Oracle® Database

Client Installation Guide

11*g* Release 2 (11.2) for Microsoft Windows

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Oracle Database Client Installation Guide 11*g* Release 2 (11.2) for Microsoft Windows

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Preface

This guide provides instructions about installing and configuring Oracle Database Client for both Microsoft Windows (32-Bit) and Microsoft Windows (x64). Only the features of Oracle Database for Microsoft Windows (32-bit) and Microsoft Windows (x64) software installed on Windows Server 2003, Windows Server 2003 R2, Windows XP Professional, Windows Vista, Windows Server 2008, Windows Server 2008 R2 (x64), and Windows 7 are discussed in this guide.

This preface contains these topics:

- Audience
- Documentation Accessibility
- Related Documentation
- Conventions

Audience

Oracle Database Client Installation Guide for Microsoft 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

   See Also:

   - *Oracle Database Client Quick Installation Guide for Microsoft Windows (32-Bit)* to perform a quick installation using the default settings
   - *Oracle Database Client Quick Installation Guide for Microsoft Windows (x64)* to perform a quick installation using the default settings

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documentation

For more information, see these Oracle resources:

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

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 about how these schemas were created and how you can use them yourself.

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/technetwork/community/join/overview/index.html

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/technetwork/indexes/documentation/index.html

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.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Oracle Database Client Installation Overview

This chapter describes the different types of Oracle Database Client installations that you can perform, and issues to consider before you install the software:

- Installation Overview
- Oracle Database Client and Oracle Database Interoperability
- Recommended File System
- Managing User Accounts with User Account Control
- Oracle Database Client Installation Types
- Simplified Patching of Timestamp with Time Zone Data Type
- Software Updates Option

1.1 Installation Overview

The Oracle Database Client installation process consists of five steps:

1. **Read the release notes**: Read the Oracle Database 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/technetwork/indexes/documentation/index.html

2. **Plan your installation:** This overview chapter describes the installation types that you can use to install Oracle Database Client and issues to consider before you begin.

   You may also 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. **Complete preinstallation tasks:** Chapter 2 describes preinstallation tasks that you must complete before installing Oracle Database Client.

4. **Install the software:** Use the following sections to install Oracle Database Client:

   - Chapter 3 describes how to use the Oracle Universal Installer (OUI) GUI to install Oracle Database Client.
   - Appendix B describes how to perform a silent or noninteractive installation using response files.

- "Installing and Using Oracle Components in Different Languages" on page C-1 describes how to install and use Oracle components in different languages.

- Appendix D provides troubleshooting advice in case you encounter problems with the installation.

- Chapter 5 describes how to remove Oracle Database Client.

5. **Complete postinstallation tasks:** Use the following sections to complete the postinstallation tasks:

- Chapter 4 describes recommended and required postinstallation tasks.

- Appendix C provides information about globalization support.

1.2 Oracle Database Client and Oracle Database Interoperability

For information about interoperability between different versions of Oracle Database Client and Oracle Database releases, see Note 207303.1 on the My Oracle Support (formerly Oracle*MetaLink*) Web site at

https://support.oracle.com/

1.3 Recommended File System

Oracle strongly recommends that you install the Oracle database home (Oracle database binaries, trace files, and so on) on Oracle ACFS or NTFS; the database files themselves must be placed on Oracle ASM if using Oracle ACFS; otherwise they cannot be placed on NTFS. Usage of Oracle ACFS and Oracle ASM or NTFS instead of FAT32 is recommended to ensure security of these files.

> **See Also:** "File Permissions" in *Oracle Database Platform Guide for Microsoft Windows* for information about the default permissions when using Oracle Universal Installer and Database Configuration Assistant to install the Oracle Database software

1.4 Managing User Accounts with User Account Control

To ensure that only trusted applications run on your computer, Windows Vista, Windows Server 2008, Windows Server 2008 R2, and Windows 7 provide User Account Control. If you have enabled this security feature, then, depending on how you have configured it, Oracle Universal Installer prompts you for either your consent or your credentials when installing Oracle Database. Provide either the consent or your Windows Administrator credentials as appropriate.

You must have Administrator privileges to run some Oracle tools, such as Database Configuration Assistant, Net Configuration Assistant, and OPatch, or to run any tool or application that writes to any directory within the Oracle home. If User Account Control is enabled, and you are logged in as the local Administrator, then you can successfully run each of these commands in the usual way. However, if you are logged in as "a member of the Administrator group," then you must explicitly invoke these tasks with Windows Administrator privileges. All the Oracle shortcuts that require Administrator privileges will be invoked as "Administrator" automatically when you click the shortcuts. However, if you run the above tools from a Windows command prompt, you must run them from an Administrator command prompt. OPatch does not have a shortcut and has to be run from an Administrator command prompt.

See Also: "Running Tools with Windows User Account Control" in *Oracle Database Platform Guide for Microsoft Windows* for more information

To start a command prompt window with Windows Administrator privileges:

1. On your desktop, create a shortcut for the command prompt window. An icon for that shortcut appears on the desktop.

2. Right click the icon for the newly created shortcut, and specify "Run as administrator."

When you open this window, the title bar reads Administrator: Command Prompt. Commands run from within this window are run with Administrator privileges.

1.5 Oracle Database Client Installation Types

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

- **Instant Client:** Installs 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.

  Included in the Instant Client installation is Instant Client Light. You may want to use this version of Instant Client if your applications generate error messages in American English only. The advantage of using Instant Client Light is that it has a much smaller footprint than regular Instant Client. Hence, your applications use less memory.

- **Administrator:** Enables applications to connect to an Oracle database on the local system or on a remote system. It 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:** Enables you to select individual components from the list of Administrator and Runtime components.

1.6 Simplified Patching of Timestamp with Time Zone Data Type

Starting with Oracle Database 11*g* Release 2 (11.2), the patching process of `TIMESTAMP WITH TIME ZONE` data type values is simplified.

See Also: "Oracle Database 11g Release 2 (11.2) New Features in Globalization" and "Clients and Servers Operating with Different Versions of Time Zone Files" in *Oracle Database Globalization Support Guide* for more information about the simplified patching process and how certain clients work with server with different time zone files

1.7 Software Updates Option

Use the Software Updates feature to dynamically download and apply the latest updates released by Oracle; such as, interim patch updates, critical patch updates, Oracle Universal Installer updates, and the latest patch set updates. This functionality is available starting with Oracle Database 11*g* Release 2 (11.2.0.2).

You can choose to download the latest updates by providing My Oracle Support credentials or you can apply previously downloaded updates. You can also download the updates separately using the -downloadUpdates option and later apply them during the installation by providing the location where the updates are present.

> **See Also:** "Procedure for Installing Oracle Database Client" on page 3-8 for more information about the -downloadUpdates option, and dynamically applying software updates during the installation

2

Oracle Database Client Preinstallation Requirements

This chapter describes the following tasks that you must complete before you can install the Oracle Database Client products:

- Oracle Database Client Hardware Requirements
- Oracle Database Client Software Requirements
- Oracle Database Network Topics
- Oracle Database Client Hardware and Software Certification

2.1 Oracle Database Client Hardware Requirements

Table 2–1 lists the required hardware components for Oracle Database Client on Windows 32-bit.

Table 2–2 lists the required hardware components for Oracle Database Client on Windows x64.

Table 2–1   Windows 32-Bit Hardware Requirements

Requirement	Minimum Value
System Architecture	Processor: Intel (x86), AMD64, and Intel EM64T
	Note: Oracle provides 32-bit (Windows x86) and 64-bit (Windows x64) versions of Oracle Database Client. The 32-bit database client version runs on the 32-bit version of Windows on either x86 or x64 hardware. Oracle certifies 32-bit Oracle Database Client on Windows x64. Table 2–5 lists the operating systems supported on Windows 32-bit.
Physical memory (RAM)	512 MB minimum, 1 GB recommended
	On Windows 7, 1 GB minimum
Virtual memory	Double the amount of RAM
Hard disk space	Total ranges between 300 - 1160 MB. See Table 2–3 for details.
Video adapter	256 colors
Screen Resolution	1024 X 768 minimum

Table 2–2   Windows x64 Hardware Requirements

Requirement	Minimum Value
System Architecture	Processor: AMD64 and Intel EM64T
	Note: Oracle provides 32-bit (Windows x86) and 64-bit (Windows x64) versions of Oracle Database Client. Oracle certifies 32-bit Oracle Database Client on Windows x64. Table 2–6 lists the operating systems supported on Windows x64.
Physical memory (RAM)	512 MB minimum, 1 GB recommended
	On Windows 7, 2 GB minimum
Virtual memory	Double the amount of RAM
Hard disk space	Total ranges from 330 - 1260 MB. See Table 2–4 for details.
Video adapter	256 colors
Screen Resolution	1024 X 768 minimum

2.1.1 Hard Disk Space Requirements

This section lists system requirements for Windows platforms that use the NT File System (NTFS). Oracle strongly recommends that you install the Oracle database home (Oracle database binaries, trace files, and so on) on Oracle ACFS or NTFS; the database files themselves must be placed on Oracle ASM if using Oracle ACFS; otherwise they can be placed on NTFS. Usage of Oracle ACFS and Oracle ASM or NTFS instead of FAT32 is recommended to ensure security of these files.

The NTFS system requirements listed in this section are more accurate than the hard disk values reported by the Oracle Universal Installer Summary window. The Summary window does not include accurate values for disk space, 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 2–3 lists the Windows 32-Bit disk space requirements on NTFS.

Table 2–4 lists the Windows x64 disk space requirements on NTFS.

Table 2–3   Windows 32-Bit Disk Space Requirements on NTFS

Installation Type	TEMP Space	SYSTEM_DRIVE:\Program Files\Oracle\Inventory	Oracle Home	Total
Instant Client	130 MB	1.1 MB	215 MB	346.1 MB
Administrator	130 MB	1.1 MB	1024 MB	1155.1 MB
Runtime	130 MB	1.1 MB	735 MB	866.1 MB
Custom (all components installed)	130 MB	1.1 MB *	1024 MB *	1155.1 MB *

* Disk space requirements vary, depending on the components selected.

Table 2–4   Windows x64 Disk Space Requirements on NTFS

Installation Type	TEMP Space	SYSTEM_DRIVE:\Program Files\Oracle\Inventory	Oracle Home	Total
Instant Client	130 MB	5 MB	244 MB	380 MB
Administrator	130 MB	5 MB	1126.4 MB	1261.4 MB
Runtime	130 MB	5 MB	750 MB	885 MB
Custom (all components installed)	130 MB	5 MB *	1126.4 MB *	1261.4 MB *

* Disk space requirements vary, depending on the components selected.

> **Note:**   If you want to configure only the Instant Client Light component of Instant Client, you need 30–32 MB of disk space to store the related files. Refer to "Configuring Instant Client Light" on page 4-3 for more information.

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

2.1.2 Verifying Hardware Requirements

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

1. Determine the physical RAM size. For example, on a Windows 2003 computer, double-click **System** in the Windows Control Panel and select the **General** tab.

    On a Windows Server 2008 R2 computer, click **System and Security** in the Windows Control Panel, then click **System**.

    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 virtual memory (also known as paging file size). For example, on a Windows 2003 computer, double-click **System**, click the **Advanced** tab, and click **Settings** in the Performance section. Then select the **Advanced** tab.

    On a Windows Server 2008 R2 computer, click **System and Security**, then click **System**, click **Advanced System Settings**, click the **Advanced** tab on System Properties page, and then click **Settings** in the Performance section. Then select the **Advanced** tab on Performance Options page.

    The virtual memory is listed in the Virtual Memory section.

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

3. Determine the amount of free disk space on the system. For example, on a Windows 2003 computer, double-click **My Computer**, right-click the drive where the Oracle software is to be installed, and select **Properties**.

