## Contents

**Preface**

Audience ................................................................................................................................. vii
Documentation Accessibility ................................................................................................. viii
Related Documents ............................................................................................................... viii
Conventions .......................................................................................................................... ix

### Part I  Installation

1 **Installing OracleAS Portal Release 10.1.4**
   1.1 Installing Oracle Application Server Release 10.1.2.0.2 ........................................... 1-1
   1.2 Upgrading to OracleAS Portal Release 10.1.4 from a Fresh Installation ................. 1-2
   1.2.1 Performing Pre-Upgrade Tasks ............................................................................. 1-2
   1.2.1.1 Stopping All Middle-Tier Instances................................................................. 1-2
   1.2.1.2 Ensuring That Oracle Internet Directory and Database Processes Are Running 1-3
   1.2.2 Upgrading OracleAS Portal .................................................................................. 1-3
   1.2.2.1 Performing the upgrade ................................................................................... 1-4
   1.2.2.2 Reviewing the Upgrade Log File ...................................................................... 1-6
   1.2.2.3 Starting All Middle Tiers ................................................................................ 1-8
   1.2.2.4 Accessing the Upgraded OracleAS Portal .................................................... 1-8
   1.2.3 Components That Require Post-Upgrade Tasks .................................................. 1-9

### Part II  Upgrade

2 **Preparing to Upgrade**
   2.1 Understanding Oracle Application Server Portal Upgrade ................................. 2-1
   2.2 Verifying System Requirements ............................................................................. 2-1
   2.2.1 Supported Upgrade Paths .................................................................................... 2-2
   2.2.2 Supported Database Releases .............................................................................. 2-2
   2.3 Performing Pre-Upgrade Tasks ............................................................................. 2-2
   2.3.1 Backing Up the Database .................................................................................... 2-2
   2.3.2 Stopping All Middle-Tier Instances ................................................................... 2-3
   2.3.3 Ensuring That Oracle Internet Directory and Database Processes Are Running 2-3
   2.3.4 Assessing the Impact of an OracleAS Portal Upgrade ....................................... 2-4
### 3 Upgrading to OracleAS Portal Release 10.1.4

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Performing the Upgrade</td>
<td>3-1</td>
</tr>
<tr>
<td>3.1.1 Upgrading the Portal Schema in an OracleAS Metadata Repository</td>
<td>3-1</td>
</tr>
<tr>
<td>3.1.2 Upgrading the Portal Schema in a Customer Database</td>
<td>3-4</td>
</tr>
<tr>
<td>3.2 Reviewing the Upgrade Log File</td>
<td>3-6</td>
</tr>
<tr>
<td>3.3 Backing Up the Database That Contains the Upgraded Portal Schema</td>
<td>3-9</td>
</tr>
<tr>
<td>3.4 Starting All Middle Tiers</td>
<td>3-9</td>
</tr>
<tr>
<td>3.5 Accessing the Upgraded OracleAS Portal</td>
<td>3-9</td>
</tr>
</tbody>
</table>

### 4 Performing Post-Upgrade Tasks

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Required Tasks</td>
<td>4-1</td>
</tr>
<tr>
<td>4.1.1 Updating to the New URL Format and Correcting Invalid Links</td>
<td>4-1</td>
</tr>
<tr>
<td>4.1.2 Removing Obsolete Substitution Tags in HTML Page Skins</td>
<td>4-5</td>
</tr>
<tr>
<td>4.1.3 Reregistering OracleAS Portal as a Content Source in Oracle Ultra Search</td>
<td>4-5</td>
</tr>
<tr>
<td>4.1.3.1 Deleting the Old OracleAS Portal Content Source</td>
<td>4-5</td>
</tr>
<tr>
<td>4.1.3.2 Registering the Upgraded Portal Instance as an Oracle Ultra Search Content Source</td>
<td>4-6</td>
</tr>
<tr>
<td>4.1.4 Scheduling a Full Recrawl Using Oracle Ultra Search</td>
<td>4-6</td>
</tr>
<tr>
<td>4.1.5 Updating the OracleAS Portal URL in the OracleAS Wireless Service Definition</td>
<td>4-6</td>
</tr>
<tr>
<td>4.1.6 Reenabling Portal Export and Import</td>
<td>4-7</td>
</tr>
<tr>
<td>4.1.6.1 Reviewing the Log Files</td>
<td>4-9</td>
</tr>
<tr>
<td>4.1.7 Updating Performance Reporting</td>
<td>4-9</td>
</tr>
<tr>
<td>4.1.8 Changing the Category and Perspective Names</td>
<td>4-9</td>
</tr>
<tr>
<td>4.1.9 Enabling Time Monitoring of Queue Messages</td>
<td>4-10</td>
</tr>
<tr>
<td>4.2 Optional Tasks</td>
<td>4-10</td>
</tr>
<tr>
<td>4.2.1 Moving the Portlet Repository to the New Format</td>
<td>4-10</td>
</tr>
<tr>
<td>4.2.2 Deleting the Community News Portlet</td>
<td>4-11</td>
</tr>
<tr>
<td>4.2.3 Configuring Oracle Text Indexes to Synchronize on Commit</td>
<td>4-11</td>
</tr>
</tbody>
</table>

### 5 Obsolete Features and Usage Changes

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Obsolete Features in OracleAS Portal Release 10.1.4</td>
<td>5-1</td>
</tr>
<tr>
<td>5.1.1 URL Portlet and XML Portlet</td>
<td>5-1</td>
</tr>
<tr>
<td>5.1.2 User Interface Templates</td>
<td>5-1</td>
</tr>
<tr>
<td>5.1.3 Obsolete Substitution Tags for HTML Templates</td>
<td>5-1</td>
</tr>
<tr>
<td>5.2 Usage Changes in OracleAS Portal Release 10.1.4</td>
<td>5-2</td>
</tr>
<tr>
<td>5.2.1 Introduction of the HTML Output Compatibility Mode Switch</td>
<td>5-2</td>
</tr>
<tr>
<td>5.2.2 URL Changes</td>
<td>5-3</td>
</tr>
<tr>
<td>5.2.2.1 GUID Displayed in URLs for Text and PL/SQL Items</td>
<td>5-3</td>
</tr>
<tr>
<td>5.2.3 Changes in Caching</td>
<td>5-4</td>
</tr>
<tr>
<td>5.2.4 Change in Portal Service Monitoring Link</td>
<td>5-4</td>
</tr>
</tbody>
</table>

### Part III Appendix

#### A OracleAS Portal Upgrade Error Messages

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1 Numbered Error Messages (WWU-00001 to WWU-24999 and WWU-26004 to WWU-26007)</td>
<td>A-1</td>
</tr>
</tbody>
</table>
A.2 Numbered Warning Messages (WWU-25000 to WWU-26001)................................. A-7
A.3 Unnumbered Error Messages .................................................................................. A-8

Index
List of Tables

1–1  Summary of the Required Upgrade Command-Line Arguments ................................. 1-4
1–2  Generated Files ............................................................................................................. 1-8
1–3  OracleAS Portal Access URL Parameters ................................................................. 1-8
3–1  Summary of the Required Upgrade Command-Line Arguments ............................ 3-2
3–2  Generated Files ............................................................................................................. 3-8
3–3  Commands Used for Shutting Down the Database .................................................... 3-9
3–4  OracleAS Portal Access URL Parameters ................................................................. 3-10
4–1  Changes to Path-Based URLs ...................................................................................... 4-4
This guide describes how to install a new Oracle Application Server Portal 10g Release 2 (10.1.4) instance and how to upgrade an existing OracleAS Portal repository to release 10.1.4.

This guide is classified into two parts and depending on whether you are installing OracleAS Portal for the first time, or, are upgrading from an earlier release of OracleAS Portal, refer to the relevant part in the guide as follows:

- **Part I, "Installation"**
  Refer to this part in the guide if you are installing an OracleAS Portal instance for the first time.

- **Part II, "Upgrade"**
  Refer to this part in the guide if you are upgrading from an earlier release of OracleAS Portal.

---

**Caution:** Ensure that you are referring to the appropriate part in the guide. If you perform an upgrade by following instructions that are not relevant to your setup, then the upgrade may not complete successfully.

You will find the *Oracle Application Server Portal Installation and Upgrade Guide* on the Oracle Portal documentation page of the Oracle Technology Network:


---

**Note:** For the portable document format (PDF) version of this manual, when a URL breaks onto two lines, the full URL data is not sent to the browser when you click it. To get to the correct target of any URL included in the PDF, copy and paste the URL into your browser’s address field. In the HTML version of this manual, you can click a link to directly display its target in your browser.

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**Audience**

This guide is for portal administrators who are responsible for installing, maintaining, and upgrading OracleAS Portal instances. It is assumed that the readers of this guide have knowledge of OracleAS Portal system administration and configuration.
Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at

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Related Documents

For more information, refer to the following manuals in the OracleAS Portal documentation set:

- Oracle Application Server Portal Release Notes
- Oracle Application Server Portal Configuration Guide
- Oracle Application Server Portal User’s Guide
- Oracle Application Server Portal Developer’s Guide

Note: A complete glossary of OracleAS Portal-related terminology can be found in the Oracle Application Server Portal User’s Guide.

You can find all documentation related to OracleAS Portal, including the release notes, on the OracleAS Portal documentation page of the Oracle Technology Network (OTN):


See Also: Oracle Application Server Upgrade and Compatibility Guide in the release 10.1.2 documentation library for your platform on OTN, http://www.oracle.com/technology/.
Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated</td>
</tr>
<tr>
<td></td>
<td>with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables</td>
</tr>
<tr>
<td></td>
<td>for which you supply particular values.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates commands within a paragraph, URLs, code</td>
</tr>
<tr>
<td></td>
<td>in examples, text that appears on the screen, or text that you enter.</td>
</tr>
<tr>
<td><strong>IDENTITY_</strong></td>
<td>The Oracle Identity Management home directory. It will be same as</td>
</tr>
<tr>
<td>MANAGEMENT_**</td>
<td>OracleAS Metadata Repository home in case of a colocated OracleAS</td>
</tr>
<tr>
<td><strong>ORACLE_HOME</strong></td>
<td>Metadata Repository and Oracle Identity Management setup.</td>
</tr>
<tr>
<td><strong>METADATA_REP_</strong></td>
<td>The OracleAS Metadata Repository home directory.</td>
</tr>
<tr>
<td><strong>ORACLE_HOME</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MID_TIER_ORACLE_</strong></td>
<td>The Oracle Application Server middle tier home directory.</td>
</tr>
<tr>
<td><strong>HOME</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CD_ROOT</strong></td>
<td>The directory where the Oracle Application Server Portal Upgrade</td>
</tr>
<tr>
<td></td>
<td>CD-ROM is mounted.</td>
</tr>
</tbody>
</table>
Refer to this part in the guide if you are installing OracleAS Portal for the first time and want to install OracleAS Portal release 10.1.4.

**Note:** Do not perform the tasks described in Part II, "Upgrade" if you are following the procedures described in this part to install OracleAS Portal release 10.1.4.

Part I contains the following chapter:

- Chapter 1, "Installing OracleAS Portal Release 10.1.4"
This chapter is different from the upgrade chapters discussed later in this guide because it makes the assumption that you are working with a fresh installation and therefore, can skip some steps. Follow this chapter only if you are completing a fresh installation.

This chapter provides instructions to install Oracle Application Server Portal 10g Release 2 (10.1.4).

**Note:** The installation procedure for OracleAS Portal release 10.1.4 is different from the installation procedure in earlier releases of Oracle Application Server, for example, release 10.1.2.0.2. This is because a direct installation of Oracle Application Server Portal 10g Release 2 (10.1.4) is not possible.

The Oracle Application Server Portal Upgrade CD-ROM, which is shipped with Oracle Application Server 10g Release 2 (10.1.2.0.2), enables you to only upgrade the portal repository from release 10.1.2.0.2 to release 10.1.4. Therefore, if you are installing an Oracle Application Server Portal and Wireless instance for the first time and want to leverage the features in OracleAS Portal release 10.1.4, you must first install Oracle Application Server 10g Release 2 (10.1.2.0.2), and then upgrade the portal repository to release 10.1.4.

This chapter contains the following sections:

- Section 1.1, "Installing Oracle Application Server Release 10.1.2.0.2"
- Section 1.2, "Upgrading to OracleAS Portal Release 10.1.4 from a Fresh Installation"

### 1.1 Installing Oracle Application Server Release 10.1.2.0.2

To install Oracle Application Server release 10.1.2.0.2, refer to the *Oracle Application Server Quick Installation Guide* in the Oracle Application Server release 10.1.2 documentation library for your platform on Oracle Technology Network (OTN). To view this guide, perform the following steps:

1. Access the following URL:
   
   http://www.oracle.com/technology/documentation/appserver1012.html
1.2 Upgrading to OracleAS Portal Release 10.1.4 from a Fresh Installation

To upgrade the portal schema to release 10.1.4, you must perform the following tasks:

- Section 1.2.1, "Performing Pre-Upgrade Tasks"
- Section 1.2.2, "Upgrading OracleAS Portal"
- Section 1.2.3, "Components That Require Post-Upgrade Tasks"

1.2.1 Performing Pre-Upgrade Tasks

To ensure a successful upgrade to release 10.1.4, you must perform certain pre-upgrade tasks, which include the following:

- Section 1.2.1.1, "Stopping All Middle-Tier Instances"
- Section 1.2.1.2, "Ensuring That Oracle Internet Directory and Database Processes Are Running”

1.2.1.1 Stopping All Middle-Tier Instances

Before you perform the upgrade, you must stop all processes associated with each middle tier that uses the portal schema being upgraded. There are two ways to view all the Oracle Application Server instances that use the portal schema:

- Display the Farm page in the Application Server Control Console.

