Oracle® Application Server 10*g*

Forms and Reports Services Installation Guide

10*g* (9.0.4) for hp-ux PA-RISC (64-bit) and Linux x86

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Oracle Application Server 10*g* Forms and Reports Services Installation Guide, 10*g* (9.0.4) for hp-ux PA-RISC (64-bit) and Linux x86

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Preface

This installation guide covers requirements, new features in the installer, concepts that affect installation, compatibility with other products, requirements, and post-installation tasks.

Intended Audience

This guide is intended for users who are comfortable performing some system administration operations, such as creating users and groups, adding users to groups, and installing operating system patches on the computer where Oracle Application Server 10*g* Forms and Reports Services is going to be installed. Users who are installing Oracle Application Server 10*g* Forms and Reports Services need root access to run some scripts.

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Structure of This Guide

This guide contains the following chapters:

Chapter 1, "Introduction to Oracle Application Server 10g Forms and Reports Services"

This chapter introduces you to Oracle Application Server 10*g* Forms and Reports Services and provides an overview of the components.

Chapter 2, "Installation Overview"

This chapter provides an overview of the installation steps.

Chapter 3, "What is New in the Installation"

This chapter describes new features in Oracle Application Server 10*g* Forms and Reports Services that affect the installation procedure.

Chapter 4, "Compatibility with Earlier Versions"

This chapter describes possible side-effects when you install and run Oracle Application Server 10*g* Forms and Reports Services on a computer that is already running other products.

Chapter 5, "Requirements"

This chapter lists the requirements for installing and running Oracle Application Server 10*g* Forms and Reports Services.

Chapter 6, "Post-Installation Tasks"

This chapter describes the post-installation tasks you need to perform to ensure complete installation of Oracle Application Server 10*g* Forms and Reports Services.

Related Documents

For more information, see the following guides:

- *Oracle Application Server 10g Forms and Reports Services Release Notes*
- *Oracle Application Server Reports Services Publishing Reports to the Web*
- *Oracle Reports Building Reports*
- *Getting Started with Oracle Reports*, available on the Oracle Technology Network (`http://otn.oracle.com/products/reports/`)
- *Oracle Forms Migrating Forms Applications from Forms 6i*
- *Oracle Application Server Forms Services Deployment Guide 10g (9.0.4) for Windows and UNIX*

Conventions

This guide uses the following conventions:

Convention	Meaning
boldface text	Boldface type in text indicates objects (such as buttons and fields) on screens.
code	Text in the code font indicates file names, commands, or contents of configuration files.
italicized code	Italicized code indicates placeholder text that you need to replace with an appropriate value.

Convention	Meaning
[ ]	Brackets enclose optional clauses from which you can choose one or none.
. . .	Ellipses indicate that extraneous information have been omitted.

1

Introduction to Oracle Application Server 10*g* Forms and Reports Services

Oracle Application Server Forms and Reports Services allows you to install and configure Forms and Reports Services without the need to install and configure all of Oracle Application Server 10g.

This type of installation is suited best for users who want to upgrade Forms applications to the Grid environment in two phases. In phase one, they move to the Grid environment by upgrading their client server based Forms applications to Web-based ones. In phase two, users can then choose to use the services offered by an existing Oracle Application Server Infrastructure installation.

1.1 Restrictions with this Installation Type

Oracle Application Server Forms and Reports Services provides no Infrastructure service, such as Single Sign-On or Identity Management integration. However, Infrastructure services are available with the Business Intelligence and Forms Installation type.

Furthermore, it is not possible to associate or link this installation with an Infrastructure at a later point in time.

If you wish to take advantage of Infrastructure features, you will need to install an instance of Oracle Application Server with Business Intelligence and Forms, and move your applications to this new installation.

1.2 Available Features with This Installation Type

When you install Oracle Application Server Forms and Reports Services, you will have access to these features:

- OracleAS Forms Services
- Oracle Application Server Reports Services
- Oracle HTTP Server
- Oracle Application Server Web Cache
- Oracle Containers for J2EE (OC4J)
- Oracle Enterprise Manager
- Oracle Process and Management Notification (OPMN)
- Distributed Configuration Management (DCM)

1.2.1 OracleAS Forms Services

Oracle Application Server Forms Services deploys Forms applications with database access to Java clients in a Web environment. Oracle Application Server Forms Services automatically optimizes class downloads, network traffic, and interactions with Oracle database. Applications are automatically load-balanced across multiple servers and, therefore, can easily scale to service any number of requests.

1.2.2 Oracle Application Server Reports Services

Oracle Application Server Reports Services provides an easy-to-use, scalable, and manageable solution for high-quality database publishing and reporting by creating dynamic reports for the Web and across the enterprise. It enables you to implement a multi-tiered architecture for running your reports.

1.2.3 Oracle HTTP Server

Oracle HTTP Server is the Web server that Oracle Application Server uses, which is built on Apache Web server technology. Oracle HTTP Server offers scalability, stability, speed, and extensibility. It also supports Java servlets, Java Server Pages (JSPs), Perl, PL/SQL, and CGI applications.

1.2.4 Oracle Application Server Web Cache

Oracle Application Server Web Cache is a server accelerator caching service that improves the performance, scalability, and availability of frequently used Oracle E-business Web sites that run on the Oracle platform. By storing frequently accessed URLs in virtual memory, Oracle Application Server Web Cache eliminates the need to repeatedly process requests for those URLs on the Web server, and it caches both static and dynamically-generated HTTP content from one or more applications Web servers.

1.2.5 Oracle Containers for J2EE (OC4J)

Oracle Application Server Containers for J2EE is a complete set of J2EE containers written entirely in Java that execute on the Java Virtual Machine (JVM) of the standard Java Development Kit (JDK).

1.2.6 Oracle Enterprise Manager

Oracle Enterprise Manager Application Server Control (from here on Application Server Control) provides you with the management tools you need to monitor and administer Oracle Application Server instances. Application Server Control is installed with every instance of Oracle Application Server.

Application Server Control provides Web-based management tools designed specifically for Oracle Application Server. Using Application Server Control, you can monitor and configure components of your application server. You can deploy applications, manage security, and create and manage Oracle Application Server clusters.

Application Server Control consists of the following:

- The Enterprise Manager Home pages you use to manage Oracle Application Server and its components: These Web pages provide you with a high-level view of your Oracle Application Server environment. From these pages you can drill down for more detailed information on administration, configuration, and

performance monitoring. These pages allow you to administer the application server and its components and deployed applications.

- The underlying software technologies that keep track of your application server instances and components: These technologies automatically perform many management tasks. For example, they discover the components of each application server instance, gather and process performance data, and provide access to application configuration information.

Application Server Control is installed as part of the Oracle Application Server installation process.

1.2.7 Oracle Process and Management Notification (OPMN)

Oracle Process Manager and Notification Server (OPMN) provides process control and monitoring for application server instances and their components. It gathers component status information, and distributes the status information to components that are interested in it. The Application Server Control uses OPMN for such tasks as starting and stopping the components of your application server instance.

1.2.8 Distributed Configuration Management (DCM)

Distributed Configuration Management (DCM) manages configurations among application server instances that are associated with a common Metadata Repository. It enables Oracle Application Server cluster-wide deployment so you can deploy an application to one instance and have it automatically propagated to the entire cluster. You can also make a single host or instance configuration change to one instance and have it propagated across all instances in the cluster. Application Server Control uses DCM to make configuration changes and to propagate configuration changes and deployed applications across the cluster.

