Oracle® Fusion Middleware

Installation Guide for Oracle Enterprise Repository

11*g* Release 1 (11.1.1.4.0)

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Oracle Fusion Middleware Installation Guide for Oracle Enterprise Repository, 11*g* Release 1 (11.1.1.4.0)

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Preface

Oracle Fusion Middleware Installation Guide for Oracle Enterprise Repository provides information and instructions for installing, configuring, and troubleshooting Oracle Enterprise Repository.

Audience

This document is intended for system administrators or application developers who are installing Oracle Enterprise Repository 11*g* software. It is assumed that readers are familiar with Web technologies and have a general understanding of Windows and UNIX platforms.

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Related Documents

For more information, see the following documents in the Oracle Enterprise Repository 11*g* Release 1 (11.1.1.4.0) documentation set:

- Oracle Enterprise Repository on OTN - The home page for Oracle Enterprise Repository on Oracle Technology Network (OTN) is:

  `http://www.oracle.com/technology/products/soa/repository/index.html`

- Architect Center: SOA Governance: Essential to Your Business - Learn how effective SOA governance is an essential element in any enterprise transformation strategy by reading the Architect Center: SOA Governance: Essential to Your Business documents at:

  `http://www.oracle.com/technology/architect/soa/soagov/index.html`

- SOA Blog - Keep on top of the latest SOA blogs at:

  `http://blogs.oracle.com/governance`

Conventions

The following text conventions are used in this document:

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

Part I

Installing Oracle Enterprise Repository

This part describes how to install Oracle Enterprise Repository.

This part contains the following chapters:

- Chapter 1, "Preparing for Your Installation"
- Chapter 2, "Installing Oracle Enterprise Repository"
- Chapter 3, "Post-Installation Steps"
- Chapter 4, "Uninstalling the Software"

1

Preparing for Your Installation

This chapter provides information that you must know before installing your Oracle software:

This chapter contains the following sections:

- Section 1.1, "Installation Overview"
- Section 1.2, "Oracle Enterprise Repository Sizing Guidelines"
- Section 1.3, "Installable Product Components"
- Section 1.4, "Product Distribution Methods"
- Section 1.5, "Installation Prerequisites"
- Section 1.6, "Database Installation Procedures"
- Section 1.7, "Selecting Directories for Your Installation"
- Section 1.8, "Running the Oracle Enterprise Repository Product Installation"
- Section 1.9, "Generating a Verbose Installation Log"

1.1 Installation Overview

The installation program provides a complete framework for the installation and uninstallation of your entire Oracle software product, or individual components, as desired. You can install Oracle Enterprise Repository using the default option, which enables you to install Oracle Enterprise Repository and its examples.

The following sections provide an overview about:

- Section 1.1.1, "Installation Modes"

1.1.1 Installation Modes

You can use the Oracle Products installation program in one of the following modes:

- Section 1.1.1.1, "Graphical Mode"
- Section 1.1.1.2, "Console Mode"
- Section 1.1.1.3, "Silent Mode"

1.1.1.1 Graphical Mode

Graphical-mode installation is an interactive, GUI-based method for installing your software. It can be run on both Windows and UNIX systems. For installation procedures, see Section 2.2.1, "Running the Installation Program in Graphical Mode".

If you want to run graphical-mode installation, the console attached to the computer on which you are installing the software must support a Java-based GUI. All consoles for Windows systems support Java-based GUIs, but not all consoles for UNIX systems do.

> **Note:** If you attempt to start the installation program in graphical mode on a system that cannot support a graphical display, the installation program automatically starts console-mode installation.

1.1.1.2 Console Mode

Console-mode installation is an interactive, text-based method for installing your software from the command line, on either a UNIX system or a Windows system. For instructions for using this method, see Section 2.2.2, "Running the Installation Program in Console Mode".

1.1.1.3 Silent Mode

Silent-mode installation is a noninteractive method of installing your software that requires the use of an XML properties file for selecting installation options. You can run silent-mode installation in either of two ways: as part of a script or from the command line. Silent-mode installation is a way of setting installation configurations only once and then using those configurations to duplicate the installation on many computers. For information on running the installation program in the silent mode, see Section 2.2.3, "Running the Installation Program in Silent Mode".

1.2 Oracle Enterprise Repository Sizing Guidelines

This section describes the Oracle Enterprise Repository sizing guidelines:

- Oracle Enterprise Repository offers greatest capacity on a 64-bit architecture. Oracle Enterprise Repository is essentially a single java process. With a 32 -bit architecture any process is limited to 4GB (a little less on Windows), regardless of how much memory is in the system. With a 64-bit architecture the processes are limited to the amount of memory in the system and the JDK is more tunable. This enables you to make much larger amounts of memory available to the application server, which includes the cache that the assets load into.

- Treat virtualized environments just like actual hardware when sizing your environment.

- **Minimum Configuration**
  - 32 -bit architecture
  - Application Server
    * Supported Platforms

      For the list of Oracle Enterprise Repository supported platforms, see *http://www.oracle.com/technology/products/soa/repository/index.html*.

    * Minimum 2GB RAM available for application server usage (dependent on the number of assets expected within the Oracle Enterprise Repository). Creating large numbers of assets and complex taxonomies consumes memory.

    * Initial RAM size for application server: 1GB

    * Initial Disk Space usage for application server: 2GB (Including Eclipse)

* Minimum CPU Speeds: 1.8Ghz (Recommended 2.4Ghz Dual Core processors)

* Minimum Network Speeds connecting Application Server and Database Server: 100Mbit (Recommended 1Gbit)

- **Large Configuration**
  - 64-bit architecture
  - Multiple CPU cluster
  - Isolated development and test environments

- **Typical Database Configuration**
  - Using Oracle 11*g*
  - 20MB for Data (including blob data)
  - 20MB for Index
  - Rule of thumb on DB drive size is 10 X physical table and index size for 100K tables and index at 1.1GB so figure 10 or 11 GB for DB drive space. This varies based on how the DBAs have configured the drives.
  - A properly configured database server has enough drives to optimize disk usage. Oracle's performance testing database server for Oracle Enterprise Repository has 6 drives.

    > **Note:**   Oracle Enterprise Repository has not been tested with HA databases.

- The Oracle Enterprise Repository design is one of the most important performance components and the following can impact performance:
  - Number of assets (Oracle Enterprise Repository is easily capable of storing hundreds of thousands of assets. There are however some limitations with the GUI.)
  - Number of asset types
  - Nested taxonomies (Complexity of the taxonomy can have a huge impact on performance, not to mention decrease the usability for asset consumers)
  - Number of relationships
  - Number of active users

1.3 Installable Product Components

Using the Oracle Products installation program, you can install the following components on your system:

- Section 1.3.1, "Oracle Enterprise Repository"

For additional information about:

- The features and capabilities of Oracle Enterprise Repository, see Section 1.3.1, "Oracle Enterprise Repository".

- Operating systems and hardware supported by your software, see Oracle Products Supported Configurations.

1.3.1 Oracle Enterprise Repository

Oracle Enterprise Repository manages the metadata for any type of software asset, from business processes and Web services to patterns, frameworks, applications, and components. It maps the relationships and interdependencies that connect those assets to improve impact analysis, promote and optimize their reuse, and measure their impact on the bottom line.

Oracle Enterprise Repository consists of the following subcomponents that can be installed on your system:

- **Core Repository with Examples**: Installs everything necessary for Oracle Enterprise Repository. The evaluation customers should choose just this option.

- **Oracle Enterprise Repository Plug-in for Eclipse**: This plug-in allows access to the repository from Eclipse. The Repository Access View supports browsing, searching, and retrieval of assets from Oracle Enterprise Repository.

- **Oracle Enterprise Repository Plug-ins**

  The Oracle Enterprise Repository Plug-in depends upon the OEPE plug-in for Eclipse. The OEPE Plug-in depends on the Eclipse WST project, therefore making WST a transitive dependency for Oracle Enterprise Repository. You can retrieve the WST project from the following location:

  http://download.eclipse.org/webtools/updates/

  The following list describes the plug-ins available in Oracle Enterprise Repository:

  – **Development Environments (IDEs)**

  * Oracle JDeveloper

  * Eclipse

  * VS .NET

  – **Service Registry**

  * Oracle Service Registry

  * UDDI v3.0

  – **Version Control Systems**

  * Clear Case

  * CVS

  * PVCS

  * Harvest

  * Serena

  – **Workflow Engine**

  * Oracle BPM

  – **Harvester Plug-ins for**

  * WLST

  * Ant

  * Oracle Enterprise Manager Management Pack Plus for SOA

  * JDeveloper

  * Eclipse

– **Defect Tracking Systems**

* ClearQuest

1.4 Product Distribution Methods

Your Oracle software is distributed on the Oracle Web site.

■ Section 1.4.1, "Web Distribution"

1.4.1 Web Distribution

You can download your software from the Oracle Web site at
http://www.oracle.com/technologies/soa/enterprise-repository.html.

In the Downloads panel, click **Oracle Enterprise Repository** to go to the Oracle
Enterprise Repository Downloads page. From the list of operating systems, choose the
appropriate operating system to download the installer to your local computer.

> **Note:** You must accept the license agreement, before you download
> the installer.

1.5 Installation Prerequisites

The following sections specify the installation prerequisites:

■ Section 1.5.1, "System Requirements"

■ Section 1.5.2, "Temporary Disk Space Requirements"

> **Note:** For more information about the Oracle Enterprise Repository
> sizing guidelines, see Section 1.2, "Oracle Enterprise Repository Sizing
> Guidelines".

1.5.1 System Requirements

The system requirements for your installation are given in the following table.

Table 1–1 System Requirements

Component	Requirement
Platform configuration	A supported configuration of hardware, operating system, application server, JDK, and database is required. See Oracle Products Supported Configurations.
	The Supported Configurations documentation specifies other prerequisites and recommendations, such as recommended versions of the JDK.
Processor	2-GHz CPU recommended
Hard Disk Drive	A complete installation requires approximately 1.2 GB of disk space.
Memory	A minimum of 2 GB RAM
Character Encoding	UTF-8/Unicode character encoding must be configured for your supported database and application server.

Table 1–1   (Cont.) System Requirements

Component	Requirement
Color bit depth display and size	For graphical user interface (GUI) mode installation, 8-bit color depth (256 colors) is required.
	For console-mode and silent-mode installation, there is no color bit depth requirement.
JDK	The Oracle Enterprise Repository installation program requires a Java run-time environment (JRE) to run.
	To run the .jar installation programs, you must have the appropriate version of the JDK installed on your system, and include the bin directory of the JDK at the beginning of the PATH variable definition. It is important that you use a JDK because the installation process assigns values to JAVA_HOME and related variables to point to the JDK directory.
JDBC	The Oracle Enterprise Repository installation program requires the location of supported JDBC driver file(s) to communicate with a supported database server.
	Ensure that the JDBC driver file(s) are compatible with your application server's JDK/JRE version, before proceeding with the Oracle Enterprise Repository installation.
	When using the IBM WebSphere application server, the bundled JDK/JRE does not support JDBC drivers that are compiled using a newer JDK. For example, the Oracle 11*g* JDBC driver, ojdbc6.jar, does not function within a WebSphere 6.1.0.5 installation, however, the **ojdbc5.jar** driver would be appropriate.

1.5.2 Temporary Disk Space Requirements

The Oracle installation program uses a temporary directory into which it extracts the files necessary to install the software on the target system. During the installation process, your temporary directory must contain sufficient space to accommodate the compressed Java run-time environment (JRE) bundled with the installation program and an uncompressed copy of the JRE that is expanded into the temporary directory. The extracted files are deleted from the temporary directory after the installation process. As a general rule, installation programs require approximately 2.5 times the amount of temporary space that is ultimately required by the installed files.

By default, the installation program uses the following temporary directories:

- Windows platforms: directory referenced by the TMP system variable

- UNIX platforms: system-dependent temporary directory

> **Note:**   If you do not have enough temporary space to run the installation program, you are prompted to specify an alternate directory or exit the installation program.

To ensure that you have adequate temporary space, you may want to allocate an alternate directory for this purpose. To do so, follow the instructions provided in the following table.

Platform	To allocate more space in the temp folder
Windows	Do one of the following: ■ Set the TMP system variable to a directory of your choice. ■ If starting the installation program from the command line, include the `-Djava.io.tmpdir=tmpdirpath` option, replacing `tmpdirpath` with the full path of the directory that you want to designate as a temporary storage area for the Oracle Enterprise Repository installation program. For example: java -jar `OER1111xx_generic.jar` -Djava.io.tmpdir=D:\Temp
UNIX	Enter the following option on the command line when you start the installation program: `java -jar  OER1111xx_generic.jar -Djava.io.tmpdir=tmpdirpath` Here, `tmpdirpath` is the full path of the directory that you want to designate as a temporary storage area for the Oracle Enterprise Repository installation program.

1.6 Database Installation Procedures

The database administrator must create an empty database for Oracle Enterprise Repository to install its files into. A user for this database must also be created (for example, `OER_USER`) and that user must have database owner privileges on the Oracle Enterprise Repository database.

This section contains the following topics:

- Section 1.6.1, "Oracle Database Installation"
- Section 1.6.2, "Oracle Real Application Clusters Database Installation"
- Section 1.6.3, "SQL Server 2008 Database Installation"
- Section 1.6.4, "UDB Database Installation"

1.6.1 Oracle Database Installation

Appropriate administrative privileges are necessary to complete this process. This section contains the following topics:

- Section 1.6.1.1, "Oracle Database"
- Section 1.6.1.2, "Prerequisites"
- Section 1.6.1.3, "Create the Tablespaces"
- Section 1.6.1.4, "Build a Database User"

1.6.1.1 Oracle Database

1. Connect to the database as a DBA.

2. From a SQL Plus command prompt, run: select * from nls_database_parameters where `Parameter='NLS_CHARACTERSET';`

   The output has two columns, Parameter and Value. The most common Values are:

   - UTF-8 Encoding: AL32UTF8 (International support)
   - ISO-8859-1 Encoding: WE8ISO8859P1 (U.S. English Encoding)

1.6.1.2 Prerequisites

You must verify the following database prerequisites before beginning the Oracle Enterprise Repository installation process.

- A login with database administrator privileges

- The name of the supported JDBC driver for Oracle: You could use either **ojdbc5.jar** or **ojdbc6.jar** depending on the JDK used by your application server. The supported Oracle Database versions are - 10..2.0.4.0, 11.1.0.7.0, and 11.2.

  For supported Oracle Enterprise Repository JDBC Drivers, see Table 2–1, " Oracle Enterprise Repository 11g Supported JDBC Driver Information".

  > **Note:** The Oracle Database driver that you use should be based on your application servers JDK.

- JDK 1.5.x or higher on the current workstation/server
- SQL *Plus Client tools

1.6.1.3 Create the Tablespaces

Follow these steps to create the necessary tablespaces before installing Oracle Enterprise Repository:

1. Log in to Oracle (system or DBA privileges are required).

2. Create a data tablespace named `OER_DATA` with at least 300M of available space.

3. Create an index tablespace named `OER_INDEX` with at least 300M of available space.

Example Tablespace Creation Script

The following example scripts show how to create the `OER_DATA` and `OER_INDEX` tablespaces.

> **Note:** These scripts are for a UNIX/Linux based DataFile. For Windows, a file path value of *c:\oracle\...\file.dbf* is appropriate syntax.

```
CREATE TABLESPACE OER_DATA
    DATAFILE '/opt/oracle/oradata/oer/oer_data.dbf' SIZE 300M
 AUTOEXTEND ON NEXT 10240K MAXSIZE UNLIMITED
    EXTENT MANAGEMENT LOCAL AUTOALLOCATE
    LOGGING
    ONLINE
    SEGMENT SPACE MANAGEMENT AUTO;

CREATE TABLESPACE OER_LOB
    DATAFILE '/opt/oracle/oradata/oer/oer_lob.dbf' SIZE 300M
 AUTOEXTEND ON NEXT 10240K MAXSIZE UNLIMITED
    EXTENT MANAGEMENT LOCAL AUTOALLOCATE
    LOGGING
    ONLINE
    SEGMENT SPACE MANAGEMENT AUTO;

CREATE TABLESPACE OER_INDEX
    DATAFILE '/opt/oracle/oradata/oer/oer_index.dbf' SIZE 300M
```

```
AUTOEXTEND ON NEXT 5120K MAXSIZE UNLIMITED
    EXTENT MANAGEMENT LOCAL AUTOALLOCATE
    LOGGING
    ONLINE
    SEGMENT SPACE MANAGEMENT AUTO;
```

1.6.1.4 Build a Database User

Follow these steps to create the necessary database user before installing Oracle Enterprise Repository:

1. Log in to Oracle (administrative privileges required).

2. Create a user and password.

3. Ensure that the user has the following privileges:

   - Privilege to create sessions

   - Ability to create tables

   - Default tablespace is `oer_data`

   - Assigned quota of 300M for `oer_data`

   - Assigned quota of 300M for `oer_lob`

   - Assigned quota of 300M for `oer_index`

Example User Creation Script

The following example script show how to create a user for newly created Oracle Enterprise Repository Tablespaces.

```
CREATE USER OER IDENTIFIED BY OER_PWD
DEFAULT TABLESPACE OER_DATA
    TEMPORARY TABLESPACE TEMP;

GRANT CREATE MATERIALIZED VIEW TO OER;
GRANT CREATE SEQUENCE TO OER;
GRANT CREATE SESSION TO OER;
GRANT CREATE SYNONYM TO OER;
GRANT CREATE TABLE TO OER;
GRANT CREATE TRIGGER TO OER;
GRANT CREATE VIEW TO OER;
GRANT UNLIMITED TABLESPACE TO OER;
```

1.6.2 Oracle Real Application Clusters Database Installation

The Oracle Enterprise Repository 10.3 Installer does not support the installation into Oracle Real Application Cluster (Oracle RAC) environments, but supports Oracle RAC postinstall configurations. The Oracle Enterprise Repository installer requires a standard SID to connect and create relations, and also to insert the sample data for use with the initial installation of Oracle Enterprise Repository.

The Oracle Database administrators should assist in the database configuration of Oracle Enterprise Repository when the migration from SID to an Oracle RAC environment is required. Once the Oracle RAC environment is configured and verified by the Oracle Database administrator, then the database.properties file in the Oracle Enterprise Repository application contains the appropriate values for the db.url property, as mentioned in the following example:

```
db.url=jdbc:oracle:thin:@(DESCRIPTION = (load_balance = true)
(failover =true) (ADDRESS = (PROTOCOL = TCP)(HOST = db_
host1)(PORT = 1521)) (ADDRESS =(PROTOCOL = TCP)(HOST = db_
host2)(PORT = 1521)) (CONNECT_DATA = (SERVICE_NAME =
siprc)(failover_mode = (type = session) (method = basic)
(retries = 0) (delay = 0))))
```

1.6.3 SQL Server 2008 Database Installation

Appropriate administrative privileges are necessary to complete this process. These instructions assume the use of Enterprise Manager. This section contains the following topics:

- Section 1.6.3.1, "SQL Server 2008 Database"

- Section 1.6.3.2, "Prerequisites"

- Section 1.6.3.3, "Create a Database"

- Section 1.6.3.4, "Create a Database User"

1.6.3.1 SQL Server 2008 Database

SQL Server is automatically configured to support UTF-8/Unicode character encoding. No additional configuration is necessary.

1.6.3.2 Prerequisites

You must verify the following database prerequisites before beginning the Oracle Enterprise Repository installation process.

- A login with database administrator privileges (Usually the SA account).

- The name of the supported JDBC driver for SQL Server 2008: **sqljdbc.jar** (driver version 1.1.1501.101)

1.6.3.3 Create a Database

Follow these steps to create the necessary database before installing Oracle Enterprise Repository:

1. Open the SQL Server 2008 Management Studio.

2. Right-click the **Databases** folder and select **New Database**.

3. In the New Database window, enter Oracle Enterprise Repository as the database name.

4. In the Database files section, change the Logical Name of Oracle Enterprise Repository to OER_DATA.

5. Enter OER_USER as the database owner (or choose a Windows login account as appropriate for your security policy).

6. Click Add to create a Filegroup, as follows:

   a. In Logical Name, enter OER_INDX.

   b. Click the Filegroup cell and select <new filegroup>.

   c. On the New Filegroup for Oracle Enterprise Repository page, enter INDEX for the name.

   d. Click **OK**.