**See Also:** "Introduction to Administration Tools” in the Oracle Application Server Administrator’s Guide for more information about the Application Server Control Console Farm page.

- Use the following Distributed Configuration Management command in the Oracle home of any middle-tier or Oracle Identity Management instance that belongs to the farm:

  `MID_TIER_ORACLE_HOME/dcm/bin/dcmctl listinstances`

To stop all the middle-tier processes, perform the following tasks:
1. Click **Stop All** on the Application Server Control Console home page for each instance, or use the following Oracle Process Manager and Notification Server (OPMN) command within the Oracle home of each instance:

   ```
   MID_TIER_ORACLE_HOME/opmn/bin/opmnctl stopall
   ```

2. Stop the Application Server Control Console by using the following command:

   ```
   MID_TIER_ORACLE_HOME/bin/emctl stop iasconsole
   ```

   On Windows, also referred to as Windows, you can also stop OPMN and its managed processes and the Application Server Control Console from the Services control panel.

   **See Also:**
   - The *Distributed Configuration Management Administrator’s Guide* for more information about `dcmctl` commands.
   - "Starting and Stopping the Application Server" in the *Oracle Application Server Administrator’s Guide* for information about stopping all the processes in a release 10.1.2.0.2 middle tier.

### 1.2.1.2 Ensuring That Oracle Internet Directory and Database Processes Are Running

Before you perform the upgrade, you must ensure that the following processes are running:

- The OracleAS Metadata Repository database that hosts the portal schema.
- The listener for the OracleAS Metadata Repository database.
- The Oracle Internet Directory instance where the portal schema is registered.

Log in to the Application Server Control Console of the Oracle Identity Management instance to verify that the necessary processes are running and that the required components are configured properly. For example, you can use the Application Server Control Console to verify that the Farm page is displayed correctly and that the Oracle Internet Directory and OracleAS Single Sign-On components are up and running.

When you log in to the Application Server Control Console of the Oracle Identity Management instance, the Application Server home page is displayed. On this page, click **Ports** to view a list of the ports currently used by the Oracle Application Server instance and to verify that the components are configured properly.

   **See Also:** "Introduction to Administration Tools" in the *Oracle Application Server Administrator’s Guide* for more information about the Application Server Control Console Farm page.

### 1.2.2 Upgrading OracleAS Portal

This section explains the procedure to upgrade OracleAS Portal to release 10.1.4. To upgrade the portal schema, perform the following steps:

- Section 1.2.2.1, "Performing the upgrade"
- Section 1.2.2.2, "Reviewing the Upgrade Log File"
- Section 1.2.2.3, "Starting All Middle Tiers"
- Section 1.2.2.4, "Accessing the Upgraded OracleAS Portal"
1.2.2.1 Performing the upgrade

After performing the tasks described in Section 1.2.1, "Performing Pre-Upgrade Tasks", you can use the Oracle Application Server Portal Upgrade CD-ROM to upgrade the portal schema in an OracleAS Metadata Repository. To perform an upgrade, you must run the mrua.bat (Windows) or mrua.sh (UNIX) script.

**Note:** You must run the upgrade on the computer that hosts the portal schema that you are about to upgrade.

To run the upgrade, perform the following steps:

1. Mount the Oracle Application Server Portal Upgrade CD–ROM.
2. Start the upgrade by using the following command with the required arguments, which are described in Table 1–1:

   ```
   CD_ROOT/mrua/<mrua_script>
   -oracle_home <metadata_repository_oracle_home>
   -oid_host <oracle_internet_directory_host>
   -oid_ssl_port <oracle_internet_directory_ssl_port>
   ```

   In this command, `<mrua_script>` can be mrua.sh or mrua.bat.

   An example for running the upgrade is as follows:

   On UNIX:
   ```
   mrua.sh -oracle_home /dua1/oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130
   ```

   On Windows:
   ```
   mrua.bat -oracle_home d:\oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130
   ```

**Table 1–1 Summary of the Required Upgrade Command-Line Arguments**

<table>
<thead>
<tr>
<th>Arguments</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-oracle_home</td>
<td>The OracleAS Metadata Repository home directory.</td>
</tr>
<tr>
<td>-oid_host</td>
<td>The name of the computer that hosts the Oracle Internet Directory</td>
</tr>
<tr>
<td>-oid_ssl_port</td>
<td>The secure port for Oracle Internet Directory.</td>
</tr>
</tbody>
</table>

   For purposes of upgrading the OracleAS Metadata Repository, you must use a secure connection to Oracle Internet Directory.

**Note:** The values of the -oid_host and -oid_ssl_port arguments must match the values of the corresponding properties defined in the following configuration file in the Oracle Identity Management home directory:

   `IDENTITY_MANAGEMENT_ORACLE_HOME/config/ias.properties`

   The corresponding properties in the ias.properties file are as shown in the following example:

   ```
   OIDhost=dserv1.acme.com
   OIDsslport=3130
   ```
3. When you are prompted, enter the password for the database SYS user account.
   You must provide the SYS password in order to access and modify the portal schema in the database.

4. When you are prompted, enter the Oracle Internet Directory cn=orcladmin administrator password.
   You must provide the Oracle Internet Directory password in order to connect to the Oracle Internet Directory where the OracleAS Metadata Repository is registered.

   After you provide the required passwords, the upgrade script checks if Oracle Internet Directory is running and does one of the following:
   ■ If Oracle Internet Directory is down or unavailable, then the upgrade script displays an error message and exits.
   ■ If Oracle Internet Directory is up and running, then the upgrade script connects to the directory service and obtains additional information required to upgrade the portal schema.

   If multiple instances of the OracleAS Metadata Repository are registered with the directory, then the upgrade script prompts you to select the OracleAS Metadata Repository that you want to upgrade.

   You can upgrade only one OracleAS Metadata Repository at a time.

5. If you are prompted to select an OracleAS Metadata Repository, then select the OracleAS Metadata Repository on the local computer that corresponds to the value of the -oracle_home parameter.

---

**Note:** The upgrade script first performs the pre-upgrade checks, and then proceeds with the actual upgrade. The upgrade is not immediately terminated if a single precheck fails. Instead, the errors for all prechecks are consolidated in the precheck.log file. This file is generated in the METADATA_REP_ORACLE_HOME/upgrade/temp/portal directory. Look at the end of the log file to see a list of checks that failed. Run the upgrade again until none of the prechecks fail. If the upgrade did not complete because of precheck errors, then the schema is not altered, and therefore, restoring from your backup is not necessary between runs.

Look up any errors found in the precheck log file. Refer to Appendix A, "OracleAS Portal Upgrade Error Messages" for information about upgrade errors. Contact Oracle Support Services for any errors that are not documented or that cannot be resolved by following documented actions.

---

The upgrade script starts the upgrade process. As each step in the upgrade is performed, information messages appear on the screen to show the progress of the upgrade.

Example 1–1 shows an example of a typical upgrade session.

**Example 1–1 Sample Output from an Upgrade Session**

```
mrua.sh -oracle_home /dua1/oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130
Executing mrua.pl
Running on UNIX
```
OracleAS Metadata Repository Upgrade Assistant 10.1.4.0.0

Enter the password for SYS:
Enter the password for cn=orcladmin:

Upgrading the OracleAS Metadata Repository to release 10.1.4

Calling upgrade plugin for MRUA
Component upgraded successfully  MRUA

Calling upgrade plugin for PORTAL
Component upgraded successfully  PORTAL

Calling upgrade plugin for MRC
Component upgraded successfully  MRC

SUCCESS: All OracleAS plug-ins report successful upgrade

Finished mrua.pl

---

Note: The MRUA and MRC plugins shown here are the Metadata Repository Upgrade Assistant components and not Oracle Application Server components. During an upgrade to 10.1.4, only the portal component and the required MRUA framework components in Oracle Application Server 10g Release 2 (10.1.2.0.2) are upgraded to 10.1.4.

1.2.2.2 Reviewing the Upgrade Log File

Once the upgrade is complete, check the upgrade log files for any errors, by performing the following steps:

1. Locate the upgrade log file. The default name for the upgrade log file is upgrade.log and it is located in the following directory:

   METADATA_REP_ORACLE_HOME/upgrade/temp/portal

   Unless the upgrade terminates abruptly before finishing, the errors in the log file are sent to standard output and are also included in a separate section at the end of the log file. Use the line numbers in the section at the end of the log file to search for the errors when they occurred earlier in the file. In addition to the log file, errors are also summarized in a file named upgrade.err, and warnings are summarized in a file named upgrade.wrn. These files are located in the following directory:

   METADATA_REP_ORACLE_HOME/upgrade/temp/portal/tmp

2. Open the upgrade log file with a text editor.

3. Look up the errors and warnings described in the log file.

4. Refer to Appendix A, "OracleAS Portal Upgrade Error Messages" and resolve any errors and warnings for which the workarounds have been documented. Most errors require that you restore the repository from backup, resolve the problem, and run another upgrade.
5. Contact Oracle Support Services for any errors that are not documented.
6. Continue this process until all errors are resolved.

The following example shows the end of the log file of a successful upgrade. Notice the Upgrade completed successfully message and the lack of error messages.

```plaintext
### Show errors and warnings
Step started at Tue Jul 12 04:17:22 2005
### WARNING: WWU-26002: Upgrade completed with the following warnings:
...
### Upgrade completed successfully
...
Upgrade Ended at Tue Jul 12 04:17:31 2005
```

The following examples show the last few lines of the log files of unsuccessful upgrades:

Example 1: Premature termination with the error section:

```plaintext
### ERROR: WWU-01013: Upgrade terminated with the following errors:
### 1278 : EXP-00003: no storage definition found for segment(9, 10251)
### 1368 : ERROR: Exception Executing Script
upg/common/precln/../../frwk/export.pl :
...
```

Example 2: Standard termination, but with errors found (notice the line numbers preceding each error line):

```plaintext
### ERROR: WWU-01012: Upgrade completed with the following errors:
### 8503:ERROR at line 1:
### 8504 : ORA-20000:
### 8505 : ORA-06512: at "UPGR309.WWPOF", line 440
...
Upgrade Ended at Fri Jul  1 04:28:08 2005
```

**Note:** If an error occurred while performing pre-upgrade checks, that is, if an error is logged in the precheck.log file, then it is not necessary to restore the repository from your backup. This is because, while performing the prechecks, the schema is not altered.

If an error occurred while performing the upgrade, that is, if an error is logged in the upgrade.log file, then you must restore the repository from backup.

**Caution:** You cannot run OracleAS Portal until you have completed a successful upgrade. A successful upgrade has zero errors in the upgrade log file, upgrade.log.
Table 1–2 describes the location and contents of the different log files.

<table>
<thead>
<tr>
<th>Name of File</th>
<th>Location of File</th>
<th>Contents and Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>precheck.log</td>
<td>METADATA_REP_ ORACLE_HOME/upgrade/temp/portal</td>
<td>Contains information that was logged while performing prechecks during an upgrade. Errors are summarized at the end of the log file.</td>
</tr>
<tr>
<td>upgrade.log</td>
<td>METADATA_REP_ ORACLE_HOME/upgrade/temp/portal</td>
<td>Contains all the logged information including errors, warnings, and details. Errors are summarized at the end of the log file.</td>
</tr>
<tr>
<td>upgrade.err</td>
<td>METADATA_REP_ ORACLE_HOME/upgrade/temp/portal/tmp</td>
<td>Contains a summary of the error messages from the end of the upgrade.log file.</td>
</tr>
<tr>
<td>upgrade.wrn</td>
<td>METADATA_REP_ ORACLE_HOME/upgrade/temp/portal/tmp</td>
<td>Contains a summary of the warning messages from the end of the upgrade.log file.</td>
</tr>
</tbody>
</table>

1.2.2.3 Starting All Middle Tiers

After the upgrade is completed successfully, start each middle tier that is using the upgraded OracleAS Portal instance by performing the following steps:

1. Start OPMN and its managed processes by using the following command:

   MIDDLE_TIER_ORACLE_HOME/opmn/bin/opmnctl startall

2. Start the Application Server Control Console using the following command:

   MIDDLE_TIER_ORACLE_HOME/bin/emctl start iasconsole

On Windows, you can also start OPMN and its managed processes and the Application Server Control Console from the Services control panel.

1.2.2.4 Accessing the Upgraded OracleAS Portal

If the upgrade is completed successfully, then you are ready to access the upgraded OracleAS Portal instance.

Open a browser and specify the URL to access OracleAS Portal in the following format:

http://<host>:<port>/portal/pls/portal

Table 1–3 OracleAS Portal Access URL Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>host</td>
<td>The computer on which you installed OracleAS Portal. Specify the host name and the fully qualified domain name, for example, host.domain.com. This name must also match the ServerName parameter in the configuration file, httpd.conf, located in the following directory: MIDDLE_TIER_ORACLE_HOME/Apache/Apache/conf</td>
</tr>
<tr>
<td>port</td>
<td>The port number to access OracleAS Portal. Typically, this is the OracleAS Web Cache listen port of the middle tier.</td>
</tr>
</tbody>
</table>
1.2.3 Components That Require Post-Upgrade Tasks

After performing the upgrade, if you plan to use Oracle Application Server Wireless and Oracle Ultra Search along with OracleAS Portal, then you must perform some configuration tasks before you can use these components. Refer to the following documentation for the tasks to be performed:


Refer to this part in the guide if you are upgrading from an earlier release of OracleAS Portal to release 10.1.4.