2

Installation Overview

Oracle Application Server 10*g* Forms and Reports Services is an Oracle Application Server 10*g* installation option. It is highly recommended that you read this guide in its entirety to ensure a successful installation and optimize the capabilities of this release.

To install Oracle Application Server 10*g* Forms and Reports Services, follow these steps:

1. Read the latest version of the following Release Notes for the most current information:
   - Oracle Forms Developer Release Notes
   - Oracle Reports Developer Release Notes
2. Start the Oracle Universal installer (OUI). The Welcome screen appears.
3. On the Welcome screen, click **Next**.
4. On the Specify File Locations screen, enter the following information:
   - **Name**: Enter a name to identify this Oracle home. The name cannot contain spaces and has a maximum length of 16 characters.

     Example: `OH_FRSA_904`
   - **Destination Path**: Enter the full path to the destination directory. This is the Oracle home. If the directory does not exist, the OUI creates it. If you want to create the directory beforehand, create it as the `oracle` user; do not create it as the `root` user.

     Example: `/opt/oracle/frstand_904`
5. Click **Next**.
6. The Language Selection screen appears. By default, the OUI installs Oracle Application Server 10*g* Forms and Reports Services with text in English and in the operating system language. If you need to install additional languages, select them from the available languages list. Click **Next**.
7. The Specify Instance Name and ias_admin Password screen appears.
   - **Instance Name**: Enter a name for this instance. Instance names contain alphanumeric and underscore characters only. If you have more than one Oracle Application Server 10*g* Forms and Reports Services instance on a computer, the instance names must be unique.
   - **ias_admin Password** and **Confirm Password**: Set the password for the `ias_admin` user. This is the administrative user for the instance.
8. Click **Next**.

9. The Provide Outgoing Mail Server Information screen appears. Enter the outgoing mail (SMTP) server used by Oracle Application Server Reports Services. Click **Next**.

10. The Summary screen appears. This window lists all the components that will be installed.

11. Click **Install** to complete the installation. The Summary screen shows the progress of the installation.

Note: At any time during the installation, click **Cancel** to exit.

3

What is New in the Installation

This chapter contains information about new installation features for Oracle Application Server 10*g* Forms and Reports Services in the following sections:

- Section 3.1, "Custom Port Numbers"
- Section 3.2, "Configuration Assistant Enhancements"

3.1 Custom Port Numbers

In Oracle Application Server 10*g* Forms and Reports Services 10*g*, you can specify custom port numbers for components, instead of having the Oracle Universal Installer (OUI) assign default port numbers. The term for this feature is "static ports". To use static ports, set up a file with component names and desired port numbers. The OUI then uses the values from the file instead of the default port numbers.

> **See Also:** For more details, see Section 3.1.3, "Using Custom Port Numbers (the "Static Ports" Feature)".

3.1.1 Ports

Many Oracle Application Server 10*g* Forms and Reports Services components, such as Oracle HTTP Server and OracleAS Web Cache, use ports. You can have OUI assign default port numbers, or use port numbers that you specify. The information in the following sections provide more information on the usage and customizing of ports.

- Section 3.1.2, "Using Default Port Numbers"
- Section 3.1.3, "Using Custom Port Numbers (the "Static Ports" Feature)"

3.1.2 Using Default Port Numbers

If you want to use the default port numbers assigned to the installed components, you do not have to do anything. See Table 3–1, " Default Port Numbers and Ranges (Arranged by Component)" for a list of default port numbers that OUI will assign to components.

Tip: The OUI will not assign port numbers that are specified in the `/etc/services` file. If you do not want OUI to assign a specific port number, add the port number to the `/etc/services` file. For example, if you want to reserve port 7777 for an application, you can add something like the following line to the `/etc/services` file:

```
myApplication      7777/tcp
```

The OUI will not assign port 7777 to any component if this line exists in the `/etc/services` file.

Note: In the default configuration for hp-ux PA-RISC (64-bit) and Linux x86 operating system, the `/etc/services` file includes ports 389 and 636 (for LDAP and LDAP/SSL). These are the default ports for Oracle Internet Directory. This means that if you want to use these port numbers for Oracle Internet Directory, you must either delete or comment out these lines in the `/etc/services` file. To comment out a line, add a # at the beginning of the line, as follows:

```
# ldap   389/tcp   # Lightweight Directory Access Protocol
# ldap   389/udp   # Lightweight Directory Access Protocol
# ldaps  636/tcp   # LDAP protocol over TLS/SSL (was sldap)
# ldaps  636/udp   # LDAP protocol over TLS/SSL (was sldap)
```

If you do not comment out or remove the lines from the `/etc/services` file, then OUI will not assign ports 389 and 636 for Oracle Internet Directory (OID). Instead, it assigns a number from the default port number range for OID. See Table 3–1, " Default Port Numbers and Ranges (Arranged by Component)" for a list of default port numbers.

3.1.3 Using Custom Port Numbers (the "Static Ports" Feature)

To instruct OUI to assign custom port numbers for components:

1. Create a file containing the component names and port numbers. See below for file format. This file is typically called the `staticports.ini` file, but you can name it anything you want.
2. When you start up OUI, you can include the file name in the command line.

The `staticports.ini` file has the following format (replace the *`port_num`* variable with the port number that you want to use for the component).

```
Oracle HTTP Server port = port_num
Oracle HTTP Server Listen port = port_num
Oracle HTTP Server SSL port = port_num
Oracle HTTP Server Listen (SSL) port = port_num
Oracle HTTP Server Diagnostic port = port_num
Oracle HTTP Server Jserv port = port_num
Java Object Cache port = port_num
DCM Java Object Cache port = port_num
Oracle Notification Server Request port = port_num
Oracle Notification Server Local port = port_num
Oracle Notification Server Remote port = port_num
Application Server Control port = port_num
```

```
Application Server Control RMI port = port_num
Oracle Management Agent port = port_num
Web Cache HTTP Listen port = port_num
Web Cache HTTP Listen (SSL) port = port_num
Web Cache Administration port = port_num
Web Cache Invalidation port = port_num
Web Cache Statistics port = port_num
Reports Services SQL*Net port = port_num
Oracle Certificate Authority SSL Server Authentication port = port_num
Oracle Certificate Authority SSL Mutual Authentication port = port_num
Log Loader port = port_num
```

The easiest way to create the file is to use the `staticports.ini` file on the Disk 1 CD-ROM as a template:

1. Copy the `staticports.ini` file from the Disk 1 CD-ROM to your hard drive.
2. Edit the local copy (the file on the hard disk) to include the desired port numbers.

   You only provide port numbers for components that require them. You do not need to provide port numbers for all the components in this file. Remove the lines for the components for which you want to use default port numbers.

Usage Notes:

- Port numbers cannot be greater than 65536.
- If you use a port number lower than 1024 for a component, you must run the component as the `root` user.
- If you use a port number lower than 1024 for a component, OUI will not be able to start up the component at the end of installation. You may need to configure the component first before you can start it up. See the appropriate component documentation for details.
- You still have to comment out ports 389 and 636 in the `/etc/services` file if you want to use these port numbers for OID. See the Note on page 3-2 for details.
- If you plan to set port numbers for Oracle HTTP Server and OracleAS Web Cache, read Section 3.1.3.1, "Ports for Oracle HTTP Server and OracleAS Web Cache".

