

Oracle® Application Server

Forms and Reports Services Installation Guide

10g Release 2 (10.1.2) for Windows

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Oracle Application Server Forms and Reports Services Installation Guide, 10g Release 2 (10.1.2) for Windows
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Preface

Oracle Application Server Forms and Reports Services Installation Guide covers requirements, new features in the installer, concepts that affect installation, compatibility with other products, post-installation tasks, and troubleshooting tips.

Audience

This guide is intended for users who are comfortable performing system administration operations such as creating users and groups, adding users to groups, and installing operating system patches on the computer on which Forms and Reports Services will be installed.

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Related Documents

For more information, see the following documents:

- *Oracle Application Server 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://www.oracle.com/technology/products/reports/>)

The Index of *Getting Started with Oracle Reports* provides access to Reports documentation not available on the main OTN Reports Documentation page. You can select from the Topic and Collateral Type lists to view any Reports document, including online help and tech notes.

- *Oracle Application Server Forms Services Deployment Guide*

Conventions

The following text conventions are used in this document:

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

What's New in the Installation

This chapter describes new features in Oracle Application Server 10g Forms and Reports Services. This chapter is mostly of interest to users who have installed previous versions of Forms and Reports Services.

To see a list of new features in the product itself, visit the Oracle Technology Network site (<http://www.oracle.com/technology>). For frequently asked questions (FAQ) about the installation of Forms and Reports Services, visit the Forms and Reports Services Installation FAQ page on the Oracle Technology Network site (http://www.oracle.com/technology/products/reports/htdocs/faq/faq_fr_services.htm).

This chapter includes the following topics:

- [Windows NT No Longer Supported](#)
- [New Screen for Specifying the staticports.ini File](#)
- [New Element for Specifying Port Numbers for CORBA Communication](#)
- [Configuring Forms and Reports Services to Use the Services of an Oracle Application Server Infrastructure](#)
- [Cloning Forms and Reports Services Instances](#)
- [Additional Tool for Deinstallation](#)
- [Recording Feature for Silent Installations](#)
- [Generating Installation Statistics](#)
- [Change in the Default Port Range](#)
- [What's New in Oracle Application Server Forms Services](#)
- [What's New in Oracle Application Server Reports Services](#)

1.1 Windows NT No Longer Supported

In this release, Windows NT is no longer supported, because Microsoft is ending its support for Windows NT.

1.2 New Screen for Specifying the staticports.ini File

In earlier releases, for components to use custom ports, you created a `staticports.ini` file to map components and port numbers. When you started the installer, you used a command-line option to specify the file.

In this release, you specify the `staticports.ini` file in the new "Select Port Configuration Options" screen in the installer. You do not use the command-line options to specify the file.

1.3 New Element for Specifying Port Numbers for CORBA Communication

This release introduces the `ORBPorts` element in the server configuration file to enable you to explicitly specify the port numbers used by Reports Server and engines for communication through CORBA. You can specify either a range of ports or individual ports separated by commas. For example:

```
<ORBPorts value="15000-15010"/> (Range of values)
```

```
<ORBPorts value="15000,16000,17000,18000"/> (Comma-separated values)
```

By default, the `ORBPorts` element is not present in the Reports Server configuration file. If this element is missing, Reports Server chooses a random port for CORBA communication. For more information about the `ORBPorts` element, see the chapter "Configuring OracleAS Reports Services" in the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

Note: The `ORBPorts` element should be defined only if the TCP port filtering has been enabled on the server where Reports Server is running. If port filtering is enabled, and a few ports can be opened for Reports Server, then use `ORBPorts` to specify them in the server configuration file for Reports Server and engine communication. If any of the ports are not available, Reports Server or engines may fail to start and an error displays.

1.4 Configuring Forms and Reports Services to Use the Services of an Oracle Application Server Infrastructure

In this release, you can configure Forms and Reports Services to use the services of an Oracle Application Server Infrastructure. Forms and Reports Services can then use the services of an OracleAS Infrastructure in the same way as used by the Business Intelligence and Forms components. For more information on the configuration, see [Chapter 6, "Configuring Forms and Reports Services to Use an Oracle Application Server Infrastructure"](#).

1.5 Cloning Forms and Reports Services Instances

Cloning is the process of copying an existing installation to a different location while preserving its configuration. In this release, cloning an installation of Forms and Reports Services instance is possible. For more information on cloning, see the *Oracle Application Server Administrator's Guide*.

1.6 Additional Tool for Deinstallation

In this release, there is a new tool called the Deconfig tool that removes entries from Oracle Internet Directory and the Oracle Application Server Metadata Repository. You run this tool before you deinstall an Oracle Application Server instance using the installer. For more information about the Deconfig tool, see the *Oracle Application Server Installation Guide*.

1.7 Recording Feature for Silent Installations

The installer has a record mode, in which it saves your inputs to a response file. You can then use the generated response file to install Forms and Reports Services on different computers using the same values.

For details, see the *Oracle Application Server Installation Guide*.

1.8 Generating Installation Statistics

The installer provides command-line options for monitoring resources used for installation.

[Table 1–1](#) lists the options that are supported.

Table 1–1 Installer Options for Generating Installation Statistics

Option	Description
-printtime	Retrieves information on the time taken for the installation. The installer writes the information in the following file: C:\Program Files\Oracle\Inventory\logs\time timestamp .log
-printmemory	Retrieves information on the memory used for the installation. The installer writes the information in the following file: C:\Program Files\Oracle\Inventory\logs\memory timestamp .log
-printdiskusage	Retrieves information on the disk space used for the installation. The installer writes the information in the following file: C:\Program Files\Oracle\Inventory\logs\diskusage timestamp .log

For example, the following command provides information for the time taken, memory used, and disk space used for the installation:

```
setup.exe -printtime -printmemory -printdiskusage
```

1.9 Change in the Default Port Range

The default port ranges for the following components have changed:

- Oracle Application Server Reports Services
- Oracle Internet Directory
- Oracle Application Server Certificate Authority
- Oracle Application Server Containers for J2EE
- Oracle Enterprise Manager 10g
- Oracle Application Server Web Cache

For details, see [Appendix C, "Default Port Numbers"](#).

1.10 What's New in Oracle Application Server Forms Services

Much of the functionality that was handled by the Web server in Oracle 6i Forms has been assumed by components that are delivered with Oracle Application Server. For example, load balancing, security, scalability, HTTP/S communication handling, and deployment of Java servlets are all performed by various components delivered with Oracle Application Server, such as the Oracle HTTP Server and Oracle Application Server Containers for J2EE (OC4J).

The Forms Services component of Oracle Application Server handles all processing specific to Forms Developer applications, such as running the business logic defined in the Forms Developer application and providing the connection to the Oracle Database. A Java applet provides the client user interface.

New features for OracleAS Forms Services include:

- Improved Integration with Enterprise Manager for easier administration and manageability such as End User Monitoring.
- Java Virtual Machine (JVM) Pooling.
- Upgrade Assistant. For more information on the Upgrade Assistant, see [Chapter 8, "Upgrading 9.0.4 Forms and Reports Services to 10.1.2 Forms and Reports Services"](#).

For more information about these features, see the *Oracle Application Server Forms Services Deployment Guide*.

1.11 What's New in Oracle Application Server Reports Services

The new features of OracleAS Reports Services include:

- A new output format SPREADSHEET, using which you can generate spreadsheet output directly from existing paper layout reports, while preserving the paper layout information such as colors, fonts, and conditional formatting in the output.
- Formatting enhancements that allow you to use a defined set of inline HTML formatting tags to format text style attributes, and generate formatted text objects in all bitmap output formats.
- Support for specifying table attributes for paper-based reports generated to HTML output.
- Improvements to right-alignment of text in PDF output, as required by languages that read from right to left.
- Standards compliance for HTML/HTMLCSS output and XML output.
- The capability to apply external style sheets and user-defined styles to your report or report objects when you generate HTMLCSS output.
- Enhanced implementation of font subsetting and improved font support to generate PDF output that is clearer, smoother, searchable, and accessible.
- Several graphing enhancements like support for dashed and dotted line graph.
- WebDAV destination enhancement to enable you to send report output to a specific Virtual Private Portal (VPP).
- Migration from Borland's VisiBroker to Sun Microsystems' industry-standard Java Developer's Kit Object Request Broker (JDK ORB).
- Improved integration with Oracle Application Server Control.

- New documentation that provides information and step-by-step instructions for cross-platform report deployment. Refer to the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

For more information about these features, refer to the *Oracle Reports online Help*.

Introduction to Forms and Reports Services

Oracle Application Server Forms and Reports Services enables you to install and configure Forms and Reports Services without the need to install and configure the entire Oracle Application Server. This is called a standalone installation of Forms and Reports Services. You can also configure the standalone Forms and Reports Services instance to use the Oracle Identity Management and Oracle Application Server Metadata Repository services of an Oracle Application Server Infrastructure.

Forms and Reports Services standalone installation is best suited for users who want to upgrade Forms and Reports applications to the Grid environment in two phases. In phase one, they move to the Grid environment by upgrading their client/server-based Forms and Reports applications to Web-based applications. In phase two, users can then choose to use the services offered by an existing OracleAS Infrastructure installation.

This chapter includes the following topics:

- [Restrictions with This Installation Type](#)
- [Available Features with This Installation Type](#)

2.1 Restrictions with This Installation Type

Once you configure Forms and Reports Services to use the services of an OracleAS Infrastructure, you *cannot* reverse this configuration.

2.2 Available Features with This Installation Type

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

- [Oracle Application Server Forms Services](#)
- [Oracle Application Server Reports Services](#)
- [Oracle HTTP Server](#)
- [Oracle Application Server Web Cache](#)
- [Oracle Application Server Containers for J2EE](#)
- [Oracle Enterprise Manager](#)
- [Oracle Process and Management Notification](#)
- [Distributed Configuration Management](#)

2.2.1 Oracle Application Server Forms Services

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

2.2.2 Oracle Application Server Reports Services

Oracle Application Server Reports Services provides an easy-to-use, scalable, and manageable solution for high-quality enterprise reporting and publishing. Using Oracle Reports, you can publish data generated by multiple sources in various formats (paper layout, Web, or data interchange format). This provides flexibility in the presentation of data. OracleAS Reports Services is part of Oracle Application Server.

2.2.3 Oracle HTTP Server

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

2.2.4 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. It also caches both static and dynamically-generated HTTP content from one or more applications Web servers.

2.2.5 Oracle Application Server Containers for J2EE

Oracle Application Server Containers for J2EE (OC4J) 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).

2.2.6 Oracle Enterprise Manager

Oracle Enterprise Manager Application Server Control (henceforth referred to as Application Server Control) provides you with Web-based management tools that you need to monitor, administer, and configure multiple Oracle Application Server instances and its components. By default, Application Server Control is installed with every instance of Oracle 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 also let you administer Oracle Application Server, its components, and deployed applications.

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

2.2.7 Oracle Process and Management Notification

Oracle Process and Management Notification (OPMN) provides process control and monitoring services for Oracle Application Server instances and their components such as Forms and Reports Services. It gathers component status information and distributes the information to the relevant components. Application Server Control uses OPMN for such tasks as starting and stopping the components of your Oracle Application Server instance.

2.2.8 Distributed Configuration Management

Distributed Configuration Management (DCM) manages configurations among Oracle Application Server instances with a common Oracle Application Server Metadata Repository. It enables cluster-wide deployment of Oracle Application Server; thus, enabling you to 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.

Requirements

Before installing Forms and Reports Services, ensure that your computer meets the requirements described in this chapter.

This chapter contains the following sections:

- [System Requirements](#)
- [Windows System Files \(wsf.exe\)](#)
- [Ports](#)
- [Operating System User](#)
- [Environment Variables](#)
- [The Hosts File](#)
- [Network Topics](#)
- [Prerequisite Checks Performed by the Installer](#)

3.1 System Requirements

[Table 3–1](#) lists the system requirements for installing Forms and Reports Services.

The installer checks many of these requirements at the start of the installation and displays a warning if any of the requirements is not met.

You can also run the system checks performed by the installer by running the `setup.exe` command. The `setup.exe` command is on the Forms and Reports Services CD-ROM (Disk 1) or DVD-ROM (in the `orawinfrs` directory).

CD-ROM (assumes E: is the CD-ROM drive):

```
E:\> setup.exe -executeSysPrereqs
```

DVD-ROM (assumes E: is the DVD-ROM drive):

```
E:\> cd orawinfrs
E:\orawinfrs> setup.exe -executeSysPrereqs
```

The results are displayed on the screen as well as written to a log file. For more information on the types of checks performed, see [Section 3.8, "Prerequisite Checks Performed by the Installer"](#).

Table 3–1 System Requirements

Item	Requirement	Checked by the Installer
Operating system	<ul style="list-style-type: none"> ■ Microsoft Windows 2000 with Service Pack 3 or later ■ Microsoft Windows Server 2003 (32-bit) with Service Pack 1 ■ Microsoft Windows XP is supported only for these two types: <ul style="list-style-type: none"> - J2EE and Web Cache middle tier without Oracle Application Server Infrastructure - J2EE and Web Cache middle tier running on Windows XP, using services from an OracleAS Infrastructure running on a different (non-XP) platform - OracleAS Developer Kits <p>You can install other Forms and Reports Services installation types on Windows XP (the installer displays a warning, but lets you continue), but they are not supported on Windows XP.</p> <p>If you are running Windows XP with Service Pack 2, see Document ID 280874.1 on the OracleMetaLink site (http://metalink.oracle.com).</p> <p>Note: Forms and Reports Services is <i>not supported</i> on Windows operating systems that include Terminal Services. For example, Windows 2000 with Terminal Services is not supported.</p>	Yes
Network	<p>You can install Forms and Reports Services on a computer that is connected to a network, or on a standalone computer (not connected to the network).</p> <p>If you are installing Forms and Reports Services on a standalone computer, you can connect the computer to a network after installation. You have to perform some configuration tasks when you connect it to the network; see the <i>Oracle Application Server Administrator's Guide</i> for details.</p> <p>Note: The Reports default broadcast discovery mechanism requires the host machine to be inside a network. If the host machine is not in a network (that is, it is a standalone machine), then the in-built broadcast mechanism does not work. As a result, you cannot use OracleAS Reports Services. Specifically, Oracle Reports clients cannot discover and communicate with Reports Server(s). Note that the definition of a "network" does not include a Virtual Private Network (VPN). That is, even if the host machine is connected to the network through VPN, Oracle Reports clients cannot discover and communicate with Reports Server(s). Therefore, if your installation is on a standalone (non-networked) host machine or you are connected to a network through VPN, turn off the Reports out-of-the-box broadcast mechanism, and turn on the Reports naming service support for discovery instead. For information on turning on the naming service, see the <i>Oracle Application Server Reports Services Publishing Reports to the Web</i> manual.</p>	No
IP	You can install Forms and Reports Services on a computer that uses static IP or DHCP-based IP.	No
Processor Speed	300 MHz Intel Pentium processor	Yes

Table 3–1 (Cont.) System Requirements

Item	Requirement	Checked by the Installer
Memory	<p>The memory requirements provided for the various installation types represent enough physical memory to install and run Forms and Reports Services. However, for most production sites, you should configure at least 1 GB of physical memory. For sites with substantial traffic, increasing the amount of memory further may improve your performance. For Java applications, either increase the maximum heap allocated to the OC4J processes, or configure additional OC4J processes to utilize this memory. See the <i>Oracle Application Server Performance Guide</i> for details.</p> <p>In determining the optimal amount of memory for your installation, the best practice is to load test your site. Resource requirements can vary substantially for different applications and different usage patterns. In addition, some operating system utilities for monitoring memory can overstate memory usage (partially due to the representation of shared memory). The preferred method for determining memory requirements is to monitor the improvement in performance resulting from the addition of physical memory in your load test. Refer to your platform vendor documentation for information on configuring memory and processor resources for testing purposes.</p> <p>Forms and Reports Services: 1GB</p> <p>If you do not meet the memory requirements, the installer displays a warning. The installer lets you dismiss the warning and continue because you may configure some but not all components and thus require less memory. However, you should test your site to ensure that you do have sufficient memory.</p>	Yes
Disk space	800 MB	No
Space in TEMP directory	55 MB	Yes

Table 3–1 (Cont.) System Requirements

Item	Requirement	Checked by the Installer
Total Pagefile size (Virtual Memory)	1.5 GB To view and change the total pagefile size (virtual memory): Windows 2000: <ol style="list-style-type: none"> 1. Select Start > Settings > Control Panel > System. 2. Select the Advanced tab. 3. Click Performance Options. 4. Click Change to review and change the virtual memory setting. 	Yes
Monitor	256 color display	Yes
Supported browsers	For the most current list of supported browsers, check the OracleMetaLink site (http://metalink.oracle.com). The following browsers are supported: <ul style="list-style-type: none"> ■ Microsoft Internet Explorer 5.5, 6.0 and higher ■ On Windows XP with SP2, use the Microsoft Internet Explorer 6.0.2900.2180.xpsp_sp2_rtm.040803-2158. This is the version packaged with SP2. ■ Netscape 7.1, 7.2 ■ Mozilla 1.5, Mozilla 1.7. You can download Mozilla from http://www.mozilla.org. Note that Firefox, the standalone Mozilla browser, is currently not certified. But check the OracleMetaLink site (http://metalink.oracle.com) for the most current list of certified browsers. ■ Safari 1.2 (on Apple Macintosh computers) ■ Adobe Acrobat Forms applications require a JVM running within a browser. The following browsers and JVM combinations are currently supported: <ul style="list-style-type: none"> ■ Microsoft Internet Explorer 6.0 and higher with native JVM or JInitiator 1.3.1.13 and higher ■ Netscape 4.7x, 7.0x and higher with JInitiator 1.3.1.13 and higher or Sun Java Plugin 1.4.1 and higher More browsers and JVMs will be certified over time. For the latest information on which browsers and JVMs are certified for Forms, check Oracle Technology Network (OTN): (http://otn.oracle.com/products/forms/htdocs/10g/clientsod_forms10g.html)	No

Tips for Reducing/Fine Tuning Memory Usage

If you need to reduce memory consumption:

- After installation, use Oracle Enterprise Manager to stop services not used. This reduces the memory usage. For details, see the *Oracle Application Server Administrator's Guide*.
- For OracleAS Reports Services, you can control the JVM heap size by specifying small values using the REPORTS_JVM_OPTIONS environment variable.

