Oracle® Fusion Middleware

Installing and Configuring Oracle SOA Suite and Business Process Management

12*c* (12.1.3)

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Documentation for installers and system administrators that describes how to install and configure Oracle SOA Suite and Business Process Management.

ORACLE®

Oracle Fusion Middleware Installing and Configuring Oracle SOA Suite and Business Process Management, 12*c* (12.1.3)

E38081-03

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A   Understanding the Secondary Topologies for Oracle SOA Suite and Business Process Management

Preface

This document describes how to install and configure Oracle SOA Suite and Business Process Management.

Audience

This document is intended for system administrators or application developers who are installing Oracle SOA Suite and Business Process Management. It is assumed that readers are familiar with Web technologies and have a general understanding of Windows and UNIX platforms.

Documentation Accessibility

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Related Documents

For more information, see the following documents in the 12*c* (12.1.3) documentation set:

- *Planning an Installation of Oracle Fusion Middleware*

- *Installing and Configuring the Oracle Fusion Middleware Infrastructure*

- *Administering Oracle SOA Suite and Oracle Business Process Management Suite*

- *Installing Oracle SOA Suite Quick Start*

- *High Availability Guide*

- *WLST Command Reference for SOA Suite*

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.

1

Planning the Oracle SOA Suite and Business Process Management Installation

This chapter will help you plan your installation and configuration for Oracle SOA Suite and Business Process Management by providing topologies, explaining the product distribution, and giving you an overview of the entire process.

Various topics are covered that should be reviewed thoroughly to help ensure that you do not encounter any problems either during or after the product installation and domain configuration.

The following topics are covered:

- Using This Document
- About Installing a Development Environment
- Understanding the Standard Installation Topologies
- Roadmap for Installing and Configuring the Standard Installation Topologies
- Roadmap for Verifying Your System Environment
- Understanding and Obtaining the Product Distributions
- Verifying the Installation Checklist
- Products and Components Not Included in the Standard Installation Topologies
- About the Custom Variables Required for the SOA Suite Schemas

1.1 Using This Document

This section contains the following topics:

- Section 1.1.1, "Using the Standard Installation Topology as a Starting Point"
- Section 1.1.2, "Using this Document in an Upgrade Scenario"
- Section 1.1.3, "Using this Document to Extend a Domain"

1.1.1 Using the Standard Installation Topology as a Starting Point

This guide will help you create the standard installation topology for Oracle SOA Suite (Figure 1–1) and Oracle Business Process Management (Figure 1–2). These topologies can be extended to be highly available and secure, making them suitable for a production system.

The standard installation topology represents a sample topology for this product; it is not the only topology that is supported. For more information, see "Understanding the Standard Installation Topology" in *Planning an Installation of Oracle Fusion Middleware*.

1.1.2 Using this Document in an Upgrade Scenario

If you are installing Oracle SOA Suite and Business Process Management as part of an upgrade procedure, follow the instructions in this book to install the software, but do not run the Configuration Wizard to create a WebLogic domain.

After the software is installed, refer to *Upgrading Oracle SOA Suite and Business Process Management*.

1.1.3 Using this Document to Extend a Domain

The instructions in this document describe how to create a new domain, and assumes that no other Oracle Fusion Middleware products are installed on your system. All of the instructions for installation and domain creation are based on this assumption.

In the event that you already have other Oracle Fusion Middleware products installed on your system (for example, you already have Oracle Fusion Middleware Infrastructure installed with a domain that is up and running), the same instructions can be used to extend your existing domain. If you choose to do this, be sure to read "Installing Multiple Products in the Same Domain" in *Planning an Installation of Oracle Fusion Middleware* for important information.

If you are creating a new domain but your needs do not match the instructions given in the procedure, be sure to make your selections accordingly and refer to the supporting documentation for additional details.

1.2 About Installing a Development Environment

This guide describes how to use the Oracle SOA Suite and Business Process Management distribution to install and configure a standard installation topology as a starting point for a production environment.

To install Oracle SOA Suite and Business Process Management in a development environment, Oracle recommends that you download and install the Oracle SOA Suite or Oracle Business Process Quick Start distribution, which provides an integrated development environment (IDE), preconfigured with the design-time software to develop SOA Suite and Business Process Management applications.

With Oracle JDeveloper, you can test your applications from within JDeveloper, using the integrated Oracle WebLogic Server, or you can create a compact domain to use as runtime environment for your custom applications.

For more information, see *Installing SOA Suite and Business Process Management Quick Start for Developers*.

1.3 Understanding the Standard Installation Topologies

This section contains the following topics:

- Section 1.3.1, "Understanding the Oracle SOA Suite Standard Installation Topology"
- Section 1.3.2, "Understanding the Oracle Business Process Management Standard Installation Topology"

- Section 1.3.3, "Understanding the Elements in the Standard Installation Topology Illustrations"

1.3.1 Understanding the Oracle SOA Suite Standard Installation Topology

The standard installation topology for Oracle SOA Suite is shown in Figure 1–1.

Figure 1–1   Oracle SOA Suite Standard Installation Topology
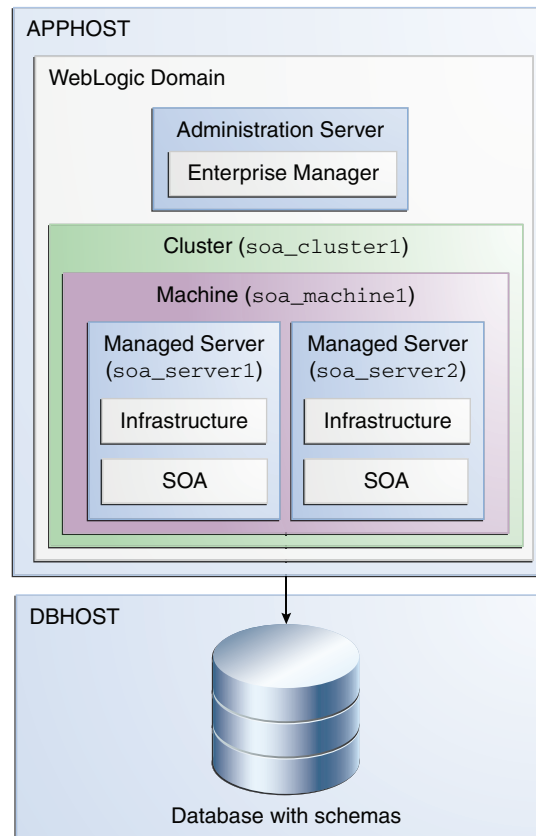
1.3.2 Understanding the Oracle Business Process Management Standard Installation Topology

The standard installation topology for Oracle Business Process Management is shown in Figure 1–2.

Figure 1–2   Oracle Business Process Management Standard Installation Topology
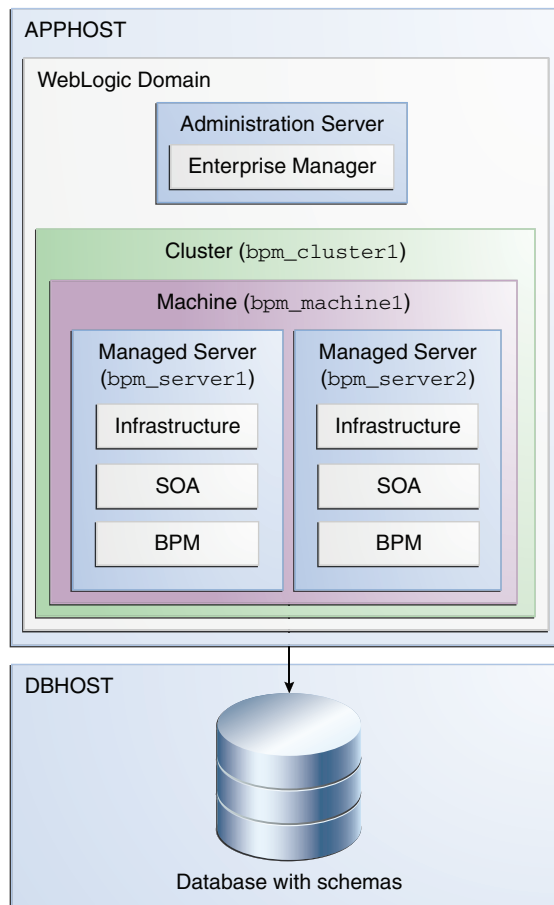
1.3.3 Understanding the Elements in the Standard Installation Topology Illustrations

All elements in this topology illustration are described in Table 1–1.

Table 1–1   Description of the Elements in the Oracle SOA Suite and Business Process Management Standard Installation Topologies

Element	Description and Links to Additional Documentation
APPHOST	Standard term used in Oracle documentation referring to the machine that is hosting the application tier.
DBHOST	Standard term used in Oracle documentation referring to the machine that is hosting the database.
WebLogic Domain	A logically related group of Java components (in this case, the administration Server, Managed Servers, and other related software components). For more information, see "What is an Oracle WebLogic Server Domain" in *Understanding Oracle Fusion Middleware*.
Administration Server	The central control entity of a domain which maintains the domain's configuration objects and distributes configuration changes to Managed Servers. For more information, see "What is the Administration Server" in *Understanding Oracle Fusion Middleware*.

Table 1–1   (Cont.) Description of the Elements in the Oracle SOA Suite and Business Process Management Standard Installation Topologies

Element	Description and Links to Additional Documentation
Enterprise Manager	Oracle Enterprise Manager Fusion Middleware Control. This is the main tool that can be used to manage your domain.
	For more information, see "Oracle Enterprise Manager Fusion Middleware Control" in *Understanding Oracle Fusion Middleware*.
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together.
	For more information, see "Understanding Managed Servers and Managed Server Clusters" in *Understanding Oracle Fusion Middleware*.
Machine	Logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between WebLogic Managed Servers and the Node Manager; in order to start or stop a Managed Server with Node Manager, the Managed Server must be associated with a machine.
Managed Server	Host for your applications, application components, Web services, and their associated resources.
	For more information, see "Understanding Managed Servers and Managed Server Clusters" in *Understanding Oracle Fusion Middleware*.
Infrastructure	Collection of services that include the following:
	■ Metadata repository (MDS)
	This contains metadata for Oracle Fusion Middleware components, such as the Oracle Application Developer Framework.
	For more information, see "What is the Metadata Repository" in *Understanding Oracle Fusion Middleware*.
	■ Oracle Application Developer Framework (Oracle ADF)
	■ Oracle Web Services Manager (OWSM)

1.4 Roadmap for Installing and Configuring the Standard Installation Topologies

This guide provides all the steps required to install and configure the standard installation topologies. Within the procedures, the guide also provides references to additional information that you can use if you want to create a modified version of this topology.

Table 1–2 show the steps required to install and configure the topology.

Table 1–2   Oracle SOA Suite and Business Process Management Installation Roadmap

Task	Description	Documentation
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	See Section 1.5.
Check for any mandatory patches that will be required before or after the installation	Review the Oracle Fusion Middleware Infrastructure release notes to see if there are any mandatory patches required for the software products you are installing.	See "Install and Configure" in *Release Notes for Oracle Fusion Middleware Infrastructure*.
Obtain the appropriate distribution	Both Oracle SOA Suite and Business Process Management require an existing Oracle Fusion Middleware Infrastructure installation; Oracle SOA Suite and Business Process Management must be installed in the same Oracle Home as Oracle Fusion Middleware Infrastructure. You must obtain both product distributions.	See Section 1.6.
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements. Both Oracle SOA Suite and Oracle Business Process Management must be installed into an existing Oracle home directory containing Oracle Fusion Middleware Infrastructure.	See "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.
Install Oracle Fusion Middleware Infrastructure	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle SOA Suite and Business Process Management.	See *Installing and Configuring the Oracle Fusion Middleware Infrastructure*. There is no need to configure a domain for Infrastructure; the purpose of this task is to install `oracle_common` into the Oracle home.
Install the software	Run the Oracle Universal Installer to install Oracle SOA Suite or Oracle Business Process Management. Installing the software transfers the software to your system and creates the Oracle home directory.	See Chapter 2.
Select a database profile and review any requirements for Oracle SOA Suite Healthcare Integration	Before you install the required schemas in the database, review the information about the custom variables you will need to set for the SOA Suite schemas.	See Section 1.9.

Table 1–2 (Cont.) Oracle SOA Suite and Business Process Management Installation Roadmap

Task	Description	Documentation
Create the schemas	Run the Repository Creation Utility to create the schemas required for configuration.	See Section 3.1.
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain.	See Section 3.2 if you are creating the topology for Oracle SOA Suite.
		See Chapter 4.2 if you are creating the topology for Business Process Management.
Administer and prepare your domain for high availability	Discover additional tools and resources to administer your domain and configure your domain to be highly available.	See Chapter 5.

1.5 Roadmap for Verifying Your System Environment

This section (Table 1–3) contains important information that you must read and understand prior to beginning the installation and configuration process. It identifies important tasks and checks to perform to make sure your environment is properly prepared for installing and configuring Oracle SOA Suite and Business Process Management.

Table 1–3 Roadmap for Verifying Your System Environment

Task	Description	Documentation
Verify certification and system requirements	Verify that your operating system is certified and properly configured for installation and configuration.	See "Verifying Certification and System Requirements" in *Planning an Installation of Oracle Fusion Middleware*.
Identify a proper installation user	Verify that the installation user has the proper permissions to install and configure the software.	See "Selecting an Installation User" in *Planning an Installation of Oracle Fusion Middleware*.
Select the installation and configuration directories on your system	Verify that you are able to create the necessary directories for installation and configuration, according to the recommended directory structure.	See "Selecting Directories for Installation and Configuration" in *Planning an Installation of Oracle Fusion Middleware*.
Install a certified JDK	The installation program for the distribution requires a certified JDK present on your system.	See "Installing a JDK" in *Planning an Installation of Oracle Fusion Middleware*.
Install and configure an Oracle database	To configure your WebLogic domain, you must have access to a certified database that is properly configured for schemas required by Oracle SOA Suite and Business Process Management.	See "Installing and Configuring a Certified Database" in *Planning an Installation of Oracle Fusion Middleware*.

1.6 Understanding and Obtaining the Product Distributions

The distributions for Oracle Fusion Middleware Infrastructure and Oracle SOA Suite and Business Process Management are available as `.jar` files. You must have a certified JDK already installed on your system in order to install and configure this distribution.

> **Tip:** For more information about distributions, see "Understanding and Obtaining Product Distributions" in *Planning an Installation of Oracle Fusion Middleware*.

For information on how to obtain the distribution, see "Obtaining Product Distributions" in *Planning an Installation of Oracle Fusion Middleware*.

1.7 Verifying the Installation Checklist

Table 1–4 lists important items that you must know before or decide during Oracle SOA Suite and Business Process Management installation.

