**Oracle® Fusion Middleware**

Upgrade Guide for Oracle Portal, Forms, Reports, and Discoverer

11*g* Release 1 (11.1.1)

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Oracle Fusion Middleware Upgrade Guide for Oracle Portal, Forms, Reports, and Discoverer, 11g Release 1 (11.1.1)

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# Preface

This preface contains the following sections:

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## Audience

The *Oracle Fusion Middleware Upgrade Guide for Oracle Portal, Forms, Reports, and Discoverer* is intended for administrators that are responsible for installing Oracle Identity Management components.

This document assumes you have experience installing enterprise components. Basic knowledge about the Oracle Identity Management components and Oracle Application Server is recommended.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc`.

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## Related Documents

For more information, see the following related documentation available in the Oracle Fusion Middleware 11*g* documentation library:

- Related Upgrade Documentation
  - *Oracle Fusion Middleware Upgrade Planning Guide*

- *Oracle Fusion Middleware Upgrade Guide for Java EE*
- *Oracle Fusion Middleware Upgrade Guide for Oracle SOA Suite, WebCenter, and ADF*
- *Oracle Fusion Middleware Upgrade Guide for Oracle Identity Management*

- *Oracle Fusion Middleware Installation Planning Guide*

- *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*

- *Oracle Fusion Middleware Administrator's Guide*

## Conventions

The following text conventions are used in this document:

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

# 1

# Summary of the Oracle Portal, Forms, Reports, and Discoverer Upgrade Process

This chapter provides a high-level summary of the steps required to upgrade an Oracle Portal, Forms, Reports, and Discoverer environment from Oracle Application Server 10*g* to Oracle Fusion Middleware 11*g*.

This chapter contains the following sections:

- Flow Chart of the Oracle Portal, Forms, Reports, and Discoverer Upgrade Process
- Table Describing the Steps in the Oracle Application Server Upgrade Process

## 1.1 Flow Chart of the Oracle Portal, Forms, Reports, and Discoverer Upgrade Process

Figure 1–1 provides a flow chart of the Oracle Portal, Forms, Reports, and Discoverer upgrade process. Review this chart to get familiar with the steps you will be required to take, based on your existing Oracle Application Server environment.

**Figure 1–1   Flow Chart of the Oracle Portal, Forms, Reports, and Discoverer Upgrade Process**
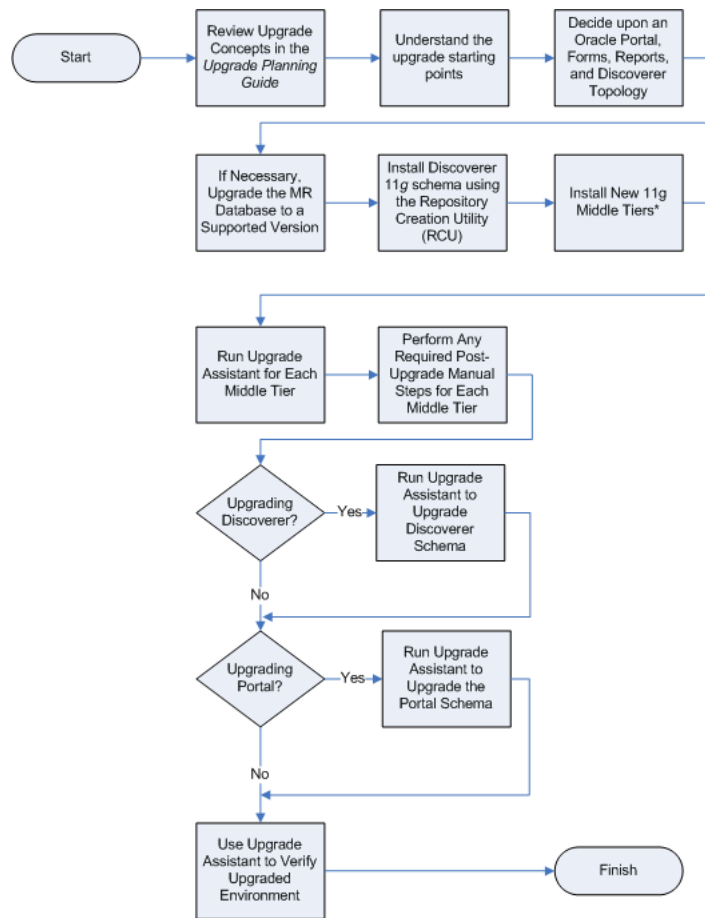


\* During installation, configure  Discoverer middle tiers to use the new 11*g* Discoverer schema; configure Portal middle tiers to use the existing 10*g* Portal schema.

## 1.2  Table Describing the Steps in the Oracle Application Server Upgrade Process

Table 1–1 describes each of the steps in the upgrade process flow chart, which is shown in Figure 1–1. The table also provides information on where to get more information on each step in the process.

**Table 1–1    Table Describing the Steps in the Oracle Application Server Upgrade Process**

| Step | Description | More Information |
|---|---|---|
| Review Upgrade Concepts in the *Oracle Fusion Middleware Upgrade Planning Guide* | The *Oracle Fusion Middleware Upgrade Planning Guide* provides a high-level overview of how to upgrade your entire Oracle Application Server environment to Oracle Fusion Middleware, including compatibility information and instructions for upgrading any databases that support your middleware components. | *Oracle Fusion Middleware Upgrade Planning Guide* |
| Understand the upgrade starting points | Before planning your upgrade, you should be familiar with the supported starting points for an Oracle Portal, Forms, Reports, and Discoverer upgrade. | Task 1: Understand the Starting Points for Oracle Portal, Forms, Reports, and Discoverer Upgrade |
| Decide upon an Oracle Portal, Forms, Reports, and Discoverer Topology | With the introduction of Oracle WebLogic Server, the topologies for Oracle Portal, Forms, Reports, and Discoverer have changed somewhat. Before you begin an upgrade, make sure you are familiar with the basic topologies in Oracle Fusion Middleware 11*g*. | Task 2: Decide Upon an Oracle Portal, Forms, Reports, and Discoverer Topology |
| If necessary, upgrade the MR database to a supported database version | The Oracle Discoverer and Oracle Portal components require schemas that must be installed in a database. Before you can install or upgrade the schemas, you must make sure the database is a supported version. | Task 3: If Necessary, Upgrade the Database that Contains the Oracle Portal and Oracle BI Discoverer Schemas |
| Install Discoverer 11g schema using the Repository Creation Utility (RCU) | Use the Oracle Fusion Middleware Metadata Repository Creation Utility to install the Oracle BI Discoverer 11*g* schema.<br><br>Note that there is no need to install the Oracle Portal 11*g* schema because you will be upgrading your existing 10g Portal schema. | Task 4: Use the Repository Creation Utility to Install the Oracle BI Discoverer Schema in the Database |
| Install New 11g Middle Tiers | Use the Oracle Portal, Forms, Reports, and Discoverer installer to install your new Oracle Fusion Middleware middle tiers.<br><br>When prompted:<br><br>■ Configure Oracle Discoverer to use the new 11*g* Discoverer 11g schemas<br><br>■ Configure Oracle Portal to use the existing 10*g* Portal schema. | Task 5: Install and Configure Oracle Portal, Forms, Reports, and Discoverer Middle Tiers |
| Run Upgrade Assistant for Each Middle Tier | The Oracle Fusion Middleware Upgrade Assistant copies configuration data from your existing Oracle Application Server middle tiers to the newly installed Oracle Fusion Middleware middle tiers. | Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers |

*Table 1–1  (Cont.)  Table Describing the Steps in the Oracle Application Server Upgrade Process*

| Step | Description | More Information |
|---|---|---|
| Perform Any Required Post-Upgrade Manual Steps for Each Middle Tier | The Upgrade Assistant automates many of the upgrade tasks, but there are cases where you must manually modify the configuration settings after running the Upgrade Assistant. | Task 7: Perform Any Required Post-Upgrade Configuration Tasks |
| Run Upgrade Assistant to Upgrade Discoverer Schema | The Upgrade Assistant upgrades the Oracle Business Intelligence Discoverer10*g* schema to 11*g*. | Task 6c: Upgrade the Oracle BI Discoverer Schema |
| Run Upgrade Assistant to Upgrade the Portal Schema | The Upgrade Assistant upgrades the Oracle Portal 10*g* schema to 11*g*. | Task 6d: Upgrade the Oracle Portal Schema |
| Use Upgrade Assistant to Verify Upgraded Environment | The Upgrade Assistant provides a feature that will verify the upgraded environment to make sure specific components and URLs are functional. | Task 8: Verify the Oracle Portal, Forms, Reports, and Discoverer Upgrade |

# 2

# Oracle Portal, Forms, Reports, and Discoverer for 10*g* Users

The following sections introduce some key concepts of the Oracle Portal, Forms, Reports, and Discoverer environment for Oracle Application Server 10*g* Release 2 (10.1.2) users:

- Components of the Oracle Portal, Forms, Reports, and Discoverer Suite
- Basic Architecture of the Oracle Portal, Forms, Reports, and Discoverer Suite
- Considerations When Deciding Upon an Oracle Portal, Forms, Reports, and Discoverer Topology

## 2.1 Components of the Oracle Portal, Forms, Reports, and Discoverer Suite

Oracle Application Server 10*g* Release 2 (10.1.2) provided users with updated versions of the following components:

- Oracle Portal
- Oracle Business Intelligence Discoverer
- Oracle Forms Services
- Oracle Reports
- Oracle HTTP Server (including mod_plsql)
- Oracle Web Cache
- Oracle Net Services, which includes the `tnsnames.ora`, `sqlnet.ora`, and `ldap.ora` configuration files

Oracle Fusion Middleware 11*g* provides updates to all these components. In Oracle Fusion Middleware, they are packaged as the Oracle Portal, Forms, Reports, and Discoverer software suite.

In Oracle Application Server 10*g* Release 2 (10.1.2), the Oracle Identity Management components, such as Oracle Internet Directory, Oracle Directory Integration Platform, Oracle Single Sign-On, and Oracle Delegated Administration Services were packaged with the Oracle Portal, Forms, Reports, and Discoverer components.

In Oracle Fusion Middleware 11*g*, your Oracle Identity Management components are packaged and installed separately, but they still provide the same resources and services.

## 2.2 Basic Architecture of the Oracle Portal, Forms, Reports, and Discoverer Suite

The basic architecture of the Oracle Portal, Forms, Reports, and Discoverer components is the same as Oracle Application Server 10*g*, with one major difference. Instead of being based on Oracle Containers for Java EE (OC4J), the Oracle Fusion Middleware middle-tiers are based on Oracle WebLogic Server.

Figure 2–1 illustrates a basic Oracle Portal, Forms, Reports, and Discoverer topology in Oracle Application Server 10*g* Release 2 (10.1.2) and Oracle Fusion Middleware 11*g*. Notice how the system components are deployed to dedicated managed servers in the Oracle WebLogic Server domain.

In a more complex environment, you can also extend the domain to other hosts, so some of the Oracle Portal, Forms, Reports, and Discoverer components can be deployed on managed servers on remote hosts.

**Figure 2–1   Comparing the Oracle Portal, Forms, Reports, and Discoverer Topology in 10g Release 2 (10.1.2) and Oracle Fusion Middleware 11g**
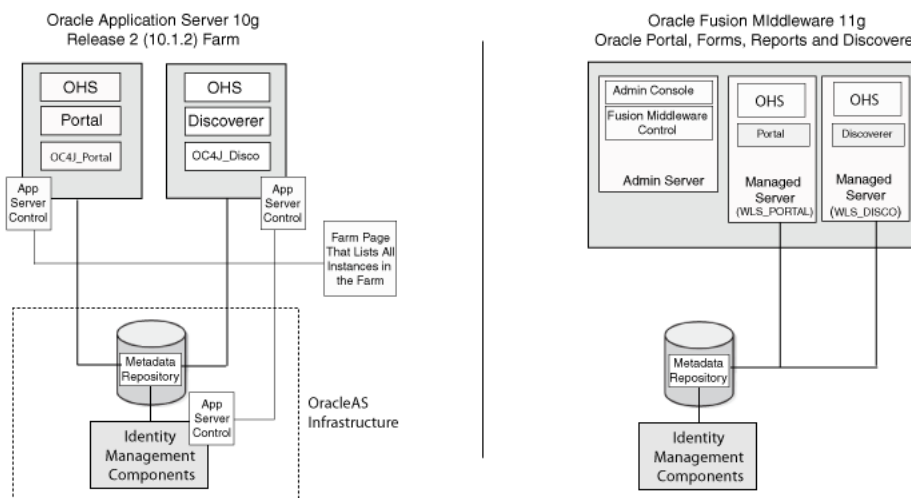


## 2.3 Considerations When Deciding Upon an Oracle Portal, Forms, Reports, and Discoverer Topology

The following sections describe the general guidelines for configuring a new Oracle Fusion Middleware 11*g* topology in preparation for upgrade, as well as considerations for other alternative topologies:

- General Guideline for Configuring Your Oracle Fusion Middleware Topology
- Understanding the Impact on Upgrade When Configuring an Alternative Topology

### 2.3.1 General Guideline for Configuring Your Oracle Fusion Middleware Topology

In general, Oracle recommends that you upgrade your Oracle Application Server 10*g* environment to a similarly configured environment.