    On a Windows Server 2008 R2 computer, right-click **My Computer** and click **Open**.

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.

On Windows 32-bit, if there is less than 500 MB of disk space available in the `temp` directory, then delete all unnecessary files. If the temp disk space is still less than 500 MB, then set the `TEMP` or `TMP` environment variable to point to a different hard drive location.

On Windows x64, if there is less than 125 MB of disk space available in the `temp` directory, then delete all unnecessary files. If the temp disk space is still less than 125 MB, then set the `TEMP` or `TMP` environment variable to point to a different hard drive location.

For example, to change the environment variables on a Windows Server 2003 computer, double-click **System**, click the **Advanced** tab, and click **Environment Variables**.

On a Windows Server 2008 R2 computer, click **System and Security**, then click **System**, click **Advanced System Settings**, click the **Advanced** tab on System Properties page, and then click **Environment Variables**.

2.2 Oracle Database Client Software Requirements

This section covers the following topics:

- General Oracle Database Client Software Requirements for Windows 32-Bit
- General Oracle Database Client Software Requirements for Windows x64
- Instant Client Light Language and Character Set Requirements

2.2.1 General Oracle Database Client Software Requirements for Windows 32-Bit

Table 2–5 lists the software requirements for Oracle Database Client on Windows 32-bit.

Table 2–5   Windows 32-Bit Software Requirements

Requirement	Value
Operating System	Oracle Database Client for Windows is supported on the following operating systems:
	■ Windows Server 2003 - all editions
	■ Windows Server 2003 R2 - all editions
	■ Windows XP Professional
	■ Windows Vista - Business, Enterprise, and Ultimate editions
	■ Windows Server 2008 - Standard, Enterprise, Datacenter, Web, and Foundation editions. The specific operating system component that is not supported is Server Core. For information about Hyper-V support, visit My Oracle Support (formerly Oracle*MetaLink*) at
	https://support.oracle.com/
	■ Windows 7 - Professional, Enterprise, and Ultimate editions
	Windows Multilingual User Interface Pack is supported.

Table 2–5   (Cont.) Windows 32-Bit Software Requirements

Requirement	Value
Compiler	Pro*COBOL has been tested and certified with Net Express 5.0.
	The following components are supported with the Microsoft Visual C++ .NET 2005 8.0, Microsoft Visual C++ .NET 2008 9.0, and Intel 10.1 C compilers:
	■ Oracle Call Interface
	■ External callouts
	■ Pro*C/C++
	■ XDK
	Oracle C++ Call Interface is supported with
	■ Microsoft Visual C++ .NET 2005 8.0
	■ Microsoft Visual C++ .NET 2008 9.0 - OCCI libraries are installed under `ORACLE_HOME`\oci\lib\msvc\vc9. When developing OCCI applications with MSVC++ 9.0, ensure that the OCCI libraries are correctly selected from this directory for linking and executing.
	■ Intel 10.1 C++ compiler with Microsoft Visual C++ .NET 2005 STLs.
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:

■ "Remote Desktop Services" on page 2-14

2.2.2 General Oracle Database Client Software Requirements for Windows x64

Table 2–6 lists the software requirements for Oracle Database Client on Windows x64.

Table 2–6   Windows x64 Software Requirements

Requirement	Value
Operating System	Oracle Database Client for Windows is supported on the following operating systems:
	■ Windows Server 2003 - all x64 editions
	■ Windows Server 2003 R2 - all x64 editions
	■ Windows XP Professional x64
	■ Windows Vista x64 - Business, Enterprise, and Ultimate editions
	■ Windows Server 2008 x64 and Windows Server 2008 R2 x64 - Standard, Enterprise, Datacenter, Web, and Foundation editions. The Server Core option is not supported.
	Note: For more information about Hyper-V support, visit My Oracle Support (formerly Oracle*MetaLink*) at
	https://support.oracle.com
	■ Windows 7 x64 - Professional, Enterprise, and Ultimate editions
	Windows Multilingual User Interface Pack is supported.
Compiler	Pro*COBOL has been tested and certified with Net Express 5.0.
	The following components are supported with the Microsoft Visual C++ .NET 2005 8.0, Microsoft Visual C++ .NET 2008 9.0, and Intel 10.1 C compilers:
	■ Oracle Call Interface
	■ External callouts
	■ Pro*C/C++
	■ XDK
	Oracle C++ Call Interface is supported with
	■ Microsoft Visual C++ .NET 2005 8.0
	■ Microsoft Visual C++ .NET 2008 9.0 - OCCI libraries are installed under `ORACLE_HOME`\oci\lib\msvc\vc9. When developing OCCI applications with MSVC++ 9.0, ensure that the OCCI libraries are correctly selected from this directory for linking and executing.
	■ Intel 10.1 C++ compiler with Microsoft Visual C++ .NET 2005 STLs.
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:

■ "Remote Desktop Services" on page 2-14

2.2.3 Instant Client Light Language and Character Set Requirements

In addition to the requirements described in the previous section, if you plan to use Instant Client Light, the applications must use the following languages and character sets:

- **Language:** Any language that is supported by Oracle, but only US English error messages are returned for errors generated on the client side.

- **Territory:** Any territory that is supported by Oracle.

- **Character sets:**
  - Single byte
    * US7ASCII
    * WE8DEC
    * WE8ISO8859P1
    * WE8MSWIN1252
  - Unicode
    * UTF8
    * AL16UTF16
    * AL32UTF8

Instant Client Light can connect to databases having one of the following database character sets. An error is returned if a character set other than those in the list is used as the client or database character set.

- US7ASCII
- WE8DEC
- WE8MSWIN1252
- WE8ISO8859P1
- WE8EBCDIC37C
- WE8EBCDIC1047
- UTF8
- AL32UTF8

Instant Client Light can also operate with the OCI Environment handles created in the OCI_UTF16 mode.

The language, territory, and character sets are determined by the NLS_LANG parameter, which is stored in the registry under the HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE*KEY_HomeName*\NLS_LANG subkey, where *HomeName* is the unique name identifying the Oracle home.

> **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 an irrecoverable 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 terminates parsing and raises an exception.

> **See Also:** Appendix C, "Configuring Oracle Database Globalization Support" for more information about NLS_LANG

2.3 Oracle Database Network Topics

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

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

- Installing Oracle Database on DHCP Computers
- Installing Oracle Database on Computers with Multiple IP Addresses
- Installing Oracle Database on Computers with Multiple Aliases
- Installing Oracle Database on Non-Networked Computers
- Installing a Loopback Adapter

2.3.1 Installing Oracle Database 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 Oracle Database onto a computer that uses the DHCP protocol, you must install a loopback adapter to assign a static, non-routable IP address to that computer.

> **See Also:** Checking if a Loopback Adapter Is Installed on Your Computer on page 2-11

2.3.2 Installing Oracle Database on Computers with Multiple IP Addresses

You can install Oracle Database 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.

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

6. Click **OK**, then in 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**.

2.3.3 Installing Oracle Database on Computers with Multiple Aliases

A computer with multiple aliases is registered with the naming service under a single IP address 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 host name you want to use.

2.3.4 Installing Oracle Database on Non-Networked Computers

You can install Oracle Database on a non-networked computer. If the computer, such as a laptop, is configured for DHCP and you plan to connect the computer to the network after the Oracle Database installation, perform these steps before you install Oracle Database on the non-networked computer.

1. Install a loopback adapter on the computer.

   The loopback adapter and local IP address simulate a networked computer. If you connect the computer to the network, Oracle Database still uses the local IP address and host name.

   > **See Also:**

2. Ping the computer from itself, using only the host name and using the fully qualified name, which should be in the *DRIVE_LETTER:*\system32\drivers\etc\hosts file.

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

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

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

If the `ping` command fails, contact your network administrator.

Connecting the Computer to the Network after Installation

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

2.3.5 Installing a Loopback Adapter

When you install a loopback adapter, the loopback adapter assigns a local IP address for your computer. After the loopback adapter is installed, there are at least two network adapters on your computer: your own network adapter and the loopback adapter. To run Oracle Database on Windows, set the loopback adapter as the primary adapter.

You can change the bind order for the adapters without reinstalling the loopback adapter. The bind order of the adapters to the protocol indicates the order in which the adapters are used. When the loopback adapter is used first for the TCP/IP protocol, all programs that access TCP/IP first probe the loopback adapter. The local address is used for tools, such as Oracle Enterprise Manager. Any other applications that use a different Ethernet segment are routed to the network card.

A loopback adapter is required if:

- You are installing on a DHCP computer, or

  > **See Also:** "Installing Oracle Database on DHCP Computers" on page 2-8

- You are installing on a non-networked computer and plan to connect the computer to a network after installation.

  > **See Also:** "Installing Oracle Database on Non-Networked Computers" on page 2-9

This section covers the following topics:

- Checking if a Loopback Adapter Is Installed on Your Computer

- Installing a Loopback Adapter on Windows Server 2003, Windows Server 2003 R2, or Windows XP

- Installing a Loopback Adapter on Windows Vista and Windows Server 2008

- Installing a Loopback Adapter on Windows 7 and Windows Server 2008 R2

- Removing a Loopback Adapter

2.3.5.1 Checking if a Loopback Adapter Is Installed on Your Computer

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

```
DRIVE_LETTER:\>ipconfig /all
```

> **Note:** Loopback Adapter installed on the computer should be made the Primary Network Adapter.