Table 1–4   Installation Checklist

Information	Example Value	Description
JAVA_HOME	/home/Oracle/jdk7_55/jdk1.7.0_55	Environment variable that points to the Java JDK 1.7 home directory.
Database hostname	examplehost.exampledomain	Name and domain of the host where the database is running.
Database port	1521	Port number on which the database listens. The default Oracle database listen port is 1521.
Database service name	orcl	Oracle databases require a unique service name. The default service name is orcl.
DBA username	SYS	Name of user with database administration privileges. The default DBA user on Oracle databases is SYS.
DBA password	ExamplePassword1	Password of the user with database administration privileges.
ORACLE_HOME	/home/Oracle/product/Oracle_Home	The directory in which you will install your software. This directory will include Oracle Fusion Middleware Infrastructure, Oracle SOA Suite and Oracle Business Process Management Suite, as needed.
WebLogic Server hostname	examplehost.exampledomain.com	Hostname for Oracle WebLogic Server and Oracle SOA Suite and Business Process Management consoles.
Console port	7001	Port for Oracle WebLogic Server and Oracle SOA Suite and Business Process Management consoles.
DOMAIN_HOME	/home/Oracle/config/domains/soa_domain	Location in which your domain data is stored.
APPLICATION_HOME	/home/Oracle/config/applications/soa_domain	Location in which your application data is stored.
Administrator user name for your WebLogic domain	weblogic	Name of user with Oracle WebLogic Server administration privileges. The default administrator user is weblogic.
Administrator user password	ExamplePassword1	Password of the user with Oracle WebLogic Server administration privileges.
$FTP_ROOT	${ORACLE_HOME}/b2b/ftp_root	Embedded FTP server root directory.
FTP Port	7021	Port for embedded FTP server.
RCU utility	ORACLE_HOME/oracle_common/bin	Path to the Repository Creation Utility (RCU).

Table 1–4 (Cont.) Installation Checklist

Information	Example Value	Description
RCU schema prefix	`soa` or `bpm`	The prefix for names of database schemas used by Oracle SOA Suite and Business Process Management.
RCU schema password	ExamplePassword1	The password for database schemas used by Oracle SOA Suite and Business Process Management.
Config utility	`ORACLE_HOME/oracle_ common/common/bin`	Path to the configuration wizard for domain creation and configuration.

1.8 Products and Components Not Included in the Standard Installation Topologies

The Oracle SOA Suite and Business Process Management distribution contains several Oracle SOA Suite products, some of which are not identified or included in the Oracle SOA Suite and Oracle Business Process Management standard installation topologies.

For information about installing the other components not included in the primary standard installation topologies, see Appendix A.

In addition, refer to the following sections:

- Section 1.8.1, "About Installing Oracle User Messaging Service (UMS)"
- Section 1.8.2, "About Installing Oracle Business Activity Monitoring"
- Section 1.8.3, "About Installing Oracle Enterprise Scheduler"
- Section 1.8.4, "About Installing Oracle SOA Core Extensions"

1.8.1 About Installing Oracle User Messaging Service (UMS)

Oracle User Messaging Service is a software technology that enables two-way communication between users and deployed applications. For more information, see "Introduction to Oracle User Messaging Service" in *Administering Oracle User Messaging Service*.

UMS is distributed as part of the Oracle Fusion Middleware Infrastructure distribution. It is installed as part of the Oracle Fusion Middleware Infrastructure standard installation topology, described in *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

UMS runtime components consists of an Oracle Fusion Middleware Configuration Wizard template and an Oracle Fusion Middleware schema, which is installed into a supported database by using the Repository Creation Utility.

For development, you can install and use Oracle JDeveloper 12*c* to develop applications that can take advantage of UMS features. For more information, see *Installing Oracle JDeveloper*.

1.8.2 About Installing Oracle Business Activity Monitoring

Oracle Business Activity Monitoring (BAM) 12*c* monitors your business processes in real time to help you make informed tactical and strategic business decisions.

Oracle BAM is distributed as part of the Oracle SOA Suite and Business Process Management distribution. A secondary topology that includes Oracle BAM is described in Appendix A.

In addition, an enterprise deployment topology that includes Oracle BAM is included in the *Enterprise Deployment Guide for Oracle SOA Suite*. For more information, see "Diagram of the Oracle SOA Suite and Oracle Business Activity Monitoring Topology" in *Enterprise Deployment Guide for Oracle SOA Suite*.

For information about Oracle BAM, see *Monitoring Business Activity with Oracle BAM*.

1.8.3 About Installing Oracle Enterprise Scheduler

Oracle Enterprise Scheduler provides the ability to run different job types, including: Java, PL/SQL, binary scripts, web services, and EJBs distributed across the nodes in an Oracle WebLogic Server cluster.

For more information, see "About Oracle Enterprise Scheduler" in *Developing Applications for Oracle Enterprise Scheduler*.

For production systems, the Oracle Enterprise Scheduler runtime software is included as part of the Oracle SOA Suite and Business Process Management distribution, and it is installed automatically when you install the Oracle SOA Suite or Oracle Business Process Management software.

To install and configure the Oracle Enterprise Scheduler runtime software, see the secondary topology that includes Oracle Enterprise Scheduler in Appendix A.

In addition, the *Enterprise Deployment Guide for Oracle SOA Suite* describes an enterprise deployment topology that includes Oracle Enterprise Scheduler. For more information, see "Diagram of the Oracle SOA Suite and Oracle Service Bus Topology" in the *Enterprise Deployment Guide for Oracle SOA Suite*

If you are developing Oracle Enterprise Scheduler applications, see *Installing SOA Suite and Business Process Management Quick Start for Developers*.

1.8.4 About Installing Oracle SOA Core Extensions

SOA Core Extensions (SCE) is a feature delivered with SOA 12*c* to provide the necessary capability for Oracle Application Integration Architecture (AIA) based integration projects to continue operating after an upgrade to SOA 12*c*.

For more information, see "Using SOA Core Extensions for AIA Development" in *Developing Integrations with Oracle SOA Core Extension Tools*.

For production systems, the SOA Core Extensions runtime software is included as part of the Oracle SOA Suite and Business Process Management distribution, and it is installed automatically when you install the Oracle SOA Suite or Oracle Business Process Management software.

To install and configure the SOA Core Extensions runtime software, select the **Oracle SOA Core Extension** template when you are running the Oracle Fusion Middleware Configuration Wizard to create an Oracle SOA Suite domain.

For development systems, see "How to Set Up Development and Test Environments" in *Developing Integrations with Oracle SOA Core Extension Tools*.

1.9 About the Custom Variables Required for the SOA Suite Schemas

After you install the Oracle SOA Suite or Business Process Management software, you must create database schemas in order to configure your Oracle WebLogic domain. When you install the Oracle SOA Suite schemas, you are prompted to set two custom variables, which affect the way in which these schemas are created in the database. As a result, you should review the following information before you install the schemas.

Both of these topics are relevant for Task 6, "Specifying Custom Variables" in Chapter 3.

- About the Database Profile Custom Variable
- About the Healthcare Integration Custom Variable

1.9.1 About the Database Profile Custom Variable

The Database Profiles custom variable on the Repository Creation Utility (RCU) Custom Variables screen allows you to identify the predicted size or "profile" of the database on which you are installing the SOA Infrastructure schema. To estimate the size of the database required for your Oracle SOA Suite configuration, consider the information in "Developing a Database Growth Management Strategy" in *Administering Oracle SOA Suite and Oracle Business Process Management Suite*.

If you enter **SMALL** or **MEDIUM** as the database profile, RCU performs no special actions when the schema is created. The **SMALL** and **MEDIUM** options should be entered for informational purposes only.

If you enter **LARGE** as the database profile, RCU creates the SOA Infrastructure schema using an Oracle database feature called Interval Partitioning. Interval partitioning improves the efficiency of the database when large numbers of composite applications must be processed. When you select the **LARGE** database profile, RCU creates the interval partitioned tables in a manner supported by the Oracle SOA Suite purging scripts and guidelines.

For more information about database partitioning, see the following sections of the *Oracle Database VLDB and Partitioning Guide*:

- Partitioning Concepts
- Interval Partitioning

1.9.2 About the Healthcare Integration Custom Variable

> **Note:** The Healthcare Integration and BPM Suite are mutually exclusive. Do not include both of these in the same domain as this configuration is not supported by Oracle.

If you are not planning to use the Healthcare Integration User Interface, then enter **NO** as the value for the Healthcare Integration Custom variable. If you are planning to use the Healthcare Integration User Interface, select **YES**; otherwise, the Healthcare Integration User Interface will not function properly after it is installed and configured. For more information, see "Using the Oracle SOA Suite for Healthcare Integration User Interface" in *Healthcare Integration User's Guide for Oracle SOA Suite*.

When you enter **YES** as the value for the Healthcare Integration custom variable, RCU creates additional materialized views in the database, which are required by the Healthcare Integration User Interface. If you have entered **NO**, you can perform these additional schema configuration tasks later by running the following SQL script on the database. This script is installed in the Oracle Fusion Middleware Oracle home when you select the Healthcare with B2B installation type:

```
ORACLE_HOME/common/sql/soainfra/sql/oracle/b2b_mv.sql
```

2

Installing the Oracle SOA Suite and Business Process Management Software

This chapter describes how to install the Oracle SOA Suite and Business Process Management software.

Before beginning the installation, ensure that you already have verified you system environment (Section 1.5) and have installed Oracle Fusion Middleware Infrastructure (*Installing and Configuring the Oracle Fusion Middleware Infrastructure*).

By the end of this chapter you would already have installed Oracle SOA Suite or Business Process management.

The following topics are covered:

- Starting the Installation Program
- Navigating the Installation Screens
- Verifying the Installation

2.1 Starting the Installation Program

To start the installation program, perform the following steps.

1. Log in to the target system.

2. The installer requires that a certified JDK already exists on your system. For more information, see the appropriate certification document for 12*c* (12.1.3) on the *Oracle Fusion Middleware Supported System Configurations* page.

3. Go to the directory in which you downloaded the installation program.

4. Launch the installation program by invoking the `java` executable from the JDK directory on your system, as shown in the examples below.

   On UNIX operating systems:

   ```
   /home/Oracle/jdk7_55/jdk1.7.0_55/bin/java -jar fmw_12.1.3.0.0_soa.jar
   ```

   On Windows operating systems:

   ```
   C:\Program Files\Java\jdk1.7.0_55\bin\java -jar fmw_12.1.3.0.0_soa.jar
   ```

   Be sure to replace the JDK location in these examples with the actual JDK location on your system.

> **Note:** You can also launch the installer in silent mode to ensure that no configuration options are displayed during the installation process. For more information about silent or command line installation, see "Using the Oracle Universal Installer in Silent Mode" in *Installing Software with the Oracle Universal Installer*.

When the installation program appears, you are ready to begin the installation. See Section 2.2 for a description of each installation program screen.

2.2 Navigating the Installation Screens

The installation program displays a series of screens, in the order listed in Table 2–1.

If you need additional help with any of the installation screens, click the screen name. You can also click **Help** on the installation screens if you need any additional instructions.

Table 2–1   Oracle SOA Suite and Business Process Management Install Screens

Screen	Description
Installation Inventory Setup	On UNIX operating systems, this screen will appear if this is the first time you are installing any Oracle product on this host. Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location.
	For more information about the central inventory, see "Understanding the Oracle Central Inventory" in *Installing Software with the Oracle Universal Installer*.
	This screen will not appear on Windows operating systems.
Welcome	This screen introduces you to the product installer.
Installation Location	Use this screen to specify the location of your Oracle home directory. This Oracle home should already contain Oracle Fusion Middleware Infrastructure.
	You can click **View** to verify and ensure that you are installing Oracle SOA Suite and Business Process Management in the correct Oracle home.
	For more information about Oracle Fusion Middleware directory structure, see "Selecting Directories for Installation and Configuration" in *Planning an Installation of Oracle Fusion Middleware*.
Installation Type	Use this screen to select the type of installation and consequently, the products and feature sets you want to install.
	■ Select **SOA Suite** if you are creating the Oracle SOA Suite standard topology
	■ Select **BPM** if you are creating the Oracle Business Process Management standard topology
	If you have installed only SOA Suite and would like to include BPM in your installation set, run the installer again and select **BPM**.
	Note that when you select **BPM** as the installation type, Oracle SOA Suite gets automatically installed, too.

Table 2–1 (Cont.) Oracle SOA Suite and Business Process Management Install Screens

Screen	Description
Prerequisite Checks	This screen verifies that your system meets the minimum necessary requirements.
	If you want to view the list of tasks that gets verified, select **View Successful Tasks**. If you want to view the log details, select **View Log**.
	If there are any warning or error messages, you can refer to one of the documents in Section 1.5.
Installation Summary	Use this screen to verify the installation options you have selected. If you want to save these options to a response file, click **Save Response File** and provide the location and name of the response file. Response files can be used later in a silent installation situation.
	All of the feature sets that will be installed once the installation is complete is listed here.
	For more information about silent or command line installation, see "Using the Oracle Universal Installer in Silent Mode" in *Installing Software with the Oracle Universal Installer*.
	Click **Install** to begin the installation.
Installation Progress	This screen allows you to see the progress of the installation.
	When the progress bar reaches 100% complete, you can click **Finish** to dismiss the installer, or click **Next** to see a summary.
Installation Complete	Review the summary information on this screen, then click **Finish** to dismiss the installer.

2.3 Verifying the Installation

After you complete the installation, you can verify it by successfully completing the following tasks:

- Section 2.3.1, "Reviewing the Installation Log Files"

- Section 2.3.2, "Checking the Directory Structure"

- Section 2.3.3, "Viewing the Contents of the Oracle Home"

2.3.1 Reviewing the Installation Log Files

Review the contents of the installation log files to make sure that no problems were encountered. By default, the installer writes logs files to the `Oracle_Inventory_Location/log` (on UNIX operating systems) or `Oracle_Inventory_Location\logs` (on Windows operating systems) directory.

For a description of the log files and where to find them, see "Understanding Installation Log Files" in *Installing Software with the Oracle Universal Installer*.

2.3.2 Checking the Directory Structure

The contents of your installation vary based on the options you selected during the installation.

For more information about the directory structure you should see after installation, see "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.

2.3.3 Viewing the Contents of the Oracle Home

You can also view the contents of the Oracle home using the `viewInventory` script. For more information, see "Viewing the Contents of an Oracle Home" in *Installing Software with the Oracle Universal Installer*.

3

Configuring the Oracle SOA Suite Domain

This chapter describes how to create and configure the Oracle SOA Suite domain. By the end of the configuration, you would have created database schemas and configured a Weblogic domain, which you can also extend for high availability.

Before you begin the configuration process, ensure that you have completed installing the Oracle SOA Suite software in the same Oracle home as Oracle Fusion Middleware Infrastructure. For more information, see Chapter 2.

The following topics are covered in this chapter:

- Creating the Database Schemas
- Configuring the Oracle SOA Suite Domain
- Starting the Servers
- Verifying the Configuration

3.1 Creating the Database Schemas

Before you can configure an Oracle SOA Suite domain, you must install the required schemas on a certified database for use with this release of Oracle Fusion Middleware.

Follow the instructions in this section to install the schemas:

- Section 3.1.1, "Installing and Configuring a Certified Database"
- Section 3.1.2, "Starting the Repository Creation Utility (RCU)"
- Section 3.1.3, "Navigating the RCU Screens to Create the Schemas"

3.1.1 Installing and Configuring a Certified Database

Make sure you have installed and configured a certified database, and that the database is up and running.

For more information, see "Installing a Database and Database Schemas" in *Planning an Installation of Oracle Fusion Middleware*.

