

Oracle® Application Server 10g

Forms and Reports Services Installation Guide

10g (9.0.4) for Solaris Operating Environment

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Oracle Application Server 10g Forms and Reports Services Installation Guide, 10g (9.0.4) for Solaris Operating Environment

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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 10g Forms and Reports Services is going to be installed. Users who are installing Oracle Application Server 10g 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 and appendixes:

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

This chapter introduces you to Oracle Application Server 10g 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's New in the Installation"

This chapter describes new features in Oracle Application Server 10g 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 10g 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 10g 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 10g 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>code</code>	Text in the code font indicates filenames, commands, or contents of configuration files.
<i>italicized code</i>	Italicized code indicates placeholder text that you need to replace with an appropriate value.
[]	Brackets enclose optional clauses from which you can choose one or none.
...	Ellipses indicate that extraneous information have been omitted.

Introduction to Oracle Application Server 10g 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'll 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'll have access to these features:

- [OracleAS Forms Services](#)
- [Oracle Application Server Reports Services](#)
- [Oracle HTTP Server](#)
- [Oracle Application Server Web Cache](#)
- [Oracle Containers for Java \(OC4J\)](#)
- [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 multitiered 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 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 Java (OC4J)

Oracle Application Server Containers for Java 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): 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): 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.

Installation Overview

Oracle Application Server 10g Forms and Reports Services is an Oracle Application Server 10g 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 10g 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 installer 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 Installer installs Oracle Application Server 10g 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 10g 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.

What's New in the Installation

This chapter contains information about new installation features Oracle Application Server 10g 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 10g Forms and Reports Services 10g, you can specify custom port numbers for components, instead of having the Oracle Universal Installer (OUI) assign default port numbers. This feature is called "static ports". To use static ports, you 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 [Section 3.1.3, "Using Custom Port Numbers \(the "Static Ports" Feature\)"](#) for details.

3.1.1 Ports

Many Oracle Application Server 10g 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 `/etc/services`:

```
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 Solaris operating system, the `/etc/services` file includes ports 389 and 636 (for LDAP and LDAP/SSL). These happen to be 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 `/etc/services`, 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 *port_num* 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, be sure you 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 10g Forms and Reports Services installation. If you have installed Oracle Application Server 10g 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.

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 this 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 your `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 these lines in `staticports.ini`:

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

the `Port` directive would be set to 7979.

2. Set the port for Oracle HTTP Server.

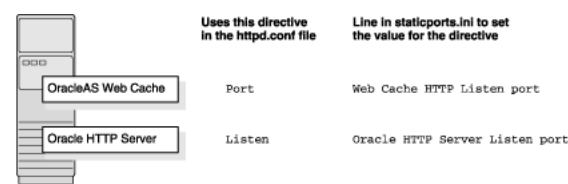
Oracle HTTP Server uses the port specified by the `Listen` directive. To set this port, add this line in the `staticports.ini` file:

```
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.

To Configure 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 staticports.ini, 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 staticports.ini.

- [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. You do this configuration after installation. For details, see *Oracle HTTP Server Administrator's Guide*.

3.1.3.3 Notes on Using `staticports.ini`

- 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
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

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

Component	Default Port	Port Number Range	Name in staticports.ini
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 6i backwards compatibility only)	1950	1950 - 1960	Reports Services SQL*Net port
OracleAS Reports Services Visigenics CORBA	14000	14000 - 14010	Not settable
OracleAS Web Cache			

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

Component	Default Port	Port Number Range	Name in staticports.ini
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
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 10g 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 10g 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.