The following example sets the Application Server Control port and some ports for OracleAS Web Cache. For components not specified, OUI will assign the default port numbers.

```
Application Server Control port = 2000
Web Cache Administration port = 2001
Web Cache Invalidation port = 2002
Web Cache Statistics port = 2003
```

Tip: The `staticports.ini` file uses the same format as the `ORACLE_HOME/install/portlist.ini` file, which is created *after* an Oracle Application Server 10*g* Forms and Reports Services installation. If you have installed Oracle Application Server 10*g* Forms and Reports Services and you want to use the same port numbers in another installation, you can use the `portlist.ini` file from the first installation as the `staticports.ini` file for subsequent installations.

3.1.3.1 Ports for Oracle HTTP Server and OracleAS Web Cache

In the `httpd.conf` file for Oracle HTTP Server, the `Port` and the `Listen` directives specify the ports used by OracleAS Web Cache and Oracle HTTP Server. The correct lines in the `staticports.ini` file for setting these ports depend on which components you are configuring.

Configuring OracleAS Web Cache and Oracle HTTP Server

Use the following procedure to configure OracleAS Web Cache and Oracle HTTP Server:

1. Set the port for OracleAS Web Cache.

   OracleAS Web Cache uses the port specified by the `Port` directive (Figure 3–1). To set this port, add the following line in the `staticports.ini` file:

   ```
   Web Cache HTTP Listen port = port_number
   ```

   To configure the SSL port for OracleAS Web Cache, add the following line:

   ```
   Web Cache HTTP Listen (SSL) port = port_number
   ```

   You cannot set the port number using the `Oracle HTTP Server port` line in this case. If the `staticports.ini` file contains both `Oracle HTTP Server port` and `Web Cache HTTP Listen port`, the `Oracle HTTP Server port` line is ignored. For example, if you have the following lines in `staticports.ini`, the `Port` directive would be set to 7979:

   ```
   Web Cache HTTP Listen port = 7979
   Oracle HTTP Server port = 8080
   ```

2. Set the port for `Oracle HTTP Server`.

   `Oracle HTTP Server` uses the port specified by the `Listen` directive. To set this port, add the following line in the `staticports.ini` file:

   ```
   Oracle HTTP Server Listen port = port_number
   ```

   To configure the SSL Listen port, add the following line:

   ```
   Oracle HTTP Server Listen (SSL) port = port_number
   ```

Figure 3–1 Configuring both OracleAS Web Cache and Oracle HTTP Server

The ports_wc.gif displays the configuration of both OracleAS Web Cache and Oracle HTTP.

****

Configuring Oracle HTTP Server Only

If you are configuring Oracle HTTP Server only, then Oracle HTTP Server uses both `Port` and `Listen` directives. In this case, you must set both directives to use the same port number.

To set these ports, use the `Oracle HTTP Server port` and `Oracle HTTP Server Listen port` lines in the `staticports.ini` file. For example:

```
Oracle HTTP Server port = 8080
Oracle HTTP Server Listen port = 8080
```

To set the SSL version of these ports, use the following lines (As in the non-SSL version, the port numbers must be the same):

```
Oracle HTTP Server SSL port = 443
Oracle HTTP Server Listen (SSL) port = 443
```

If you also specify the Web Cache lines in the `staticports.ini` file, they will be ignored because you are not configuring OracleAS Web Cache.

3.1.3.2 Examples

This section describes some common scenarios for using the `staticports.ini` file.

- Section 3.1.3.2.1, "Configuring Oracle HTTP Server to Use Ports 80 and 443 With OracleAS Web Cache as the Front-End"
- Section 3.1.3.2.2, "Configuring Oracle HTTP Server to Use Ports 80 and 443 Without OracleAS Web Cache"

3.1.3.2.1 Configuring Oracle HTTP Server to Use Ports 80 and 443 With OracleAS Web Cache as the Front-End In this scenario, create a `staticports.ini` file that includes the following lines:

```
Web Cache HTTP Listen port = 80
Oracle HTTP Server Listen port = 81     See below.
Web Cache HTTP Listen (SSL) port = 443
Oracle HTTP Server Listen (SSL) port = 444     See below.
```

The ports for Oracle HTTP Server Listen and SSL Listen can be any available port. The example uses ports 81 and 444. These port numbers do not have to be less than 1024. If you select port numbers less than 1024, you have to start up Oracle HTTP Server and OracleAS Web Cache as the `root` user.

Note: Because you are using ports lower than 1024, you have to configure Oracle HTTP Server and OracleAS Web Cache to run as the `root` user. You do this configuration after installation. For more details, see *Oracle HTTP Server Administrator's Guide* and *Oracle Application Server Web Cache Administrator's Guide*.

3.1.3.2.2 Configuring Oracle HTTP Server to Use Ports 80 and 443 Without OracleAS Web Cache

In this scenario, create a `staticports.ini` file that includes the following lines:

```
Oracle HTTP Server port = 80
Oracle HTTP Server Listen port = 80
Oracle HTTP Server SSL port = 443
Oracle HTTP Server Listen (SSL) port = 443
```

> **Note:** Because you are using ports lower than 1024, you have to configure Oracle HTTP Server to run as the `root` user. Do this configuration after installation. For details, see *Oracle HTTP Server Administrator's Guide*.

3.1.3.3 Notes on Using the staticports.ini File

- You do not need to specify port numbers for all components in the `staticports.ini` file. If you remove the line for a component from the file, OUI uses the default port number for the component.
- Names of components in the file are case sensitive.
- OUI verifies that the ports specified in the file are available by checking memory. This means that it can only detect ports that are being used by running processes. It does not look in configuration files to determine which ports an application is using.
- If the OUI detects that a specified port is not available, it displays an alert. The OUI will not assign a port that is not available. To fix this:
  a. Edit the `staticports.ini` file to specify a different port, or shut down the application that is using the port.
  b. Click **Retry**. The OUI rereads the `staticports.ini` file and verifies the entries in the file again.
- When installation is complete, you can check the *ORACLE_HOME*`/install/portlist.ini` file to see the assigned ports.

3.1.4 Default Port Numbers

Table 3–1 lists the default port numbers for components. The last column, Name in staticports.ini, specifies the component name as it appears in the `staticports.ini` file, which enables you to override the default port numbers. See Section 3.1.3, "Using Custom Port Numbers (the "Static Ports" Feature)" for details.

