

Oracle® Database

Companion CD Installation Guide

10g Release 2 (10.2) for Microsoft Windows (32-Bit)

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Preface

This guide explains how to install and configure the products available on the Oracle Database Companion CD for Microsoft Windows. Only the features of Oracle Database Companion CD for Microsoft Windows software installed on the Windows Server 2000, Windows Server 2003, and Windows XP Professional operating systems are discussed in this guide.

This Preface contains these topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documentation](#)
- [Conventions](#)

Audience

Oracle Database Companion CD Installation Guide for Microsoft Windows (32-Bit) is intended for anyone responsible for installing the following products available on the Oracle Database Companion CD for Microsoft Windows:

- Oracle Workflow server and Oracle Workflow middle tier components
- Oracle HTML DB
- Oracle HTTP Server
- Oracle JDBC Development Drivers
- Oracle SQLJ
- Oracle Database Examples
- JPublisher
- Natively Compiled Java Libraries
- Oracle Text Supplied Knowledge Bases
- Oracle Ultra Search

To use this manual, you must have administrative privileges on the computer where you installed your Oracle Database and familiarity with object-relational database management concepts.

See Also: *Oracle Database Companion CD Quick Installation Guide for Microsoft Windows (32-Bit)* if you want to perform a quick installation using the default settings

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. Accessibility 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 more information, visit the Oracle Accessibility Program Web site at

<http://www.oracle.com/accessibility/>

Accessibility of Code Examples in Documentation

Screen readers 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, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

Related Documentation

For more information, see these Oracle resources:

- *Oracle Database Release Notes for Microsoft Windows (32-Bit)*
- *Oracle Database Installation Guide for Microsoft Windows (32-Bit)*
- *Oracle Database Client Installation Guide for Microsoft Windows (32-Bit)*
- *Oracle Database Concepts*

For information about Oracle error messages, see *Oracle Database Error Messages*. Oracle error message documentation is available only in HTML. If you only have access to the Oracle Database 10g release 2 (10.2) Online Documentation Library, you can browse the error messages by range. Once you find the specific range, use your browser's "find in page" feature to locate the specific message. When connected to the Internet, you can search for a specific error message using the error message search feature of the Oracle online documentation.

Many of the examples in this book use the sample schemas, which are installed by default when you select the Basic Installation option with an Oracle Database installation. Refer to *Oracle Database Sample Schemas* for information on how these schemas were created and how you can use them yourself.

Printed documentation is available for sale in the Oracle Store at

<http://oraclestore.oracle.com/>

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

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

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

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

Conventions

The following text conventions are used in this document:

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

Oracle Database Companion CD Installation Overview

This chapter provides an overview of the products available on the Oracle Database Companion CD and describes issues to consider before you install the products:

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

Overview of the Installation Process

The installation process consists of six steps:

1. **Read the release notes:** Read the Oracle Database 10g release 2 (10.2) release notes before you begin the installation. The release notes are available with the platform-specific documentation. The latest version of the release notes is available on Oracle Technology Network at:

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

2. **Plan the installation:** This chapter describes the products in the installation types and provides information that you must understand before installing the software.

You also may want to refer to Appendix A, "Frequently Asked Questions about Installation," in *Oracle Database Installation Guide*. This appendix advises on the best way to install Oracle products depending on your site's requirements.

3. **Verify system requirements:** [Chapter 2](#) describes the minimum requirements that your system must meet before you install the software.
4. **Install the software:** Use the following sections to install the Oracle Database Companion CD products:
 - [Chapter 3](#) describes how to use Oracle Universal Installer to install the software.
 - [Appendix A](#) describes how to install Java Access Bridge, which enables the use of a screen reader with Oracle components.
 - [Appendix B](#) describes how to perform the installation using silent or noninteractive mode using response files. It also explains how to run Oracle Workflow Configuration Assistant in noninteractive mode.

- ["Installing and Using Oracle Components in Different Languages"](#) on page C-1 describes how to install and use Oracle Database Companion CD components in different languages.
- [Appendix E](#) provides installation troubleshooting advice.
- 5. **Complete postinstallation tasks:** [Chapter 4](#) describes recommended and required postinstallation tasks.
- 6. **Get started using the Companion CD products:** Use the following sections to get started using Oracle Database Companion CD products:
 - [Chapter 5](#) describes where to go after you have installed the Oracle Database Companion CD products and performed any necessary postinstallation steps: how to check the contents of the installation and how to start and log in to the products you have installed.
 - ["Configuring Locale and Character Sets with the NLS_LANG Parameter"](#) on page C-4 explains how to configure the Oracle Database Companion CD locale and character sets.
 - [Appendix D](#) describes how to check and modify port numbers.

Products Available in the Oracle HTML DB Installation Type

The following products are available in the Oracle HTML DB installation type:

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

Note: The Summary window of Oracle Universal Installer provides a detailed list of the products available with the Oracle HTML DB installation type.

Oracle HTML DB

Oracle HTML DB is a tool for rapid development and deployment of Web applications on an Oracle database. It provides developers with the productivity of a desktop database, but with the security, reliability, and performance of the Oracle database. With little programming or scripting and only a Web browser, you can build reporting and data entry applications either on existing tables or views or by importing data from spreadsheets.

Oracle HTTP Server

Oracle HTTP Server is a Web server that is based on Apache Standalone version 10.2.0.0. Use the Oracle HTML DB installation type to install Oracle HTTP Server in a new Oracle home. (If you are installing Oracle Workflow middle tier components, Oracle HTTP Server is available with Oracle Database 10g Companion Products.) This standalone release of Oracle HTTP Server provides the following features:

- 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_ossso`

To enable single sign-on, you must use Oracle HTTP Server in conjunction with Oracle Internet Directory and Single Sign-On Server, both of which are available with Oracle Application Server 10g.

- Many standard Apache modules, in addition to modules provided by Oracle

See Also: *Oracle Application Server Installation Guide* for more information on Oracle Internet Directory and Single Sign-On Server

Products Available in the Oracle Database 10g Products Installation Type

The following products are available with the Oracle Database 10g Products installation type:

- [Oracle JDBC Development Drivers](#)
- [Oracle SQLJ](#)
- [Oracle Database Examples](#)
- [Oracle Text Supplied Knowledge Bases](#)
- [Oracle Workflow Server](#)
- [Oracle Ultra Search](#)
- [Natively Compiled Java Libraries](#)
- [JPublisher](#)

Note:

- The Summary window of Oracle Universal Installer provides a detailed list of the products available with the Oracle Database 10g Products installation type.
 - Legato Single Server Version (LSSV) is no longer supported on Oracle Database. Oracle Database Recovery Manager (RMAN), which is a backup and recovery tool integrated into Oracle Database. *Oracle Database Backup and Recovery Basics* covers RMAN in more detail.
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Oracle JDBC Development Drivers

Oracle provides a set of JDBC drivers that you can use for debugging your code and other deployment scenarios. These drivers can access Oracle Database release 8.1.7 or later.

See Also:

- Oracle Technology Network (<http://www.oracle.com/technology/index.html>) for more information on Oracle JDBC Drivers and Oracle Call Interface
- *Oracle Call Interface Programmer's Guide*

Oracle SQLJ

Oracle SQLJ enables applications programmers to embed SQL operations in Java code in a way that is compatible with the Java design philosophy. A SQLJ program is a Java program containing embedded SQL statements. Oracle SQLJ offers extensions to support dynamic SQL operations—those that are not predefined, where the operations themselves can change in real-time. It is also possible to use dynamic SQL operations through JDBC code or PL/SQL code within a SQLJ application. Typical applications contain much more static SQL than dynamic SQL. SQLJ has both a translator and a runtime component and is smoothly integrated into your development environment.

Oracle Database Examples

Oracle Database Examples include a variety of examples and product demonstrations that you can use to learn about the products, options, and features of Oracle Database. Many of these examples are designed to work with the Sample Schemas which you can optionally install in any Oracle database. Many of the documents in the Oracle Online Documentation Library use the example programs and scripts provided with the Oracle Database Examples.

Required Products

Before you can use the Oracle Database Examples, you must install the Sample Schemas into an Oracle database. When you install Oracle Database, or use 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.

See Also: *Oracle Database Sample Schemas* for information about manually installing the Sample Schemas into an existing database

Oracle Text Supplied Knowledge Bases

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, in languages other than English and French.

See Also: *Oracle Text Reference* for more information about creating and extending knowledge bases

Oracle Workflow Server

Oracle Workflow provides a complete workflow management system that supports business process-based integration. Its technology enables modeling, automation, and continuous improvement of business processes, routing information of any type according to user-defined business rules. The Oracle Workflow installation includes Oracle Workflow server and Oracle Workflow Manager on the Oracle Database Products installation type and the Oracle Workflow middle tier components on the Companion Products installation type.

In this release, starting the Oracle Application Server Containers for J2EE (OC4J) instances for Oracle Workflow Manager has been simplified to running two scripts.

Note: Do not install Oracle Workflow server in an Oracle E-Business Suite database. If you want to use the version of Oracle Workflow available with Oracle Database 10g, or any Oracle Database components that depend on this version of Oracle Workflow, you must install the Oracle Workflow server into a database that is not used for an Oracle E-Business Suite instance.

For an Oracle E-Business Suite database, you can continue to use the version of the Oracle Workflow server embedded in Oracle E-Business Suite instead.

See Also: *Oracle Workflow Client Installation Guide* on Oracle Technology Network (OTN) for information about installing Oracle Workflow Client:

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

Oracle Workflow Client is available from Oracle Technology Network:

<http://www.oracle.com/technology/products/ias/workflow/>

Other Installation Types that Install Oracle Workflow

Oracle Workflow is also installed by some installation types of the following products:

- Oracle Application Server 10g
- Oracle Content Management SDK 10g

If you installed either of these products, you might already have installed Oracle Workflow. In this case, you do not need to install Oracle Workflow again.

Oracle Ultra Search

You can use Oracle Ultra Search to build different kinds of search applications. It lets you index and search Web sites, database tables, files, mailing lists, Oracle Application Server Portals, and user-defined data sources.

Natively Compiled Java Libraries

The Oracle Database 10g Products installation type installs JAccelerator and Oracle *interMedia* Image Accelerator which contains 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.

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

You can use JPublisher 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 also can 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 use PL/SQL conversion functions between such types. With such type correspondences in place, JPublisher can automatically generate 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 lets you 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 passing instructions along to the JDBC driver.

See Also: *Oracle Database JPublisher User's Guide*

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

The following products are available with the Oracle Database 10g Companion Products installation type:

- [Oracle Workflow Middle Tier Components](#)
- [Oracle HTTP Server](#)

Note: The Summary window of Oracle Universal Installer provides a detailed list of the products available with the Oracle Database 10g Companion Products installation type.

Oracle Workflow Middle Tier Components

Oracle Workflow middle tier components enable the Oracle Workflow user interface Web pages, including the Database Access Descriptor (DAD) and virtual directory mappings for Oracle Workflow. Before you can use Oracle Workflow server, you must install Oracle Workflow middle tier components. The Oracle Workflow middle tier

components are associated with one Oracle database, the database for which Oracle Workflow server is installed.

Use the Oracle Database 10g Companion Products installation type to install the Oracle Workflow middle tier components after you install Oracle Workflow server.

Oracle HTTP Server

["Oracle HTTP Server"](#) on page 1-2 describes Oracle HTTP Server in detail.

Oracle Database Companion CD Requirements

This chapter describes the requirements for installing the Oracle Database 10g Companion CD products:

- [Requirements for Oracle HTML DB Products](#)
- [Requirements for Oracle Database 10g Products](#)
- [Requirements for Oracle Database 10g Companion Products](#)
- [Hardware and Software Certifications](#)
- [Oracle Database Companion CD Network Topics](#)

Requirements for Oracle HTML DB Products

This section covers the following topics:

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

Oracle HTML DB Requirements

This section covers the following topics:

- [Requirements Overview](#)
- [Disk Space Requirements](#)
- [Browser Requirements](#)
- [Oracle Database Requirement](#)
- [Oracle HTTP Server Requirement](#)
- [Oracle XML DB Requirement](#)
- [Oracle Text Requirement](#)

Requirements Overview

[Table 2-1](#) summarizes the requirements for each Oracle HTML DB installation option. For details on each requirement, refer to the remaining topics in this section.

Table 2–1 Oracle HTML DB Requirements

Installation Option	Required Disk Space	Required Browsers	Required Products
Oracle HTML DB Only (in Oracle HTTP Server home)	Total disk space: 682.13 MB Details: "Disk Space Requirements" on page 2-2	<ul style="list-style-type: none"> ■ Netscape Communicator 7.0 ■ Microsoft Internet Explorer 6.0 ■ Mozilla 1.2 ■ Firefox 1.0.4 Details: "Browser Requirements" on page 2-3	<ul style="list-style-type: none"> ■ Oracle Database ■ Oracle HTTP Server ■ Oracle XML DB ■ Oracle Text Details: <ul style="list-style-type: none"> ■ "Oracle Database Requirement" on page 2-3 ■ "Oracle HTTP Server Requirement" on page 2-3 ■ "Oracle XML DB Requirement" on page 2-4 ■ "Oracle Text Requirement" on page 2-4
Oracle HTML DB and Oracle HTTP Server	Total disk space: 1.03 GB Details: "Disk Space Requirements" on page 2-2	Same as Oracle HTML DB Only installation	<ul style="list-style-type: none"> ■ Oracle Database ■ Oracle XML DB ■ Oracle Text Details: <ul style="list-style-type: none"> ■ "Oracle Database Requirement" on page 2-3 ■ "Oracle XML DB Requirement" on page 2-4 ■ "Oracle Text Requirement" on page 2-4

Disk Space Requirements

The following disk space sizes apply to Oracle HTML DB and Oracle HTTP Server only. They do not include the sizes in an existing Oracle Database installation.

Disk space requirements for Oracle HTML DB only:

- TEMP space: 110 MB
- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 0.13 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 342 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\oradata` directory: 230 MB (datafiles)
- Total: 682.13 MB

Disk space requirements for Oracle HTML DB and Oracle HTTP Server together:

- TEMP space: 110 MB
- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 1.12 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 715 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\oradata` directory: 230 MB (datafiles)
- Total: 1.03 GB

Browser Requirements

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

- Netscape Communicator 7.0 or higher
- Microsoft Internet Explorer 6.0 or higher (Windows only)
- Mozilla 1.2 or higher
- Firefox 1.0.4

Oracle Database Requirement

Oracle HTML DB requires an Oracle database that is release 9.2.0.3 or higher. You need to install Oracle HTML DB into an Oracle home that contains Oracle HTTP Server. This Oracle home can be on a different physical server from the Oracle Database home, as long as Oracle HTML DB can access this database with Oracle*Net.

For example, if Oracle Database has been installed in `OraDB10g_home1`, when you run Oracle Universal Installer to install Oracle HTML DB and are prompted for an Oracle database, you can specify the Oracle Database in that home, but you need to install Oracle HTML DB into its own home that contains Oracle HTTP Server, for example, `OraDB10g_home2`.

Oracle HTTP Server Requirement

Oracle HTML DB must have access to Oracle HTTP Server and `mod_plsql` in order to run. The Oracle HTML DB installation option that you choose determines the available versions of Oracle HTTP Server that meet this requirement:

- **Oracle HTML DB Only:** If you plan to select the Oracle HTML DB Only installation option, you need to install it into an existing Oracle HTTP Server home. Oracle9i release 2 (9.2) or higher will meet this requirement.

Oracle HTTP Server has the following minimum operating system and service pack requirements:

- Windows 2000 with Service Pack 3 or higher

Windows 2000 includes: Window 2000 Professional, Windows 2000 Server, Windows 2000 Advanced Server, Windows 2000 Datacenter Server, and Terminal Services

- Windows 2003
- Windows XP Professional

Note: Windows Multilingual User Interface Pack is supported on Windows 2003 and Windows XP.

If the system does not meet these requirements, select the Oracle HTML DB and Oracle HTTP Server installation option instead of Oracle HTML DB Only.

- **Oracle HTML DB and Oracle HTTP Server:** If you plan to install the version of Oracle HTTP Server that is included in the Oracle Database 10g Companion Products release, see ["Using the Oracle HTTP Server Provided with the Companion Products"](#) on page 2-8 for its requirements.

Oracle XML DB Requirement

Oracle XML DB first must be installed in the Oracle database that you want to use for Oracle HTML DB. If you are using a preconfigured database created either during an installation or by Database Configuration Assistant (DBCA), Oracle XML DB is already installed and configured.

See Also: *Oracle XML DB Developer's Guide* for more information about manually adding Oracle XML DB to an existing database

Oracle Text Requirement

Oracle Text must be installed so that you can use the searchable online help in Oracle HTML DB. By default, Oracle Text is installed as part of Oracle Database.

In addition, make sure that the default language preferences for Oracle Text have been installed. To install the Oracle Text default language, log into the Oracle database where you plan to install Oracle HTML DB and run the appropriate `drdeflang.sql` script, which by default is located in `ORACLE_BASE\ORACLE_HOME\ctx\admin\defaults`. For example, to run the language preferences script for US English, `drdefus.sql`:

```
c:\> sqlplus sys/SYS_password as sysdba
SQL> @c:\oracle\product\10.2.0\db_1\ctx\admin\defaults\drdefus.sql
```

See Also : *Oracle Text Application Developer's Guide* for more information on Oracle Text

Requirements for Oracle Database 10g Products

This section covers the following topics:

- [Requirements Overview](#)
- [Disk Space Requirements](#)
- [Oracle Database Requirement](#)
- [Oracle Workflow Server Browser Requirements](#)
- [Oracle Workflow Server Product Requirements](#)

See Also: ["Products Available in the Oracle Database 10g Products Installation Type"](#) on page 1-3

Requirements Overview

[Table 2–2](#) summarizes the requirements for an Oracle Database 10g Products installation. For details on each requirement, refer to the remaining topics in this section.