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. . . . . . . . . . . : No
IP Address. . . . . . . . . . . . : 10.10.10.10
Subnet Mask . . . . . . . . . . . : 255.255.0.0
```

2.3.5.2 Installing a Loopback Adapter on Windows Server 2003, Windows Server 2003 R2, or Windows XP

To install a loopback adapter on Windows 2003, Windows Server 2003 R2, 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 common hardware types, 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**. If you are using Windows Vista or Windows Server 2008, then click **Manage Network Connections**. This displays the Network Connections Control Panel item.

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. Save the values you entered, which you need later in this procedure.

   d. Leave all other fields empty.

   e. Click **OK**.

17. Click **Close**.

18. Close **Network Connections**.

19. Restart the computer.

20. Add a line to the `DRIVE_LETTER:\ 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:

> **Note:** Domain name is optional.

---

   a. Open **System** in the Control Panel, and select the **Computer Name** tab. In Windows Vista and Windows Server 2008, the Computer Name tab is not available. In **Full computer name**, make sure you see the host name and the domain name, for example, `sales.us.example.com`.

   b. Click **Change**. 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.example.com`.

   c. Click **More**. In **Primary DNS suffix of this computer**, you should see the domain name, for example, `us.example.com`.

2.3.5.3 Installing a Loopback Adapter on Windows Vista and Windows Server 2008

To install a loopback adapter on Windows Vista or Windows Server 2008:

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 The wizard can help you install other hardware window, select **Install the hardware that I manually select from a list**, and click **Next**.

5. From the list of hardware types, select the type of hardware you are installing window, select **Network adapters**, and click **Next**.

6. In the Select Network Adapter window, make the following selections:

- **Manufacturer**: Select **Microsoft**.

- **Network Adapter**: Select **Microsoft Loopback Adapter**.

7. Click **Next**.

8. In the The wizard is ready to install your hardware window, click **Next**.

9. In the Completing the Add Hardware Wizard window, click **Finish**.

10. Go to step 12 of the previous section. The remaining steps are the same as given for Windows Vista.

2.3.5.4 Installing a Loopback Adapter on Windows 7 and Windows Server 2008 R2

To install a loopback adapter on Windows 7 and Windows Server 2008 R2:

1. Click **Start** and enter `hdwwiz` in the Search box.

2. Click **hdwwiz** to start the Add Hardware wizard.

3. Go to step 3 of the previous section. The remaining steps are the same as given for Windows XP.

2.3.5.5 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**. This tab is not available with Windows Vista and Windows Server 2008. Click **Device Manager** instead.

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**.

6. Restart the computer.

7. Remove the line from the `DRIVE_LETTER:`\WINDOWS\system32\drivers\etc\hosts file, added after the localhost line while installing the loopback adapter on other Windows operating systems.

2.4 Oracle Database Client 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 My Oracle Support (formerly 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 My Oracle Support (formerly Oracle*MetaLink)* Web site is available at the following URL:

https://support.oracle.com/

You must register online before using My Oracle Support (formerly Oracle*MetaLink*). After logging in, click the **Certifications** tab from the list of tabs in the home page. On the Certification Information page, choose a product by using the Select Product menu on the left side of the page. Other options include **Product Roadmap**, and **Quick Links**.

The following sections list the certification information:

- Remote Desktop Services
- Oracle Services for Microsoft Transaction Server
- Third-Party Database Certification for SQL Developer
- Separate 32-Bit Client Software for 64-Bit Platforms
- Web Browser Support

2.4.1 Remote Desktop Services

On Windows, Oracle supports installing, configuring, and running Oracle Database through Remote Desktop Services, formerly known as Terminal Services. To install Oracle Database, Oracle recommends that you start all configuration tools from the Terminal Server console session of the server (using `mstsc/console`).

Platform-specific support information is as follows:

- Windows 2003 and Windows Server 2003 R2: You can configure Windows 2003 and Windows Server 2003 R2 to use Terminal Services in Remote Desktop for Administration Mode or Terminal Server Mode.

- Windows XP, Windows Vista, and Windows 7: The Remote Desktop is only available in Single User Mode.

- Windows Server 2008 and Windows Server 2008 R2: You can have multiple Remote Desktop sessions.

See Also:

- The Microsoft Web site for more information about Remote Desktop Services

  http://www.microsoft.com/

- The My Oracle Support (formerly Oracle*MetaLink*) Web site for the latest Terminal Services and Remote Desktop Services certification information

  https://support.oracle.com/

2.4.2 Oracle Services for Microsoft Transaction Server

Oracle Services for Microsoft Transaction Server running on Windows Vista requires a minimum of Service Pack 1 or higher.

2.4.3 Third-Party Database Certification for SQL Developer

You can use Oracle SQL Developer to view metadata and data of several non-Oracle databases. See "Database Certification for SQL Developer (Oracle and Third-Party)" in *Oracle SQL Developer Installation Guide* for more information.

2.4.4 Separate 32-Bit Client Software for 64-Bit Platforms

Starting with Oracle Database 11*g* Release 2 (11.2), the 64-bit client software does not contain any 32-bit client binaries. If you require 32-bit client binaries on 64-bit platforms, then install the 32-bit binaries from the respective 32-bit client software.

However, when you install the 32-bit client binaries on 64-bit platforms, the installer checks for the existence of 32-bit software.

> **See Also:** "General Oracle Database Client Software Requirements for Windows 32-Bit"

2.4.5 Web Browser Support

The following Web browsers are supported for Oracle Enterprise Manager Database Control:

- Netscape Navigator 8.1
- Netscape Navigator 9.0
- Microsoft Internet Explorer 6.0 SP2
- Microsoft Internet Explorer 7.0 SP1
- Microsoft Internet Explorer 8.0
- Microsoft Internet Explorer 9.0
- Firefox 2.0
- Firefox 3.0.7
- Firefox 3.5
- Firefox 3.6
- Safari 3.1
- Safari 3.2

- Safari 4.0.x
- Google Chrome 3.0
- Google Chrome 4.0

3

Installing Oracle Database Client

You can use 32-Bit media for installing Oracle Database Client on all supported operating systems. You can use 64-Bit media for installing Oracle Database Client on all supported 64-bit x64 operating systems. This guide is for both Windows 32-Bit and Windows x64. This chapter covers the following topics:

- Preinstallation Considerations Before Installing Oracle Database Client
- Accessing the Installation Software
- Installing the Oracle Database Client Software

3.1 Preinstallation Considerations Before Installing Oracle Database Client

The Oracle Database Client software is available on 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 silent or noninteractive installations using response files, without using the GUI.

Review the information in Chapter 1, "Oracle Database Client Installation Overview" and complete the tasks listed in Chapter 2, "Oracle Database Client Preinstallation Requirements" before beginning the installation.

Next, consider the following issues:

- Installation Consideration on Windows Vista and Later
- Installing Oracle Database Client Installations in Silent or Noninteractive Mode
- Creating the Oracle Base Directory
- Installing Oracle Database Client into Multiple Oracle Homes
- Installing Oracle Database Client on a System with an Existing Oracle Software
- Updating the Existing Software with the Current Version

3.1.1 Installation Consideration on Windows Vista and Later

On Windows Vista, Windows Server 2008, Windows Server 2008 R2, and Windows 7, command prompts should be opened with Administrator privileges.

> **See Also:** "Managing User Accounts with User Account Control"

3.1.2 Installing Oracle Database Client Installations in Silent or Noninteractive Mode

If you need to perform multiple installations of Oracle Database Client, you may want to use silent or noninteractive mode, with response files. In these modes, at each computer, you run Oracle Universal Installer from the command line using a response file. The response file is a text file containing the settings you normally enter in the Oracle Universal Installer GUI dialog boxes. This method lets you quickly perform multiple installations using similar settings for each computer.

> **See Also:** Appendix B, "Installing Oracle Database Client Using Response Files" for instructions on performing silent and noninteractive installations

3.1.3 Creating the Oracle Base Directory

If you install Oracle Database Client on a computer with no other Oracle software installed, Oracle Universal Installer creates an Oracle base directory for you. If Oracle software is already installed, 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.

3.1.4 Installing Oracle Database Client into Multiple Oracle Homes

You can install all Oracle components 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 on Windows 32-bit
- Oracle Provider for OLE DB

> **Note:** Oracle Objects for OLE is not supported on Windows x64.

3.1.5 Installing Oracle Database Client on a System with an Existing Oracle Software

Oracle Database Client can be installed in the same Oracle Database home if both products are at the same release level. For example, you can install Oracle Database Client 10*g* Release 2 (10.2) into an existing Oracle Database 10*g* Release 2 (10.2) home. If you apply a patch set before installing the client, then you must apply the patch set again. Oracle Universal Installer will prompt you for an Oracle home directory, whether you have other Oracle software installed on the computer or not. 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 11*g* release 1 (11.1) software into an existing Oracle9*i* Oracle home directory.

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

3.1.6 Updating the Existing Software with the Current Version

Use the In-Place Upgrade feature to upgrade an existing client installation to the latest release by installing the new client software into an existing client home with the same installation type. For example, if release 11.2.0.1 is installed, then use Oracle Universal Installer to upgrade to release 11.2.0.2.

Consider the following before selecting this option:

- This upgrade is only possible in a client home and not in any other Oracle home that contains non-client installations, such as Database installations.

- This upgrade does not delete files in the client home that are commonly updated by other users. For example, configuration data files.

- This upgrade cannot be performed if processes associated with the Oracle Database Client home are running.

This functionality is available starting with Oracle Database 11*g* Release 2 (11.2.0.2).

> **See Also:** "Performing an In-place Oracle Database Client Upgrade" on page 3-11

3.2 Accessing the Installation Software

The Oracle Database Client software is available on installation media or you can download it from the Oracle Technology Network (OTN) Web site, or Oracle Software Delivery Cloud Web site. To install the software from the hard disk, you must either download it and unpack it, or copy it from the installation media, if you have it.

You can access and install Oracle Database Client by using the following scenarios:

- Installing from a Remote DVD Drive

- Installing on Remote Computers Through Remote Access Software

- Downloading Oracle Software

- Copying the Oracle Database Client Software to a Hard Disk

3.2.1 Installing from a Remote DVD Drive

If the computer where you want to install Oracle Database Client does not have a DVD drive, you can perform the installation from a remote DVD drive. You must complete the following steps:

- Step 1: On the Remote Computer, Share the DVD Drive

- Step 2: On the Local Computer, Map the DVD Drive

3.2.1.1 Step 1: 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 in step d of the next section.

   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 DVD labeled Oracle Database 11g Release 2 (11.2) into the DVD drive.

3.2.1.2 Step 2: 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.

3. Go to the "Installing the Oracle Database Client Software" section on page 3-7.

3.2.2 Installing on Remote Computers Through Remote Access Software

If you want to install and run Oracle Database Client on a remote computer (that is, the remote computer has the hard drive and will run Oracle Database Client 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 Oracle Database Client on the remote computer in one of two ways:

■ If you have copied the contents of the Oracle Database Client 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.

3.2.2.1 Installing on Remote Computers from a Hard Drive

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

The steps that must 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 Client 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.

5. Go to the "Installing the Oracle Database Client Software" section on page 3-7.

3.2.2.2 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.

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 the "Installing from a Remote DVD Drive" section on page 3-3.

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

4. Go to Section 3.3, "Installing the Oracle Database Client Software."

3.2.3 Downloading Oracle Software

You can download the trial version of the installation files from the Oracle Technology Network (OTN) or Oracle Software Delivery Cloud Web site and extract them on your hard disk. Make sure that you completely review and understand the terms of the license. Most downloads include the Development License. This section contains the following topics:

- Downloading the Installation Archive Files from OTN

- Downloading the Software from Oracle Software Delivery Cloud

- Extracting the Installation Files

3.2.3.1 Downloading the Installation Archive Files from OTN

To download the installation archive files from Oracle Technology Network:

1. Use any browser to access the software download page from Oracle Technology Network:

http://www.oracle.com/technetwork/indexes/downloads/index.html

2. Navigate to the download page for the product that you want to install.

3. On the 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 archive files.

   In most cases, the available disk space must be at least twice the size of all the archive files.

5. On the file system that you selected in step 4, create a parent directory for each product, for example OraDBClient11g, to hold the installation directories.

6. Download all of the installation archive files to the directories that you created in step 5.

7. Verify that the files you downloaded are the same size as the corresponding files on Oracle Technology Network.

8. Extract the files in each directory that you just created.

9. After you have extracted the required installation files, see the "Installing the Oracle Database Client Software" section on page 3-7.

3.2.3.2 Downloading the Software from Oracle Software Delivery Cloud

You can download the software from Oracle Software Delivery Cloud as Media Packs. A Media Pack is an electronic version of the software that is also available to Oracle customers on CD-ROM or DVD. To download the Media Pack:

1. Use any browser to access the Oracle Software Delivery Cloud Web site:

   http://edelivery.oracle.com/

2. Complete the Export Validation process by entering information (name, company, e-mail address, and country) in the online form.

3. In the Media Pack Search page, specify the Product Pack and Platform to identify the Media Pack you want to download. If you do not know the name of the Product Pack, you can search for it using the License List.

4. In the search results page, click **Readme** to download and review the Readme file for download instructions and product information.

5. After you review the Readme, choose the appropriate Media Pack from the search results to download the individual zip files. Follow the Download Notes instructions in this page. Once you download and extract the contents of the required zip files, proceed with the installation of the software.

Note: Print the page with the list of downloadable files. It contains a list of part numbers and their corresponding descriptions that you may need to refer during the installation process.

See Also: *Frequently Asked Questions* section on the Oracle Software Delivery Cloud Web site for more information about Media Packs

3.2.3.3 Extracting the Installation Files

To extract the installation archive files, perform the following steps:

1. If necessary, change to the directory that contains the downloaded installation archive files.

2. Use GUI tool, like 7-Zip, to extract the installation files.

   When you have extracted all of the required installation files, see "Installing the Oracle Database Client Software" section on page 3-7.

3.2.4 Copying the 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\client
   ```

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

When you have copied the required installation files, see the "Installing the Oracle Database Client Software" section on page 3-7.

