Oracle9*i* Application Server

Installation Guide

Release 1 (v1.0.2.2) for Sun SPARC Solaris

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Oracle9*i* Application Server Installation Guide, Release 1 (v1.0.2.2) for Sun SPARC Solaris

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Primary Author: Priya Darshane

Contributors: Sanjay Singh, Francisco Abedrabbo, Biju Albert, John Bassett, Warren Briese, Julianna Button, Jaymes Clere, Daniel Damon, Mike De Groot, Thomas Fillenwarth, Helen Grembowicz, Yuning He, Mariyln Hollinger, Pavana Jain, Deanna Kitis, Lisa Kohn, Arun Kumar, John Lang, Susan Leveille, Jeremy Lizt, Sheryl Maring, Andy Page, Scott Peterson, Tony Quan, M.V. Satyanarayana, Sandhya Sridharan, Mark Templeton, Liz Trojan, Micheal Wei

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  Oracle Corporation
  Oracle9*i* Application Server Documentation Manager
  500 Oracle Parkway, M/S 2op4
  Redwood Shores, CA 94065 USA

If you would like a reply, please give your name, address, and telephone number below.

If you have problems with the software, please contact your local Oracle Support Services.

Preface

This guide describes the installation process for Oracle9*i* Application Server.

This preface contains these topics:

Audience

This installation guide is intended for system administrators and others responsible for installing Oracle products. You should be familiar with client/server relationships and database concepts.

Organization

This document contains:

Chapter 1, "Requirements"

This chapter provides hardware and software requirements for Oracle9*i* Application Server, Oracle9*i*AS Wireless client, and the online documentation.

Chapter 2, "Concepts and Preinstallation"

This chapter provides basic concepts, and preinstallation steps for Oracle9*i* Application Server.

Chapter 3, "Minimal Edition"

This chapter guides you through the installation and postinstallation steps for the Minimal Edition installation option for Oracle9*i* Application Server.

Chapter 4, "Standard Edition"

This chapter guides you through the installation and postinstallation steps for the Standard Edition installation option for Oracle9*i* Application Server.

Chapter 5, "Enterprise Edition"

This chapter guides you through the installation and postinstallation steps for the Enterprise Edition installation option for Oracle9*i* Application Server.

Chapter 6, "Non-Interactive Installation"

This chapter guides you through Non-interactive installation steps for Oracle9*i* Application Server.

Chapter 7, "Deinstallation and Reinstallation"

This chapter guides you through the deinstallation and reinstallation steps for Oracle9*i* Application Server.

Appendix A, "Configuration Tools"

This appendix guides you through the steps required to run component-specific configuration assistants to configure Oracle9*i* Application Server.

Appendix B, "Installing Oracle9i Application Server Administrative and Development Client CD-ROM"

This appendix provides an overview, and describes the installation process for the Oracle9*i* Application Server Administrative and Development Client CD-ROM.

Appendix C, "Installing Oracle9iAS Containers for J2EE (OC4J)"

This appendix provides a brief overview, and installation instructions for Oracle9*i*AS Containers for J2EE.

Appendix D, "Installing Supplemental Components"

This appendix introduces you to the Oracle9*i* Application Server supplemental components, and provides basic installation instruction.

Appendix E, "Enabling SSL for Oracle HTTP Server powered by Apache"

This appendix describes steps necessary to enable SSL for Oracle HTTP Server *powered by Apache*.

Appendix F, "Installing Documentation Library"

This appendix contains the contents of the Oracle9*i* Application Server Documentation Library CD-ROM, and provides instructions for installing and viewing the documentation.

Related Documentation

For more information, see these Oracle resources:

- Oracle9*i* Application Server Documentation Library CD-ROM
- Oracle9*i* Application Server Platform Specific Documentation on Oracle9*i* Application Server Disk 1

In North America, printed documentation is available for sale in the Oracle Store at

`http://oraclestore.oracle.com/`

Customers in Europe, the Middle East, and Africa (EMEA) can purchase documentation from

`http://www.oraclebookshop.com/`

Other customers can contact their Oracle representative to purchase printed documentation.

To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at

`http://technet.oracle.com/membership/index.htm`

If you already have a username and password for OTN, then you can go directly to the documentation section of the OTN Web site at

`http://technet.oracle.com/docs/index.htm`

Conventions

This section describes the conventions used in the text and code examples of this documentation set. It describes:

- Conventions in Text
- Conventions in Code Examples

Conventions in Text

We use various conventions in text to help you more quickly identify special terms. The following table describes those conventions and provides examples of their use.

Convention	Meaning	Example
Bold	Bold typeface indicates terms that are defined in the text or terms that appear in a glossary, or both.	When you specify this clause, you create an **index-organized table**.
Italics	Italic typeface indicates book titles or emphasis.	*Oracle9i Concepts* Ensure that the recovery catalog and target database do *not* reside on the same disk.
`UPPERCASE monospace (fixed-width font)`	Uppercase monospace typeface indicates elements supplied by the system. Such elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, usernames, and roles.	You can specify this clause only for a `NUMBER` column. You can back up the database by using the `BACKUP` command. Query the `TABLE_NAME` column in the `USER_TABLES` data dictionary view. Use the `DBMS_STATS.GENERATE_STATS` procedure.

Convention	Meaning	Example
lowercase monospace (fixed-width font)	Lowercase monospace typeface indicates executables, filenames, directory names, and sample user-supplied elements. Such elements include computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages and classes, usernames and roles, program units, and parameter values. **Note:** Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	Enter `sqlplus` to open SQL*Plus. The password is specified in the `orapwd` file. Back up the datafiles and control files in the `/disk1/oracle/dbs` directory. The `department_id`, `department_name`, and `location_id` columns are in the `hr.departments` table. Set the `QUERY_REWRITE_ENABLED` initialization parameter to `true`. Connect as `oe` user. The `JRepUtil` class implements these methods.
lowercase monospace (fixed-width font) italic	Lowercase monospace italic font represents placeholders or variables.	You can specify the *`parallel_clause`*. Run `U`*`old_release`*`.SQL` where *`old_release`* refers to the release you installed prior to upgrading.

Conventions in Code Examples

Code examples illustrate SQL, PL/SQL, SQL*Plus, or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT username FROM dba_users WHERE username = 'MIGRATE';
```

The following table describes typographic conventions used in code examples and provides examples of their use.

Convention	Meaning	Example
[ ]	Brackets enclose one or more optional items. Do not enter the brackets.	`DECIMAL (`*`digits`*` [ , `*`precision`*` ])`
{ }	Braces enclose two or more items, one of which is required. Do not enter the braces.	`{ENABLE | DISABLE}`
|	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	`{ENABLE | DISABLE}` `[COMPRESS | NOCOMPRESS]`

Convention	Meaning	Example
...	Horizontal ellipsis points indicate either: ■ That we have omitted parts of the code that are not directly related to the example ■ That you can repeat a portion of the code	`CREATE TABLE ... AS subquery;` `SELECT col1, col2, ... , coln FROM employees;`
. . .	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	
Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as shown.	`acctbal NUMBER(11,2);` `acct CONSTANT NUMBER(4) := 3;`
Italics	Italicized text indicates placeholders or variables for which you must supply particular values.	`CONNECT SYSTEM/system_password` `DB_NAME = database_name`

UPPERCASE	Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	`SELECT last_name, employee_id FROM employees;`
		`SELECT * FROM USER_TABLES;`
		`DROP TABLE hr.employees;`

lowercase	Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files.
	Note: Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.
		`SELECT last_name, employee_id FROM employees;`
		`sqlplus hr/hr`
		`CREATE USER mjones IDENTIFIED BY ty3MU9;`

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Requirements

This chapter provides information about the hardware and software items required for the installation of the Oracle9*i* Application Server, Oracle9*i*AS Client, and the online documentation. The topics include:

- Hardware Requirements
- Software Requirements
- Certified Software
- Oracle9iAS Client Requirements
- Online Documentation Requirements

Hardware Requirements

The following table contains the hardware requirements for Oracle9*i* Application Server.

Hardware Items	Requirements
CPU	A SPARC Processor
Memory	128 MB
Disk Space	Minimal: 625 MB Standard Edition: 1.40 GB Enterprise Edition: 4.10 GB
TMP or Swap Space	800 MB

Make note of the following:

- The disk space must be available on a single disk. Oracle9*i* Application Server does not support spanning the installation over multiple disks.
- Origin database must have minimum free disk space for the following:
  - System Tablespace: 1 GB
  - User Tablespace: 400 MB

For Standard Edition Only: You will need an additional 430 MB disk space on your Oracle9*i* Application Server machine to install the Oracle Enterprise Java Engine database. The database files do not have to be installed on the same disk as the Oracle9*i* Application Server Oracle home.

Software Requirements

The following table contains the software requirements for Oracle9*i* Application Server. The patches can be downloaded from `http://sunsolve.sun.com`. For the latest information, refer to Oracle*MetaLink* at `http://metalink.oracle.com`.

Software Items	Version
Operating System	Solaris 2.6 ■ Linker patch: 107733-08 or higher ■ /usr/lib/libthread.so.1 patch: 105568-18 or higher ■ libaio, libc, watchmalloc patch: 105210-32 or higher ■ X Input & Output Method patch: 106040-14 or higher ■ Linker patch: 105490-07 or higher ■ OpenWindows 3.6: Xsun patch: 105633-48 or higher[1] ■ Fixes the Chinese TrueType fonts: 106409-01 or higher[2] ■ SunOS 5.6: ssJDK1.2.1_03 fails with fatal errors in ISO8859-01 Locales: 108091-03 or higher[3] ■ CDE 1.2: libDtSvc patch (recommended): 105669-10 or higher ■ Motif 1.2.7: Runtime library patch : 105284-37 or higher ■ SunOS 5.6: Kernel update patch (recommended): 105181-23 or higher Solaris 2.7 ■ Libthread patch: 106980-13 or higher ■ Kernal update patch: 106541-12 or higher[4] ■ /kernal/fs/sockfs patch: 109104-04 or higher[4] ■ /usr/lib/fs/fsck patch: 107544-03 or higher[4] ■ Motif Runtime library patch: 107081-22 or higher ■ X Input & Output Method patch: 107636-05 or higher ■ OpenWindows 3.6.1 Xsun patch: 108376-12 or higher[1] Solaris 2.8: Additional patches not required at this time.

1 This patch is required for asian locales.

2 This patch is required to display Traditional Chinese characters in Swing applications.

3 This patch (108091-03 or higher) is required for any locale which uses the ISO8859-1 or ISO8859-15 character encoding.

4 This patch is a pre-requisite for 106980-13.

Certified Software

Installation of the Oracle9*i* Application Server requires an Oracle database. A complete list of certified software, including databases, for Oracle9*i* Application Server can be found at Oracle*MetaLink*:

`http://metalink.oracle.com`

Oracle9*i*AS Client Requirements

The following table contains the requirements for the installation of Oracle9*i*AS Client.

See Also: Appendix B, "Installing Oracle9i Application Server Administrative and Development Client CD-ROM"

Hardware Items	Required
Operating System	Microsoft Windows NT 4.0, with Service Pack 5.0 or higher Microsoft Windows 2000 Service Pack 1. Some components might malfunction if Service Pack 1 is not available.
CPU	Pentium 266
Memory	At least 64 MB RAM for running both the Oracle9*i*AS Wireless Service Designer and Web Integration Developer; at least 32 MB RAM for running the Oracle9*i*AS Wireless Service Designer.
Disk Space	40 MB for running both the Oracle9*i*AS Wireless Service Designer and Web Integration Developer; at least 20 MB for running the Oracle9*i*AS Wireless Service Designer.
JDK 1.2.2	The client system requires JDK 1.2.2. You can install JDK 1.2.2 for Windows NT from the client CD-ROM. Make the JDK directory the first entry in the system environment path.

Online Documentation Requirements

The following table contains the tools and disk space requirements for the installation of the Oracle9*i* Application Server online documentation. The documentation library can be installed on a separate machine.

See Also: Appendix F, "Installing Documentation Library"

Requirement	Items
Online Readers	Requires any one of the following: HTML ■ Netscape Navigator 3.0 or higher ■ Microsoft Internet Explorer 3.0 or higher PDF ■ Acrobat Reader 3.0 or higher ■ Acrobat Reader+Search 3.0 or higher ■ Acrobat Exchange 3.0 or higher ■ PDFViewer Web browser plug-in 1.0 or higher
Disk Space	260 MB

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Concepts and Preinstallation

This chapter guides you through the basic concepts and preinstallation steps for Oracle9*i* Application Server. The following topics provide information about Oracle9*i* Application Server, environment variables settings, configuration options, and starting Oracle Universal Installer:

About Oracle9*i* Application Server

Oracle9*i* Application Server is a scalable, secure, middle-tier application server. It enables you to deliver Web content, host Web applications, connect to back-office applications, and access your data on wireless devices. Oracle9*i* Application Server has three installation options:

- **Minimal Edition**: recommended for Websites that require a lightweight Web server with minimal application support.
- **Standard Edition**: recommended for smaller Websites that require minimal support for running transactional applications.
- **Enterprise Edition**: recommended for medium to large-sized Websites that handle a high volume of requests and that require robust support for running transactional applications.

Oracle9*i* Application Server, version 1.0.2.2 includes Oracle9*i*AS Containers for J2EE (OC4J). The J2EE Container runs as a JVM that accepts HTTP and RMI connections, which access servlets, JSP Pages, and EJBs. For more information, including installation steps, refer to Appendix C, "Installing Oracle9iAS Containers for J2EE (OC4J)".

Oracle9*i* Application Server Components

Table 2–1 lists the three installation options for Oracle9*i* Application Server, and the components that are installed with each option. This is followed by a brief description of each component.

> **See Also:** *Oracle9i Application Server Overview Guide* in the Oracle9*i* Application Server Documentation Library for detailed information about each component.

Table 2–1 Oracle9i Application Server Components

Component	Minimal Edition	Standard Edition	Enterprise Edition
Oracle9*i*AS Database Cache			x
Oracle9*i*AS Discoverer			x
Oracle9*i*AS Forms Services			x
Oracle9*i*AS Portal	x	x	x
Oracle9*i*AS Reports Services			x
Oracle9*i*AS Web Cache			x
Oracle9*i*AS Wireless	x	x	x
Oracle Advanced Security		x	x
Oracle Business Components for Java (BC4J)	x	x	x
Oracle Database Client Developer Kit	x	x	x
Oracle Enterprise Java Engine		x	x
Oracle HTTP Server	x	x	x
Oracle Internet File System		x	x
Oracle LDAP Client Kit	x	x	x
Oracle Management Server			x
Oracle XML Developer's Kit	x	x	x

Oracle9*i*AS Database Cache

Oracle9*i*AS Database Cache improves the performance and scalability of applications that access Oracle databases by storing frequently used data on middle tier machines. With Oracle9*i*AS Database Cache, your applications can process several times as many requests as their original capacity.

Oracle9*i*AS Discoverer

Oracle9*i*AS Discoverer is a business intelligence tool for analyzing data. With Oracle9*i*AS Discoverer's award-winning user interface, users can access and analyze database data. There are two Oracle9*i*AS Discoverer components:

- Oracle9*i*AS Discoverer Plus is the Internet version of the award-winning Windows version of Discoverer. With Discoverer Plus, business professionals can get and analyze data in a company's database without having to understand complex database concepts. Using Wizard dialogs and menus, Discoverer Plus guides users through the steps to get and analyze data to support their business decisions.
- Oracle9*i*AS Discoverer Viewer is a tool for viewing workbooks created by Discoverer Plus users. Discoverer Viewer can also be used to integrate database output into a Web site and portal. In addition, it is easy both to customize Discoverer Viewer to conform to a particular Web site look-and-feel, and to build custom Discoverer applications for the Web. Discoverer Viewer is optimized for performance and designed to minimize network traffic.

Oracle9*i*AS Forms Services

Oracle9*i*AS Forms Services deploys Forms applications with database access to Java clients in a Web environment. Oracle9*i*AS Forms Services automatically optimizes class downloads, network traffic, and interactions with Oracle database. Applications are automatically load-balanced across multiple servers and, therefore, can easily scale to service any number of requests.

Oracle9*i*AS Portal

Oracle9*i*AS Portal is a complete solution for building, deploying and monitoring Web database applications and content-driven Web sites. Oracle9*i*AS Portal enables you to create and view database objects through an easy-to-use HTML-based interface, and provides tools for creating HTML-based interfaces. It also allows you to resolve performance problems using performance tracking facilities, and enables you to manage database security through its interface.

Oracle9*i*AS Reports Services

Oracle9*i*AS Reports Services provides an easy-to-use, scalable, and manageable solution for high-quality database publishing and reporting by creating dynamic reports for the Web and across the enterprise. It enables you to implement a multi-tiered architecture for running your reports.

Oracle9*i*AS Web Cache

Oracle9*i*AS Web Cache is a server accelerator caching service that improves the performance, scalability, and availability of frequently used e-business Web sites that run on Oracle9*i* Application Server and Oracle database. By storing frequently accessed URLs in virtual memory, Oracle9*i*AS Web Cache eliminates the need to repeatedly process requests for those URLs on the Web server, and it caches both static and dynamically-generated HTTP content from one or more applications Web servers.

Oracle9*i*AS Wireless

Oracle9*i*AS Wireless is a portal service for delivering information and applications to mobile devices. Using Oracle9*i*AS Wireless, you can create custom portal sites that use different kinds of content, including Web pages, custom Java applications, and XML-based applications. Oracle9*i*AS Wireless sites make this diverse information accessible to mobile devices without you having to rewrite the content for each target device platform.

Oracle Advanced Security

Oracle Advanced Security provides a comprehensive suite of security features to protect enterprise networks and securely extend corporate networks to the Internet. It provides a single source of integration with network encryption and authentication solutions, single signon services, and security protocols. By integrating industry standards, it delivers unparalleled security to the Oracle network and beyond.

Oracle Business Components for Java (BC4J)

Oracle Business Components for Java is a 100% Java-compatible, XML-powered framework that enables productive development, portable deployment, and flexible customization of multi-tier, database applications from business components.

Oracle Database Client Developer Kit

The Oracle Database Client Developer Kit contains the following client libraries:

- Oracle Java Database Connectivity (JDBC) Drivers
- Oracle Java Messaging Service (JMS) Toolkit
- Oracle SQLJ Translator

Oracle Enterprise Java Engine

Oracle Enterprise Java Engine is an enterprise-class 100% Java-compatible server environment that supports Enterprise JavaBeans, CORBA, and database stored procedures. Oracle Enterprise Java Engine achieves high scalability through its unique architectural design, which minimizes the burden and complexity of memory management when the number of users increases.

Oracle HTTP Server *powered by Apache*

Oracle9*i* Application Server uses the Oracle HTTP Server, which is built on Apache Web server technology. Oracle HTTP Server offers scalability, stability, speed, and extensibility. It also supports Java Servlets, JavaServer Pages, Perl, PL/SQL, and CGI applications. This component also includes the following sub-components:

- Apache JServ
- Apache SOAP
- BC4J
- Dynamic Monitoring System (DMS)
- HiAv Infrastructure or `mod_oprocmgr`
- `mod_fastcgi`
- `mod_Jserv`
- `mod_mm`
- `mod_ose`
- `mod_plsql`
- `mod_perl`, Perl Interpreter
- `mod_ssl`
- Object Cache Service for Java (OCS4J)

- OCS4J JSP Tags
- Oracle JSP

Oracle Internet File System

Oracle Internet File System is a file system and development platform that stores files in an Oracle database. It provides a mechanism for creating, storing, and managing various types of information, from Web pages to email, from spreadsheets to XML files, in a common repository for users to access and update.

Oracle LDAP Client Kit

LDAP (Lightweight Directory Access Protocol) is the emerging Internet standard for directory services. Oracle LDAP Client Kit supports client interaction with any LDAP-compliant directory server; for example, Oracle Internet Directory. The toolkit provides tools and development libraries to support client calls to directory services, encrypted connections, and enables you to manage your directory data.

Oracle Management Server

Oracle Management Server provides distributed control between the database and Oracle9*i* Application Server in the network. As a central engine for notifications, it processes all system management tasks and administers the distribution of these tasks across the enterprise. Ensure that you do not have multiple Oracle Management Servers installed on a single machine.

Oracle XML Developer Kit

The Oracle XML Developer Kit (XDK) contains the necessary XML components libraries and utilities to give developers the ability to easily XML-enable applications and Web sites. Oracle XDK supports development in Java, C, C++, and PL/SQL with a collection of libraries, command-line utilities, and tools.

Supplemental Components

The following is a list of the supplemental components that are available with Oracle9*i* Application Server, version 1.0.2.2:

> **See Also:** Appendix D, "Installing Supplemental Components" for overview and installation instructions.

- Oracle9iAS Email
- Oracle9iAS Unified Messaging
- Oracle9iAS InterConnect
- Oracle Gateways for Informix, Ingres, Sybase
- Oracle Internet Directory
- Oracle Workflow

Preinstallation Tasks

The preinstallation tasks for Oracle9*i* Application Server are divided into the following parts.

- Installation Overview
- Setting Environment Variables
- Creating UNIX Accounts and Groups
- Migration
- Port Allocation
- Completing Preinstallation for Specific Installation Options

Installation Overview

This section provides an overview of the installation process. Before installing Oracle9*i* Application Server, review the Release Notes and Release Notes Addendum. You can find the Release Notes Addendum on OTN at:

`http://otn.oracle.com`

The Oracle9*i* Application Server installation process is divided into the following three phases:

- Preinstallation
- Installation
- Postinstallation

Preinstallation

During the first phase of installation, the users completes the following tasks:

- Setting environment variables such as `ORACLE_HOME`, `ORACLE_TERM`, `DISPLAY`, `TMP`, and `TNS_ADMIN`.
- Creating UNIX accounts and groups
- Performing component-specific preinstallation tasks on the middle tier, and origin database.
- Launching the Oracle Universal Installer to begin the installation process.

Installation

During the second phase, the Oracle Universal Installer guides the user through the installation screens. Depending on the install type, the user will require the information listed in Table 2–2.

Table 2–2 Installation Information

Component	Minimal Edition	Standard Edition	Enterprise Edition
Oracle home directory	x	x	x
UNIX group name	x	x	x
OSDBA group		x	
OSOPER group		x	
Origin database hostname	x	x	x
Origin database port number	x	x	x
Origin database SID	x	x	x
Set user name for Oracle9*i*AS Wireless schema on the origin database	x	x	x
Set password for Oracle9*i*AS Wireless schema on the origin database	x	x	x
SYS password for the origin database	x	x	x
SYSTEM password for the origin database	x	x	x
SYSDBA user name for the origin database			x
SYSDBA password for the origin database			x
Oracle EJE database global name		x	
Oracle EJE database SID		x	

During installation, the user has the following configuration options:

- Select components to configure and automatically start during installation. This option makes pre-selected components ready to use after installation. The user does not have to run all the configuration assistants, populate the origin database with configuration data, nor start the individual components.
- Select components to configure at a later time. This option installs all of the files for the components, but does not configure them. After installation, the user has the option of manually launching the configuration assistants to enable the corresponding components.

If you are installing Enterprise Edition, the components are installed into two Oracle homes. The first Oracle home contains components that use the 8.1.7 database libraries. The other Oracle home contains components that use the 8.0.6 database libraries. The installer will prompt you to enter a path for both Oracle homes.

Postinstallation

During the final phase of the installation process, the user is provided with the following information:

- Running environment scripts
- Component-specific tasks
- Starting and stopping components
- Component Web sites to verify installation
- Component port numbers
- List of additional documentation, such as component-specific administration and configuration guides.

Setting Environment Variables

The following environment variables must be set before starting the installer.

> **Note:** Be sure your PATH, LD_LIBRARY_PATH, and CLASSPATH does not exceed 1,024 bytes as that might generate errors such as "Word too long" during installation.

ORACLE_HOME

Oracle home is the root directory in which Oracle software is installed.

Oracle9*i* Application Server cannot share the same Oracle home with other Oracle products. If you have installed other Oracle products, then Oracle9*i* Application Server must be installed in a different Oracle home. If previously-set Oracle homes exist on the machine where you are installing Oracle9*i* Application Server on, then refer to "Preventing Conflicts Between ORACLE_HOMEs" below.

> **Note:** Be sure not to install Oracle9*i* Application Server in an Oracle home containing other Oracle products, including the database. Such an installation could overwrite shared components, causing the products to malfunction. For migration or upgrade issues, refer to the *Oracle9i* Application Server *Migration Guide*

Preventing Conflicts Between ORACLE_HOMEs

To prevent a conflict between the software in an existing Oracle home and Oracle9*i* Application Server, you must remove all references to the existing Oracle home. The following steps describe removing these references.

1. Unset your existing Oracle home variable by using the following command.

C shell	Bourne/Korn shell
`prompt> unsetenv ORACLE_HOME`	`prompt> export ORACLE_HOME=`

2. Edit your PATH, CLASSPATH, and LD_LIBRARY_PATH environment variables so they do not use the existing Oracle home value.

Setting ORACLE_HOME

To set ORACLE_HOME environment variable, run the following command.

C shell	Bourne/Korn shell
prompt> setenv ORACLE_HOME *full_path*	prompt> export ORACLE_HOME=*full path*

ORACLE_TERM

ORACLE_TERM specifies the terminal definition resource file to be used with the installer. If ORACLE_TERM is not set, then the installer uses the value of the UNIX environment variable TERM and searches for an equivalent ORACLE_TERM resource file.

C shell	Bourne/Korn shell
prompt> setenv ORACLE_TERM *term_value*	prompt> export ORACLE_TERM=*term_value*

Table 2–3 lists common ORACLE_TERM settings on SUN SPARC Solaris 2.x.

Table 2–3 ORACLE_TERM value

Terminal	ORACLE_TERM value
ANSI terminal for SCO	ansi
AT386 console	386
AT386 xterm	386x
UNIXWARE terminal	386u
Solaris x86 xterm	386s
Data General 200	dgd2
Data General 400	dgd4
IBM High Function terminal and aixterm (monochrome)	hft
IBM High Function terminal and aixterm (color)	hftc
hpterm terminal emulator and HP 700/9x terminal	hpterm
IBM 3151 terminal	3151 (for IBM)
NCD X terminal with vt200 style keyboard	ncd220

Table 2–3 ORACLE_TERM value

Terminal	ORACLE_TERM value
cmdtool/shell using a type 4 keyboard	sun
cmdtool/shell using a type 5 keyboard	sun5
vt100 terminal	vt100
vt200 terminal	vt200
Wyse 50 or 60 terminal	wy50
Wyse 150 terminal	wy150
xterm using a type 4 keyboard	xsun
xterm using a type 5 keyboard	xsun5

DISPLAY

Setting the `DISPLAY` environment variable enables you to run the Oracle Universal Installer remotely from a local work station. On the system where you run the Oracle Universal Installer, set `DISPLAY` to the system name or IP address of your local workstation.

> **Note:** A PC X emulator can be used to run the install if it supports a PsuedoColor color model or PseudoColor visual. Set the PC X emulator to use a PseudoColor visual, and then start the installer. Refer to the X emulator documentation for instructions on how to change the color model or visual settings.

If you get an Xlib error similar to “Failed to connect to server”, “Connection refused by server”, or “Can’t open display” when starting the installer, then run the commands on your local workstations as listed in the table below.

Shell Types	On server where the installer is running	In session on your workstation
C shell	`prompt> setenv DISPLAY` *`hostname`*`:0.0`	`prompt> xhost +server_`*`name`*
Borne or Korn shell	`prompt> export DISPLAY=`*`hostname`*`:0.0`	`prompt> xhost +server_`*`name`*

TMP

During installation, Oracle Universal Installer uses a temporary directory for swap space. This directory must meet the "Hardware Requirements" listed on page 1-2 before installing Oracle9*i* Application Server. The installation may fail if you do not have sufficient space. The installer checks for the TMP environment variable to locate the temporary directory. If this environment variable does not exist, then the installer uses the /tmp directory. The following are instructions for setting the TMP environment variable.

C shell	Bourne/Korn shell
prompt> setenv TMP *full_path*	prompt> export TMP=*full_path*

TNS_ADMIN

TNS_ADMIN points to the directory where Net8 configuration files are stored.

If TNS_ADMIN is set on your system, you will have conflicts between that directory and the directory where the Oracle9*i* Application Server Net8 configuration files are created. You will also have conflicts if the configuration files are in a common directory outside of the Oracle home for your other Oracle product. For example, your system may use /var/opt/oracle/tnsnames.ora for database aliases.

To prevent conflicts between the Net8 configuration files for different Oracle products, copy the configuration files from either TNS_ADMIN or the common directory to *ORACLE_HOME*/network/admin for the other product and unset TNS_ADMIN using the following command.

C shell	Bourne/Korn shell
prompt> unsetenv TNS_ADMIN	prompt> export TNS_ADMIN=

Creating UNIX Accounts and Groups

The following UNIX account and groups are required for the installation process.

UNIX Group Name for the Oracle Universal Installer Inventory

Use the `admintool` or `groupadd` utility to create a group named `oinstall`. The `oinstall` group will own Oracle Universal Installer's `oraInventory` directory. The `oracle` user account that runs the installation must have the `oinstall` group as its primary group.

For more information on these utilities, refer to your operating system documentation.

UNIX Account to Own Oracle Software

The `oracle` account is the UNIX account that owns Oracle software for your system. You must run Oracle Universal Installer from this account.

Create an `oracle` account with the properties listed in Table 2–4.

Table 2–4 Oracle Account Properties

Variable	Property
Login Name	Choose any name to access the account. This document refers to the name as the `oracle` account.
Group Identifier	The `oinstall` group.
Home Directory	Choose a home directory consistent with other user home directories. The home directory of the `oracle` account does not have to be the same as the `ORACLE_HOME` directory.
Login Shell	The default shell can be either the C, Bourne, or Korn shell.

Note: Use the `oracle` account only for installing and maintaining Oracle software. Never use it for purposes unrelated to the Oracle Universal Installer. Do not use `root` as the `oracle` account.

UNIX Group Names for Privileged Groups

Two groups, the database operator group and the database administrator group, are required for installation. Oracle documentation refers to these groups as OSOPER and OSDBA, respectively. Databases use these groups for operating system authentication. This is necessary in situations where the database is shutdown and database authentication is unavailable.

The privileges of these groups are given to either a single UNIX group or two corresponding UNIX groups. There are two ways to choose which group(s) get the privileges:

- If the `oracle` account is a member of the `dba` group before starting the installer, then `dba` is given the privileges of both OSOPER and OSDBA.
- If the `oracle` account is not a member of the `dba` group, then the installer will prompt you for the group name(s) that get these privileges.

The following table lists the privileges for the OSOPER and OSDBA groups.

Group	Privileges
OSOPER	Permits the user to perform STARTUP, SHUTDOWN, ALTER DATABASE OPEN/MOUNT, ALTER DATABASE BACKUP, ARCHIVE LOG, and RECOVER, and includes the RESTRICTED SESSION privilege.
OSDBA	Contains all system privileges with ADMIN OPTION, and the OSOPER role; permits CREATE DATABASE and time-based recover.

Migration

If you are migrating from a previous version of Oracle9*i* Application Server, including version 1.0.2.1, review the *Oracle9i Application Server Migration Guide*.

Port Allocation

Oracle9*i* Application Server installs another database that listens on port 1521. This is so only if you install Enterprise Edition and configure Oracle9*i*AS Database Cache. To avoid port conflicts, change the port for the origin database listener to be, for example, 1526.

Oracle HTTP Server does not have a set port number that it listens on. It will automatically attempt to listen on 7777, but if that port number is in use, then it will search unoccupied port numbers such as 7778, 7779 (non SSL mode) to listen on. Similarly, if port 80 is in use for Oracle HTTP Server (SSL-enabled), then it will search unoccupied port numbers such as 7777 and greater, and if 443 is occupied, it will search for ports 4443 and greater.

A file named `setupinfo.txt` is automatically generated in *`ORACLE_HOME`*`/Apache/Apache`. This file is generated at install time, and is not updated thereafter. If the user restarts Oracle HTTP Server, the information in `setupinfo.txt` becomes inaccurate.

`setupinfo.txt` displays the port number information in the following format:

```
The HTTP Server can be accessed using the following URLs:
Non SSL Mode (executed at install time):
http://machine_name:7778
SSL mode: (executed at install time)
http://machine_name:80
https://machine_name:443
```

Completing Preinstallation for Specific Installation Options

After setting the environment variables and creating UNIX accounts and groups, complete version-specific pre-installation tasks for the Oracle9*i* Application Server.

The following list directs you to the installation option that you have license to:

- Minimal Edition on page 2-20
- Standard Edition on page 2-21
- Enterprise Edition on page 2-24

Minimal Edition

Minimal Edition does not require any preinstallation tasks.

Origin Database Connectivity

Oracle9*i* Application Server requires an active database connection. The installer uses this connection to add database objects to the origin database. The origin database is the original and primary storage for your data and is typically located on a database server tier.

You have completed the preinstallation tasks for the Oracle9*i* Application Server. Proceed to "About Oracle Universal Installer" on page 2-33 to start the installer.

Standard Edition

Perform preinstallation tasks for the following Standard Edition component:

- Oracle Internet File System

Oracle Internet File System

Perform the following tasks on the origin database to set database parameters for Oracle Internet File System:

Installation of Oracle Internet File System requires reconfiguration of specific database parameters on the origin database.

1. Before changing any parameters, shut down the network listener, interMedia Text servers, and the database.

   See Also: *Oracle8i Installation Guide* in the Oracle Database Documentation Library

   Set the following Oracle initialization parameters to the values specified. These parameters are contained in the `init`*`SID`*`.ora` file in the *`ORACLE_HOME`*`/admin/`*`global_database_name`*`/pfile` directory.

   Note: This configuration file may be located in a different directory depending on how the database was installed.

   a. Set the value for `open_cursors` to at least 255.
   b. Set the value for `shared_pool_size` at least 50 MB.
   c. Set the value for `processes` to at least 200.

d. Make sure there is at least one online non-system rollback segment.

To verify that there is at least one online non-system rollback segment, connect to Oracle as the SYS user with SQL*Plus and execute the following SQL statement:

```
SQL> SELECT segment_name, tablespace_name, status
     FROM dba_rollback_segs;
```

This will result in output that looks like the following table.

Table 2–5 dba_rollback_segs Output

SEGMENT_NAME	TABLESPACE_NAME	STATUS
SYSTEM	SYSTEM	ONLINE
PUBLIC_RS	SYSTEM	ONLINE
USERS_RS	USERS	ONLINE

In this example, USERS_RS is an online non-system rollback segment. To ensure that the rollback segment is always online after a database startup, include the following line in the `init`*`SID`*`.ora` file:

```
rollback_segments = (rbs_name1, .... , rbs_namex)
```

See Also: *Oracle8i Administration's Guide* in the Oracle Database Documentation Library

2. Configure the Solaris environment to accommodate the database. To do this, edit the `/etc/system` file and modify the following variables:

- Set SEMMSL to 10 plus the largest `init.ora` parameter, PROCESSES of any Oracle database on the machine.
- Set SEMMNS to the sum of the PROCESSES parameter for each Oracle database, adding the largest one twice, then add an additional 10 for each database.

Note: After modifying the `/etc/system` file, you must restart your Solaris system, to reflect the reconfigure information.

For more information, refer to *Oracle8i Installation Guide*.

3. Restart the network listener and database.
4. Execute the following SQL statement:

```
SQL> SELECT name, value FROM v$parameter WHERE name = 'open_cursors';
```

You should see the `open_cursors` value you entered in the `init`*`SID`*`.ora` file in step 2.

> **See Also:** *Oracle8i Administration's Guide* in the Oracle Database Documentation Library

Origin Database Connectivity

Oracle9*i* Application Server requires an active database connection. The installer uses this connection to add database objects to the origin database. The origin database is the original and primary storage for your data and is typically located on a database server tier.

You have completed the preinstallation tasks for the Oracle9*i* Application Server. Proceed to "About Oracle Universal Installer" on page 2-33 to start the installer.

Enterprise Edition

Perform preinstallation tasks for the following Enterprise Edition components:

- Oracle9iAS Web Cache
- Oracle9iAS Database Cache
- Oracle Internet File System

Oracle9*i*AS Web Cache

For TCP/IP performance tuning tips for the computer running Oracle9*i*AS Web Cache, refer to *Oracle HTTP Server powered by Apache Performance Guide* available on your product CD.

Oracle9*i*AS Database Cache

Perform the following preinstallation tasks for Oracle9*i*AS Database Cache on the origin database machine:

- Synchronize the Origin Database Name with its SID
- Allow Remote Access to the Origin Database
- Configure the Listener for External Procedures

Synchronize the Origin Database Name with its SID

To use Oracle9*i*AS Database Cache, the name of your origin database and its System Identifier (SID) must be the same. You can see both the name and SID by executing the following commands in SQL*Plus when logged on as the SYS user:

```
SQL> select value from v$parameter where name = 'db_name';
SQL> select instance_name from v$instance;
```

If these values are different, then you must perform the following steps on the origin database machine to change the SID:

1. Shut down the origin database and listener.

   See Also: *Oracle8i Installation Guide* and *Oracle8i Administration's Guide* in the Oracle Database Documentation Library for information on shutting down the origin database and listener.

2. Change the value of the ORACLE_SID environment variable to the new value. This new value must match the origin database name.

3. Rename the init*SID*.ora and orapw*SID* files to use the new SID.
4. Change the listener.ora and tnsnames.ora files to use the new SID.
5. Restart the network listener and database.

Allow Remote Access to the Origin Database

To allow remote access by Oracle9*i*AS Database Cache to the origin database, perform the following steps:

1. Edit the initialization file (init*SID*.ora) of the origin database. If the file contains the REMOTE_LOGIN_PASSWORDFILE parameter, then make sure that the value equals SHARED or EXCLUSIVE. Oracle9*i*AS Database Cache can use either value. If the parameter is already set to either SHARED or EXCLUSIVE, then you do not need to change the value.

   - **EXCLUSIVE**: The password file can be used by only one database and the password file can contain user names other than SYS and INTERNAL.
   - **SHARED**: The password file can be used by more than one database. However, the only user names recognized by the password file are SYS and INTERNAL.

   If the file does not contain the entry, then add it to the file, specifying either SHARED or EXCLUSIVE as the value. For example, to specify EXCLUSIVE, add the following entry to the file:

   ```
   REMOTE_LOGIN_PASSWORDFILE=EXCLUSIVE
   ```

   The initSID.ora file is in the *ORACLE_HOME*/database directory for of the origin database.

   Check if a password file exists for the database. The file is named pwd*SID*.ora, where SID is the system identifier of the origin database.

2. If you change the parameter, stop and restart the origin database.
3. If the file does not exist, create the password file using the orapwd utility with the following commands:

   ```
   prompt> orapwd file=orapwSID password=syspw entries=maxRemUsers
   ```

   There are no spaces around the equal sign (=). The parameters have the following meanings:

   - **FILE:** The full path name of the password file. The contents of this file are encrypted, and the file is not user-readable. This parameter is mandatory.

The types of file names allowed for the password file are operating system specific. Some platforms require the password file to be a specific format and located in a specific directory. Other platforms allow the use of environment variables to specify the name and location of the password file. See your operating system-specific Oracle documentation for the names and locations allowed on your platform.

- **PASSWORD:** The password of the user SYS for the origin database. This parameter sets the password for SYSOPER and SYSDBA. If you issue the ALTER USER statement to change the password after connecting to the origin database, both the password stored in the data dictionary and the password stored in the password file are updated.
- **ENTRIES:** The maximum number of users allowed for remote connections. This value must be greater than the number of Oracle9*i*AS Database Cache nodes that will connect to the origin database.

Configure the Listener for External Procedures

You must configure the listener for the origin database so that it listens for external procedure calls. Perform the following test to check for existing external procedure listener:

To test if you have an external procedure listener, you need to do a `tnsping` on `EXTPROC_CONNECTION_DATA` from the origin database. The command is:

```
prompt> tnsping EXTPROC_CONNECTION_DATA
```

a. If you see the following message, then there is an existing external procedure listener on the origin database. You can skip to Step 7.

```
TNS Ping Utility for Solaris: Version 8.1.7.0.0. - Production on
13-APR-2001 09:09:19
(c) Copyright 1997 Oracle Corporation. All rights reserved.
Attempting to contact (ADDRESS= (PROTOCOL=IPC) (KEY=EXTPROC))
OK (102 msec)
```

b. If you see the following message, then an external procedure listener does not exist on the origin database.