Table 2–2 Oracle Database 10g Products Requirements

Required Disk Space	Required Browsers	Required Products
Total: 960.2 MB Details: "Disk Space Requirements" on page 2-5	Oracle Workflow server needs the following browsers: <ul style="list-style-type: none"> ■ Netscape Communicator 7.2 ■ Mozilla 1.7 ■ Microsoft Internet Explorer 6.0 ■ Firefox 1.0.4 ■ Safari 1.2 Details: "Oracle Workflow Server Browser Requirements" on page 2-5	<ul style="list-style-type: none"> ■ Oracle Database ■ Oracle Workflow server requires the following products, in addition to Oracle Database: Unzip utility, JDK 1.4, outbound SMTP mail server (optional), and inbound IMAP mail server (optional) Details: <ul style="list-style-type: none"> ■ "Oracle Database Requirement" on page 2-5 ■ "Oracle Workflow Server Product Requirements" on page 2-5

Disk Space Requirements

The following disk space sizes reflect the sizes required by Oracle Database 10g Products only. They do not include the sizes in an existing Oracle Database installation.

- TEMP space: 130 MB
- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 0.2 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 790 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\oradata`: 40 MB
- Total: 960.2 MB

Oracle Database Requirement

Your system must have access to Oracle Database release 2 (10.2) before you can install the Oracle Database 10g Products installation type.

See Also: *Oracle Database Installation Guide for Microsoft Windows (32-Bit)*

Oracle Workflow Server Browser Requirements

Oracle Workflow server requires a Web browser that supports frames, JavaScript, Java Development Kit (JDK) Version 1.4, and AWT. The following following Web browsers meet this requirement:

- Netscape Communicator 7.2 or higher
- Mozilla 1.7 or higher
- Microsoft Internet Explorer 6.0 or higher
- Firefox 1.0.4 or higher
- Safari 1.2 or higher

Oracle Workflow Server Product Requirements

In addition to Oracle Database, Oracle Workflow server needs the following products in order to run:

- An unzip utility, such as WINZIP from NicoMak, to extract the Workflow HTML help from the `wfdoc.zip` file.
- Java Development Kit (JDK) Version 1.4, to run the Oracle Workflow Java Function Activity Agent and the Workflow XML Loader.
- An outbound SMTP mail server and an inbound IMAP mail server, if you want to send and receive e-mail notifications using an Oracle Workflow notification mailer.

Requirements for Oracle Database 10g Companion Products

This section covers the following topics:

- [Requirements Overview](#)
- [Disk Space Requirements](#)
- [Browser Requirements](#)
- [Oracle Workflow Server Requirement](#)
- [Oracle HTTP Server Requirement](#)

See Also: ["Products Available in the Oracle Database 10g Companion Products Installation Type"](#) on page 1-6

Requirements Overview

[Table 2–3](#) summarizes the requirements for each Oracle Database 10g Companion Products installation option. For details on each requirement, refer to the remaining topics in this section.

Table 2–3 Oracle Database 10g Companion Products Requirements

Installation Option	Required Disk Space	Required Browsers	Required Products
Oracle Workflow middle tier components (in Oracle HTTP Server home)	Total: 111.15 MB Details: "Disk Space Requirements" on page 2-7	<ul style="list-style-type: none"> ■ Netscape Communicator 7.2 ■ Mozilla 1.7 ■ Microsoft Internet Explorer 6.0 ■ Firefox 1.0.4 ■ Safari 1.2 Details: "Browser Requirements" on page 2-8	<ul style="list-style-type: none"> ■ Oracle Database ■ Oracle Workflow server ■ Oracle HTTP Server Details: <ul style="list-style-type: none"> ■ "Oracle Database Requirement" on page 2-9 ■ "Oracle Workflow Server Requirement" on page 2-8 ■ "Oracle HTTP Server Requirement" on page 2-8
Oracle Workflow middle tier components and Oracle HTTP Server	Total: 481.11 MB Details: "Disk Space Requirements" on page 2-7	<ul style="list-style-type: none"> ■ Netscape Communicator 7.2 ■ Mozilla 1.7 ■ Microsoft Internet Explorer 6.0 ■ Firefox 1.0.4 ■ Safari 1.2 Details: "Browser Requirements" on page 2-8	<ul style="list-style-type: none"> ■ Oracle Database ■ Oracle Workflow server Details: <ul style="list-style-type: none"> ■ "Oracle Database Requirement" on page 2-9 ■ "Oracle Workflow Server Requirement" on page 2-8
Oracle HTTP Server only	Total: 463.1 MB Details: "Disk Space Requirements" on page 2-7	<ul style="list-style-type: none"> ■ Netscape Communicator 7.2 ■ Mozilla 1.7 ■ Microsoft Internet Explorer 6.0 ■ Firefox 1.0.4 ■ Safari 1.2 Details: "Browser Requirements" on page 2-8	Oracle Database Details: "Oracle Database Requirement" on page 2-9

Disk Space Requirements

The following disk space sizes reflect the sizes required by the Oracle Database 10g Companion Products only. They do not include the sizes in an existing Oracle Database installation.

Disk space requirements for Oracle Workflow middle tier components only:

- TEMP space: 90 MB
- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 0.15 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 21 MB
- Total: 111.15 MB

Disk space requirements for Oracle Workflow middle tier components and Oracle HTTP Server:

- TEMP space: 90 MB

- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 1.11 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 390 MB
- Total: 481.11 MB

Disk space requirements for Oracle HTTP Server only:

- TEMP space: 90 MB
- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 1.1 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 372 MB
- Total: 463.1 MB

Browser Requirements

The Oracle Database 10g Companion Products require a Web browser that supports frames, JavaScript, Java Development Kit (JDK) Version 1.4, and AWT. The following following Web browsers meet this requirement:

- Netscape Communicator 7.2 or higher
- Mozilla 1.7 or higher
- Microsoft Internet Explorer 6.0 or higher
- Firefox 1.0.4 or higher
- Safari 1.2 or higher

Oracle Workflow Server Requirement

If Oracle Workflow server is not installed, follow the instructions in this guide for installing Oracle Database 10g products. After you install Oracle Workflow server, you need to configure it using Oracle Workflow Configuration Assistant.

Oracle Workflow server must be installed in an Oracle Database 10g Oracle home. You can use the Oracle Universal Installer to check the contents of an Oracle home.

See Also: ["Identifying the Oracle Home Directory Location"](#) on page 3-8 for how to find the contents of the Oracle home

Oracle HTTP Server Requirement

The Oracle Workflow middle tier components need access to Oracle HTTP Server in order to run. You can install the version of Oracle HTTP Server that is available with the Oracle Database 10g Companion Products. Alternatively, you can use an existing Oracle HTTP Server installation.

- [Using the Oracle HTTP Server Provided with the Companion Products](#)
- [Using an Existing Oracle HTTP Server Installation](#)

Using the Oracle HTTP Server Provided with the Companion Products

If you plan to use the version of Oracle HTTP Server available with Oracle Database 10g Companion Products, you can install this version of Oracle HTTP Server, along with the Companion Products, into their own Oracle HTTP Server home. If you plan to choose this option, ensure that you have the following requirements in place:

- [Requirements Overview](#)
- [Disk Space Requirements](#)

- [Operating System and Service Pack Requirements](#)
- [Oracle Database Requirement](#)

Requirements Overview

[Table 2–4](#) summarizes the requirements for an Oracle HTTP Server installation. For details on each requirement, refer to the remaining topics in this section.

Table 2–4 Oracle HTTP Server Requirements

Required Disk Space	Required Operating System and Service Pack	Required Products
Total: 463.1 MB Details: " Disk Space Requirements " on page 2-9	<ul style="list-style-type: none"> ■ Windows 2000 with Service Pack 3 or higher ■ Windows 2003 ■ Windows XP Details: " Operating System and Service Pack Requirements " on page 2-9	Oracle Database Details: " Oracle Database Requirement " on page 2-9

Disk Space Requirements

The disk space requirements for Oracle HTTP Server are as follows:

- TEMP space: 90 MB
- `SYSTEM_DRIVE:\Program Files\Oracle` directory: 1.1 MB
- `SYSTEM_DRIVE:\ORACLE_BASE\ORACLE_HOME` directory: 372 MB
- Total: 463.1 MB

Operating System and Service Pack Requirements

Oracle HTTP Server has the following minimum operating system and service pack requirements:

- Windows 2000 with Service Pack 3 or higher
Windows 2000 includes: Windows 2000 Professional, Windows 2000 Server, Windows 2000 Advanced Server, Windows 2000 Datacenter Server, and Terminal Services
- Windows 2003
- Windows XP Professional

Note: Windows Multilingual User Interface Pack is supported on Windows 2003 and Windows XP.

Oracle Database Requirement

Oracle HTTP Server must have access to Oracle9i release 9.2.0.3 or higher in order to run. Oracle Database can be on a separate system from Oracle HTTP Server, as long as it is accessible by Oracle*Net. However, Oracle HTTP Server must be in its own home.

For example, if Oracle Database has been installed in `OraDB10g_home1`, when you run Oracle Universal Installer to install Oracle HTTP Server, you can specify the Oracle Database in that home, but you need to install Oracle HTTP Server into its own home, for example, `OraDB10g_home2`, along with the Oracle Database 10g Companion Products.

Using an Existing Oracle HTTP Server Installation

If you plan to install the Oracle Database 10g Companion Products into an existing Oracle HTTP Server home, make sure that this version of Oracle HTTP Server has `mod_plsql`. Oracle 9i release 2 (9.2) or higher will meet this requirement.

Hardware and Software Certifications

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 *OracleMetaLink* Web site for the most up-to-date list of certified hardware platforms and operating system versions. The *OracleMetaLink* Web site is available at the following URL:

<http://metalink.oracle.com/>

You must register online before using *OracleMetaLink*. After logging in, select **Certify & Availability** from the left-hand column. From the Product Lifecycle page, select the **Certifications** button. Other Product Lifecycle options include **Product Availability**, **Desupport Notices**, and **Alerts**.

The following sections list the following certification information:

- [Windows Telnet Services Support](#)
- [Windows Terminal Services and Remote Desktop Support](#)

Windows Telnet Services Support

Windows 2000, Windows 2003, and Windows XP include a Telnet Service that allows remote users to log on to the operating system and run console programs using the command line. Oracle supports command line utilities using this feature, but does not support the database GUI tools such as Oracle Universal Installer, Database Configuration Assistant, and Oracle Net Configuration Assistant.

Note: Make sure that the Telnet service is started on the Windows **Services** utility.

Windows Terminal Services and Remote Desktop Support

Oracle supports using the Windows Terminal Services console to install, configure, and run Oracle HTML DB and Oracle HTTP Sever on Windows 2000 Server, Windows XP Professional, and Windows Server 2003. You cannot use the Terminal Services Client on Windows 2000. However, if you want to use the Terminal Services Client instead, you can only do so with Windows Server 2003. If you attempt to install Oracle HTTP Server or Oracle HTML DB in this manner, many configuration tools will stop responding. Start all configuration tools from the Terminal Services console (using `mstsc/console`) and not from the Terminal Services Client.

See Also:

- The Microsoft Web site for more information about terminal services:

<http://www.microsoft.com/>

- The OracleMetaLink Web site for the latest Terminal Server certification information:

<http://metalink.oracle.com/>

Oracle Database Companion CD Network Topics

Typically, the computer on which you want to install the Oracle Database Companion CD products is connected to the network, has local storage to contain this installation, has a display monitor, and has a DVD drive.

This section describes how to install the Oracle Database Companion CD products on computers that do not meet the typical scenario. It covers the following cases:

- [Installing Oracle Database Companion CD on DHCP Computers](#)
- [Installing Oracle Database Companion CD on Computers with Multiple IP Addresses](#)
- [Installing Oracle Database Companion CD on Computers with Multiple Aliases](#)
- [Installing a Loopback Adapter](#)

Installing Oracle Database Companion CD on DHCP Computers

Dynamic Host Configuration Protocol (DHCP) assigns dynamic IP addresses on a network. Dynamic addressing allows a computer to have a different IP address each time it connects to the network. In some cases, the IP address can change while the computer is still connected. You can have a mixture of static and dynamic IP addressing in a DHCP system.

In a DHCP setup, the software tracks IP addresses, which simplifies network administration. This lets you add a new computer to the network without having to manually assign that computer a unique IP address. However, before installing the Oracle Database Companion CD products onto a computer that uses the DHCP protocol, you need to install a loopback adapter to assign a local IP address to that computer.

See also: ["Checking if a Loopback Adapter Is Installed on Your Computer"](#) on page 2-13

Installing Oracle Database Companion CD on Computers with Multiple IP Addresses

You can install Oracle Database Companion CD on a computer that has multiple IP addresses, also known as a multihomed computer. Typically, a multihomed computer has multiple network cards. Each IP address is associated with a host name; additionally, you can set up aliases for the host name. By default, Oracle Universal Installer uses the ORACLE_HOSTNAME environment variable setting to find the host name. If ORACLE_HOSTNAME is not set and you are installing on a computer that has multiple network cards, Oracle Universal Installer determines the host name by using the first name in the `hosts` file, typically located in `SYSTEM_DRIVE:\WINDOWS\system32\drivers\etc` on Windows 2003 and Windows XP, or `SYSTEM_DRIVE:\WINNT\system32\drivers\etc` on Windows 2000.

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

Setting the ORACLE_HOSTNAME Environment Variable

To set the ORACLE_HOSTNAME environment variable:

1. Display **System** in the Windows Control Panel.
2. In the System Properties dialog box, click **Advanced**.
3. In the **Advanced** tab, click **Environment Variables**.
4. In the Environment Variables dialog box, under System Variables, click **New**.
5. In the New System Variable dialog box, enter the following information:
 - **Variable name:** ORACLE_HOSTNAME
 - **Variable value:** The hostname of the computer that you want to use.
6. Click **OK**, then in the the Environment Variables dialog box, click **OK**.
7. Click **OK** in the Environment Variables dialog box, then in the System Properties dialog box, click **OK**.

Installing Oracle Database Companion CD on Computers with Multiple Aliases

A computer with multiple aliases is registered with the naming service under a single IP but with multiple aliases. The naming service resolves any of those aliases to the same computer. Before installing Oracle Database on such a computer, set the ORACLE_HOSTNAME environment variable to the computer whose hostname you want to use.

Installing a Loopback Adapter

When you install a loopback adapter, the loopback adapter assigns a local IP address for your computer. After you install a loopback adapter on your computer, you have at least two network adapters on your computer: your own network adapter and the loopback adapter. The Oracle Database Companion CD products need to have Windows using the loopback adapter as the primary adapter.

The primary adapter is determined by the order in which you installed the adapters: it is the *last* adapter installed. If you install additional network adapters after you install the loopback adapter, you need to deinstall the loopback adapter and reinstall it.

A loopback adapter is required if you are installing on a DHCP computer.

See Also: ["Installing Oracle Database Companion CD on DHCP Computers"](#) on page 2-11

This section covers the following topics:

- [Checking if a Loopback Adapter Is Installed on Your Computer](#)
- [Installing a Loopback Adapter on Windows 2000](#)
- [Installing a Loopback Adapter on Windows 2003 or Windows XP](#)
- [Removing a Loopback Adapter](#)

Checking if a Loopback Adapter Is Installed on Your Computer

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

```
SYSTEM_DRIVE:\> ipconfig /all
```

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

```
Ethernet adapter Local Area Connection 2:
  Connection-specific DNS Suffix . . : 
  Description . . . . . : Microsoft Loopback Adapter
  Physical Address. . . . . : 02-00-4C-4F-4F-50
  DHCP Enabled. . . . . : Yes
  Autoconfiguration Enabled . . . . : Yes
  Autoconfiguration IP Address. . . : 169.254.25.129
  Subnet Mask . . . . . : 255.255.0.0
```

Installing a Loopback Adapter on Windows 2000

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

To install a loopback adapter on Windows 2000:

1. From the **Start** menu, select **Settings**, then **Control Panel**.
2. Double-click **Add/Remove Hardware** to start the Add/Remove Hardware wizard.
3. In the Welcome window, click **Next**.
4. In the Choose a Hardware Task window, select **Add/Troubleshoot a device**, and click **Next**.
5. In the Choose a Hardware Device window, select **Add a new device**, and click **Next**.
6. In the Find New Hardware window, select **No, I want to select the hardware from a list**, and click **Next**.
7. In the Hardware Type window, select **Network adapters**, and click **Next**.
8. In the Select Network Adapter window, do the following:
 - a. **Manufacturers:** Select **Microsoft**.
 - b. **Network Adapter:** Select **Microsoft Loopback Adapter**.
 - c. Click **Next**.
9. In the Start Hardware Installation window, click **Next**.
10. In the Completing the Add/Remove Hardware Wizard window, click **Finish**.
11. Right-click **My Network Places** on the desktop and select **Properties**. This displays the Network and Dial-up Connections control panel.
12. Right-click the connection that was just created. This is usually "Local Area Connection 2". Select **Properties**.
13. On the **General** tab, select **Internet Protocol (TCP/IP)**, and click **Properties**.
14. In the Properties dialog box, click **Use the following IP address** and do the following:

- a. **IP Address:** Enter a non-routable IP for the loopback adapter. Oracle recommends the following non-routable addresses:
 - 192.168.x.x (x is any value between 0 and 255)
 - 10.10.10.10
- b. **Subnet mask:** Enter 255.255.255.0.
- c. Record the values you entered, which you will need later in this procedure.
- d. Leave all other fields empty.
- e. Click **OK**.

15. Close the Network Connections window.

16. Restart the computer.

17. Add a line to the `SYSTEM_DRIVE:\WINNT\system32\drivers\etc\hosts` file with the following format, right after the `localhost` line:

```
IP_address hostname.domainname hostname
```

where:

- `IP_address` is the non-routable IP address you entered in step 14.
- `hostname` is the name of the computer.
- `domainname` is the name of the domain.

