Oracle® Database

Client Installation Guide

10*g* Release 1 (10.1.0.2.0) for Windows

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Oracle Database Client Installation Guide, 10*g* Release 1 (10.1.0.2.0) for Windows

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

Preface

This manual is your primary source of introduction, preinstallation, installation, and postinstallation information for Oracle Database Client for Windows. Only the features of Oracle Database Client for Windows software installed on Windows NT, Windows 2000, Windows XP, and Windows Server 2003 operating systems are discussed in this guide.

This preface contains these topics:

Intended Audience

Oracle Database Client Installation Guide for Windows is intended for anyone installing an Oracle Database Client.

To use this document, you need the following:

- A supported Microsoft Windows operating system installed and tested on your computer system
- Administrative privileges on the computer where you are installing Oracle Database Client
- Familiarity with object-relational database management concepts

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

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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 technical questions, call:

1.800.446.2398

For non-technical questions, call:

1.800.464.2330

Structure

This document contains:

Chapter 1, "Oracle Database Client Installation Overview"

This chapter introduces you to the different types of Oracle Database Client installations that you can perform, as well as issues that you should consider before installing the software.

Chapter 2, "Oracle Database Client Preinstallation Tasks"

This chapter describes the tasks that you must complete before you start Oracle Universal Installer.

Chapter 3, "Oracle Database Client Installation Tasks"

This chapter describes how to install Oracle Database Client from the installation media or from a hard disk using Oracle Universal Installer.

Chapter 4, "Oracle Database Client Postinstallation Tasks"

This chapter describes how to complete postinstallation tasks after you have installed the software.

Chapter 5, "Removing Oracle Database Client Software"

This chapter describes how to completely remove all Oracle databases, instances, and software from an Oracle home directory.

Appendix A, "Installing Java Access Bridge"

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

Appendix B, "Oracle Database Client Advanced Installation Topics"
This appendix describes how to run Oracle Universal Installer in noninteractive mode or in a foreign language.

Appendix C, "Oracle Database Client Globalization Support"
This appendix describes Globalization Support.

Appendix D, "Oracle Database Client Installation Troubleshooting"
This appendix contains information about troubleshooting.

Glossary

Related Documents

For more information, see these Oracle resources:

- *Oracle Database Installation Guide for Windows*
- *Oracle Database Client Release Notes for Windows*
- *Oracle Workflow Installation Notes for Oracle Database*
- *Oracle Enterprise Manager Grid Control Installation and Basic Configuration*
- *Oracle Database Platform Guide for Windows*
- *Oracle Database Upgrade Guide*
- *Oracle Database 2 Day DBA*

Many books in the documentation set use the sample schemas of the seed database, which is installed by default when you install Oracle. 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://otn.oracle.com/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://otn.oracle.com/documentation/`

Conventions

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

- Conventions in Text
- Conventions in Code Examples
- Conventions for Windows Operating Systems

Conventions in Text

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

Convention	Meaning	Example
Bold	Bold typeface indicates terms that are defined in the text or terms that appear in a glossary, or both.	When you specify this clause, you create an **index-organized table**.
Italics	Italic typeface indicates book titles or emphasis.	*Oracle Database Concepts* Ensure that the recovery catalog and target database do *not* reside on the same disk.
`UPPERCASE monospace (fixed-width) font`	Uppercase monospace typeface indicates elements supplied by the system. Such elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, usernames, and roles.	You can specify this clause only for a `NUMBER` column. You can back up the database by using the `BACKUP` command. Query the `TABLE_NAME` column in the `USER_TABLES` data dictionary view. Use the `DBMS_STATS.GENERATE_STATS` procedure.
`lowercase monospace (fixed-width) font`	Lowercase monospace typeface indicates executables, filenames, directory names, and sample user-supplied elements. Such elements include computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages and classes, usernames and roles, program units, and parameter values. **Note:** Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	Enter `sqlplus` to start SQL*Plus. The password is specified in the `orapwd` file. Back up the datafiles and control files in the `/disk1/oracle/dbs` directory. The `department_id`, `department_name`, and `location_id` columns are in the `hr.departments` table. Set the `QUERY_REWRITE_ENABLED` initialization parameter to `true`. Connect as `oe` user. The `JRepUtil` class implements these methods.
`lowercase italic monospace (fixed-width) font`	Lowercase italic monospace font represents placeholders or variables.	You can specify the *`parallel_clause`*. Run *`old_release`*`.SQL` where *`old_release`* refers to the release you installed prior to upgrading.

Conventions in Code Examples

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

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

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

Convention	Meaning	Example
`[ ]`	Brackets enclose one or more optional items. Do not enter the brackets.	`DECIMAL (`*`digits`*` [ , `*`precision`*` ])`
`{ }`	Braces enclose two or more items, one of which is required. Do not enter the braces.	`{ENABLE | DISABLE}`

Convention	Meaning	Example
|	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	{ENABLE | DISABLE} [COMPRESS | NOCOMPRESS]
...	Horizontal ellipsis points indicate either: ■ That we have omitted parts of the code that are not directly related to the example ■ That you can repeat a portion of the code	CREATE TABLE ... AS *subquery*; SELECT *col1*, *col2*, ... , *coln* FROM employees;
. . .	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	SQL> SELECT NAME FROM V$DATAFILE; NAME ---------- /fsl/dbs/tbs_01.dbf /fs1/dbs/tbs_02.dbf . . . /fsl/dbs/tbs_09.dbf 9 rows selected.
Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as shown.	acctbal NUMBER(11,2); acct CONSTANT NUMBER(4) := 3;
Italics	Italicized text indicates placeholders or variables for which you must supply particular values.	CONNECT SYSTEM/*system_password* DB_NAME = *database_name*
UPPERCASE	Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	SELECT last_name, employee_id FROM employees; SELECT * FROM USER_TABLES; DROP TABLE hr.employees;
lowercase	Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files. **Note:** Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	SELECT last_name, employee_id FROM employees; sqlplus hr/hr CREATE USER mjones IDENTIFIED BY ty3MU9;

Conventions for Windows Operating Systems

The following table describes conventions for Windows operating systems and provides examples of their use.

Convention	Meaning	Example
Choose **Start > menu_item**	How to start a program.	To start Database Configuration Assistant, choose **Start > Programs > Oracle - *HOME_NAME* > Configuration and Migration Tools > Database Configuration Assistant**.

Convention	Meaning	Example
File and directory names	File and directory names are not case sensitive. The following special characters are not allowed: left angle bracket (<), right angle bracket (>), colon (:), double quotation marks ("), slash (/), pipe (|), and dash (-). The special character backslash (\) is treated as an element separator, even when it appears in quotes. If the file name begins with \\, then Windows assumes it uses the Universal Naming Convention.	`c:\winnt"\"system32 is the same as C:\WINNT\SYSTEM32`
`C:\>`	Represents the Windows command prompt of the current hard disk drive. The escape character in a command prompt is the caret (^). Your prompt reflects the subdirectory in which you are working. Referred to as the *command prompt* in this manual.	`C:\oracle\oradata>`
Special characters	The backslash (\) special character is sometimes required as an escape character for the double quotation mark (") special character at the Windows command prompt. Parentheses and the single quotation mark (') do not require an escape character. Refer to your Windows operating system documentation for more information on escape and special characters.	`C:\>exp scott/tiger TABLES=emp QUERY=\"WHERE job='SALESMAN' and sal<1600\"` `C:\>imp SYSTEM/`*`password`*` FROMUSER=scott TABLES=(emp, dept)`
`HOME_NAME`	Represents the Oracle home name. The home name can be up to 16 alphanumeric characters. The only special character allowed in the home name is the underscore.	`C:\> net start Oracle`*`HOME_NAME`*`TNSListener`
`ORACLE_HOME` and *`ORACLE_BASE`*	In releases prior to Oracle8*i* release 8.1.3, when you installed Oracle components, all subdirectories were located under a top level *`ORACLE_HOME`* directory. The default for Windows NT was `C:\orant`. This release complies with Optimal Flexible Architecture (OFA) guidelines. All subdirectories are not under a top level *`ORACLE_HOME`* directory. There is a top level directory called *`ORACLE_BASE`* that by default is `C:\oracle\product\10.1.0`. If you install the latest Oracle release on a computer with no other Oracle software installed, then the default setting for the first Oracle home directory is `C:\oracle\product\10.1.0\db_`*`n`*, where *`n`* is the latest Oracle home number. The Oracle home directory is located directly under *`ORACLE_BASE`*. All directory path examples in this guide follow OFA conventions. Refer to *Oracle Database Platform Guide for Windows* for additional information about OFA compliances and for information about installing Oracle products in non-OFA compliant directories.	Go to the *`ORACLE_BASE`*`\`*`ORACLE_HOME`*`\rdbms\admin` directory.