For Reports Engine, the JVM options are specified in the *server_name.conf* file in the *jvmoptions* attribute of the *engine* element. If specified, the JVM options set in *server_name.conf* override the value of the REPORTS_JVM_OPTIONS environment variable. If not specified in *server_name.conf*, Oracle Reports uses the JVM options specified by the REPORTS_JVM_OPTIONS environment

variable. For Reports Server, you can use the command line to specify the JVM options. For details about JVM option support, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

3.2 Windows System Files (wsf.exe)

Note: Perform this procedure only if prompted by the installer.

Forms and Reports Services requires minimum versions of some system files in the Windows system directory (typically `C:\Windows\system32` or `C:\Winnt\system32`). When you run the installer for Forms and Reports Services, the installer checks the Windows system files on your computer. If it finds old versions of these files, and the files are in use by other processes, then it prompts you to exit the installer and run `wsf.exe` to install the latest Windows system files. (If it finds old versions of the files, but the files are not in use by other processes, then it just replaces the files and you do not have to run `wsf.exe`.)

`wsf.exe` is located in the same directory as the installer.

To run `wsf.exe`, which you need to do only if prompted by the installer, perform these steps:

1. Start `wsf.exe`, which starts Oracle Universal Installer to install the Windows system files.

CD-ROM (assumes E: is the CD-ROM drive):

```
E:\> wsf.exe
```

DVD-ROM (assumes E: is the DVD-ROM drive):

```
E:\> cd application_server
E:\> wsf.exe
```

2. Follow the screens in the installer:

Table 3–2 Screens for Installing Windows System Files

Screen	Action
1. Welcome	Click Next .
2. Specify File Locations	Destination Name: Enter a name for the Oracle home for wsf. Destination Path: Enter any full path. The installer installs the files in the proper system directories, regardless of the value you enter in this field. Click Next .
3. Warning: System Reboot Required	If you see this screen, the installer restarts your computer automatically at the end of this installation to complete the Windows system files installation. Save and close applications (other than this installer) that you have running on your computer. Click Next .
4. Summary	Click Next to start installing the Windows system files.
5. End of Installation	Click Exit to exit the installer.

3. If the installer displayed the Warning: System Reboot Required screen during installation, the installer now restarts your computer. If not, restart your computer before continuing.

3.3 Ports

Many Oracle Application Server components, such as Oracle HTTP Server, OracleAS Web Cache, and Oracle Enterprise Manager 10g, use ports. You can have the installer assign default port numbers, or use port numbers that you specify.

- [Section 3.3.1, "About Ephemeral Ports"](#)
- [Section 3.3.2, "Checking If a Port Is in Use"](#)
- [Section 3.3.3, "Using Default Port Numbers"](#)
- [Section 3.3.4, "Using Custom Port Numbers \(the Static Ports Feature\)"](#)

3.3.1 About Ephemeral Ports

Problem: Components Cannot Start Up Because of Conflicts with Ephemeral Ports

On rare occasions, Oracle Application Server processes are unable to start because required ports are not available. Processes may fail to start or report that they are unable to bind to ports. The behavior may be transient in that if you try to restart the affected process later, it does start successfully.

The cause of this problem is that by default, Oracle Application Server uses a number of ports that fall into the range of ephemeral ports. Ephemeral ports are usually used on the client ends of client/server TCP/IP connections. Because client processes usually are unconcerned with the port value used on the client side of the connection, all TCP/IP implementations enable clients to defer to the operating system the choice of the port value to use for the client side. The operating system selects a port from the ephemeral port range for each client connection of this type.

On the other hand, server processes (for example, Oracle Application Server processes) cannot use ephemeral ports. They must use fixed port values so that clients can always connect to the same server port to communicate with the server.

Port conflicts with ephemeral ports arise when an Oracle Application Server process is configured to use a port in the ephemeral port range. The Oracle Application Server process tries to start up, but discovers that the port that it needs is already in use by a client process (the client received the ephemeral port assignment from the operating system). This client can be any process on the computer capable of communicating through TCP/IP. The Oracle Application Server process fails to start up when the port that it needs is unavailable.

This problem occurs relatively more frequently on Microsoft Windows than on other operating systems because by default Windows uses a small range of ports for ephemeral client connections.

Ephemeral Port Range

The ephemeral port range on Microsoft Windows is ports 1024 through 5000, inclusive.

Only the upper end of this range is adjustable in Windows. In most other operating systems, the ephemeral range by default is much larger, and the lower and upper bounds of the range are adjustable.

Several Application Server processes, including Oracle HTTP Server, OracleAS Web Cache, Oracle Enterprise Manager 10g Application Server Control, and OC4J, use ports in the ephemeral port range. These processes cannot start up if the ports that they need are already in use by clients.

Avoiding Conflicts with Ephemeral Ports

To avoid conflicts with ephemeral ports, you have these options:

- Install Forms and Reports Services using `staticports.ini` so that Forms and Reports Services components do not use ports within the ephemeral range. In the `staticports.ini` file, use port numbers below 1024 or above 5000.

See [Section 3.3.4, "Using Custom Port Numbers \(the Static Ports Feature\)"](#) for details.

- If you have already installed Forms and Reports Services, you can reconfigure the components to use ports below 1024 or above 5000. See the *Oracle Application Server Administrator's Guide* to learn to change the current ports used by Application Server processes.
- (This option can be done post-installation.) Modify the ephemeral port range on your computer. Use this option only if you cannot use any of the alternatives above. This option is the least preferred because it makes changes to the Windows registry, and it affects all products that you run on your computer.

This option moves the ephemeral port range to a new location. Before making the change, you must verify that none of the products you are using (Oracle or non-Oracle) on your computer use non-ephemeral ports within the ephemeral port range. If any products do so, you must relocate them to the new ReservedPorts range (see below), above the new ephemeral range, or below port 1024.

To implement this option, perform these steps:

- Raise the upper bound of the ephemeral port range to expand the size of the range.

Set the `MaxUserPort` value in the registry to at least 13000, but no higher than 65534. `MaxUserPort` is the upper bound of the ephemeral port range.

For steps, see Microsoft Knowledge Base article 196271:

[http://support.microsoft.com/default.aspx?scid=kb;\[LN\];196271](http://support.microsoft.com/default.aspx?scid=kb;[LN];196271).

- Reserve a portion of the newly expanded ephemeral port range for use by Oracle Application Server.

Set the `ReservedPorts` value in the registry so that ports 1024 through 8000 are reserved for Oracle Application Server. The reserved range incorporates the range of ports normally used by Oracle Application Server.

For steps, see Microsoft Knowledge Base article 812873:

[http://support.microsoft.com/default.aspx?scid=kb;\[LN\];812873](http://support.microsoft.com/default.aspx?scid=kb;[LN];812873).

- Restart your computer for the changes to take effect.

After performing the steps, you end up with the following: ports from 1024 through 8000 are reserved for Oracle Application Server, and ports 8001 through 13000 are the new ephemeral port range (assuming you set the `MaxUserPort` to 13000). The reserved range incorporates the range of ports normally used by

Oracle Application Server, and the ephemeral range has the same size as the original.

3.3.2 Checking If a Port Is in Use

To check if a port is being used, run the `netstat` command as follows:

```
C:\> netstat -an | find "portnum"
```

Note that you need double-quotes around the port number.

3.3.3 Using Default Port Numbers

If you want to use the default port numbers for components, you do not have to do anything. Ensure that at least one port is available in the port range for each component. If the installer is unable to find a free port in the range, the installation fails.

Note the following points:

- The installer assigns the default ports to components only if the ports are not in use by other applications. If the default port is in use, the installer tries other ports in the port number range for the component. For example, the default non-SSL port for Oracle HTTP Server for the middle tier is port 80. If this port is in use by another application, the installer assigns a port in the 7777 - 7877 range.
- The default ports for Oracle HTTP Server depend on the installation type (Table 3-3). The middle tier gets ports 80 and 443 because it is where you would deploy your applications. Users would send requests to the middle tier's Oracle HTTP Server/OracleAS Web Cache to access the applications.

In Table 3-3, the values in parenthesis indicate the ports that the installer tries to assign to Oracle HTTP Server if the default port is already in use.

Table 3-3 Default Ports for Oracle HTTP Server

Installation Type	Default Non-SSL Port	Default SSL Port
OracleAS Infrastructure	7777 (7777 - 7877)	4443 (4443 - 4543)
Middle tier	80 (7777 - 7877)	443 (4443 - 4543)

- The installer no longer checks the `services` file to determine if a port is in use. In earlier releases, the installer would not assign a port number if the port number was listed in the file.

The `services` file is located in the

`C:\%SystemRoot%\system32\drivers\etc` directory, where `%SystemRoot%` is `winnt` on Windows 2000, and `windows` on Windows XP and Windows 2003.

3.3.4 Using Custom Port Numbers (the Static Ports Feature)

To instruct the installer to assign custom port numbers for components:

1. Create a file containing the component names and port numbers. Section 3.3.4.1, "Format of the `staticports.ini` File" describes the file format. This file is typically called `staticports.ini`, but you can name it anything you want.
2. In the installer, on the Specify Port Configuration Options screen, select **Manual** and enter the *complete path* to the `staticports.ini` file.

If you do not specify the complete path to the file, the installer will not be able to find the file. The installer then assigns default ports for all the components, and it does this without displaying any warning.

Difference from Previous Release: In Release 10g (9.0.4), you used command-line options to specify the `staticports.ini` file. In this release, you specify the file in the new Specify Port Configuration Options screen.

3.3.4.1 Format of the `staticports.ini` File

The `staticports.ini` file has the following format. Replace `port_num` with the port number that you want to use for the component.

```
# J2EE and Web Cache
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
Java Object Cache port = port_num
DCM Java Object Cache port = port_num
DCM Discovery 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
Log Loader port = port_num
ASG port = port_num

# Business Intelligence and Forms
Reports Services SQL*Net port = port_num
Reports Services discoveryService port = port_num
Reports Services bridge port = port_num

# Infrastructure
Oracle Internet Directory port = port_num
Oracle Internet Directory (SSL) port = port_num
Oracle Certificate Authority SSL Server Authentication port = port_num
Oracle Certificate Authority SSL Mutual Authentication port = port_num
Ultra Search HTTP port number = port_num
```

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

1. Copy the `staticports.ini` file from the CD-ROM or DVD-ROM to your hard disk.

Table 3–4 Location of the staticports.ini File on CD-ROM and DVD-ROM

Media	Location of staticports.ini File (assumes E: is your CD-ROM or DVD-ROM drive)
CD-ROM	Disk 1: E:\stage\Response\staticports.ini
DVD-ROM	E:\application_server\stage\Response\staticports.ini

2. Edit the local copy (the file on the hard disk) to include the required port numbers.

You do not need to specify port numbers for all components in the `staticports.ini` file. If a component is not listed in the file, the installer uses the default port number for that component.

The following example sets the Application Server Control port and some OracleAS Web Cache ports. For components not specified, the installer assigns the default port numbers.

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

When installation is complete, you can check the `portlist.ini` file to see the assigned ports.

Notes on Choosing Port Numbers:

- Port numbers cannot be greater than 65535.
 - If you plan to set port numbers for Oracle HTTP Server and OracleAS Web Cache, be sure you read [Section 3.3.4.3, "Ports for Oracle HTTP Server and OracleAS Web Cache"](#).
-
-

The installer verifies that the ports specified in the file are available by checking the 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 installer detects that a specified port is not available, it displays an alert. The installer does not assign a port that is not available. To fix this:

1. Edit the `staticports.ini` file to specify a different port, or shut down the application using the port.
2. Click **Retry**. The installer rereads the `staticports.ini` file and verifies the entries in the file again.

Using portlist.ini as the staticports.ini File

The `staticports.ini` file uses the same format as the `portlist.ini` file, which is created *after* a Forms and Reports Services installation. If you have installed Forms and Reports Services and want to use the same port numbers in another installation, use the `portlist.ini` file from the first installation as the `staticports.ini` file for subsequent installations.

Note: In `staticports.ini`, the Oracle Management Agent port line corresponds to the Enterprise Manager Agent port line in `portlist.ini`.

3.3.4.2 Error Conditions That Cause the Installer to Use Default Ports Instead of Specified Ports

Check the `staticports.ini` file carefully because a mistake can cause the installer to use default ports without displaying any warning. Here are some things that you should check:

- If you specify the same port for more than one component, the installer uses the specified port for the first component, but for the other components, it uses the components' default ports. The installer does not warn you if you have specified the same port for multiple components.
- If you have syntax errors in the `staticports.ini` file (for example, if you omitted the `=` character for a line), the installer ignores the line. For the components specified on such lines, the installer assigns the default ports. The installer does not display a warning for lines with syntax errors.
- If you misspell a component name, the installer assigns the default port for the component. Names of components in the file are case-sensitive. The installer does not display a warning for lines with unrecognized names.
- If you specify a non-numeric value for the port number, the installer ignores the line and assigns the default port number for the component. It does this without displaying any warning.
- If you specify a relative path to the `staticports.ini` file, the installer will not find the file. The installer continues without displaying a warning and assigns default ports to all components. You must specify a complete path to the `staticports.ini` file.

3.3.4.3 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 the components that you are configuring.

Ensure that you understand the following when setting ports for these components.

If You Are Configuring 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, use this line in the `staticports.ini` file:

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

To configure the SSL port for OracleAS Web Cache, use 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 the Oracle HTTP Server port and the Web Cache HTTP Listen port lines, 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 is set to 7979.

2. Set the port for Oracle HTTP Server.

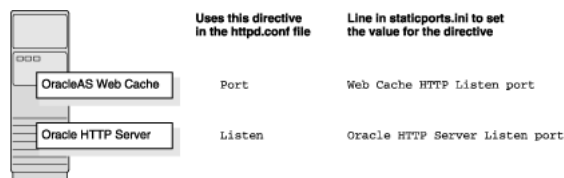
Oracle HTTP Server uses the port specified by the Listen directive. To set this port, use this line in the `staticports.ini` file:

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

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

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

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



If You Are Configuring Oracle HTTP Server Only (no OracleAS Web Cache)

If you are configuring Oracle HTTP Server only, then Oracle HTTP Server uses both Port and Listen directives (Figure 3–2). 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:

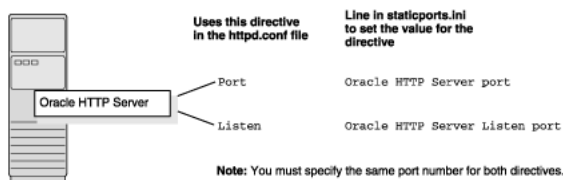
```
Oracle HTTP Server port = 8080
Oracle HTTP Server Listen port = 8080
```

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 are ignored because you are not configuring OracleAS Web Cache.

Figure 3–2 Configuring Only Oracle HTTP Server



3.4 Operating System User

The operating system user performing the installation must belong to the Administrators group. Perform the following steps to check if the operating system user belongs to the Administrators group.

To check if a user belongs to the administrators group:

1. Display the Computer Management dialog box.
Windows 2000 / Windows XP: Right-click **My Computer** on the desktop, and click **Manage**.
Windows 2003: Right-click the local computer icon on the desktop, and click **Manage**.
2. On the left side, expand **Local Users and Groups**, and select **Users**.
3. On the right side, right-click the user and click **Properties** to display the Properties dialog box.
4. Select the **Member Of** tab.

If you are not a member of the Administrators group, get an administrator to add you to the group or log in as a user who is a member of the Administrators group.

3.5 Environment Variables

The operating system user who installs Forms and Reports Services must set (or unset) the environment variables listed in [Table 3–5](#).

Table 3–5 Environment Variable Summary

Environment variable	Set or Unset
ORACLE_HOME and ORACLE_SID	Does not matter (the installer unsets these two environment variables).
PATH	Must not be longer than 1023 characters.
TNS_ADMIN	Must not be set.
TEMP	Optional. If unset, defaults to C : \ temp.

3.5.1 Setting Environment Variables

To set environment variables in Windows:

1. Display the System control panel.
Windows 2000: Select **Start > Settings > Control Panel > System**.
Windows 2003: Select **Start > Control Panel > System**.
Windows XP: Select **Start > Control Panel**, and then double-click **System**.
2. Click the **Advanced** tab.
3. Click **Environment Variables**.
4. To change the value of a variable, select the variable and click **Edit**.

3.5.2 ORACLE_HOME and ORACLE_SID

The installer unsets the `ORACLE_HOME` and `ORACLE_SID` environment variables when you start the installer regardless of whether these environment variables were set or unset.

3.5.3 PATH and CLASSPATH

The `PATH` environment variable cannot be longer than 1023 characters. Otherwise, the installation may fail.