For example:

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

18. Check the network configuration:

- a. Open **System** in the Control Panel, and select the **Network Identification** tab.
In **Full computer name**, make sure you see the host name and the domain name, for example, `sales.us.mycompany.com`.
- b. Click **Properties**.
In **Computer name**, you should see the host name, and in **Full computer name**, you should see the host name and domain name. Using the previous example, the host name would be `sales` and the domain would be `us.mycompany.com`.
- c. Click **More**. In **Primary DNS suffix of this computer**, the domain name, for example, `us.mycompany.com`, should appear.
- d. Exit the **System** in the Control Panel.

Installing a Loopback Adapter on Windows 2003 or Windows XP

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

1. Open the Windows Control Panel.
2. Double-click **Add Hardware** to start the Add Hardware wizard.
3. In the Welcome window, click **Next**.
4. In the Is the hardware connected? window, select **Yes, I have already connected the hardware**, and click **Next**.

5. In the The following hardware is already installed on your computer window, in the list of installed hardware, select **Add a new hardware device**, and click **Next**.
6. In the The wizard can help you install other hardware window, select **Install the hardware that I manually select from a list**, and click **Next**.
7. From the list of hardware types, select the type of hardware you are installing window, select **Network adapters**, and click **Next**.
8. In the Select Network Adapter window, make the following selections:
 - **Manufacturer:** Select **Microsoft**.
 - **Network Adapter:** Select **Microsoft Loopback Adapter**.
9. Click **Next**.
10. In the The wizard is ready to install your hardware window, click **Next**.
11. In the Completing the Add Hardware Wizard window, click **Finish**.
12. If you are using Windows 2003, restart your computer.
13. Right-click **My Network Places** on the desktop and choose **Properties**. This displays the Network Connections control panel.
14. Right-click the connection that was just created. This is usually named "Local Area Connection 2". Choose **Properties**.
15. On the **General** tab, select **Internet Protocol (TCP/IP)**, and click **Properties**.
16. In the Properties dialog box, click **Use the following IP address** and do the following:
 - a. **IP Address:** Enter a non-routable IP for the loopback adapter. Oracle recommends the following non-routable addresses:
 - 192.168.x.x (x is any value between 0 and 255)
 - 10.10.10.10
 - b. **Subnet mask:** Enter 255.255.255.0.
 - c. Record the values you entered, which you will need later in this procedure.
 - d. Leave all other fields empty.
 - e. Click **OK**.
17. Click **OK**.
18. Close **Network Connections**.
19. Restart the computer.
20. Add a line to the `SYSTEM_DRIVE:\WINDOWS\system32\drivers\etc\hosts` file with the following format, after the localhost line:

```
IP_address hostname.domainname hostname
```

where:

- *IP_address* is the non-routable IP address you entered in step 16.
- *hostname* is the name of the computer.
- *domainname* is the name of the domain.

For example:

10.10.10.10 mycomputer.mydomain.com mycomputer

21. Check the network configuration:
 - a. Open **System** in the Control Panel, and select the **Computer Name** tab. In **Full computer name**, make sure you see the host name and the domain name, for example, `sales.us.mycompany.com`.
 - b. Click **Change**. In **Computer name**, you should see the hostname, and in **Full computer name**, you should see the host name and domain name. Using the previous example, the host name would be `sales` and the domain would be `us.mycompany.com`.
 - c. Click **More**. In **Primary DNS suffix of this computer**, you should see the domain name, for example, `us.mycompany.com`.

Removing a Loopback Adapter

To remove a loopback adapter:

1. Display **System** in the Windows Control Panel.
2. In the Hardware tab, click **Device Manager**.
3. In the Device Manager window, expand **Network adapters**. You should see **Microsoft Loopback Adapter**.
4. Right-click **Microsoft Loopback Adapter** and select **Uninstall**.
5. Click **OK**.

Installing the Oracle Database Companion CD Software

This chapter covers the following topics:

- [General Steps for Installing Companion CD Products](#)
- [Accessing the Installation Software](#)
- [Installing Oracle HTML DB and Oracle HTTP Server](#)
- [Installing Oracle Database 10g Products](#)
- [Installing Oracle Database 10g Companion Products](#)
- [Removing the Oracle Database Companion CD Software](#)

General Steps for Installing Companion CD Products

After completing the tasks in [Chapter 1](#) and [Chapter 2](#), you will follow these general steps to install the Companion CD products:

1. Consider the following issues:
 - **Installing in interactive mode or in silent or noninteractive mode:** The instructions in this chapter are written for interactive installations. If you prefer to perform the installation in silent mode noninteractive mode using response files—for example, if your site requires multiple installations—read [Appendix B, "Installing Oracle Database Companion CD Using Response Files"](#) for more information.
 - **Installing in a Different Language:** See ["Installing and Using Oracle Components in Different Languages"](#) on page C-1 for language considerations.
2. Use the procedures under ["Accessing the Installation Software"](#) on page 3-2 if you need to install the software from a hard drive or install remotely.
3. Follow the steps in these sections to complete the installation, depending on the products you want to install:
 - ["Installing Oracle HTML DB and Oracle HTTP Server"](#) on page 3-4
You must install Oracle HTML DB in an Oracle HTTP Server home. If a current Oracle HTTP Server has not been installed yet, the installation process allows you to install both of these products.
 - ["Installing Oracle Database 10g Products"](#) on page 3-8
If you plan to use Oracle Workflow server, which is included in the Oracle Database 10g products, you need to complete the steps under ["Preparing](#)

[Oracle Workflow Server for the Oracle Workflow Middle Tier Installation](#)" on page 3-10 before installing the Oracle Workflow middle tier components. The Oracle Workflow middle tier components are available with the Oracle Database 10g Companion Products.

- ["Installing Oracle Database 10g Companion Products"](#) on page 3-14

This section explains how to install Oracle Workflow middle tier components.

Accessing the Installation Software

The Oracle Database software is available on DVD. Do not use Oracle Universal Installer from an earlier release to install components from this release.

If you need to install the Oracle Database Companion CD products using any of the following scenarios, follow the procedures in this section before continuing to the installation instructions.

- [Copying Oracle Database Software to Hard Disk](#)
- [Installing from a Remote DVD Drive](#)
- [Installing on Remote Computers Through Remote Access Software](#)

Copying Oracle Database Software to Hard Disk

Instead of installing from the Oracle Database Companion CD products DVD, you can copy the contents of the DVD to a hard drive and install from there. This might be easier if you plan to install many instances of the Oracle Database Companion CD products on your network, or if the computers where you want to install the products do not have DVD drives.

To copy the contents of the installation media to a hard disk:

1. Create a directory on your hard drive. For example:

```
c:\install\companion
```
2. Copy the contents of the installation media to the directory that you just created.
3. After you have copied all of the required installation files, you can install the Oracle Database Companion CD products.

Installing from a Remote DVD Drive

If the computer where you want to install the Oracle Database Companion CD products does not have a DVD drive, you can perform the installation from a remote DVD drive. Check the following points:

- [On the Remote Computer, Share the DVD Drive](#)
- [On the Local Computer, Map the DVD Drive](#)

On the Remote Computer, Share the DVD Drive

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

1. Log in to the remote computer as an Administrator user.
2. Start Windows Explorer.
3. Right-click the DVD drive letter and choose **Sharing** (or **Sharing and Security**).

4. Click the **Sharing** tab and do the following:
 - a. Select **Share this folder**.
 - b. In **Share name**, give it a share name such as `dvd`. You will use this name when you map the DVD drive on the local computer. Under "[On the Local Computer, Map the DVD Drive](#)" on page 3-3 see Step d under Step 1.
 - c. Click **Permissions**. You need at least "read" permission for the user who will be accessing it to install Oracle Database.
 - d. Click **OK** when you are finished.
5. Insert the Oracle Database installation media into the DVD drive.

On the Local Computer, Map the DVD Drive

Perform these steps on the local computer to map a remote DVD drive and to run Oracle Universal Installer from the mapped drive:

1. Map the remote DVD drive.
 - a. Start Windows Explorer on the local computer.
 - b. From the **Tools** menu, select **Map Network Drive** to display the Map Network Drive dialog.
 - c. Select a drive letter to use for the remote DVD drive.
 - d. In **Folder**, enter the location of the remote DVD drive using the following format:


```
\\remote_hostname\share_name
```

where:

 - *remote_hostname* is the name of the remote computer with the DVD drive.
 - *share_name* is the share name that you entered in Step 4 of the previous procedure. For example


```
\\computer2\dvd
```
 - e. If you need to connect to the remote computer as a different user, Click **different user name**, and enter the username.
 - f. Click **Finish**.
2. Run Oracle Universal Installer from the mapped DVD drive.

Installing on Remote Computers Through Remote Access Software

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

You can install the Oracle Database Companion CD products on the remote computer in one of two ways:

- If you have copied the contents of the Oracle Database Companion CD products DVD to a hard drive, you can install from the hard drive.

- You can insert the DVD into a drive on your local computer, and install from the DVD.

Installing on Remote Computers from a Hard Drive

If you have copied the contents of the Oracle Database Companion CD products DVD to a hard drive, you can install from the hard drive.

The steps that you have to complete are:

1. Make sure that the remote access software is installed and running on the remote and local computers.
2. Share the hard drive that contains the Oracle Database Companion CD products DVD.
3. On the remote computer, map a drive letter to the shared hard drive. You would use the remote access software to do this on the remote computer.
4. Through the remote access software, run Oracle Universal Installer on the remote computer. You access Oracle Universal Installer from the shared hard drive.

Installing on Remote Computers from a Remote DVD Drive

You can insert the DVD into a drive on your local computer, and install from the DVD. This is similar to the scenario described in ["Installing from a Remote DVD Drive"](#) on page 3-2.

The steps that you need to complete are:

1. Make sure that the remote access software is installed and running on the remote and local computers.
2. On the local computer, share the DVD drive.

On the remote computer, map a drive letter to the shared DVD drive. You would use the remote access software to do this on the remote computer.

These steps are described in ["Installing on Remote Computers from a Remote DVD Drive"](#) on page 3-4.

3. Through the remote access software, run Oracle Universal Installer on the remote computer. You access Oracle Universal Installer from the shared DVD drive.

Installing Oracle HTML DB and Oracle HTTP Server

This section covers the following topics:

- [Recommended Preinstallation Task for Oracle HTML DB](#)
- [Oracle Home Location for Oracle HTML DB and Oracle HTTP Server](#)
- [Procedure for Installing Oracle HTML DB and Oracle HTTP Server](#)

Recommended Preinstallation Task for Oracle HTML DB

Before you install Oracle HTML DB, back up the Oracle database in that you plan to use for the installation. You can use Oracle Database Recovery Manager, which is included the Oracle Database installation, to perform the backup.

See Also: *Oracle Database Backup and Recovery Basics*

Oracle Home Location for Oracle HTML DB and Oracle HTTP Server

When you install the Oracle HTML DB installation type, you can install either Oracle HTML DB or Oracle HTTP Server, or both Oracle HTML DB and Oracle HTTP Server.

Oracle home locations for these two products are as follows:

- **Oracle HTML DB:** You must install Oracle HTML DB into an Oracle home that contains Oracle HTTP Server. In a new installation, you will install Oracle HTML DB into the same home as Oracle HTTP Server. If Oracle HTTP Server already is installed, you can install Oracle HTML DB into the Oracle home where Oracle HTTP Server is installed.
- **Oracle HTTP Server:** You must install Oracle HTTP Server in a new Oracle home. You can install Oracle HTTP Server more than once on the same system, as long as each installation uses a separate Oracle home directory.

Procedure for Installing Oracle HTML DB and Oracle HTTP Server

This section explains how to install Oracle HTML DB using either of the following scenarios:

- **Installing both a new Oracle HTML DB and Oracle HTTP Server:** Oracle Universal Installer creates an Oracle HTTP Server home in which to install Oracle HTML DB.
- **Installing Oracle HTML DB into an existing Oracle HTTP Server home:** You can either install a new Oracle HTML DB or upgrade an existing HTML DB into an existing Oracle HTTP Server home.

To install Oracle HTML DB and Oracle HTTP Server:

1. Log on as a member of the Administrators group to the computer on which to install Oracle components.

If you are installing on a Primary Domain Controller (PDC) or a Backup Domain Controller (BDC), log on as a member of the Domain Administrators group.

2. Make sure that the Oracle database that you plan to use for Oracle HTML DB is accessible and running.

You can use the Windows **Services** utility, located either in the Windows Control Panel or from the **Administrative Tools** menu (under **Start** and then **Programs**), to check that the Oracle database service is running. In the Services listing, names of Oracle databases are preceded with `OracleService`. Right-click the name of the database service you want and from the drop-down menu, choose **Start**.

3. Delete the `ORACLE_HOME` environment variable (from the **System** Control Panel) if it exists.

Refer to your Microsoft online help for more information about deleting environment variables.

Note: The `ORACLE_HOME` environment variable is automatically set in the registry. Manually setting this variable prevents installation.

4. Insert the Oracle Database installation media and navigate to the companion directory. Alternatively, navigate to the directory where you downloaded or copied the installation files.

Use the same installation media to install Oracle Database on all supported Windows platforms.

5. Double-click `setup.exe` to start Oracle Universal Installer.
6. In the Welcome window click **Next**.
7. In the Select a Product to Install window, choose **Oracle HTML DB** and click **Next**.
8. In the Select Installation Type window, select one of the following choices and then click **Next**.
 - **Oracle HTML DB and Oracle HTTP Server:** Select this option to install a new Oracle HTML DB and Oracle HTTP Server into a new Oracle home.
 - **Oracle HTML DB only:** Select this option to install a new Oracle HTML DB into an existing Oracle HTTP Server home, or to upgrade an existing Oracle HTML DB installation.
9. In the Specify Home Details window, enter the following:
 - **Name:** If you chose **Oracle HTML DB and Oracle HTTP Server** in the previous step, enter a new Oracle home. If you chose **Oracle HTML DB only**, select the name of the existing Oracle HTTP Server home that Oracle HTML DB will use.
 - **Path:** Enter the directory location for the Oracle home that you specified under **Name**. Do not enter a directory path that has spaces. After you enter a correct directory path, Oracle Universal Installer creates a new directory for you.

See also: ["Identifying the Oracle Home Directory Location"](#) on page 3-8 for information on finding the Oracle home. Select each home and search for **Apache Standalone**. Oracle HTTP Server is listed as Apache Standalone in the Specify Home Details window.
10. Click **Next**.
11. In the Available Product Components window, select the additional components you would like to have installed as part of Oracle HTML DB, and then click **Next**.
12. In the Product-specific Prerequisite Checks window, check for and correct any errors that may have occurred while Oracle Universal Installer was checking your system.
13. Click **Next**.
14. In the Specify HTML DB Database Details window, enter the information required to configure Oracle HTML DB.
 - **Hostname**

Specify the host name of the system where the database is installed. If the host name is the local host, enter the name of the computer (for example, `myserver.us.mycompany.com`), not `localhost`.
 - **Port**

Specify the TCP/IP port number for the Oracle Net listener on the database system. The default port number is 1521. To find the current port number for your Oracle Database installation, check its `tnsnames.ora` file, which by default is located in `ORACLE_BASE\ORACLE_HOME\network\admin`.
 - **Database Service Name**

Specify the database service name for the database where you want to install the Oracle HTML DB database objects, for example, `sales`. (You can find the database service names in the `tnsnames.ora` file.) Alternatively, you can enter the domain name, which is usually the same as the global database name, for example, `sales.us.mycompany.com`.

To configure Oracle HTML DB, you must install the Oracle HTML DB database objects in an Oracle database. The database that you choose must be a release 9.2.0.3 or later database. If you plan to use the 10g release of Oracle HTTP Server, Oracle Universal Installer automatically creates a database access descriptor (DAD) in the `mod_plsql` configuration file and directory aliases in the Oracle HTTP Server configuration file `httpd.conf`, based on the information you enter during installation. However, if you plan to use a release 9i Release 2 of Oracle HTTP Server, you need to create these settings manually by using procedure described in the postinstallation steps in [Chapter 4](#).

- **TABLESPACE Name**

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

- **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 Oracle HTML DB schemas (users). These schemas are created in the database during the installation.

After the installation, you can use this password to connect to Oracle HTML DB as the administrative 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, and for the `FLows_010600` and `FLows_FILES` schemas.

- **Confirm HTML DB Password**

Enter the password again to verify that you have specified it correctly.

15. Click **Next**.

16. In the Summary window, check the list of products that will be installed, and click **Install**.

17. When the installation completes, click **Exit** and then click **Yes** to exit from Oracle Universal Installer.

18. Optionally, delete the `OraInstalldate_time` directory if you want to remove the temporary files that were created during the installation process. The `OraInstalldate_time` directory holds about 45 MB of files. This directory is created in the location set by the `TEMP` environment variable setting.

Restarting your computer also removes the `OraInstalldate_time` directory.

See Also:

- [Chapter 4, "Oracle Database Companion CD Postinstallation Tasks"](#) for information on tasks that you must complete after you have installed the Oracle HTML DB and Oracle HTTP Server
- ["Installing and Configuring Oracle HTML DB on a Remote Oracle Database"](#) on page 4-12 if you want to install additional Oracle HTML DB instances in a remote Oracle database

Installing Oracle Database 10g Products

This section covers the following topics:

- [Oracle Home Location for the Oracle Database 10g Products](#)
- [Procedure for Installing Oracle Database 10g Products](#)
- [Preparing Oracle Workflow Server for the Oracle Workflow Middle Tier Installation](#)

Oracle Home Location for the Oracle Database 10g Products

You need to install Oracle Database 10g Products in an existing Oracle Database 10g release 2 (10.2) Oracle home. These products are:

- Oracle JDBC Development Drivers
- Oracle SQLJ
- Database Examples
- Oracle Text Knowledge Base
- JAccelerator (NCOMP)
- Intermedia Image Accelerator
- Oracle Workflow

Identifying the Oracle Home Directory Location

Before you install Oracle Database 10g Products into an existing Oracle home, you need to identify the location of this Oracle home. If you do not know the path of the Oracle home directory, you can check it using Oracle Universal Installer.