3.3 Installing the Oracle Database Client Software

This section covers the following topics:

- Guidelines for Installing Oracle Database Client

- Procedure for Installing Oracle Database Client

- Performing an In-place Oracle Database Client Upgrade

3.3.1 Guidelines for Installing Oracle Database Client

In most cases, you use the graphical user interface (GUI) provided by Oracle Universal Installer to install Oracle Database Client. However, you can also use Oracle Universal Installer to complete silent or noninteractive installations using a response file, without using the GUI. This method is particularly useful if you need to perform multiple installations of Oracle Database Client.

As you install Oracle Database Client, follow these guidelines:

> **See Also:**   Appendix B, "Installing Oracle Database Client Using Response Files" for information about silent or noninteractive installations

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

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

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

- 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.

- If you encounter errors during installation, click **Help** or see Appendix D, "Troubleshooting the Oracle Database Client Installation" for advice.

- Products not installed by default, in case of Custom installation:
  - Oracle Connection Manager
  - Oracle Net Listener
  - Oracle Scheduler Agent
  - Oracle Services for Microsoft Transaction Server
  - Oracle Counters for Windows Performance Monitor

3.3.2 Procedure for Installing Oracle Database Client

Use Oracle Universal Installer to install the Oracle Database Client software.

To install Oracle Database Client perform the following steps:

1. Log on as a member of the Administrators group to the computer 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. Insert the Oracle Database Client installation media and navigate to the `client` 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.

3. Double-click `setup.exe` to start Oracle Universal Installer.

   Starting with Oracle Database 11*g* Release 2 (11.2.0.2), if you plan to run the installation in a secured data center, then you can download updates before starting the installation by starting Oracle Universal Installer on a system that has Internet access in update download mode. To start Oracle Universal Installer to download updates, enter the following command:

   ```
   ./setup.exe -downloadUpdates
   ```

   Provide the My Oracle Support user name and password, and provide proxy settings if needed on the Provide My Oracle Support credentials screen. Then, enter the **Download location** and click **Download** on the Download software updates screen. If updates are available, then they are downloaded in the location provided. The Finish Updates screen shows the successful download of the updates. Click **Close**.

   After you download updates, transfer the update file to a directory on the server where you plan to run the installation.

   > **See Also:**
   >
   > - *Oracle Universal Installer and OPatch User's Guide* for information about response file formats
   > - "Software Updates Option" on page 1-3

4. If you have an existing Oracle Database Client 11*g* Release 2 (11.2) installed on your system, the Select Installation Mode screen is displayed. Select **New Install** to install Oracle Database Client software in to a new location.

   Starting with Oracle Database 11*g* Release 2 (11.2.0.2), if you want to upgrade an earlier release of Oracle Database Client, then select **Upgrade** and follow the

instructions in "Performing an In-place Oracle Database Client Upgrade" on page 3-11

5. In the Select Installation Type screen, select the type of installation that you want: Instant Client, Administrator, Runtime, or Custom and click **Next**.

6. Starting with Oracle Database 11*g* Release 2 (11.2.0.2), you can use the Software Updates feature to dynamically download and apply latest updates. In the Download Software Updates screen, select one of the following options, and click **Next**:

- Use My Oracle Support credentials for download to download and apply the latest software updates.

  Click **Proxy Settings** to configure a proxy for Oracle Universal Installer to use to connect to the Internet. Provide the proxy server information for your site, along with a user account that has access to the local area network through which the server is connecting. Starting with Oracle Database 11*g* Release 2 (11.2.0.3), you can enter the Proxy Realm information. The proxy realm information is case-sensitive. If you do not have a proxy realm, then you do not need to provide an entry for the Proxy Username, Proxy Password, and Proxy Realm fields.

  Click **Test Connection** to ensure that your proxy settings are correctly entered, and the installer can download the updates.

- Use pre-downloaded software updates to apply previously downloaded software updates.

- Skip software updates if you do not want to apply any updates.

  See Also: "Software Updates Option" on page 1-3

7. The Apply Software Updates screen is displayed if you select to download the software updates or provide the pre-downloaded software downloads location. If you selected Use My Oracle Support credentials for download in the previous screen, then select **Download and apply all updates**, and click **Next**. If you selected Use pre-downloaded software updates, then select **Apply all updates**, and click **Next**.

8. The Select Product Languages screen enables you to select the language in which you want to run the product.

Select the product language from the Available Languages list, transfer it to the Selected Languages list. Click **Next**.

This screen is not displayed if you select Instant Client as the type of installation in step 5.

9. In the Specify Installation Location screen, enter the following details:

Oracle Base: This path appears by default. You can change the path based on your requirement.

The Oracle Base section is not displayed if you select Instant Client as the type of installation in step 5.

In the **Software Location** section, accept the default value or enter the Oracle home directory path in which you want to install Oracle components. The directory path should not contain spaces. Click **Next**.

10. If you selected Custom as the type of installation in step 5, then the Available Product Components screen is displayed. Select the products that you want to install and click **Next**.

11. In step 10, if you select Oracle Scheduler Agent as one of the components that you want to install, then the Oracle Database Scheduler Agent screen is displayed. Enter the Scheduler Agent Host Name, and the Scheduler Agent Port Number. Click **Next**.

12. The Perform Prerequisite Checks screen verifies if your computer meets the minimum system requirements to install the desired product. Click **Next**.

> **Note:** Oracle recommends that you use caution in checking the **Ignore All** option. If you check this option, then Oracle Universal Installer may not confirm that your system is able to install Oracle Database successfully.

13. Review the information displayed in the Summary screen, and click **Install.**

> **Note:** Starting with Oracle Database 11*g* Release 2 (11.2), you can save all the installation steps into a response file by clicking **Save Response File.** Later, this file can be used for a silent installation.

14. The Install Product screen shows the progress of a client installation. After Oracle Database Client is installed, click **OK**.

15. If you are performing a Custom installation, and selected Oracle Net Listener from the list of components to install in step 10, then go to "Using Oracle Net Configuration Assistant" for instructions.

16. In the Finish screen, click **Close** to exit Oracle Universal Installer.

Using Oracle Net Configuration Assistant

During a Custom Oracle Database Client installation, if you select Oracle Net Listener from the list of components to install in step 10, then Oracle Universal Installer automatically starts Oracle Net Configuration Assistant as part of the Oracle Database Client installation. Perform the following to configure the listener and naming methods using Oracle Net Configuration Assistant:

1. In the Welcome screen, click **Next**.

2. In the Listener Configuration screen, enter a **Listener name** or accept the default value. Click **Next**.

3. In the Listener Configuration, Select Protocol screen, select one or more protocols from the Available Protocols list, and move it to the Selected Protocols list. Click **Next**.

4. In the Listener Configuration, TCP/IP Protocol screen, select the standard port number, or enter a different port number. Click **Next**.

5. Select **No** if you do not want to configure an additional listener, and click **Next**.

6. The listener configuration is now complete, click **Next** to proceed.

7. In the Naming Methods Configuration screen, select Yes to configure naming methods. Click **Next**.

8. In the Naming Methods Configuration screen, select the naming method you want from the list of Available Naming Methods and then click **Next**.

    Typically, Local Naming is sufficient.

9. In the Net Service Name Configuration screen, enter Service Name, and click **Next**.

10. In the Net Service Name Configuration screen, select the protocol for the database you want to access, and click **Next**.

11. In the Net Service Name Configuration screen, enter the **Host name** of the computer where the Oracle database is installed. Use the standard port number, or specify a different port number, and click **Next**.

12. In the Net Service Name Configuration, Test screen, click **Yes** to test the database connection. Click **Next**.

    In most cases, the test fails only because the default user name and password Oracle Universal Installer supplies in the dialog box do not match the user name and password for the target database. Click **Change Login**, reenter the user name and password, and then click **OK**.

13. In the Connecting screen, click **Next**.

14. In the Net Service Name screen, enter the name of the **Net Service Name**, and click **Next**.

15. Answer the remaining prompts to complete the configuration.

16. In the Finish screen, click **Close**, to exit from Oracle Universal Installer.

You can also run Oracle Net Configuration Assistant after the installation in standalone mode to configure the listener, naming methods, net service names, and directory server usage.

To start Oracle Net Configuration Assistant in standalone mode, select **Programs** from the Start menu, and then select **Oracle - *HOME_NAME***. Next, select **Configuration and Migration Tools**, and then **Oracle Net Configuration Assistant**.

> **See Also:** "Using Oracle Net Configuration Assistant to Configure Network Components" in *Oracle Database Net Services Administrator's Guide*

3.3.3 Performing an In-place Oracle Database Client Upgrade

Starting with Oracle Database 11*g* Release 2 (11.2.0.2) you can perform an in-place upgrade of Oracle Database Client 11*g* Release 2 (11.2) using the following instructions:

> **Note:** You can perform an in-place Oracle Database Client upgrade only if you have an existing Oracle Database Client 11*g* Release 2 (11.2.0.1) or later client home installed on your system.

1. Perform Steps 1 through 3 listed in "Procedure for Installing Oracle Database Client" on page 3-8.

2. The Select Installation Mode screen is displayed only if you have an existing Oracle Database Client 11*g* Release 2 (11.2.0.1) or later installed on your system, . Select **Upgrade** to upgrade the existing Oracle Database Client software to the latest version.

3. In the Specify Installation Location screen, accept the default Software Location value or enter the Oracle home directory path in which you want to install Oracle components. The directory path should not contain spaces. Click **Next**.

4. In the Download Software Updates screen, select one of the following options, and click **Next**:

   ■ Use My Oracle Support credentials for download

   ■ Use pre-downloaded software updates

   ■ Skip software updates

   See Step 6 in "Procedure for Installing Oracle Database Client" on page 3-8 for more information about the options in the Download Software Updates screen.

5. The Apply Software Updates screen is displayed if you select to download the software updates or provide the pre-downloaded software updates location. Select either **Download and apply all updates** or **Apply all updates**, as applicable, and click **Next**.

   See Step 7 in "Procedure for Installing Oracle Database Client" on page 3-8 for more information about the options in the Apply Software Updates screen.

6. The Select Product Languages screen enables you to select the language in which you want to run the product.

   Select the product language from the Available Languages list, transfer it to the Selected Languages list. Click **Next.**

7. The Perform Prerequisite Checks screen verifies if your computer meets the minimum system requirements to install the desired product. Click **Next**.

8. Review the information displayed in the Summary screen, and click **Install**.

9. The Install Product screen displays the progress of the client upgrade.

10. Review the information in the Finish screen and click **Close** to exit Oracle Universal Installer.

> **See Also:**
>
> ■ "Updating the Existing Software with the Current Version" on page 3-3
>
> ■ "Performing an In-place Oracle Database Client Upgrade Using the Response File" on page B-5

4

Oracle Database Client Postinstallation Tasks

This chapter describes the following postinstallation tasks:

- **Required Postinstallation Tasks**
- **Recommended Postinstallation Tasks**
- **Required Product-Specific Postinstallation Task – Configuring Oracle Net Services**
- **Postinstallation Tasks for SQL Developer**

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

4.1 Required Postinstallation Tasks

This section covers the following topics:

- **Downloading and Installing Patches**
- **Updating Instant Client**

4.1.1 Downloading and Installing Patches

To download required patches, check the My Oracle Support (formerly Oracle*MetaLink*) Web site for required patches for your installation. Doing so ensures that you have the latest update of Oracle Database Client.

> **Note:** You cannot update Instant Client by downloading a patch. Use the procedure under "Updating Instant Client" on page 4-2 to update Instant Client.