7. Click **OK** again to create the database.

1.6.3.4 Create a Database User

Follow these steps to create the necessary user before installing Oracle Enterprise Repository:

> **Note:** This step is only necessary if you are using SQL Server Authentication for the Oracle Enterprise Repository application installation.

1. Open the SQL Server 2008 Management Studio.

2. Expand the Server tree to open the Security folder.

3. Right-click **Logins** and select **New Login**.

4. Enter OER_USER as the Login name (or choose a Windows login account as appropriate for your security policy).

5. Select **SQL Server Authentication**.

6. Enter a password that meets your password policy into the Password and Confirm password fields.

7. Change the default database to Oracle Enterprise Repository.

8. Select a page list, select **User Mappings**, and then in the Map column select the Oracle Enterprise Repository database option.

9. Grant database roles for public and **db_owner**.

10. Click **OK** to create the user account.

1.6.4 UDB Database Installation

Appropriate administrative privileges are necessary to complete this process. This section contains the following topics:

- Section 1.6.4.1, "UDB Database"
- Section 1.6.4.2, "Prerequisites"
- Section 1.6.4.3, "Create a Database"
- Section 1.6.4.4, "Tune the Database"

1.6.4.1 UDB Database

1. Connect to the database as a DBA.

2. From a DB2 shell command prompt, run the following:

```
> get db cfg
```

The output should include the line Database code set = UTF-8. If this line does not appear, it is necessary to create a UTF-8 database.

1.6.4.2 Prerequisites

You must ensure a successful login to the database using the administrator privileges, before beginning the Oracle Enterprise Repository installation process.

1.6.4.3 Create a Database

To create the required database before installing Oracle Enterprise Repository, perform the following steps:

1. Open the DB2 Command Editor.

2. Run `db2 -tv` to start the DB2 shell command prompt with semicolon command termination.

3. Create a database named OER that includes bufferpools and tablespaces.

   a. Name the bufferpools as: **OER32kDataBP**, **OER32kIndxBP**, **OER32kBlobBP**, and **OER32kTempBP**.

   b. Create three large tablespaces named: **OERDataTS**, **OERIndxTS**, and **OERLobTS** with at least 300M of available space.

   c. Create one temporary tablespace named: **OERTempTS** with at least 100M of available space.

   > **Note:** The tablespace names **OERDataTS**, **OERIndxTS**, and **OERLobTS** are necessary for the Oracle Enterprise Repository installation process.

Example 1–1 Example Database Create Script

```
CREATE DATABASE OER USING CODESET UTF-8 TERRITORY US;
-- Connect to the OER database
-- Replace <user> and <password> with the user who would own the OER schema.
CONNECT TO OER USER <user> USING <password>;
-- Create the OER 32K Buffer Pools
CREATE BUFFERPOOL OER32KDATAbp SIZE 1000 PAGESIZE 32K;
CREATE BUFFERPOOL OER32KINDXbp SIZE 1000 PAGESIZE 32K;
CREATE BUFFERPOOL OER32KBLOBbp SIZE 1000 PAGESIZE 32K;
CREATE BUFFERPOOL OER32KTEMPbp SIZE 1000 PAGESIZE 32K;
CONNECT RESET;
-- Same <user> and <password> replacements as before are required.
CONNECT TO OER USER <user> USING <password>;
CREATE LARGE TABLESPACE oerdatats PAGESIZE 32 K MANAGED BY DATABASE USING(file
 '/opt/IBM/DB2/data/oerdatats.dat' 300M) extentsize 512k BUFFERPOOL OER32KDATAbp;
CREATE LARGE TABLESPACE oerindxts PAGESIZE 32 K MANAGED BY DATABASE USING(file
 '/opt/IBM/DB2/data/oerindxts.dat' 300M) extentsize 512k BUFFERPOOL OER32KINDXbp;
CREATE LARGE TABLESPACE oerlobts  PAGESIZE 32 K MANAGED BY DATABASE USING(file
 '/opt/IBM/DB2/data/oerlobts.dat' 300M) extentsize 512k BUFFERPOOL OER32kBLOBbp;
-- Create the OER Temp Tablespace
CREATE TEMPORARY TABLESPACE oertempts PAGESIZE 32 K MANAGED BY DATABASE
 USING(file '/opt/IBM/DB2/data/oertempts.dat' 128M) BUFFERPOOL OER32KTEMPbp;
```

1.6.4.4 Tune the Database

To configure the tuning parameters, perform the following steps in the Configuration Advisor Wizard:

1. In the DB2 Control Center, click **Tools**, **Wizards**, and then select **Configuration Advisor**. The Configuration Advisor Wizard - Introduction page is displayed.

2. Select the new Oracle Enterprise Repository database, and click **Next**. The Configuration Advisor Wizard - Server page is displayed.

3. Select a percentage of memory to allocate to the Oracle Enterprise Repository database in DB2, and then click **Next**. The Configuration Advisor Wizard - Workload page is displayed.

4. Select the **Mixed** option in the Optimize for Workload Type list, and then click **Next**. The Configuration Advisor Wizard - Transactions page is displayed.

5. Select the **More than 10(long transactions)** option in the Average Number of SQL Statements Per Unit of Work list. Take the default number of transactions per minute.

6. Click **Next**. The Configuration Advisor Wizard - Priority page is displayed.

7. Select a database administration priority. The default option is **Both**.

8. Click **Next**. The Configuration Advisor Wizard - Populated page is displayed.

9. Select **No**, as the database is not yet populated with data. Then, click **Next**. The Configuration Advisor Wizard - Connections page is displayed.

> **Note:** On all future visits to this wizard for the Oracle Enterprise Repository database, select the answer as "Yes".

10. Select 0 local and 25 remote as the average number of connected applications, and then click **Next**. The Configuration Advisor Wizard - Isolation page is displayed.

11. Select the **Cursor Stability (many locks of short duration)** option, and then click Next. The Configuration Advisor Wizard - Results page is displayed.

12. Accept the suggested modifications, and click **Finish** to apply changes to your database.

> **Note:** Since many tuning parameters are data dependent, this Wizard can be re-run following the load of significant amounts of data, or after a designated period, for example, monthly or quarterly.

1.7 Selecting Directories for Your Installation

During the installation process, you must specify locations for the following directories:

- Section 1.7.1, "Choosing an Oracle Home Directory"
- Section 1.7.2, "Choosing Product Installation Directory"

1.7.1 Choosing an Oracle Home Directory

During the installation of the Oracle software, you are prompted to specify an Oracle home directory. This directory serves as a repository for common files that are used by various Oracle products installed on the same computer. For this reason, the Oracle home directory can be considered a central support directory for all the Oracle products installed on your system.

The files in the Oracle home directory are essential to ensuring that Oracle software operates correctly on your system. These files:

- Facilitate checking of cross-product dependencies during installation
- Facilitate Service Pack installation

The default Oracle home directory where these files are installed is:

$ORACLE_HOME/repository111

All files related to the application installation are found under this Oracle home directory. In the case of a WebLogic Server installation, the application domain template file is found in the *$ORACLE_HOME/wl_server10.3/templates/applications* directory.

> **Note:**
>
> - On some UNIX platforms, the installation program does not install the JDK. During installation of your Oracle software, you are prompted to choose an existing Oracle home directory or specify a path to create a Oracle home directory. If you choose to create a directory, the installation program automatically creates it for you.
>
> - Oracle recommends that you do not exceed a maximum of 12 characters when naming your Oracle home directory. If the name of this directory has more than 12 characters, or if there are spaces in the directory name, the CLASSPATH may not be resolved properly. You can install only one instance of each version of an Oracle product in a single Oracle home directory.
>
> - If the Oracle home directory is populated and it does not contain registry.xml, or if any of the other installation directories are not empty, the following messages are displayed. You are then prompted to continue installation, or return to the directory selection task with the one of the error message as shown in Listing 2-1:

Listing 2-1

```
For Oracle home directory selection task: Oracle_HOME directory
is not empty. Proceed with installation?

For product installation directories selection task:One or more
installation directories are not empty. Proceed with
installation?
```

- The product maintenance level of the current installer must be compatible with the maintenance level of the product already installed. If not, an error message is displayed and you must obtain the compatible installer or perform maintenance to achieve compatibility.

1.7.2 Choosing Product Installation Directory

The product installation directory contains all the software components that you choose to install on your system, including program files and examples. You are prompted during your initial installation to choose a product installation directory. If you accept the default on a Windows system, for example, your software is installed in the following directory:

<ORACLE_HOME>/repositoryXXX

where, ORACLE_HOME is the Oracle home directory and repositoryXXX is the product installation directory for the Oracle Enterprise Repository software. However, you can specify any name and location on your system for your product installation

directory; you need not name the directory `repositoryXXX` or create it under the Oracle home directory.

1.8 Running the Oracle Enterprise Repository Product Installation

This section describes the steps to run the Oracle Enterprise Repository product installation:

1. If you are planning to use a Generic Application Server (Tomcat, JBoss, Jetty.), then a supported JDK is required to be installed before the installation of Oracle Enterprise Repository.

2. Use of the JDK that is installed with WebSphere or WebLogic Server as your `JAVA_HOME` environment variable and the *JAVA_HOME/bin* directory being prepended to your PATH environment variable.

3. Run the following command-line option to start the Oracle Enterprise Repository installer:

    ```
    java -jar OER1111xx_generic.jar
    ```

1.9 Generating a Verbose Installation Log

If you launch the installation from the command line or from a script, you can specify the `-log` option to generate a verbose installation log. The installation log stores messages about events that occur during the installation process, including informational, warning, error, and irrecoverable messages. This type of file can be especially useful for silent installations.

> **Note:** You may see some warning messages in the installation log. However, unless a irrecoverable error occurs, the installation program completes the installation successfully. The installation user interface indicates the success or failure of each installation attempt, and the installation log file includes an entry indicating that the installation was successful.

Syntax

To create a verbose log file during installation, include the -log=full_path_to_log_file option in the command line. For example:

```
$JAVA_HOME/bin/java -jar OER1111xx_generic.jar -log=c:\logs\OER_install.log
```

where `JAVA_HOME` represents the path the users java.

The path must specify a file. You cannot create a folder simply by including a name for it in a path name; your path should specify only existing folders. If your path includes a nonexistent folder when you execute the command, the installation program does not create the log file.

> **Note:** For information about upgrading your software, see the *Oracle Fusion Middleware Upgrade Guide for Oracle Enterprise Repository*.

2

Installing Oracle Enterprise Repository

This chapter describes how to start the installation program on Windows and UNIX platforms.

This chapter contains the following sections:

2.1 Starting the Installation Program

This section contains the following topics:

2.1.1 Before You Start

Before you start installing the software, please review the following information:

- According to Sun Microsystems, the Firefox 3.6 browser requires Java SE 6 Update 10 or later. Otherwise, Java-based Web applications does not work. For more information, see *http://www.java.com/en/download/faq/firefox_newplugin.xml*.

- Ensure your system meets the hardware and the software requirements before you install the Oracle Enterprise Repository software. A complete list of documents that describe Oracle Product family configurations supported by Oracle can be found at

  http://www.oracle.com/technology/software/products/middleware/index.html

- You cannot reinstall any Oracle product on top of a previously installed version of the same product - in the same Oracle home directory or in the same file location. You can, however, add products and product components to an existing installation. For example, you can install Oracle Enterprise Repository during one installation, and Oracle BPM during a later installation. However, to reinstall the same version of one of the products, you must first uninstall the previous installation, as described in Chapter 4, "Uninstalling the Software".

- If you are adding components to an existing installation of Oracle Enterprise Repository, you should shut down any running instances before starting the installation.

> **Note:** If you are installing the software on a Windows system that supports more than one monitor, you must disable all but one monitor before starting the installation program.

- Ensure that you have a supported application server available. The Oracle Enterprise Repository installer optionally provides a default application server.

- Ensure that you have a supported database that is configured, running, and supports UTF-8/Unicode character encoding. For more information, see Section 1.6, "Database Installation Procedures".

- Ensure that your supported application server is configured to use UTF-8/Unicode character encoding. Database Configuration for UTF-8/Unicode Character Encoding.

Table 2–1 describes the supported JDBC Driver file names for Oracle Enterprise Repository 11*g* as well as its mapping to the appropriate application server.

Table 2–1   Oracle Enterprise Repository 11g Supported JDBC Driver Information

App Server JDK Version	Oracle JDBC	Oracle Driver Version	UDB JDBC	UDB Driver Version	SQL Server JDBC	SQL Driver Version
1.5.x	ojdbc5.jar	11.1.0.7.0-Production	db2jcc.jar db2jcc_license_cu.jar db2jcc4.jar	3.50.152	sqljdbc4.jar	2.0.1803.100
1.6.x	ojdbc6.jar	11.1.0.7.0-Production	db2jcc.jar db2jcc_license_cu.jar db2jcc4.jar	3.50.152	sqljdbc4.jar	2.0.1803.100

For information about supported application servers and databases, see Oracle Enterprise Repository Supported Configurations.

> **Note:** If the installation process is aborted before it is completed, manually clear the database before running the installer again. The installer does not clear data from the database when an installation is aborted. The existing data causes an error when the installer runs for the second time.

2.1.2 Starting the Installation Program on Windows Platforms

This section describes how to start the installation program on Windows Platforms:

- Section 2.1.2.1, "Starting the Installation in Graphical Mode"

- Section 2.1.2.2, "Starting the Installation in Console Mode"

- Section 2.1.2.3, "Starting the Installation in Silent Mode"

2.1.2.1 Starting the Installation in Graphical Mode

To start the graphical-mode installation process on a Windows platform, perform the following steps:

1. Enter the following command to start the installation:

```
filename.exe [-log=full_path_to_log_file]
```

For example:

```
OER1111XX_generic.exe [-log=full_path_to_log_file]
```

> **Note:**
> - `-log=full_path_to_log_file` is optional.
> - By default, the installer starts in the graphical mode.
> - You can also start the installer by double-clicking the file.

2. To continue the installation in the Graphical mode on Windows, see Section 2.2.1, "Running the Installation Program in Graphical Mode".

2.1.2.2 Starting the Installation in Console Mode

To start the console-mode installation process on a Windows platform, perform the following steps:

1. Log in to the target Windows system.

2. Launch the installation by entering one of the following commands:

```
filename.exe -mode=console
```

For example:

```
OER1111xx_generic.exe -mode=console
```

> **Note:** You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
>
> ```
> OER1111xx_generic -mode=console -log=C:\logs\OER30_
> install.log
> ```
>
> For more information on generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".
>
> After a few moments, an Installer window opens and the installation program begins to install the software.

3. To continue the installation in the Console mode on Windows, see Section 2.2.2.3, "Install Oracle Enterprise Repository Using Console Mode".

2.1.2.3 Starting the Installation in Silent Mode

For details about silent-mode installation, see Section 2.2.3.1, "What Is Silent-Mode Installation?".

To start the installation in silent-mode follow these steps:

1. Log in to the Windows system.

2. Create a `silent.xml` file that defines the configuration settings normally entered by a user during an interactive installation process, such as graphical-mode or

console-mode installation. For information about creating a silent.xml file, see Section 2.2.3.3, "Creating a silent.xml File for Silent-Mode Installation".

> **Note:** Incorrect entries in the silent.xml file can cause installation failures. To help you determine the cause of a failure, Oracle recommends that you create a log file when you start the installation.

3. Launch the installation by entering the following commands:

```
filename.exe -mode=silent -silent_xml=path_to_silent.xml
```

Here, `filename.exe` is the name of the software installation file, and `path_to_silent.xml` is the full path name of the `silent.xml` file.

> **Note:** You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
>
> ```
> OER1111xx_generic.exe -mode=silent -silent_
> xml=C:\silent.xml -log=C:\logs\OER_install.log
> ```

For more information, see Section 1.9, "Generating a Verbose Installation Log".

An Installer window is displayed, indicating that the files are being extracted. No other prompt or text is displayed.

For more information, see Section 2.2.3, "Running the Installation Program in Silent Mode".

2.1.3 Starting the Installation Program on UNIX Platforms

The Oracle Enterprise Repository installation program requires a Java run-time environment (JRE) to run. A JRE is bundled in the Windows installation program, and in some UNIX installation programs (those with filenames ending in .bin). For other UNIX platforms, the installation program does not include a JRE. Filenames for these installation programs end in .jar. To run the .jar installation programs, you must have an appropriate version of a JDK installed on your system, and include the bin directory of the JDK at the beginning of your PATH system variable.

> **Note:** It is important that you use a JDK because the installation process assigns values to `JAVA_HOME` and related variables to point to this directory. All scripts installed by your installation program use this JDK by default, including scripts to start sample applications, the Configuration Wizard, and other development tools.

To run graphical-mode installation, your console must support a Java-based GUI. If the installation program determines that your system cannot support a Java-based GUI, it automatically starts running in console mode. For details, see Section 2.2.3, "Running the Installation Program in Silent Mode". The section describes how to start the installation using the following types of installers:

- Section 2.1.3.1, "Using Installers with Filenames Ending in .bin"
- Section 2.1.3.2, "Using Installers with Filenames Ending in .jar"

2.1.3.1 Using Installers with Filenames Ending in .bin

The following sections describe how to start the installation program on UNIX platforms using filenames that end in .bin:

- Section 2.1.3.1.1, "Starting the Installation in Graphical Mode"
- Section 2.1.3.1.2, "Starting the Installation in Console Mode"
- Section 2.1.3.1.3, "Starting the Installation in Silent Mode"

2.1.3.1.1   Starting the Installation in Graphical Mode   To start the graphical-mode installation process using the installation files with names ending in .bin, do the following:

1. Log in to the target UNIX system.

2. To change the permissions of the file enter the following command:

   ```
   chmod a+x filename.bin
   ```

   For example:

   ```
   chmod a+x OER10XX_linux32.bin.
   ```

   > **Note:**   You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
   >
   > ```
   > OER10XX_linux32.bin -log=/home/logs/OER_install.log
   > ```
   >
   > For more information, see Section 1.9, "Generating a Verbose Installation Log".

To continue the installation in the graphic mode, see Section 2.2.1, "Running the Installation Program in Graphical Mode".

2.1.3.1.2   Starting the Installation in Console Mode   To start the console-mode installation process for installation files with names ending in .bin, follow these steps:

1. Log in to the target UNIX system.

2. Launch the installation by entering the following commands:

   ```
   chmod a+x filename.bin
   ```

   ```
   ./filename.bin -mode=console
   ```

   Here `filename.bin` is the name of the installation program specific to your platform, for example,

   ```
   chmod a+x OER10XX_linux32.bin.
   ```

> **Note:** You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
>
> ```
> OER10XX_linux32.bin -mode=console
> -log=/home/logs/OER_install.log
> ```
>
> For more information about generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".

To continue the installation in the console mode, see Section 2.2.2, "Running the Installation Program in Console Mode".

2.1.3.1.3 Starting the Installation in Silent Mode For details about silent-mode installation, see Section 2.2.3.1, "What Is Silent-Mode Installation?"

To start the silent-mode installation process for installation files with names ending in .bin, follow these steps:

1. Log in to the target UNIX system.

2. Create a `silent.xml` file that defines the configuration settings normally entered by a user during an interactive installation process, such as graphical-mode or console-mode installation.

    For information about creating a silent.xml file, see Section 2.2.3.3, "Creating a silent.xml File for Silent-Mode Installation".

    > **Note:** Incorrect entries in the `silent.xml` file can cause installation failures. To help you determine the cause of a failure, Oracle recommends that you create a log file when you start the installation.

3. Complete the appropriate procedure as in the following table.

If you are installing from...	Do this...
Web download	Go to the directory to which you have downloaded the installation program.
DVD	1. Insert the software DVD into the DVD drive and go to the DVD directory.
	2. Navigate to the directory that contains the installation program for your platform.

4. Launch the installation program by entering the following commands:

    ```
    chmod a+x filename
    ```

    ```
    ./filename.bin -mode=silent -silent_xml=/path_to_silent.xml
    ```

    Here `filename.bin` is the name of the installation file, for example,

    ```
    chmod a+x OER10XX_linux32.bin
    ```

    and `path_to_silent.xml` is the full path name of the `silent.xml` template file.