Table 3–1 Default Port Numbers and Ranges (Arranged by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
Oracle Process Management and Notification (OPMN)			
Oracle Notification Server Request Port	6003	6003 - 6099	`Oracle Notification Server Request port`
Oracle Notification Server Local Port	6100	6100 - 6199	`Oracle Notification Server Local port`
Oracle Notification Server Remote Port	6200	6200 - 6299	`Oracle Notification Server Remote port`

Table 3–1 (Cont.) Default Port Numbers and Ranges (Arranged by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
Oracle Application Server Containers for J2EE (OC4J)			
OC4J AJP	3301	3301 - 3400	Not settable
OC4J RMI	3201	3201 - 3300	Not settable
JMS	3701	3701 - 3800	Not settable
IIOP	3401	3401 - 3500	Not settable
IIOPS1	3501	3501 - 3600	Not settable
IIOPS2	3601	3601 - 3700	Not settable
OracleAS Forms Services			
OracleAS Forms Services	Uses the same port as Oracle HTTP Server		
Oracle HTTP Server			
Oracle HTTP Server Listener (OracleAS Web Cache **not** configured)	7777	7777 - 7877	`Oracle HTTP Server Listen port`
Oracle HTTP Server Listener (SSL)	4443	4443 - 4543	`Oracle HTTP Server Listen (SSL) port`
Oracle HTTP Server Listener (non-SSL, OracleAS Web Cache configured)	7778	7777 - 7877	`Oracle HTTP Server port`
Oracle HTTP Server Listener (SSL, OracleAS Web Cache configured)	4444	4443 - 4543	`Oracle HTTP Server SSL port`
JServ servlet engine	8007	8007 - 8107	`Oracle HTTP Server Jserv port`
Java Object Cache	7000	7000 - 7099	`Java Object Cache port`
DCM Java Object Cache	7100	7100 - 7199	`DCM Java Object Cache port`
SOAP server	9998	9998 - 9999	Not settable
Port Tunneling	7501	7501 - 7599	Not settable
Oracle HTTP Server Diagnostic port	7200	7200 - 7299	`Oracle HTTP Server Diagnostic port`
OracleAS Reports Services			
SQL*Net (for 6*i* backwards compatibility only)	1950	1950 - 1960	`Reports Services SQL*Net port`
OracleAS Reports Services Visigenics CORBA	14000	14000 - 14010	Not settable
OracleAS Web Cache			
OracleAS Web Cache - HTTP Listener	7777	7777 - 7877	`Web Cache HTTP Listen port`
OracleAS Web Cache - HTTP Listener (SSL)	4443	4443 - 4543	`Web Cache HTTP Listen (SSL) port`
OracleAS Web Cache Administration	4000	4000 - 4300	`Web Cache Administration port`
OracleAS Web Cache Invalidation	4001	4000 - 4300	`Web Cache Invalidation port`

Table 3–1 (Cont.) Default Port Numbers and Ranges (Arranged by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
OracleAS Web Cache Statistics	4002	4000 - 4300	`Web Cache Statistics port`
Oracle Enterprise Manager Application Server Control			
Application Server Control	1810	1810 - 1829	`Application Server Control port`
Application Server Control - RMI	1850	1850 - 1869	`Application Server Control RMI port`
Application Server Control - SSL	4888	4888 - 4899	Not settable
Log Loader	44000	44000 - 44099	`Log Loader port`
Oracle Enterprise Manager 10*g* Grid Control			
Grid Control	Uses the same port as Oracle HTTP Server		
Oracle Management Agent	1830	1830 - 1849	`Oracle Management Agent port`
Oracle Management Service	7770	7770 - 7776	
OracleAS Certificate Authority			
Server Authentication Virtual Host	4400	4400 - 4419	`Oracle Certificate Authority SSL Server Authentication port`
Mutual Authentication Virtual Host	4401	4400 - 4419	`Oracle Certificate Authority SSL Mutual Authentication port`

3.2 Configuration Assistant Enhancements

In Oracle Application Server 10*g* Forms and Reports Services, configuration assistants are enhanced with these features:

- The configuration assistants write log files in a central location.
- The configuration assistants write more understandable error messages in the log files.
- You can rerun configuration assistants that have failed.

4

Compatibility with Earlier Versions

This chapter outlines the compatibility matrix of earlier versions of Oracle Forms and Oracle Reports with Oracle Application Server 10*g* Forms and Reports Services.

4.1 Compatibility with Release 2 (9.0.2), Release 2 (9.0.3), and Release 10*g* (9.0.4)

Table 4–1 shows a compatibility matrix of earlier versions of Oracle Forms and Oracle Reports.

Notes about the table:

- The Clients column refers to all the clients of Oracle Reports and Oracle Forms.
- The Reports / Forms Server column refers to the different releases of Oracle Forms and Oracle Reports server.
- The Supported column refers to backward compatibility between client and server.

Table 4–1 Oracle Application Server 10g Forms and Reports Services Compatibility Matrix

Clients	Reports/Forms Server	Supported?	Comments
Oracle Reports 6*i* Clients ■ `rwcgi60` ■ `rwcli60` ■ `rwrqv60` ■ `rwservlet`	10*g* (9.0.4) Reports Server	**Yes**	Using `rwproxy`; shipped with 10*g*
Oracle9*i* (9.0.2) Reports Clients ■ `rwcgi` ■ `rwclient` ■ `rwrqv` ■ `rwservlet`	10*g* (9.0.4) Reports Server	**Yes**	None
Oracle Reports 10*g* Clients ■ `rwcgi` ■ `rwclient` ■ `rwrqv` ■ `rwservlet`	9*i* (9.0.2) Reports Server	**Yes**	None

Table 4–1 (Cont.) Oracle Application Server 10g Forms and Reports Services Compatibility Matrix

Clients	Reports/Forms Server	Supported?	Comments
Oracle Reports 10*g* Clients ■ `rwcgi` ■ `rwclient` ■ `rwrqv` ■ `rwservlet`	6*i* Reports Server	**No**	None
Oracle Forms 6*i* Clients	10*g* (9.0.4) Forms Server	**Yes**	None
Oracle9*i* Forms Clients	10*g* (9.0.4) Forms Server	**Yes**	There is no need to recompile Forms 9.0.2 applications
Oracle Forms 10*g* Clients	9*i* (9.0.2) Forms Server	**Yes**	None

5

Requirements

Before installing Oracle Application Server 10*g* Forms and Reports Services, you must ensure that your computer meets the requirements described in this chapter.

This chapter contains the following sections:

5.1 System Requirements

Table 5–1 lists the system requirements for running Oracle Application Server 10*g* Forms and Reports Services. The Oracle Universal Installer (OUI) checks many of the requirements at the start of the installation process and warns you if any of them are not met. To save time, you can manually check only the remaining requirements. Refer to Table 5–1 to see which requirements are not checked by the installer.

Table 5–1 Hardware Requirements for HP-UX and Linux Systems

Item	Minimum Requirement	Checked by Installer

Disk space	1 GB
	To determine the amount of free disk space, use the `bdf` command for HP-UX:
	`prompt> bdf dir`
	For Linux x86, use the `df -k` command:
	`prompt> df -k dir`
	Replace *dir* with `/opt/oracle`.
		No

IP	The computer IP address must be static. Oracle Application Server 10*g* Forms and Reports Services does not support HP-UX systems using DHCP. DHCP is supported on Linux and Microsoft Windows.	No

Memory	512 MB
	To determine the amount of memory, use the `following` command for HP-UX:
	`# /usr/sbin/dmesg | grep "Physical:"`
	For Linux x86, use the following command:
	`# grep MemTotal /proc/meminfo`
	Note: These values assume you are running only one Oracle Application Server 10*g* Forms and Reports Services instance per computer.
		Yes