Part II contains the following chapters:

- Chapter 2, "Preparing to Upgrade"
- Chapter 3, "Upgrading to OracleAS Portal Release 10.1.4"
- Chapter 4, "Performing Post-Upgrade Tasks"
- Chapter 5, "Obsolete Features and Usage Changes"
This chapter gives a brief introduction to Oracle Application Server Portal Upgrade 10g Release 2 (10.1.4), describes the prerequisites for upgrading, and includes instructions to prepare your system for a successful upgrade.

The following topics are discussed in this chapter:

- Section 2.1, “Understanding Oracle Application Server Portal Upgrade”
- Section 2.2, "Verifying System Requirements"
- Section 2.3, "Performing Pre-Upgrade Tasks"

### 2.1 Understanding Oracle Application Server Portal Upgrade

The Oracle Application Server Portal Upgrade can be applied to Oracle Application Server 10g Enterprise Edition, Oracle Application Server 10g Standard Edition, and Oracle Application Server 10g Standard Edition One.

Oracle Application Server Portal Upgrade is a portal repository only upgrade and can be applied when the portal schema resides either in the OracleAS Metadata Repository, or in a customer database configuration outside the OracleAS Metadata Repository.

**Note:** If the OracleAS Portal instance was originally installed as 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.

In earlier releases of Oracle Application Server, the Metadata Repository Upgrade Assistant (MRUA) was used to upgrade the Oracle Application Server component schemas in the OracleAS Metadata Repository. Oracle Application Server Portal Upgrade uses the MRUA technology, but when applied to the OracleAS Metadata Repository, the software upgrades just the portal component and the required MRUA framework components.

Oracle Application Server Portal Upgrade 10g Release 2 (10.1.4) is shipped as a separate CD-ROM.

By applying the software, the portal component is upgraded to release 10.1.4.

### 2.2 Verifying System Requirements

Verify that your system meets the requirements discussed in the following sections.
2.2.1 Supported Upgrade Paths

The Oracle Application Server Portal Upgrade 10g Release 2 (10.1.4) can be applied to the following:

- Oracle Application Server 10g Release 2 (10.1.2.0.2)
- Oracle Application Server 10g Release 2 (10.1.2.1.0)

---

**Note:** If you are running Oracle Application Server 10g Release 2 (10.1.2.0.0) or Oracle Application Server 10g Release 2 (10.1.2.0.1) Standard Edition One, then apply the Oracle Application Server 10.1.2.1 patch before applying Oracle Application Server Portal Upgrade.

Check OracleMetalink for availability of the Oracle Application Server 10.1.2.1 patch for your platform at http://metalink.oracle.com

---

2.2.2 Supported Database Releases

The portal schema may be residing in an OracleAS Metadata Repository, or in a customer database. The database in which the portal schema resides must be one of the following supported releases:

- Oracle Database 10g (10.1.0.4.2) or later
- Oracle9i Database Release 2 (9.2.0.7) or later

2.3 Performing Pre-Upgrade Tasks

To ensure a successful upgrade to release 10.1.4, you must perform certain pre-upgrade tasks, which include the following:

- Section 2.3.1, "Backing Up the Database"
- Section 2.3.2, "Stopping All Middle-Tier Instances"
- Section 2.3.3, "Ensuring That Oracle Internet Directory and Database Processes Are Running"
- Section 2.3.4, "Assessing the Impact of an OracleAS Portal Upgrade"

2.3.1 Backing Up the Database

Back up the database that hosts the OracleAS Metadata Repository before and after upgrading OracleAS Portal. If OracleAS Portal was installed on a customer database and not in the OracleAS Metadata Repository, then back up the database that hosts the portal schema.

During an upgrade, only the portal schema is changed. Application components, that is the database providers, are generated in their own schemas. Therefore, ensure that you back up the portal instance that you are upgrading. This backup will allow you to restore the database to its original state, if necessary. The OracleAS Portal-specific schemas are as follows:

- OracleAS Portal Schema (for example, PORTAL)
- OracleAS Portal Demo Schema (for example, PORTAL_DEMO)
- OracleAS Portal Public Schema (for example, PORTAL_PUBLIC)
Performing Pre-Upgrade Tasks

There are several ways to perform a backup. Consult an experienced database administrator, or refer to Oracle Database documentation for further information about the backup and recovery procedures for the database.

See Also: The Oracle Database Backup and Recovery Basics manual in the Oracle Database documentation library for release, for information and guidelines about backing up Oracle Database.

2.3.2 Stopping All Middle-Tier Instances

Before you perform the upgrade, you must stop all processes associated with each middle tier that uses the portal schema being upgraded. Note that at this point in the upgrade process, as a prerequisite for running the portal upgrade, all the middle tier instances must either be at release 10.1.2.0.2 or release 10.1.2.1.0. There are two ways to view all the Oracle Application Server instances that use the portal schema:

- Display the Farm page in the Application Server Control Console.

See Also: "Introduction to Administration Tools” in the Oracle Application Server Administrator’s Guide for more information about the Application Server Control Console Farm page.

- Use the following Distributed Configuration Management command in the Oracle home of any middle-tier or Oracle Identity Management instance that belongs to the farm:

  \[ \text{MID\_TIER\_ORACLE\_HOME/dcm/bin/dcmctl listinstances} \]

To stop all the middle-tier processes, perform the following tasks:

1. Click Stop All on the Application Server Control Console home page for each instance, or use the following Oracle Process Manager and Notification Server (OPMN) command within the Oracle home of each instance:

  \[ \text{MID\_TIER\_ORACLE\_HOME/opmn/bin/opmnctl stopall} \]

2. Stop the Application Server Control Console by using the following command:

  \[ \text{MID\_TIER\_ORACLE\_HOME/bin/emctl stop iasconsole} \]

On Windows, you can also stop OPMN and its managed processes and the Application Server Control Console from the Services control panel.

See Also:

- The Distributed Configuration Management Administrator’s Guide for more information about dcmctl commands.
- "Starting and Stopping the Application Server” in the Oracle Application Server Administrator’s Guide for information about stopping all the processes in a release 10.1.2.0.2 or release 10.1.2.1.0 middle tier.

2.3.3 Ensuring That Oracle Internet Directory and Database Processes Are Running

Before you perform the upgrade, you must ensure that the following processes are running:
Performing Pre-Upgrade Tasks

- The database that hosts the portal schema. This can be an OracleAS Metadata Repository database or a customer database.

- The listener for the OracleAS Metadata Repository database or customer database.

- The Oracle Internet Directory instance where the portal schema is registered.

Log in to the Application Server Control Console of the Oracle Identity Management instance to verify that the necessary processes are running and that the required components are configured properly. For example, you can use the Application Server Control Console to verify that the Farm page is displayed correctly and that the Oracle Internet Directory and OracleAS Single Sign-On components are up and running.

When you log in to the Application Server Control Console of the Oracle Identity Management instance, the Application Server home page is displayed. On this page, click **Ports** to view a list of the ports currently used by the Oracle Application Server instance and to verify that the components are configured properly.

**See Also:** "Introduction to Administration Tools" in the Oracle Application Server Administrator’s Guide for more information about the Application Server Control Console Farm page.

### 2.3.4 Assessing the Impact of an OracleAS Portal Upgrade

Before you perform an upgrade to release 10.1.4, consider the impact of the upgrade on your system. An upgrade to OracleAS Portal release 10.1.4 includes the following tasks:

- Creating the upgrade framework objects and installing the Schema Validation Utility.

- Exporting a subset of the OracleAS Portal tables, which are available before an upgrade, to a dump file.

- Displaying all invalid objects before the upgrade proceeds. You can use this for troubleshooting purposes because all OracleAS Portal packages must be valid at this stage.

- Disabling the directory provisioning profile. This disables event notifications from Oracle Internet Directory to which the portal has subscribed.

- Disabling triggers in the portal schema. These triggers will be reenabled at the end of the upgrade.

- Disabling the Database Management System (DBMS) jobs in the portal schema. These jobs will be reenabled at the end of the upgrade.

- Dropping statistics gathered on all tables in the portal schema. The statistics supported by OracleAS Portal will then be gathered toward the end of the upgrade.

- Upgrading OWA packages if necessary.

- Dropping and reloading all Java objects in the portal schema. If there were any Java objects not belonging to OracleAS Portal but residing in the portal schema, then they will have to be reinstalled manually after the upgrade.

- Dropping and reloading all product messages in all languages in the portal schema. If any product messages were manually altered before the upgrade, then these changes will have to be manually reapplied.

- Changing the schema and compiling new OracleAS Portal packages.

- Exporting temporary tables created during the upgrade.
■ Creating the jobs for gathering the statistics on portal tables.
■ Enabling triggers and DBMS jobs in the portal schema.
■ Recompiling any invalid non-OracleAS Portal objects. Warnings will be displayed if any invalid non-OracleAS Portal objects remain after this step.
■ Updating the OracleAS Portal release if there are no fatal compilation errors.
■ Enabling the directory provisioning profile.
■ Searching for errors and warnings in the upgrade log file and displaying a summary of the ones encountered. If no errors are found, then a success message is displayed.
This chapter explains the procedure to upgrade OracleAS Portal to release 10.1.4. You can upgrade to OracleAS Portal release 10.1.4 by performing the following steps:

- Section 3.1, "Performing the Upgrade"
- Section 3.2, "Reviewing the Upgrade Log File"
- Section 3.3, "Backing Up the Database That Contains the Upgraded Portal Schema"
- Section 3.4, "Starting All Middle Tiers"
- Section 3.5, "Accessing the Upgraded OracleAS Portal"

3.1 Performing the Upgrade

Depending on whether the portal schema was installed in the Oracle Application Server Metadata Repository or in a customer database, you can use either of the following procedures to perform an upgrade:

- Section 3.1.1, "Upgrading the Portal Schema in an OracleAS Metadata Repository"
- Section 3.1.2, "Upgrading the Portal Schema in a Customer Database"

3.1.1 Upgrading the Portal Schema in an OracleAS Metadata Repository

After performing the tasks described in Section 2.3, "Performing Pre-Upgrade Tasks", you can use the Oracle Application Server Portal Upgrade CD-ROM to upgrade the portal schema in an OracleAS Metadata Repository. To perform an upgrade, you must run the `mrua.bat` (Windows) or `mrua.sh` (UNIX) script.

**Note:** You must run the upgrade on the computer that hosts the portal schema that you are about to upgrade.

To run the upgrade, perform the following steps:

1. Mount the Oracle Application Server Portal Upgrade CD–ROM.
2. Start the upgrade by using the following command with the required arguments, which are described in Table 3–1:

   ```bash
   CD_ROOT/mrua/<mrua_script>
   -oracle_home <metadata_repository_oracle_home>
   -oid_host <oracle_internet_directory_host>
   -oid_ssl_port <oracle_internet_directory_SSL_port>
   ```
In this command, `<mrua_script>` can be `mrua.sh` or `mrua.bat`.

An example for running the upgrade is as follows:

On UNIX:

```
 mrua.sh -oracle_home /dua1/oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130
```

On Windows:

```
 mrua.bat -oracle_home d:\oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130
```

### Table 3–1 Summary of the Required Upgrade Command-Line Arguments

<table>
<thead>
<tr>
<th>Arguments</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-oracle_home</code></td>
<td>The OracleAS Metadata Repository home directory.</td>
</tr>
<tr>
<td><code>-oid_host</code></td>
<td>The name of the computer that hosts the Oracle Internet Directory where the OracleAS Metadata Repository is registered.</td>
</tr>
<tr>
<td><code>-oid_ssl_port</code></td>
<td>The secure port for Oracle Internet Directory. For purposes of upgrading the OracleAS Metadata Repository, you must use a secure connection to Oracle Internet Directory.</td>
</tr>
</tbody>
</table>

**Note:** The values of the `-oid_host` and `-oid_ssl_port` arguments must match the values of the corresponding properties defined in the following configuration file in the Oracle Identity Management home directory:

```
IDENTITY_MANAGEMENT_ORACLE_HOME/config/ias.properties
```

The corresponding properties in the `ias.properties` file are as shown in the following example:

```
OIDhost=dserv1.acme.com
OIDsslport=3130
```

3. When you are prompted, enter the password for the database `SYS` user account.  
You must provide the `SYS` password in order to access and modify the portal schema in the database.

4. When you are prompted, enter the Oracle Internet Directory `cn=orcladmin` administrator password.

You must provide the Oracle Internet Directory password in order to connect to the Oracle Internet Directory where the OracleAS Metadata Repository is registered.

After you provide the required passwords, the upgrade script checks if Oracle Internet Directory is running and does one of the following:

- If Oracle Internet Directory is down or unavailable, then the upgrade script displays an error message and exits.
- If Oracle Internet Directory is up and running, then the upgrade script connects to the directory service and obtains additional information required to upgrade the portal schema.
Performing the Upgrade

If multiple instances of the OracleAS Metadata Repository are registered with the directory, then the upgrade script prompts you to select the OracleAS Metadata Repository that you want to upgrade.

You can upgrade only one OracleAS Metadata Repository at a time.

5. If you are prompted to select an OracleAS Metadata Repository, then select the OracleAS Metadata Repository on the local computer that corresponds to the value of the -oracle_home parameter.