Compatibility with Earlier Versions

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

4.1 Compatibility with Release 2 (9.0.2), Release 2 (9.0.3) and Release 10g (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 6i Clients ■ <code>rwcgi60</code> ■ <code>rwcli60</code> ■ <code>rwrqv60</code> ■ <code>rwervlet</code>	10g (9.0.4) Reports Server	Yes	Using <code>rwproxy</code> ; shipped with 10g
Oracle9i (9.0.2) Reports Clients ■ <code>rwcgi</code> ■ <code>rwclient</code> ■ <code>rwrqv</code> ■ <code>rwervlet</code>	10g (9.0.4) Reports Server	Yes	None
Oracle Reports 10g Clients ■ <code>rwcgi</code> ■ <code>rwclient</code> ■ <code>rwrqv</code> ■ <code>rwervlet</code>	9i (9.0.2) Reports Server	Yes	None
Oracle Reports 10g Clients ■ <code>rwcgi</code> ■ <code>rwclient</code> ■ <code>rwrqv</code> ■ <code>rwervlet</code>	6i Reports Server	No	None
Oracle Forms 6i Clients	10g (9.0.4) Forms Server	Yes	None
Oracle9i Forms Clients	10g (9.0.4) Forms Server	Yes	There is no need to recompile Forms 9.0.2 applications
Oracle Forms 10g Clients	9i (9.0.2) Forms Server	Yes	None

Requirements

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

This chapter contains the following sections:

- [Section 5.1, "System Requirements"](#)
- [Section 5.2, "Operating System Patches"](#)
- [Section 5.3, "Operating System Packages"](#)
- [Section 5.4, "Operating System User"](#)
- [Section 5.5, "Environment Variables"](#)

5.1 System Requirements

[Table 5–1](#) lists the system requirements for running Oracle Application Server 10g Forms and Reports Services. The OUI checks many of the requirements at the start of the installation process and warns you if any of them is 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 System Requirements

Item	Requirement	Checked by Installer
Operating system	■ Solaris 8	Yes
	■ Solaris 9	
	See Section 5.2, "Operating System Patches" for a list of required patches.	

Table 5–1 System Requirements

Item	Requirement	Checked by Installer
IP	The computer’s IP address must be static. Oracle Application Server 10g Forms and Reports Services does not support computers using Solaris DHCP. DHCP is supported on Linux and Microsoft Windows.	No
Processor Type	The processor must have a SPARC v9 architecture. This is because Oracle Application Server 10g (9.0.4) uses the Sun Java 1.4.1 HotSpot Server VM, which no longer supports SPARC v8 and older processors.	No
Processor Speed	300 MHz or greater (450 MHz recommended). Oracle recommends a multiple CPU computer. To determine the processor speed, run the <code>psrinfo</code> command with the <code>-v</code> option: <code>prompt> /usr/sbin/psrinfo -v</code> Status of processor 0 as of: 02/10/03 13:21:20 Processor has been on-line since 02/04/03 15:45:07. The sparc processor operates at 450 MHz, and has a sparc floating point processor.	Yes
Memory	512 MB To determine the amount of memory, use the <code>prtconf</code> command: <code>prompt> /usr/sbin/prtconf grep Memory</code> Note: These values assume you are running only one Oracle Application Server 10g Forms and Reports Services instance per computer.	Yes
Disk space	1 GB To determine the amount of free disk space, use the <code>df</code> command: <code>prompt> df -k dir</code> Replace <code>dir</code> with <code>/opt/oracle</code>	No
Space in /tmp directory	256 MB To determine the amount of free space in the <code>/tmp</code> directory, use the <code>df</code> command: <code>prompt> df -k /tmp</code> If the <code>/tmp</code> directory does not have enough free space, you can specify a different directory by setting the <code>TMP</code> environment variable.	Yes