To check the path of the Oracle home directory:

1. From the **Start** menu, choose **Programs**, then **Oracle - HOME_NAME**, then **Oracle Installation Products**, then **Universal Installer**.
2. When the Welcome window appears, click **Installed Products**.
The Inventory window appears, listing all of the Oracle homes on the system and the products installed in each Oracle home.
3. In the Inventory window, expand each Oracle home and locate **Oracle Database 10g 10.2.0.1.0**.
4. Click **Close** and then **Cancel** to exit Oracle Universal Installer.
5. Have the Oracle home name available when you begin installing Oracle Database 10g Products, described next.

Procedure for Installing Oracle Database 10g Products

In brief, you first run Oracle Universal Installer to install the Oracle Database 10g Products. Afterwards, you configure Oracle Workflow server before you install the Oracle Workflow middle tier components.

To install Oracle Database 10g Products:

1. Log on as a member of the Administrators group to the computer on which to install Oracle components.

If you are installing on a Primary Domain Controller (PDC) or a Backup Domain Controller (BDC), log on as a member of the Domain Administrators group.

2. Make sure that the Oracle database that you plan to use for Oracle Workflow is accessible and running.

You can use the Windows **Services** utility, located either in the Windows Control Panel or from the **Administrative Tools** menu (under **Start** and then **Programs**), to check that Oracle Database is running. Names of Oracle databases are preceded with OracleService. Right-click the name of the service and from the menu, choose **Start**.

3. Delete the ORACLE_HOME environment variable (from the **System** Control Panel) if it exists.

Refer to your Microsoft online help for more information about deleting environment variables.

Note: The ORACLE_HOME environment variable is automatically set in the registry. Manually setting this variable prevents installation.

4. Insert the Oracle Database installation media and navigate to the companion directory. Alternatively, navigate to the directory where you downloaded or copied the installation files.

Use the same installation media to install Oracle Database on all supported Windows platforms.

5. Double-click `setup.exe` to start Oracle Universal Installer.
6. In the Welcome window click **Next**.
7. In the Select a Product to Install window, choose **Oracle Database 10g Products** and click **Next**.
8. In the Specify Home Details window, do the following:
 - a. **Name:** Verify that the Oracle home specified is the Oracle Database Oracle home. (The default Oracle home is offered.)
 - b. **Path:** Enter the directory location of the Oracle Database Oracle home where you want to install the Oracle home files. (The directory of the default Oracle home is offered.) Do not enter a directory path that has spaces. After you enter a correct directory path, Oracle Universal Installer creates a new directory for you.

See also: ["Identifying the Oracle Home Directory Location"](#) on page 3-8 for information on finding the correct Oracle home

9. Click **Next**.
10. In the Product-specific Prerequisite Checks window, check for and correct any errors that may have occurred when Oracle Universal Installer checked your system.
11. Click **Next**.
12. In the Summary window, check the list of products that will be installed, and click **Install**.

13. When the installation completes, click **Exit** and then click **Yes** to exit from Oracle Universal Installer.
14. Optionally, delete the `OraInstalldate_time` directory if you want to remove the temporary files that were created during the installation process. The `OraInstalldate_time` directory holds about 45 MB of files. This directory is created in the location set by the `TEMP` environment variable setting.

Restarting your computer also removes the `OraInstalldate_time` directory.

15. Restart Oracle HTTP Server. For example:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl restartproc ias-component=HTTP_Server
```

See Also: ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1

Preparing Oracle Workflow Server for the Oracle Workflow Middle Tier Installation

After you have installed Oracle Workflow server, you need to configure it before you install the Oracle Workflow middle tier components. You use Oracle Workflow Configuration Assistant to configure Oracle Workflow. The following steps explain how to run Oracle Workflow Configuration Assistant by using its graphic user interface.

See Also: ["Running Oracle Workflow Configuration Assistant in Noninteractive Mode"](#) on page B-5 for information on running Oracle Workflow Configuration Assistant in noninteractive mode.

To prepare Oracle Workflow server for the Oracle Workflow middle tier components:

1. Make sure that the Oracle database that you plan to use for Oracle Workflow is accessible and running.

You can use the Windows **Services** utility, located either in the Windows Control Panel or from the **Administrative Tools** menu (under **Start** and then **Programs**), to check that Oracle Database is running. Names of Oracle databases are preceded with `OracleService`. Right-click the name of the service and from the menu, choose **Start**.
2. From the **Start** menu, choose **Programs**, then **Oracle - HOME_NAME**, then **Configuration and Migration Tools**, then **Workflow Configuration Assistant**.
3. In the Welcome to Oracle Workflow Configuration Assistant window, enter the following information:
 - **Install Option** - Select either **Server Only** or **Add Language**.

If you choose the **Server Only** option, Workflow Configuration Assistant installs Oracle Workflow into the Oracle database.

Note: To upgrade to Oracle Workflow release 2.6.4, make sure that the existing Oracle Workflow server is release 2.6.2 or higher.

If you chose the **Add Language** installation option, select the language abbreviation for the language that you want to add. You must install Oracle Workflow before you can add a language.

See Also: *Oracle Database Globalization Support Guide* for a list of language abbreviations used by Oracle database

- **Workflow Account** - Enter the name that you want to use for the Oracle Workflow database account or accept the default name, typically owf_mgr.

The default tablespace for this account is USERS and the temporary tablespace is TEMP. You can change the tablespace if necessary.

Note: If you are upgrading an existing installation of Oracle Workflow, enter the name and password for the existing Oracle Workflow database account.

- **Workflow Password** - Enter a password for the Oracle Workflow account.
- **SYS Password** - Enter the password for the SYS account of the Oracle Database installation on the system. The password is mandatory for Oracle Workflow Server installations but not if you are adding a language.
- **TNS Connect Descriptor** - The database connect string in TNS format:

```
(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST =
host_name) (PORT = port_number))) (CONNECT_DATA = (SERVICE_NAME =
database_service_name)))
```

The connect string is stored in the `tnsnames.ora` file, which in a default installation is located in `ORACLE_BASE\ORACLE_HOME\network\admin`. An easy way to find the connect string in a single-line format is to run the **tnsping** command at a command prompt, output the results into a text file, and then copy and paste the connect string into the **TNS Connect Descriptor** box. For example, to get the connect string for a server named mau, you could enter:

```
c:\> tnsping mau > tns.txt
```

4. If you want to integrate Oracle Internet Directory as the directory repository for Oracle Workflow, select the **Enter LDAP Parameters** check box and then select **Get LDAP Values** to display the Workflow LDAP Parameters window.

Note: If you are upgrading an existing Oracle Workflow installation in which you already implemented Oracle Internet Directory integration, you must re-enter the Lightweight Directory Access Protocol (LDAP) values here to preserve the Oracle Internet Directory integration during the upgrade.

Enter the following LDAP server information for the LDAP directory to which you want to connect and click **OK**. After the installation, you can update these values if necessary in the Global Workflow preferences Web page.

See Also: "Setting Up Oracle Workflow" section in the *Oracle Workflow Administrator's Guide* for more information

- **LDAP Host Name** - Enter the host on which the Lightweight Directory Access Protocol (LDAP) directory is installed.
- **LDAP Non-SSL Port** - Enter the port number that the host uses. This port must not be a Secure Sockets Layer (SSL) port.

- **LDAP Admin Username**- Enter the username used to connect to the LDAP server. This username must have write privileges and is required to bind to the LDAP directory. For example:

cn=orcladmin

- **LDAP Admin Password** - Enter the Oracle Internet Directory password for the LDAP user account. LDAP password values are masked as asterisks in the display and are stored in encrypted form.
- **Changelog DN** - Enter the LDAP node where change log files are located. For example:

cn=changelog

- **User Base** - Enter the LDAP node under which user records can be found. For example:

cn=Base, cn=OracleSchemaVersion

Note: After setting up integration with Oracle Internet Directory during installation, you must use the WF_LDAP APIs to synchronize the Oracle Workflow directory service with Oracle Internet Directory. For instructions, see *Oracle Workflow Administrator's Guide*.

5. If you do not want to integrate with Oracle Internet Directory, leave the **Enter LDAP Parameters** check box blank.
6. To enter configuration parameters for the seeded Java-based notification mailer service component Workflow Notification Mailer, select the **Enter Mailer Parameters** check box and then select **Get Mailer Values** to display the Workflow Mailer Parameters. Enter values for the following parameters and then click **OK**.
 - **Inbound EMail Account: Server Name:**
 - **Server Name** - Enter the name of the inbound IMAP mail server.
 - **Username** - Enter the username of the mail account where the notification mailer receives e-mail messages.
 - **Password** - Enter the password of the mail account specified in the **Username** parameter.
 - **Outbound EMmail Account** - Enter the name of the outbound SMTP mail server.
 - **EMail Processing:**
 - **Processed Folder** - Enter the name of the mail folder in the inbound e-mail account where the notification mailer places successfully processed notification messages.
 - **Discard Folder** - Enter the name of the mail folder in the inbound e-mail account where the notification mailer places incoming messages that are not recognized as notification messages.
 - **Message Generation: HTML Agent:**
 - **HTML Agent** - The HTML Agent is the base URL that identifies the Web agent defined for Oracle Workflow in Oracle HTTP Server. The notification mailer uses this URL to support e-mail notifications with

HTML attachments. By default, this parameter is set to the following placeholder value:

```
http://localhost.com/pls/wf
```

If you have already installed Oracle HTTP Server, replace `localhost.com` with the server and TCP/IP port number on which the Web listener accepts requests. Otherwise, leave this parameter set to the placeholder value. In this case you must set this parameter in the notification mailer configuration wizard in Oracle Workflow Manager after you complete the Oracle HTTP Server and Oracle Workflow installations.

See Also: "Setting Up Oracle Workflow" in Oracle Workflow Administrator's Guide

- **Reply-to Address** - Enter the address of the e-mail account that receives incoming messages, to which notification responses should be sent.

After the initial installation, you can update the notification mailer configuration values if necessary in the Oracle Workflow Manager. You can also update the HTML agent value for Oracle Workflow in the Global Workflow preferences Web page.

See Also: "Setting Up Oracle Workflow" in *Oracle Workflow Administrator's Guide* and Oracle Workflow Manager online help for more information

7. To change the tablespace assigned to the Oracle Workflow database account, select the **Change Tablespace** check box, then select an existing tablespace from the list of values.
8. Choose **Submit** to begin the configuration or choose **Quit** to exit Workflow Configuration Assistant without performing the configuration.
9. When the configuration is complete, a confirmation window appears. Click **OK**.

You can check the status of the configuration by reviewing the `ORACLE_BASE\ORACLE_HOME\wf\install\workflow.log` file.

If you want to add additional languages to Oracle Workflow, rerun Oracle Workflow Configuration Assistant with the **Add Language** install option.

Do not rerun Oracle Workflow Configuration Assistant with the **Server Only** install option to add additional Oracle Workflow schemas, because only one Oracle Workflow schema is allowed in each Oracle home. If you attempt this, the configuration assistant will succeed, but you may encounter errors later on in the Oracle Workflow middle tier services.

If you need to recreate the Oracle Workflow schema, first drop the existing schema and deinstall Oracle Workflow. Then follow the instructions in this chapter to reinstall Oracle Workflow and create a new Oracle Workflow schema using the Oracle Workflow Configuration Assistant.

See Also: [Chapter 4, "Oracle Database Companion CD Postinstallation Tasks"](#) for tasks that you must complete after you have installed Oracle Workflow server

Installing Oracle Database 10g Companion Products

This section covers the following topics:

- [Oracle Home Location for Oracle Database 10g Companion Products](#)
- [Procedure for Installing Oracle Database 10g Companion CD Products](#)

Oracle Home Location for Oracle Database 10g Companion Products

When you install Oracle Database 10g Companion Products, you can install either Oracle HTTP Server, Oracle Workflow middle tier components, or both Oracle HTTP Server and Oracle Workflow middle tier components.

Oracle home locations for these two products are as follows:

- **Oracle Workflow middle tier components:** You must install Oracle Workflow middle tier components into a new Oracle home. In a new installation, you will install Oracle Workflow middle tier components into the same home as Oracle HTTP Server. If Oracle HTTP Server already is installed, you can install Oracle Workflow middle tier components into the Oracle home where Oracle HTTP Server is installed.
- **Oracle HTTP Server:** You must install Oracle HTTP Server in a new Oracle home. You can install Oracle HTTP Server more than once on the same system, as long as each installation uses a separate Oracle home directory.

Procedure for Installing Oracle Database 10g Companion CD Products

To install Oracle Database 10g Companion CD Products:

1. Make sure that you have first installed Oracle Workflow server from the Oracle Database 10g Products installation type and run Workflow Configuration Assistant to configure Oracle Workflow.
2. Log on as a member of the Administrators group to the computer on which to install Oracle components.

If you are installing on a Primary Domain Controller (PDC) or a Backup Domain Controller (BDC), log on as a member of the Domain Administrators group.
3. Delete the ORACLE_HOME environment variable if it exists. Refer to your Microsoft online help for more information about deleting environment variables.

Note: The ORACLE_HOME environment variable is automatically set in the registry. Manually setting this variable prevents installation

4. Insert the Oracle Database installation media and navigate to the companion directory. Alternatively, navigate to the directory where you downloaded or copied the installation files.

Use the same installation media to install Oracle Database on all supported Windows platforms.
5. Double-click setup.exe to start Oracle Universal Installer.
6. In the Welcome window click **Next**.
7. In the Select a Product to Install window, choose **Oracle Database 10g Companion Products** and click **Next**.

8. In the Specify Home Details window, do the following:
 - a. **Name:** Enter a name for the new Oracle home. You can install the Oracle Database Companion Products into a new Oracle home, or you can install Oracle Workflow middle tier only into an existing Oracle HTTP Server Oracle home. You cannot install the Oracle Database Companion Products into an existing Oracle Database home.
 - b. **Path:** Enter the directory location for the Oracle home. If the directory does not exist, then Oracle Universal Installer creates it for you. Do not enter a directory path that has spaces. After you enter a correct directory path, Oracle Universal Installer creates a new directory for you.

See also: ["Identifying the Oracle Home Directory Location"](#) on page 3-8 for information on finding the correct Oracle home.

9. Click **Next**.
10. In the Available Product Components window, select from the following products and then click **Next**:
 - **Apache Standalone** (this option installs Oracle HTTP Server)
 - **Oracle Workflow Middle Tier**

Note: If you are installing Oracle Workflow middle tier in a new Oracle home, you must choose Oracle HTTP Server.

11. In the Product-specific Prerequisite Checks window, check for and correct any errors that may have occurred while Oracle Universal Installer was checking your system.

If you are installing Oracle Workflow middle tier only into an existing Oracle HTTP Server home, you may need to manually verify the prerequisite check to confirm the selected Oracle home.

12. Click **Next**.

13. In the Oracle Workflow Middle Tier Configuration window, specify the configuration settings needed for the Oracle Workflow middle tier.

To configure the Oracle Workflow middle tier, you must create a database access descriptor (DAD) in the `mod_plsql` configuration files and directory aliases in the Oracle HTTP Server configuration file. The Oracle Universal Installer completes these tasks for you using the information that you specify in this step.

Enter the following information:

- **Workflow Schema**

Specify the user name (schema name) that you used when installing the Oracle Workflow server database objects in the database. The default user name is `owf_mgr`.

- **DB Hostname**

Specify the host name of the system where the database is installed. If the host name is the local host, enter the name of the computer, for example, `myserver.us.mycompany.com`, not `localhost`.

- **Port Number**

Specify the TCP/IP port number for the Oracle Net listener on the database system. The default port number is 1521. You can find this information in the Oracle database's `tnsnames.ora` file. In a default installation, this file is located in `ORACLE_BASE\ORACLE_HOME\network\admin`.

- **Oracle SID**

Specify the database instance identifier (SID) for the database where you installed the Oracle Workflow server database objects.

14. In the Oracle Workflow Middle Tier Configuration window, enter a password for the Oracle Workflow schema you created in the previous step, and then click **Next**.
15. In the Oracle Apache Installation window, enter the following information required to configure Oracle Workflow middle tier and click **Next**.

- **Enter Password**

Specify the password for the Workflow user (typically `OWF_MGR`) that you specified on the previous window. This password is used for the `mod_plsql` database access descriptor.

- **Confirm Password**

Enter the password again to verify that you have specified it correctly.

16. In the Summary window, check the list of products that will be installed, and click **Install**.
17. In the End of Installation window, make a note of the URLs that Oracle HTTP Server will use.

Note: These URLs are also listed in the `ORACLE_BASE\ORACLE_HOME\Apache\Apache\setupinfo.txt` file.

18. Click **Exit** and click **Yes** to exit from the Oracle Universal Installer.
19. Optionally, delete the `OraInstalldate_time` directory if you want to remove the temporary files that were created during the installation process. The `OraInstalldate_time` directory holds about 45 MB of files. This directory is created in the location set by the `TEMP` environment variable setting.

Restarting your computer also removes the `OraInstalldate_time` directory.

20. Restart Oracle HTTP Server. For example:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl restartproc ias-component=HTTP_Server
```

See Also: ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1

See Also: [Chapter 4, "Oracle Database Companion CD Postinstallation Tasks"](#) for information on tasks that you must complete after you have installed Oracle HTTP Server

Removing the Oracle Database Companion CD Software

This section covers the following topics:

- [Removing Oracle HTML DB from Oracle Database](#)
- [Removing Oracle Workflow](#)

- [Removing Oracle Database Products and Oracle Database Companion CD Products](#)

Removing Oracle HTML DB from Oracle Database

After you have successfully deinstalled Oracle HTML DB using the Oracle Universal Installer, you can remove Oracle HTML DB from the database. Be aware that following these instructions will render inoperable any previous version of HTML DB you may have installed on your system.