Monitor	256 color display To determine your monitor display capabilities for HP-UX and Linux x86, run the following command (Before running the command, ensure that the DISPLAY environment variable is set): `prompt> /usr/X11R6/bin/xdpyinfo` Look for the "Depth" line. You need a depth of at least 8 (bits per pixel).	Yes
Network	The computer must be connected to a network. You cannot install Oracle Application Server 10*g* Forms and Reports Services on a standalone computer that is not connected to a network. Installing Oracle Application Server 10*g* Forms and Reports Services on standalone computers is supported for Linux and Microsoft Windows.	No
Processor speed	240 MHz or faster	Yes
Processor type	64-bit HP-UX PA-RISC processor If the processor is 64-bit the following command returns the value `64`: `# /bin/getconf KERNEL_BITS` Pentium (32-bit) for Linux x86	No

Table 5–1 (Cont.) Hardware Requirements for HP-UX and Linux Systems

Item	Minimum Requirement	Checked by Installer

Space in /tmp directory	256 MB
	To determine the amount of free space in the /tmp directory for HP-UX, use the following command:
	`prompt> bdf /tmp`
	To determine the amount of free space in the /tmp directory for Linux x86, use the following command:
	`prompt> df -k /tmp`
	If the /tmp directory does not have enough free space, you can specify a different directory by setting the TMP environment variable.
		Yes

Swap space	640 MB of available swap space
	To determine the amount of available swap space for HP-UX, use the following command:
	`# /usr/sbin/swapinfo -a`
	To determine the amount of available swap space for Linux x86, use the following command:
	`# grep SwapTotal /proc/meminfo`
	If you do not have enough swap space, perform the following tasks:
	1. Log in as the root user, and create an empty swap file as follows:
	`prompt> su`
	`Password: root_user_password`
	`# mkfile size m swap_file_name`
	Append an m to *size* to specify the size in megabytes (example: 600m). The minimum size of this file must be greater than the difference between the currently available swap space and required swap space. For example, if you have 100 MB of free swap space, then this swap file must be at least 540 MB.
	2. Add the file to the swap space using the following command:
	`# /usr/sbin/swap -a swap_file_name`
	3. Verify the new swap space size:
	`prompt> /usr/sbin/swap -s`
		Yes

Supported browsers	The following browsers are supported: ■ Microsoft Internet Explorer 5.5, 6.0 and higher ■ Netscape 4.78, 4.79, 7 and higher ■ Mozilla 1.3.1 and higher However, Oracle Enterprise Manager is optimized for the following browsers: ■ Microsoft Internet Explorer 5.5, 6.0 and higher ■ Netscape 7 and higher ■ Mozilla 1.3.1 and higher For the most current list of supported browsers, check the Oracle*MetaLink* site (http://metalink.oracle.com).	No

5.1.1 Tips for Reducing Memory Usage

If you need to reduce memory consumption:

- After installation, if you want to stop services that are not used to reduce the memory usage, you can stop them from the Oracle Enterprise Manager. For details, see the *Oracle Application Server 10g Administrator's Guide*.
- For Oracle Report Services, you can control the JVM heap size by specifying small value through the environment variable `REPORTS_JVM_OPTIONS`. For details, see *Oracle Application Server Reports Services Publishing Reports to the Web*.

5.1.2 Checking the Software Requirements for HP-UX

Depending on the version of HP-UX, check that the software listed in Table 5–2, " Software Requirements for HP-UX 11.0 Systems" or Table 5–3, " Software Requirements for HP-UX 11i Systems" is installed on the system. The procedure that follows the tables describes how to verify that you installed the correct software on the system.

Note: Oracle Application Server 10*g* Forms and Reports Services is certified with the following Operating System specific software. For the most current list of supported Operating System specific software (For example, JDK or Operating System version), check Oracle*MetaLink* (`http://metalink.oracle.com`).

Table 5–2 Software Requirements for HP-UX 11.0 Systems

Item	Requirements
Operating System	HP-UX 11.0 (64-bit)
JDK	JDK 1.4.1.05 or higher
Patches required for JDK	Install all patches required for JDK 1.4.1.05. This list is constantly under review and is published on the JDK download page on the HP web site.
Quality Pack	Sept 2002 Quality Pack (QPK1100 B.11.00.58.5) or higher
Patches (or higher versions)	▪ PHKL_27813 s700_800 11.00 POSIX AIO;getdirentries;MVFS;rcp;mmap / IDS patch ▪ PHSS_26559 s700_800 11.00 ld(1) and linker tools cumulative patch
Packages	Motif 2.1 Development Environment X11MotifDevKit.MOTIF21-PRG:B.11.10.01 **Note:** This package is not required if you create the symbolic links described in step 6 of the next section.

Note: Oracle Application Server 10*g* Forms and Reports Services is certified with the following Operating System specific software. For the most current list of supported Operating System specific software (For example, JDK or Operating System version), check Oracle*MetaLink* (`http://metalink.oracle.com`).

Table 5–3 Software Requirements for HP-UX 11i Systems

Item	Requirements
Operating System	hp-ux PA-RISC 11i (11.11) or higher
JDK	JDK 1.4.1.05 or higher
Patches required for JDK	Install all patches required for JDK 1.4.1.05. This list is constantly under review and is published on the JDK download page on the HP web site
Quality Pack	Dec 2001 Consolidate Patches (Dec01GQPK11i_Aux_Patch B.03.02.06) or higher
Patches (or higher versions)	■ PHKL_25212 vm preemption point, mlock / async_io patch ■ PHKL_25506 asyncio driver patch ■ PHKL_27091 s700_800 11.11 Core PM, vPar, Psets Cumulative, slpq1 perf patch ■ PHKL_28267 s700_800 11.11 thread perf, user limit, cumulative VM ■ PHNE_28089 s700_800 11.11 cumulative ARPA Transport patch ■ PHSS_24638 s700_800 11.11 HP aC++ -AA runtime libraries (aCC A.03.33) ■ PHSS_26263 s700_800 11.11 ld(1) and linker tools cumulative patch ■ PHSS_26792 s700_800 11.X ANSI C compiler B.11.11.04 cumulative patch ■ PHSS_26793 s700_800 11.X +O4 / PBO Compiler B.11.11.04 cumulative patch
Package	Motif 2.1 Development Environment (X11MotifDevKit.MOTIF21-PRG) B.11.11.01 **Note:** This package is not required if you create the symbolic links described in step 6 of the next section.

To ensure that the system meets these requirements, follow the following steps:

1. To determine which version of HP-UX is installed, enter the following command:

   ```
   # uname -a
   HP-UX hostname B.11.11 U 9000/800 109444686 unlimited-user license
   ```

   In this example, the version of HP-UX 11i is 11.11.

2. To determine which JDK is installed, enter the following command:

   ```
   # JDK_location/bin/java -fullversion
   ```

   If the version displayed is less than 1.4.1.05, download JDK 1.4.1.05 or higher from the following Web site and install it:

   http://www.hp.com/products1/unix/java/index.html

3. To determine whether the Quality Pack is installed, enter the following command:

   ```
   # /usr/sbin/swlist | grep QPK
   ```

   If the quality pack is not installed, download it from the following web site and install it:

   http://www.software.hp.com/SUPPORT_PLUS/qpk.html

4. To determine whether a bundle or product is installed, enter the following command:

   ```
   # /usr/sbin/swlist -l product | more
   ```

   If a required product is not installed, you must install it. See your operating system or software documentation for information on installing products.