1

Oracle Database Client Installation Overview

This chapter describes the different types of Oracle Database Client installations that you can perform, as well as issues that you should consider before installing the software.

This chapter contains these topics:

Installation Overview

The Oracle Database Client installation process consists of four steps:

1. **Planning your installation:** This chapter describes the Oracle products that you can install and issues that you must consider before starting the installation.
2. **Completing preinstallation tasks:** Chapter 2 describes preinstallation tasks that you must complete before installing the product.
3. **Installing software:** Chapter 3 describes how to use Oracle Universal Installer to install this product.
4. **Completing postinstallation tasks:** Chapter 4 describes recommended and required postinstallation tasks.

Oracle Database Client Installation Types

You can choose one of the following installation types when installing Oracle Database Client:

- **Administrator:** Enables applications to connect to an Oracle database on the local system or on a remote system. It also provides tools that let you administer an Oracle database.
- **Runtime:** Enables applications to connect to an Oracle database on the local system or on a remote system.
- **Custom:** Allows you to select individual components from the list of Administrator and Runtime components.
- **Instant Client:** Enables you to install only the shared libraries required by Oracle Call Interface applications that use the Instant Client feature. This installation type

requires much less disk space than the other Oracle Database Client installation types.

See Also: *Oracle Call Interface Programmer's Guide* for more information about the Instant Client feature

Oracle Base Directory

If you install Oracle Database Client on a computer with no other Oracle software installed, then Oracle Universal Installer creates an Oracle base directory for you. If Oracle software is already installed, then one or more Oracle base directories already exist. In the latter case, Oracle Universal Installer offers you a choice of Oracle base directories into which you can install Oracle Database Client.

You are not required to create an Oracle base directory before installation, but you can do so if you want.

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

Multiple Oracle Homes

Starting with Oracle Database 10*g* release 1 (10.1), all Oracle components can be installed in multiple Oracle homes on the same computer. However, some components can only support one active instance at a time. This means that the current (latest) installation renders the previous one inactive. These components are:

- Oracle Administration Assistant for Windows
- Oracle Counters for Windows Performance Monitor
- Oracle Objects for OLE
- Oracle Provider for OLE DB

Installing the Software on a System with an Existing Oracle Installation

You must install this product into a new Oracle home directory. You cannot install products from one release of Oracle Database Client into an Oracle home directory of a different release. For example, you cannot install Oracle Database 10*g* release 1 (10.1) software into an existing Oracle9*i* Oracle home directory. If you attempt to install this release into an Oracle home directory that contains software from an earlier Oracle release, then the installation fails.

You can install this release more than once on the same system provided that each installation is installed in a separate Oracle home directory.

2

Oracle Database Client Preinstallation Tasks

This chapter describes the tasks that you must complete before you start Oracle Universal Installer.

This chapter contains these topics:

Software Requirements

Table 2–1 lists the software requirements for Oracle Database Client.

Table 2–1 Software Requirements

Requirement	Value
System Architecture	32-bit
Operating System	Oracle Database Client for Windows is supported on the following operating systems: ■ Windows NT Server 4.0, Windows NT Server Enterprise Edition 4.0, and Terminal Server Edition with service pack 6a or higher are supported. Windows NT Workstation is no longer supported. ■ Windows 2000 with service pack 1 or higher. All editions, including Terminal Services and Windows 2000 MultiLanguage Edition (MLE), are supported. ■ Windows Server 2003 ■ Windows XP Professional Windows Multilingual User Interface Pack is supported on Windows XP Professional and Windows Server 2003.

Table 2–1 (Cont.) Software Requirements

Requirement	Value
Compiler	Oracle C++ Call Interface supports the following compilers: Microsoft Visual C++ 6.0, Microsoft Visual C++ .NET 2002, and Microsoft Visual C++ .NET 2003 Oracle Call Interface supports the following compilers: Microsoft Visual C++ 6.0, Microsoft Visual C++ .NET 2002, and Microsoft Visual C++ .NET 2003 External callouts support the following compilers: Microsoft Visual C++ 6.0, Microsoft Visual C++ .NET 2002, and Microsoft Visual C++ .NET 2003 PL/SQL native compilation supports the following compilers: Microsoft Visual C++ 6.0, Microsoft Visual C++ .NET 2002, and Microsoft Visual C++ .NET 2003 Pro*COBOL supports Micro Focus NetExpress. Object Oriented COBOL (OOCOBOL) specifications are not supported. XDK supports the following compilers: Microsoft Visual C++ 6.0, Microsoft Visual Studio .NET 2002, and Microsoft Visual Studio .NET 2003
Network Protocol	The **Oracle Net foundation layer** uses Oracle protocol support to communicate with the following industry-standard network protocols: ■ TCP/IP ■ TCP/IP with SSL ■ Named Pipes

See Also:

- "Web Browser Support" on page 2-4
- "Windows XP Support" on page 2-4
- "Telnet and Terminal Services Support" on page 2-4

Hardware Requirements

The following hardware components are required for Oracle Database Client:

- RAM: 128 MB minimum, 256 MB recommended
- Virtual memory: double the amount of RAM
- Disk space: see Table 2–2
- Temp disk space: 100 MB
- Video adapter: 256 color
- Processor: 200 MHz minimum

Hard Disk Space Requirements

This section lists system requirements for NT File System (NTFS) file systems. FAT32 space requirements are slightly larger. Oracle recommends installing Oracle components on NTFS.

The NTFS system requirements listed in this section are more accurate than the hard disk values reported by the Oracle Universal Installer Summary screen. The Summary

screen does not include the space required to create a database or the size of compressed files that are expanded on the hard drive.

The hard disk requirements for Oracle Database Client components include space required to install Java Runtime Environment (JRE) and Oracle Universal Installer on the partition where the operating system is installed. If sufficient space is not detected, then installation fails and an error message appears.

Table 2–2 lists the space requirements for NTFS.

Table 2–2 Hard Disk Space Requirements for NTFS

Installation Type	System Drive	Oracle Home Drive
Administrator	80 MB	485 MB
Runtime	70 MB	240 MB
Instant Client	70 MB	88 MB

> **See Also:** "About NTFS File System and Windows Registry Permissions" in *Oracle Database Platform Guide for Windows*

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

1. Determine the physical RAM size. For a computer using Windows 2000, for example, open the **System** control panel and select the **General** tab. If the size of the physical RAM installed in the system is less than the required size, then you must install more memory before continuing.
2. Determine the size of the configured swap space (also known as paging file size). For a computer using Windows 2000, for example, open the **System** control panel, select the **Advanced** tab, and click **Performance Options**.

   If necessary, see your operating system documentation for information about how to configure additional swap space.
3. Determine the amount of free disk space on the system. For a computer using Windows 2000, for example, open **My Computer**, right-click the drive where the Oracle software is to be installed, and choose **Properties**.
4. Determine the amount of disk space available in the `temp` directory. This is equivalent to the total amount of free disk space, minus what will be needed for the Oracle software to be installed.

   If there is less than 100 MB of disk space available in the `temp` directory, then first delete all unnecessary files. If the `temp` disk space is still less than 100 MB, then set the `TEMP` or `TMP` environment variable to point to a different hard drive. For a computer using Windows 2000, for example, open the **System** control panel, select the **Advanced** tab, and click **Environment Variables**.

