

Oracle® Database

Companion CD Installation Guide

10g Release 1 (10.1) for UNIX Systems: AIX-Based Systems, hp
HP-UX, hp Tru64 UNIX, Linux, and Solaris Operating System

Part No. B10886-06

October 2004

Oracle Database Companion CD Installation Guide, 10g Release 1 (10.1) for UNIX Systems: AIX-Based Systems, hp HP-UX, hp Tru64 UNIX, Linux, and Solaris Operating System

Part No. B10886-06

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Oracle welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
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If you find errors or have other suggestions for improvement, you can email them to us at osdwrite_us@oracle.com. Please indicate the title and part number of the document and the chapter, section, and page number if available. Please indicate whether you would like a reply.

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

Preface

This guide describes how to install and configure the products available on the Oracle Database 10g Companion CD.

Audience

This guide is intended for anyone responsible for installing the products available on the Oracle Database 10g Companion CD.

Documentation Accessibility

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

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Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

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Terminology

The names for the UNIX operating systems have been shortened in this guide, as follows:

Operating System	Abbreviated Name
AIX-Based Systems	AIX
hp HP-UX PA-RISC (64-bit) hp HP-UX Itanium	HP-UX Note: Where the information for HP-UX is different on a particular architecture, this is noted in the text.
hp Tru64 UNIX	Tru64 UNIX
Linux x86 Linux Itanium IBM zSeries Based Linux	Linux Note: Where the information for Linux is different on a particular architecture, this is noted in the text.
Solaris Operating System (SPARC) Solaris Operating System (x86)	Solaris Note: Where the information for Solaris is different on a particular architecture, this is noted in the text.

Typographic Conventions

The following typographic conventions are used in this guide:

Convention	Description
<code>monospace</code>	Monospace type indicates UNIX commands, directory names, user names, path names, and file names.
<i>italics</i>	Italic type indicates a variable, including variable portions of file names. It is also used for emphasis and for book titles.
UPPERCASE	Uppercase letters indicate Structured Query Language (SQL) reserved words, initialization parameters, and environment variables.

Command Syntax

UNIX command syntax appears in monospace font. The dollar character (\$), number sign (#), or percent character (%) are UNIX command prompts. Do not enter them as part of the command.

Convention	Description
backslash \	A backslash indicates a command that is too long to fit on a single line. Enter the line as displayed (with a backslash) or enter it on a single line without a backslash: <pre>dd if=/dev/rdisk/c0t1d0s6 of=/dev/rst0 bs=10b \ count=10000</pre>
braces { }	Braces indicate required items: <pre>.DEFINE {macro1}</pre>
brackets []	Brackets indicate optional items: <pre>cvtcrt termname [outfile]</pre>

Convention	Description
ellipses ...	Ellipses indicate an arbitrary number of similar items: CHKVAL <i>fieldname value1 value2 ... valueN</i>
<i>italics</i>	Italic type indicates a variable. Substitute a value for the variable: <i>library_name</i>
vertical line	A vertical line indicates a choice within braces or brackets: SIZE <i>filesize</i> [K M]

Accessing Documentation

The documentation for Oracle Database 10g Companion CD includes platform-specific documentation and generic product documentation.

Platform-Specific Documentation

Platform-specific documentation includes information about installing and using Oracle products on particular platforms. The platform-specific documentation for this product is available in both Adobe portable document format (PDF) and HTML format on the product disc. To access the platform-specific documentation on disc:

1. Use a Web browser to open the `welcome.htm` file in the top-level directory of the disc.
2. For DVD-ROMs only, select the appropriate product link.
3. Select the **Documentation** tab.

If you prefer paper documentation, then open and print the PDF files.

Product Documentation

Product documentation includes information about configuring, using, or administering Oracle products on any platform. The product documentation for Oracle Database 10g products is available in both HTML and PDF formats in the following locations:

- On the Oracle Database 10g Documentation Library CD-ROM
To access the documentation from the CD-ROM, use a Web browser to view the `index.htm` file in the top-level directory on the disc.
- In the `doc` subdirectory on the Oracle Database 10g DVD-ROM
To access the documentation from the DVD-ROM, use a Web browser to view the `welcome.htm` file in the top-level directory on the disc, then select the Oracle Database 10g Documentation Library link.
- Online on the Oracle Technology Network (OTN) Web site:
<http://www.oracle.com/technology/documentation>

Related Documentation

The platform-specific documentation for Oracle Database 10g products includes the following manuals:

- Oracle Database:
 - *Oracle Database Release Notes (platform-specific)*
 - *Oracle Database Quick Installation Guide (platform-specific)*
 - *Oracle Database Installation Guide for UNIX Systems*
 - *Oracle Real Application Clusters Installation and Configuration Guide*
 - *Oracle Database Administrator's Reference for UNIX Systems*
 - *Oracle Procedural Gateway for APPC Installation and Configuration Guide for UNIX*
 - *Oracle Procedural Gateway for APPC User's Guide for UNIX*
 - *Oracle Procedural Gateway for APPC Messages Guide*
 - *Oracle Transparent Gateway for DRDA Installation and User's Guide for UNIX*
- Oracle Client:
 - *Oracle Database Client Quick Installation Guide (platform-specific)*
 - *Oracle Database Client Installation Guide for UNIX Systems*
- Oracle Database 10g Companion CD:
 - *Oracle Database Companion CD Installation Guide for UNIX Systems*
 - *Oracle Database Companion CD Quick Installation Guide (platform-specific)*

Refer to the Oracle Database release notes for your platform for important information that was not available when this book was released. The release notes for Oracle Database 10g are updated regularly. You can get the most-recent version from OTN:

<http://www.oracle.com/technology/documentation>

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Installation Overview

This chapter provides an overview of the products available on the Oracle Database 10g Companion CD and describes issues that you must consider before installing them. It includes information about the following topics:

- [Installation Overview](#)
- [Products Available in the Oracle Database 10g Products Installation Type](#)
- [Products Available in the Oracle Database 10g Companion Products Installation Type](#)

Installation Overview

This section describes the installation types available from the Oracle Database 10g Companion CD and provides an overview of the installation process.

Installation Types

The Oracle Database 10g Companion CD contains two installation types:

- Oracle Database 10g Products
- Oracle Database 10g Companion Products

Oracle Database 10g Products

The Oracle Database 10g Products installation type includes the following products, which must be installed in an existing Oracle Database 10g Oracle home:

- [Oracle Database Examples](#)
- [JPublisher](#)
- [Legato Single Server Version](#)
- [Natively Compiled Java Libraries](#)
- [Oracle Text Supplied Knowledge Bases](#)

Oracle Database 10g Companion Products

The Oracle Database 10g Companion Products installation type includes the following products:

- [Oracle HTTP Server](#)
- [Oracle HTML DB](#)

You must install Oracle HTTP Server in a new Oracle home. You must install Oracle HTML DB in an Oracle HTTP Server Oracle home. This can be an existing Oracle home that contains Oracle HTTP Server which you installed from the Companion CD, or you can choose to install both products at the same time.

Installation Process

Regardless of which products you choose to install, the installation process consists of four parts:

1. **Planning your installation:** This chapter describes the products that you can install and describes information that you must know before installing the software.
2. **Completing pre-installation tasks:** Depending on where you want to install the software, one of the following chapters describes pre-installation tasks that you must complete before installing the software:
 - [Chapter 2, "Pre-installation Tasks for Installations in an Existing Oracle Home"](#)
 - [Chapter 3, "Pre-installation Tasks for Installations in a New Oracle Home"](#)
3. **Installing software:** [Chapter 4](#) describes how to use the Oracle Universal Installer to install the software.
4. **Completing post-installation tasks:** [Chapter 5](#) describes recommended and required post-installation tasks.

Products Available in the Oracle Database 10g Products Installation Type

The following sections describe the products that are installed by the Oracle Database 10g Products installation type. You must install these products in an existing Oracle Database 10g Oracle home:

- [Oracle Database Examples](#)
- [JPublisher](#)
- [Legato Single Server Version](#)
- [Natively Compiled Java Libraries](#)
- [Oracle Text Supplied Knowledge Bases](#)

Oracle Database Examples

Oracle Database Examples include a wide range of examples and product demonstrations that you can use to learn about the products, options, and features of Oracle Database 10g. Many of these examples are designed to work with the Sample Schemas which you can optionally install in any Oracle Database 10g database. Many of the documents in the Oracle product-specific documentation library use the example programs and scripts provided with the Oracle Database Examples.

Required Products

To use many of the examples, you must also install the Sample Schemas into an Oracle database. When you install Oracle Database 10g, or use the Database Configuration Assistant (DBCA) to create a new database, you can choose to include the Sample Schemas when you create the database. You can also manually install the Sample Schemas into an existing database. Note that the scripts required to install the sample schemas are installed with the Oracle Database 10g Products installation type.

See Also: For information about manually installing the Sample Schemas into an existing database, see the *Oracle Database Sample Schemas* manual.

JPublisher

JPublisher is a Java utility that generates Java classes to represent the following user-defined database entities in a Java program:

- SQL object types
- Object reference types ("REF types")
- SQL collection types (VARRAY types or nested table types)
- PL/SQL packages
- Server-side Java classes
- SQL queries and DML statements

JPublisher enables you to specify and customize the mapping of SQL object types, object reference types, and collection types (VARRAYs or nested tables) to Java classes in a strongly typed paradigm.

JPublisher can also generate classes for PL/SQL packages. These classes have wrapper methods to invoke the stored procedures in the PL/SQL packages.

In addition, JPublisher simplifies access to PL/SQL-only types from Java. You can employ predefined or user-defined mappings between PL/SQL and SQL types, as well as make use of PL/SQL conversion functions between such types. With such type correspondences in place, JPublisher can automatically generate all of the required Java and PL/SQL code.

In a similar way that SQL or PL/SQL entities publish to Java, you can publish server-side Java classes to client-side Java classes. Doing this enables applications to make direct calls to Java classes in the database.

JPublisher enables you to expose generated Java classes as Web services, for example you can publish either SQL or PL/SQL entities or server-side Java entities.

JPublisher uses SQLJ code in most Java classes that it generates, so it includes Oracle SQLJ Translator and Oracle SQLJ Runtime. Oracle SQLJ is a standard way to embed SQL statements in Java programs.

Oracle SQLJ Translator

Because JPublisher uses SQLJ code in its generated classes, it automatically invokes the Oracle SQLJ translator during the code generation process, as necessary. The translator converts embedded SQL statements into JDBC calls.

Oracle SQLJ Runtime

Oracle SQLJ Runtime is used during program execution to execute most classes that were generated by JPublisher. SQLJ Runtime is a thin layer of pure Java code that runs above the JDBC driver. It acts as an intermediary that reads information about SQL operations and passes instructions to the JDBC driver.

See Also: For more information about JPublisher, see the *Oracle Database JPublisher User's Guide*.

Legato Single Server Version

Note: Legato Single Server Version is not supported on Solaris x86 or zSeries Linux.

Legato Single Server Version (LSSV) is a backup and recovery application which is developed by Legato Systems, Inc. LSSV is a subset of Legato NetWorker and Legato NetWorker Module for Oracle products. You can use it to back up and restore Oracle data on a single server only. It allows you to perform online or offline backups of Oracle data stored on file systems, in Automatic Storage Management disk groups, or on raw devices.

LSSV software includes a media management layer. Oracle Recovery Manager (RMAN) requires this layer when using tape storage for database backups and restoration. LSSV manages the backup schedule and communicates with Oracle Recovery Manager (RMAN) to copy the Oracle data to tape.

Because Legato Single Server Version works in conjunction with Oracle Database for Oracle data storage management, Legato Single Server Version must be installed on the same system as Oracle Database. The Legato Single Server Version and Oracle Database software components provide a storage management solution for Oracle Database data.

The Legato Single Server Version Administrator program has a graphical user interface for administering the Legato Single Server Version configuration. The

Administrator program is installed during the Legato Single Server Version installation on the Oracle Server system.

To fully install and configure Legato Single Server Version, you must complete the following tasks:

1. Remove Legato Storage Manager or Legato Networker if they are installed.
2. Verify that the required software and hardware is available.
3. Install the Legato Single Server Version in the same Oracle home directory as Oracle Database 10g.
4. Complete post-installation steps.

See Also: For information about configuring Oracle Database as a client of Legato Single Server Version, upgrading or removing Legato Storage Manager, or removing Legato Single Server Version, see the *Legato Single Server Version Installation Guide, Release 6.1*.

Legato documentation is available from the Legato Web site:

<http://www.legato.com/LSSV>

Natively Compiled Java Libraries

The Oracle Database 10g Products installation type installs JAccelerator and Oracle *interMedia* Image Accelerator which contain the natively compiled Java libraries (NCOMPs) for Oracle JVM and Oracle *interMedia*. These libraries are required to improve the performance of these products on your platform.

Oracle Text Supplied Knowledge Bases

An Oracle Text knowledge base is a hierarchical tree of concepts used for theme indexing, ABOUT queries, and deriving themes for document services. The Oracle Database 10g Products installation type installs two Oracle Text knowledge bases, English and French. You can extend the supplied knowledge bases depending on your requirements. Alternatively, you can create your own knowledge bases, possibly in languages other than English and French. For more information about creating and extending knowledge bases, see the *Oracle Text Reference*.

Products Available in the Oracle Database 10g Companion Products Installation Type

The following sections describe the products that you can install with the Oracle Database 10g Companion Products installation type:

- [Oracle HTTP Server](#)
- [Oracle HTML DB](#)

Oracle HTTP Server

Oracle HTTP Server is a Web server that is based on Apache HTTP Server. Use the Oracle Database 10g Companion Products installation type to install Oracle HTTP Server in a new Oracle home. This standalone release of Oracle HTTP Server provides the following features:

Note: OPMN is not provided on HP-UX Itanium, Linux Itanium, Solaris x86, or zSeries Linux systems.

mod_osso is not provided on HP-UX Itanium or Linux Itanium systems.