> **Note:** You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
>
> ```
> OER10XX_linux32.bin –mode=silent -silent_
> xml=/home/silent.xml -log=/home/logs/OER_install.log
> ```
>
> For more information on generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".

An Installer window is displayed, indicating that the files are being extracted. No other prompt or text is displayed. For more information on Silent-Mode installation, see Section 2.2.3, "Running the Installation Program in Silent Mode".

2.1.3.2 Using Installers with Filenames Ending in .jar

The following sections describe how to start the installation program on UNIX platforms using filenames that end in .jar:

- Section 2.1.3.2.1, "Starting the Installation in Graphical Mode"
- Section 2.1.3.2.2, "Starting the Installation in Console Mode"
- Section 2.1.3.2.3, "Starting the Installation in Silent Mode"

2.1.3.2.1 Starting the Installation in Graphical Mode To start the graphical-mode installation process using the installation files with names ending in .jar, do the following:

1. Log in to the target UNIX system.

2. Add the bin directory of the appropriate JDK to the beginning of the PATH variable definition on the target system. For example:

    ```
    PATH=<JAVA_HOME>/bin:$PATH
    export PATH
    ```

    Here <JAVA_HOME> represents the full path to the JDK directory.

3. Launch the installation program by entering the following command::

    ```
    java -jar filename.jar [-log=full_path_to_log_file]
    ```

> **Note:** You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
>
> ```
> OER1111xx_generic.jar -log=/home/logs/OER_
> install.log
> ```
>
> For more information about generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".

The installation program begins the graphical mode.

To continue the installation in the graphic mode, see Section 2.2.1, "Running the Installation Program in Graphical Mode".

2.1.3.2.2 Starting the Installation in Console Mode To start the console-mode installation process for installation files with names ending in `.jar`, follow these steps:

1. Log in to the target UNIX system.

2. Add the bin directory of the appropriate JDK to the beginning of the PATH variable definition on the target system. For example:

```
PATH=<JAVA_HOME>/bin:$PATH
export PATH
```

   Here `<JAVA_HOME>` represents the full path to the JDK directory.

3. Launch the installation by entering the following command:

```
java -jar filename.jar -mode=console [-log=full_path_to_log_file]
```

   where, filename.jar is the name of the installation file, for example,

```
oer_generic.jar.
```

> **Note:** You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:
>
> ```
> java -jar OER1111xx_generic.jar -mode=console
> -log=/home/logs/OER_install.log
> ```
>
> For more information about generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".

To continue the installation in the console mode, see Section 2.2.2, "Running the Installation Program in Console Mode".

2.1.3.2.3 Starting the Installation in Silent Mode For details about silent-mode installation, see Section 2.2.3.1, "What Is Silent-Mode Installation?".

To start the silent-mode installation process for installation files with names ending in `.jar`, follow these steps:

1. Log in to the target UNIX system.

2. Create a `silent.xml` file that defines the configuration settings normally entered by a user during an interactive installation process, such as graphical-mode or console-mode installation.

   For information about creating a silent.xml file, see Section 2.2.3.3, "Creating a silent.xml File for Silent-Mode Installation".

> **Note:** Incorrect entries in the silent.xml file can cause installation failures. To help you determine the cause of a failure, Oracle recommends that you create a log file when you start the installation.

---

3. Add the bin directory of the appropriate JDK to the beginning of the PATH variable definition on the target system. For example:

```
PATH=<JAVA_HOME>/bin:$PATH
export PATH
```

Here <JAVA_HOME> represents the full path to the JDK directory.

4. Launch the installation by entering the following command:

```
java -jar filename.jar -mode=silent -silent_xml=/path_to_silent.xml [-log=full_
path_to_log_file]
```

where, filename.jar is the name of the installation file for example,

```
oerXX_generic.jar
```

where, XX represents the version number of the software you are installing and `path_to_silent.xml` is the full path to the `silent.xml` file.

Note: You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:

```
oer_generic.jar -mode=silent -silent_
xml=/home/silent.xml -log=/home/logs/OER_install.log
```

For more information on generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".

An Installer window is displayed, indicating that the files are being extracted. No other prompt or text is displayed. For more information on Silent-Mode installation, see Section 2.2.3, "Running the Installation Program in Silent Mode".

2.2 Running the Installation Program

This section contains the following topics:

- Section 2.2.1, "Running the Installation Program in Graphical Mode"
- Section 2.2.2, "Running the Installation Program in Console Mode"
- Section 2.2.3, "Running the Installation Program in Silent Mode"

2.2.1 Running the Installation Program in Graphical Mode

Caution: Before running the installer, follow the preparation guidelines in Preparing for Your Installation, especially the Database Installation Procedures for your DBMS.

Start the installation program as described in Section 2.1, "Starting the Installation Program".

The installation program prompts you to enter specific information about your system and configuration.

Note: If the installation process is aborted before it is completed, manually clear the database before running the installer again. The installer does not clear data from the database when an installation is aborted. The existing data causes an error when the installer runs for the second time.

---

1. Double-click the installer file to start the installation. The Oracle Enterprise Repository - Oracle Products Welcome screen is displayed, as shown in Figure 2–1.

Figure 2–1   Oracle Enterprise Repository - Oracle Products Welcome Screen
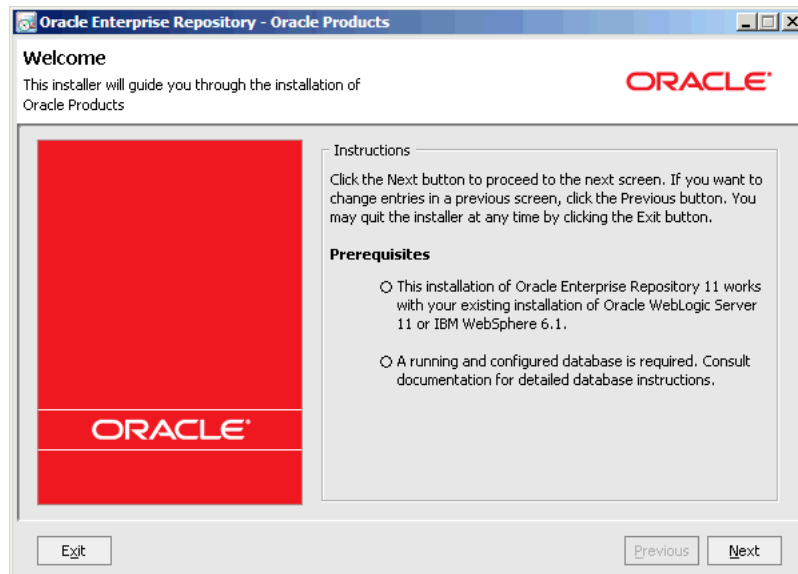
2. Click **Next**. The Choose Middleware Home Directory screen is displayed, as shown in Figure 2–2.

Figure 2–2   Choose Middleware Home Directory Screen
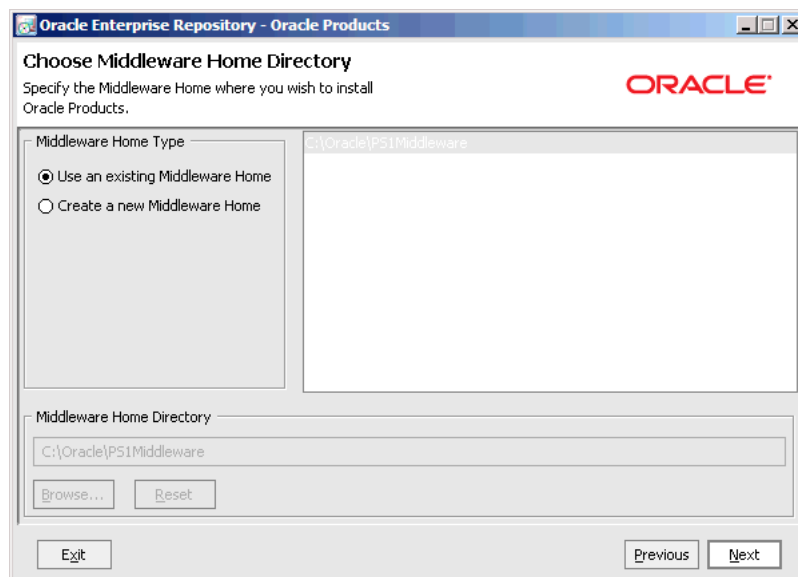
Choose either of the following options:

■ **Use an existing Middleware Home**: If you already have a Middleware Home directory on your system, you can select that directory (recommended).

■ **create a Middleware Home**: Creates a new Middleware Home directory. If you choose to create a directory by typing a new directory name in this field,

the installation program automatically creates one for you. You can also click **Browse** and select a directory from the Middleware Home Directory Selection dialog. Click **Reset** to reset the Middleware Home Directory field.

> **Note:** For information about the Middleare Home directory, see Section 1.7.1, "Choosing an Oracle Home Directory".

3. Click **Next**. The Choose Products Installation Directories screen is displayed, as shown in Figure 2–3.

Figure 2–3   Choose Products Installation Directories Screen
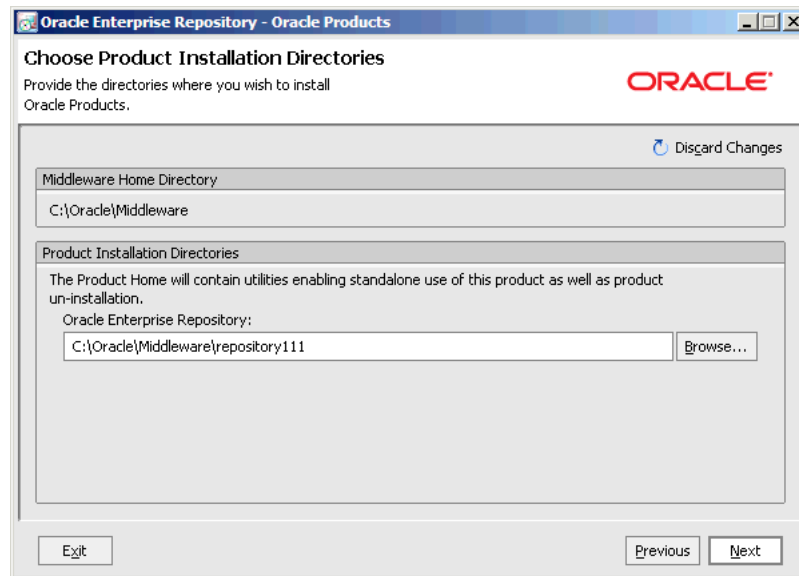
4. Click **Next**. The Choose Application Server screen is displayed, as shown in Figure 2–4.

Figure 2–4   Choose Application Server Screen

5. Select the appropriate application server and click **Next**. The Initialize Repository Properties screen is displayed, as shown in Figure 2–5.

Figure 2–5   Initialize Repository Properties Screen

6. Specify the information required to initialize Oracle Enterprise Repository for your application server, and click **Next**. The Configure Database screen is displayed, as shown in Figure 2–6.

Figure 2–6   Configure Database Screen

Specify whether you want to enter information for the Oracle Enterprise Repository Tablespaces that were configured as a prerequisite to this installation procedure or to configure a database at a later time.

Before selecting Yes, verify that your DBA completed the Database Installation Procedures for your DBMS. If you select No, see the Installation Complete window.

7. Select **Yes** and then click **Next**. The Provide Database Tablespace Names screen is displayed, as shown in Figure 2–7.

Figure 2–7   Provide Database Tablespace Names Screen

Specify the Oracle Enterprise Repository tablespace names that were created before the installation procedure, as follows:

- `SQL Server`: provide the file group and index group names to be used by Oracle Enterprise Repository. Typically, the value for Data Tablespace would be `PRIMARY` and Index Tablespace would be `INDEX`.

- `Oracle`: provide the data and index tablespace names to be used by Oracle Enterprise Repository. Typically, the value for Data Tablespace would be `OER_DATA` and Index Tablespace would be `OER_INDEX`.

   Note: For the BLOB Tablespace field, enter the same value that you entered in the Data Tablespace field.

8. Click **Next**. The Initialize Repository Database Properties screen is displayed, as shown in Figure 2–8.

   Note: This window is displayed only when configuring an Oracle Enterprise Repository database.

Figure 2–8   Initialize Repository Database Properties Screen

Specify the properties required to initialize your database.

- **Driver File Locations**:
  - **Oracle**: ojdbc5.jar or ojdbc6.jar

    For more information, see Table 2–1.
  - **IBM UDB/DB2**: db2jcc.jar, db2jcc_licence_cu.jar, db2jcc4.jar
  - **SQL 2008**: sqljdbc4.jar

    > **Note:**   By default, the Oracle Enterprise Repository installer does not have JDBC driver. You must download the respective JDBC driver.

- **DBMS Name**:
  - **Oracle**: Enter the SID that the Oracle Enterprise Repository schema was installed on. For Oracle, the default SID is orcl; for Oracle XE, the default SID is xe.

    > **Note:**   You can determine the SID must be entered by running this SQL statement: select instance_name from v$instance.

  - **SQL**: Enter the database name, for example, `OER`.
- **DBMS Host**: Enter the fully-qualified server and domain name where Oracle Enterprise Repository is being installed, for example, `abc.mycompany.com`.
- **User Name** and **User Password** fields: Ensure that you enter the appropriate user information from the Preparing for Your Installation instructions. If you used the recommended sample Build a Database User scripts for Oracle, or if you followed the Create a Database User steps for SQL Server 2008, they are `OER` and `OER_PWD`.

9. Click **Next**. The Test Passed screen is displayed.

10. Click **OK**. If the test fails, confirm your user credential settings and retry. The Installation Complete screen is displayed.

> **Caution:** If the test passed, do not click Back or you may overwrite the database configuration.

After completing the installation process, complete the following post installation tasks, as described in Chapter 3, "Post-Installation Steps".

2.2.2 Running the Installation Program in Console Mode

This section describes how to run the installation program in the console mode. It contains the following topics:

- Section 2.2.2.1, "Starting the Console Installer Using Windows"
- Section 2.2.2.2, "Starting the Console Installer Using UNIX"
- Section 2.2.2.3, "Install Oracle Enterprise Repository Using Console Mode"

2.2.2.1 Starting the Console Installer Using Windows

Use the following steps to install Oracle Enterprise Repository using console mode:

1. Perform the pre-installation tasks as described in Section 2.1.2, "Starting the Installation Program on Windows Platforms".

2. Install Oracle Enterprise Repository Using Console Mode.

2.2.2.2 Starting the Console Installer Using UNIX

This section describes the installation using the console mode on the UNIX platforms. The following sections describe the installation using:

- "Installers With Filenames Ending in .bin"
- "Installers With Filenames Ending in .jar"

Installers With Filenames Ending in .bin

Using the following steps to install Oracle Enterprise Repository using an installer with filename ending in .bin:

1. Complete the pre-installation tasks for installers with filename ending in .bin, see "Installers With Filenames Ending in .bin" on page 2-15.

2. Install Oracle Enterprise Repository Using Console Mode.

> **Note:** Skip step 11 and step 12, choosing the shortcut location applies only to Windows systems.

Installers With Filenames Ending in .jar

Using the following steps to install Oracle Enterprise Repository using an installer with filename ending in .jar:

1. Complete the pre-installation tasks for installers with filename ending in .jar, see "Installers With Filenames Ending in .jar" on page 2-15.

2. Install Oracle Enterprise Repository Using Console Mode.

> **Note:** Skip step 11 and step 12, choosing the shortcut location applies only to Windows systems.

2.2.2.3 Install Oracle Enterprise Repository Using Console Mode

> **Caution:** Before running the installer, follow the preparation guidelines in Preparing for Your Installation, especially the Database Installation Procedures for your DBMS.

To complete the console-mode installation process, respond to the prompts in each section by entering the number associated with your choice or by pressing Enter to accept the default. To exit the installation process, enter exit (or x, for short) in response to any prompt. To review or change your selection, enter previous (or p, for short) at the prompt. To proceed to the following prompt, enter Next (or n, for short).

For Information on how to start the installation in the console mode, see Section 2.1.2.2, "Starting the Installation in Console Mode". When you start the installation in the console mode, the welcome screen is displayed, as in Listing 5-1 Welcome Screen in the Console Mode.

> **Note:** If the installation process is aborted before it is completed, manually clear the database before running the installer again. The installer does not clear data from the database when an installation is aborted. The existing data causes an error when the installer runs for the second time.

Listing 5-1 Welcome Screen in the Console Mode

```
<-----------------Oracle Enterprise Repository - Oracle Products
------------------>
Welcome:
--------
This installer will guide you through the installation of Oracle
Enterprise Repository 11.
Prerequisites:
This installation works with your existing installation of Oracle WebLogic Server
 11 or IBM WebSphere 6.1. A running and configured database is required. Consult
 documentation for detailed database instructions.
Type "Next" or enter to proceed to the next prompt.  If you want to change data
 entered previously, type "Previous". You may quit the installer at any time by
 typing "Exit".
Enter [Exit][Next]>
```

1. At the Welcome prompt, type Next (or n for short) or press Enter to continue with the installation process. The Oracle home directory prompt is displayed.

2. Specify the Oracle home directory that serves as the central support directory for all products installed on the target system. For details about the Oracle home directory, see Section 1.7.1, "Choosing an Oracle Home Directory". If Oracle home directories exist on your system, a list of the directories is displayed, as shown in Listing 5-2 Choose an Oracle Home Directory.

- To use an existing Oracle home directory, type the number associated with the desired Oracle home directory. If your application server is WebLogic 9.2.1, select the associated existing Oracle home.

- To create a Oracle home directory, type 1 or press Enter.

  If there are no Oracle home directories on your system, or you have selected to create a Oracle home, the installation program is displayed, as shown in Listing 5-3 Choose an Oracle Home.

Listing 5-2 Choose an Oracle Home Directory

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Middleware Home Directory:
-------------------------
 ->1¦* create a Middleware Home
   2¦C:\Oracle\PS1Middleware
   3¦C:\Oracle\FMW
Enter index number to select OR [Exit][Previous][Next]>
```

Listing 5-3 Choose an Oracle Home

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Middleware Home Directory:
-------------------------
    "Middleware Home" = [Enter new value or use default "C:\Oracle\Middleware"]
Enter new Middleware Home OR [Exit][Previous][Next]>
```

Do one of the following:

- To use the default Oracle home directory, type Next (or n for short), or press Enter.

- Enter the directory path and press Enter.

The installation program displays the Oracle home directory you have specified, as shown in Listing 5-4 Accept Oracle Home Directory.

Listing 5-4 Accept Oracle Home Directory

```
<-------------------- Oracle Installer - Oracle Products -------------------->
Choose Product Installation Directories:
---------------------------------------
Middleware Home Directory: [C:\Oracle\Middleware]

Product Installation Directories:
    "Oracle Enterprise Repository" = [Enter new value or use default
"C:\Oracle\Middleware\repository111"]

Enter new Oracle Enterprise Repository OR [Exit][Previous][Next]>
```

3. Press Enter to accept your selection. Otherwise, type 1 or 2 to return to the Choose Oracle home Directory panel, where you can modify your entry.

   After you have selected your Oracle home directory and confirmed your selection, type Next or press Enter. One of the following occurs:

   - If you are adding components to an existing installation, the Choose Components to install panel is displayed. Go to step 5.

   - If you are performing an initial installation, the Choose Install Type (see Listing 5-5 Accept Oracle Home Directory) prompt is displayed.

Listing 5-5 Accept Oracle Home Directory

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Install Type:
--------------------
Select the type of installation you want to perform.
 ->1Default
      This option will install Oracle Enterprise Repository, also suitable for
    evaluation purposes. Install the following software: - Oracle
    Enterprise Repository
    Examples
   2Custom
      Choose additional software products and components to install.
Enter index number to select OR [Exit][Previous][Next]>
```

4. Specify the type of installation you want to perform by entering the number associated with the install type, as shown in Listing 5-5 Accept Oracle Home Directory:

   ■ Type 1 or press Enter to choose a Default installation type. Proceed to step 8.

   ■ Type 2 to choose a Custom installation type. The Choose Components to install prompt is displayed.

   For more information about complete and custom installations, see Section 1.1, "Installation Overview".

5. If you the choose the Custom type installation, select the components you want to install. The available components are displayed, as shown in Listing 5-6 Choose Components to Install.

   Listing 5-6 Choose Components to Install

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Components to install:
----------------------------
Release 3.0.0.0
    +----Oracle Enterprise Repository [1] v
     +----Core Repository with Examples [1.1] v
     +----Oracle Enterprise Repository Plug-In for Eclipse [1.2] v
      +----Process Engine [2.1] v
Enter number exactly as it appears in brackets to toggle selection OR
 [Exit][Previous][Next]>
```

   The word Installed is shown in brackets for any components you have already installed on your system.