1. Connect to the database as a privileged user, such as SYS or SYSTEM, for example:

```
c:\> sqlplus sys/SYS_password as sysdba
```

2. Execute the following commands:

```
SQL> ALTER SESSION SET current_schema = FLOWS_010600;
SQL> EXEC wwv_flow_upgrade.drop_public_synonyms;
SQL> ALTER SESSION SET current_schema = SYSTEM;
SQL> DROP USER FLOWS_010600 CASCADE;
SQL> DROP USER flows_files CASCADE;
SQL> DROP USER htmldb_public_user CASCADE;
```

Removing Oracle Workflow

To remove Oracle Workflow:

1. Use Oracle Universal Installer to deinstall Oracle Workflow server or the Oracle Workflow middle tier components.

See Also: ["Removing Oracle Database Products and Oracle Database Companion CD Products"](#) on page 3-17

2. Drop the Oracle Workflow schema from the database.

Log in to the database as the SYS user:

```
c:\> sqlplus sys/SYS_password as sysdba
```

Enter the following DROP USER command. For example, if the Oracle Workflow schema is named owf_mgr, you would enter:

```
SQL> drop user owf_mgr cascade
```

Removing Oracle Database Products and Oracle Database Companion CD Products

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

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

Stop the Oracle HTTP Server and Oracle Process Manager and Notification services.

See also: ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1

1. From the **Start** menu, select **Programs**, then **Oracle - HOME_NAME**, then **Oracle Installation Products**, then **Universal Installer**.
2. When the Welcome window appears, click **Deinstall Products**.
The Inventory window appears, listing all of the Oracle homes on the system and the products installed in each Oracle home.
3. In the Inventory window, select the Oracle home and the Oracle products that you want to remove.
4. To delete specific products, select them in the tree window.
5. Click **Remove**.
A confirmation window appears asking you to confirm that you want to deinstall the products and their dependent components.
6. Click **Yes**.
A progress indicator appears as the software is removed.

Oracle Database Companion CD Postinstallation Tasks

This chapter describes the following tasks that you might need to complete after you install the software:

- [Installing the Latest Patch Set Release](#)
- [Postinstallation Tasks for Oracle HTTP Server](#)
- [Postinstallation Tasks for Oracle HTML DB](#)
- [Postinstallation Tasks for Oracle Workflow Server](#)

Installing the Latest Patch Set Release

Oracle recommends installing the latest patch set release after you have successfully installed the Oracle Companion CD components. Doing so ensures that you have the latest update of Oracle Database Companion CD.

You must register online before using *OracleMetaLink*. After logging in to *OracleMetaLink*, select **Patches** from the left-hand column.

To find and download patches:

1. Go to the *OracleMetaLink* Web site

<http://metalink.oracle.com/>

2. Log in to *OracleMetaLink*.

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

3. On the main *OracleMetaLink* 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 the Companion CD product.
 - 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.

6. Under **Results for Platform**, find the latest patch set for Oracle Database using *OracleMetaLink*.
7. From the list of available patches, click the number of the patch you want to download.
8. Click **View Readme** to review the README before proceeding with the download.

Each patch has a README file with installation requirements and instructions. Some patches install with Oracle Universal Installer; others require special procedures. Oracle recommends that you always read the README before proceeding.
9. Return to the Patch Set page and click **Download** to download and save the file on your system.
10. Use an unzip utility to uncompress the patch zip file.

Postinstallation Tasks for Oracle HTTP Server

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

This section contains these topics:

- [Backing Up the Files](#)
- [Migrating from a Previous Release of Oracle HTTP Server](#)
- [Migrating the httpd.conf Configuration File from an Earlier Oracle HTTP Server](#)
- [Migrating Database Access Descriptors Used by mod_plsql](#)
- [Enabling the High Availability Features of Oracle HTTP Server](#)

Backing Up the Files

Oracle recommends that you back up the Oracle HTTP Server configuration and log files. The configuration and log files are located in the following locations:

```
ORACLE_BASE\ORACLE_HOME\opmn\conf
ORACLE_BASE\ORACLE_HOME\opmn\logs
ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf
ORACLE_BASE\ORACLE_HOME\Apache\Apache\logs
ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf
```

Oracle recommends that you back up the entire Oracle home directory before applying a patch.

Migrating from a Previous Release of Oracle HTTP Server

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

There are two parts to the migration process:

- [Migrating the httpd.conf Configuration File from an Earlier Oracle HTTP Server](#)
- [Migrating Database Access Descriptors Used by mod_plsql](#)

Migrating the httpd.conf Configuration File from an Earlier Oracle HTTP Server

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:

- [Step1: Copying and Opening the httpd.conf File](#)
- [Step 2: Making Global Changes](#)
- [Step 3: Modifying the List of LoadModule Directives](#)
- [Step 4: Removing Directives and Sections for Unsupported Features](#)
- [Step 5: Modifying Port Numbers](#)
- [Step 6: Modifying Existing Sections and Directives](#)
- [Step 7: Adding New Sections and Directives](#)
- [Step 8: Migrating Your Server Certificate and Private Key](#)
- [Step 9: Modifying the Secure Socket Layer Sections and Directives](#)
- [Step 10: Copying or Moving the Required Files to New Directories](#)

Step1: Copying and Opening the httpd.conf File

Copy the Oracle HTTP Server configuration `httpd.conf` file used by the previous release to the current release configuration file directory.

To copy and open the `http.conf` file:

1. Change directory to the configuration file directory for the current release of Oracle HTTP Server:

```
c:\> cd ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf
```

2. Back up the `httpd.conf` file:

```
c:\> copy httpd.conf httpd.conf.orig
```

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

```
c:\> copy ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf ORACLE_BASE\ORACLE_HOME
```

4. Change directory to the configuration file directory:

```
c:\> cd ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf
```

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

```
c:\> copy \OLD_ORACLE_HOME\Apache\Apache\conf\httpd.conf
```

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

Step 2: Making Global Changes

To 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 SSL is not used.

Step 3: Modifying the List of LoadModule Directives

To 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 the LoadModule directive in the `<IfDefine SSL>` section, change `ssl_module` to `ossl_module` and change `mod_ssl.so` to `mod_ossl.so`, as follows:

```
LoadModule ossl_module       libexec\mod_ossl.so
```

Step 4: Removing 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_BASE\ORACLE_HOME\Apache\Jserv\docs\"
Alias /soapdocs/ " \ORACLE_BASE\ORACLE_HOME\soap\"
```

2. Remove the following directive from the `<IfModule mod_fastcgi>` section:

```
FastCGIServer fcgi-bin/echo -initial-env ORACLE_HOME \
                        -initial-env NLS_LANG
```

3. Remove the following include directive:

```
include " \ORACLE_BASE\ORACLE_HOME\Apache\Jserv\etc\jserv.conf"
```

4. Remove the `<IfModule mod_oprocmgr.c>` section.

Step 5: Modifying Port Numbers

The `httpd.conf` file is used by previous releases of Oracle HTTP Server that were installed with Oracle HTTP Server or Oracle Database. This file specifies 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_ossl.c>
    Port port2
    Listen port2
```

```
Listen SSL_port
</IfModule>
```

To modify the port numbers:

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

```
Port port2
Listen port2
```

Oracle HTTP Server listens 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 listens for HTTP requests on port *port2* and for HTTPS requests on port *SSL_port*.

3. If you intend to continue using 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*.

Step 6: Modifying Existing Sections and Directives

To modify the following sections and directives in `httpd.conf`:

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_BASE\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_BASE\ORACLE_HOME\perl\5.6.1\lib:\ORACLE_BASE\ORACLE_
HOME\perl\site\5.6.1\lib"
```

Enter this setting on one line.

Step 7: Adding New Sections and Directives

To add the following new sections and directives to the `http.conf` 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. Add the following lines before the line that includes the `oracle_apache.conf` file:

```
# Include the configuration files needed for mod_oc4j
include "\ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf\mod_oc4j.conf"

# Loading mod_rewrite module here as it loads before mod_oc4j
LoadModule rewrite_module      modules/ApacheModuleRewrite.dll
```

Step 8: Migrating 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 using the following syntax in a separate terminal window:

```
\ORACLE_BASE\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 the `ssl2oss1` 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. 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. 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>\ORACLE_BASE\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.
<code>-ssowallet</code>	Specify the value <code>yes</code> to create a wallet that is compatible with Oracle Single Sign-On.
<code>-validate</code>	Specify the value <code>yes</code> to verify that the wallet will be converted successfully. If you specify this option with the value <code>yes</code> , 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:

```
ORACLE_BASE\ORACLE_HOME\Apache\Apache\bin\iasobf -p wallet_pwd
```

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.

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.

Step 9: Modifying the Secure Socket Layer Sections and Directives

Note: Oracle recommends that you change the Secure Socket Layer (SSL) related sections and directives in the `httpd.conf` file, even if SSL is currently not used.

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

1. Change the setting for the `SSLSessionCache` directive as follows:

```
SSLSessionCache shmcb:/ORACLE_BASE/ORACLE_HOME/Apache/Apache/logs/ssl_
scache(512000)
```

2. 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
```

3. 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_BASE\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:
 - a. Change the value specified by the `SSLWallet` directive to specify the wallet path, if it is different from the default value.
 - b. 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.

Step 10: Copying or Moving the 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.

You need to copy or move only files that are located in subdirectories of the previous release Oracle home directory. Alias directories in other locations continue to be accessible, as long as 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.

Copy the following files, as appropriate

- 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

Migrating 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 the `dadTool.pl` script:

1. 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 and the location of the `dadTool.pl` script.

For example:

```
c:\> set PATH=%ORACLE_BASE%\%ORACLE_HOME%\Apache\modplsql\conf;
      %ORACLE_BASE%\%ORACLE_HOME%\perl\5.6.1\bin\MSWin32-x86;%PATH%
```

Enter this setting on one line.

2. If `ORACLE_BASE\ORACLE_HOME\bin` is not already in your `PATH`, include it in the `PATH` statement.

For example:

```
c:\> set PATH=c:\oracle\product\10.1.0\Db_1\bin;%PATH%
```

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

```
c:\> cd ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf
```

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

```
c:\> copy OLD_ORACLE_BASE\ORACLE_HOME\Apache\modplsql\cfg\wdbsvr.app
```

5. Enter the following command to run the `dadTool` script:

```
c:\> perl dadTool.pl -m
```

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

Enabling the High Availability Features of Oracle HTTP Server

If you want to enable the high-availability features of Oracle HTTP Server, you must use Oracle Process Manager and Notification server (OPMN) with Oracle HTTP Server. To use OPMN, you must first start the OPMN service. To start the OPMN service and the Oracle HTTP Server processes together, enter the following command:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl startall
```

Note: The `apachectl` script is not supported for starting and stopping Oracle HTTP Server in this release.

When the OPMN service is running, you can start, stop, or restart Oracle HTTP Server.

See Also: ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1

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

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl stopall
```

Postinstallation Tasks for Oracle HTML DB

If you installed Oracle HTML DB, complete the following tasks:

- [Restarting Processes](#)
- [Configuring Oracle HTTP Server for an Oracle HTML DB Upgrade](#)
- [Obfuscating PlsqlDatabasePassword Parameter](#)
- [Installing and Configuring Oracle HTML DB on a Remote Oracle Database](#)

Restarting Processes

Restart the processes that you stopped before you began the installation, such as listener and other processes. In addition, restart Oracle HTTP Server.

See Also: ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1

Configuring Oracle HTTP Server for an Oracle HTML DB Upgrade

If you are upgrading Oracle HTML DB from release 1 (10.1) and the password you provided during your initial installation differs from the one you specified during this installation, you need to modify the file that contains the Database Access Descriptors (DADs). The following sections describe the parameter you need to modify depending upon the type of Oracle HTTP Server in your environment.

Topics in this section include:

- [Oracle HTTP Server Release 9.0.3](#)
- [Oracle HTTP Server 10g Release 1](#)

Note: Only perform the tasks that follow if the password you provided during your initial installation differs from the one you specified during the installation.

Oracle HTTP Server Release 9.0.3

If you are upgrading Oracle HTML DB and are running the version of Oracle HTTP Server included with Oracle Database release 9.2.0.x, you must modify the parameter password in the `wdbsvr.app` file.

To modify the parameter password in the `wdbsvr.app` file:

1. Use a text editor and open the `wdbsvr.app` file.

```
ORACLE_BASE\ORACLE_HOME\Apache\modplsql\cfg\wdbsvr.app
```

2. Find the DAD settings for Oracle HTML DB by searching for the following:

```
DAD_htmlldb
```

3. Edit value next to the parameter password to match the password you provided during the installation.
4. Save your changes.
5. Stop and restart Oracle HTTP Server:
 - Stop Oracle HTTP Server: From the **Start** menu, select **Programs, Oracle - OraHome, Oracle HTTP Server**, and **Stop HTTP Server**.
 - Restart Oracle HTTP Server: From the **Start** menu, select **Oracle - OraHome, Oracle HTTP Server**, and **Start HTTP Server**.

See Also: *Oracle HTTP Server Administration Guide*

Oracle HTTP Server 10g Release 1

If you are upgrading Oracle HTML DB and are running Oracle HTTP Server 10g release 1, you must modify the parameter `PlsqlDatabasePassword` in the `marvel.conf` file.

To modify the parameter `PlsqlDatabasePassword` in the `marvel.conf` file:

1. Use a text editor and open the `marvel.conf` file:

```
ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf\marvel.conf
```

2. Find the DAD settings for Oracle HTML DB by searching for the following:

```
/pls/htmlldb
```

3. Modify the value of the parameter `PlsqlDatabasePassword` to match the password you provided during installation.
4. Save your changes.
5. Stop and restart Oracle HTTP Server:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl stopproc ias-component=HTTP_Server
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl startproc ias-component=HTTP_Server
```

See Also: ["Obfuscating PlsqlDatabasePassword Parameter"](#) on page 4-12 and *Oracle HTTP Server Administration Guide*

Obfuscating PlsqlDatabasePassword Parameter

The `PlsqlDatabasePassword` parameter specifies the password for logging in to the database. You can use the `dadTool.pl` script to obfuscate passwords in the `dads.conf` file.

You can find the `dadTool.pl` script in the following directory:

`ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf`

Obfuscating Passwords in a New Oracle HTML DB Installation

In a new Oracle HTML DB installation, the `PlsqlDatabasePassword` parameter is found in the `dads.conf` file. To obfuscate passwords in a new installation, run the `dadTool.pl` utility by following the instructions in the `dadTool.README` file.

Obfuscating Passwords if Upgrading Oracle HTML DB

If you have upgraded from a previous release of Oracle HTML DB, the DAD information is in the file `marvel.conf`. Before you can run the `dadTool.pl` script, you must copy the DAD entry from the `marvel.conf` file to the `dads.conf` file.

To obfuscate passwords when upgrading:

1. Use a text editor and copy the entry for `/pls/htmldb` from the `marvel.conf` file into the `dads.conf` file, located in:

`ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf\dads.conf`

2. Run `dadTool.pl` by following the instructions in the `dadTool.README` file.
3. Copy the entry for `/pls/htmldb` from the `dads.conf` file back into `marvel.conf`.
4. Remove the entry for `/pls/htmldb` from the `dads.conf` file.

Installing and Configuring Oracle HTML DB on a Remote Oracle Database

You can use the `htmldbca` command-line tool to perform the following activities:

- Install and configure Oracle HTML DB onto a remote Oracle database.
- Upgrade an existing Oracle HTML DB in a remote Oracle database.
- Add languages to an existing Oracle HTML DB in a remote Oracle database.

Requirements for Running htmldbca

To use `htmldbca`, you must have the following requirements in place:

- **A local Oracle Database Companion CD installation that has HTML DB installed.** The `htmldbca` executable is in the `bin` directory in the same Oracle home as Oracle HTML DB.
- **A remote Oracle database.** This database can be on the same computer as the Oracle HTML DB home or on an Oracle database installation on a remote computer. You must have a valid connection to this remote Oracle database installation.

- **Connection privileges to the remote Oracle database.** You need to be able to connect as SYS using the SYSDBA role. `htmldbca` will prompt you for the password for user SYS.

See Also: *Oracle Database Net Services Administrator's Guide* for information on connecting to another Oracle database

Syntax for `htmldbca`

The syntax for `htmldbca` is as follows:

```
htmldbca [options]
```

where *options* are:

- `-oracle_home string`: Enter the location of the Oracle home where Oracle HTML DB is installed. If you do not specify this Oracle home, `htmldbca` tries to use the ORACLE_HOME environment variable setting. If ORACLE_HOME is not set or is unusable, and if you do not specify the `oracle_home` option, `htmldbca` prompts for the Oracle home. Required. For example:

```
htmldbca -oracle_home c:\oracle\product\10.2.0\db_2
```

- `-db_host string`: Host name of the remote Oracle Database. Required, but if you do not specify it, `htmldbca` prompts for it. For example:

```
htmldbca -db_host shobeen
```

- `-db_servicename string`: Oracle Database service name. Required, but if you do not specify it, `htmldbca` prompts for it. For example:

```
htmldbca -db_servicename welcome
```

- `sys_password` | `-sys_obfuscatedPassword string`: Remote password or obfuscated password for SYS. Required, but if you do not specify either of these parameters, `htmldbca` prompts for the `sys_password`. In that case, `sys_obfuscatedPassword` becomes optional. For example:

```
htmldbca -sys_password welcome
```

- `-htmlldb_password` | `-htmlldb_obfuscatedPassword string`: Oracle HTML DB password | obfuscated password. Password or obfuscated password for Oracle HTML DB. Required, and if you do not specify either of these passwords, `htmldbca` prompts for the `htmlldb_password`. (If you are upgrading from an earlier version of Oracle HTML DB, enter the password you had created for that version of the HTMLDB_PUBLIC_USER schema.) For example:

```
htmldbca -htmlldb_password htmlldb_welcome
```

After the installation, you can use this password to connect to Oracle HTML DB as the administrative 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, and for the FLOWS_010600 and FLOWS_FILES schemas.

