor and manage BPEL service engines.

This page enables you to perform the following tasks:

- Monitor Deployments in the BPEL Process Service Engine
- Monitor BPEL Process Service Engine Pending and Active Requests and Thread Performance Statistics
- Recover from BPEL Process Service Engine Message Failure

#### A.16.5 Decision Service Component

Use this page to manage the decision service component.

#### A.16.5.1 Decision Service Component Page

Use the Decision service component page to monitor and manage Decision Service components.

These pages enable you to perform the following tasks:

Manage Decision Service Components

#### A.16.5.2 Business Rules Engine Page

Use the Business Rules engine page to monitor and manage Business Rules service engines.

This page enables you to perform the following tasks:

Monitor Business Rules Service Engine Statistics

Monitor Deployed Decision Service Components

#### A.16.6 Human Workflow

Use this page to manage human workflow.

#### A.16.6.1 Human Workflow Engine Page

Use the Human Workflow Engine page to monitor and manage human workflow service engines.

This page enables you to perform the following tasks:

- Monitor Human Workflow Service Engine Active Requests and Operation Statistics
- Monitor Deployments in the Human Workflow Service Engine
- Manage Human Workflow Service Engine Incoming and Outgoing Notifications

#### A.16.6.2 Human Task Component Page

Use the Human Task Component page to monitor and manage human task service components.

This page enables you to perform the following tasks:

- Manage Human Task Service Component Policies
- Manage the URI of the Human Task Service Component Task Details Application

#### A.16.7 Oracle Mediator

Use to manage Oracle Mediator.

#### A.16.7.1 Oracle MediatorService Component Page

Use the Oracle Mediator page to monitor and manage Oracle Mediator service components.

- <sup>n</sup> Monitor Mediator Service Component Recent Instances and Faults
- <sup>n</sup> Monitor Mediator Service Component Instances
- <sup>n</sup> Monitor Mediator Service Component Faults
- <sup>n</sup> Recover From Mediator Service Component Faults
- Manage Mediator Service Component Policies

#### A.16.7.2 Oracle MediatorService Engine Page

Use the Oracle Mediator page to monitor and manage the Oracle Mediator service engine.

- <sup>n</sup> Monitor Request Breakdown Statistics
- <sup>n</sup> Monitor Deployments in the Mediator Service Engine
- <sup>n</sup> Recover from Mediator Service Engine Faults
- Recover from Mediator Service Engine Faults

#### A.16.8 Binding Components

Use to manage binding components.

#### A.16.8.1 Services and References Binding Components Page

Use the Services and References page to configure, monitor, and manage service and reference binding components in SOA composite applications.

This page enables you to perform the following tasks:

- Monitor Services and References Binding Component Instances and Faults
- Manage Service and Reference Binding Component Policies
- <sup>n</sup> Configure Service and Reference Binding Component Properties
- N View Adapter Reports

#### A.16.9 Business Events

Use the Business Events page to manage business events.

#### A.16.9.1 Business Events Page

Use the Business Events page to manage business events.

This page enables you to perform the following tasks:

- <sup>n</sup> Subscribe to Business Events
- Manage Business Event Subscribers

#### A.16.10 Oracle BAM

Use this page to manage Oracle Business Activity Monitoring.

#### A.16.10.1 Oracle BAM Server Page

Use the Oracle BAM Server page to monitor server performance and configure server properties.

This page enables you to perform the following tasks:

- <sup>n</sup> Monitor Oracle BAM Server Performance
- <sup>n</sup> Configure Oracle BAM Server Properties

#### A.16.10.2 Oracle BAM Web Applications Page

Use the Oracle BAM Web Applications page to monitor web applications performance and configure web application properties.

This page enables you to perform the following tasks:

- <sup>n</sup> Monitor Oracle BAM Web Applications Performance
- <sup>n</sup> Configure Oracle BAM Web Properties

# A.17 Oracle Business Process Management Suite

Use this page to manage Oracle Business Process Management Suite.

#### A.17.1 BPMN Component Page

Use the BPMN Component page to monitor and manage BPMN process service components.

This page enables you to perform the following tasks:

Manage BPMN Process Service Component Policies

#### A.17.2 BPMN Engine Page

Use the BPMN Engine page to monitor and manage BPMN service engines.

This page enables you to perform the following tasks:

- Monitor BPMN Process Service Engine Performance Statistics
- <sup>n</sup> Monitor Deployments in the BPMN Process Service Engine
- <sup>n</sup> Recover from BPMN Process Service Engine Message Failure

# A.18 Oracle Data Integrator Console Home Page

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

- <sup>n</sup> Configure Oracle Data Integrator
- Manage Oracle Data Integrator

#### A.18.1 Agent Home Page

Use this page to monitor the Oracle Data Integrator run-time agents.

You can perform the following tasks on this page:

- <sup>n</sup> Click **Master Repository** to access the Master Repository Home Page and monitor Master Repository components.
- <sup>n</sup> Search Sessions
- <sup>n</sup> Search Load Plan Executions

#### A.18.2 Master Repository Home Page

Use this page to monitor the master repository components.

You can perform the following tasks on this page:

- Search Sessions
- <sup>n</sup> Search Load Plan Executions

# A.19 Oracle Service Bus

Use these pages to monitor and manage Oracle Service Bus projects and services.

#### A.19.1 Manage an Oracle Service Bus Domain

Use this page to monitor and manage service health, alerts, and errors across a Service Bus domain. You can also update operational and global settings, skip resequenced messages, and recover from resequencing faults. You can perform the following tasks on this page:

- <sup>n</sup> Monitor Service Bus SLA Alerts
- <sup>n</sup> Monitor Service Bus Pipeline Alerts
- n Monitor Service Bus Services with Errors
- <sup>n</sup> Monitor Service Health Across a Service Bus Domain
- <sup>n</sup> Monitor Service Bus Resequencing Groups
- <sup>n</sup> Skip Resequencing Messages or Recover from Faults
- <sup>n</sup> Configure Operational Settings for Multiple Services Across the Domain
- <sup>n</sup> Configure Service Bus Global Operational Settings

#### A.19.2 Manage an Oracle Service Bus Project

Use this page to monitor and manage service health across a Service Bus project and to configure operational settings for services the project.

You can perform the following tasks on this page:

- Monitor Service Health for a Service Bus Project
- Configure Operational Settings for Multiple Services in a Project

#### A.19.3 Manage an Oracle Service Bus Service Without OWSM Policies

Use this page to monitor and manage service health for a Service Bus service that does not have any OWSM policies attached. You can also configure operational settings for the service.

You can perform the following tasks on this page:

- <sup>n</sup> Monitor Health for a Service Bus Service
- <sup>n</sup> Configure Operational Settings for a Single Service

#### A.19.4 Manage an Oracle Service Bus Service with OWSM Policies

Use this page to monitor and manage service health for a Service Bus proxy or business service to which OWSM policies can be attached. You can also configure operational settings for the service.

You can perform the following tasks on this page:

- Monitor Health for a Service Bus Service
- Note: Not
- Configure Operational Settings for a Single Service