3.1.2 Starting the Repository Creation Utility (RCU)

To start the Repository Creation Utility (RCU):

1. Navigate to the *ORACLE_HOME*/oracle_common/bin directory on your system.

2. Ensure that the *JAVA_HOME* environment variable is set to the location of a certified JDK on your system. The location should be up to but not including the bin

directory. For example, if your JDK is located in `/home/Oracle/JDK/jdk7_15/jdk1.7.0_55`:

On UNIX operating systems:

```
setenv JAVA_HOME /home/Oracle/JDK/jdk7_15/jdk1.7.0_55
```

On Windows operating systems:

```
set JAVA_HOME=C:\home\Oracle\JDK\jdk7_15\jdk1.7.0_55
```

Be sure to replace the JDK location in these examples with the actual JDK location on your system.

3. Start RCU:

On UNIX operating systems:

```
./rcu
```

On Microsoft Windows operating systems:

```
rcu.bat
```

3.1.3 Navigating the RCU Screens to Create the Schemas

Schema creation includes the following tasks:

- Task 1, "Introducing RCU"
- Task 2, "Selecting a Method of Schema Creation"
- Task 3, "Providing Database Connection Details"
- Task 4, "Specifying a Custom Prefix and Selecting Schemas"
- Task 5, "Specifying Schema Passwords"
- Task 6, "Specifying Custom Variables"
- Task 7, "Completing Schema Creation"

Task 1 Introducing RCU

Click **Next**. You can skip this screen when you load RCU next time by selecting the check box at the bottom of the screen.

Task 2 Selecting a Method of Schema Creation

If you have the necessary permission and privileges to perform DBA activities on your database, select **System Load and Product Load**. This procedure assumes that you have the necessary privileges.

If you do not have the necessary permission or privileges to perform DBA activities in the database, you must select **Prepare Scripts for System Load** on this screen. This option will generate an SQL script, which can be provided to your database administrator. See "Understanding System Load and Product Load" in *Creating Schemas with the Repository Creation Utility*.

Task 3 Providing Database Connection Details

Provide the database connection details for RCU to connect to your database.

Click **Next** to proceed, then click **OK** on the dialog window confirming that connection to the database was successful.

Task 4 Specifying a Custom Prefix and Selecting Schemas

Select **Create new prefix**, specify a custom prefix, then select **SOA Suite** schema. This will automatically select SOA Infrastructure, along with the following schemas as dependencies:

- Metadata Services

- Audit Services

- Audit Services Append

- Audit Services Viewer

- Oracle Platform Security Services

- User Messaging Service

- WebLogic Services

A schema called Common Infrastructure Services is also automatically created; this schema is grayed out and cannot be selected or deselected. This schema enables you to retrieve information from RCU during domain configuration. For more information, see "Understanding the Service Table Schema" in *Creating Schemas with the Repository Creation Utility*.

The custom prefix is used to logically group these schemas together for use in this domain only; you must create a unique set of schemas for each domain as schema sharing across domains is not supported.

> **Tip:** For more information about custom prefixes, see "Understanding Custom Prefixes" in *Creating Schemas with the Repository Creation Utility*.
>
> For more information about how to organize your schemas in a multi-domain environment, see "Planning Your Schema Creation" in *Creating Schemas with the Repository Creation Utility*.

Specify a unique prefix for all schemas created in this session, so you can easily locate, reference, and manage the schemas later.

○ Select existing prefix:	BOSS	▼
◉ Create new prefix:	DEV1213	

Alpha numeric only. Cannot start with a number. No special characters.

Component	Schema Owner	
⊟ ☑ AS Common Schemas		▲
☑ Metadata Services	DEV1213_MDS	
☑ Audit Services	DEV1213_IAU	
☑ Audit Services Append	DEV1213_IAU_APPEND	
☑ Audit Services Viewer	DEV1213_IAU_VIEWER	
☑ Oracle Platform Security Services	DEV1213_OPSS	
☑ User Messaging Service	DEV1213_UMS	
☑ WebLogic Services	DEV1213_WLS	
☐ Oracle Enterprise Scheduler	ESS	
☐ Call Control	UCSCC	
◼ Common Infrastructure Services	DEV1213_STB	
⊟ ☑ SOA Suite		
☑ SOA Infrastructure	DEV1213_SOAINFRA	
◼ Oracle Data Integrator		
◼ Oracle GoldenGate		
◼ Oracle EDQ		▼

> **Tip:** You must make a note of the custom prefix you choose to enter here; you will need this later on during the domain creation process.

Click **Next** to proceed, then click **OK** on the dialog window confirming that prerequisite checking for schema creation was successful.

Task 5 Specifying Schema Passwords

Specify how you want to set the schema passwords on your database, then specify and confirm your passwords.

> **Tip:** You must make a note of the passwords you set on this screen; you will need them later on during the domain creation process.

Task 6 Specifying Custom Variables

Ensure that you have reviewed the information provided in Section 1.9.

Specify the custom variables for the SOA Infrastructure schema. For the Oracle SOA Suite standard installation topology, accept both default values for the Database Profile (SMALL) and Healthcare Integration (NO).

For more information about the database profile, see *Tuning Performance*.

Enter value for the following custom variables.

Component	Custom Variable	Value
SOA Infrastructure	Database Profile (SMALL/MED/LARGE)	SMALL
	Healthcare Integration(YES/NO)	NO

> **Tip:** More information about the options on this screen can be found in Custom Variables in *Creating Schemas with the Repository Creation Utility*.

Task 7 Completing Schema Creation

Navigate through the remainder of the RCU screens to complete schema creation. When you reach the Completion Summary screen, click **Close** to dismiss RCU.

3.2 Configuring the Oracle SOA Suite Domain

This section provides instructions for creating a WebLogic domain using the configuration wizard. For more information on other methods available for domain creation, see "Additional Tools for Creating, Extending, and Managing WebLogic Domains" in *Creating WebLogic Domains Using the Configuration Wizard*.

Creating and configuring your domain involves the following:

- Section 3.2.1, "Starting the Configuration Wizard"
- Section 3.2.2, "Navigating the Configuration Wizard Screens to Create the Domain"

3.2.1 Starting the Configuration Wizard

To begin domain configuration, navigate to the *ORACLE_HOME*/oracle_common/common/bin directory and start the WebLogic Server Configuration Wizard.

On UNIX operating systems:

```
./config.sh
```

On Microsoft Windows operating systems:

```
config.cmd
```

3.2.2 Navigating the Configuration Wizard Screens to Create the Domain

Follow the instructions in this section to create and configure the domain for the topology.

> **Note:** You can use the same procedure described in this section to extend an existing domain. If your needs do not match the instructions given in the procedure, be sure to make your selections accordingly, or refer to the supporting documentation for additional details.

Domain creation and configuration includes the following tasks:

- Task 1, "Selecting the Domain Type and Domain Home Location"
- Task 2, "Selecting the Configuration Template"
- Task 3, "Selecting the Application Home Location"
- Task 4, "Configuring the Administrator Account"
- Task 5, "Specifying the Domain Mode and JDK"
- Task 6, "Specifying the Database Configuration Type"
- Task 7, "Specifying JDBC Component Schema Information"
- Task 8, "Testing the JDBC Connections"
- Task 9, "Selecting Advanced Configuration"
- Task 10, "Configuring the Administration Server Listen Address"
- Task 11, "Configuring Node Manager"
- Task 12, "Configuring Managed Servers"
- Task 13, "Configuring a Cluster"
- Task 14, "Assigning Managed Servers to the Cluster"
- Task 15, "Configuring Coherence Clusters"
- Task 16, "Creating a New Machine"
- Task 17, "Assigning Servers to Machines"
- Task 18, "Reviewing Your Configuration Specifications and Configuring the Domain"
- Task 19, "Writing Down Your Domain Home and Administration Server URL"

Task 1 Selecting the Domain Type and Domain Home Location

On the Configuration Type screen, select **Create a new domain**.

In the Domain Location field, specify your Domain home directory.

It is recommended that you locate your Domain home in accordance with the directory structure summarized in "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*, where the Domain home is located outside the Oracle home directory. This directory structure will help you avoid issues when you need to upgrade or reinstall your software.

> **Tip:**   More information about the other options on this screen can be
> found in "Configuration Type" in *Creating WebLogic Domains Using the
> Configuration Wizard*.

Task 2   Selecting the Configuration Template

On the Templates screen, make sure **Create Domain Using Product Templates** is
selected, then select the following templates:

- Oracle SOA Suite - 12.1.3.0 [soa]]

  Selecting this template automatically selects the following as dependencies:

  – Oracle Enterprise Manager - 12.1.3.0 [em]

  – Oracle WSM Policy Manager - 12.1.3.0 [oracle_common]

  – Oracle JRF - 12.1.3.0 [oracle_common]

  – WebLogic Coherence Cluster Extension - 12 1.3.0 [wlserver]

  > **Note:**   The "Oracle SOA Core Extension - 12.1.3.0" template should
  > also be selected if you plan to develop integrations with Oracle SOA
  > Suite. For more information, see *Developing Integrations with Oracle
  > SOA Core Extension Tools*.
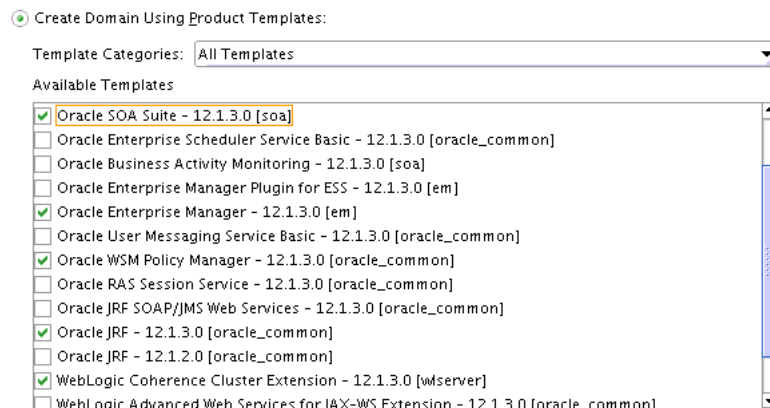
> **Tip:**   More information about the options on this screen can be found
> in "Templates" in *Creating WebLogic Domains Using the Configuration
> Wizard*.

Task 3   Selecting the Application Home Location

On the Application Location screen, select the location in which you want to store your
applications associated with your domain. This location is also referred to as the
Application home directory.

It is recommended that you locate your Application home in accordance with the
directory structure summarized in "What are the Key Oracle Fusion Middleware
Directories?" in *Understanding Oracle Fusion Middleware*, where the Application home is
located outside the Oracle home directory. This directory structure will help you avoid
issues when you need to upgrade or re-install your software.

> **Tip:** More information about the Application home directory can be found in "Choosing an Application Home" in *Planning an Installation of Oracle Fusion Middleware*.
>
> More information about the options on this screen can be found in "Application Location" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 4 Configuring the Administrator Account

On the Administrator Account screen, specify the user name and password for the default WebLogic Administrator account for the domain.

It is recommended that you make a note of the user name and password specified on this screen; you will need these credentials later to boot and connect to the domain's Administration Server.

Task 5 Specifying the Domain Mode and JDK

On the Domain Mode and JDK screen:

- Select **Production** in the Domain Mode field.

- Select the Oracle HotSpot JDK in the JDK field.

    > **Tip:** More information about the options on this screen can be found in "Domain Mode and JDK" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 6 Specifying the Database Configuration Type

Select **RCU Data** to activate the fields on this screen. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain.

> **Note:** If you choose to select **Manual Configuration** on this screen, you will have to manually fill in the parameters for your schema on the JDBC Component Schema screen.

After selecting **RCU Data**, fill in the following fields:

Field	Description
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver.
Host Name	Enter the name of the server hosting the database.
Port	Enter the port number on which the database listens.
Schema Owner Schema Password	Enter the username and password for connecting to the database's Service Table schema. This is the schema username and password that was specified for the Service Table component on the "Schema Passwords" screen in RCU (see Task 5 in Section 3.1.3). The default username is *prefix*_STB, where *prefix* is the custom prefix that you defined in RCU.

Click **Get RCU Configuration** when you are finished specifying the database connection information. The following output in the Connection Result Log indicates that the operating succeeded:

```
Connecting to the database server...OK
Retrieving schema data from database server...OK
Binding local schema components with retrieved data...OK

Successfully Done.
```

> **Tip:**   More information about the **RCU Data** option can be found in "Understanding the Service Table Schema" in *Creating Schemas with the Repository Creation Utility*.
>
> More information about the other options on this screen can be found in "Datasource Defaults" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 7 Specifying JDBC Component Schema Information

Verify that the values on the JDBC Component Schema screen are correct for all schemas. If you selected **RCU Data** on the previous screen, the schema table should already be populated appropriately.

> **Tip:**   For high availability environments, see the following sections in *High Availability Guide* for additional information on configuring data sources for Oracle RAC databases:
>
> - "Configuring GridLink Data Sources with Oracle RAC"
> - "Configuring Multi Data Sources"
>
> More information about the other options on this screen can be found in JDBC Component Schema in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 8 Testing the JDBC Connections

Use the JDBC Component Schema Test screen to test the datasource connections you have just configured.

A green check mark in the Status column indicates a successful test. If you encounter any issues, see the error message in the Connection Result Log section of the screen, fix the problem, then try to test the connection again.

By default, the schema password for each schema component is the password you have specified while creating your schemas. If you want different passwords for different schema components, manually edit them by entering the desired password in the **Schema Password** column, against each row. After specifying the passwords, select the check box corresponding to the schemas that you have changed the password in and test the connection again.

> **Tip:** More information about the other options on this screen can be found in "Test Component Schema" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 9 Selecting Advanced Configuration

To complete domain configuration for the topology, select the following options on the Advanced Configuration screen:

- Administration Server

  This is required to properly configure the listen address of the Administration Server.

- Node Manager

  This is required to configure Node Manager.

- Managed Server, Clusters and Coherence

  This is required to configure the Oracle SOA Suite Managed Server.

Task 10 Configuring the Administration Server Listen Address

On the Administration Server screen, select the drop-down list, next to the Listen Address, and select the IP address of the host on which the Administration Server will reside. Do not use "All Local Addresses."

Do not specify any server groups for the Administration Server.

Task 11 Configuring Node Manager

The Node Manager screen can be used to select the type of Node Manager you want to configure, along with the Node Manager credentials.

Select **Per Domain Default Location** as the Node Manager type, then specify the Node Manager credentials.

> **Tip:** More information about the options on this screen can be found in "Node Manager" in *Creating WebLogic Domains Using the Configuration Wizard*.
>
> More information about the types of Node Manager can be found in "Node Manager Overview" in *Administering Node Manager for Oracle WebLogic Server*.

Task 12 Configuring Managed Servers

On the Managed Servers screen, a new Managed Server named `soa_server1` is created:

1. In the Listen Address drop-down list, select the IP address of the host on which the Managed Server will reside or use the system name or DNS name that maps to a single IP address. Do not use "All Local Addresses."

2. In the Server Groups drop-down list, select **SOA-MGD-SVRS**. This server group ensures that SOA and Oracle Web Services Manager (OWSM) services are targeted to the Managed Servers you are creating.

   There is another server group called **SOA-MGD-SVRS-ONLY** that targets only SOA but not Oracle Web Services Manager (OWSM) to the server. This is typically used if you want to have Oracle Web Services Manager (OWSM) in a different server rather than with the SOA server.