3.5.4 TEMP

During installation, the installer needs to write temporary files to a temporary directory. By default, the temporary directory is `C:\temp`.

If you want the installer to use a directory other than `C:\temp`, set the `TEMP` environment variable to the full path of an alternate directory. This directory must meet the requirements listed in [Table 3-1](#).

If you do not set this environment variable, and the default directory does not have enough space, then the installer displays an error message that says the environment variable is not set. You can either set the environment variable to point to a different directory or free up enough space in the default directory. In either case, you have to restart the installation.

3.6 The Hosts File

The hosts file for Windows is located at `%WINDIR%\system32\drivers\etc\`, where `%WINDIR%` specifies the Windows operating system directory. Typically, it is `C:\WINDOWS` for Windows 2003, and `C:\WINNT` for Windows 2000.

The contents of the `%WINDIR%\system32\drivers\etc\hosts` file affect the location of the default Oracle Identity Management realm and the host name for Oracle Application Server Single Sign-On.

The installer provides alternative methods for you to enter the values that you want without editing the `hosts` file. For more information, see the *Oracle Application Server Installation Guide*.

3.7 Network Topics

Typically, the computer on which you want to install Forms and Reports Services is connected to the network, has local storage to contain the Forms and Reports Services installation, has a display monitor, and has a CD-ROM or DVD-ROM drive.

This section describes the procedure to install Forms and Reports Services on computers that do not meet the typical scenario. It covers the following cases:

- [Installing on DHCP Computers](#)
- [Installing on Multihomed \(Multi-IP\) Computers](#)
- [Installing on Computers With Multiple Aliases](#)
- [Installing on Non-Networked Computers](#)
- [Installing on Static IP Computers That You Want to Disconnect from the Network Later](#)
- [Installing a Loopback Adapter](#)

- [Copying CD-ROMs or DVD-ROM to Hard Drive, and Installing from the Hard Drive](#)
- [Installing from a Remote CD-ROM or DVD-ROM Drive](#)
- [Installing on Remote Computers](#)

3.7.1 Installing on DHCP Computers

Note this limitation when running Forms and Reports Services on DHCP computers: Forms and Reports Services instances on DHCP computers cannot communicate with instances running on other computers. All the instances that need to communicate with each other must run on the same computer. There are no limitations on clients; clients from other computers can access instances running on the DHCP computer, as long as the client computer can resolve the DHCP computer on the network.

Before installing Forms and Reports Services on a DHCP computer, perform these steps:

1. Install a loopback adapter on the DHCP computer.

When you install a loopback adapter, the loopback adapter assigns a local IP for your computer. Having a loopback adapter and a local IP address means that you do not have to run the `chgiphost` script after installation each time the IP address changes (due to DHCP).

Which Is the Primary Network Adapter?

Windows considers loopback adapters as a type of network adapter. After installing a loopback adapter on your computer, you have at least two network adapters on your computer: your network adapter and the loopback adapter.

Windows must use the loopback adapter as the primary adapter. The primary adapter is determined by the order in which you installed the adapters:

- On Windows 2000, the primary adapter is the *last* adapter installed. You can just install the loopback adapter. However, if you install additional network adapters after installing the loopback adapter, deinstall the loopback adapter and reinstall it.

To install a loopback adapter on the different Windows platforms, see [Section 3.7.6, "Installing a Loopback Adapter"](#).

2. Ping each computer on which you plan to install Forms and Reports Services.
 - Ping the computer from itself, using only the hostname and the fully qualified name.

For example, if you installed a loopback adapter on a computer called `mycomputer`, check the following:

prompt> ping mycomputer	<i>Ping itself using just the hostname.</i>
Reply from 10.10.10.10	<i>Returns local IP.</i>
prompt> ping mycomputer.mydomain.com	<i>Ping using a fully qualified name.</i>
Reply from 10.10.10.10	<i>Returns local IP.</i>

Note: When you ping a computer from itself, the `ping` command should return the local IP (the IP of the loopback adapter). It should not return the network IP of the computer.

- Ping the computer from other computers on the network, using only the hostname and the fully qualified name.

In this case, the ping command returns the network IP of the computer.

```
prompt> ping mycomputer           Ping using the hostname.
Reply from 139.185.140.166         Returns network IP.
prompt> ping mycomputer.mydomain.com Ping using a fully qualified name.
Reply from 139.185.140.166         Returns network IP.
```

If ping fails, then contact your network administrator.

3.7.2 Installing on Multihomed (Multi-IP) Computers

A multihomed computer is associated with multiple IP addresses. This is achieved by having multiple network cards on the computer. Each IP address is associated with a hostname; additionally, you can set up aliases for the hostname. By default, Oracle Universal Installer uses the ORACLE_HOSTNAME environment variable setting to find the hostname. If ORACLE_HOSTNAME is not set and you are installing Forms and Reports Services on a computer that has multiple network cards, Oracle Universal Installer determines the hostname by using the first name in the hosts file (typically located in *DRIVE_LETTER*: \WINDOWS\system32\drivers\etc).

Clients must be able to access the computer using this hostname (or using aliases for this hostname). To check, ping the hostname from the client computers using the short name (hostname only) and the full name (hostname and domain name). Both must work.

3.7.3 Installing on Computers With Multiple Aliases

A computer with multiple aliases refers to a computer registered with the naming service under a single IP but with multiple aliases. The naming service resolves any of those aliases to the same computer.

Before installing Forms and Reports Services on such computers, you must:

- Install a loopback adapter on the computer.
- Ensure the loopback adapter is the primary network adapter.

The loopback adapter ensures that when Forms and Reports Services queries for the hostname, it always gets the same name (because the queries are done locally). Without the loopback adapter, the queries can return any of the aliases for the computer (because the queries get the response from the naming service).

For steps on installing a loopback adapter, see [Section 3.7.6, "Installing a Loopback Adapter"](#).

3.7.4 Installing on Non-Networked Computers

You can install Forms and Reports Services on a non-networked computer, such as a laptop. Because a non-networked computer has no access to other computers, you must install all the components that you need on the computer.

If you want to install Forms and Reports Services on a non-networked computer and do not want to connect the computer to a network after installation, then install Forms and Reports Services on your non-networked computer.

Note: If you are installing on a non-networked computer, then configure the Common Object Service (COS) naming service to access the Reports Server. For information about configuring the naming service, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

However, if you want to connect the computer to a network after installation, perform these steps before installing Forms and Reports Services on the non-networked computer.

1. Install a loopback adapter on the computer. See [Section 3.7.6, "Installing a Loopback Adapter"](#).

The loopback adapter and local IP address simulate a networked computer. If you connect the computer to the network, Forms and Reports Services uses the local IP and hostname.

2. Ping the computer from itself, using only the hostname and the fully qualified name.

For example, if you installed a loopback adapter on a computer called `mycomputer`, check the following:

```
prompt> ping mycomputer           Ping itself using just the hostname.
Reply from 10.10.10.10           Returns local IP.
prompt> ping mycomputer.mydomain.com Ping using a fully qualified name.
Reply from 10.10.10.10           Returns local IP.
```

Note: When you ping a computer from itself, the `ping` command should return the local IP (the IP of the loopback adapter).

If `ping` fails, then contact your network administrator.

Connecting the Computer to the Network After Installation

If you connect the computer to a network after installation, then the Forms and Reports Services instance on your computer can work with other instances on the network. Recall that you must have installed a loopback adapter on your computer. Your computer can use a static IP or DHCP, depending on the network to which you are connected.

See the *Oracle Application Server Administrator's Guide* for details.

3.7.5 Installing on Static IP Computers That You Want to Disconnect from the Network Later

If you plan to install Forms and Reports Services on a networked computer with static IP and be able to run Forms and Reports Services when you disconnect the computer from the network, perform the following steps before installing Forms and Reports Services:

1. Install a loopback adapter on your computer. See [Section 3.7.6, "Installing a Loopback Adapter"](#) for details.

Without a loopback adapter, Forms and Reports Services cannot function correctly when you disconnect the computer from the network because the static IP is no longer available.

2. Ensure the loopback adapter is the primary network adapter. To check, ping the computer from itself using (1) the hostname only and (2) the fully qualified name.

For example, if you installed a loopback adapter on a computer called `mycomputer`, you can run these commands:

```
prompt> ping mycomputer           Ping itself using just the hostname.
Reply from 10.10.10.10           Returns loopback adapter IP.
prompt> ping mycomputer.mydomain.com Ping using a fully qualified name.
Reply from 10.10.10.10           Returns loopback adapter IP.
```

When you ping a computer from itself, the ping command should return the IP of the loopback adapter. It should not return the network IP of the computer.

These steps are required regardless of whether the computer is using static IP or DHCP. If this is a DHCP computer, you already know you need a loopback adapter; see [Section 3.7.1, "Installing on DHCP Computers"](#).

When you disconnect the computer from the network, the computer has no access to any network resources.

3.7.6 Installing a Loopback Adapter

A loopback adapter is required if:

- You are installing on a DHCP computer (see [Section 3.7.1, "Installing on DHCP Computers"](#)).
- You are installing on a non-networked computer and plan to connect the computer to a network after installation (see [Section 3.7.4, "Installing on Non-Networked Computers"](#)).

The procedure for installing a loopback adapter depends on the version of Windows:

- [Section 3.7.6.1, "Checking If a Loopback Adapter Is Installed on Your Computer"](#)
- [Section 3.7.6.2, "Installing a Loopback Adapter - Windows 2000"](#)
- [Section 3.7.6.3, "Installing a Loopback Adapter - Windows 2003 / Windows XP"](#)
- [Section 3.7.6.4, "Removing a Loopback Adapter - Windows 2000 / Windows 2003 / Windows XP"](#)

3.7.6.1 Checking If a Loopback Adapter Is Installed on Your Computer

To check if a loopback adapter is installed on your computer, run the `ipconfig /all` command:

```
prompt> ipconfig /all
```

If there is a loopback adapter installed, you will see a section that lists the values for the loopback adapter. For example:

```
Ethernet adapter Local Area Connection 2:
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Loopback Adapter
Physical Address. . . . . : 02-00-4C-4F-4F-50
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . : Yes
Autoconfiguration IP Address. . . : 169.254.25.129
```

Subnet Mask : 255.255.0.0

3.7.6.2 Installing a Loopback Adapter - Windows 2000

Windows 2000 reports on the *last* network adapter installed. This means that if you install additional network adapters after installing the loopback adapter, remove and reinstall the loopback adapter. The loopback adapter must be the last network adapter installed on the computer.

To install a loopback adapter on Windows 2000:

1. Select **Start > Settings > Control Panel**.
2. Double-click **Add/Remove Hardware** to start the Add/Remove Hardware wizard. The Welcome page is displayed.
3. On the Welcome page, click **Next** to display the Choose a Hardware Task page.
4. On the Choose a Hardware Task page, select **Add/Troubleshoot a Device**.
5. Click **Next** to display the Choose a Hardware Device page.
6. On the Choose a Hardware Device page, select **Add a new device**.
7. Click **Next** to display the Find New Hardware page.
8. On the Find New Hardware page, select **No, I Want to Select the Hardware from a List**.
9. Click **Next** to display the Hardware Type page.
10. On the Hardware Type page, select **Network Adapters**.
11. Click **Next** to display the Select Network Adapter page.
12. On the Select Network Adapter page:
 - a. Select **Microsoft** from the **Manufacturers** list.
 - b. Select **Microsoft Loopback Adapter** from the **Network Adapter** list.
13. On the Start Hardware Installation page, click **Next** to display the Completing the Add/Remove Hardware Wizard page.
14. Click **Next** to display the Start Hardware Installation page.
15. On the Completing the Add/Remove Hardware Wizard page, click **Finish**.
16. Right-click **My Network Places** on the desktop and choose **Properties**. This displays the Network and Dial-up Connections control panel.
17. Right-click the connection that was just created. This is usually Local Area Connection 2. Choose **Properties**.
18. On the **General** tab, select **Internet Protocol (TCP/IP)**, and click **Properties**.
19. In the Properties dialog box (Figure 3-3), enter the following values:

IP Address: Enter a non-routable IP for the loopback adapter. The following non-routable addresses are recommended:

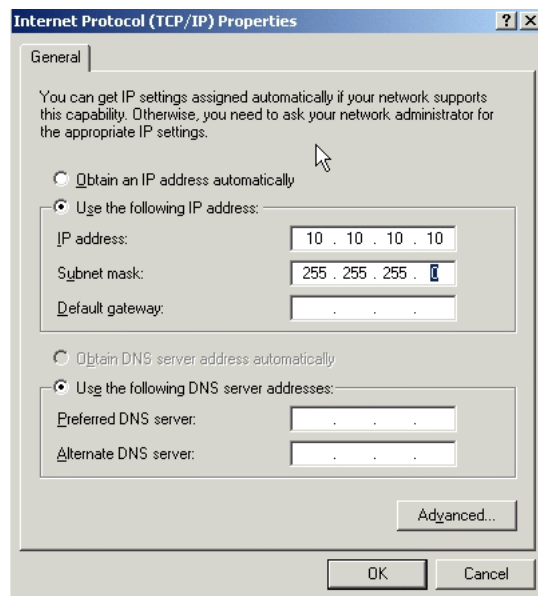
192.168.x.x (x is any value between 1 and 255)

10.10.10.10

Subnet mask: Enter 255.255.255.0.

Leave all other fields empty.

Figure 3–3 Internet Protocol (TCP/IP) Properties Dialog Box Showing Values for the Loopback Adapter



20. Click **OK**.
21. Click **OK** in the Local Area Connection 2 Properties dialog box.
22. Restart the computer.
23. Add a line to the `C:\winnt\system32\drivers\etc\hosts` file with the following format:

```
IP_address    hostname.domainname    hostname
```

This line should come after the `localhost` line in the file.

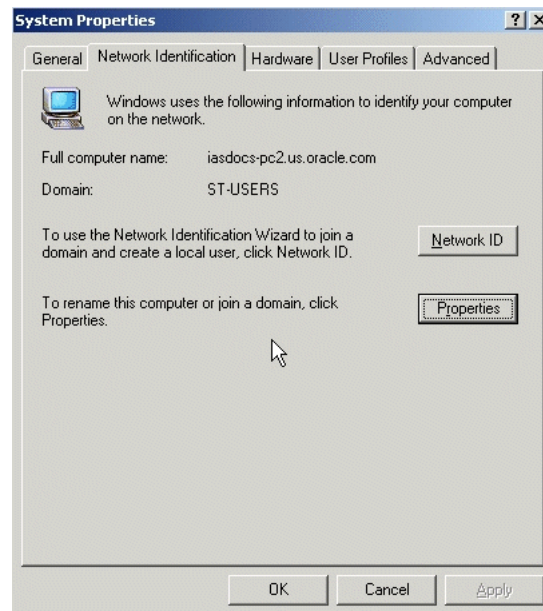
Replace *IP_address* with the non-routable IP address you entered in step 19.

Replace *hostname* and *domainname* with the appropriate values.

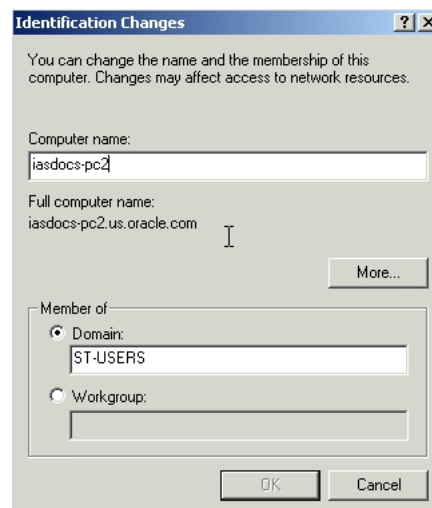
Example:

```
10.10.10.10    mycomputer.mydomain.com    mycomputer
```

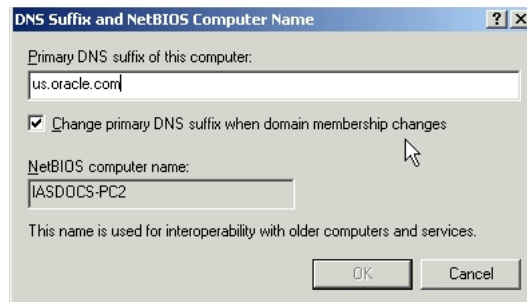
24. Check the network configuration:
 - a. Open the System control panel, and select the **Network Identification** tab. In **Full Computer Name**, ensure you see the host name and the domain name (Figure 3–4).

Figure 3–4 System Control Panel, Network Identification Tab

- b. Click **Properties**. In **Computer name**, you should see the host name, and in **Full Computer Name**, you should see the hostname and domain name (Figure 3–5).

Figure 3–5 Identification Changes Dialog Box

- c. Click **More**. The domain name is displayed in the **Primary DNS Suffix of This Computer** field as displayed in Figure 3–6.