- A robust and reliable Web server that you can use to serve Web pages
- Support for Perl and Fast CGI scripts using mod_perl and mod_fastcgi
- Support for PL/SQL applications using mod_plsql
- High-availability, through the use of Oracle Process Manager and Notification server (OPMN)

OPMN monitors Oracle HTTP Server processes and restarts them if they fail.

- Support for secure transactions using secure socket layer (SSL)
 - Single sign-on capabilities using mod_osso
- To enable single sign-on, you must use Oracle HTTP Server in conjunction with Oracle Internet Directory, which is available as part of Oracle Application Server 10g.
- Many standard Apache modules, in addition to modules provided by Oracle

Differences Between this Release and Other Oracle HTTP Server Releases

The standalone version of Oracle HTTP Server differs from the version shipped with other releases of Oracle software, as follows:

Note: On HP-UX Itanium and Linux Itanium, the version of Oracle HTTP Server is 9.2.0. This is the same version provided with Oracle9i release 2.

On Solaris x86 and zSeries Linux, the version of Oracle HTTP Server is 10.1.2.

- Oracle9i release 2 or earlier, and Oracle9iAS release 1:
 - Apache JServ is not shipped with this release of Oracle HTTP Server. Its use with this release is not supported.
 - Because Apache JServ is not supported, the mod_oprocmgr module is not loaded in the default configuration.
 - In this release, mod_ssl is replaced by mod_oss1, which is developed by Oracle.

See [Chapter 5](#) for more information about migrating SSL certificates to the format required by mod_oss1.

- On AIX, HP-UX PA-RISC, Linux x86, Solaris SPARC, and Tru64 UNIX, the `apachectl` utility is not supported for starting, stopping, or restarting Oracle HTTP Server.

On these platforms, use the `opmnctl` utility to start, stop, or restart Oracle HTTP Server. See [Chapter 5](#) for more information about using the `opmnctl` utility.

- Oracle9iAS Release 2 or later:
 - You cannot configure the standalone release of Oracle HTTP Server in an Oracle9iAS or Oracle Application Server 10g cluster.
For this reason, you cannot use the `dcmdctl` utility to start, stop, or restart processes associated with this release of Oracle HTTP Server.
 - You cannot use the Oracle Enterprise Manager Application Server Control to administer this release of Oracle HTTP Server.

Where to Install Oracle HTTP Server

You must install Oracle HTTP Server in a new Oracle home directory. Do not install it in an existing Oracle home directory. You can install Oracle HTTP Server more than once on the same system, provided that each installation uses a separate Oracle home directory.

Oracle HTML DB

Oracle HTML DB is a hosted development environment that enables non-programmers to create database-centric Web applications. It provides developers with the productivity of a desktop database, but with the security, reliability, and performance of the Oracle database. Any IT organization can host Oracle HTML DB environments for departments in the company that do not have Oracle development skills available.

Where to Install Oracle HTML DB

You can choose to install Oracle HTML DB with Oracle HTTP Server in a new Oracle home directory. Alternatively, you can also install this product in an existing Oracle home that contains Oracle HTTP Server which you installed from the Companion CD. Do not install Oracle HTML DB in any other Oracle HTTP Server Oracle home.

Pre-installation Tasks for Installations in an Existing Oracle Home

This chapter describes the tasks that you must complete before you install the software in an existing Oracle home. It includes information about the following:

- [Pre-installation Tasks for Oracle Database 10g Products](#)
- [Pre-installation Tasks for Oracle HTML DB](#)

Pre-installation Tasks for Oracle Database 10g Products

When you select the Oracle Database 10g Products installation type, the Installer installs all of the products available through this installation type. Ensure that your system meets the requirements in the following sections before installing Oracle Database 10g Products.

Check the Oracle Database 10g Installation

Before using this installation type, make sure that your system has an Oracle Database 10g Oracle home. If it does not, you must install Oracle Database 10g before installing products with the Oracle Database 10g Products installation type.

See Also: For information about installing Oracle Database 10g, see the *Oracle Database Installation Guide*.

Identify the Oracle Database 10g Oracle Home Directories

If necessary, identify the Oracle home directory used by the Oracle Database 10g installation. If you do not know the path of the Oracle home directory, check the `oratab` file as follows:

- Solaris:
more /var/opt/oracle/oratab
- Other operating systems:
more /etc/oratab

Check Disk Space Requirements

Verify that the file system that contains the Oracle home directory contains at least 1 GB of free disk space.

To check that the Oracle home directory has enough space, enter one of the following commands:

- HP-UX:
bdf oracle_home_path
- Other operating systems:
df -k oracle_home_path

Pre-installation Tasks for Oracle HTML DB

Note: This section describes the pre-installation tasks that you must complete if you are installing Oracle HTML DB in an existing Oracle home directory that contains Oracle HTTP Server. See the following section for information about Oracle home directories that satisfy this requirement. Alternatively, you can install Oracle HTML DB with Oracle HTTP Server in a new Oracle home directory.

When you select the Oracle Database 10g Companion Products installation type, you can choose to install Oracle HTML DB in an existing Oracle home that contains Oracle HTTP Server which you installed from the Companion CD. Before installing Oracle HTML DB, make sure your system meets the requirements described in the following sections.

Identify an Appropriate Oracle HTTP Server Installation

Before installing Oracle HTML DB, make sure that the system has an Oracle home directory that contains Oracle HTTP Server which you installed from the Companion CD. If it does not, you must install Oracle HTTP Server when you install Oracle HTML DB.

Note: If you do not have an Oracle home directory that contains Oracle HTTP Server installed from the Companion CD, you must install Oracle HTTP Server when you install Oracle HTML DB. See [Chapter 3](#) for information about pre-installation tasks for Oracle HTTP Server.

Check Disk Space Requirements

Verify that the file system that contains the Oracle home directory contains at least 350 MB of free disk space.

To check that the Oracle home directory has enough space, enter one of the following commands:

- HP-UX:

```
# bdf /httpserver_oracle_home_path
```
- Other operating systems:

```
# df -k /httpserver_oracle_home_path
```

Check the Oracle Database Installation

Before installing Oracle HTML DB, identify the Oracle database that you want to use with Oracle HTML DB. The database must be Oracle9i release 9.2.0.3 or higher. The database can be on a different system from the system where you are installing Oracle HTML DB.

Check for Oracle XML DB

Oracle XML DB must be installed in the database that you want to use.

If you are using a preconfigured database created either during an installation or by the Database Configuration Assistant (DBCA), Oracle XML DB is already installed and configured. For information about manually adding Oracle XML DB to an existing database, see the *Oracle XML DB Developer's Guide*.

Identify Database Information

During the installation, you must specify the following information about the database:

- The host name of the database system
- The port number of the Oracle Net listener
- The service name of the database
- The password of the SYS user

Make sure that you have this information before starting the installation.

See [Chapter 4](#) for instructions on installing the Oracle Database 10g Companion Products installation type.

Pre-installation Tasks for Installations in a New Oracle Home

This chapter describes the tasks that you must complete before you start the Oracle Universal Installer and install Oracle products in a new Oracle home. It includes information about the following tasks:

- [Installation Considerations](#)
- [Pre-installation Tasks for Oracle HTTP Server](#)
- [Pre-installation Tasks for Oracle HTML DB](#)

Installation Considerations

Review the following sections before starting the installation.

Hardware and Software Certification

The platform-specific hardware and software requirements included in this installation guide were current at the time this guide was published. However, because new platforms and operating system software versions might be certified after this guide is published, review the certification matrix on the Oracle*MetaLink* Web site for the most up-to-date list of certified hardware platforms and operating system versions. The Oracle*MetaLink* Web site is available at the following URL:

<http://metalink.oracle.com>

If you do not have a current Oracle Support Services contract, you can access the same information from the following Web site:

<http://otn.oracle.com/support/metalink/content.html>

Installing Oracle Database 10g Companion Products

Before installing the products available with the Oracle Database 10g Companion Products installation type, complete the tasks described in the following sections, depending on the products that you want to install:

- [Pre-installation Tasks for Oracle HTTP Server](#)
- [Pre-installation Tasks for Oracle HTML DB](#)

Note: If you install Oracle HTML DB in a new Oracle home, you must install Oracle HTTP Server at the same time.

See Also: If you want to install Oracle HTML DB in an existing Oracle HTTP Server Oracle home, see [Chapter 2, "Pre-installation Tasks for Installations in an Existing Oracle Home"](#).

Pre-installation Tasks for Oracle HTTP Server

Perform the tasks described in the following sections before installing Oracle HTTP Server.

Log in to the System as root

Before you install the Oracle software, you must complete several tasks as the `root` user. To log in as the `root` user, complete one of the following procedures:

Note: Unless you intend to complete a silent installation, you must install the software from an X Window System workstation, an X terminal, or a PC or other system with X server software installed.

- If you are installing the software from an X Window System workstation or X terminal:
 1. Start a local terminal session, for example, an X terminal (`xterm`).
 2. If you are not installing the software on the local system, enter the following command to enable remote hosts to display X applications on the local X server:


```
$ xhost +
```
 3. If you are not installing the software on the local system, use the `ssh`, `rlogin`, or `telnet` command to connect to the system where you want to install the software:


```
$ telnet remote_host
```
 4. If you are not logged in as the `root` user, enter the following command to switch user to `root`:


```
$ su - root
password:
#
```
- If you are installing the software from a PC or other system with X server software installed:

Note: If necessary, see your X server documentation for more information about completing this procedure. Depending on the X server software that you are using, you may need to complete the tasks in a different order.

1. Start the X server software.
2. Configure the security settings of the X server software to permit remote hosts to display X applications on the local system.
3. Connect to the remote system where you want to install the software and start a terminal session on that system, for example, an X terminal (`xterm`).
4. If you are not logged in as the `root` user on the remote system, enter the following command to switch user to `root`:

```
$ su - root
password:
```

Check the Hardware Requirements

The system must meet the following minimum hardware requirements:

- 256 MB of physical RAM
- 512 MB of swap space
- 400 MB of free disk space in the `/tmp` directory

- The amount of free disk space shown in the following table, depending on your platform and the products that you want to install:

Products for Installation	Platform	Disk Space Required
Oracle HTTP Server	AIX, HP-UX, Tru64 UNIX	700 MB
	zSeries Linux	500 MB
	Linux x86, Linux Itanium, Solaris	400 MB
Oracle HTTP Server and Oracle HTML DB	AIX, HP-UX, Tru64 UNIX	1050 MB
	zSeries Linux	800 MB
	Linux x86, Linux Itanium, Solaris	700 MB

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

1. To determine the physical RAM size, enter one of the following commands:

Platform	Command
AIX	# /usr/sbin/lssattr -E -l sys0 -a realmem
HP-UX	# grep "Physical:" /var/adm/syslog/syslog.log
Linux	# grep MemTotal /proc/meminfo
Solaris	# /usr/sbin/prtconf grep "Memory size"
Tru64 UNIX	# /bin/vmstat -P grep "Total Physical Memory"

If the size of the physical RAM installed in the system is less than the required size, you must install more memory before continuing.

2. To determine the size of the configured swap space, enter one of the following commands:

Platform	Command
AIX	# /usr/sbin/lssps -a
HP-UX	# /usr/sbin/swapinfo -a
Linux	# grep SwapTotal /proc/meminfo
Solaris	# /usr/sbin/swap -s
Tru64 UNIX	# /sbin/swapon -s

If necessary, see your operating system documentation for information about how to configure additional swap space.

3. To determine the amount of disk space available in the /tmp directory, enter one of the following commands:
 - HP-UX:


```
# bdf /tmp
```
 - Other operating systems:


```
# df -k /tmp
```

If there is less than 400 MB of disk space available in the `/tmp` directory, complete one of the following steps:

- Delete unnecessary files from the `/tmp` directory to achieve the required disk space.
 - Set the `TEMP` and `TMPDIR` environment variables when setting the `oracle` user's environment (described later).
 - Extend the file system that contains the `/tmp` directory. If necessary, contact your system administrator for information about extending file systems.
4. To determine the amount of free disk space on the system, enter one of the following commands:
 - HP-UX:


```
# bdf
```
 - Other operating systems:


```
# df -k
```
 5. To determine whether the system architecture can run the software, enter one of the following commands:

Note: If you do not see the expected output, you cannot install the software on this system.

Platform	Command	Expected Output
AIX	<pre># /usr/bin/getconf HARDWARE_BITMODE</pre>	64
HP-UX	<pre># /bin/getconf KERNEL_BITS</pre>	64
Linux (X86 and Itanium)	<pre># grep "model name" /proc/cpuinfo</pre>	This command displays the processor type. Verify that the processor architecture matches the Oracle software release that you want to install.
Solaris	<pre># /bin/isainfo -kv</pre>	SPARC systems: 64-bit sparcv9 kernel modules x86 systems: 32-bit i386 kernel modules

Check the Software Requirements

Depending on your operating system, see one of the following sections for information about checking the software requirements:

- [Checking the Software Requirements on AIX](#) on page 3-6
- [Checking the Software Requirements on HP-UX](#) on page 3-7
- [Checking the Software Requirements on Linux](#) on page 3-11
- [Checking the Software Requirements on Solaris](#) on page 3-15
- [Checking the Software Requirements on Tru64 UNIX](#) on page 3-17

Checking the Software Requirements on AIX

Check that the required software and patches are installed on the system.

Check for Required Software

Verify that the following software is installed on the system. The procedure following the table describes how to check these requirements.