   When you select or deselect components to install, the installation program checks for dependencies between components and automatically modifies the list of selected components. For example, if you deselect the Oracle BPM component, the Process Engine is also deselected.

   When you have selected the components, press Enter or type Next (or n for short). The Install Eclipse Options prompt is displayed.

   Listing 5-7 Install Eclipse Options

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Install Eclipse Options:
-----------------------
Install Oracle installer bundled Eclipse or use the existing Eclispe.
 ->1¦Install Workspace Studio
    ¦
    ¦   Installer will use the Oracle installer bundled
    ¦Eclipse kit and installs it to the default location.
```

```
    2¦Use Existing Eclipse
     ¦
     ¦
     ¦  Do not install the installer bundled Eclipse.
     ¦I will specify Eclipse Home to use.
Enter index number to select OR [Exit][Previous][Next]>
```

6. Specify whether you want to install Eclipse, as shown in Listing 5-7 Install Eclipse
   Options. Do one of the following:

   ■ Type 1 if you want to install Eclipse. Proceed to step 8.

   ■ Type 2 if you want to use an existing Eclipse installation. The Choose a Eclipse
     Home Directory prompt is displayed, as shown in Listing 5-8 Choose a Eclipse
     Home Directory.

   Listing 5-8 Choose a Eclipse Home Directory

   ```
   <------------- Oracle Enterprise Repository - Oracle Products ------------->
   Choose a Eclipse Home directory:
   -------------------------------
       "Eclipse Home" = []
   Enter new Eclipse Home OR [Exit][Next]>
   ```

7. Enter the directory and type n. Verify the directory as shown in Listing 5-9 Choose
   a Eclipse Home Directory.

   Listing 5-9 Choose a Eclipse Home Directory

   ```
   <------------- Oracle Enterprise Repository - Oracle Products ------------->
   Choose a Eclipse Home directory:
   -------------------------------
   ->1Yes, use this Eclipse Home [e:\myEclipse]
     2No, select another Eclipse Home
   Enter index number to select OR [Exit][Next]>
   ```

   Do one of the following:

   ■ Type 1 or n to select the Eclipse Home directory and press Enter.

   ■ Type 2 to select a different directory, press Enter and return to Listing 5-8
     Choose a Eclipse Home Directory.

8. Select an application server (see Listing 5-10 Choose Application Server). Enter the
   number representing your application server and press Enter.

   The Initialize Repository Properties prompt for the selected application server is
   displayed (for example, see Listing 5-11 Initialize Repository Properties.

   Listing 5-10 Choose Application Server

   ```
   <------------- Oracle Enterprise Repository - Oracle Products ------------->
   Choose Application Server:
   -------------------------
   Enterprise Repository supports deployment in the following application
   servers.
   *Select Application Server
      1¦WebSphere 6.1
      2¦Generic Application Server

   Enter index number to select OR [Exit][Previous][Next]>
   ```

   Listing 5-11 Initialize Repository Properties

   ```
   <------------- Oracle Enterprise Repository - Oracle Products ------------->
   ```

```
Initialize Repository Properties:
---------------------------------
Provide the required data to initialize Enterprise Repository.
   1¦*Server name:[]
   2¦*Fully qualified server name (for example, abc.mycompany.com):[]
   3¦*OER managed server port number:[7101]
   4¦*Repository application name:[oer]

Enter index number to select OR [Exit][Previous][Next]>
```

9. Use the installer menus to provide the initialization properties for the selected application server. When finished, type n.

    The Choose Product Installation Directories prompt is displayed (see Listing 5-12 Choose Product Installation Directories).

10. Verify your entry and press Enter to proceed with the installation. Otherwise, do one of the following:

    ■ Type 1 and press Enter to change the product installation directory for Oracle Enterprise Repository.

    ■ Type 2 and press Enter to change the Process Engine directory.

    Modify your entry, confirm it. Type Next. Press Enter.

Listing 5-12 Choose Product Installation Directories

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Product Installation Directories:
---------------------------------------
Oracle Home Directory: [E:\oer20_2]
Product Installation Directories:
   1Default Product Home: [E:\oer20_2\repostoryXXX]

Enter index number to select OR [Exit][Previous][Next]>Enter option number to
 select OR [Exit][Previous][Next]> Next
```

The locations for Shortcut prompt is displayed (see Listing 5-13 Location for the Shortcut).

Listing 5-13 Location for the Shortcut

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Shortcut Location:
------------------------
*The installer creates shortcuts to Oracle components, samples, and tools. As
    *a user with administrative privileges, you can specify where these
    *shortcuts are created.
 ->1¦"All Users" Start Menu folder (recommended)
    ¦For some installations, this setting may limit the automatic creation of
server shortcuts
    ¦for users without administrative privileges. Refer to the documentation
for more
    ¦information.
   2¦Local user's Start Menu folder
    ¦Select this option if you must ensure that other profiles registered on
this computer
    ¦will not have access to these shortcuts.

Enter index number to select OR [Exit][Previous][Next]>
```

11. Do one of the following:

- Type 1 or n to select All Users Start Menu folder and press Enter.

- Type 2 to select Local users Start Menu folder and press Enter.

12. Type n and press Enter to confirm your choice for the location of the shortcut(see Listing 5-14 Confirm the Location for the Shortcut).

Listing 5-14 Confirm the Location for the Shortcut

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Choose Shortcut Location:
------------------------
*Are you sure you want to create the shortcuts in the selected location?
    *
    *"All Users" Start Menu folder (recommended)
    *For some installations, this setting may limit the automatic creation of
    *server shortcuts for users without administrative privileges. Refer to the
 *documentation for more information.
 ->1Yes.
   2No, Go back to the previous screen and make another choice.

Enter index number to select OR [Exit][Previous][Next]>
```

Installation starts and you can see the progress of the installation at the prompt.

> **Note:** It is normal for the installation program to pause for a fairly long time.

When the installation is complete, the Configure Repository Database panel is displayed (see Listing 5-15 Configure Repository Database).

Listing 5-15 Configure Repository Database

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Configure Repository Database
  ->1 - Yes, configure the database now.
    2 - No, do not configure the database now.

Enter a number or [Previous][Next]>
```

13. Do one of the following:

- Type 1 and press Enter to configure a database.

- Type 2 and press Enter to configure a database later. Proceed to step 17.

The Database Tablespace Names panel is displayed (see Listing 5-16 Database Tablespace Names).

Listing 5-16 Database Tablespace Names

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Provide Database Tablespace Names:
----------------------------------
Provide the requested information about the tablespaces configured for use
by Enterprise Repository.
   1¦BLOB tablespace: []
   2¦Data tablespace: []
   3¦Index tablespace: []
Enter index number to select OR [Exit][Previous][Next]>
```

14. Use the installer menus to provide the table space names. When finished, type n.

The Select Database Driver prompt is displayed (see Listing 5-17 Select Database Driver).

Listing 5-17 Select Database Driver

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Select Database Driver:
----------------------
Select a JDBC driver for your database from the supported drivers list.
->1¦Oracle
    ¦ [oracle.jdbc.driver.OracleDriver]
2¦IBM DB2 General Type 4 Driver
    ¦ [com.ibm.db2.jcc.DB2Driver]
3¦Microsoft SQL Server Driver 2008
    ¦ [com.microsoft.sqlserver.jdbc.SQLServerDriver]
Enter index number to select OR [Exit][Previous][Next]>
```

15. Use the installer menus to select a driver. When finished, type n.

The Configure Database Properties prompt is displayed (see Listing 5-18 Configure Database Properties).

Listing 5-18 Configure Database Properties

```
<------------- Oracle Enterprise Repository - Oracle Products ------------->
Configure the database properties below:
---------------------------------------
1¦Driver File Locations: []
   2¦DBMS Name: []
   3¦DBMS Host: [localhost]
   4¦DBMS Port: [50000]
   5¦User Name: []
   6¦User Password: []
   7¦Confirm Password: []
Enter index number to select OR [Exit][Previous][Next]>
```

16. Use the installer menus to provide the database properties. When finished, type n.

The connection is tested:

- If a connection is made, go to step 17.

- If the connection fails, you are returned to step 16. Correct any properties, verify that your database is running and you have selected the correct driver.

17. Press Enter or type Exit to exit the installation program.

After completing the installation process, complete the following post installation tasks, as described in Chapter 3, "Post-Installation Steps".

2.2.3 Running the Installation Program in Silent Mode

This section describes how to run the installation program in the console mode. It contains the following topics:

- Section 2.2.3.1, "What Is Silent-Mode Installation?"

- Section 2.2.3.2, "Using Silent-Mode Installation"

- Section 2.2.3.3, "Creating a silent.xml File for Silent-Mode Installation"

- Section 2.2.3.4, "Sample silent.xml Files for Silent-Mode Installation"

- Section 2.2.3.5, "Returning Exit Codes to the Console"

2.2.3.1 What Is Silent-Mode Installation?

Silent-mode installation is a way of setting installation configurations once and then using these configurations to duplicate the installation on many computers. During installation in silent mode, the installation program reads the settings for your configuration from an XML file that you create before beginning the installation. The installation program does not display any configuration options during the installation process. Silent-mode installation works on both Windows and UNIX systems.

It is assumed that you have already acquired the installation program, either on DVD or from the Oracle Web site. For more information on different modes of product distribution, see Section 1.4, "Product Distribution Methods".

2.2.3.2 Using Silent-Mode Installation

The silent-mode installation process for Oracle Enterprise Repository has three primary steps:

1. Follow the preparation guidelines in Chapter 1, "Preparing for Your Installation", especially the Section 1.6, "Database Installation Procedures" for your DBMS.

2. Creating a `silent.xml` file that defines the configuration settings normally entered by a user during an interactive installation process, such as graphical-mode or console-mode installation. For example, values for the Oracle home directory, the product directory, and the components to be installed are supplied in a silent.xml file.

   For a detailed procedure, see Section 2.2.3.3, "Creating a silent.xml File for Silent-Mode Installation". For a sample `silent.xml` file, see Section 2.2.3.4, "Sample silent.xml Files for Silent-Mode Installation".

3. Starting the silent-mode installation process using the values specified in the `silent.xml` file.

   For more information on launching the installation in silent mode, see Section 2.1, "Starting the Installation Program".

2.2.3.2.1 Important Considerations for Silent-Mode Installation When you are performing an installation in silent mode, keep in mind the following considerations:

- Before running the installer, follow the preparation guidelines in Chapter 1, "Preparing for Your Installation", especially the Section 1.6, "Database Installation Procedures" for your DBMS.

- Silent-mode installation requires the same amount of temporary disk space and uses the same temporary storage directories as a standard installation. For more information, see Temporary Disk Space Requirements. The installation program does not alert you if there is insufficient space in the temporary directory.

- A silent-mode installation takes the same amount of time as a standard installation. At the beginning of a silent-mode installation, an initial installation program window or message is displayed briefly, indicating that the installation has started. No messages are displayed to indicate that the installation is in progress or has been completed successfully.

- Incorrect entries in the silent.xml file can cause installation failures. To help you determine the cause of a failure, Oracle recommends that you create a log file when you start the installation. For more information on generating a verbose log, see Section 1.9, "Generating a Verbose Installation Log".

- The XML definition (<?xml version='1.0' encoding='UTF-8'?>) must be at the very beginning of the silent.xml file. There cannot be any spaces or line breaks before the XML definition.

- You cannot reinstall any Oracle product on top of a previously installed version of the same product - in the same Oracle home directory or in the same file location. You can, however, add products and product components to an existing installation. For example, you can install Oracle Enterprise Repository during one installation, and Oracle BPM during a later installation. However, to reinstall the same version of one of the products, you must first uninstall the previously installed instance of it, as described in or install the new instance in another location.

2.2.3.3 Creating a silent.xml File for Silent-Mode Installation

When you install your Oracle Enterprise Repository software in silent mode, the installation program uses an XML file (silent.xml) to determine which installation options should be implemented. Therefore, before you can run the installation program in silent mode, you must first create a silent.xml file in which you specify the installation options that you want to invoke.

Incorrect entries in the silent.xml file can cause installation to fail. To help you determine the cause of a failure, Oracle recommends that you create a log file when you start the installation.

> **Caution:** Before running the installer in silent mode, follow the preparation guidelines in Preparing for Your Installation, especially the Database Installation Procedures for your DBMS.

To create a silent.xml file for use in the silent-mode installation process, follow these steps:

1. In a supported browser, view the sample silent.xml file for silent-mode installation.

   The sample file is available at
   http://e-docs.bea.com/common/docs92/install/scripts/silent.xml

   This sample silent.xml file is also presented in this section. See Section 2.2.3.4, "Sample silent.xml Files for Silent-Mode Installation".

2. Save the sample XML file, with the name silent.xml, in the same directory that contains the installation program.

> **Note:** The XML definition (<?xml version="1.0" encoding="ISO-8859-1"?>) must be at the very beginning of the silent.xml file. There should not be any spaces or line breaks before the XML definition.

3. In the silent.xml file that you saved on your system, edit the values for the keywords shown in Table 2–2 to reflect your configuration.

> **Note:** You must follow XML guidelines for characters when modifying values. That is, do not use characters reserved for use in XML, such as <, >, [, and].

Table 2–2   Parameters for Silent.xml

For this data-value name...	Enter the following value...
OracleHOME	The full path for the Oracle home directory of your choice. For details about the Oracle home directory, see Section 1.7.1, "Choosing an Oracle Home Directory".
COMPONENT_PATHS	The components and subcomponents you want to install on your system:
	To install Oracle Enterprise Repository, use the following values:
	■ Oracle Enterprise Repository
	■ Core Repository with Examples
	■ Oracle Enterprise Repository Plug-In for Eclipse
APP_SERVER_TYPE	The application server type used to run Oracle Enterprise Repository. Valid values are:
	■ value for user-supplied Tomcat (GUI = Tomcat 5.5.17/18 (user supplied))
	■ value for WLS (GUI = WebLogic Server 10.3)
	■ value for WAS (GUI = WebSphere 6.1)
	■ value for Generic App Server (GUI =Generic Application Server)
APP_SERVER_NAME	The application server name used to run Oracle Enterprise Repository.
	Valid values are:
	■ Tomcat 5.5.17/18 (user supplied)
	■ WebLogic Server 9.2.1/9.2.2
	■ WebSphere 6.1
	■ Generic Application Server
APP_PATH	The Oracle Enterprise Repository application path. For example, if the OER_URL is ultimately http://www.myhost.com:8001/OER1111, then the APP_PATH is OER1111.
WEB_PATH	The web application path. It is recommended that the WEB_PATH value should be the APP_PATH value with -web appended. For example, if APP_PATH=oer10300, then WEB_PATH is recommended to be oer10300-web.
OER_URL	The fully-qualified server and domain name where Oracle Enterprise Repository is being installed (for example, abc.mycompany.com)
DOMAIN_LISTING_PORT	The domain listening port.
USER_INSTALL_DIR	The directory where Oracle Enterprise Repository is installed within the specified OracleHOME.
RUN_DBCONFIG_WIZARD	The flag to run the DB Configuration Wizard:
	■ true or yes, to run the Database Configuration wizard. The default is true.
	■ false or no, to skip the database wizard.
CONFIG_RESPOSIT_DB	The flag to run the Repository Database Configuration wizard, which initializes the repository database properties.
	■ true or yes, to configure a Repository Database Configuration wizard. The default is true.
	■ false or no, to skip the configuration of a database.
	Note: This flag is skipped if RUN_DBCONFIG_WIZARD is set to false or no.
DB_TABLE_BLOG	Tablespace name for BLOBs.
	Note: For the BLOB Tablespace field, enter the same value that you specify for DB_TABLE_DATA.
DB_TABLE_DATA	The data tablespace name to be used by Oracle Enterprise Repository. For example:
	■ SQL Server – PRIMARY
	■ Oracle – OER_DATA
	■ DB2 – oerdatats

Table 2–2   (Cont.) Parameters for Silent.xml

For this data-value name...	Enter the following value...
DB_TABLE_INDEX	The index tablespace name to be used by Oracle Enterprise Repository. For example: ■ SQL Server – INDEX ■ Oracle – OER_INDEX ■ DB2 – oerindxts
DB_DRIVER	Name of the driver. For example: oracle.jdbc.driver.OracleDriver
DB_JARFILES	Path to the driver JAR file. For example: ■ Oracle – d:\jdbc14.jar ■ SQL 2008 – d:\qljdbc.jar
DB_DBMS	The database management system. ■ Oracle – enter the SID that the Oracle Enterprise Repository schema was installed on. For Oracle, the default SID is orcl; for Oracle XE, the default SID is xe. Note: You can determine the SID must be entered by running this SQL statement: select instance_name from v$instance; ■ SQL – enter the database name (for example, OER)
DB_PORT	The database port number.
DB_HOST	The fully-qualified server and domain name where Oracle Enterprise Repository is being installed (for example, abc.mycompany.com).
DB_USERNAME	The database user name. Enter the appropriate user information from the Database Installation Procedures instructions for your DBMS.
DB_PASSWORD	The password for a database user. Enter the appropriate user information from the Database Installation Procedures instructions for your DBMS.
APP_SERVER_HOME	The application server home directory For example: OracleHOME\weblogic103
USER_DOMAIN_DIR	The Oracle Enterprise Repository User Domain Directory directory. For example: OracleHOME\user_projects\domains\oerDomain
SUPPORTED_WL_HOME	The supported WebLogic Server home. For example: OracleHOME\weblogic103
WL_HOME	The WebLogic Server home. For example: OracleHOME\weblogic103
ECLIPSE32_HOME	For installations pointing at existing Eclipse plug-ins for Oracle Enterprise Repository, specifies the optional Eclipse installation. If this key/value is not specified, the installer continues as in the normal GUI installation. <data-value name="ECLIPSE32_HOME" value="c:\my_eclipse_home" />

> **Note:** The application server name and the types supported for
> Oracle Enterprise Repository 11*g* are as follows (these combinations
> must be used together):
>
> **Apache Tomcat Installs:**
>
> APP_SERVER_NAME=Tomcat 5.5.17/18 (user-supplied)
>
> APP_SERVER_TYPE=user_tomcat
>
> **WebLogic Installs:**
>
> APP_SERVER_NAME=WebLogic Server 10.3
>
> APP_SERVER_TYPE=wls
>
> **WebSphere Installs:**
>
> APP_SERVER_NAME=WebSphere 6.1
>
> APP_SERVER_TYPE=was
>
> **Generic Application Server Installs:**
>
> APP_SERVER_NAME=Generic Application Server
>
> APP_SERVER_TYPE=generic

2.2.3.3.1 Guidelines for Component Selection Use the following guidelines when you
specify values for the COMPONENT_PATHS data-value name:

- When you specify a product component to be installed, all subcomponents that
  are installed by default in a complete installation are also installed. For example,
  the following entry in silent.xml installs both Oracle Enterprise Repository and the
  examples:

  <data-value name="COMPONENT_PATHS" >

- To install multiple components, separate the components with a bar (|). Do not
  leave a space before or after the bar.

- To specify subcomponents, you must specify a component/subcomponent
  combination for each entry.

  > **Note:** You can include the component/subcomponent of the
  > products you want to install.

- If you do not include the COMPONENT_PATHS data-value name in the silent.xml
  file, the "complete" Oracle Enterprise Repository product is installed.

  > **Note:** The installation program performs dependency checking to
  > ensure that all components that provide functionality on which other
  > components depend for proper operation are installed. These
  > dependencies are visible during graphical and console mode
  > installations. The same dependencies are enforced during silent
  > installation: components on which other components depend are
  > installed even if they are not explicitly referenced in a silent script.

2.2.3.4 Sample silent.xml Files for Silent-Mode Installation

The following sample silent.xml demonstrate how to install Oracle Enterprise Repository and configure a database.

Example 2–1   Sample XML File -- Install Oracle Enterprise Repository with Database Configuration and Oracle BPM Process Engine