In other words, if your Oracle Application Server 10*g* environment consisted of a single Oracle home that contained all the Oracle Portal, Forms, Reports, and Discoverer components, then it is assumed you will be upgrading to an Oracle Fusion

Middleware domain that is configured in a similar manner: one Oracle home and one Oracle instance containing all the components.

If you follow this general guideline, you can use the Oracle Fusion Middleware Upgrade Assistant and the procedures documented in this guide to upgrade the components.

## 2.3.2 Understanding the Impact on Upgrade When Configuring an Alternative Topology

Oracle Fusion Middleware 11*g* provides a flexible architecture that does not prevent you from installing and configuring the Oracle Portal, Forms, Reports, and Discoverer components in separate Oracle instances.

You can, for example, install Oracle Portal and Oracle Forms Services and later extend the Oracle WebLogic Server domain to support Oracle Reports and Oracle BI Discoverer. The resulting topology will include two Oracle instances: one that contains Oracle Portal and Oracle Forms Services and one that contains Oracle Reports and Oracle BI Discoverer.

If you decide upon such an approach, note the following important restrictions and considerations:

- Extending a Domain Creates Multiple Oracle Instances and Web Tier Components
- Impact of Multiple Web Tier Components in the Same Domain
- Impact of Multiple Oracle Instances on Upgrade
- Upgrading Oracle Single Sign-On to Oracle Access Manager

### 2.3.2.1 Extending a Domain Creates Multiple Oracle Instances and Web Tier Components

Each time you extend a domain to include additional Oracle Portal, Forms, Reports, and Discoverer components, you create a new Oracle instance.

Depending upon the components you choose to configure in each Oracle instance, the configuration tool will create new Web tier components (Oracle HTTP Server and Oracle Web Cache instances) for the components that require them. For example, if you extend a domain to include Oracle Portal, then new Oracle HTTP Server and Oracle Web Cache instances are configured automatically to support Oracle Portal.

### 2.3.2.2 Impact of Multiple Web Tier Components in the Same Domain

If you configure multiple Web tier components in a single domain, then you must decide whether to maintain:

- Multiple Web tier components (for example, where each Oracle HTTP Server instance uses a different listening port and routes requests to specific components)

  OR

- A single set of Web tier components (for example, a single Oracle HTTP Server that routes requests to all the configured components in the domain).

Depending upon your decision, you might have to disable one set of Web tier components or reconfigure one Oracle HTTP Server instance to route requests to the other Oracle instance.

For more information about configuring Oracle HTTP Server to route requests to an Oracle WebLogic Server instance, see "Configuring the mod_wl_ohs Module" in the *Oracle Fusion Middleware Administrator's Guide for Oracle HTTP Server*.

### 2.3.2.3 Impact of Multiple Oracle Instances on Upgrade

If your Oracle Fusion Middleware domain contains multiple Oracle instances, then you must run the Upgrade Assistant at least twice (once for each 11*g* Oracle instance), and you must use care when selecting your upgrade options.

In particular, if you select the **Use source Oracle home ports in destination** option, note that you can run the Upgrade Assistant with this option selected only once for each host. Otherwise, you will likely encounter port conflicts, since no more than one component can listen on a single same listening port on a single host.

For more information, see Section 3.6.2.2, "Important Notes When Using the Source Oracle Home Ports in the Destination Oracle Instance"

## 2.3.3 Upgrading Oracle Single Sign-On to Oracle Access Manager

Oracle Access Manager is a component of Oracle Fusion Middleware that you can use in place of Oracle Single Sign-On 10*g* to implement centralized authentication, policy-based authorizations, delegated administration, and so on.

> **Note:** Oracle recommends that you refer to the "Evaluating Single Sign-On Installations" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle Identity Management* before determining a single sign-on solution.

Before or after you upgrade to Oracle Portal, Forms, Reports, and Discoverer 11*g*, you can also upgrade your Oracle Identity Management components, which can include upgrading Oracle Single Sign-On 10*g* to Oracle Access Manager 11*g*.

For more information about upgrading to Oracle Access Manager, see "Upgrading Your Oracle Single Sign-On Environment" in the *Oracle Fusion Middleware Upgrade Guide for Oracle Identity Management*.

Specifically, when you are about to perform the upgrade, refer to the following Oracle Single Sign-On upgrade scenario in the *Oracle Fusion Middleware Upgrade Guide for Oracle Identity Management*:

Oracle Delegated Administration Services Required After Upgrading from Oracle Single Sign-On to Oracle Access Manager

For information about using Oracle Portal with Oracle Access Manager, see "Relationship Between Oracle Portal and Oracle Access Manager" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

**3**

# Upgrading Your Oracle Portal, Forms, Reports, and Discoverer Environment

This chapter describes how to upgrade your existing Oracle Application Server 10*g* Release 2 (10.1.2) environment to Oracle Portal, Forms, Reports, and Discoverer 11*g*.

This chapter contains the following sections:

- Task 1: Understand the Starting Points for Oracle Portal, Forms, Reports, and Discoverer Upgrade

- Task 2: Decide Upon an Oracle Portal, Forms, Reports, and Discoverer Topology

- Task 3: If Necessary, Upgrade the Database that Contains the Oracle Portal and Oracle BI Discoverer Schemas

- Task 4: Use the Repository Creation Utility to Install the Oracle BI Discoverer Schema in the Database

- Task 5: Install and Configure Oracle Portal, Forms, Reports, and Discoverer Middle Tiers

- Task 6: Use the Upgrade Assistant to Upgrade the Required Schemas and Middle Tiers

- Task 7: Perform Any Required Post-Upgrade Configuration Tasks

- Task 8: Verify the Oracle Portal, Forms, Reports, and Discoverer Upgrade

## 3.1 Task 1: Understand the Starting Points for Oracle Portal, Forms, Reports, and Discoverer Upgrade

This document provides information about upgrading from:

- One of the following Oracle Application Server 10*g* Release 2 (10.1.2) installation types:
    - Portal and Wireless
    - Business Intelligence and Forms
    - Forms and Reports Services

- Oracle Application Server Portal 10g Release 2 (10.1.4)

Note that the procedures in this guide were tested against the latest 10*g* Release 2 (10.1.2) patch set. As a result, Oracle recommends that you upgrade your 10*g* Release 2 (10.1.2) environment to the latest patch set before starting this upgrade procedure.

This restriction is most important for Oracle Portal users. Specifically, if you are using Oracle Portal 10*g* Release 2 (10.1.2.0.1) Standard Edition One, you must upgrade to Oracle Portal 10*g* Release 2 (10.1.2.3) before you can upgrade the Oracle Portal schema to Oracle Portal 11*g*.

For the most up-to-date information about available Oracle Application Server 10*g* patch sets, refer to My Oracle Support (formerly Oracle*MetaLink*):

http://support.oracle.com

> **Note:** If you are currently running Oracle Fusion Middleware 11*g*, refer to the *Oracle Fusion Middleware Patching Guide*, which provides information about applying the latest Oracle Fusion Middleware patches.
>
> This guide, as well as the other upgrade guides available in the Oracle Fusion Middleware 11*g* documentation library, provide instructions for upgrading from Oracle Application Server 10*g* to the latest Oracle Fusion Middleware 11*g* release.

## 3.2 Task 2: Decide Upon an Oracle Portal, Forms, Reports, and Discoverer Topology

Before you begin the upgrade process, consider whether you want to install the Oracle Portal, Forms, Reports, and Discoverer software in a single Oracle instance or in separate Oracle instances.

In Oracle Fusion Middleware 11*g*, you can create multiple Oracle instances from a single Oracle Portal, Forms, Reports, and Discoverer Oracle home. For example, you can install a single Oracle home and then run the Oracle Portal, Forms, Reports, and Discoverer installation and configuration tool multiple times to configure multiple Oracle instances.

For another example, you can configure Oracle Portal in one Oracle instance and Oracle Reports and Oracle Forms Services in another Oracle instance.

Note, however, that you must ensure that the destination Oracle instance has only a single instance of each component configured. For example, if the Oracle instance has two Oracle HTTP Server instances configured, only one of the Oracle HTTP Server instances will be upgraded.

For more information, see:

- "Understanding Oracle Fusion Middleware Concepts" in the *Oracle Fusion Middleware Administrator's Guide*

- Section 2.3, "Considerations When Deciding Upon an Oracle Portal, Forms, Reports, and Discoverer Topology"

## 3.3 Task 3: If Necessary, Upgrade the Database that Contains the Oracle Portal and Oracle BI Discoverer Schemas

If you are upgrading Oracle Portal or Oracle BI Discoverer, then you must ensure that the database that contains the Oracle Portal and Oracle BI Discoverer schemas is supported by Oracle Fusion Middleware 11*g*.

For instructions on verifying that your database meets the requirements of Oracle Fusion Middleware 11*g*, see "Upgrading and Preparing Your Databases" in the *Oracle Fusion Middleware Upgrade Planning Guide*.

## 3.4 Task 4: Use the Repository Creation Utility to Install the Oracle BI Discoverer Schema in the Database

As with Oracle BI Discoverer 10*g*, Oracle BI Discoverer 11*g* can be installed as a standalone product or associated with a database schema and Oracle Internet Directory instance.

For more information about the Oracle BI Discoverer 11*g* standalone configuration, see "About Oracle BI Discoverer installations" in the *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Discoverer*.

When you installed Oracle BI Discoverer 10*g*, if you associated it with an Oracle Infrastructure 10*g* (database schema), then you must use the Repository Creation Utility to create the Oracle BI Discoverer 11*g* schema.

You install the Oracle BI Discoverer schema into the database that you identified and prepared in Task 3: If Necessary, Upgrade the Database that Contains the Oracle Portal and Oracle BI Discoverer Schemas.

> **Note:** There is no need to install the Oracle Portal 11*g* schema in the database.
>
> For more information, see Section 3.4.3, "Selecting the Oracle BI Discoverer Schema In Preparation for an Oracle Portal, Forms, Reports, and Discoverer Upgrade"

For more information about installing the Oracle BI Discoverer schema, refer to the following sections:

- Verifying that the Database Meets the Minimum Requirements for Oracle BI Discoverer 11g

- Running the Repository Creation Utility in Preparation for Upgrading Oracle BI Discoverer

- Selecting the Oracle BI Discoverer Schema In Preparation for an Oracle Portal, Forms, Reports, and Discoverer Upgrade

- Providing a Password for the Oracle BI Discoverer 11g Schema

### 3.4.1 Verifying that the Database Meets the Minimum Requirements for Oracle BI Discoverer 11*g*

Before performing any installation you should read the system requirements and certification documentation to ensure that your environment meets the minimum installation requirements for the products you are installing.

Specifically, Oracle BI Discoverer has some specific database requirements that must be met before you install the Oracle BI Discoverer schema.

For more information, refer to "Review System Requirements and Specifications" in the *Oracle Fusion Middleware Installation Planning Guide*.

## 3.4.2 Running the Repository Creation Utility in Preparation for Upgrading Oracle BI Discoverer

To run the Repository Creation Utility to install the Oracle BI Discoverer schema in the database:

1. Mount the Oracle Fusion Middleware Metadata Repository Creation Utility CD–ROM.

   Alternatively, you can download and unpack the Repository Creation Utility installation kit from the Oracle Technology Network (OTN):

   `http://www.oracle.com/technology/`

   In either case, the root directory of the CD-ROM or the directory where you unpacked the downloaded kit is referred to as the RCU_HOME directory.

2. Start the Repository Creation Utility:

   On UNIX systems:

   `RCU_HOME/bin/rcu`

   On Windows systems:

   `RCU_HOME\bin\rcu.bat`

3. Follow the instructions on the Repository Creation Utility screens to connect to the database and create the required schemas.

   Refer to the following resources for more information:

   - For more information about which schemas to select when running the Repository Creation Utility, refer to Section 3.4.3, "Selecting the Oracle BI Discoverer Schema In Preparation for an Oracle Portal, Forms, Reports, and Discoverer Upgrade".

   - For more information about providing passwords for the schemas you select, see Section 3.4.4, "Providing a Password for the Oracle BI Discoverer 11g Schema".

   - For more detailed information about using the Repository Creation Utility, refer to the *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

## 3.4.3 Selecting the Oracle BI Discoverer Schema In Preparation for an Oracle Portal, Forms, Reports, and Discoverer Upgrade

When you are upgrading Oracle Portal, Forms, Reports, and Discoverer, there is no need to install all the Oracle Fusion Middleware schemas. Instead, you can install only the schemas required for the Oracle Portal, Forms, Reports, and Discoverer upgrade.

Figure 3–1 shows the options available in the Repository Creation Utility when you are prompted to select the schemas to install. Specifically, note the following when this screen appears:

- The only required schema for an Oracle Portal, Forms, Reports, and Discoverer upgrade is the **Discoverer** schema. This schema is required only if you associated Oracle BI Discoverer 10*g* with an Oracle Infrastructure 10*g* (database schema).