---

**Note:** The upgrade script first performs the pre-upgrade checks, and then proceeds with the actual upgrade. The upgrade is not immediately terminated if a single precheck fails. Instead, the errors for all prechecks are consolidated in the precheck.log file. This file is generated in the METADATA_REP_ORACLE_HOME/upgrade/temp/portal directory. Look at the end of the log file to see a list of checks that failed. Run the upgrade again until none of the prechecks fail. If the upgrade did not complete because of precheck errors, then the schema is not altered, and therefore, restoring from your backup is not necessary between runs.

Look up any errors found in the precheck log file. Refer to Appendix A, "OracleAS Portal Upgrade Error Messages" for information about upgrade errors. Contact Oracle Support Services for any errors that are not documented or that cannot be resolved by following documented actions.

---

The upgrade script starts the upgrade process. As each step in the upgrade is performed, information messages appear on the screen to show the progress of the upgrade.

**Example 3–1** shows an example of a typical upgrade session.

---

**Example 3–1  Sample Output from an Upgrade Session**

```bash
mrua.sh -oracle_home /dual/oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130
Executing mrua.pl
Running on UNIX
OracleAS Metadata Repository Upgrade Assistant 10.1.4.0.0

Enter the password for SYS:
Enter the password for cn=orcladmin:

Upgrading the OracleAS Metadata Repository to release 10.1.4

Calling upgrade plugin for MRUA
Component upgraded successfully  MRUA

Calling upgrade plugin for PORTAL
Component upgraded successfully  PORTAL

Calling upgrade plugin for MRC
Component upgraded successfully  MRC

SUCCESS: All OracleAS plug-ins report successful upgrade

Finished mrua.pl
```
3.1.2 Upgrading the Portal Schema in a Customer Database

This section details the steps for upgrading a portal schema residing in a customer database configuration outside 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.

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 database that contains the portal schema.
2. Mount the Oracle Application Server Portal Upgrade CD–ROM.
3. Verify if you can connect to the portal schema in the database Oracle home by specifying the schema password and the Transparent Network Services (TNS) name using SQL*Plus.
   
   For example:
   ```
   sqlplus portal/portal@orcl
   ```
4. Change the directory to a location where you have write permissions. The upgrade script will create a set of log files and temporary directories in this location.
5. Stop all Oracle Application Server services in the middle-tier Oracle homes that are associated with the portal schema being upgraded. For the procedure to do this, refer to Section 2.3.2, "Stopping All Middle-Tier Instances".
6. Verify that the Oracle Internet Directory associated with the portal schema is up and running. For the procedure to do this, refer to Section 2.3.3, "Ensuring That Oracle Internet Directory and Database Processes Are Running".
7. Run the upgrade script in precheck mode until there are no errors found.
   
   On UNIX, run the script as follows:
   ```
   CD_ROOT/portal/admin/plsql/upgrade -precheck
   ```
   
   On Windows, run the script as follows:
   ```
   CD_ROOT\portal\admin\plsql\upgrade.bat -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.
Performing the Upgrade

Upgrading to OracleAS Portal Release 10.1.4

3-5

if a precheck fails. Instead, the errors for all prechecks are consolidated in the
precheck.log file. This file is generated in the METADATA_REP_ORACLE_HOME/upgrade/temp/portal directory. 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. Refer to Appendix A, "OracleAS
Portal Upgrade Error Messages" for information about upgrade errors. Contact
Oracle Support Services for any errors that are not documented or that cannot be
resolved by following documented actions.

8. 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:

CD_ROOT/portal/admin/plsql/upgrade

On Windows, run the script as follows:

CD_ROOT\portal\admin\plsql\upgrade.bat

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 10g
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 ORACLE_HOME/network/admin/tnsnames.ora file.

9. 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.
Reviewing the Upgrade Log File

Once the upgrade is complete, check the upgrade log files for any errors, by performing the following steps:

1. Locate the upgrade log file. The default name for the upgrade log file is `upgrade.log` and it is located in the following directory:
   - If you upgraded the portal schema in the OracleAS Metadata Repository, then the log file is generated in the `METADATA_REP_ORACLE_HOME/upgrade/temp/portal` directory.
   - If you upgraded the portal schema in a customer database, then the log file is generated in the same directory, `<upgrade_directory>`, in which you ran the upgrade script.

Unless the upgrade terminates abruptly before finishing, the errors in the log file are sent to standard output and are also included in a separate section at the end of the log file. Use the line numbers in the section at the end of the log file to search for the errors when they occurred earlier in the file. In addition to the log file, errors are also summarized in a file named `upgrade.err`, and warnings are summarized in a file named `upgrade.wrn`. These files are located in the following directory:

   - If you upgraded the portal schema in the OracleAS Metadata Repository, then the error and warning files are generated in the `METADATA_REP_ORACLE_HOME/upgrade/temp/portal/tmp` directory.
   - If you upgraded the portal schema in a customer database, then the error and warning files are generated in the `<upgrade_directory>/tmp` directory.

2. Open the upgrade log file with a text editor.
3. Look up the errors and warnings described in the log file.
4. Refer to Appendix A, "OracleAS Portal Upgrade Error Messages" and resolve any errors and warnings for which the workarounds have been documented. Most errors require that you restore the repository from backup, resolve the problem, and run another upgrade.

---

**Caution:** You cannot run OracleAS Portal until you have completed a successful upgrade. A successful upgrade has zero errors.

When undocumented errors are found, do not attempt to run the upgrade again, run any further steps, alter any files, modify the portal schema, or access the OracleAS Portal instance in your browser. Contact Oracle Support Services for help.

---

**3.2 Reviewing the Upgrade Log File**

Once the upgrade is complete, check the upgrade log files for any errors, by performing the following steps:

1. Locate the upgrade log file. The default name for the upgrade log file is `upgrade.log` and it is located in the following directory:
   - If you upgraded the portal schema in the OracleAS Metadata Repository, then the log file is generated in the `METADATA_REP_ORACLE_HOME/upgrade/temp/portal` directory.
   - If you upgraded the portal schema in a customer database, then the log file is generated in the same directory, `<upgrade_directory>`, in which you ran the upgrade script.

Unless the upgrade terminates abruptly before finishing, the errors in the log file are sent to standard output and are also included in a separate section at the end of the log file. Use the line numbers in the section at the end of the log file to search for the errors when they occurred earlier in the file. In addition to the log file, errors are also summarized in a file named `upgrade.err`, and warnings are summarized in a file named `upgrade.wrn`. These files are located in the following directory:

   - If you upgraded the portal schema in the OracleAS Metadata Repository, then the error and warning files are generated in the `METADATA_REP_ORACLE_HOME/upgrade/temp/portal/tmp` directory.
   - If you upgraded the portal schema in a customer database, then the error and warning files are generated in the `<upgrade_directory>/tmp` directory.

2. Open the upgrade log file with a text editor.
3. Look up the errors and warnings described in the log file.
4. Refer to Appendix A, "OracleAS Portal Upgrade Error Messages" and resolve any errors and warnings for which the workarounds have been documented. Most errors require that you restore the repository from backup, resolve the problem, and run another upgrade.

---

**Note:** If an error occurred while performing pre-upgrade checks, that is, if an error is logged in the `precheck.log` file, then it is not necessary to restore the repository from your backup. This is because, while performing the prechecks, the schema is not altered.

If an error occurred while performing the upgrade, that is, if an error is logged in the `upgrade.log` file, then you must restore the repository from backup.
5. Contact Oracle Support Services for any errors that are not documented.

6. Continue this process until all errors are resolved.

The following example shows the end of the log file of a successful upgrade. Notice the `Upgrade completed successfully` message and the lack of error messages.

```
### Show errors and warnings
Step started at Tue Jul 12 04:17:22 2005
### WARNING: WWU-26002: Upgrade completed with the following warnings:
... 
### Upgrade completed successfully
... 
Upgrade Ended at Tue Jul 12 04:17:31 2005
```

The following examples show the last few lines of the log files of unsuccessful upgrades:

Example 1: Premature termination with the error section:

```
### ERROR: WWU-01013: Upgrade terminated with the following errors:
### 1278 : EXP-00003: no storage definition found for segment(9, 10251)
### 1368 : ### ERROR: Exception Executing Script
upg/common/precln/../../frwk/export.pl :
... 
```

Example 2: Standard termination, but with errors found (notice the line numbers preceding each error line):

```
### ERROR: WWU-01012: Upgrade completed with the following errors:
### 8503:ERROR at line 1:
### 8504 : ORA-20000:
### 8505 : ORA-06512: at "UPGR309.WWPOF", line 440
... 
Upgrade Ended at Fri Jul  1 04:28:08 2005
```

Table 3–2 describes the location and contents of the different log files.

---

**Caution:** You cannot run OracleAS Portal until you have completed a successful upgrade. A successful upgrade has zero errors in the upgrade log file, upgrade.log.
### Table 3-2  Generated Files

<table>
<thead>
<tr>
<th>Name of File</th>
<th>Location of File</th>
<th>Contents and Purpose</th>
</tr>
</thead>
</table>
| precheck.log | If you upgraded the portal schema in the OracleAS Metadata Repository:  
  
  METADATA_REP_  
  ORACLE_  
  HOME/upgrade/temp/portal  
  
  If you upgraded the portal schema in a customer database:  
  
  <upgrade_directory> | Contains information that was logged while performing prechecks during an upgrade. Errors are summarized at the end of the log file. |
| upgrade.log  | If you upgraded the portal schema in the OracleAS Metadata Repository:  
  
  METADATA_REP_  
  ORACLE_  
  HOME/upgrade/temp/portal  
  
  If you upgraded the portal schema in a customer database:  
  
  <upgrade_directory> | Contains all the logged information including errors, warnings, and details. Errors are summarized at the end of the log file. |
| upgrade.err | If you upgraded the portal schema in the OracleAS Metadata Repository:  
  
  METADATA_REP_  
  ORACLE_  
  HOME/upgrade/temp/portal/tmp  
  
  If you upgraded the portal schema in a customer database:  
  
  <upgrade_directory>/tmp | Contains a summary of the error messages from the end of the upgrade.log file. |
| upgrade.wrn | If you upgraded the portal schema in the OracleAS Metadata Repository:  
  
  METADATA_REP_  
  ORACLE_  
  HOME/upgrade/temp/portal/tmp  
  
  If you upgraded the portal schema in a customer database:  
  
  <upgrade_directory>/tmp | Contains a summary of the warning messages from the end of the upgrade.log file. |
3.3 Backing Up the Database That Contains the Upgraded Portal Schema

After performing the upgrade, you must back up the database that contains the upgraded portal schema. To do this, you must shut down the database, perform a backup, and then start the database.

There are several ways to perform a backup. Consult an experienced database administrator, or refer to Oracle Database documentation for further information about the backup and recovery procedures for the database.

Effects of Shutting Down the Database

In OracleAS Portal release 10.1.4, missing Oracle Text indexes are created during upgrade, but they are not populated at that time because this can be time-consuming. The new indexes are populated once the upgrade is complete, when the next synchronization job is scheduled.

After the upgrade, if you need to shut down the database to perform a backup, and the Oracle Text index synchronization job has started, then consider the impact of the shutdown commands, described in Table 3-3, on the synchronization process.

<table>
<thead>
<tr>
<th>Shutdown Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shutdown Immediate/Abort</td>
<td>The indexing job stops immediately and is rolled back.</td>
</tr>
<tr>
<td>Shutdown Normal</td>
<td>The entire indexing job finishes before the database shuts down.</td>
</tr>
<tr>
<td>Shutdown Transactional</td>
<td>Synchronization of the current index is allowed to finish before the database shuts down. If one or more indexes still need to be synchronized, then the synchronization of the next index is not started.</td>
</tr>
</tbody>
</table>

3.4 Starting All Middle Tiers

After the upgrade is completed successfully, start each middle tier that is using the upgraded OracleAS Portal instance by performing the following steps:

1. Start OPMN and its managed processes by using the following command:

```
MIDDLE_TIER_ORACLE_HOME/opmn/bin/opmnctl startall
```

2. Start the Application Server Control Console using the following command:

```
MIDDLE_TIER_ORACLE_HOME/bin/emctl start iasconsole
```

On Windows, you can also start OPMN and its managed processes and the Application Server Control Console from the Services control panel.

3.5 Accessing the Upgraded OracleAS Portal

If the upgrade is completed successfully, then you are ready to access the upgraded OracleAS Portal instance. Due to architectural changes, the format of URLs has changed in OracleAS Portal release 10.1.4.

Open a browser and specify the URL to access OracleAS Portal in the following format:

```
http://<host>:<port>/portal/pls/<portal_DAD>
```
Table 3–4  OracleAS Portal Access URL Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>host</td>
<td>The computer on which you installed OracleAS Portal. Specify the host name and the fully qualified domain name, for example, <code>host.domain.com</code>. This name must also match the <code>ServerName</code> parameter in the configuration file, <code>httpd.conf</code>, located in the following directory: <code>MID_TIER_ORACLE_HOME/Apache/Apache/conf</code></td>
</tr>
<tr>
<td>port</td>
<td>The port number to access OracleAS Portal. Typically, this is the OracleAS Web Cache listen port of the middle tier.</td>
</tr>
<tr>
<td>portal_DAD</td>
<td>The Database Access Descriptor (DAD) name of the upgraded OracleAS Portal instance. This is the same DAD name you used before the upgrade.</td>
</tr>
</tbody>
</table>
This chapter describes the tasks that you must perform after a successful upgrade.

Perform the following actions after the upgrade script has completed successfully and you have made a backup of the upgraded OracleAS Portal release 10.1.4 instance. You must perform a backup because several of the post-upgrade actions can negatively affect the repository if not applied correctly.

Post-upgrade tasks are divided into the following two categories:

- Section 4.1, "Required Tasks"
- Section 4.2, "Optional Tasks"

### 4.1 Required Tasks

To ensure that you can use an upgraded OracleAS Portal instance without problems, you must perform the following post-upgrade tasks:

- Section 4.1.1, "Updating to the New URL Format and Correcting Invalid Links"
- Section 4.1.2, "Removing Obsolete Substitution Tags in HTML Page Skins"
- Section 4.1.3, "Reregistering OracleAS Portal as a Content Source in Oracle Ultra Search"
- Section 4.1.4, "Scheduling a Full Recrawl Using Oracle Ultra Search"
- Section 4.1.5, "Updating the OracleAS Portal URL in the OracleAS Wireless Service Definition"
- Section 4.1.6, "Reenabling Portal Export and Import"
- Section 4.1.7, "Updating Performance Reporting"
- Section 4.1.8, "Changing the Category and Perspective Names"
- Section 4.1.9, "Enabling Time Monitoring of Queue Messages"

#### 4.1.1 Updating to the New URL Format and Correcting Invalid Links

Due to architectural changes, the format of URLs has changed in OracleAS Portal release 10.1.4. If you try to access portal objects in an upgraded OracleAS Portal instance using the old URL format, then you will be presented with a redirection screen that shows the old URL you are accessing, along with a new URL. This screen will automatically redirect you to the new URL format.
Displaying a URL Redirection Screen

You can choose whether to display a URL redirection screen or not. The URL redirection screen displays both the new and old URLs to assist in correcting bookmarks, and so on.

When you access an old URL, the URL redirection screen is displayed by default. To alter the default behavior, you can use the `pobredir.sql` script. It is located in the `portal/admin/plsql/wws` directory in the upgrade CD-ROM. The script takes one parameter. Run this script as the portal schema owner.

The following is an example for running the script to enable seamless redirection to the new URL:

```
SQL> @pobredir.sql 1
```

- A value of 1 seamlessly redirects the user to the new URL and does not produce the redirection screen.

**Note:** If you choose a value of 1, then the seamless redirection will work only for this release. After future upgrades, these URLs may be broken. For this reason, turn off the seamless redirection at some point, and fix any URLs that are causing redirection.

- A value of 0, which is the default value, produces the redirection page.

To run the `pobredir.sql` script, you must log in to the OracleAS Metadata Repository database as the portal schema user from SQL*Plus. If OracleAS Portal was installed on a customer database, then log in to the database that hosts the portal schema.

Viewing Portal Schema Password Using Oracle Directory Manager

To log in to the OracleAS Metadata Repository database as the portal schema user, you must know the portal schema password. If the portal schema resides in the OracleAS Metadata Repository, then the portal schema password is stored in Oracle Internet Directory. You can get the portal schema password from Oracle Internet Directory using Oracle Directory Manager.

To view the portal schema password, perform the following steps:

1. Start Oracle Directory Manager:
   - On UNIX, use the following command:
     ```
     METADATA_REP_ORACLE_HOME/bin/oidadmin
     ```
   - On Windows, click **Start**, **Programs**, **Oracle Application Server <ias_instance_name>**, **Integrated Management Tools**, and **Oracle Directory Manager**.

2. Log in to Oracle Directory Manager as the `orcladmin` user.

3. In the System Objects frame, expand **Entry Management**, `cn=OracleContext, cn=Products, cn=IAS, cn=IAS Infrastructure Databases`, and then **orclReferenceName=<Infrastructure Database name>** for the OracleAS Metadata Repository.

---

**Note:** Update any references and bookmarks that include old URLs. The old format will not be supported in future releases.

---

**Note:** If you choose a value of 1, then the seamless redirection will work only for this release. After future upgrades, these URLs may be broken. For this reason, turn off the seamless redirection at some point, and fix any URLs that are causing redirection.

---

**Note:** Update any references and bookmarks that include old URLs. The old format will not be supported in future releases.
Required Tasks

4. Select the `OrclResourceName=PORTAL` entry to view the portal schema password.

5. In the Properties tab, you can view the password in the `orclpasswordattribute` field.

Durable URLs

A durable URL is formed by using a GUID. The format for a durable URL is as follows:

```
http://<host>:<port>/portal/page/<portal_DAD>/[lang-<language>]/[ver-<version>]/<item_guid>
```

For example, to access a document, `mydocument.htm`, which has an ID `A47D41ECA23648A9E030007F0100118A`, the URL is as follows:

```
http://mymachine.mycompany.com:5000/portal/page/mydad/lang-en/A47D41ECA23648A9E030007F0100118A
```

The format of a durable URL to render a page is as follows:

```
http://<host>:<port>/portal/page/<portal_DAD>/<page_guid>
```

Because the GUID of an object never changes, the URL will continue to be valid even if the object name changes. Durable URLs are generated by OracleAS Portal for item types such as Page Path, Page Links, List of Objects, and so on.

Updating Direct-Access URLs

Direct-access URLs that were used in earlier releases of OracleAS Portal are now referred to as path-based URLs. A path-based URL is formed by identifying the path taken through the portal to get to a particular object. In earlier releases, a path alias like `doc`, `url`, and `page` was used in the URL to denote the type of portal object being accessed. The format of direct-access URLs has changed in this release and does not contain the path alias any more. Following this release, direct-access URL formats will be obsolete.

For backward compatibility, direct-access URL formats are supported in this release of OracleAS Portal. These URL formats invoke a redirection screen that redirects users to the correct target. Avoid using direct-access URL formats going forward, and consider fixing legacy uses of these formats. The syntax for the obsolete URL format is as follows:

```
http://<host>:<port>/pls/<portal_DAD>/<path_alias>/PAGE/<page_path>
```

Note: Only the first tab in a path alias of path-based URLs is preserved when redirecting to the new URL format. The other tabbed regions on the page default to the first available tab in the region.

Table 4–1 describes the format of path-based URLs in OracleAS Portal release 10.1.2.0.2 or 10.1.2.1.0, and release 10.1.4.
To update a direct-access URL and fix a broken link, perform the following steps:

1. Display a link to the property sheet by adding a Property Sheet Smart Link item to the page. Look at the page property sheet to obtain the path-based URL and update the link. Refer to the Oracle Application Server Portal User’s Guide for information about performing these steps.

2. Find the page to which the link must be attached.

3. Replace the broken link with the new one.

The redirection screen will not be displayed when you access portal objects using the new URL format.

## Updating ID-Based URLs

For backward compatibility, ID-based URLs are supported in the current release of OracleAS Portal. Following this release, ID-based URLs that use the following syntax will be obsolete:

```
http://<host>:<port>/portal/page?_pageid=<site_id>,<page_id>,<tabstring>&_dad=<portal_DAD>&_schema=<portal_schema>
```

**Note:** To avoid broken links in the future, it is recommended that you replace path-based URLs with durable URLs. A durable URL uses the object globally unique identifier (GUID) in the URL, and therefore does not cause the link to be broken even if the object name has changed. Refer to the section titled “Durable URLs” for information about durable URLs.
For the current release, ID-based URL formats invoke a redirection screen that redirects users to the correct target. Avoid using ID-based URL formats in the future, and consider fixing legacy uses of these formats.

Note the newly formed URL that is displayed on the redirection screen and correct the link. After you update URLs to the new format, a redirection screen will not be displayed when you access portal objects.

See Also: The Oracle Application Server Portal User’s Guide for information about the types of URLs supported in OracleAS Portal release 10.1.4.

4.1.2 Removing Obsolete Substitution Tags in HTML Page Skins

In earlier releases, unstructured user interface (UI) templates governed what was displayed on the page. From release 10.1.4 onward, HTML page skins replace the functions of unstructured UI templates. Some of the substitution tags that were used in these templates are now obsolete. After upgrading to OracleAS Portal release 10.1.4, to ensure that portal pages are rendered without errors, do not use obsolete substitution tags in HTML page skins. To ensure that you are not using obsolete substitution tags, perform the following steps:

1. Open the HTML page skin template in edit mode.

2. Check the template for obsolete substitution tags. For a list of obsolete substitution tags, refer to Section 5.1.3, "Obsolete Substitution Tags for HTML Templates".

3. If you find obsolete substitution tags, then replace them with valid substitution tags, or remove them from the template. For a list of substitution tags that are supported, refer to the Oracle Application Server Portal User’s Guide.

4.1.3 Reregistering OracleAS Portal as a Content Source in Oracle Ultra Search

Perform this step only if you are using Oracle Ultra Search, and have registered OracleAS Portal as a content source.

As the URL format has changed in OracleAS Portal release 10.1.4, after performing the upgrade, you must reregister OracleAS Portal as an Oracle Ultra Search content source by deleting the existing OracleAS Portal content source and creating a new one. Perform the steps in the following sections to delete the existing OracleAS Portal content source, and register the upgraded portal instance as a new content source:

- Section 4.1.3.1, "Deleting the Old OracleAS Portal Content Source"
- Section 4.1.3.2, "Registering the Upgraded Portal Instance as an Oracle Ultra Search Content Source"

4.1.3.1 Deleting the Old OracleAS Portal Content Source

To delete the portal instance, which was registered as an Oracle Ultra Search content source before performing the upgrade, perform the following steps:

1. Click Ultra Search Administration in the Services portlet to access the Oracle Ultra Search administration tool.

By default, the Services portlet is on the Portal subtab of the Administer tab on the Portal Builder page.

See Also: Oracle Ultra Search Administrator’s Guide
2. On the Instances tab, click **Apply** to set the instance.

   If you have more than one instance, then ensure that you select the instance you want to update first.

3. Click the **Sources** tab, and then click the **Oracle Sources** subtab.

4. Select the old OracleAS Portal content source, and then click **Delete**.

### 4.1.3.2 Registering the Upgraded Portal Instance as an Oracle Ultra Search Content Source

To register the upgraded portal instance as an Oracle Ultra Search content source by specifying the new URL, refer to the section titled "Registering OracleAS Portal As a Content Source" in the *Oracle Application Server Portal Configuration Guide*.

Once you have registered OracleAS Portal as an Oracle Ultra Search content source, you can register the Ultra Search provider with OracleAS Portal.

### 4.1.4 Scheduling a Full Recrawl Using Oracle Ultra Search

Perform this step if you have created custom file attributes for items and pages, and are displaying these attributes through the Oracle Ultra Search content repository.

In OracleAS Portal release 10.1.4, the format of the URL for custom file attributes has changed. Because of this, the Oracle Ultra Search content repository must be updated. Oracle Ultra Search identifies changes by looking at the date on which the items were updated. In this case, the date has not changed, and therefore the Oracle Ultra Search content repository will not be updated. To update this content repository, you must schedule a full recrawl of OracleAS Portal using Oracle Ultra Search.

For details about scheduling a full recrawl of OracleAS Portal, refer to Section "Schedule-Related APIs" in Chapter 11 in the *Oracle Ultra Search Administrator’s Guide*.

### 4.1.5 Updating the OracleAS Portal URL in the OracleAS Wireless Service Definition

Perform this task only if you are accessing OracleAS Portal using a wireless device.

Wireless devices access OracleAS Portal by using the portal home page URL that is stored in the Oracle Application Server Wireless server service definition. Because the OracleAS Portal URL format has changed in release 10.1.4, this change must be reflected in the OracleAS Wireless server service definition.
To update the OracleAS Portal home page URL in the OracleAS Wireless server service definition, perform the following tasks:

1. Log in to OracleAS Wireless Tools by using the following URL:
   \[http://<host>:<port>/webtool/login.uix\]

2. Log in as an Oracle Application Server administrator, such as orcladmin. (The password is set during installation, but can be changed with the User Manager.)

3. Click the **Contents** tab.

4. In the Content Manager, select the portal service, and click **Edit**.

5. Click **Input Parameters** on the left-hand side of the screen.

6. In the Input Parameters screen, change the existing URL to the following:
   \[http://<host>:<port>/portal/pls/<portal_DAD>/<portal_schema>.home\]
   
   For example:
   
   http://myserver.abc.com:7778/portal/pls/portal/portal.home

7. Click **Apply** to save the changes.

8. Log out of the Content Manager.

---

**Note:** If you do not perform this task, then every time you try to access OracleAS Portal using a wireless device, a redirection screen is displayed with a link to the new URL.

---

### 4.1.6 Reenabling Portal Export and Import

Perform this task only if you are using the OracleAS Portal Export and Import feature.

If you have two portal instances, one source and one target, where you migrate page groups between these two instances using the OracleAS Portal Export and Import functions, then after an upgrade, if you try to export and import content between the two portal instances, it will fail. This happens because the upgrade process assigns new GUIDs to page groups, pages, categories, and perspectives, which are unique for each upgraded portal instance. As the GUIDs of the objects in the two portal instances no longer match after the upgrade, the precheck for these objects will fail during the import.

In such cases, you must run the `guidmasg.sql` script located in the `portal/admin/plsql/wwu` directory in the upgrade CD-ROM. Do this before performing an export and import operation. Running this script synchronizes the GUIDs of objects between the upgraded source and target portal instances, and also ensures that any future export and import of page groups is not affected by GUID mismatch.

To run the `guidmasg.sql` script, perform the following steps:

1. Back up the source and target portal instances if you have not already done so.

2. Change the directory to a location where you have write permissions. The `guidmasg.sql` script will create a set of log files in this location.

3. Using SQL*Plus, connect to the target portal instance.
4. Create a database link to the source portal schema, as follows:

```sql
create database link <database_link_name>
connect to <source_portal_schema>
identified by <source_portal_password>
using <database_connect_info>;
```

**See Also:** The Oracle Database Administrator’s Guide in the Oracle Database documentation library, for information about creating database links.

5. Verify that you are able to connect to the source portal instance using the prior database link, as follows:

```sql
select version from wwc_version$@<database_link_name>;
```

6. Log in to the OracleAS Metadata Repository database on the target portal instance as the portal schema user from SQL*Plus. If OracleAS Portal was installed on a customer database, then log in to the database that hosts the portal schema.

**Note:** If the portal schema resides in the OracleAS Metadata Repository, and if you do not know the portal schema password, then refer to "Viewing Portal Schema Password Using Oracle Directory Manager" in Section 4.1.1 to find out the password.

7. Run the `guidmasg.sql` script and pass the database link name as the input parameter by using the following command:

```
@CD_ROOT/portal/admin/plsql/wwu/guidmasg.sql <database_link_name>
```

8. Review the `guidmasg.log` file, generated in the current directory, for any errors. Refer to Section 4.1.6.1, "Reviewing the Log Files" for more information.

9. You can now export and import the page groups between the source and target portal instances.

**Note:** If you have more than two portal instances between which the Export and Import operations must be performed, then you must perform the preceding steps multiple times until all portal instances are synchronized. For example, if you have development, test, stage, and production portals, named Portal A, Portal B, Portal C, and Portal D respectively, then you must run the script in the following manner:

1. Run the `guidmasg.sql` script from B, when connected to A as the source.
2. Run the `guidmasg.sql` script from C, when connected to B as the source.
3. Run the `guidmasg.sql` script from D, when connected to C as the source.
4.1.6.1 Reviewing the Log Files

To review the output of the guidmasg.log file and to ensure that there are no errors, perform the following checks:

1. Ensure that the number of page groups listed in the log file as updated includes all the page groups that were migrated before the upgrade to release 10.1.4.

2. For each page group, verify that the number of pages, perspectives, and categories on both the source and target instances are correct. If there are a greater number of pages and perspectives and categories on the source, then it indicates that the objects are not yet present in the target, which is expected. If there are a greater number of pages on the target, then the additional target pages may be an issue if pages with the same name are created in the upgraded source instance and an attempt is made to import them to the target instance at a later date.

3. The errors in the log file are sent to standard output and are also included in a separate section at the end of the log file. Use the line numbers in the section at the end of the log file to search for the errors when they occurred earlier in the file.

4.1.7 Updating Performance Reporting

Perform this task only if you are already using the performance reporting scripts.

To generate performance reports for OracleAS Portal, you must use a set of SQL scripts. The scripts are located in the following directory:

CD_ROOT/portal/admin/plsql/perf

By running these scripts, OracleAS Portal log files are loaded into a database table and reports can be generated based on the information in the log files.

Caution: It is highly recommended that you do not store this data in the same database as the portal repository because this may affect performance.

If you are already using the performance reporting scripts, then after upgrading the OracleAS Portal repository to release 10.1.4, you must run the new copy of the CD_ROOT/portal/admin/plsql/perf/install/update.sql file. This is to accommodate the new URL format for repository requests and to enable collection of new data. If this is not done, then the scripts will not work.

For details about how you can use the scripts to monitor OracleAS Portal performance, refer to the README.html file in the scripts subdirectory:

CD_ROOT/portal/admin/plsql/perf/scripts/README.html

4.1.8 Changing the Category and Perspective Names

Perform this task only if you started with OracleAS Portal release 3.0.9.

You may find that you are not able to access category and perspective pages by using path-based URLs with their pre-upgrade names. This is because, after upgrade, the page ID and page group ID are appended to the category or perspective name. Therefore, the category or perspective name that you specified in the URL is not valid.

For example, if you had a category named GENERAL in release 3.0.9, then on moving to release 10.1.2.0.2 or 10.1.2.1.0, and then to release 10.1.4, the name of this category may be GENERAL_12345_0, where 12345 is the page ID and 0 is the page group ID.
As a workaround to this problem, perform either of the two tasks:

- Change the category or perspective name to the pre-upgrade name by removing the ID that is appended to the name.
- Specify a new name. If there is an existing category or perspective with the name you specified, then you are prompted for a different name.

**Note:** The title of the category will remain unchanged.

### 4.1.9 Enabling Time Monitoring of Queue Messages

Perform this task only if the database that contains the portal schema was upgraded to Oracle Database 10g from an earlier release.

Oracle Streams Advanced Queuing time manager processes are controlled by the database initialization parameter, `AQ_TM_PROCESSES`. This parameter must be set to a nonzero value. This enables time monitoring on queue messages and processes messages with delay and expiration properties specified.

For details about updating a database initialization parameter file, refer to the section, "Managing Initialization Parameters Using a Server Parameter File", in the *Oracle Database Administrator’s Guide* in the Oracle Database 10g documentation library.

### 4.2 Optional Tasks

The following sections describe post-upgrade steps that are optional:

- **Section 4.2.1, "Moving the Portlet Repository to the New Format"
- **Section 4.2.2, "Deleting the Community News Portlet"
- **Section 4.2.3, "Configuring Oracle Text Indexes to Synchronize on Commit"

#### 4.2.1 Moving the Portlet Repository to the New Format

By default, the portlet repository is upgraded in-place in the OracleAS Portal schema. The existing pages, templates, items, and so on, in the portlet repository are upgraded, and the new portlets are added into the repository. As the old settings are preserved, the pages look very similar to the way they did before the upgrade was run.

**Note:** If you started with Oracle9iAS Portal release 9.0.2 and you had rendered the Portlet Repository as grouped by Provider names, then after the upgrade, the folders in the repository will be grouped by the category, because the Group by Provider Name option has been deprecated since Oracle Application Server 10g (9.0.4).

To create a similar organization, assign the portlet names to categories that represent the Provider names.

If you want the repository to have the appearance of a newly installed instance, then the `prrplc.sql` script is available to re-create the upgraded portlet repository. This script removes the existing portlet repository and re-creates it. Use the script only if you do not wish to preserve customizations, settings, styles, banners, and so on in the portlet repository.

To re-create the portlet repository, perform the following steps:
1. Perform a backup of the database, as the script overwrites the repository and is not reversible.

2. Follow the steps described in Section 3.4, "Starting All Middle Tiers" to start the middle-tier instances.

3. Navigate to the following directory on the Oracle Application Server Portal Upgrade CD–ROM, which contains the prrplc.sql script:

   CD_ROOT/portal/admin/plsql/upg/frwk

4. Log in to the OracleAS Metadata Repository database as the portal schema user from SQL*Plus. If OracleAS Portal was installed on a customer database, then log in to the database that hosts the portal schema.

   **Note:** If the portal schema resides in the OracleAS Metadata Repository, and if you do not know the portal schema password, then refer to "Viewing Portal Schema Password Using Oracle Directory Manager" in Section 4.1.1 to find out the password.

5. Run the prrplc.sql script with no arguments.

### 4.2.2 Deleting the Community News Portlet

From OracleAS Portal release 10.1.4 onward, the Community News portlet is obsolete. But this portlet is still available on portal pages. When you try to edit this portlet, a blank page is displayed. To avoid confusion, you can manually delete the Community News portlet from portal pages. To delete this portlet from a page, perform the following steps:

1. Log in to OracleAS 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.

### 4.2.3 Configuring Oracle Text Indexes to Synchronize on Commit

If you are using Oracle Database 10g or later, Oracle Text indexes can be configured to synchronize immediately after data is committed to your portal. This is a new feature in OracleAS Portal release 10.1.4 but it does not apply to databases earlier than Oracle Database 10g.

On upgrade, Oracle Text indexes are not updated to make use of this new feature. This means that all the Oracle Text indexes are configured to synchronize manually using **wwv_context.sync** procedure. If you want to take advantage of the **on commit** feature introduced in Oracle Database 10g, then use the procedure **wwv_context.commit_sync** to reconfigure Oracle Text indexes. For more information, refer to the section titled "Configuring Oracle Text Indexes to Synchronize On Commit" in the *Oracle Application Server Portal Configuration Guide*.  
Optional Tasks
This chapter describes features in OracleAS Portal that were supported in earlier releases, but are not supported in release 10.1.4. This chapter also describes the changes you may find in an upgraded OracleAS Portal instance.

The following topics are discussed in this chapter:

- Section 5.1, "Obsolete Features in OracleAS Portal Release 10.1.4"
- Section 5.2, "Usage Changes in OracleAS Portal Release 10.1.4"

5.1 Obsolete Features in OracleAS Portal Release 10.1.4

The following sections describe the features that have been deprecated and will not be available after you upgrade to OracleAS Portal release 10.1.4:

- Section 5.1.1, "URL Portlet and XML Portlet"
- Section 5.1.2, "User Interface Templates"
- Section 5.1.3, "Obsolete Substitution Tags for HTML Templates"

5.1.1 URL Portlet and XML Portlet

The URL Portlet and XML Portlet features, that were used to create new portlets in earlier releases of OracleAS Portal, are now deprecated. The Web Clipping and OmniPortlet features replace the functions of URL Portlet and XML Portlet respectively. You can create new portlets by using Web Clipping or OmniPortlet from the Portlet Builder folder in the portlet repository. Existing URL Portlet and XML Portlet instances on your pages will continue to function as in previous releases.

5.1.2 User Interface Templates

In earlier releases, unstructured UI templates governed what was displayed around the page. From release 10.1.4 onward, HTML page skins replace the functions of unstructured UI templates. After an upgrade, unstructured UI templates that were created before release 10.1.4 will be available for use as HTML page skins in the Shared Objects page group.

5.1.3 Obsolete Substitution Tags for HTML Templates

The following substitution tags for HTML templates are obsolete from OracleAS Portal release 10.1.4 onward:

- PAGE.STYLE.URL
5.2 Usage Changes in OracleAS Portal Release 10.1.4

This section details the following changes in usage after upgrading to OracleAS Portal release 10.1.4:

- Section 5.2.1, "Introduction of the HTML Output Compatibility Mode Switch"
- Section 5.2.2, "URL Changes"
- Section 5.2.3, "Changes in Caching"
- Section 5.2.4, "Change in Portal Service Monitoring Link"

5.2.1 Introduction of the HTML Output Compatibility Mode Switch

Many of the elements on a portal page are defined by text attributes, entered either by the page designer or the user. Along with text, it is also possible to enter HTML tags and expect them to be rendered on the page.

For example, you can enter the following in the page title:

```html
<b>OracleAS 10<i>g</i> Collateral</b>
```

And expect it to be rendered as follows:

OracleAS 10g Collateral

However, this poses a security risk as anything can be entered into the element, including JavaScript.

For pages and portlets generated by using PL/SQL, OracleAS Portal release 10.1.4 introduces a compatibility mode that lets you choose whether elements with HTML tags are rendered in the browser, or the HTML tags are filtered out and displayed as text on the page thereby eliminating the security risk.

Some fields are purposely intended to contain arbitrary HTML provided by the end user, as this data cannot be filtered without compromising the usefulness of the feature itself. These components are not affected by the compatibility mode and are therefore never filtered. Components of this type include HTML Portlet, Rich Text Item, and HTML Page Skins.

However, if required, it is also possible to switch off the use of the HTML Portlet by deleting it from the portlet repository. The use of the Rich Text Editor to edit text items can be turned off at the page group level so that users can enter only plain text in text items. And, to restrict the access to HTML Page Skins, developer privileges can be granted to a small set of users only.

When upgrading a portal instance, the compatibility mode is disabled by default after the upgrade. This means that HTML tags are filtered out. Therefore, after upgrade, on systems that have leveraged HTML tags, you will find that the appearance of some pages has changed. This is because the HTML tags are displayed as text. To remedy this situation, you can either remove the HTML tags, reverting to the default portal...
functionality, or enable the compatibility mode by performing the tasks described in the following sections.

**Note:** Enabling compatibility mode, that is, rendering HTML tags in the browser, provides the desired output but it is not secure. Therefore, you must bear in mind the security vulnerability when you enable the compatibility mode.

For any pages and portlets generated by using PL/SQL coding, the compatibility mode switch includes two packages, `cfgcmyes.pkb` and `cfgcmno.pkb`, to turn compatibility mode on and off respectively.

Running the `cfgcmyes.pkb` package turns compatibility mode on. As a result of this, HTML tags are not filtered but are allowed to be rendered by the browser. This is equivalent to the behavior in prior releases.

Running the `cfgcmno.pkb` package turns compatibility mode off. As a result of this, HTML tags are filtered out and appear as text.

To enable compatibility mode:

1. Navigate to the `CD_ROOT/portal/admin/plsql/wwc` directory.
2. Log in to SQL*Plus with the appropriate user name and password for the portal schema. For example:
   ```sql
   sqlplus portal/SE3bJg@orcl123
   ```
3. Enter the following command:
   ```sql
   SQL> @cfgcmyes.pkb
   ```

To disable compatibility mode, perform the same steps 1 through 3, but in step 3, enter the following command:

```sql
SQL> @cfgcmno.pkb
```

### 5.2.2 URL Changes

Path-based URLs and durable URLs are the two distinct types of URLs used for accessing objects in OracleAS Portal release 10.1.4. In analyzing links and bookmarks to pages on your site, determine the appropriate format for all future manually created links to OracleAS Portal pages.

**See Also:** The *Oracle Application Server Portal User's Guide* for information about the types of URLs supported in OracleAS Portal release 10.1.4.

Due to architectural changes in OracleAS Portal release 10.1.4, many URLs are formatted differently now.

#### 5.2.2.1 GUID Displayed in URLs for Text and PL/SQL Items

When editing a page type or item type, you can use certain base attributes to store information about the page or item. In OracleAS Portal release 10.1.4, there is a new base attribute called Name. This attribute contains a name for the item, which is used internally only. For further information about this attribute, refer to the *Oracle Application Server Portal User's Guide*. 
After upgrading to OracleAS Portal release 10.1.4, the Name attribute for a PL/SQL or text item will be populated with the globally unique identifier (GUID) of the item. As a result of this, the URL to access the PL/SQL or text item will also reflect the GUID.

5.2.3 Changes in Caching

In this release, substantial architectural changes were made in caching in order to improve performance and scalability. There is now more granular caching of components of a page that enables variations of caching options for each component. In particular, tab headings, subpage regions, page portlets, and navigation page portlets are now cached separately from the rest of the page definition. This flexibility allows more components to be cached at system level. This was not feasible in earlier releases.

This also allows more fine-grained invalidation, which increases the cache hit ratio and reduces the time to regenerate invalidated content. For example, adding a subpage to a page with a subpage region no longer invalidates the whole page. Instead, it invalidates just the content for the subpage region. Regenerating this content is less expensive than regenerating the whole page.

In general, these caching changes do not result in any functional change. The exception is for pages that contain tabs or subpage regions where the page definition only is cached at system level. In earlier releases, the tabs and subpage display items were cached as part of the page definition, and therefore, they were cached at the system level. As system level caching results in only one cached copy for all users, all users must see the same content. As a result, in system cached pages, all tabs and subpages were displayed to all users viewing the page, regardless of privileges on the tabs or subpages. The security check was applied when the user accessed the tab or subpage. In release 10.1.4, the tab headings and subpage regions are cached at the user level, separate from the page definition, which is cached at system level. Therefore, a page where the page definition only is cached at system level will now display only the tabs and subpages to which the user has access.

While the caching changes in release 10.1.4 allow performance and scalability to be improved by increased use of system level caching, this is not available automatically on upgrade. To ensure improved performance and scalability, the caching options for pages and portlet instances must be manually updated to their optimal settings.

See Also: The Oracle Application Server Portal User’s Guide for more information about caching in OracleAS Portal release 10.1.4.

5.2.4 Change in Portal Service Monitoring Link

In earlier releases, the Portal Service Monitoring link would take you directly to the OracleAS Portal Monitoring page in the Application Server Control Console. From release 10.1.4 onward, this link takes you to the highest level Application Server Control Console Farm page. To access the OracleAS Portal Monitoring page, select the Application Server that is servicing the portal instance you want to monitor, and then select the portal target within.
Part III contains the following appendix:

- Appendix A, "OracleAS Portal Upgrade Error Messages"
This chapter provides information about the error and warning messages that you may encounter when upgrading to OracleAS Portal 10g Release 2 (10.1.4). The messages are grouped into the following sections:

- Numbered Error Messages (WWU-00001 to WWU-24999 and WWU-26004 to WWU-26007)
- Numbered Warning Messages (WWU-25000 to WWU-26001)
- Unnumbered Error Messages

### A.1 Numbered Error Messages (WWU-00001 to WWU-24999 and WWU-26004 to WWU-26007)

This section describes the numbered error messages, their causes, and suggested actions that you may encounter while upgrading to OracleAS Portal 10g Release 2 (10.1.4).

**WWU-00001: An unexpected exception was raised during the upgrade prechecks.**

**Cause:** An unexpected error caused the upgrade to terminate.

**Action:** Based on the details in the message, correct the problem, and run the upgrade again.

**WWU-00002: The value of the shared_pool_size database parameter is not high enough for the upgrade.**

**Cause:** The value of the shared_pool_size database parameter is too low.

**Action:** Increase the value of the shared_pool_size database parameter to 20 MB or more. Run the upgrade again.

**WWU-00003: The value of the java_pool_size database parameter is not high enough for the upgrade.**

**Cause:** The value of the java_pool_size database parameter is too low.

**Action:** Increase the value of the java_pool_size database parameter to 20 MB or more. Run the upgrade again.

**WWU-00004: The optimizer_mode database parameter should not be set to RULE.**

**Cause:** The optimizer_mode database parameter is incorrectly set to RULE.

**Action:** Change the optimizer_mode database parameter to CHOOSE. Run the upgrade again.

**WWU-00005: There is not enough free space in the default tablespace.**
Cause: There is less than 20 MB of free default tablespace.
Action: Create at least 20 MB of free default tablespace. Run the upgrade again.

WWU-00006: There is not enough free space in the temporary tablespace.
Cause: There is less than 10 MB of free temporary tablespace.
Action: Create at least 10 MB of free temporary tablespace. Run the upgrade again.

WWU-00007: The _system_trig_enabled database parameter is set to FALSE.
Cause: The _system_trig_enabled database parameter is incorrectly set to FALSE.
Action: Set the value for the _system_trig_enabled database parameter to TRUE, or do not set it. Run the upgrade again.

WWU-00008: There were jobs running in the DBMS jobs queue during the upgrade.
Cause: The upgrade cannot progress because there are DBMS jobs running.
Action: Either kill the DBMS jobs or wait for them to finish before restarting the upgrade.

WWU-00009: The DBMS job queue is disabled. There were jobs that would have run immediately if it were enabled.
Cause: Jobs submitted for the current repository may not run properly under the upgraded version.
Action: Either:
  1. Remove the jobs from the queue, or
  2. Re-enable the job queue by raising the job_queue_processes database parameter to a value greater than 0, and allow the jobs to complete.

WWU-00010: Some jobs in the DBMS job queue were incorrectly configured.
Cause: There are OracleAS Portal jobs in the DBMS job queue that were either incorrectly submitted as another user or submitted as the OracleAS Portal user with another default schema or default privilege.
Action: Remove these jobs from the job queue. The upgrade will resubmit any jobs that are missing.

WWU-00011: There are concurrent sessions running for the schema you are upgrading.
Cause: There are other sessions running on the OracleAS Portal schema.
Action: Make sure the Oracle Application Server 10g middle tier is shut down and there are no other connections to the schema being upgraded. Look under Open Sessions in the upgrade log for a list of open sessions for the schema.

WWU-00012: Not all components of the JVM installation are present in the database or valid.
Cause: SYS Java objects are not present in the database or are invalid.
Action: Recompile the invalid Java objects in SYS. If this fails, reinstall the JVM in the database following the instructions found in the Oracle database documentation.

WWU-00013: Tables with UPG_ prefix were found in the OracleAS Portal schema.
Cause: The upgrade is terminated when UPG_ prefix tables are present in the OracleAS Portal schema.
Action: Back up all tables with the UPG_ prefix, then delete them from the OracleAS Portal schema. The script %0 can be used for this purpose.

**WWU-00014: Obtaining Oracle Text information failed.**

**Cause:** An error occurred during the attempt to retrieve information about the Oracle Text installation.

**Action:** Ensure that the Oracle Text component is correctly installed. If necessary, reinstall the Oracle Text component. For installation instructions, refer to the Oracle Application Server Portal Configuration Guide.

**WWU-00015: Oracle Text schema, CTXSYS, does not exist.**

**Cause:** The database does not contain the CTXSYS schema, which indicates that Oracle Text is not installed.

**Action:** Install the Oracle Text component in the database. For installation instructions, refer to the Oracle Application Server Portal Configuration Guide.

**WWU-00016: Oracle Text indextype is invalid or does not exist.**

**Cause:** The Oracle Text context indextype is not valid or does not exist. This may indicate a problem with the Oracle Text installation.

**Action:** Ensure the Oracle Text context indextype is present and valid. If necessary, reinstall the Oracle Text component. For installation instructions, refer to the Oracle Application Server Portal Configuration Guide.

**WWU-00017: Some Oracle Text packages are invalid.**

**Cause:** Packages in the Oracle Text schema, CTXSYS, that begin with DRI or CTX_ are invalid.

**Action:** Revalidate the Oracle Text invalid packages. If necessary, reinstall the Oracle Text component. For installation instructions, refer to the Oracle Application Server Portal Configuration Guide.

**WWU-00018: Oracle Text version does not match the database version.**

**Cause:** The version of the database is more recent than the Oracle Text component. This may indicate that the Oracle Text component upgrade was not successful. The manual steps to upgrade Oracle Text may have failed or been omitted. On some platforms, this error may also indicate that patch 2658339 was not applied.

**Action:** Depending on the situation, either rerun the Oracle Text upgrade or download and apply the patch.

**WWU-00019: Could not find the schema or schemas on which Portlet Builder/Web View applications are based.**

**Cause:** The schema on which the Portlet Builder application is based is missing.

**Action:** There are two ways to fix this issue:

1. Drop the applications that are using the schema.
2. Re-create the missing schema and all objects in it.

**WWU-00020: One or more one-off patches with schema changes have been applied.**

**Cause:** One or more one-off patches that include schema changes have been applied to the OracleAS Portal schema. The upgrade cannot proceed because these changes have not been tested with this release of the upgrade scripts.
**Action:** See if a version of the upgrade based on the next patchset has been released on Metalink. If so, download and run the new version. If not, wait until it is released.

**WWU-00021: The following mandatory objects are missing or invalid:**

**Cause:** Mandatory objects that OracleAS Portal relies on are invalid or are not present in the database. If they are missing due to a faulty upgrade of the database, this could also cause failures in the OracleAS Portal upgrade.

**Action:** Review the database installation and upgrade procedures. If the object is present but invalid, run the rdbms/admin/utlrp.sql script under the database Oracle home to recompile all invalid objects.

**WWU-00022: Version %0 of Oracle Portal/WebDB is not supported for upgrade.**

**Cause:** The OracleAS Portal version being upgraded is not supported by this upgrade.

**Action:** Run the upgrade on a supported version of OracleAS Portal.

**WWU-00023: Version %0 of Oracle Database is not supported for upgrade.**

**Cause:** The version of the database against which the upgrade was run is not supported for this upgrade.

**Action:** Upgrade to the minimum database version of Oracle9i Database 9.0.1.5 Enterprise or Standard Edition.

**WWU-00024: The compatible database parameter is less than 9.0.0.**

**Cause:** The compatible database parameter is set to less than 9.0.0.

**Action:** Set the value of the compatible database parameter to 9.0.0 or later.

**WWU-00025: VPD has not been installed properly.**

**Cause:** One of the VPD checks has failed.

**Action:** This error is followed by a detailed message. Resolve the issue by examining the information provided in the message.

**WWU-00026: VPD context value is not set.**

**Cause:** The OracleAS Portal login trigger that sets the VPD context is disabled or is not installed.

**Action:** Verify that the OracleAS Portal login trigger was installed and enabled on the database. If you need to install the trigger, run the wwhost/logintrg.sql script from SQL*Plus while logged in as SYS user. You will find this script under the upgrade directory.

**WWU-00027: VPD context value is incorrect.**

**Cause:** The login triggers are not setting the correct context.

**Action:** Verify that the login trigger is correctly installed. To install the trigger, run the wwhost/logintrg.sql script from SQL*Plus while logged in as SYS user. You will find this script under the upgrade directory.

**WWU-00028: Portal schema user is not set up to use VPD.**

**Cause:** The OracleAS Portal schema user has the EXEMPT ACCESS POLICY system privilege.

**Action:** Revoke the EXEMPT ACCESS POLICY privilege from the OracleAS Portal schema user by running the following SQL command in SQL*Plus: "REVOKE EXEMPT ACCESS POLICY FROM PORTAL_SCHEMA_NAME;". In this command, replace PORTAL_SCHEMA_NAME with the actual OracleAS
Portal schema name. Also verify that the OracleAS Portal schema user does not inherit the EXEMPT ACCESS POLICY privilege from any of its assigned roles.