Hardware and Software Certification

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

http://metalink.oracle.com/metalink/certify/

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

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

Web Browser Support

The following Web browsers are supported for *i*SQL*Plus and Oracle Enterprise Manager Database Control:

- Netscape Navigator 4.78, 4.79, 7.0.1, and 7.1.0
- Microsoft Internet Explorer 5.5 with service pack 1
- Microsoft Internet Explorer 6.0 with service pack 2

Windows XP Support

The following components are not certified on Windows XP:

- DCE Adapter Support
- Entrust PKI Support
- Generic Connectivity
- nCipher Accelerator Support

Telnet and Terminal Services Support

This section contains these topics:

- Windows Telnet Services Support
- Windows Terminal Services Support

Windows Telnet Services Support

Windows XP, Windows 2000, and Windows Server 2003 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 the use of database command line utilities such as `sqlplus` and `sqlldr` using this feature, but does not support the database GUI tools such as Oracle Universal Installer and Oracle Net Configuration Assistant.

Note: Ensure that the Telnet service is started on the Services control panel.

Windows Terminal Services Support

Oracle supports Terminal Services on Windows 2000 Server, Windows XP Professional, and Windows Server 2003. If you attempt to install Oracle Database Client 10*g* release 1 (10.1) in this manner, then many configuration tools will stop responding. Start all configuration tools from the Terminal Server console and not from the Terminal Services Client.

Oracle Connection Manager is not supported with Windows Terminal Servers.

See Also:

- The Microsoft Web site for more information about terminal servers

  http://www.microsoft.com/

- The Oracle*MetaLink* Web site for the latest Terminal Server certification information

  http://metalink.oracle.com/metalink/certify/

3

Oracle Database Client Installation Tasks

This chapter describes how to install Oracle Database Client.

This chapter contains these topics:

- Installation Files
- Downloading Oracle Software from the OTN Web Site
- Copying Oracle Database Client Software to a Hard Disk
- Installing Oracle Database Client

> **Note:** Review the information in Chapter 1, "Oracle Database Client Installation Overview" and complete the tasks listed in Chapter 2, "Oracle Database Client Preinstallation Tasks" before beginning the installation.

Installation Files

The Oracle Database Client software is available on compact disc (CD-ROM or DVD-ROM) or you can download it from the Oracle Technology Network (OTN) Web site. In most cases, you use the graphical user interface (GUI) provided by Oracle Universal Installer to install the software. However, you can also use Oracle Universal Installer to complete noninteractive installations, without using the GUI. See Appendix B, "Oracle Database Client Advanced Installation Topics" for information about noninteractive installations.

This chapter describes how to install Oracle Database Client from the installation media or from a hard disk. To install the software from a hard disk, you must either download it from OTN and unpack it, or copy it from the compact discs, if you have them. See one of the following sections, depending on the method that you want to use:

- To copy the software to a hard disk, see "Copying Oracle Database Client Software to a Hard Disk" on page 3-2.
- To install the software from compact disc or from an existing hard disk location, see "Installing Oracle Database Client" on page 3-2.
- To download the software from OTN, see the following section.

Downloading Oracle Software from the OTN Web Site

This section describes how to download the installation files from OTN and extract them on your hard disk.

1. Use any browser to access the software download page on OTN:

   `http://otn.oracle.com/software/`

2. Navigate to each of the download pages for the products that you want to install.
3. On each download page, identify the required disk space by adding the file sizes for each required file. The file sizes are listed next to the filenames.
4. Select a file system with enough free space to store and expand the files. In most cases, the available disk space must be at least twice the size of all compressed files combined.
5. On the file system that you just selected, create a parent directory for each product you plan to install, for example `OraDB10g`, to hold the installation directories.
6. Download all of the installation files to the directories that you just created.
7. Verify that the files you downloaded are the same sizes as the corresponding files on OTN.
8. Extract the files in each directory that you just created.

When you have extracted all of the required installation files, see "Installing Oracle Database Client" on page 3-2.

Copying Oracle Database Client Software to a Hard Disk

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

1. Create a directory for the installation files on your hard drive. For example:

   ```
   d:\install\Disk1
   ```

2. Copy the contents of the installation media to the directory that you just created.

When you have copied all of the required installation files, see "Installing Oracle Database Client" on page 3-2.

Installing Oracle Database Client

The following sections describe how to install the Oracle software:

- Reviewing Product-Specific Installation Guidelines
- Running Oracle Universal Installer

Reviewing Product-Specific Installation Guidelines

Review the following guidelines before starting Oracle Universal Installer:

- Do not use Oracle Universal Installer from an earlier Oracle product release to install components from this release.
- Reinstalling Oracle Software

  If you reinstall Oracle software into an Oracle home directory where Oracle Database Client is already installed, then you must also reinstall any components that were installed before you began the reinstallation.

Running Oracle Universal Installer

> **Note:** Use the same installation media to install Oracle Database Client on all supported Windows platforms.

Start Oracle Universal Installer and install the software, as follows:

1. Insert the CD labeled Oracle Database Client or navigate to the directory you created for the downloaded or copied installation files.

   See Also:

   - "Downloading Oracle Software from the OTN Web Site" on page 3-1
   - "Copying Oracle Database Client Software to a Hard Disk" on page 3-2

   When installing from the installation media, the Autorun screen automatically appears. If the Autorun screen does not appear, then:

   a. Click **Start > Run**.

   b. Enter the following:

      ```
      DRIVE_LETTER:\autorun\autorun.exe
      ```

      The Autorun screen appears. Choose **Install/Deinstall Products** from the Autorun screen.

   When installing from a hard disk, double-click `setup.exe` located in the directory you created for the downloaded or copied installation files.

2. The Welcome screen appears. Table 3–1 on page 3-4 lists the recommended action for each screen.

   > **Note:** The Configuration Assistants screens do not appear in an Instant Client installation.

3. Use the following guidelines to complete the installation:

   - Follow the instructions displayed in Oracle Universal Installer screens. If you encounter errors while installing the software, then click **Help** or see Appendix D, "Oracle Database Client Installation Troubleshooting".
   - Do not install Oracle Database Client 10*g* release 1 (10.1) software into an existing Oracle home that contains Oracle9*i* or earlier software.
   - Do not modify the Java Runtime Environment (JRE) except by using a patch provided by Oracle Support Services. Oracle Universal Installer automatically installs the Oracle-supplied version of the JRE. This version is required to run Oracle Universal Installer and several Oracle assistants.

4. If you chose an installation type that runs Oracle Net Configuration Assistant (NetCA) in interactive mode, then you must provide detailed information about configuring your network. If you need assistance when using NetCA in interactive mode, then click **Help** on any screen.

Note: If you chose a default installation, then Oracle Net Configuration Assistant runs noninteractively.

5. When all of the configuration tools have finished, click **Exit**, then click **Yes** to exit from Oracle Universal Installer.
6. See Chapter 4, "Oracle Database Client Postinstallation Tasks" for information about tasks that you must complete after you have installed the software.
7. Optionally, delete the `\temp\OraInstall`*`date_time`* directory if you want to remove the temporary files that were created during the installation process. The `OraInstall`*`date_time`* directory holds about 45 MB of files.

   Restarting your computer also removes the `OraInstall`*`date_time`* directory.