  This schema is required at this point in the upgrade process because, unlike the Oracle Portal schema upgrade, the Discoverer schema is upgraded "out-of-place." This means that the Upgrade Assistant copies data from the Oracle Application Server 10*g* Discoverer schema to the new 11*g* Discoverer schema. As a result, you

must install the Oracle BI Discoverer 11*g* schema; otherwise, you will not be able to install Oracle Business Intelligence Discoverer 11*g* or upgrade your 10*g* Discoverer schema.

■ Do not select the **Portal** schema. When you later run the OracleAS Upgrade Assistant, your existing Oracle Application Server 10*g* Portal schema will be upgraded "in-place" to 11*g*; as a result, there is no need to install a new Oracle Portal 11*g* schema.

■ No schemas are required for Oracle Forms Services or Oracle Reports.

*Figure 3–1   Selecting the Required Schemas for an Oracle Portal, Forms, Reports, and Discoverer Upgrade*
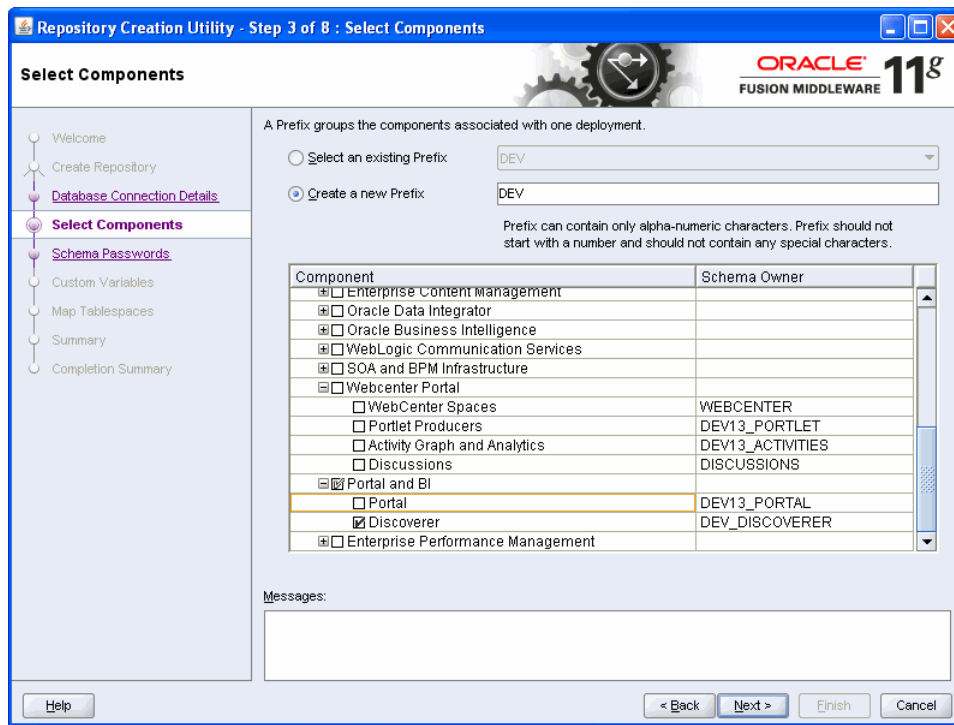


### 3.4.4 Providing a Password for the Oracle BI Discoverer 11*g* Schema

After you select the Oracle BI Discoverer schema, the Repository Creation Utility prompts you to provide a password for the schema. You must provide a password for each schema you are installing in the database; otherwise, you will not be able to install the schemas.

Note that you will need to know the Oracle BI Discoverer schema passwords later, when you are prompted to connect to the database during the Oracle Portal, Forms, Reports, and Discoverer installation procedure.

Figure 3–2 shows the Repository Creation Utility Schema Passwords page, which appears after you have selected component schemas for an Oracle Portal, Forms, Reports, and Discoverer upgrade.

You can enter a different password for each schema, or use the same password for all the schemas.

*Figure 3–2   Repository Creation Utility Schema Passwords Page*



## 3.5  Task 5: Install and Configure Oracle Portal, Forms, Reports, and Discoverer Middle Tiers

The following sections describes how to install and configure new Oracle Fusion Middleware 11*g* middle tier instances in preparation for an upgrade to Oracle Fusion Middleware 11*g*:

■   Task 5a: Understand the Implications of Installing Oracle Portal Against the Oracle Application Server 10g PORTAL schema

■   Task 5b: Consider the Impact of the Oracle Portal Upgrade on Oracle Web Agent (OWA) Packages

■   Task 5c: Install the Oracle Fusion Middleware 11g Software

■   Task 5d: Configure Oracle Portal, Forms, Reports, and Discoverer in Preparation for Upgrade

■   Step 5e: Verify the Installation and Configuration of Your Oracle Portal, Forms, Reports, and Discoverer 11g Environment

### 3.5.1  Task 5a: Understand the Implications of Installing Oracle Portal Against the Oracle Application Server 10*g* PORTAL schema

To upgrade Oracle Portal, you must do the following:

1.   Install Oracle Portal 11*g* against the existing Oracle Portal 10*g* schema.

2.   Use the Upgrade Assistant to upgrade the middle tier.

3.   Use the Upgrade Assistant to upgrade the PORTAL schema to 11*g*.

However, understand that after you install Oracle Portal 11*g* against the Oracle Portal 10*g* schema and upgrade the middle tier, you can use Oracle Portal 11*g* in only a limited capacity. Oracle Portal 11*g* will be operational, but you will not be able to take advantage of any Oracle Portal 11*g* features until you subsequently run the Upgrade Assistant and upgrade the Oracle Portal 10*g* schema to 11*g*.

Because of this limitation, be sure you have planned for the proper amount of down time to not only install Oracle Portal 11*g*, but also to upgrade the Oracle Portal middle tier to 11*g*, as described in Section 3.6.2, "Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers", and upgrade the PORTAL schema, as described in Section 3.6.4, "Task 6d: Upgrade the Oracle Portal Schema".

### 3.5.2 Task 5b: Consider the Impact of the Oracle Portal Upgrade on Oracle Web Agent (OWA) Packages

Oracle Fusion Middleware 11*g* includes a new version of the Oracle Web Agent (OWA) packages. Existing packages will be updated to the new version the first time either an Oracle Portal 11*g* repository is installed or when an existing Portal repository is upgraded to 11g.

When the OWA update takes place, packages from existing Portal schemas that reside in the same database will become invalid. The OWA update ends with an attempt to revalidate all invalid packages in all Portal schemas in the existing database instance.

The OWA update may fail if there are any sessions or jobs active in any of the existing Portal schemas. For this reason, a warning will be issued during the install or upgrade if the OWA update is necessary and if it will cause potential problems in existing Portal schemas.

For the seamless completion of the OWA update in cases where there are existing Portal schemas in the target database, make sure you perform the following steps before installing or upgrading the Oracle Portal repository:

1. Shut down all middle tiers associated with any of the existing Oracle Portal repositories in the target database.

2. Stop all jobs and sessions in those same Oracle Portal repositories.

### 3.5.3 Task 5c: Install the Oracle Fusion Middleware 11*g* Software

Before you upgrade to Oracle Fusion Middleware 11*g*, you must install and configure an Oracle Fusion Middleware environment that is similar to the topology you set up for Oracle Application Server 10*g*.

For more information, see the following:

- About the Oracle Portal, Forms, Reports, and Discoverer Installation and Configuration Tool

- Related Documentation for Installing and Configuring Oracle Portal, Forms, Reports, and Discoverer 11g

- Summary of the Oracle Portal, Forms, Reports, and Discoverer 11g Installation Steps

#### 3.5.3.1 About the Oracle Portal, Forms, Reports, and Discoverer Installation and Configuration Tool

The Oracle Portal, Forms, Reports, and Discoverer installer functions as an installation and configuration tool. It allows you optionally to separate the installation and

configuration tasks. In other words, you can choose to install the software on disk into an Oracle home and configure the components later.

However, for the purposes of this upgrade procedure, and in order to ensure you are installing and configuring the latest Oracle Fusion Middleware 11*g* software, you must perform a software-only install, then apply the latest Oracle Fusion Middleware patch set, and then start the tool a second time to configure the Oracle Portal, Forms, Reports, and Discoverer software.

For more information about specific version information, refer to "Obtaining the Latest Oracle WebLogic Server and Oracle Fusion Middleware 11*g* Software" in the *Oracle Fusion Middleware Upgrade Planning Guide*.

### 3.5.3.2 Related Documentation for Installing and Configuring Oracle Portal, Forms, Reports, and Discoverer 11*g*

Refer to the following documentation resources for complete instructions on installing and configuring the Oracle Portal, Forms, Reports, and Discoverer middle tiers:

■ The *Oracle Fusion Middleware Installation Planning Guide*

■ The *Oracle Fusion Middleware Quick Installation Guide for Oracle Forms and Reports*

■ The *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*

### 3.5.3.3 Summary of the Oracle Portal, Forms, Reports, and Discoverer 11*g* Installation Steps

Table 3–1 provides a high-level summary of the main steps you must perform when installing and configuring the Oracle Portal, Forms, Reports, and Discoverer middle tiers.

Note that the procedures described in this section assume you have downloaded the latest version of Oracle WebLogic Server and Oracle Fusion Middleware 11*g*. For more information, refer to "Obtaining the Latest Oracle WebLogic Server and Oracle Fusion Middleware 11*g* Software" in the *Oracle Fusion Middleware Upgrade Planning Guide*.

*Table 3–1  Main Steps Required to Install and Configure the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers*

| Step # | Description | Section | Book |
|---|---|---|---|
| 1 | Install Oracle WebLogic Server and create the Middleware home | "Running the Installation Program in Graphical Mode" | *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server* |
| 2 | Install the Oracle Portal, Forms, Reports, and Discoverer software on disk and create the Oracle Portal, Forms, Reports, and Discoverer Oracle home | "Starting the Installer"<br><br>"Installing Oracle Portal, Forms, Reports and Discoverer" | *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer* |
| 3 | Apply the latest Oracle Fusion Middleware patch set | "Applying the Latest Fusion Middleware Patch Set with the Patch Set Installers" | *Oracle Fusion Middleware Patching Guide* |

## 3.5.4 Task 5d: Configure Oracle Portal, Forms, Reports, and Discoverer in Preparation for Upgrade

The following sections provide information about installing and configuring Oracle Portal, Forms, Reports, and Discoverer in preparation for upgrade:

- Running the Oracle Portal, Forms, Reports, and Discoverer Configuration Tool
- Specifying the PORTAL Schema Name and Password
- Specifying the DISCOVERER Schema Name and Password
- Locating the Oracle Portal 10g Schema Password in the Oracle Internet Directory

### 3.5.4.1 Running the Oracle Portal, Forms, Reports, and Discoverer Configuration Tool

After you install the Oracle WebLogic Server software, create the Middleware home, and install the latest Oracle Fusion Middleware software, you can then configure the Oracle Portal, Forms, Reports, and Discoverer components.

To configure Oracle Portal, Forms, Reports, and Discoverer:

1.  Start the Oracle Portal, Forms, Reports, and Discoverer 11*g* configuration:

    On UNIX systems:

    *ORACLE_HOME*/bin/config.sh

    On Windows systems:

    *ORACLE_HOME*\bin\config.bat

2.  Follow the instructions on the screen to configure one or more of the Oracle Portal, Forms, Reports, and Discoverer components.

    As you proceed through the installation screens, note the following:

    -   If you are upgrading to Oracle Portal 11*g*, then see Section 3.5.4.2, "Specifying the PORTAL Schema Name and Password".
    -   If you are upgrading Oracle Business Intelligence Discoverer, then see Section 3.5.4.3, "Specifying the DISCOVERER Schema Name and Password".

    For other information about installing and configuring Oracle Portal, Forms, Reports, and Discoverer, refer to the following:

    -   For help on the options available on each screen, click **Help**.
    -   For more detailed information about the configuration options, "Configuring Oracle Portal, Forms, Reports and Discoverer" in the *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*.

### 3.5.4.2 Specifying the PORTAL Schema Name and Password

If you are configuring Oracle Portal in preparation for an upgrade from Oracle Portal 10*g*, then the installer prompts you for the name and password of the Oracle Portal schema (Figure 3–3).

It is important that you enter the name and password of the Oracle Application Server 10*g* PORTAL schema, as follows:

-   In the **Schema Name** column, enter PORTAL.
-   In the **Schema Password** column, enter the password for the 10*g* PORTAL schema. For more information, see Section 3.5.4.4, "Locating the Oracle Portal 10g Schema Password in the Oracle Internet Directory"

*Figure 3–3   Specify Schema Screen From an Oracle Portal, Forms, Reports, and Discoverer Installation*



### 3.5.4.3  Specifying the DISCOVERER Schema Name and Password

If you are configuring Oracle BI Discoverer in preparation for an upgrade from Oracle BI Discoverer 10*g*, then the installer prompts you for the name and password of the Oracle Fusion Middleware 11*g* DISCOVERER schema (Figure 3–3).