```
<?xml version='1.0' encoding='UTF-8'?>
<Oracle-installer>
  <input-fields>
  <data-value name='OracleHOME' value='D:\dev\silentInstall\oer_albpm'/>
  <data-value name='COMPONENT_PATHS' value='Oracle Enterprise Repository/Core
 Repository with Examples|Oracle Enterprise Repository/Oracle Enterprise
 Repository Plug-In for Eclipse|Oracle BPM/Process Engine'/>
  <data-value name='APP_SERVER_TYPE' value='ce_tomcat' />
  <data-value name='APP_SERVER_NAME' value='Default'/>
  <data-value name='APP_PATH' value='oer3'/>
  <data-value name='WEB_PATH' value='oer3-web'/>
  <data-value name='OER_URL' value='MyURL' />
  <data-value name='DOMAIN_LISTEN_PORT' value='8080' />
  <data-value name='APP_SERVER_HOME' value='D:\dev\silentInstall\oer
_albpm\my\tomcat'/>
  <data-value name='USER_INSTALL_DIR' value='D:\dev\silentInstall\oer
_albpm\repositoryXXX'/>
  <data-value name='RUN_DBCONFIG_WIZARD' value='yes'/>
  <data-value name='CONFIG_RESPOSIT_DB' value='yes'/>
  <data-value name='DB_TABLE_BLOB' value='USER_BLOB'/>
  <data-value name='DB_TABLE_DATA' value='USER_DATA'/>
  <data-value name='DB_TABLE_INDEX' value='USER_INDEX'/>
  <data-value name='DB_DRIVER' value='oracle.jdbc.driver.OracleDriver'/>
  <data-value name='DB_JARFILES' value='d:\ojdbc14.jar'/>
  <data-value name='DB_DBMS' value='sid2'/>
  <data-value name='DB_PORT' value='1521'/>
  <data-value name='DB_HOST' value='MyHostName'/>
  <data-value name='DB_USERNAME' value='silent'/>
  <data-value name='DB_PASSWORD' value='silent'/>
  <data-value name='DBA_ALBPM_USER' value='system'/>
  <data-value name='DBA_ALBPM_PASSWORD' value='oer30'/>
  <data-value name='ALBPM_ADMIN_USER' value='system'/>
  <data-value name='ALBPM_ADMIN_PASSWORD' value='manager'/>
  <data-value name='FDI_USER_NAME' value='fd1'/>
  <data-value name='FDI_USER_PASSWORD' value='fd1'/>
  <data-value name='SERVER_USER_NAME' value='fd2'/>
  <data-value name='SERVER_USER_PASSWORD' value='fd2'/>
  <data-value name='CONFIGURE_WORKFLOW' value='yes'/>
  </input-fields>
\</Oracle-installer>
```

Example 2–2   Sample XML File -- Install Oracle Enterprise Repository Only with Database Configuration

```
<?xml version='1.0' encoding='UTF-8'?>
<Oracle-installer>
  <input-fields>
  <data-value name='BEAHOME' value='D:\dev\silentInstall\oer3'/>
  <data-value name='COMPONENT_PATHS' value='Oracle Enterprise Repository/Core
 Repository with Examples|Oracle Enterprise Repository/Oracle Enterprise
 Repository Plug-In for Eclipse'/>
  <data-value name='APP_SERVER_TYPE' value='ce_tomcat' />
```

```
  <data-value name='APP_SERVER_NAME' value='Default '/>
  <data-value name='APP_PATH' value='oer3'/>
  <data-value name='WEB_PATH' value='oer3-web'/>
  <data-value name='OER_URL' value='MyURL' />
  <data-value name='DOMAIN_LISTEN_PORT' value='8080' />
  <data-value name='APP_SERVER_HOME' value='D:\dev\silentInstall\oer
_albpm\my\tomcat'/>
  <data-value name='USER_INSTALL_DIR' value='D:\dev\silentInstall\oer
_albpm\repositoryXXX'/>
  <data-value name='RUN_DBCONFIG_WIZARD' value='yes'/>
  <data-value name='CONFIG_RESPOSIT_DB' value='yes'/>
  <data-value name='DB_TABLE_BLOB' value='USER_BLOB'/>
  <data-value name='DB_TABLE_DATA' value='USER_DATA'/>
  <data-value name='DB_TABLE_INDEX' value='USER_INDEX'/>
  <data-value name='DB_DRIVER' value='oracle.jdbc.driver.OracleDriver'/>
  <data-value name='DB_JARFILES' value='d:\ojdbc14.jar'/>
  <data-value name='DB_DBMS' value='sid2'/>
  <data-value name='DB_PORT' value='1521'/>
  <data-value name='DB_HOST' value='MyHostName'/>
  <data-value name='DB_USERNAME' value='silent'/>
  <data-value name='DB_PASSWORD' value='silent'/>
  </input-fields>
\</Oracle-installer>
```

For more information on launching the installation in silent mode, see Section 2.1, "Starting the Installation Program".

2.2.3.5 Returning Exit Codes to the Console

When run in silent mode, the installation program generates exit codes that indicate the success or failure of the installation. These exit codes are shown in the following table.

Code	Description
0	Installation Completed Successfully.
1	Installation failed due to an irrecoverable error.
2	Installation failed due to an internal XML parsing error.

If you are launching the silent-mode installation process from a script, you can choose to have these exit codes displayed on the console. Example 2–3 provides a sample command file that invokes the installation program in silent mode and echoes the exit codes to the console from which the script is executed.

Example 2–3   Sample Command File Displaying Silent-Mode Exit Codes

```
rem Execute the installer in silent mode
@echo off
oer1111xx_generic.exe -mode=silent -silent_xml=mySilentXMLFile.xml -log=oer_30.log
@rem Return an exit code to indicate success or failure of installation
set exit_code=%ERRORLEVEL%
@echo.
@echo Exitcode=%exit_code%
@echo.
@echo Exit Code Key
@echo ---------------
```