Table 3–1 Oracle Universal Installer Screens

Screen	Recommended Action
Welcome	Click **Next**.
Specify File Locations	In the **Destination** section, accept the default values or enter the Oracle home name and directory path in which to install Oracle components. Click **Next**.
Select Installation Type	Select **Instant Client**, **Administrator**, **Runtime**, or **Custom**. Click **Next**.
Summary	Review the information displayed, then click **Install**.
Install	The Install screen displays status information while the product is being installed.
Configuration Assistants	The Configuration Assistants screen displays status information for the configuration assistants that configure the software.
Oracle Net Configuration Assistant: Welcome	You can choose Naming Methods configuration or let Oracle Net Configuration Assistant complete a typical configuration for you. If you want to choose, simply click **Next**. If you want a typical configuration, first click the **Perform typical configuration** checkbox and then click **Next**.
Oracle Net Configuration Assistant: Naming Methods Configuration, Select Naming Methods	This screen appears only if you did not click the **Perform typical configuration** checkbox. Local Naming, the recommended naming method, is preselected. But you can remove it, add other naming methods, or change the order of selected naming methods by first clicking on the naming method and then clicking on the arrow keys. When you are done selecting naming methods, click **Next**.
Oracle Net Configuration Assistant: Net Service Name Configuration, Service Name	This screen appears only if you did not click the **Perform typical configuration** checkbox. Enter the service name of the database or other service you want to access and click **Next**.
Oracle Net Configuration Assistant: Net Service Name Configuration, Select Protocols	This screen appears only if you did not click the **Perform typical configuration** checkbox. Select the protocol used by the database you want to access and click **Next**.
Oracle Net Configuration Assistant: Net Service Name Configuration, Your Protocol	This screen appears only if you did not click the **Perform typical configuration** checkbox, and its contents depend on which protocol you chose in the previous screen. If you chose TCP or TCPS, then this screen asks for a Host name and port number. If you chose IPC, then this screen asks for an IPC Key value. If you chose NMP, then this screen asks for a Computer Name and a pipe name. Supply the needed information and click **Next**.
Oracle Net Configuration Assistant: Net Service Name Configuration, Test	This screen appears only if you did not click the **Perform typical configuration** checkbox. It offers a pair of radio buttons enabling you to test or not test your connection to the database. Make your choice and click **Next**.

Table 3–1 (Cont.) Oracle Universal Installer Screens

Screen	Recommended Action
Oracle Net Configuration Assistant: Net Service Name Configuration, Connecting	This screen appears only if you chose to test the connection in the previous screen. If the connection does not succeed, this screen instructs you to click **Back** to review the connection information you supplied or click **Change Login** to change username, password, or both. Click **Next**.
Oracle Net Configuration Assistant: Net Service Name	This screen appears only if you did not click the **Perform typical configuration** checkbox. It lets you enter a name for this net service name. The default is the service name you entered earlier. Click **Next**.
Oracle Net Configuration Assistant: Another Net Service Name?	This screen appears only if you did not click the **Perform typical configuration** checkbox. It asks if you want to enter another name for this net service name. Click **Next**.
Oracle Net Configuration Assistant: Net Service Name Configuration Done	This screen appears only if you did not click the **Perform typical configuration** checkbox. It tells you that net service name configuration is complete. Click **Next**.
Oracle Net Configuration Assistant: Naming Methods Configuration Done	This screen appears only if you did not click the **Perform typical configuration** checkbox. It tells you that naming methods configuration is complete. Click **Next**.
Oracle Net Configuration Assistant: Done	Click **Finish**.
End of Installation	The End of Installation screen tells you installation was successful. Click **Exit**, then click **Yes**.

4

Oracle Database Client Postinstallation Tasks

This chapter describes how to complete postinstallation tasks after you have installed the software.

This chapter contains these topics:

- Required Postinstallation Tasks
- Recommended Postinstallation Tasks
- Required Product-Specific Postinstallation Tasks

You must perform the tasks listed in "Required Postinstallation Tasks" on page 4-1. Oracle recommends that you perform the tasks listed in "Recommended Postinstallation Tasks" on page 4-2 after all installations.

If you installed and intend to use any of the products listed in "Required Product-Specific Postinstallation Tasks" on page 4-3, then you must perform the tasks listed in the product-specific subsections.

Note: This chapter describes basic configuration only. See *Oracle Database Platform Guide for Windows* and product-specific administration and tuning guides for more sophisticated configuration and tuning information.

Required Postinstallation Tasks

You must perform the tasks described in the following section after completing an installation:

- Downloading and Installing Patches

Downloading and Installing Patches

Check the Oracle*Metalink* Web site for required patches for your installation. To download required patches:

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

   `http://metalink.oracle.com`

2. Log in to Oracle*Metalink*.

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

3. On the main Oracle*Metalink* page, click **Patches**.
4. Select **Simple Search**.
5. Specify the following information, then click **Go**:
   - In the **Search By** field, choose Product or Family, then specify RDBMS Server
   - In the **Release** field, specify the current release number
   - In the **Patch Type** field, specify Patchset/Minipack
   - In the **Platform or Language** field, select your platform
6. Each patch has a ReadMe file with installation instructions. Some patches install with Oracle Universal Installer; others require special procedures. Oracle recommends that you always read the ReadMe before proceeding.

Recommended Postinstallation Tasks

Oracle recommends that you perform the tasks in the following sections after completing an installation:

- Setting Up User Accounts
- Running Oracle Enterprise Manager Java Console
- Connecting with Instant Client

Setting Up User Accounts

For information about setting up additional user accounts, see *Oracle Database Platform Guide for Windows*.

Running Oracle Enterprise Manager Java Console

In addition to using Oracle Enterprise Manager Database Control or Grid Control, you can also use the Oracle Enterprise Manager Java Console to manage databases from this release or previous releases. The Java Console is installed by the Administrator installation type.

> **Note:** Oracle recommends that you use Grid Control or Database Control in preference to the Java Console when possible.

To start the Java Console, follow these steps:

1. Click **Start > Run**.
2. Type `oemapp console` and click **OK**.

> **Note:** You can also start the Oracle Enterprise Manager Java Console from the Start menu. Click **Start > Programs > Oracle - *HOME_NAME* > Enterprise Manager Console**.

Connecting with Instant Client

If you installed the Instant Client installation type, then you can configure user environments to enable dynamically linked client applications to connect to a database as follows:

1. Set the `Path` environment variable to specify the directory that contains the Instant Client libraries. For the Instant Client installation type, this directory is the Oracle home directory that you specified during the installation, for example:

   ```
   C:\oracle\products\10.1.0\client_1
   ```

2. Use one of the following methods to specify database connection information for the client application:

   - Specify a SQL connect URL string using the following format:

     ```
     \\host:port\service_name
     ```

   - Set the `TNS_ADMIN` environment variable to specify the location of the `tnsnames.ora` file and specify a service name from that file.
   - Set the `TNS_ADMIN` environment variable and set the `LOCAL` environment variable to specify a service name from the `tnsnames.ora` file.

     See Also: *Oracle Call Interface Programmer's Guide* for more information on using Instant Client

Required Product-Specific Postinstallation Tasks

The following section describes platform-specific postinstallation tasks that you must perform if you installed and intend to use the products mentioned:

- Configuring Oracle Net Services

Configuring Oracle Net Services

If you have a previous release of Oracle software installed on this system, you might want to copy information from the Oracle Net `tnsnames.ora` and `listener.ora` configuration files from the previous release to the corresponding files for the new release.

Note: The default location for the `tnsnames.ora` file is the *ORACLE_BASE*`\`*ORACLE_HOME*`\network\admin` directory.

5

Removing Oracle Database Client Software

This chapter describes how to remove Oracle databases, instances, and software. Always use Oracle Universal Installer to initially remove Oracle components. To avoid installation and configuration problems with new Oracle installations, follow the instructions in this chapter.

This chapter contains these topics:

- Stopping Oracle Services on Windows
- Removing Components with Oracle Universal Installer
- Removing Components Manually

> **See Also:** Component-specific documentation for individual requirements and restrictions

Stopping Oracle Services on Windows

You must first stop the Oracle Windows services before removing Oracle components or removing any registry entries.

> **See Also:** Your Microsoft online help for more information about stopping services

To stop Windows services:

1. Open the Services control panel:
   - On Windows NT, choose **Start > Settings > Control Panel > Services**.
   - On Windows 2000, choose **Start > Settings > Control Panel > Administrative Tools > Services**.
   - On Windows XP, and Windows Server 2003 choose **Start > Control Panel > Administrative Tools > Services**.
2. If any Oracle services (names begin with `Oracle` or `Ora`) exist and have the status *Started*, then select each of the services, and click **Stop**.
3. Click **Close** to exit the Services window.
4. Exit the Control Panel.

Removing Components with Oracle Universal Installer

You must first use Oracle Universal Installer to remove Oracle components from the inventory on the computer. Afterwards, you need to manually remove the remaining components.