It is important that you enter the name and password of the Oracle Fusion Middleware 11*g* DISCOVERER schema that you created using the Repository Creation Utility in Section 3.4, "Task 4: Use the Repository Creation Utility to Install the Oracle BI Discoverer Schema in the Database".

Enter the following information about the DISCOVERER schema on the Specify Schema screen:

- In the **Schema Name** column, enter the schema name and prefix that you used when you created the schema with Repository Creation Utility. For example, DEV_ DISCOVERER.

- In the **Schema Password** column, enter the password that you provided for the DISCOVERER schema in Repository Creation Utility.

### 3.5.4.4  Locating the Oracle Portal 10*g* Schema Password in the Oracle Internet Directory

You can locate and view the password for an Oracle Application Server 10*g* component schema by using the following ldapsearch command on the Oracle Internet Directory.

If your password is in an Oracle Internet Directory instance, use this command syntax:

```
ORACLE_HOME/bin/ldapsearch -p oid_port -h oid_hostname -D "cn=orcladmin"
-w orcladmin_password -b "orclresourcename=schema_name,
orclreferencename=metadata_rep_global_db_name, cn=ias infrastructure databases,
```

```
cn=ias, cn=products, cn=oraclecontext" -s base "objectclass=*"
orclpasswordattribute
```

For example, on a Linux system, if your Oracle Internet Directory instance is on `host1`, the port is `13060`, the database name is `myDB`, and the cn=orcladmin password is `myPassword1`, then you would use this command:

```
$ORACLE_HOME/bin/ldapsearch -p 13060 -h host1.example.com -D "cn=orcladmin"
-w myPassword1 -b "orclresourcename=PORTAL,
orclreferencename=myDB.example.com, cn=ias infrastructure databases,
cn=ias, cn=products, cn=oraclecontext" -s base "objectclass=*"
orclpasswordattribute
```

### 3.5.5 Step 5e: Verify the Installation and Configuration of Your Oracle Portal, Forms, Reports, and Discoverer 11*g* Environment

Refer to "Verifying the Installation" in the *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*.

## 3.6 Task 6: Use the Upgrade Assistant to Upgrade the Required Schemas and Middle Tiers

The Oracle Fusion Middleware Upgrade Assistant automates the upgrade of many aspects of your Oracle Application Server 10*g* environment.

The Upgrade Assistant is installed automatically into the `bin` directory of your Oracle Fusion Middleware Oracle home.

> **Note:** The following sections describe how to use the Upgrade Assistant in graphical user interface mode. You can also use the Upgrade Assistant command line to perform these tasks.
>
> For more information, see "Using the Upgrade Assistant Command-Line Interface" in the *Oracle Fusion Middleware Upgrade Planning Guide*.

The following sections provide more information:

- Task 6a: Start the Upgrade Assistant for an Oracle Portal, Forms, Reports, and Discoverer Upgrade
- Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers
- Task 6c: Upgrade the Oracle BI Discoverer Schema
- Task 6d: Upgrade the Oracle Portal Schema

### 3.6.1 Task 6a: Start the Upgrade Assistant for an Oracle Portal, Forms, Reports, and Discoverer Upgrade

To start the Upgrade Assistant using the graphical user interface:

1. Change directory to the *ORACLE_HOME*/bin directory of the Oracle Fusion Middleware installation.

2. Enter the following command to start the Upgrade Assistant.

   On UNIX system:

```
./ua
```

On Windows systems:

```
ua.bat
```

The Upgrade Assistant displays the Welcome screen as shown in Figure 3–4.

*Figure 3–4   Upgrade Assistant Welcome Screen*
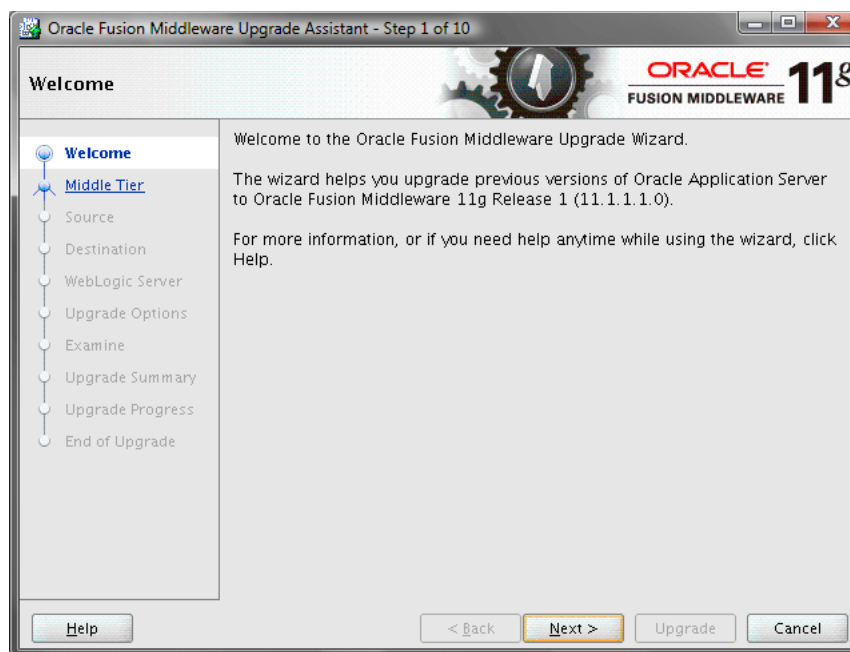


3.  Click **Next** to display the Specify Operation screen (Figure 3–5).

    The options available in the Upgrade Assistant are specific to the Oracle home from which it started. For example, when you start Upgrade Assistant from an Oracle Portal, Forms, Reports, and Discoverer Oracle home, the options shown on the Specify Operation screen are the valid options for an Oracle Portal, Forms, Reports, and Discoverer Oracle home.

*Figure 3–5   Upgrade Assistant Select Operation Screen for an Oracle Portal, Forms, Reports, and Discoverer Upgrade*
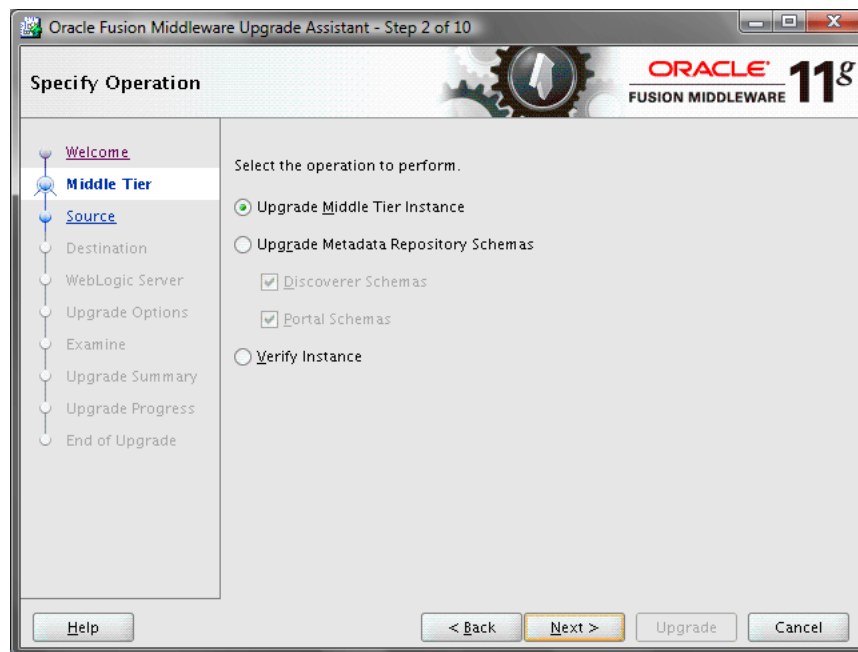


## 3.6.2  Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers

The following sections describe how to use the Upgrade Assistant to upgrade your Oracle Portal, Forms, Reports, and Discoverer middle tiers:

- Using the Upgrade Assistant to Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tier

- Important Notes When Using the Source Oracle Home Ports in the Destination Oracle Instance

### 3.6.2.1  Using the Upgrade Assistant to Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tier

To upgrade an Oracle Application Server 10*g* Release 2 (10.1.2) middle tier to Oracle Fusion Middleware 11*g*:

1. Start the Upgrade Assistant as described in Task 6a: Start the Upgrade Assistant for an Oracle Portal, Forms, Reports, and Discoverer Upgrade.

2. Select **Upgrade Middle Tier Instance** on the Specify Operation screen (Figure 3–5).

3. Refer to Table 3–2 for a description of the Upgrade Assistant screens that require input from you during a middle-tier instance upgrade and the options on each screen.

   The Upgrade Assistant performs the following tasks and provides the progress on each task:

   - Examines the components to be upgraded.

   - Provides a summary of the components to be upgraded so you can verify that the Upgrade Assistant is upgrading the components you expect.

   - Provides a progress screen so you can see the status of the upgrade as it proceeds.

- Alerts you of any errors or problems that occur during the upgrade.

  **See Also:** Section B.1, "Troubleshooting Upgrade Assistant Problems and Issues" in the *Oracle Fusion Middleware Upgrade Planning Guide* for specific instructions for troubleshooting problems that occur while running the Upgrade Assistant

- Displays the End of Upgrade screen, which confirms that the upgrade was complete.

*Table 3–2   Upgrade Assistant Screens That Require Input During a Middle-Tier Instance Upgrade*

| Upgrade Assistant Screen | Description |
|---|---|
| Specify Source Home | Select the 10*g* source Oracle home. |
| | If the Oracle home you want to upgrade does not appear in the drop-down lists, see Section B.1.2.1, "Source Oracle Home Not Listed by the Upgrade Assistant" in the *Oracle Fusion Middleware Upgrade Planning Guide*. |
| Specify Destination Instance | Enter the complete path to the 11*g* Oracle instance, or click **Browse** to locate the instance directory. |
| Specify WebLogic Server | Enter the host and Administration Server port for the Oracle WebLogic Server you configured in Task 5c: Install the Oracle Fusion Middleware 11g Software. |
| Specify Upgrade Options | Select the upgrade options you want to apply to the Oracle Portal, Forms, Reports, and Discoverer upgrade: |
| | ■ **Use source Oracle home ports in destination:** If you want to migrate the port assignments used by your Oracle Application Server 10g Oracle home to your new Oracle Fusion Middleware Oracle instance. |
| | For more information, see Section 3.6.2.2, "Important Notes When Using the Source Oracle Home Ports in the Destination Oracle Instance". |
| | ■ **Stop source components before upgrade:** By default, this check box is selected and all the components in the Source Oracle home will be stopped before the upgrade process begins. Stopping the source components is necessary to avoid any port conflicts when you select the Use source Oracle home ports in destination option. |
| | ■ **Start destination components after successful upgrade:** If you want the Upgrade Assistant to automatically start the components in the destination Oracle home after a successful upgrade is complete. If you do not select this option, then you will have to manually start the destination instance after the upgrade. Note that this option works only if the upgrade is successful. |
| | Click **Help** to display more information about the upgrade options on this screen. |

### 3.6.2.2 Important Notes When Using the Source Oracle Home Ports in the Destination Oracle Instance

When you select the **Use Source Oracle home ports in destination** option in the Oracle Fusion Middleware Upgrade Assistant, note the following.

**General Information and Restrictions**

- If you select this option, then you will not be able to run both the 10*g* and 11*g* middle tiers at the same time; otherwise, port conflicts will occur.

- If you are upgrading to multiple instances of a particular Oracle Fusion Middleware 11*g* component, you can select this option only once for each component that you upgrade on a host.

  For example, suppose you upgrade Oracle HTTP Server in one Oracle instance on MYHOST1.

  If you use the option again while upgrading another Oracle HTTP Server instance in another Oracle instance on MYHOST1, then the same listening ports are assigned to the second Oracle HTTP Server instance. Two instances of Oracle HTTP Server on the same host cannot use the same listening ports.

**Component-Specific Information and Restrictions**

- When you use this option to upgrade an Oracle Portal middle tier, the option is enabled and you cannot disable it. As a result, you might end up with extra partner applications displayed on the Oracle Single Sign-On Administration page in Oracle Portal 11*g*.

  For more information, see Section 4.1.5, "Removing Obsolete Partner Applications After Upgrade".

- If you are upgrading Oracle Reports and you select this option, then Fusion Middleware Control may not be able to gather performance metrics about the Oracle Reports instance. This is because Oracle Enterprise Manager Fusion Middleware Control is using the new Oracle HTTP Server 11*g* port and not the Oracle HTTP Server 10*g* port to communicate with Oracle Reports.

  To address this issue, modify the Agent-Monitored Target properties for the Oracle Reports component in Fusion Middleware Control. Change the following properties to reflect the 10*g* Oracle HTTP Server port information:

  - The **HTTP Port** property

  - The port identified in the **Servlet URL** property

  - The **Server** property for the WLS_REPORTS Java EE application. You must change this property because, during upgrade, the Oracle Reports 11g in-process server is renamed to use the same name as the 10g in-process server.