**WWU-00029: VPD is not being enforced in the database.**  
**Cause:** A problem occurred in the database that caused the VPD check to fail.  
**Action:** Consult the database documentation to find possible actions.

**WWU-00031: %0 Unable to connect to the Oracle Internet Directory server.**  
**Cause:** An error was encountered while connecting to the Oracle Internet Directory server.  
**Action:** The error message above may provide more information about the cause. Make sure that the Oracle Internet Directory server is up and running on host %1 and port %2 and OracleAS Portal has been wired correctly against it.

**WWU-00032: The aq_tm_processes database parameter must be greater than zero.**  
**Cause:** The aq_tm_processes database parameter needs to be set to 1 or more to allow correct management of database queues.  
**Action:** Change the aq_tm_processes database parameter to a value greater than zero. Run the upgrade again.

**WWU-01000: Back up the database before running the upgrade.**  
**Cause:** You have answered n, or no, when asked if the schema has been backed up.  
**Action:** Back up the database and restart the upgrade.

**WWU-01001: Connection to the Portal repository failed.**  
**Cause:** Incorrect OracleAS Portal schema, password, or connect string.  
**Action:** Supply the correct OracleAS Portal schema, password, and connect string.

**WWU-01002: Connection as SYS to the Portal repository failed.**  
**Cause:** An invalid SYS password was supplied, or the orapw file is missing.  
**Action:** Supply the correct SYS password. If the password is correct, verify that you can connect remotely to SYS as SYSDBA using an orapwSID file. Refer to the Oracle database documentation for instructions on creating an orapw file.

**WWU-01003: An unexpected exception was raised.**  
**Cause:** An unexpected error caused the upgrade to terminate.  
**Action:** Based on the details in the message, correct the problem, restore the database from backup, and run the upgrade again.

**WWU-01004: Missing strings reported in %0 file.**  
**Cause:** The sqlldr utility encountered issues when trying to load message translation data.  
**Action:** Look for specific issues in the .bad file and the corresponding .log file in the upgrade tmp directory. Give these to Oracle Support Services along with the upgrade logs.

**WWU-01005: Version not updated, fatal errors found in upgrade log.**  
**Cause:** This message indicates that the earlier version of OracleAS Portal will not be updated to the new version. Errors have occurred in the upgrade that will prevent OracleAS Portal from functioning properly. A summary of the errors is listed at the end of the upgrade log.
**Action:** Search through the errors in the log and apply any fixes mentioned. Then restore the database from backup and run another upgrade. If this fails, or if unexpected errors are encountered, contact Oracle Support Services.

**WWU-01007: Unable to create directory %0.**

*Cause:* You do not have the required permissions to create the directory.

*Action:* If possible, change the permissions on the parent directory. Or, contact the administrator to change the permissions on this directory.

**WWU-01008: Write permission not available for directory %0.**

*Cause:* You do not have the required permissions to write to the directory.

*Action:* Change the permissions on the directory, specify a different temporary directory, or ask the administrator the change the permissions on the directory. Then, run the upgrade again.

**WWU-01009: Unable to create %0. Check permissions on the directory.**

*Cause:* The permissions on the temporary directory do not allow the creation of a login.sql script for the user profile.

*Action:* If possible, change the permissions on the temporary directory, or ask the administrator to change the permissions on the directory. Then, run the upgrade again.

**WWU-01010: SQL*Plus version %0 not supported for upgrade.**

*Cause:* The version of SQL*Plus you are trying to execute is not supported for this upgrade.

*Action:* Verify that the version of bin/sqlplus under the Oracle home is 9.0.1 or later.

**WWU-01011: Restart the upgrade.**

*Cause:* You have answered n, or no, when asked if input details are correct.

*Action:* Correct the input details and restart the upgrade.

**WWU-02200: Cannot grant execute privilege on PL/SQL package %1 to the Portal database provider schema %2 due to the following error: %3.**

*Cause:* A database issue has prevented execute privileges from being successfully granted.

*Action:* Fix the reported issue on a restored database and rerun the upgrade.

**WWU-26004: Unable to create EXTERNAL_SEARCH_ENGINES group entry in Oracle Internet Directory.**

*Cause:* The seeded portal user does not have sufficient privileges to perform this action.

*Action:* Run ptlconfig -dad <portal_dad_name> -oid to ensure that the EXTERNAL_SEARCH_ENGINES group is created in Oracle Internet Directory.

**WWU-26005: Unable to add PORTAL_ADMINISTRATOR group as an owner to EXTERNAL_SEARCH_ENGINES group.**

*Cause:* The seeded portal user does not have sufficient privileges to perform this action.

*Action:* Run ptlconfig -dad <portal_dad_name> -oid to ensure that the PORTAL_ADMINISTRATOR is added as an owner to the EXTERNAL_SEARCH_ENGINES group.
WWU-26006: Unable to add ultrasearch_ese user as a member to the EXTERNAL_SEARCH_ENGINES group.

Cause: The seeded portal user does not have sufficient privileges to perform this action.

Action: Run ptlconfig -dad <portal_dad_name> -oid to ensure that the ultrasearch_ese user is added as a member to the EXTERNAL_SEARCH_ENGINES group.

WWU-26007: Could not update GUID for %0.

Cause: The names of the Report Server Objects were changed by end user.

Action: Change these objects back to their original names and apply the ARU 6870580 patch.

A.2 Numbered Warning Messages (WWU-25000 to WWU-26001)

This section describes the numbered warning messages, their causes, and suggested actions, that you may encounter while upgrading to OracleAS Portal 10g Release 2 (10.1.4).

WWU-25000: Removed session cleanup job: %0 from the SYS schema.

Cause: The session cleanup job usually exists in the OracleAS Portal schema. However, an earlier operation, such as the database upgrade, has resulted in removing this job as a part of the upgrade.

Action: If the database instance where the upgrade is being performed does not contain another OracleAS Portal schema, then no action is required because the session clean-up job is created in the OracleAS Portal schema during upgrade. However, if another OracleAS Portal schema exists in the database, then verify that the schema contains a session clean-up job. To do so, run the script wwc/ctxjget.sql under the upgrade directory from SQL*Plus in the OracleAS Portal schema. If this job is missing, you can create it by running the script wwc/ctxjsub.sql in that schema from SQL*Plus.

WWU-25001: VPD check found some issues.

Cause: One of the VPD checks has failed.

Action: This warning is followed by a detailed message. Resolve the issue by examining the information provided in the message.

WWU-25003: Portlet Builder/WebView components have unknown issues.

Cause: The Portlet Builder components or packages are invalid.

Action: Try resolving the cause of the errors when compiling the packages that are listed in the log. For example, if a report is based on a table that has been dropped, the report is no longer valid. In this case, you could drop the report.

WWU-25004: Only %0% of the components in the wtvv_modules$ table are production components.

Cause: This informational message indicates that there is a relatively large number of archive versions of Portlet Builder components, formerly WebView. This may be because in Oracle9iAS Portal 3.0.9, a new version of a component was created each time the component was edited and saved.

Action: Delete as many of the archive versions of components as possible. This reduces the size of the tables where attributes for all the archive versions are stored.
WWU-25005: Table without VPD policy: %0.
   Cause: The VPD policy on the table indicated in the message was not installed properly in the OracleAS Portal schema.
   Action: If the table indicated in the message is not part of the OracleAS Portal product, it is safe to ignore the warning.

WWU-26000: Component %0 has errors. Check that all the objects it is based on are present.
   Cause: The component is based on one or more missing objects. For example, a Query By Example report was based on table MY_TABLE, then MY_TABLE was dropped.
   Action: Supply the missing object. If the component is no longer being used, delete it using the OracleAS Portal Navigator.

WWU-26001: Non-OracleAS Portal objects have errors. See %0 for details.
   Cause: Non-OracleAS Portal objects in the OracleAS Portal schema cannot be compiled and have errors.
   Action: Examine %0, or nonportal.log, to determine the objects and the errors generated on compilation of each object. Fix these errors and recompile the object.

A.3 Unnumbered Error Messages

This section describes the unnumbered error messages, their causes, and suggested actions, that you may encounter while upgrading to OracleAS Portal 10g Release 2 (10.1.4).

Environment variable ORACLE_HOME is not set.
   Cause: The ORACLE_HOME environment variable is not set.
   Action: Review your environment and set the ORACLE_HOME environment variable.

GUID and/or DN are not available for %string% subscriber.
   Cause: Could not get the globally unique identifier and/or the distinguished name for the named identity management realm from the Portal repository.
   Action: Make sure that the identity management realm has been configured properly.

OracleAS Portal 10.1.4 upgrade precheck failed. See <precheck-log-file> for details.
   Cause: Errors were encountered during the precheck run of the 10.1.4 upgrade.
   Action: Search through the errors in the log file and apply any fixes mentioned. Then run the upgrade again.

OracleAS Portal 10.1.4 upgrade completed with errors. See <upgrade-log-file> for details.
   Cause: Errors were encountered in the 10.1.4 upgrade.
   Action: Search through the errors in the log file and make a note of any fixes mentioned. Then restore the database from backup, apply the fixes, and run the upgrade again.

SQL Error: %string% LDAP Error: %string%. Unexpected Error occurred while connecting to the Oracle Internet Directory as Application entry
**Cause:** An attempt was made to connect to the Oracle Internet Directory using the application credentials stored in the OracleAS Portal repository. However, this attempt failed. Some possible reasons for this failure are as follows:

- OracleAS Portal has not been configured correctly for the Oracle Internet Directory.
- Oracle Internet Directory server is not running.
- An unexpected error was encountered.

**Action:** Make sure that the Oracle Internet Directory is up and running. Reconfigure OracleAS Portal for the Oracle Internet Directory. Also review the message logged before this error message and take appropriate action.

**Unable to bind as the application. LDAP Error: %string%**

**Cause:** An error was encountered while connecting to the Oracle Internet Directory Server.

**Action:** The line following the error may provide more information about the cause. Make sure that the Oracle Internet Directory Server is up and running and the Portal has been wired correctly against it.

**Unable to get the application GUID. LDAP Error: %string%**

**Cause:** Could not get the globally unique identifier for the application entry stored in the Oracle Internet Directory.

**Action:** The line following the error may provide more information about the cause. Make sure that the Oracle Internet Directory Server is up and running and the Portal has been wired correctly against it.

**Unable to unbind. LDAP Error: %string%**

**Cause:** An error was encountered while closing the connection with the Oracle Internet Directory.

**Action:** The line following the error may provide more information about the cause. Take corrective action as appropriate.

**Updating provisioning profile: %string%**

**Cause:** An error was encountered while updating the provisioning profile.

**Action:** The string may provide more information about the cause of error. Take appropriate action to resolve the error.
**Index**

| A | accessing the upgraded portal instance, 1-8, 3-9  
|   | assessing upgrade impact, 2-4 |
| B | backing up databases  
|   | after upgrade, 3-9  
|   | before upgrade, 2-2 |
| C | changing category and perspective names, 4-9  
|   | community news portlet  
|   | deleting, 4-11  
|   | correcting invalid links, 4-1  
|   | customer databases, 3-4 |
| D | database releases supported, 2-2  
|   | databases  
|   | backing up after upgrade, 3-9  
|   | backing up before upgrade, 2-2  
|   | deleting  
|   | community news portlet, 4-11  
|   | obsolete HTML substitution tags, 4-5  
|   | direct-access URLs, 4-3  
|   | durable URLs  
|   | updating, 4-5 |
| E | enabling time monitoring of queue messages, 4-10 |
| G | guidmasg.sql script, 4-7 |
| H | HTML compatibility mode switch  
|   | for PL/SQL generated pages and portlets, 5-3  
|   | HTML page skins, 4-5 |
| I | installing Oracle Application Server release  
|   | 10.1.2.0.2, 1-1  
|   | installing OracleAS Portal release 10.1.4, 1-1 |
| L | log files, 1-8, 3-7  
|   | reviewing, 1-6, 3-6 |
| M | middle tiers  
|   | stopping, 1-2, 2-3  
|   | mrua.bat script, 1-4, 3-1  
|   | mrua.sh script, 1-4, 3-1 |
| O | obsolete features, 5-1  
|   | OPMN  
|   | starting, 1-8, 3-9  
|   | stopping, 1-3, 2-3  
|   | Oracle Text Indexes  
|   | configuring to synchronize on commit, 4-11  
|   | Oracle Ultra Search, 4-5  
|   | OracleAS Portal release 10.1.4  
|   | obsolete features, 5-1  
|   | usage changes, 5-2  
|   | OracleAS Wireless, 4-6 |
| P | page skins  
|   | HTML, 4-5  
|   | path-based URLs  
|   | updating to, 4-3  
|   | performance reporting, 4-9  
|   | performance reporting scripts, 4-9  
|   | Portal Service Monitoring link, 5-4  
|   | portal upgrade  
|   | about, 2-1  
|   | portlet repository  
|   | moving to the new format, 4-10  
|   | re-creating, 4-10  
|   | post-upgrade tasks, 4-1 |
changing category and perspective names, 4-9
configuring Oracle Text Indexes to synchronize on commit, 4-11
correcting invalid links, 4-1
deleting the community news portlet, 4-11
enabling time monitoring of queue messages, 4-10
moving portlet repository to the new format, 4-10
recrawling using Oracle Ultra Search, 4-6
removing obsolete HTML substitution tags, 4-5
upgrading Oracle Ultra Search, 4-5
updating OracleAS Wireless definition, 4-6
updating performance reporting, 4-9
upgrading URL format, 4-1
precheck option, 1-5, 3-3, 3-4
pre-upgrade tasks, 1-2, 2-2
  assessing upgrade impact, 2-4
  backing up databases, 2-2
  stopping all middle tiers, 1-2, 2-3
prrpclc.sql script, 4-10

R
reccrawling OracleAS Portal using Oracle Ultra Search, 4-6
redirection screen, 4-2
reenabling OracleAS Portal export and import, 4-7
removing obsolete HTML substitution tags, 4-5
reregistering Portal in Oracle Ultra Search, 4-5
reviewing upgrade log files, 1-6, 3-6
running upgrade
  precheck mode, 1-5, 3-3, 3-4

S
scheduling a recrawl, 4-6
starting middle tiers, 1-8, 3-9
  after upgrade, 1-8, 3-9
stopping all middle tiers, 1-2, 2-3
supported database releases, 2-2
supported upgrade paths, 2-2

tasks for upgrading
  post-upgrade, 4-1
  pre-upgrade, 1-2, 2-2
templates
  HTML page skins, 4-5
  unstructured UI, 4-5

U
unstructured UI templates, 4-5
update.sql script, 4-9
updating direct-access URLs, 4-3
durable URLs, 4-3
upgrading portal schema in a customer database, 3-4
in OracleAS Metadata Repository, 3-1
upgrading portal schema in OracleAS Metadata Repository, 3-1
upgrading to OracleAS Portal release 10.1.4, 1-4, 3-1
usage changes
  changes in caching, 5-4
  new HTML compatibility mode switch, 5-2
  Portal Service Monitoring link, 5-4
  URL changes, 5-3
usage changes in OracleAS Portal release 10.1.4, 5-2