   Server groups target Fusion Middleware applications and services to one or more servers by mapping defined application service groups to each defined server group. A given application service group may be mapped to multiple server groups if needed. Any application services that are mapped to a given server group are automatically targeted to all servers that are assigned to that group. For more information, see "Application Service Groups, Server Groups, and Application Service Mappings" in *Domain Template Reference*.

3. Click **Add** and repeat this process to create a second Managed Server named `soa_server2`.

   > **Note:** If you plan to configure a cluster that includes both SOA and OSB Managed Servers on the same machine, you must assign both the **OSB-MGD-SVRS-COMBINED** and **SOA-MGD-SVRS** server groups to each Managed Servers. Otherwise, domain creation will fail.

   Configuring a second Managed Server is one of the steps needed to configure the standard topology for high availability. If you are not creating a highly available environment, then this step is optional.

   For more information about the high availability standard topology, see "Understanding the Fusion Middleware Standard HA Topology" in *High Availability Guide*.

   For more information about the next steps to prepare for high availability after your domain is configured, see Section 5.3.

These server names and will be referenced throughout this document; if you choose different names be sure to replace them as needed.

> **Tip:** More information about the options on this screen can be found in "Managed Servers" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 13 Configuring a Cluster

Use the Clusters screen to create a new cluster:

1. Click **Add**.

2. Specify `soa_cluster1` in the Cluster Name field.

3. Leave the Cluster Address field blank.

By default, server instances in a cluster communicate with one another using unicast. If you want to change your cluster communications to use multicast, see "Considerations for Choosing Unicast or Multicast" in *Administering Clusters for Oracle WebLogic Server*.

New clusters can also be created by using Fusion Middleware Control. In such cases, cluster communication (unicast or multicast) can be configured when the new cluster is created. For more information, see "Create and configure clusters" in *Oracle WebLogic Server Administration Console Online Help*.

> **Warning:** If you are extending an existing SOA cluster domain with OSB, do not delete an existing Managed Server during this step. Instead, do the following:
>
> 1. Create new Managed Servers for OSB, leaving the old Managed Servers untouched. Complete the rest of the domain creation process.
>
> 2. After creating your domain, delete the old Managed Servers using the WebLogic Server console.

More information about the options on this screen can be found in "Clusters" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 14 Assigning Managed Servers to the Cluster

Use the Assign Servers to Clusters screen to assign `soa_server1` and `soa_server2` to the new cluster `soa_cluster1`:

1. In the Clusters pane, select the cluster to which you want to assign the servers; in this case, `soa_cluster1`.

2. In the Servers pane, assign `soa_server1` to `soa_cluster1` by doing one of the following:

   - Click once on `soa_server1` to select it, then click on the right arrow to move it beneath the selected cluster (`soa_cluster1`) in the Clusters pane.

   - Double-click on `soa_server1` to move it beneath the selected cluster (`soa_cluster1`) in the clusters pane.

3. Repeat to assign `soa_server2` to `soa_cluster1`.

> **Tip:** More information about the options on this screen can be found in "Assign Servers to Clusters" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 15 Configuring Coherence Clusters

Use the Coherence Clusters screen to configure the Coherence cluster that is automatically added to the domain. Leave the default port number 0 as the Coherence cluster listen port.

> **Note:** Setting the unicast listen port to 0 creates an offset for the Managed Server port numbers. The offset is 5000, meaning the maximum allowed value that can be assigned to a Managed Server port number is 60535, instead of 65535.

See Table 5–2 for more information and next steps for configuring Coherence.

> **Note:** For Coherence licensing information, see "Oracle Coherence" in *Licensing Information*.

Task 16 Creating a New Machine

Use the Machines screen to create a new machine in the domain. A machine is required in order for the Node Manager to be able to start and stop the servers.

> **Tip:** If you plan to create a high availability environment and know the list of machines required for your target topology, you can follow the directions in this section to create all of the machines at this time. For more information, see "Optional Scale Out Procedure" in *High Availability Guide*.

1. Click **Add** to create a new machine.

2. Specify soa_machine1 in the Name field.

3. In the Node Manager Listen Address field, select the IP address of the machine in which the Managed Servers are being configured.

    You must select a specific interface and not "localhost." This allows Coherence cluster addresses to be dynamically calculated.

4. Verify the port in the Node Manager Listen Port field.

    The port number 5556, shown in this example, may be referenced by other examples in the documentation. Replace this port number with your own port number as needed.

> **Note:** If you are extending an existing domain, you can assign servers to any existing machine. It is not necessary to create a new machine unless your situation requires it.

> **Tip:** More information about the options on this screen can be found in "Machines" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 17 Assigning Servers to Machines

Use the Assign Servers to Machines screen to assign the Administration Server and Managed Servers to the new machine you just created:

1. In the Machines pane, select the machine to which you want to assign the servers; in this case, `soa_machine1`.

2. In the Servers pane, assign `AdminServer` to `soa_machine1` by doing one of the following:

   - Click once on `AdminServer` to select it, then click on the right arrow to move it beneath the selected machine (`soa_machine1`) in the Machines pane.

   - Double-click on `AdminServer` to move it beneath the selected machine (`soa_machine1`) in the Machines pane.

3. Repeat to assign both `soa_server1` and `soa_server2` to `soa_machine1`.

> **Tip:** More information about the options on this screen can be found in "Assign Servers to Machines" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 18 Reviewing Your Configuration Specifications and Configuring the Domain

The Configuration Summary screen contains the detailed configuration information for the domain you are about to create. Review the details of each item on the screen and verify that the information is correct.

You can go back to any previous screen if you need to make any changes, either by using the **Back** button or by selecting the screen in the navigation pane.

Domain creation will not begin until you click **Create**.

> **Tip:** More information about the options on this screen can be found in "Configuration Summary" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 19 Writing Down Your Domain Home and Administration Server URL

The Configuration Success screen will show the following items about the domain you just configured:

- Domain Location
- Administration Server URL

You must make a note of both items as you will need them later; the domain location is needed to access the scripts used to start the Node Manager and Administration Server, and the URL is needed to access the Administration Server.

Click **Finish** to dismiss the configuration wizard.

3.3 Starting the Servers

After configuration is complete, do the following to access the tools with which you can manage your domain:

> **Note:** For more information on additional tools you can use to manage your domain, see "Overview of Oracle Fusion Middleware Administration Tools" in *Administering Oracle Fusion Middleware*.

- Section 3.3.1, "Starting the Node Manager"
- Section 3.3.2, "Starting the Administration Server"
- Section 3.3.3, "Starting the Managed Servers"

3.3.1 Starting the Node Manager

To start your per-domain Node Manager, go to the `DOMAIN_HOME`/bin directory.

On UNIX operating systems, start the Node Manager as shown below, using `nohup` and `nm.out` as an example output file:

```
nohup ./startNodeManager.sh > $LOG_DIR/nm.out&
```

In this command, `LOG_DIR` is the location of directory in which you want to store the log files.

On Windows operating systems, run:

```
startNodeManager.cmd
```

> **Note:** On Windows operating systems, it is recommended that you
> configure Node Manager to run as a startup service. This allows Node
> Manager to start up automatically each time the system is restarted.
>
> For more information, see "Running Node Manager as a Startup
> Service" in *Administering Node Manager for Oracle WebLogic Server*.

For more information about additional Node Manager configuration options, see
Administering Node Manager for Oracle WebLogic Server.

3.3.2 Starting the Administration Server

To start the Administration Server, go to the `DOMAIN_HOME`/bin directory.

On UNIX operating systems, run:

```
./startWebLogic.sh
```

On Windows operating systems, run:

```
startWebLogic.cmd
```

If you have selected **Production Mode** on the Domain Mode and JDK screen in Task 5
(Section 3.2.2), you will be prompted for the login credentials of the Administrator
user as provided on the Administrator Account screen in Task 4.

> **Tip:** For more information about starting the Administration Server,
> see "Starting and Stopping Administration Servers" in *Administering
> Oracle Fusion Middleware*.
>
> In production mode, a boot identity file can be created to bypass the
> need to provide a user name and password when starting the
> Administration Server. For more information, see "Creating a Boot
> Identity File for an Administration Server" in *Administering Server
> Startup and Shutdown for Oracle WebLogic Server*.

You can verify that the Administration Server is up and running by accessing the
Administration Server Console. The URL is provided on the Configuration Success
screen in Task 19.

> **Note:** Make sure that the database hosting your product schemas is
> up and running and accessible by the Administration Server.

```
http://administration_server_host:administration_server_port/console
```

The default Administration Server port number is `7001`.
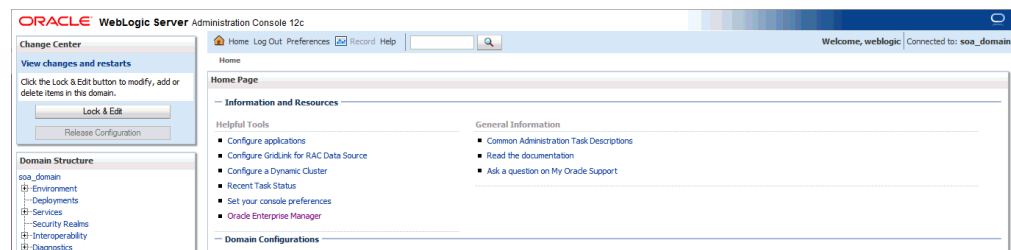
For more information about how to use the Administration Console, see "Getting Started Using Oracle WebLogic Server Administration Console" in *Administering Oracle Fusion Middleware*.

3.3.3 Starting the Managed Servers

To start the Managed Servers:

1. Login to Oracle Fusion Middleware Control:

   http://*administration_server_host*:*administration_server_port*/em

   The Administration Server host and port number were in the URL on the Configuration Success screen (Task 19). The default Administration Server port number is 7001.

   The login credentials were provided on the Administrator Account screen (Task 4).

2. From the "Target Navigation" pane, click the arrows to expand the domain until the Managed Servers (soa_server1 and soa_server2) are visible.
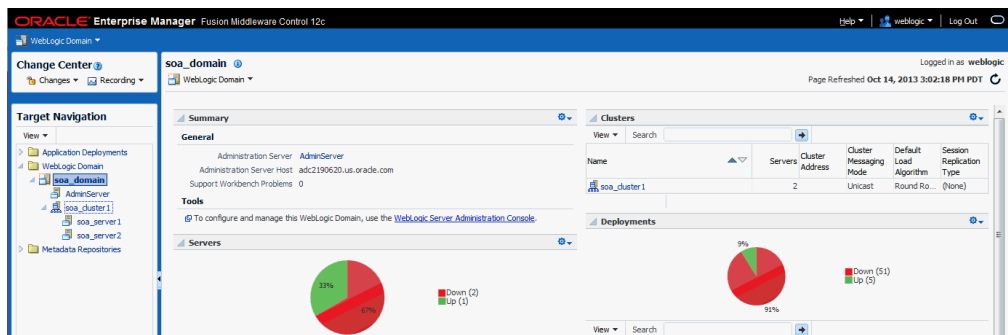
3. Select the first Managed Server (soa_server1).

4. Next to the **WebLogic Server** menu, select **Start Up**.
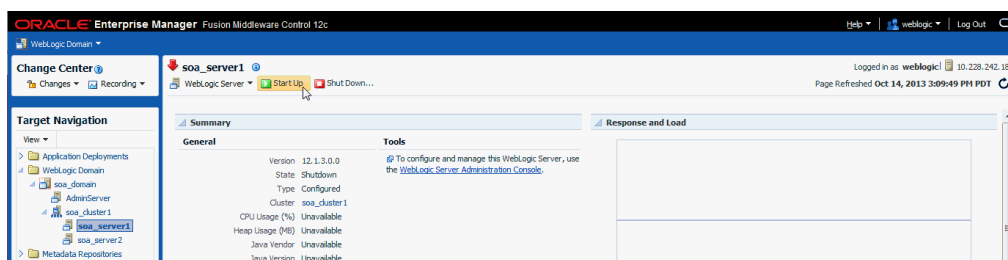
5. Repeat Steps 3 and 4 to start soa_server2.

6. In the Target Navigation page, select your domain name to see that all the servers are up and running.
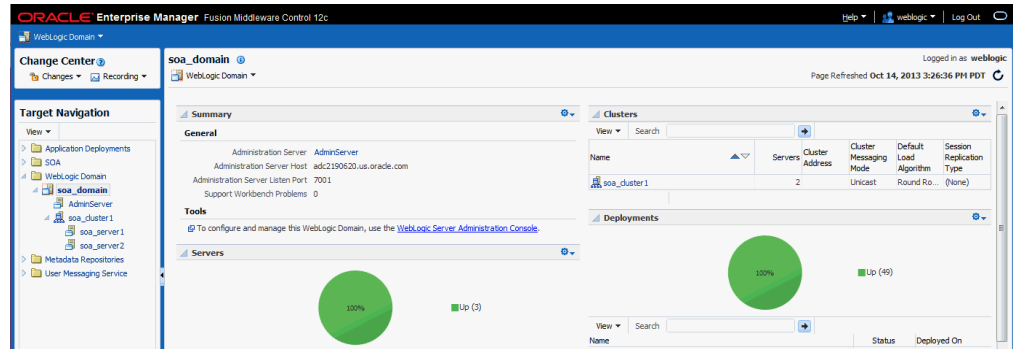
3.4 Verifying the Configuration

To verify that the domain is configured properly, see Section 5.1. You should familiarize yourself with the tasks described in this section and perform them to verify that your domain is properly configured.

4

Configuring the Oracle Business Process Management Domain

This chapter describes how to create and configure the Oracle Business Process Management domain. By the end of the configuration, you would have created database schemas and configured a Weblogic domain for Business Process Management, which you can also extend for high availability.

Before you begin the configuration process, ensure that you have completed installing the Oracle Business Process Management software in the same Oracle home as Oracle Fusion Middleware Infrastructure. For more information, see Chapter 2.

The following topics are covered in this chapter:

- Creating the Database Schemas
- Configuring the Oracle Business Process Management Domain
- Starting the Servers
- Verifying the Configuration

4.1 Creating the Database Schemas

Before you can configure an Oracle Business Process Management domain, you must install the required Oracle schemas on a certified database for use with this release of Oracle Fusion Middleware.

Follow the instructions in Section 3.1 to install the schemas.

When you are finished installing the schemas, go to Section 4.2 to continue with the domain creation and configuration.

4.2 Configuring the Oracle Business Process Management Domain

This section provides instructions for creating a WebLogic domain by using the configuration wizard. For more information on other methods available for domain creation, see "Additional Tools for Creating, Extending, and Managing WebLogic Domains" in *Creating WebLogic Domains Using the Configuration Wizard*.

Creating and configuring your domain involves the following:

- Section 4.2.1, "Starting the Configuration Wizard"
- Section 4.2.2, "Navigating the Configuration Wizard Screens to Configure the Domain"

4.2.1 Starting the Configuration Wizard

To begin the domain configuration, navigate to the *ORACLE_HOME*/`oracle_common/common/bin` directory and start the WebLogic Server Configuration Wizard.

On UNIX operating systems:

```
./config.sh
```

On Microsoft Windows operating systems:

```
config.cmd
```

4.2.2 Navigating the Configuration Wizard Screens to Configure the Domain

Follow the instructions in this section to create and configure the domain for the topology.

Note: You can use the same procedure described in this section to extend an existing domain. If your needs do not match the instructions given in the procedure, be sure to make your selections accordingly, or refer to the supporting documentation for additional details.