  For information on changing the Agent-Monitored Target properties, see "Troubleshooting the Display of Performance Metrics and Charts in Fusion Middleware Control" in the *Oracle Fusion Middleware Administrator's Guide*.

- If you are using Oracle Single Sign-On, and you do not select this option (in other words, if you use a different set of port numbers than those used in Oracle Application Server 10*g*), then consider the following:

  - You will likely have to re-register your components (such as Oracle Business Intelligence Discoverer) with Oracle Single Sign-On.

    For more information, see "Configuring and Administering Partner Applications" in the *Oracle Application Server Single Sign-On Administrator's Guide*, which is available in the Oracle Application Server 10*g* (10.1.4) documentation library on the Oracle Technology Network (OTN):

    ```
    http://www.oracle.com/technology/documentation/
    ```

- You will have to verify the ports used for Oracle HTTP Server and Oracle Web Cache and re-register Oracle HTTP Server and Oracle Web Cache with Oracle Single Sign-On.

   For more information, see Section 4.5.2, "Web Tier Component Post-Upgrade Tasks When Using Oracle Single Sign-On".

### 3.6.3 Task 6c: Upgrade the Oracle BI Discoverer Schema

If you installed Oracle BI Discoverer as part of a standalone installation, then you can skip this step and proceed to Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers. For more information about the Oracle BI Discoverer 11*g* standalone configuration, see "About Oracle BI Discoverer installations" in the *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Discoverer*.

If you associated Oracle BI Discoverer 11*g* with an Oracle Infrastructure (database schema), then you must upgrade the DISCOVERER schema to 11*g*.

To upgrade the DISCOVERER schema:

1. Start the Upgrade Assistant as described in Task 6a: Start the Upgrade Assistant for an Oracle Portal, Forms, Reports, and Discover Upgrade.

2. Select **Upgrade Metadata Repository Schemas** and **Discoverer Schema** from the Specify Operation screen (Figure 3–5).

3. Follow the instructions on the screen to upgrade the Oracle BI Discoverer schema.

   Click **Help** for information about the options available on each screen.

### 3.6.4 Task 6d: Upgrade the Oracle Portal Schema

If you are upgrading Oracle Portal, then use the following sections for information on upgrading the Oracle Portal schema. You must perform these steps after upgrading your Oracle Portal, Forms, Reports, and Discoverer middle tiers:

- Understanding the Impact of the Oracle Portal Schema Upgrade

- Checking for Invalid Objects in the Database Where the Oracle Portal 10g Schema Resides

- Backing Up the Database Where the Oracle Portal 10g Schema Resides

- Verifying the Required Database Parameters for Oracle Portal 11g

- Verifying That the Database and Oracle Internet Directory Are Running

- Using the Upgrade Assistant to Upgrade the Oracle Portal Schema

> **Important Note:** If your Oracle Portal repository is not stored in the Oracle Metadata Repository, and is instead installed in a separate database, then do not use the procedures in this section. Instead, refer to Appendix A, "Upgrading an Oracle Portal Repository in a Customer Database".

#### 3.6.4.1 Understanding the Impact of the Oracle Portal Schema Upgrade

Before you upgrade the Oracle Portal to 11*g*, consider the impact of the upgrade on your existing Oracle Portal environment.

In particular, you should be aware that when you use the Upgrade Assistant to upgrade your Oracle Portal schema, the Upgrade Assistant performs the following tasks:

- Creates the upgrade framework objects and installs the Schema Validation Utility.

- Identifies all invalid objects before the upgrade proceeds. You can use this for troubleshooting purposes; all OracleAS Portal packages must be valid before an upgrade.

- Recompiles any invalid non-OracleAS Portal objects and displays warnings if any invalid non-OracleAS Portal objects remain in the database.

- Disables the directory provisioning profile, as a result event notifications in the Oracle Internet Directory instance to which the Oracle Portal instance has subscribed. The Upgrade Assistant later re-enables the directory providing profile.

- Disables triggers in the portal schema and re-enables them at the end of the upgrade.

- Disables the Database Management System (DBMS) jobs in the Oracle Portal schema and reenables them at the end of the upgrade.

- Drops statistics gathered on all tables in the portal schema. Later in the process, the Upgrade Assistant gathers statistics supported by OracleAS Portal. Later in the process, the Upgrade Assistant creates the jobs for gathering statistics.

- Upgrades OWA packages if necessary.

- Drops and reloads all Java objects in the Oracle Portal schema. Note that any Java objects that do not belong to OracleAS Portal, but reside in the Oracle Portal must be reinstalled manually after the upgrade.

- Drops and reloads all product messages in all languages in the Oracle Portal schema. If any product messages were manually altered before the upgrade, then these changes will have to be manually reapplied.

- Upgrades the schema and compiles new OracleAS Portal packages.

- Updates the OracleAS Portal release if there are no fatal compilation errors.

- Searches for errors and warnings in the upgrade log file and displays a summary of the issues.

### 3.6.4.2 Checking for Invalid Objects in the Database Where the Oracle Portal 10*g* Schema Resides

Before you upgrade the schemas in your database, it is good practice to make sure that none of the database objects required by Oracle Fusion Middleware are invalid:

1. Connect to the Metadata Repository database.

   For example:

   ```
   ORACLE_HOME/bin/sqlplus "connect / as sysdba"
   ```

2. When prompted, enter the SYS password.

3. Issue the following SQL command:

   ```
   SELECT owner, object_type, object_name
        FROM all_objects
        WHERE status='INVALID';
   ```

The query should not return any database objects that have an Oracle Application Server component schema (such as PORTAL, WIRELESS, and so on) in the 'owner' column.

If you find any invalid objects, run the `utlrp.sql` script from the SQL*Plus command line to recompile the invalid objects:

```
@?/rdbms/admin/utlrp.sql
```

For more information about invalid objects, see "About Dependencies Among Schema Objects" in the *Oracle Database Administrator's Guide*.

### 3.6.4.3  Backing Up the Database Where the Oracle Portal 10*g* Schema Resides

Before you upgrade the Oracle Portal 10*g* schema to 11*g*, back up your database, in case you need to restore the database to its pre-upgrade state.

For more information, see "Backup Strategies for Upgrade" in the *Oracle Fusion Middleware Upgrade Planning Guide*.

### 3.6.4.4  Verifying the Required Database Parameters for Oracle Portal 11*g*

Before you upgrade the Oracle Portal schemas in the metadata repository, be sure to verify that the following database parameters are set correctly.

These settings are required for Oracle Portal 11*g*. If you do not set these parameters correctly, errors will appear in the Upgrade Assistant during the examination phase:

- Set the `aq_tm_processes` database parameter to a value of one (1) or higher to allow correct management of database queues.

- If you are upgrading the schema in Oracle Database 11*g*, then set the `compatible` database parameter to `11.0.0.0.0` or higher.

- If you are upgrading the schema in Oracle Database 10*g*, then set the `compatible` parameter to `10.2.0.0` or higher.

- Set the `shared_pool_size` database parameter to 20MB or higher.

- Set the `java_pool_size` database parameter to 20MB or higher.

- Set the `optimizer_mode` database parameter to `CHOOSE`.

- Set the `processes` database parameter to at least `500`.

### 3.6.4.5  Verifying That the Database and Oracle Internet Directory Are Running

Before you proceed with the Oracle Portal schema upgrade, you must first ensure that the following processes are up and running and available:

- The database that hosts the Oracle Portal schema

- The listener for the database that hosts the Oracle Portal schema

- The Oracle Internet Directory instance where the Oracle Portal schema is registered

### 3.6.4.6  Using the Upgrade Assistant to Upgrade the Oracle Portal Schema

To upgrade the Oracle Portal schema:

1. Stop all the middle tiers associated with the metadata repository where the Oracle Portal schema resides.

This includes the `WLS_Portal` managed server in the Oracle WebLogic Server domain, as well as any Oracle HTTP Server and Oracle Web Cache instances associated with the middle tiers.

For more information, see "Starting and Stopping Oracle Fusion Middleware" in the *Oracle Fusion Middleware Administrator's Guide*.

2. Start the Upgrade Assistant as described in Task 6a: Start the Upgrade Assistant for an Oracle Portal, Forms, Reports, and Discoverer Upgrade.

3. Select **Upgrade Metadata Repository Schemas** and then **Portal Schema** from the Specify Operation screen (Figure 3–5).

4. Follow the instructions on the screens to upgrade the Oracle Portal schema.

   Click **Help** for information about the options available on each screen.

## 3.7 Task 7: Perform Any Required Post-Upgrade Configuration Tasks

Refer to Chapter 4, "Oracle Portal, Forms, Reports, and Discoverer Post-Upgrade Tasks" for a description of the post-upgrade tasks you might need to perform for each of the Oracle Portal, Forms, Reports, and Discoverer components.

## 3.8 Task 8: Verify the Oracle Portal, Forms, Reports, and Discoverer Upgrade

To verify that your Oracle Portal, Forms, Reports, and Discoverer upgrade was successful:

1. Start the Oracle Portal middle tiers that are using the Oracle Portal schema you just upgraded.

   This includes the `WLS_Portal` managed server in the Oracle WebLogic Server domain, as well as any Oracle HTTP Server and Oracle Web Cache instances associated with the middle tiers.

   For more information, see "Starting and Stopping Oracle Fusion Middleware" in the *Oracle Fusion Middleware Administrator's Guide*.

2. Run the Upgrade Assistant again and select **Verify Instance** on the Specify Operation page.

   Follow the instructions on the screen for information on how to verify that specific Oracle Fusion Middleware components are up and running.

3. Use the Fusion Middleware Control to verify that the Oracle Portal, Forms, Reports, and Discoverer components are up and running.

   For more information, see "Getting Started Using Oracle Enterprise Manager Fusion Middleware Control" in the *Oracle Fusion Middleware Administrator's Guide*.

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# Oracle Portal, Forms, Reports, and Discoverer Post-Upgrade Tasks

This task involves completing the following component-specific upgrade steps:

- Post-Upgrade Tasks for Oracle Portal
- Post-Upgrade Tasks and Information for Oracle BI Discoverer
- Post-Upgrade Tasks for Oracle Forms Services
- Post-Upgrade Tasks for Oracle Reports
- Post-Upgrade Tasks and Information for the Web Tier Components

## 4.1 Post-Upgrade Tasks for Oracle Portal

Refer to the following sections for information about post-upgrade tasks for Oracle Portal:

- Configuring Preference Stores in an Upgraded Oracle Portal 11g Environment
- Upgrading the PDK-Java Sample Application and Its Customizations from Oracle Portal 10g to 11g
- Removing the Community News Portlet
- Configuring End-to-End SSL for an Upgraded Oracle Portal Environment
- Removing Obsolete Partner Applications After Upgrade
- Relative Hypertext Links to Images and Documents May Break After Upgrade
- Resetting FILE_ACCESS_ROLE if Set Before Installing or Upgrading to Oracle Portal 11g
- Refreshing the Database Provider to Fix Missing Translated Content
- Refreshing OMNI, WebClipping, or Sample Producers After Upgrade
- Upgrading Sample WSRP Providers During a Portal Midtier Upgrade
- About OmniPortlet Repository Changes

### 4.1.1 Configuring Preference Stores in an Upgraded Oracle Portal 11*g* Environment

If you are using the Oracle Portal Developer Kit-Java (PDK-Java) or Web Services for Remote Portlets (WSRP) to develop or deploy custom Oracle Portal applications, review the following information for configuration tasks you might have to perform after you upgrade to Oracle Portal 11*g*.

For more information about the PDK-Java, see "Creating Java Portlets" in the *Oracle Fusion Middleware Developer's Guide for Oracle Portal*.

### 4.1.1.1 About the jdbc/portletPrefs Data Source

By default, PDK-Java, the Oracle Portal 11*g* installation and configuration procedure automatically creates a data source called the `jdbc/portletPrefs` data source in the Oracle Portal Oracle WebLogic Server domain. This data source is created by the configuration process, but it is not configured to reference any specific preference store.

Depending on how you configure the preference store for your PDK-Java and WSRP producer applications in Oracle Portal 10*g*, refer to the following sections for information on how use this data source in Oracle Portal 11*g*:

- Oracle Portal Post-Upgrade Tasks If You Are Using One Database-Based Preference Store

- Oracle Portal Post-Upgrade Tasks If You Are Using Multiple Database-Based Stores

- Oracle Portal Post-Upgrade Tasks If You Are Not Using a Database-Based Preference Store

- Oracle Portal Post-Upgrade Tasks If You Are Using One or More File-Based Store

### 4.1.1.2 Oracle Portal Post-Upgrade Tasks If You Are Using One Database-Based Preference Store

If you are already using a single database-based preference store for WSRP or PDK-Java producer applications in Oracle Portal 10*g*, then modify the existing `jdbc/portletPrefs` data source so it references the existing preference store. You can use the Oracle WebLogic Server Administration Console to perform this task.