If you want to obfuscate the password after installation, see ["Obfuscating Passwords in a New Oracle HTML DB Installation"](#) on page 4-12 for more information.

- `-ts_htmlldb string`: Specifies the name of the HTML DB tablespace to be created for the remote HTML DB. Required, but if you do not specify it, `htmldbca` prompts for it. For example:

```
htmldbca -ts_htmlodb sysaux
```

- `-ts_files` string: Oracle HTML DB Files tablespace. By default, `htmldbca` uses the `ts_htmlodb` value. Optional, but if you enter an invalid value, `htmldbca` prompts for a valid one. For example:

```
htmldbca -ts_files sysaux
```

- `-ts_temp` string: Oracle HTML DB Temporary tablespace. The default value is set to use `temp` tablespace. Optional, but if you enter an invalid value, `htmldbca` prompts for a valid one.

- `-load_lang` string [, string [, string [. . .]]]: Specifies one or more additional languages to install. Optional, but if you enter an invalid value, `htmldbca` prompts for a valid response. (In this case, you can only enter one language.) If you do not enter a value, English is selected. For example:

```
htmldbca -load_lang de, fr, it
```

Language choices are as follows:

- `de`: German
- `en`: English, which is the default. If the English version of Oracle HTML DB is already installed in the remote Oracle database, `htmldbca` displays a notification message and exits.
- `es`: Spanish
- `fr`: French
- `it`: Italian
- `ja`: Japanese
- `ko`: Korean
- `pt-br`: Brazilian Portuguese
- `zh-cn`: PRC Chinese
- `zh-tw`: Taiwan Chinese

Oracle Database Globalization Support Guide provides information about language support for Oracle Database.

- `-DAD_name` string: Creates a new Database Access Descriptor Name for Oracle HTML DB. The default value is `htmlodb`. `htmldbca` will update the `ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf\marvel.conf` file with the new DAD value. Optional, but if you enter an duplicate value, `htmldbca` prompts for a valid one. In order for the changes to take effect, you must restart Oracle HTTP Server, in which case you can use the `-restart` parameter, described in the next section. For example:

```
htmldbca -DAD_name my_htmlodb -restart
```

Alternatively, after you run `htmldbca`, you can enter the following command at a command prompt to restart Oracle HTTP Server:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl restartproc ias-component=HTTP_Server
```

Afterward, users can access this instance by entering a URL using the following syntax:

`http://host:port/pls/DAD_name`

For example:

`http://mycompany:7778/pls/my_html`

- `-restart`: Restarts Oracle HTTP Server after the configuration completes. Optional and will not be prompted. For example:
`htmldbca -restart`
- `-interactive on|off`: Turns interactive mode on or off. When interactive mode is on, `htmldbca` prompts for missing or incorrect parameter values. When off, no prompts appear; hence, you need to specify all the required prompt values at the command line when you run `htmldbca`. By default, `htmldbca` runs in interactive mode. Optional and will not be prompted. For example:
`htmldbca -interactive off`
- `-help`: Displays brief usage description for `htmldbca`. Optional and will not be prompted. For example:
`htmldbca -help`

Running htmldbca

To run `htmldbca`, open a Windows command prompt and either run `htmldba` by itself or run it using any combination of the options described in the previous section. For example:

`c:\> htmldbca`

Unless the `-interactive` mode is set to off, `htmldbca` will prompt you for any required information that you do not specify in the command line.

Postinstallation Tasks for Oracle Workflow Server

This section contains these topics:

- [Checking Initialization Parameter Values](#)
- [Compiling Invalid Objects](#)
- [Configuring Oracle Workflow HTML Help](#)
- [Completing Additional Set-up Tasks](#)

Checking Initialization Parameter Values

Verify that the initialization parameters listed in the following table are set to the values shown or higher, and if necessary, change those values:

Note: If a current value is higher than the required value, do not change the current value.

Parameter	Required Value
AQ_TM_PROCESSES	Greater than 1
JOB_QUEUE_PROCESSES	10 or greater

To check the values of these initialization parameters and change them if necessary:

1. Log in to the database as the SYS user:

```
c:\> sqlplus sys/SYS_password as sysdba
```

2. To determine the current value for all initialization parameters, enter the following command:

```
SQL> SHOW PARAMETER parameter_name
```

3. To alter the value of an initialization parameter, enter a command similar to the following:

```
SQL> ALTER SYSTEM SET parameter_name=value
```

4. If the database is not using a server parameter file, edit the value specified for the parameter in the initialization parameter file (*init_{sid}.ora*).

Compiling Invalid Objects

Log into the Oracle database and run the *utlrp.sql* script to compile any invalid objects in the SYS schema. For example:

```
c:\> sqlplus sys/SYS_password as sysdba
SQL> @C:\oracle\product\10.2.0\db_1\rdbms\admin\utlrp.sql
```

Configuring Oracle Workflow HTML Help

Oracle Workflow provides access to context-sensitive HTML help from the Help button on each of its Web pages. Before you can view the Oracle Workflow HTML help, you must extract the *doc* directory tree from the *ORACLE_BASE\ORACLE_HOME\wf\wfdoc.zip* file to your file system.

To extract the *wfdoc.zip* file:

1. Use an unzip utility to extract the *doc* directory tree from the zip file within the Workflow directory in your middle-tier Oracle home.

This extraction requires at least 5 MB of free disk space. After extracting the *doc* directory tree, you can optionally remove the *wfdoc.zip* zip file.

2. Click the **Help** button on any Oracle Workflow Web page to access the HTML help.

You also can access any HTML help file directly by appending its virtual path to your Web listener base URL. The path for the contents page of the Oracle Workflow help is:

```
http://hostname:portID/OA_DOC/lang/wf/toc.htm
```

3. Optionally, if you want to add custom help, you can replace the placeholder file in the *ORACLE_BASE\ORACLE_HOME\wf\doc\lang\wfcust* directory, *wfcust.htm*, with your own help material.

The HTML file that is the main entry point for your custom help must be named *wfcust.htm* and must contain an anchor named *contents*. Your custom help will be accessible through the **Custom Help** link on the contents page of the Oracle Workflow help, or you can access your custom help directly through the following path:

```
http://hostname:portID/OA_DOC/lang/wfcust/wfcust.htm
```

Completing Additional Set-up Tasks

After you complete the Oracle Workflow server and middle tier installation process, you must perform some additional steps to set up Oracle Workflow for your site.

See Also: "Setting Up Oracle Workflow" in Oracle Workflow Administrator's Guide for instructions on completing these tasks

Getting Started with the Oracle Database Companion CD Products

This chapter describes where to go now that you have installed the Oracle Database Companion CD products:

- [Checking the Installation Contents](#)
- [Getting Started with Oracle HTTP Server](#)
- [Getting Started with Oracle HTML DB](#)
- [Getting Started with Oracle Workflow](#)
- [Getting Started with Oracle Ultra Search](#)

Checking the Installation Contents

You can check the installation contents of your Oracle software by using Oracle Universal Installer:

1. From the **Start** menu, choose **Programs**, then **Oracle - HOME_NAME**, **Oracle Installation Products**, then **Universal Installer**.

You can access Oracle Universal Installer from any Oracle home.

2. When the Welcome window appears, click **Installed Products**.

The Inventory window appears, listing all of the Oracle homes on the system and the products installed in each Oracle home. To check the paths of the products, click the **Environment** tab.

Getting Started with Oracle HTTP Server

This section covers the following topics:

- [Starting, Stopping, or Restarting Oracle HTTP Server](#)
- [Logging into Oracle HTTP Server](#)

Starting, Stopping, or Restarting Oracle HTTP Server

To start, stop, or restart Oracle HTTP Server:

1. From the **Start** menu, choose **Programs**, then **Oracle - HOME_NAME**, then **Oracle HTTP Server**.
2. Select the appropriate option:

- **Start HTTP Server**
- **Stop HTTP Server**

Alternatively, you can open a command prompt and run the following commands:

- To start Oracle HTTP Server:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl startproc ias-component=HTTP_Server
```

- To restart Oracle HTTP Server:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl restartproc ias-component=HTTP_Server
```

- To stop Oracle HTTP Server:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl stopproc ias-component=HTTP_Server
```

Logging into Oracle HTTP Server

To log in to Oracle HTTP Server, in a browser, enter a URL using the following syntax:

```
http://server:port/
```

where:

- *server* is the computer where you have installed Oracle HTTP Server, for example, `mycomputer.us.mycompany.com`.
- *port* is the port number assigned to Oracle HTTP Server. In a default installation, this number is 7777. You can find information about your Oracle HTTP Server installation's port number from the `httpd.conf` file, located in `ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf`, by searching for `Port`.

You can also find the port number in the `portlist.ini` file, located in `ORACLE_BASE\ORACLE_HOME\install`. However, be aware that if you change a port number, it is not updated in the `portlist.ini` file, so you can only rely on this file immediately after installation.

After you have logged in, you can find Oracle HTTP Server product demonstrations and a listing of new features for this release. This link also provides access to the Oracle Technology Network.

Getting Started with Oracle HTML DB

This section covers the following topics:

- [Logging into Oracle HTML DB](#)
- [Set-up Tasks for Oracle HTML DB Administrators](#)

Logging into Oracle HTML DB

You open the Oracle HTML DB home page in a Web browser. To view or develop Oracle HTML DB applications, the Web browser must support JavaScript and the HTML 4.0 and CSS 1.0 standards.

See Also: ["Browser Requirements"](#) on page 2-3 for supported Web browsers

To log in to Oracle HTML DB Administration Services:

1. In a Web browser, navigate to the Oracle HTML DB Administration Services application:

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

where:

- *hostname* is the name of the computer where Oracle HTTP Server is installed.
- *port* is the port number assigned to Oracle HTTP Server. In a default installation, this number is 7777. You can find information about your Oracle HTTP Server installation's port number from the `httpd.conf` file, located in `ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf`, by searching for `Port`.

You can also find the port number in the `portlist.ini` file, located in `ORACLE_BASE\ORACLE_HOME\install`. However, be aware that if you change a port number, it is not updated in the `portlist.ini` file, so you can only rely on this file immediately after installation.

- *database_access_descriptor* is the database access descriptor (DAD) defined in the `mod_plsql` configuration file. The default value is `htmldb`.

See Also: `ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf\dads.readme` for more information on how database access descriptors work

For example:

`http://myserver.us.mycompany.com:7777/pls/htmldb/htmldb_admin`

The Login page appears.

2. In Username, enter `admin`.
3. In Password, enter the Oracle HTML DB administrator account password you specified when you installed Oracle HTML DB.
4. Click **Login**.

The Oracle HTML DB Administration Services page appears.

Set-up Tasks for Oracle HTML DB Administrators

If you are an Oracle HTML DB administrator, you need to:

- **Log in to Oracle HTML DB Administration Services.** Oracle HTML DB Administration Services is a separate application for managing an entire Oracle HTML DB instance.
- **Specify a provisioning mode.** In Oracle HTML DB Administration Services you need to determine how the process of creating (or provisioning) a workspace will work in your development environment.
- **Create a Workspace.** A workspace is a shared work area within the Oracle HTML DB development environment that has a unique ID and name. An Oracle HTML DB administrator can create a workspace manually or have users submit requests.
- **Log in to a Workspace.** Once you have created workspace in Oracle HTML DB Administration Services, you can return to the Oracle HTML DB Login page and log in to that workspace.

See Also: *Oracle HTML DB User's Guide* for more information about using, developing applications with, and administering Oracle HTML DB

Getting Started with Oracle Workflow

This section covers the following topics:

- [Logging into the Oracle Workflow Home Page](#)
- [Logging into Oracle Workflow Manager](#)
- [Set-up Tasks for Oracle Workflow Administrators](#)

Logging into the Oracle Workflow Home Page

You open the Oracle Workflow home page in a Web browser. You must be a valid user in the Workflow directory service. Depending on the settings you selected during the installation and configuration, the directory service is based on either Oracle Internet Directory or on the native database users.

See Also: ["Oracle Workflow Server Browser Requirements"](#) on page 2-5 for list of supported Web browsers

To access the Oracle Workflow home page, connect as a valid Oracle Workflow user to the following URL:

`http://hostname:port/pls/wf/wfa_html.home`

See Also: `ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\deploy_db_wf.ini` if you are not sure which server and port number to use

Logging into Oracle Workflow Manager

The Oracle Workflow server installation includes the Oracle Workflow Manager component of Oracle Enterprise Manager. This component provides administrative and management tools for Oracle Workflow. When you install Oracle Workflow into your Oracle Database home, Oracle Workflow Configuration Assistant configures Oracle Workflow Manager. It creates two Oracle Application Server Containers for Java 2 Enterprise Edition (OC4J) instances:

- **OC4J_Workflow_Component_Container:** Workflow Configuration Assistant deploys two applications within this instance. One application runs the agent listener service components and the other runs notification mailer service components.
- **OC4J_Workflow_Management_Container:** Workflow Configuration Assistant deploys one application within this instance to implement the Oracle Workflow Manager user interface.

Starting, Stopping, or Restarting the OC4J Instances

To start these instances, run the following scripts:

```
ORACLE_BASE\ORACLE_HOME\wf\admin\wfmgrstart.bat
ORACLE_BASE\ORACLE_HOME\wf\admin\wfsvcstart.bat
```

You can stop and restart the OC4J instances in which Oracle Workflow Manager is deployed. To stop the instances, run the following scripts:

```
ORACLE_BASE\ORACLE_HOME\wf\admin\wfmgrstop.bat
ORACLE_BASE\ORACLE_HOME\wf\admin\wfsvcstop.bat
```

Accessing the Oracle Workflow Manager User Instance

To access the Oracle Workflow Manager user interface:

1. Log in to Oracle Enterprise Manager Database Control:

```
http://server:port/em
```

For example:

```
http://myserver.mycompany:5500/em
```

2. In the Home page, navigate to the **Related Links** section.
3. In the Related Links section, select **Workflow Manager**.
4. Log in using your Oracle Workflow Manager database username (typically owf_mgr) and password.

See Also:

- *Oracle Workflow Administrator's Guide*
- *Oracle Workflow Developer's Guide*
- *Oracle Workflow User's Guide*
- *Oracle Workflow API Reference*

Set-up Tasks for Oracle Workflow Administrators

If you are an Oracle Workflow administrator, complete the tasks described in the "Setting Up Oracle Workflow" chapter of the *Oracle Workflow Administrator's Guide*.

See Also: *Oracle Workflow Administrator's Guide*

Getting Started with Oracle Ultra Search

After you install Oracle Ultra Search, Oracle Universal Installer creates the following Oracle Ultra Search-specific administrative accounts:

- WK_TEST: The default Ultra Search instance schema.
- WKPROXY: The Ultra Search proxy user.
- WKSYS: Used for storing Ultra Search system dictionaries and PL/SQL packages.

See Also: *Oracle Ultra Search Administrator's Guide*

Installing Java Access Bridge

This appendix describes how to install Java Access Bridge, which enables use of a screen reader with Oracle components:

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

Introduction

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

Your Oracle Database, Oracle Database Client, and Oracle Database Companion CD installation media contain the Java Runtime Environment (JRE) 1.4.2, which Oracle Universal Installer uses during installation. The JRE enables use of Java Access Bridge during installation. To install and configure Java Access Bridge after you install Oracle components, see "[Setup for Oracle Installed Components](#)" on page A-1.

Setup for JRE 1.4.2

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

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

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

Setup for Oracle Installed Components

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

- [Installing Java Access Bridge](#)
- [Configuring Oracle Components to Use Java Access Bridge](#)

Installing Java Access Bridge

To install Java Access Bridge, follow these steps:

1. On the Oracle installation media, go to the `AccessBridge` directory.

2. Select the `accessbridge-1_0_4.zip` file and extract its files to the system where you plan to install Access Bridge. For example:

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

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

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

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

Table A-1 Copy Files to JRE Directory

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

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

```
DRIVE_LETTER:\AccessBridge-1.0.4\doc
```

Configuring Oracle Components to Use Java Access Bridge

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

Follow these steps:

1. From the **Start** menu, select **Settings**, then **Control Panel**, then **System** to display the Windows **System** Control Panel.
2. Select the **Advanced** tab.
3. Click the **Environment Variables** button.
4. Click the **New** button under the System Variable list. The New System Variable dialog appears.

5. In the **Variable Name** field, enter `ORACLE_OEM_CLASSPATH`.
6. In the **Variable Value** field, enter the full path to `jaccess.jar` and `access-bridge.jar`.

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

```
ORACLE_BASE\ORACLE_HOME\jre\1.4.2\lib\ext\jaccess.jar;ORACLE_BASE\ORACLE_  
HOME\jre\1.4.2\lib\ext\access-bridge.jar
```

7. Click **OK**.

Installing Oracle Database Companion CD Using Response Files

This appendix covers the following topics:

- [How Response Files Work](#)
- [Preparing a Response File](#)
- [Running Oracle Universal Installer Using the Response File](#)
- [Running Oracle Workflow Configuration Assistant in Noninteractive Mode](#)

How Response Files Work

You can automate the installation and configuration of Oracle software, either fully or partially, by specifying a response file when you start Oracle Universal Installer. Oracle Universal Installer uses the values in the response file to provide answers to some or all of the Oracle Universal Installer prompts.

Typically, Oracle Universal Installer runs in interactive mode, which means that it prompts you to provide information in graphical user interface (GUI) screens. When you use response files to provide this information, you run Oracle Universal Installer at a command prompt using either of the following modes:

- **Silent mode:** Oracle Universal Installer does not display any screens. Instead it displays progress information in the command window where you started it. To use silent mode, you run `setup.exe` with the `-silent` parameter and include a response file, which contains responses to the Oracle Universal Installer prompts.
- **Noninteractive (or suppressed) mode:** Oracle Universal Installer only displays screens for which you did not supply information in the response file. You can use variables in the response file or command-line prompts to suppress other Oracle Universal Installer screens, such as Welcome and Summary, that do not prompt for information. To use noninteractive mode, run `setup.exe` without the `-silent` parameter, but include the response file or any other parameters that apply.