Domain creation and configuration includes the following tasks:

- Task 1, "Selecting the Domain Type and Domain Home Location"
- Task 2, "Selecting the Configuration Template"
- Task 3, "Selecting the Application Home Location"
- Task 4, "Configuring the Administrator Account"
- Task 5, "Specifying the Domain Mode and JDK"
- Task 6, "Specifying the Datasource Configuration Type"
- Task 7, "Specifying JDBC Component Schema Information"
- Task 8, "Testing the JDBC Connections"
- Task 9, "Selecting Advanced Configuration"
- Task 10, "Configuring the Administration Server Listen Address"
- Task 11, "Configuring Node Manager"
- Task 12, "Configuring Managed Servers"
- Task 13, "Configuring a Cluster"
- Task 14, "Assigning Managed Servers to the Cluster"
- Task 15, "Configuring Coherence Clusters"
- Task 16, "Creating a New Machine"
- Task 17, "Assigning Servers to Machines"
- Task 18, "Reviewing Your Configuration Specifications and Configuring the Domain"
- Task 19, "Writing Down Your Domain Home and Administration Server URL"

Task 1 Selecting the Domain Type and Domain Home Location

On the Configuration Type screen, select **Create a new domain**.

In the Domain Location field, specify your Domain home directory.

It is recommended that you locate your Domain home in accordance with the directory structure summarized in "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*, where the Domain home is located outside the Oracle home directory. This directory structure will help you avoid issues when you need to upgrade or reinstall your software.

Note that you can also extend your existing Oracle SOA Suite domain to include BPM by selecting **Update an existing domain** and specifying the domain location of your SOA Oracle home.

> **Tip:**   More information about the other options on this screen can be found in "Configuration Type" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 2 Selecting the Configuration Template

On the Templates screen, make sure **Create Domain Using Product Templates** is selected, then select the following templates:

- Oracle BPM Suite - 12.1.3.0 [soa]]

  Selecting this template automatically selects the following as dependencies:

  - Oracle SOA Suite - 12.1.3.0 [soa]

  - Oracle Enterprise Manager - 12.1.3.0 [em]

  - Oracle WSM Policy Manager - 12.1.3.0 [oracle_common]

  - Oracle JRF - 12.1.3.0 [oracle_common]

  - WebLogic Coherence Cluster Extension - 12 1.3.0 [wlserver]
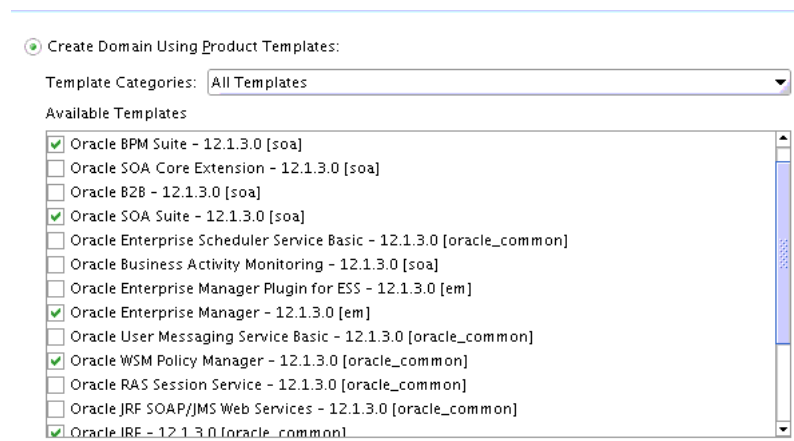
> **Tip:**   More information about the options on this screen can be found in "Templates" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 3 Selecting the Application Home Location

On the Application Location screen, select the location where you want to store your applications associated with your domain. This location is also referred to as the Application home directory.

It is recommended that you locate your Application home in accordance with the directory structure summarized in "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*, where the Application home is located outside the Oracle home directory. This directory structure will help you avoid issues when you need to upgrade or re-install your software.

> **Tip:** More information about the Application home directory can be found in "Choosing an Application Home" in *Planning an Installation of Oracle Fusion Middleware*.
>
> More information about the options on this screen can be found in "Application Location" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 4 Configuring the Administrator Account

On the Administrator Account screen, specify the user name and password for the default WebLogic Administrator account for the domain.

It is recommended that you make a note of the user name and password specified on this screen; you will need these credentials later to boot and connect to the domain's Administration Server.

Task 5 Specifying the Domain Mode and JDK

On the Domain Mode and JDK screen:

- Select **Production** in the Domain Mode field.

- Select the Oracle HotSpot JDK in the JDK field.

> **Tip:** More information about the options on this screen can be found in "Domain Mode and JDK" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 6 Specifying the Datasource Configuration Type

Select **RCU Data** to activate the fields on this screen. The **RCU Data** option instructs the Configuration Wizard to connect to the database and Service Table (STB) schema to automatically retrieve schema information for the schemas needed to configure the domain.

> **Note:** If you choose to select **Manual Configuration** on this screen, you will have to manually fill in the parameters for your schema on the JDBC Component Schema screen.

After selecting **RCU Data**, fill in the following fields:

Field	Description
DBMS/Service	Enter the database DBMS name, or service name if you selected a service type driver.
Host Name	Enter the name of the server hosting the database.
Port	Enter the port number on which the database listens.

Field	Description
Schema Owner Schema Password	Enter the username and password for connecting to the database's Service Table schema. This is the schema username and password that was specified for the Service Table component on the "Schema Passwords" screen in RCU (see Task 5 in Section 3.1.3). The default username is *prefix*_STB, where *prefix* is the custom prefix that you defined in RCU.

Click **Get RCU Configuration** when you are finished specifying the database connection information. The following output in the Connection Result Log indicates that the operating succeeded:

```
Connecting to the database server...OK
Retrieving schema data from database server...OK
Binding local schema components with retrieved data...OK

Successfully Done.
```

> **Tip:** More information about the **RCU Data** option can be found in "Understanding the Service Table Schema" in *Creating Schemas with the Repository Creation Utility*.
>
> More information about the other options on this screen can be found in "Datasource Defaults" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 7 Specifying JDBC Component Schema Information

Verify that the values on the JDBC Component Schema screen are correct for all schemas. If you have selected **RCU Data** on the previous screen, the schema table should already be populated appropriately.

> **Tip:** For high availability environments, see the following sections in *High Availability Guide* for additional information on configuring data sources for Oracle RAC databases:
>
> - "Configuring GridLink Data Sources with Oracle RAC"
>
> - "Configuring Multi Data Sources"
>
> More information about the other options on this screen can be found in "JDBC Component Schema" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 8 Testing the JDBC Connections

Use the JDBC Component Schema Test screen to test the datasource connections you have just configured.

A green check mark in the Status column indicates a successful test. If you encounter any issues, see the error message in the Connection Result Log section of the screen, fix the problem, then try to test the connection again.

By default, the schema password for each schema component is the password you have specified while creating your schemas. If you want different passwords for different schema components, manually edit them by entering the desired password in the **Schema Password** column, against each row. After specifying the passwords, select the check box corresponding to the schemas that you have changed the password in and test the connection again.

> **Tip:** More information about the other options on this screen can be found in "Test Component Schema" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 9 Selecting Advanced Configuration

To complete domain configuration for the topology, select the following options on the Advanced Configuration screen:

- Administration Server

  This is required to properly configure the listen address of the Administration Server.

- Node Manager

  This is required to configure Node Manager.

- Managed Server, Clusters and Coherence

  This is required to configure the Oracle Business Process Management Managed Server.

Task 10 Configuring the Administration Server Listen Address

On the Administration Server screen, select the drop-down list next to Listen Address and select the IP address of the host on which the Administration Server will reside. Do not use "All Local Addresses."

Do not specify any server groups for the Administration Server.

Task 11 Configuring Node Manager

The Node Manager screen can be used to select the type of Node Manager you want to configure, along with the Node Manager credentials.

Select **Per Domain Default Location** as the Node Manager type, then specify the Node Manager credentials.

> **Tip:** More information about the options on this screen can be found in "Node Manager" in *Creating WebLogic Domains Using the Configuration Wizard*.
>
> More information about the types of Node Manager can be found in "Node Manager Overview" in *Administering Node Manager for Oracle WebLogic Server*.

Task 12 Configuring Managed Servers

On the Managed Servers screen, a new Managed Server named `bpm_server1` is created:

1. In the Listen Address drop-down list, select the IP address of the host on which the Managed Server will reside. Do not use "All Local Addresses."

2. In the Server Groups drop-down list, select **SOA-MGD-SVRS**. This server group ensures that SOA and Oracle Web Services Manager (OWSM) services are targeted to the Managed Servers you are creating.

   There is another server group called **SOA-MGD-SVRS-ONLY** that targets only SOA but not Oracle Web Services Manager (OWSM) to the server. This is typically used if you want to have Oracle Web Services Manager (OWSM) in a different server rather than with the SOA server.

   Server groups target Fusion Middleware applications and services to one or more servers by mapping defined application service groups to each defined server group. A given application service group may be mapped to multiple server groups if needed. Any application services that are mapped to a given server group are automatically targeted to all servers that are assigned to that group. For more information, see "Application Service Groups, Server Groups, and Application Service Mappings" in *Domain Template Reference*.

3. Click **Add** and repeat this process to create a second Managed Server named `bpm_server2`.

   Configuring a second Managed Server is one of the steps needed to configure the standard topology for high availability. If you are not creating a highly available environment, then this step is optional.

   For more information about the high availability standard topology, see "Understanding the Fusion Middleware Standard HA Topology" in *High Availability Guide*.

   For more information about the next steps to prepare for high availability after your domain is configured, see Section 5.3.

These server names and will be referenced throughout this document; if you choose different names be sure to replace them as needed.

> **Tip:** More information about the options on this screen can be found in "Managed Servers" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 13 Configuring a Cluster

Use the Clusters screen to create a new cluster:

1. Click **Add**.

2. Specify `bpm_cluster1` in the Cluster Name field.

3. Leave the Cluster Address field blank.

By default, server instances in a cluster communicate with one another by using unicast. If you want to change your cluster communications to use multicast, see "Considerations for Choosing Unicast or Multicast" in *Administering Clusters for Oracle WebLogic Server*.

New clusters can also be created by using Oracle Fusion Middleware Control. In such cases, cluster communication (unicast or multicast) can be configured when the new cluster is created. For more information, see "Create and configure clusters" in *Oracle WebLogic Server Administration Console Online Help*.

> **Tip:** More information about the options on this screen can be found in "Clusters" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 14 Assigning Managed Servers to the Cluster

Use the Assign Servers to Clusters screen to assign `bpm_server1` and `bpm_server2` to the new cluster `bpm_cluster1`:

1. In the Clusters pane, select the cluster to which you want to assign the servers; in this case, `bpm_cluster1`.

2. In the Servers pane, assign `bpm_server1` to `bpm_cluster1` by doing one of the following:

   - Click once on `bpm_server1` to select it, then click on the right arrow to move it beneath the selected cluster (`bpm_cluster1`) in the Clusters pane.

- Double-click on `bpm_server1` to move it beneath the selected cluster (`bpm_cluster1`) in the clusters pane.

3. Repeat to assign `bpm_server2` to `bpm_cluster1`.

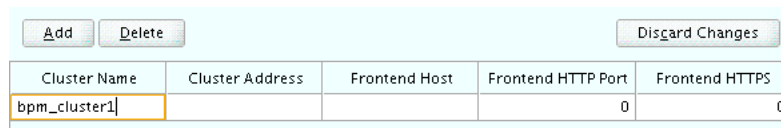

> **Tip:** More information about the options on this screen can be found in "Assign Servers to Clusters" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 15 Configuring Coherence Clusters

Use the Coherence Clusters screen to configure the Coherence cluster that is automatically added to the domain. Leave the default port number 0 as the Coherence cluster listen port.

> **Note:** Setting the unicast listen port to 0 creates an offset for the Managed Server port numbers. The offset is 5000, meaning the maximum allowed value that can be assigned to a Managed Server port number is 60535, instead of 65535.

See Table 5–2 for more information and next steps for configuring Coherence.

> **Note:** For Coherence licensing information, see "Oracle Coherence" in *Licensing Information*.

Task 16 Creating a New Machine

Use the Machines screen to create a new machine in the domain. A machine is required in order for the Node Manager to be able to start and stop the servers.

> **Tip:** If you plan to create a high availability environment and know the list of machines required for your target topology, you can follow the directions in this section to create all of the machines at this time. For more information, see "Optional Scale Out Procedure" in *High Availability Guide*.

1. Click **Add** to create a new machine.

2. Specify `bpm_machine1` in the Name field.

3. In the Node Manager Listen Address field, select the IP address of the machine where the Managed Servers are being configured.

   You must select a specific interface and not "localhost." This allows Coherence cluster addresses to be dynamically calculated.

4. Verify the port in the Node Manager Listen Port field.

The port number 5556, shown in this example, may be referenced by other examples in the documentation. Replace this port number with your own port number as needed.

> **Note:** If you are extending an existing domain, you can assign servers to any existing machine. It is not necessary to create a new machine unless your situation requires it.
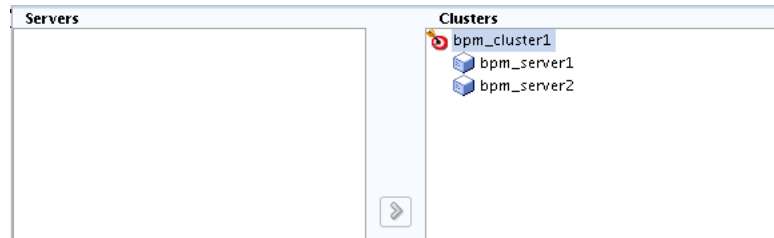

> **Tip:** More information about the options on this screen can be found in Machines in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 17 Assigning Servers to Machines

Use the Assign Servers to Machines screen to assign the Administration Server and Managed Servers to the new machine you have just created:

1. In the Machines pane, select the machine to which you want to assign the servers; in this case, bpm_machine1.

2. In the Servers pane, assign AdminServer to bpm_machine1 by doing one of the following:

   - Click once on AdminServer to select it, then click on the right arrow to move it beneath the selected machine (bpm_machine1) in the Machines pane.

   - Double-click on AdminServer to move it beneath the selected machine (bpm_machine1) in the Machines pane.

3. Repeat to assign both bpm_server1 and bpm_server2 to bpm_machine1.

> **Tip:** More information about the options on this screen can be found in "Assign Servers to Machines" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 18 Reviewing Your Configuration Specifications and Configuring the Domain

The Configuration Summary screen contains the detailed configuration information for the domain you are about to create. Review the details of each item on the screen and verify that the information is correct.

You can go back to any previous screen if you need to make any changes, either by using the **Back** button or by selecting the screen in the navigation pane.

Domain creation will not begin until you click **Create**.

> **Tip:** More information about the options on this screen can be found in "Configuration Summary" in *Creating WebLogic Domains Using the Configuration Wizard*.