```
TNS Ping Utility for Solaris: Version 8.1.7.0.0. - Production on
13-APR-2001 09:09:19
(c) Copyright 1997 Oracle Corporation. All rights reserved.

TNS-03505: Failed to resolve name
```

Perform the following steps to configure an external procedure listener:

1. Edit the `tnsnames.ora` file for the origin database by adding an entry that enables you to connect to the listener process (and subsequently, the `extproc` process). For example, add the following entry to the `tnsnames.ora` file:

```
EXTPROC_CONNECTION_DATA.US.ORACLE.COM=
   (DESCRIPTION=
      (ADDRESS_LIST=
         (ADDRESS= (PROTOCOL=IPC) (KEY=EXTPROC0))
      )
      (CONNECT_DATA=
         (SID=PLSExtProc)
         (PRESENTATION= RO)
      )
   )
```

Verify the following:

- The service name is "EXTPROC_CONNECTION_DATA". (Note that the domain name can be set to any value appropriate for your network.)
- The ADDRESS_LIST contains an ADDRESS entry setting "(PROTOCOL = IPC)".

Make a note of the KEY value (in this example, it is "EXTPROC0"). Also make a note of the SID value (in his example, it is "PLSExtProc"). These values must match the KEY and SID_NAME value, respectively, in the corresponding entry in the listener.ora file.

2. Edit the listener.ora file for the origin database and add the following entries for the external procedure listener:

```
LISTENER_01=
   (DESCRIPTION_LIST=
      (DESCRIPTION=
         (ADDRESS_LIST=
            (ADDRESS= (PROTOCOL= TCP) (HOST = my_hostname) (PORT = 1521))
         )
         (ADDRESS_LIST=
            (ADDRESS= (PROTOCOL= IPC)  (KEY=EXTPROC0))
         )
      )
   )
```

Verify the following:

- The ADDRESS_LIST contains an ADDRESS entry setting "(PROTOCOL = IPC)".
- The ADDRESS_LIST containing "(PROTOCOL = IPC) "has a key value which is the same KEY value from the tnsnames.ora file. In this example, the key value is "EXTPROC0".

Make a note of the name of the listener that will be used for external procedures. In this example, the listener name is "LISTENER_01".

3. Edit the `listener.ora` file and verify that there is a `SID` for external procedure listener in the listener's `SID` list.

```
SID_LIST_LISTENER=
   (SID_LIST=
      (SID_DESC=
         (SID_NAME=PLSExtProc)
         (ORACLE_HOME=/dsk1/oracle/rdbms/OraHome)
         (PROGRAM=extproc)
      )
      ...
   (SID_DESC =
      (GLOBAL_DBNAME = global_DBname)
      (ORACLE_HOME = /dsk1/oracle/rdbms/OraHome)
      (SID_NAME = ias)
    )
   )
```

   Verify the following:

   - The `SID` list contains an entry with a `SID_NAME` that is the same as the `SID` noted in Step 1. In this example, the `SID` is "`PLSExtProc`".
   - The `ORACLE_HOME` value for this entry is set to the `ORACLE_HOME` for the origin database.
   - The `PROGRAM` value for this entry is "`extproc`".

4. Restart the listener if you have made any changes to the configuration files. If the listener name you noted in step 2 is anything other than "LISTENER", then you will need to start and stop that specific listener. In the following example, the listener name is "LISTENER_01".

```
prompt> lsnrctl stop listener_01
prompt> lsnrctl start listener_01
```

5. The `extproc` process spawned by the listener inherits the operating system privileges of the listener. So Oracle Corporation strongly recommends that you restrict the privileges for the separate listener process. The process should not have permission to read or write to database files. The owner of this separate process should not be the `oracle` user (which is the default owner of the server executable and database files). Start the listener from a user account that does not have permission to read or write to database files or the Oracle server address space.

6. If not already installed, place the `extproc` executable in the `bin` directory under the `ORACLE_HOME` of the origin database.
7. Minimum configuration for `sqlnet.ora`:

```
NAMES.DEFAULT_DOMAIN = your.Domain.Name
SQLNET.AUTHENTICATION_SERVICES= (NTS)
NAMES.DIRECTORY_PATH= (TNSNAMES, ONAMES, HOSTNAME)
```

Oracle Internet File System

Perform the following tasks on the origin database machine to set database parameters for Oracle Internet File System:

Installation of Oracle Internet File System requires reconfiguration of specific database parameters on the origin database.

1. Before changing any parameters, shut down the network listener, interMedia Text servers, and the database.

   See Also: *Oracle8i Installation Guide* in the Oracle Database Documentation Library

   Set the following Oracle initialization parameters to the values specified. These parameters are contained in the `init`*`SID`*`.ora` file in the *`ORACLE_HOME`*`/admin/`*`global_database_name`*`/pfile` directory.

   Note: This configuration file may be located in a different directory depending on how the database was installed.

a. Set the value for `open_cursors` to at least 255.

b. Set the value for `shared_pool_size` at least 50 MB.

c. Set the value for `processes` to at least 200.

d. Make sure there is at least one online non-system rollback segment.

To verify that there is at least one online non-system rollback segment, connect to Oracle as the SYS user with SQL*Plus and execute the following SQL statement:

```
SQL> SELECT segment_name, tablespace_name, status
     FROM dba_rollback_segs;
```

This will result in output that looks like the following table.

Table 2–6 dba_rollback_segs Output

SEGMENT_NAME	TABLESPACE_NAME	STATUS
SYSTEM	SYSTEM	ONLINE
PUBLIC_RS	SYSTEM	ONLINE
USERS_RS	USERS	ONLINE

In this example, USERS_RS is an online non-system rollback segment. To ensure that the rollback segment is always online after a database startup, include the following line in the `init`*`SID`*`.ora` file:

```
rollback_segments = (rbs_name1, .... , rbs_namex)
```

See Also: *Oracle8i Administration's Guide* in the Oracle Database Documentation Library.

2. Configure the Solaris environment to accommodate the database. To do this, edit the `/etc/system` file and modify the following variables:

   - Set `SEMMSL` to 10 plus the largest `init.ora` parameter, `PROCESSES` of any Oracle database on the machine.
   - Set `SEMMNS` to the sum of the `PROCESSES` parameter for each Oracle database, adding the largest one twice, then add an additional 10 for each database.

   Note: After modifying the `/etc/system` file, you must restart your Solaris system, to reflect the reconfigured information.

   For more information, refer to *Oracle8i Installation Guide*.

3. Restart the network listener and database.
4. Execute the following SQL statement:

   ```
   SQL> SELECT name, value FROM v$parameter WHERE name = 'open_cursors';
   ```

   You should see the `open_cursors` value you entered in the `init`*`SID`*`.ora` file in step 2.

   See Also: *Oracle8i Administration's Guide* in the Oracle Database Documentation Library

Origin Database Connectivity

Oracle9*i* Application Server requires an active database connection. The installer uses this connection to add database objects to the origin database. The origin database is the original and primary storage for your data and is typically located on a database server tier.

You have completed the preinstallation tasks for the Oracle9*i* Application Server. Proceed to "About Oracle Universal Installer" on page 2-33 to start the installer.

About Oracle Universal Installer

Oracle9*i* Application Server uses Oracle Universal Installer to configure environment variables and to install components. The installer guides you through each step of the installation process, so you can choose configuration options for a customized product.

The installer includes features that perform the following tasks:

- Explore and provide installation options for products
- Detect pre-set environment variables and configuration settings
- Set environment variables and configuration during installation
- Deinstall products

oraInventory Directory

The installer creates the `oraInventory` directory the first time it is run on your machine. The `oraInventory` directory keeps an inventory of products that the installer installs on your machine as well as other installation information. If you have previously installed Oracle products, then you may already have an `oraInventory` directory.

- When a UNIX group name is specified, it grants that group the permission to write to the `oraInventory` directory. If another group attempts to run the installer, then they must have permission to write to the `oraInventory` directory. If they do not have permission, then the installation will fail.
- Be sure the user running the installer has permission to write to the `oraInventory` directory and all its files so that you are allowed to run the installer.
- The location of `oraInventory` is defined in `/var/opt/oracle/oraInst.loc`.
- The latest log file is `oraInventory_location/logs/installActions.log`. Log file names of previous installation sessions take the form `installActions`*`datetime`*`.log`.
- Do not delete or manually alter the `oraInventory` directory or its contents. Doing so can prevent the installer from locating products that you have installed on your system.

Starting Oracle Universal Installer

Follow these steps to launch Oracle Universal Installer, which installs Oracle9*i* Application Server:

1. Stop all Oracle processes and services (for example, the Oracle database).
2. Mount the installation CD-ROM.

   The Oracle Product Installation CD-ROM is in RockRidge format. If you are using the Solaris Volume Management software (installed by default in Sun SPARC Solaris), then the CD-ROM is mounted automatically to `cdrom/9ias_1022_disk1` when you insert it in the disk drive. To begin installation, insert the CD labelled Disk 1.

   If you are not using the Solaris Volume Management software, then you must mount the CD-ROM manually. To manually mount or unmount the CD-ROM, you must have root privileges. Be sure to unmount the CD-ROM before removing it from the drive.

   To manually mount Disk 1 CD-ROM, perform the following tasks:

   a. Insert the Oracle9*i* Application Server CD-ROM into the CD-ROM drive.
   b. Log in as the root user.
   c. Create the CD-ROM mount point directory.

      ```
      prompt> mkdir mount_point
      ```

   d. Mount the CD-ROM drive on the mount point directory and exit the root account:

      ```
      prompt> mount options device_name mount_point
      prompt> exit
      ```

   The following example mounts the CD-ROM manually on `/cdrom`, without using the Solaris Volume Management software. Execute the following commands as root user.

   ```
   prompt> mkdir /cdrom
   prompt> mount -r -F hsfs device_name /cdrom
   prompt> exit
   ```

3. Run Oracle Universal Installer from the CD-ROM.

> **Note:** Be sure you are **not** logged in as the root user when you start the Oracle Universal Installer. If you are, then only the root user will have permissions to manage Oracle9*i* Application Server.

   a. Log in as the `oracle` user.

   b. Start the installer by entering:

```
prompt> mount_point/9ias_1022_disk1/runInstaller
```

> **Note:** Do not use *`mount_point`* as your working directory when you start the installer. If you do, then you will not be able to eject Disk 1 during the installation process to insert Disk 2.

This launches Oracle Universal Installer through which you can install Oracle9*i* Application Server.

The list below navigates you to installation instructions for the Oracle9*i* Application Server edition you are licensed to:

- For instructions for Minimal Edition installation, refer to Chapter 3, "Minimal Edition".
- For instructions for Standard Edition installation, refer to Chapter 4, "Standard Edition".
- For instructions for Enterprise Edition installation, refer to Chapter 5, "Enterprise Edition".
- For instructions for Non-interactive installation, refer to Chapter 6, "Non-Interactive Installation".

3

Minimal Edition

This chapter guides you through the installation steps for the Minimal Edition of Oracle9*i* Application Server. The following topics provide detailed installation steps, and basic postinstallation tasks:

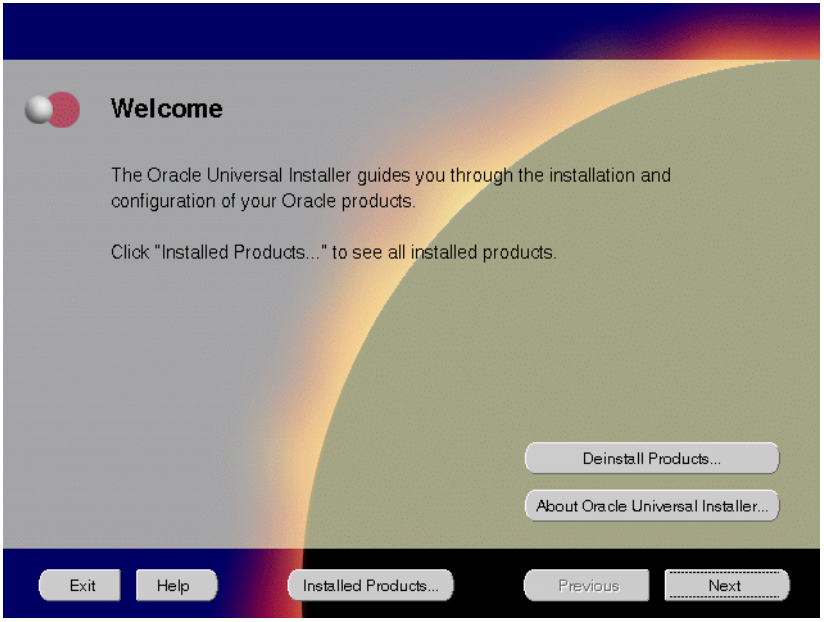
- Installation
- Postinstallation

Installation

The following instructions guide you through the Minimal Edition of Oracle9*i* Application Server.

1. Review the Oracle Universal Installer Welcome screen and click **Next**.

Figure 3–1 Welcome Screen



The Welcome screen provides information about the Oracle Universal Installer.

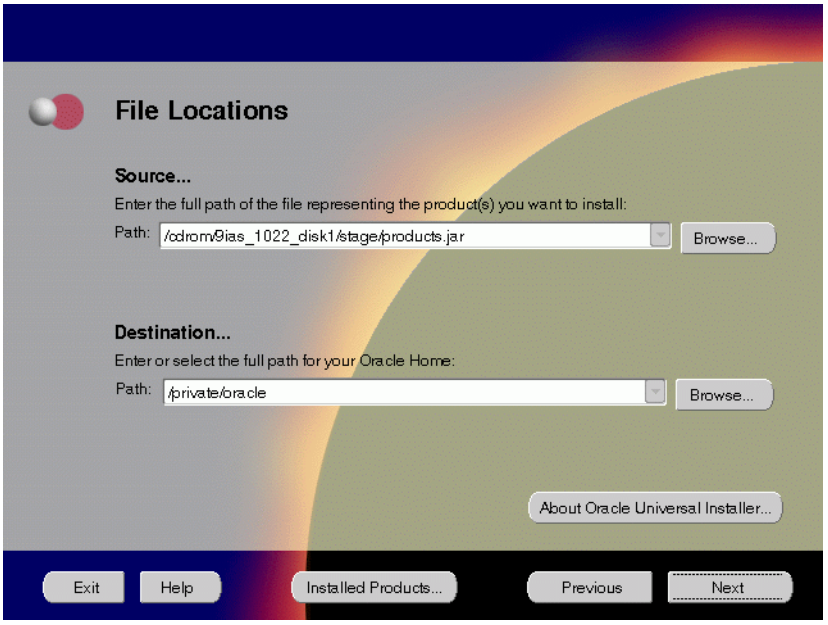
The following function buttons appear on the installation screens.

- **Deinstall Products**: Deinstall individual components or the entire product. This button appears only on the Welcome screen.
- **About Oracle Universal Installer**: View the version number of the installer in use.
- **Exit**: Quit the installation process and exit the installer.
- **Help**: Access detailed information about the functionality of each screen.
- **Installed Products**: View currently installed products or to deinstall the entire product or components.

- **Previous**: Return to the previous screen.
- **Next**: Move to the next screen.

2. Verify the source and destination paths and click **Next**. If you have not previously installed Oracle products on your machine, the "OraInventory Location screen" appears after you click **Next**. Enter the complete location path for `oraInventory` directory and click **OK**.

Figure 3–2 File Locations Screen



The File Locations screen allows you to enter the full path for the source and destination locations of Oracle9*i* Application Server.

- **Source**: This is the full path to the `products.jar` file from which the product will be installed. The installer detects and uses the default values of the `products.jar` file of the installation program. Do *not* change the path.
- **Destination**: This is the full path to the Oracle home where the product will be installed. The installer defaults to the Oracle home set in the preinstallation chapter.

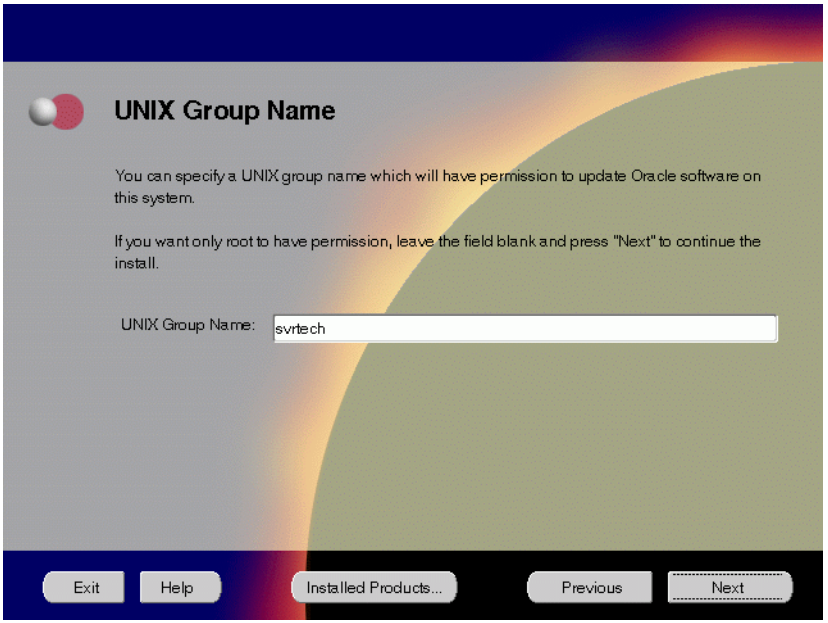
Note: Oracle home path must be a real, absolute path. It cannot contain symbolic links, environment variables, or spaces.

For more information regarding Oracle home, refer to "ORACLE_HOME" on page 2-12.

- **Browse**: Navigate through the file system to find source and destination locations.

3. This screen appears only the first time you run Oracle Universal Installer on your machine. Take note of the default value if it appears. Enter a UNIX group name and click **Next**.

Figure 3–3 UNIX Group Name Screen



The UNIX Group Name screen grants permission for the `oraInventory` directory to the group specified. For more information, refer to "UNIX Group Name for the Oracle Universal Installer Inventory" on page 2-16.

UNIX Group Name:

- Enter a UNIX group name for those who have permission to configure all the functionality of Oracle9*i* Application Server. Verify your group name by entering this command from the UNIX prompt the installer was launched from:

  ```
  prompt> id
  ```

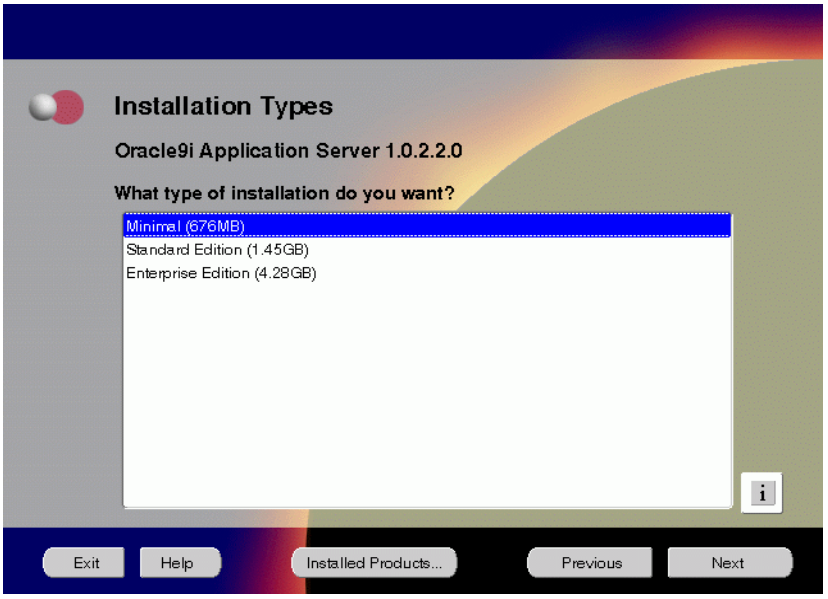
- Run the `orainstRoot.sh` script from your Oracle home to grant permissions to the root user only. You must have root privileges to run this script. The script creates pointers to the components as the installer installs them in the system so that they can be identified later in the installation

procedure. It produces the `/var/opt/oracle/oraInst.loc` file, which provides a pointer to the `oraInventory` directory.

After you have run the script, click **Retry** to continue.

4. Select Minimal Edition and click **Next**.

Figure 3–4 Installation Types Screen



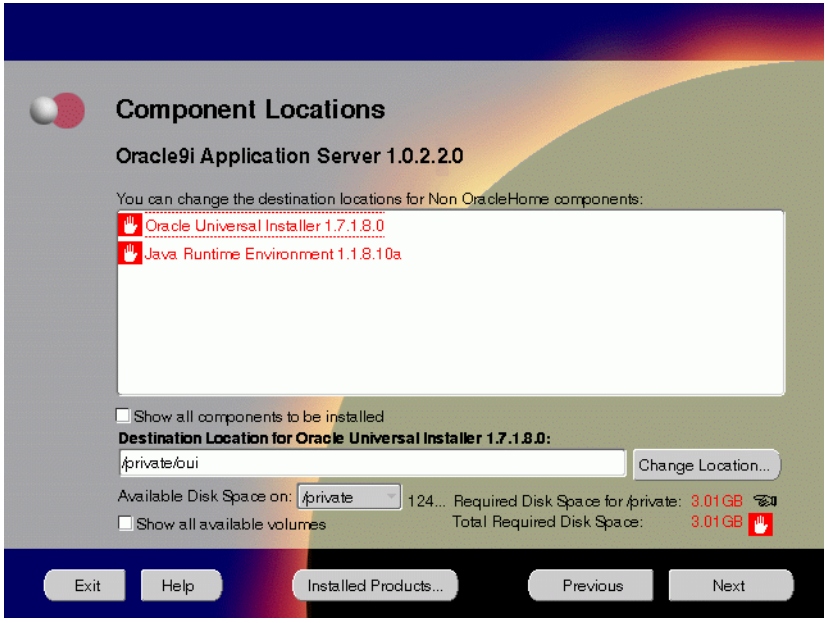
The Installation Types screen allows you to select the Oracle9*i* Application Server installation option that you are licensed to use.

> **See Also:** Table 2–1, "Oracle9i Application Server Components" on page 2-3 for a complete list of components.

- **Minimal Edition**: Installs Oracle9*i*AS Portal, Oracle9*i*AS Wireless, Oracle Enterprise Manager Client, and Oracle HTTP Server.
- **Standard Edition**: Installs Oracle9*i*AS Portal, Oracle9*i*AS Wireless, Oracle Enterprise Java Engine, Oracle Enterprise Manager Client, Oracle HTTP Server, and Oracle Internet File System.
- **Enterprise Edition**: Installs Oracle9*i*AS Database Cache, Oracle9*i*AS Discoverer, Oracle9*i*AS Forms Services, Oracle9*i*AS Portal, Oracle9*i*AS Reports Services, Oracle9*i*AS Web Cache, Oracle9*i*AS Wireless, Oracle Enterprise Java Engine, Oracle Enterprise Manager Client, Oracle HTTP Server, Oracle Internet File System, and Oracle Management Server.

5. This screen appears only if Oracle Universal Installer has detected insufficient disk space in the Oracle home directory. If needed, verify and change the locations of the components displayed on the screen, and click **Next**.

Figure 3–5 Component Locations Screen



The Component Locations screen allows you to select alternative locations for some components.

Note: Insufficient disk space is indicated in red with a hand icon next to it.

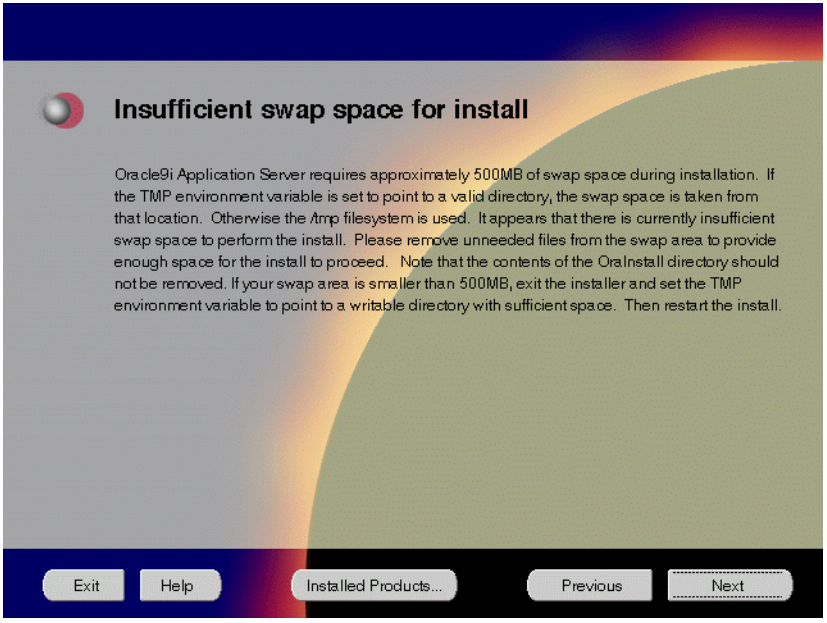
- **Show all components to be installed**: To view the complete list of components chosen for installation. Select check box to display component list.

Click individual components to view and change destination location path. The installer enables you to change the destination location of the components displayed on the screen.

- **Destination Location**: To view the full path of the selected component.
- **Change Location**: To browse for alternate locations for the selected component.
- **Available Disk Space**: To view available disk space in the current directory. The installer also provides information about the total disk space required for the installation of additional components.
- **Required Disk Space for *directory_name***: To view the total disk space required for installation in the selected directory.
- **Total Required Disk Space:** To view the total disk space required for the product to be installed.
- **Show all available volumes**: To browse through file system for available disk space. Select check box to display the file system.

6. This screen appears if the installer detects insufficient TMP space. Remove unneeded files from the swap directory to provide sufficient space for installation and click **Next**. If your swap space is smaller than 500 MB, click **Exit** and correct the problem.

Figure 3–6 Insufficient Swap Space for Install Screen



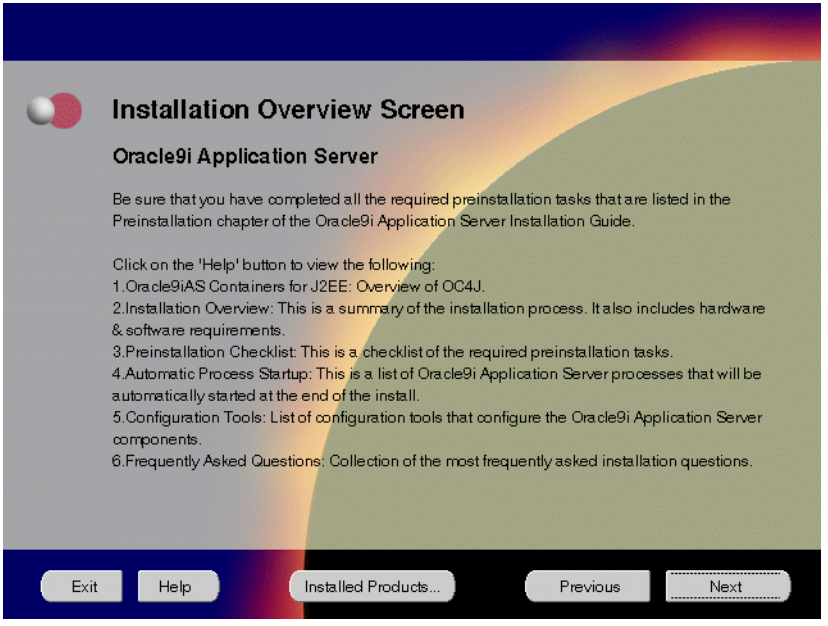
The Insufficient Swap Space for Install screen indicated inadequate space in the swap directory. You have two options:

- If you have more than 500 MB swap space, then remove unneeded files from your swap space to create room for installation and click **Next** to proceed.
- If you have less than 500 MB swap space, then **Exit** the installer and set TMP environment variable to point to a writable directory with sufficient space.

For detailed information on TMP directory, refer "TMP" on page 2-15.

7. Click the **Help** button to verify that all the preinstallation tasks have been performed, and then click **Next**.

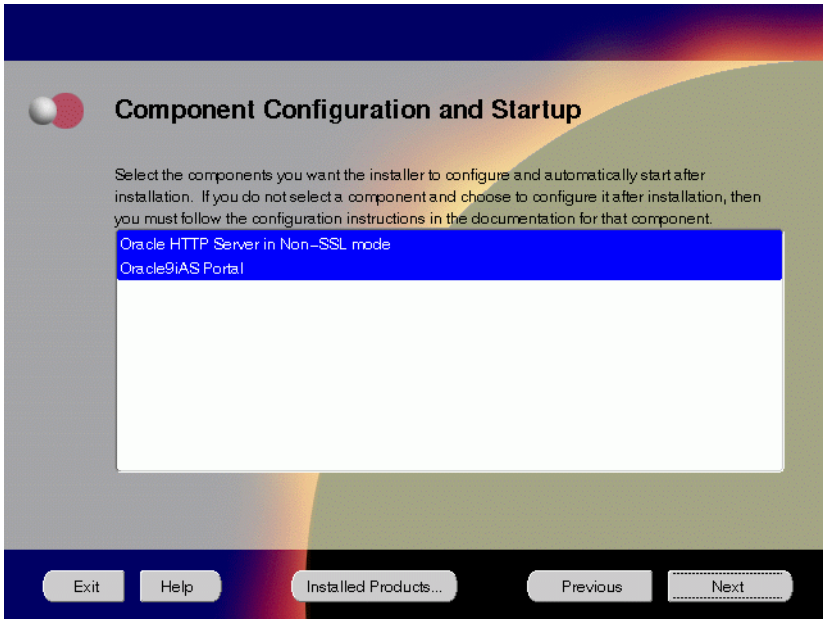
Figure 3–7 Installation Overview Screen



The Installation Overview screen gives you an overview of the installation process. Click on the **Help** button for information on the installation process, preinstallation checklist, automatic process startup, configuration tools, and frequently asked questions.

8. Select the components you wish to configure during the installation process and click **Next**. These components will automatically start up after installation. If you wish to configure the components later, do not select them.

Figure 3–8 Component Configuration and Startup Screen



The Component Configuration and Startup screen allows you to select the components that you want the installer to configure and start after installation. This screen offers two configuration options:

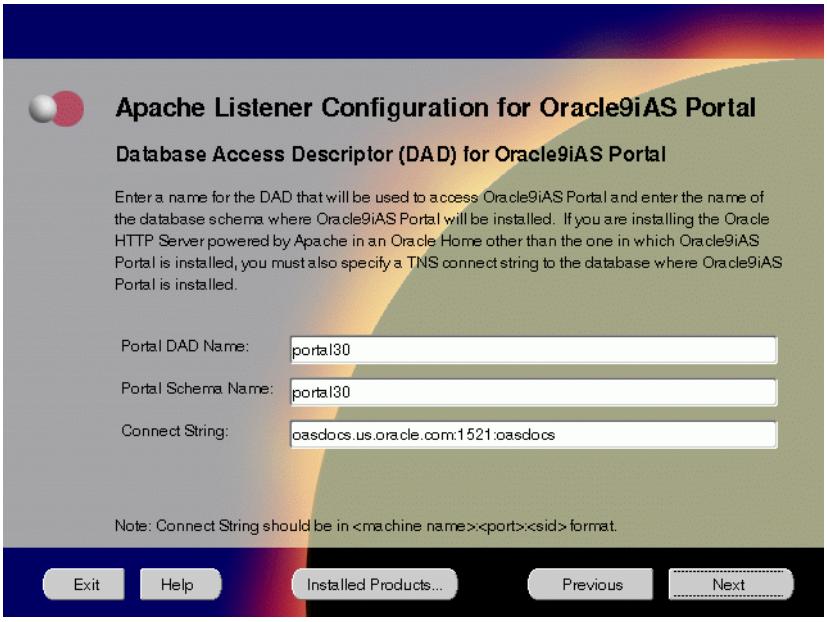
- If you select a component here, then the installer prompts you for any or all configuration information required by that component. After installation, the installer starts that component.
- If you de-select a component here, then the installer installs it, but does not configure or start it. later on, if you decide to use that component, then manually launch the configuration assistant to configure that component.

  See Also: Appendix A, "Configuration Tools"

You can select or de-select multiple components by holding down the Control key while clicking on the component name.

9. This screen will appear only if you selected Oracle9*i*AS Portal in the Component Configuration and Startup screen. Enter or accept the default Portal DAD and Schema names. Also, enter the database connection information. Click **Next**.

Figure 3–9 Apache Listener Configuration for Oracle9iAS Portal (DAD and Schema name) Screen



The Apache Listener Configuration for Oracle9*i*AS Portal screen allows you to enter the name of the Database Access Descriptor (DAD) that will be used to access Oracle9*i*AS Portal, and the name of the database schema where Oracle9*i*AS Portal will be installed. It also enables you to enter the database connection information if Oracle9*i*AS Portal and Oracle HTTP Server are installed in different Oracle homes. The information you enter here is used to create the PL/SQL Gateway settings which you can access upon installation from the following location:
`http://machine_name:port/pls/admin_/gateway.htm`

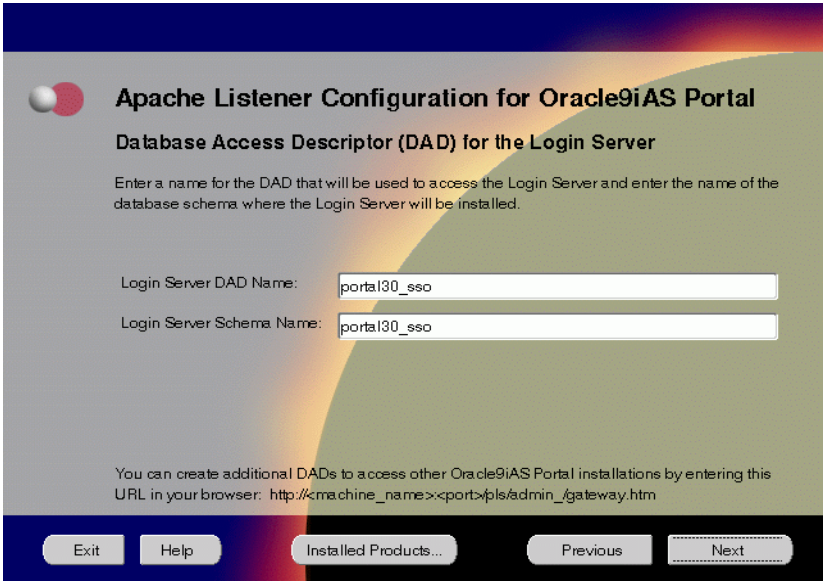
- **Portal DAD Name**: Enter the name of the DAD for each instance you installed in the database. A Database Access Descriptor (DAD) is a set of values that specify how the Apache Listener connects to your Oracle database server to fulfill an HTTP request. Based on this DAD name, the

installation automatically sets other DAD-related and default settings such as the name and location of the document table. The default DAD name is `portal30`.

- **Portal Schema Name**: Enter the name of the database schema that will contain Oracle Portal. A schema is a collection of components and database objects under the control of a given database user. Each Oracle Portal application maps to an Oracle database schema. The default schema name is `portal30`.
- **Connect String**: Enter the origin database connection information in the form `host:port:sid`.

10. This screen will appear only if you selected Oracle9*i*AS Portal in the Component Configuration and Startup screen. Enter or accept the default Login Server DAD and Schema names. Click **Next**.

Figure 3–10 Apache Listener Configuration for Oracle9iAS Portal (Login Server) Screen



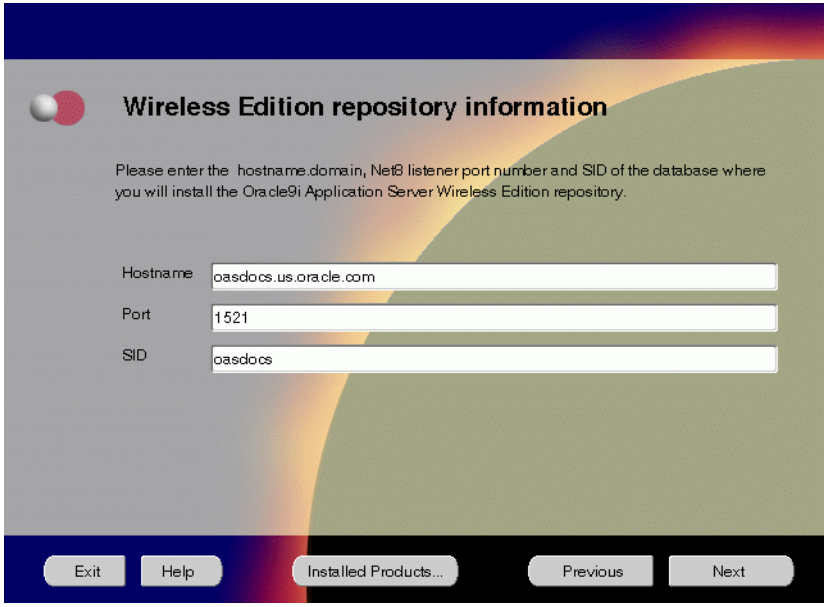
The Apache Listener Configuration for Oracle9*i*AS Portal screen allows you to enter the Login Server DAD and Schema Name, with a `_sso` extension for easy recognition. The Login Server provides an enterprise-wide Single Sign-On (SSO) mechanism that enables an Oracle Portal user to log in securely to Oracle Portal and any partner and external applications using a single user name and password.

- **Login Server DAD Name**: Enter the name of the DAD for each instance you installed in the database.The default DAD name is `portal30_sso`.
- **Login Server Schema Name**: Enter the name of the database schema that will contain Oracle Portal.The default schema name is `portal30_sso`.

11. Enter the hostname, port number, and SID of the origin database where you will install the Oracle9*i*AS Wireless, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then an "Upgrade Installation Detected" screen will appear. Review the content on the screen and click **Next** or **Exit** accordingly. If you click **Next**, then the installation will continue and the following screen will appear.

Note: Do not enter Oracle9*i*AS Database Cache hostname, port number, and SID in this screen.

Figure 3–11 Wireless Edition Repository Information Screen



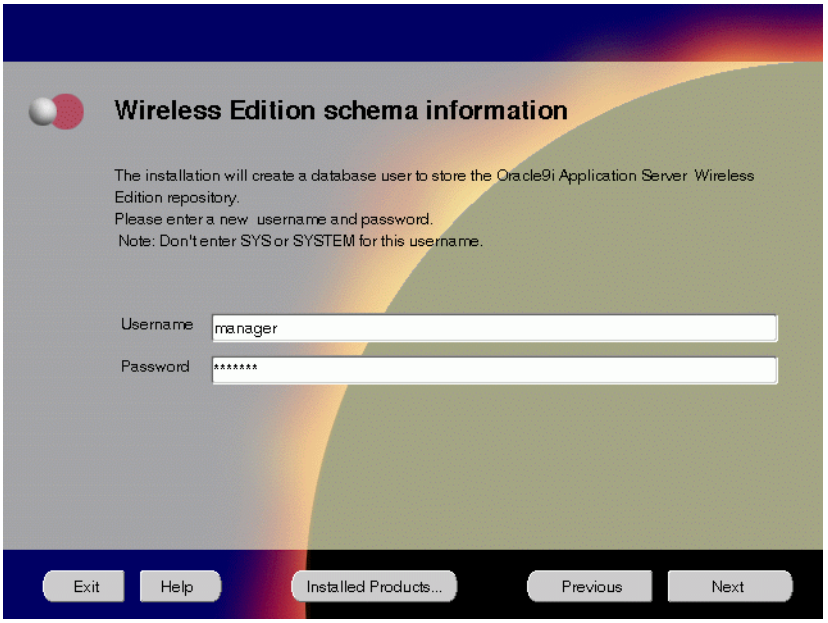
The Wireless Edition Repository Information screen allows you to enter the hostname, Net8 Listener port number, and SID of the database where you will install the Oracle9*i*AS Wireless repository.

- **Hostname**: Enter the hostname.domain of the database where you will install the Oracle9*i*AS Wireless.
- **Port**: Enter the Net8 Listener port number.
- **SID**: Enter the System Identifier (SID) of the database where you will install the Oracle9*i*AS Wireless repository.

12. Enter the new username and password for the database user to store the Oracle9*i*AS Wireless repository, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then the "Oracle9*i*AS Wireless Schema Information Screen" will be slightly different. Enter the existing Oracle9*i*AS Wireless username and password, and click **Next**.

Note: Do not use an existing database user, (that is, SYS, SYSTEM, or any other existing database user) as the username.

Figure 3–12 Wireless Edition Schema Information Screen



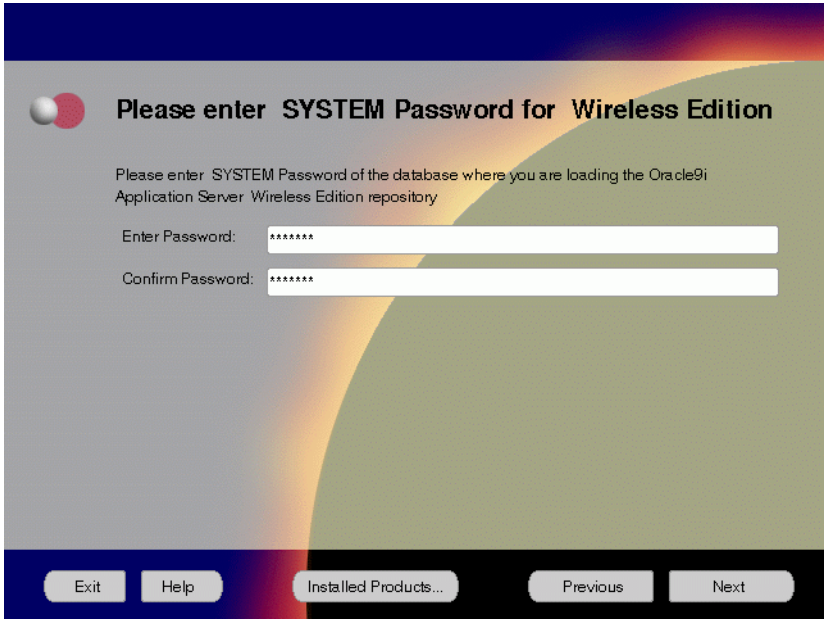
The Wireless Edition Schema Information screen allows you to create a database user to store the Oracle9*i*AS Wireless repository.

- **Username**: Enter a new user name for the database user to store the Oracle9*i*AS Wireless repository.
- **Password**: Enter a password for the database user.

13. Enter and confirm the SYSTEM password of the database, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then a "Wireless Edition Administrator Password Information" screen appears. Enter and confirm the "Administrator" password, and click **Next**.

Note: Do not enter the database schema owner password.

Figure 3–13 System Password for Wireless Edition Screen

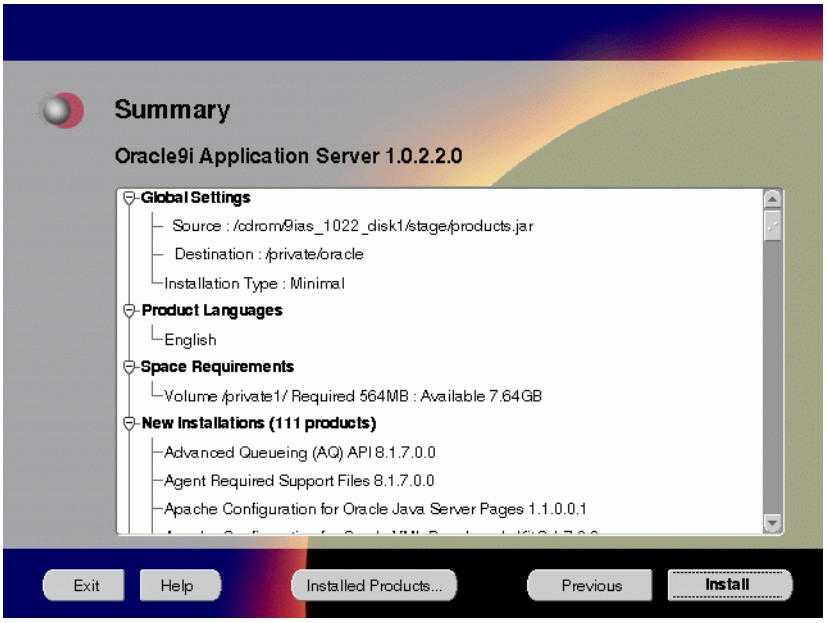


The System Password for Wireless Edition screen allows you to enter and confirm the SYSTEM password of the database where you are loading the Oracle9*i*AS Wireless repository.

- **Enter Password**: Enter the SYSTEM password of the database where you will install the Oracle9*i*AS Wireless.
- **Confirm Password**: Re-enter the SYSTEM password as entered above for verification.

14. Review the summary and click **Install** to begin the installation process.

Figure 3–14 Summary Screen



The Summary screen allows you to review all the settings before the actual installation process. These settings include source, destination, installation type, product language, space requirements, and a list of components.

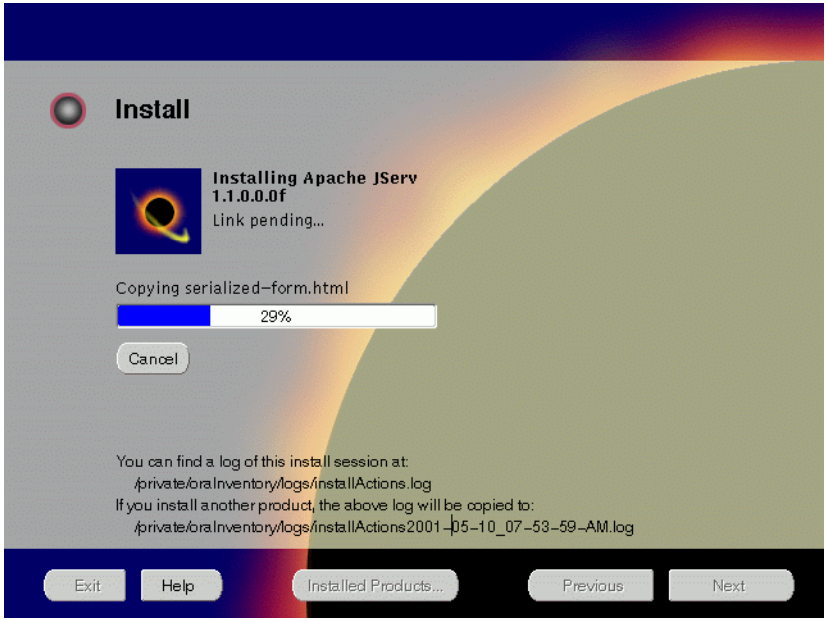
- To make changes to any of these settings, click **Previous** to return to the respective screens.

Note: Insufficient disk space is indicated in red under **Space Requirements**.

When you click **Install**, the installation process begins.

15. Monitor the installation process and after the installer finishes, click **Next**.

Figure 3–15 Install Screen



The Install screen appears while the product is installing. Installation operations include executing actions such as file copy and linking, and executing decision points and calculations. It also displays the full path of the installation log.

- **Cancel**: To discontinue the installation process. You can then choose to stop the installation of an individual component or the entire product.

For more information about installation log, refer to "oraInventory Directory" on page 2-33.

Changing Disks

During installation, the installer prompts you to switch between Disks 1 through 5. Use these steps to change disks and continue the installation process.

Figure 3–16 Changing Disks Dialog

a. Eject and unmount the current disk.

If you are using Solaris Volume Management software and Disk1 was automatically mounted, then this can be done with the following command:

```
prompt> eject cdrom
```

If you are not using Solaris Volume Management software, then you must manually eject and unmount the disk. For further instructions, refer to your operating system documentation

b. Insert the next disk into the CD-ROM drive and mount it.

If you are using the Solaris Volume Management software, then the next disk will be automatically mounted.

If you are not using Solaris Volume Management software, then you must manually mount the disk. For further instructions, refer to "Starting Oracle Universal Installer" on page 2-34.

c. Click the **Browse** button on the changing disks dialog, and navigate to `/cdrom/9ias_1022_diskx`. This directory may be different depending on where the original disk was mounted.

d. Click OK to continue the installation process.

Running `root.sh`

After installation is completed, the installer prompts you to run `root.sh` script. Use these steps to run the `root.sh` script.

a. Log on as the root user.

b. Go to the Oracle home directory.

```
prompt> cd ORACLE_HOME
```

c. Run the `root.sh` script.

```
prompt> ./root.sh
```

Once you see "Finished running generic part of the root.sh script" and "Now product-specific root actions will be performed," exit root user and return to the Install screen.

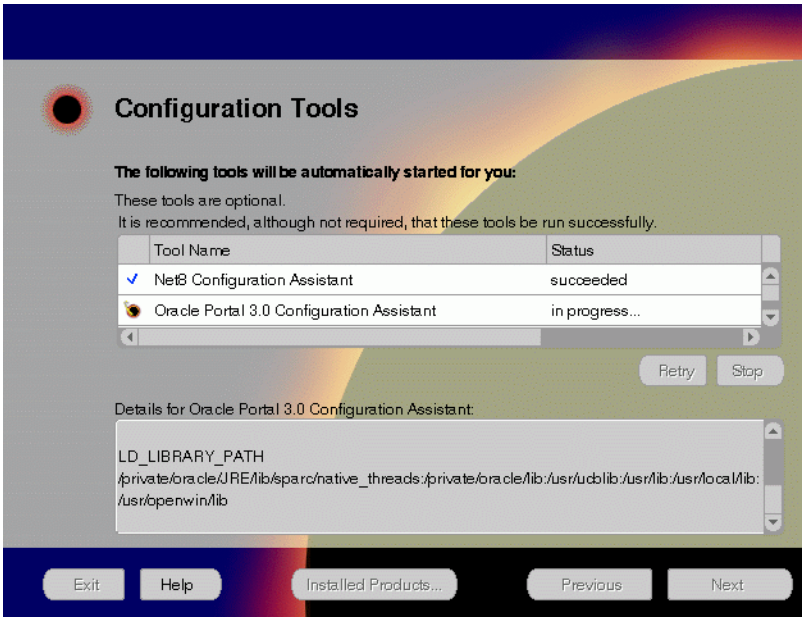
The `root.sh` script detects:

- Settings of `ORACLE_OWNER`, `ORACLE_HOME` and `ORACLE_SID` environment variables.
- Full path of local bin directory. You can accept the default or change to a different local bin directory.

16. Start the origin database if it has been shut down during installation. Verify the list of configuration tools and click **Next**. This screen appears only if you select components to configure and start in the Components Configuration and Startup screen.

Note: The installer has completed copying and linking the necessary files. Be sure to start the database if it had been shut down for the installation process. The configuration tools such as Oracle9*i*AS Portal Configuration Assistant need to connect to an active database for configuration purposes.

Figure 3–17 Configuration Tools Screen



The Configuration Tools screen lists the configuration tools for all installed components.

Scroll down the list to review the configuration status of each tool. The status changes as each component is configured.

The installer performs the following functions in this screen:

- Executes a configuration tool for each component selected previously in the Component Configuration and Startup screen.
- Displays all the configuration settings in the display window below as it executes a configuration tool for each component.
- Enables you to view configuration settings after all configuration tools are executed. Click on each component to review all the changes made.
- Allows you to view data for failed executions in the display window. You can either fix the error and click **Retry** to execute the configuration tool again, or ignore the error and click **Next** to proceed to the next screen.
- **Retry**: To re-execute the configuration script if the configuration of a component fails.
- **Stop**: To quit the configuration process.

Configuration Tools

This installation option launches the following configuration tools:

Net8 Configuration Assistant - This configuration assistant enables you to connect and configure the Oracle client / server network environment.

> **See Also:** *Net8 Administration's Guide* in the Oracle Database Documentation Library for information on running Net8 Configuration Assistant.

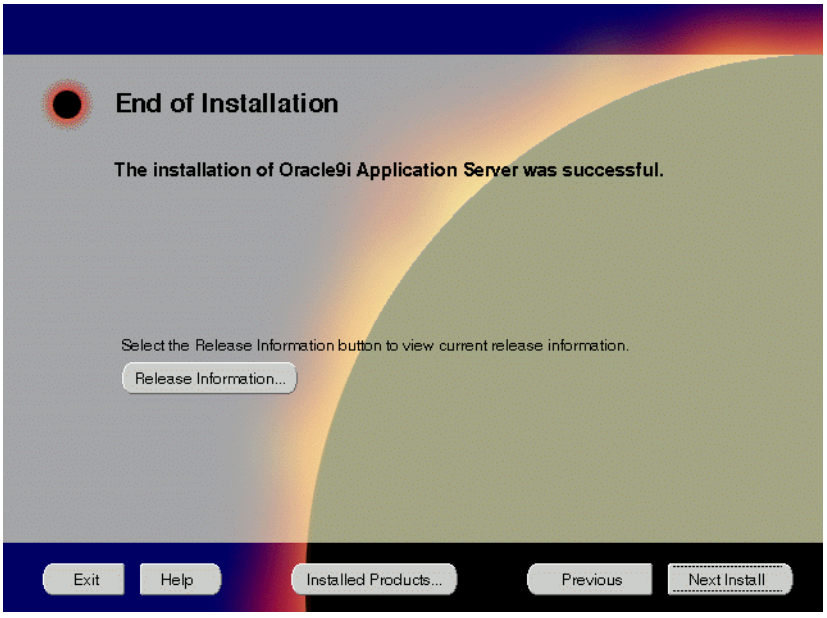
Oracle9*i*AS Portal Configuration Assistant - This configuration assistant loads necessary database objects for Oracle9*i*AS Portal to run.

> **See Also:** "Oracle9iAS Portal Configuration Assistant" on page A-8 for instructions on running Oracle9*i*AS Portal Configuration Assistant.

Starting HTTP Server - This starts Oracle HTTP Server.

17. Ensure that the installation was successful. Click **Exit** to quit the installer.

Figure 3–18 End of Installation Screen



The End of Installation screen appears at the end of the installation process. It notifies you whether the installation was successful or unsuccessful.

- **Release Information**: To view the latest release information.

If the installer detects that specific port numbers such as 7777, are occupied, it will display the alternate port numbers on the end of Installation screen. For Oracle HTTP Server port number information, refer to "Port Allocation" on page 2-18.

You have successfully installed the Minimal Edition of Oracle9*i* Application Server. Proceed to "Postinstallation" on page 3-27 to complete the installation process.

Postinstallation

The following instructions guide you through the basic postinstallation tasks for Oracle9*i* Application Server. Before performing these tasks, install, if needed, Oracle9*i* Application Server Client from the Oracle9*i* Application Server Administrative and Development Client CD included in the Oracle9*i* Application Server CD pack.

> **See Also:** Appendix B, "Installing Oracle9i Application Server Administrative and Development Client CD-ROM"

The postinstallation contains the following sections:

- Starting and Stopping Components
- Component Web Sites
- Component Port Numbers
- Additional Documentation

Starting and Stopping Components

Table 3–1 lists the commands needed to individually start and stop Oracle HTTP Server.

Table 3–1 Starting and Stopping Components

Component	Function	Command
Oracle9*i*AS Wireless Web Integration Server	Start	*ORACLE_HOME*/panama/WebIntegration/Server/bin/server.sh
	Stop	Go to `http://hostname.domainname:5555` and click on shutdown.
Oracle HTTP Server	Start	*ORACLE_HOME*/Apache/Apache/bin/apachectl start
	Stop	*ORACLE_HOME*/Apache/Apache/bin/apachectl stop
Oracle HTTP Server SSL-enabled	Start	*ORACLE_HOME*/Apache/Apache/bin/apachectl startssl (Log in as `root` user)
	Stop	*ORACLE_HOME*/Apache/Apache/bin/apachectl stop (Log in as `root` user)

Component Web Sites

Table 3–2 lists Web sites for Oracle9*i* Application Server components.

Table 3–2 Component Web sites

Component	Web Site
Oracle9*i*AS Portal	`http://`*hostname.domain:listener_port*`/pls/portal30`
Oracle9*i*AS Wireless Web Integration Server	`http://`*hostname.domain*`:5555` (Log on as `Administrator/manage`)
Oracle HTTP Server Oracle HTTP Server (SSL-enabled)	`http://`*hostname.domain*`:`*listener_port* `https://`*hostname.domain*`:`*listener_port*

Component Port Numbers

Table 3–3 lists the default port numbers on which requests are received for each component.

Table 3–3 Port Numbers

Components	Port Number
Oracle9*i*AS Portal	Oracle9*i*AS Portal uses the same port number as Oracle HTTP Server
Oracle9*i*AS Wireless	Oracle9*i*AS Wireless uses the same port as Oracle HTTP Server
Oracle9*i*AS Wireless Web Integration Server	5555
Oracle HTTP Server Oracle HTTP Server (SSL-enabled) Oracle HTTP Server Jserv Servlet Engine	For information on port numbers, refer to "Port Allocation" on page 2-18. 8007

Additional Documentation

For further information on postinstallation and configuration tasks, refer to component-specific documentation. For information on viewing and installing the documentation, refer to Appendix F, "Installing Documentation Library".

4

Standard Edition

This chapter guides you through the installation steps for the Standard Edition of Oracle9*i* Application Server. The following topics provide detailed installation steps, and basic postinstallation tasks:

- Installation
- Postinstallation

Installation

The following instructions guide you through the Standard Edition installation option of Oracle9*i* Application Server.

1. Review the Oracle Universal Installer Welcome screen and click **Next**.

Figure 4–1 Welcome Screen

The Welcome screen provides information about the Oracle Universal Installer.

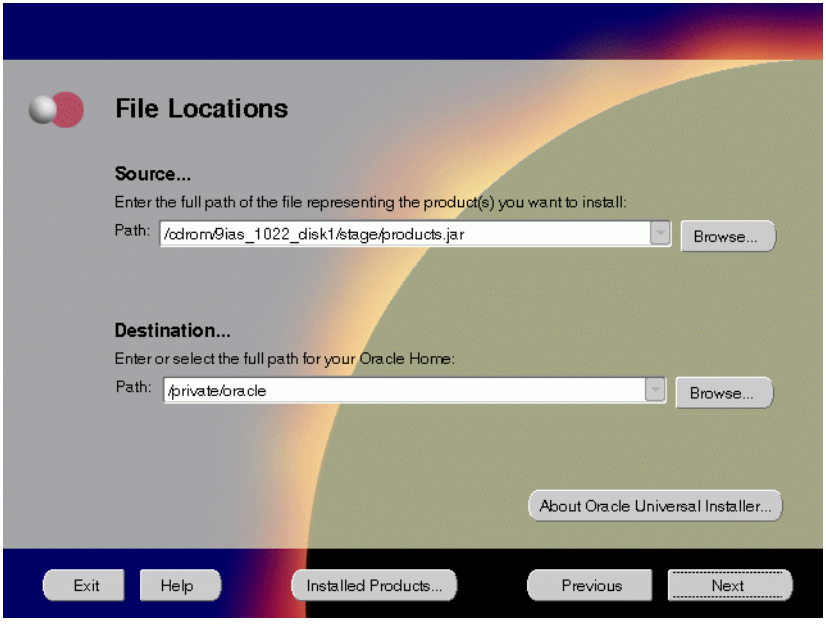
The following function buttons appear on the installation screens.

- **Deinstall Products**: Deinstall individual components or the entire product. This button appears only on the Welcome screen.
- **About Oracle Universal Installer**: View the version number of the installer in use.
- **Exit**: Quit the installation process and exit the installer.
- **Help**: Access detailed information about the functionality of each screen.
- **Installed Products**: View currently installed products or to deinstall the entire product or components.

- **Previous**: Return to the previous screen.
- **Next**: Move to the next screen.

2. Verify the source and destination paths and click **Next**. If you have not previously installed Oracle products on your machine, the "OraInventory Location screen" appears after you click **Next**. Enter the complete location path for `oraInventory` directory and click **OK**.

Figure 4–2 File Locations Screen



The File Locations screen allows you to enter the full path for the source and destination locations of Oracle9*i* Application Server.

- **Source**: This is the full path to the `products.jar` file from which the product will be installed. The installer detects and uses the default values of the `products.jar` file of the installation program. Do not change the path.
- **Destination**: This is the full path to the Oracle home where the product will be installed. The installer defaults to the Oracle home set in the pre-installation chapter.

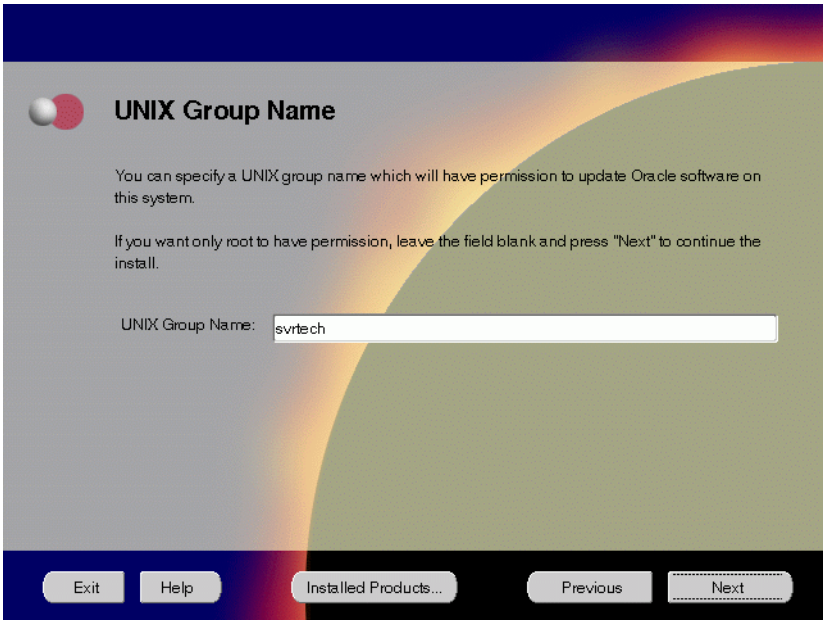
Note: Oracle home path must be a real, absolute path. It cannot contain symbolic links, environment variables, or spaces.

For more information regarding Oracle home, refer to "ORACLE_HOME" on page 2-12.

- **Browse**: To navigate through the file system to find source and destination locations.

3. This screen appears only the first time you run Oracle Universal Installer on your machine. Take note of the default value if it appears. Enter a UNIX group name and click **Next**.

Figure 4–3 UNIX Group Name Screen



The UNIX Group Name screen grants permission for the `oraInventory` directory to the group specified. For more information, refer to “UNIX Group Name for the Oracle Universal Installer Inventory” on page 2-9.

UNIX Group Name:

- Enter a UNIX group name for those who have permission to configure all the functionality of Oracle9*i* Application Server. Verify your group name by entering this command from the UNIX prompt the installer was launched from:

  ```
  prompt> id
  ```

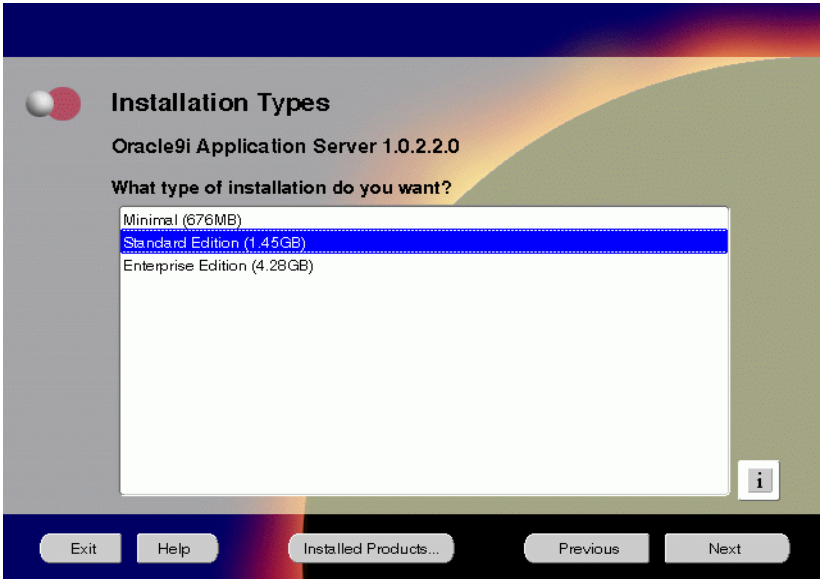
- Run the `orainstRoot.sh` script from your Oracle home to grant permissions to the root user only. You must have root privileges to run this script. The script creates pointers to the components as the installer installs them in the system so that they can be identified later in the installation

procedure. It produces the `/var/opt/oracle/oraInst.loc` file, which provides a pointer to the `oraInventory` directory.

After you have run the script, click **Retry** to continue.

4. Select Standard Edition and click **Next**.

Figure 4–4 Installation Types Screen



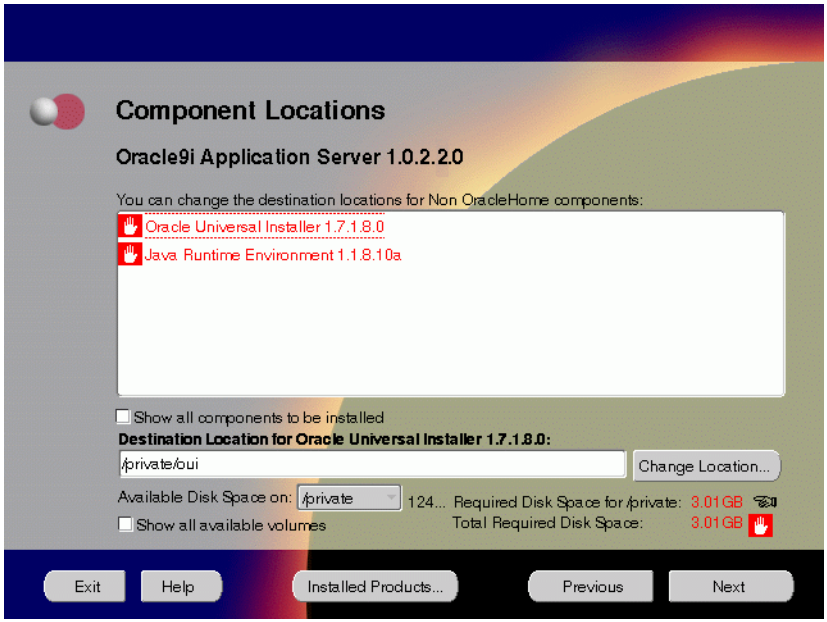
The Installation Types screen allows you to select the Oracle9*i* Application Server installation option that you are licensed to use.

> **See Also:** Table 2–1, "Oracle9i Application Server Components" on page 2-3 for a complete list of components.

- **Minimal Edition**: Installs Oracle9*i*AS Portal, Oracle9*i*AS Wireless, Oracle Enterprise Manager Client, and Oracle HTTP Server.
- **Standard Edition**: Installs Oracle9*i*AS Portal, Oracle9*i*AS Wireless, Oracle Enterprise Java Engine, Oracle Enterprise Manager Client, Oracle HTTP Server, and Oracle Internet File System.
- **Enterprise Edition**: Installs Oracle9*i*AS Database Cache, Oracle9*i*AS Discoverer, Oracle9*i*AS Forms Services, Oracle9*i*AS Portal, Oracle9*i*AS Reports Services, Oracle9*i*AS Web Cache, Oracle9*i*AS Wireless, Oracle Enterprise Java Engine, Oracle Enterprise Manager Client, Oracle HTTP Server, Oracle Internet File System, and Oracle Management Server.

5. This screen appears only if Oracle Universal Installer has detected insufficient disk space in the Oracle home directory. If needed, verify and change the locations of the components displayed on the screen, and click **Next**.

Figure 4–5 Component Locations Screen



The Component Locations screen allows you to select alternative locations for some components.

Note: Insufficient disk space is indicated in red with a hand icon next to it.

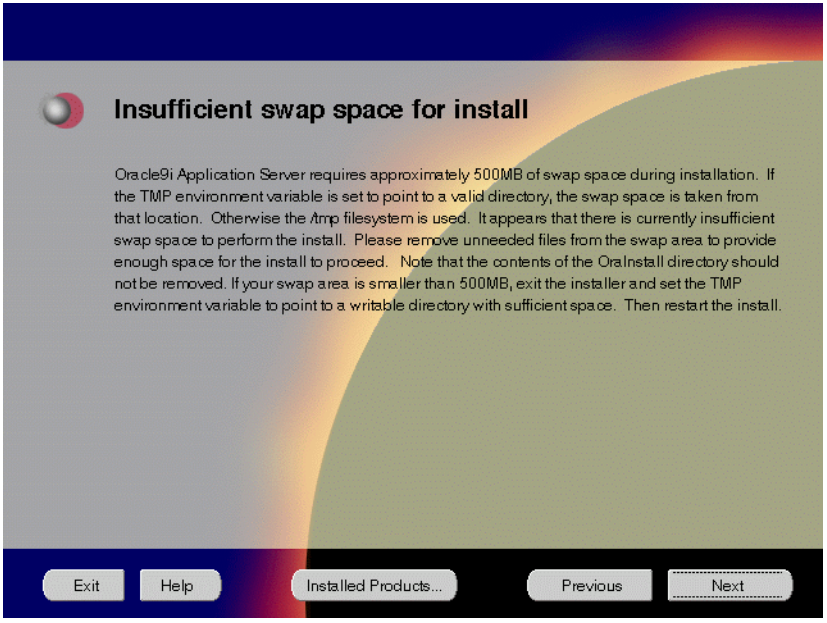
- **Show all components to be installed**: To view the complete list of components chosen for installation. Select check box to display component list.

Show all components to be installed: To view the complete list of components chosen for installation. Select check box to display component list. Click individual components to view and change destination location path. The installer enables you to change the destination location of the components displayed on the screen.

- **Destination Location**: To view the full path of the selected component.
- **Change Location**: To browse for alternate locations for the selected component.
- **Available Disk Space**: To view available disk space in the current directory. The installer also provides information about the total disk space required for the installation of additional components.
- **Required Disk Space for *directory_name***: To view the total disk space required for installation in the selected directory.
- **Total Required Disk Space:** To view the total disk space required for the product to be installed.
- **Show all available volumes**: To browse through file system for available disk space. Select check box to display the file system.

6. This screen appears if the installer detects insufficient TMP space. Remove unneeded files from the swap directory to provide sufficient space for installation and click **Next**. If your swap space is smaller than 500 MB, click **Exit** and correct the problem.

Figure 4–6 Insufficient Swap Space for Install Screen



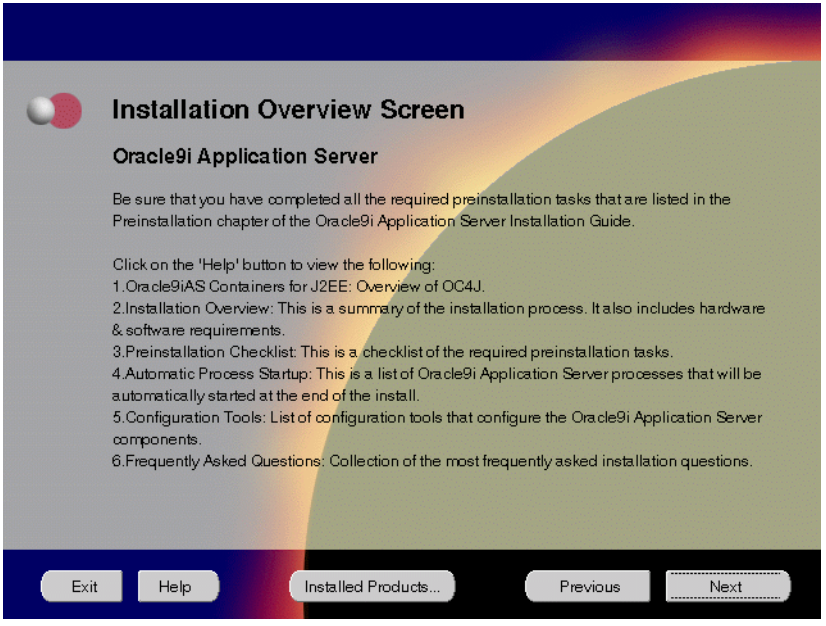
The Insufficient Swap Space for Install screen indicated inadequate space in the swap directory. You have two options:

- If you have more than 500 MB swap space, then remove unneeded files from your swap space to create room for installation and click **Next** to proceed.
- If you have less than 500 MB swap space, then **Exit** the installer and set TMP environment variable to point to a writable directory with sufficient space.

For detailed information on TMP directory, refer "TMP" on page 2-15.

7. Click the **Help** button to verify that all the preinstallation tasks have been performed, and then click **Next**.

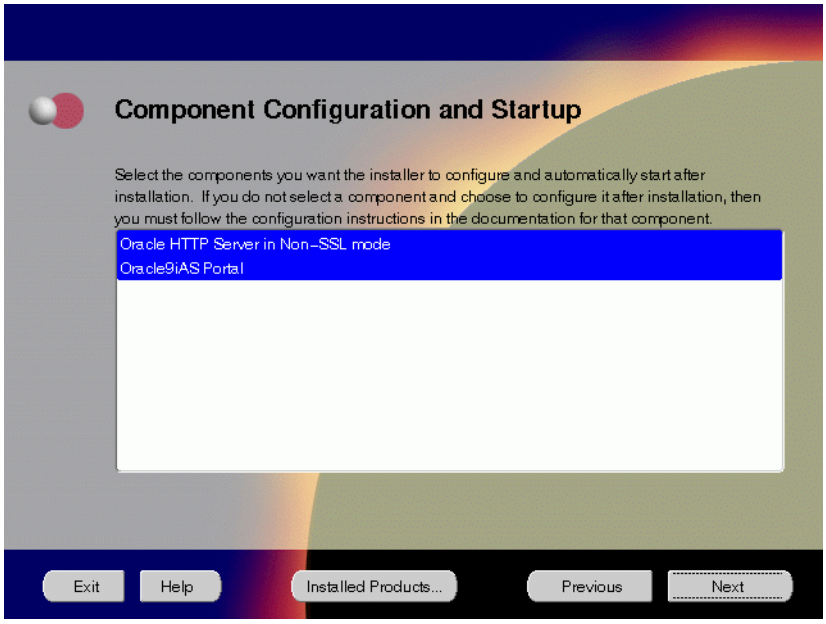
Figure 4–7 Installation Overview Screen



The Installation Overview screen gives you an overview of the installation process. Click on the **Help** button for information on the installation process, preinstallation checklist, automatic process startup, configuration tools, and frequently asked questions.

8. Select the components you wish to configure during the installation process and click **Next**. These components will automatically start up after installation. If you wish to configure the components later, do not select them.

Figure 4–8 Component Configuration and Startup Screen



The Component Configuration and Startup screen allows you to select the components that you want the installer to configure and start after installation. This screen offers two configuration options:

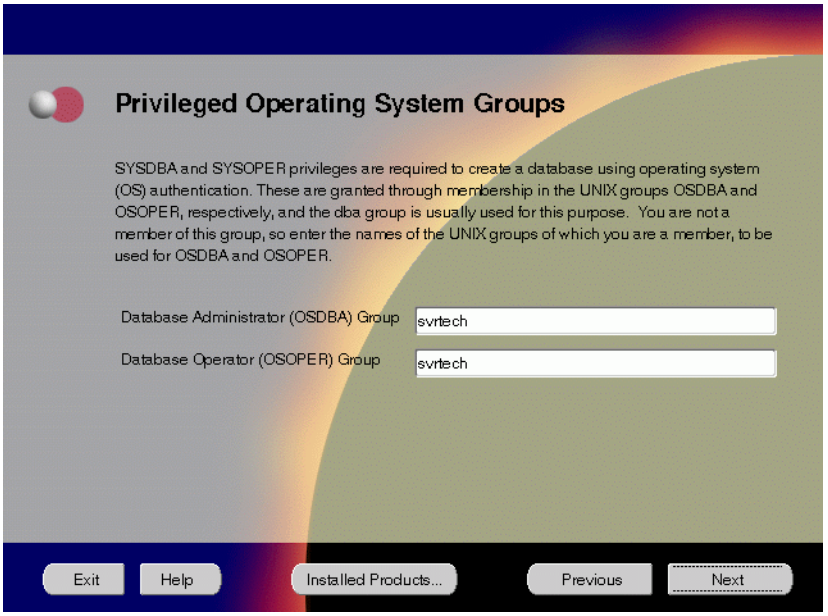
- If you select a component here, then the installer prompts you for any or all configuration information required by that component. After installation, the installer starts that component.
- If you de-select a component here, then the installer installs it, but does not configure or start it. later on, if you decide to use that component, then manually launch the configuration assistant to configure that component.

  See Also: Appendix A, "Configuration Tools"

You can select or de-select multiple components by holding down the Control key while clicking on the component name.

9. This screen appears only if the `oracle` account is not a member of the `dba` group. Enter the database administrator and operator group name and click **Next**.

Figure 4–9 Privileged Operating System Groups Screen

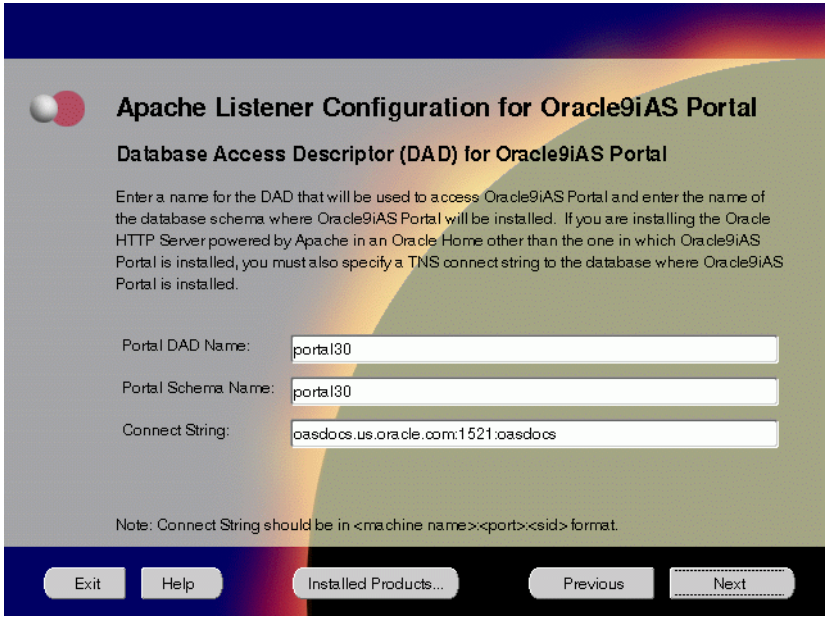


The Privileged Operating System Groups screen allows you to enter the database administrator and operator group name. For more information regarding privileged group names, refer to "UNIX Group Names for Privileged Groups" on page 2-17. The installer detects and defaults to the user's OS group.

- **Database Administrator (OSDBA) Group**: The UNIX group that has database administrator privileges.
- **Database Operator (OSOPER) Group**: The UNIX group that has database operator privileges.

10. This screen will appear only if you selected Oracle9*i*AS Portal in the Component Configuration and Startup screen. Enter or accept the default Portal DAD and Schema names. Also, enter the database connection information. Click **Next**.

Figure 4–10 Apache Listener Configuration for Oracle9iAS Portal (DAD and Schema name) Screen



The Apache Listener Configuration for Oracle9*i*AS Portal screen allows you to enter the name of the Database Access Descriptor (DAD) that will be used to access Oracle9*i*AS Portal, and the name of the database schema where Oracle9*i*AS Portal will be installed. It also enables you to enter the database connection information if Oracle9*i*AS Portal and Oracle HTTP Server are installed in different Oracle homes. The information you enter here is used to create the PL/SQL Gateway settings which you can access upon installation from the following location:
`http://machine_name:port/pls/admin_/gateway.htm`

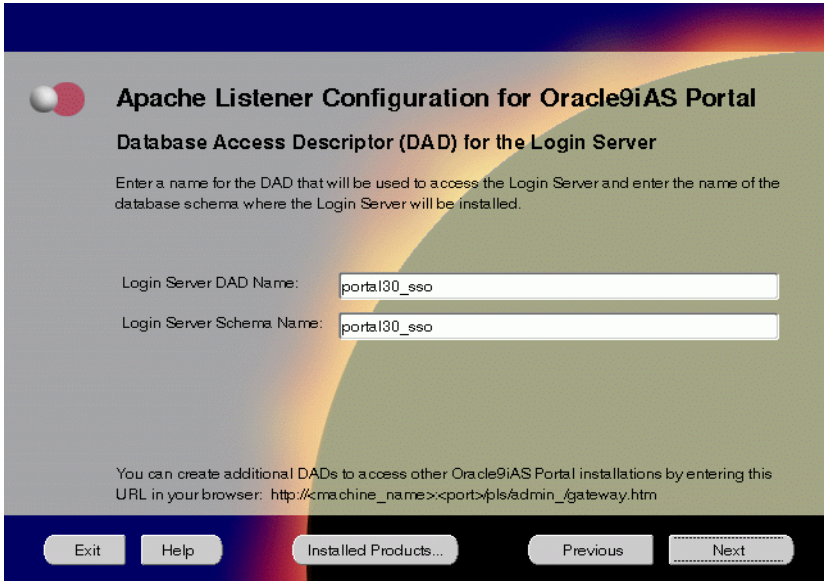
- **Portal DAD Name**: Enter the name of the DAD for each instance you installed in the database. A Database Access Descriptor (DAD) is a set of values that specify how the Apache Listener connects to your Oracle database server to fulfill an HTTP request. Based on this DAD name, the

installation automatically sets other DAD-related and default settings such as the name and location of the document table. The default DAD name is `portal30`.

- **Portal Schema Name**: Enter the name of the database schema that will contain Oracle Portal. A schema is a collection of components and database objects under the control of a given database user. Each Oracle Portal application maps to an Oracle database schema. The default schema name is `portal30`.
- **Connect String**: Enter the origin database connection information in the form `host:port:sid`.

11. This screen will appear only if you selected Oracle9*i*AS Portal in the Component Configuration and Startup screen. Enter or accept the default Login Server DAD and Schema names. Click **Next**.

Figure 4–11 Apache Listener Configuration for Oracle9iAS Portal (Login Server) Screen

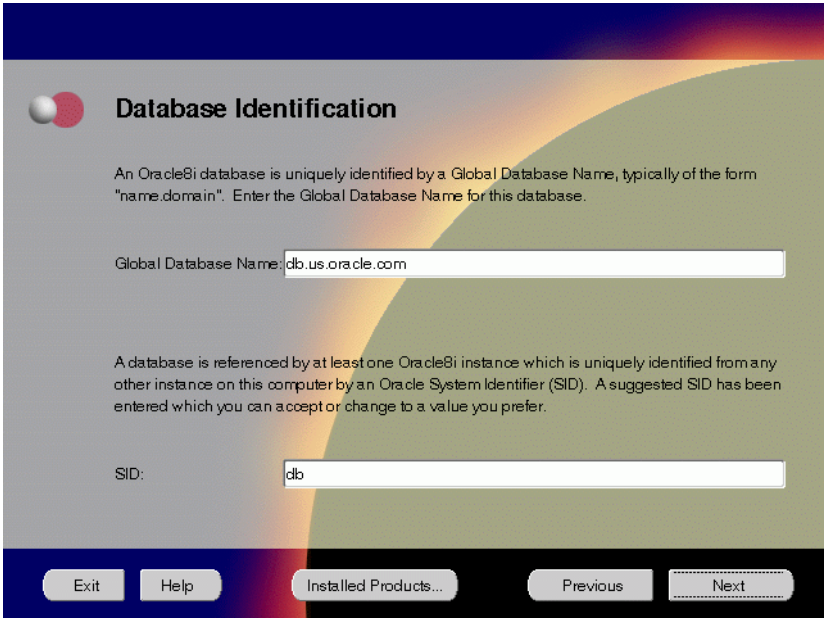


The Apache Listener Configuration for Oracle9*i*AS Portal screen allows you to enter the Login Server DAD and Schema Name, with a `_sso` extension for easy recognition. The Login Server provides an enterprise-wide Single Sign-On (SSO) mechanism that enables an Oracle Portal user to log in securely to Oracle Portal and any partner and external applications using a single user name and password.

- **Login Server DAD Name**: Enter the name of the DAD for each instance you installed in the database.The default DAD name is `portal30_sso`.
- **Login Server Schema Name**: Enter the name of the database schema that will contain Oracle Portal.The default schema name is `portal30_sso`.

12. Enter the Global Database Name and System Identifier (SID) of the mid tier database and click **Next**.

Figure 4–12 Database Identification Screen



The Database Identification screen allows you to enter the Global Database name and SID of the database that is created to run Oracle Enterprise Java Engine applications.

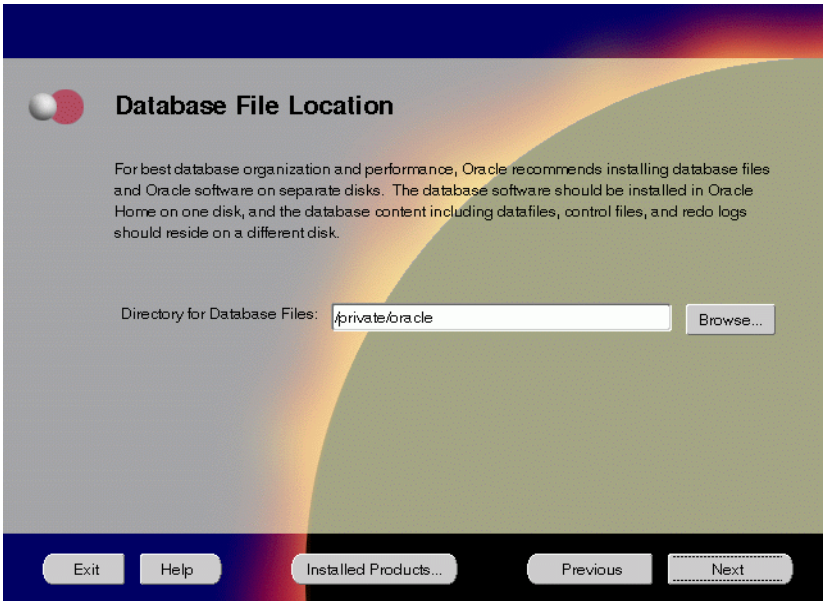
Note: This database is licensed only to run Oracle Enterprise Java Engine applications in the mid tier and should not be used for any other purposes. It will be installed in the same Oracle home as Oracle9*i* Application Server.

- **Global Database Name**: This is the full database name that distinguishes it from any other database in your network domain. For example: `db.us.oracle.com`, where `db` is the name of the database and `us.oracle.com` is the network domain in which the database is located.

- **SID (System Identifier)**: This is the database instance name that distinguishes it from any other database on your system. For any database, there is at least one instance associated with the database. The SID field defaults to the database name portion of the Global Database Name. (For example: db). You can accept or change the default value.

13. Enter the location for the database files and click **Next**.

Figure 4–13 Database File Location Screen



The Database File Location screen allows you to enter the directory name for the database files. Oracle recommends installing the database software and the database content, including files, on separate disks.

Note: This database is licensed only to run Oracle Enterprise Java Engine applications in the mid tier and should not be used for any other purposes. It will be installed in the same Oracle home as Oracle9*i* Application Server.

- **Directory of Database Files**: This is the directory that contains your data, control, and log files. For example, if you enter `/dbmount`, then the database file locations will be:

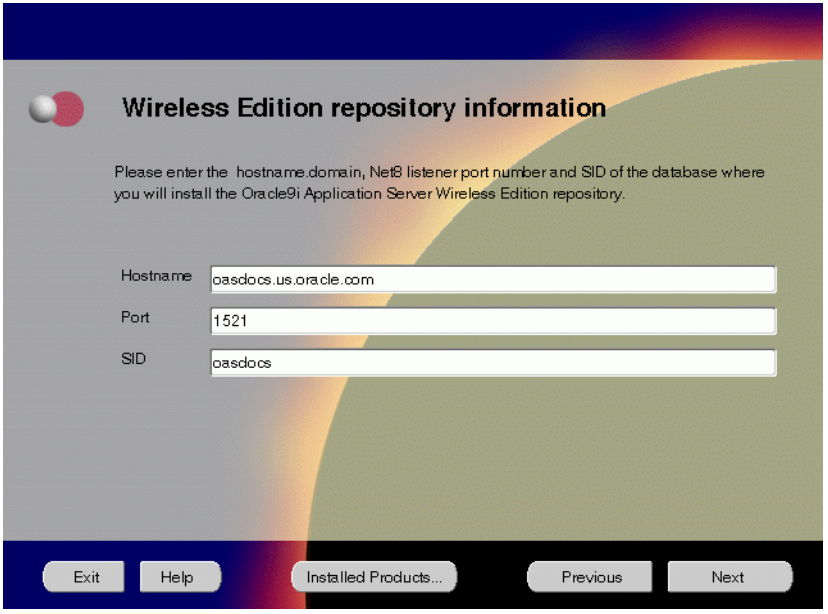
File Type	Path Name
Data Files	/dbmount/oradata/*SID*/*.dbf
Control Files	/dbmount/oradata/*SID*/*.ctl
Log Files	/dbmount/oradata/*SID*/*.log

- **Browse**: To navigate the directory structure.

14. Enter the hostname, port number, and SID of the origin database where you will install the Oracle9*i*AS Wireless, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then an "Upgrade Installation Detected" screen will appear. Review the content on the screen and click **Next** or **Exit** accordingly. If you click **Next**, then the installation will continue and the following screen will appear.

Note: Do not enter Oracle9*i*AS Database Cache hostname, port number, and SID in this screen.

Figure 4–14 Wireless Edition Repository Information Screen



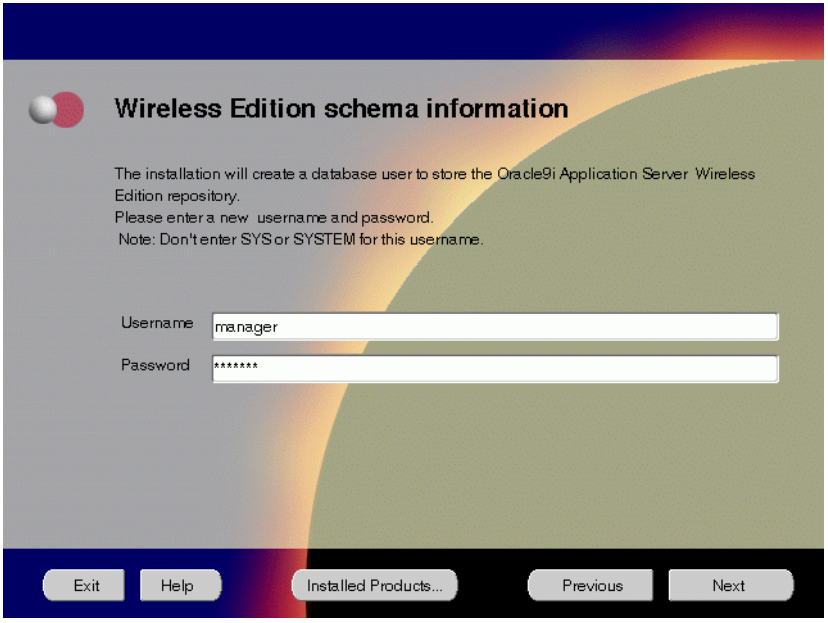
The Wireless Edition Repository Information screen allows you to enter the hostname, Net8 Listener port number, and SID of the database where you will install the Oracle9*i*AS Wireless repository.

- **Hostname**: Enter the `hostname.domain` of the database where you will install the Oracle9*i*AS Wireless.
- **Port**: Enter the Net8 Listener port number.
- **SID**: Enter the System Identifier (SID) of the database where you will install the Oracle9*i*AS Wireless repository.

15. Enter the new username and password for the database user to store the Oracle9*i*AS Wireless repository, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then the "Oracle9*i*AS Wireless Schema Information Screen" will be slightly different. Enter the existing Oracle9*i*AS Wireless username and password, and click **Next**.

Note: Do not use an existing database user, (that is, SYS, SYSTEM, or any other existing database user) as the username.

Figure 4–15 Wireless Edition Schema Information Screen



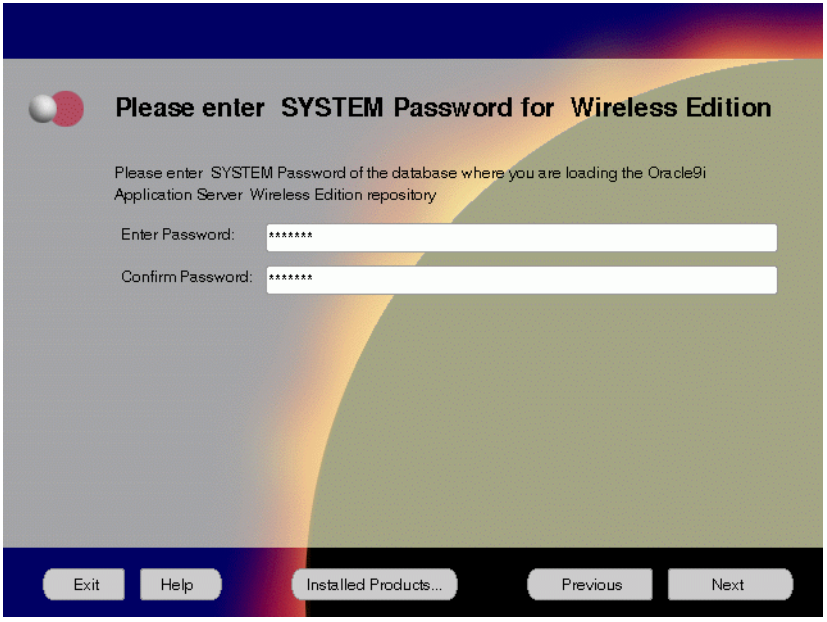
The Wireless Edition Schema Information screen allows you to create a database user to store the Oracle9*i*AS Wireless repository.

- **Username**: Enter a new user name for the database user to store the Oracle9*i*AS Wireless repository.
- **Password**: Enter a password for the database user.

16. Enter and confirm the SYSTEM password of the database, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then a "Wireless Edition Administrator Password Information" screen appears. Enter and confirm the "Administrator" password, and click **Next**.

Note: Do not enter the database schema owner password.

Figure 4–16 System Password for Wireless Edition Screen

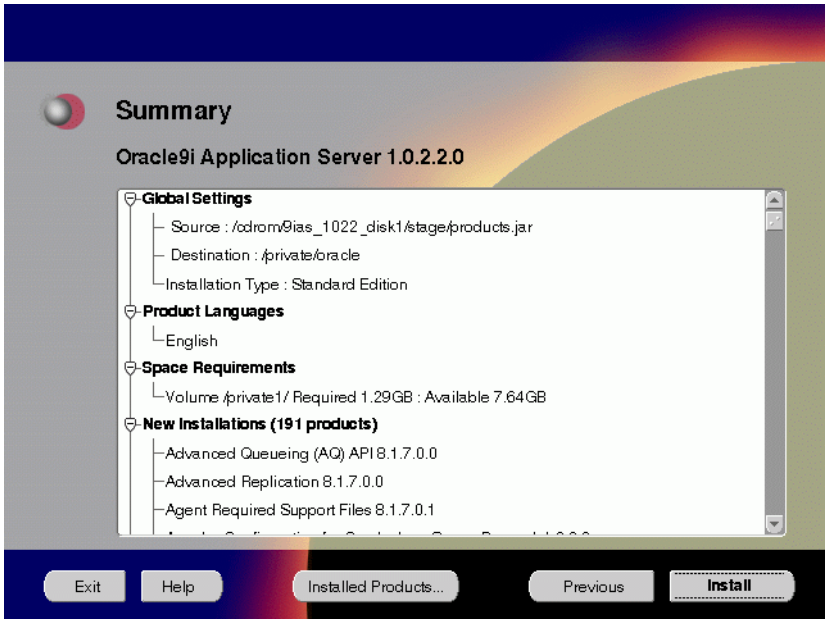


The System Password for Wireless Edition screen allows you to enter and confirm the SYSTEM password of the database where you are loading the Oracle9*i*AS Wireless repository.

- **Enter Password**: Enter the SYSTEM password of the database where you will install the Oracle9*i*AS Wireless.
- **Confirm Password**: Re-enter the SYSTEM password as entered above for verification.

17. Review the summary and click **Install** to begin the installation process.

Figure 4–17 Summary Screen



The Summary screen allows you to review all the settings before the actual installation process. These settings include source, destination, installation type, product language, space requirements, and a list of components.

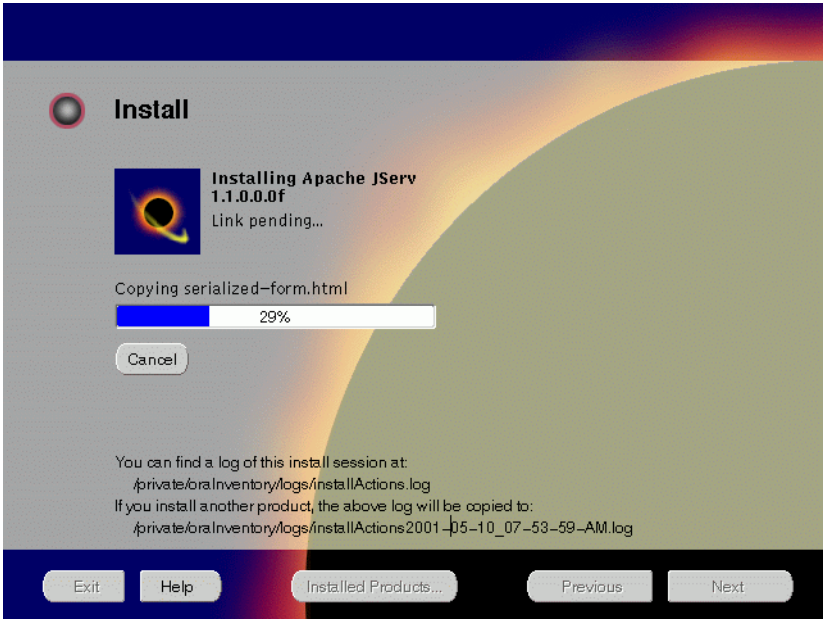
- To make changes to any of these settings, click **Previous** to return to the respective screens.

Note: Insufficient disk space is indicated in red under **Space Requirements**.

When you click **Install**, the installation process begins.

18. Monitor the installation process and after the installer finishes, click **Next**.

Figure 4–18 Install Screen



The Install screen appears while the product is installing. Installation operations include executing actions such as file copy and linking, and executing decision points and calculations. It also displays the full path of the installation log.

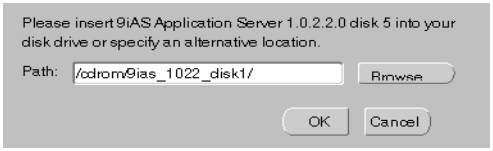
- **Cancel**: To discontinue the installation process. You can then choose to stop the installation of an individual component or the entire product.

For more information about installation log, refer to "oraInventory Directory" on page 2-33.

Changing Disks

During installation, the installer prompts you to switch between Disks 1 through 5. Use these steps to change disks and continue the installation process.

Figure 4–19 Changing Disks Dialog



a. Eject and unmount the current disk.

If you are using Solaris Volume Management software and Disk1 was automatically mounted, then this can be done with the following command:

```
prompt> eject cdrom
```

If you are not using Solaris Volume Management software, then you must manually eject and unmount the disk. For further instructions, refer to your operating system documentation

b. Insert the next disk into the CD-ROM drive and mount it.

If you are using the Solaris Volume Management software, then the next disk will be automatically mounted.

If you are not using Solaris Volume Management software, then you must manually mount the disk. For further instructions, refer to "Starting Oracle Universal Installer" on page 2-34.

c. Click the **Browse** button on the changing disks dialog, and navigate to `/cdrom/9ias_1022_diskx`. This directory may be different depending on where the original disk was mounted.

d. Click OK to continue the installation process.

Running `root.sh`

After installation is completed, the installer prompts you to run `root.sh` script. Use these steps to run the `root.sh` script.

a. Log on as the root user.

b. Go to the Oracle home directory.

```
prompt> cd $ORACLE_HOME
```

c. Run the `root.sh` script.

```
prompt> ./root.sh
```

d. Exit root user.

Once you see "Finished running generic part of the root.sh script" and "Now product-specific root actions will be performed," exit root user and return to the Install screen.

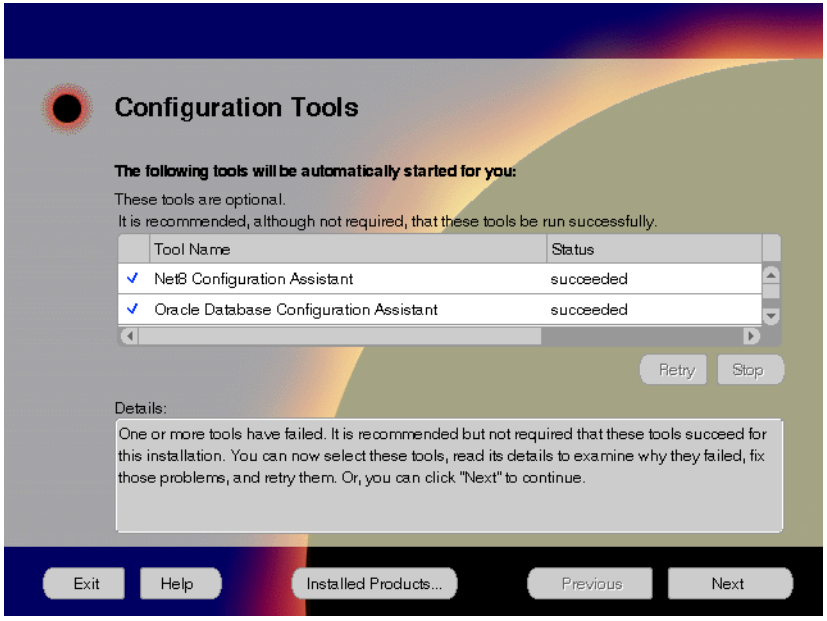
The `root.sh` script detects:

- Settings of `ORACLE_OWNER`, `ORACLE_HOME` and `ORACLE_SID` environment variables.
- Full path of local bin directory. You can accept the default or change to a different local bin directory.

19. Start the origin database if it has been shut down during installation. Verify the list of configuration tools and click **Next**. This screen appears only if you select components to configure and start in the Components Configuration and Startup screen.

> **Note:** The installer has completed copying and linking the necessary files. Be sure to start the database if it had been shut down for the installation process. The configuration tools such as Oracle9*i*AS Portal Configuration Assistant need to connect to an active database for configuration purposes.

Figure 4–20 Configuration Tools Screen



The Configuration Tools screen lists the configuration tools for all installed components.

Scroll down the list to review the configuration status of each tool. The status changes as each component is configured.

The installer performs the following functions in this screen:

- Executes a configuration tool for each component selected previously in the Component Configuration and Startup screen.
- Displays all the configuration settings in the display window below as it executes a configuration tool for each component.
- Enables you to view configuration settings after all configuration tools are executed. Click on each component to review all the changes made.
- Allows you to view data for failed executions in the display window. You can either fix the error and click **Retry** to execute the configuration tool again, or ignore the error and click **Next** to proceed to the next screen.
- **Retry**: To re-execute the configuration script if the configuration of a component fails.
- **Stop**: To quit the configuration process.

Configuration Tools

This installation option launches the following configuration tools:

Net8 Configuration Assistant - This configuration assistant enables you to connect and configure the Oracle client/server network environment.

> **See Also:** *Net8 Administration's Guide* in the Oracle Database Documentation Library for information on running Net8 Configuration Assistant.

Oracle Database Configuration Assistant - This configuration assistant configures the database for Oracle Enterprise Java Engine. Oracle Database Configuration Assistant will not appear if you are migrating from Oracle9*i* Application Server 1.0.2.1 to 1.0.2.2.

> **See Also:** "Oracle Database Configuration Assistant" on page A-17 for instructions on running Oracle Database Configuration Assistant.

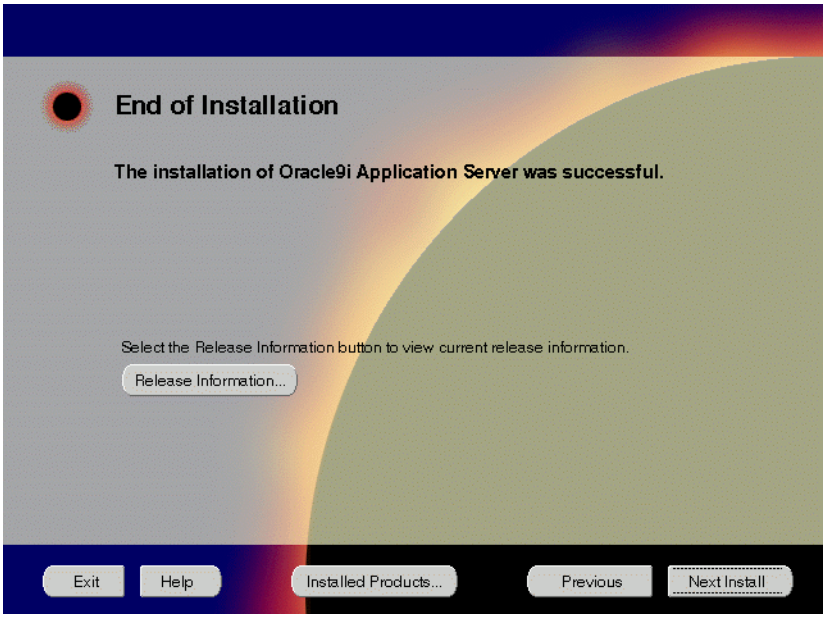
Oracle9*i*AS Portal Configuration Assistant - This configuration assistant loads necessary database objects for Oracle9*i*AS Portal to run.

> **See Also:** "Oracle9iAS Portal Configuration Assistant" on page A-8 for instructions on running Oracle9*i*AS Portal Configuration Assistant.

Starting HTTP Server - This starts Oracle HTTP Server.

20. Ensure that the installation was successful. Click **Exit** to quit the installer.

Figure 4–21 End of Installation Screen



The End of Installation screen appears at the end of the installation process. It notifies you whether the installation was successful or unsuccessful.

- **Release Information**: To view the latest release information.

If the installer detects that specific port numbers such as 7777, are occupied, it will display the alternate port numbers on the end of Installation screen. For Oracle HTTP Server port number information, refer to "Port Allocation" on page 2-18.

You have successfully installed the Standard Edition installation option of Oracle9*i* Application Server. Proceed to "Postinstallation" on page 4-33 to complete the installation process.

Postinstallation

The following instructions guide you through the basic postinstallation tasks for Oracle9*i* Application Server. Before performing these tasks, install, if needed, Oracle9*i* Application Server Client from the Oracle9*i* Application Server Administrative and Development Client CD included in the Oracle9*i* Application Server CD pack.

> **See Also:** Appendix B, "Installing Oracle9i Application Server Administrative and Development Client CD-ROM"

The postinstallation contains the following sections:

- Environment Scripts
- Component-specific Tasks
- Starting and Stopping Components
- Component Web Sites
- Component Port Numbers
- Additional Documentation

Environment Scripts

Table 4–1 lists the environment script for Standard Edition installation option:

Table 4–1 Environment Scripts

Component	Environment Scripts
Oracle Internet File System	*ORACLE_HOME*/ifs1.1/bin/infenv.sh *ORACLE_HOME*/ifs1.1/bin/ifsconfig

Component-specific Tasks

Oracle Internet File System

You must run the Oracle Internet File System Configuration Assistant manually to configure Oracle Internet File System.

> **See Also:** "Oracle Internet File System Configuration Assistant" for instructions on running Oracle Internet File System Configuration Assistant.

Starting and Stopping Components

Table 4–2 lists the commands needed to individually start and stop the components.

Table 4–2 Starting and Stopping Components

Component	Function	Command
Oracle9*i*AS Wireless Web Integration Server	Start	*ORACLE_HOME*/panama/WebIntegration/Server/bin/server.sh
	Stop	Go to `http://hostname.domainname:5555` and click on shutdown.
Oracle HTTP Server	Start	*ORACLE_HOME*/Apache/Apache/bin/apachectl start
	Stop	*ORACLE_HOME*/Apache/Apache/bin/apachectl stop
Oracle HTTP Server SSL-enabled	Start	*ORACLE_HOME*/Apache/Apache/bin/apachectl startssl (Log in as `root` user.)
	Stop	*ORACLE_HOME*/Apache/Apache/bin/apachectl stop (Log in as `root` user.)
Oracle Internet File System	Start	*ORACLE_HOME*/ifs1.1/bin/ifsstart
	Stop	*ORACLE_HOME*/ifs1.1/bin/ifsstop

Component Web Sites

Table 4–3 lists Web sites for Oracle9*i* Application Server components.

Table 4–3 Component Web sites

Component	Web Site
Oracle9*i*AS Portal	http://*hostname.domain:listener_port*/pls/portal30
Oracle9*i*AS Wireless Web Integration Server	http://*hostname.domain*:5555 (Log on as `Administrator/manage`)
Oracle HTTP Server Oracle HTTP Server (SSL-enabled)	http://*hostname.domain*:*listener_port* https://*hostname.domain*:*listener_port*
Oracle Internet File System	http://*hostname.domain:listener_port*/ifs/files (Log on as `system/manager`)

Component Port Numbers

Table 4–4 lists the default port numbers on which requests are received for each component.

Table 4–4 Port Numbers

Components	Port Number
Oracle9*i*AS Portal	Oracle9*i*AS Portal uses the same port number as Oracle HTTP Server
Oracle9*i*AS Wireless Oracle9*i*AS Wireless Web Integration Server	Oracle9*i*AS Wireless uses the same port as Oracle HTTP Server 5555
Oracle HTTP Server Oracle HTTP Server (SSL-enabled) Oracle HTTP Server Jserv Servlet Engine	For information on port numbers, refer to "Port Allocation" on page 2-18. 8007
Oracle Internet File System	Oracle Internet File System uses the same port number as Oracle HTTP Server FTP: 21 SMB: 139 SMTP: 2500 IMAP: 143 CUP: 4180
Oracle Enterprise Java Engine TNS Listener	TCP / IP: 1521 IIOP: 2481

Additional Documentation

For further information on postinstallation and configuration tasks, refer to component-specific documentation. For information on viewing and installing the documentation, refer to Appendix F, "Installing Documentation Library".

5

Enterprise Edition

This chapter guides you through the installation steps for the Enterprise Edition of Oracle9*i* Application Server. The following topics provide detailed installation steps, and basic postinstallation tasks:

- Installation
- Postinstallation

Installation

The following instructions guide you through the Enterprise Edition installation option of Oracle9*i* Application Server.

1. Review the Oracle Universal Installer Welcome screen and click **Next**.

Figure 5–1 Welcome Screen

The Welcome screen provides information about the Oracle Universal Installer.

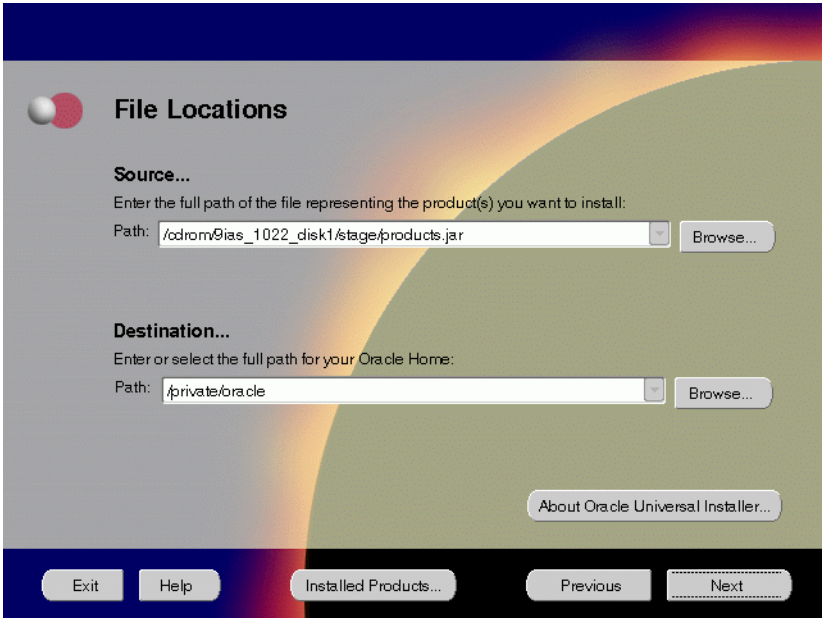
The following function buttons appear on the installation screens.

- **Deinstall Products**: Deinstall individual components or the entire product. This button appears only on the Welcome screen.
- **About Oracle Universal Installer**: View the version number of the installer in use.
- **Exit**: Quit the installation process and exit the installer.
- **Help**: Access detailed information about the functionality of each screen.
- **Installed Products**: View currently installed products or to deinstall the entire product or components.

- **Previous**: Return to the previous screen.
- **Next**: Move to the next screen.

2. Verify the source and destination paths and click **Next**. If you have not previously installed Oracle products on your machine, the "OraInventory Location screen" appears after you click **Next**. Enter the complete location path for `oraInventory` directory and click **OK**.

Figure 5–2 File Locations Screen



The File Locations screen allows you to enter the full path for the source and destination locations of Oracle9*i* Application Server.

- **Source**: This is the full path to the `products.jar` file from which the product will be installed. The installer detects and uses the default values of the `products.jar` file of the installation program. Do not change the path.
- **Destination**: This is the full path to the Oracle home where the product will be installed. The installer defaults to the Oracle home set in the preinstallation chapter.

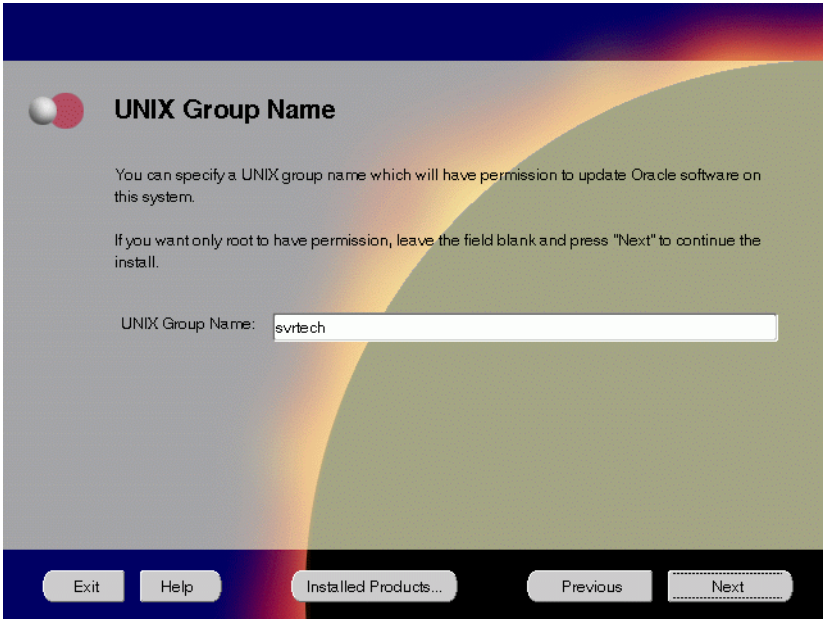
Note: Oracle home path must be a real, absolute path. It cannot contain symbolic links, environment variables, or spaces.

For more information regarding Oracle home, refer to "ORACLE_HOME" on page 2-12.

- **Browse**: To navigate through the file system to find source and destination locations.

3. This screen appears only the first time you run Oracle Universal Installer on your machine.Take note of the default value if it appears. Enter a UNIX group name and click **Next**.

Figure 5–3 UNIX Group Name Screen



The UNIX Group Name screen grants permission for the `oraInventory` directory to the group specified. For more information, refer to "UNIX Group Name for the Oracle Universal Installer Inventory" on page 2-16.

UNIX Group Name:

- Enter a UNIX group name for those who have permission to configure all the functionality of Oracle9*i* Application Server. Verify your group name by entering this command from the UNIX prompt the installer was launched from:

  ```
  prompt> id
  ```

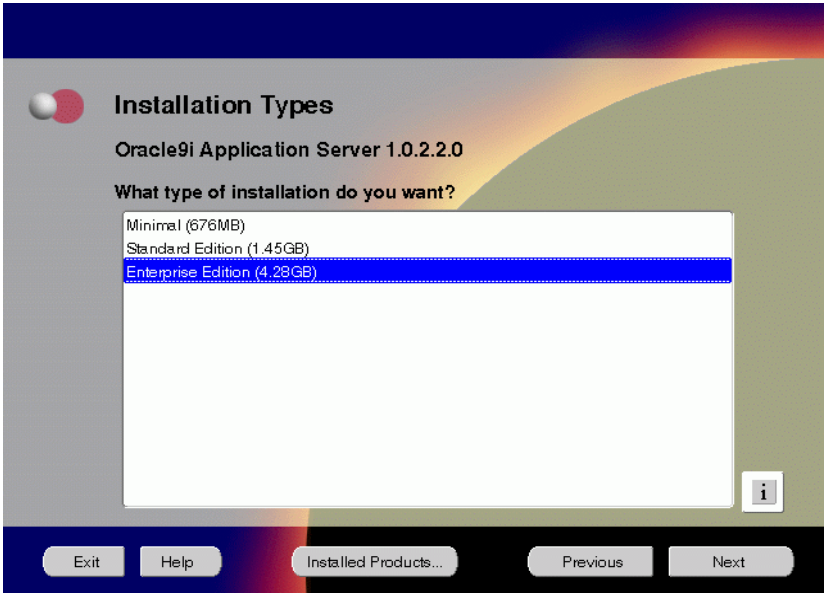
- Run the `orainstRoot.sh` script from your Oracle home to grant permissions to the root user only. You must have root privileges to run this script. The script creates pointers to the components as the installer installs them in the system so that they can be identified later in the installation

procedure. It produces the `/var/opt/oracle/oraInst.loc` file, which provides a pointer to the `oraInventory` directory.

After you have run the script, click **Retry** to continue.

4. Select Enterprise Edition and click **Next**.

Figure 5–4 Installation Types Screen



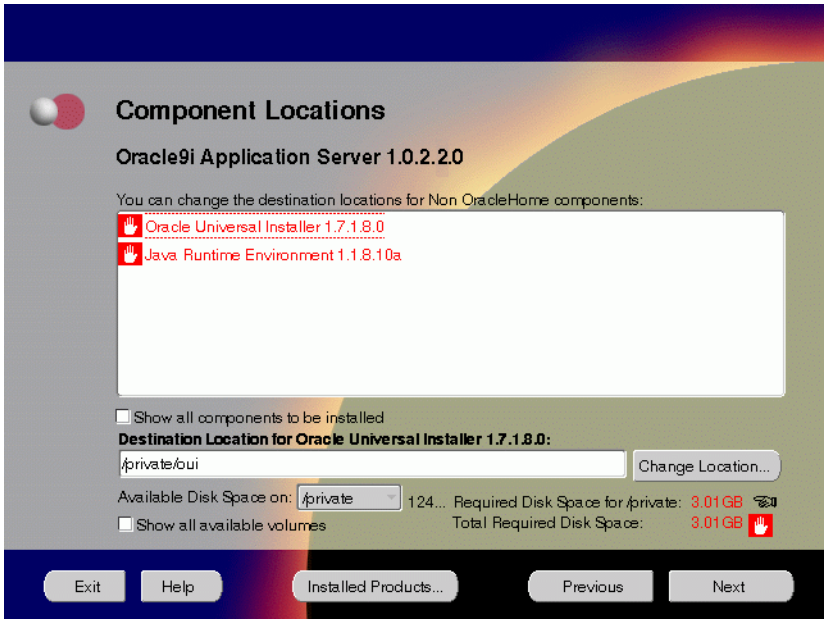
The Installation Types screen allows you to select the Oracle9*i* Application Server installation option that you are licensed to use.

> **See Also:** Table 2–1, "Oracle9i Application Server Components" on page 2-3 for a complete list of components.

- **Minimal Edition**: Installs Oracle9*i*AS Portal, Oracle9*i*AS Wireless, Oracle Enterprise Manager Client, and Oracle HTTP Server.
- **Standard Edition**: Installs Oracle9*i*AS Portal, Oracle9*i*AS Wireless, Oracle Enterprise Java Engine, Oracle Enterprise Manager Client, Oracle HTTP Server, and Oracle Internet File System.
- **Enterprise Edition**: Installs Oracle9*i*AS Database Cache, Oracle9*i*AS Discoverer, Oracle9*i*AS Forms Services, Oracle9*i*AS Portal, Oracle9*i*AS Reports Services, Oracle9*i*AS Web Cache, Oracle9*i*AS Wireless, Oracle Enterprise Java Engine, Oracle Enterprise Manager Client, Oracle HTTP Server, Oracle Internet File System, and Oracle Management Server.

5. This screen appears only if Oracle Universal Installer has detected insufficient disk space in the Oracle home directory. If needed, verify and change the locations of the components displayed on the screen, and click **Next**.

Figure 5–5 Component Locations Screen



The Component Locations screen allows you to select alternative locations for some components.

Note: Insufficient disk space is indicated in red with a hand icon next to it.

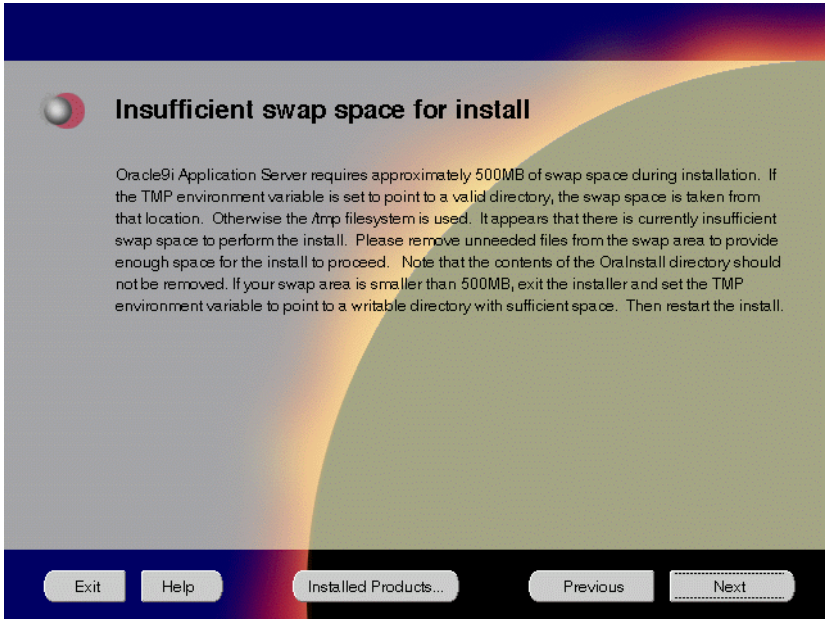
Show all components to be installed: To view the complete list of components chosen for installation. Select check box to display component list.

Click individual components to view and change destination location path. The installer enables you to change the destination location of the components displayed on the screen.

- **Destination Location**: To view the full path of the selected component.
- **Change Location**: To browse for alternate locations for the selected component.
- **Available Disk Space**: To view available disk space in the current directory. The installer also provides information about the total disk space required for the installation of additional components.
- **Required Disk Space for *directory_name***: To view the total disk space required for installation in the selected directory.
- **Total Required Disk Space:** To view the total disk space required for the product to be installed.
- **Show all available volumes**: To browse through file system for available disk space. Select check box to display the file system.

6. This screen appears if the installer detects insufficient TMP space. Remove unneeded files from the swap directory to provide sufficient space for installation and click **Next**. If your swap space is smaller than 500 MB, click **Exit** and correct the problem.

Figure 5–6 Insufficient Space in TMP Screen



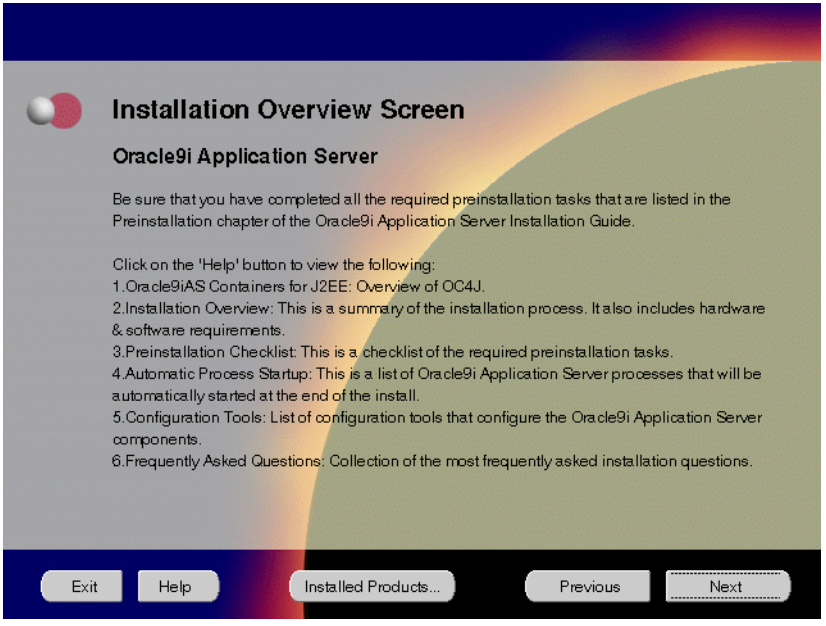
The Insufficient Space in TMP screen indicated inadequate space in the swap directory. You have two options:

- If you have more than 500 MB swap space, then remove unneeded files from your swap space to create room for installation and click **Next** to proceed.
- If you have less than 500 MB swap space, then **Exit** the installer and set TMP environment variable to point to a writable directory with sufficient space.

For detailed information on TMP directory, refer to"TMP" on page 2-15.

7. Click the **Help** button to verify that all the preinstallation tasks have been performed, and then click **Next**.

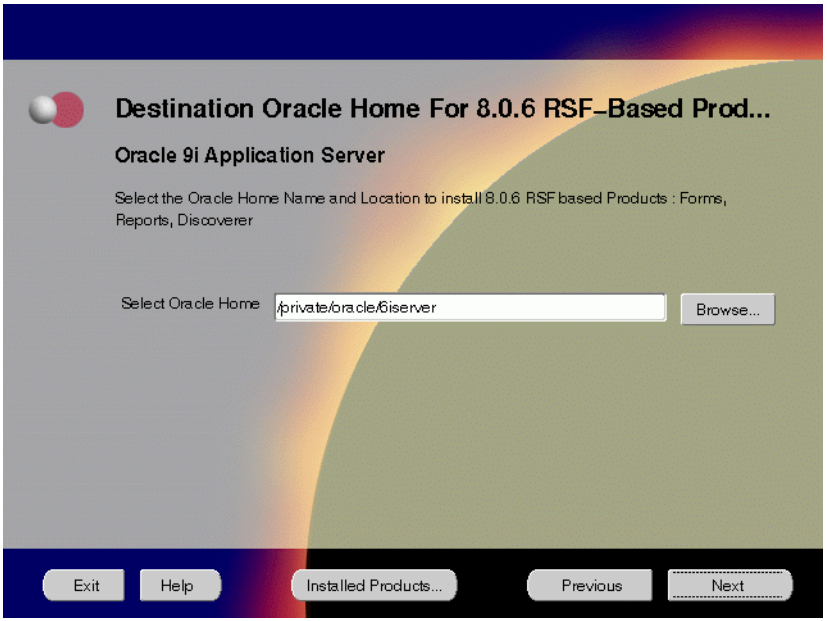
Figure 5–7 Installation Overview Screen



The Installation Overview screen gives you an overview of the installation process. Click on the **Help** button for information on the installation process, preinstallation checklist, automatic process startup, configuration tools, and frequently asked questions.

8. Enter the location of the 8.0.6 RSF based products Oracle Home, and click **Next**.

Figure 5–8 Destination Oracle Home for 8.0.6 RSF-Based Products



The Destination Oracle Home for 8.0.6 RSF-based Products screen enables you to enter the location to install the 8.0.6 RSF based products.

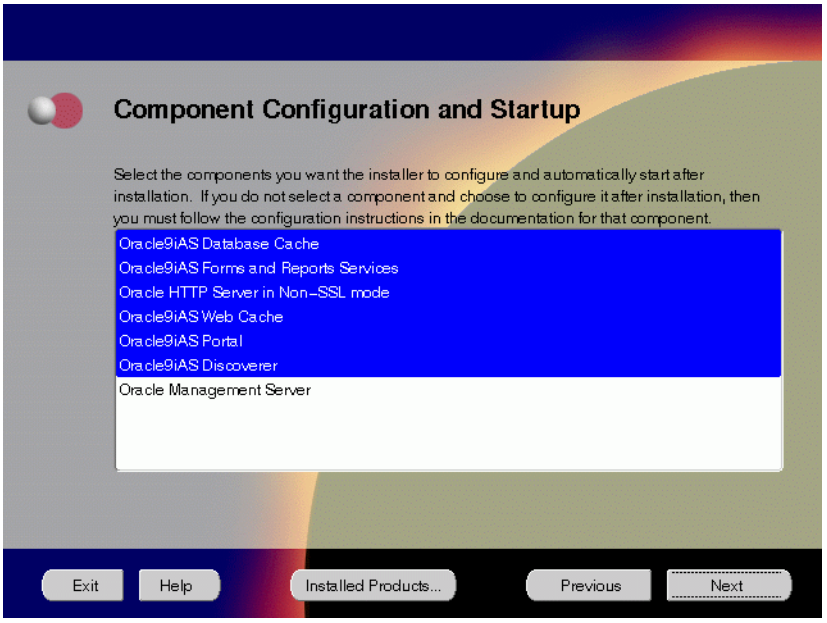
- **Select Oracle Home**: Enter the location of the Oracle Home where you want to install the 8.0.6 RSF-based products.
- **Browse**: To navigate through the file system to find source and destination locations.

Note: Do not to install Oracle9*i* Application Server in an Oracle home containing other Oracle products, including the database. Such an installation could overwrite shared components, causing the products to malfunction. Also, do not use a 8.1.x Oracle home. For migration and upgrade issues, refer to the *Oracle9i Application Server Migration Guide*.

---

9. Select the components you wish to configure during the installation process and click **Next**. These components will automatically start up after installation. If you wish to configure the components later, do not select them.

Figure 5–9 Component Configuration and Startup Screen



The Component Configuration and Startup screen allows you to select the components that you want the installer to configure and start after installation. This screen offers two configuration options:

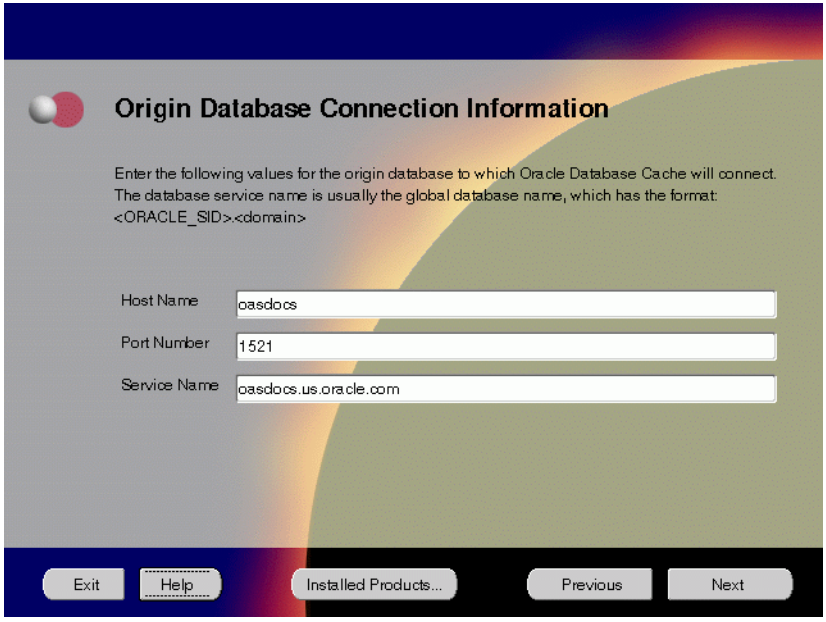
- If you select a component here, then the installer prompts you for any or all configuration information required by that component. After installation, the installer starts that component.
- If you de-select a component here, then the installer installs it, but does not configure or start it. later on, if you decide to use that component, then manually launch the configuration assistant to configure that component.

  See Also: Appendix A, "Configuration Tools"

You can select or de-select multiple components by holding down the Control key while clicking on the component name.

10. This screen will appear only if you selected Oracle9*i*AS Database Cache in the Component Configuration and Startup screen. Enter the host name, port number, and service name of the origin database and click **Next**.

Figure 5–10 Origin Database Connection Information



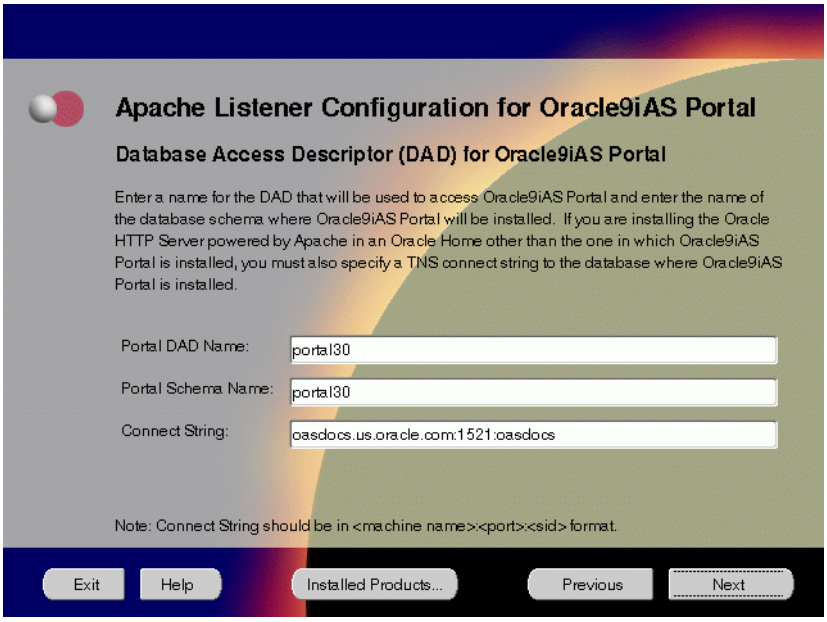
The Origin Database Connection Information screen enables you to identify the origin database for the middle-tier cache.

- **Host Name**: The name of the machine where the origin database is located.
- **Port Number**: The port number of the listener for the origin database. The default port number is 1521.
- **Service Name**: The database service name is the global database name. The global database name uniquely distinguishes the database from other databases in your network domain. The installation procedure uses this name to create an entry in the `tnsnames.ora` file on the local cache node.

  For example, if `oasdocs` is the database name and `us.oracle.com` is the network domain in which the database is located, then the service name is `oasdocs.us.oracle.com`.

11. This screen will appear only if you selected Oracle9*i*AS Portal in the Component Configuration and Startup screen. Enter or accept the default Portal DAD and Schema names. Also, enter the database connection information. Click **Next**.

Figure 5–11 Apache Listener Configuration for Oracle9iAS Portal (DAD and Schema name) Screen



The Apache Listener Configuration for Oracle9*i*AS Portal screen allows you to enter the name of the Database Access Descriptor (DAD) that will be used to access Oracle9*i*AS Portal, and the name of the database schema where Oracle9*i*AS Portal will be installed. It also enables you to enter the database connection information if Oracle9*i*AS Portal and Oracle HTTP Server are installed in different Oracle homes. The information you enter here is used to create the PL/SQL Gateway settings which you can access upon installation from the following location:
`http://machine_name:port/pls/admin_/gateway.htm`

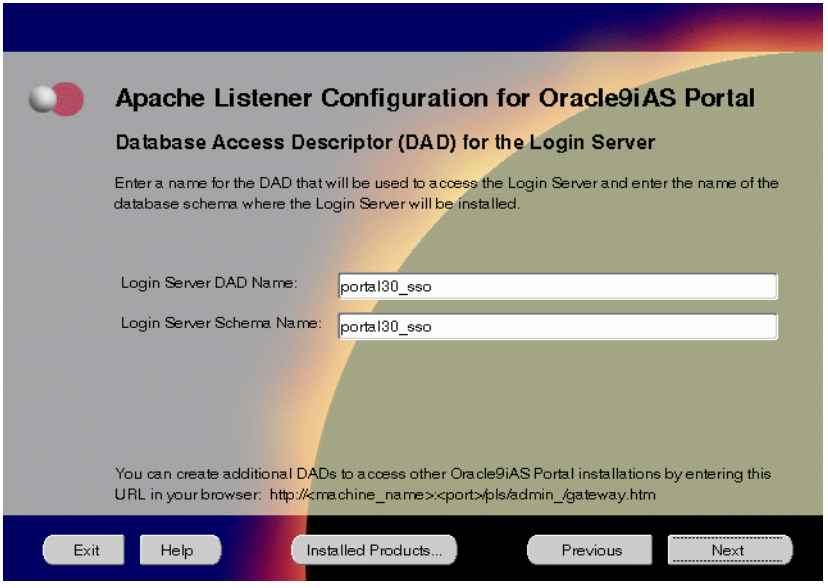
- **Portal DAD Name**: Enter the name of the DAD for each instance you installed in the database. A Database Access Descriptor (DAD) is a set of values that specify how the Apache Listener connects to your Oracle database server to fulfill an HTTP request. Based on this DAD name, the

installation automatically sets other DAD-related and default settings such as the name and location of the document table. The default DAD name is `portal30`.

- **Portal Schema Name**: Enter the name of the database schema that will contain Oracle Portal. A schema is a collection of components and database objects under the control of a given database user. Each Oracle Portal application maps to an Oracle database schema. The default schema name is `portal30`.
- **Connect String**: Enter the origin database connection information in the form `host:port:sid`.

12. This screen will appear only if you selected Oracle9*i*AS Portal in the Component Configuration and Startup screen. Enter or accept the default Login Server DAD and Schema names. Click **Next**.

Figure 5–12 Apache Listener Configuration for Oracle9iAS Portal (Login Server) Screen

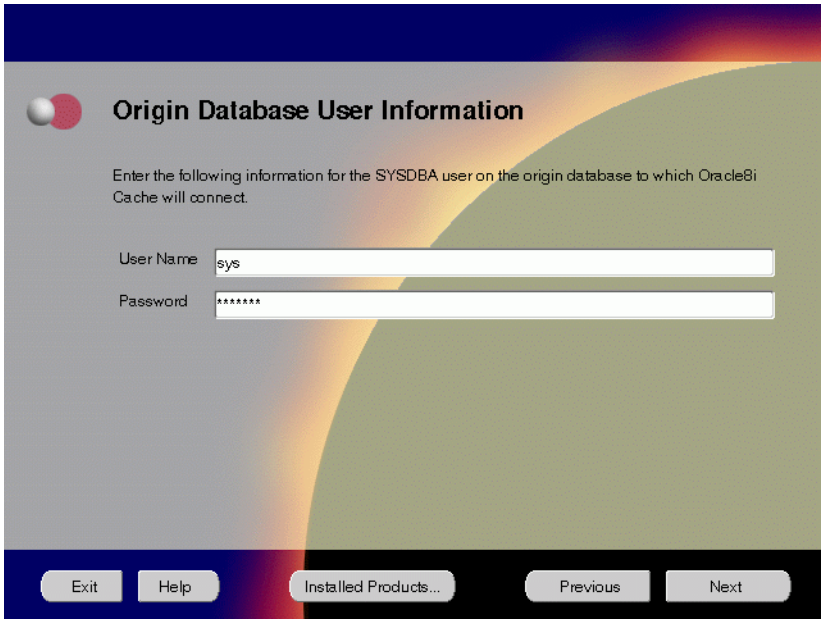


The Apache Listener Configuration for Oracle9*i*AS Portal screen allows you to enter the Login Server DAD and Schema Name, with a `_sso` extension for easy recognition. The Login Server provides an enterprise-wide Single Sign-On (SSO) mechanism that enables an Oracle Portal user to log in securely to Oracle Portal and any partner and external applications using a single user name and password.

- **Login Server DAD Name**: Enter the name of the DAD for each instance you installed in the database.The default DAD name is `portal30_sso`.
- **Login Server Schema Name**: Enter the name of the database schema that will contain Oracle Portal.The default schema name is `portal30_sso`.

13. This screen will appear only if you have selected Oracle9*i*AS Database Cache in the Component Configuration and Startup screen. Enter the SYSDBA name and password and click **Next**.

Figure 5–13 Origin Database User Information Screen



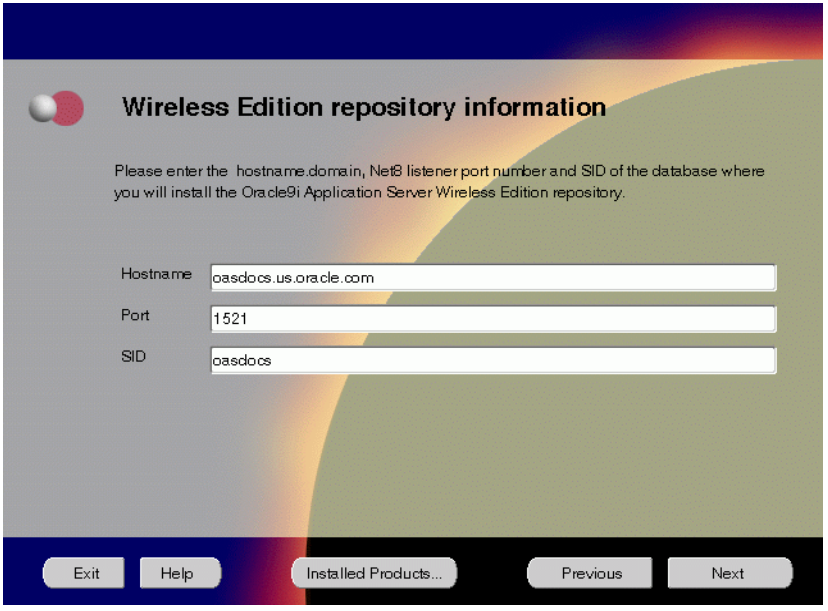
The Origin Database User Information screen allows you to enter the SYSDBA information created for the origin database.

- **User Name**: The SYSDBA user name for the origin database that the installer detects and defaults. You can change the name or accept the default.
- **Password**: The password for the SYSDBA user.

14. Enter the hostname, port number, and SID of the origin database where you will install the Oracle9*i*AS Wireless, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then an "Upgrade Installation Detected" screen will appear. Review the content on the screen and click **Next** or **Exit** accordingly. If you click **Next**, then the installation will continue and the following screen will appear.

Note: Do not enter Oracle9*i*AS Database Cache hostname, port number, and SID in this screen.

Figure 5–14 Wireless Edition Repository Information Screen



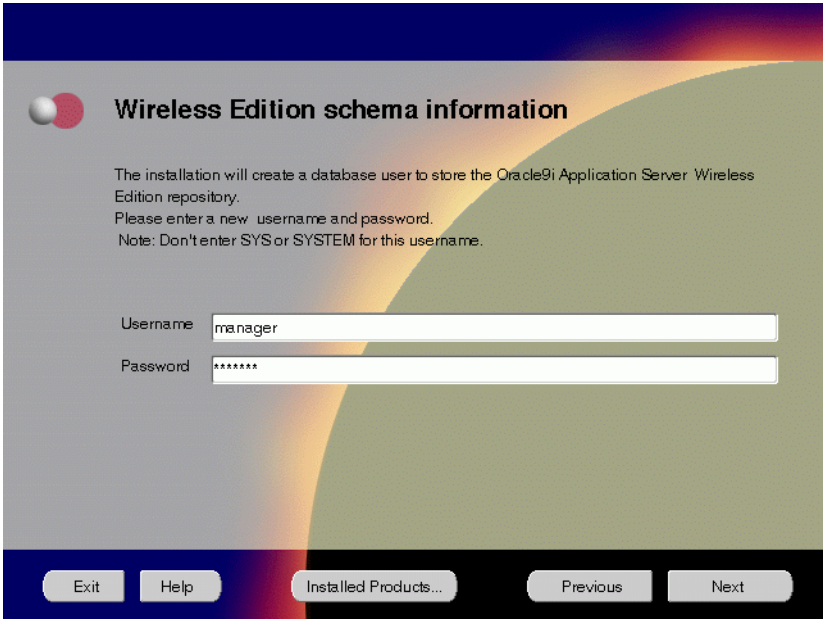
The Wireless Edition Repository Information screen allows you to enter the hostname, Net8 Listener port number, and SID of the database where you will install the Oracle9*i*AS Wireless repository.

- **Hostname**: Enter the hostname.domain of the database where you will install the Oracle9*i*AS Wireless.
- **Port**: Enter the Net8 Listener port number.
- **SID**: Enter the System Identifier (SID) of the database where you will install the Oracle9*i*AS Wireless repository.

15. Enter the new username and password for the database user to store the Oracle9*i*AS Wireless repository, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then the "Oracle9*i*AS Wireless Schema Information Screen" will be slightly different. Enter the existing Oracle9*i*AS Wireless username and password, and click **Next**.

Note: Do not use an existing database user, (that is, SYS, SYSTEM, or any other existing database user) as the username.

Figure 5–15 Wireless Edition Schema Information Screen



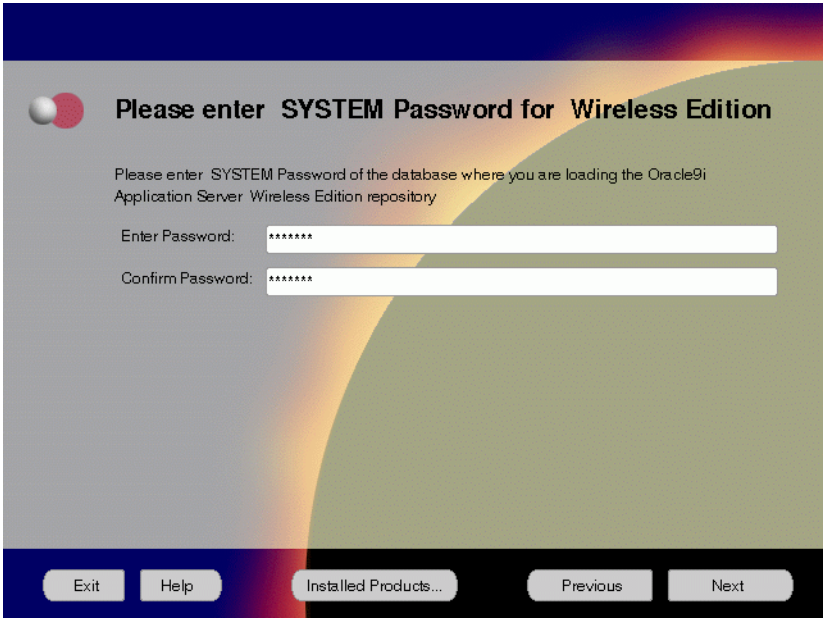
The Wireless Edition Schema Information screen allows you to create a database user to store the Oracle9*i*AS Wireless repository.

- **Username**: Enter a new user name for the database user to store the Oracle9*i*AS Wireless repository.
- **Password**: Enter a password for the database user.

16. Enter and confirm the SYSTEM password of the database, and click **Next**. If you are upgrading from Oracle9*i* Application Server, version 1.0.2.1, then a "Wireless Edition Administrator Password Information" screen appears. Enter and confirm the "Administrator" password, and click **Next**.

Note: Do not enter the database schema owner password.

Figure 5–16 System Password for Wireless Edition Screen

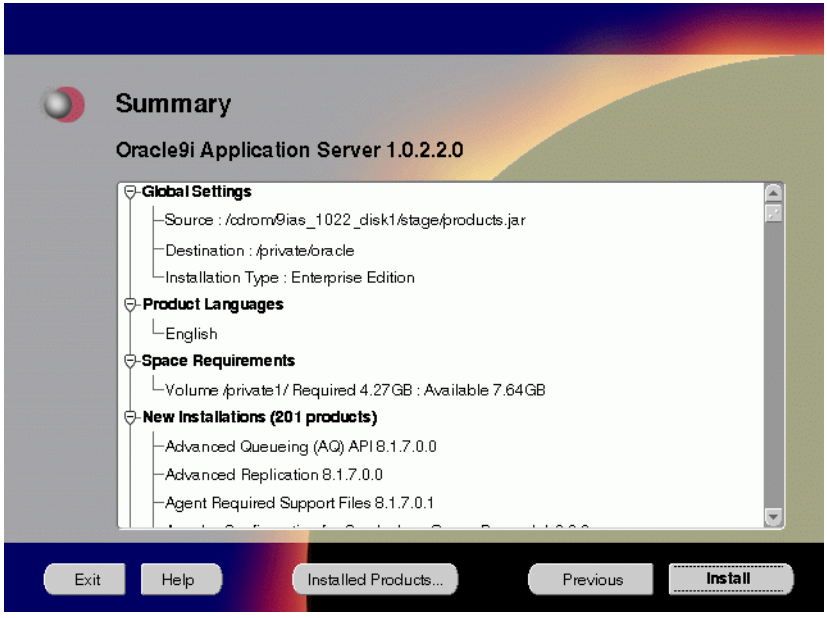


The System Password screen allows you to enter and confirm the SYSTEM password of the database where you are loading the Oracle9*i*AS Wireless repository.

- **Enter Password**: Enter the SYSTEM password of the database where you will install the Oracle9*i*AS Wireless.
- **Confirm Password**: Re-enter the SYSTEM password as entered above for verification.

17. Review the summary and click **Install** to begin the installation process.

Figure 5–17 Summary Screen



The Summary screen allows you to review all the settings before the actual installation process. These settings include source, destination, installation type, product language, space requirements, and a list of components.

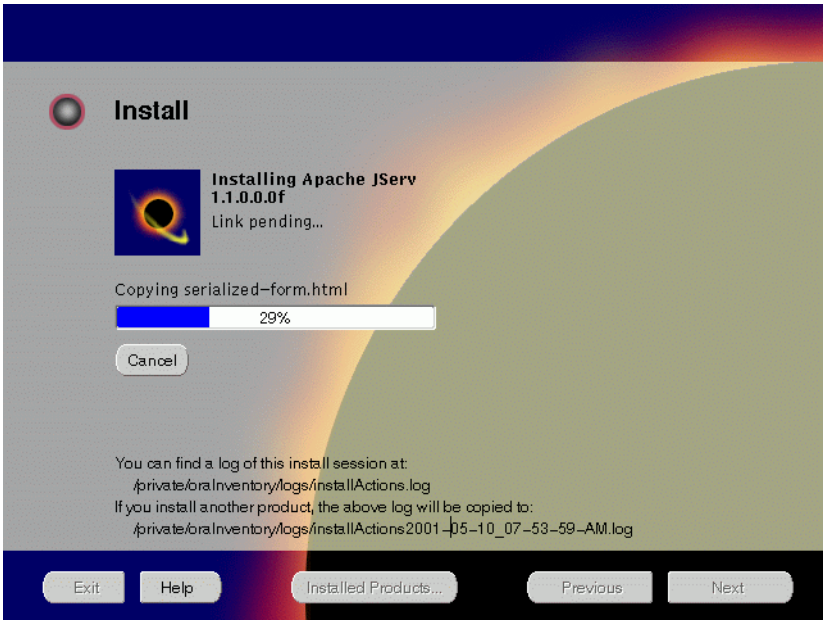
- To make changes to any of these settings, click **Previous** to return to the respective screens.

Note: Insufficient disk space is indicated in red under **Space Requirements**.

When you click **Install**, the installation process begins.

18. Monitor the installation process and after the installer finishes, click **Next**.

Figure 5–18 Install Screen



The Install screen appears while the product is installing. Installation operations include executing actions such as file copy and linking, and executing decision points and calculations. It also displays the full path of the installation log.

- **Cancel**: To discontinue the installation process. You can then choose to stop the installation of an individual component or the entire product.

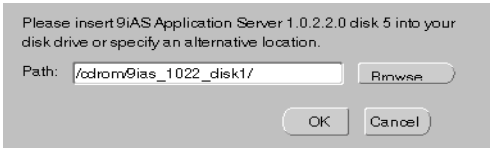
For more information about installation log, refer to "oraInventory Directory" on page 2-33.

During the installation process, Oracle Installer appears to install 8.0.6 RSF-based products such as Oracle9*i*AS Forms Services, Oracle9*i*AS Reports Services, and Oracle9*i*AS Discoverer. No user input is required.

Changing Disks

During installation, the installer prompts you to switch between Disks 1 through 5. Use these steps to change disks and continue the installation process.

Figure 5–19 Changing Disks Dialog



a. Eject and unmount the current disk.

If you are using Solaris Volume Management software and Disk1 was automatically mounted, then this can be done with the following command:

```
prompt> eject cdrom
```

If you are not using Solaris Volume Management software, then you must manually eject and unmount the disk. For further instructions, refer to your operating system documentation

b. Insert the next disk into the CD-ROM drive and mount it.

If you are using the Solaris Volume Management software, then the next disk will be automatically mounted.

If you are not using Solaris Volume Management software, then you must manually mount the disk. For further instructions, refer to "Starting Oracle Universal Installer" on page 2-34.

c. Click the **Browse** button on the changing disks dialog, and navigate to `/cdrom/9ias_1022_disk`*x*. This directory may be different depending on where the original disk was mounted.

d. Click OK to continue the installation process.

Running root.sh

After installation is completed, the installer prompts you to run root.sh script. Use these steps to run the root.sh script.

a. Log on as the root user.

b. Go to the Oracle home directory.

```
prompt> cd $ORACLE_HOME
```

c. Run the root.sh script.