For more information, see the "Create JDBC generic data sources" topic in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*. Specifically, you must modify the database connection details on the Connection Properties page for the data source in the Administration Console.

### 4.1.1.3 Oracle Portal Post-Upgrade Tasks If You Are Using Multiple Database-Based Stores

If you are using multiple database-based preference stores for your PDK-Java or WSRP producer applications in Oracle Portal 10*g*, then you must:

1. Identify one of your existing database-based preference stores, or create a new database-based preference store, that will serve as your single Oracle Portal 11*g* preference store.

   To create a new Oracle Portal preference store, see Section 4.1.1.6, "Creating a New Database Preference Store for PDK-Java or WSRP Applications".

2. Use the PDK-Java Preference Store Migration and Upgrade Utility to migrate each of your existing Oracle Portal 10*g* preference stores to the Oracle Portal 11*g* database-based preference store you identified or created in Step 1.

   For more information, see "Using the PDK-Java Preference Store Migration and Upgrade Utility" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

3. Modify the existing `jdbc/portletPrefs` data source so it references your existing preference store. You can use the Oracle WebLogic Server Administration Console to perform this task.

   For more information, see "Create JDBC data sources" in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*. Specifically, you must modify the database connection details on the Connection Properties page for the data source in the Administration Console.

### 4.1.1.4 Oracle Portal Post-Upgrade Tasks If You Are Not Using a Database-Based Preference Store

If you are not using a database-based preference store, you can use the Oracle WebLogic Server Administration Console to remove the `jdbc/portletPrefs` data source.

For more information, see "Delete JDBC data sources" in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*.

### 4.1.1.5 Oracle Portal Post-Upgrade Tasks If You Are Using One or More File-Based Store

If you are using one or more file-based preference stores for WSPR or PDK-Java applications, then use the Preference Store Migration and Upgrade Utility to migrate each of your existing Oracle Portal 10*g* preference stores to the an Oracle Portal 11*g* file-based preference store.

For more information, see "Using the PDK-Java Preference Store Migration and Upgrade Utility" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

### 4.1.1.6 Creating a New Database Preference Store for PDK-Java or WSRP Applications

A preference store is a mechanism for storing information like user preference data, portlet/provider settings, or even portlet data, while using Oracle Portal.

The information stored in the preference store is persistent in the sense that, even if you log out and log back in later, you can still access previously saved preferences. The preference store maintains the user preference information and invokes the user preferences whenever the user logs in again.

PDK-Java provides the `PrefStorePersonalizationManager`, which uses a PreferenceStore implementation to persist personalized data. Currently, PDK-Java has two PreferenceStore implementations: `DBPreferenceStore` and `FilePreferenceStore`. The `DBPreferenceStore` persists data using a JDBC compatible relational database and FilePreferenceStore persists data using the file system.

For more details of these implementations, refer to the Javadoc on the Oracle Technology Network (OTN), by clicking Java Doc API on the Portlet Development page available at:

```
http://www.oracle.com/technology/products/ias/portal/portlet_development_
10g1014.html
```

Example 4–1 shows some sample SQL code that demonstrates how you can create a preference store table in an Oracle database.

For more information about using preference stores, refer to the following resources:

- "Enhancing Java Portlets" in the *Oracle Fusion Middleware Developer's Guide for Oracle Portal*

- "Setting Up a Preference Store" in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*

***Example 4–1   Sample SQL Code for Creating a New Oracle Portal Preference Store***

```
CREATE TABLE JPDK_PREFERENCE_STORE2 (
 PATH_TYPE       VARCHAR2 (60)  NOT NULL,
 REFERENCE_PATH  VARCHAR2 (250)  NOT NULL,
 SEARCH_PATH     VARCHAR2 (250)  NOT NULL,
 DATA_CLASS      VARCHAR2 (250),
 LONG_VALUE      LONG RAW,
 CONSTRAINT JPS2_PK
 PRIMARY KEY ( REFERENCE_PATH, PATH_TYPE ) ) ;

 CREATE INDEX JPDK_PATH_TYPES2 ON
 JPDK_PREFERENCE_STORE2(PATH_TYPE);

 CREATE INDEX JPDK_SEARCH_PREFS2 ON
 JPDK_PREFERENCE_STORE2(SEARCH_PATH);
```

## 4.1.2  Upgrading the PDK-Java Sample Application and Its Customizations from Oracle Portal 10*g* to 11*g*

If you are using the Oracle Portal Developer Kit-Java (PDK-Java), then any PDK-Java applications you used in Oracle Portal 10*g*, as well as the customizations used by the applications, are not upgraded to your new Oracle Portal environment

For example, the sample PDK-Java application (`jpdk.ear`) is not installed in an upgraded middle tier.  The following sections describe how to:

- Deploy the `jpdk.ear` sample application on the upgraded Oracle Portal 11*g* middle tier

- Migrate the sample application customizations from a Oracle Portal 10*g* file-based preference store to an Oracle Portal 11*g* file-based or database-based preference store.

Use one of the following procedures to accomplish this task:

- Upgrading the jpdk.ear file and Its Customizations to an 11g File-Based Preference Store

- Upgrading the jpdk.ear file and Its Customizations to an 11g Database Preference Store

### 4.1.2.1  Upgrading the jpdk.ear file and Its Customizations to an 11*g* File-Based Preference Store

To redeploy the `jpdk.ear` file and upgrade its customizations from Oracle Portal 10*g* to an Oracle Portal 11*g* file-based preference store:

1. Deploy the `jpdk.ear` file as an application to the WLS_PORTAL managed server in the Oracle WebLogic Server domain that was created during the Oracle Portal 11*g* installation.

   Note the following:

- In many cases, the WLS_PORTAL managed server is part of an Oracle WebLogic Server cluster. In those cases, you deploy the jpdk.ear file to the cluster that contains the WLS_PORTAL managed server.

- The jpdk.ear file is located in the following directory of the Oracle Portal Oracle home:

  *PORTAL_ORACLE_HOME*/archives/applications/

- For information, see "Install applications and modules" topic in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*.

2. Edit the provider registration, which was registered in Oracle Portal 10*g*, to reference the new JPDK provider URL:

   a. Locate the provider.xml file for the JPDK sample:

      *DOMAIN_HOME*/servers/WLS_PORTAL/tmp/_WL_user/
              jpdk/byvlpg/war/WEB-INF/providers/sample/provider.xml

      In this example, replace *DOMAIN_HOME* with the patch to the Oracle WebLogic Server domain directory.

   b. Comment the following section in the provider.xml file:

      oracle.portal.provider.v2.preference.FCFDBPreferenceStore

   c. Uncomment the following section in the provider.xml file:

      oracle.portal.provider.v2.preference.FilePreferenceStore section

   d. Save and close the provider.xml file.

3. Start the deployed JPDK application.

4. Use the PDK-Java Preference Store Migration and Upgrade Utility to change Oracle Portal preferences store to a file-based store.

   Example 4–2 shows the command you can use to perform this task.

   In the example, replace the following variables with the actual path to the corresponding Oracle home: *10g_ORACLE_HOME*, *11g_ORACLE_HOME*, *DOMAIN_HOME*.

   For more information, see "Using the PDK-Java Preference Store Migration and Upgrade Utility" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

***Example 4–2   Using the Preference Store Migration and Upgrade Utility to Upgrade the 10g JPDK Customizations to an Oracle Portal 11g File-Based Store***

```
java -classpath
          11g_ORACLE_HOME/portal/jlib/pdkjava.jar:11g_PORTAL_ORACLE_HOME/portal/jlib/ptlshare.jar
          oracle.portal.provider.v2.preference.MigrationTool
     -mode filetofile
     -remap language
     -countries GB,US
     -pref1UseHashing true
     -pref1RootDirectory 10g_ORACLE_HOME/j2ee/OC4JPortal/applications/
             jpdk/jpdk/WEB-INF/providers/sample
     -pref2RootDirectory DOMAIN_HOME/servers/WLS_PORTAL/tmp/_WL_user/
             jpdk/byvlpg/war/WEB-INF/providers/sample
     -pref2UseHashing true
```

#### 4.1.2.2 Upgrading the jpdk.ear file and Its Customizations to an 11*g* Database Preference Store

To redeploy the `jpdk.ear` file and upgrade its customizations from Oracle Portal 10*g* to an Oracle Portal 11*g* database preference store:

1. Deploy the `jpdk.ear` file as an application to the WLS_PORTAL managed server in the Oracle WebLogic Server domain that was created during the Oracle Portal 11*g* installation.

   Note the following:

   - In many cases, the WLS_PORTAL managed server is part of an Oracle WebLogic Server cluster. In those cases, you deploy the `jpdk.ear` file to the cluster that contains the WLS_PORTAL managed server.

   - The `jpdk.ear` file is located in the following directory of the Oracle Portal Oracle home:

     *PORTAL_ORACLE_HOME*/archives/applications/

   - For information, see "Install applications and modules" in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*.

2. Start the deployed JPDK application.

3. Identify an existing 11*g* database preference store, or create a new database preference store.

4. Note the database connection details for the preference store. For more information, see Section 4.1.1.6, "Creating a New Database Preference Store for PDK-Java or WSRP Applications".

5. Use the PDK-Java Preference Store Migration and Upgrade Utility to change Oracle Portal preferences store to a database-based store.

   Example 4–2 shows the command you can use to perform this task.

   In the example, replace the following variables with the actual path to the corresponding Oracle home: *10g_ORACLE_HOME*, *11g_ORACLE_HOME*.

   For more information, see "Using the PDK-Java Preference Store Migration and Upgrade Utility" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

*Example 4–3   Using the Preference Store Migration and Upgrade Utility to Upgrade the 10g JPDK Customizations to Oracle Portal 11g Database Preference Store*

```
java -classpath 11g_ORACLE_HOME/portal/jlib/pdkjava.jar:11g_ORACLE_HOME/portal/jlib/ptlshare.jar:
            11g_ORACLE_HOME/jdbc/lib/ojdbc6.jar
            oracle.portal.provider.v2.preference.MigrationTool
   -mode filetodb
   -remap language
   -countries GB,US
   -pref1UseHashing true
   -pref1RootDirectory 10g_ORACLE_HOME/j2ee/OC4J_Portal/applications/
           jpdk/jpdk/WEB-INF/providers/sample
   -pref2User <portal_schema_user>
   -pref2Password <schema_passwd>
   -pref2URL jdbc:oracle:thin:@<db_connect_string_in_host:port:sid_format
```

### 4.1.3 Removing the Community News Portlet

Starting with OracleAS Portal 10*g* (10.1.4) and later, the Community News portlet is no longer supported.

This portlet is still available on Oracle Portal pages, but when you attempt to edit this portlet, a blank page is displayed. You can manually delete the Community News portlet from portal pages, as follows:

1. Log in to Oracle Portal.

2. Navigate to the page from which you want to delete the portlet.

3. Click **Edit** at the top of the page to switch to Edit mode.

4. Click **Actions** next to the Community News portlet.

5. Click **Delete**.

6. On the confirmation page, click **Yes** to delete the portlet and return to the page.

### 4.1.4 Configuring End-to-End SSL for an Upgraded Oracle Portal Environment

After you upgrade to Oracle Portal 11*g*, you can configure end-to-end secure socket layer (SSL) security connections for all your Portal connections.

For general information about configuring SSL for Oracle Fusion Middleware products, see "Secure Sockets Layer" in the *Oracle Fusion Middleware Administrator's Guide*.

To configure SSL for Oracle Portal 11*g* after upgrade, perform the following tasks.

**Task 1  Enable the WebLogic plug-in, and enable the WLProxySSLPassThrough and WLProxySSL parameters**

For more information, see "Enable the WebLogic Plug-In, and WLProxySSL and WLProxySSLPassThrough Parameters" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

**Task 2  Add the Oracle Web Cache certificate to the Oracle WebLogic Server managed server keystore**

For example:

1. Obtain the Oracle Web Cache certificate.

   There are several methods for performing this task. For example, you can export it from your Microsoft Internet Explorer browser as follows:

   a. Access the Portal URL so the index page is dislayed.

      For example:

      ```
      https://demohost.us.oracle.com:8250/
      ```

   b. From the Internet Explorer **View** menu, select **Security Report**.

   c. From the Website Identification dialog box, click **View Certificates**.

   d. In the Certificates dialog box, click **Details**, and then **Copy To File** to display the Certificate Export wizard.

   e. On the Export File Format page of the wizard, select **Base-64 encoded X.509 (.CER)**.

      **f.**   On the File to Export page of the wizard, enter a path and file name for the certificate file (for example, `self.cer`).

  **2.**  You can find the location of the keystore from the Oracle WebLogic Server Administration Console:

      **a.**   Log in to the Oracle WebLogic Server Administration Console.

      **b.**   In the left pane of the Console, expand **Environment** and select **Servers**.

      **c.**   Select the **WLS_PORTAL** managed server.

      **d.**   Select **Keystores** and locate the **Java Standard Trust Keystore** entry in the Trust section of the Keystores page.

          The value of the Java Keystore Trust Keystore field is the path to the Oracle WebLogic Server managed server keystore.