You define the settings for a silent or noninteractive installation by entering values for the variables listed in the response file. For instance, to specify the Oracle home name, you would supply the appropriate value for the `ORACLE_HOME_NAME` variable, as in the following example:

```
ORACLE_HOME_NAME="OraDBHome1"
```

Another way of specifying the response file's variable settings is to pass them as command line arguments when you run Oracle Universal Installer. For example:

```
SYSTEM_DRIVE:\setup.exe_location> setup -silent "ORACLE_HOME_NAME=OraDBHome1" ...
```

This method is particularly useful if you do not want to embed sensitive information, such as passwords, in the response file. For example:

```
SYSTEM_DRIVE:\setup.exe_location> setup -silent "s_sysPwdFresh=binks342" ...
```

Ensure that you enclose the variable and its setting in quotes.

See Also: *Oracle Universal Installer and OPatch User's Guide* for more information about response file formats.

Reasons for Using Silent Mode or Noninteractive Mode

Table B–1 describes several reasons why you might want to run Oracle Universal Installer in silent mode or noninteractive mode.

Table B–1 Reasons for Using Silent Mode or Noninteractive Mode	
Mode	Uses
Silent	<p>Use silent mode if you want to:</p> <ul style="list-style-type: none">■ Complete an unattended installation■ Complete several similar installations on multiple systems without user interaction <p>Oracle Universal Installer displays progress information in the window that you used to start it, but it does not display the Oracle Universal Installer screens.</p>
Noninteractive	<p>Use noninteractive mode if you want to complete similar Oracle software installations on more than one system, providing default answers to some, but not all, of Oracle Universal Installer prompts.</p> <p>If you do not specify information required for a particular Installer screen in the response file, Oracle Universal Installer displays that screen. It suppresses screens for which you have provided all of the required information.</p>

General Procedure for Using Response Files

You follow these general steps to install the Oracle Database Companion CD products using response files:

1. Customize or create a response file for the installation settings that you need.
You can create the response file by using one of the following methods:
 - Modify one of the sample response files that is provided with the installation.
 - Run Oracle Universal Installer at a command prompt using record mode.

"Preparing a Response File" on page B-2 explains how to customize or create the response file.
2. Run Oracle Universal Installer from a command prompt, specifying the response file, using either silent or noninteractive mode.

"Running Oracle Universal Installer Using the Response File" on page B-5 explains how to run Oracle Universal Installer with a response file.

Preparing a Response File

This section describes the methods that you can use to prepare a response file for use during silent-mode or noninteractive-mode installations:

- [Editing a Response File Template](#)
- [Recording a Response File](#)

Editing a Response File Template

Oracle provides response file templates for each product and installation type, and for each configuration tool. These files are located in the `companion\response` directory on the Oracle Database installation media.

Creating a response file using a response file template is most useful for the Enterprise Edition or Standard Edition installation types.

[Table B-2](#) lists the available sample response files:

Table B-2 Response Files

Response File Name	This File Silently Runs The...
<code>companionCD.db.rsp</code>	Oracle Database Products installation type
<code>companionCD.midtier.rsp</code>	Oracle Database Companion CD installation type
<code>htmldb.HTMLDBONLY</code>	Oracle HTML DB-only installation of Oracle HTML DB installation type
<code>htmldb.HTMLDBwithOHS.rsp</code>	Oracle HTML DB and Oracle HTTP Server installation of Oracle HTML DB installation type

To copy and modify a response file:

1. Copy the appropriate response files from the `companion\Response` directory on the Oracle Database media to your hard drive.
2. Modify the response files with a text file editor.

In addition to editing settings specific to the Oracle Database Companion CD products installation, check that the `FROM_LOCATION` path is correct and points to the `products.xml` file in the `stage` directory in the installation media. You may want to set this variable to point to an absolute path, for example:

```
FROM_LOCATION="\\myserver\companion\stage\products.xml"
```

Remember that you can specify sensitive information, such as passwords, at the command line rather than within the response file. ["How Response Files Work"](#) on page B-1 explains this method.

See Also: *Oracle Universal Installer and OPatch User's Guide* for detailed information on creating response files. In an installed Oracle Database, select **Start**, then **Programs**, then **Oracle - HOME_NAME**, then **Oracle Installation Products**, then **Universal Installer Concepts Guide**. It appears in HTML format.

3. Run the response file by following the instructions in the ["Running Oracle Universal Installer Using the Response File"](#) section on page B-5.

Recording a Response File

You can create a response file by running Oracle Universal Installer in interactive mode using record mode. This method is most useful for custom or software-only installations.

Recording the response file generates the response file immediately after you complete the Summary window, so you do not need to install the Oracle Database Companion CD products to create the response file. After you create the response file in this manner, you can customize it to meet your needs.

If you want to use record mode during a noninteractive mode installation, Oracle Universal Installer records the variable values that were specified in the original source response file into the new response file.

Note: You cannot use record mode to create a response file based on the Basic installation type.

To record a response file:

1. Ensure that the computer on which you are creating the response file has met the requirements in [Chapter 2](#).
2. At the command prompt, use the `cd` command to change to the directory that contains the Oracle Universal Installer `setup.exe` executable.

On the installation DVD, `setup.exe` is located in the `db` directory. Alternatively, navigate to the directory where you downloaded or copied the installation files.

3. Enter the following command:

```
SYSTEM_DRIVE:\setup.exe_location> setup -record -destinationFile response_file_name
```

Replace `response_file_name` with the complete path name for the new response file. For example:

```
SYSTEM_DRIVE:\setup.exe_location> setup -record -destinationFile c:\response_files\install_oracle10_2.rsp
```

4. After Oracle Universal Installer starts, enter the installation settings, which will be recorded in the response file.
5. When the Summary window appears, do one of the following:
 - Click **Install** to create the response file and continue with the installation.
 - Click **Cancel** if you only want to create the response file but not continue with the installation. The installation will stop, but the settings you have entered will be recorded in the response file.

Afterwards, Oracle Universal Installer saves your new response file using the path and file name you specified on the command line.

6. Edit the new response file to have any environment-specific changes for the computer on which you will run it.

In addition to editing settings specific to the Oracle Database Companion CD products installation, check that the `FROM_LOCATION` path is correct and points to the `products.xml` file in the `stage` directory in the installation media. You may want to set this variable to point to an absolute path, for example:

```
FROM_LOCATION="\\myserver\companion\response\stage\products.xml"
```

Remember that you can specify sensitive information, such as passwords, at the command line rather than within the response file. "[How Response Files Work](#)" on page B-1 explains this method.

7. Run the response file by following the instructions in the ["Running Oracle Universal Installer Using the Response File"](#) section, next.

Running Oracle Universal Installer Using the Response File

At this stage, you are ready to run Oracle Universal Installer at the command line, specifying the response file you created, to perform the installation. The Oracle Universal Installer executable, `setup.exe`, provides several options. For help information about the full set of these options, run `setup.exe` with the `-help` option, for example:

```
SYSTEM_DRIVE:\setup.exe_location> setup -help
```

A new command window appears, with the "Preparing to launch..." message. In a moment, the help information appears in that window.

To run Oracle Universal Installer and specify a response file:

1. Place the response file on the computer where you want to install the Oracle Database Companion CD products.
2. At a command prompt, run Oracle Universal Installer with the appropriate response file. For example:

```
SYSTEM_DRIVE:\setup.exe_location> setup [-silent] "variable=setting"
[-nowelcome] [-noconfig] [-nowait] -responseFile filename
```

where:

- *filename*: Identifies the full path of the response file.
- `-silent`: Runs Oracle Universal Installer in silent mode and suppresses the Welcome window. When you use `-silent`, then the `-nowelcome` option is not necessary.
- `"variable=setting"` refers to a variable within the response file that you may prefer to run at the command line rather than set in the response file. Enclose the variable and its setting in quotes.
- `-nowelcome`: Suppresses the Welcome window that appears during installation.
- `-noconfig`: Suppresses running the configuration assistants during installation, performing a software-only installation instead.
- `-nowait`: Closes the console window when the silent installation completes.

See Also:

- "Installing Oracle Products" in *Oracle Universal Installer and OPatch User's Guide* for more information about installing using response files
- "Deinstalling Products" in *Oracle Universal Installer and OPatch User's Guide* for more information about deinstalling using response files

Running Oracle Workflow Configuration Assistant in Noninteractive Mode

You can run Workflow Configuration Assistant in noninteractive mode by entering your configuration parameter settings directly in the Workflow Configuration

Assistant `wfinstall.bat` script. You must specify all required and conditionally required parameters for the features that you want to use.

To run Oracle Workflow Configuration Assistant in noninteractive mode:

1. Go to the `ORACLE_BASE\ORACLE_HOME\wf\install` directory, which is the default location of the `wfinstall.bat` script.
2. Open the `wfinstall.bat` script in a text editor and locate a line similar to the following:

```
... repository.jar" WorkflowCA /wkdir workflow_directory /orahome
oracle_home
```

For example:

```
... repository.jar" WorkflowCA /wkdir /d1/iasinstall/m21pw1/wf
/orahome /d1/iasinstall/m21pw1
```

3. Edit the script to append your additional parameters after the `/wkdir`, `/orahome`, and `/ospath` parameters. Enter the parameters all on the same line; otherwise, the script will not run correctly.

```
... repository.jar" WorkflowCA /wkdir workflow_directory /orahome
oracle_home /wfacct workflow_schema /instype installation_type
/tnsconndesc connection_string
```

where:

- `/wkdir`: The Oracle Workflow directory within your Oracle Home directory. The default directory is `ORACLE_BASE\ORACLE_HOME\wf`.
- `/orahome`: Your Oracle home directory location, for example, `C:\oracle\product\10.2\Db_1`.
- `/wintz`: The time zone you are using, for example, "Pacific Daylight Time". (Enclose the time zone in quotes.)
- `/systemroot`: The location of the system root files for your operating system, for example, `C:\WINDOWS`.
- `/wfacct`: Workflow Account.
- `/instype`: Specify one of the following installation options:
 - `server` - Configures Workflow Server only; available in both GUI mode and command-line mode
 - `add_language` - Sets the language or languages used; available in both GUI mode and command-line mode
- `/tnsconndesc`: Connection string to the Oracle database

Note: If a parameter can be entered in both user interface mode and noninteractive mode, this section lists the name of the corresponding field in the Oracle Workflow Configuration Assistant window alongside the noninteractive mode parameter name.

4. If you specified `add_language` for the `/instype` parameter, enter the `/nlsopt` parameter with the languages you want to add.

Enclose the languages in quotes. For example, to specify Arabic, German, and Danish, enter the following value:

"ar d dk"

To use all available languages, set `nlsop` to `all`. Oracle Workflow server supports all languages that Oracle Database supports.

See Also: "Locale Data" in *Oracle Database Globalization Support Guide* for a list of standard language abbreviations.

5. If you specified server for the `/instype` parameter, enter the following parameters if you want to integrate Oracle Internet Directory as your Oracle Workflow directory service:

- `/ldaphost` - LDAP host name
- `/ldapport` - LDAP Non-SSL port
- `/ldapuser` - LDAP admin username
- `/ldaplogbase` - Changelog DN
- `/ldapuserbase` - User base (for example, `/ldapuserbase cn=Users,dc=us,dc=oracle,dc=com`)

In these cases, Oracle Workflow Configuration Assistant configures your Oracle Internet Directory integration using the existing LDAP parameters defined in your database. However, if you specify new LDAP parameters here, the Oracle Workflow Configuration Assistant will update your settings.

6. If you specified server or all for the `/instype` parameter, enter these parameters if you want to use Oracle Workflow Notification Mailer:

- `/mailserver` - Inbound e-mail account: server name
- `/mailuser` - Inbound e-mail account: username
- `/mailhost` - Outbound e-mail account: server name
- `/htmlagent` - Mail generation: HTML agent
- `/mailreply` - Message generation: reply-to address
- `/processfolder` - E-mail processing: name of processed folder
- `/discardfolder` - E-mail processing: name of discard folder

7. If you specified server for the `/instype` parameter, and if you want to change the tablespace assigned to the Oracle Workflow database account, set the `/tablespace` parameter to a valid existing tablespace name.

8. To control how Oracle Workflow Configuration Assistant writes log information, set these parameters:

- `/debug` - Specify `true` if you want Oracle Workflow Configuration Assistant to write debug information to the `workflow.log` file. By default, Oracle Workflow does not log this information.
- `/logdir` - Specify the path to the directory where you want Oracle Workflow Configuration Assistant to write the `workflow.log` file, or specify `nolog` if you do not want to create a log file. By default, the log file is written to the `ORACLE_BASE\ORACLE_HOME\wf\install` directory.

9. Save your changes and exit the `wfinstall.bat` script.

To run the `wfinstall.bat` script, enter the following command:

```
ORACLE_BASE\ORACLE_HOME\wf\install\wfinstall.bat
```

If the `wfinstall.bat` script includes the minimum parameters, all entered as a single line of text in the file, it performs the configuration in noninteractive mode, without displaying the Oracle Workflow Assistant window. However, as a security precaution, the script may prompt you to enter the following passwords at runtime, depending on the installation options that your site uses:

- The password for your Oracle Workflow database account
- Your `SYS` password
- The password for the LDAP user account, if you enter LDAP parameters
- The password for the notification mailer e-mail account, if you enter mailer parameters

Configuring Oracle Database Companion CD Globalization Support

This appendix describes the following Globalization Support topics:

- [Installing and Using Oracle Components in Different Languages](#)
- [Configuring Locale and Character Sets with the NLS_LANG Parameter](#)

Installing and Using Oracle Components in Different Languages

This section describes the following features:

- [Installing Oracle HTML DB in Other Languages](#)
- [Installing Oracle Workflow in Other Languages](#)
- [Running Oracle Universal Installer in Different Languages](#)
- [Using Oracle Components in Different Languages](#)

Installing Oracle HTML DB in Other Languages

The Oracle HTML DB interface is translated into German, Spanish, French, Italian, Japanese, Korean, Brazilian Portuguese, Simplified Chinese, and Traditional Chinese. A single instance of Oracle HTML DB can be installed with one or more of these translated versions. At runtime, each user's Web browser language settings determine the specific language version.

The translated version of Oracle HTML DB should be loaded into a database that has a character set that can support the specific language. If you attempt to install a translated version of Oracle HTML DB into a database that does support the character encoding of the language, the installation may fail or the translated Oracle HTML DB instance may appear corrupt when run. The database character set AL32UTF8 supports all the translated versions of Oracle HTML DB.

You can manually install translated versions of Oracle HTML DB using SQL*Plus. The installation files are encoded in UTF8.

Note: Regardless of the target database character set, to install a translated version of Oracle HTML DB you must set the character set value of the NLS_LANG environment variable to AL32UTF8 prior to starting SQL*Plus.

Caution: AL32UTF8 is the Oracle Database character set that is appropriate for XMLType data. It is equivalent to the IANA registered standard UTF-8 encoding, which supports all valid XML characters.

Do not confuse Oracle Database database character set UTF8 (no hyphen) with database character set AL32UTF8 or with character encoding UTF-8. Database character set UTF8 has been superseded by AL32UTF8. Do not use UTF8 for XML data. UTF8 supports only Unicode version 3.1 and earlier; it does not support all valid XML characters. AL32UTF8 has no such limitation.

Using database character set UTF8 for XML data could potentially cause a fatal error or affect security negatively. If a character that is not supported by the database character set appears in an input-document element name, a replacement character (usually "?") is substituted for it. This will terminate parsing and raise an exception.

The following examples illustrates valid NLS_LANG settings for loading Oracle HTML DB translations:

```
American_America.AL32UTF8
Japanese_Japan.AL32UTF8
```

To install a translated version of Oracle HTML DB:

1. Set the NLS_LANG environment variable, making sure that the character set is AL32UTF8. For example:

```
c:\> set NLS_LANG=American_America.AL32UTF8
```

2. Start SQL*Plus and connect to the target database as SYS:

```
c:\> sqlplus sys/SYS_password as sysdba
```

3. Execute the following statement:

```
SQL> ALTER SESSION SET CURRENT_SCHEMA = FLOWS_010600;
```

4. Execute the appropriate language specific script. For example:

```
SQL> @c:\oracle\product\10.2.0\db_1\htmldb\builder\de\load_de.sql
```

The installation scripts are located in subdirectories identified by a language code in the unzipped distribution /htmldb/builder. For example, the German version is located in /htmldb/builder/de and the Japanese version is located in /htmldb/builder/ja. Within each of these directories, there is a language loading script identified by the language code (for example, load_de.sql or load_ja.sql).

See Also: ["Installing and Configuring Oracle HTML DB on a Remote Oracle Database"](#) on page 4-12 if you need to add languages to an existing Oracle HTML DB on a remote Oracle database

Installing Oracle Workflow in Other Languages

Use the **Add Language** option in Oracle Workflow Configuration Assistant to install Oracle Workflow in another language.

See Also: ["Preparing Oracle Workflow Server for the Oracle Workflow Middle Tier Installation"](#) on page 3-10 for instructions on starting Oracle Workflow Configuration Assistant

Running Oracle Universal Installer in Different Languages

Oracle Universal Installer runs by default in the selected language of your operating system. You can run Oracle Universal Installer in the following additional languages:

- Brazilian Portuguese
- German
- Japanese
- Simplified Chinese
- Traditional Chinese
- French
- Italian
- Korean
- Spanish

To run Oracle Universal Installer in a different language:

1. Change the language in which your operating system is running. For example, on Windows 2000:
 - a. From the **Start** menu, select **Settings**, then **Control Panel**, then **Regional Options**.
 - b. In the drop-down list, select a language from the preceding table list and choose **OK**.
2. Run Oracle Universal Installer by following the instructions in the *Oracle Database Installation Guide for Microsoft Windows (32-Bit)*.