Task 19 Writing Down Your Domain Home and Administration Server URL

The Configuration Success screen will show the following items about the domain you just configured:

- Domain Location
- Administration Server URL

You must make a note of both items as you will need them later; the domain location is needed to access the scripts used to start the Node Manager and Administration Server, and the URL is needed to access the Administration Server.
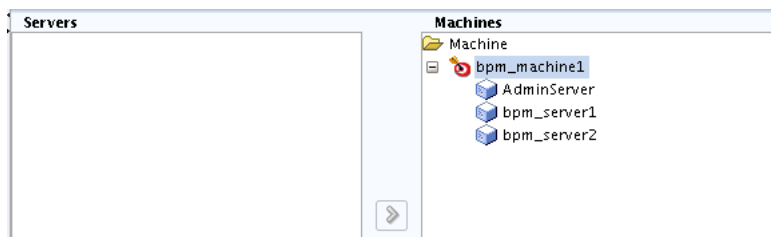
Click **Finish** to dismiss the configuration wizard.

4.3 Starting the Servers

After configuration is complete, do the following to access the tools with which you can manage your domain:

> **Note:** For more information on additional tools you can use to manage your domain, see "Overview of Oracle Fusion Middleware Administration Tools" in *Administering Oracle Fusion Middleware*.

- Section 4.3.1, "Starting the Node Manager"
- Section 4.3.2, "Starting the Administration Server"
- Section 4.3.3, "Starting the Managed Servers"

4.3.1 Starting the Node Manager

To start your per-domain Node Manager, go to the `DOMAIN_HOME`/bin directory.

On UNIX operating systems, start the Node Manager as shown below, using `nohup` and `nm.out` as an example output file:

```
nohup ./startNodeManager.sh > $LOG_DIR/nm.out&
```

In this command, `LOG_DIR` is the location of directory in which you want to store the log files.

On Windows operating systems, run:

```
startNodeManager.cmd
```

> **Note:** On Windows operating systems, it is recommended that you configure Node Manager to run as a startup service. This allows Node Manager to start up automatically each time the system is restarted.
>
> For more information, see "Running Node Manager as a Startup Service" in *Administering Node Manager for Oracle WebLogic Server*.

For more information about additional Node Manager configuration options, see *Administering Node Manager for Oracle WebLogic Server*.

4.3.2 Starting the Administration Server

To start the Administration Server, go the `DOMAIN_HOME`/bin directory.

On UNIX operating systems, run:

```
./startWebLogic.sh
```

On Windows operating systems, run:

```
startWebLogic.cmd
```

If you have selected **Production Mode** on the Domain Mode and JDK screen in Task 5 (Section 4.2.2), you will be prompted for the login credentials of the Administrator user as provided on the Administrator Account screen in Task 4.

> **Tip:** For more information about starting the Administration Server, see "Starting and Stopping Administration Servers" in *Administering Oracle Fusion Middleware*.
>
> In production mode, a boot identity file can be created to bypass the need to provide a user name and password when starting the Administration Server. For more information, see "Creating a Boot Identity File for an Administration Server" in *Administering Server Startup and Shutdown for Oracle WebLogic Server*.

You can verify that the Administration Server is up and running by access the Administration Server Console. The URL is provided on the Configuration Success screen in Task 19.

> **Note:** Make sure that the database hosting your product schemas is up and running and accessible by the Administration Server.

```
http://administration_server_host:administration_server_port/console
```

The default Administration Server port number is `7001`.
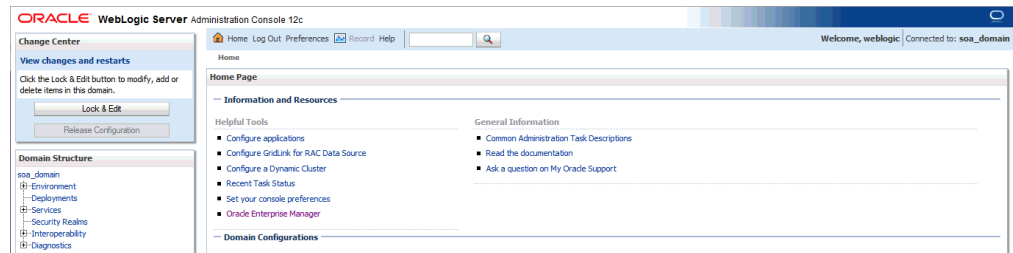
For more information about how to use the Administration Console, see "Getting Started Using Oracle WebLogic Server Administration Console" in *Administering Oracle Fusion Middleware*.

4.3.3 Starting the Managed Servers

To start the Managed Servers:

1. Login to Oracle Fusion Middleware Control:

    http://*administration_server_host*:*administration_server_port*/em

    The Administration Server host and port number were in the URL on the Configuration Success screen (Task 19). The default Administration Server port number is 7001.

    The login credentials were provided on the Administrator Account screen (Task 4).

2. From the "Target Navigation" pane, click the arrows to expand the domain until the Managed Servers (bpm_server1 and bpm_server2) are visible.
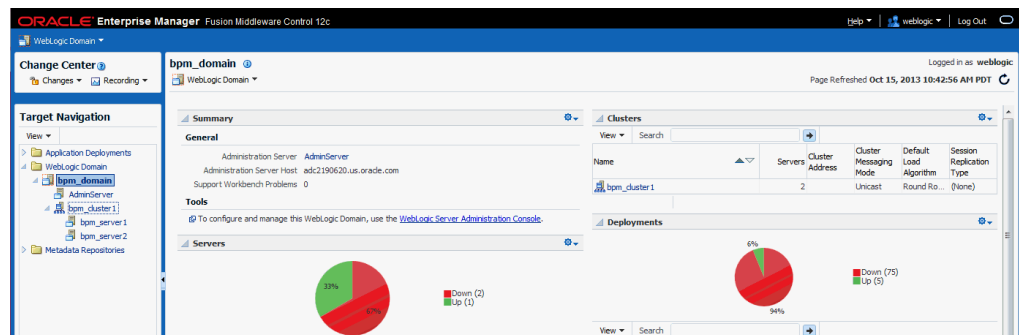
3. Select the first Managed Server (bpm_server1).

4. Next to the **WebLogic Server** menu, select **Start Up**.
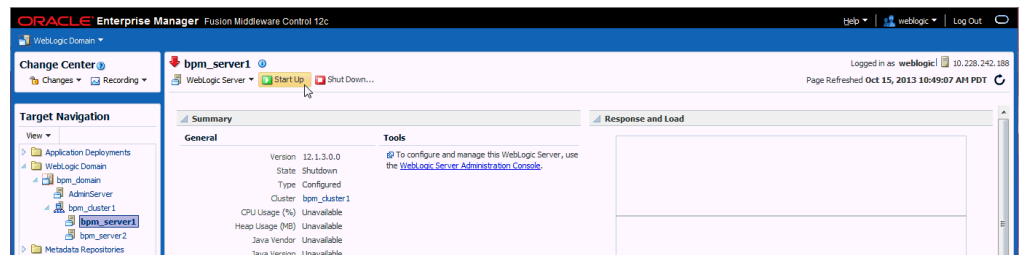
5. Repeat Steps 3 and 4 to start bpm_server2.

6. In the Target Navigation page, select your domain name to see that all the servers are up and running.
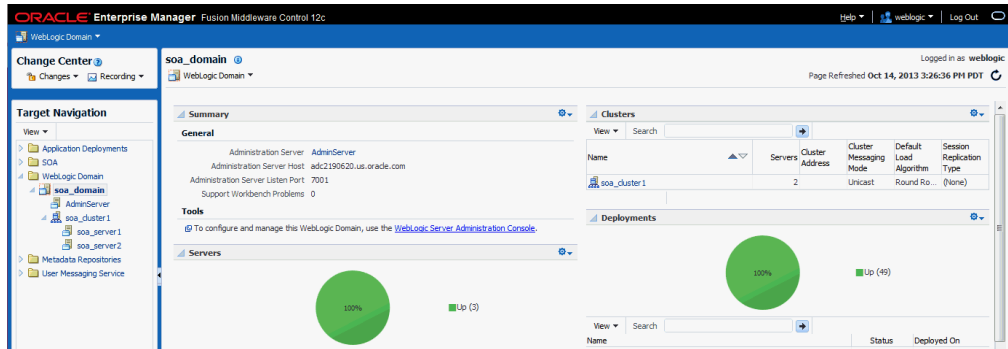
4.4 Verifying the Configuration

To verify that the domain is configured properly, see Section 5.1. You should familiarize yourself with the tasks described in this section and perform them to verify that your domain is properly configured.

5

Next Steps After Configuring the Domain

This chapter describes common tasks you might want to perform on a newly created Oracle SOA Suite or Oracle Business Process Management domain.

The following sections are included in this chapter:

- Performing Basic Administrative Tasks
- Performing Additional Domain Configuration Tasks
- Preparing Your Environment for High Availability

5.1 Performing Basic Administrative Tasks

Table 5–1 lists some common administration tasks you will likely want to perform on your newly created domain.

Table 5–1 Basic Administration Tasks for a New Domain

Task	Description	More Information
Getting familiar with Fusion Middleware administration tools	Get familiar with the various tools available which you can use to manage your environment.	See "Overview of Oracle Fusion Middleware Administration Tools" in *Administering Oracle Fusion Middleware*.
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	See "Starting and Stopping Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications between Oracle Fusion Middleware components using SSL.	See "Configuring SSL in Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	See "Monitoring Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.
Understanding Backup and Recovery Procedures	Learn the recommended backup and recovery procedures for Oracle Fusion Middleware.	See "Introducing Backup and Recovery" in *Administering Oracle Fusion Middleware*.
Getting familiar with Oracle SOA database purging	Get familiar with scheduling and executing purge jobs that automatically remove older flow instances, adapter reports, and fault alerts data from the database.	See "Managing Database Growth" in *Administering Oracle SOA Suite and Oracle Business Process Management Suite*.

5.2 Performing Additional Domain Configuration Tasks

Table 5–2 lists some additional tasks you will likely want to perform on your newly created domain.

Table 5–2   Additional Domain Configuration Tasks

Task	Description	More Information
Deploying Applications	Learn how to deploy your applications to Oracle Fusion Middleware.	See, "Deploying Applications" in *Administering Oracle Fusion Middleware*.
Adding a Web Tier front-end to your domain	Oracle Web Tier hosts Web pages (static and dynamic), provides security and high performance along with built-in clustering, load balancing, and failover features. In particular, the Web Tier contains Oracle HTTP Server.	Follow the instructions to install and configure Oracle HTTP Server in the WebLogic Server domain in *Installing and Configuring Oracle HTTP Server*. Also, refer to "Installing Multiple Products in the Same Domain" in *Planning an Installation of Oracle Fusion Middleware* for important information.
Tuning and configuring Coherence for your topology	The standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers. This configuration is a good starting point for using Coherence, but depending upon your specific requirements, consider tuning and reconfiguring Coherence to improve performance in a production environment.	For information about Coherence clusters, see "Configuring and Managing Coherence Clusters" in *Administering Clusters for Oracle WebLogic Server*. For information about tuning Coherence, see *Administering Oracle Coherence*. For information about storing HTTP session data in Coherence, see "Using Coherence*Web with WebLogic Server" in *Administering HTTP Session Management with Oracle Coherence*Web*. For more information about creating and deploying Coherence applications, see *Developing Oracle Coherence Applications for Oracle WebLogic Server*.

5.3 Preparing Your Environment for High Availability

Table 5–3 provides a list of tasks to perform if you want to scale out your standard installation environment for high availability.

Table 5–3   Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Scaling out to multiple host computers	To enable high availability, it is important to provide failover capabilities to another host computer. That way, if one computer goes down, your environment can continue to serve the consumers of your deployed applications.	See "Scaling Out a Topology (Machine Scaleout)" in the *High Availability Guide*.
Configuring high availability for your Web Tier components.	If you have added a Web tier front-end, then you must configure the Web Tier for high availability, as well as the WebLogic Server software.	See "Configuring High Availability for Web Tier Components" in *High Availability Guide*.
Setting up a front-end load balancer	A load balancer can be used to distribute requests across servers more evenly.	See "Server Load Balancing in a High Availability Environment" and "Configure Load Balancer" in *High Availability Guide*.
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location. This document assumes you have configured a per-domain Node Manager. Review the Node Manager documentation for information on advanced Node Manager configuration options and features.	See *Administering Node Manager for Oracle WebLogic Server*.

6

Deinstalling Oracle SOA Suite and Business Process Management

This chapter describes how to deinstall or reinstall Oracle SOA Suite and Business Process Management.

You should always use the instructions provided in this chapter for removing the software. If you try to remove the software manually, you may experience problems when you try to reinstall the software again at a later time. Following the procedures in this chapter will ensure that the software is properly removed.

This chapter contains the following topics:

- Understanding Product Deinstallation
- Stopping Oracle Fusion Middleware
- Removing Your Database Schemas
- Deinstalling the Software
- Removing the Oracle Home Directory Manually
- Removing the Program Shortcuts on Windows Operating Systems
- Removing Your Domain and Application Data
- Reinstalling the Software

6.1 Understanding Product Deinstallation

The Oracle Fusion Middleware deinstaller removes the software from the Oracle home directory from which it is started. Table 6–1 summarizes the procedure and provides links to supporting documentation.

Table 6–1 Roadmap for Product Deinstallation

Task	Description	Documentation
Stop Oracle Fusion Middleware	All servers and processes in your domain should be stopped before running the deinstaller.	See Section 6.2.
Remove your database schemas	Run Repository Creation Utility to remove your database schemas.	See Section 6.3.

Table 6–1 (Cont.) Roadmap for Product Deinstallation

Task	Description	Documentation
Remove the software	Run the product deinstaller to remove Oracle Fusion Middleware Infrastructure.	See Section 6.4.
	Note that if your Oracle home contains multiple products, you will need to run the deinstaller multiple times; once for each product.	
Remove the Oracle home directory	The deinstaller does not remove all files and folders from the Oracle home directory. After the deinstaller is finished, you must manually remove the Oracle home to complete your product removal.	See Section 6.5.
Remove your domain and application data	The deinstaller does not remove data contained in your Domain home or Application home directories, even if they are located inside the Oracle home. You must remove these directories manually.	See Section 6.7.

6.2 Stopping Oracle Fusion Middleware

Before running the deinstaller, you should stop all servers and processes associated with the Oracle home you are going to remove.

For more information, see "Stopping an Oracle Fusion Middleware Environment" in *Administering Oracle Fusion Middleware*.

6.3 Removing Your Database Schemas

Before your Oracle home is removed, you should run Repository Creation Utility to remove the database schemas associated with this domain. Each domain has its own set of schemas, uniquely identified by a custom prefix (see "Understanding Custom Prefixes" in *Creating Schemas with the Repository Creation Utility*). This set of schemas cannot be shared with any other domain (see "Planning Your Schema Creation" in *Creating Schemas with the Repository Creation Utility*).

If there are multiple sets of schemas on your database, be sure to identify the schema prefix associated with the domain you are removing.

For schema removal instructions, see "Dropping Schemas" in *Creating Schemas with the Repository Creation Utility*.

6.4 Deinstalling the Software

Follow the instructions in this section to start the product deinstaller and remove the software.

- Section 6.4.1, "Starting the Deinstallation Program"

- Section 6.4.2, "Selecting the Product to Deinstall"

- Section 6.4.3, "Navigating the Deinstallation Screens"

If you want to perform a silent (command-line) deinstallation, see "Running the Oracle Universal Installer for Silent Deinstallation" in *Installing Software with the Oracle Universal Installer*.