Figure 3–6 DNS Suffix and NetBIOS Computer Name Dialog Box

3.7.6.3 Installing a Loopback Adapter - Windows 2003 / Windows XP

To install a loopback adapter on Windows 2003 or Windows XP:

1. Select **Start / Control Panel**.
2. Double-click **Add Hardware**. This starts the Add Hardware wizard.
3. On the Welcome page, click **Next** to display the Is the Hardware Connected page.
4. On the Is the Hardware Connected? page, select **Yes, I Have Already Connected the Hardware**.
5. Click **Next** to display the The Following Hardware is Already Installed on Your Computer page.
6. On the The Following Hardware is Already Installed on Your Computer page, select **Add a new hardware device**.
7. Click **Next** to display the The Wizard Can Help You Install Other Hardware page.
8. On the The Wizard Can Help You Install Other Hardware page, select **Install the Hardware That I Manually Select From a List**.
9. Click **Next** to display the From the List Below, Select the Type of Hardware You Are Installing page.
10. On the From the List Below, Select the Type of Hardware You Are Installing page, select **Network adapters**.
11. Click **Next** to display the Select Network Adapter page.
12. On the Select Network Adapter page:
 - a. From the **Manufacturer** list, select **Microsoft**.
 - b. From the **Network Adapter** list, select **Microsoft Loopback Adapter**.
13. Click **Next** to display the The Wizard is Ready to Install Your Hardware page.
14. On the The Wizard is Ready to Install Your Hardware page, click **Next** to display the Completing the Add Hardware Wizard page.
15. On the Completing the Add Hardware Wizard page, click **Finish**.
16. (Windows 2003) Restart your computer.
17. Right-click **My Network Places** on the desktop and choose **Properties**. This displays the Network Connections control panel.
18. Right-click the connection that was just created. This is usually Local Area Connection 2. Choose **Properties**.
19. On the **General** tab, select **Internet Protocol (TCP/IP)**, and click **Properties**.

20. In the Properties dialog box ([Figure 3-3](#)), enter the following values:
 - IP Address:** Enter a non-routable IP for the loopback adapter. The following non-routable addresses are recommended:
 - 192.168.x.x (x is any value between 1 and 255)
 - 10.10.10.10
 - Subnet mask:** Enter 255.255.255.0.
 - Leave all other fields empty.
21. Click **OK**.
22. Click **OK** in the Local Area Connection 2 Properties dialog box.
23. Restart the computer.
24. Add a line to the C:\windows\system32\drivers\etc\hosts file with the following format:


```
IP_address    hostname.domainname    hostname
```

This line should come after the localhost line in the file.

Replace *IP_address* with the non-routable IP address you entered in step 20.

Replace *hostname* and *domainname* with the appropriate values.

Example:

```
10.10.10.10    mycomputer.mydomain.com    mycomputer
```
25. Check the network configuration:
 - a. Open the System control panel, and select the **Computer Name** tab. In **Full Computer Name**, ensure you see the host name and the domain name.
 - b. Click **Change**. In **Computer Name**, you should see the host name, and in **Full Computer Name**, you should see the hostname and domain name ([Figure 3-5](#)).
 - c. Click **More**. In **Primary DNS Suffix of This Computer**, you should see the domain name ([Figure 3-6](#)).

3.7.6.4 Removing a Loopback Adapter - Windows 2000 / Windows 2003 / Windows XP

To remove the loopback adapter on Windows 2000 or Windows XP:

1. Display the System control panel.
 - Windows 2000: Select **Start / Settings / Control Panel**, then double-click **System**.
 - Windows 2003: Select **Start / Control Panel / System**.
 - Windows XP: Select **Start / Control Panel**, then double-click **System**.
2. On the **Hardware** tab, click **Device Manager**.
3. In the Device Manager window, expand **Network adapters**. You should see **Microsoft Loopback Adapter**.
4. Right-click **Microsoft Loopback Adapter** and select **Uninstall**.

3.7.7 Copying CD-ROMs or DVD-ROM to Hard Drive, and Installing from the Hard Drive

Instead of installing from the Forms and Reports Services CD-ROMs or DVD-ROM, you can copy the contents of the CD-ROMs or DVD-ROM to a hard drive and install from the hard drive. This might be easier if you plan to install many instances of Forms and Reports Services on your network, or if the computers on which you want to install Forms and Reports Services do not have CD-ROM or DVD-ROM drives.

You can also install from remote CD-ROM or DVD-ROM drives. See [Installing from a Remote CD-ROM or DVD-ROM Drive](#).

When you install from the hard drive, the installer does not prompt you to swap CD-ROMs. It can find all the files if they are in the proper locations.

Accessing the Hard Drive from Other Computers

If you want to install Forms and Reports Services on remote computers from the hard drive where you copied the contents of the CD-ROM or DVD-ROM, perform the following steps:

1. On the local computer, share the hard drive.
2. On the computers where you want to install Forms and Reports Services, map to the shared hard drive.
3. Run the installer from the remote computers on which you want to install Forms and Reports Services.

Note that you have to use the drive letter for the mapped drive to access the installer (for example, H:\orawinfrs_10_1_2\setup.exe).

You cannot use the universal naming convention (UNC) syntax (`\\hostname\sharename`) to access the installer.

To copy the CD-ROMs:

1. Create a parent directory (for example, `orawinfrs`) and, under the parent directory, create subdirectories called `Disk1`, `Disk2`, and so on. The names of the subdirectories must be `DiskN`, where *N* is the CD-ROM number.
2. Copy the contents of each CD-ROM into the corresponding directory.

You can copy the files using Windows Explorer or the command line. If you are using the command line, you can use the `xcopy` command.

The following example assumes E: is the CD-ROM drive, and `C:\orawinfrs\DiskN` are the directories that you want to copy the CD-ROMs to.

```
E:> xcopy /e /i E:\1012disk1 C:\orawinfrs\Disk1
E:> xcopy /e /i E:\1012disk2 C:\orawinfrs\Disk2
... Repeat for each CD-ROM.
```

To run the installer from the copied files, invoke the `setup.exe` executable from the `Disk1` directory. Run it from the computer that will be running Forms and Reports Services.

```
C:> cd orawinfrs\Disk1
C:\orawinfrs\Disk1> setup.exe
```

To copy the orawinfrs Directory from the DVD-ROM

You can copy the `orawinfrs` directory using Windows Explorer or the command line. If you are using the command line, here are the steps:

1. (optional) Create a directory to contain the `orawinfrs` directory.
2. Copy the `orawinfrs` directory from the DVD-ROM to your hard disk.

The example assumes `E:` is the DVD-ROM drive, and `C:\orawinfrs` is the destination directory:

```
E:\> xcopy /e /i E:\orawinfrs C:\orawinfrs
```

To run the installer from the copied files, invoke the `setup.exe` executable from the computer that will be running Forms and Reports Services:

```
C:\> cd orawinfrs
C:\orawinfrs> setup.exe
```

3.7.8 Installing from a Remote CD-ROM or DVD-ROM Drive

If the computer on which you want to install Forms and Reports Services does not have a CD-ROM or DVD-ROM drive, you can perform the installation from a remote CD-ROM or DVD-ROM drive. Check that you have performed these steps:

On the Remote Computer, Share the CD-ROM or DVD-ROM Drive

The remote CD-ROM or DVD-ROM drive that you want to use must allow shared access. To set this up, perform these steps on the remote computer (the computer that has the CD-ROM or DVD-ROM drive):

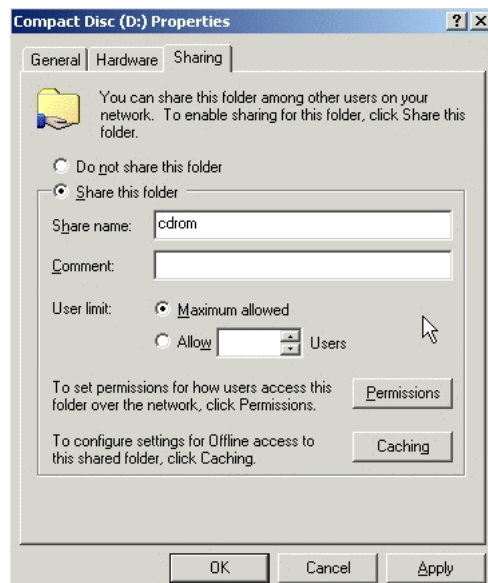
1. Log on to the remote computer as an Administrator user.
2. Start up Windows Explorer.
3. Right-click the CD-ROM or DVD-ROM drive letter and choose **Sharing** (Windows 2000) or **Sharing and Security** (Windows 2003, Windows XP).
4. On the **Sharing** tab ([Figure 3-7](#)):

Select **Share this folder**.

Share name: Give it a share name such as `cdrom` or `dvd`. You will use this name when you map the CD-ROM or DVD-ROM drive on the local computer.

Click **Permissions**. The user who accesses this folder to install Forms and Reports Services will need at least read permission.

Click **OK** when done.

Figure 3–7 Sharing a CD-ROM Drive

5. CD-ROM: Insert Forms and Reports Services Disk 1 into the CD-ROM drive.
DVD-ROM: Insert the Forms and Reports Services DVD into the DVD-ROM drive.

On the Local Computer, Map the CD-ROM or DVD-ROM Drive

Perform these steps on the local computer to map the CD-ROM or DVD-ROM drive and to run the installer:

1. Map the remote CD-ROM or DVD-ROM drive.
 - a. Start up Windows Explorer on the local computer.
 - b. Select **Tools > Map Network Drive**. This displays the Map Network Drive dialog box.
 - c. Select a drive letter to use for the remote CD-ROM or DVD-ROM drive.
 - d. In **Folder**, enter the location of the remote CD-ROM or DVD-ROM drive using the following format:

`\\remote_hostname\share_name`

Replace *remote_hostname* with the name of the remote computer with the CD-ROM or DVD-ROM drive.

Replace *share_name* with the share name that you entered.

Example: `\\computer2\cdrom`

- e. If you need to connect to the remote computer as a different user, click **Different User Name**, and enter the username.
 - f. Click **Finish**.
2. Run the installer from the mapped CD-ROM or DVD-ROM drive.
When the installer prompts you to switch CD-ROMs, eject the CD-ROM and insert the requested CD-ROM.

Note: The installer must be running when you are switching CD-ROMs. Do *not* exit the installer when switching CD-ROMs. If you exit the installer, it is unable to continue from where it left off. In addition, the partial installation created is not usable and may need to be removed manually.

3.7.9 Installing on Remote Computers

If you want to install and run Forms and Reports Services on a remote computer (that is, the remote computer has the hard drive and will run Forms and Reports Services components), but you do not have physical access to the computer, you can still perform the installation on the remote computer if it is running remote control software such as VNC or Symantec pcAnywhere. You also need the remote control software running on your local computer.

You can install Forms and Reports Services on the remote computer in one of these two ways:

- If you have copied the contents of the Forms and Reports Services CD-ROM or DVD-ROM to a hard drive, then you can install from the hard drive.
- You can insert the CD-ROM or DVD-ROM into a drive on your local computer, and install from the CD-ROM or DVD-ROM.

Installing from a Hard Drive

If you have copied the contents of the Forms and Reports Services CD-ROM or DVD-ROM to a hard drive, then you can install from the hard drive. To install from the hard drive:

1. Ensure that the remote control software is installed and running on the remote and local computers.
2. Share the hard drive that contains the Forms and Reports Services CD-ROM or DVD-ROM.
3. On the remote computer, map a drive letter to the shared hard drive. Use the remote control software to do this on the remote computer.
4. Using the remote control software, run the installer on the remote computer. You can access the installer from the shared hard drive.

Installing from a Remote CD-ROM or DVD-ROM Drive

You can insert the CD-ROM or DVD-ROM into a drive on your local computer, and install from the CD-ROM or DVD-ROM. This is similar to the scenario described in [Section 3.7.8, "Installing from a Remote CD-ROM or DVD-ROM Drive"](#). To install from a remote CD-ROM or DVD-ROM:

1. Ensure that the remote control software is installed and running on the remote and local computers.
2. On the local computer, share the CD-ROM or DVD-ROM drive.

On the remote computer, map a drive letter to the shared CD-ROM or DVD-ROM drive. Use the remote control software to do this on the remote computer.

These steps are described in [Section 3.7.8, "Installing from a Remote CD-ROM or DVD-ROM Drive"](#).

3. Using the remote control software, run the installer on the remote computer. You can access the installer from the shared CD-ROM or DVD-ROM drive.

3.8 Prerequisite Checks Performed by the Installer

[Table 3–6](#) lists the checks performed by the installer:

Table 3–6 *Prerequisite Checks Performed by the Installer*

Item	Description
User	The installer checks that the user has administrative privileges.
Processor	See Table 3–1 for the processor speed requirements.
Monitor	The installer checks that the monitor is configured to display at least 256 colors.
Operating system version	See Table 3–1 for supported versions.
Windows service pack	See Table 3–1 for supported service packs.
Memory	See Table 3–1 for recommended values.
Total pagefile (virtual memory) size	See Table 3–1 for recommended values.
Space in TEMP directory	See Table 3–1 for recommended values.
Instance name	The installer checks that the computer on which you are installing Forms and Reports Services does not already have an instance of the same name.
Oracle home directory name	The installer checks that the Oracle home directory name does not contain any spaces.
Path to the Oracle home directory	The installer checks that the path to the Oracle home directory is not longer than 127 characters.
Oracle home directory contents	The installer checks that the Oracle home directory does not contain any files that may interfere with the installation.

Table 3–6 (Cont.) Prerequisite Checks Performed by the Installer

Item	Description
Oracle home directory	<p>You should install Forms and Reports Services in a new directory. Here are some examples of installations that are <i>not allowed</i>:</p> <ul style="list-style-type: none"> Any type of Oracle Application Server into an 8.0, 8i, 9.0.1, or 9.2 database Oracle home Any type of Oracle Application Server into an Oracle Management Service Oracle home Any type of Oracle Application Server into an Oracle Collaboration Suite Oracle home Any type of Oracle Application Server into an Oracle HTTP Server standalone Oracle home Any type of Oracle Application Server into an OracleAS Web Cache standalone Oracle home Any type of Oracle Application Server into an Oracle9i Developer Suite 9.0.2 Oracle home Any type of Oracle Application Server into an Oracle Application Server Containers for J2EE standalone Oracle home Any type of Oracle Application Server into an Oracle9iAS 1.0.2.2 Oracle home Oracle Application Server 10g Release 2 (10.1.2) Forms and Reports Services into an infrastructure 9.0.2 or 10g Release 2 (10.1.2) Oracle home Oracle Application Server 10g Release 2 (10.1.2) Forms and Reports Services into an Oracle9iAS 9.0.2 or 9.0.3 middle tier Oracle home OracleAS Developer Kits into an OracleAS Infrastructure 9.0.2 or 10g Release 2 (10.1.2) Oracle home OracleAS Developer Kits into an Oracle9iAS middle tier 9.0.2 or 9.0.3 Oracle home OracleAS Developer Kits into an Oracle Developer Suite 9.0.2 or 10g Release 2 (10.1.2) Oracle home OracleAS Infrastructure 10g into any Oracle9iAS 9.0.2 Oracle home OracleAS Infrastructure 10g into an Oracle Application Server 10g Release 2 (10.1.2) Forms and Reports Services or OracleAS Developer Kits Oracle home OracleAS Infrastructure 10g into an Oracle Developer Suite 9.0.2 or 10g Release 2 (10.1.2) Oracle home
Static port conflicts	The installer checks the ports listed in the <code>staticports.ini</code> file, if specified. See Section 3.3, "Ports" .
Oracle Enterprise Manager directories are writable	<p>The installer runs this check only if you are expanding a middle tier or if you are reinstalling Forms and Reports Services in the same Oracle home. The installer checks that these directories are writable by the operating system user running the installer:</p> <ul style="list-style-type: none"> <code>ORACLE_HOME/sysman/emd</code> <code>ORACLE_HOME/sysman/config</code> <code>ORACLE_HOME/sysman/webapps/emd/WEB-INF/config</code>
Oracle Enterprise Manager files exist	<p>The installer runs this check only if you are expanding a middle tier or if you are reinstalling Forms and Reports Services in the same Oracle home. The installer checks that these files exist:</p> <ul style="list-style-type: none"> <code>ORACLE_HOME/sysman/config/iasadmin.properties</code> <code>ORACLE_HOME/sysman/webapps/emd/WEB-INF/config/consoleConfig.xml</code>

Considerations Before Starting the Installation

This chapter contains the following topics:

- [Oracle Home Directory](#)
- [Oracle Home Name](#)
- [Installing Additional Languages](#)
- [Forms and Reports Services Instances and Instance Names](#)
- [The ias_admin User](#)
- [Installer File Locations](#)
- [Starting Oracle Universal Installer](#)

4.1 Oracle Home Directory

The directory in which you install Forms and Reports Services is called the Oracle home. During installation, you must specify the full path to this directory and a name for this Oracle home.

For example, you can install Forms and Reports Services in `C:\oracle\orawinfrs` and you can name it `frs1012`.

See [Section 4.2, "Oracle Home Name"](#) that describes how the name is used.

4.2 Oracle Home Name

One of the screens in the installer prompts you for the Oracle home directory (which is the destination directory) and also an Oracle home name. This Oracle home name does not need to be the same as the directory name. The Oracle home name can consist of alphanumeric and the underscore (`_`) characters, and cannot be longer than 128 characters.

4.3 Installing Additional Languages

By default, the installer installs Forms and Reports Services with text in English and in the operating system language. If you need to install additional languages, click **Product Languages** on the Available Product Components screen.

Note that you cannot install additional languages after installation. You must install additional languages only during installation. If you run Forms and Reports Services in an environment that uses a language you did not install, the user interface may

display text in that language and in English, or it may display square boxes (caused by missing fonts) instead of text.

4.4 Forms and Reports Services Instances and Instance Names

When you install Forms and Reports Services, an instance of Forms and Reports Services is created. The installer prompts you to provide a name for this new instance that you are installing. For example, you can name an instance `frs1012` or `J2EE_1012`. This name can be different from the Oracle home name. You cannot change this name after installation.