> **Note:** Browsers require an Adobe Flash plug-in, version 9.0.115 or higher to use My Oracle Support. Check your browser for the correct version of Flash plug-in by going to the Adobe Flash checker page, and installing the latest version of Adobe Flash.
>
> If you do not have Flash installed, then download the latest version of the Flash Player from the Adobe Web site:
>
> http://www.adobe.com/go/getflashplayer

To find and download patches:

1. Use a Web browser to view the My Oracle Support (Oracle*MetaLink*) Web site:

   https://support.oracle.com/

2. Log in to My Oracle Support (formerly Oracle*MetaLink)*.

   > **Note:** If you are not a My Oracle Support (formerly Oracle*MetaLink)* registered user, then click **Register here** and follow the registration instructions.

3. On the main page of My Oracle Support (formerly Oracle*MetaLink)*, click **Patches & Updates**.

4. Select **Advanced Search**.

5. Specify the following information, then click **Go**:

   - On the Advanced Search page, click the search icon next to the **Product or Product Family** field.

   - In the **Product Family** field, select **Database and Tools** in the search list field, then specify RDBMS Server in the text field.

   - In the **Release** field, specify the current release number.

   - In the **Platform or Language** field, select your platform.

   - Any available patch updates are displayed under the Results heading.

6. Open the patch ReadMe file, which you can access by clicking the **View README** icon, and follow the installation instructions.

   Some patches install with Oracle Universal Installer; others require special procedures. Oracle recommends that you always read the README before proceeding.

7. Return to the Patch Set page, click **Download**, and save the file on the system.

8. Use an `unzip` utility to uncompress the Oracle patches that you downloaded from My Oracle Support (formerly Oracle*MetaLink)*. The `unzip` utility is located in the `$ORACLE_HOME/bin` directory.

4.1.2 Updating Instant Client

To update Instant Client:

1. Download Instant Client from Oracle Technology Network
   http://www.oracle.com/technetwork/database/features/instant-client/index-097480.html.

2. Place the new files directly on top of the previous files.

If you place the files into a different directory (and remove the previous files), be sure to update your `PATH` environment variable setting to reflect the new location.

4.2 Recommended Postinstallation Tasks

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

- Configuring Instant Client Light
- Connecting Oracle Database Client to an Oracle Database
- Connecting Instant Client or Instant Client Light to an Oracle Database
- Setting Up User Accounts
- Using Oracle9i Language and Definition Files with Oracle Database 11g Release 2
- Configuring Oracle Counters for Windows Performance Monitor

4.2.1 Configuring Instant Client Light

To configure Instant Client Light, you must make it the default instead of Instant Client.

To configure Instant Client Light:

1. In the `ORACLE_BASE\ORACLE_CLIENT_HOME` directory, either rename or delete the `oraociei11.dll` file.

The `oraociei11.dll` file is the main binary for Instant Client.

2. From the `ORACLE_BASE\ORACLE_CLIENT_HOME\install\instantclient\light` directory, copy the `oraociicus11.dll` file to the `ORACLE_BASE\ORACLE_CLIENT_HOME` directory.

The `oraociicus11.dll` file is the binary for Instant Client Light.

3. Ensure that the `PATH` environment variable points to the `ORACLE_BASE\ORACLE_CLIENT_HOME` directory.

> **Note:** If the Instant Client `PATH` is not set, applications will try to load the regular Instant Client libraries first. If the applications cannot find these, they will attempt to load the Instant Client Light library next.

4.2.2 Connecting Oracle Database Client to an Oracle Database

After you run Oracle Universal Installer to install Oracle Database Client, you must use Net Configuration Assistant (NetCA) to configure Oracle Database Client to connect to an Oracle database. At the end of installation, Oracle Universal Installer prompts you to configure the database connection. If you bypassed that option, or if you need to change the database connection later on, use the following procedure if you installed the **Administrator**, **Runtime**, or **Custom** installation types.

> **See Also:** "Connecting Instant Client or Instant Client Light to an Oracle Database" on page 4-4 if you had installed the **Instant Client** installation type

To connect Oracle Database Client to an Oracle Database:

1. From the **Start** menu, choose **Oracle -** *HOME_NAME*, then **Configuration and Migration Tools**, then **Net Configuration Assistant**.

2. In the Welcome window, select **Local Net Service Name configuration** and click **Next**.

3. In the Net Service Name Configuration window, select **Add** and click **Next**.

4. In the Service Name window, enter the name of the Oracle database to which you want to connect and click **Next**.

5. In the Select Protocols window, select the protocol you want and click **Next**.

6. In the Protocol window, depending on the protocol you selected, enter the appropriate information and click **Next**.

7. In the Net Test window, select whether you want to test the connection, and click **Next**.

8. In the Net Service Name window, enter a name for the net service and click **Next**.

9. Answer the remaining prompts, which allow you to configure another net service name, and then click **Finish** to complete the configuration.

   Net Configuration Assistant creates the `tnsnames.ora` file in the following location:

   ```
   ORACLE_HOME\network\admin\tnsnames.ora
   ```

   > **See Also:** *Oracle Database Net Services Administrator's Guide* for more information about Oracle Net Configuration Assistant

4.2.3 Connecting Instant Client or Instant Client Light to an Oracle Database

Before you can connect Instant Client or Instant Client Light to an Oracle database, ensure that the PATH environment variable specifies the directory that contains the Instant Client libraries. (By default, Oracle Universal Installer updates the PATH variable for you during the installation process, but another user may have inadvertently reset it since then.) This directory is the Oracle home directory that you specified during installation.

For example, for regular Instant Client, it is in:

```
C:\app\username\product\11.2.0\client_1
```

For Instant Client Light, it is in:

```
C:\app\username\product\11.2.0\client_1\light
```

After you have checked the PATH environment variable, you can use any of the following methods to specify Oracle Database connection information for client applications:

- Specifying a Connection by Using the Easy Connect Naming Method

- Specifying a Connection by Configuring a tnsnames.ora File

- Specifying a Connection by Using an Empty Connect String and the LOCAL Variable

4.2.3.1 Specifying a Connection by Using the Easy Connect Naming Method

You can specify a connection address to an Oracle Database directly from a client application, without having to configure a `tnsnames` setting for the Instant Client. This

method is convenient in that you do not have to create and manage a `tnsnames.ora` file. However, your application users must specify the host name and port number when they want to log in to your application.

For example, suppose you are running SQL*Plus on the client computer and want to connect to the `sales_us` database, which is located on a server whose host name is `shobeen` and port number is 1521. If you launch SQL*Plus from the command line, you could log in as follows:

```
sqlplus system/admin@//shobeen:1521/sales_us
```

Similarly, in your application code, you can use Oracle Call Interface net naming methods to create the Instant Client-to-Oracle Database connection. For example, the following formats in the `OCIServerAttach()` call specify the connection information:

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

  ```
  //host[:port][/service_name]
  ```

  For example:

  ```
  //shobeen:1521/sales_us
  ```

- Alternatively, you can specify the SQL connect information as an Oracle Net keyword-value pair. For example:

  ```
  "(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=shobeen) (PORT=1521))
  (CONNECT_DATA=(SERVICE_NAME=sales_us)))"
  ```

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

4.2.3.2 Specifying a Connection by Configuring a tnsnames.ora File

By default, when you install Instant Client, Oracle Universal Installer does not include a sample `tnsnames.ora` file nor the Oracle Net Configuration Assistant utility normally used to create it. However, if you want to shield users from having to specify actual host names and port numbers, you may want to consider using a `tnsnames.ora` file to set the Instant Client-to-Oracle Database connection.

You can create the `tnsnames.ora` file manually by copying and modifying a version of this file from another Oracle installation, or you can use Oracle Net Configuration Assistant to create and manage it for you.

To install Oracle Net Configuration Assistant:

1. Run Oracle Universal Installer.

2. Select the **Custom** installation type.

3. In the Available Product Components list, select **Oracle Network Utilities** and click **Next**.

4. In the Summary window, click **Install**, then click **Exit** and **Yes** to exit Oracle Universal Installer.

After you have installed Oracle Net Configuration Assistant, follow the procedure in "Connecting Oracle Database Client to an Oracle Database" on page 4-3 for each client computer.

Then, on each client computer, configure either of the following settings:

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

■ Place the `tnsnames.ora` file in the *ORACLE_HOME*`\network\admin` directory, and ensure that the `ORACLE_HOME` environment has been set to this Oracle home.

> **See Also:** *Oracle Call Interface Programmer's Guide* for more information about Oracle Call Interface Instant Client connection strings

4.2.3.3 Specifying a Connection by Using an Empty Connect String and the LOCAL Variable

You can set the connect string to an empty connect string (""), and then set the `LOCAL` environment variable to one of the following values:

■ A direct address, as described under "Specifying a Connection by Using the Easy Connect Naming Method" on page 4-4

■ Oracle Net keyword-value pair

■ A `tnsnames.ora` entry and `TNS_ADMIN` is set to the location of `tnsnames.ora`

■ A `tnsnames.ora` entry and the following:

– `tnsnames.ora` file located in *ORACLE_HOME*`/network/admin`

– The `ORACLE_HOME` environment variable set to this Oracle home

This method allows your applications to specify internally a connection string if the application code itself uses an empty connection string. The benefit of an empty connect string is that the application itself does not need to specify the `tnsnames.ora` entry. Instead, when a user invokes the application, the location of the database is determined by a script or the environment, depending on where you have set the `LOCAL` environment variable. The disadvantage of using empty strings is that you must configure this additional information in order for your application to connect to the database.

4.2.4 Setting Up User Accounts

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

4.2.5 Using Oracle9*i* Language and Definition Files with Oracle Database 11g Release 2

Changes have been made to the content of some of the language and territory definition files in Oracle Database 10*g* and later releases. These updates are necessary to correct the legacy definitions that no longer meet the local conventions in some of the languages and territories that Oracle Database supports.

Oracle Database 11*g* Release 2 customers should review their existing application code to ensure that the correct cultural conventions, which were introduced and defined in Oracle Database 10*g*, are being used. For customers who may not be able to make the necessary code changes to support their applications, Oracle Database offers Oracle9*i* locale definition files with this release of Oracle Database. If the Oracle Database server installation has been configured to use the Oracle9*i* files, then you must enable this functionality in each client installation as well.

To enable this functionality:

1. Run the `cr9idata.pl` script, by default located in *ORACLE_HOME*`\nls\data\old`.

If the client installation type you chose does not include this directory, you can find the `cr9idata.pl` script in the same directory path in a default Oracle Database installation.

2. Set the `ORA_NLS10` environment variable to point to the directory where you installed the new language and territory definition files, which by default are in `ORACLE_HOME`\nls\data.

3. Restart Oracle Database.

> **See Also:**
>
> - Appendix B, "Installing Oracle Database Client Using Response Files" for information about response files, in which you can set the `b_cr9idata` variable and then run the response file with Oracle Universal Installer
>
> - Appendix C, "Configuring Oracle Database Globalization Support" for information about globalization support that is affected by this release of Oracle Database
>
> - *Oracle Database Globalization Support Guide* for information about the `NLS_LANG` parameter, the Globalization Support initialization parameters, and the changes made to language and territory definitions in Oracle Database 10*g*

4.2.6 Configuring Oracle Counters for Windows Performance Monitor

Before you can use to view Oracle-specific counters, you must specify the system password using `operfcfg.exe` located in the `ORACLE_HOME`\bin directory.

To set the system password, enter the following:

```
DRIVE_LETTER:\> ORACLE_HOME\bin\operfcfg.exe
Enter user-name: system
Enter password: password
Enter tns-alias: orcl
operfcfg: New registry values have been successfully set.
```

> **See Also:** *Oracle Database Platform Guide for Microsoft Windows* for additional information about Oracle Counters for Windows Performance Monitor

4.3 Required Product-Specific Postinstallation Task – Configuring Oracle Net Services

You can configure Oracle Database Client to communicate with Oracle Net Services by adding the appropriate entries to the `tnsnames.ora` and `listener.ora` files. If you have a previous release or Oracle software, you can just copy information in the Oracle Net `tnsnames.ora` and `listener.ora` configuration files from the previous release to the corresponding files in the new release.