5. To determine whether a patch is installed, enter a command similar to the following:

   ```
   # /usr/sbin/swlist -l patch | grep PHKL_27813
   ```

   Alternatively, to list all installed patches, enter the following command:

   ```
   # /usr/sbin/swlist -l patch | more
   ```

   If a required patch is not installed, download it from the following URL and install it:

   `http://itresourcecenter.hp.com`

6. If the Motif package listed in Table 5–2 and Table 5–3 is not installed on the computer, create the following symbolic links:

   a. Log in as the `root` user

   b. Change to the `/usr/lib` directory:

      ```
      # cd /usr/lib
      ```

   c. Create the required links:

      ```
      # ln -s libX11.3 libX11.sl
      # ln -s libXIE.2 libXIE.sl
      # ln -s libXext.3 libXext.sl
      # ln -s libXhp11.3 libXhp11.sl
      # ln -s libXi.3 libXi.sl
      # ln -s libXm.4 libXm.sl
      # ln -s libXp.2 libXp.sl
      # ln -s libXt.3 libXt.sl
      # ln -s libXtst.2 libXtst.sl
      ```

5.1.3 Checking the Software Requirements for Linux

Depending on your distribution of Linux, see one of the following sections for information on checking the software requirements:

- Software Requirements for Red Hat 2.1 Systems
- Software Requirements for Red Hat 3.0 Systems
- Software Requirements for UnitedLinux 1.0 Systems

Oracle does not support customized kernels or modules not supported by the Linux vendor.

You can install Oracle Application Server 10*g* Forms and Reports Services 10*g* (9.0.4) on a Linux system that is not on a network and you can install Oracle Application Server 10*g* Forms and Reports Services 10*g* (9.0.4) on a Linux system that is configured to use DHCP. If you want to install Oracle Application Server 10*g* Forms and Reports Services on a computer that is not on a network, you must configure the computer to use either a static IP address or a loopback IP address. Configure the computer to

resolve the hostname of the computer to either a static IP address or a loopback IP address.

5.1.3.1 Software Requirements for Red Hat 2.1 Systems

Table 5–4 lists the software requirements for Red Hat 2.1 systems and the procedure that follows the table describes how to ensure your system meets these requirements and any additional requirements for installing Oracle Application Server 10*g* Forms and Reports Services.

> **Note:** Oracle Application Server 10*g* Forms and Reports Services is certified with the following Operating System specific software. For the most current list of supported Operating System specific software (For example, JDK version or Operating System version), check Oracle*MetaLink* (`http://metalink.oracle.com`).

Table 5–4 Software Requirements for Red Hat 2.1 Systems

Item	Requirements
Operating System	Red Hat Enterprise Linux AS/ES 2.1 For more information on Red Hat, see: `http://www.redhat.com`
Red Hat Patches	Errata 25 kernel or a higher errata patch approved by Red Hat For example, one of the following, depending on the type of Red Hat installation: ▪ kernel-2.4.9-e.25 kernel-smp-2.4.9-e.25 kernel-enterprise-2.4.9-e.25 The glibc-2.2.4-32 package glibc-2.2.4-32
Software packages (check that these versions or higher versions are installed)	gcc-2.96-108.1 pdksh-5.2.14-13 openmotif-2.1.30 sysstat-4.0.1 compat-glibc-6.2-2.1.3.2 libstdc++-2.96-108.1

To ensure that the system meets all the requirements, follow these steps:

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
Red Hat Linux Advanced Server release 2.1AS/\m (Pensacola)
```

> **Note:** Red Hat Enterprise Linux AS/ES 2.1, 3.0 and UnitedLinux 1.0 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (http://metalink.oracle.com). Do not install the software on other versions of Linux.

3. To determine which version of the Red Hat Linux kernel is installed, enter the following command

```
# uname -r
kernel-smp-2.4.9-e.25
```

   In this example, the version shown is 2.4.9 with errata 25. If necessary, see your operating system documentation for information on upgrading the kernel.

   For more information on Red Hat patches, see:

   http://www.redhat.com

4. To determine whether any other package is installed, enter a command similar to the following:

```
# rpm -q package_name
```

   If a package is missing, download it and install it using the following command:

```
# rpm -i package_name
```

5.1.3.2 Software Requirements for Red Hat 3.0 Systems

Table 5–5 lists the software requirements for Red Hat 3.0 systems and the procedure that follows the table describes how to ensure your system meets these requirements and any additional requirements for installing Oracle Application Server 10*g* Forms and Reports Services.

> **Note:** Oracle Application Server 10*g* Forms and Reports Services is certified with the following Operating System specific software. For the most current list of supported Operating System specific software (For example, JDK and Operating System version), check Oracle*MetaLink* (http://metalink.oracle.com).

Table 5–5 Software Requirements for Red Hat 3.0 Systems

Item	Requirements
Operating System	Red Hat Enterprise Linux AS/ES 3.0 For more information on Red Hat, see: http://www.redhat.com The minimum supported kernel and glibc version are: ■ 2.4.21-4-EL ■ glibc-2.3.2-95.3

Table 5–5 (Cont.) Software Requirements for Red Hat 3.0 Systems

Item	Requirements
Software packages	gcc-3.2.3-20
(check that these versions or higher versions are installed)	setarch-1.3-1
	pdksh-5.2.14
	openmotif21-2.1.30-8
	gnome-libs-1.4.1.2.90-34.1
	compat-glibc-7.x-2.2.4.32.5
	compat-gcc-7.3-2.96.122
	compat-libstdc++-7.3-2.96.122
	compat-libstdc++-devel-7.3-2.96.122
	compat-gcc-c++-7.3-2.96.122
	sysstat-4.0.7
	Note: For Red Hat 3.0, the equivalent version of openmotif 2.1.30-8 is openmotif21-2.1.30-8. The openmotif21-2.1.30-8 package can be installed from disk number 3 of the Red Hat 3.0 distribution by entering:
	`$ rpm -ivh openmotif21-2.1.30-8`

To ensure that the system meets all the requirements, follow these steps:

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
Red Hat Enterprise Linux AS release 3 (Taroon)
```

> **Note:** Red Hat Enterprise Linux AS/ES 2.1, 3.0 and UnitedLinux 1.0 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (`http://metalink.oracle.com`). Do not install the software on other versions of Linux.

3. To determine whether any other package is installed, enter a command similar to the following:

```
# rpm -q package_name
```

If a package is missing, download it and install it using the following command:

```
# rpm -i package_name
```

4. Check whether the following symbolic links exist:

```
# cd /usr/bin
# ls -l gcc g++
gcc -> gcc296
g++ -> g++296
```

If these links do not exist, use the following instruction to create them:

a. Create a backup of the existing files as follows:

```
# mv /usr/bin/gcc /usr/bin/gcc.backup
# mv /usr/bin/g++ /usr/bin/g++.backup
```

b. Create the symbolic links as follows:

```
# ln -s /usr/bin/gcc296 /usr/bin/gcc
# ln -s /usr/bin/g++296 /usr/bin/g++
```

You can restore the original files if required, however you must recreate the links as described in this procedure for Oracle Application Server 10*g* Forms and Reports Services to relink properly.

5. If the hugemem kernel is used, set the architecture using following command:

```
prompt> setarch i386
```

6. Apply patch no. 3006854. You can download this patch from Oracle*MetaLink* (http://metalink.oracle.com). This patch creates the /etc/libcwait.so file and appends the following line to the /etc/ld.so.preload file:

```
/etc/libcwait.so
```

5.1.3.3 Software Requirements for UnitedLinux 1.0 Systems

Table 5–6 lists the software requirements for UnitedLinux 1.0 systems and the procedure that follows the table describes how to ensure your system meets these requirements and any additional requirements for installing Oracle Application Server 10*g* Forms and Reports Services.