```
prompt> ./root.sh
```

d. Exit root user.

Once you see "Finished running generic part of the root.sh script" and "Now product-specific root actions will be performed," exit root user and return to the Install screen.

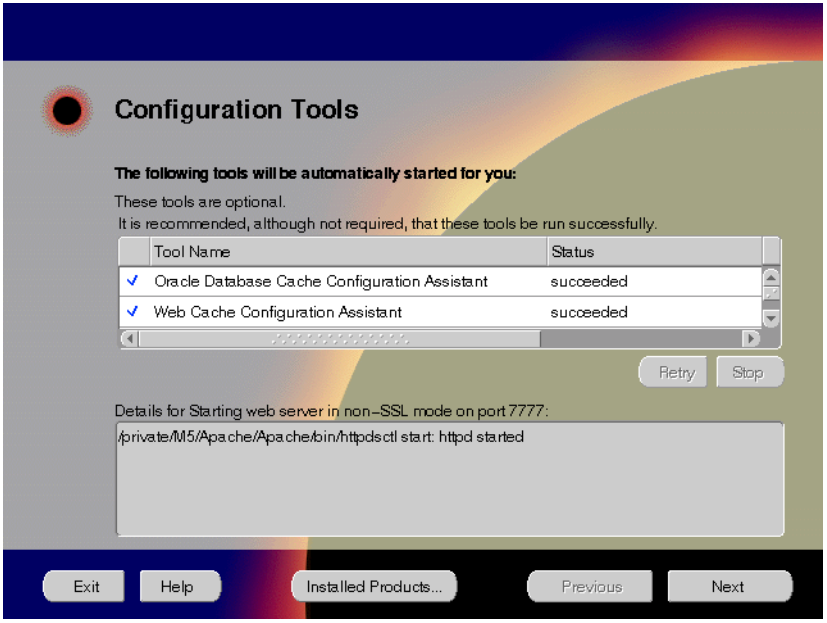
The root.sh script detects:

- Settings of ORACLE_OWNER, ORACLE_HOME and ORACLE_SID environment variables.
- Full path of local bin directory. You can accept the default or change to a different local bin directory.

19. Start the origin database if it has been shut down during installation. Verify the list of configuration tools and click **Next**. This screen appears only if you select components to configure and start in the Components Configuration and Startup screen.

> **Note:** The installer has completed copying and linking the necessary files. Be sure to start the database if it had been shut down for the installation process. The configuration tools such as Oracle9*i*AS Portal Configuration Assistant need to connect to an active database for configuration purposes.

Figure 5–20 Configuration Tools Screen



The Configuration Tools screen lists the configuration tools for all installed components.

Scroll down the list to review the configuration status of each tool. The status changes as each component is configured.

The installer performs the following functions in this screen:

- Executes a configuration tool for each component selected previously in the Component Configuration and Startup screen.
- Displays all the configuration settings in the display window below as it executes a configuration tool for each component.
- Enables you to view configuration settings after all configuration tools are executed. Click on each component to review all the changes made.
- Allows you to view data for failed executions in the display window. You can either fix the error and click **Retry** to execute the configuration tool again, or ignore the error and click **Next** to proceed to the next screen.
- **Retry**: To re-execute the configuration script if the configuration of a component fails.
- **Stop**: To quit the configuration process.

Configuration Tools

Depending on the components you select in the Configuration and Startup screen, the following configuration tools launch:

Oracle9*i*AS Database Cache Configuration Assistant - This configuration assistant enables you to configure your middle-tier caches. Oracle9*i*AS Database Cache Configuration Assistant will not appear if you are migrating from Oracle9*i* Application Server 1.0.2.1to 1.0.2.2.

> **See Also:** "Oracle9iAS Database Cache Configuration Assistant" on page A-3 for instructions on running Oracle9*i*AS Database Cache Configuration Assistant.

Oracle9*i*AS Web Cache Configuration Assistant - This launches the service to start Oracle9*i*AS Web Cache. Oracle9*i*AS Web Cache service starts up automatically by default. If you choose not to use Oracle9*i*AS Web Cache, you will need to stop the service manually.

> **See Also:** "Starting and Stopping Components" on page 5-41

Starting HTTP Server - This starts Oracle HTTP Server.

Starting Forms Server - This starts the Oracle9*i*AS Forms Services.

Starting Reports Server - This starts the Oracle9*i*AS Reports Services.

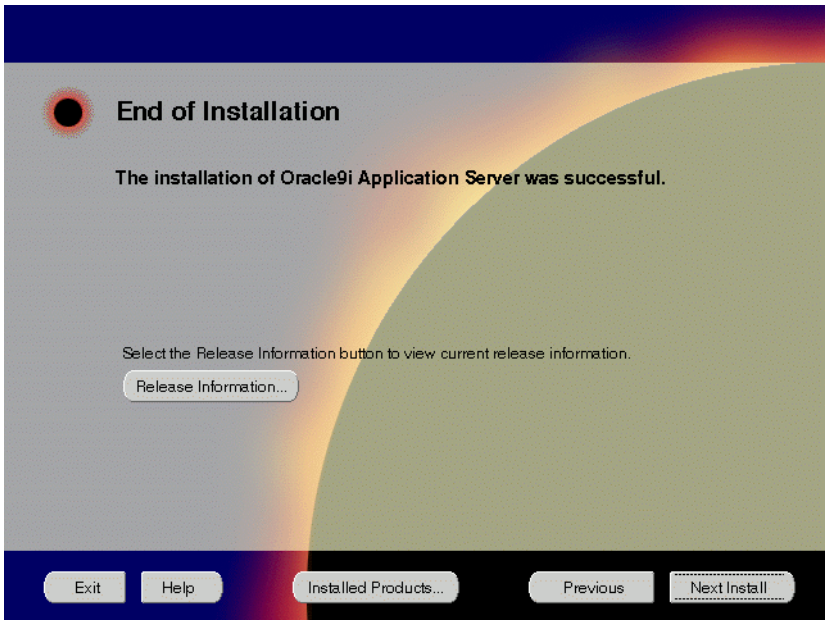
Oracle9*i*AS Portal Configuration Assistant - This configuration assistant loads necessary database objects for Oracle9*i*AS Portal to run.

> **See Also:** "Oracle9iAS Portal Configuration Assistant" on page A-8 for instructions on running Oracle9*i*AS Portal Configuration Assistant.

Starting Discoverer 4*i* Viewer Server - This starts the Oracle9*i*AS Discoverer Services.

20. Ensure that the installation was successful. Click **Exit** to quit the installer.

Figure 5–21 End of Installation Screen



The End of Installation screen appears at the end of the installation process. It notifies you whether the installation was successful or unsuccessful.

- **Release Information**: To view the latest release information.

If the installer detects that specific port numbers such as 7777, are occupied, it will display the alternate port numbers on the end of Installation screen. For Oracle HTTP Server port number information, refer to "Port Allocation" on page 2-18.

You have successfully installed the Enterprise Edition installation option of Oracle9*i* Application Server. Proceed to "Postinstallation" on page 5-31 to complete the installation process.

Postinstallation

The following instructions guide you through the basic postinstallation tasks for Oracle9*i* Application Server. Before performing these tasks, install, if needed, Oracle9*i* Application Server Client from the Oracle9*i* Application Server Administrative and Development Client CD included in the Oracle9*i* Application Server CD pack.

> **See Also:** Appendix B, "Installing Oracle9i Application Server Administrative and Development Client CD-ROM"

The postinstallation contains the following sections:

- Environment Scripts
- Component-specific Tasks
- Starting and Stopping Components
- Component Web Sites
- Component Port Numbers
- Additional Documentation

Environment Scripts

Table 5–1 and Table 5–2 list the environment script for Enterprise Edition installation option:

Table 5–1 Environment Scripts for C Shell Users

Component	C Shell
Oracle9*i*AS Database Cache	*ORACLE_HOME*/8ienv.csh
Oracle9*i*AS Discoverer	*ORACLE_HOME*/6iserver/discwb4/discwb.csh
Oracle9*i*AS Forms Services	*ORACLE_HOME*/6iserver/forms60.csh
Oracle9*i*AS Reports Services	*ORACLE_HOME*/6iserver/reports60.csh
Oracle9*i*AS Web Cache	*ORACLE_HOME*/8ienv.csh
Oracle Internet File System	Using the Bourne or Korn shell, run the following scripts: *ORACLE_HOME*/ifs1.1/bin/infenv.sh *ORACLE_HOME*/ifs1.1/bin/ifsconfig
Oracle Management Server	*ORACLE_HOME*/8ienv.csh

Table 5–2 Environment Scripts for Bourne or Korn Shell Users

Component	Bourne/Korn Shell
Oracle9*i*AS Database Cache	*ORACLE_HOME*/8ienv.sh
Oracle9*i*AS Discoverer	*ORACLE_HOME*/6iserver/discwb4/discwb.sh
Oracle9*i*AS Forms Services	*ORACLE_HOME*/6iserver/forms60.sh
Oracle9*i*AS Reports Services	*ORACLE_HOME*/6iserver/reports60.sh
Oracle9*i*AS Web Cache	*ORACLE_HOME*/8ienv.sh
Oracle Internet File System	*ORACLE_HOME*/ifs1.1/bin/infenv.sh *ORACLE_HOME*/ifs1.1/bin/ifsconfig
Oracle Management Server	*ORACLE_HOME*/8ienv.sh

Component-specific Tasks

This section contains postinstallation tasks for the following topics:

- Oracle Internet File System
- Oracle Management Server
- Oracle9iAS Database Cache
- SSL Authentication Method Configuration
- Multi-threaded Server Configuration

Oracle Internet File System

You must run the Oracle Internet File System Configuration Assistant manually to configure Oracle Internet File System.

> **See Also:** "Oracle Internet File System Configuration Assistant" for instructions on running Oracle Internet File System Configuration Assistant.

Oracle Management Server

You must run the Oracle Enterprise Manager Configuration Assistant manually to configure Oracle Management Server.

> **See Also:** "Oracle Management Server Configuration Assistant" for instructions on running Oracle Enterprise Manager Configuration Assistant.

Oracle9*i*AS Database Cache

Be sure to perform the following post-installation steps to Oracle9*i*AS Database Cache

- Setting Up the Oracle9iAS Database Cache Environment for Your Applications
- Using the Oracle9iAS Database Cache Home
- Using a Previous Oracle8i Release 8.1.6 Oracle Home
- Relinking Applications That Use Releases Previous to Release 8.1.6
- Modify the initicache.ora File

Setting Up the Oracle9*i*AS Database Cache Environment for Your Applications

When you install Oracle9*i*AS Database Cache, the installation procedure installs files that are specific to Oracle9*i*AS Database Cache and files that are updates to Oracle8*i* Server or Client release 8.1.6.1. These files contain the Oracle9*i*AS Database Cache functionality, as well as bug fixes to files usually installed with the Oracle8*i* Server or Client.

To use Oracle9*i*AS Database Cache, you must make sure that your applications are using the files and libraries installed for Oracle9*i*AS Database Cache. You can do this in the following ways:

- Run your application from the Oracle home in which you installed Oracle9*i*AS Database Cache. This is the supported method. See "Using the Oracle9iAS Database Cache Home" for a description of the steps you must take.
- If you have multiple Oracle homes and you need to run your application from the Oracle home for Oracle8*i* Server or Client release 8.1.6 or 8.1.6.1, you must copy files from the Oracle9*i*AS Database Cache Oracle home to the Oracle8*i* Server or Client Oracle home. See "Using a Previous Oracle8i Release 8.1.6 Oracle Home" on page 5-36 for a description of the steps you must take.
- If your application was compiled and linked using a release prior to Oracle8*i* Server or Client release 8.1.6, you must relink your application using the OCI libraries that are installed by Oracle9*i*AS Database Cache. See "Relinking Applications That Use Releases Previous to Release 8.1.6" on page 5-37 for more information.

Using the Oracle9*i*AS Database Cache Home

To run your application from the Oracle home in which you installed Oracle9*i*AS Database Cache, you must take the following steps:

1. From the process in which you will run your application, set the following environment variables:
   - Set Oracle home to the Oracle home in which you have installed Oracle9*i*AS Database Cache.
   - Set `LD_LIBRARY_PATH` so that the Oracle9*i*AS Database Cache library directory (*`ORACLE_HOME`*`/lib`) precedes library directories from other Oracle homes.
   - Set `ORA_OCI_CACHE` to "1" so that all applications started from the process will use the cache. (Alternatively, you can use parameters within `OCI` applications to control which applications or statements use the cache. See the *Oracle9i*AS Database Cache *Concepts and Administration Guide* for more information.)
   - If you use the environment variable `TNS_ADMIN`, make sure that it is set to the *`ORACLE_HOME`*`/network/admin` directory in the Oracle home for Oracle9*i*AS Database Cache.
2. If your application was running previously on the node on which you installed Oracle9*i*AS Database Cache and the application connected to the origin database by using an entry in an existing `tnsnames.ora` file, you must copy that entry to the `tnsnames.ora` file used by Oracle9*i*AS Database Cache.

   The `tnsnames.ora` file is located in the *`ORACLE_HOME`*`/network/admin` directory. Copy the entry from the file in the previously existing Oracle home to the `tnsnames.ora` file in the Oracle home in which you installed Oracle9*i*AS Database Cache.

   Note that the Oracle9*i*AS Database Cache installation creates an entry for the origin database in the `tnsnames.ora` file on the local cache node. It assigns the alias `ora_icache_origin`. Do not modify or delete the `ora_icache_origin` entry. To assign a different alias for another purpose, edit the `tnsnames.ora` file and add another entry. The Oracle9*i*AS Database Cache installation also creates an entry, `ora_icache`, for the cache. Do not modify or delete this entry.

Using a Previous Oracle8*i* Release 8.1.6 Oracle Home

If you previously ran your application from the Oracle home for Oracle8*i* Server or Client release 8.1.6 or 8.1.6.1 and you continue to need to run your application from that Oracle home, you must take the following steps:

Note: Use this method only if you cannot use the Oracle home for Oracle9*i*AS Database Cache. Do not use this method if your application ran from a release later than 8.1.6.1. Instead, refer to "Using the Oracle9iAS Database Cache Home" on page 5-35 for the recommended method.

---

1. Copy the following library files from the Oracle home in which you installed Oracle9*i*AS Database Cache to the Oracle home for the Oracle8*i* server or client that your application uses:
   - *ORACLE_HOME*/lib/libclient8.a
   - *ORACLE_HOME*/lib/libgeneric8.a (not required for 8.1.6.1)
   - *ORACLE_HOME*/lib/libwtc8.so
   - *ORACLE_HOME*/lib/libwtc8.a
2. Set the following environment variables to the Oracle home for the Oracle8*i* server or client that your applications uses:
   - Set ORACLE_HOME to the Oracle home.
   - Set LD_LIBRARY_PATH to *ORACLE_HOME*/lib.
   - Set PATH to include *ORACLE_HOME*/bin.
3. From the Oracle home for the Oracle8*i* server or client that your application uses, run the executable file genclntsh, which is located in the ORACLE_HOME/bin directory.
4. Copy the SQL*Plus executable file from the Oracle home in which you installed Oracle9*i*AS Database Cache to the Oracle home for the Oracle8*i* server or client that your application uses.
5. Set the value of the environment variable ORA_OCI_CACHE to “1” so that all applications started from the process will use the cache. (Alternatively, you can use parameters within OCI applications to control which applications or statements use the cache.)

6. If you use the environment variable or registry parameter `TNS_ADMIN`, make sure it points to the Oracle home that your application uses.
7. Copy the entries in the `tnsnames.ora` file from the Oracle home in which you installed Oracle9*i*AS Database Cache to the `tnsnames.ora` file in the Oracle home for the Oracle8*i* server or client that your application uses.

Relinking Applications That Use Releases Previous to Release 8.1.6

If your application was compiled and linked using a release prior to Oracle8*i* Server or Client release 8.1.6, you must relink your application using the `OCI` libraries that are installed by Oracle8*i* Cache.

For information about relinking applications, see *Oracle Call Interface Programmers Guide* and *Oracle8i Administrator s Reference* in the database documentation.

Then, you must take the steps described in "Using the Oracle9iAS Database Cache Home" on page 5-35.

Modify the initicache.ora File

The Oracle9*i*AS Database Cache installation creates a cache using the same database character set as the origin database. However, it does not set other National Language Support (NLS) features, such as date format or currency symbols.

If the initialization file (`init`*`SID`*`.ora`) of your origin database specifies NLS parameters, you must copy those parameters to the initialization file (`initicache.ora`) of the cache. (NLS parameters begin with "NLS_".)

For example, if the initialization file of your origin database contains the following parameters, copy them to `initicache.ora`:

```
NLS_LANGUAGE = JAPANESE
NLS_CALENDAR = "Japanese Imperial"
NLS_DATE_FORMAT = "E YY-MM-DD"
```

The file `initicache.ora` is located in the following directory:

`ORACLE_HOME``/admin/icache/pfile`

For information about setting up your caches and additional information about configuring your application environment, see the *Oracle9i*AS Database Cache *Concepts and Administration Guide*.

SSL Authentication Method Configuration

This section guides you through configuring SSL for Oracle9*i*AS Database Cache, Oracle Servlets Engine for Java, Distributed CORBA Applications, and Enterprise JavaBeans.

These steps guide you through the SSL configuration for the following:

Oracle9*i*AS Database Cache

To configure Oracle9*i*AS Database Cache to use SSL, remove the comment characters (#) from the following entry in the `listener.ora` file:

For secure connections over SSL, uncomment the following lines:

```
#  (DESCRIPTION = # Secure TCP connections
#      (ADDRESS =
#         (PROTOCOL = TCPS) (HOST = host_name) (PORT = 2484)
#      )
#  )
```

The listener will listen for all SSL requests.

Oracle Servlets Engine for Java

To configure Oracle Servlets Engine for Java to use SSL, (in addition to removing the comment characters from the appropriate line in the initialization file) you must remove the comment characters (#) from the following entry in the `tnsnames.ora` file:

```
# Support for mod_ose over TCP with SSL connections.
# inst1_https =
#   (DESCRIPTION =
#      (ADDRESS =
#         (PROTOCOL=TCPS)
#         (HOST=host_name)
#         (PORT=2484)
#      )
#      (CONNECT_DATA=
#         (SERVICE_NAME=MODOSE)
#         (SERVER=shared)
#         (PRESENTATION=http://admin)
#      )
#   )
```

Distributed CORBA Applications and Enterprise JavaBeans

To configure distributed CORBA application and Enterprise JavaBeans to use SSL, (in addition to removing the comment characters from the appropriate line in the initialization file) you must remove the comment characters (#) from the following entry in the `listener.ora` file:

For secure IIOP connections over SSL, uncomment the following lines:

```
# (DESCRIPTION = # Secure IIOP Connections
#    (PROTOCOL_STACK =
#       (PRESENTATION=GIOP)
#       (SESSION=RAW)
#     )
#    (ADDRESS=(PROTOCOL=TCPS)(HOST=% s_host_name%)(PORT=2482))
#  )
```

Multi-threaded Server Configuration

These steps guide you through configuring Oracle9*i*AS Database Cache as a Multi-threaded server for Oracle Servlets Engine for Java, Distributed CORBA Applications, and Enterprise JavaBeans:

Oracle Servlets Engine for Java

To configure Oracle9*i*AS Database Cache as a multi-threaded server (MTS) for Oracle Servlets Engine for Java, you must make one or both of the following changes to your initialization file (`inst`*`SID`*`.ora`):

- For standard connections, remove the comment character (#) from the following line:

  ```
  # mts_dispatcher = "(PROTOCOL=TCP)(SERV=MODOSE)"
  ```

- To use the secure socket layer (SSL) authentication method, remove the comment character (#) from the following line:

  ```
  # mts_dispatcher = "(PROTOCOL=TCPS)(SERV=MODOSE)"
  ```

For information on enabling SSL for Oracle9*i*AS Portal, refer to *Oracle Portal 3.0.8 Configuration Guide*.

Distributed CORBA Applications and Enterprise JavaBeans

To configure Oracle9*i*AS Database Cache as a multi-threaded server (MTS) for distributed CORBA applications and Enterprise JavaBeans, you must make the following changes in your initialization file (`inst`*`SID`*`.ora`):

- Remove the comment character (#) from the following line:

  ```
  # mts_dispatcher = "(PROTOCOL=TCP)(PRE=oracle.aurora.server.SGiopServer)"
  ```

- To use the secure socket layer (SSL) authentication method, remove the comment character (#) from the following line:

  ```
  # mts_dispatcher = "(PROTOCOL=TCPS)(SERV=oracle.aurora.server.SGiopServer)"
  ```

Starting and Stopping Components

Table 5–3 lists the commands needed to individually start and stop the components.

Table 5–3 Starting and Stopping Components

Component	Function	Command
Oracle9*i*AS Database Cache	Start	*ORACLE_HOME*/bin/cachstrt
	Stop	*ORACLE_HOME*/bin/cachshut
Oracle9*i*AS Discoverer	Start	*ORACLE_HOME*/6iserver/discwb4/util/startall.sh
	Stop	*ORACLE_HOME*/6iserver/discwb4/util/stopall.sh
Oracle9*i*AS Forms Services	Start	*ORACLE_HOME*/6iserver/forms60_server start
	Stop	*ORACLE_HOME*/6iserver/forms60_server stop
Oracle9*i*AS Reports Services	Start	*ORACLE_HOME*/6iserver/reports60_server start
	Stop	*ORACLE_HOME*/6iserver/reports60_server stop
Oracle9*i*AS Web Cache	Start	*ORACLE_HOME*/webcache/bin/webcachectl start
	Stop	*ORACLE_HOME*/webcache/bin/webcachectl stop
Oracle9*i*AS Wireless Web Integration Server	Start	*ORACLE_HOME*/panama/WebIntegration/Server/bin/server.sh
	Stop	Go to `http://hostname.domainname:5555` and click on shutdown.
Oracle HTTP Server	Start	*ORACLE_HOME*/Apache/Apache/bin/apachectl start
	Stop	*ORACLE_HOME*/Apache/Apache/bin/apachectl stop
Oracle HTTP Server SSL-enabled	Start	*ORACLE_HOME*/Apache/Apache/bin/apachectl startssl (Log in as `root` user.)
	Stop	*ORACLE_HOME*/Apache/Apache/bin/apachectl stop (Log in as `root` user.)
Oracle Internet File System	Start	*ORACLE_HOME*/ifs1.1/bin/ifsstart
	Stop	*ORACLE_HOME*/ifs1.1/bin/ifsstop
Oracle Management Server	Start	*ORACLE_HOME*/bin/oemctrl start oms &
	Stop	*ORACLE_HOME*/bin/oemctrl stop oms &

Component Web Sites

Table 5–4 lists Web sites for Oracle9*i* Application Server components.

Table 5–4 Component Web sites

Component	Web Site
Oracle9*i*AS Discoverer Viewer	http://*hostname.domain:listener_port*/discoverer4i/viewer
Oracle9*i*AS Discoverer Plus	http://hostname.domain:*listener_port*/discwb4/html/english/welcome.htm
Oracle9*i*AS Forms Services	http://*hostname.domain:listener_port*/dev60html/runform.htm
Oracle9*i*AS Portal	http://*hostname.domain:listener_port*/pls/portal30
Oracle9*i*AS Reports Services	http://*hostname.domain:listener_port*/dev60html/runrep.htm
Oracle9*i*AS Wireless Web Integration Server	http://*hostname.domain*:5555 (Log on as Administrator/manage)
Oracle9*i*AS Web Cache	http://*hostname.domain*:4000 (Log on as Administrator/Administrator)
Oracle HTTP Server Oracle HTTP Server (SSL-enabled)	http://*hostname.domain*:*listener_port* https://*hostname.domain*:*listener_port*
Oracle Internet File System	http://*hostname.domain:listener_port*/ifs/files (Log on as system/manager)
Oracle Management Server	http://*hostname.domain*:3339

Component Port Numbers

Table 5–5 lists the default port numbers on which requests are received for each component.

Table 5–5 Port Numbers

Components	Port Number
Oracle9*i*AS Database Cache Oracle9*i*AS Database Cache TNS Listener Oracle9*i*AS Database Cache `-wtcme` process Oracle9*i*AS Database Cache Data Gatherer `-vppdc` process	51719 TCP / IP: 1521, IIOP: 2481 51719, 51720 1808, 1809
Oracle9*i*AS Discoverer	Oracle9*i*AS Discoverer uses the same port number as Oracle HTTP Server
Oracle9*i*AS Forms Services Load Balancer Client Load Balancer Server	9001 9011 9021
Oracle9*i*AS Portal	Oracle9*i*AS Portal uses the same port number as Oracle HTTP Server
Oracle9*i*AS Reports Services	1950
Oracle9*i*AS Web Cache Oracle9*i*AS Web Cache Administration Port Oracle9*i*AS Web Cache Invalidation Port Oracle9*i*AS Web Cache Statistics Port	1100 4000 4001 4002
Oracle9*i*AS Wireless Oracle9*i*AS Wireless Web Integration Server	Oracle9*i*AS Wireless uses the same port as Oracle HTTP Server 5555
Oracle HTTP Server Oracle HTTP Server (SSL-enabled) Oracle HTTP Server Jserv Servlet Engine	For information on port numbers, refer to "Port Allocation" on page 2-18. 8007
Oracle Internet File System	Oracle Internet File System uses the same port number as Oracle HTTP Server FTP: 21 SMB: 139 SMTP: 2500 IMAP: 143 CUP: 4180
Oracle Enterprise Java Engine TNS Listener	TCP / IP: 1521 IIOP: 2481
Oracle Management Server	7771, 7772, 7773

Additional Documentation

For further information on postinstallation and configuration tasks, refer to component-specific documentation. For information on viewing and installing the documentation, refer to Appendix F, "Installing Documentation Library".

6

Non-Interactive Installation

This chapter guides you through the non-interactive installation of Oracle9*i* Application Server. The topics include:

- Introduction
- Setting a Response File
- Specifying a Response File
- Error Handling
- Validation of Values from Response File

Introduction

You can perform a non-interactive installation of Oracle9*i* Application Server by supplying the Oracle Universal Installer with a *response file*. The installer uses the variables and values contained in this text file to provide answers to some or all of the installer user prompts. If you include responses for all of the installer prompts in the response file, then you can run a "silent" installation that displays no graphical output.

Requirements

For a complete list of requirements, refer to Chapter 1, "Requirements".

Setting a Response File

There are multiple Oracle Universal Installer response files depending on your installation type. These files are included on the Oracle9*i* Application Server, Release 1 (v1.0.2.2) CD-ROM. You will need to edit the response file to suit your installation option. The following sections describe configuring the response files for your installation type:

To use a response file, copy the response file from the Oracle9*i* Application Server CD-ROM to a drive mounted on your system. For example:

```
prompt> cd mount_point/Disk1/stage/Response/
prompt> cp oracle.iappserver.iapptop.Enterprise.rsp local_directory
```

Edit the response file you want to use with any text editor to include information specific to your system. Each file contains instructions for properly configuring the response file.Table 6–1 lists the response files included on the Oracle9*i* Application Server CD-ROM.

Table 6–1 Response Files

Oracle9*i* Application Server installation option	File Name
Minimal Edition	oracle.ias.silent.toplevel.Minimal.rsp
Standard Edition	oracle.ias.silent.toplevel.Standard.rsp
Enterprise Edition	oracle.ias.silent.toplevel.Enterprise.rsp

Specifying a Response File

To make the installer use the response file at install time, follow the same steps to launch the installer, but specify the location of the response file that you wish to use as a parameter when starting the installer. To make a configuration assistant use a response file, invoke it at the command line using the same parameters.

See Also: "Starting Oracle Universal Installer" on page 2-34

```
prompt> ./runInstaller [-silent] -responseFile absolute_path_and_filename
```

To perform a completely silent installation or configuration session, use the `-silent` parameter.

Oracle Enterprise Manager Configuration Assistant

To run Oracle Enterprise Manger Configuration Assistant in non-interactive mode, you must use both the `-silent` and `-responseFile` parameters.

Oracle9*i*AS Database Cache Configuration Assistant

This tool's user input is specified with EE response file parameters `sl_dbaReturn` and `sl_connectStringReturn` as mentioned above with component [`oracle.icache.icacheca_1.0.2.2.0`]

The following steps invoke the Oracle9*i*AS Database Cache Configuration Assistant and complete the configuration silently.

Launch the following from the Oracle home:

```
prompt > ORACLE_HOME/bin/wtacca -create -typical -silent
        responsefile=ORACLE_HOME/resp/icacheresponse.rsp
        username=syspassword = <SYSDBApasswordofthesysuser>
        service=ora_icache_origin
        ntadminpw=<passwordofthentuserwithadminprivileges>
```

Note the following:

1. The response file is already available in the above location. The user need to substitute the Oracle home value.
2. Fill the parameters flanked by <> with the correct value.
3. The 'ntadminpw' should be mentioned at the end.

The success or failure of the installation is logged in the `installActions.log` and `silentInstall.log` file. The log files are created in the `oraInventory` directory during installation. For more information, refer to "oraInventory Directory" on page 2-33.

Note: The installer or configuration assistant will fail if you attempt a non-interactive session without appropriately configuring a response file.

Error Handling

Values for variables that are of the wrong context, format, or type are treated as if no value were specified. Variables which are outside any section are ignored.

A non-interactive installation fails if no response file is specified, or if you attempt a silent installation with an incorrect or incomplete response file. If you attempt a silent installation and the installer encounters an error, such as insufficient disk space, then the installation fails. The results of your non-interactive installation is recorded in the installation session log file. For more information, refer to "oraInventory Directory" on page 2-33.

Validation of Values from Response File

The installer or configuration assistant performs calculation and validation of the response file at runtime. Failure of the validation process ends the installation or configuration.

7

Deinstallation and Reinstallation

This chapter guides you through the deinstallation and reinstallation process for Oracle9*i* Application Server. They are described in the following topics:

- Deinstallation
- Reinstallation

Deinstallation

The following steps guide you through the deinstallation process of Oracle9*i* Application Server. This process is divided into three parts:

- Deinstalling Using Oracle Installer (only if you have installed Enterprise Edition)
- Deinstalling Oracle9iAS Database Cache (only if you have installed Enterprise Edition)
- Deinstalling Oracle Management Server (only if you have installed Enterprise Edition)
- Deinstalling using Oracle Universal Installer

Note: Be sure to stop all services and processes before starting the deinstallation process.

Deinstalling Using Oracle Installer

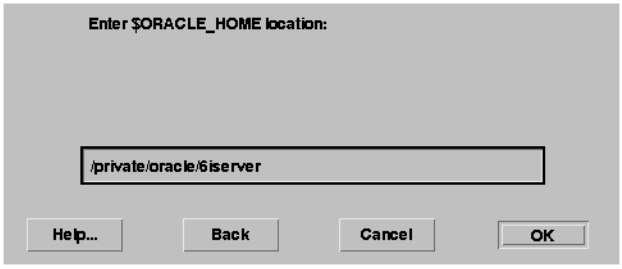
Follow the instructions below to deinstall Oracle Forms Services, Oracle Reports Services, and Oracle9*i*AS Discoverer. Perform these steps only if you have installed Oracle9*i* Application Server Enterprise Edition. If you have installed Minimal or Standard Edition, proceed directly to "Deinstalling using Oracle Universal Installer" on page 7-13.

1. Launch Oracle Installer from the following command:

```
prompt> cd ORACLE_HOME/6iserver/orainst
prompt> ./orainst /m
```

2. Enter the Oracle home location and click **OK**.

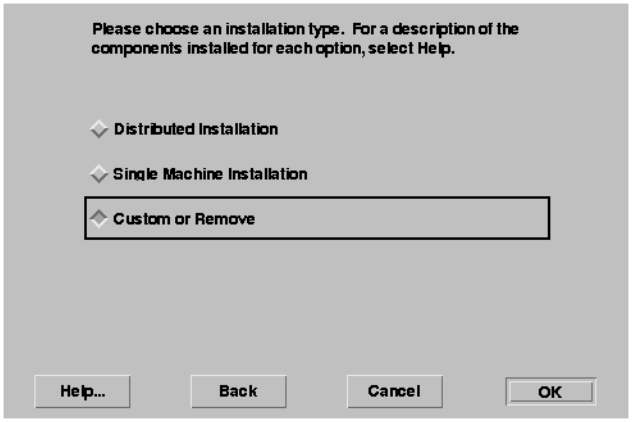
Figure 7–1 Oracle Home Location Screen



Oracle Home Location screen allows you to enter the Oracle home location. Be sure to enter *ORACLE_HOME*`/6iserver` in the field.

3. Select **Custom or Remove**, and click **OK**.

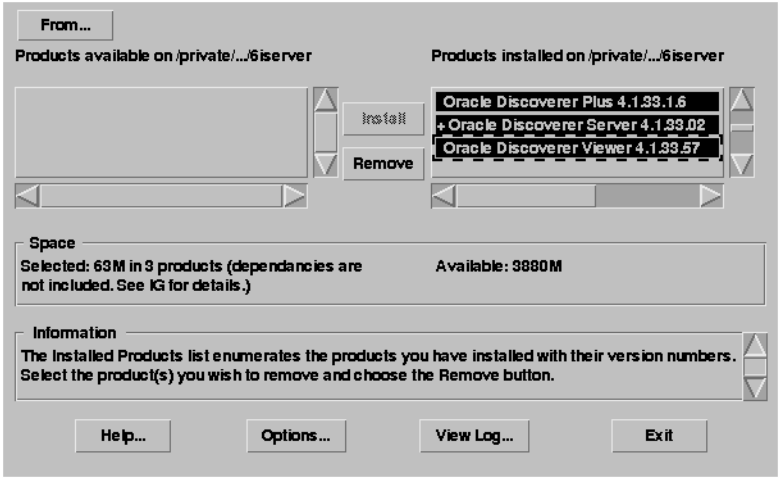
Figure 7–2 Installation Options Screen



Installation Options screen provides you with installation and deinstallation options.

4. Select all the components, and click **Remove**.

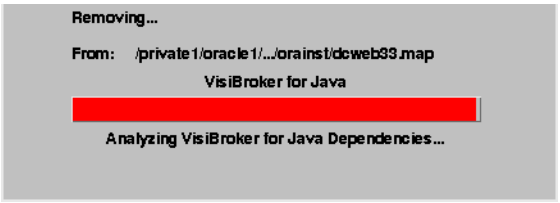
Figure 7–3 Software Asset Manager Screen



Software Asset Manager screen allows you to select the components you wish to deinstall. Scroll down the list and click on all the components to deinstall. Do **not** select Oracle UNIX Installer. When you click on **Remove**, you will get a confirmation screen asking if you wish to remove the selected components. Click **Yes**.

5. Monitor the deinstallation process.

Figure 7–4 Deinstallation Progress Bar Screen



6. Once the deinstallation process concludes, quit the installer by clicking **Exit**.

You have successfully deinstalled Oracle9*i*AS Forms Services, Oracle9*i*AS Reports Services, and Oracle9*i*AS Discoverer. Continue the deinstallation process:

Deinstalling Oracle9*i*AS Database Cache

If you have installed the Enterprise Edition of Oracle9*i* Application Server, then you must perform the additional steps. If you have installed Standard or Minimal edition of Oracle9*i* Application Server, then proceed directly to "Deinstalling using Oracle Universal Installer" on page 7-13.

1. Make sure the cache is started. If it is not, then start the cache using the Cache Manager or the `cachstrt` script which is located in *`ORACLE_HOME`*`/bin` directory.
2. Run the Configuration Assistant, specifying the `-deinstall` option:

```
prompt> wtacca -deinstall
```

Deinstalling Oracle Management Server

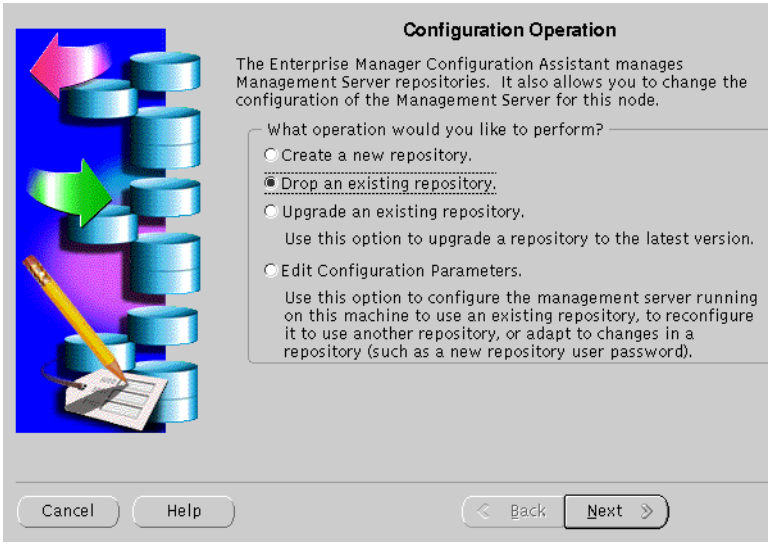
Perform the following steps to deinstall Oracle Management Server. If you have installed Standard or Minimal edition of Oracle9*i* Application Server, then proceed directly to "Deinstalling using Oracle Universal Installer" on page 7-13.

1. Launch the Oracle Management Server Configuration Assistant using the following command:

   ```
   prompt> ORACLE_HOME/bin/emca
   ```

2. The Configuration Operations screen appears. Click on **Drop** an existing repository, and click **Next**.

Figure 7–5 Configuration Operation Screen



Configuration Operation Screen allows you to create, drop, or upgrade a repository. It also enables you to edit your configuration parameters.

3. Enter the username, password, and service name of your existing repository, and click **Next**.

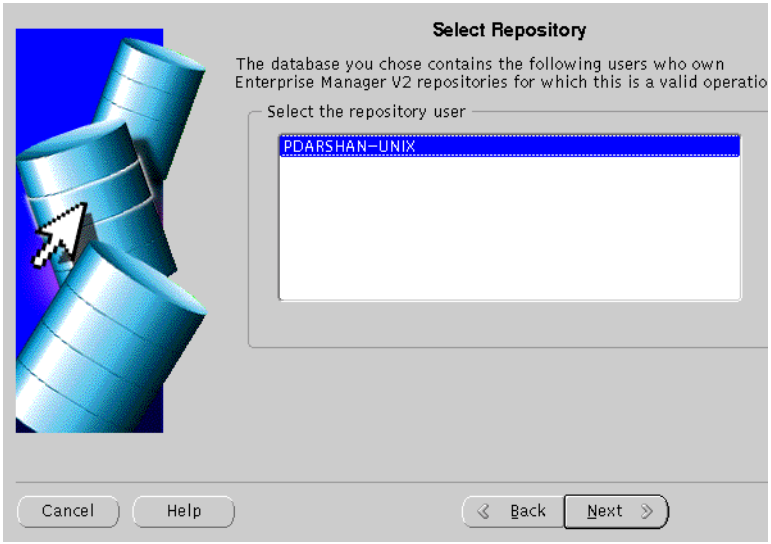
Figure 7–6 Select Database for Repository

Select Database for Repository screen allows you to enter database information for the management server's repository. Be sure to log in as a user with DBA privileges.

- **User name**: Enter a user name, with DBA privileges.
- **Password**: Enter the password for the username.
- **Service**: Enter the *host:port:SID* for the database.

4. Select the appropriate user who owns the repository you wish to drop, and click **Next**.

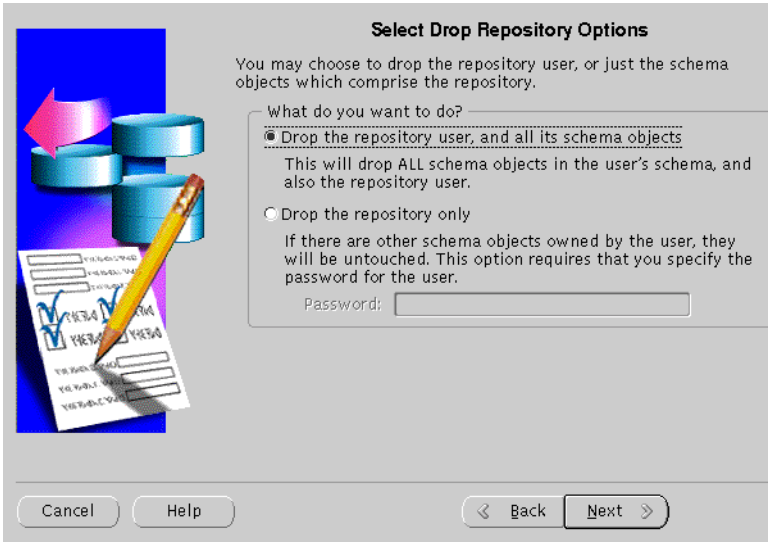
Figure 7–7 Select Repository



The Select Repository screen displays the users own repositories in the database you selected.

5. Choose to drop the repository user, and all its schema objects, or the repository only, and click **Next**.

Figure 7–8 Select Drop Repository Options

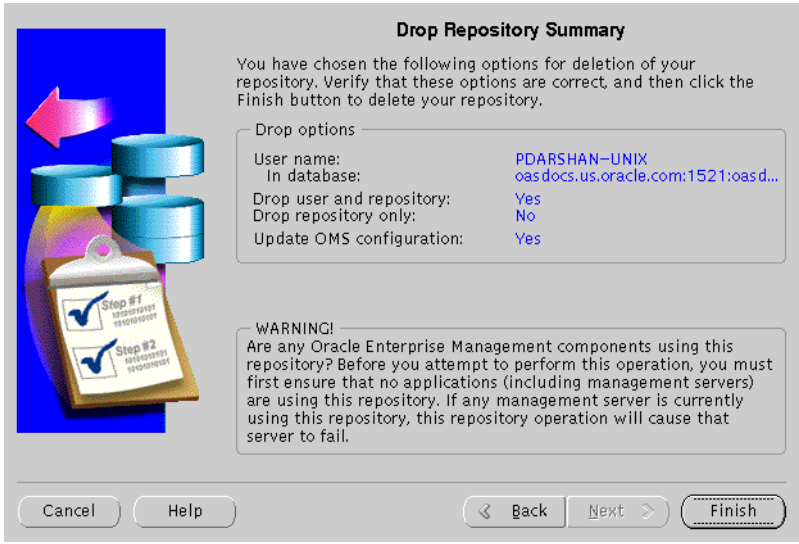


The Select Drop Repository Options gives you the following options:

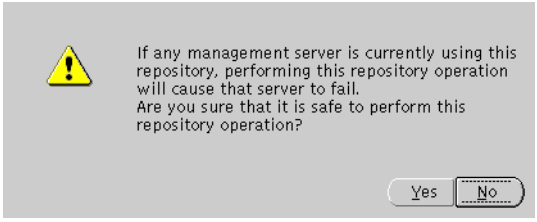
- **Drop the repository user, and all its schema objects**: You do not require a password to perform this action.
- **Drop the repository only**: You must supply the repository user password so that the configuration assistant can connect to the repository in order to invoke the drop scripts. Only the repository objects are dropped. Other schema objects in the repository remain.

6. Verify the information, and click **Finish**.

Figure 7–9 Drop Repository Summary



The Drop Repository Summary displays the options you have selected in the previous screens. Verify the information. If you wish to make changes, click the **Back** button. Once you click Finish, the following warning screen appears.



Be sure that the management server is not using the selected repository, and click **Yes**.

7. The screen indicates the progress of the deinstallation process.

Click on **Cancel** to cancel the deinstallation process, and **Show Details** to display details of the process.

You have successfully deinstalled Oracle Management Server.

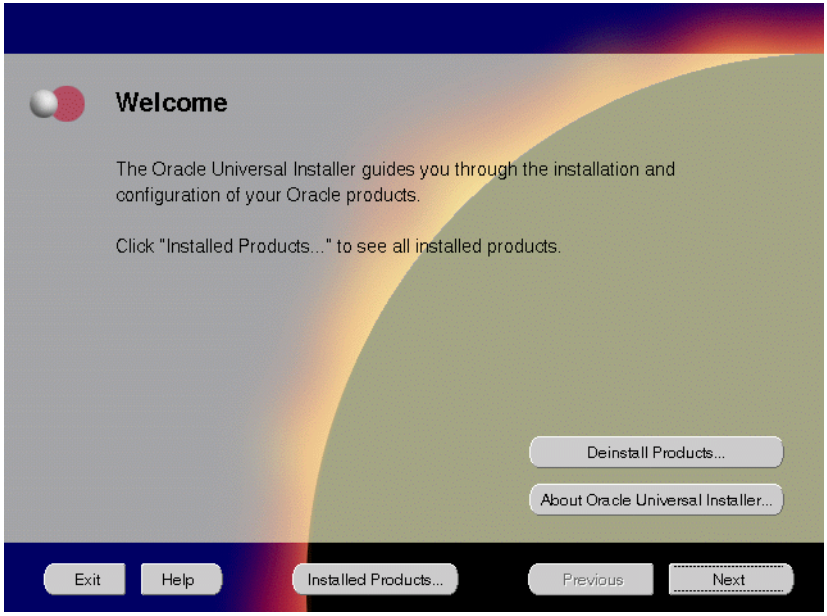
Proceed to "Deinstalling using Oracle Universal Installer" on page 7-13.

Deinstalling using Oracle Universal Installer

1. Start the Oracle Universal Installer. For information on starting the installer, refer to "Starting Oracle Universal Installer" on page 2-34.

   Once Oracle Universal Installer is launched, Welcome screen appears. Click on **Deinstall Products**.

Figure 7–10 Welcome Screen



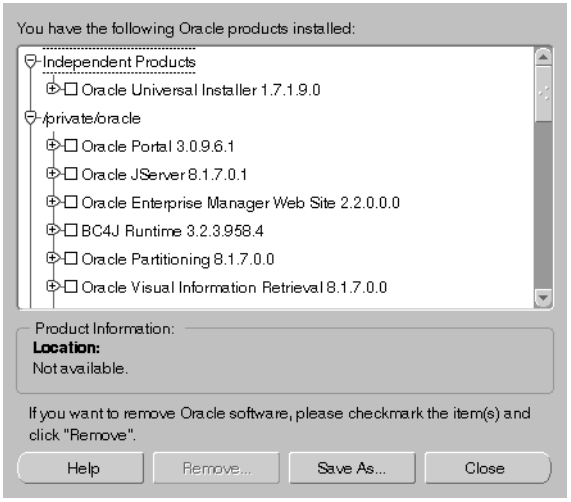
The Welcome screen provides information about Oracle Universal Installer.

The installer provides you with two ways to deinstall products:

- **Deinstall Products**: To deinstall individual components or the entire product.
- **Installed Products**: To view currently installed products and deinstall individual components or the entire product.

2. Review all installed components and check the ones you wish to deinstall. Click **Remove**.

Figure 7–11 Inventory Screen



The Inventory screen appears when you click **Deinstall Products** on the Welcome screen, or **Installed Products** on any screen.

The Inventory screen displays all the components installed in Oracle home.

The following buttons and product information appear on the Inventory screen:

- **Help**: To access detailed information about the functionality of the Inventory screen.
- **Remove**: To deinstall all checked components from Oracle home.
- **Save As**: To save the inventory as text. A file browser dialog pops us when you click **Save As**. Accept a file name and the complete inventory list as displayed by the inventory screen will be logged into this file as text.
- **Close**: To quit the Inventory screen.
- **Location**: To view the full location path of the selected component.

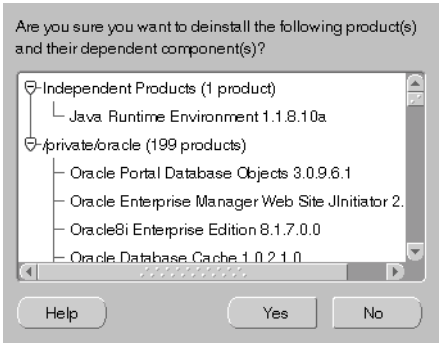
Note: The "+" sign before a product name indicates that there are more components and files installed within that particular product. Click on it to view dependent components. If you choose to remove a product or component, then all of its dependent components and files are also deinstalled.

If you wish to deinstall Oracle9*i* Application Server completely, check the box displayed before the product name, which is listed directly below the Oracle home name.

Note: If you deinstall a product or component, then all of its dependent components and files will also be deinstalled.

3. Verify the components selected for deinstallation, and click **Yes**.

Figure 7–12 Confirmation Screen



The Confirmation screen lists all the components selected for deinstallation in the previous step. Scroll down the screen to verify selected components.

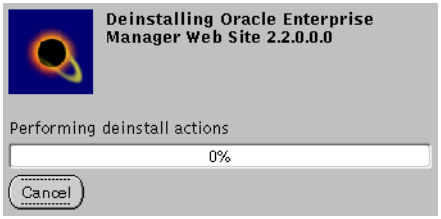
Note: Oracle Universal Installer does not deinstall all the files and directories during deinstallation. These must be deleted manually.

The following buttons appear on the Confirmation screen:

- **Help**: To access detailed information about the functionality of the Confirmation screen.
- **Yes**: To start deinstallation of listed components.
- **No**: To return to the Inventory screen. Listed components are not removed from Oracle home.

4. Monitor the deinstallation process.

Figure 7–13 Remove Progress Bar Screen



The Remove Progress Bar screen appears when you click **Remove**. The installer detects all components chosen for deinstallation from the Inventory screen and removes them from Oracle home.

- **Cancel**: To discontinue the deinstallation process.

Note: If you deinstall a product or component, then all of its dependent components and files will also be deinstalled.

You have successfully deinstalled Oracle9*i* Application Server.

Reinstallation

Oracle Universal Installer does not allow reinstallation of Oracle9*i* Application Server over an already installed version. To reinstall Oracle9*i* Application Server over the same version, deinstall and then install the product.

See Also: "Deinstallation" on page 7-2

A

Configuration Tools

This appendix guides you through the steps required to run component-specific configuration assistants to configure Oracle9*i* Application Server. It contains instructions on manually launching, and running the following configuration assistants to configure the components you chose not to configure during installation:

- Net8 Configuration Assistant
- Oracle9iAS Database Cache Configuration Assistant
- Oracle9iAS Portal Configuration Assistant
- Oracle Database Configuration Assistant
- Oracle Internet File System Configuration Assistant
- Oracle Management Server Configuration Assistant

Net8 Configuration Assistant

For information on running the Net8 Configuration Assistant, refer to the *Net8 Administration Guide* in your database documentation library.

Oracle9*i*AS Database Cache Configuration Assistant

Before you can run the Oracle9*i*AS Database Cache Configuration Assistant, you need to configure the `ora_icache_origin` service manually.

Configure the ora_icache origin service manually. The `tnsnames.ora` in the *ORACLE_HOME*`/network/admin` directory has the following entry after installation:

```
ora_icache_origin =
   (DESCRIPTION =
      (ADDRESS_LIST =
         (ADDRESS =
            (PROTPCOL = TCP)
            (HOST = ORIGINHostName)
            (PORT = originPortNumber>)
         )
      )
      (CONNECT_DATA =
         (SERVICE_NAME = originServiceName)
      )
   )
```

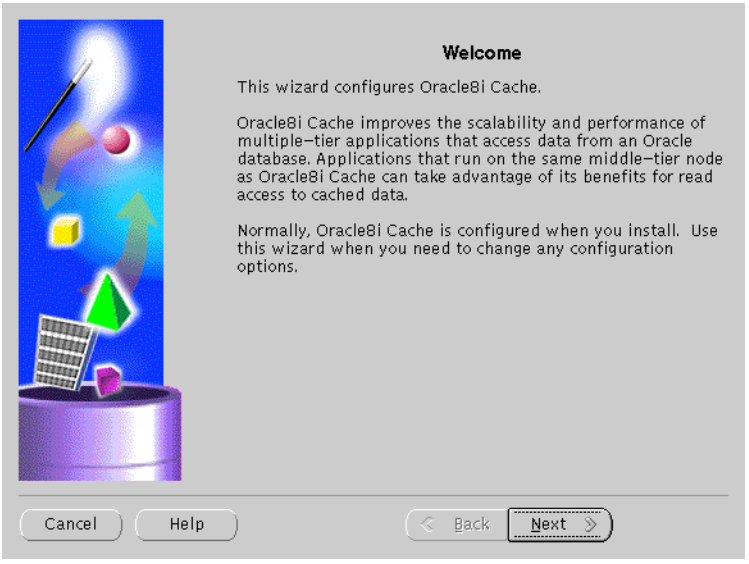
Fill in the origin host name, port and service name in `tnsnames.ora` file as per the above example before running the following command to launch the Oracle9*i*AS Database Cache Configuration Assistant:

```
prompt> ORACLE_HOME/bin/wtacca -create -typical
```

The following steps guide you through the Oracle9*i*AS Database Cache Configuration Assistant:

1. Review the Oracle9*i*AS Database Cache Configuration Assistant welcome screen and click **Next**.

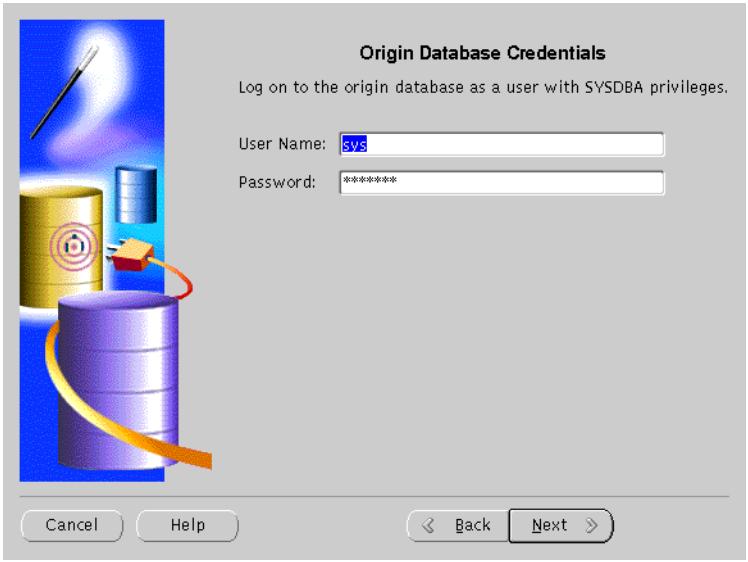
Figure A–1 Welcome Screen



The Welcome screen introduces you to the Oracle9*i*AS Database Cache Wizard.

2. Enter the privileged account information and click **Next**.

Figure A–2 Origin Database Credentials Screen



The Origin Database Credentials screen specifies the database that is the original and primary storage for the data that you cache on the middle-tier node.

- **User Name**: The name of a user on the origin database who has the SYSDBA role. This field defaults to the information you entered in the Origin Database User Information screen during installation.
- **Password**: The password of the specified user. This field defaults to the information you entered in the Origin Database User Information screen during installation.

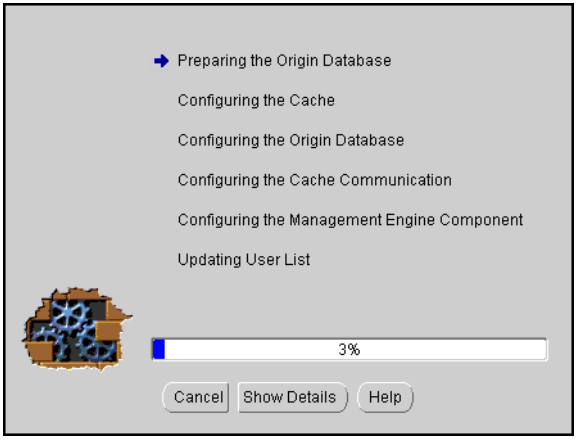
3. Review the summary screen and click **Finish** to configure the cache.

Figure A–3 Summary Screen

The Summary screen provides information about the origin database, cache node, port number, cache name, memory, disk space allocated and file specification.

4. Monitor the Configuration Assistant as it configures your cache.

Figure A–4 Cache Configuration Assistant Progress Screen



The Cache Configuration Assistant Progress screen informs you of the results of the configuration.

- **Show Details**: To display detailed result of the configuration.

Oracle9*i*AS Portal Configuration Assistant

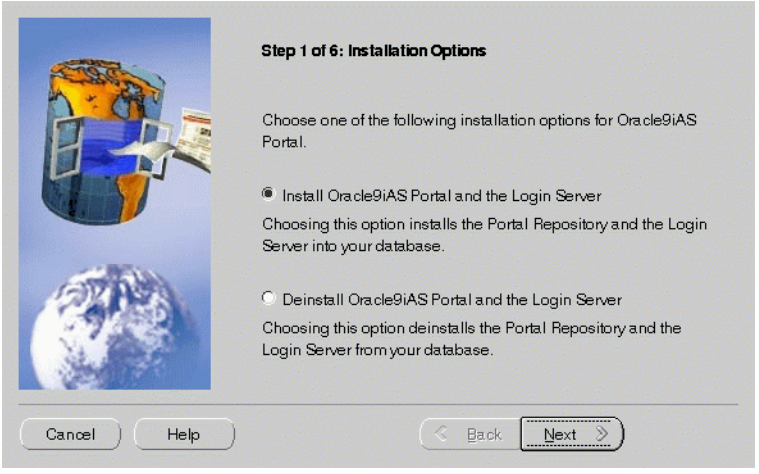
The following command launches the Oracle9*i*AS Portal Configuration Assistant:

```
prompt> ORACLE_HOME/assistants/opca/launch.sh
```

The following steps guide you through the Oracle9*i*AS Portal Configuration Assistant:

1. Choose the first installation option to install Oracle9*i*AS Portal and the Login Server and click **Next**.

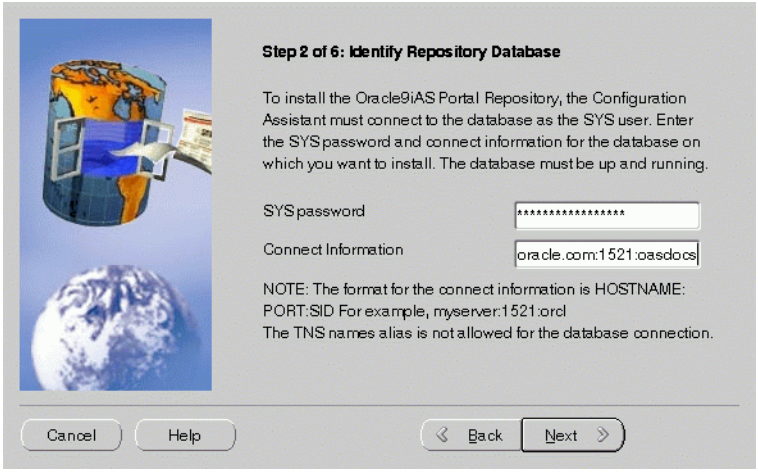
Figure A–5 Installation Options Screen



The Installation Options screen allows you to install and deinstall Oracle9*i*AS Portal. Selecting “Install Oracle9*i*AS Portal and the Login Server” installs the Oracle9*i*AS Portal schema and the Login Server onto your database.

2. Enter the database connection information and click **Next**.

Figure A–6 Database Authentication Screen



The Database Authentication screen allows you to specify the database connection information granting the Configuration Assistant database access to install the Oracle9*i*AS Portal database objects.

Note: Be sure to connect, and store objects in the origin database or any Oracle database that you have access to. Otherwise you will get an error stating that the `sys` user is locked.

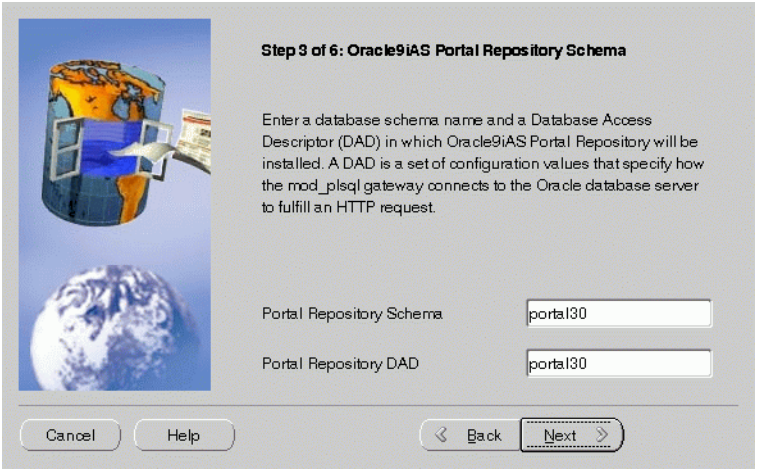
- **SYS Password**: Enter the `SYS` password for the database on which you want to install Oracle9*i*AS Portal database objects. When an Oracle database is created, the user `SYS`, identified by the password `CHANGE_ON_INSTALL`, is automatically created and granted the `DBA` role.
- **Connection Information**: Enter the connect information in the following format: `HOSTNAME:PORT:SID`

  Example: `oasdocs.us.oracle.com:1521:oasdocs`

  where `hostname` is the domain name and machine where you want to install Oracle9*i*AS Portal, `port` is the port number on which the Oracle database is running, and `SID` is the database name which uniquely identifies a node's instance.

3. Enter the Oracle9*i*AS Portal Schema and Oracle9*i*AS Portal DAD names, and click **Next**.

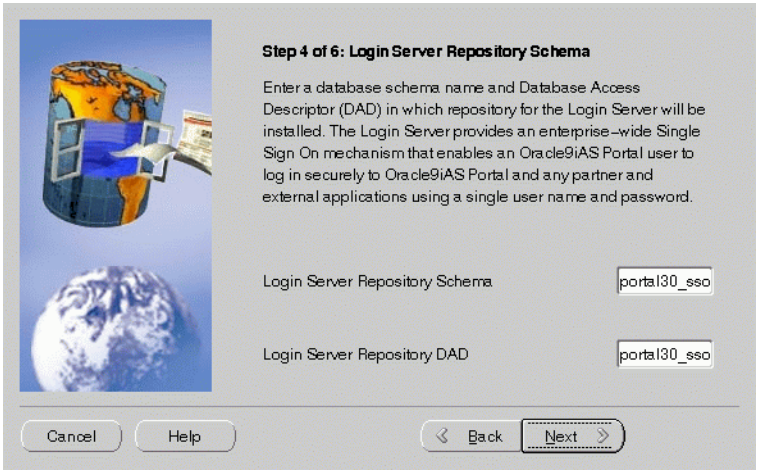
Figure A–7 Oracle9iAS Portal Schema Screen



Oracle9*i*AS Portal Schema screen allows you to enter the Schema and DAD name. These *must* match the Oracle9*i*AS Portal Schema and DAD name you entered during the installation process on the Apache Listener Configuration for Oracle9*i*AS Portal (DAD and Schema name) screen. The default is `portal30`.

4. Enter the SSO Schema and SSO DAD names for the Login Server, and click **Next**.

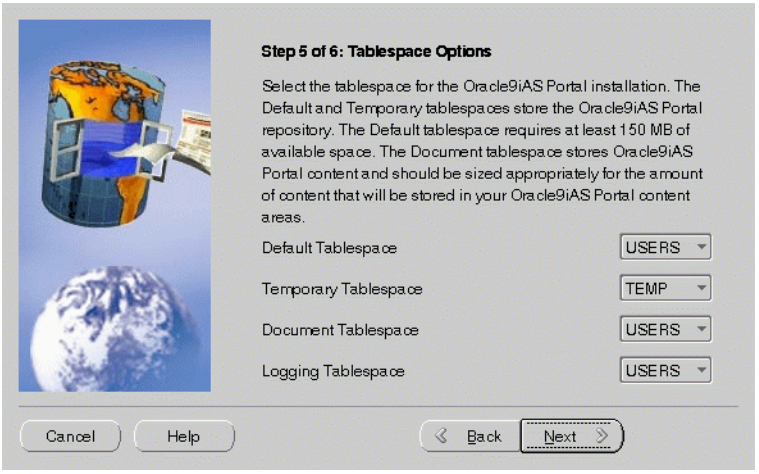
Figure A–8 Single SIgn-On Schema Screen



Single Sign-On Schema screen allows you to enter the SSO Schema and DAD name. These *must* match the SSO Schema and DAD name you entered during the installation process on the Apache Listener Configuration for Oracle9*i*AS Portal (Login Server) screen. The default is `portal30_sso`.

5. Enter the tablespace names for Oracle9*i*AS Portal installation. Click **Next**.

Figure A–9 Tablespace Options Screen



Tablespace Options screen allows you to enter the tablespace names for Oracle9*i*AS Portal. Choose from the list of tablespaces. For more information, refer to Table A–1.

Table A–1 Tablespace Options

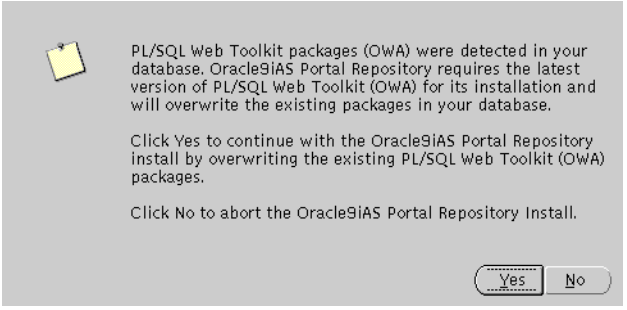
Field	Description
Default Tablespace	Used to store any database objects or components created by the Oracle9*i*AS Portal user. Required minimum: 150 MB
Temporary Tablespace	Improves the concurrence of multiple sort operations, reduce their overhead, or avoid Oracle space management operations altogether. Used for the creation of temporary table segments for operations performed by the Oracle9*i*AS Portal user such as sorting table rows.

Table A–1 Tablespace Options

Field	Description
Document Tablespaces	Used to store any items uploaded onto an Oracle9*i*AS Portal content area. These item types can include files, images, folders, and stored procedures. **Note**: The Document Tablespace will gradually fill as users add items to Oracle9*i*AS Portal content area. You should choose a tablespace large enough to accommodate these additions or a tablespace that automatically extends itself. Size the document tablespaces according to the planned size of your content areas.
Logging Tablespace	Name of the tablespace where the logs are stored. These contain logging information such as end user requests for components and information about the time of the request, the end user who made the request, the machine and browser that was used, and when an Oracle9*i*AS Portal developer created or last edited the component. Additional logging information includes database storage allocated to users, objects, and tablespaces, memory allocation, object creation dates, objects created during a given time span, rollback segment attributes, session locks, redo logs, and DBMS jobs.

6. Determine if you want to overwrite or keep the existing PL/SQL Web Toolkit packages. Click **Yes** or **No** accordingly.

Figure A–10 PL/SQL Web Toolkit Screen



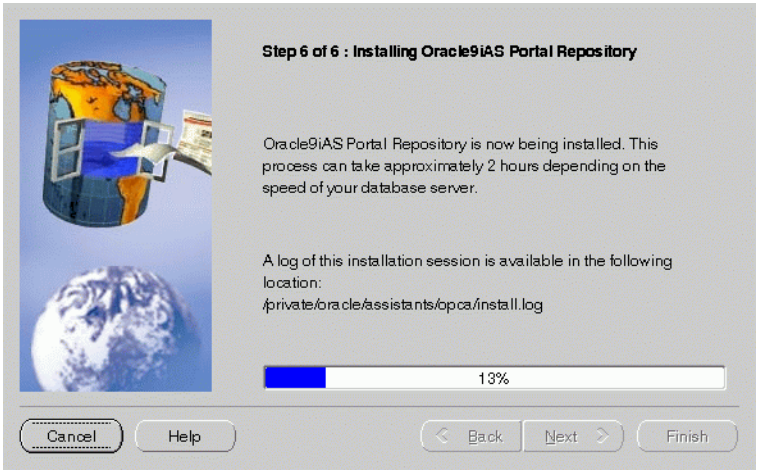
PL/SQL Web Toolkit screen appears only if the configuration assistant detects that PL/SQL Web Toolkit packages already exist on your machine. Click **Yes** to overwrite the existing packages, or click **No** to abort the Oracle9*i*AS Portal Repository Install.

Note: Oracle9*i*AS Portal requires the latest version of PL/SQL Web Toolkit packages. If you are unsure if your existing packages are compatible with PL/SQL Gateway, click **Yes** to install the correct version.

---

7. Monitor the progress of the configuration assistant as the database objects are installed.

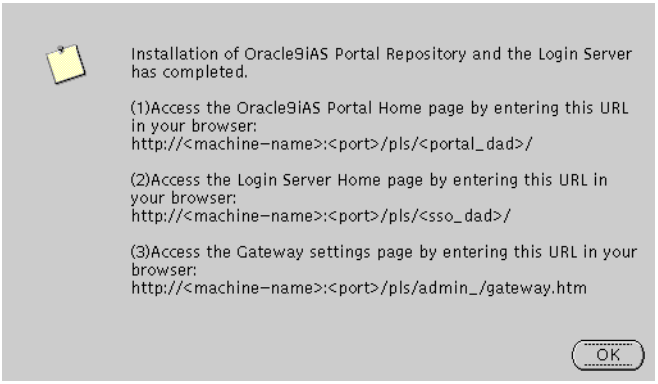
Figure A–11 Installing Oracle9iAS Portal Screen



Installing Oracle9*i*AS Portal screen displays a database objects installation progress bar. Please be patient and refrain from using your machine while this is underway. This process may a take long time to complete.

8. Make note of the information, and click **OK**.

Figure A–12 Summary Screen



Summary screen appears at the end of installation. It reveals information about accessing the Oracle9*i*AS Portal Home page, Login Server page and the gateway settings page. For your convenience, make note of this information before clicking **OK**.

9. An installation session log that describes the actions performed and the components installed is created. You can check the log file for ORA and PLS errors that may have occurred during installation. The log file is located in the following locations:

   ORACLE_HOME/assistants/opca/install.log

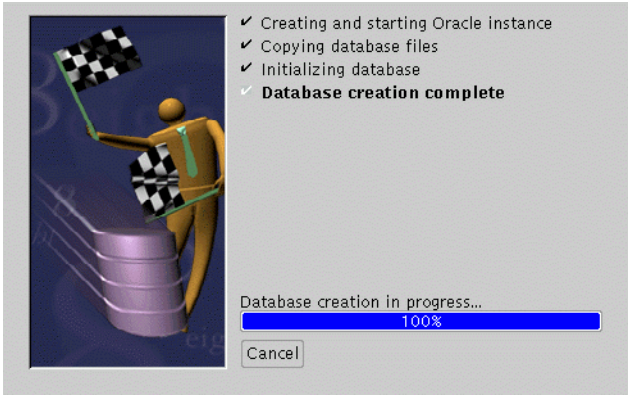
Oracle Database Configuration Assistant

The following command launches the Oracle Database Configuration Assistant:

```
prompt> ORACLE_HOME/bin/dbassist
```

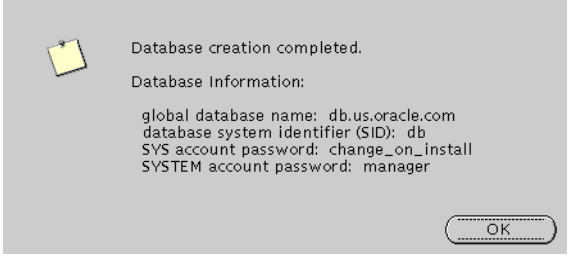
The Oracle Database Configuration Assistant creates a database that is used as a container for Oracle Enterprise Java Engine. The following screen appears as the configuration assistant creates the database:

Figure A–13 Oracle Database Configuration Assistant Screen



Oracle Database Configuration Assistant does not require any user input. Once the database creation process ends, the following screen appears.

Figure A–14 Database Information Screen



The Database Information screen displays database information such as global database name, database SID, SYS account password, and SYSTEM account password. Make a note of this information and click **OK**. You have completed the database creation process.

Oracle Internet File System Configuration Assistant

The following command launches the Oracle Internet File System Configuration Assistant:

```
prompt> ORACLE_HOME/ifs1.1/bin/ifsconfig
```

> **Note:** Be sure that the origin database is running to store the Oracle Internet File System schema. You must have a TNS name that maps to that database instance.

The following steps guide you through the Oracle Internet File System Configuration Assistant:

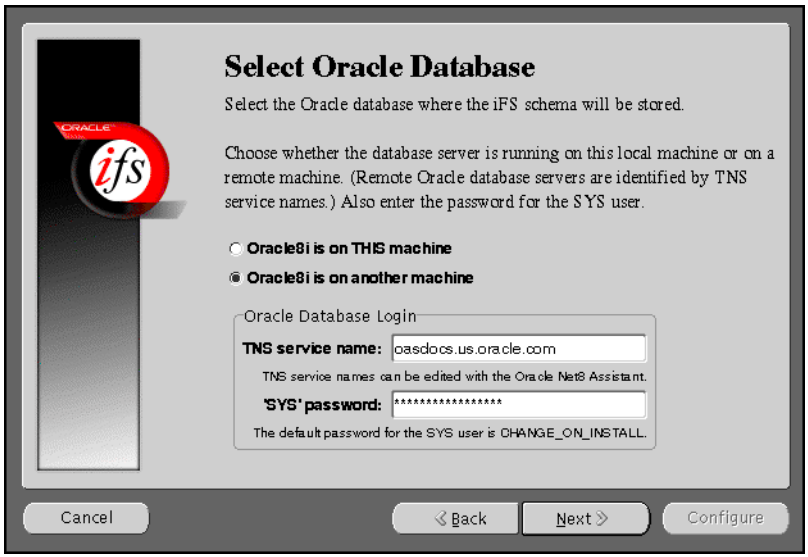
1. Review the Welcome screen and click **Next**.

Figure A–15 Welcome Screen

The Welcome screen introduces you to the Oracle Internet File System Configuration Assistant and allows you to review the licensing agreement before you can proceed to configure Oracle Internet File System.

2. Select the database to store Oracle Internet File System, and click **Next**.

Figure A–16 Select Oracle Database Screen



Select Oracle Database screen allows you to choose where the Oracle Internet File System schema will be stored. Select whether the origin database is on the local machine or on the remote machine other than the Oracle Internet File System server machine currently being configured.

Note: Be sure to connect, and store objects in the origin database or any Oracle8*i* database that you have access to. Otherwise you will get an error stating that the sys user is locked.

If you select Oracle8*i* on THIS machine, then you will have to fill in the SYS password field.

If you select Oracle8*i* on another machine, then you will have to enter the TNS service name and the SYS password in their respective fields.

- **TNS Service Name**: This is used to identify the database server you want to use for Oracle Internet File System. The TNS Name specifies the hostname, port, protocol, and service name for the database.

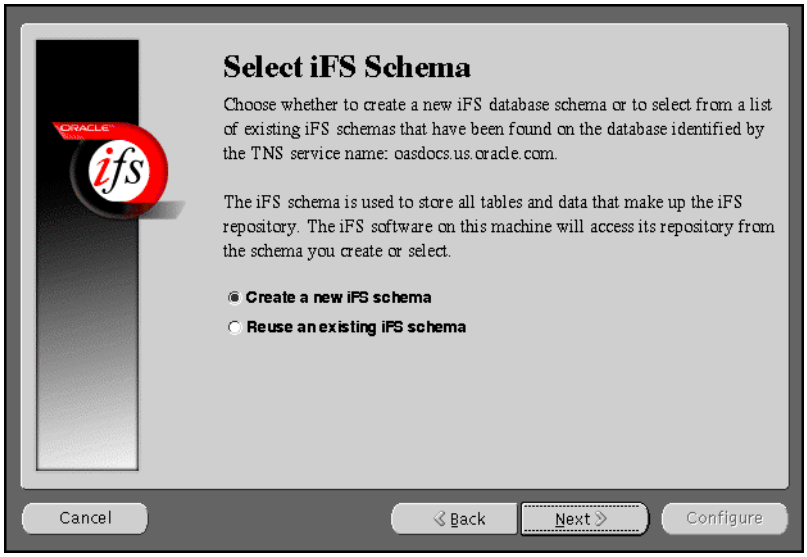
  See Also: *Net8 Administration Guide* in the Oracle Database Documentation Library

- **SYS Password**: This is the password for the SYS database account.

If an error occurs, you will be required to correct the database connection information before continuing.

3. Choose to create a schema or reuse an existing one, and click **Next**.

Figure A–17 Select IFS Schema Screen



The Select iFS Schema screen allows you to either create a new iFS schema or select from a list of existing iFS schemas that have been found on the database identified by the TNS service name you specified.

If you are using an Oracle9*i* as the backend database

1. Use the “Re-use existing schema” option and not the “Create a new schema” option if you want to continue using your existing Oracle9*i* schema.
2. Use “Create an new schema” option if you want to create a new schema.
3. If you want an Oracle iFS schema from a 8.1.7 database, migrate the database to Oracle9*i* and then select “Re-se existing schema”.

If you are using an 8.1.7 database as the backend

1. Use “Re-use existing schema” and not “Create a new schema” if you want to continue your existing 8.1.7 based Oracle iFS schema.
2. If you want to create a new schema, select “Create a new schema” option.

If you select “Create a new iFS schema”, then click **Next** to proceed with the instructions provided.

If you select “Reuse an existing iFS schema”, then click **Next**. The following screens will appear:

a. **Select Existing iFS Schema screen**: This screen informs you of all the existing iFS schemas found on the database identified by the TNS service name you specified. Select an existing schema from the menu and enter its password, and click **Next**.

b. **Set iFS Options screen**: This screen allows set various iFS options. Set the necessary options, and click **Next**.

c. **Configure iFS Email screen**: This screen provides you with options to configure your iFS email. Select the necessary options, and click **Next**.

d. **Configuring iFS screen**: This screen displays the various configuration tasks. Click **Cancel** to stop the configuration.

e. **iFS Configuration Completed screen**: This screen appears when the configuration completes. It prompts you to run the `ifssetup` script as an admin user. The script is located in the *`ORACLE_HOME`*`\ifs1.1\bin` directory. This script will configure your system for Oracle Internet File System email, if this option was selected.

f. Perform the following steps to configure Oracle HTTP Server:

   Stop Oracle HTTP Server.

   ```
   prompt> ./apachectl stop
   ```

   Run the following script:

   ```
   prompt> ORACLE_HOME/ifs1.1/bin/ifsapachesetup
   ```

   Be sure to run this script as the user who owns the Oracle software.

See Also: "UNIX Account to Own Oracle Software" on page 2-16 for more information.

   Restart Oracle HTTP Server.

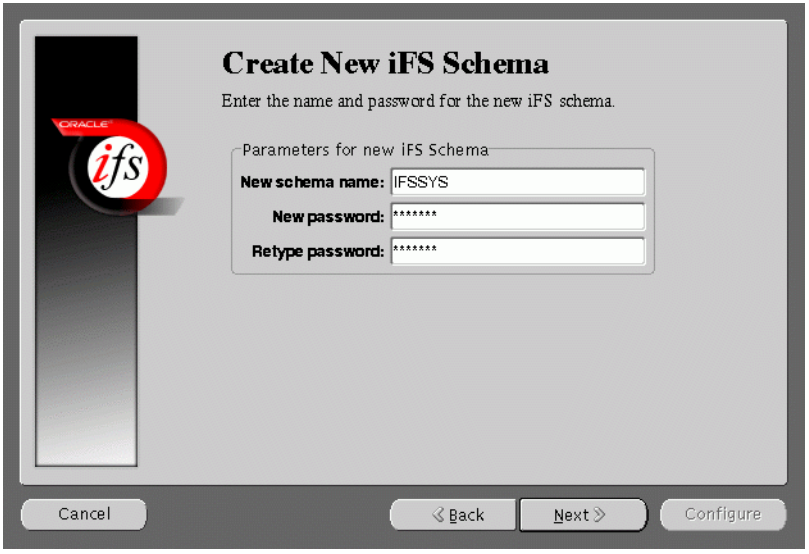
   ```
   prompt> ./apachectl start
   ```

g. Restart the Oracle Internet File System as the root user using the `ifsstart` script.

You have completed configuring Oracle Internet File System.

4. Enter an Oracle database username and password for a new schema, and click **Next**.

Figure A–18 Create New iFS Schema Screen



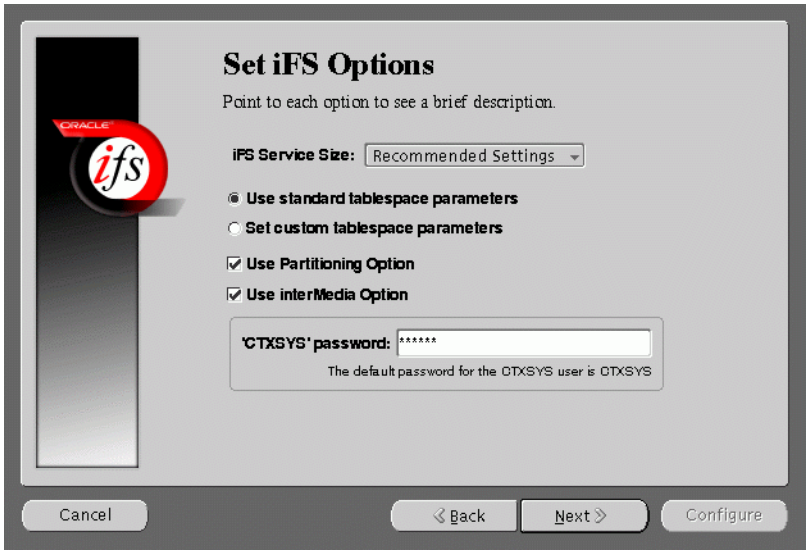
Create New *i*FS Schema screen allows you to specify an Oracle database username and password for the new schema.

- **New Schema Name**: Enter the Oracle database username for the new schema. The default username is `ifssys`.
- **New Password**: Enter the password for the Oracle database user for the new schema.
- **Retype Password**: Re-enter the new schema user password for confirmation.

If you choose to create a new schema with the same name as an existing schema, a warning message appears. Creating a new schema with the same name as an existing schema will drop the existing schema.

5. Set the necessary Oracle Internet File System options, and click **Next**.

Figure A–19 Set iFS Options Screen



Set *i*FS Options screen allows you to set certain schema options and to select a service size for your Oracle Internet File System server. There are two choices for the Oracle Internet File System server size:

- Minimum requirements
- Recommended settings

If you are creating a new Oracle Internet File System schema, then you can choose whether to use standard tablespace parameters, or to specify custom tablespace parameters.

- **Standard Tablespaces**: By default, the Oracle Internet File System configuration creates six tablespaces used to store the data in the Oracle Internet File System schema. The database files for these tablespaces are placed in the same location (on the database machine) as the `SYSTEM` tablespace, which is usually found under *`ORACLE_HOME`*`/oradata/global_dbname`. Oracle recommends storing each of these tablespaces on separate disks for best performance.

  - Primary: Stores metadata for documents. information about users and groups, and other Oracle Internet File System data.

- Non-Indexed Medias: Stores the LOB data for documents that are not indexed by interMedia, such as image, audio, and video files.

- Indexed Media: Stores the LOB data documents that are indexed by interMedia, such as text and word processing files.

- interMedia Index: Stores the Oracle indexed on interMedia data.

- interMedia Keymap: Stores the mapping between interMedia Text information and Oracle Internet File System information.

- interMedia Data: Stores the interMedia data about Oracle Internet File System documents.

- **Custom Tablespaces**: Choosing the custom tablespaces option displays six additional pages where the custom tablespace information can be entered. These pages allow experienced database administrators to create customized tablespaces for Oracle Internet File System or to select existing tablespaces.

  - Partioning Option: Improves performance. Available only with Oracle8*i* Enterprise Edition.

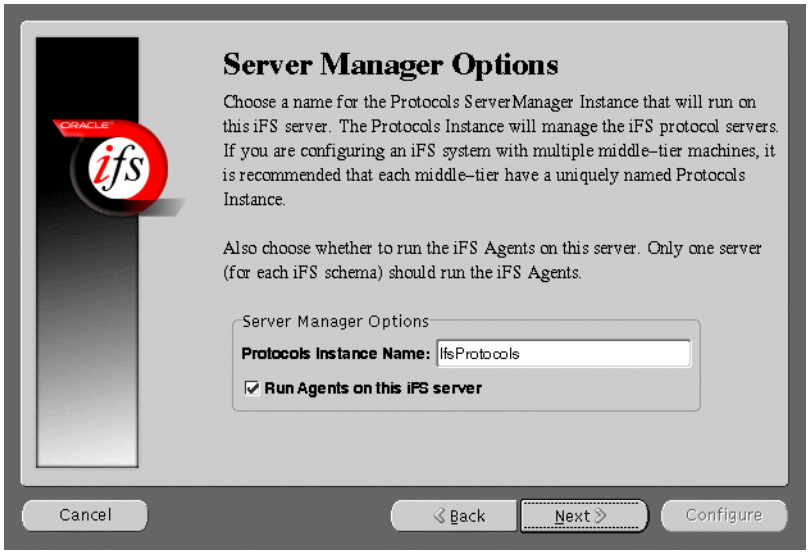
  - interMedia Option: If you have installed interMedia Text, then select this option to use interMedia Text for searching document contents.

  - CTXSYS: If you choose the interMedia Text option, then enter the password for the interMedia CTXSYS account. The default password is **CTXSYS**.

If you have chosen to use interMedia Text, the Configuration Assistant will verify the interMedia configuration when you click the **Next** button. If an error occurs. then you will not be able to choose the interMedia Text option unless you rectify the error.

6. Enter the Protocol Instance Name, and click **Next**.

Figure A–20 Server Manager Options Screen

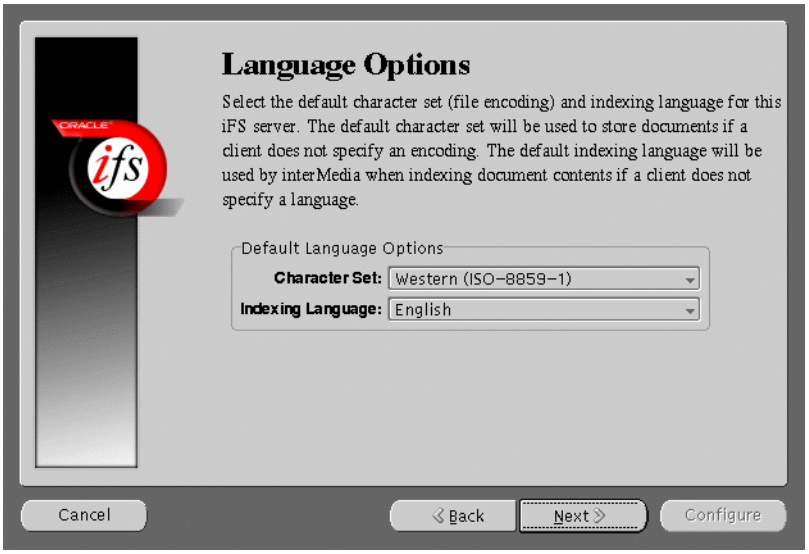


Server Manager Options screen allows you to enter a name for the Protocols Server Manager Instance that will run on this Oracle Internet File System server.

- **Protocol Instance Name**: Enter the Protocols Server Manager Instance name that will run on this Oracle Internet File System server. The Protocols Instance will manage the Oracle Internet File System protocol servers. If you are configuring an Oracle Internet File System system with multiple middle-tier machines, then it is recommended that each middle-tier have a uniquely named Protocols Instance.
- **Run Agents on This iFS Server**: Choose whether to run the Oracle Internet File System Agents on this server. Only one server for each Oracle Internet File System schema should run the Oracle Internet File System Agents.

7. Select the default character set and indexing language, and click **Next**.

Figure A–21 Language Options Screen

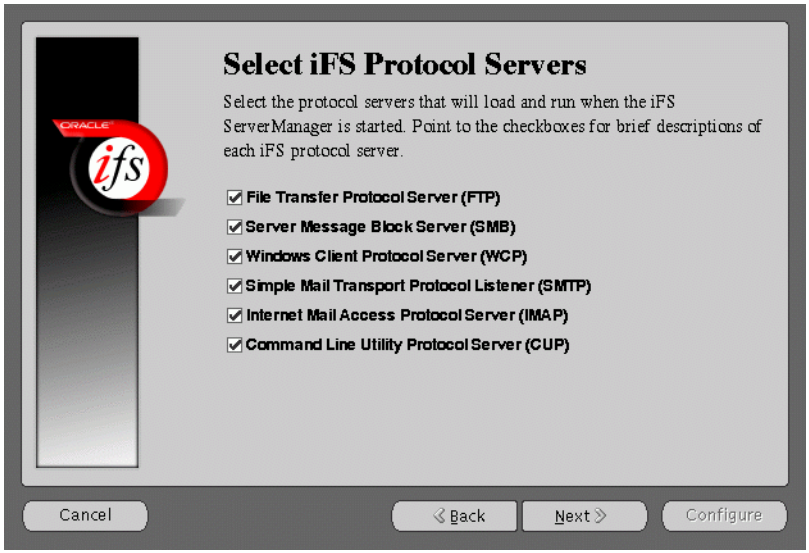


Language Options screen allows you to select the Character set and indexing language for this Oracle Internet File System server.

- **Character Set**: Select the default character set (file encoding). The default character set will be used to store documents if a client does not specify an encoding.
- **Indexing Language**: Select the default indexing language. The default indexing language will be used by interMedia when indexing document comment contents if a client does not specify a language.

8. Select the required Oracle Internet File System protocol serves, and click **Next**.

Figure A–22 Select iFS Protocol Servers Screen



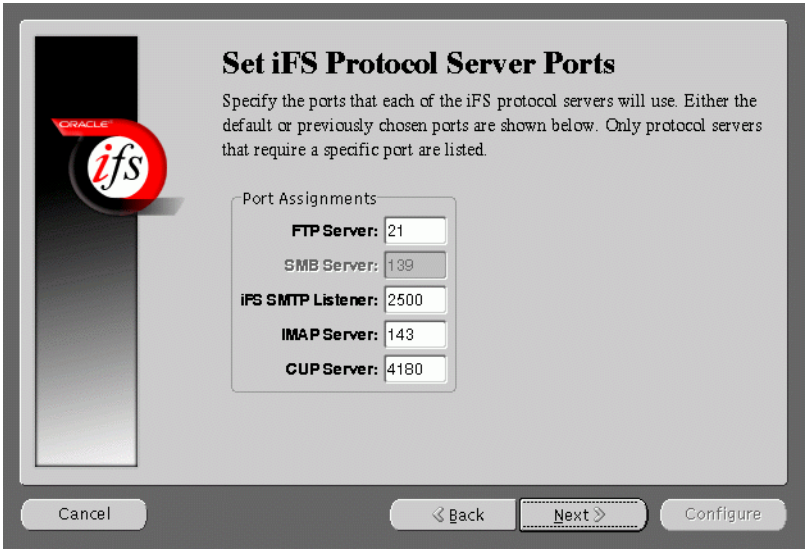
Select *i*FS Protocol Servers screen allows you to select the protocol servers to configure for this Oracle Internet File System server. The following protocol servers are available:

- File Transfer Protocol Server (FTP)
- Server Message Block Server (SMB)
- Windows Client Protocol Server (WCP)
- Simple Mail Transport Protocol Listener (SMTP)
- Internet Mail Access Protocol Server (IMAP)
- Command Line Utility Protocol Server (CUP)

See Also: *Oracle Internet File System Setup and Administration Guide* in the Oracle9*i* Application Server Documentation Library

9. Select the port numbers for the Oracle Internet File System protocol servers, and click **Next**.

Figure A–23 Set iFS Protocol Server Ports Screen



Set *i*FS Protocol Server Ports screen allows you to set port numbers for the protocol servers you selected in the previous screen. The following is a list of protocol servers and their default port numbers:

- **FTP Server**: Port 21
- **SMB Server**: Port 139 (not configurable)
- ***i*FS SMTP Listener**: Port 2500
- **IMAP Server**: Port: 143
- **CUP Server**: Port 4180

When you click the **Next** button, the port availability on your computer is tested. If a port is already in use, a warning screen appears. A common port conflict can arise because the standard Solaris installation includes a FTP server on port 21, which conflicts with the Oracle Internet File System FTP server. You must resolve such conflicts before starting the Oracle Internet File System protocol servers.

10. Enter your Oracle Internet File System Email Domain, and click **Next**.

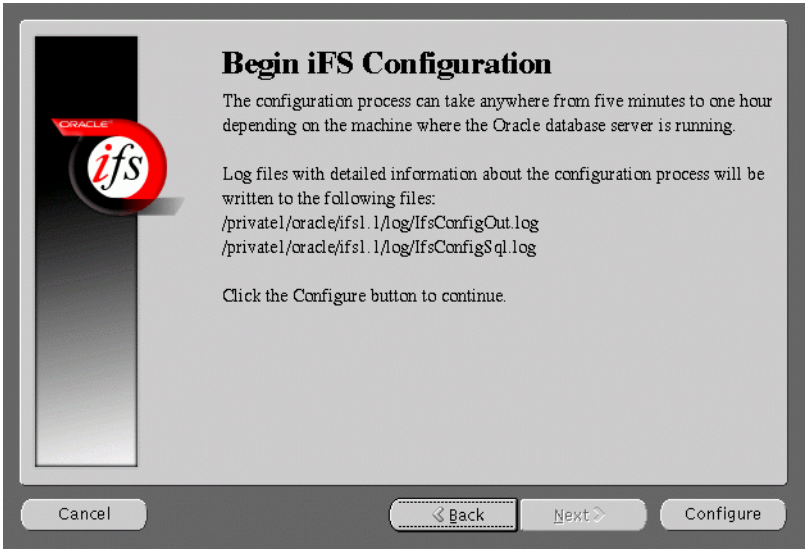
Figure A–24 Configure iFS Email Screen

Configure *i*FS Email screen allows you to enter the *i*FS Email domain.

- **Use NIS for *i*FS Email**: Click on the check box to use NIS (Network Information System) for your Oracle Internet File System email package.
- ***i*FS Email Domain**: Enter the default email domain for the users you will create on your Oracle Internet File System server. This option is available only if you are creating a new Oracle Internet File System schema.

11. Review the screen and click **Configure** to begin the Oracle Internet File System configuration process.

Figure A–25 Begin iFS Configuration Screen



Begin *i*FS Configuration screen informs the users of the configuration process, and displays the location for the log files.

Once you have started the configuration process, a progress window appears. indicating the progress of the Oracle Internet File System configuration. If an error occurs, check the log files that are displayed on the Begin iFS Configuration screen.

12. A dialog box appears noting that the configuration was successfully completed. Run the `ifssetup` script as a root user.

    The script is located in the *ORACLE_HOME*`/ifs1.1/bin` directory. This script will configure your system for Oracle Internet File System email, if this option was selected.

13. Perform the following steps to configure Oracle HTTP Server:

    a. Stop Oracle HTTP Server.

    ```
    prompt> ./apachectl stop
    ```

    b. Run the following script:

    ```
    prompt> ORACLE_HOME/ifs1.1/bin/ifsapachesetup
    ```

    Be sure to run this script as the user who owns the Oracle software.

    See Also: "UNIX Account to Own Oracle Software" on page 2-16 for more information.

    ---

    c. Restart Oracle HTTP Server.

    ```
    prompt> ./apachectl start
    ```

    d. Start the Oracle Internet File System as root using the `ifsstart` script.

    You have completed configuring Oracle Internet File System.

Oracle Management Server Configuration Assistant

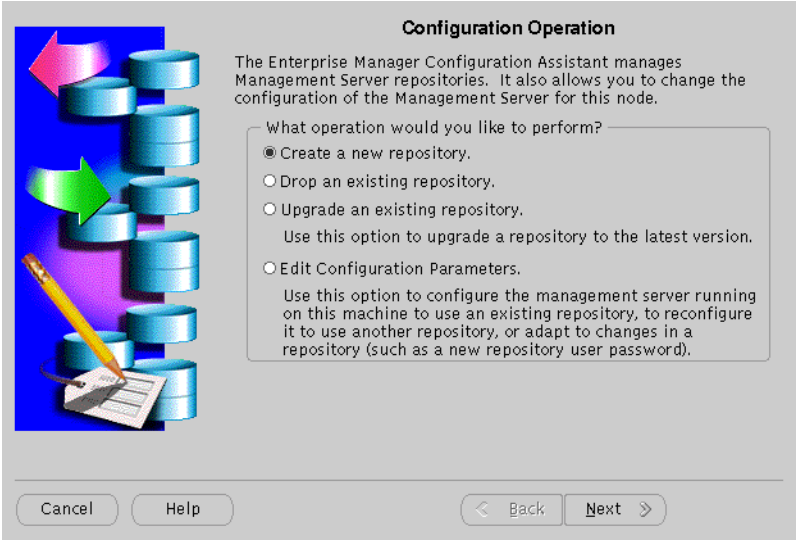
The following command launches the Oracle Enterprise Manager Configuration Assistant:

```
prompt> ORACLE_HOME/bin/emca
```

The following steps guide you through the Oracle Enterprise Manager Configuration Assistant:

1. Select “Create a new repository” and click **Next**.

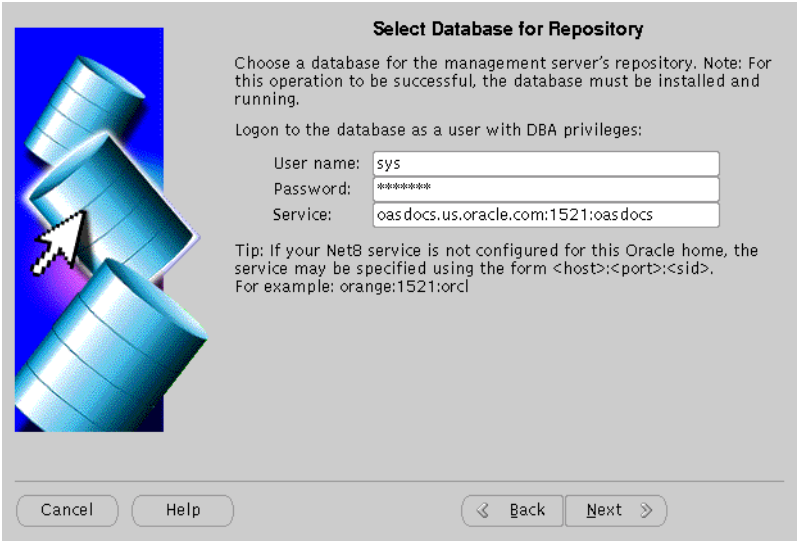
Figure A–26 Configuration Operation



Configuration Operation Screen allows you to create, drop, or upgrade a repository. It also enables you to edit your configuration parameters.

2. Enter the host name, password, and service information, and click **Next**.

Figure A–27 Select Database for Repository Screen



Select Database for Repository screen allows you to enter database information for the management server's repository. Be sure to log in as a user with DBA privileges.

- **User name**: Enter a user name, with DBA privileges.
- **Password**: Enter the password for the username.
- **Service**: Enter the *`host:port:SID`* for the database.

3. Enter the repository login information, and click **Next**.

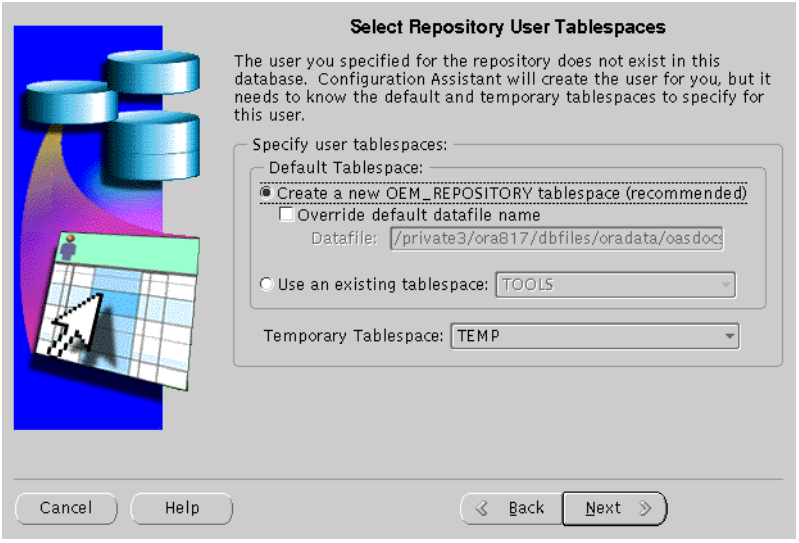
Figure A–28 Repository Login Information Screen

Repository Login Information screen allows you to enter the login username and password for the database user.

- **Username**: Enter the database user name who will own the repository.
- **Password**: Enter the password for the username.
- **Confirm Password**: Re-enter the user password for verification.

4. Select to either create a new OEM_REPOSITORY tablespace, or use an existing tablespace, and click **Next**.

Figure A–29 Select Repository User Tablespaces Screen



Select Repository User Tablespaces screen allows you to choose between creating a new OEM_REPOSITORY tablespace, or using an existing one.

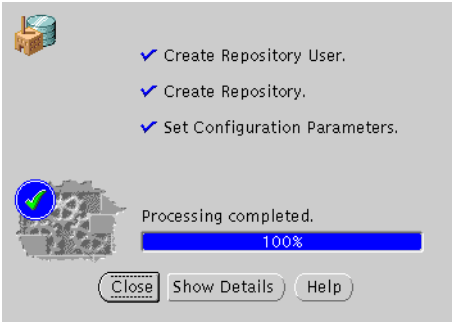
5. Review the repository summary, and click **Finish**.

Figure A–30 Create Repository Summary

Create Repository Summary screen displays all your repository settings. Be sure to verify them for accuracy.

6. Monitor the repository creation process, and click **Close** when it finishes.

Figure A–31 Configuration Screen



Configuration screen indicates the progress the configuration assistant has made as it creates the repository. Click on **Show Details** if you get an error.

B

Installing Oracle9*i* Application Server Administrative and Development Client CD-ROM

The following topics provide an overview for the Oracle9*i* Application Server Administrative and Development Client CD-ROM components, and guide you through the installation process:

- Oracle Enterprise Manager Client
- Oracle9iAS SOAP Client
- Oracle9i Application Server Wireless Edition Client

Oracle Enterprise Manager Client

The Oracle Enterprise Manager Client runs only on the NT platform, and consists of the following components:

- Oracle Enterprise Manager Console
- DBA Management Pack

Oracle Enterprise Manager Console

The Oracle Enterprise Manager Console is a graphical user interface that provides menus, toolbars, launch palettes, and the framework to access Oracle tools and utilities available through other vendors. The format of the Console and the tools available are determined by the products purchased and user preferences. Console menus, toolbars, and tool palettes provide access to the Console components and database administration (DBA) applications.

DBA Management Pack

DBA Management Pack is a set of tools that help automate and simplify the common database administrator tasks. All the tools provide an intuitive graphical user interface (GUI), wizards, and a common look-and-feel which minimizes training costs, along with easy-to-use features that let administrators specify what they want to do rather than specify how to do it.

Installation

The following steps guide you through the Oracle Enterprise Manager Client installation process:

1. Insert the Oracle9*i* Application Server Administrative and Development Client CD-ROM and run the setup program. The Welcome screen appears. Click **Next**.
2. The File Location screen appears. Select the installation source, and then enter or select the destination Oracle home name and its path. Click **Next**.
3. The Available Products screen appears. Select Oracle Enterprise Manager Client and click **Next**.

4. The Installation Types screen appears. Select the installation type:
   - **Typical**: Installs the Oracle Enterprise Manager Console, and Database Administrative Tools.
   - **Custom**: Installs individual components. **Minimal**: Installs the minimal required components.
   - **Complete**: Installs all the components.

     If you select Custom, then the Available Products screen appears. Select the products you wish to install, and click **Next**.
5. The Summary screen appears. Verify the installation selections, and click **Next**.
6. When the installation is complete, the End of Installation screen appears.

Oracle9*i*AS SOAP Client

The Simple Object Access Protocol (SOAP), is a lightweight, XML-based protocol for exchanging information in a decentralized, distributed environment. By combining SOAP-based requests and responses with a transport protocol, for example HTTP, the Internet becomes a medium for applications to publish database-backed *Web Service*s.

SOAP requests are easy to generate, and a client can easily process the responses. This allows for one application to become a programmatic client of another application's services, with each exchanging rich, structured information. The ability to *aggregate* powerful, distributed Web Services allows SOAP to provide a powerful programming model that turns the Internet into an application development platform.

Installation

The following steps guide you through the Oracle9*i*AS SOAP Client installation process:

1. Insert the Oracle9*i* Application Server Administrative and Development Client CD-ROM and run the setup program. The Welcome screen appears. Click **Next**.
2. The File Location screen appears. Select the installation source, and then enter or select the destination Oracle home name and its path. Click **Next**.
3. The Available Products screen appears. Select Oracle SOAP Client. Click **Next**.
4. The SOAP Server Location screen appears. Enter the location to the SOAP Server, and click **Next**. This would be the URL to the Oracle HTTP Server located on the Oracle9*i* Application Server installation.
5. The Summary screen appears. Verify the installation selections, and click **Next**.
6. When the installation is complete, the End of Installation screen appears.

Oracle9*i* Application Server Wireless Edition Client

The Oracle9*i* Application Server Wireless Edition Client runs only on the NT platform, and consists of the following components:

- Service Designer
- Web Integration Developer

Service Designer

Service Designer is a visual interface for implementing and managing Oracle9*i*AS Wireless. It creates and modifies Oracle9*i*AS Wireless objects, including adapters, transformers, and services. Service Designer provides a tree view of the Oracle9*i*AS Wireless repository. The tree displays Oracle9*i*AS Wireless objects classes, such as adapters and transformers, as folders or branch nodes. It shows instances of those classes as objects or leaf nodes.

Web Integration Developer

Web Integration Developer is a development environment for creating and testing Web Integration services written in Web Interface Definition Language (WIDL). The Web Integration Developer also has tools that you use to:

- Publish WIDL services for Web Integration Server.
- Create source code for client applications that invoke Web Integration services.
- Create starter code for the development of an integration module.

See Also: "Configure the Web Integration Developer" on page B-6 for postinstallation configuration instructions.

Note: The Web Integration Developer includes its own Java Virtual Machine (JVM). It does not require any Java setup.

Installation

> **See Also:** "Oracle9iAS Client Requirements" on page 1-4 for hardware requirements for installation.

The following steps guide you through the Oracle9*i* Application Server Wireless Edition Client installation process:

1. Insert the Oracle9*i* Application Server Administrative and Development Client CD-ROM and run the setup program. The Welcome screen appears. Click **Next**.
2. The File Location screen appears. Select the installation source, and then enter or select the destination Oracle home name and its path. Click **Next**.
3. The Available Products screen appears. Select Oracle9i Application Server Wireless Edition Client. Click **Next**.
4. The Installation Types screen appears. Select the installation type:
   - **Typical**: Installs the Service Designer and Web Integration Developer.
   - **Custom**: Installs individual components.

     If you select Custom, then the Available Products screen appears. Select the products you wish to install, and click **Next**.
5. The Summary screen appears. Verify the installation selections, and click **Next**.
6. When the installation is complete, the End of Installation screen appears.

Configure the Web Integration Developer

To configure the Web Integration Developer, follow these steps:

Run the Web Integration Developer from the Windows NT Programs menu. **Select Programs** > **Oracle for Windows NT** > **Oracle9*i* Application Server Wireless Edition** > **Web Integration Developer**.

1. From the **Edit menu**, select **Preferences**, and then **`Configuration`**.
2. Enter the Proxy (HTTP) and the Secure Proxy (HTTPS) settings appropriate for your environment.
3. Click **OK**.

C

Installing Oracle9*i*AS Containers for J2EE (OC4J)

The appendix provides an overview and installation instructions for Oracle9*i*AS Containers for J2EE (OC4J).

Overview

OC4J is a J2EE container with a JVM that accepts HTTP and RMI connections. These connections access servlets, JSP Pages, and EJBs.

For more information, refer to the *Oracle9i*AS Containers for J2EE *Getting Started* on the Oracle9*i*AS Containers for J2EE CD-ROM, which is part of the Oracle9*i* Application Server CD pack.

Installing OC4J

This section provides installation instructions for OC4J. The topics include:

- Requirements
- Basic Installation
- Testing the Default Web Server

Requirements

The current release of OC4J is more stable when used with JDK version 1.2.2_07, or 1.3.*xxx*. We recommend that you use the JDK that comes with Oracle9*i* Application Server 1.0.2.2, which is JDK version 1.2.2_07.

You do not need to add anything to your `CLASSPATH` to run OC4J, because it loads the Java JAR and class files directly from the installation directory, from the `lib/` subdirectory, and from the deployed applications EAR, WAR, or `ejb-jar` files.

Basic Installation

OC4J is distributed within a ZIP file named `oc4j.zip` on the Oracle9*i*AS Containers for J2EE CD-ROM. Unzip this file into the `$ORACLE_HOME` directory where you installed the Oracle9*i* Application Server.

You must have a Java2 version Java executable in your `$PATH`, preferably version 1.2.2_07. To install OC4J, unzip `oc4j.zip` into your Oracle home directory. For example, execute the following:

```
prompt> cd $ORACLE_HOME
prompt> unzip oc4j.zip
prompt> cd $ORACLE_HOME/j2ee/home
prompt> java -jar orion.jar -install
```

After the install is complete, the $ORACLE_HOME/j2ee/home directory contains all the files necessary for running OC4J with a default configuration. The installation prompts you for an administration username and password, which is used for the administration console command-line tool.

Note: OC4J is installed with the Sun Microsystems JDK version 1.2.2_07 `tools.jar`. However, if you receive a versioning problem because you use version 1.3, copy `lib/tools.jar` from your version of the JDK installation to the `j2ee/home/` root installation directory.

Testing the Default Web Server

OC4J is installed with a default configuration that includes a default Web site and a default application. These are provided so you can start and test OC4J immediately.

Start OC4J by executing the following:

1. Change directory to the OC4J installation directory (`j2ee/home`), and issue one of the following commands:

   - `java -jar orion.jar`

     This starts OC4J using the default configuration files.

   - `java -jar orion.jar -config /mypath/server.xml`

     This starts OC4J using the `server.xml` file located in `/mypath`.

   You should get the following output:

   ```
   Oracle9iAS (1.0.2.2) Container for J2EE initialized
   ```

2. Test OC4J by accessing "`http://localhost:8888/`" from a Web browser. If you changed the default port number, access the Web server using "`http://localhost:portnumber/`".

Test OC4J by accessing "`http://localhost:8888/`" from a Web browser. If you changed the default port number, access the Web server using "`http://localhost:portnumber/`".

For further instructions, including information on starting and stopping OC4J, refer to the *Oracle9i*AS Containers for J2EE *Getting Started* on the Oracle9*i*AS Containers for J2EE CD-ROM, which is part of the Oracle9*i* Application Server CD pack.

D

Installing Supplemental Components

This appendix introduces you to the Oracle9*i* Application Server, version 1.0.2.2 supplemental components, and provides basic installation instruction. The topics include:

Overview

Oracle9*i* Application Server supplemental components are installed from the same CD-ROM as Oracle9*i* Application Server. Installation guides for each component are provided on Oracle9*i* Application Server Disk 1.

For instructions on launching the installer, refer to "Starting Oracle Universal Installer" on page 2-34.

When Oracle Universal Installer appears, you will see the Welcome screen. Review the screen and click **Next**. The next screen is the File Location screen. This screen allows you to enter the full path for the source and destination locations of Oracle9*i* Application Server. In the `Source` field, enter the full path to the `products.jar` file.

Supplemental Components

This section introduces you to each supplemental component, and provides the full path to each `products.jar` file.

Oracle9*i*AS Email

Oracle9*i*AS Email is an integrated solution for messaging and directory services. Users can send messages to anyone on the network with any IMAP4 or POP-3 compliant client. The Oracle9*i*AS Email database contains information about users, rooms, and equipment that you can organize by domain. Oracle9*i*AS Email provides tools to help you perform most administration tasks, including managing processes, directory entries, and databases. You can also use monitor tests and server process logs to monitor the system for potential problems.

Source Path

You can install Oracle9*i*AS Email from Oracle9*i* Application Server Supplemental CD-ROM Disk 2. The following is the full path to the `products.jar` file for Oracle9*i*AS Email. Enter this path in the `Source` field of the File Locations Screen.

mount_point`/9ias_1022_Supplemental_Disk2/EMAILSERVER/Disk1/stage/products.jar`

Oracle9*i*AS Unified Messaging

Oracle9*i*AS Unified Messaging is a highly scalable messaging framework that integrates messages from multiple sources into a single box. Oracle9*i*AS Unified Messaging not only consolidates all messages into a single interface, it also frees the business professional to focus on making decisions, rather than on keeping track of multiple telephone numbers, passwords, and access codes. It integrates messages from multiple sources into a single "inbox."

Source Path

You can install Oracle9*i*AS Unified Messaging from Oracle9*i* Application Server Supplemental CD-ROM Disk 2. The following is the full path to the `products.jar` file for Oracle9*i*AS Unified Messaging. Enter this path in the `Source` field of the File Locations Screen.

mount_point`/9ias_1022_Supplemental_Disk2/UM/Disk1/stage/products.jar`

Oracle9*i*AS InterConnect

Oracle9*i*AS InterConnect is a comprehensive application integration framework that enables seamless integration of enterprise software It is built on top of Oracle's robust integration platform and leverages its underlying services. It is designed to integrate heterogeneous systems, be it Oracle Applications, non-Oracle applications, or 3-party messaging oriented middleware (MOM). This integration can be deployed either within an enterprise or across enterprise boundaries through the Internet. In addition, Oracle9*i*AS InterConnect provides a tool (iStudio) for modeling the data in the integration scenario. iStudio eliminates the need for "hardwired" or "hardcoded" integration. Users define their integration using iStudio which minimizes the need to write any code for the integration.

Source Path

You can install Oracle9*i*AS InterConnect from Oracle9*i* Application Server Supplemental CD-ROM Disk 2. The following is the full path to the `products.jar` file for Oracle9*i*AS InterConnect. Enter this path in the `Source` field of the File Locations Screen.

mount_point`/9ias_1022_Supplemental_Disk2/OAI/Disk1/stage/products.jar`

Oracle Gateways

Oracle Gateways are agents for accessing data stored in non-Oracle systems, such that users perceives that all data resides on a local Oracle database server. Each agent is designed specifically for particular non-Oracle system (such as Sybase, Informix, and Ingres), and extends Oracle9*i* Application Server to that system. While installation an Oracle Gateways, you must:

- install each gateway in its own Oracle home directory.
- install the gateway on the same machine as the non-Oracle database.

Source Path

You can install the Oracle Gateways from Oracle9*i* Application Server Supplemental CD-ROM Disk 1. Table D–1 lists the full paths to the `products.jar` file for each gateway. Enter this path in the Source field of the File Location Screen.

Table D–1 Oracle Gateway Source Path

Gateway Name	Path
Sybase	*mount_point*/9ias_1022_Supplemental_Disk1/GW_SYBASE/Disk1/stage/products.jar
Informix	*mount_point*/9ias_1022_Supplemental_Disk1/GW_INFORMIX/Disk1/stage/products.jar
Ingres	*mount_point*/9ias_1022_Supplemental_Disk1/GW_INGRES/Disk1/stage/products.jar

Oracle Internet Directory

Oracle Internet Directory is a general purpose directory service that stores information about users and network resources. It enables retrieval of information about dispersed users and network resources. It combines Lightweight Directory Access Protocol (LDAP), the open Internet standard directory access protocol, with the high performance, scalability, robustness, and availability of the Oracle9*i* Application Server.

Source Path

You can install Oracle Internet Directory from Oracle9*i* Application Server Supplemental CD-ROM Disk 2. The following is the full path to the `products.jar` file for Oracle Internet Directory. Enter this path in the `Source` field of the File Locations Screen.

mount_point`/9ias_1022_Supplemental_Disk2/OID/Disk1/stage/products.jar`

Oracle Workflow

Oracle Workflow is a business process modeling and automation tool that enables users to route information, create and change business processes, deliver electronic notifications, and integrate systems based on business events. It enables you to define and continuously improve your business processes using a drag-and-drop process designer, extend the reach of business process automation throughout the enterprise and beyond to include any e-mail or Internet user, and set up subscriptions to business events which can launch workflows or enable messages to be propagated from one system to another when business events occur.

Source Path

You can install Oracle Workflow from Oracle9*i* Application Server Supplemental CD-ROM Disk 2. The following is the full path to the `products.jar` file for Oracle Workflow. Enter this path in the `Source` field of the File Locations Screen.

mount_point`/9ias_1022_Supplemental_Disk2/WF/Disk1/stage/products.jar`

E

Enabling SSL for Oracle HTTP Server *powered by Apache*

This appendix describes the method of enabling SSL for Oracle HTTP Server. The following topics guide you through the necessary steps:

- Generate the Certification Request
- Modify httpd.conf File to Enable SSL

Generate the Certification Request

Perform the following steps to generate a certificate request:

1. Use the commands below to generate the certification request:

```
prompt> ORACLE_HOME/Apache/open_ssl/bin md5 *>rand.dat
prompt> ORACLE_HOME/Apache/open_ssl/bin genrsa -rand rand.dat -des3
1024>server.pem
prompt> ORACLE_HOME/Apache/open_ssl/bin req -new -key server.pem -out
server.pem -config
prompt> ./openssl.cnf
```

   When you run the final command, a certificate request is generated. The following is an example of a certification request:

```
Country Name (2 letter code) [AU]: US
State or Province Name (full name)[Some-State]: California
Locality name (eg, city) []: Redwood Shores
Organization Name (eg, company) [Internet Widgits Pty Ltd}: Oracle
Organizational Unit Name (eg, section) []: EITQA
Common Name (eg, YOUR name) []:machine.us.oracle.com
Email Address []: username@oracle.com
```

   Enter the following "extra" attributes to be sent with your certification request. This step is optional.

```
A challenge password []:
An optional company name []:
```

   Be sure to take note of the following:

   - These commands create two files: `server.pem` and `server.csr` (certificate request).
   - For Common Name, include the FULL name of the HOST and DOMAIN you are running the command on, for example: www.mycompany.com.
   - Remember the password you enter. This password is used every time Oracle HTTP Server is started.

2. Send the Certification Request. In the CSR area, paste the certification request from `server.csr` file.
3. When you receive the certificate, paste it into a file named `server.crt`.

   Be sure that you get the Root Trial CA certificate by going to the URL mentioned in the Certificate Authority email. Export that certificate from the

browser to a file named `rootcacert.crt`. If you are getting a trial certificate, only then do you need to put the trial CA certificate in the browser.

4. Copy the following in appropriate directories:
   - Certificate file `server.key` into the `./Apache/Apache/conf/ssl.crt` directory.
   - `server.pem` file into the `.../Apache/Apache/conf/ssl.key` directory.
   - Root Trial CA file `rootcacert.crt` into the `.../Apache/Apache/conf/ssl.crt` directory.

Modify httpd.conf File to Enable SSL

Make the following changes to the `httpd.conf` file to enable SSL:

1. **Port changes**: Be sure your entries are similar to the ones in the example below:

```
#
# This port is used when starting without SSL
Port 7777
# This port is used when starting with SSL
<IfDefine SSL>
   Port 7777
   Port 7788
</IfDefine>

##
##SSL Support
##
##When we also provide SSL we have to listen to the standard HTTP port
##(see above) abd to the HTTPS port
##
<IfDefine SSL>
   Listen 7777
   Listen 7788
</IfDefine>

##
##SSL Virtual Host Context
##

<VirtualHost_default_:7788>
```

2. **SSL Certificate related entries**: To configure the `httpd.conf` file to your certificate, search for `SSLCertificateFile` and make this entry as below pointing to your certificate that came from the certificate authority. This is illustrated in the following example:

```
SSLCertificateFile .../Apache/Apache/conf/ssl.crt/server.crt

Entry for Server Private Key

SSLCertificateKeyFile .../Apache/Apache/conf/ssl.key/server.pem

Entry for Server Certificate Chain: (The Root Trial CA Certificate)

SSLCertificateChainFile .../Apache/Apache/conf/ssl.crt/rootcacert.crt

Entry for Certificate Authority (CA): as below

#Certificate Authority (CA):
#Set the CA certificate verification path where to find CA
#certificates for client authentication or alternatively one
#huge file containing all of this (file must be PEM encoded).
#Note: Inside SSLCACertificatePath you beed hash symlinks
#to point to the certificate files. Use the provided
#Makefile to update the hash symlinks after changes.
#SSLCACertificateFile conf/ssl.crt/ca-bundle.crt
SSLCACertificateFile conf/ssl.crt
SSLCACertificateFile conf/ssl.crt/rootcacert.crt
```

3. Restart Oracle HTTP Server.

For information on enabling SSL for Oracle9*i*AS Portal, refer to *Oracle Portal 3.0.8 Configuration Guide.*

F

Installing Documentation Library

The Oracle9*i* Application Server Documentation Library CD-ROM contains the documentation set for this product. The documentation on the CD-ROM is available in both HTML and PDF formats. The following topics describe the contents of the CD-ROM, and provides instructions for installing and viewing the documentation:

Documentation Library Titles

The Documentation Library CD-ROM contains the documentation listed in the tables on the following pages. Titles that have a part number are available as printed and bound manuals from the Oracle Store at

`http://store.oracle.com`

Table F–1 Oracle9i Application Server Core Documentation

Part Number	Title
NA	Oracle9*i* Application Server Quick Tour
A87353-01	Oracle9*i* Application Server Overview Guide
A83709-07	Migrating from Oracle Application Server

Table F–2 Run Websites and Applications

Part Number	Title
NA	Apache User's Guide
NA	Apache JServ Documentation *(links to http://java.apache.org/jserv)*
NA	Apache mod_perl Documentation *(links to http://perl.apache.org)*
NA	mod_ssl Documentation
NA	OpenSSL Documentation *(links to http://www.openssl.org)*
A90282-01	Oracle HTTP Server powered by Apache Using mod_oprocmgr with mod_jserv
NA	Oracle Business Components for Java Developing Business Components
NA	Oracle Business Components for Java Tutorial - Building BC4J
NA	Oracle Business Components for Java Reference API
A88852-01	Oracle9iAS Object Caching Service for Java Developer's Guide
A83728-01	Oracle8*i* Java Developer's Guide
A81358-01	Oracle8*i* Java Stored Procedures Developer's Guide
A83720-011	Oracle8*i* Servlet Engine User's Guide
NA	OracleJSP Developer's Toolkit

Table F–2 Run Websites and Applications (Cont.)

Part Number	Title
A83725-01	Oracle8*i* Enterprise JavaBeans Developer's Guide and Reference
A88705-01	Deploying Enterprise JavaBeans to Oracle9*i* Application Server
A83722-01	Oracle8*i* CORBA Developer's Guide and Reference
A83724-01	Oracle8*i* JDBC Developer's Guide and Reference
A83723-01	Oracle8*i* SQLJ Developer's Guide and Reference
A81357-01	Oracle8*i* JPublisher User's Guide
A85456-01	Oracle8*i* Supplied Java Packages Reference
A83727-01	Oracle8*i* Java Tools Reference
A90099-01	Using the PL/SQL Gateway
A90101-01	PL/SQL Web Toolkit Reference
NA	Forms Developer Quick Tour
A86202-01	Deploying Forms Applications to the Web
A73074-01	Form Builder Reference Manual
A73073-02	Guidelines for Building Applications
A73075-01	Graphics Builder Reference Manual
A73076-01	Procedure Builder Reference Manual
A73152-01	Common Built-in Packages Reference Manual
A86030-01	Oracle8*i* Application Developer's Guide - XML
A83730-01	Oracle8*i* XML Reference Guide
A86082-01	Oracle Internet Directory Application Developer's Guide

Table F–3 Create Personalized Portals

Part Number	Title
NA	Oracle9*i*AS Portal Quick Tour
A90097-01	Oracle9*i*AS Portal Tutorial
A90096-01	Oracle9*i*AS Portal Configuration Guide
A90098-01	Oracle9*i*AS Portal Building Portals
A90343-01	Oracle9iAS Single Sign-On Application Developer's Guide
A88732-01	Oracle9iAS Single Sign-On Administrator's Guide

Table F–4 Wireless Enable Portals

Part Number	Title
A86701-02	Oracle9*i*AS Wireless Configuration Guide
A86700-01	Oracle9*i*AS Wireless Developer's Guide
A86699-01	Oracle9*i*AS Wireless Implementation Guide

Table F–5 Accelerate Performance with Caching

Part Number	Title
NA	Oracle9*i*AS Database Cache Quick Tour
A88706-01	Oracle9*i*AS Database Cache Concepts and Administration Guide

Table F–6 Extract Business Intelligence

Part Number	Title
A90288-01	Oracle9*i*AS Discoverer Plus and Viewer Configuration Guide for UNIX
A90287-01	Oracle9*i*AS Discoverer Plus and Viewer Configuration Guide for Windows
NA	Reports Developer Quick Tour
A86784-02	Publishing Reports to the Web
A73172-01	Building Reports
A73174-01	Reports Developer Reference Manual
A73073-02	Guidelines for Building Applications
A73075-01	Graphics Builder Reference Manual
A73076-01	Procedure Builder Reference Manual
A73152-01	Common Built-in Packages Reference Manual

Table F–7 Integrate Users, Applications, and Businesses

Part Number	Title
A87449-01	Oracle Workflow Guide
A90225-02	Oracle9iAS InterConnect User's Guide
A90297-01	Oracle9iAS SOAP Developer's Guide
A88729-01	Using Transparent Gateways with Oracle9*i* Application Server
A88714-01	Oracle Heterogeneous Services
A86653-01	Oracle9*i*AS Email Server Administrator's Guide
A86650-01	Oracle9*i*AS Email Server Developer's Guide
A86093-02	Oracle9*i*AS Unified Messaging Developer's Guide

Table F–7 Integrate Users, Applications, and Businesses (Cont.)

Part Number	Title
NA	Oracle Internet File System Quick Tour
A81197-05	Oracle Internet File System Setup and Administration Guide
A75154-04	Oracle Internet File System User's Guide
A75172-04	Oracle Internet File System Developer's Guide
NA	Oracle Internet File System Class Reference
NA	Oracle Internet File System Java Reference API
NA	Oracle Internet File System XML Reference

Table F–8 Manage and Secure Web Infrastructure

Part Number	Title
NA	Oracle Enterprise Manager Console Quick Tour
NA	Standard Management Pack Quick Tour
A85250-01	Oracle Enterprise Manager Concepts Guide
A85247-01	Oracle Enterprise Manager Configuration Guide
A85248-01	Oracle Enterprise Manager Administrator's Guide
A85251-01	Oracle Intelligent Agent User's Guide
A85245-01	Oracle Enterprise Manager Messages Manual
A85249-01	Oracle SNMP Support Reference Guide
A86101-01	Oracle Internet Directory Administrator's Guide
A86082-01	Oracle Internet Directory Application Developer's Guide
A90387-01	Oracle Wallet Manager User's Guide

Installing the Documentation Library

You can install the documentation on the CD-ROM in either of two ways:

- Copying the files from the CD-ROM to your local system.
- Using the Oracle Universal Installer included with Oracle9*i* Application Server.

File Copy Installation

The simplest installation method is to directly copy the files from the CD-ROM to your computer. Use your operating system's commands to copy the contents of the doc directory on the CD-ROM to the appropriate installation directory on your system. For consistency with installations performed by the Oracle Universal Installer, Oracle recommends that you name the directory doc.

For example, the following command copies the documentation from the CD-ROM to your Oracle home directory.

For UNIX, enter the following command:

```
prompt> cp -r mount_point/doc $ORACLE_HOME
```

For Windows, enter the following command at the command prompt:

```
prompt> xcopy /s cdrom_drive\doc %ORACLE_HOME%
```

Note: This method may overwrite files if the destination directory already exists.

Oracle Universal Installer Installation

The Oracle Universal Installer also installs the documentation onto your computer from the CD-ROM. The following instructions describe the process:

1. Launch the Oracle Universal Installer.

   See Also: "Starting Oracle Universal Installer" on page 2-34

2. At the Welcome screen, click **Next**.

3. At the File Locations screen do the following:
   a. Eject the Oracle9*i* Application Server CD-ROM and replace it with the Documentation Library CD-ROM.
   b. In the Source field,

      For UNIX, enter *mount_point*`/stage/products.jar`.

      For Windows, enter *cdrom-drive*`\stage\products.jar`.

      This directs the installer to the installation file for the documentation library.
   c. In the Destination field, enter the path to the Oracle home you are installing the documentation to. The documentation will be installed in the `doc` directory under Oracle home.
   d. Click **Next** to continue.
4. At the Summary screen, review the summary and click **Install** to begin the installation process.
5. After installation, the End of Installation screen will appear. Click **Exit** to quit the installer.

Viewing the Documentation Library

You can view the Oracle9*i* Application Server documentation library directly from the CD-ROM or from disk after installing it. For information about the tools necessary to view the documentation, refer to "Online Documentation Requirements" on page 1-5.

To view the HTML and PDF documentation from a local installation or from the CD-ROM, follow these steps:

1. Use your browser to open the top-level `index.htm` file from the `doc` directory on either the CD-ROM or Oracle home directory.
2. Click on the list of components to see the documentation relating to a particular component.

Using the Oracle Information Navigator Applet

Oracle Information Navigator is a Java-based search and navigation utility provided with Oracle online documentation. If you are using a Java-enabled browser, the navigator is launched automatically when you open `index.htm` in a browser. The navigator can be used with Oracle documentation, whether you are reading from the CD-ROM or from installed files.

For information on how to use the navigator, click the **Help** button in the top right corner of the browser window.

Bypassing the Oracle Information Navigator Applet

If you do not wish to launch the Oracle Information Navigator applet, open `products.htm` instead of `index.htm`.

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