> **Note:** The default location for the `tnsnames.ora` and `listener.ora` files is the `ORACLE_HOME`\network\admin directory.

4.4 Postinstallation Tasks for SQL Developer

This section describes tasks that you must complete after you install the software:

- Migrating User Settings from Release 1.0
- Migrating Information from Previous Releases
- Location of User-Related Information

4.4.1 Migrating User Settings from Release 1.0

The first time you start SQL Developer after installing it or after adding any extensions, you are asked if you want to migrate your user settings from a previous release. (This occurs regardless of whether there was a previous release on your system.)

> **Note:** Migration of user settings is supported only from SQL Developer Release 1.0 to Release 1.1. It is *not* supported for migration from a pre-release version of 1.1 to Release 1.1.

These settings refer to database connections, reports, and certain SQL Developer user preferences that you set in a previous version by clicking **Tools** and then **Preferences**. However, some user preferences are not saved, and you must re-specify these using the new release.

To migrate user settings from SQL Developer Release 1.0:

1. Install Oracle SQL Developer.

2. When you start SQL Developer Release 1.1, click **Yes** when asked if you want to migrate settings from a previous release.

3. In the dialog box that is displayed, do *not* accept the default location for the settings. Instead, specify the location of your Release 1.0 settings, which might be a folder whose path ends with `sqldeveloper\jdev\system`.

See also Section 4.4.2, "Migrating Information from Previous Releases."

4.4.2 Migrating Information from Previous Releases

If you have used a previous release of SQL Developer or a pre-release version of the current release, you may want to preserve database connections that you have been using. To preserve database connections, save your existing database connections in an XML file. To save the connections, right-click the Connections node in the Connections Navigator and select **Export Connections**. After you complete the installation described in this guide, you can use those connections by right-clicking the Connections node in the Connections Navigator and selecting **Import Connections**.

If you want to use any user-defined reports or the SQL history from a previous version, see "Location of User-Related Information" on page 4-9 for information about where these are located. If you want to use any user-defined reports or the SQL history from Release 1.0 with both Releases 1.0 and 1.1, you must save them before using Release 1.1, because Release 1.1 modifies the files to a format that is incompatible with Release 1.0.

SQL Developer preferences (specified by clicking Tools and then Preferences) from a pre-release version of the current release cannot currently be saved and reused; you must re-specify any desired preferences.

4.4.3 Location of User-Related Information

SQL Developer stores user-related information in several places, with the specific location depending on the operating system and certain environment specifications. User-related information includes user-defined reports, user-defined snippets, SQL Worksheet history, and SQL Developer user preferences.

SQL Developer user preferences are stored under the installation directory. To preserve preferences when upgrading to a more recent version of the same SQL Developer release, but *not* to upgrade from Release 1.0 to 1.1, use the Check for Updates feature (click **Help,** then **Check for Updates**) to upgrade your system.

This user-related information is stored in or under the HOME environment variable location, if defined; otherwise the SQLDEVELOPER_USER_DIR location, if defined; otherwise as indicated in the following table.

The table shows the typical default locations (under a directory or in a file) for specific types of resources on different operating systems. (Note the period in the name of any directory or folder named .sqldeveloper.)

Table 4–1   Default Locations for User-Related Information

Resource Type	Windows Systems
User-defined reports	C:\Documents and Settings*<user-name>*\.sqldeveloper\UserReports.xml
User-defined snippets	C:\Documents and Settings*<user-name>*\.sqldeveloper\UserReports.xml
SQL history	C:\Documents and Settings*<user-name>*\.sqldeveloper\SqlHistory.xml
SQL Worksheet archive files	C:\Documents and Settings*<user-name>*\.sqldeveloper\tmp\
SQL Developer user preferences	*<sqldeveloper_install>*\sqldeveloper\sqldeveloper\system\ ~/.sqldeveloper/system/

SQL Worksheet archive files contain SQL statements that you have entered. These files begin with *sqldev* and then have a random number (for example, sqldev14356.sql). If you close SQL Developer with a SQL Worksheet open that contains statements, then you will be prompted to save these files.

To specify a nondefault SQLDEVELOPER_USER_DIR location, do either of the following:

- Set the SQLDEVELOPER_USER_DIR environment variable to specify another directory path.

- Edit the *<sqldeveloper_install>*\sqldeveloper\sqldeveloper\bin\sqldeveloper.conf file and substitute the desired directory path for SQLDEVELOPER_USER_DIR in the following line:

```
SetUserHomeVariable SQLDEVELOPER_USER_DIR
```

If you want to prevent other users from accessing your user-specific SQL Developer information, you must ensure that the appropriate permissions are set on the directory where that information is stored or on a directory above it in the path hierarchy. For example, you may want to ensure that the sqldeveloper folder and the *<user-name>*\.sqldeveloper folder under Documents and Settings are not sharable.

5

Removing Oracle Database Client Software

This chapter describes how to completely remove Oracle software and configuration files related to the specified Oracle home using the Deinstallation Tool.

The `deinstall` command removes the Oracle Database Client installations.

It includes information about the following topics:

- About the Deinstallation Tool
- Downloading the Deinstall Tool for Use With Failed Installations
- Example of Running the Deinstallation Command
- Example of a Deinstallation Parameter File for an Oracle Database Client

5.1 About the Deinstallation Tool

The Deinstallation Tool (`deinstall`) is available in the installation media before installation, and is available in Oracle home directories after installation. It is located in *ORACLE_HOME*\deinstall.

The `deinstall` command uses the information you provide and the information gathered from the software home to create a parameter file. Alternatively, you can supply a parameter file generated previously by the `deinstall` command using the `-checkonly` option, or by editing the response file template.

> **Caution:** When you run the deinstall command, if the central
> inventory contains no other registered homes besides the home that
> you are deconfiguring and removing, then the Deinstallation tool
> removes the following files and directory contents in the Oracle base
> directory of the Oracle Database installation owner:
>
> - admin
>
> - cfgtoollogs
>
> - checkpoints
>
> - diag
>
> - oradata
>
> - flash_recovery_area
>
> Oracle strongly recommends that you configure your installations
> using an Optimal Flexible Architecture (OFA) configuration, and that
> you reserve Oracle base and Oracle home paths for exclusive use of
> Oracle software. If you have any user data in these locations in the
> Oracle base that is owned by the user account that owns the Oracle
> software, then the deinstall command deletes this data.

The command uses the following syntax, where variable content is indicated by italics:

```
deinstall.bat -home complete path of Oracle home [-silent] [-checkonly] [-local]
[-cleanupOBase] [-paramfile complete path of input parameter property file]
[-params name1=value name2=value . . .]
[-o complete path of directory for saving files] [-help]
```

The default method for running the deinstall tool is from the deinstall directory in
the Oracle home as the installation owner:

```
%ORACLE_HOME%\deinstall
DRIVE_LETTER:\> deinstall
```

Provide information about your servers as prompted or accept the defaults.

The deinstall tool stops Oracle software, and removes Oracle software and
configuration files on the operating system.

In addition, you can run the deinstall tool from other locations, or with a parameter
file, or select other options to run the tool.

The options are:

- -home

  Use this flag to indicate the home path of the Oracle home to check or deinstall. To
  deinstall Oracle software using the deinstall command in the Oracle home you
  plan to deinstall, provide a parameter file in another location, and do not use the
  -home flag.

  If you run deinstall from the ORACLE_HOME\deinstall path, then the -home flag is
  not required because the tool knows from which home it is being run. If you use
  the standalone version of the tool, then -home is mandatory.

- -silent

  Use this flag to run the command in silent or response file mode. If you use the
  -silent flag, then you must use the -paramfile flag, and provide a parameter file

that contains the configuration values for the Oracle home to deinstall or deconfigure.

You can generate a parameter file to use or modify by running `deinstall` with the `-checkonly` flag. The `deinstall` command then discovers information from the Oracle home to deinstall and deconfigure. It generates the properties file, which you can then use with the `-silent` option.

You can also modify the template file `deinstall.rsp.tmpl`, located in the `response` folder.

- `-checkonly`

  Use this flag to check the status of the Oracle software home configuration. Running the command with the `-checkonly` flag does not remove the Oracle configuration. The `-checkonly` flag generates a parameter file that you can use with the `deinstall` command.

- `-local`

  Use this flag on a multinode environment to deinstall Oracle software in a cluster.

  When you run `deinstall` with this flag, it deconfigures and deinstalls the Oracle software on the local node (the node where `deinstall` is run). On remote nodes, it deconfigures Oracle software, but does not deinstall the Oracle software.

- `-cleanupOBase`

  Use this flag to force the removal of all the contents in the Oracle base directory, including the `admin`, `oradata`, and `flash_recovery_area` directories. This flag forces an Oracle base removal only if the Oracle home that you specify with the `-home` flag is the only Oracle home associated with the Oracle base directory. You must use the `-cleanupOBase` flag to force an Oracle base removal for both command-line interface deinstall and response file mode deinstall.

  This flag is available with the deconfig tool available in the Oracle Grid Infrastructure and Oracle Database 11.2.0.3 patch release, and from Oracle Technology Network (OTN).

- `-paramfile` *complete path of input parameter property file*

  Use this flag to run `deinstall` with a parameter file in a location other than the default. When you use this flag, provide the complete path where the parameter file is located.

  The default location of the parameter file depends on the location of `deinstall`:

  - From the installation media or stage location: *ORACLE_HOME*`\inventory\response`.

  - From a unzipped archive file from OTN: *ziplocation*`\response`.

  - After installation from the installed Oracle home: `ORACLE_HOME\deinstall\response`.

- `-params` [name1=*value* name 2=*value* name3=*value* . . .]

  Use this flag with a parameter file to override one or more values to change it in a parameter file you have already created.

- `-o` *complete path of directory for saving files*

  Use this flag to provide a path other than the default location where the properties file is saved. The default location is `\response\deinstall.rsp.tmpl`.

  The default location of the parameter file depends on the location of `deinstall`:

– From the installation media or stage location before installation: *ORACLE_HOME*\

– From an unzipped archive file from OTN: *ziplocation*\response\.

– After installation from the installed Oracle home: *ORACLE_HOME*/deinstall/response.

■ -help

Use the help option (-help) to obtain additional information about the optional flags.

5.2 Downloading the Deinstall Tool for Use With Failed Installations

If you require the Deinstallation Tool (deinstall) to remove failed or incomplete installations, then it is available as a separate download from the Oracle Technology Network (OTN) Web site.

To download the Deinstallation Tool from OTN:

1. Go to the following URL:

   http://www.oracle.com/technology/software/products/database/index.html

2. Under **Oracle Database 11g Release 2**, click **See All** for the respective platform for which you want to download the Deinstallation Tool.

   The Deinstallation Tool is available for download at the end of this web page.

5.3 Example of Running the Deinstallation Command

As the deinstall.bat command runs, you are prompted to provide the home directory of the Oracle software that you want to remove from your system. Provide additional information as prompted.

If you run the deinstall tool from the deinstall.zip file, you must include the -home flag, and the help is displayed. If you run the tool from the installed ORACLE_HOME, the -home flag is not required and deinstallation starts without prompting you for a home address.