  **3.**  Import the certificate into the managed server keystore.

     There are several methods to import a certificate into the keystore. For more information, see "Common Certificate Operations" in the *Oracle Fusion Middleware Administrator's Guide*.

     In particular, refer to the following:

      ■  "Importing a Certificate or Trusted Certificate into a Keystore Using Fusion Middleware Control"

      ■  "Importing a Certificate or Trusted Certificate into a Keystore Using WLST"

**Task 3  Restart OPMN and the WebLogic servers**

For more information, see "Starting and Stopping Oracle Fusion Middleware" in the *Oracle Fusion Middleware Administrator's Guide*.

## 4.1.5 Removing Obsolete Partner Applications After Upgrade

If you select the **Use source Oracle home ports in destination** option when you upgrade to Oracle Portal 11*g*, then you will notice that, after the upgrade, some extra partner applications will appear on the SSO Administration page in the Oracle Portal 11*g* instance.

You can safely remove these extra partner applications after upgrade, since they are replaced by the upgraded partner applications.

For more information about the Use source Oracle home ports in destination option, see Section 3.6.2, "Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers".

For more information about viewing the partner applications in Oracle Portal 11*g*, see "Using the Oracle Portal Administer Tab" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*. You use the Portal Administer tab to access the Oracle Single Sign-On administration features in Oracle Portal.

## 4.1.6 Relative Hypertext Links to Images and Documents May Break After Upgrade

When upgrading to Oracle Portal 11*g*, relative hypertext links to images and documents may be broken. This can occur when the relative hypertext link uses a different case than the file name. For example, if a pre-upgrade image was uploaded to your portal with the name `PROCESS1.GIF`, and a hypertext link is referring to `process1.gif`, after the upgrade, the relative hypertext link to the image will be

broken. You are most likely to encounter this in HTML templates or in documents that refer to images or other documents.

To address this issue, edit image and document names, making their case agree with the case used for the file names.

### 4.1.7 Resetting FILE_ACCESS_ROLE if Set Before Installing or Upgrading to Oracle Portal 11*g*

If you have set the FILE_ACCESS_ROLE system parameter in the database before installing or upgrading to Oracle Portal 11*g*, then consider resetting it after the installation or upgrade.

The FILE_ACCESS_ROLE system parameter is used to specify the name of a database role that is authorized to create an index using the FILE or URL datastores. If the parameter is set, any user attempting to create an index using FILE or URL datastores must have this role otherwise the index cannot be created.

In database versions earlier than Oracle Database 11*g* Release 2, if the FILE_ACCESS_ROLE parameter was not set, users did not need to have a specific role to create indexes using the FILE or URL datastores. From Oracle Database 11*g* Release 2 onwards, if the FILE_ACCESS_ROLE parameter is not set, the URL and File datastore are disabled and indexes using the FILE or URL datastores cannot be created. For more information, see the Oracle Text documentation at http://www.oracle.com/technology/products/text/index.html.

When installing or upgrading to Oracle Portal 11*g*, into a database that is Oracle Database 11*g* or higher, the following events occur:

- The "PORTAL_SEARCH_FILE_ACCESS_ROLE" role is created.

- The "PORTAL_SEARCH_FILE_ACCESS_ROLE" role is granted to the portal schema.

- The FILE_ACCESS_ROLE system parameter set to "PORTAL_SEARCH_FILE_ACCESS_ROLE" regardless of whether the preference was originally set

If the FILE_ACCESS_ROLE system parameter was set before installing or upgrading to Oracle Portal 11*g* from a previous version, you may want to set it back to the original role. If you reset it to another role, you must grant that role to the Oracle Portal schema for Oracle Portal Search to function correctly.

### 4.1.8 Refreshing the Database Provider to Fix Missing Translated Content

After you upgrade to Oracle Portal 11*g*, language translations of some components or portlets will be missing (for example, survey builder, User Surveys, and so on).

To fix this issue, you must refresh the database provider. Log in to the Oracle Portal, then go to **Navigator, Providers, Registered Providers** and then select your database provider, and then click **Refresh**. After refreshing you should be able to see the translations.

### 4.1.9 Refreshing OMNI, WebClipping, or Sample Producers After Upgrade

After you upgrade to Oracle Portal 11*g*, you will not able to refresh the tools producers (omni, webclip, or sample) that were registered from the previous release.

To fix this problem, log in to Oracle Portal, then go to **Administer**. Click **Portlets** tab, and enter the name of your registered producer (registered from the previous release) in the Remote Providers section. Click **Refresh**.

### 4.1.10 Upgrading Sample WSRP Providers During a Portal Midtier Upgrade

The Sample WSRP provider does not upgrade automatically during a Portal midtier and any instances of portlets on pages from that producer will give an error post upgrade. To upgrade the SampleWSRP Web Provider, do the following:

1. Deploy the `wsrp-samples.ear` file to the new Portal managed server (WLS_ PORTAL) instance using the Oracle WebLogic Server Administration Console.

2. Make the preference store that the old producer used available to the new instance. You can do this, by making the new producer use the same preference store (in scenario, where the data base preference store is used), or by migrating the preference store using the preference store migration utility.

3. Update the registration details in portal to point to the new location of the producer, by using the Edit Registration page within Portal.

### 4.1.11 About OmniPortlet Repository Changes

In Oracle Portal 11*g*, OmniPortlet connection details are stored in the Oracle Platform Security Service (OPSS) credential store. In earlier versions of Oracle Portal, connection details for OmniPortlet are stored in the Web Clipping repository.

After you upgrade any Oracle Portal application containing OmniPortlet, connection details for OmniPortlet are automatically upgraded from the Web Clipping repository when you run the OmniPortlet for the first time after upgrade.

The first time run of OmniPortlet can be either accessing the OmniPortlet Test Page or displaying an OmniPortlet instance on an application page. The migration process is recorded in the log file of Oracle WebLogic Server.

After the upgrade, in OmniPorlet's `provider.xml`, the `vaultId` tag is marked with the prefix `MIGRATED_FROM_VAULT_ID_old_vault_id`.

If there is any error during application migration, you may need to run the migration procedure again. For example, if application migration fails due to the Web Clipping repository being unavailable, you must ensure that the database is up and running and then migrate your application again.

To re-run the migration procedure for an application that contains an OmniPortlet:

1. From the OmniPorlet's `provider.xml`, remove the `MIGRATED_FROM_VAULT_ ID_old_vault_id` prefix.

2. Restart the OmniPortlet producer.

3. Access the OmniPortlet Test Page by using the following URL format:

   `http://host:port/portalTools/omniPortlet/providers/omniPortlet`

   Where, `host` and `port` refer to the host name and port number of the system where you installed Oracle Portal.

## 4.2 Post-Upgrade Tasks and Information for Oracle BI Discoverer

The following sections describe the post-upgrade tasks you should consider performing after you upgrade to Oracle BI Discoverer 11*g*:

- Upgrading Oracle BI Discoverer Plus OLAP 10g User Privileges to 11g
- About Using the Oracle BI Discoverer End User Layer in Oracle Fusion Middleware 11g
- Configuring Application URLs in Fusion Middleware Control After Upgrading Using the 10g Ports
- Updating Environment Variables for Oracle E-Business Suite 11i and Oracle Business Intelligence Discoverer 10g

## 4.2.1 Upgrading Oracle BI Discoverer Plus OLAP 10*g* User Privileges to 11*g*

After the upgrade to 11*g*, make sure that all your existing Oracle BI Discoverer Plus OLAP users have the proper access privileges to the Oracle BI Discoverer 11*g* Discoverer Catalog.

Oracle BI Discoverer provides command-line utilities to help you authorize new users and to update the privileges of existing users. For more information, see "Using the Discoverer Plus OLAP command line utility to manage the Discoverer Catalog" in the *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Discoverer*.

Refer to the following sections for specific post-upgrade tasks to complete using the command-line utilities:

- Authorizing a New User to Access the Discoverer Catalog
- Updating the Privileges of an Existing Discoverer Catalog User

### 4.2.1.1 Authorizing a New User to Access the Discoverer Catalog

Use the following commands to authorize one or more users so they can access the Discoverer Catalog:

```
java -classpath path_to_d4o_jar_file load .
java -classpath path_to_d4o_jar_file authorize -h hostname -po portname
    -sid database_SID -p d4osyspasswd -u user
```

For example:

```
java -classpath C:\temp\d4o.jar load .
java -classpath C:\temp\d4o.jar authorize -h sys42.example.com -po 1521
    -sid disco_db1 -p nPword432 -u jones
```

In this example, you must run the load command only once before authorizing any number of users. For example, if you want to authorize ten users, run the load command once, and then run the authorize command once for each user.

### 4.2.1.2 Updating the Privileges of an Existing Discoverer Catalog User

To update the user's privileges to access all private and shared folders, use the following command:

```
java -classpath path_to_d4o_jar_file updatePrivileges -h hostname -po portname
    -sid database_SID -p d4osyspasswd -u user
```

For example:

```
java -classpath C:\temp\d4o.jar updatePrivileges -h sys42.example.com -po 1521
    -sid disco_db1 -p nPword432 -u jones
```

In this example, if you provide the -u option, then the privileges will be upgraded only for that user. If you do not provide the -u option, then the privileges will be upgraded for all users.

## 4.2.2 About Using the Oracle BI Discoverer End User Layer in Oracle Fusion Middleware 11*g*

Oracle BI Discoverer 11*g* uses the same End User Layer version (5.1) as Oracle BI Discoverer 10*g* Release 2 (10.1.2).

For more information, see "Creating and maintaining End User Layers" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Business Intelligence Discoverer*.

## 4.2.3 Configuring Application URLs in Fusion Middleware Control After Upgrading Using the 10*g* Ports

If you select the **Use Source Oracle home ports in destination** option while using the Upgrade Assistant to upgrade the Oracle BI Discoverer middle tier, then you must configure the application URLs that appear on the Oracle BI Discoverer Home page in Fusion Middleware Control.

For more information, see "How to configure application URLs displayed on the Fusion Middleware Control Discoverer Home page" in the *Oracle Fusion Middleware Configuration Guide for Oracle Business Intelligence Discoverer*.

## 4.2.4 Updating Environment Variables for Oracle E-Business Suite 11i and Oracle Business Intelligence Discoverer 10g

If you have installed Oracle E-Business Suite 11i and Oracle Business Intelligence Discoverer 10g in the same Oracle Application Server 10g Release 2 (10.1.2) home using the same user, then after upgrading to Oracle BI Discoverer 11g you must complete one of the following tasks depending on your environment to access Oracle Enterprise Manager Fusion Middleware Control, and Oracle BI Discoverer 11g using the WebCache, HTTP Listen, or WLS listen ports.

### 4.2.4.1 Updating the Environment Script

Update the `commEnv.sh` or `setDomainEnv.sh` script as shown in the following example:

```
MW_HOME=/home/oracle/fmw11g_home; export MW_HOME

DOMAIN_HOME=$MW_HOME/user_projects/domains/ClassicDomain; export
DOMAIN_HOME

WL_HOME=$MW_HOME/wlserver_10.3; export WL_HOME

ORACLE_HOME=$MW_HOME/classic_ohome; export ORACLE_HOME

ORACLE_INSTANCE=$MW_HOME/classic_instance; export ORACLE_
INSTANCE
```

You may also want to set your `PATH` environment to avoid using the paths in the commands:

```
PATH=$WL_HOME/server/bin:$DOMAIN_HOME/bin:$ORACLE_
INSTANCE/bin:$PATH; export PATH
```

#### 4.2.4.2 Clearing the Environment Variables

Ensure that you clear the environment variables from Oracle E-Business Suite start up file before setting the environment for Oracle Business Intelligence Discoverer and starting it.

#### 4.2.4.3 Providing Separate User Credentials

If you use the user's profile of Oracle E-Business Suite and Oracle Business Intelligence Discoverer, then you must specify different user credentials.

## 4.3 Post-Upgrade Tasks for Oracle Forms Services

Review the following list of manual tasks that you might have to perform after using the Upgrade Assistant to upgrade Oracle Forms Services 10*g* Release 2 (10.1.2) to Oracle Fusion Middleware 11*g*.

> **Note:** For information on upgrading from Oracle Forms Release 6i, refer to "Upgrading to Oracle Forms Services" in the *Oracle Fusion Middleware Forms Services Deployment Guide*.

Refer to the *Oracle Fusion Middleware Forms Services Deployment Guide* for detailed information about performing these tasks in Oracle Forms Services 11*g*:

- Regenerate the Forms application files: fmx's, mmx's, and plx's to run on Oracle Forms Services 11*g*.

- If you deployed the Oracle Forms Services J2EE applications EAR file (`formsapp.ear`) on multiple OC4J instances for load balancing and high availability purposes, then you deploy them in a similar manner on Oracle WebLogic Server.

  Specifically, you can create additional managed servers and deploy the Oracle Forms Services J2EE application ear file on each server. The ear file is stored in the following location in Oracle Fusion Middleware 11*g*:

  `ORACLE_HOME/forms/j2ee/formsapp.ear`
  For more information on Oracle Forms J2EE ear file redeployment, see *Oracle Fusion Middleware Forms Services Deployment Guide*.