The Enterprise Manager appends the hostname and domain name to the given instance name to form a complete instance name. For example, if you are installing an instance on a computer named `c1`, and you name the instance `frs1`, then the full name of the instance is `frs1.c1.mydomain.com`, assuming the domain name is `mydomain.com`.

Valid Characters in Instance Names

Instance names can consist only of the alphanumeric characters (A-Z, a-z, 0-9) and the `$` or `_` (underscore) characters.

There is no maximum length restriction for instance names.

How Forms and Reports Services Uses Instance Names

Instance names are important because Forms and Reports Services uses them to uniquely identify instances. This means that if you install multiple Forms and Reports Services instances on the same computer (for example, an OracleAS Infrastructure 10g and a J2EE and Web Cache instance), you must give them different names.

When you administer Forms and Reports Services using Oracle Enterprise Manager Application Server Control, the instance name appears on the screens. You can click the instance name to see details about the instance, such as the components that are installed in that instance, whether the components are running or stopped, and the log files for the components. The Application Server Control is a browser-based administration tool for Forms and Reports Services. See the *Oracle Application Server Administrator's Guide* for details about this administration tool.

4.5 The `ias_admin` User

The installer prompts you to specify a password for the `ias_admin` user. The `ias_admin` user is the administrative user for Forms and Reports Services instances. To manage Forms and Reports Services instances using Application Server Control, log on as `ias_admin`.

On a computer, you can install multiple Forms and Reports Services instances, each with its own unique instance name, but the name of the administrative user is `ias_admin` for all instances. The password for the `ias_admin` user can be different for each instance.

Each Forms and Reports Services instance has its own password. Even if you install multiple Forms and Reports Services instances on the same computer using the same operating system user, you have to enter a new password for each instance on the same computer.

Password for the `ias_admin` User

The password for the `ias_admin` user must conform to the following password policy:

- The minimum length is five alphanumeric characters.
- At least one of the characters must be a number.

The password for the `ias_admin` user has these restrictions:

- Passwords must be shorter than 30 characters.
- Passwords can contain only alphanumeric characters from your database character set, the underscore (`_`), the dollar sign (`$`), and the number sign (`#`).
- Passwords must begin with an alphabetic character. Passwords cannot begin with a number, the underscore (`_`), the dollar sign (`$`), or the number sign (`#`).
- Passwords cannot be Oracle reserved words. Appendix C in the *Oracle9i SQL Reference* guide lists the reserved words. You can find this guide on Oracle Technology Network (<http://www.oracle.com/technology>). Alternatively, avoid using words that sound as though they may be reserved words.

You must remember the password because you need to enter it to perform the following task:

- When you log on to Application Server Control to manage Forms and Reports Services, you log on as the `ias_admin` user.

If you forget the password, you can reset it. See the *Oracle Application Server Administrator's Guide* for details.

4.6 Installer File Locations

The installer writes files to the following directories:

Table 4–1 Directories Where the Installer Writes Files

Directory	Description
Oracle home directory	This directory contains Forms and Reports Services files. You specify this directory when you install Forms and Reports Services.
Inventory directory (<code>system_drive:\Program Files\Oracle\Inventory</code>)	The installer uses the inventory directory to keep track of which Oracle products are installed on the computer. The inventory directory is created when you install the first Oracle product on the computer. In subsequent installations, the installer uses the same inventory directory.
TEMP directory	The installer writes files needed only during installation to a temporary directory. The temporary directory is specified by the TEMP variable.

Additionally, the installer also creates entries in the Windows registry.

4.7 Starting Oracle Universal Installer

To start Oracle Universal Installer:

1. Log on to the computer as a user who is a member of the Windows Administrators group.

2. If you are installing Forms and Reports Services on a multihomed computer or a computer that uses multiple aliases, use the Windows System control panel to create the `ORACLE_HOSTNAME` system environment variable. Set this variable to point to the hostname of the computer on which you are installing Forms and Reports Services. For more information on installing on multihomed computers, see [Section 3.7.2, "Installing on Multihomed \(Multi-IP\) Computers"](#).
3. Insert the disk.

CD-ROM users: Insert Forms and Reports Services Disk 1 into the CD-ROM drive.

DVD-ROM users: Insert the Forms and Reports Services DVD into the DVD-ROM drive. The DVD is in DVD-ROM format.
4. If your computer supports the auto run feature, the installer launches automatically.

If your computer does not support the auto run feature, start the installer manually:

CD-ROM users: Double-click the `setup.exe` file.

DVD-ROM users: Double-click the `setup.exe` file located in the `application_server` directory.

This starts Oracle Universal Installer, through which you can install Forms and Reports Services.

Installation Overview

It is highly recommended that you read this guide in its entirety to ensure a successful installation and to optimize the capabilities of this release.

There are a few restrictions with this installation. For more information about these restrictions, see [Section 2.1, "Restrictions with This Installation Type"](#).

To install Forms and Reports Services, follow these steps:

1. Read the latest versions of the following Release Notes:
 - *Oracle Application Server Forms and Reports Services Release Notes* contains release notes for OracleAS Forms Services, Oracle Forms Developer, OracleAS Reports Services, and Oracle Reports Developer. In addition, *Oracle Application Server Forms and Reports Services Release Notes* contains information about the features available in this installation type.
 - *Oracle Application Server Release Notes* contains general information about Oracle Application Server 10g Release 2 (10.1.2), as well as references to other sources of information. You can find the latest version of the release notes document on the Oracle Technology Network (<http://www.oracle.com/technology/documentation/ias.html>).
2. Start Oracle Universal Installer (OUI).

For information about starting OUI, see [Section 4.7, "Starting Oracle Universal Installer"](#).
3. The Welcome screen appears. Click Next.
4. The Specify File Locations screen appears. On the Specify File Locations screen, enter the following information:
 - **Name:** A name to identify this Oracle home. This name cannot contain spaces and can have a maximum length of 16 characters.
Example: orawinfrs
 - **Path:** The full path to the destination directory (Oracle home). If the directory specified does not exist, the installer creates it with administrative privileges.
Example: C:\oracle\orawinfrs
5. Click Next.
6. The Language Selection screen appears. This screen lists the additional languages that you can install to run Forms and Reports Services. Select the required language from the **Available Languages** list.

Note: By default, the installer installs Forms and Reports Services with text in English and in the operating system language.

7. Click **Next**.
8. The Specify Port Configuration Options screen appears.
 - Select **Automatic** to assign default ports to Forms and Reports Services. For more information about default ports, see the *Oracle Application Server Installation Guide*.
 - Select **Manual** if you want to manually configure the ports. If you select **Manual**, then create a port configuration file that specifies the port numbers that you want to use. Enter the entire path of the port configuration file in the field provided. For more information about the port configuration file, see the *Oracle Application Server Installation Guide*.
9. Click **Next**.
10. The Provide Outgoing Mail Server Information screen appears. Enter the outgoing mail (SMTP) server to be used by Forms and Reports Services.

Example: smtp.oracle.com

Note: This field is optional. However, you cannot distribute reports through e-mail until you have configured the mail server information. Refer to the *Oracle Application Server Reports Services Publishing Reports to the Web* manual for more information on specifying the outgoing mail server information.

11. The Specify Instance Name and ias_admin Password screen appears.
 - **Instance Name:** Enter a name for this instance. Instance names can contain only alphanumeric and underscore characters. If you have more than one Forms and Reports Services instance on a computer, then the instance names must be unique.
 - **ias_admin Password** and **Confirm Password:** Enter a password for the ias_admin user. This is the administrative user for the instance. By default, the password must have a minimum of five alphanumeric characters and at least one of the characters must be a number.

Note: Each Forms and Reports Services instance has its own password, regardless of the user performing the installation. Passwords are not shared across instances even if the instances are installed by the same user.

12. Click **Next**.
13. The Summary screen appears and lists all the components that will be installed. Click **Install** to complete the installation. The Summary screen shows the progress of the installation.

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

When you install OracleAS Reports Services, the broadcast mechanism is configured for server communication. For information on changing this to the Common Object Service (COS) naming mechanism, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

If you want to retain the broadcast mechanism for communication, but if your Reports Server is located across subnets, configure the Oracle Reports bridge. For information on configuring the Oracle Reports bridge, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual. In case of the COS naming service, the Oracle Reports bridge is not needed even if your servers are located across subnets.

To configure Oracle Reports security, you must have OracleAS Portal installed, as the security information is stored in the OracleAS Portal repository. For information about configuring OracleAS Portal to store OracleAS Reports Services security information, refer to the Securing Oracle Reports white paper on OTN (<http://www.oracle.com/technology/products/reports/htdocs/getstart/whitepapers/securing9i.pdf>).

Configuring Forms and Reports Services to Use an Oracle Application Server Infrastructure

In this release, you can configure Forms and Reports Services to use the services of an Oracle Application Server Infrastructure. This configuration enables Forms and Reports Services to be a part of an Oracle Application Server Farm. Forms and Reports Services can then use the services of an OracleAS Infrastructure in the same way as used by the Business Intelligence and Forms components.

Forms and Reports Services can be configured to use the following services of an OracleAS Infrastructure:

- Oracle Identity Management

This enables Forms and Reports Services to use Oracle Identity Management components such as Oracle Application Server Single Sign-On, Oracle Internet Directory, and so on.

To configure Forms and Reports Services to use Oracle Identity Management, refer to [Section 6.1, "Configuring Forms and Reports Services to Use Oracle Identity Management"](#).

- Oracle Application Server Metadata Repository

This adds Forms and Reports Services to an OracleAS Farm, thus enabling it to join an OracleAS Cluster.

To configure Forms and Reports Services to use OracleAS Metadata Repository, refer to [Section 6.2, "Configuring Forms and Reports Services to Use OracleAS Metadata Repository"](#).

Note: Once you configure Forms and Reports Services, you *cannot* reverse this configuration, though you can reassociate to a different Oracle Identity Management and OracleAS Metadata Repository.

This chapter includes the following topics:

- [Configuring Forms and Reports Services to Use Oracle Identity Management](#)
- [Configuring Forms and Reports Services to Use OracleAS Metadata Repository](#)
- [Making the Reports Server Secure](#)
- [Starting OPMN Services](#)
- [Testing the Configuration on Oracle Application Server Forms Services](#)

- [Testing the Configuration on Oracle Application Server Reports Services](#)

6.1 Configuring Forms and Reports Services to Use Oracle Identity Management

This section describes the procedure to configure Oracle Identity Management. Oracle Identity Management components provide directory, security, and user-management functionality. Some of these components (such as OracleAS Single Sign-On) have schemas in the Oracle Application Server Metadata Repository.

Before starting the configuration, ensure that:

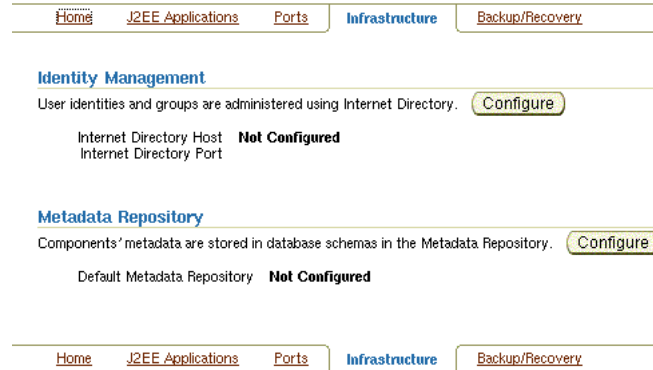
- The Oracle Identity Management instance is started (status is Up)
- You know the Oracle Internet Directory host and port numbers
- You know the password for `cn=orcladmin`, or another user who is a member of the `iASAdmins` group

To configure Oracle Identity Management:

1. Navigate to the Application Server Control home page.
2. Click **Infrastructure**.

Internet Directory Host in the Identity Management section and Default Metadata Repository in the Metadata Repository section display **Not Configured** as shown in [Figure 6–1](#).

Figure 6–1 Identity Management and Metadata Repository Sections



3. In the Identity Management section, click **Configure** to display the Configure Identity Management: Internet Directory page.
4. On the Configure Identity Management: Internet Directory page:
 - a. In the **Host** field, enter the name of the computer on which Oracle Internet Directory and Identity Management are running.
For example, `host.oracle.com`
 - b. In the **Port** field, enter the port at which Oracle Internet Directory is listening. The default port number is 389.
 - c. Select **Use Only SSL Connections with Internet Directory** if you want to use only SSL to connect to Oracle Internet Directory.

Note: If you select **Use Only SSL Connections with Internet Directory**, then the default port number is 636.

- d. Click **Next** to display the Configure Identity Management: Login page.
5. On the Configure Identity Management: Login page:
 - a. In the **User Name** field, the user name to log on to Oracle Internet Directory is displayed as `cn=orcladmin`. You may change this provided the user belongs to the `IASAdmin` group and the user name is in the `cn=user_name` format. For example, `cn=admin` where `admin` is the username.

You must log on as a user who belongs to the necessary groups in Oracle Internet Directory. For more information about the necessary groups, see the *Oracle Application Server Installation Guide*.
 - b. In the **Password** field, enter the password for the user name.
 - c. Click **Next** to display the Configure Identity Management: Validation page.
6. The Configure Identity Management: Validation page displays a summary of the Oracle Application Server and Oracle Internet Directory details. Click **Finish** to complete the configuration.

The configuration of Oracle Identity Management is complete. For more information about Oracle Identity Management, see the *Oracle Identity Management Concepts and Deployment Planning Guide*.

6.2 Configuring Forms and Reports Services to Use OracleAS Metadata Repository

This section describes the procedure to configure OracleAS Metadata Repository. OracleAS Metadata Repository is a collection of schemas that are used by other Oracle Application Server components.

Before starting the configuration, ensure that:

- OracleAS Metadata Repository is started (status is **Up**)
- The Oracle Identity Management instance is started (status is **Up**)
- You know the password for `cn=orcladmin`, or another user who is a member of the `iasAdmins` group

To configure OracleAS Metadata Repository:

1. Navigate to the Application Server Control home page.
2. Click **Infrastructure**.

Internet Directory Host in the Identity Management section and Default Metadata Repository in the Metadata Repository section display **Not Configured** as shown in [Figure 6-1](#).

3. In the Metadata Repository section, click **Configure** to display the Configure Repository: Internet Directory page.
4. On the Configure Repository: Internet Directory page:
 - a. In the **User Name** field, the user name to log on to Oracle Internet Directory is displayed as `cn=orcladmin`. You may change it provided the user is in the

IASAdmin group and the user name is in the `cn=user_name` format. For example, `cn=admin` where `admin` is the user name.

You must log on as a user who belongs to the necessary groups in Oracle Internet Directory. For more information about the necessary groups, see the *Oracle Application Server Installation Guide*.

- b. In the **Password** field, enter the password for the user name.
 - c. Click **Next** to display the Configure Repository: Location page.
5. On the Configure Repository: Location page:
 - a. From the **Repository** list, select an existing OracleAS Metadata Repository.
 - b. Click **Next** to display the Configure Repository: Validation page.
6. The Configure Repository: Validation page displays a summary of the Oracle Application Server instance and the new database. Click **Finish** to complete the configuration.

The configuration of OracleAS Metadata Repository is complete. Forms and Reports Services is now a part of the OracleAS Metadata Repository's farm. For more information about OracleAS Metadata Repository's farms, see the *Oracle Application Server High Availability Guide*.

6.3 Making the Reports Server Secure

After configuring Forms and Reports Services to use the services of an OracleAS Infrastructure, you must make the Reports Server secure. The in-process server reduces the maintenance and administration of the Reports Server by providing a means for starting the server automatically. For more information about the in-process server, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

To make the existing Reports Server secure:

1. Update the `server_name.conf` file located in the `ORACLE_HOME/reports/conf` directory. To do this:
 - a. Navigate to the Application Server Control home page.
 - b. Under the System Components section, click the **Reports Server:server_name** link to display the Reports Server page.
 - c. On the Reports Server page, under the Administration section, click **Configuration** to display the Configuration page.
 - d. On the Configuration page, click **Edit Configuration File** to display the Edit Configuration File page.

On the Edit Configuration page, the `server_name.conf` file is displayed.

2. In the `server_name.conf` file, search for the `security` element. Uncomment the `security` element. After uncommenting, the `security` element must look like this:

```
<security id="rwSec" class="oracle.reports.server.RWSecurity">
<!--property name="securityUserId" value="portal_db_username/portal_db_
password@%portal_db_tnsname" confidential="yes" encrypted="no"/-->
<property name="oidEntity" value="reports_oid_entity"/>
</security>
```

3. Ensure that the value of `oidEntity` is the same as the value of `oidEntity` in the `rwserver.template` file. The `rwserver.template` file is located in the `ORACLE_HOME/reports/conf` directory.

Save your changes and restart the Reports Server. To make the earlier servers secure, perform steps 1, 2 and 3 in [Section 6.3, "Making the Reports Server Secure"](#).

All newly started servers will be secure by default.

Note: OracleAS Reports Services enables Reports-related groups (prefixed `RW_`) such as `RW_ADMINISTRATORS`, `RW_DEVELOPER` and `IASADMINS` to run the certain Web commands such as `getjobid`, `getserverinfo`, `showjobs`, and `showenv`. If OracleAS Portal is not configured to use the services of the OracleAS Infrastructure that is configured with the Forms and Reports Services installation, `RW_` groups are not created. In this case, to enable these users to run the Web commands, you have to create the `RW_` groups manually and add users to these `RW_` groups. For more information on the Reports-related (`RW_`) groups, refer to the chapter "Deploying Reports in OracleAS Portal" in the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

6.4 Starting OPMN Services

Once the configuration of Oracle Identity Management and OracleAS Metadata Repository is complete, the status of the Oracle Process and Management Notification (OPMN) services is displayed as **Down**. You must restart the OPMN services.