Table 5–1 System Requirements

Item	Requirement	Checked by Installer
Swap space	640 MB of available swap space To determine the amount of available swap space, use the <code>swap</code> command: <pre>prompt> /usr/sbin/swap -s</pre> 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: <pre>prompt> su Password: root_user_password # mkfile <i>size</i> <i>swap_file_name</i></pre> Append an "m" to the 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: <pre># /usr/sbin/swap -a <i>swap_file_name</i></pre> 3. Verify the new swap space size: <pre>prompt> /usr/sbin/swap -s</pre>	Yes
Monitor	256 color display To determine your monitor's display capabilities, run the <code>xwininfo</code> command. Before running the command, ensure that the <code>DISPLAY</code> environment variable is set. <pre>prompt> /usr/openwin/bin/xwininfo</pre> Look for the "Depth" line. You need a depth of at least 8 (bits per pixel).	Yes

Table 5–1 System Requirements

Item	Requirement	Checked by Installer
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<i>MetaLink</i> 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, the JVM heap size can be controlled by specifying small value through the environment variable `REPORTS_JVM_OPTIONS`. For details, see *Oracle Application Server Reports Services Publishing Reports to the Web*.

5.2 Operating System Patches

Table 5–2 lists the Solaris operating system patches that you must install before installing Oracle Application Server 10g Forms and Reports Services. You can download the patches from:

<http://sunsolve.sun.com>

Note: Although the patches listed in [Table 5-2](#) are current at the time of publication, Sun Microsystems, Inc. often updates the list of required patches for J2SE. Click the "Readme" link on the following URL for the most current list of patches:
<http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/J2SE>

Table 5-2 Required Patches for Solaris Operating Systems

Operating System	Patches Required
Solaris 8	■ 108652-66 or higher: X11 6.4.1: Xsun patch ■ 108921-16 or higher: CDE 1.4: dtwm patch ■ 108940-54 or higher: Motif 1.2.7 and 2.1.1: Runtime library patch ■ 112003-03 or higher: Unable to load fontset in 64-bit Solaris 8 iso-1 or iso-15 ■ 108773-18 or higher: IIIM and X input and output method patch ■ 111310-01 or higher: /usr/lib/libdhcpagent.so.1 patch ■ 109147-24 or higher: Linker patch ■ 111308-03 or higher: /usr/lib/libmtmalloc.so.1 patch ■ 112438-01 or higher: /kernel/drv/random patch ■ 111111-03 or higher: /usr/bin/nawk patch ■ 112396-02 or higher: /usr/bin/fgrep patch ■ 110386-03 or higher: RBAC feature patch ■ 111023-02 or higher: /kernel/fs/mntfs and /kernel/fs/sparcv9/mntfs patch ■ 108987-13 or higher: Patch for patchadd and patchrm ■ 108528-22 or higher: Kernel update patch ■ 108989-02 or higher: /usr/kernel/sys/acctctl and /usr/kernel/sys/exacctsys patch ■ 108993-22 or higher: LDAP2 client, libc, libthread and libnsl libraries patch ■ 112138-01 or higher: usr/bin/domainname patch
Solaris 9	No patches required.

How to Get a List of Operating System Patches Installed on Your Computer

Follow the procedure below to determine which patches are installed on your computer.

1. Run the `showrev` command with the `-a` option. The following command saves the output to a file called `patchList`.

```
prompt> showrev -a > patchList
```

2. Open the file in a text editor, such as vi or emacs, and search for patch numbers.

How the Installer Checks for Operating System Patches

The installer searches for the required patch versions on your computer. If it does not find an exact match, it displays a warning message in the shell where you started the installer:

```
prompt> runInstaller
...
Pre-Requisite checks for patches have failed. Do you wish to continue y/n n
```

The installer gives you a choice to exit or continue.

Type **n** to exit the installer if you do not have all the patches. You can then download and install the patches.

Type **y** to continue only if you have patches that are of a later version (for example, you have patch 108652-67 instead of 108652-66).

5.3 Operating System Packages

Check that your computer contains the following operating system packages. If the packages are not present, the installer cannot continue.