6.4.1 Starting the Deinstallation Program

To start the deinstaller:

- **On Unix**

    Go to the *ORACLE_HOME*/oui/bin directory and enter the following command:

```
./deinstall.sh
```

■ **On Windows**

Do one of the following:

– Use a file manager window to go to the *ORACLE_HOME*\oui\bin directory and double click on deinstall.cmd.

– From the command line, go to the *ORACLE_HOME*\oui\bin and enter the following command:

```
deinstall.cmd
```

– From the **Start** menu, select **All Programs**, then select **Oracle**, then select **OracleHome**, and then select **Uninstall Oracle Middleware**.

6.4.2 Selecting the Product to Deinstall

Because multiple products exist in the Oracle home, ensure that you are deinstalling the correct Oracle home. After you run the deinstaller, the Distribution to Uninstall screen is displayed. From the drop-down list, select **BPM_SOA 12.1.3.0.0** and click **Uninstall**. The deinstallation program displays the screens listed in Table 6–2.

> **Note:** You can deinstall Oracle Fusion Middleware Infrastructure once the Oracle SOA Suite and Business Process management software is deinstalled, by running the deinstallation wizard again. You will not run into the Distribution to Deinstall screen if no other software is dependent on Oracle Fusion Middleware Infrastructure.

6.4.3 Navigating the Deinstallation Screens

The deinstallation program displays a series of screens, in the order listed in Table 6–2.

If you need additional help with any of the deinstallation screens, click the screen name or click the **Help** on the screen.

Table 6–2   Deinstall Screens and Descriptions

Screen	Description
Welcome	This screen introduces you to the product deinstaller.
Deinstallation Summary	This screen shows the Oracle home directory and its contents that will be deinstalled. Verify that this is the correct directory.
	If you want to save these options to a response file, click **Save Response File** and provide the location and name of the response file. Response files can be used later in a silent deinstallation situation.
	For more information about silent or command line deinstallation, see "Running the Oracle Universal Installer for Silent Deinstallation" in *Installing Software with the Oracle Universal Installer*.
	Click **Deinstall** to begin removing the software.
Deinstallation Progress	This screen shows the progress of the deinstallation.
Deinstallation Complete	This screen appears when the deinstallation is complete. Review the information on this screen, then click **Finish** to dismiss the deinstaller.

6.5 Removing the Oracle Home Directory Manually

After the deinstaller is finished, you must manually remove your Oracle home directory and any existing sub-directories that were not removed by the deinstaller. For example, if your Oracle home directory was `/home/Oracle/product/Oracle_Home` on a UNIX operating system:

```
> cd /home/Oracle/product
> rm -rf Oracle_Home
```

On a Windows operating system, if your Oracle home directory was `C:\Oracle\Product\Oracle_Home`, use a file manager window and navigate to the `C:\Oracle\Product` directory, then right-click on the `Oracle_Home` folder and select **Delete**.

6.6 Removing the Program Shortcuts on Windows Operating Systems

On Windows operating systems, you must also manually remove the program shortcuts; the deinstaller does not remove them for you.

Go to the `C:\Program Data\Microsoft\Windows\Start Menu\Programs\Oracle\`*`Oracle Home`*`\`*`Product`* directory. If you only have one product installed in your Oracle home, you can remove the *`Oracle Home`* directory. If you have multiple products installed in your Oracle home, you must remove all products before removing the *`Oracle Home`*.

6.7 Removing Your Domain and Application Data

To remove your domain and application data:

1. Manually remove your Domain home directory.

    For example, if your Domain home directory was `/home/Oracle/config/domains/soa_domain` on a UNIX operating system:

    ```
    > cd /home/Oracle/config/domains
    > rm -rf soa_domain
    ```

    On a Windows operating system, if your Domain home directory was `C:\Oracle\Config\domains\soa_domain`, use a file manager window and navigate to the `C:\Oracle\Config\domains` directory, then right-click on the `soa_domain` folder and select **Delete**.

2. Manually remove your Application home directory.

    For example, if your Application home directory was `/home/Oracle/config/applications/soa_domain` on a UNIX operating system:

    ```
    > cd /home/Oracle/config/applications
    > rm -rf soa_domain
    ```

    On a Windows operating system, if your Application home directory was `C:\Oracle\Config\applications\soa_domain`, use a file manager window and navigate to the `C:\Oracle\Config\applications` directory, then right-click on the `soa_domain` folder and select **Delete**.

3. Backup the `domain_registry.xml` file in your Oracle home, then edit the file and remove the line associated with the domain you are removing. For example, to remove the `soa_domain`, find the following line and remove it:

    ```
    <domain location="/home/Oracle/config/domains/soa_domain"/>
    ```

Save and exit the file when you are finished.

6.8 Reinstalling the Software

You can reinstall your software into the same Oracle home as a previous installation only if you have deinstalled the software according to the instructions in this chapter, including manually removing the Oracle home directory. When you reinstall, you can then specify the same Oracle home as your previous installation.

Consider the following cases where the Oracle home is not empty:

- Installing in an existing Oracle home that contains the same feature sets.

  The installer will warn you that the Oracle home you specified during the installation already contains the same software you are trying to install. Your options are to:

  a. Select a different installation type. In this case, only the feature sets that do not already exist in the Oracle home directory will be installed.

  b. Select a different Oracle home directory.

- Installing in an existing, non-empty Oracle home.

  For example, suppose that you have chosen to create your Domain home or Application home somewhere inside your existing Oracle home. This data is not removed during the deinstallation process, so if you attempt to reinstall into the same Oracle home, the installer will not allow it. Your options are to:

  a. Deinstall your software from the Oracle home as described in this chapter, and then remove the Oracle home directory. After this is complete, you can reinstall and reuse the same Oracle home location, using the instructions in Chapter 2. Any domain or application data that was in the Oracle home will have to be re-created.

  b. Select a different Oracle home directory.

A

Understanding the Secondary Topologies for Oracle SOA Suite and Business Process Management

This chapter provides alternate topologies for Oracle SOA Suite and Business Process Management.

The following topologies are covered in this appendix:

- Section A.1, "Oracle Business Process Management Standalone Topology"

- Section A.2, "Oracle SOA Suite and Enterprise Scheduler Topology"

- Section A.3, "Oracle Business Process Management and Application Development Framework (ADF) Topology"

- Section A.4, "Oracle SOA Suite and Business Activity Monitoring (BAM) Topology"

A.1 Oracle Business Process Management Standalone Topology

This section contains the following topics:

- Understanding the Oracle Business Process Management Standalone Topology

- Roadmap for Installing and Configuring the Oracle Business Process Management Standalone Topology

A.1.1 Understanding the Oracle Business Process Management Standalone Topology

Figure A–1 illustrates the Oracle Business Process Management standalone topology.

Use this topology when you require a simple domain that offers only the Oracle Business Process Management software capabilities and no cluster.

Note that there might be licensing implications for domains where you deploy Oracle Business Process Management to a cluster. For more information, see the *Oracle Fusion Middleware Licensing Information*.

This topology consists of an Administration Server and one Managed Server in a Oracle WebLogic Server domain on a single host (SOAHOST1). Both the Oracle SOA Suite software and Oracle Business Process Management software are targeted to the Managed Server.

The required product database schemas are installed in a supported Oracle database on a separate host (DBHOST1).

Figure A–1   Oracle Business Process Management Standalone Topology
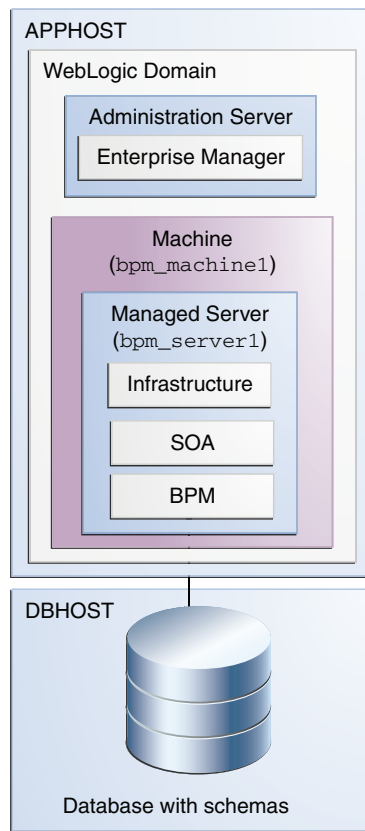
A.1.2 Roadmap for Installing and Configuring the Oracle Business Process Management Standalone Topology

Table A–1 describes the roadmap needed to configure this topology on your system.

Table A–1 Installation and Configuration Steps for Standalone Oracle Business Process Management

Task	Description	More Information	Special instructions
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	See Section 1.5.	None.
Obtain the appropriate distribution	Both Oracle SOA Suite and Business Process Management require an existing Oracle Fusion Middleware Infrastructure installation; Oracle SOA Suite and Business Process Management must be installed in the same Oracle Home as Oracle Fusion Middleware Infrastructure.	See Section 1.6.	You must obtain both Oracle Infrastructure and Oracle SOA Suite and Business Process Management distributions.
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements. Both Oracle SOA Suite and Oracle Business Process Management must be installed into an existing Oracle home directory containing Oracle Fusion Middleware Infrastructure.	See "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.	None.
Install Oracle Fusion Middleware Infrastructure	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle Business Process Management.	See *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.	None.
Install the Oracle Business Process Management software	Install the Oracle Business Process Management software into the existing Infrastructure Oracle home.	See Chapter 2.	Select **BPM** on the Installation Type screen.
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain. Ensure that you select the appropriate options on the configuration screens.	See Chapter 4.	On the Managed Servers screen (Task 12), create only one managed server, bpm_server, and do not create any clusters or machines.
Start the servers	Once you complete the domain creation, start the administration and managed servers.	See Section 4.3.	Start the Administration Server and the Managed Servers.
Verify the configuration	Verify to ensure that the domain is configured properly.	See Section 4.4.	None.
Next steps after installing and configuring Business Process Management in a standalone mode	You can perform administrative as well as management tasks for the domain that you have just configured.	See Chapter 5.	None.

A.2 Oracle SOA Suite and Enterprise Scheduler Topology

This section contains the following topics:

- Understanding the Oracle SOA Suite and Oracle Enterprise Scheduler Topology

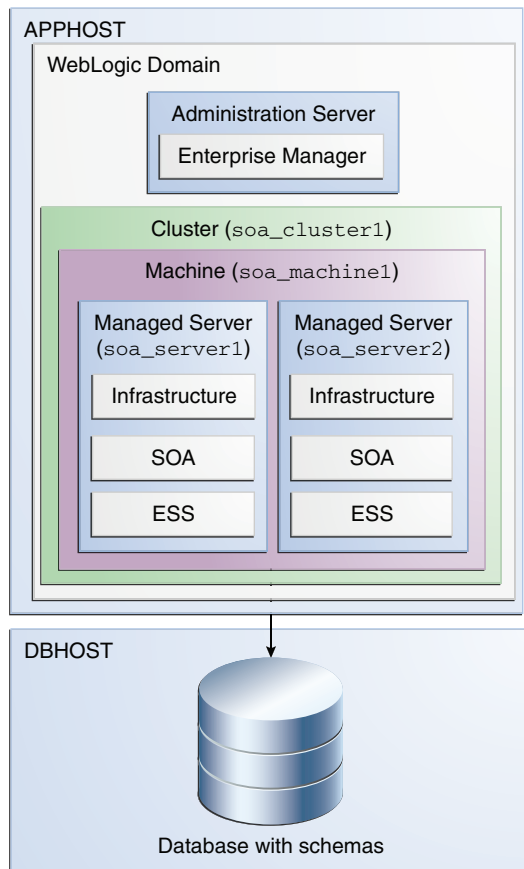- Roadmap for Installing and Configuring the Oracle SOA Suite and Oracle Enterprise Scheduler Topology

A.2.1 Understanding the Oracle SOA Suite and Oracle Enterprise Scheduler Topology

Figure A–2 shows the Oracle SOA Suite and Enterprise Schedule Services (ESS) topology.

Use this topology to integrate the capabilities of Oracle Enterprise Scheduler with Oracle SOA Suite.

The topology is similar to the Oracle SOA Suite standard installation topology, described in Section 1.3.1; however, in this topology, the Oracle Enterprise Scheduler software is targeted to the Oracle WebLogic Server cluster, in addition to the Oracle Fusion Middleware Infrastructure and Oracle SOA Suite software.

Figure A–2   Oracle SOA Suite and Enterprise Schedule Services Topology

A.2.2 Roadmap for Installing and Configuring the Oracle SOA Suite and Oracle Enterprise Scheduler Topology

Table A–2 describes the roadmap needed to configure this topology on your system.

Table A–2   Installation and Configuration Steps for Oracle SOA Suite and Oracle Enterprise Scheduler

Task	Description	More Information	Special Instructions
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	See Section 1.5.	None.
Obtain the appropriate distribution	Both Oracle SOA Suite and Enterprise Schedule Services require an existing Oracle Fusion Middleware Infrastructure installation; when you install Oracle SOA Suite, Enterprise Schedule Services gets installed, too, and Oracle SOA Suite must be installed in the same Oracle Home as Oracle Fusion Middleware Infrastructure.	See Section 1.6.	You must obtain both Oracle Infrastructure and Oracle SOA Suite and Business Process Management distributions.
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements.	See "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.	None.
Install Oracle Fusion Middleware Infrastructure	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle SOA Suite.	See *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.	None.
Install the software	Install the Oracle SOA Suite software into the existing Oracle Infrastructure home. When you install Oracle SOA suite, Enterprise Schedule Services gets installed too.	See Chapter 2.	Select **SOA** on the Installation Type screen.
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain. Ensure that you select the appropriate options on the configuration screens.	See Chapter 3.	Follow the instructions provided for specific screens in Section A.2.2.1.
Start the servers	Once you complete the domain creation, start the administration and managed servers.	See Section 3.3.	Start the Managed server on which wsm-pm is targeted before you start the Manager Server on which Oracle Enterprise Scheduler is deployed.
Verify the configuration	Verify to ensure that the domain is configured properly.	See Section 3.4.	None.
Next steps after installing and configuring Oracle SOA Suite and Enterprise Schedule Services	You can perform administrative as well as management tasks for the domain that you have just configured.	See Chapter 5.	None

A.2.2.1 Configuration Options to Select for the Oracle SOA Suite and Oracle Enterprise Scheduler

Almost all of the screens and options that you must select while configuring Oracle SOA Suite and Enterprise Schedule Services are identical to the ones provided in Chapter 3. However, there are a couple of screens on which you must select different

options and Table A–3 lists the key screens and options. Ensure that you select the configuration options as provided on this table.

Table A–3   Key Screens and Configuration Options for Oracle SOA Suite and Enterprise Schedule Services Topology

Screen	Description
Select Components	This screen appears when you run the RCU to create schemas.
	In addition to the schema list provided in Task 4, select **Oracle Enterprise Scheduler**.
Templates	This screen appears after you start the configuration wizard to create your domains.
	In addition to the templates listed in Task 2, select the following templates:
	■ Oracle Enterprise Scheduler Services Basic - 12.1.3.0 [oracle_common]
	■ Oracle Enterprise Manager Plugin for ESS - 12.1.3.0 [em]
Managed Servers	On the Managed Servers screen (Task 12), two managed servers, `soa_server1` and `ess_server1`, are created. Delete `ess_server1` and create `soa_server2`. Ensure that in the Listen Address drop-down list, you select the IP address of the host on which the Managed Server will reside. Do not use "All Local Addresses."
	In the Server Groups drop-down list, ensure that `soa_server1` and `soa_server2` are targeted to **SOA-MGD-SVRS** and **ESS_MGD_SVRS**.
Assign Servers to Clusters	On this screen (Task 14), assign both `soa_server1` and `soa_server2` to `soa_cluster1`.
Assign Servers to Machine	On this screen (Task 17), assign the `AdminServer`, `soa_server1` and `soa_server2` to `soa_machine1`.