To restart the OPMN services:

1. Navigate to the Application Server Control home page.
2. Click **Start All** to display the Processing: Start All page. The Processing: Start All page displays the progress of the Start All operation.

After the Start All operation is complete, the Application Server Control home page displays the earlier standalone Forms and Reports Services instance as part of an OracleAS Farm as shown in [Figure 6–2](#).

Figure 6–2 Forms and Reports Services Part of an OracleAS Farm



6.5 Testing the Configuration on Oracle Application Server Forms Services

To test whether the configuration of Oracle Application Server Forms Services to use the services of an OracleAS Infrastructure is successful:

1. Navigate to the Application Server Control home page.

2. In the System Components section, click **Forms** to display the Forms Overview page.
3. Click the **Configuration** tab on the Forms Overview page.
4. From the **View** list, select **Forms Web Configuration (formsweb.cfg)**.
5. Click **Create New Section**. The section that you create will be added to the `formsweb.cfg` file.
6. In the **Section Name You Want to Add** field, enter a name for the section. For example, `modosso`.
7. Click **OK**.
8. The section that you added is displayed in the Configuration page. You can add comments in the field next to the section name. Select the section that you added and click **Edit** to display the Edit Section page.
9. On the Edit Section page, you must add parameters to the section you created. To add parameters:
 - a. In the **Name** field, enter a name for the parameter. For example, `ssoMode`.
 - b. In the **Value** field, enter `true`.
 - c. Click **Add New Parameter**.
 - d. The parameter name and value are displayed in the Edit Section page. Click **Apply**.
10. Run a form by typing the following URL to display the Oracle Single Sign-On page:
`http://host-name:port-number/forms/frmservlet?config=modosso`

For example,
`http://host.oracle.com:7778/forms/frmservlet?config=modosso`
11. On the Oracle Single Sign-On page, log on with the Oracle Internet Directory user name and password.

If the configuration is successful, an OracleAS Forms Services page is displayed.

6.6 Testing the Configuration on Oracle Application Server Reports Services

To test whether the configuration of Oracle Application Server Reports Services to use the services of an OracleAS Infrastructure is successful:

1. Navigate to the following URL to open the Reports demo page:
`http://host-name:port-number/repdemo`

For example,
`http://host.oracle.com:80/repdemo`
2. Click either the **Test a JSP Web Report** link or the **Test a Paper Report on the Web** link.
3. On the Getting Started with Oracle Reports page, click **Run Report**.

If the configuration is successful, a "Reports Ran Successfully" message is displayed.

Post-Installation Tasks

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

This chapter contains the following topics:

- [State of Forms and Reports Services Instances After Installation](#)
- [Testing the Forms and Reports Services Installation](#)
- [Backup and Recovery](#)
- [SSL](#)
- [NLS_LANG Environment Variable](#)
- [Deployment of Forms and Reports](#)

7.1 State of Forms and Reports Services Instances After Installation

After installation, the components that you have configured are started (unless you have configured them to use ports lower than 1024, in which case you have to start them up manually).

You can view the Welcome page and the Application Server Control page in a browser. The URLs for these pages are shown in the last screen of the installer. You can view the contents of the last screen in the `ORACLE_HOME\install\setupinfo.txt` file.

Some of the OracleAS Forms Services components run as Windows services. You can see them in the Services dialog box. To display the Services dialog box:

Windows 2000: Select **Start / Programs / Administrative Tools / Services**.

Windows 2003: Select **Start / Administrative Tools / Services**.

Windows XP: Select **Start / All Programs / Administrative Tools / Services**.

You can use scripts or the Oracle Enterprise Manager Application Server Control to start and stop Forms and Reports Services instances. See the *Oracle Application Server Administrator's Guide* for details.

7.2 Testing the Forms and Reports Services Installation

Testing the Forms and Reports Services installation requires you to use an available Windows machine with a Web browser to invoke the Enterprise Manager page of your installation.

To test your installation, perform the following steps:

1. Open the Oracle Application Server Welcome page (<http://hostname:80>).
2. Click the **Demonstrations** tab.
3. Click the **Forms Services** or **Reports Services** link to run a test Form or a test Report.

Note: If your computer is not on the network, then configure the Common Object Service (COS) naming service to access the Reports Server. For information about configuring the naming service, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

7.3 Backup and Recovery

Post-installation is an ideal time to set up your backup and recovery strategies and implement them. See the *Oracle Application Server Administrator's Guide* for details.

7.4 SSL

By default, most components are not configured for SSL. To enable SSL for the components, view the guide for the specific components. For example, to enable SSL for Oracle HTTP Server, see the *Oracle HTTP Server Administrator's Guide*.

7.5 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 Globalization Guide* for details, including a list of files that set this variable. You may need to edit the value of the NLS_LANG variable in these files.

7.6 Deployment of Forms and Reports

[Table 7-1](#) lists the guides that outline post-installation information on how to configure and deploy Forms and Reports applications. These guides are available on Oracle Technology Network (<http://www.oracle.com/technology>)

Table 7-1 Deploying Forms and Reports Applications

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

Upgrading 9.0.4 Forms and Reports Services to 10.1.2 Forms and Reports Services

You can upgrade a 10g Release 1 (9.0.4) standalone instance of Forms and Reports Services to a 10g Release 2 (10.1.2) Business Intelligence and Forms instance. For other supported upgrade scenarios, see the *Oracle Application Server Upgrade and Compatibility Guide*.

This chapter briefly describes the steps to accomplish 10g Release 1 (9.0.4) standalone instance of Forms and Reports Services to a 10g Release 2 (10.1.2) Business Intelligence and Forms instance upgrade in the following sections:

- [Compatibility Matrix](#)
- [Upgrading a 9.0.4 Standalone Forms and Reports Services Instance](#)
- [Configuring the 10.1.2 Standalone Instance of Forms and Reports Services to Use Oracle Application Server Infrastructure Services](#)

For detailed information about the upgrade, see the *Oracle Application Server Upgrade and Compatibility Guide*.

8.1 Compatibility Matrix

[Table 8–1](#) shows the Release 2 (9.0.2) middle-tier installation types and the corresponding compatible 10g Release 2 (10.1.2) installation types.

Table 8–1 Compatible 10g Release 2 (10.1.2) Middle-Tier Installation Types for Release 2 (9.0.2) Upgrades

Release 2 (9.0.2) Installation Type	Compatible 10g Release 2 (10.1.2) Installation Types
Business Intelligence and Forms	Forms and Reports Services

[Table 8–2](#) shows the 10g (9.0.4) middle-tier installation types and the corresponding compatible 10g Release 2 (10.1.2) installation types.

Table 8–2 Compatible 10g Release 2 (10.1.2) Middle-Tier Installation Types for 10g (9.0.4) Upgrades

10g (9.0.4) Installation Type	Compatible 10g Release 2 (10.1.2) Installation Types
Business Intelligence and Forms	Forms and Reports Services
Forms and Reports Services	Forms and Reports Services

8.2 Upgrading a 9.0.4 Standalone Forms and Reports Services Instance

It is assumed that you have a standalone 10g Release 1 (9.0.4) instance of Forms and Reports Services on your computer. To upgrade the 10g Release 1 (9.0.4) instance to 10g Release 2 (10.1.2):

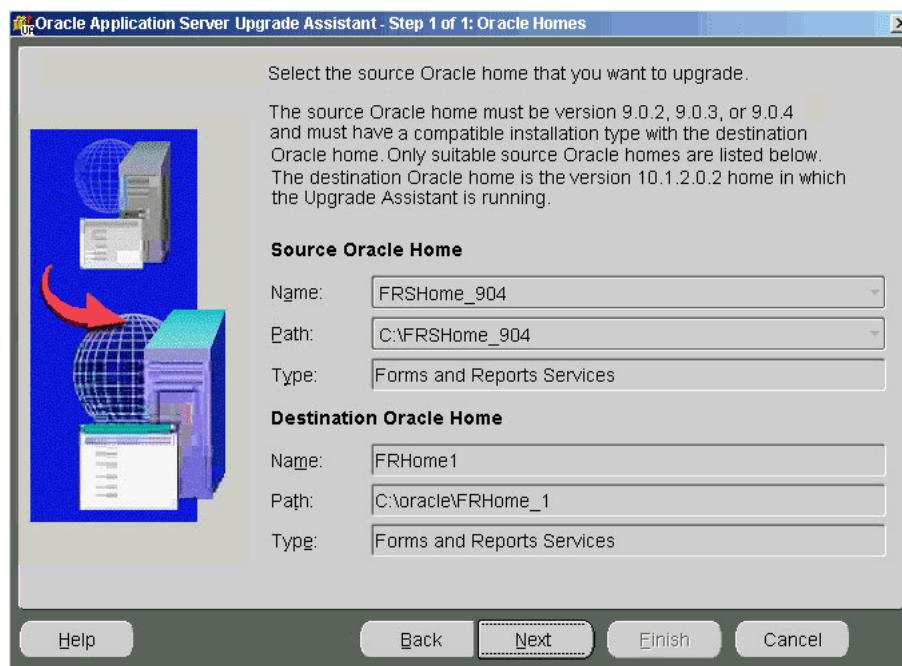
1. Install Forms and Reports Services 10g Release 2 (10.1.2).

For information about installing Forms and Reports Services, see [Chapter 5, "Installation Overview"](#).

Note: Ensure that the Oracle home directory for your Forms and Reports Services 10g Release 2 (10.1.2) is different from the Oracle home directory for the Forms and Reports Services 9.0.4 installation.

2. Navigate to the `ORACLE_HOME/upgrade` directory where `ORACLE_HOME` is your Oracle home directory in which you installed Forms and Reports Services 10g Release 2 (10.1.2).
3. Run the `iasua.bat` file. Running this file starts the Oracle Application Server Upgrade Assistant.
4. In the Oracle Application Server Upgrade Assistant - Welcome screen, click **Next**.
5. The Oracle Application Server Upgrade Assistant - Step 1 of 1: Oracle Homes screen appears as shown in [Figure 8-1](#).

Figure 8-1 Oracle Application Server Upgrade Assistant - Step 1 of 1: Oracle Homes Screen



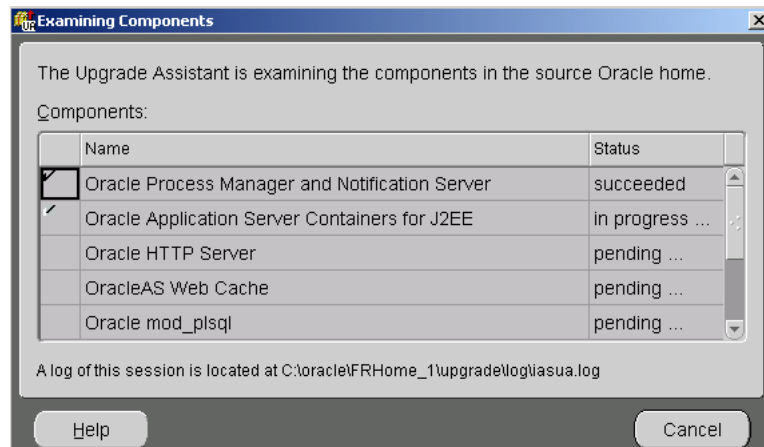
The Source Oracle Home section contains the name and path of the 9.0.4 instance of Forms and Reports Services.

The Destination Oracle Home section contains the name and path of the 10g Release 2 (10.1.2) Oracle home of Forms and Reports Services in which the OracleAS Upgrade Assistant is running.

Click **Next** to display the Examining Components dialog box.

6. In the Examining Components dialog box, the OracleAS Upgrade Assistant examines each component in the source Oracle home to determine whether it needs to be upgraded as shown in [Figure 8-2](#).

Figure 8-2 Examining Components Dialog Box

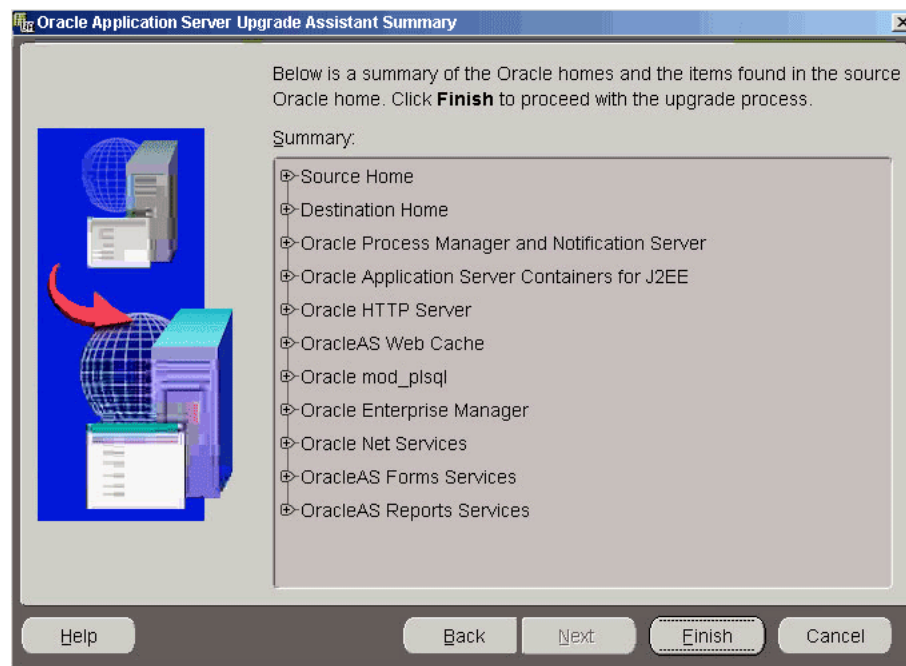


The Status column for each component contains one of the following:

Table 8-3 Values of the Status column in the Examining Components Dialog Box

Status	Meaning
Succeeded	The component is valid for upgrade.
In Progress	The OracleAS Upgrade Assistant is examining the validity of the component.
Pending	The component will be examined when the OracleAS Upgrade Assistant finishes examining the current component.
Failed	The component has upgrade items that are missing or did not meet upgrade criteria. The OracleAS Upgrade Assistant cannot upgrade the component.

After the examination of the components, the Oracle Application Server Upgrade Assistant - Summary screen appears as shown in [Figure 8-3](#). You can click the plus symbol (+) to view the upgrade items for a particular component.

Figure 8–3 Oracle Application Server Upgrade Assistant - Summary Screen

7. Click **Finish** to start the upgrade process. The Upgrading Components screen appears and shows the status of the upgrade.
8. Click **OK** when the upgrade is complete.
9. Once the upgrade is complete, the Upgrade Succeeded or Upgrade Failed screen appears.
 - If the Upgrade Failed screen appears, click **OK** to close the screen and remedy the conditions that prevented the components from being upgraded. Start the OracleAS Upgrade Assistant again.
 - The Upgrade Succeeded screen specifies the location of the upgrade log file and lists the post-upgrade tasks to be performed for various components. Click **OK** to close the Upgrade Succeeded screen.

For more information about the OracleAS Upgrade Assistant or reasons for the failure of an upgrade, see the *Oracle Application Server Upgrade and Compatibility Guide*.

8.3 Completing the Oracle Application Server Forms Services Upgrade

The OracleAS Upgrade Assistant moves most of the OracleAS Forms Services configuration data from the source to the destination Oracle home. However, there may be manual tasks remaining after the upgrade. This section explains how to perform these tasks. For more information about the OracleAS Upgrade Assistant, see the *Oracle Application Server Upgrade and Compatibility Guide*.

Note: After the upgrade, the `default.env` file contains the default OracleAS Forms Services environment variables and user-defined environment variables if any. The Upgrade Assistant upgrades any user-defined environment variables to the destination Oracle home `default.env` file. Any user modifications to the default variables in the source Oracle home `default.env` file will be extracted and appended to the default environment variable values that the installer puts in the destination Oracle home `default.env` file.

8.3.1 Upgrading Forms *.fmx Files

If you have deployed these files within the source Oracle home, you must manually copy them to the same location in the destination Oracle home. If the *.fmx files are not under the Oracle home on the file system, then no action is needed, as `FORMS90_PATH` will be upgraded by the OracleAS Upgrade Assistant, and will be valid after the upgrade.

8.3.2 Upgrading forms90app.ear Deployed in User-defined OC4J Instances

The `forms90app.ear` file is deployed by default into the `OC4J_BI_Forms` OC4J instance. Note that the OracleAS Upgrade Assistant upgrades all user-defined OC4J instances and the applications deployed under these instances to the destination Oracle home.

Thus, if you have deployed the `forms90app.ear` file into one of the user-defined OC4J instances in the source Oracle home, the OracleAS Upgrade Assistant upgrades this deployment into the corresponding OC4J instance in the destination Oracle home.

As a result, the source Oracle home Release 1 (9.0.4) `forms90app.ear` file is deployed into the destination Oracle home. This causes the configuration of OracleAS Forms Services 10g Release 2 (10.1.2) to be incorrect, because it requires the 10g Release 2 (10.1.2) EAR file in order to function properly.

Therefore, you must undeploy the `forms90app.ear` file from these upgraded OC4J instances in the destination Oracle home, and then deploy `forms90app.ear` in the destination Oracle home again.