Note: Oracle Application Server 10*g* Forms and Reports Services is certified with the following Operating System specific software. For the most current list of supported Operating System specific software (For example, JDK and Operating System version), check Oracle*MetaLink* (http://metalink.oracle.com).

Table 5–6 Software Requirements for UnitedLinux Systems

Item	Requirements
Operating System	UnitedLinux 1.0 For more information on United Linux, see: http://www.unitedlinux.com SP2a and SP3 are certified for Oracle Application Server 10*g* Forms and Reports Services 10*g* (9.0.4). For UnitedLinux 1.0 SP2a, the minimum supported kernel and glibc versions are: ■ 2.4.19 ■ glibc-2.2.5-179 For UnitedLinux 1.0 SP3, the minimum supported kernel and glibc versions are: ■ 2.4.21 ■ glibc-2.2.5-213

Table 5–6 (Cont.) Software Requirements for UnitedLinux Systems

Item	Requirements
Software packages	gcc_old-2.95.3
(check that these versions or higher versions are installed)	pdksh-5.2.14
	openmotif-2.1.30MLI4
	sysstat-4.0.3
	libstdc++-3.2.2-38

To ensure that the system meets all the requirements, follow these steps:

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

   ```
   # cat /etc/issue
   Welcome to UnitedLinux 1.0 (i586) - Kernel \r (\l)
   ```

   Note: Red Hat Enterprise Linux AS/ES 2.1, 3.0 and UnitedLinux 1.0 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (`http://metalink.oracle.com`). Do not install the software on other versions of Linux.

3. To determine the service pack version, enter the following command:

   ```
   # rpm -qf /boot/vmlinuz
   ```

   If the kernel version contains the string `2.4.19`, SP2a is installed. If the kernel version contains the string `2.4.21`, SP3 is installed.

4. To determine whether any other package is installed, enter a command similar to the following:

   ```
   # rpm -q package_name
   ```

   If a package is missing, download it and install it using the following command:

   ```
   # rpm -i package_name
   ```

5. Create the following symbolic link for the Perl executable if it does not already exist:

   ```
   # ln -sf /usr/bin/perl /usr/local/bin/perl
   ```

6. Create the following symbolic link for the `fuser` executable if it does not already exist:

   ```
   # ln -sf /bin/fuser /sbin/fuser
   ```

7. Create the correct compiler environment on UniteLinux 1.0:

   a. Install the `gcc_old` package. This provides the old compiler GCC 2.95.3 in the `/opt/gcc295` directory.

   b. Check whether the following symbolic links exist:

      ```
      # cd /usr/bin
      ```

```
# ls -l gcc cc
gcc -> /opt/gcc295/bin/gcc
cc -> /opt/gcc295/bin/gcc
```

If these links do not exist, create a backup of the existing files:

```
# mv /usr/bin/gcc /usr/bin/gcc.backup
# mv /usr/bin/cc /usr/bin/cc.backup
```

Create the symbolic links:

```
# ln -s /opt/gcc295/bin/gcc /usr/bin/gcc
# ln -s /opt/gcc295/bin/gcc /usr/bin/cc
```

You can restore the original files if required, however you must recreate the links as described in this procedure for Oracle Application Server 10*g* Forms and Reports Services to relink properly.

c. Create the following symbolic link if it does not already exist:

```
prompt> ln -s /opt/gcc295/lib/gcc-lib/i486-suse-linux/2.95.3/libgcc.a \
/lib/libgcc.a
```

Depending on the UnitedLinux distribution, the first path in the previous command may contain a string other than `suse`.

8. If the `orarun` package was installed on a UnitedLinux system, complete the following steps as the `oracle` user to reset the environment:

a. Enter the following commands:

```
prompt> cd /etc/profile.d
prompt> mv oracle.csh oracle.csh.bak
prompt> mv oracle.sh oracle.sh.bak
prompt> mv alljava.sh alljava.sh.bak
prompt> mv alljava.csh alljava.csh.bak
```

b. Use any text editor to comment out the following line in the `$HOME/.profile` file:

```
. ./.oracle
```

c. Log out of the `oracle` user account.

d. Log into the `oracle` user account for the changes to take effect.

9. If any Java packages are installed on the system, unset the Java environment variables, for example JAVA_HOME.

Note: Oracle recommends that you do not install any of the Java packages supplied with the UnitedLinux distribution.

---

10. Check the `/etc/services` file to make sure that the following port ranges are available on the system:

- ports 3060-3129 required for Oracle Internet Directory
- ports 3130-3199 required for Oracle Internet Directory (SSL)
- ports 1812-1829 required for Oracle Enterprise Manager (console)
- ports 1830-1849 required for Oracle Enterprise Manager (agent)

- ports 1850-1869 required for Oracle Enterprise Manager (RMI)

If necessary, remove entries from the `/etc/services` file and reboot the system. To remove the entries, you can use the perl script included with the patch 3167528. This patch is available from:

`http://metalink.oracle.com`

If these ports are not available, the associated configuration assistants will fail during the installation.

11. If you use Network Information Service (NIS):

    a. Make sure that the following line exists in the `/etc/yp.conf` file:

    ```
    hostname.domainname broadcast
    ```

    b. Make sure that the following line exists in the `/etc/nsswitch.conf` file:

    ```
    hosts: files nis dns
    ```

5.2 Operating System User

Create an operating system user to install and upgrade Oracle products. The operating system user running the installer must have write permission for these directories:

- the Oracle home directory, which contains files for the product you are installing
- the inventory directory, which is used by the installer for all Oracle products

If the computer contains other Oracle products, you might already have a user for this purpose. Look in the `/var/opt/oracle/oraInst.loc` file for HP-UX systems and the `/etc/oraInst.loc` file on Linux systems. This file lists the location of the inventory directory and the group who owns it. If the file does not exist, the computer does not have Oracle products installed on it.

If you do not already have a user for installing Oracle products, create a user with the following properties:

Table 5–7 Properties of the Operating System User Who Runs the Installer

Item	Description
Login name	You can use any name for the user. This guide refers to the user as the `oracle` user.
Group identifier	The primary group of the `oracle` user must have write permission for the `oraInventory` directory. You can use any name for the group. This guide uses the name `oinstall`.
Home directory	The home directory for the `oracle` user can be consistent with the home directories of other users.
Login shell	The default login shell can be the C, Bourne, or Korn shell.

Note: Use the `oracle` user only for installing and maintaining Oracle products. Never use it for purposes unrelated to the installer. Do not use root as the `oracle` user.

To create a local operating system user:

1. Switch to the `root` user.

```
prompt> su
```

2. To create the `oracle` user, enter a command similar to the following:

   ```
   # /usr/sbin/useradd -g oinstall oracle
   ```

   In this command the `-g` option specifies the primary group, which must be the group that owns the Oracle Inventory, for example, `oinstall`.

   Use the `-G` option to specify the secondary groups, which can include the OSDBA group, and the OSOPER group if necessary, for example, `dba` or `dba, oper`.