- SUNWarc
- SUNWbtool
- SUNWhea
- SUNWlibm
- SUNWlibms
- SUNWsprot
- SUNWsprox
- SUNWtoo
- SUNWi1of (the character after the "i" is the number 1, not the letter "ell")
- SUNWxwft
- SUNWi1cs (the character after the "i" is the number 1, not the letter "ell")

- SUNWi15cs (the character after the "i" is the number 1, not the letter "ell")

The last two packages (SUNWi1cs and SUNWi15cs) are required for the ISO8859-1 and ISO8859-15 codesets.

To check if an operating system package is installed on your computer, run the `pkginfo` command with the name of the package. Do this for each package listed above. The syntax for running `pkginfo` is:

```
pkginfo package_name
```

For example:

```
prompt> pkginfo SUNWarc
```

If your computer is missing a package, contact your system administrator.

5.4 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. 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 5–3 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 <code>oracle</code> user.
Group identifier	The primary group of the <code>oracle</code> user must have write permission for the <code>oraInventory</code> directory. You can use any name for the group. This guide uses the name <code>oinstall</code> .

Table 5–3 Properties of the Operating System User Who Runs the installer

Item	Description
Home directory	The home directory for the <code>oracle</code> 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, use the Solaris Management Console:

1. Set the `DISPLAY` environment variable to point to the monitor where you want the Solaris Management Console window to appear. See [Section 5.5.1, "DISPLAY Environment Variable"](#) if you need help setting the environment variable.
2. Start up the Solaris Management Console:

```
prompt> /usr/sadm/bin/smc
```
3. In the left frame, expand **This Computer**, then expand **System Configuration**.
4. Click **Users**. This displays the Log In window.
5. In the Log In window, in **User Name**, enter `root`. In **Password**, enter the root password.
6. In the left frame, expand **Users** and select **User Accounts**.
7. Select **Action > Add User > With Wizard**.
8. In **User Name**, enter the name of the user (`oracle`). The **Full Name** and **Description** fields are optional. Click **Next**.
9. In **User ID Number**, accept the default value. Click **Next**.
10. Select **User Must Use This Password At First Login**, and enter a password for the user. Click **Next**.
11. In **Primary Group**, select the primary group for the user. This is the group you created earlier to own the inventory directory. Click **Next**.
12. In **Path**, enter a home directory for the user. Click **Next**.

13. Review the mail server information for the user and click **Next**.

14. Review the user information and click **Finish** to create the user.

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.

5.5 Environment Variables

The operating system user who will be installing Oracle Application Server 10g Forms and Reports Services needs to set (or unset) the following environment variables. [Table 5–4](#) summarizes whether you set or unset an environment variable.

Table 5–4 Environment Variable Summary

Environment variable	Set or Unset
ORACLE_HOME	Unset
PATH, CLASSPATH, and LD_LIBRARY_PATH	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	Optional. If unset, defaults to <code>/tmp</code> .
TNS_ADMIN	Unset
REPORTS_DEFAULT_DISPLAY	Default set to YES. If it is set to NO, ensure that you specify the appropriate display.
FORM90_PATH	Specifies the path that Oracle Forms searches when looking for a form, menu, or library to run.

5.5.1 DISPLAY Environment Variable

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
```

Example (C shell):

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

Example (Bourne or Korn shell):

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

You can test the display by running the `xclock` program:

```
$ /usr/openwin/bin/xclock &
```

Oracle Application Server 10g 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".

Post-Installation Tasks

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

This chapter contains the following sections:

- [Section 6.1, "Testing your Forms and Reports Services Installation"](#)
- [Section 6.2, "NLS_LANG Environment Variable"](#)
- [Section 6.3, "Deployment of Forms and Reports Application"](#)

6.1 Testing your Forms and Reports Services Installation

Testing your 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 application.

Table 6–1 Deploying Forms and Reports Applications

Component	Guides
OracleAS Reports Services	<i>Oracle Application Server Reports Services Publishing Reports to the Web</i>
OracleAS Forms Services	Oracle Application Server Forms Services Deployment Guide

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