Note: Manually removing components without first deinstalling with Oracle Universal Installer is not recommended unless you exit Oracle Universal Installer during an installation. For example:

- Clicking Cancel
- Turning off the computer
- If the installation does not complete (that is, all required configuration tools do not run at the end)

In these cases, Oracle Universal Installer does not register the installation in its inventory. However, files may have been copied to your Oracle home. Remove these files manually and restart the installation.

You must first remove Oracle components with Oracle Universal Installer before deleting an Oracle home manually (for example, by deleting the directory structure with Windows Explorer or command prompt), because the components in that Oracle home remain registered in the Oracle Universal Installer inventory. If you subsequently attempt an installation in the same Oracle home, then some or all of the components selected may not be installed, because Oracle Universal Installer determines the components are already installed.

Oracle Universal Installer creates Windows services for Oracle components during installation. However, Oracle Universal Installer does not delete all the services created by Oracle Net Configuration Assistant.

To remove components on a Windows computer with Oracle Universal Installer:

1. Ensure that you first follow the instructions in "Stopping Oracle Services on Windows" on page 5-1.
2. Start Oracle Universal Installer. The start procedure depends on which version of Oracle Database Client you installed.
   a. If you installed the Administrator, Runtime, or Custom versions of Oracle Database Client, then Oracle Universal Installer was also installed. Choose **Start > Programs > Oracle - *HOME_NAME* > Oracle Installation Products > Universal Installer**. The Welcome screen for Oracle Universal Installer appears.
   b. If you installed the Instant Client version of Oracle Database Client, then Oracle Universal Installer was not installed. You must instead run it from your installation media or the installation directory you created for downloaded or copied installation files.
   c. To start Oracle Universal Installer from the installation media, insert the CD labeled Oracle Database Client. The Autorun screen automatically appears.

      If the Autorun screen does not appear, then choose **Start > Run** and enter:

      ```
      DRIVE_LETTER:\autorun\autorun.exe
      ```

      Choose **Install/Deinstall Products** from the Autorun screen.

d. To start Oracle Universal Installer from your installation directory, double-click `setup.exe`.

3. Click the **Deinstall Products** button.

   The Inventory screen appears.

4. Select the Oracle home you wish to remove. Expand the tree of installed components only if you want to remove selected components of an Oracle home.

   For example, if you installed Oracle Database Client with the Runtime option and later installed additional components with the Custom option, then expand the Oracle home component to display all the components installed in the Oracle home.

5. Check the boxes of components to remove.

6. Click **Remove**.

   The Confirmation screen appears.

7. Click **Yes** to remove the selected components.

   Note: A message may appear indicating that removing some components may cause other components to not function properly.

   After the components are removed from your computer, the Inventory screen appears without the removed components.

8. Click **Close** to close the Inventory screen.

9. Click **Cancel** to exit Oracle Universal Installer.

10. Click **Yes** to confirm that you want to exit.

Removing Components Manually

Oracle Universal Installer does not remove all Oracle components. After using Oracle Universal Installer to remove Oracle components, you need to manually remove remaining registry keys, environment variables, Start menu options, and directories.

This section contains these topics:

- Removing Oracle Keys from the Registry on Windows
- Updating the System Variable Path
- Removing Oracle from the Start Menu
- Removing Oracle Directories

Note: In rare situations, you might want to correct serious system problems by completely removing Oracle components manually from the computer without first deinstalling with Oracle Universal Installer. Do this only as a last resort, and only if you want to remove all Oracle components from your system.

Removing Oracle Keys from the Registry on Windows

Oracle Universal Installer does not delete all services created by Oracle Net Configuration Assistant. In addition, it does not delete several other registry keys. You

must remove any existing registry keys manually by following the instructions in one of the following sections:

- Removing Only the Oracle Net Service Registry Key
- Removing All Oracle Registry Keys

> **Caution:** Use Microsoft Registry Editor at your own risk. Incorrectly using the Registry Editor can cause serious problems and might require reinstallation of your operating system.

Removing Only the Oracle Net Service Registry Key

To remove only the Oracle Net Service registry entry (if it exists):

1. Log in as a member of the Administrators group.
2. Ensure that you first follow the instructions in "Stopping Oracle Services on Windows" on page 5-1.
3. Start the registry editor at the command prompt:

```
C:\> regedt32
```

4. Go to `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services` and delete the `Oracle`*`HOME_NAME`*`TNSListener` registry entry. Oracle Universal Installer automatically deletes all other Oracle Net services.
5. Exit the registry editor.
6. Restart your computer.

Removing All Oracle Registry Keys

To remove all Oracle registry keys from a computer (if any exist):

> **Caution:** These instructions remove *all* Oracle components, services, and registry entries from your computer. Exercise extreme care when removing registry entries. Removing incorrect entries can break your system. Any database files under *`ORACLE_BASE`*`\`*`ORACLE_HOME`*`\`*`DB_NAME`* should be deleted only after completing these instructions.

1. Log in as a member of the Administrators group.
2. Ensure that you first follow the instructions in "Stopping Oracle Services on Windows" on page 5-1.
3. Start the registry editor at the command prompt:

```
C:\> regedt32
```

4. Go to `HKEY_CLASSES_ROOT`.
5. Delete keys that begin with `Ora`, `Oracle`, `Orcl`, or `EnumOra`. This collection of keys includes those that begin with `EnumOraHomes`, `OracleConfig`, `OracleDatabase`, `OracleHome`, `OracleInProcServer`, `OracleProcess`, `ORADC`, `ORAMMCCFG10`, `ORAMMCPMON10`, `OraOLEDB`, `OraPerfMon`, `ORCLMMC`, and `ORCLSSO`.
6. Go to `HKEY_LOCAL_MACHINE\SOFTWARE`.

7. Delete the `ORACLE Group` key.
8. Go to `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services`.
9. Delete all keys under this branch that begin with `Oracle`.
10. Go to `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services \Eventlog\Application`.
11. Delete all keys under this branch that begin with `Oracle`.
12. Go to `HKEY_CURRENT_USER`.
13. Delete the `ORACLE` key.
14. Go to `HKEY_CURRENT_USER\Software`.
15. Delete all `Oracle` keys, including `Oracle-`*`HOME_NAME`* entries under: `Microsoft\Windows\CurrentVersion\Explorer\MenuOrder\Start Menu\Programs`.
16. Exit the registry editor.
17. Restart your computer.

Updating the System Variable Path

Check the `Path` environmental variable and remove any Oracle entries.

1. Choose **Start > Settings > Control Panel > System > Advanced tab > Environment Variables**.
2. Select the system variable `Path` and edit it to remove any Oracle entries.

   For example, remove Oracle entries that contain *`ORACLE_BASE`*`\`*`ORACLE_HOME`* in the `Path` variable. You may see a `Path` variable that contains entries similar to the following:

   ```
   ORACLE_BASE\ORACLE_HOME\bin;ORACLE_BASE\ORACLE_HOME\jre\1.4.2\bin\client;
   ORACLE_BASE\ORACLE_HOME\jre\1.4.2\bin
   ```

3. Save any changes and then exit the Control Panel.

Removing Oracle from the Start Menu

Check the Start menu for any Oracle entries and remove them.

On Windows NT computers, perform the following:

1. Using My Computer or Windows Explorer, navigate to the *`SYSTEM_ DRIVE`*`:\WINNT\Profiles\All Users\Start Menu\Programs` folder.
2. Delete the Oracle - *HOME_NAME* folder.

On Windows 2000 and Windows XP computers, perform the following:

1. Using My Computer or Windows Explorer, navigate to the *`SYSTEM_ DRIVE`*`:\Document and Settings\All Users\Start Menu\Programs` folder.
2. Delete the Oracle - *HOME_NAME* folder.

You can also remove Oracle menu entries with the following instructions:

1. Right click the **Start** button to display the context menu.
2. Select the **Explore All Users** option.

3. Expand the Start Menu\Programs folder if necessary.
4. Delete the **Oracle - *HOME_NAME*** folder.

Removing Oracle Directories

After removing all Oracle registry keys and restarting the computer, delete any existing Oracle directories and files.