The Oracle Application Server Forms Services 10g Release 2 (10.1.2) `forms90app.ear` file is located in the following directory:

`ORACLE_HOME/forms/j2ee`

8.4 Completing the Oracle Application Server Reports Services Upgrade

The OracleAS Upgrade Assistant performs most of the Oracle Reports upgrade. However, it does not process the following:

- The script files in the following source Oracle home location:
`ORACLE_HOME/bin/rw*.bat`
- The template file in the following source Oracle home location:
`ORACLE_HOME/reports/conf/rwserver.template`
- The `jdbcpds.conf` configuration file in the following source Oracle home location:

`ORACLE_HOME/reports/conf/jdbcpds.conf`

If you have customized any of these files, you must apply the customizations to the corresponding files in the destination Oracle home.

Caution: To apply customizations, you must copy the individual customized entries from the file in the source Oracle home to the file in the destination Oracle home. Do not replace any 10g Release 2 (10.1.2) files with the files from the source Oracle home, because the organization and content of the files are different in 10g Release 2 (10.1.2).

In addition, to preserve the cache files and the cache directory from source Oracle home, copy the reports server cache directory from the source Oracle home to the destination Oracle home.

8.4.1 Enabling Management of Oracle Application Server Reports Services from Application Server Control Console

After you upgrade OracleAS Reports Services in the middle tier, make the following changes to the `targets.xml` configuration file to manage the upgraded in-process server from the Application Server Control Console. These changes are necessary for the Oracle Enterprise Manager integration to work with the upgraded Reports in-process server.

1. Open the `targets.xml` file in a text editor. This file is located in the `ORACLE_HOME/sysman/emd` directory.
2. Locate the following entry in the `targets.xml` file for the Reports in-process server:

`TYPE="oracle_repserv" and DISPLAY_NAME="Reports Server: new_server_name`

Note that `new_server_name` will be in the `rep_hostname_newOracleHome` format.

In this example, `hostname` is the name of host computer without the domain name and `newOracleHome` is the Oracle home directory.

3. For the `oracle_repserv` entry, replace all occurrences of `new_server_name` with the original server name that was used in the source Oracle home before you performed the middle-tier upgrade.

This example uses boldface type to identify the typical occurrences of new server name in the `oracle_repserv` entry in the `targets.xml` file. The original server name can be found in the `rwervlet.properties` file located at `ORACLE_HOME/reports/conf`.

```
<Target TYPE="oracle_repserv"
NAME="appserv1.acme.com_Reports_Server: new_server_name"
DISPLAY_NAME="Reports Server: new_server_name"
VERSION="1.0"
ON_HOST="appserv1.acme.com">
<Property NAME="IASInternalName" VALUE="new_server_name" />
<Property NAME="Password" VALUE="77c1ed41793a5ce6" ENCRYPTED="TRUE" />
<Property NAME="Server" VALUE="new_server_name" />
<Property NAME="Servlet"
VALUE="http://appserv1.acme.com:port/reports/rwervlet"/>
```

```
...  
...  
</Target>
```

4. Stop and restart Enterprise Manager for the changes to take effect.

8.4.2 Upgrading User-Defined OC4J Instances With Oracle Reports Deployments

The OracleAS Upgrade Assistant upgrades your Release 1 (9.0.4) Forms and Reports Services configuration to a 10g Release 2 (10.1.2) Forms and Reports Services configuration. The OracleAS Upgrade Assistant is not aware of OC4J instances outside of these configurations that may contain deployed reports, or of customizations made to those instances in order to enable the deployed reports to run.

Therefore, if you are using OC4J instances other than the standard Forms and Reports Services OC4J instance, you must apply any manual deployment steps that you performed on those instances to the equivalent instances in Forms and Reports Services 10g Release 2 (10.1.2).

8.5 Configuring the 10.1.2 Standalone Instance of Forms and Reports Services to Use Oracle Application Server Infrastructure Services

After upgrading your standalone 10g Release 1 (9.0.4) Forms and Reports Services instance to a 10g Release 2 (10.1.2) Forms and Reports Services instance, you can configure this 10g Release 2 (10.1.2) instance to use the services of an Oracle Application Server Infrastructure. For information about configuring a standalone 10g Release 2 (10.1.2) Forms and Reports Services instance to use the services of an Oracle Application Server Infrastructure, see [Chapter 6, "Configuring Forms and Reports Services to Use an Oracle Application Server Infrastructure"](#).

Compatibility with Earlier Versions

This chapter outlines the compatibility matrix, known issues and workarounds that you should be aware of when you have a configuration that includes different versions of Oracle Forms and Oracle Reports with Oracle Application Server 10g Release 2 (10.1.2) Forms and Reports Services in the following topics:

- [Compatibility with Earlier Versions and Release 10g \(10.1.2\)](#)
- [Interoperability Issues and Workarounds](#)

9.1 Compatibility with Earlier Versions and Release 10g (10.1.2)

[Table 9–1](#) 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 9–1 Forms and Reports Services Compatibility Matrix

Clients	Reports/Forms Server	Supported?	Comments
Oracle6i Reports ■ rwcgi60 ■ rwcli60 ■ rwrqm60 ■ rwservlet	AS 10g Release 2 (10.1.2) Reports Services	No	None
Oracle9i Reports (9.0.2) Clients ■ rwcgi ■ rwclient ■ rwrqm ■ rwservlet	AS 10g Release 2 (10.1.2) Reports Services	No	None
Oracle Reports 10g Release 1 (9.0.4) Clients ■ rwcgi ■ rwclient ■ rwrqm ■ rwservlet	AS 10g Release 2 (10.1.2) Reports Services	Yes	None

9.2 Interoperability Issues and Workarounds

This section describes the known issues and workarounds that you should be aware of when you have a configuration that includes different versions of Oracle Application Server instances:

- [Oracle Enterprise Manager for 9.0.2/9.0.3/9.0.4 and 10g Release 2 \(10.1.2\) Uses the Same Port \(Port 1810\)](#)
- [dcmctl getState Command from an Oracle Application Server Forms Services Instance Cannot Be Used With 9.0.2/ 9.0.3/9.0.4 Instances](#)
- [Oracle Enterprise Manager: No Rollup Metrics for 9.0.2 Middle Tiers](#)

9.2.1 Oracle Enterprise Manager for 9.0.2/9.0.3/9.0.4 and 10g Release 2 (10.1.2) Uses the Same Port (Port 1810)

In 9.0.2, 9.0.3, and 9.0.4, the installer assigns port 1810 to the Oracle Enterprise Manager Web Site, regardless of whether or not the port is already in use. If the computer on which you plan to install the 10g Release 2 (10.1.2) instance already has a 9.0.2/9.0.3/9.0.4 instance, the Application Server Control component for the 10g Release 2 (10.1.2) instance might already be using port 1810.

Tip: In 10g Release 2 (10.1.2), you can specify custom port numbers to use for each component. See [Section 3.3.4, "Using Custom Port Numbers \(the Static Ports Feature\)"](#).

For the case where Oracle Enterprise Manager 9.0.2/9.0.3/9.0.4 and 10g Release 2 (10.1.2) are configured on the same port (1810), you can change the port used by the 10g Release 2 (10.1.2) Oracle Enterprise Manager to a different port. You can then

run both Oracle Enterprise Managers at the same time. To change the port on the Oracle Enterprise Manager Release 10g, perform these steps:

1. In the 10g Release 2 (10.1.2) home, edit the `ORACLE_HOME\sysman\j2ee\config\emd-web-site.xml` file and change the port value from 1810 to an unused port. The following example sets the port to 1814:

```
<web-site host="[ALL]" port="1814" display-name="Oracle Enterprise Manager
  iAS Console Website" secure="false">
```

If the 9.0.2/9.0.3/9.0.4 instance is using 1810, it is also likely that the instance is using port 1811 for RMI operations. With the 9.0.2/9.0.3/9.0.4 Oracle Enterprise Manager running, check which port in the 1810–1829 range is unused, and use this value.

You can run the `netstat` command to determine which ports are in use. The following example checks if port 1814 is in use.

```
prompt> netstat -n | grep 1814
```

2. Also in the 10g Release 2 (10.1.2) home, enter the same port number in the `ORACLE_HOME\sysman\emd\targets.xml` file. The port number is specified in the `StandaloneConsoleURL` property of the `oracle_ias` target.

```
<Target TYPE="oracle_ias" NAME="infra.myhost.oracle.com" VERSION="1.0">
  ... lines not shown ...
  <Property NAME="StandaloneConsoleURL"
    VALUE="http://myhost.oracle.com:1814/emd/console"/>
```

Once you have updated these two files, you can run BOTH the 9.0.2/9.0.3/9.0.4 and Oracle Enterprise Manager 10g Release 2 (10.1.2) at the same time.

9.2.2 dcmctl getState Command from an Oracle Application Server Forms Services Instance Cannot Be Used With 9.0.2/ 9.0.3/9.0.4 Instances

If you run the `dcmctl getState` command from an OracleAS Forms Services instance to get information on a 9.0.2/9.0.3/9.0.4 instance, you will get an ADMN-604104 error:

```
prompt> dcmctl getState -i name_of_902_or_903_instance
ADMN-604104 Unable to connect to the OPMN process to obtain process status table
```

To get information on 9.0.2/9.0.3/9.0.4 instances using the `dcmctl` command, use the 9.0.2/9.0.3/9.0.4 `dcmctl` command.

9.2.3 Oracle Enterprise Manager: No Rollup Metrics for 9.0.2 Middle Tiers

Oracle Enterprise Manager Application Server Control does not monitor 9.0.2.x or 9.0.3.x instances. You have to use Oracle Enterprise Manager 9.0.2 or 9.0.3 to manage these instances.

Troubleshooting

This appendix lists some methods for troubleshooting your Forms and Reports Services installation. It includes the following topics:

- [Verifying Requirements](#)
- [Resolving Installation Errors](#)
- [Troubleshooting Configuration Assistants](#)
- [Descriptions of Forms and Reports Services Configuration Assistants](#)

A.1 Verifying Requirements

Review the following information before performing any of the troubleshooting steps in this appendix:

- Ensure that the computer meets the requirements specified in [Chapter 3, "Requirements"](#).

Read the Release Notes

- Read *Oracle Application Server Forms and Reports Services Release Notes*, which contains release notes for Oracle Forms Services, Oracle Forms Developer, Oracle Reports Services, and Oracle Reports Developer. In addition, *Oracle Application Server Forms and Reports Services Release Notes* contains information about the features that are available in this installation type.
- Read *Oracle Application Server Release Notes* prior to installing Forms and Reports Services. The release notes are available with the platform-specific documentation. The latest version of the release notes is available on OTN at:

<http://otn.oracle.com/documentation/ias.html>

A.2 Resolving Installation Errors

If you encounter an error during installation of Forms and Reports Services:

- Ensure that you entered correct information on all the installation screens. In case you entered wrong information on one of the screens, return to that screen by clicking **Back** and enter the correct information.
- Exit the installer only if you want to access the component log files. The log files located in the `ORACLE_HOME/cfgtoollogs` directory are inaccessible if the installer is running.
- If you encounter an error while the installer is copying or linking files, do the following:

1. Note the error and review the installation logs for causes:
 - * `inventory_location\logs\installActionstimestamp.log`
 - * `inventory_location\logs\oraInstalltimestamp.err`
 - * `inventory_location\logs\oraInstalltimestamp.out`

The default `inventory_location` is:

`C:\Program Files\Oracle\Inventory`
2. Remove the failed installation by following the steps in [Appendix B, "Deinstallation and Reinstallation"](#).
3. Correct the issue that caused the error.
4. Restart the installation.

A.3 Troubleshooting Configuration Assistants

To troubleshoot an installation error that occurs when the configuration assistants are running:

- Review the installation log files listed in [Section A.2, "Resolving Installation Errors"](#).
- Review the configuration assistant log files located in the `ORACLE_HOME\cfgtoollogs` directory for a specific Forms and Reports Services configuration assistant. [Section A.4, "Descriptions of Forms and Reports Services Configuration Assistants"](#) also lists any other log file locations for a specific configuration assistant. Try to fix the issue that caused the error.
- If you see a `Fatal Error. Reinstall` message, try to find the cause of the problem by analyzing the log files. Refer to [Section A.3.3, "Fatal Errors"](#) for further instructions.

A.3.1 Configuration Assistant Failure

Forms and Reports Services configuration assistant failures are noted at the bottom of the installation screen. The configuration assistant interface displays additional information when applicable. The configuration assistant's execution status is identified by the result. The result codes are:

Status	Result Code
Configuration Assistant Succeeded	0
Configuration Assistant Failed	1
Configuration Assistant Cancelled	-1

This result code is written to the following log file:

`C:\Program Files\Oracle\Inventory\logs\installActionstimestamp.log`

A.3.2 Failure During Component Configuration and Startup

During installation, configuration assistants run when the Configuration Assistants screen appears. If a configuration assistant fails, try the following procedure to correct the problem:

1. Review the installation log files for this Forms and Reports Services instance.
2. Review the log files for each configuration assistant located in the `ORACLE_HOME\cfgtoollogs` directory. Default log file locations are described in [Section A.4, "Descriptions of Forms and Reports Services Configuration Assistants"](#).
3. Refer to the section describing the configuration assistants in [Section A.4, "Descriptions of Forms and Reports Services Configuration Assistants"](#).
 - a. If the failing configuration assistant has any dependencies, then run the dependencies again. You must do this even if the dependency completed successfully.
 - b. Run the failing configuration assistant again. If you are using the installer, select the configuration assistant and click **Retry**.

If the configuration assistant fails again after you click **Retry**, then remove the `/var/tmp/EM_CONFIG_INSTALL.lk` lock entry and try running the configuration assistant again.

- c. If an optional configuration assistant fails, and it does not have any dependencies, run the remaining configuration assistants. Deselect the cancelled optional configuration assistant, highlight and check the next listed configuration assistant, and click **Retry**.
- d. If configuration assistant failure occurs when running configuration assistant execution commands on the command line, then run the configuration assistant execution command again.

You can use the generated script file named `configToolCommands` located in the `ORACLE_HOME\cfgtoollogs` directory to execute the failed configuration assistant again. The `configToolCommands` script is generated after you exit the installer. During silent or non-interactive installation of Forms and Reports Services, the `configToolCommands` script is generated immediately after configuration assistant failure.

You must set the following environment variables before using the generated script:

- Set the `ORACLE_HOME` environment variable to the `ORACLE_HOME` path.
- Append the `PATH` environment variable with `ORACLE_HOME\lib` and `ORACLE_HOME\network\lib`.
- For the Register DCM Plug-Ins With Enterprise Manager Configuration Assistant only, set the `PERL5LIB` environment variable to the `ORACLE_HOME\perl\lib\5.6.1` directory.

Note: If the description of a configuration assistant includes an "Initial Tasks" section, perform these tasks before running the configuration assistant.

A.3.3 Fatal Errors

Some configuration assistant failures are "fatal errors". You cannot recover from a fatal error by correcting the problem and continuing. You must remove the current installation and reinstall Forms and Reports Services. The following tasks describe the recovery procedure:

1. Deinstall the failed installation using the procedure described in [Section B.1, "Deinstallation of Forms and Reports Services Instances"](#).
2. Correct the cause of the fatal error.
3. Reinstall Forms and Reports Services.
4. If the fatal error reoccurs, then you must remove all Oracle installations from your computer using the procedure in [Section B.1, "Deinstallation of Forms and Reports Services Instances"](#).

A.3.4 OC4J Instance Configuration Assistant Errors

If you are installing a middle tier against an Oracle Internet Directory that was upgraded from 9.2.0.x to 10g Release 2 (10.1.2) and not all the upgrade steps were completed, then the OC4J Instance Configuration Assistant may fail with the following error:

```
Adding dependent libraries for application 'portal'...done.
Deploying application 'oraudrepl' to OC4J instance 'OC4J_Portal'...
ERROR: Caught exception during deploy.
java.rmi.RemoteException: deploy failed!: ; nested exception is:
oracle.oc4j.admin.internal.DeployerException: User specified for
application-client uddirepl, 'uddi_replicator' not found
at com.evermind.server.rmi.RMIConnection.
EXCEPTION_ORIGINATES_FROM_THE_REMOTE_SERVER(RMIConnection.java:1520)
... lines omitted ...
```

Ensure that you followed the steps on upgrading Oracle Internet Directory 9.2.0.x to 10g Release 2 (10.1.2) as documented in *Oracle Application Server Upgrade and Compatibility Guide*. The instructions are in the "Upgrading the Identity Management Services" chapter.

Reports Server Start/Stop Errors

Oracle Process and Management Notification (OPMN) checks the status of the Report in-process Server using a ping mechanism. The ping URL is specified in the OC4J_BI_Forms process-type in the *ORACLE_HOME/opmn/conf/opmn.xml* file. The `urlping` element is present in the *ORACLE_HOME/opmn/conf/opmn.xml* file:

```
<process-type id="OC4J_BI_Forms" module-id="OC4J">
...
<category id="urlping-parameters">
<data id="/reports/rwservlet/pingserver?start=auto" value="200" />
</category>
...
<start timeout="900" retry="2"/>
<stop timeout="120"/>
<restart timeout="720" retry="2"/>
...
</process-type>
```

OPMN sends the ping URL to the Reports Servlet and if the Reports Servlet is up, it responds to the ping. `start=auto` in the URL means that if the in-process Reports Server is not up while receiving the ping, the Reports Servlet starts the in-process server automatically.