3. Set the password of the `oracle` user:

   ```
   # passwd oracle
   ```

To check which groups an operating system user belongs to, run the `groups` command with the name of the user. For example:

```
prompt> groups oracle
```

For more information about operating system users and groups, see your operating system documentation or contact your system administrator.

User IDs are important if you are setting up an OracleAS Active Failover Cluster environment because you need to set up identical users on each node.

5.3 Environment Variables

The operating system user who will be installing Oracle Application Server 10*g* Forms and Reports Services needs to set (or unset) the environment variables in Table 5–8. The table also summarizes whether you set or unset an environment variable.

Table 5–8 Environment Variable Summary

Environment variable	Set or Unset
ORACLE_HOME and ORACLE_SID	Does not matter (the installer unsets these two environment variables).
PATH, CLASSPATH, and Shared Library Path Environment Variables	Must not contain references to directories in any Oracle home directories.
DISPLAY	Set it to the monitor where you want to the installer window to appear.
TMP and TMPDIR	Optional. If unset, defaults to `/tmp`.
TNS_ADMIN	Unset.
ORA_NLS	Unset.
LD_BIND_NOW (Linux Only)	Unset.

5.3.1 Environment Variable Tips

Here are some tips when working with environment variables:

- If you set environment variables in the `.profile` file, they might not be read. To ensure environment variables are set to the correct values, check their values in the shell where you will be running the installer.

- To check the value of environment variables, use the `env` command. This displays all the currently defined environment variables and their values.

  ```
  % env
  ```

- If you use the `su` command to switch users (for example, switching from the `root` user to the `oracle` user), check the environment variables when you are the new user because the environment variables might not be passed to the new user. This can happen even if you run `su` with the `-` option (`su - user`).

  ```
  # /* root user */
  # su - oracle
  % env
  ```

5.3.2 ORACLE_HOME and ORACLE_SID

It does not matter if these environment variables are set or unset when you start up the installer because the installer unsets these environment variables.

5.3.3 PATH, CLASSPATH, and Shared Library Path Environment Variables

Edit your PATH, CLASSPATH, and shared library path environment variables so that they do not reference any Oracle home directories.

Table 5–9 lists the shared library path environment variables for different platforms

Table 5–9 Shared Library Path Environment Variables

Platform	Environment variable
Linux	LD_LIBRARY_PATH
HP-UX	SHLIB_PATH and LD_LIBRARY_PATH

5.3.4 DISPLAY

Set the DISPLAY environment variable to point to the X server that will display the installer. The format of the DISPLAY environment variable is:

hostname:*display_number*.*screen_number*

The following is an example of setting the DISPLAY environment variable in C shell:

```
% setenv DISPLAY test.mydomain.com:0.0
```

The following is an example of setting the DISPLAY environment variable in Bourne or Korn shell:

```
$ DISPLAY=test.mydomain.com:0.0; export DISPLAY
```

You can test the display by running the xclock program. For Linux, use the following command:

```
$ /usr/X11R6/bin/xclock &
```

For HP-UX, use the following command:

```
$ /usr/bin/X11/xclock
```

Oracle Application Server 10*g* Forms and Reports Services requires a running X server during installation only. The frame buffer X server installed with your operating

system requires that you remain logged in and have the frame buffer running during installation. If you do not wish to do this, then you must use a virtual frame buffer, such as X Virtual Frame Buffer (XVFB) or Virtual Network Computing (VNC).

Visit Oracle Technology Network (http://otn.oracle.com) for information about obtaining and installing XVFB or other virtual frame buffer solutions. Search OTN for "frame buffer".

5.3.5 TMP and TMPDIR

The installer uses a temporary directory for swap space. The installer checks for the TMP and TMPDIR environment variables to locate the temporary directory. If this environment variable does not exist, the installer uses the /tmp directory.

If you want the installer to use a temporary directory other than /tmp, set the TMP and TMPDIR environment variables to the full path of an alternate directory. The oracle user must have write permission for this directory and the directory must meet the requirements listed in Section 5.1.2, "Checking the Software Requirements for HP-UX" and Section 5.1.3, "Checking the Software Requirements for Linux".

Example (C shell):

```
% setenv TMP /tmp2
% setenv TMPDIR /tmp2
```

Example (Bourne or Korn shell):

```
$ TMP=/tmp2; export TMP
$ TMPDIR=/tmp2; export TMPDIR
```

5.3.6 TNS_ADMIN

This section describes two requirements:

- The TNS_ADMIN environment variable must not be set.
- The /etc and the /var/opt/oracle directories must not contain a tnsnames.ora file.

These requirements are necessary to prevent conflicts between the Net configuration files for different Oracle products.

If you need to set TNS_ADMIN or if you have the tnsnames.ora file in /etc or /var/opt/oracle, do the following steps before installing Oracle Application Server 10*g* Forms and Reports Services.

1. If you have the tnsnames.ora file in /etc or /var/opt/oracle, move the file from these directories to a different directory. Alternatively, you can rename the file.
2. Make sure the TNS_ADMIN environment variable is not set.

   Example (C shell):

   ```
   % unsetenv TNS_ADMIN
   ```

   Example (Bourne or Korn shell):

   ```
   $ unset TNS_ADMIN
   ```

After installation, you can merge the contents of the newly created tnsnames.ora file with your existing tnsnames.ora file.

5.3.7 ORA_NLS

To make sure that the Oracle Application Server 10*g* Forms and Reports Services installation completes successfully, unset the ORA_NLS environment variable.

Example:

```
$ unset ORA_NLS
```

5.3.8 LD_BIND_NOW (Linux Only)

To make sure that the Oracle Application Server 10*g* Forms and Reports Services installation completes successfully on Linux systems, unset the LD_BIND_NOW environment variable.

Example:

```
$ unset LD_BIND_NOW
```

6

Post-Installation Tasks

This chapter describes the post-installation tasks you need to perform to ensure complete installation of Oracle Application Server 10*g* Forms and Reports Services.

This chapter contains the following sections:

6.1 Testing the Forms and Reports Services Installation

Testing the Forms and Reports Services install would require you to have a Windows machine and a browser to invoke the OEM page of your installation.

To test your installation, perform the following steps:

1. Open the Oracle Application Server Welcome page (`http://hostname:7777`)
2. Click the Demonstrations tab.
3. Click the Business Intelligence and Forms link.
4. Click the Forms Services or Reports link to run the test Form or test Report.

6.2 NLS_LANG Environment Variable

Check the value of the `NLS_LANG` environment variable to ensure that it is correct for your environment. See the *Oracle Application Server 10g Globalization Guide* for details, including a list of files that set this variable. You might need to edit the value of the `NLS_LANG` variable in these files.

6.3 Deployment of Forms and Reports Application

Table 6–1 lists the guides that outline post-installation information on how to configure and deploy Forms and Reports applications.

Table 6–1 Deploying Forms and Reports Applications

Component	Guides
OracleAS Reports Services	*Oracle Application Server Reports Services Publishing Reports to the Web*

Table 6–1 (Cont.) Deploying Forms and Reports Applications

Component	Guides
OracleAS Forms Services	*Oracle Application Server Forms Services Deployment Guide*

6.4 PATH Environment Variable for Linux Installations

If you installed Oracle Application Server 10g Forms and Reports Services on a Linux system, include the `/usr/bin` directory as the first entry of the `PATH` environment variable. This is a requirement for relinking executables using make files.

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