```
@echo   0=Installation completed successfully
@echo  -1=Installation failed due to a fatal error
@echo  -2=Installation failed due to an internal XML parsing error
@echo.
```

After completing the installation process, complete the following post installation tasks, as described in Chapter 3, "Post-Installation Steps".

3

Post-Installation Steps

This chapter describes the post-installation steps that you must perform after installing Oracle Enterprise Repository.

This chapter contains the following sections:

3.1 Configure Your Application Server

Your application server may require additional configuration before you can start using the product.

3.1.1 WebLogic Server Installations

The following sections provide post-installation information when using WebLogic Server as your application server.

3.1.1.1 Run WebLogic Server Domain Configuration Wizard

The Oracle Enterprise Repository is distributed as part of a WLS Domain template.

This domain template allows Oracle Enterprise Repository to extend an existing domain or be a separate domain entirely (Default).

The Oracle Enterprise Repository domain template is designed to allow a quick installation of the Oracle Enterprise Repository application by supplying minimum configuration details. When the domain template is created using the defaults within the template, an administration server and a single managed server (oer_server1) are

created. The managed server contains the Oracle Enterprise Repository Web application deployment within and is created in the directories supplied to the configuration panel, which had prompted for the domain name.

The default port used by the administration server is the WLS default of 7001. The Oracle Enterprise Repository Managed Server has a default port value that had been supplied to the Oracle Enterprise Repository installer (7101 by default). The Oracle Enterprise Repository Managed Server also listens to the network interface that is associated with the fully qualified host name also supplied to the Oracle Enterprise Repository installation program.

Creating WebLogic Domains Using the Configuration Wizard

This section provides information and examples for some common domain configuration tasks using the Configuration Wizard:

3.1.1.1.1 Create New Domain with default Managed Server

1. Start the Configuration Wizard in graphical mode.

   - On Windows: Click **Start**, **Programs**, **Oracle Products**, **Tools**, **Configuration Wizard** or enter *<WEBLOGIC_HOME>/common/bin/config.cmd*

   - On UNIX: Enter *<WEBLOGIC_HOME>/common/bin/config.sh*

   The Welcome page is displayed.

Figure 3–1 Fusion Middleware Configuration Wizard Welcome Page
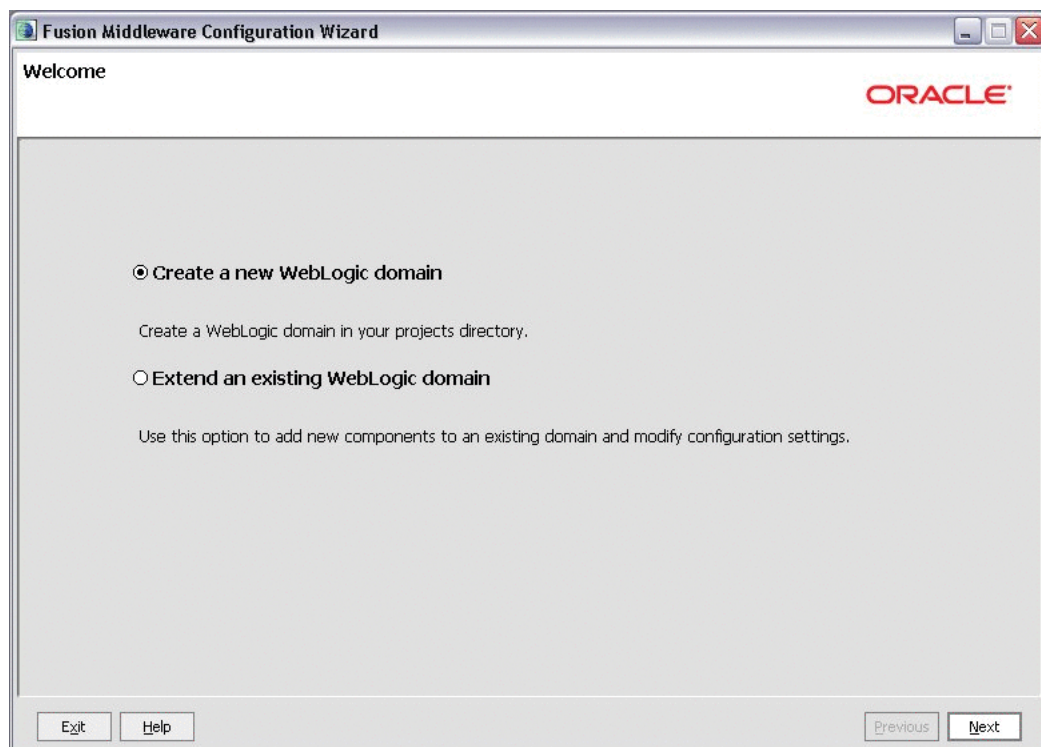
2. Click the **Create a New WebLogic domain** option, as shown in Figure 3–1, and then click **Next**. The Select Domain Source page is displayed.
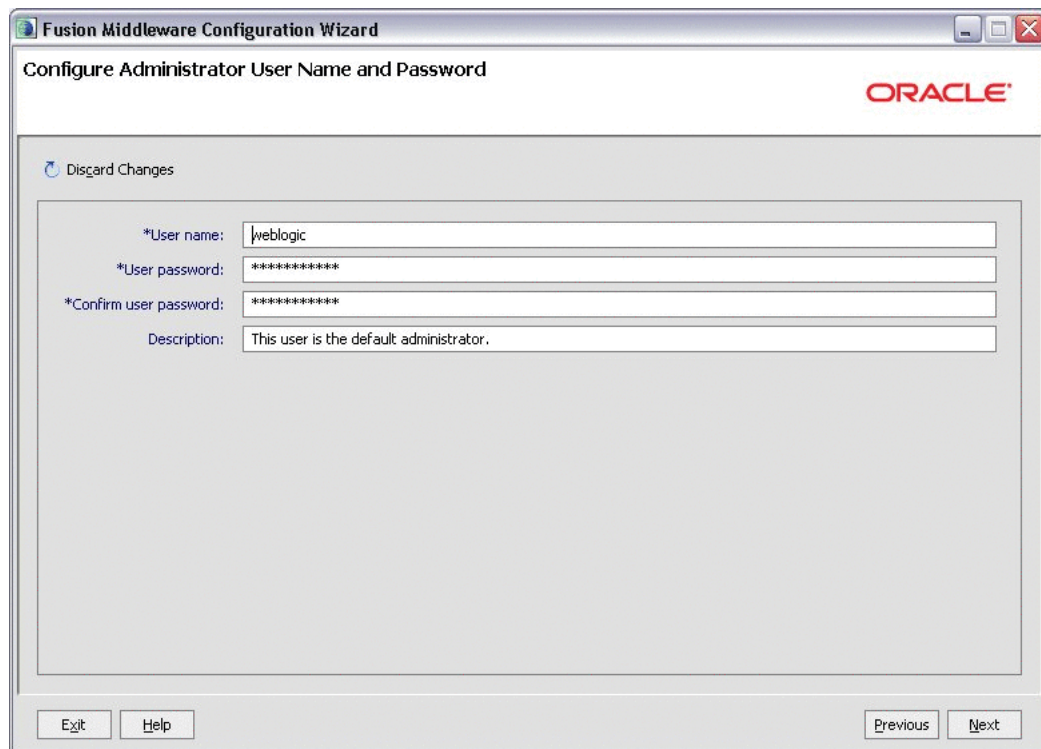
Figure 3–2   Select Domain Source Page
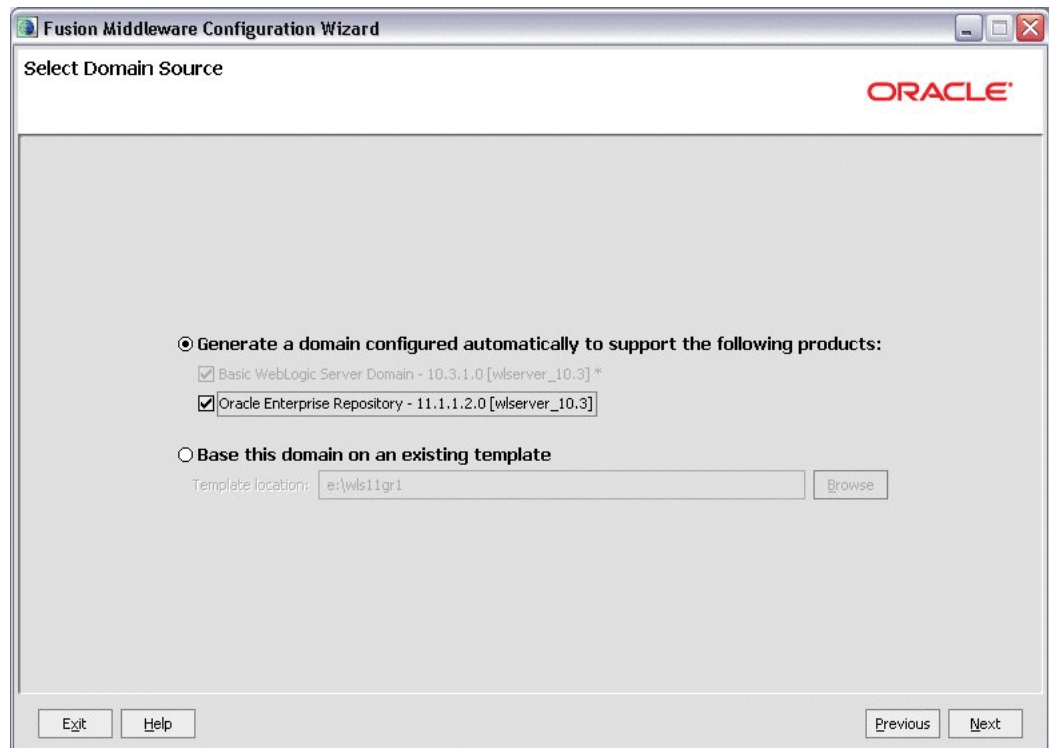
3. Click **Generate a domain configured automatically to support the following products** and the Oracle Enterprise Repository option is selected, as shown in Figure 3–2. Click **Next**. The Specify Domain Name and Location page is displayed.

Figure 3–3   Specify Domain Name and Location Page
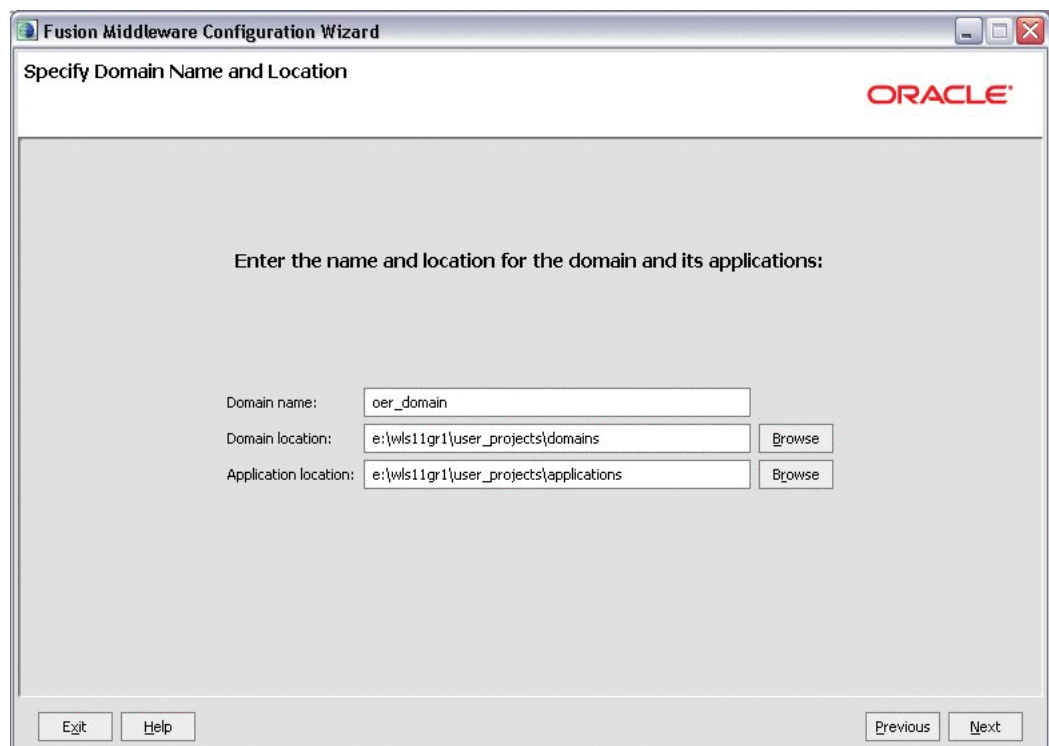
4. Enter the name and location for the domain, as shown in Figure 3–3, and then click **Next**. The Configure Administrator Username and Password page is displayed.

Figure 3–4   Configure Administrator User Name and Password Page

5. Enter a valid username and password, as shown in Figure 3–4, and click **Next**. This user name is also used to start each managed server within the domain. The Configure Server Start Mode and JDK page is displayed.

Figure 3–5   Configure Server Start Mode and JSK Page
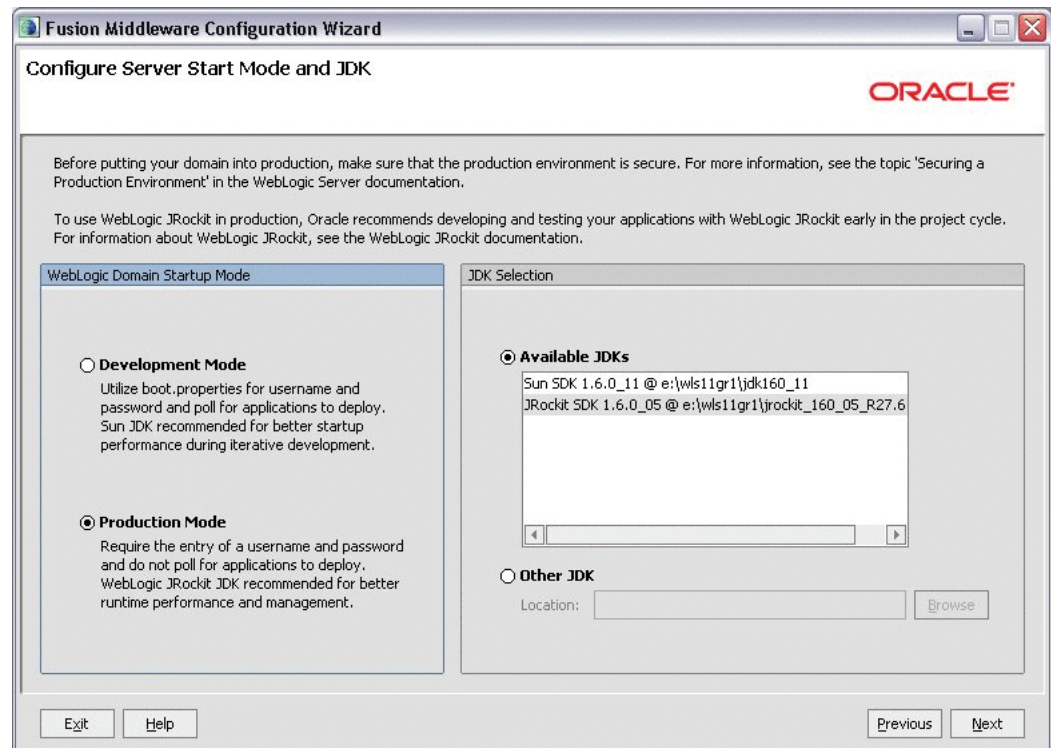
6. Specify whether to start the server in development mode or production mode, as shown in Figure 3–5, and also select which JDK to use. Click **Next**. The Select Optional Configuration page is displayed.

7. Specify whether you want to change the System or Managed Servers (optional), then click **Next**. The Configuration Summary page is displayed, as shown in Figure 3–6.

Figure 3–6 Configuration Summary Page
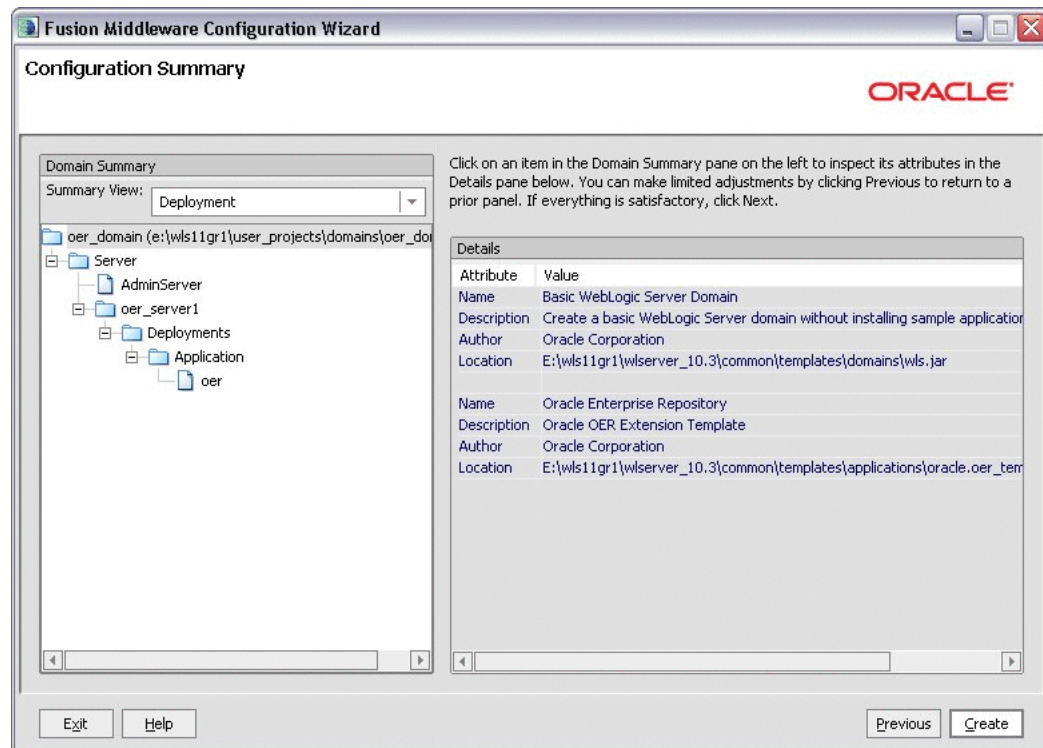
8. Review the values supplied to the configuration and click **Create** to create the domain.

3.1.1.1.2 Extend Existing Domain and Target on an existing Managed Server

1. Start the Configuration Wizard in graphical mode.

    ■   On Windows: Click **Start**, **Programs**, **Oracle Products**, **Tools**, **Configuration Wizard** or enter *<WEBLOGIC_HOME>/common/bin/config.cmd*

    ■   On UNIX: Enter *<WEBLOGIC_HOME>/common/bin/config.sh*

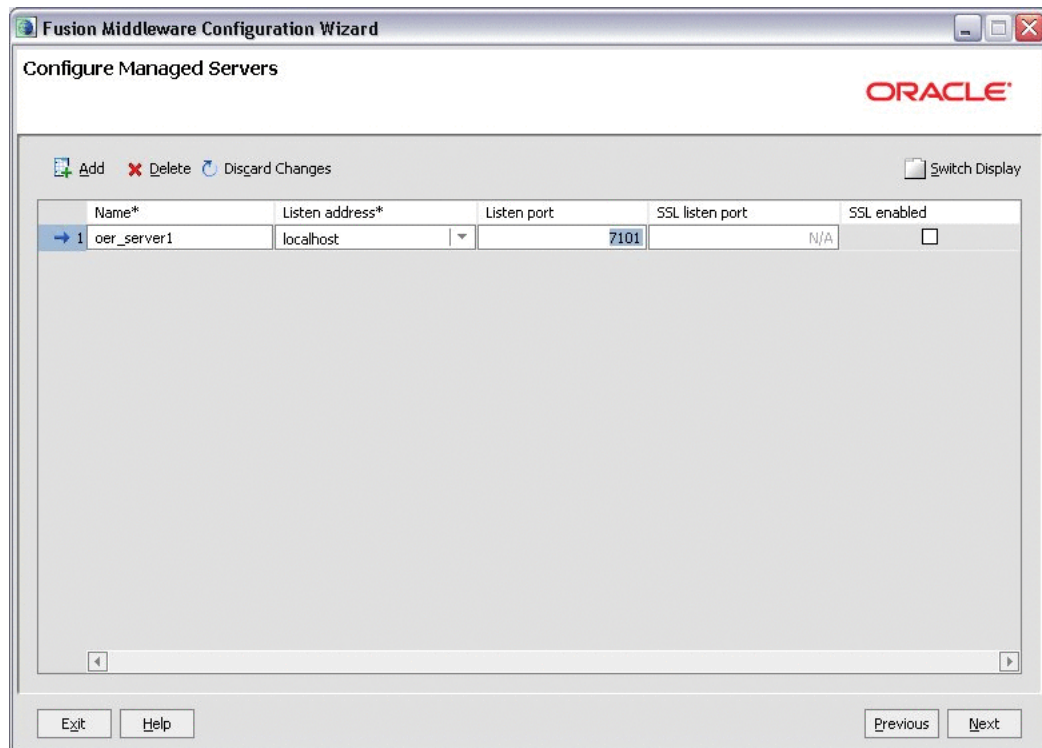   The Welcome page is displayed, as shown in Figure 3–1.

2. Click the **Extend an existing WebLogic domain** option, and then click **Next**. The Select a WebLogic Domain Directory page is displayed.

3. Navigate to the domain directory that you want to extend. Click **Next**. The Extension Source page is displayed.

4. You can choose to extend your domain by selecting an Oracle Enterprise Repository, and then click **Next**. The Specify Domain Name and Location page is displayed, as shown in Figure 3–3.

5. Select a directory where the application EAR is deployed for this domain. By default, it is *<WEBLOGIC_HOME>/user_projects/applications*.

6. Click **Next**. The Select Optional Configuration page is displayed.

Figure 3–7   Select Optional Configuration Page
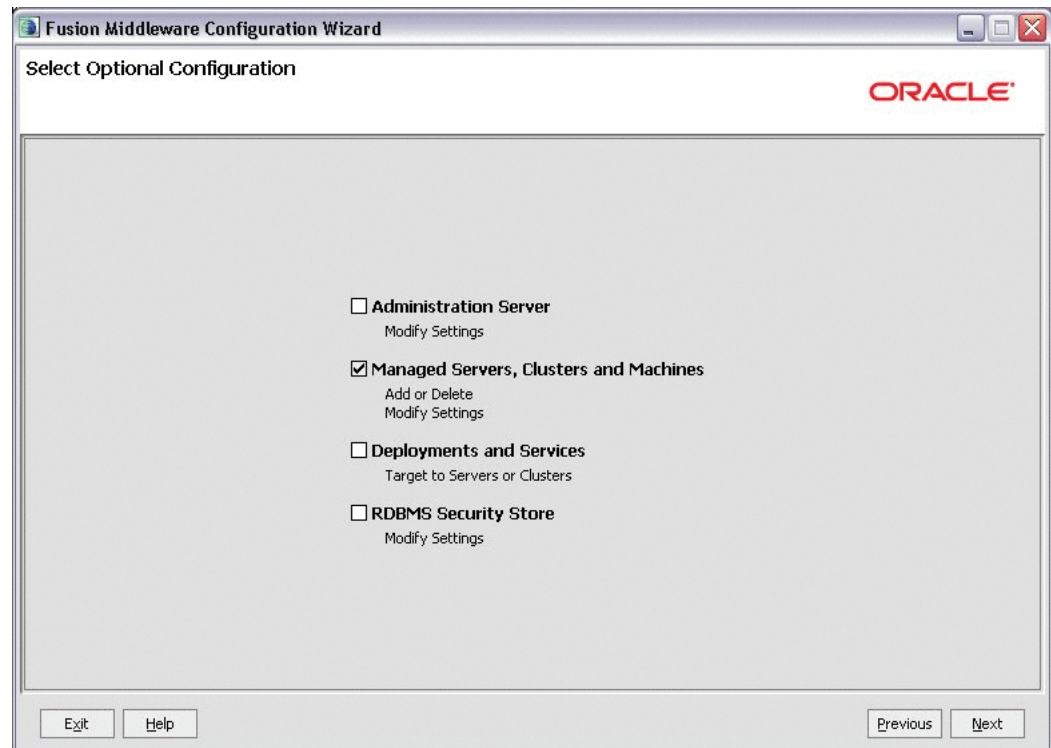
7. Select the options to configure servers, clusters, and computers, , as shown in Figure 3–7, then click **Next**. The Configure Managed Servers page is displayed.

8. In Figure 3–8, review the **oer_server1** definition, and then click **Next**. The Configure Clusters page is displayed.

> **Note:**   Ensure that the **oer_server1** server has a fully qualified host name entered for the listen address. Do NOT use an IP address, nor the option for 'All Local Addresses' and the listen port does not interfere with any of the existing Managed Servers within the domain.

Figure 3–8   Configure Managed Servers

9. Click **Next**. The Configure Machines page is displayed, as shown in Figure 3–9.

Figure 3–9   Configure Machines
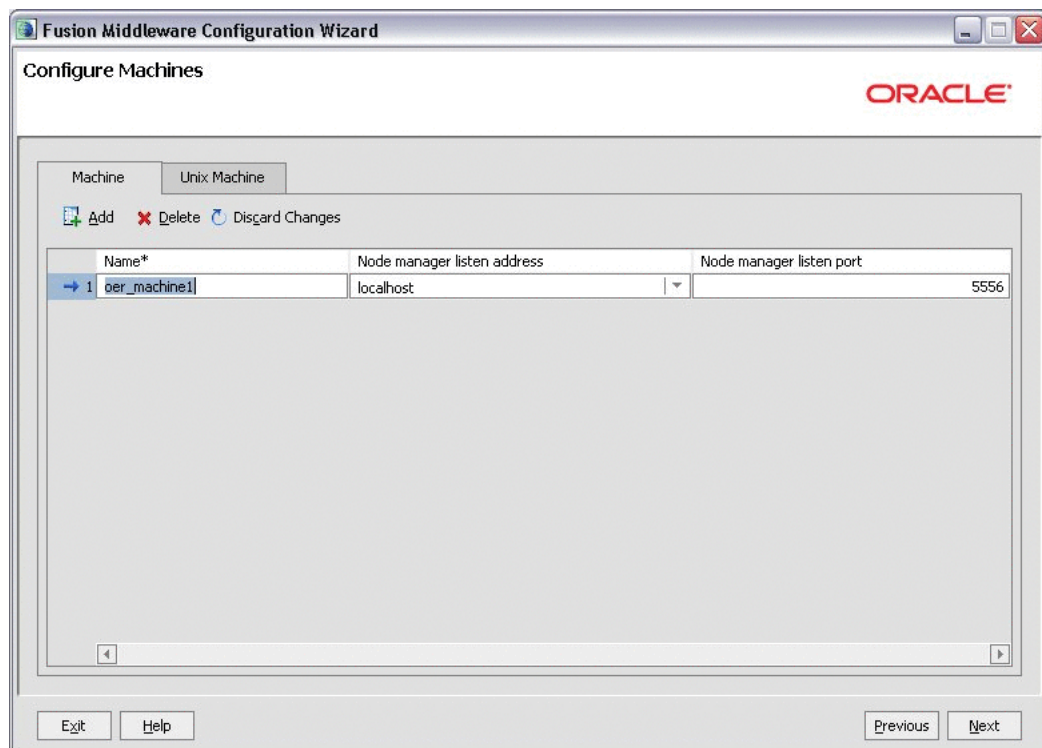
10. Review the current machine definitions.

If the domain being extended already contains a machine, Oracle Enterprise Repository must be configured to use the existing machine and the `oer_machine1` entry should be removed. Otherwise, the oer_machine1 should remain as defined. This example assumes that an existing machine named **soa_machine1** already exists in this domain.

11. Click **Next**. The Assign Servers to Machines page is displayed, as shown in Figure 3–10.

Figure 3–10   Assign Servers to Machines
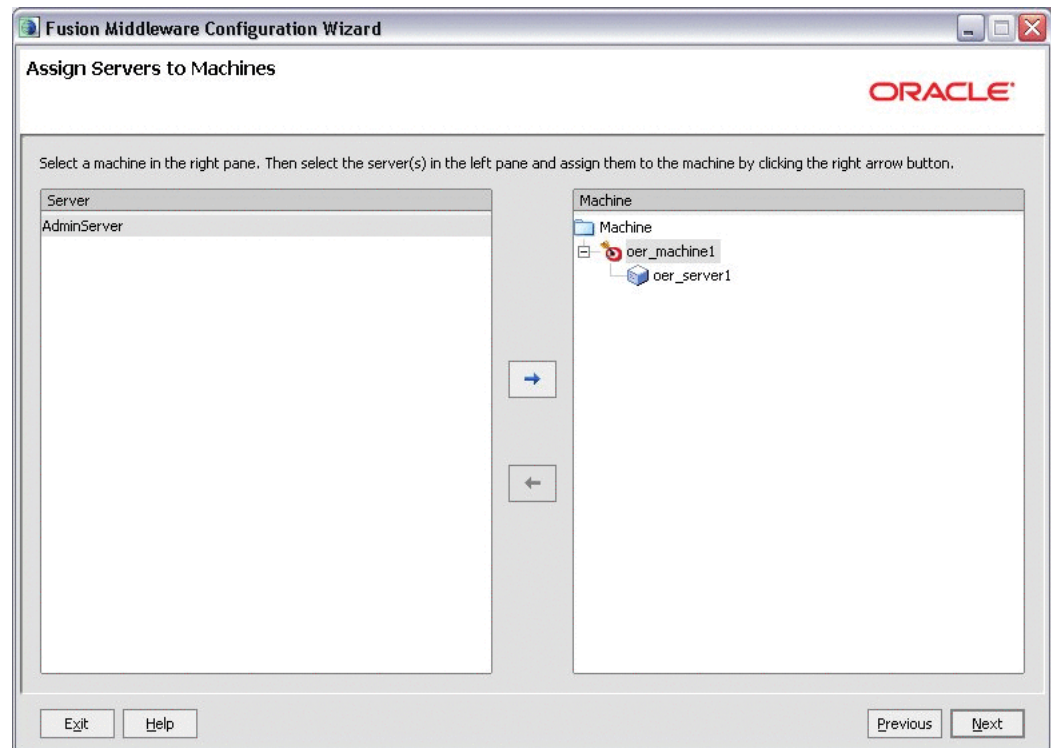
12. Select **oer_server1** in the Server list and click the right-arrow button. The **oer_server1** should be related to either the existing machine within the domain, or to the **oer_machine1**, if no machine had existed within this domain before extending it with the Oracle Enterprise Repository application template.

13. Click **Next**. The Target Deployments to Clusters or Servers page is displayed.

    After configuring these environments you can extend the existing domain.

3.1.1.2 Set WebLogic Server Environment Parameters

When starting the servers of the domain containing Oracle Enterprise Repository, an additional domain configuration file is used to define environment variables and WebLogic Server operational behavior. This file is found within the *$OER_DOMAIN/bin/setOERDomainEnv.sh* or **.cmd* files.

Please review the default JVM parameters being supplied within this file to ensure that these are in-line with your corporate policies and supported character set of your locale.

If this Oracle Enterprise Repository installation runs within an SSL enabled environment, then the addition of the following parameter to the

`cookie-secure=true` parameter to the session-descriptor element within the `weblogic.xml` file.

3.1.2 WebSphere Installations

The following sections provide information for post-installation procedures required to complete your installation of Oracle Enterprise Repository.

- Section 3.1.2.1, "Deploying the Oracle Enterprise Repository Application"
- Section 3.1.2.2, "Change the Server Classloader Order for XLST"

3.1.2.1 Deploying the Oracle Enterprise Repository Application

Once the installer has completed, you have a WebSphere directory, such as `ORACLE_HOME/repositoryXXX/websphere`. This directory contains all of the properties files that configure the Oracle Enterprise Repository instance appropriately once it is deployed, as well as the oer.ear file and a copy of the JDBC Drivers that had been used to generate the database during the install process.

Use the following steps to deploy Oracle Enterprise Repository 11*g* on WebSphere:

1. Create a `ORACLE_HOME`, such as */opt/Oracle*, on the target application server. The Oracle Enterprise Repository installation program prompts you to use an existing `ORACLE_HOME` if one exists, otherwise it enables you to create a directory.

   The Oracle Enterprise Repository installation application deposits the WebSphere deployable application and the appropriate properties files into the *ORACLE_HOME/repositoryXXX/websphere* directory. This recommendation ensures that the Oracle Enterprise Repository application has a consistent driver that should not be effected by outside changes to the WebSphere or other library environment.

2. As a recommended best practice, copy the JDBC Driver JAR file(s) and all properties files from the *ORACLE_HOME/repositoryXXX/websphere* directory. This recommendation ensures that the Oracle Enterprise Repository application has a consistent driver that should not be effected by outside changes to the WebSphere or other library environment.

3. Deploy the `oer.ear` file in the manner most appropriate for your deployment server.

   > **Note:** Do not start the application as there are additional configuration steps that must be performed before the application is considered fully deployed.

4. Modify the generic JVM parameters.

   > **Note:** These installation instructions assume the use of the WebSphere Administration Console. All instructions are relative to the links leading to the appropriate pages within this management tool.

   a. Open the **Servers**, **Application Servers**, **myserver**, **Java and Process Management**, **Process Definition**, **Java Virtual Machine** page.

   b. Add the following parameters to the Generic JVM Parameters property:

*) Unicode compatibility – be sure to set the default client encoding appropriately. Depending on your locale, this may be reasonable: -Dclient.encoding.override=UTF-8

*) Turn off strict code verification: -Xverify:none

*) To prevent XLST transformations in the diagnostic page and the metadata viewer from failing in your Web browser, add a default implementation for DTMConfiguration:

```
-Dorg.apache.xml.dtm.DTMManager=org.apache.xml.dtm.ref.DTM
ManagerDefault
```

5. Modify the Oracle Enterprise Repository application module class load order:

   a. Enter the WebSphere Integrated Solutions Console.

   b. Click **Applications**, **Enterprise Applications**.

   c. Click the deployed Oracle Enterprise Repository application.

   d. Click the **Manage Modules** link.

   e. Click the **oer-app.war** module.

   f. Change the Class load order to Classes loaded from application class loader first (labeled as "Parent last" in version 6.0 and earlier).

   g. Click **Apply**.

   h. Click the **oer-web.war** module.

   i. Change the Class load order to Classes loaded from application class loader first (labeled as "Parent last" in version 6.0 and earlier).

   j. Click **Apply**.

   k. Click **Save** directly to the master configuration link to commit your changes to the master configuration.

6. Create a shared library from within the Oracle Enterprise Repository application and associate it with the application:

   a. On the **Applications**, **Enterprise Applications**, **OER**, **Shared Library References** page, select the **oer-app.war** module and then click **Reference Shared Library**.

   b. Click **New**.

   c. Select a scope for the shared library that is appropriate for your WebSphere application environment.

   d. Assign a meaningful Name to the shared library. Description is optional.

   e. In the classpath field, enter the Oracle Enterprise Repository 11*g* directory, such as ORACLE_HOME/repositoryXXX/websphere. This directory contains all of the properties files for the Oracle Enterprise Repository instance.

   f. On a separate line within the classpath field, enter the absolute path of each JDBC driver JAR files within the ORACLE_HOME directory. If you have more than one file, add only one file per line.

   g. Select the new library in the Available list and use the right-facing arrow (>>) button to select that library for use with the oer-app.war application.

   h. Click **OK** to continue.

      i. Click **Save** directly to the master configuration link to commit your changes to the master configuration.

7. Restart WebSphere.

8. Start the Oracle Enterprise Repository application.

9. After starting up Oracle Enterprise Repository, enable and set the following Systems Setting property to true for SSL support and also to avoid an SSLContext error on the Run Active Diagnostic page.