A.3 Oracle Business Process Management and Application Development Framework (ADF) Topology

This section contains the following topics:

■ Understanding the Oracle Business Process Management and Application Development Framework Topology

■ Roadmap for Installing and Configuring the Oracle Business Process Management and Application Development Framework Topology
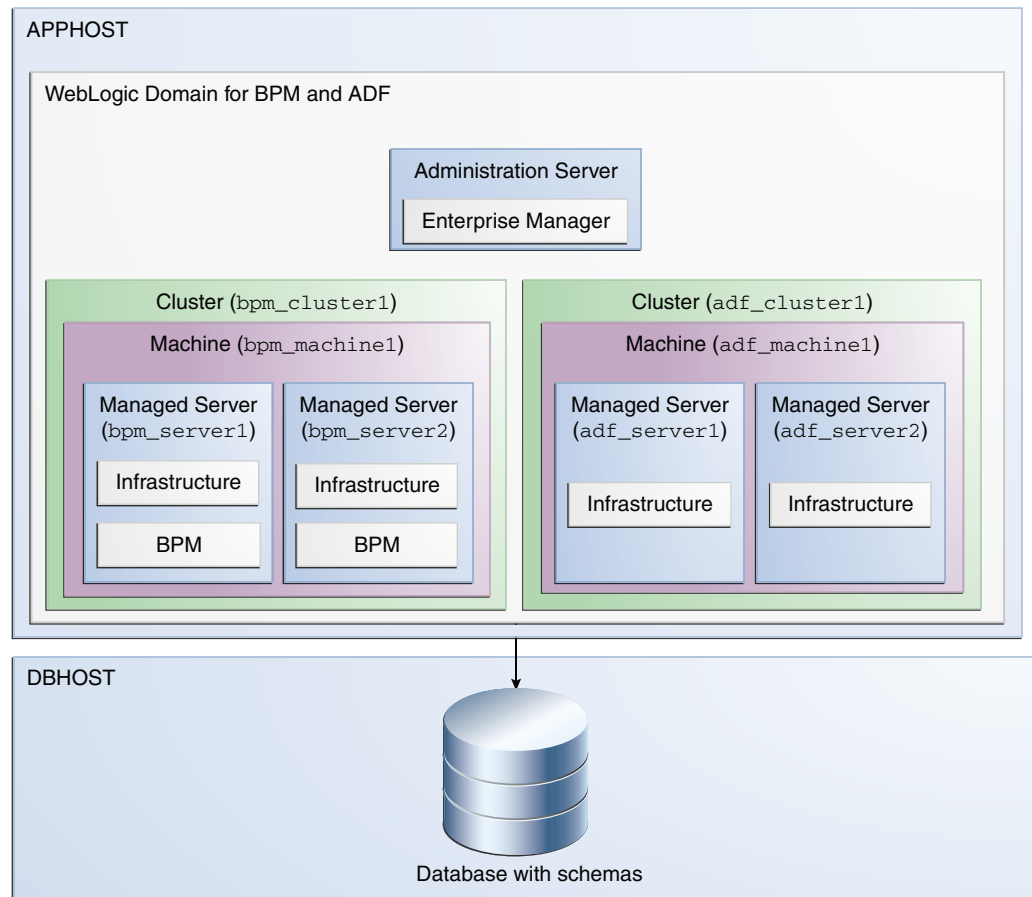
A.3.1 Understanding the Oracle Business Process Management and Application Development Framework Topology

Figure A–3 shows the Oracle Business Process Management and Application Development Framework topology.

Use this topology if you are deploying applications that take advantage of both the Oracle Business Process Management software and a custom user interface developed using Oracle Application Development Framework (Oracle ADF). This topology allows you to target the Oracle Business Process Management sofware to one cluster and the Oracle Application Development Framework software to another cluster, so there is no resource contention between the two products.

Figure A–3   Oracle Business Process Management and Application Development Framework Topology

A.3.2 Roadmap for Installing and Configuring the Oracle Business Process Management and Application Development Framework Topology

Table A–4 describes the roadmap needed to configure this topology on your system.

Table A–4   Installation and Configuration Steps for Oracle Business Process Management and Application Development Framework

Task	Description	More Information	Special Instructions
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	See Section 1.5.	None.
Obtain the appropriate distribution	Both Oracle SOA Suite and Business process Management require an existing Oracle Fusion Middleware Infrastructure installation; Oracle SOA Suite must be installed in the same Oracle Home as Oracle Fusion Middleware Infrastructure.	See Section 1.6.	You must obtain both Oracle Infrastructure and Oracle SOA Suite and Business Process Management distributions.
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements.	See "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.	None.
Install Oracle Fusion Middleware Infrastructure	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle SOA Suite.	See *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.	None.
Install the software	Install the Oracle Business Process Management software into the existing Oracle Infrastructure home.	See Chapter 2.	Select **BPM** on the Installation Type screen.
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain. Ensure that you select the appropriate options on the configuration screens.	See Chapter 4.	Follow the instructions provided for specific screens in Section A.3.2.1.
Start the servers	Once you complete the domain creation, start the administration and managed servers.	See Section 4.3.	None.
Verify the configuration	Verify to ensure that the domain is configured properly.	See Section 4.4.	None.
Next steps after installing and configuring Business Process management and Application Development Framework	You can perform administrative as well as management tasks for the domain that you have just configured.	See Chapter 5.	None.

A.3.2.1 Configuration Options to Select for Oracle Business Process Management and Application Development Framework

Almost all of the screens and options that you must select while configuring Oracle Business Process Management and Application Development Framework are identical to the ones provided in Chapter 4. However, there are a couple of screens on which you must select different options and Table A–5 lists the key screens and options. Ensure that you select the configuration options as provided in this section.

Table A–5   Key Screens and Configuration Options for Oracle Business Process Management and Application Development Framework Topology

Screen	Description

Managed Servers	On the Managed Servers screen (Task 12), do the following:
	
	1. Click **Add** and create the following Managed Servers:
	   - Two BPM Managed Servers, `bpm_server1` and `bpm_server2`.
	   - Two ADF managed servers, `adf_server1` and `adf_server2`.
	
	2. Ensure that in the Listen Address drop-down list, you select the IP address of the host on which the Managed Server will reside. Do not use "All Local Addresses."
	
	3. In the Server Groups drop-down list, ensure that `bpm_server1` and `bpm_server2` are targeted to **SOA-MGD-SVRS**, but do not assign any server groups to `adf_server1` and `adf_server2`. Leave the ADF Managed Servers as **Unspecified**.

Clusters	On the Clusters screen (Task 13), create two clusters, `bpm_cluster1` and `adf_cluster1`.
Assign Servers to Clusters	On this screen (Task 14), assign the servers as given below: - `bpm_server1` and `bpm_server2` to `bpm_cluster1` - `adf_server1` and `adf_server2` to `adf_cluster1`
Machines	On this screen (Task 16), create two machines, `bpm_machine1` and `adf_machine2`.
Assign Servers to Machine	On this screen (Task 17), assign the servers as follows: - `AdminServer`, `bpm_server1` and `bpm_server2` to `bpm_machine1` - `adf_server1` and `adf_server2` to `adf_machine1`

A.4 Oracle SOA Suite and Business Activity Monitoring (BAM) Topology
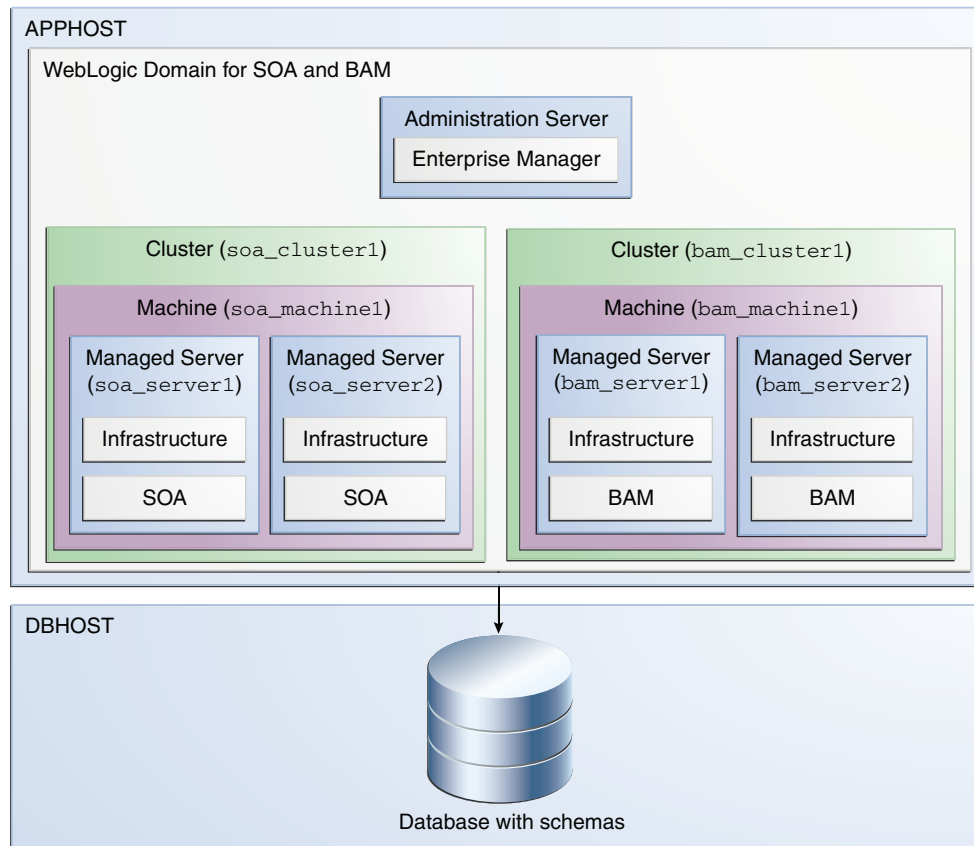
This section contains the following topics:

- Understanding the Oracle SOA Suite and Business Activity Monitoring Topology

- Roadmap for Installing and Configuring the Oracle SOA Suite and Business Activity Monitoring Topology

A.4.1 Understanding the Oracle SOA Suite and Business Activity Monitoring Topology

Figure A–4 shows the Oracle SOA Suite and Business Activity Monitoring topology.

Use this topology to implement Oracle Business Activity Monitoring in your Oracle SOA Suite domain. The Oracle Business Activity Monitoring software is targeted to its own cluster; this ensures that there is no resource contention between the Oracle SOA Suite and Oracle Business Activity Monitoring software.

Figure A–4   Oracle SOA Suite and Business Activity Monitoring Topology

A.4.2 Roadmap for Installing and Configuring the Oracle SOA Suite and Business Activity Monitoring Topology

Table A–6 describes the roadmap needed to configure this topology on your system.

Table A–6   Overview of the Installation and Configuration Steps for Oracle SOA Suite and Business Activity Monitoring

Task	Description	More Information	Special Instructions
Verify your system environment	Before beginning the installation, verify that the minimum system and network requirements are met.	See Section 1.5.	None.
Check for any mandatory patches that will be required before or after the installation	Review the Oracle Fusion Middleware Infrastructure release notes to see if there are any mandatory patches required for the software products you are installing.	See "Install and Configure" in *Release Notes for Oracle Fusion Middleware Infrastructure*.	None.
Obtain the appropriate distribution	Both Oracle SOA Suite and Business Activity Monitoring require an existing Oracle Fusion Middleware Infrastructure installation; When you install Oracle SOA Suite, Business Activity Monitoring gets installed, too, and Oracle SOA Suite must be installed in the same Oracle Home as Oracle Fusion Middleware Infrastructure.	See Section 1.6.	You must obtain both Oracle Infrastructure and Oracle SOA Suite and Business Process Management distributions.

Table A–6 (Cont.) Overview of the Installation and Configuration Steps for Oracle SOA Suite and Business Activity Monitoring

Task	Description	More Information	Special Instructions
Determine your installation directories	Verify that the directories that will need to be created can be created or accessed by the installer, and exist on systems that meet the minimum requirements.	See "What are the Key Oracle Fusion Middleware Directories?" in *Understanding Oracle Fusion Middleware*.	None.
Install Oracle Fusion Middleware Infrastructure	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory for Oracle SOA Suite.	See *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.	None.
Install the software	Install the Oracle SOA Suite software into the existing Oracle Infrastructure home.	See Chapter 2.	Select **SOA** on the Installation Type screen.
Create a WebLogic domain	Use the configuration wizard to create and configure the WebLogic domain. Ensure that you select the appropriate options on the configuration screens.	See Chapter 3.	Follow the instructions provided for specific screens in Section A.4.2.1.
Start the servers	Once you complete creating the domain, start the administration and managed servers.	See Section 3.3.	None.
Verify the configuration	Verify to ensure that the domain is configured properly.	See Section 3.4.	None.
Next steps after installing and configuring Oracle SOA Suite and Business Activity Monitoring	You can perform administrative as well as management tasks for the domain that you have just configured.	See Chapter 5.	None.

A.4.2.1 Configuration Options to Select for Oracle SOA Suite and Business Activity Monitoring

Almost all of the screens and options that you must select while configuring Oracle SOA Suite and Business Activity Monitoring are identical to the ones provided in Chapter 3. However, there are a couple of screens on which you must select different options and Table A–7 lists the key screens and options. Ensure that you select the configuration options as provided in this section.

Table A–7 Key Screens and Configuration Options for Oracle SOA Suite and Business Activity Monitoring Topology

Screen	Description
Templates	This screen appears after you start the configuration wizard to create your domain.
	In addition to the templates listed in Task 2, select **Business Activity Monitoring - 12.1.3.0 [soa]**

Table A–7   (Cont.) Key Screens and Configuration Options for Oracle SOA Suite and Business Activity Monitoring Topology

Screen	Description
Managed Servers	On the Managed Servers screen (Task 12), two managed servers, bam_server1 and soa_server1, are created. Click **Add** and create two more managed servers, bam_server2 and soa_server2.
	Ensure that in the Listen Address drop-down list, you select the IP address of the host on which the Managed Server will reside. Do not use "All Local Addresses."
	In the Server Groups drop-down list, ensure that soa_server1 and soa_server2 are targeted to **SOA-MGD-SVRS** and bam_server1 and bam_server2 to **BAM 12-MGD-SVRS-ONLY**.
Clusters	On the Clusters screen (Task 13), create two clusters, soa_cluster1 and bam_cluster1.
Assign Servers to Clusters	On this screen (Task 14), assign the servers as given below:
	■ bam_server1 and bam_server2 to bam_cluster1
	■ soa_server1 and soa_server2 to soa_cluster1
Machines	On this screen (Task 16), create two machines, bam_machine1 and soa_machine2.
Assign Servers to Machine	On this screen (Task 17), assign the servers as follows:
	■ AdminServer, bam_server1 and bam_server2 to bam_machine1
	■ soa_server1 and soa_server2 to soa_machine1