Installation Type or Product	Requirement
All installations	Operating system version and maintenance level: AIX 5L version 5.2, Maintenance Level 1 or higher
	Operating system filesets: bos.adt.base bos.adt.lib bos.adt.libm bos.perf.libperfstat bos.perf.perfstat bos.perf.proctools

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

1. To determine which version of AIX is installed, enter the following command:

```
# oslevel -r
```

If the operating system version is lower than AIX 5.2.0.0 Maintenance Level 1 (5200-01), upgrade your operating system to this level. AIX 5L version 5.2 maintenance packages are available from the following Web site:

<http://www-912.ibm.com/eserver/support/fixes/>

2. To determine whether the required filesets are installed and committed, enter a command similar to the following:

```
# lsllpp -l bos.adt.base bos.adt.lib bos.adt.libm bos.perf.perfstat \  
bos.perf.libperfstat bos.perf.proctools
```

If a fileset is not installed and committed, then install it. See your operating system or software documentation for information about installing filesets.

Check for Required Patches

Verify that the following patches are installed on the system. The procedure following the table describes how to check these requirements.

Installation Type or Product	Requirement
All installations	Authorized Problem Analysis Reports (APARs): <ul style="list-style-type: none"> ■ IY43980: libperfstat.h not ANSI-compliant ■ IY44810: DSI IN BMRECYCLE ■ IY45462: Definition of isnan() in math.h incorrect ■ IY45707: J2 READAHEAD/CIO INTERACTION ■ IY46214: dropping partial connections leaves them on so_q0 ■ IY46605: exec of 32 bit application can fail on 64 bit kernel ■ IY48525: SDK 1.4.1 32-BIT SR1: CA141-20030930 ■ IY51801: race condition in aio_nwait_timeout

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

1. To determine whether an APAR is installed, enter a command similar to the following:

```
# /usr/sbin/instfix -i -k "IY43980 IY44810 IY45462 IY45707 IY46214 IY46605 \
IY48525 IY51801"
```

If an APAR is not installed, download it from the following Web site and install it:

<http://www-912.ibm.com/eserver/support/fixes/>

2. To continue completing pre-installation tasks, go to the "[Create Required UNIX Group and User](#)" section on page 3-19.

Checking the Software Requirements on HP-UX

Check that the required software and patches are installed on the system.

Check for Required Software

Verify that the following software is installed on the system. The procedure following the table describes how to check these requirements.

Installation Type or Product	Requirement
All installations	Operating system version: <ul style="list-style-type: none"> ■ PA-RISC (64-bit) systems: HP-UX 11i (11.11) PA-RISC ■ Itanium systems: HP-UX 11i v2 (11.23)

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

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

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

Check for Required Patches

Verify that the following patches are installed on the system. The procedure following the table describes how to check these requirements.

Note: There may be more recent versions of the patches listed installed on the system. If a listed patch is not installed, determine whether a more recent version is installed before installing the version listed.

Installation Type or Product	Requirement
All installations	Quality Pack bundle: HP-UX 11i (11.11): HP-UX 11i Quality Pack (GOLDQPK11i), June 2003 or later: GOLDAPPS11i GOLDBASE11i HP-UX 11i v2 (11.23): None currently required
All installations	Patches for HP-UX 11i (11.11): <ul style="list-style-type: none"> ■ PHCO_28123: cumulative SAM patch ■ PHKL_29198: Psets Enablement Patch; top(1) ■ PHNE_28476: Cumulative STREAMS Patch ■ PHNE_28923: LAN product cumulative patch ■ PHSS_28871: ld(1) and linker tools cumulative patch ■ PHSS_28880: HP aC++ -AA runtime libraries (aCC A.03.50) Patches for HP-UX 11i v2 (11.23): <ul style="list-style-type: none"> ■ PHSS_29658: Aries cumulative patch ■ PHSS_29660: linker + fdp cumulative patch

Installation Type or Product	Requirement
All installations	<p>Patches for JDK on HP-UX 11i (11.11):</p> <ul style="list-style-type: none"> ■ PHCO_26331: mountall cumulative patch, Dev IDs enabler ■ PHCO_29109: Pthread enhancement and fixes ■ PHKL_25468: eventport (/dev/poll) pseudo driver ■ PHKL_25842: Thread Abort ■ PHKL_25993: thread nostop for NFS, rlimit, Ufalloc fix ■ PHKL_25994: Thread NOSTOP, Psets Enablement, Ufalloc ■ PHKL_25995: ufalloc;VxFS3.5;SPP fragmentation ■ PHKL_26468: Shared synchronization performance support ■ PHKL_28489: copyin EFAULT, LDCD access type <p>Note: See the following Web site for information about additional patches that might be required by JDK 1.4.2:</p> <p>http://www.hp.com/products1/unix/java/patches/index.html</p>

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

1. On PA-RISC systems only, enter the following command to determine whether the HP-UX 11i Quality Pack is installed:

```
# /usr/sbin/swlist -l bundle | grep GOLD
```

If the Quality Pack is not installed, or if the date is before June 2003, download the latest Quality Pack from the following Web site and install it:

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

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

```
# /usr/sbin/swlist -l patch | grep PHSS_28880
```

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

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

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

<http://itresourcecenter.hp.com>

If the Web site shows a more recent version of the patch, download and install that version.

Create Required Symbolic Links

Note: This task is required only if the Motif 2.1 Development Environment package (X11MotifDevKit.MOTIF21-PRG) is *not* installed.

To allow you to successfully relink Oracle products after installing this software, enter the following commands to create required X library symbolic links in the `/usr/lib` directory:

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

To continue completing pre-installation tasks, go to the ["Create Required UNIX Group and User"](#) section on page 3-19.

Checking the Software Requirements on Linux

Check that the required software and patches are installed on the system.

Check for Required Software

Depending on the system architecture, verify that the software listed in one of the following tables is installed on the system:

- [Table 3–1, "Software Requirements for Installations on x86 Systems"](#)
- [Table 3–2, "Software Requirements for Installations on Itanium Systems"](#)
- [Table 3–3, "Software Requirements for Installations on zSeries Systems"](#)

The procedure following the tables describes how to check these requirements.

Table 3–1 Software Requirements for Installations on x86 Systems

Item	Requirement
Operating system	One of the following operating system versions: <ul style="list-style-type: none"> ■ Red Hat Enterprise Linux AS/ES 2.1 (Update 3 or higher) ■ Red Hat Enterprise Linux AS/ES 3 (Update 2 or higher) ■ SUSE Linux Enterprise Server (SLES) 8 (service pack 3 or higher) ■ SUSE Linux Enterprise Server 9
Kernel version	The system must be running the following kernel version (or a higher version): <p>Red Hat Enterprise Linux 2.1: 2.4.9, errata 34 (for example 2.4.9-e.34)</p> <p>Red Hat Enterprise Linux 3: 2.4.21-15.EL</p> <p>SUSE Linux Enterprise Server 8: 2.4.21-138</p> <p>SUSE Linux Enterprise Server 9: 2.6.5-7.5</p>

Table 3–1 (Cont.) Software Requirements for Installations on x86 Systems

Item	Requirement
Packages	<p>The following packages (or higher versions) must be installed:</p> <p>Red Hat Enterprise Linux 2.1:</p> <pre>make-3.79.1 glibc-2.2.4-32 gcc-2.96-128 gcc-c++-2.96-128 libstdc++-2.96-128 openmotif-2.1.30-11</pre> <p>Red Hat Enterprise Linux 3:</p> <pre>make-3.79.1 gcc-3.2.3-34 glibc-2.3.2-95.20 compat-db-4.0.14-5 compat-gcc-7.3-2.96.128 compat-gcc-c++-7.3-2.96.128 compat-libstdc++-7.3-2.96.128 compat-libstdc++-devel-7.3-2.96.128 openmotif21-2.1.30-8 setarch-1.3-1 gnome-libs-1.4.1.2.90-34.1</pre> <p>SUSE Linux Enterprise Server 8:</p> <pre>make-3.79.1 gcc-3.2.2-38 gcc-c++-3.2.2-38 openmotif-2.2.2-124</pre> <p>SUSE Linux Enterprise Server 9:</p> <pre>gcc-3.3.3-43 gcc-c++-3.3.3-43 glibc-2.3.3-98 libaio-0.3.98-18 libaio-devel-0.3.98-18 make-3.80 openmotif-libs-2.2.2-519.1</pre>

Table 3–2 Software Requirements for Installations on Itanium Systems

Item	Requirement
Operating system	<p>One of the following operating system versions:</p> <ul style="list-style-type: none"> ■ Red Hat Enterprise Linux AS/ES 2.1 (Update 3 or higher) ■ Red Hat Enterprise Linux AS/ES 3 (Update 1 or higher) ■ SUSE Linux Enterprise Server (SLES) 8 (service pack 3 or higher) ■ SUSE Linux Enterprise Server 9

Table 3–2 (Cont.) Software Requirements for Installations on Itanium Systems

Item	Requirement
Kernel version	<p>The system must be running the following kernel version (or a higher version):</p> <p>Red Hat Enterprise Linux 2.1: 2.4.18, errata 37 (for example 2.4.18-e.37)</p> <p>Red Hat Enterprise Linux 3: 2.4.21-4.EL</p> <p>SUSE Linux Enterprise Server 8: 2.4.21-241</p> <p>SUSE Linux Enterprise Server 9: 2.6.5-7.5</p>
Packages	<p>The following packages (or higher versions) must be installed:</p> <p>Red Hat Enterprise Linux 2.1: make-3.79.1 glibc-2.2.4-32 gcc-2.96-128 gcc-c++-2.96-128 libstdc++-2.96-128 openmotif-2.1.30-11 libaio-0.3.92-1 libaio-devel-0.3.92-1</p> <p>Red Hat Enterprise Linux 3: make-3.79.1 gcc-3.2.3-20 gcc-c++-3.2.3-20 glibc-2.3.2-95.3 compat-db-4.0.14-5 compat-gcc-7.3-2.96.128 compat-gcc-c++-7.3-2.96.128 compat-libstdc++-7.3-2.96.128 compat-libstdc++-devel-7.3-2.96.128 openmotif21-2.1.30-8 setarch-1.3-1 gnome-libs-1.4.1.2.90-34.1</p> <p>SUSE Linux Enterprise Server 8: make-3.79.1 gcc-3.2.2-23 gcc-c++-3.2.2-23 glibc-2.2.5-161 openmotif-2.2.2-125</p> <p>SUSE Linux Enterprise Server 9: gcc-3.3.3-43 gcc-c++-3.3.3-43 glibc-2.3.3-98 libaio-0.3.98-18 libaio-devel-0.3.98-18 make-3.80 openmotif-libs-2.2.2-519.1</p>

Table 3–3 Software Requirements for Installations on zSeries Systems

Item	Requirement
Operating system	The following operating system version: <ul style="list-style-type: none"> ■ SUSE Linux Enterprise Server (SLES) 8 (service pack 3 or higher)
Kernel version	The system must be running the following kernel version (or a higher version): SUSE Linux Enterprise Server 8: 2.4.21-112
Packages	The following packages (or higher versions) must be installed: SUSE Linux Enterprise Server 8: gcc-3.2.2-29 gcc-c++-3.2.2-29 glibc-2.2.5-108 glibc-devel-32bit-8.1-9 libaio-0.3.15-106 make-3.79.1 binutils-2.14.90.0.5-41 openmotif-2.2.2-52

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

1. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
```

Note: Only the distributions and versions listed in the previous table are supported. Do not install the software on other versions of Linux.

2. To determine whether the required kernel version is installed, enter the following command:

```
# uname -r
```

If the kernel version is lower than the required version, download and install the required version or a higher version from your Linux vendor's Web site.

3. To determine whether the required packages are installed, enter commands similar to the following:

```
# rpm -q package_name
```

If a package is not installed, install it from your Linux distribution media or download the required package version from your Linux vendor's Web site.

4. To continue completing pre-installation tasks, go to the ["Create Required UNIX Group and User"](#) section on page 3-19.

Checking the Software Requirements on Solaris

Check that the required software and patches are installed on the system.

Check for Required Software

Verify that the following software is installed on the system. The procedure following the table describes how to check these requirements.

Installation Type or Product	Requirement
All installations	<p>Operating system versions:</p> <p>SPARC systems:</p> <p>Solaris 8 or Solaris 9, 64-bit</p> <p>x86 systems:</p> <p>Solaris 9</p> <hr/> <p>Operating system packages:</p> <p>SPARC and x86 systems:</p> <p>SUNWarc SUNWbtool SUNWhea SUNWlibm SUNWlibms SUNWsprout SUNWtoo SUNWilof SUNWilcs SUNWi15cs SUNWxwfont</p> <p>SPARC systems only:</p> <p>SUNWsprout</p> <p>Note: You might also require additional font packages for Java, depending on your locale. See the following Web site for more information:</p> <p>http://java.sun.com/j2se/1.4.2/font-requirements.html</p>

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

1. To determine which version of Solaris is installed, enter the following command:

```
# uname -r
5.9
```

In this example, the version shown is Solaris 9 (5.9). If necessary, see your operating system documentation for information about upgrading the operating system.

2. To determine whether the required packages are installed, enter a command similar to the following:

```
# pkginfo -i SUNWarc SUNWbtool SUNWhea SUNWlibm SUNWlibms SUNWsprout \
  SUNWsprout SUNWtoo SUNWilof SUNWilcs SUNWi15cs SUNWxwfont
```

If a package is not installed, then install it. See your operating system or software documentation for information about installing packages.

Check for Required Patches

Verify that the following patches are installed on the system. The procedure following the table describes how to check these requirements.

Note: The patch versions shown in the following table are minimum versions. Higher versions of the same patches are also supported.

Installation Type or Product	Requirement
All installations	<p>Patches for Solaris 8 (SPARC only):</p> <p>All of the patches included in the J2SE Patch Cluster for Solaris 8:</p> <ul style="list-style-type: none"> ■ 108528-23, SunOS 5.8: kernel update patch ■ 108652-66, X11 6.4.1: Xsun patch ■ 108773-18, SunOS 5.8: IIIM and X I/O Method patch ■ 108921-16, CDE 1.4: dtwm patch ■ 108940-53, Motif 1.2.7 and 2.1.1: Runtime lib. patch for Solaris 8 ■ 108987-13, SunOS 5.8: Patch for patchadd and patchrm ■ 108989-02, /usr/kernel/sys/acctctl & /.../exaccts patch ■ 108993-18, SunOS 5.8: LDAP2 client, libc, ... lib. patch ■ 109147-24, SunOS 5.8: linker patch ■ 110386-03, SunOS 5.8: RBAC Feature Patch ■ 111023-02, SunOS 5.8: /kernel/fs/mntfs and ... sparcv9/mntfs ■ 111111-03, SunOS 5.8: /usr/bin/nawk patch ■ 111308-03, SunOS 5.8: /usr/lib/libmtmalloc.so.1 patch ■ 111310-01, SunOS 5.8: /usr/lib/libdhcagent.so.1 patch ■ 112396-02, SunOS 5.8: /usr/bin/fgrep patch <p>The following additional patches:</p> <ul style="list-style-type: none"> ■ 111721-04, SunOS 5.8: Math Library (libm) patch ■ 112003-03, SunOS 5.8: Unable to load fontset ... iso-1 or iso-15 ■ 112138-01, SunOS 5.8: usr/bin/domainname patch
All installations	<p>Patches for Solaris 9 (SPARC):</p> <ul style="list-style-type: none"> ■ 112233-11, SunOS 5.9: Kernel Patch ■ 111722-04, SunOS 5.9: Math Library (libm) patch <p>Patches for Solaris 9 (x86):</p> <ul style="list-style-type: none"> ■ 111713-06, SunOS 5.9_x86: Shared library patch for C++ ■ 111728-03, SunOS 5.9_x86: Math Library (libm) patch ■ 112234-12, SunOS 5.9_x86: Kernel Patch ■ 113986-08, SunOS 5.9_x86: linker Patch ■ 115114-02, SunOS 5.9_x86: Patch for assembler ■ 116013-02, SunOS 5.9_x86: ps utility patch (Available only from your local Sun solution center)

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

1. To determine whether an operating system patch is installed, enter a command similar to the following:

```
# /usr/sbin/patchadd -p | grep patch_number
```

If an operating system patch is not installed, download it from the following Web site and install it:

<http://sunsolve.sun.com>

2. To continue completing pre-installation tasks, go to the "[Create Required UNIX Group and User](#)" section on page 3-19.

Checking the Software Requirements on Tru64 UNIX

Check that the required software and patches are installed on the system.

Check for Required Software

Verify that the following software is installed on the system. The procedure following the table describes how to check these requirements.

Installation Type or Product	Requirement
All installations	Operating system version: HP Tru64 UNIX V5.1B
	Software Development Kit (SDK) v 1.4.2 for the Tru64 UNIX Operating System for the Java Platform (JDK 1.4.2)
	Operating system subsets: OSFCMPLRS OSFLIBA OSFPGMR OSFSER OSFX11

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

1. To determine which version of Tru64 UNIX is installed, enter the following command:

```
# /usr/sbin/sizer -v
Compaq Tru64 UNIX V5.1B (Rev. 2650); Mon Nov  3 10:13:28 PST 200
```

In this example, the version shown is V5.1B. If necessary, see your operating system documentation for information about upgrading the operating system.

2. To determine whether Java SDK 1.4.2 is installed, enter the following command:

```
# /usr/sbin/setld -i JAVA142 | more
```

If Java SDK 1.4.2 is installed, this command displays the paths to all of the installed files. Note the path of the Java home directory. You must specify this value during the installation. The default path is:

```
/usr/opt/java142
```

If this command returns the message Unknown subset, Java SDK 1.4.2 is not installed. Download the Java SDK 1.4.2-3 or higher from the following Web site and install it:

<http://www.compaq.com/java/download/index.html>

3. To determine whether the required software subsets are installed, enter one of the following commands:

- To view the list of all software subsets installed on the system, enter the following command:

```
# /usr/sbin/setld -i | more
```

- To determine whether a particular software subset is installed, enter a command similar to the following:

```
# /usr/sbin/setld -i | grep subsetname
```

Check for Required Patches

Verify that the following patches are installed on the system. The procedure following the table describes how to check these requirements.

Installation Type or Product	Requirement
All installations	<p>Tru64 UNIX V5.1B Patch Kit 2 or higher: T64V51BB22AS0002-20030415</p> <p>The following patch kits are also required:</p> <ul style="list-style-type: none"> ■ HP Tru64 UNIX 5.1B PK2 BL22 Fixes for AdvFS Panic in _OtsMove; and Possible Memory Corruption: T64KIT0020879-V51BB22-E-20031125 ■ HP Tru64 UNIX - Problem with IP Multicast Packets: T64KIT0019662-V51BB22-E-20030818 ■ HP Tru64 UNIX V5.1B PK2 (BL22) ERP Kit - Fix for Multiple applications may be granted an exclusive lock on the same file: T64KIT0021665-V51BB22-E-20040220 ■ Tru64 UNIX V5.1B PK2/BL22 Early Release Patch - Fix for Potential Application Core Dump: T64KIT0021681-V51BB22-E-20040223

To determine whether the required patch kits are installed, enter the following command:

```
# /usr/sbin/dupatch -track -type kit
```

If this command does not display the identifiers shown in the previous table for the required patch kits (or the identifier for a higher patch kit level), download the latest patch kit from the following Web site and install it (registration is required to access this Web site):

<http://itrc.hp.com/service/patch/mainPage.do>

Create Required UNIX Group and User

Depending on whether this is the first time Oracle software is being installed on this system and on the products that you are installing, you may need to create the following UNIX group and user:

- The Oracle Inventory group (`oinstall`)

You must create this group the first time you install Oracle software on the system. The usual name chosen for this group is `oinstall`. This group owns the Oracle inventory, which is a catalog of all Oracle software installed on the system.

Note: If Oracle software is already installed on the system, the existing Oracle Inventory group must be the primary group of the UNIX user that you use to install new Oracle software. The following sections describe how to identify an existing Oracle Inventory group.

- The Oracle software owner user (`oracle`)

You must create this user the first time you install Oracle software on the system. This user owns all of the software installed during the installation. The usual name chosen for this user is `oracle`. This user must have the Oracle Inventory group as its primary group.

A single Oracle Inventory group is required for all installations of Oracle software on the system. After the first installation of Oracle software, you must use the same Oracle Inventory group for all subsequent Oracle software installations on that system. However, you can choose to create different Oracle software owner users for separate installations.

The following sections describe how to create the required UNIX user and group.

Note: The following sections describe how to create local users and groups. As an alternative to creating local users and groups, you could create the appropriate users and groups in a directory service, for example, Network Information Services (NIS). For information about using directory services, contact your system administrator or see your operating system documentation.

Creating the Oracle Inventory Group

You must create the Oracle Inventory group if it does not already exist. The following subsections describe how to determine the Oracle Inventory group name, if it exists, and how to create it if necessary.

Determine Whether the Oracle Inventory Group Exists

When you install Oracle software on the system for the first time, the Installer creates the `oraInst.loc` file. This file identifies the name of the Oracle Inventory group and the path of the Oracle Inventory directory. To determine whether the Oracle Inventory group exists, enter the following command:

- AIX, Linux x86, or Linux Itanium:

```
# more /etc/oraInst.loc
```

- Other operating systems:

```
# more /var/opt/oracle/oraInst.loc
```

If the `oraInst.loc` file exists, the output from this command is similar to the following:

```
inventory_loc=/u01/app/oracle/oraInventory
inst_group=oinstall
```

The `inst_group` parameter shows the name of the Oracle Inventory group (`oinstall`).

Create the Oracle Inventory Group

If the `oraInst.loc` file does not exist, create the Oracle Inventory group as follows, depending on your operating system:

- AIX:

1. Enter the following command:

```
# smit security
```

2. Choose the appropriate menu items to create the `oinstall` group.

3. Press F10 to exit.

- Other operating systems:

Enter the following command to create the `oinstall` group:

```
# /usr/sbin/groupadd oinstall
```

Creating the Oracle Software Owner User

You must create an Oracle software owner user in the following circumstances:

- If an Oracle software owner user does not exist, for example, if this is the first installation of Oracle software on the system
- If an Oracle software owner user exists, but you want to use a different UNIX user

Determine Whether an Existing Oracle Software Owner User Exists

To determine whether an Oracle software owner user named `oracle` exists, enter one of the following commands:

- Solaris:

```
# id -a oracle
```

- Other operating systems:

```
# id oracle
```

If the `oracle` user exists, the output from this command is similar to the following:

```
uid=440(oracle) gid=200(oinstall) groups=201(dba),202(oper)
```

If the user exists, determine whether you want to use the existing user or create a new user. If you want to use the existing user, ensure that the user's primary group is the Oracle Inventory group.

See one of the following sections for more information:

Note: If necessary, contact your system administrator before using or modifying an existing user.

- If you want to use the existing Oracle software owner user, and the user's primary group is the Oracle Inventory group, see the "[Identify Required Software Directories](#)" section on page 3-22.
- To modify an existing user, see the "[Modify an Existing Oracle Software Owner User](#)" section on page 3-22.
- To create a new user, see the following section.

Create a New Oracle Software Owner User

If the Oracle software owner user does not exist or if you require a new Oracle software owner user, create it as follows, depending on your operating system. In the following procedure, use the user name `oracle` unless a user with that name already exists.

- AIX:
 1. Enter the following command:


```
# smit security
```
 2. Choose the appropriate menu items to create the `oracle` user, specifying the following information:
 - In the **Primary GROUP** field, specify the Oracle Inventory group, for example `oinstall`.
 - In the **Group SET** field, specify any required secondary groups.

Note: The UID for the `oracle` user must be less than 65536.

3. Press F10 to exit.
 4. Set the password of the `oracle` user:


```
# passwd oracle
```
- Other operating systems:
 1. To create the `oracle` user, enter a command similar to the following:


```
# /usr/sbin/useradd -g oinstall[ -G dba] oracle
```

In this command:

 - The `-g` option specifies the primary group, which must be the Oracle Inventory group, for example `oinstall`
 - The `-G` option specifies optional secondary groups
 2. Set the password of the `oracle` user:


```
# passwd oracle
```

See the "[Identify Required Software Directories](#)" section on page 3-22 to continue.

Modify an Existing Oracle Software Owner User

If the `oracle` user exists, but its primary group is not `oinstall`, you can modify it as follows depending on your operating system:

- AIX:
 1. Enter the following command:

```
# smit security
```
 2. Choose the appropriate menu items to modify the `oracle` user.
 3. In the **Primary GROUP** field, specify the Oracle Inventory group, for example `oinstall`.
 4. In the **Group SET** field, specify any required secondary groups.
 5. Press F10 to exit.
- Other operating systems:

Enter a command similar to the following, specifying the primary group using the `-g` option and any required secondary groups using the `-G` option:

```
# /usr/sbin/usermod -g oinstall -G dba oracle
```

Identify Required Software Directories

You must identify or create three directories for the Oracle software, as follows:

- Oracle base directory
- Oracle Inventory directory
- Oracle home directory

The following subsections describe the requirements for these directories.

Oracle Base Directory

The Oracle base directory acts as a top-level directory for Oracle software installations. It is analogous to the `C:\Oracle` directory used for Oracle software installations on Windows systems. On UNIX systems, the Optimal Flexible Architecture (OFA) guidelines recommend that you use a path similar to the following for the Oracle base directory:

```
/mount_point/app/oracle_sw_owner
```

In this example:

- *mount_point* is the mount point directory for the file system that will contain the Oracle software.

The examples in this guide use `/u01` for the mount point directory. However, you could choose another mount point directory, `/oracle` or `/opt/oracle` for example.
- *oracle_sw_owner* is the UNIX user name of the Oracle software owner, for example `oracle`.

You can use the same Oracle base directory for more than one installation or you can create separate Oracle base directories for different installations. If different UNIX users install Oracle software on the same system, each user must create a separate Oracle base directory. The following example Oracle base directories could all exist on the same system:

```
/u01/app/oracle  
/u01/app/orauser  
/opt/oracle/app/oracle
```

The following sections describe how to identify existing Oracle base directories that might be suitable for your installation and how to create a new Oracle base directory if necessary.

Regardless of whether you create a new Oracle base directory or decide to use an existing one, you must set the `ORACLE_BASE` environment variable to specify the full path to this directory.

Oracle Inventory Directory

The Oracle Inventory directory (`oraInventory`) stores an inventory of all software installed on the system. It is required by, and shared by, all Oracle software installations on a single system. The first time you install Oracle software on a system, the Installer prompts you to specify the path to this directory. Oracle recommends that you choose the following path:

```
oracle_base/oraInventory
```

The Installer creates the directory that you specify and sets the correct owner, group, and permissions on it. You do not need to create it.

Note: All Oracle software installations rely on this directory. Make sure that you back it up regularly.

Do not delete this directory unless you have completely removed all Oracle software from the system.

Oracle Home Directory

The Oracle home directory is the directory where you choose to install the software for a particular Oracle product. You must install different Oracle products, or different releases of the same Oracle product, in separate Oracle home directories. When you run the Installer, it prompts you to specify the path to this directory, as well as a name that identifies it. The directory that you specify must be a subdirectory of the Oracle base directory. Oracle recommends that you specify a path similar to the following for the Oracle home directory:

```
oracle_base/product/10.1.0/companion_1
```

The Installer creates the directory path that you specify under the Oracle base directory. It also sets the correct owner, group, and permissions on it. You do not need to create this directory.

Identify or Create an Oracle Base Directory

Before starting the installation, you must either identify an existing Oracle base directory or if required, create a new one. This section contains information about the following:

- [Identifying an Existing Oracle Base Directory](#)
- [Creating a New Oracle Base Directory](#)

Note: You can choose to create a new Oracle base directory, even if other Oracle base directories exist on the system.

Identifying an Existing Oracle Base Directory

Existing Oracle base directories might not have paths that comply with OFA guidelines. However, if you identify an existing Oracle Inventory directory or existing Oracle home directories, you can usually identify the Oracle base directories, as follows:

- Identify an existing Oracle Inventory directory

Enter the following command to view the contents of the `oraInst.loc` file:

- AIX, Linux x86, or Linux Itanium:

```
# more /etc/oraInst.loc
```
- Other operating systems:

```
# more /var/opt/oracle/oraInst.loc
```

If the `oraInst.loc` file exists, the output from this command is similar to the following:

```
inventory_loc=/u01/app/oracle/oraInventory
inst_group=oinstall
```

The `inventory_loc` parameter identifies the Oracle Inventory directory (`oraInventory`). The parent directory of the `oraInventory` directory is typically an Oracle base directory. In the previous example, `/u01/app/oracle` is an Oracle base directory.

- Identify existing Oracle home directories

Enter the following command to view the contents of the `oratab` file:

- Solaris:

```
# more /var/opt/oracle/oratab
```
- Other operating systems:

```
# more /etc/oratab
```

If the `oratab` file exists, it contains lines similar to the following:

```
*:/u03/app/oracle/product/10.1.0/db_1:N
*/opt/orauser/infra_904:N
*/oracle/9.2.0:N
```


The directory paths specified on each line identify Oracle home directories. Directory paths that end with the user name of the Oracle software owner that you want to use are valid choices for an Oracle base directory. If you intend to use the `oracle` user to install the software, you could choose one of the following directories from the previous example:

```
/u03/app/oracle
/oracle
```

Note: If possible, choose a directory path similar to the first (`/u03/app/oracle`). This path complies with the OFA guidelines.

To continue:

- If an Oracle base directory exists and you want to use it, see the "[Configure the oracle User's Environment](#)" section on page 3-25.

When you are configuring the `oracle` user's environment later in this chapter, set the `ORACLE_BASE` environment variable to specify the directory you chose.

- If an Oracle base directory does not exist on the system or if you want to create a new Oracle base directory, see the following section.

Creating a New Oracle Base Directory

To identify an appropriate file system, follow these steps:

1. Use the `df -k` command (or `bdf` command on HP-UX) to determine the free disk space on each mounted file system.
2. From the display, identify a file system that has appropriate free space.
3. Note the name of the mount point directory for the file system that you identified.

To create the Oracle base directory and specify the correct owner, group, and permissions for it, follow these steps:

1. Enter commands similar to the following to create the recommended subdirectories in the mount point directory that you identified and set the appropriate owner, group, and permissions on them:

```
# mkdir -p /mount_point/app/oracle_sw_owner
# chown -R oracle:oinstall /mount_point/app/oracle_sw_owner
# chmod -R 775 /mount_point/app/oracle_sw_owner
```

If the mount point you identified is `/u01` and `oracle` is the user name of the Oracle software owner, the recommended Oracle base directory path is as follows:

```
/u01/app/oracle
```

2. When you are configuring the `oracle` user's environment later in this chapter, set the `ORACLE_BASE` environment variable to specify this directory.

Configure the oracle User's Environment

You run the Installer from the `oracle` account. However, before you start the Installer you must configure the environment of the `oracle` user. To configure the environment, you must:

- Set the default file mode creation mask (`umask`) to `022` in the shell startup file.
- Set the `DISPLAY` and `ORACLE_BASE` environment variables.

To set the `oracle` user's environment, follow these steps:

1. Start a new terminal session, for example, an X terminal (`xterm`).
2. Enter the following command to ensure that X Window applications can display on this system:

```
$ xhost +
```
3. If you are not already logged in to the system where you want to install the software, log in to that system as the `oracle` user.
4. If you are not logged in as the `oracle` user, switch user to `oracle`:

```
$ su - oracle
```
5. To determine the default shell for the `oracle` user, enter the following command:

```
$ echo $SHELL
```
6. Open the `oracle` user's shell startup file in any text editor:
 - Bash shell on Red Hat Enterprise Linux:

```
$ vi .bash_profile
```
 - Bourne shell (`sh`), Bash shell (`bash`), or Korn shell (`ksh`):

```
$ vi .profile
```
 - C shell (`csh` or `tcsh`):

```
% vi .login
```
7. Enter or edit the following line, specifying a value of `022` for the default file mode creation mask:

```
umask 022
```
8. If the `ORACLE_SID`, `ORACLE_HOME`, or `ORACLE_BASE` environment variables are set in the file, remove the appropriate lines from the file.
9. Save the file and exit from the editor.
10. To run the shell startup script, enter one of the following commands:
 - Bash shell on Red Hat Enterprise Linux:

```
$ . ~/.bash_profile
```
 - Bourne, Bash, or Korn shell:

```
$ . ~/.profile
```
 - C shell:

```
% source ~/.login
```
11. If you are not installing the software on the local system, enter a command similar to the following to direct X applications to display on the local system:
 - Bourne, Bash, or Korn shell:

```
$ DISPLAY=local_host:0.0 ; export DISPLAY
```

- C shell:

```
% setenv DISPLAY local_host:0.0
```

In this example, *local_host* is the host name or IP address of the system you want to use to display the Installer (your workstation or PC).

12. If you determined that the `/tmp` directory has less than 400 MB of free disk space, identify a file system with at least 400 MB of free space and set the `TEMP` and `TMPDIR` environment variables to specify a temporary directory on this file system:

- a. Use the `df -k` command (or `bdf` command on HP-UX) to identify a suitable file system with sufficient free space.
- b. If necessary, enter commands similar to the following to create a temporary directory on the file system you identified, and set the appropriate permissions on the directory:

```
$ su - root
# mkdir /mount_point/tmp
# chmod a+wr /mount_point/tmp
# exit
```

- c. Enter commands similar to the following to set the `TEMP` and `TMPDIR` environment variables:

- * Bourne, Bash, or Korn shell:

```
$ TEMP=/mount_point/tmp
$ TMPDIR=/mount_point/tmp
$ export TEMP TMPDIR
```

- * C shell:

```
% setenv TEMP /mount_point/tmp
% setenv TMPDIR /mount_point/tmp
```

13. Enter commands similar to the following to set the `ORACLE_BASE` environment variable:

- Bourne, Bash, or Korn shell:

```
$ ORACLE_BASE=/u01/app/oracle
$ export ORACLE_BASE
```

- C shell:

```
% setenv ORACLE_BASE /u01/app/oracle
```

In these examples, `/u01/app/oracle` is the Oracle base directory that you created or identified earlier.

14. Enter the following command to ensure that the `TNS_ADMIN` environment variable is not set:

- Bourne, Bash, or Korn shell:

```
$ unset TNS_ADMIN
```

- C shell:

```
% unsetenv TNS_ADMIN
```

15. To verify that the environment has been set correctly, enter the following commands:

```
$ umask  
$ env | more
```

Verify that the `umask` command displays a value of 22, 022, or 0022 and the environment variables that you set in this section have the correct values.

Pre-installation Tasks for Oracle HTML DB

Perform the tasks in the following sections before installing Oracle HTML DB.

Check the Oracle Database Installation

Before installing Oracle HTML DB, identify the Oracle database that you want to use with Oracle HTML DB. The database must be Oracle9i release 9.2.0.3 or higher. The database can be on a different system from the system where you are installing Oracle HTML DB.

Check for Oracle XML DB

Oracle XML DB must be installed in the database that you want to use.

If you are using a preconfigured database created either during an installation or by the Database Configuration Assistant (DBCA), Oracle XML DB is already installed and configured. For information about manually adding Oracle XML DB to an existing database, see the *Oracle XML DB Developer's Guide*.

Identify Database Information

During the installation, you must specify the following information about the database:

- The host name of the database system
- The port number of the Oracle Net listener
- The service name of the database
- The password of the SYS user

Make sure that you have this information before starting the installation.

Installing the Software

This chapter describes how to start the Oracle Universal Installer and install the products available on the Oracle Database 10g Companion CD. Before beginning the installation, review the information in [Chapter 1, "Installation Overview"](#) and complete the tasks listed in either [Chapter 2, "Pre-installation Tasks for Installations in an Existing Oracle Home"](#) or [Chapter 3, "Pre-installation Tasks for Installations in a New Oracle Home"](#). This chapter contains the following sections:

- [Introduction](#)
- [Installing the Software on zSeries Linux](#)
- [Installing Oracle Database 10g Products](#)
- [Installing Oracle HTML DB in an Existing Oracle Home](#)
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#)

Introduction

The Oracle Database 10g Companion CD software is available on disc (CD-ROM or DVD-ROM) or you can download it from the Oracle Technology Network Web site (OTN). This chapter describes how to install Oracle Database 10g Companion CD software from the product media.

The Oracle Database 10g Companion CD contains two installation types: Oracle Database 10g Products and Oracle Database 10g Companion Products. If you install Oracle Database 10g Products, the Installer installs all of the products available with that installation type. If you install Oracle Database 10g Companion Products, you can choose which products to install and whether you want to install them in a new Oracle home or an existing one. Depending on the products that you want to install, follow the instructions in one of the following sections:

- [Installing Oracle Database 10g Products](#)
- [Installing Oracle HTML DB in an Existing Oracle Home](#)
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#)

Installing the Software on zSeries Linux

Note: If you do not have access to a system with a CD-ROM or DVD-ROM drive, you can copy the installation files to your system from the Oracle Technology Network Web site:

<http://www.oracle.com/technology/software>

Because zSeries systems do not support the direct attachment of CD-ROM or DVD-ROM drives, you must copy the installation files from the discs to a hard disk on a system that does support a CD-ROM or DVD-ROM drive.

After you have copied the installation files, you can use one of the following methods to access them on the zSeries based Linux system:

- Copy the installation files to the zSeries based Linux system, using FTP for example.
- Use a method such as NFS or Samba to make the file system containing the installation files available on the zSeries based Linux system.

In the following procedures, use a command similar to the following to start the Installer:

```
$ /directory_path/runInstaller
```

In this example, *directory_path* is the local or network directory where you copied the installation files.

Installing Oracle Database 10g Products

To install Oracle Database 10g Products, follow these steps:

1. Mount the disc, if it is not already mounted.

Some platforms automatically mount the disc when you insert it into the drive. If the disc does not mount automatically, see [Appendix A](#) for platform-specific information about mounting it.

2. If necessary, log in as the Oracle software owner user (`oracle`) and set the `DISPLAY` environment variable.
3. To start the Installer, enter the following commands where `directory_path` is the CD-ROM mount point directory path or the `companion` directory on the DVD-ROM:

```
$ cd /tmp
$ /directory_path/runInstaller
```

Note: Do not use the Oracle Universal Installer from an earlier release to install components from this release.

4. On the Welcome screen, click **Next**.
5. On the Specify File Locations screen, verify that the Oracle home name and path specifies the Oracle home for an Oracle Database 10g installation, then click **Next**.
6. If Oracle Real Application Clusters (RAC) is installed in the Oracle home that you choose, the Installer displays the Selected Nodes screen. Click **Next** to continue.

Note: The Installer installs the software on all cluster nodes.

7. On the Select a Product to Install screen, choose **Oracle Database 10g Products**, then click **Next**.
For more information about the products that are installed with this installation type, see [Chapter 1, "Installation Overview"](#).
8. To complete the installation, follow the instructions displayed in the Installer screens. If you need additional information about any screen, click **Help**.
9. When the installation completes, click **Exit**, then click **Yes** to exit from the Installer.
10. When you run the `root.sh` script, if you do not want to install Legato Single Server Version, enter 3 to quit the installation.

See [Chapter 5](#) for information about tasks that you must complete after you have installed the software.

Installing Oracle HTML DB in an Existing Oracle Home

To install Oracle HTML DB in an existing Oracle home directory, follow these steps:

1. Mount the disc, if it is not already mounted.
Some platforms automatically mount the disc when you insert it into the drive. If the disc does not mount automatically, see [Appendix A](#) for platform-specific information about mounting it.
2. If necessary, log in as the Oracle software owner user (`oracle`) and set the `DISPLAY` environment variable.
3. To start the Installer, enter the following commands where `directory_path` is the CD-ROM mount point directory path or the `companion` directory on the DVD-ROM:

```
$ cd /tmp
$ /directory_path/runInstaller
```

4. On the Welcome screen, click **Next**.
5. On the Specify File Locations screen, verify that the Oracle home name and path specifies the Oracle home for an existing installation that contains Oracle HTTP Server that you installed from the Companion CD, then click **Next**.
6. On the Select a Product to Install screen, choose **Oracle Database 10g Companion Products**.
7. On the Available Product Components screen, select Oracle HTML DB, then click **Next**.

Note: Because you are installing Oracle HTML DB in an existing Oracle home directory, do not select Oracle HTTP Server. Oracle HTTP Server is listed as **Apache Standalone** in the Available Product Components screen.

For more information about Oracle HTML DB, see [Chapter 1, "Installation Overview"](#).

8. Enter the following information on the Enter HTML DB Configuration Information screen, then click **Next**:
 - **Hostname**

Specify the host name of the system where the database is installed.
 - **Port**

Specify the TCP/IP port number for the Oracle Net listener on the database system. The default port number is 1521.
 - **Database Service Name**

Specify the database service name for the database where you want to install the Oracle HTML DB database objects. The database service name is usually the same as the global database name for the database, for example, `sales.us.oracle.com`.
 - **SYS Password**

Specify the password for the SYS user in the database.
 - **HTML DB Password**

Specify the password that you want to use for the HTML DB schemas (users), which are created in the database during the installation.

After the installation, you can use this password to connect to Oracle HTML DB as the ADMIN user. The password that you specify is also used for the HTMLDB_PUBLIC_USER schema, which is used by mod_plsql to connect to the database.
 - **Confirm HTML DB Password**

Enter the password again to verify that you have specified it correctly.
 - **TABLESPACE Name**

Enter the name of the tablespace where you want to load the Oracle HTML DB database objects, or accept the default (SYSAUX).

9. To complete the installation, follow the instructions displayed in the Installer screens. If you need additional information about any screen, click **Help**.
10. When the installation completes, click **Exit**, then click **Yes** to exit from the Installer.
See [Chapter 5](#) for information about tasks that you must complete after you have installed the software.

Installing Oracle Database 10g Companion Products in a New Oracle Home

To install Oracle Database 10g Companion Products in a new Oracle home, follow these steps:

1. Mount the disc, if it is not already mounted.

Some platforms automatically mount the disc when you insert it into the drive. If the disc does not mount automatically, see [Appendix A](#) for platform-specific information about mounting it.
2. If necessary, log in as the Oracle software owner user (`oracle`) and set the `DISPLAY` environment variable.
3. To start the Installer, enter the following commands where `directory_path` is the CD-ROM mount point directory path or the `companion` directory on the DVD-ROM:

```
$ cd /tmp
$ /directory_path/runInstaller
```

4. On the Welcome screen click **Next**.
5. If this is the first installation of Oracle products on this system, the Installer displays the Specify Inventory Directory and Credentials screen. Specify the following information, then click **Next**:
 - **Enter the full path of the inventory directory:**
Verify that the path is similar to the following, where `oracle_base` is the value you specified for the `ORACLE_BASE` environment variable:
`oracle_base/oraInventory`
 - **Specify operating system group name:**
Verify that the group specified is the Oracle Inventory group:
`oinstall`
6. If prompted, run the following script in a separate terminal window as the `root` user:
`oracle_base/oraInventory/orainstRoot.sh`
7. On the Specify File Locations screen, enter a name and path for a new Oracle home directory, similar to the following:

Field	Sample Value
Name	OraDb10g_Home2
Path	<code>oracle_base/product/10.1.0/companion_1</code>

8. If Cluster Ready Services (CRS) or Oracle Real Application Clusters (RAC) is installed on the system, the Installer displays the Specify Hardware Cluster Installation Mode screen. Choose **Local Installation** to install the software on the installation node only, then click **Next**.

Note: If required, you must install the software separately on each node of the cluster.

9. On the Select a Product to Install screen, choose **Oracle Database 10g Companion Products**, then click **Next**.
10. On the Available Product Components screen, select the products that you want to install. For more information about the products installed with the Oracle Database 10g Companion Products installation type, see [Chapter 1, "Installation Overview"](#).

Note: If you are installing Oracle HTML DB in a new Oracle home, you must choose Oracle HTTP Server. Oracle HTTP Server is listed as **Apache Standalone** in the Available Product Components screen.

11. If you selected **Oracle HTML DB**, enter the following information on the Enter HTML DB Configuration Information screen, then click **Next**:
 - **Hostname**
Specify the host name of the system where the database is installed.
 - **Port**
Specify the TCP/IP port number for the Oracle Net listener on the database system. The default port number is 1521.
 - **Database Service Name**
Specify the database service name for the database where you want to install the Oracle HTML DB database objects. The database service name is usually the same as the global database name for the database, for example, `sales.us.oracle.com`.
 - **SYS Password**
Specify the password for the SYS user in the database.
 - **HTML DB Password**
Specify the password that you want to use for the HTML DB schemas (users), which are created in the database during the installation.

After the installation, you can use this password to connect to Oracle HTML DB as the ADMIN user. The password that you specify is also used for the HTMLDB_PUBLIC_USER schema, which is used by mod_plsql to connect to the database.
 - **Confirm HTML DB Password**
Enter the password again to verify that you have specified it correctly.
 - **TABLESPACE Name**
Enter the name of the tablespace where you want to load the Oracle HTML DB database objects, or accept the default (SYSAUX).

12. On Tru64 UNIX systems only, specify the full path of the Java Development Kit (JDK) 1.4.2 home directory on the JDK Home Directory screen, then click **Next**.

To determine whether Java JDK 1.4.2 is installed, enter the following command:

```
# /usr/sbin/setld -i JAVA142 | more
```

If Java JDK 1.4.2 is installed, this command displays the paths to all of the installed files. Note the path of the Java home directory and enter it in the JDK Home Directory screen. The default path is:

```
/usr/opt/java142
```

13. To complete the installation, follow the instructions displayed in the Installer screens. If you need additional information about any screen, click **Help**.
14. If prompted, run the following script in a separate terminal window as the root user:

```
oracle_home/root.sh
```

When the script finished, click **OK**.

15. On the End of Installation screen, make a note of the URLs used by Oracle HTTP Server.

Note: These URLs are also listed in the following file:

- Solaris x86:

```
  $ORACLE_HOME/install/setupinfo.txt
```

- Other operating systems:

```
  $ORACLE_HOME/Oracle/Oracle/setupinfo.txt
```

16. Click **Exit**, then click **Yes** to exit from the Installer.
17. See [Chapter 5](#) for information about tasks that you must complete after you have installed the software.

Post-installation Tasks

This chapter describes tasks that you might need to complete after you install the software. It includes information about the following:

- [Post-installation Tasks for Oracle HTTP Server](#)
- [Post-installation Tasks for Oracle HTML DB](#)
- [Post-installation Tasks for Legato Single Server Version](#)

Post-installation Tasks for Oracle HTTP Server

If you installed Oracle HTTP Server, complete the tasks described in the following sections.

Back Up the root.sh Script

Oracle recommends that you back up the `root.sh` script after you complete an installation. If you install other products in the same Oracle home directory, then the Oracle Universal Installer updates the contents of the existing `root.sh` script during the installation. If you require information contained in the original `root.sh` script, then you can recover it from the backed up `root.sh` file.

Download and Install Patches

Check the Oracle*Metalink* Web site for required patches for this product. To download required patches:

1. Use a Web browser to view the Oracle*Metalink* Web site:

`http://metalink.oracle.com`

2. Log in to Oracle*Metalink*.

Note: If you are not an Oracle*Metalink* registered user, click **Register for MetaLink!** and follow the registration instructions.

3. On the main Oracle*Metalink* page, click **Patches**.
4. Select **Simple Search**.
5. Specify the following information, then click **Go**:
 - In the **Search By** field, choose Product or Family, then specify RDBMS Server.
 - In the **Release** field, specify the current release number.
 - In the **Patch Type** field, specify Patchset/Minipack.
 - In the **Platform or Language** field, select your platform.

Migrating From a Previous Release of Oracle HTTP Server

Note: This section does not apply to HP-UX Itanium, Linux Itanium, Solaris x86, or zSeries Linux systems. On Itanium systems, the version of Oracle HTTP Server is the same as that shipped with Oracle9i release 2.

If you installed the software on one of these systems, see the "[Starting, Stopping, and Restarting Oracle HTTP Server](#)" section on page 5-10.

This section does not describe how to migrate from an Oracle HTTP Server release installed as part of Oracle Application Server. Oracle does not support that type of migration.

If you are using Oracle HTTP Server installed with a previous release of Oracle Server on this system, you can migrate the configuration of that HTTP server to the current release.

There are two parts to the migration, as described in the following sections:

- [Migrate the httpd.conf File](#)
- [Migrate Database Access Descriptors Used by mod_plsql](#)

Migrate the httpd.conf File

To migrate the configuration of an earlier release of Oracle HTTP Server to the current release, you must copy and modify the `httpd.conf` file used by that release. The following sections describe how to complete this task.

Copy and Edit the httpd.conf File

Copy the `httpd.conf` file used by the previous release to the current release configuration file directory:

1. Switch user to the Oracle software owner user (typically `oracle`):

```
$ su - oracle
```

2. Set the `ORACLE_HOME` environment variable to specify the path to the Oracle home directory for the current release:

- Bourne, Bash, or Korn shell:

```
$ ORACLE_HOME=new_oracle_home_path ; export ORACLE_HOME
```

- C shell:

```
% setenv ORACLE_HOME new_oracle_home_path
```

3. Back up the configuration file directory for the current release of Oracle HTTP Server:

```
$ cp $ORACLE_HOME/Apache/Apache/conf $ORACLE_HOME/Apache/Apache/conf.orig
```

4. Change directory to the configuration file directory:

```
$ cd $ORACLE_HOME/Apache/Apache/conf
```

5. Copy the `httpd.conf` file used by the previous release to the current directory, for example:

```
$ cp /old_oracle_home/Apache/Apache/conf/httpd.conf .
```

6. Open the `httpd.conf` file in any text editor.

Make Global Changes

Make the following global changes to the `httpd.conf` file:

1. Search for all occurrences of the old Oracle home directory path and replace them with the current Oracle home directory path.
2. Change all occurrences of `mod_ssl.c` to `mod_oss1.c`.

Note: Oracle recommends that you change the SSL related directives in the `httpd.conf` file, even if you do not currently use SSL.

Modify the List of LoadModule Directives

Modify the list of LoadModule directives:

1. Remove the following directives:

```
LoadModule oprocmgr_module    libexec/liboprocgr.so
LoadModule rewrite_module     libexec/mod_rewrite.so
```

Note: You must add a LoadModule directive for the `mod_rewrite` module later in the file.

2. Add the following directive, which loads the `onsint` module, immediately before the `<IfDefine SSL>` section:

```
LoadModule onsint_module      libexec/mod_onsint.so
```

3. In LoadModule directive in the `<IfDefine SSL>` section, change `ssl_module` to `oss1_module` and change `mod_ssl.so` to `mod_oss1.so`, as follows:

```
LoadModule oss1_module       libexec/mod_oss1.so
```

Remove Directives and Sections for Unsupported Features

To remove all directives and sections for unsupported features:

1. Remove the following directives from the `<IfModule mod_alias.c>` section:

```
Alias /jservdocs/ "oracle_home/Apache/Jserv/docs/"
Alias /soapdocs/  "/oracle_home/soap/"
```

2. Remove the following include directive:

```
include "/oracle_home/Apache/Jserv/etc/jserv.conf"
```

3. Remove the `<IfModule mod_oprocgr.c>` section.

Modify Port Numbers

The `httpd.conf` file used by previous releases of Oracle HTTP Server that were installed with Oracle Server specified different ports for non-SSL (HTTP) requests depending on whether you started an SSL-enabled server. These ports are shown as `port1` and `port2` in the following example:

```
Port port1
Listen port1

<IfModule mod_ssl.c>
    Port port2
    Listen port2
    Listen SSL_port
</IfModule>
```

Oracle recommends that you change these directives as follows:

1. If you did not use SSL, remove the following directives:

```
Port port2
Listen port2
```

Oracle HTTP Server will listen for HTTP requests on port `port1`.

2. If you used only the ports defined for SSL, change the directives as shown in the following example:

```
Port port2
Listen port2

<IfModule mod_ssl.c>
    Listen SSL_port
</IfModule>
```

Oracle HTTP Server will listen for HTTP requests on port `port2` and for HTTPS requests on port `SSL_port`.

3. If you intend to continue to use the previous version of Oracle HTTP server concurrently with this release, change the ports specified by the Port and Listen directives to unused ports.
4. If you changed `SSL_port` in the previous step, complete the following steps:
 - a. Locate the `<VirtualHost _default_:SSL_port>` directive and ensure that the value of `SSL_port` matches the value specified by the Listen directive in the `<IfModule mod_ssl.c>` section.
 - b. In the `<VirtualHost _default_:SSL_port>` section, ensure that the port number specified by the Port directive is the same as `SSL_port`.

Verify the Values of the User and Group Directives

If necessary, change the values specified by the User and Group directives, as follows:

- The User directive should specify the user name of the Oracle Software Owner user that you used to install Oracle HTTP Server. The default value is `oracle`.
- The Group directive should specify the name of the Oracle Inventory group on this system. The default value is `oinstall`.

Modify Existing Sections and Directives

Modify the following sections and directives:

1. In the default directory section, `<Directory />`, add the `MultiViews` option to the `Options` directive. For example:

```
<Directory />
    Options FollowSymLinks MultiViews
    AllowOverride None
</Directory>
```

2. In the `<IfModule mod_alias.c>` section, create a new `<IfModule mod_perl.c>` section and move the `Alias` directive that defines the `/perl/` alias into this section. For example:

```
<IfModule mod_alias.c>
...
    <IfModule mod_perl.c>
        Alias /perl/ "/oracle_home/Apache/Apache/cgi-bin/"
    </IfModule>
...
</IfModule>
```

3. Modify the `<IfModule mod_dms.c>` section as shown in the following example, substituting the appropriate values for the `hostname` and `domain` variables:

```
<IfModule mod_dms.c>
    <Location /dms0>
        SetHandler dms-handler
        Order deny,allow
        Deny from all
        Allow from localhost hostname.domain hostname
    </Location>
</IfModule>
```

4. In the directive that sets the `PERL5LIB` environment variable, edit the Perl directory location and version, as shown in the following example:

```
SetEnv PERL5LIB "/oracle_home/perl/lib/5.6.1:/oracle_home/perl/lib/site_perl/5.6.1"
```

Add New Sections and Directives

Add the following new sections and directives to the file:

1. Add the following section to protect the `WEB-INF` directories:

```
#Protect WEB-INF directory

<DirectoryMatch /WEB-INF/>
    Order deny,allow
    Deny from all
</DirectoryMatch>
```

2. Include the following lines before the line that includes the `oracle_apache.conf` file:

```
# Include the configuration files needed for mod_oc4j
include "/oracle_home/Apache/Apache/conf/mod_oc4j.conf"

# Loading mod_rewrite module here as it has to load before mod_oc4j
LoadModule rewrite_module libexec/mod_rewrite.so
```

Migrate Your Server Certificate and Private Key

If you use SSL and have an existing server certificate and private key, you must migrate them to the format required by `mod_oss1` before using them with this release of Oracle HTTP Server. To migrate an existing server certificate and private key:

1. Enter a command similar to the following in a separate terminal window:

```
$ /new_oracle_home/Apache/Apache/bin/ssl2oss1 -cert cert_file \
                                             -key key_file \
                                             { [ -chain chain_file ] |
                                             [ -cafile CA_file ] |
                                             [ -capath CA_path ] } \
                                             -wallet wallet_path \
                                             [ -certpass key_file_pwd ] \
                                             [ -wltpass wallet_pwd ] \
                                             [ -ssowallet yes ] \
                                             [ -validate yes ]
```

The following table lists the recommended value for each option available with this command:

Note: You must specify at least one of the following options:
`-chain`, `-cafile`, or `-capath`.

Option	Recommended Value
<code>-cert</code>	Use the value specified by the <code>SSLCertificateFile</code> directive in the <code>httpd.conf</code> file for the previous release.
<code>-key</code>	Use the value specified by the <code>SSLCertificateKeyFile</code> directive in the <code>httpd.conf</code> file for the previous release.
<code>-chain</code>	Use the value specified by the <code>SSLCertificateChainFile</code> directive in the <code>httpd.conf</code> file for the previous release, if that directive is not preceded by the comment character (<code>#</code>). Note: If the <code>SSLCertificateChainFile</code> directive is not specified or is preceded by a comment character, do not specify the <code>-chain</code> option.
<code>-cafile</code>	Use the value specified by the <code>SSLCACertificateFile</code> directive in the <code>httpd.conf</code> file for the previous release, if that directive is not preceded by the comment character (<code>#</code>). Note: If the <code>SSLCACertificateFile</code> directive is not specified or is preceded by a comment character, do not specify the <code>-cafile</code> option.
<code>-capath</code>	Use the value specified by the <code>SSLCACertificatePath</code> directive in the <code>httpd.conf</code> file for the previous release, if that directive is not preceded by the comment character (<code>#</code>). Note: If the <code>SSLCACertificatePath</code> directive is not specified or is preceded by a comment character, do not specify the <code>-capath</code> option.
<code>-wallet</code>	Specify the path to the directory in which you want to create the wallet. The default value is: <code>/new_oracle_home/Apache/Apache/conf/ssl.wlt/default</code>
<code>-certpass</code>	Specify the password for your private key file, if it is encrypted.
<code>-wltpass</code>	Specify a password for your new wallet. If you do not specify this option, the <code>ssl2oss1</code> utility prompts you to enter and verify the wallet password.

Option	Recommended Value
-ssowallet	Specify the value <i>yes</i> to create a wallet that is compatible with Oracle Single Sign-On.
-validate	Specify the value <i>yes</i> to verify that the wallet will be converted successfully. If you specify this option with the value <i>yes</i> , the wallet is not created.

- Optionally, enter a command similar to the following to generate an encrypted version of the wallet password you specified in the `ssl2oss1` command:

Note: If you specify the `-ssowallet` option in the `ssl2oss1` command, you do not need to complete this step. Otherwise, because the password must be specified in the `httpd.conf` file, Oracle recommends that you encrypt it.

```
$ /oracle_home/Apache/Apache/bin/iasobf -p wallet_pwd
```

The output from this command is the encrypted version of the password specified by the `-p` option. In the following section, you must specify this value for the `SSLWalletPassword` directive.

Modify the SSL Sections and Directives

Note: Oracle recommends that you change the SSL related sections and directives in the `httpd.conf` file, even if you do not currently use SSL.

Make the following changes to the directives contained in the `<IfModule mod_oss1.c>` sections:

- Change the setting for the `SSLSessionCache` directive as follows:

```
SSLSessionCache shmcb:/oracle_home/Apache/Apache/logs/ssl_scache(512000)
```

- Change the setting for the `SSLCipherSuite` directive as follows:

```
SSLCipherSuite SSL_RSA_WITH_RC4_128_MD5:SSL_RSA_WITH_RC4_128_SHA:
SSL_RSA_WITH_3DES_EDE_CBC_SHA:SSL_RSA_WITH_DES_CBC_SHA:
SSL_RSA_EXPORT_WITH_RC4_40_MD5:SSL_RSA_EXPORT_WITH_DES40_CBC_SHA
```

- Remove the following directives and their associated comments:

```
SSLRandomSeed
SSLCertificateFile
SSLCertificateKeyFile
SSLCertificateChainFile
SSLCACertificateFile
SSLCACertificatePath
SSLVerifyDepth
```

4. In the `<VirtualHost _default_:SSL_port>` section, add the following lines:

```
# Server Wallet:
# The server wallet contains the server's certificate, private key
# and trusted certificates. Set SSLWallet at the wallet directory
# using the syntax: file:<path-to-wallet-directory>
SSLWallet file:/oracle_home/Apache/Apache/conf/ssl.wlt/default

# Server Wallet Password:
# Both clear text wallet password and obfuscated password are allowed
# here. An obfuscated one is recommended.
# Examples:
# SSLWalletPassword <clear_pass>
# SSLWalletPassword <obfuscated_pass>
#SSLWalletPassword ...
```

5. If you migrated a server certificate and private key, complete the following steps:
- Change the value specified by the `SSLWallet` directive to specify the wallet path, if it is different from the default value.
 - If you did not create a wallet that is compatible with Oracle Single Sign-On (using the `-ssowallet yes` option in the previous section), remove the comment from the `SSLWalletPassword` directive and specify the clear-text or encrypted wallet password as its value.

Copy Required Files to New Directories

Copy (or move) any scripts for files from the document root and script directories to the equivalent directories for the new release. Copy the following files, as appropriate:

Note: You need to copy only files that are located in subdirectories of the previous release Oracle home directory. Alias directories in other locations continue to be accessible, provided that the permissions on these directories and their contents allow the server to read them. If you changed the User or Group directive, you might need to change these permissions.

- Files and subdirectories in directories specified by a `DocumentRoot` or `Alias` directive
- CGI, Perl, and FastCGI programs and scripts and their associated files in directories specified by a `ScriptAlias` directive

Migrate Database Access Descriptors Used by `mod_plsql`

If you used `mod_plsql` to access a database with the previous release of Oracle HTTP Server, you must migrate the database access descriptors (DADs) to the format required by `mod_plsql` in the current release. You can use the `dadTool.pl` Perl script to complete this migration. To run this script, follow these steps:

- If necessary, switch user to the Oracle software owner user (typically `oracle`):

```
$ su - oracle
```

2. Set the ORACLE_HOME environment variable to specify the path to the Oracle home directory for the current release and set the PATH environment variable to include the directory containing the perl executable:

- Bourne, Bash, or Korn shell:

```
$ ORACLE_HOME=new_oracle_home_path
$ PATH=${ORACLE_HOME}/perl/bin:${PATH}
$ PATH=${ORACLE_HOME}/Apache/modplsql/conf:${PATH}
$ export ORACLE_HOME PATH
```

- C shell:

```
% setenv ORACLE_HOME new_oracle_home_path
% setenv PATH ${ORACLE_HOME}/perl/bin:${PATH}
% setenv PATH ${ORACLE_HOME}/Apache/modplsql/conf:${PATH}
```

3. Set the appropriate shared library path environment variable for your platform to include the \$ORACLE_HOME/lib directory. The following table shows the appropriate environment variable for each platform:

Platform	Environment Variable
AIX	LIBPATH
HP-UX	SHLIB_PATH
Linux, Solaris, and Tru64 UNIX	LD_LIBRARY_PATH

For example, to set the SHLIB_PATH environment variable in the Bourne shell on HP-UX systems, enter the following command:

```
$ SHLIB_PATH=$ORACLE_HOME/lib:${SHLIB_PATH}; export SHLIB_PATH
```

4. Change directory to the mod_plsql configuration directory for the current release of Oracle HTTP Server:

```
$ cd $ORACLE_HOME/Apache/modplsql/conf
```

5. Copy the DAD configuration file (wdbsvr . app) used by the previous release to this directory:

```
$ cp /old_oracle_home/Apache/modplsql/cfg/wdbsvr.app .
```

6. Enter the following command to run the script:

```
$ perl dadTool.pl -m
```

The script reads the DAD information from the wdbsvr . app file and creates new equivalent DADs in the dads . conf file.

Starting, Stopping, and Restarting Oracle HTTP Server

The following sections describe how to start, stop and restart Oracle HTTP Server:

- [Starting, Stopping, and Restarting Oracle HTTP Server on HP-UX Itanium, Linux Itanium, Solaris x86, and zSeries Linux](#)
- [Starting, Stopping, and Restarting Oracle HTTP Server on Other Platforms](#)

Starting, Stopping, and Restarting Oracle HTTP Server on HP-UX Itanium, Linux Itanium, Solaris x86, and zSeries Linux

Note: The `apachectl` script is supported for starting and stopping Oracle HTTP server only on HP-UX Itanium, Linux Itanium, Solaris x86, and zSeries Linux systems.

Use the `apachectl` script to start, stop, or restart Oracle HTTP Server, as follows:

```
$ $ORACLE_HOME/Apache/Apache/bin/apachectl { start | startssl | stop | restart | restartssl }
```

Starting, Stopping, and Restarting Oracle HTTP Server on Other Platforms

You must use Oracle Process Manager and Notification server (OPMN) with Oracle HTTP Server. To use OPMN, you must first start the OPMN daemon. To start the OPMN daemon and the Oracle HTTP Server processes together, enter the following command:

```
$ $ORACLE_HOME/opmn/bin/opmnctl startall
```

When the OPMN daemon is running, you can enter the following commands to start, stop, or restart Oracle HTTP Server:

- Start Oracle HTTP Server only:


```
$ $ORACLE_HOME/opmn/bin/opmnctl startproc ias-component=HTTP_Server
```
- Stop Oracle HTTP Server only:


```
$ $ORACLE_HOME/opmn/bin/opmnctl stopproc ias-component=HTTP_Server
```
- Restart Oracle HTTP Server only:


```
$ $ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=HTTP_Server
```

To stop the OPMN daemon and the Oracle HTTP Server processes, enter the following command:

```
$ $ORACLE_HOME/opmn/bin/opmnctl stopall
```

Post-installation Tasks for Oracle HTML DB

If you installed Oracle HTML DB, complete the tasks listed in the following sections.

HP-UX Itanium and Linux Itanium Only: Configure a DAD for Oracle HTML DB

To enable Oracle HTML DB to access the database, you must configure a Database Access Descriptor (DAD) as follows:

1. Using any text editor, edit the `Apache/modplsql/conf/marvel.conf` file, deleting all of the lines in the file except the first line.
2. In a Web browser, access the Oracle HTTP Server home page:

```
http://hostname:port/
```

3. Select **Mod_plsql Configuration Menu**.
4. Select **Gateway Database Access Descriptor Settings**.

5. Select **Add Default (blank configuration)**.
6. On the Database Access Descriptor page, enter the values for the fields listed in the following table:

Note: Only enter values for the fields listed in the table.

Field	Value
Database Access Descriptor Name	htmldb
Oracle User Name	HTMLDB_PUBLIC_USER
Oracle Password	Password specified for HTML DB during the installation
Oracle Connect String	The connect string for the database where the HTML DB objects are installed, in the following format: <i>host:port:service_name</i>
Enable Connection Pooling?	No
Default (Home) Page	htmldb
Document Table	WWW_FLOW_FILE_OBJECTS\$
Document Access Path	docs
Document Access Procedure	WWW_FLOW_FILE_MANAGER.PROCESS_DOWNLOAD

Restart Oracle HTTP Server

Note: On HP-UX Itanium, Linux Itanium, Solaris x86, and zSeries Linux systems, you must restart Oracle HTTP Server after all Oracle HTML DB installations.

If you installed Oracle HTML DB in an existing Oracle home directory, you must restart Oracle HTTP Server before you can access it. To restart Oracle HTTP Server, enter one of the following commands:

- HP-UX Itanium, Linux Itanium, Solaris x86, or zSeries Linux:

```
$ $ORACLE_HOME/Apache/Apache/bin/apachectl restart
```
- Other operating systems:

```
$ $ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=HTTP_Server
```


Verify the Installation

To verify the installation, open the Oracle HTML DB administration page in a Web browser. To complete this task, follow these steps:

Note: To view or develop Oracle HTML DB applications, the Web browser must support JavaScript and the HTML 4.0 and CSS 1.0 standards. The following browsers meet this requirement:

- Netscape Communicator 7.0 or later
 - Microsoft Internet Explorer 5.5 or later
 - Mozilla 1.2 or later
-
-

1. Open the following URL in a Web browser:

`http://hostname:port/pls/htmldb/htmldb_admin`

In this example:

- `hostname` is the Oracle HTTP Server host name
 - `port` is the Oracle HTTP Server port
2. Log in to Oracle HTML DB using the user name ADMIN and the password that you specified during the installation.

See Also: For more information about using, developing applications with, and administering Oracle HTML DB, see the online help and the *Oracle HTML DB User's Guide*.

Post-installation Tasks for Legato Single Server Version

Note: Legato Single Server Version is not installed on Solaris x86 or zSeries Linux systems

After installing LSSV release 6.1, refer to the *Legato Single Server Version Administrator's Guide* and the program's online help for detailed instructions on how to configure, administer, and use the Legato Single Server Version software for Oracle data storage management.

Removing Oracle Software

This chapter describes how to remove Oracle software from the system. It includes information about the following tasks:

- [Removing Oracle Software Files](#)
- [Removing Oracle HTML DB Database Objects](#)

Removing Oracle Software Files

The following steps describe how to use the Installer to remove Oracle software:

Note: Always use the Oracle Universal Installer to remove Oracle software. Do not delete any Oracle home directories without first using the Installer to remove the software.

1. If necessary, log in as the `oracle` user:

```
$ su - oracle
```

2. Set the `ORACLE_HOME` environment variable to specify the path of the Oracle home directory that you want to remove:

- Bourne, Bash, or Korn shell:

```
$ ORACLE_HOME=oracle_home_path
$ export ORACLE_HOME
```

- C shell:

```
$ setenv ORACLE_HOME oracle_home_path
```

3. Start the Installer as follows:

```
$ $ORACLE_HOME/oui/bin/runInstaller
```

4. In the Welcome screen, click **Deinstall Products**.

The Inventory screen appears, listing all of the Oracle homes on the system and the products installed in each Oracle home.

5. In the Inventory screen, select the Oracle home containing the products that you want to remove.

6. If you want to delete specific products select them from the tree window.

7. Click **Remove**.

The Installer displays a confirmation screen asking you to confirm that you want to deinstall the products and their dependant components.

8. Click **Yes**.

The Installer displays a progress indicator as it removes the software.

Removing Oracle HTML DB Database Objects

When you install Oracle HTML DB, a configuration assistant creates database objects in the database that you specify during the installation. To completely remove Oracle HTML DB, you must remove the database objects from that database after you remove the software. To remove the Oracle HTML DB database objects from a database, follow these steps:

1. Using SQL*Plus, connect to the database as the SYS or SYSTEM user:

```
$ sqlplus "SYS/SYS_password AS SYSDBA"
```

2. Enter the following commands to remove the database objects:

```
SQL> ALTER SESSION SET CURRENT_SCHEMA = flows_010500;  
SQL> EXEC wwv_flow_upgrade.drop_public_synonyms;  
SQL> ALTER SESSION SET CURRENT_SCHEMA = SYSTEM;  
SQL> DROP USER flows_010500 CASCADE;  
SQL> DROP USER flows_files CASCADE;  
SQL> DROP USER htmldb_public_user CASCADE;
```

Mounting Discs

This Oracle product is delivered on both CD-ROM and DVD-ROM. The discs are in ISO 9660 format with Rockridge extensions. This appendix describes how to mount and unmount a disc on each supported platform. It includes information about the following topics:

- [Mounting Discs on AIX](#) on page A-2
- [Mounting Discs on HP-UX](#) on page A-2
- [Mounting Discs on Linux](#) on page A-3
- [Mounting Discs on Solaris](#) on page A-4
- [Mounting Discs on Tru64 UNIX](#) on page A-5

Mounting Discs on AIX

To mount a disc, follow these steps:

1. Switch user to root:

```
$ su - root
```

2. If necessary, enter a command similar to following to unmount the currently mounted disc, then remove it from the drive:

```
# umount /cdrom
```

In this example, /cdrom is the mount point directory for the disc drive.

3. Insert the appropriate disc into the drive, then enter a command similar to the following to mount it:

```
# /usr/sbin/mount -rv cdrfs /dev/cd0 /cdrom
```

In this example, /dev/cd0 is the device name of the disc drive and /cdrom is the mount point directory.

4. If the Installer is displaying the Disk Location dialog box, enter the disc mount point directory path, for example:

```
/cdrom
```

To continue, go to one of the following sections:

- [Installing Oracle Database 10g Products](#) on page 4-2
- [Installing Oracle HTML DB in an Existing Oracle Home](#) on page 4-3
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#) on page 4-5

Mounting Discs on HP-UX

To mount a disc, follow these steps:

1. Switch user to root:

```
$ su - root
```

2. If necessary, enter the following command to unmount the currently mounted disc, then remove it from the drive:

```
# /usr/sbin/umount /SD_CDRROM
```

In this example, /SD_CDRROM is the mount point directory for the disc drive.

3. Insert the appropriate disc into the disc drive, then enter a command similar to the following to mount it:

```
# /usr/sbin/mount -F cdrfs -o rr /dev/dsk/cxydz /SD_CDRROM
```

In this example, /SD_CDRROM is the disc mount point directory and /dev/dsk/cxydz is the device name for the disc device, for example /dev/dsk/c0t2d0.

4. If the Installer is displaying the Disk Location dialog box, enter the disc mount point directory path, for example:

```
/SD_CDRROM
```


To continue, go to one of the following sections:

- [Installing Oracle Database 10g Products](#) on page 4-2
- [Installing Oracle HTML DB in an Existing Oracle Home](#) on page 4-3
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#) on page 4-5

Mounting Discs on Linux

On most Linux systems, the disc mounts automatically when you insert it into the disc drive. If the disc does not mount automatically, follow these steps to mount it:

1. Switch user to root:

```
$ su - root
```

2. If necessary, enter a command similar to one of the following to eject the currently mounted disc, then remove it from the drive:

- Red Hat:

```
# eject /mnt/cdrom
```

- SUSE:

```
# eject /media/cdrom
```

In these examples, `/mnt/cdrom` and `/cdrom` are the mount point directories for the disc drive.

3. Insert the appropriate disc into the disc drive.
4. To verify that the disc mounted automatically, enter one of the following commands depending on your platform:

- Red Hat:

```
# ls /mnt/cdrom
```

- SUSE:

```
# ls /media/cdrom
```

5. If the command in step 4 fails to display the contents of the disc, enter a command similar to the following to mount it, depending on your platform:

- Red Hat:

```
# mount -t iso9660 /dev/cdrom /mnt/cdrom
```

- SUSE:

```
# mount -t iso9660 /dev/cdrom /media/cdrom
```

In these examples, `/mnt/cdrom` and `/media/cdrom` are the default mount point directories for the disc drive on Red Hat and SUSE respectively.

6. If the Installer is displaying the Disk Location dialog box, enter the disc mount point directory path, for example:

```
/mnt/cdrom
```

To continue, go to one of the following sections:

- [Installing Oracle Database 10g Products](#) on page 4-2
- [Installing Oracle HTML DB in an Existing Oracle Home](#) on page 4-3
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#) on page 4-5

Mounting Discs on Solaris

On most Solaris systems, the disc mounts automatically when you insert it into the disc drive. If the disc does not mount automatically, follow these steps to mount it:

1. Switch user to root:

```
$ su - root
```

2. If necessary, enter the following command to eject the currently mounted disc, then remove it from the drive:

```
# eject
```

3. Insert the product disc into the drive.

4. To verify that the disc mounted automatically, enter the following command:

```
# ls /cdrom/cdrom0
```

5. If this command fails to display the contents of the disc, enter a command similar to the following to mount the disc:

```
# /usr/sbin/mount -r -F hsfs /dev/dsk/cxydzs2 /cdrom
```

In this example, `/cdrom` is the disc mount point directory and `/dev/dsk/cxydzs2` is the device name for the disc device, for example `/dev/dsk/c0t2d0s2`.

6. If the Installer is displaying the Disk Location dialog box, enter the disc mount point directory path, for example:

- Disc mounted automatically:

```
/cdrom/cdrom0
```

- Disc mounted manually:

```
/cdrom
```

To continue, go to one of the following sections:

- [Installing Oracle Database 10g Products](#) on page 4-2
- [Installing Oracle HTML DB in an Existing Oracle Home](#) on page 4-3
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#) on page 4-5

Mounting Discs on Tru64 UNIX

To mount a disc, follow these steps:

1. Switch user to root:

```
$ su - root
```

2. If necessary, enter a command similar to the following to unmount the currently mounted disc, then remove it from the drive:

```
# /usr/sbin/umount /cdrom
```

In this example, /cdrom is the mount point directory for the disc drive.

3. Insert the appropriate disc into the disc drive, then enter a command similar to the following to mount it:

```
# /usr/sbin/mount -t cdfs -o nodefperm,noversion /dev/disk/cdrom0c /cdrom
```

In this example, /cdrom is the disc mount point directory, which must exist, and /dev/disk/cdrom0c is the disc device name.

4. If the Installer is displaying the Disk Location dialog box, enter the disc mount point directory path, for example:

```
/cdrom
```

To continue, go to one of the following sections:

- [Installing Oracle Database 10g Products](#) on page 4-2
- [Installing Oracle HTML DB in an Existing Oracle Home](#) on page 4-3
- [Installing Oracle Database 10g Companion Products in a New Oracle Home](#) on page 4-5

B

Troubleshooting

This appendix contains information about troubleshooting. It includes information about the following topics:

- [Verify Requirements](#)
- [X Windows Display Errors](#)
- [What to Do If an Installation Error Occurs](#)
- [Reviewing the Log of an Installation Session](#)
- [Troubleshooting Configuration Assistants](#)
- [Cleaning Up After a Failed Installation](#)
- [Alias for the HTML DB Image Directory](#)

Verify Requirements

Before performing any of the troubleshooting steps in this appendix, ensure that the system meets the requirements and that you have completed all of the pre-installation tasks specified either in [Chapter 2, "Pre-installation Tasks for Installations in an Existing Oracle Home"](#) or in [Chapter 3, "Pre-installation Tasks for Installations in a New Oracle Home"](#).

X Windows Display Errors

If you are running the Installer on a remote system and you want to display the Installer's user interface on your local system, you might see error messages similar to the following:

```
"Failed to connect to server"  
"Connection refused by server"  
"Can't open display"
```

If you see one of these error messages, follow these steps:

Note: This procedure applies only to users of UNIX workstations. If you are using a PC or other system with X server software installed, see the X server documentation for information about how to permit remote systems to display X applications on the local system.

1. In a local terminal window, log in as the user that started the X window session.
2. Enter the following command:

```
$ xhost +
```
3. Enter the following commands, where *workstation_name* is the host name or IP address of your workstation:
 - Bourne, Bash, or Korn shell:

```
$ DISPLAY=workstation_name:0.0  
$ export DISPLAY
```
 - C shell:

```
% setenv DISPLAY workstation_name:0.0
```
4. To determine whether X Window applications display correctly on the local system, enter the following command:

```
$ xclock
```

The X clock should appear on your monitor.
5. If the X clock appears, close X clock and start the Installer again.

What to Do If an Installation Error Occurs

If you encounter an error during installation:

- Do not exit the Installer.
- If you clicked **Next** after you entered incorrect information on one of the installation screens, click **Back** to return to the screen and correct the information.
- If you encounter an error while the Installer is copying or linking files, see the ["Reviewing the Log of an Installation Session"](#) section on page B-3.
- If you encounter an error while a configuration assistant is running, see the ["Troubleshooting Configuration Assistants"](#) section on page B-4.
- If you cannot resolve the problem, remove the failed installation by following the steps listed in the ["Cleaning Up After a Failed Installation"](#) section on page B-4.

Reviewing the Log of an Installation Session

During an installation, the Installer records all of the actions that it performs in a log file. If you encounter problems during the installation, review the log file for information about possible causes of the problem.

To view the log file, follow these steps:

1. If necessary, enter one of the following commands to determine the location of the `oraInventory` directory:

- AIX, Linux x86, or Linux Itanium:

```
$ cat /etc/oraInst.loc
```

- Other operating systems:

```
$ cat /var/opt/oracle/oraInst.loc
```

The `inventory_loc` parameter in this file specifies the location of the `oraInventory` directory.

2. Enter the following command to change directory to the Installer log file directory, where `orainventory_location` is the location of the `oraInventory` directory:

```
$ cd /orainventory_location/logs
```

3. Enter the following command to determine the file name of the log file:

```
$ ls -ltr
```

This command lists the files in the order of creation, with the most recent file shown last. Installer log files have names similar to the following, where `date_time` indicates the date and time that the installation started:

```
installActionsdate_time.log
```

4. To view the most recent entries in the log file, where information about a problem is most likely to appear, enter a command similar to the following:

```
$ tail -50 installActionsdate_time.log | more
```

This command displays the last 50 lines in the log file.

5. If the error displayed by the Installer or listed in the log file indicates a relinking problem, see the following file for more information:

`$ORACLE_HOME/install/make.log`

Troubleshooting Configuration Assistants

To troubleshoot an installation error that occurs when a configuration assistant is running:

- Review the installation log files listed in the ["Reviewing the Log of an Installation Session"](#) section on page B-3.
- Review the specific configuration assistant log file located in the `$ORACLE_HOME/cfgtoollogs` directory. Try to fix the issue that caused the error.
- If you see the Fatal Error. Reinstall message, look for the cause of the problem by reviewing the log files. Refer to the ["Fatal Errors"](#) section for further instructions.

Configuration Assistant Failure

Oracle configuration assistant failures are noted at the bottom of the installation screen. The configuration assistant interface displays additional information, if available. The configuration assistant execution status is stored in the following file:

`oraInventory_location/logs/installActionsdate_time.log`

The execution status codes are listed in the following table:

Fatal Errors

If you receive a fatal error while a configuration assistant is running, you must remove the current installation and reinstall the Oracle software, as follows:

1. Remove the failed installation as described in the ["Cleaning Up After a Failed Installation"](#) section on page B-4.
2. Correct the cause of the fatal error.
3. Reinstall the Oracle software.

Cleaning Up After a Failed Installation

If an installation fails, you must remove files that the Installer created during the attempted installation and remove the Oracle home directory. Perform the following steps to remove the files:

1. Start the Installer as described in the ["Installing Oracle Database 10g Products"](#) section on page 4-2.
2. Click **Deinstall Products** on the Welcome window or click **Installed Products** on any Installer window.
The Inventory window appears, listing installed products.
3. Select the products that you want to remove, then click **Remove**.
4. Manually remove the Oracle home directory created during the failed installation.
5. Reinstall the Oracle software.

Alias for the HTML DB Image Directory

The Oracle HTML DB configuration assistant defines the alias `/i/` for the Oracle HTML DB image directory. If the alias `/i/` is already defined, Oracle HTTP Server uses the first definition of the `/i/` alias. If the Oracle HTML DB images do not look correct, do one of the following:

- If possible, rename the first instance of `/i/` to a different alias name.
- Alternatively, copy the images from the `$ORACLE_HOME/marvel/images` directory to the directory defined by the first `/i/` alias.

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