```
cmee.ssl.force-sun-provider = true
```

3.1.2.2 Change the Server Classloader Order for XLST

To prevent issues with XSLT Transformation, use the following steps to change the classloader order in your WebSphere installation:

1. Log in to the WebSphere Administrative Console.

2. Click the **Server**, **Application Server**, **server** link.

3. Select the **Configuration** tab.

4. Select the option for **Parallel start**.

5. Change the Access to internal server classes to **Allow**.

6. Change Server Specific Application Settings, Classloader Policy to **Single**.

7. Change the Server Specific Application Settings, Class loading mode to **Parent First**.

8. Click **Save** directly to the master configuration link to commit your changes to the master configuration.

3.2 Install Java Web Start

Java Web Start is a browser plug-in that runs files with JNLP extensions. Java Web Start must be available on the client to use Oracle Enterprise Repository's Asset Editor, Type Manager, Navigator Applet, Browse Tree applet and the Import/Export utility.

- Section 3.2.1, "Download and Install Java Web Start"
- Section 3.2.2, "Troubleshooting Java Web Start"

3.2.1 Download and Install Java Web Start

To download and install Java Web Start, perform the following steps:

1. Download Java Web Start from java.sun.com.

2. When the download is complete, install Java Web Start.

3. When installation is complete, open the Windows Control Panel.

4. Open the Java plug-in.

5. Click the browser tab and check the appropriate browser(s) with which to use the Java Web start application. This is rquired for proper Asset Editor functionality.

6. Click the **Advanced** tab.

7. Select the appropriate SUN Java JRE version for use with the installed version of Oracle Enterprise Repository.

8. Close and re-open all instances of the Internet Explorer or FireFox browsers.

9. Navigate to the Oracle Enterprise Repository instance.

10. Click **Edit/Manage Assets** on the Oracle Enterprise Repository Assets screen.

    A security warning opens. This occurs only during the first launch of the Asset Editor.

11. Click **Start**.

    Java Web Start installs and the Asset Editor opens.

For UNIX/Linux workstations, use the following instructions to associate Java Web Start with the JNLP file type (assuming the use of Firefox/Mozilla based browsers):

1. Download Java Web Start (as a part of the Java Runtime Environment) from *http://java.sun.com/.*

2. Install Java Runtime Environment as appropriate for your platform.

3. When installation is completed, open Mozilla Firefox.

4. Click the **Edit** menu, and then select **Preferences**. The Preferences dialog is displayed.

5. Search for an existing entry for JNLP files. If it does not already exist in the list, then add this file type.

6. Choose the JRE's WebStart application binary to associate with the JNLP file type: *<JRE_HOME>/bin/javaw*.

7. Save changes to browser options.

8. Navigate to the Oracle Enterprise Repository instance.

9. Click **Edit/Manage Assets** in the Oracle Enterprise Repository Assets screen. A security warning is displayed, which occurs only during the first launch of the Asset Editor.

10. Click **Start**. The Java Web Start is installed and the Asset Editor opens.

3.2.2 Troubleshooting Java Web Start

Oracle Enterprise Repository employs a browser MIME-type support checking process that is executed when the Edit/Manage Assets (Assets screen) and Edit (asset detail display) links are generated. This process inspects the client browser to determine if there is a registered handler for a JNLP file (which should launch Java Web Start). If this process fails or returns no results, the link HREF target points to the oer-web/web start/launch.htm page.

The browser-supported mime type determines which client installed application would be presented as the target of the Edit/Manage Assets and Edit links. Java Web Start must be properly installed to work correctly with the operating system as the handler for JNLP files passed to the client browser.

The process of registering this mime type with the browser is normally handled during installation of the Java Web Start plug-in application. Certain corporate security measures or anti-Spyware applications may block this kind of change to the Windows Registry, as the improper installation and/or removal of the Java Web Start application, Java Run Time Environment or Java SDK if improperly registered within the Java plug-in applet within the Windows Control Panel.

The following instructions may help rectify the incorrect MIME type support, assuming that Java Web Start and an appropriate version of the SUN Java JRE are properly installed within the client computer system.

To manually set the file/MIME association within the Windows operating system using the Windows Explorer:

1.   Open the Tools Menu.

2.   Select **Folder Options**.

3.   Select the **File Types** tab.

4.   Scroll down to JNLP or create a JNLP file type.

5.   Associate the Java Web Start Application (located in the correct path if more than one JWS is installed) with the JNLP file extension.

6.   In the Windows Control Panel, add support (check the option) for Internet Explorer within the Java Plug-in console applet. This process should assign the JNLP file type to Java Web Start within the Windows operating system.

Install the JRE or SDK and ensure you have the following entries in your *$HOME/.mailcap* and *$HOME/.mime.types* or in the system-wide */etc/mime.types* and */etc/mailcap* files:

> **Note:**   Ensure you use the recent version, starting with Java 1.4.2.

```
in .mime.types or /etc/mime.types:
type=application/x-java-jnlp-file desc="Java Web Start" exts="jnlp"
in .mailcap or /etc/mailcap:
application/x-java-jnlp-file; /usr/java/jdk1.6.0_16/jre/javaws/javaws %s
// Adjust the path above according to your local installation
```

Conversely, when Mozilla Firefox encounters a file with an unknown extension, it often prompts you to Open or Save. Choose the **Open** option and browse to the `$JAVA_HOME/jre/bin/javaws` file, and select the appropriate option, to perform this action for the JNLP file type. If a new JRE is required, then follow the instructions in the Section 3.2, "Install Java Web Start", to change the executable associated with the JNLP file type.

3.3 Configure Oracle Enterprise Repository Web Start on Linux

After you have successfully installed Oracle Enterprise Repository, you must configure your browser to install Oracle Enterprise Repository WebStart. The steps to configure Oracle Enterprise Repository WebStart are as follows:

> **Note:**   For Linux, you only have a few options in browsers, and the default browser for the Linux installs is Mozilla Firefox.

1.   Go to the **plugins** sub-directory under the Mozilla installation directory

```
cd <Mozilla installation directory>/plugins
```

2.   In the current directory, create a symbolic link to the *Java ns7/libjavaplugin_oji.so* file type:

```
ln -s <Java installation
directory>/plugin/i386/ns7/libjavaplugin_oji.so
```

For example:

- If Mozilla is installed in the `/usr/lib/mozilla-1.4/` directory and if the Java is installed at the `/usr/java/jre1.6.0` directory, then type at the terminal to go to the browser plug-in directory:

  ```
  cd /usr/lib/mozilla-1.4/plugins
  ```

  Enter the following command to create a symbolic link to the Java Plug-in for the Mozilla browser.

  ```
  ln -s /usr/java/jre1.6.0/plugin/i386/ns7
  ```

  ```
  /libjavaplugin_oji.so
  ```

3. Open Mozilla Firefox.

4. Click the **Edit** menu, and then select **Preferences**. The Preferences dialog is displayed.

5. Click **Applications**. The Application page is displayed.

6. In the Search field, enter `JNLP`. The JNLP is displayed.

7. Select the displayed JNLP. The Action list gets activated.

8. Click the Action list to point to the correct JWS installed (such as the one installed with WLS JDK's).

3.4 Start Your Application Server and Log Into the Oracle Enterprise Repository Web-based Console

After configuring your application server, follow these steps to start your application server and log in to the Oracle Enterprise Repository Web-based console.

1. Start your application server:

   WebLogic Server: navigate to the `ORACLE_HOME\user_projects\domains\DOMAIN_NAME` directory and, depending on your platform, double-click either the **startWeblogic.cmd** (Windows) or **startWeblogc.sh** (UNIX) file.

   On Windows, you have an Oracle WebLogic Server NodeManager service. This service should be set to 'Automatic' start mode. This service is required to allow the domain Administration Server (startWeblogic.sh or *.cmd) to start the Oracle Enterprise Repository managed server.

   > **Note:**   For instructions on starting standalone Tomcat and WebSphere application servers, see the documentation for those products.

2. Log in to the Domain's Administration Server Console application (*http://myserver.domainname.com:7001/console*), and then select **Environement** -> **Servers** -> **Control** tab.

   Check the **oer_server1** managed server, and then click the **Start** button to start the Oracle Enterprise Repository managed server.

3. Point your browser to the Oracle Enterprise Repository application.

For example: *http://myserver.domainname.com:7101/oer/*

4. On the login screen, enter admin for the Username and Password. This is the default administrative account installed with Oracle Enterprise Repository. You are forced to change the default Administrator password on the first successful login to the Oracle Enterprise Repository Web application.You can change the default password through the Administration tab in Oracle Enterprise Repository at a later time.

> **Note:** If your organization requires a user name and password each time you log in to Oracle Enterprise Repository, clear the **Enable Automatic Login** option.

5. Click **Login**.

The Login Stats dialog displays a welcome message that includes the date and time of your login.

6. Click **Close**.

For more information about using the Oracle Enterprise Repository console, see the "Getting Started" section of the *Oracle Fusion Middleware User Guide for Oracle Enterprise Repository*.

3.5 Use the Oracle Enterprise Repository Diagnostics Testing Tool

The Diagnostics tool allows testing and troubleshooting of certain aspects of Oracle Enterprise Repository, including testing for:

- Checking Product Version Information
- Servlet Functionality
- Required Libraries
- Database Connectivity
- List System Paths
- Run Pre-Compile Servlet

The Oracle Enterprise Repository diagnostic tools are available only when using an application server JVM parameter for security reasons. To enable the Oracle Enterprise Repository diagnostics features, use the following parameter:

```
-DdiagPagesEnabled=true
```

This parameter can be added to the application server's environment in various ways. For WebLogic Server, edit the *ORACLE_HOME/user_projects/DOMAIN_ NAME/bin/setOERDomainEnv.sh* or **.cmd* file and uncomment the OER_DIAG_OPTION parameter in this file. Then, restart the Oracle Enterprise Repository managed server.

To launch the Diagnostics tool, navigate to the *http://host_name/application_ name/diag/index.jsp* page of the Oracle Enterprise Repository console. For more information, see "Password Encryption" in the *Oracle Fusion Middleware Upgrade Guide for Oracle Enterprise Repository*.

3.6 Import Oracle Enterprise Repository Solution Packs

Oracle bundles base sample data for users to help you get started using the Enterprise Repository. Additionally, depending upon the edition of Oracle Enterprise Repository that you purchased, you can also import supplemental Solution Packs. These supplemental Solution Packs are located with your installation under the `ORACLE_HOME\repositoryXXX\core\tools\solutions` folder. Table 3–1 describes the available Solution Packs for Oracle Enterprise Repository 11*g*:

Table 3–1 Oracle Enterprise Repository Solution Packs

Solution Pack	File Name	Desription
Policy Management Solution Pack	11.1.1.4.0-Policy-Management-Solution-Pack.zip	Install this Solution Pack to use policy management features with Oracle Enterprise Repository.
Harvester Solution Pack	11.1.1.4.0-OER-Harvester-Solution-Pack.zip	Install this Solution Pack to use Business Process Management Workflows, the Harvester, or the Oracle Registry Repository Exchange Utility, which exchanges data between Oracle Enterprise Repository and Oracle Service Registry.

3.7 Test the Oracle Enterprise Repository Installation

Testing the Oracle Enterprise Repository installation involves a number of tasks that ensure the proper operation of initial Oracle Enterprise Repository features and functions. These instructions apply to all application servers currently supported by Oracle Enterprise Repository.

- Section 3.7.1, "Submit an Asset"

- Section 3.7.2, "Accept the Asset"

- Section 3.7.3, "Register the Asset"

- Section 3.7.4, "Find the Registered Asset and View Details"

- Section 3.7.5, "Enable System Setting for Asset Editor to Work"

3.7.1 Submit an Asset

Asset submission is performed on the Oracle Enterprise Repository Assets page.

1. In the Assets panel, click **Submit an Asset**.

2. In the Asset Submission dialog, complete the following fields:

   - Asset Name

   - Version

   - Type

   - Description

   - URL: enter the file location (for example, *http:/www.example.com/repository/*)

3. Click **Submit** to submit the asset the registrar.

> **Note:** Attempts to save as asset without first completing all required data fields results in a warning message. A confirmation message indicates the asset was successfully submitted to the Oracle Enterprise Repository registrar.

4. Click **Close**.

For more information, see *Oracle Fusion Middleware User Guide for Oracle Enterprise Repository*.

3.7.2 Accept the Asset

The asset acceptance process is performed by the Oracle Enterprise Repository registrar using the Asset Editor. The registrar makes decisions about an asset based on company requirements. To accept and assign an asset means that the registrar accepts the asset and assigns it to another person to shepherd it through the remainder of the registration process.

1. On the Assets page, click the **Edit/Manage Assets** option to launch the Asset Editor.

2. Expand the Submitted folder in the Assets tree.

3. Expand the Pending folder and open the asset submitted in Submit an Asset.

4. For the purposes of this exercise, click **Accept**.

   The asset moves to the Under Review folder in the tree, and also appears in each of the workflow folders under the asset. The workflow folders correspond to tabs in the Asset Editor.

For more information, see *Oracle Fusion Middleware User Guide for Oracle Enterprise Repository*.

3.7.3 Register the Asset

The asset acceptance process is performed by the Oracle Enterprise Repository registrar using the Asset Editor.

1. On the Overview, Support, Technical, and Tests tabs, complete the remaining information, including the notification email, licensing information, and support contacts as appropriate.

   > **Note:** The notification email automatically sends notification to the email address when the asset is downloaded/selected for use. The asset can be moved from its original location to the storage repository on this tab.

2. Click **Approve** on a tab. The tab label changes color and the Approve button changes to Unapprove.

3. Click the **Taxonomy** tab.

4. Assign the asset to the appropriate categories and/or domains.

> **Note:** Categories and domains are configurable. (See the Oracle Enterprise Repository Administration Guide.)

5. Enter any keywords and classify the asset into one of five categories:

   - **Raw**: No assurance of quality or completeness.

   - **Educational**: To be used for educational purposes only. The asset may not be complete in terms of documentation, test results, or other information.

   - **Approved**: Approved for use by the registrar

   - **Recommended**: Successfully used on at least one project.

   - **Mandated**: Must be used whenever the functionality it provides is needed (This is especially relevant for Web services that access customer data, process payments, and so on).

6. Click **Approve**.

   The tab label changes color, and the Approve button changes to Unapprove.

7. Click the **Documentation** tab.

8. When all of the documentation requirements are met, click Approve.

9. Continue the approval process for each of the remaining tabs.

10. On the Administration tab, click **Register** to complete the registration process, or click Assign to assign the asset to someone else.

11. Save changes by clicking Save in the File menu.

    The asset is moved to the Registered folder and each action (approval of tabs, field value updates.) are also recorded in the Audit log found on the asset's Administration Tab.

    For more information, see *Oracle Fusion Middleware User Guide for Oracle Enterprise Repository*.

3.7.4 Find the Registered Asset and View Details

Complete the process by searching for the newly registered asset you created.

1. On the Assets page, use the Search option to locate the asset.

   The asset should appear in the list in the upper frame of the main Assets page, indicating that the XML data stored as a BLOB is correctly loaded in the database.

2. Click the asset to open the asset detail in the lower frame of main page.

3.7.5 Enable System Setting for Asset Editor to Work

The system setting, `cmee.jws.pass-all-cookies`, must be enabled to ensure the proper functioning of the Asset Editor. To enable this system setting, perform the following tasks:

1. On the Admin page, click **System Settings**.

2. Enter `cmee.jws.pass-all-cookies` in the Enable New System Setting field, and then click **Enable**.

3. Click **Save** when finished.

4

Uninstalling the Software

This chapter provides information about the procedures for uninstalling and reinstalling the software.

This chapter contains the following sections:

-
-
-
-
-
-
-

4.1 About the Uninstallation Program

The following sections describe how to uninstall your Oracle Enterprise Repository software on Windows and UNIX systems:

- You can uninstall the software using graphical, console, or silent mode. To run the graphical-mode uninstallation program, your console must support a Java-based GUI. If the uninstallation program determines that your system does not support a Java-based GUI, it automatically starts running in console mode.

- You can uninstall individual components of your product distribution, or the entire installation. Dependency checking in the uninstaller ensures that the appropriate components are uninstalled.

- The uninstallation program does not remove the Oracle Enterprise Repository Home directory associated with the installation, the JDK, or any user-created domains. Only the components that were installed by the installation program can be removed. If you choose to uninstall the entire installation, the uninstallation program also removes the product directory associated with the installation unless one of the following is true:

  - The product directory contains user-created configuration or application files - the uninstallation program does not delete user-created configuration files, application files, or domains.

  - The complete installation was not uninstalled. If an individual component is uninstalled, only the installation directory for that component is removed; the installation directories for other components are unaffected.

- – The uninstallation program was invoked from within the product directory structure - specifically, from within the utils\uninstall directory.

- When uninstalling the Oracle Enterprise Repository plug-ins for Eclipse, WorkSpace Studio is also removed, if WorkSpace Studio was installed by the Oracle Enterprise Repository installer. This may not be desirable if other plug-ins were added to WorkSpace Studio. To avoid uninstalling additional WorkSpace Studio plug-ins, deselect the Oracle Enterprise Repository Plug-ins for Eclipse from the list of components to uninstall.

4.2 Uninstalling Your Software in Graphical Mode

Use the following procedure to uninstall the all the product components, or individual components, in graphical mode:

1. Shut down any instances that are running.

2. Start the uninstallation program as described in Table 4–1.

Table 4–1   Starting the uninstallation program in the Graphical mode

To start the uninstallation program on...	Do this..
Windows	1. From the Windows Start menu, choose StartArrow symbol All ProgramsArrow symbol Oracle Enterprise Repository Arrow symbol Uninstall Oracle Enterprise Repository.
	2. The Uninstaller Welcome window is displayed. Proceed to step 3.
UNIX	1. Go to the following directory:
	`ORACLE_HOME/repositoryXXX/uninstall`
	2. Type `uninstall.sh` at the prompt and press ENTER.
	The Uninstaller Welcome window is displayed. proceed to step 3.
	Note: If your system supports a graphical user interface, the uninstallation program starts in graphical mode. If your system does not support a graphical user interface, the uninstallation program starts in console mode. If console mode is started, see Section 4.3, "Uninstalling Your Software in Console Mode" for instructions.

3. Click **Next** to start the uninstall program. The Choose Components window is displayed.

4. Select the components to uninstall by selecting or clearing the appropriate options, and click **Next**. By default, all installed components are selected, indicating that they are uninstalled.

5. Click **Done** in the Uninstalling Oracle Enterprise Repository window to exit the uninstallation program.

4.3 Uninstalling Your Software in Console Mode

Use the following procedure to uninstall the complete product installation, or individual components, using the command-line interface:

1. Shut down any instances that are running.

2. Start the uninstallation program as described in Table 4–2.

Table 4–2   Starting the Installation Program in the Console Mode

To start the uninstallation program on...	Do this..	
Windows	**1.**	Go to the following directory:
		`ORACLE_HOME/repositoryXXX/uninstall`
	2.	Type uninstall.cmd and press Enter. The Uninstaller Welcome window is displayed.
	3.	Proceed to step 3.
UNIX	**1.**	Go to the following directory:
		`ORACLE_HOME/repositoryXXX/uninstall`
	2.	Type uninstall.sh at the prompt and press ENTER.
		The Uninstaller Welcome window is displayed. proceed to step 3.
		Note: If your system supports a graphical user interface, the uninstallation program starts in graphical mode. If your system does not support a graphical user interface, the uninstallation program starts in console mode. If console mode is started, see Uninstalling Your Software in Console Mode for instructions.

3. Press `Enter` or type next to proceed to the next panel of the uninstallation program.

> **Note:**   Instead of typing complete words when you want to enter [Exit], [Previous], and [Next], you can use the following one-letter shortcuts: x, p, and n, respectively.

The Choose Components to uninstall pane is displayed.

4. Select the components you want to uninstall. The available components are displayed.

5. Enter number exactly as it appears in brackets to toggle selection OR [Exit][Previous][Next]>.

6. By default, all installed components are selected, indicating that they are removed. To leave a component installed on your system, type the numeric code for that component on the command line, exactly as it appears within the brackets. A check mark (Windows systems) or x (UNIX systems) beside the entry is cleared, indicating that it is uninstalled. Choose the components you want to uninstall. Dependency checking is performed to ensure that you do not uninstall a component that is required by another component.

7. Press Enter or type next to proceed with the uninstallation process.

8. When the uninstallation process is complete, press Enter or type exit to complete the uninstallation and exit the uninstallation program.

4.4 Uninstalling Your Software in Silent Mode

When you uninstall your Oracle Enterprise Repository software in silent mode, the complete installation of your software is uninstalled.You cannot use silent-mode uninstallation to uninstall individual Oracle Enterprise Repository components.

When you run the uninstallation program in silent mode, it leaves behind the same files and directories as when you run the uninstallation program in graphical and console modes.You can manually delete these files.

Although you can use silent-mode uninstallation to manually uninstall your software, silent-mode uninstall is intended for use in scripts. You can adapt the steps in Table 8-3 for use in scripts.

Use the following procedure to uninstall your Oracle Enterprise Repository software in silent mode:

1. Shut down any instances that are running.

2. Start the uninstallation program as described in Table 4–3.

Table 4–3   Starting the Uninstalling Program in the Silent Mode

To start the uninstallation program on this platform	Do this..	
Windows	1.	Open a Command Prompt window and go to the following directory:
		`ORACLE_HOME/repositoryXXX/uninstall`
	2.	Execute the following command at the prompt:
		`uninstall -mode=silent`
UNIX	1.	Go to the following directory:
		`ORACLE_HOME/repositoryXXX/uninstall`
	2.	At the prompt, enter the following command:
		`sh uninstall.sh -mode=silent`

> **Note:**   When you run the uninstallation program in silent mode, no messages are displayed indicating the uninstallation is in progress or has completed successfully, even if errors are encountered.

You can also include the `-log=full_path_to_log_file` option in the command line to create a verbose installation log. For example:

`uninstall -mode=silent -log=C:\logs\OER_uninstall.log`

For more information, see Section 1.9, "Generating a Verbose Installation Log".

4.5 Removing the Deployed Application

This section describes removing the deployed application for WebLogic and WebSphere Application Servers. This section contains the following topics:

- Section 4.5.1, "Removing the Deployed Application from WebLogic Server"
- Section 4.5.2, "Removing the Deployed Application from WebSphere Server"

4.5.1 Removing the Deployed Application from WebLogic Server

To remove the deployed Oracle Enterprise Repository application within WebLogic Server requires several steps depending on how the WebLogic domain was initially created.

For a domain that contains Oracle Enterprise Repository only, delete the *ORACLE_HOME/user_projects/domains/DOMAIN_NAME* directory.

For a domain which had been extended with the Oracle Enterprise Repository application template, use the following steps:

1. Start the Administration Server of the domain containing the Oracle Enterprise Repository application and access the Administration Console.

2. Select **Deployments** from the Domain Structure section.

3. Click the **Lock & Edit** button.

4. Select the Oracle Enterprise Repository application from the list and click the **Delete** button.

5. Select the **Environment** -> **Servers** option from the domain structure section.

6. Select the **oer_server1** managed server definition and click the **Delete** button to remove this managed server.

7. Click the **Activate Changes** button.

8. Stop the Administration Server (*ORACLE_HOME/user_projects/domains/DOMAIN_NAME/bin/stopWebLogic.sh* or *.cmd) and delete the Oracle Enterprise Repository application files from:

   ORACLE_HOME/user_projects/applications/DOMAIN_NAME/applications/oer_11.1.1.4.0.

4.5.2 Removing the Deployed Application from WebSphere Server

To remove the deployed application from WebSphere server, perform the following steps:

1. Access the WebSphere Administration console applications.

2. Select the **Applications** -> **Enterprise Applications** -> **OER application deployment** and click the **Uninstall** button.

3. Confirm the removal of the application and then save the changes to the WebSphere Master Configuration.

4. Choose the **Environment** -> **Shared Libraries** option.

5. Select the OER shared library and click the **Delete** button to remove all references to the directory location where the properties files are stored.

6. Save changes to the WebSphere master configuration.

For generic application servers, see the corresponding documentation.

4.6 Removing the Database Schema

This section describes how to remove the database schema.

For UDB and SQL Server database servers, drop the Oracle Enterprise Repository databases using the appropriate methods for your server(s).

For Oracle, drop the Oracle Enterprise Repository user with cascade option. For example:

```
drop user OER cascade;
```

4.7 Reinstalling Your Software

You cannot reinstall the same version of any Oracle product on top of a previously installed version of the same product - in the same Oracle home directory or in the same file location. You can, however, add products and product components to an existing installation. For example, you can install Oracle Enterprise Repository during one installation, and Oracle BPM during a separate installation.

To reinstall the same version of one of the product components or the entire Oracle Enterprise Repository distribution in the same location, you must first uninstall the previous installation.

If you try to install a complete copy of the Oracle Enterprise Repository software in an Oracle home directory that already contains a complete installation, an error message is displayed. Click or type OK to return to the Choose Oracle home directory prompt.

At the prompt, choose one of the following options:

- To continue installing the software using a different Oracle Enterprise Repository Home directory, select an existing Oracle Enterprise Repository Home directory that does not contain a previous installation, or create a Oracle home directory.

- Exit the installation program. If you want to reinstall your Oracle software in the same Oracle home, you must uninstall the previous installation. You can invoke the uninstall program appropriate for your platform, as described in one of the following sections:

    - Section 4.2, "Uninstalling Your Software in Graphical Mode"

    - Section 4.3, "Uninstalling Your Software in Console Mode"

    - Section 4.4, "Uninstalling Your Software in Silent Mode"

  Then reinstall the software as described in Section 2.1, "Starting the Installation Program".

Part II

Configuring and Clustering Oracle Enterprise Repository

This part describes the configuration and clustering information for Oracle Enterprise Repository.

This part contains the following chapters:

- Chapter 5, "Install Oracle Enterprise Repository into a Clustered Environment"

5

Install Oracle Enterprise Repository into a Clustered Environment

This chapter describes how to install Oracle Enterprise Repository into a clustered environment.

This chapter contains the following sections:

- Section 5.1, "Overview"
- Section 5.2, "Oracle Enterprise Repository Database"
- Section 5.3, "Deploy and Validate Oracle Enterprise Repository on One Cluster Member"
- Section 5.4, "Move the Application Properties to the Database"
- Section 5.5, "Configure the cluster.properties File on Each Cluster Member"
- Section 5.6, "Validate the Installation"
- Section 5.7, "Clustering JVM Parameter for WebLogic Server"
- Section 5.8, "Clustered JMS Servers for Advanced Registration Flows"

5.1 Overview

Oracle Enterprise Repository uses a server-side cache on each application server. Cached data is used only if it is available, otherwise, the database delivers data content to the cache and to the application.

When Oracle Enterprise Repository runs in a cluster, the cluster members must communicate with each other using HTTP. An edit that occurs on one cluster member invalidates the cached element on that cluster member, and communicates the edit to other cluster members. This is accomplished by a system property called cachesyncurl, which accepts a URL to the application as a valid value.

On start, the system writes the cachesyncurl to the database and fetches a list of other server's URLs from the database. A message is sent to all discovered URLs that announces the presence of a new member of the cluster. Each server then refreshes the server list from the database. On a clean server shutdown, the value is removed from the list and a cache-refresh notification is broadcast to the server list.

When edits invalidate an element in the local cache, a message is sent to all the other servers noting which cached elements must be invalidated. Upon receipt of the message, the designated element is removed from the cache. On subsequent data request, the cache contains no data, so it first caches and then the database delivers data to the application.

Clustering and Installation Requirements

- Session affinity

- Server-side HTTP cache communication

Options

- Failover

  Requires session management and persistent sessions

- Load Balancing

Supported Application Servers

The application servers listed here are currently supported for use with clustering for Oracle Enterprise Repository:

- Oracle WebLogic Server

- IBM WebSphere Application Server

For information about the supported versions of these application servers, see the Supported Configurations documentation, available on Oracle Enterprise Repository index page at

http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html.

Installing Oracle Enterprise Repository on a Clustered Environment

To install Oracle Enterprise Repository on a clustered environment:

1. Install and configure Oracle Enterprise Repository.

2. Create the clustered environment that hosts Oracle Enterprise Repository.

3. Install and deploy the Oracle Enterprise Repository application on one member of the clustered application servers.

4. Validate the deployment of the application on one member of the cluster.

5. Move the application properties to the database.

6. Shut down the cluster.

7. Install and deploy the application on all of the other cluster members.

8. Configure a `cluster.properties` file on each cluster member.

9. Start the cluster and all members.

10. Validate the cluster.

5.2 Oracle Enterprise Repository Database

For information regarding the installation of Oracle Enterprise Repository, refer Chapter 2, "Installing Oracle Enterprise Repository".

Create the Clustered Environment

For information about clustering on WebLogic or WebSphere, please refer to the application server documentation, and to organizational standards.

- For WebLogic:

  Refer to Using WebLogic Server Clusters, available from Oracle.

■ For WebSphere Application Server:

Refer to WebSphere Software Information Center. Locate the documentation for the specific appserver version and navigate to: All topics by feature -> Servers -> Clusters -> Balanced workloads with clusters.

5.3 Deploy and Validate Oracle Enterprise Repository on One Cluster Member

For information on deployment and validation of Oracle Enterprise Repository on an application server, see Section 3.1, "Configure Your Application Server" . (For example, all of the sample names should be changed.)

> **Note:** Before using the Move settings to database option, you must enable cmee.eventframework.clustering.enabled, if JMS clustering is to be achieved.

5.4 Move the Application Properties to the Database

Property files always take precedence when reading properties into the Oracle Enterprise Repository application. The application looks for properties and their corresponding values, first within the database, and then within the property files. Any properties read from the database are overwritten by the corresponding properties in the files. However, if there are no files, the properties within the database are only referenced, then properties that exist solely within the database are never overwritten.

This procedure begins with deploying one application.

1. In the Admin screen, click **System Settings** in the left pane. The System Settings section is displayed in the main pane, as shown in Figure 5–1.

Figure 5–1   System Settings Section
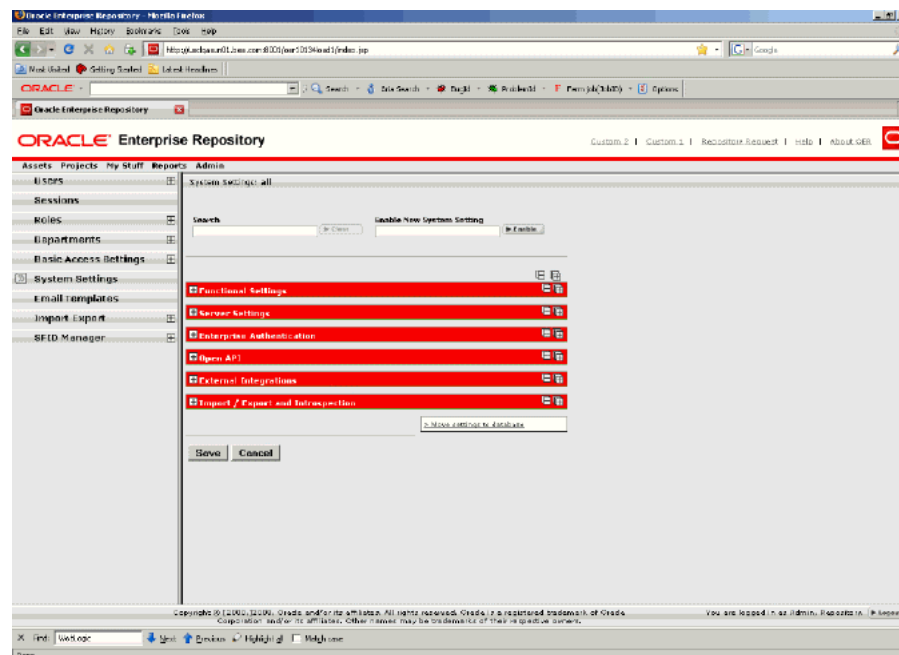
2. Scroll to the bottom and click the **Move settings to database** button.

   A confirmation message appears.

3. Remove the properties files from the classpath.

4. Restart the appserver.

5. Locate the configuration files folder (usually located within the `./WEB-INF/classes/` folder or oer_home) within the application server.

6. Remove the property files listed below from the configuration folder:

   - enterprise.properties

   - ldap.properties

   - containerauth.properties

   - eventing.properties

   - jive.properties

   - jive.tag.properties

   - jive.user.properties

   - juddi.properties

   - openapiserverlog.properties

   These properties are written to the entSettings table within the database.

7. Modify the **cmee.properties** file. Remove all property values except those containing URL values. Update the URL references to point to the proxy server path being used to load balance access to the cluster members.

8. Now, redeploy the application on all the servers.

> **Note:** Any properties enabled after this procedure are written to the database, not to the properties files.

5.5 Configure the cluster.properties File on Each Cluster Member

To configure the `cluster.properties` file on each cluster member:

1. Stop each cluster member.

2. On each cluster member create a file called `cluster.properties`, which resides in the same place as all other .properties files.

   - For exploded directory deployments this location is the WEB-INF/classes directory beneath the webapp.

   - For ear file deployments, this location is the oer_home directory.

     The contents of `cluster.properties` is based on the property `cmee.server.paths.servlet` in the `cmee.properties` file. However, the host name in the path should refer to the host name of the cluster member, not the proxy host name of the entire cluster.

     ```
     cluster.properties
     #cluster.properties
     cachesyncurl=http://<SERVLET-PATH>/<APP_PATH>
     Example:
     #cluster.properties
     ```

```
cachesyncurl=http://server.example.com:7221/cluster01

Other properties that are optional
# alias is used as an alternate/convenient name to refer
# to the server
# example: server1
# default: same value as =cachesyncurl=
alias=EclipseServer

# registrationIntervalSeconds is the number of seconds between
# attempts to update the server's registration record in the database
# default: 120
registrationIntervalSeconds=120

# registrationTimeoutSeconds is the number of seconds before a server
# is considered to be inactive/not running
# make sure this value is higher than the registrationIntervalSeconds
# default: 240
registrationTimeoutSeconds=240

# maxFailures is the number of consecutive attempts that are made
# to deliver a message to another server after which it is determined
# to be unreachable
# default: 20
maxFailures=20

# maxQueueLength is the number of messages that are queued up to
# send to another server after which server are determined to be
# unreachable
# default: 4000
maxQueueLength=5000

# email.to is the address of the email recipient for clustering status
# messages
email.to=jsmith@company.com

# email.from is the address of the sender for clustering status messages
email.from=jsmith@company.com

# email.subject is the subject line of the message for clustering status
# messages
email.subject=Oracle Enterprise Repository Clustering communication failure

# email.message is the body of the message for clustering status messages
email.message=This is an automated message from the Oracle Enterprise
Repository informing you of a cluster member communication failure.
```

Example of a `cluster.properties` file

```
cachesyncurl=http://server.example.com:7221/cluster01
alias=node1
registrationIntervalSeconds=120
registrationTimeoutSeconds=240
maxFailures=20
maxQueueLength=5000
email.to=jsmith@example.com
email.from=jsmith@example.com
email.subject=Oracle Enterprise Repository Clustering communication failure
email.message=This is an automated message from the Oracle Enterprise
Repository informing you of a cluster member communication failure
```

> **Note:**
>
> 1. The time delay should not be more than 120 seconds between the application server and the database server. Network Time Protocol is recommended to keep these servers in sync. The clustering process calculates the difference of time between messaging between the nodes of the cluster.
>
> 2. Before restarting the server, you must add `eventing.properties`, if JMS Clustering is enabled, and this should contain `cmee.eventframework.jms.producers.client.id` property with unique value on each of the cluster member. For example, `cmee.eventframework.jms.producers.client.id=OER_JmsProducer1`

3. Restart each cluster member.

> **Note:** Once a cluster member is inactivated due to exceepding maxFailures, then the only way to activate is by restarting the server.

5.6 Validate the Installation

Messages are sent to the standard out log of each cluster member.

- "running in single server mode"

  Indicates that Oracle Enterprise Repository clustering is not configured and the application is running in single server mode.

- "running in multi server mode with a sync-url of..."

  Indicates the Oracle Enterprise Repository clustering is functioning and the application is running in clustered mode.

Variables

cachesyncurl

The value of the cachesyncurl in the cluster.properties file, which references the same URL as the individual node's instance with the path of /cachesync appended. Most cluster configurations have a proxy server load-balancing each node within the clustered server.

Example:

```
Node1: cachesyncurl=http://server1.example.com:7221/cluster01

Node2: cachesyncurl=http://server2.example.com:7221/cluster01
```

It is also possible to validate the clustering installation by viewing the clustering diagnostic page from the Oracle Enterprise Repository Diagnostics screen. Click Cluster Info on the Diagnostics screen to view the Cluster Diagnostic page. This page lists information about all servers registered in the cluster, as well as information about inter-server communications.

5.7 Clustering JVM Parameter for WebLogic Server

If cluster nodes are deployed via a centralized administration console, it may be necessary to apply a JVM Parameter to allow the appropriate Oracle Enterprise Repository clustering operation in the absence of the `cluster.properties` file.

This JVM parameter should be applied statically for each member of the cluster or within the managed server startup command file. This JVM parameter can be set within the `JAVA_OPTIONS` environment variable for WebLogic Application servers or within `CATALINA_OPTS` or `JAVA_OPTS` for Tomcat servers. The JVM Parameter is as follows:

```
-Dcmee.cachesyncurl=http://<member host name>:<port>/<APP_PATH>
```

5.8 Clustered JMS Servers for Advanced Registration Flows

> **Note:**   This feature is only available when using the "Advanced Registration Flows" subsystem for automating the asset registration process. Also, "JMS Clustering" applies only to the embedded ActiveMQ JMS servers in Oracle Enterprise Repository and not to external JMS servers. You must have JDBC persistence, if you are using ActiveMQ.

In a clustered Oracle Enterprise Repository environment using the Advanced Registration Flows subsystem, each member Oracle Enterprise Repository server in the cluster has one embedded ActiveMQ JMS server for increased reliability and scalability. For example, for a two-node cluster, there would be two Oracle Enterprise Repository servers, such as server01 and server02, with each having one embedded JMS server. JMS server clustering is enabled using the Oracle Enterprise Repository "Eventing" System Settings, as described in External Integrations: Eventing. Once clustering is enabled for the embedded JMS servers, you then must specify the connection URL information for the embedded JMS servers on server01 and server02.

For more information, see the "Configuring JMS Servers for Oracle Enterprise Repository" section of the *Oracle Fusion Middleware Configuration Guide for Oracle Enterprise Repository*.

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