1. Using My Computer or Windows Explorer, delete the *SYSTEM_DRIVE*:\program files\oracle directory.
2. Using My Computer or Windows Explorer, delete all *ORACLE_BASE* directories on your hard drive.

A

Installing Java Access Bridge

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

This appendix contains these topics:

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. This section contains the following topics:

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

4. Rename `jaccess-1_4.jar` (now located 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:

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

Configuring Oracle Components to Use Java Access Bridge

You can configure Oracle components to use 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.

Configuring for Windows NT

To configure Oracle components to use Access Bridge on Windows NT, follow these steps:

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

3. Select a variable in the **System Variables** list.
4. In the **Variable** field, enter `ORACLE_OEM_CLASSPATH`.
5. In the **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 space characters. 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

6. Click **Set.**
7. Click **OK**.

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

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

1. Choose **Start > Settings > Control Panel > 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**.

B

Oracle Database Client Advanced Installation Topics

This appendix describes advanced installation topics.

This appendix contains these topics:

- About Oracle Components in Noninteractive Mode
- About Oracle Components in Different Languages

About Oracle Components in Noninteractive Mode

Typically, Oracle Universal Installer runs in interactive mode, which means you are prompted to provide information in windows. However, experienced users can also run Oracle Universal Installer in noninteractive (also called silent) mode by using response files. These are text files containing variables and values used by Oracle Universal Installer during the installation process.

Silent installations are recommended in cases when no interaction with the user is intended or when a nongraphical terminal is used. You must first edit a response file to specify the components to install. With Oracle Universal Installer release 1.7.*x* or earlier, the target installation system still requires login to a desktop system.

Using silent installation enables you to bypass the graphical user interface (GUI) of Oracle Universal Installer interactive mode. Table B–1 lists the available response files in the `\Response` directory on the CD labeled Oracle Database Client.

Table B–1 Response Files

Response File Name	Purpose
`netca.rsp`	Oracle Net Configuration Assistant to perform the configuration with the client installation types.
`clientadmin.rsp`	Administrator installation of Oracle Database Client
`clientcustom.rsp`	Custom installation of Oracle Database Client
`instantClient.rsp`	Instant Client installation of Oracle Database Client
`clientruntime.rsp`	Runtime installation of Oracle Database Client

Copying and Modifying a Response File

To copy and modify a response file:

1. Copy the appropriate files from the `\Response` directory on the Oracle Database Client CD to your hard drive.

2. Open *Oracle Universal Installer Concepts Guide*, available on your Oracle Documentation Library CD or from the Oracle Technology Network Web site.
3. Modify the response files with any text file editor by following the instructions in both the response files and *Oracle Universal Installer Concepts Guide*.

Running Oracle Universal Installer and Specifying a Response File

To run Oracle Universal Installer and specify a response file:

1. Go to the MS-DOS command prompt.
2. Go to the directory where Oracle Universal Installer is installed.
3. Run the appropriate response file. For example,

```
C:\program files\oracle\oui\install> setup.exe [-silent]
[-nowelcome] -responseFile filename
```

Where...	Description
filename	Identifies the full path of the specific response file
-silent	Runs Oracle Universal Installer in complete silent mode. The Welcome window is suppressed automatically. If you use -silent, -nowelcome is not necessary.
-nowelcome	Suppresses the Welcome window that appears during installation.

See Also:

- "Installing Oracle Products" in *Oracle Universal Installer Concepts Guide* for more information on installing using response files
- "Deinstalling Products" in *Oracle Universal Installer Concepts Guide* for more information on deinstalling using response files

About Oracle Components in Different Languages

This section describes the following features:

- Running Oracle Universal Installer in Different Languages
- Using Oracle Components in Different Languages

Running Oracle Universal Installer in Different Languages

Oracle Universal Installer runs by default in the selected language of your operating system. Oracle Universal Installer can also be run in the following 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. Click **Start > Settings > Control Panel > Regional Options**.
   b. Select a language from the preceding table list and choose **OK**.
2. Run Oracle Universal Installer by following the instructions in "Running Oracle Universal Installer" on page 3-3.

> **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 (for example, Oracle Net 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. Follow the instructions in "Running Oracle Universal Installer" on page 3-3 to start Oracle Universal Installer.
2. From the Select a Product to Install window, select **Product Languages**.

   The Language Selection window appears.
3. Select a language in which to use Oracle components from the **Available Languages** field.
4. Use the arrow button 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.

C

Oracle Database Client Globalization Support

This appendix describes Globalization Support topics.

This appendix contains these topics:

- About NLS_LANG Parameters
- Commonly Used Values for NLS_LANG
- NLS_LANG Settings in MS-DOS Mode and Batch Mode

About NLS_LANG Parameters

Oracle provides Globalization Support that enables users to interact with a database in their own language, as defined by the `NLS_LANG` parameter. When you install Oracle Database components, the `NLS_LANG` parameter is set in the registry.

The value of the `NLS_LANG` parameter at installation is automatically chosen based on the locale setting of the operating system. The operating system locale and `NLS_LANG` value mappings are listed under "Commonly Used Values for NLS_LANG" on page C-2.

The `NLS_LANG` parameter is stored in the registry under the `HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOME`*`ID`*`\NLS_LANG` subkey, where *`ID`* is the unique number identifying the Oracle home.

The `NLS_LANG` parameter uses the following format:

`NLS_LANG = `*`LANGUAGE_TERRITORY.CHARACTER_SET`*

where:

Parameter	Description
`LANGUAGE`	Specifies the language and conventions for displaying messages, day name, and month name.
`TERRITORY`	Specifies the territory and conventions for calculating week and day numbers.
`CHARACTER_SET`	Controls the character set used for displaying messages.

See Also:

- *Oracle Database Platform Guide for Windows* for more information on the subkey locations for multiple Oracle homes
- *Oracle Database Globalization Support Guide* for information on the `NLS_LANG` parameter and Globalization Support initialization parameters

Commonly Used Values for NLS_LANG

Table C–1 lists commonly used `NLS_LANG` values for various operating system locales:

Table C–1 NLS_LANG Parameter Values

Operating System Locale	NLS_LANG Value
Arabic (U.A.E.)	ARABIC_UNITED ARAB EMIRATES.AR8MSWIN1256
Bulgarian	BULGARIAN_BULGARIA.CL8MSWIN1251
Catalan	CATALAN_CATALONIA.WE8MSWIN1252
Chinese (PRC)	SIMPLIFIED CHINESE_CHINA.ZHS16GBK
Chinese (Taiwan)	TRADITIONAL CHINESE_TAIWAN.ZHT16MSWIN950
Croatian	CROATIAN_CROATIA.EE8MSWIN1250
Czech	CZECH_CZECH REPUBLIC.EE8MSWIN1250
Danish	DANISH_DENMARK.WE8MSWIN1252
Dutch (Netherlands)	DUTCH_THE NETHERLANDS.WE8MSWIN1252
English (United Kingdom)	ENGLISH_UNITED KINGDOM.WE8MSWIN1252
English (United States)	AMERICAN_AMERICA.WE8MSWIN1252
Estonian	ESTONIAN_ESTONIA.BLT8MSWIN1257
Finnish	FINNISH_FINLAND.WE8MSWIN1252
French (Canada)	CANADIAN FRENCH_CANADA.WE8MSWIN1252
French (France)	FRENCH_FRANCE.WE8MSWIN1252
German (Germany)	GERMAN_GERMANY.WE8MSWIN1252
Greek	GREEK_GREECE.EL8MSWIN1253
Hebrew	HEBREW_ISRAEL.IW8MSWIN1255
Hungarian	HUNGARIAN_HUNGARY.EE8MSWIN1250
Icelandic	ICELANDIC_ICELAND.WE8MSWIN1252
Indonesian	INDONESIAN_INDONESIA.WE8MSWIN1252
Italian (Italy)	ITALIAN_ITALY.WE8MSWIN1252
Japanese	JAPANESE_JAPAN.JA16SJIS
Korean	KOREAN_KOREA.KO16MSWIN949
Latvian	LATVIAN_LATVIA.BLT8MSWIN1257
Lithuanian	LITHUANIAN_LITHUANIA.BLT8MSWIN1257
Norwegian	NORWEGIAN_NORWAY.WE8MSWIN1252
Polish	POLISH_POLAND.EE8MSWIN1250