- If you deployed the Oracle Forms Services J2EE custom application ear file (`formsapp.ear`) file to override the context root or Forms servlet alias, then you should perform similar steps in the 11*g* Oracle WebLogic Server domain.

- Manually copy any customizations to the shell scripts in the source Oracle home to the equivalent shell scripts that reside Oracle Fusion Middleware 11*g* Oracle instance directory.

- The Upgrade Assistant copies the FMA utility configuration files (`converter.properties` and `search_replace.properties`) to the Oracle Fusion Middleware 11*g* destination Oracle instance and renames them so they have a `.10.1.2` suffix.

  You can then manually copy the required entries from the `.10.1.2` configuration files into the Oracle Fusion Middleware 11*g* version of these files as needed.

## 4.4 Post-Upgrade Tasks for Oracle Reports

After you upgrade to OracleAS Reports Services 11*g*, review the following sections, which provide information about typical post-upgrade tasks for OracleAS Reports Services users:

- Configuring Security After Upgrade to Oracle Reports 11g

- Additional Oracle Reports Post-Upgrade Tasks

### 4.4.1 Configuring Security After Upgrade to Oracle Reports 11*g*

When you upgrade to Oracle Reports 11*g*, the security configuration is not upgraded. As a result, the security configuration of Oracle Reports 11*g* remains the same as it was before the upgrade.

For information about the security features available in Oracle Reports 11*g* and how to configure them, see "Securing Oracle Reports Services" in the *Oracle Fusion Middleware Publishing Reports to the Web with Oracle Reports Services*.

### 4.4.2 Additional Oracle Reports Post-Upgrade Tasks

The following sections describe some other common post-upgrade tasks to complete after upgrading to OracleAS Reports Services 11*g*:

- Modifying Oracle Reports Shell Scripts After Upgrade

- Modifying Oracle Reports DAT Files After Upgrade

- About the In-process Server Target After Upgrade

- About the Pluggable Reports Components After Upgrade

- Viewing Cached Reports Output Files After Upgrade

#### 4.4.2.1 Modifying Oracle Reports Shell Scripts After Upgrade

Any shell scripts that are stored in the bin directory of the Oracle Reports 10*g* Oracle home, such as `reports.sh`, `rwrun.sh`, and `rwserver.sh` are not upgraded automatically during the upgrade process. Instead, you must change these scripts manually, as needed. After the upgrade, you can find these scripts in the following Oracle Fusion Middleware 11*g* directory:

```
ORACLE_INSTANCE/config/reports/bin
```

#### 4.4.2.2 Modifying Oracle Reports DAT Files After Upgrade

OracleAS Reports Services DAT files are upgraded during the upgrade process. However, if job command entries in the DAT files contain references to old Oracle Home path names or invalid path names, then those jobs will fail. Therefore, you must reschedule any such report jobs.

#### 4.4.2.3 About the In-process Server Target After Upgrade

In OracleAS Reports Services 10*g*, the in-process server target appears in the Oracle Enterprise Manager Application Server Control as `Reports Server`.

However, after you upgrade to OracleAS Reports Services 11*g*, the in-process server does not appear as `Reports server` in Oracle Enterprise Manager Fusion Middleware Control. Instead, it appears as a Reports application, called `reports`, and you can manage the in-process server target and the Reports servlet on the Reports application page.

#### 4.4.2.4 About the Pluggable Reports Components After Upgrade

After upgrade, Reports does not automatically migrate pluggable components that are developed and deployed by the users in OracleAS Reports 10g.

#### 4.4.2.5 Viewing Cached Reports Output Files After Upgrade

Cached Reports output files are not upgraded to Oracle Reports 11*g*.

## 4.5 Post-Upgrade Tasks and Information for the Web Tier Components

The Web tier components (Oracle HTTP Server and Oracle Web Cache) are required for Oracle Portal. For that reason, they are installed and configured automatically when you install and configure Oracle Portal.

Refer to the following sections for information about post-upgrade tasks you must perform after upgrading to Oracle Web Cache 11*g*:

- Resetting the Oracle Web Cache Passwords in Oracle Web Cache and Oracle Portal After Upgrade

- Web Tier Component Post-Upgrade Tasks When Using Oracle Single Sign-On

### 4.5.1 Resetting the Oracle Web Cache Passwords in Oracle Web Cache and Oracle Portal After Upgrade

For Oracle Fusion Middleware 11*g*, the Oracle Web Cache administration and invalidation passwords are saved in the Oracle Fusion Middleware credential store. In past releases, they were stored in the webcache.xml configuration file.

However, the Oracle Web Cache upgrade process is unable to update the passwords in the credential store. These passwords are used not only for Oracle Web Cache monitoring and invalidation, but they are also used by Oracle Portal for internal communications between the two components.

As a result, you should update the Oracle Web Cache passwords in two places as soon as possible after upgrade of your Oracle Portal and Oracle Web Cache components:

- Set the monitoring and invalidation passwords using the Oracle Web Cache management pages in Oracle Enterprise Manager Fusion Middleware Control.

  For more information, see "Configuring Password Security" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Web Cache*.

- Set the Oracle Web Cache invalidation credentials for Oracle Portal so that Oracle Portal uses the same invalidation password as the one you modified in Oracle Web Cache.

  For more information, see "Managing Oracle Web Cache" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal*.

### 4.5.2 Web Tier Component Post-Upgrade Tasks When Using Oracle Single Sign-On

If you are using Oracle Single Sign-On, and you did not select the **Use Source Oracle home ports in destination** option in the Upgrade Assistant when you were upgrading any of your Oracle Forms, Reports, or Discoverer components, then you must perform an additional post-upgrade task.

Specifically, you must register mod_osso with Oracle Single Sign-On and update the port values in the osso.conf file:

1. Run the `ssoreg` script on the Single Sign On host to re-register `mod_osso`:

```
ORACLE_HOME/sso/bin/ssoreg.sh -oracle_home_path ORACLE_HOME
    -config_mod_osso TRUE
    -site_name hostname.com:port_number
    -remote_midtier
    -config_file ORACLE_HOME/Apache/Apache/conf/osso/myosso.conf
    -mod_osso_url http://hostname.com:port_number
```

2. Back up the original `osso.conf` file and copy the new `osso.conf` to the following directory in the upgraded Oracle Fusion Middleware 11*g* instance directory.

   For example, on the UNIX operating system:

```
cd ORACLE_INSTANCE/config/OHS/ohs_instance_name/
mv osso.conf osso.conf.ORIG
cp ORACLE_HOME/Apache/Apache/conf/osso/myosso.conf osso.conf
```

3. Perform one of the following tasks, depending upon whether or not your environment is configured to use Secure Socket Layer (SSL):

   - If you are not using SSL connections, then modify the `ServerName` entry in the Oracle HTTP Server 11*g* `httpd.conf` file by replacing the 10*g* Oracle Web Cache listening port with the 11*g* Oracle Web Cache listening port:

     For example:

```
ServerName staeb56.us.oracle.com:8090
```

   - If you are using SSL connections, then modify the `ServerName` entry in the Oracle HTTP Server 11*g* `ssl.conf` file by replacing the 10*g* Oracle Web Cache listening port with the 11*g* Oracle Web Cache listening port:

     For example:

```
ServerName staeb56.us.oracle.com:8250
```

4. Restart the OPMN in the instance:

```
opmnctl stopall
opmnctl startall
```

### 4.5.3 Additional Web Tier Component Post-Upgrade Tasks

For more information about tasks and information for Oracle HTTP Server and Oracle Web Cache after you upgrade to Oracle Fusion Middleware 11*g*, see "Task 5: Perform Any Required Post-Upgrade Tasks for the Web Tier Components" in the *Oracle Fusion Middleware Upgrade Guide for Java EE*.

# A

# Upgrading an Oracle Portal Repository in a Customer Database

This appendix details the steps for upgrading an Oracle Portal repository stored outside of the OracleAS Metadata Repository.

> **Note:** If the OracleAS Portal instance was originally installed in release 3.0.9 or earlier, or if it was installed using the `ptlasst` utility, then the portal schema resides in a customer database configuration outside the OracleAS Metadata Repository and needs to be upgraded using the steps in this section.

Refer to the following sections for more information:

- General Information About Upgrading Oracle Portal
- Preparing to Upgrade the Oracle Portal Repository in a Customer Database
- Performing the Upgrade of the Oracle Portal Schema in a Customer Database

## A.1 General Information About Upgrading Oracle Portal

General information on upgrading to Oracle Portal, as well as instructions for upgrading from other versions, is provided at:

`http://portalcenter.oracle.com/upgrades`

## A.2 Preparing to Upgrade the Oracle Portal Repository in a Customer Database

The following steps should be executed to prepare for the upgrade:

1. Ensure that the OracleAS Portal repository database is a version supported for Oracle Fusion Middleware 11*g*.

   For more information about upgrading and preparing the database that hosts your schemas, see the *Oracle Fusion Middleware Upgrade Planning Guide*.

2. Upgrade the middle tiers that are using the Oracle Portal Repository to Oracle Oracle Fusion Middleware 11*g*, and test Oracle Portal using these middle tiers.

   Perform this step for all middle tiers that are associated with the OracleAS Portal repository being upgraded. For instructions, refer to Chapter 3.6.2, "Task 6b: Upgrade the Oracle Portal, Forms, Reports, and Discoverer Middle Tiers".

## A.3 Performing the Upgrade of the Oracle Portal Schema in a Customer Database

To upgrade the portal schema residing in a customer database, you must use the `upgrade.bat` (Windows) or `upgrade` (UNIX) script. Perform the following steps to upgrade the portal schema residing in a customer database:

1. Set the `ORACLE_HOME` environment variable to the Oracle home of the midtier.

2. Add the Transparent Network Services (TNS) entry of the database containing portal schema to `Instance_Home\config` in Windows and `Instance_Home/config` in UNIX.

3. Set the `TNS_ADMIN` environment variable to the following location: `INSTANCE_Home/config` (UNIX).

4. Ensure that you are able to connect to database using portal schema.

5. Verify if you can connect to the portal schema in the database Oracle home by specifying the schema password and the TNS name using SQL*Plus.

   For example in UNIX:

   ```
   sqlplus portal/portal@orcl
   ```

6. Change the directory to `ORACLE_HOME/upgrade/portal/admin/plsql` (UNIX).

7. Stop all Oracle Fusion middleware services in the middle-tier Oracle homes that are associated with the portal schema being upgraded.

   For this, stop the WLS_PORTAL through the Oracle WebLogic Server Administration Console and run `INSTANCE_HOME/bin/opmnctl stopall` (UNIX).

8. Verify that the Oracle Internet Directory associated with the portal schema is up and running.

9. Run the upgrade script in precheck mode until there are no errors found.

   On UNIX, run the script as follows:

   ```
   ORACLE_HOME/upgrade/portal/admin/plsql/upgrade -precheck
   ```

   When `-precheck` is specified, only the pre-upgrade checks are done and the upgrade exits after that. In this mode, the upgrade is not immediately terminated if a precheck fails. Instead, the errors for all prechecks are consolidated in the `upgrade.log` file.

   This file is generated in the following directory:

   ```
   ORACLE_HOME/upgrade/portal/admin/plsql
   ```

   Look at the end of the log file to see a list of checks that failed. Run the upgrade in this mode until none of the prechecks fails. In this mode, the schema is not altered, so restoring from your backup is not necessary between runs.

   Look up any errors found in the precheck log file. Contact Oracle Support Services for any errors that are not documented or that cannot be resolved by following documented actions.

10. After resolving all warnings and errors from the `precheck.log` file, run the upgrade script without any parameters.

    On UNIX, run the script as follows:

```
ORACLE_HOME/upgrade/portal/admin/plsql/upgrade
```

The script prompts you for information about the system setup. Your answers are echoed for verification at the end of the script. However, if you discover that you have entered incorrect information before the end of the script, then you can exit before any changes are made by answering n to the last script inquiry.

The following are the questions from the script. Default answers to the questions are given in brackets.

- `Have you backed up your database (y|n)? [y]:`

  If you have not backed up the database, then answer n, back up the database, and restart the script. If you have backed up the database, then answer y.

- `Enter the name of the schema you would like to upgrade [portal]:`

  If the schema name is different from the default OracleAS Infrastructure 10*g* installation schema name of `portal`, then enter the schema name.

- `Enter the password of the schema you would like to upgrade [portal]:`

  If the password is not the same as the schema name, then enter the portal schema password.

- `Enter the password for the SYS user of your database [change_on_install]:`

  If the password is not `change_on_install`, then enter the database `SYS` password.

- `Enter the TNS connect string to connect to the database [orcl]:`

  Provide the TNS connect string. This can be found in the `INSTANCE_HOME/config/tnsnames.ora` file (UNIX).

11. When the script is complete, examine the upgrade log files in the current directory to make sure there are no errors reported at the end.

12. Now start the midtiers associated with this repository. Check that portal is accessible.

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