In the following example, the deinstall.bat command is in the path C:\app\oracle\product\11.2.0\client_1\deinstall, and it uses a parameter file in the software owner location C:\Documents and Settings\oracle\.

```
DRIVE_LETTER:\> cd \app\oracle\product\11.2.0\client_1\deinstall\
DRIVE_LETTER:\> deinstall -home \app\oracle\product\11.2.0\client_1 -paramfile
%HOMEPATH%\myparamfile.tmpl
```

5.4 Example of a Deinstallation Parameter File for an Oracle Database Client

You can run the deinstallation command on a standalone Oracle Database with the -paramfile option to use the values you specify in the parameter file. The following is an example of a parameter file, in which the Oracle Database binary owner is oracle, the Oracle Database home (Oracle home) is in the path D:\app\oracle\product\11.2.0\client_1, the Oracle base (where other Oracle software is installed) is D:\app\oracle, the Oracle Inventory home is C:\Program Files\Oracle\Inventory, the virtual IP address (VIP) is 192.0.2.1, and the local node (the node where you are running the deinstallation session from) is client1:

```
#Copyright (c) 2005, 2006 Oracle Corporation.  All rights reserved.
#Wed Feb 18 02:19:20 PST 2009
ORACLE_BASE=D\:\\app\\oracle
INVENTORY_LOCATION=C\:\\Program Files\\Oracle\\Inventory
CRS_HOME=false
HOME_TYPE=CLIENT
ORA_CRS_HOME=
silent=false
local=false
LOCAL_NODE=client1
LOGDIR=D\:\\app\\oracle\\product\\11.2.0\\client_1\\deinstall\\logs\\
ORACLE_HOME=D\:\\app\\oracle\\product\\11.2.0\\client_1
OLD_ACTIVE_ORACLE_HOME=
```

A

Installing Java Access Bridge

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

- Overview of Java Access Bridge
- Setup for JRE 1.5
- Setup for Oracle Installed Components

> **Note:** Java Access Bridge is not supported on Windows x64 for 64-bit database installations.

A.1 Overview of Java Access Bridge

Java Access Bridge enables assistive technologies 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 Examples media contain the Java Runtime Environment (JRE) 1.5, which Oracle Universal Installer uses during installation. The JRE enables use of Java Access Bridge during installation. See "Setup for Oracle Installed Components" on page A-1 for information about installing and configuring Java Access Bridge after you install Oracle components.

A.2 Setup for JRE 1.5

To set up Java Access Bridge with JRE 1.5, stop your assistive technology, then from the installation media root, go to `install` directory and double-click `access_setup.bat` file before the installation.

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

A.3 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

A.3.1 Installing Java Access Bridge

To install Java Access Bridge, follow these steps:

1. Go to the Sun Microsystem's Web site and download Java Access Bridge:

   http://www.oracle.com/technetwork/java/javase/tech/index-jsp-136191.html

2. Select the `accessbridge-2_0_1-manual_install.zip` file and extract its files to the system where you plan to install Java Access Bridge. For example:

   DRIVE_LETTER:\AccessBridge-2_0_1

3. Copy the Java Access Bridge files listed in Table A–1 into the JRE 1.5 directory used by Oracle components. If the files exist, overwrite them. By default, the JRE used by Oracle components is installed in:

   ORACLE_HOME\jdk\jre

   Table A–1 lists the files that you must 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
DRIVE_LETTER:\AccessBridge-2_0_1\installerFiles\jaccess-1_4.jar	*ORACLE_HOME*\jdk\jre\lib\ext
DRIVE_LETTER:\AccessBridge-2_0_1\installerFiles\access-bridge.jar	*ORACLE_HOME*\jdk\jre\lib\ext
DRIVE_LETTER:\AccessBridge-2_0_1\installerFiles\JavaAccessBridge.dll	*windows_directory*\system32
DRIVE_LETTER:\AccessBridge-2_0_1\installerFiles\WindowsAccessBridge.dll	*windows_directory*\system32
DRIVE_LETTER:\AccessBridge-2_0_1\installerFiles\JAWTAccessBridge.dll	*windows_directory*\system32
DRIVE_LETTER:\AccessBridge-2_0_1\installerFiles\accessibility.properties	*ORACLE_HOME*\jdk\jre\lib

4. You can access Java Access Bridge documentation located at

   DRIVE_LETTER:\AccessBridge-2_0_1\doc

A.3.2 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 must set the system variable `ORACLE_OEM_CLASSPATH` to point to the installed Java Access Bridge files.

Follow these steps:

1. Display **System** in the 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 1.5 is installed in the default location, the setting would be:

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

7. Click **OK**.

B

Installing Oracle Database Client Using Response Files

This appendix describes how to use response files to perform a silent or noninteractive installation of Oracle Database Client. It covers the following topics:

- How Response Files Work?
- Preparing a Response File
- Running Oracle Universal Installer Using the Response File
- Performing an In-place Oracle Database Client Upgrade Using the Response File

B.1 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, you would supply the appropriate value for the *ORACLE_HOME* variable, as in the following example:

ORACLE_HOME="C:\app\product"

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

```
DRIVE_LETTER:\setup.exe_location> setup -silent "ORACLE_HOME=C:\app\product" ...
```

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.

B.1.1 Reasons for Using Silent Mode or Noninteractive Mode

Table B–1describes 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	Use silent mode to: ■ Complete an unattended installation ■ Complete several similar installations on multiple systems without user interaction 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.
Noninteractive	Use noninteractive mode if you want to complete similar Oracle software installations on multiple systems, providing default answers to some, but not all, of Oracle Universal Installer prompts. 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.

B.1.2 General Procedure for Using Response Files

You follow these general steps to install Oracle Database Client 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 either of the following methods:

   ■ Modify one of the sample response files that is provided with the installation.

   ■ Save response file option during run time.

   "Preparing a Response File" on page B-3 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.

   > **Note:** Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2 require Administrator privileges at the command prompt.

   "Running Oracle Universal Installer Using the Response File" on page B-4 explains how to run Oracle Universal Installer with a response file.

B.2 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
- Saving a Response File

B.2.1 Editing a Response File Template

Oracle provides response file templates for the database client and the configuration tool. These files are located in the `client\response` directory on the Oracle Database installation media.

Table B–2 lists the available Oracle Database Client sample response files:

Table B–2   Response Files

Response File Name	Purpose
`client_install.rsp`	Oracle Database Client installation
`netca.rsp`	Oracle Net Configuration Assistant to perform the configuration with the client installation types.

To copy and modify a response file:

1. Copy the appropriate response files from the `client\response` directory on the Oracle Database media to your hard drive.

2. Modify the response files with a text file editor.

   Remember that you can specify the response file variables 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 about 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-4.

B.2.2 Saving a Response File

You can use the Oracle Universal Installer in interactive mode to save a response file, which you can edit and then use to complete silent mode or response file mode installations.

Starting with Oracle Database 11*g* Release 2 (11.2), you can save all the installation steps into a response file during installation by clicking **Save Response File** on the Summary page. You can use the generated response file for a silent installation later.

When you save the response file, you can either complete the installation, or you can exit from the installer on the Summary page, before it starts to copy the software to the system.

If you save a response file during a silent installation, then Oracle Universal Installer saves the variable values that were specified in the original source response file into the new response file.

> **Note:** Oracle Universal Installer does not save passwords in the response file.

To save a response file:

1. Ensure that the computer on which you are creating the response file has met the requirements described in Chapter 2.

   When you run Oracle Universal Installer to save a response file, it checks the system to verify that it meets the requirements to install the software. For this reason, Oracle recommends that you complete all of the required preinstallation tasks and save the response file while completing an installation.

2. At the command prompt, use the `cd` command to change to the directory that contains the Oracle Universal Installer `setup.exe` executable.

   > **Note:** Windows Vista, Windows Server 2008, Windows Server 2008 R2, and Windows 7 require Administrator privileges at the command prompt.

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

3. Run `setup.exe`.

4. After Oracle Universal Installer starts, enter the installation settings, to save the response file.

5. When the installer displays the Summary screen, perform the following:

   - Click **Save Response File** and specify a file name and location for the response file. Then, click **Save** to save the values to the file.

   - Click **Finish** 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 saved in the response file.

6. Before you use the saved response file on another system, edit the file and make any required changes.

   Use the instructions in the file as a guide when editing it.

B.3 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. On Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2, you must open the command prompt with Administrator privileges. 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:

```
DRIVE_LETTER:\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 Oracle Database Client.

2. At a command prompt, run Oracle Universal Installer with the appropriate response file. On Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2, you must open the command prompt with Administrator privileges.

    To start Oracle Universal Installer in silent or response file mode, enter a command similar to the following:

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

    > **Note:** Do not specify a relative path to the response file. If you specify a relative path, then Oracle Universal Installer fails.

    In this example:

    - *DRIVE_LETTER*: Path of the database directory on the DVD.

    - *setup.exe_location*: Indicates the location of setup.exe.

    - -silent: Indicates that you want to run Oracle Universal Installer in silent mode.

    - "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.

    - -nowait: Closes the console window when the silent installation completes.

    - -noconfig: Suppresses running the configuration assistants during installation, performing a software-only installation instead.

    - filename: The full path and file name of the installation response file that you configured.

B.4 Performing an In-place Oracle Database Client Upgrade Using the Response File

Starting with Oracle Database 11*g* Release 2 (11.2.0.2), you can perform an in-place Oracle Database Client upgrade using the response file:

1. Edit the oracle.install.client.upgrading entry in the client_install.rsp file and set it to true. By default, the oracle.install.client.upgrading entry is set to false.

2. Run Oracle Universal Installer in silent mode as described in "Running Oracle Universal Installer Using the Response File" on page B-4.

> **See Also:** "Performing an In-place Oracle Database Client Upgrade" on page 3-11

C

Configuring Oracle Database Globalization Support

This appendix describes the following Globalization Support topics:

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

C.1 Installing and Using Oracle Components in Different Languages

This section describes the following procedures:

- Configuring Oracle Components to Run in Different Languages
- Installing Translation Resources

C.1.1 Configuring Oracle Components to Run in Different Languages

You can specify the language and the territory, or locale, in which you want to use Oracle components. The locale setting of a component determines the language of the user interface of the component and the globalization behavior, such as date and number formatting. Depending on the Oracle component, the locale of the component is either inherited from the operating system session that started the component, or is defined by the `NLS_LANG` environment variable.

The operating system locale usually influences Oracle components that are based on Java technology. The `NLS_LANG` environment variable usually influences Oracle components that use Oracle Client libraries such as OCI.

> **Note:** The user interface of an Oracle component will be displayed in a selected language only if the appropriate translation is available and has been installed. Otherwise, the user interface will be displayed in English.

C.1.1.1 Determining the Operating System Locale

The locale setting of your operating system session determines the language of the user interface and the globalization behavior for components such as Oracle Universal Installer, Oracle Net Configuration Assistant, and Oracle Database Configuration Assistant. It also determines the globalization behavior of Oracle Database sessions created by a user application through Oracle JDBC driver, unless overridden by the application.

Open the Control Panel from the Start menu to modify the operating system locale settings. On Windows XP, Windows 2003, Windows Server 2003 R2, and in the classic view of the Control Panel on Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2, click **Regional and Language Options**. In the default view of the Control Panel on Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2, click **Change keyboards or other input methods**.

To set locale for the current operating system user on Windows XP, Windows 2003, and Windows Server 2003 R2, select the desired locale from the pop-up list in Standards and formats area on the Regional Options tab. On Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2, select the desired locale from the Current format pop-up list on the Formats tab.

Some of the locales may be unavailable until you install required operating system support files. On Windows XP, Windows 2003, and Windows Server 2003 R2, make sure the relevant check boxes are checked in "Supplemental language support" area on Languages tab.

Some Oracle components, such as SQL*Plus, require that the Windows System Locale is also set to the language in which the components are to be run. System Locale is called Language for non-Unicode programs on Windows XP, Windows 2003, Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2. On Windows XP and Windows 2003, select the locale from the pop-up list in the "Language for non-Unicode programs" area on the Advanced tab. On Windows Vista, Windows Server 2008, Windows 7, and Windows Server 2008 R2, click the **Change system locale...** button on the Administrative tab, accept the use of administrative privileges, if User Account Control is active, and select the locale from the pop-up list in the opened dialog box.

> **Note:** The operating system must be restarted after the System Locale is changed. See the operating system documentation for further information about Windows locale settings.

C.1.1.2 Configuring Locale and Character Sets with the NLS_LANG Environment Variable

The NLS_LANG environment variable determines the language of the user interface and the globalization behavior for components such as SQL*Plus, exp, and imp. It sets the language and territory used by the client application and the database user session. It also declares the character set for entering and displaying data by the client application.

The NLS_LANG environment variable uses the following format:

```
NLS_LANG=language_territory.characterset
```

In this format:

- *language* specifies the language used for displaying user interface, error messages, sorting, day names, and month names
- *territory* specifies the conventions for default date, monetary and numeric formats
- *characterset* specifies the encoding of the database client, which is the character set for data entered or displayed by a client program

  In most cases, this is the Oracle character set that corresponds to the Windows ANSI Code Page as determined by the System Locale.

The *NLS_LANG* parameter on Windows can be set

- in Registry under the subkey corresponding to a given Oracle home,

- as an environment variable.

When you install Oracle Database components and the *NLS_LANG* parameter is not yet set in the Registry subkey of the target Oracle home, Oracle Universal Installer sets the *NLS_LANG* parameter to a default value derived from the operating system locale for the current user.

> **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 3.0 and earlier; it does not support all valid XML characters. AL32UTF8 has no such limitation.
>
> Using database character set UTF8 for XML data could cause an irrecoverable 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 a question mark) is substituted for it. This will terminate parsing and raise an exception.

> **See Also:**
>
> - *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

For example:

- Arabic (U.A.E.) - `ARABIC_UNITED ARAB EMIRATES.AR8MSWIN1256`

- Chinese (PRC) - `SIMPLIFIED CHINESE_CHINA.ZHS16GBK`

- Chinese (Taiwan) - `TRADITIONAL CHINESE_TAIWAN.ZHT16MSWIN950`

- English (United Kingdom) - `ENGLISH_UNITED KINGDOM.WE8MSWIN1252`

- English (United States) - `AMERICAN_AMERICA.WE8MSWIN1252`

- French (Canada) - `CANADIAN FRENCH_CANADA.WE8MSWIN1252`

- French (France) - `FRENCH_FRANCE.WE8MSWIN1252`

- German (Germany) - `GERMAN_GERMANY.WE8MSWIN1252`

- Hebrew - `HEBREW_ISRAEL.IW8MSWIN1255`

- Japanese - `JAPANESE_JAPAN.JA16SJISTILDE`

- Russian - `RUSSIAN_RUSSIA.CL8MSWIN1251`

- Spanish (Spain) - `SPANISH_SPAIN.WE8MSWIN1252`

- Spanish (Mexico) - `MEXICAN SPANISH_MEXICO.WE8MSWIN1252`

- Spanish (Venezuela) - `LATIN AMERICAN SPANISH_VENEZUELA.WE8MSWIN1252`

C.1.1.2.1 NLS_LANG Settings in Console Mode and Batch Mode Before you can use Oracle utilities such as SQL*Plus, SQL Loader, Import, and Export from the Command Prompt window, you may have to set the character set field of the `NLS_LANG` parameter to a value different than the one set in Registry.

This is required because programs running in console mode use, with a few exceptions, a different code page (character set) from programs running in GUI mode. The default Oracle home `NLS_LANG` parameter in the Registry is always set to the appropriate GUI code page. If you do not set the `NLS_LANG` parameter for the console mode session correctly, incorrect character conversion can corrupt error messages and data.

For Japanese, Korean, Simplified Chinese, Traditional Chinese, Thai, and Vietnamese, the console (OEM) code page is identical to the GUI (ANSI) code page. In this case, you do not need to set the `NLS_LANG` parameter. For other languages, set the correct character set value of `NLS_LANG` by issuing a `SET NLS_LANG` command in the same Command Prompt window in which you want to start the affected utility.

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.

To find the current console code page, issue the `CHCP` command in the Command Prompt window. Use the reported code page number to look up the corresponding Oracle character set name in Table C–1.

Table C–1 lists the Oracle character sets that correspond to the console mode code pages.

Table C–1   Oracle Character Sets for Console Mode (OEM) Code Pages

OEM Code Page	Oracle Character Set for Console Mode
437 (US)	US8PC437
737 (Greek)	EL8PC737
775 (Baltic)	BLT8PC775
850 (Multilingual Latin I)	WE8PC850
852 (Latin II)	EE8PC852
855 (Cyrillic)	RU8PC855
857 (Turkish)	TR8PC857
858 (Multilingual Latin I + Euro)	WE8PC858
866 (Russian)	RU8PC866
874 (Thai)	TH8TISASCII
932 (Japanese Shift-JIS)	JA16SJISTILDE
936 (Simplified Chinese GBK)	ZHS16GBK
949 (Korean)	KO16MSWIN949
950 (Traditional Chinese Big5)	ZHT16MSWIN950

Table C–1 (Cont.) Oracle Character Sets for Console Mode (OEM) Code Pages

OEM Code Page	Oracle Character Set for Console Mode
1258 (Vietnam)	VN8MSWIN1258

C.1.2 Installing Translation Resources

To view the user interface of Oracle components in different languages, you must install the appropriate language translations along with the component. To select the translation resources that you want to install:

> **Note:** Part of Oracle Database Vault user interface text is stored in database tables in the DVSYS schema. By default, only the English language is loaded into these tables. You can use Oracle Database Vault Configuration Assistant to add more languages to Oracle Database Vault. For the necessary steps, see Appendix C in *Oracle Database Vault Administrator's Guide*.

1. Start Oracle Universal Installer.

2. On the Select Installation Option screen, select the installation option and click **Next**.

3. On the System Class screen, select the type of system for installing the database, and click **Next**.

4. On the Grid Installation Options screen, select the type of database installation you want to perform, and click **Next**.

5. On the Select Install type screen, select the type of installation, and click **Next**.

6. On the Select Product Languages screen, select the language in which you want to run the product from the Available Languages field.

> **Note:** The Available Languages field lists all languages supported by Oracle globalization libraries. The set of languages for which a translation is actually available is usually smaller and depends on a particular component. The scope of translation for a given component may differ between languages. For example, some translations may include all user interface text, while others may include only error messages and no help files.

7. Use the > arrow to move the selected language to the Selected Languages field, and then click **OK**.

> **Note:** Oracle Universal Installer will ignore languages in the Selected Languages field for which no translation is available.

C.2 Running Oracle Universal Installer in Different Languages

The operating system locale determines the language in which Oracle Universal Installer runs. Oracle Universal Installer may run in one of the following languages:

- Brazilian Portuguese

- English

- French

- German

- Italian

- Japanese

- Korean

- Simplified Chinese

- Spanish

- Traditional Chinese

To run Oracle Universal Installer in a desired language:

1. Change the locale for the operating system user and the System Locale as described in "Determining the Operating System Locale" section.

2. Run Oracle Universal Installer by following the instructions in the "Installing the Oracle Database Client Software" section.

If the selected language is not from the languages listed earlier, then Oracle Universal Installer runs in English.

D

Troubleshooting the Oracle Database Client Installation

This appendix contains the following information about troubleshooting:

- Verifying Requirements
- What to Do if an Installation Error Occurs?
- Reviewing the Log of an Installation Session
- Silent or Noninteractive Installation Response File Error Handling
- Troubleshooting Configuration Assistants
- Troubleshooting Inventory Issues
- Cleaning Up After a Failed Installation

D.1 Verifying Requirements

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

- Check that the system meets the requirements and that you have completed all of the preinstallation tasks specified in Chapter 2, "Oracle Database Client Preinstallation Requirements."

- 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/technetwork/indexes/documentation/index.html`

D.2 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 windows, click **Back** to return to the window 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 for interactive installations or "Silent or Noninteractive Installation Response File Error Handling" on page D-2 for silent or noninteractive installations.

- If you encounter an error while configuration assistant is running, then see Section D.5, "Troubleshooting Configuration Assistants."

- If you cannot resolve the problem, then remove the failed installation by following the steps listed in Section D.7, "Cleaning Up After a Failed Installation."

D.3 Reviewing the Log of an Installation Session

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

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

During this first installation and all subsequent installations, Oracle Universal Installer saves 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 for interactive installations take the form:

```
installActionsdate_time.log

oraInstalldate_time.err
oraInstalldate_time.out
```

For example, if an interactive installation occurred at 9:00:56 A.M. on February 14, 2005, the log file would be named:

```
installActions2005-02-14_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.

> **See Also:** "Silent or Noninteractive Installation Response File Error Handling"

D.4 Silent or Noninteractive Installation Response File Error Handling

To determine whether a silent or nonintereactive 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.

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

Oracle Universal Installer or a configuration assistant validates the response file at run time. If the validation fails, the installation or configuration process ends.

> **See Also:** "Reviewing the Log of an Installation Session" on page D-2 for information about interactive installation log files

D.5 Troubleshooting Configuration Assistants

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

- Review the installation log files listed in Section D.3, "Reviewing the Log of an Installation Session."

- Review the specific configuration assistant log file located in the *ORACLE_HOME*\cfgtoollogs directory. Try to fix the issue that caused the error.

- If you see the Fatal Error. Reinstall message, look for the cause of the problem by reviewing the log files. Refer to "Irrecoverable Errors" on page D-3 for further instructions.

D.5.1 Configuration Assistant Failure

Oracle configuration assistant failures are noted at the bottom of the installation window. 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 canceled	-1

D.5.2 Irrecoverable Errors

If you receive an irrecoverable error while a configuration assistant is running:

1. Remove the failed installation as described in Section D.7, "Cleaning Up After a Failed Installation."

2. Correct the cause of the irreoverable error.

3. Reinstall the Oracle software.

D.6 Troubleshooting Inventory Issues

If you face any of the following situations for Oracle home, then run the opatch lsinventory -detail command to list the contents of the inventory and see section "Recovering from inventory corruption" in the *Oracle Universal Installer and OPatch User's Guide* for information about fixing the issue.

- Oracle home is cloned without completing the inventory steps.

- There is bad inventory.

- Inventory is not available but it is created when the Oracle Enterprise Manager Agent is installed in a separate Oracle home.

D.7 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. Follow the

instructions in Chapter 5, "Removing Oracle Database Client Software" to run the Deinstallation tool.

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.

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.

easy connect naming

A **Naming method** that allows clients to connect to a database server without any configuration. Clients use a simple TCP/IP address, which consists of a host name and optional port number, service name, and instance name:

```
SQL>CONNECT user_name@host[:port][/service_name][/instance_name]
Enter password: password
```

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 1-3 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_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_HOME`\network\admin.

An Oracle Database 11*g* Release 2 (11.2) does not require identification of the database service because of service registration. However, static service configuration is required for an Oracle Database 11*g* Release 2 (11.2) 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

- Easy Connecting naming

- NIS 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@net_service_identifier
Enter password: password
```

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 multiple) 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 to install Oracle components (for example, `c:\app\`*username*`\product\11.2.0\dbhome_`*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 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 Net foundation layer

A networking communication layer that is responsible for establishing and maintaining the connection between the client application and server, and 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 about 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 databases on your computer. The SID automatically defaults to the database name portion of the global database name (`sales` in the example `sales.us.example.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_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 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_HOME*\network\admin.

UNC

See Universal Naming Convention (UNC)

typical configuration

Oracle Universal Installer option that performs a default configuration of a connection between Oracle Database Client and Oracle Database. It configures the following:

- One net service name in the **tnsnames.ora file**.

- **local naming** and **easy connect naming** methods in the **sqlnet.ora file**.

When Oracle Database Client attempts to connect, it tries local naming first, followed by easy connect naming.

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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