Table C–1 (Cont.) NLS_LANG Parameter Values

Operating System Locale	NLS_LANG Value
Portuguese (Brazil)	BRAZILIAN PORTUGUESE_BRAZIL.WE8MSWIN1252
Portuguese (Portugal)	PORTUGUESE_PORTUGAL.WE8MSWIN1252
Romanian	ROMANIAN_ROMANIA.EE8MSWIN1250
Russian	RUSSIAN_CIS.CL8MSWIN1251
Slovak	SLOVAK_SLOVAKIA.EE8MSWIN1250
Spanish (Spain)	SPANISH_SPAIN.WE8MSWIN1252
Swedish	SWEDISH_SWEDEN.WE8MSWIN1252
Thai	THAI_THAILAND.TH8TISASCII
Spanish (Mexico)	MEXICAN SPANISH_MEXICO.WE8MSWIN1252
Spanish (Venezuela)	LATIN AMERICAN SPANISH_VENEZUELA.WE8MSWIN1252
Turkish	TURKISH_TURKEY.TR8MSWIN1254
Ukrainian	UKRAINIAN_UKRAINE.CL8MSWIN1251
Vietnamese	VIETNAMESE_VIETNAM.VN8MSWIN1258

NLS_LANG Settings in MS-DOS Mode and Batch Mode

When using Oracle utilities such as SQL*Plus, SQL Loader, Import, and Export in MS-DOS mode, the character set field of the `NLS_LANG` parameter for the session must first be set to the correct value.

This is required because MS-DOS mode uses, with a few exceptions, a different character set (or code-page) from Windows (ANSI code-page), and the default Oracle home `NLS_LANG` parameter in the registry is always set to the appropriate Windows code-page. If the `NLS_LANG` parameter for the MS-DOS mode session is not set appropriately, then error messages and data can be corrupted due to incorrect character set conversion.

For Japanese, Korean, Simplified Chinese, and Traditional Chinese, the MS-DOS code-page is identical to the ANSI code-page. In this case, there is no need to set the `NLS_LANG` parameter in MS-DOS mode.

Similarly, in batch mode, set the correct character set value of `NLS_LANG` by inserting a `SET NLS_LANG` command at the start of the batch procedure, according to the character set of the files to be processed in the procedure.

Table C–2 lists the Oracle character sets that correspond to the MS-DOS mode for various operating system locales:

Table C–2 Oracle Character Sets for Operating System Locales

Operating System Locale	Character Set
Arabic	AR8ASMO8X
Catalan	WE8PC850
Chinese (PRC)	ZHS16GBK
Chinese (Taiwan)	ZHT16MSWIN950
Czech	EE8PC852
Danish	WE8PC850

Table C–2 (Cont.) Oracle Character Sets for Operating System Locales

Operating System Locale	Character Set
Dutch	WE8PC850
English (United Kingdom)	WE8PC850
English (United States)	US8PC437
Finnish	WE8PC850
French	WE8PC850
German	WE8PC850
Greek	EL8PC737
Hungarian	EE8PC852
Italian	WE8PC850
Japanese	JA16SJIS
Korean	KO16MSWIN949
Norwegian	WE8PC850
Polish	EE8PC852
Portuguese	WE8PC850
Romanian	EE8PC852
Russian	RU8PC866
Slovak	EE8PC852
Slovenian	EE8PC852
Spanish	WE8PC850
Swedish	WE8PC850
Turkish	TR8PC857

See Also: "Managing Globalization Support in the Directory" of *Oracle Internet Directory Administrator's Guide* for Oracle Internet Directory Globalization Support issues and required `NLS_LANG` environment variables for the various components and tools in an Oracle Internet Directory environment

D

Oracle Database Client Installation Troubleshooting

This appendix contains information about troubleshooting.

This appendix contains these topics:

Verify Requirements

Before performing any of the troubleshooting steps in this appendix, ensure that the system meets the requirements and that you have completed all of the preinstallation tasks specified in Chapter 2, "Oracle Database Client Preinstallation Tasks".

Read the Release Notes

Read the release notes for the product on your platform before installing it. The release notes are available on the Oracle Database Client installation media. The latest version of the release notes is also available on the OTN Web site:

`http://otn.oracle.com/documentation/`

What to Do If an Installation Error Occurs

If you encounter an error during installation:

- Do not exit Oracle Universal Installer.
- If you clicked **Next** after you entered incorrect information about one of the installation screens, then click **Back** to return to the screen and correct the information.
- If you encounter an error while Oracle Universal Installer is copying or linking files, then see "Reviewing the Log of an Installation Session" on page D-2.
- If you encounter an error while a configuration assistant is running, then see "Troubleshooting Configuration Assistants" on page D-2.

- If you cannot resolve the problem, then remove the failed installation by following the steps listed in "Cleaning Up After a Failed Installation" on page D-3.

Reviewing the Log of an Installation Session

When Oracle Universal Installer runs on a computer with no Oracle software installed, it creates a directory called:

```
SYSTEM_DRIVE:\Program Files\Oracle\Inventory\logs
```

During this first installation and all subsequent installations, Oracle Universal Installer records all of the actions that it performs in a log file in this directory. If you encounter problems during the installation, review the log file for information about possible causes of the problem.

Log filenames take the form:

```
installActionsdate_time.log
```

If the installation occurred at 9:00:56 A.M. on May 14, 2003, for example, the log file would be named:

```
installActions2003-05-14_09-00-56-am.log
```

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.

Troubleshooting Configuration Assistants

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

- Review the installation log files listed in "Reviewing the Log of an Installation Session" on page D-2.
- Review the specific configuration assistant log file located in the *ORACLE_BASE**ORACLE_HOME*\`cfgtoollogs` directory. Try to fix the issue that caused the error.
- If you see the Fatal Error. Reinstall message, look for the cause of the problem by reviewing the log files. Refer to "Fatal Errors" on page D-3 for further instructions.

Configuration Assistant Failure

Oracle configuration assistant failures are noted at the bottom of the installation screen. The configuration assistant interface displays additional information, if available. The configuration assistant execution status is stored in the `installActions`*date_time*`.log` file.

The execution status codes are listed in the following table:

Status	Result Code
Configuration assistant succeeded	0
Configuration assistant failed	1
Configuration assistant cancelled	-1

Fatal Errors

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

1. Remove the failed installation as described in "Cleaning Up After a Failed Installation" on page D-3.
2. Correct the cause of the fatal error.
3. Reinstall the Oracle software.

Silent Response File Error Handling

To determine whether a silent installation succeeds or fails, see the `installActions`*`date_time`*`.log` file, located in the `Inventory` directory. If necessary, see the previous section for information about determining the location of the `Inventory` directory.

A silent installation fails if:

- You do not specify a response file
- You specify an incorrect or incomplete response file
- Oracle Universal Installer encounters an error, such as insufficient disk space

Oracle Universal Installer or configuration assistant validates the response file at runtime. If the validation fails, the silent 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.

Cleaning Up After a Failed 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. Start Oracle Universal Installer as described in "Installing Oracle Database Client" on page 3-2.
2. Click **Deinstall Products** on the Welcome window or click **Installed Products** on any Installer window.

   The Inventory window appears, listing installed products.
3. Select the Oracle home that contains the products that you want to remove, then click **Remove**.
4. Manually remove the Oracle home directory created during the failed installation.
5. Reinstall the Oracle software.

Glossary

connect descriptor

A specially formatted description of the destination for a network connection. A connect descriptor contains destination service and network route information.