Note: The selected language is assigned to the NLS_LANG registry parameter.

Using Oracle Components in Different Languages

You can select other languages in which to use Oracle components (such as Oracle Net Configuration Assistant, and Database Configuration Assistant). Note that this does *not* change the language in which Oracle Universal Installer is run. For the Oracle component to run in the selected language, it must be the same as the language set for your operating system. You can change your operating system language in the Regional Settings window from the Control Panel.

To use components in different languages:

1. Start Oracle Universal Installer:
 - **From the installation media:** From the installation media, navigate to the companion directory and double-click `setup.exe`.
 - **From an installed Oracle Database Companion CD:** From the **Start** menu, select **Programs**, then **Oracle - HOME_NAME**, then **Oracle Installation Products**, then **Universal Installer**.

2. From the Select Installation Type window, select the **Product Languages** button.
The Language Selection window appears.
3. Select a language in which to use Oracle components from the Available Languages field.
4. Use the > arrow to move the language to the Selected Languages field and click **OK**.
5. Select appropriate products for installation and click **Next**.

After installation is complete, the dialog box wording, messages, and online help for the installed components display in the language you selected.

Configuring Locale and Character Sets with the NLS_LANG Parameter

Oracle provides Globalization Support that enables users to interact with a database in their preferred locale and character set settings. The NLS_LANG parameter specifies locale behavior for Oracle software. It sets the language and territory used by the client application and the database. It also sets the character set for entering and displaying data by a client program, such as SQL*Plus.

The NLS_LANG parameter is stored in the registry under the HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOMEID\NLS_LANG subkey, where *ID* is the unique number identifying the Oracle home. This parameter uses the following format:

NLS_LANG = *LANGUAGE_TERRITORY.CHARACTER_SET*

where:

Parameter	Description
<i>LANGUAGE</i>	Specifies the language and conventions for displaying messages, day name, and month name.
<i>TERRITORY</i>	Specifies the territory and conventions for calculating week and day numbers.
<i>CHARACTER_SET</i>	Specifies the encoding of the database client, which is the character set for data entered or displayed by a client program.

The following table lists some of the values for the NLS_LANG parameter:

Operating System Locale	NLS_LANG Values
French (France)	FRENCH_FRANCE.WE8ISO8859P15
	FRENCH_FRANCE.WE8ISO8859P1
	FRENCH_FRANCE.WE8MSWIN1252
	FRENCH_FRANCE.AL32UTF8
Japanese (Japan)	JAPANESE_JAPAN.JA16EUC
	JAPANESE_JAPAN.JA16SJIS
	JAPANESE_JAPAN.AL32UTF8

See Also:

- *Oracle Database Installation Guide for Microsoft Windows* for more information about how NLS_LANG works in a Windows installation of Oracle Database
- *Oracle Database Platform Guide for Microsoft Windows* for more information about the subkey locations for multiple Oracle homes
- *Oracle Database Globalization Support Guide* for information about the NLS_LANG parameter and Globalization Support initialization parameters
- The operating system documentation on how to determine the operating system locale environment setting

Managing Oracle Companion CD Port Numbers

This appendix lists the default port numbers and describes how to change the assigned port after installation:

- [About Managing Ports](#)
- [Viewing Port Numbers and Access URLs](#)
- [Port Numbers and Protocols of Oracle Components](#)
- [Changing the Oracle HTTP Server Port](#)
- [Changing the Oracle Workflow Container Ports](#)
- [Changing the Oracle Ultra Search Ports](#)

About Managing Ports

During installation, Oracle Universal Installer assigns port numbers to components from a set of default port numbers. Many Oracle Database components and services use ports. As an administrator, it is important to know the port numbers used by these services, and to make sure that the same port number is not used by two services on your host.

Most port numbers are assigned during installation. Every component and service has an allotted port range, which is the set of port numbers Oracle Database attempts to use when assigning a port. Oracle Database starts with the lowest number in the range and performs the following checks:

- Is the port used by another Oracle Database installation on the host?
The installation may be up or down at the time; Oracle Database can still detect if the port is used.
- Is the port used by a process that is currently running?
This could be any process on the host, even a non-Oracle Database process.

If the answer to any of the preceding questions is yes, Oracle Database moves to the next highest port in the allotted port range and continues checking until it finds a free port.

Viewing Port Numbers and Access URLs

In most cases, the Oracle Database component's port number is listed in the tool used to configure the port. In addition, ports for some Oracle Database applications are

listed in the `portlist.ini` file. This file is located in `ORACLE_BASE\ORACLE_HOME\install`.

If you change a port number, it is not updated in the `portlist.ini` file, so you can only rely on this file immediately after installation. To find or change a port number, use the methods described in this appendix.

Port Numbers and Protocols of Oracle Components

The following table lists the port numbers and protocols used by components that are configured during the installation. By default, the first port in the range is assigned to the component, if it is available.

Table D–1 Ports Used in Oracle Components

Component and Description	Default Port Number	Port Range	Protocol
Oracle HTTP Server Allows Oracle applications, such as Oracle HTML DB, to communicate to the Web server through this port. It is configured during installation. "Changing the Oracle HTTP Server Port" on page D-3 explains how to modify this port.	7777	7777–7877	HTTP
Oracle Workflow Component Container HTTP port for Oracle Workflow. It is configured automatically during installation. "Changing the Oracle Workflow Container Ports" on page D-3 explains how to change its ports.	6010	6010–6020	TCP/HTTP
Oracle Workflow Component Container JMS port for Oracle Workflow. It is configured automatically during installation. "Changing the Oracle Workflow Container Ports" on page D-3 explains how to change its ports.	6030	6030–6040	TCP
Oracle Workflow Component Container RMI port for Oracle Workflow. It is configured automatically during installation. "Changing the Oracle Workflow Container Ports" on page D-3 explains how to change its ports.	6110	6050–6060	TCP
Oracle Workflow Management Container HTTP port for Oracle Workflow Management. It is configured automatically during installation. "Changing the Oracle Workflow Container Ports" on page D-3 explains how to change its ports.	6070	6070–6080	TCP/HTTP
Oracle Workflow Management Container JMS port for Oracle Workflow Management. It is configured automatically during installation. "Changing the Oracle Workflow Container Ports" on page D-3 explains how to change its ports.	6090	6090–6100	TCP
Oracle Workflow Management Container RMI port for Oracle Workflow Management. It is configured automatically during installation. "Changing the Oracle Workflow Container Ports" on page D-3 explains how to change its ports.	6110	6110–6120	TCP

Table D–1 (Cont.) Ports Used in Oracle Components

Component and Description	Default Port Number	Port Range	Protocol
Oracle Ultra Search HTTP port for Oracle Ultra Search. Its port number is assigned automatically when you install Oracle Ultra Search, by using the Custom installation type. "Changing the Oracle Ultra Search Ports" on page D-4 explains how to change its port number.	5620	5620–5639	TCP/HTTP
Oracle Ultra Search RMI port for Oracle Ultra Search. Its port number is assigned automatically when you install Oracle Ultra Search, by using the Custom installation type. "Changing the Oracle Ultra Search Ports" on page D-4 explains how to change its port number.	5640	5640–5659	TCP
Oracle Ultra Search JMS port for Oracle Ultra Search. Its port number is assigned automatically when you install Oracle Ultra Search, by using the Custom installation type. "Changing the Oracle Ultra Search Ports" on page D-4 explains how to change its port number.	5660	5660–5679	TCP

Changing the Oracle HTTP Server Port

To change the Oracle HTTP Server port:

1. In the Oracle HTTP Server home, modify the following settings in the `ORACLE_BASE\ORACLE_HOME\Apache\Apache\conf\httpd.conf` file:

```
Port port
Listen listener
```

2. Restart Oracle HTTP Server:

```
ORACLE_BASE\ORACLE_HOME\opmn\bin\opmnctl restartproc ias-component=HTTP_Server
```

See Also: ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1

Changing the Oracle Workflow Container Ports

The following sections explain how to change the HTTP, RMI, and JMS ports for the Oracle Workflow Component Containers and Management Containers.

Changing the HTTP Port

To change the HTTP port, edit the following files:

- Oracle Workflow Component Container: `ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_Workflow_Component_Container\config\http-web-site.xml`

Modify the port attribute of the `web-site` element:

```
<web-site port="6001" ...>
```

- Oracle Workflow Management Container: `ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_Workflow_Management_Container\config\http-web-site.xml`

Modify the port attribute of the web-site element:

```
<web-site port="6061" ...>
```

Changing the RMI Port

To change the RMI port for Oracle Workflow Component Container, modify the port attribute of the rmi-server element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_Workflow_Component_Container\config\rmi.xml* file:

```
<rmi-server port="6041">
```

For Oracle Workflow Management Container, modify the port attribute of the rmi-server element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_Workflow_Management_Container\config\rmi.xml* file:

```
<rmi-server port="6101">
```

Changing the JMS Port

To change the JMS port for Oracle Workflow Component Container, modify the port attribute of the jms-server element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_Workflow_Management_Container\config\jms.xml* file:

```
<jms-server port="6021">
```

For Oracle Workflow Management Container, modify the port attribute of the jms-server element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_Workflow_Management_Container\config\jms.xml* file:

```
<jms-server port="6080">
```

Changing the Oracle Ultra Search Ports

The following sections describe how to change the Oracle Ultra Search ports.

Changing the HTTP Port

To change the HTTP port, modify the port attribute of the web-site element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_SEARCH\config\http-web-site.xml* file:

```
<web-site port="5620"...>
```

Changing the RMI Port

To change the RMI port, modify the port attribute of the rmi-server element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_SEARCH\config\rmi.xml* file:

```
<rmi-server port="5640"...>
```

Changing the JMS Port

To change the JMS port, modify the port attribute of the jms-server element in the *ORACLE_BASE\ORACLE_HOME\oc4j\j2ee\OC4J_SEARCH\config\jms.xml* file:

```
<jms-server port="5660"...>
```

Troubleshooting the Oracle Database Companion CD Installation

This appendix contains the following information on troubleshooting:

- [Verifying Requirements](#)
- [Reviewing a Log of an Installation Session](#)
- [Cleaning Up After a Failed Installation](#)
- [Silent or Noninteractive Installation Response File Error Handling](#)
- [Images Displaying Incorrectly in Oracle HTML DB](#)
- [Oracle HTML DB Online Help Not Working](#)

Verifying Requirements

Before you try any of the troubleshooting steps in this appendix, do the following:

- Check [Chapter 2, "Oracle Database Companion CD Requirements"](#) to make sure that the system meets the requirements and that you have completed all of the preinstallation tasks.
- Read the release notes for the product on your platform before installing it. The release notes are available on the Oracle Database installation media. You can find the latest version of the release notes on the Oracle Technology Network Web site:

<http://www.oracle.com/technology/index.html>

Reviewing a Log of an Installation Session

This section covers the following topics:

- [Reviewing the Log of an Oracle Companion CD Installation Session](#)
- [Reviewing the Log of an Oracle HTML DB Installation Session](#)

Reviewing the Log of an Oracle Companion CD Installation Session

Oracle Universal Installer creates the `DRIVE_LETTER:\ORACLE_BASE\ORACLE_HOME\Inventory\logs` directory the first time it runs to record an inventory of products that it installs on your system as well as other installation information.

The log file is named `installActionsdate_time.log`, where `date_time` is the date and time of the installation. For example, `installActions2004-055-14_09-00-56-am.log`.

You can also view a list of installed components by clicking **Installed Products** on any window of Oracle Universal Installer.

Note: Do not delete or manually alter the Inventory directory or its contents. Doing so can prevent Oracle Universal Installer from locating products that you install on your system.

The `installActionsdate_time.log` file contains a log of actions executed during the installation process. This file also records any link errors during installation. Do not delete or alter the `installActionsdate_time.log` file.

Reviewing the Log of an Oracle HTML DB Installation Session

After you install Oracle HTML DB, Oracle Universal Installer creates a log file in the `htmldb` directory using the naming convention `installYYYY-MM-DD_HH24-MI-SS.log`. In a successful installation, the log file contains the following text:

```
Thank you for installing Oracle HTML DB.  
Oracle HTML DB is installed in the FLOWS_010600 schema.
```

If the log file contains a few errors, it does not necessarily mean that your installation failed. Acceptable errors are noted as such in the log file.

Cleaning Up After a Failed Installation

Stop the Oracle HTTP Server as described in the ["Starting, Stopping, or Restarting Oracle HTTP Server"](#) on page 5-1.

Proceed to the following sections to complete the process:

- [Cleaning Up After a Failed Oracle Companion CD Installation](#)
- [Cleaning Up After a Failed Oracle HTML DB Installation](#)

Cleaning Up After a Failed Oracle Companion CD Installation

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

1. Insert Oracle Database installation media and navigate to the `companion` directory. Alternatively, navigate to the directory where you downloaded or copied the installation files. Then double-click `setup.exe` to start Oracle Universal Installer.
2. Click **Deinstall Products** on the Welcome window or **Installed Products** available on any Oracle Universal Installer window. The Inventory window appears, listing installed products.
3. Select the products that you want to remove and click **Remove**.

Note: If you have more than one installation on the system, products installed in other Oracle homes appear in the Inventory window. If you select products from other Oracle homes, they are deinstalled.

4. If you installed Oracle HTTP Server, manually remove the Oracle HTTP Server Oracle home directory used in the failed installation.
5. If you installed Oracle HTML DB, follow the steps in the next section.

Cleaning Up After a Failed Oracle HTML DB Installation

In a successful Oracle HTML DB installation, the following banner displays at the end of the installation:

```
Thank you for installing Oracle HTML DB.
Oracle HTML DB is installed in the FLOWS_010600 schema.
```

However, if the installation fails, in addition to using Oracle Universal Installer to remove the Oracle HTML DB components, you need to drop either one or two database schemas depending upon the installation type before retrying the installation.

See Also: ["Cleaning Up After a Failed Oracle Companion CD Installation"](#) on page E-2

Cleaning Up After a Failed Upgrade Installation

In the case of a failed upgrade installation, you should first revert Oracle HTML DB to release 1.5 and then remove the schemas associated with release 1.6.

To revert Oracle HTML DB to release 1.5:

1. If you altered your images directory, you need to point the text alias /i/ back to images directory for release 1.5.
2. Execute the following command in SQL*Plus:

- a. Start SQL*Plus and connect the database where Oracle HTML DB is installed as SYS or SYSTEM, for example:

```
c:\> sqlplus sys/SYS_password as sysdba
```

- b. Execute the following:

```
SQL> ALTER SESSION SET CURRENT_SCHEMA = FLOWS_010600;
SQL> exec FLOWS_010600.www_flow_upgrade.switch_schemas
('FLOWS_010600','FLOWS_010600');
```

To remove the release 1.6 schema:

1. Start SQL*Plus and connect the database where Oracle HTML DB is installed as SYS or SYSTEM.
2. Execute the following commands:

```
DROP user FLOWS_010600 CASCADE;
```

Cleaning Up After a Failed New Installation

To remove schemas after a failed new installation:

1. Start SQL*Plus and connect the database where Oracle HTML DB is installed as SYS or SYSTEM.
2. Execute the following commands:

```
drop user FLOWS_010600 cascade;
drop user FLOWS_FILES cascade;
```

Silent or Noninteractive Installation Response File Error Handling

To determine whether a silent or noninteractive installation succeeds or fails, check the `silentInstallActionsdate_time.log` file, located in the `DRIVE_LETTER:\Program Files\Oracle\Inventory\logs` directory.

A silent installation fails if:

- You do not specify a response file.
- You specify an incorrect or incomplete response file.

For example, a common problem is that while all the product-specific data is filled out correctly, the staging area location may be incorrect. If this is the case, check the `FROM_LOCATION` variable and make sure that it points to the `products.xml` file in the installation media. In the installation media, this `products.xml` is in `companion\stage`.

- Oracle Universal Installer encounters an error, such as insufficient disk space.

Oracle Universal Installer or a configuration assistant validates the response file at runtime. If the validation fails, the installation or configuration process ends. Oracle Universal Installer treats values for parameters that are of the wrong context, format, or type as if no value was specified in the file.

See Also: ["Reviewing a Log of an Installation Session"](#) on page E-1 for information on interactive installation log files

Images Displaying Incorrectly in Oracle HTML DB

If the images in Oracle HTML DB do not display correctly, Oracle HTML DB may be having a problem locating the directory where these images are stored. The directory location for the images is stored in an alias in the `marvel.conf` file. To address this problem:

1. Open the `marvel.conf` file, located in `ORACLE_BASE\ORACLE_HOME\Apache\modplsql\conf`, in a text editor.
2. Look for an alias to the `images` directory, which appears similar to the following:

```
Alias /i/ C:/oracle/product/10.2.0/db_HTMLDB/htmldb/images
```
3. Check for the following problems:
 - If the `/i/` alias appears more than once, rename the first instance of `/i/` to a different alias name. Alternatively, copy the images from the `ORACLE_BASE\ORACLE_HOME\htmldb\images` directory to the directory defined by the first `/i/` alias.
 - If the `/i/` alias points to an incorrect directory, correct the directory path.

Oracle HTML DB Online Help Not Working

If users are accessing Oracle HTML DB through a Virtual Host, the online help will not work. Consider the following example:

- The hostname of the Oracle HTTP Server where the Oracle HTML DB DAD resides is `internal.server.com` and the port is 7777.
- Users access Oracle HTML DB through a Virtual Host. In their Web browsers, users see `external.server.com` and the port 80.

In this example, Oracle HTML DB online help will not work if the users cannot access `internal.server.com`. To resolve this issue, add the following lines to the Oracle HTML DB Database Access Descriptor (DAD) to override the CGI environment variables `SERVER_NAME` and `SERVER_PORT`:

```
PlsqlCGIEnvironmentList SERVER_NAME=external.server.com  
PlsqlCGIEnvironmentList SERVER_PORT=80
```

See Also: *Oracle Application Server 10g mod_plsql User's Guide* for information on overriding the CGI environment variables

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