Sometimes, the ping timeout is reached before the in-process Reports Server is fully started (for example, the Reports Server may not be able to start completely within time because of heavy load), as a result of which the URLPing request from OPMN may time out. The ping timeout is the measure that OPMN uses to determine the time

that it must wait for a callback from an in-process Reports Server (in OC4J_BI_FORMS) before considering it a timeout. You can configure the ping timeout by adding a ping entry with sufficient timeout configured to the computer's load in the following element in `opmn.xml`:

```
<ias-component id="OC4J">
  <process-type id="OC4J_BI_Forms" module-id="OC4J">
    ...
    <category id="urlping-parameters">
      <process-type id="OC4J_BI_Forms" module-id="OC4J">
        <data id="/reports/rwservlet/pingserver?start=auto" value="200" />
      </category>
    ...
    <start timeout="900" retry="2"/>
    <stop timeout="120"/>
    <restart timeout="720" retry="2" />
    <ping timeout="110" interval="30" retry="2" /> -- ping timeout
    ...
  </process-type>
</ias-component>
```

Then, restart OC4J_BI_Forms. For more information on using OPMN with Reports Server, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

A.4 Descriptions of Forms and Reports Services Configuration Assistants

Table A-1 lists the Forms and Reports Services configuration assistants in alphabetical order. Different installations use different configuration assistants depending on installation type and configuration options you selected.

For information about configuring Oracle Reports, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual. For information about configuring Oracle Forms, see the *Oracle Application Server Forms Services Deployment Guide*.

Table A-1 Forms and Reports Services Configuration Assistants

Configuration Assistant	Description	Log File Location
Application Server Control Configuration Assistant	Starts the Oracle Management Agent and the Application Server Control to deploy applications through the Oracle Enterprise Manager Application Server Control.	not applicable
DCM Repository Backup Assistant	Enables you to back up your DCM repository.	not applicable
Forms Configuration Assistant	Configures the Oracle Application Server Forms Services server and integrates Oracle Application Server Forms Services with Oracle Enterprise Manager Application Server Control.	<code>ORACLE_HOME/cfgtoollogs/formsConfig.log</code>

Table A–1 (Cont.) Forms and Reports Services Configuration Assistants

Configuration Assistant	Description	Log File Location
HTTP Server Configuration Assistant	Configures Oracle HTTP Server and registers it with the Oracle Enterprise Manager Application Server Control.	<code>ORACLE_HOME/Apache/Apache/logs</code> <code>ORACLE_HOME/Apache/Apache/httpd.log</code> <code>ORACLE_HOME/cfgtoollogs/configtoolstamp.log</code>
Java Security Configuration Assistant	Changes default password and sets and reassigns new passwords for JAAS security.	<code>ORACLE_HOME/cfgtoollogs/jaznca.log</code>
OC4J Configuration Assistant	Integrates OC4J with the Oracle Enterprise Manager Application Server Control. It uses the Oracle Enterprise Manager Application Server Control-provided APIs to perform the following steps: <ul style="list-style-type: none"> ■ Add entries to the <code>targets.xml</code> file ■ Add entries to the <code>iasadmin.properties</code> file ■ This configuration assistant is dependent on the presence of the <code>deploy.ini</code> file. 	not applicable
OC4J Instance Configuration Assistant	Configures OC4J instances for deployed Forms and Reports Services applications.	not applicable
OPMN Configuration Assistant	Starts OPMN and OPMN-managed processes.	<code>ORACLE_HOME/opmn/logs/opmn.log</code>
Oracle Net Configuration Assistant	Configures the database listener and Forms and Reports Services instances to use the LDAP naming by default.	<code>ORACLE_HOME/oraInventory/logs/installActions<time.stamp>.log</code>
OracleAS Instance Configuration Assistant	Adds Forms and Reports Services instance name into the <code>ORACLE_HOME/config/targets2add.xml</code> file.	not applicable
Register DCM Plug-Ins With Enterprise Manager Configuration Assistant	Registers DCM plug-ins with Enterprise Manager.	not applicable
Reports Configuration Assistant	Configures the Oracle Reports server and integrates Oracle Reports with Oracle Enterprise Manager Application Server Control.	<code>ORACLE_HOME/cfgtoollogs/reportsConfig.log</code>
Web Cache Configuration Assistant	Configures OracleAS Web Cache and registers it with Oracle Enterprise Manager Application Server Control.	<code>ORACLE_HOME/cfgtoollogs/configtoolstamp.log</code>

For more information on log file locations, refer to Appendix F, "Configuration Assistants" in the *Oracle Application Server Installation Guide*.

Deinstallation and Reinstallation

This appendix guides you through the deinstallation and reinstallation process for Forms and Reports Services.

Note: Forms and Reports Services is a flexible product that you can start and stop in different ways, depending on your requirements. Before you either deinstall or reinstall the product, see the *Oracle Application Server Administrator's Guide* for more information on stopping all related services or processes.

This appendix contains the following topics:

- [Deinstallation of Forms and Reports Services Instances](#)
- [Deinstalling All Oracle Products Manually](#)
- [Reinstallation](#)

B.1 Deinstallation of Forms and Reports Services Instances

To deinstall Forms and Reports Services instances, you have to completely remove the items listed in [Table B-1](#).

Table B-1 Items to Deinstall

Item to Clean Up	Tool to Use
Files from the Oracle home directory	Installer If the installer does not remove all the files, you can remove the remaining files using the <code>del</code> command.
Entries for the deleted instance in the Inventory directory	Installer
Instance name from Farm page	Installer

See the *Oracle Application Server Installation Guide* for more information on deinstallation of components.

B.2 Deinstalling All Oracle Products Manually

The following procedure removes all Oracle products from your computer.

Caution: These instructions remove *all* Oracle components, services, and registry entries from your computer. Exercise extreme care when removing registry entries. Removing incorrect entries can cause your computer to stop working.

1. Delete Registry keys.
 - a. Select **Start > Run**, type in **regedit**, and click **OK** to display the Registry Editor.
 - b. Delete the following folders from the Registry. To delete a folder, select it and select **Edit > Delete** from the menu.
 - * **HKEY_LOCAL_MACHINE > SOFTWARE > ORACLE**
 - * **HKEY_LOCAL_MACHINE > SYSTEM > CurrentControlSet > Services > ORACLE**
 - * **HKEY_LOCAL_MACHINE > SYSTEM > ControlSet X > Services > ORACLE**
X is a number, for example, ControlSet001.
 - * **HKEY_CURRENT_USER > Software > ORACLE**
 - * **HKEY_CLASSES_ROOT > ORACLE**
 - c. Exit the Registry Editor.
2. Edit/delete the environment variables.

To display the environment variables, right click **My Computer** and select **Properties**. Select the **Advanced** tab, then click **Environment Variables**.

 - a. Delete the following system variables if they exist:
 - DISCO_JRE
 - DISCO_VBROKER
 - VBROKER_JAVAVM
 - VBROKER_TAG -D
 - WV_GATEWAY_CFG
 - b. Modify the Path system variable to remove all references to any previous Oracle home paths. To do this, highlight the Path system variable. Click **Edit** and modify the path in the **Variable Value** field.
3. Click **OK**.
4. Remove Oracle program folders. To do this, click **Start > Programs**. Remove Oracle folders by right-clicking the folder and selecting **Delete**.
5. Delete the Oracle user. To do this:
 - a. Click **Start > Settings > Control Panel > Administrative Tools > Computer Management > Local Users and Groups > Users**. Open the Users folder and delete the user name for installation of Oracle applications.
 - b. Exit Administrative Tools.
 - c. Double click **My Computer** on your desktop. Inspect the Documents and Settings directories on your hard drive and delete any Oracle user entries.

- d. Exit My Computer.
6. Reboot your computer.
7. After your computer reboots, remove existing Oracle home directories from your hard drive. For example, `C:\Oracle*`, `C:\Program Files\Oracle*`
8. Reboot your computer.

B.3 Reinstallation

The installer does not allow reinstallation of an Forms and Reports Services instance in a directory that already contains a Forms and Reports Services instance. To reinstall Forms and Reports Services in the same directory, deinstall Forms and Reports Services and then install it again.

Default Port Numbers

By default, the installer assigns port numbers to components from a set of default port numbers. This appendix contains a list of these port numbers.

If you want to use a different set of port numbers, you have to create a file called `staticports.ini`, in which you list the port numbers that you want to use. See [Section 3.3.4, "Using Custom Port Numbers \(the Static Ports Feature\)"](#) for details.

This appendix contains the following topics:

- [Method of Assigning Default Port Numbers](#)
- [Default Port Numbers](#)

C.1 Method of Assigning Default Port Numbers

The installer assigns default port numbers to each component using the following method:

1. The installer checks if the default port number is in use. If it is not in use, the installer assigns it to the component.
2. If the default port number is already in use by an Oracle product or by any running application, the installer tries the lowest number in the port number range. It keeps trying the port numbers in the range until it finds one that is available.

C.2 Default Port Numbers

[Table C–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 3.3.4, "Using Custom Port Numbers \(the Static Ports Feature\)"](#) for details.

Table C–1 *Default Port Numbers and Ranges (Grouped by Component)*

Component	Default Port	Port Number Range	Name in staticports.ini
Oracle Process Manager and Notification Server (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

Table C–1 (Cont.) Default Port Numbers and Ranges (Grouped by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
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 through staticports.ini
OC4J RMI	3201	3201 - 3300	Not settable through staticports.ini
JMS	3701	3701 - 3800	Not settable through staticports.ini
IIOP	3401	3401 - 3500	Not settable through staticports.ini
IIOPS1	3501	3501 - 3600	Not settable through staticports.ini
IIOPS2	3601	3601 - 3700	Not settable through staticports.ini
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)	Middle tier: 80 Infrastructure: 7777	7777 - 7877	Oracle HTTP Server Listen port
Oracle HTTP Server Listener (SSL)	Middle tier: 443 Infrastructure: 4443	4443 - 4543	Oracle HTTP Server Listen (SSL) port
Oracle HTTP Server Listener (non-SSL, OracleAS Web Cache configured)	Middle tier: 80 Infrastructure: 7777	7777 - 7877	Oracle HTTP Server port
Oracle HTTP Server Listener (SSL, OracleAS Web Cache configured)	Middle tier: 443 Infrastructure: 4443	4443 - 4543	Oracle HTTP Server SSL 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 through staticports.ini
Port Tunneling	7501	7501 - 7599	Not settable through staticports.ini
Oracle HTTP Server Diagnostic port	7200	7200 - 7299	Oracle HTTP Server Diagnostic port
OracleAS Reports Services			
SQL*Net	14040	14040-14049	Reports Services SQL*Net port
discoveryService	14021-14030	14021-14030	Reports Services discoveryService port

Table C–1 (Cont.) Default Port Numbers and Ranges (Grouped by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
Oracle Reports Bridge	14011-14020	14011-14020	Reports Services bridge port
OracleAS Web Cache			
OracleAS Web Cache - HTTP Listener	80	80; 7777 - 7877	Web Cache HTTP Listen port
OracleAS Web Cache - HTTP Listener (SSL)	8250	8250 - 8350	Web Cache HTTP Listen (SSL) port
OracleAS Web Cache Administration	9400	9400 - 9499	Web Cache Administration port
OracleAS Web Cache Invalidation	9401	9400 - 9499	Web Cache Invalidation port
OracleAS Web Cache Statistics	9402	9400 - 9499	Web Cache Statistics port
Oracle Enterprise Manager 10g Application Server Control			
Application Server Control	1156	1156; 1810 - 1829	Application Server Control port
Oracle Management Agent	1157	1157; 1830 - 1849	Not settable through staticports.ini
Application Server Control - RMI	1850	1850 - 1869	Application Server Control RMI port
Application Server Control - SSL	1810	1810 - 1829	This port number is assigned after installation, when you configure Application Server Control for SSL. See the <i>Oracle Application Server Administrator's Guide</i> for details.
Enterprise Manager Console HTTP port (orcl)	5500		Not settable through staticports.ini
Enterprise Manager Agent port (orcl)	1831		Not settable through staticports.ini
Log Loader	44000	44000 - 44099	Log Loader port

URLs for Components

Table D-1 shows the URLs and login IDs to use to access components after installation.

The URLs in the table use the default ports. The components in your environment might use different ports. To determine the port numbers for components, look in the `ORACLE_HOME\install\portlist.ini` file.

Table D-1 URLs for Components

Component	URL	Entry in portlist.ini	Login and Password
OracleAS Welcome Pages	<code>http://host:80</code>	Oracle HTTP Server port or Web Cache Listen port	not applicable
Oracle HTTP Server	<code>http://host:80</code> (without Web Cache) <code>http://host:80</code> (with Web Cache)	Oracle HTTP Server Listen port	not applicable
Oracle Application Server Forms Services	<code>http://host:port/forms/frmse rvlet</code>	Web Cache Listen port	not applicable
Oracle Reports	<code>http://host:80/reports/rwser vlet/help?</code>	Web Cache Listen port	orcladmin Password: The default password for orcladmin is the same as the ias_admin password you supplied during installation.
Oracle Enterprise Manager Application Server Control	<code>http://host:1810</code>	Application Server Control port	ias_admin Password: Use the ias_admin password you supplied during installation.

Java Access Bridge Installation

This appendix describes the procedure to install Java Access Bridge. Java Access Bridge enables the use of a screen reader with Oracle components.

This appendix contains the following topics:

- [Introduction](#)
- [Setup for JRE 1.4.2](#)
- [Setup for Oracle Installed Components](#)

E.1 Introduction

Java Access Bridge enables assistive technologies, such as the JAWS screen reader, to read Java applications running on the Windows platform. Assistive technologies can read Java-based interfaces, such as Oracle Universal Installer and Oracle Enterprise Manager Application Server Control.

The Forms and Reports Services CD-ROMs contain Java Runtime Environment (JRE) 1.4.1 used by Oracle Universal Installer during installation. JRE enables use of Java Access Bridge during installation. To install and configure Java Access Bridge after installing Oracle components, see [Section E.3, "Setup for Oracle Installed Components"](#) on page E-1.

E.2 Setup for JRE 1.4.2

To set up Java Access Bridge with JRE 1.4.2, run the following batch file on Oracle installation media.

```
DRIVE_LETTER:\install\access_setup.bat
```

After the batch file has run, restart your assistive technology program.

E.3 Setup for Oracle Installed Components

This section describes the procedure to install and configure Java Access Bridge for Windows after installing Oracle components. This section contains the following topics:

- [Section E.3.1, "Installing Java Access Bridge"](#)
- [Section E.3.2, "Configuring Oracle Components to Use Java Access Bridge"](#)

E.3.1 Installing Java Access Bridge

To install Java Access Bridge:

1. On the Oracle installation media, navigate to the AccessBridge directory.
2. Select the accessbridge-1_0_4.zip file and extract the files to the location where you plan to install Java Access Bridge. For example:

```
c:\AccessBridge-1.0.4
```

3. Copy the Java Access Bridge files listed in [Table E-1](#) into the JRE 1.4.2 directory used by Oracle components. By default, the JRE used by Oracle components is installed in:

```
ORACLE_BASE\ORACLE_HOME\jre\1.4.2
```

[Table E-1](#) lists the files you need to copy from the Java Access Bridge location on your hard drive to the JRE directory used by Oracle components:

Table E-1 Files to be Copied to JRE Directory

Copy	To
\AccessBridge-1_0_4\installer \installerFiles\jaccess-1_4.jar	ORACLE_BASE\ORACLE_HOME\jre\1.4.2\lib\ext
\AccessBridge-1_0_4\installer \installerFiles\access-bridge.jar	ORACLE_BASE\ORACLE_HOME\jre\1.4.2\lib\ext
\AccessBridge-1_0_4\installer \installerFiles\JavaAccessBridge.dll	windows_ directory\system32
\AccessBridge-1_0_4\installer installerFiles\WindowsAccessBridge.dll	windows_ directory\system32
\AccessBridge-1_0_4\installer \installerFiles\JAWTAccessBridge.dll	windows_ directory\system32
\AccessBridge-1_0_4\installer \installerFiles\accessibility.properties	ORACLE_BASE\ORACLE_HOME\jre\1.4.2\lib

4. Rename jaccess-1_4.jar (now located at ORACLE_BASE\ORACLE_HOME\jre\1.4.2\lib\ext) to jaccess.jar.
5. Following a successful installation, you can access the Java Access Bridge documentation located at:

```
c:\AccessBridge-1.0.4\doc
```

E.3.2 Configuring Oracle Components to Use Java Access Bridge

You can configure Oracle components to use Java Access Bridge after completing the installation. To do so, set the ORACLE_OEM_CLASSPATH system variable to point to the installed Java Access Bridge files.

Configuring for Windows 2000, Windows XP, or Windows Server 2003

To configure Oracle components to use Java Access Bridge on Windows 2000, Windows XP, or Windows Server 2003, follow these steps:

1. Select **Start > Settings > Control Panel > System** to display the Windows System Control Panel.
2. Select the **Advanced** tab.

3. Click **Environment Variables**.
4. Click **New** under the System Variable list to display the New System Variable dialog box.
5. In the **Variable Name** field, enter ORACLE_OEM_CLASSPATH.
6. In the **Variable Value** field, enter the full path to jaccess.jar and access-bridge.jar.

Use a semicolon to separate the two paths. Do not use the quotes or character spaces. For example, if JRE 1.4.2 is installed in the default location, the setting would be:

```
c:\oracle\product\10.1.0\Db_
1\jre\1.4.2\lib\ext\jaccess.jar;c:\oracle\product\10.1.0\Db_
1\jre\1.4.2\lib\ext\access-bridge.jar
```

7. Click **OK**.

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