The destination service is indicated by using its service name for the Oracle Database or its Oracle system identifier (**SID**) for Oracle release 8.0, or version 7 databases. The network route provides, at a minimum, the location of the **listener** through use of a network address.

connect identifier

A name, net service name, or service name that resolves to a connect descriptor. Users initiate a connect request by passing a username and password along with a connect identifier in a connect string for the service to which they want to connect, for example:

```
SQL> CONNECT username/password@connect_identifier
```

default domain

The network domain within which most client requests take place. It can be the domain where the client resides, or a domain from which the client often requests network services. The default domain is also the client configuration parameter that determines what domain to append to unqualified network name requests. A name request is unqualified if it does not have a "." character within it.

external procedures

A PL/SQL routine executing on an Oracle server can call an external procedure or function that is written in the C programming language and stored in a shared library. In order for the Oracle Database to connect to external procedures, the server must be configured with a net service name and the **listener** must be configured with protocol address and service information.

global database name

The full database name that uniquely distinguishes it from any other database in your network domain.

For example:

```
sales.us.acme.com
```

where `sales` is the name you want to call your database and `us.acme.com` is the network domain in which the database is located.

installation type

An installation type is a predefined component set that automatically selects which components to install. See "Oracle Database Client Installation Types" on page 1-1 for a list of installation types available with each top-level component.

Interprocess Communication (IPC)

A protocol used by client applications that resides on the same node as the **listener** to communicate with the database. IPC can provide a faster local connection than TCP/IP.

ldap.ora file

A file created by the Oracle Net Configuration Assistant that contains the following directory access information:

- Type of directory
- Location of directory
- Default administrative context the client or server uses to look up or configure connect identifiers for connections to database services

The `ldap.ora` file resides in *ORACLE_BASE*`\`*ORACLE_HOME*`\network\admin`.

listener

A process that resides on the server and whose responsibility is to listen for incoming client connection requests and manage the traffic to the server.

When a client requests a network session with a database server, a listener receives the actual request. If the client information matches the listener information, then the listener grants a connection to the database server.

listener.ora file

A configuration file for the listener that identifies the:

- Listener name
- Protocol addresses on which it is accepting connection requests
- Services for which it is listening

The `listener.ora` file resides in *ORACLE_BASE*`\`*ORACLE_HOME*`\network\admin`.

An Oracle Database 10*g* release 1 (10.1) does not require identification of the database service because of service registration. However, static service configuration is required for an Oracle Database 10*g* release 1 (10.1) if you plan to use Oracle Enterprise Manager.

local naming

A **naming method** that resolves a net service name into a connect descriptor. This name is configured and stored in the **tnsnames.ora file** on each individual client.

naming method

A resolution method used by a client application to resolve a connect identifier to a network address when attempting to connect to a database service. Oracle Net Services supports the following naming methods:

- Local naming
- Directory naming

- Host naming
- External naming

net service name

A simple name for a service that resolves to a connect descriptor. Users initiate a connect request by passing a username and password along with a net service name in a connect string for the service to which they want to connect:

```
SQL> CONNECT username/password@net_service_name
```

Depending on your needs, net service names can be stored in a variety of places, including:

- Local configuration file, `tnsnames.ora`, on each client
- Directory server
- External naming service, such as Network Information Service (NIS) or Cell Directory Service (CDS)

operating system authenticated connections

Windows login credentials can be used to authenticate users connecting to an Oracle Database. The benefits of Windows native authentication include:

- Enabling users to connect to multiple Oracle Databases without supplying a username or password
- Centralizing Oracle Database user authorization information in Windows, which frees Oracle Database from storing or managing user passwords

OPS$

The initialization file parameter `OS_AUTHENT_PREFIX` enables users to specify a prefix that Oracle uses to authenticate users attempting to connect to the database. Oracle concatenates the value of this parameter to the beginning of the user's operating system account name and password. When a connection request is attempted, Oracle compares the prefixed username with Oracle usernames in the database.

The default value of this parameter is `""` (a null string), thereby eliminating the addition of any prefix to operating system account names. In earlier releases, `OPS$` (short for operating system specific) was the default setting.

Oracle Context

The root of a directory subtree with a relative distinguished name of `cn=OracleContext`, under which all Oracle software information is kept. There may be one (or more than one) Oracle Context in a directory. An Oracle Context can be associated with a directory naming context.

The Oracle Context can contain the following Oracle entries:

- Connect identifiers for use with Oracle Net Services directory naming to make database connections
- Enterprise user security for use with Oracle Advanced Security

Oracle home

The directory path in which to install Oracle components (for example, `c:\oracle\product\10.1.0\db_`*n* where *n* is the number of the Oracle home).

You are prompted to enter an Oracle home in the Path field of the Oracle Universal Installer File Locations window.

Oracle home name

The name of the current Oracle home. Each Oracle home has a home name that distinguishes it from all other Oracle homes on your computer. During installation, you are prompted to enter an Oracle home name in the Name field of the Oracle Universal Installer File Locations window.

Oracle schema

A set of rules that determine what can be stored in an LDAP-compliant directory server. Oracle has its own schema that is applied to many types of Oracle entries, including Oracle Net Services entries. The Oracle schema for Oracle Net Services entries includes the attributes the entries may contain.

Oracle Database Documentation CD

The CDs in your kit that include the Oracle Database Documentation CD. The Oracle Database Documentation CDs are separate from the component CDs.

The Oracle Database Documentation CDs do not include this installation guide or *Oracle Database Client Release Notes for Windows*. These documents are only included on the first component CD.

Oracle Net foundation layer

A networking communication layer that is responsible for establishing and maintaining the connection between the client application and server, as well as exchanging messages between them.

protocol address

An address that identifies the network address of a network object.

When a connection is made, the client and the receiver of the request, such as the **listener**, or Oracle Connection Manager, are configured with identical protocol addresses. The client uses this address to send the connection request to a particular network object location, and the recipient "listens" for requests on this address. It is important to install the same protocols for the client and the connection recipient, as well as configure the same addresses.

repository

A set of tables located in any Oracle database accessible to the Oracle Management Server. Oracle Management Server uses a repository to store all system data and application data, information on the state of managed nodes distributed throughout the environment, as well as information about the separately licensable management packs.

service registration

A feature by which the PMON process (an instance background process) automatically registers information with a **listener**. Because this information is registered with the listener, the **listener.ora file** does not need to be configured with this static information.

Service registration provides the listener with the following information:

- Service name(s) for each running instance of the database
- Instance name(s) of the database

- Service handlers (dispatchers and dedicated servers) available for each instance

  This allows the listener to direct a client's request appropriately.

- Dispatcher, instance, and node load information

  This allows the listener to determine which dispatcher can best handle a client connection's request. If all dispatchers are blocked, the listener can spawn a dedicated server for the connection.

This information allows the listener to determine how best to service a client connection request.

SID

The Oracle system identifier that distinguishes the database from all other database on your computer. The SID automatically defaults to the database name portion of the global database name (`sales` in the example `sales.us.acme.com`) until you reach eight characters or enter a period. You can accept or change the default value.

sqlnet.ora file

A configuration file for the client or server that specifies the:

- Client domain to append to unqualified service names or net service names
- Order of naming methods for the client to use when resolving a name
- Logging and tracing features to use
- Route of connections
- External naming parameters
- Oracle Advanced Security parameters

The `sqlnet.ora` file resides in *`ORACLE_BASE`*`\`*`ORACLE_HOME`*`\network\admin`.

system identifier

See **SID**.

Terminal Server

Microsoft Windows Terminal Server is a Windows thin-client terminal server, a product that adds support for multiple, simultaneous client sessions on the Windows NT Server. Windows Terminal Server provides an operating system graphical user interface (GUI) to users of Oracle databases.

tnsnames.ora file

A configuration file that contains net service names mapped to connect descriptors. This file is used for the local naming method. The `tnsnames.ora` file resides in *`ORACLE_BASE`*`\`*`ORACLE_HOME`*`\network\admin`.

UNC

See Universal Naming Convention (UNC)

unqualified name

A net service name that does not contain a network domain.

Universal Naming Convention (UNC)

The Universal Naming Convention provides a means to access files on a network without mapping the network drive to a drive letter. UNC names are constructed in the following manner:

`\\`*`computer name`*`\`*`share name`*`\`*`filename`*

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