Oracle® Database

Client Quick Installation Guide

12*c* Release 1 (12.1) for Microsoft Windows (32-Bit)

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This guide describes how to quickly install the Oracle Database Client product on 32-bit Windows systems. It includes information about the following:

1 Review Information About this Guide

> **Note:**   This guide describes how to install Oracle Database Client on a system that does not have any Oracle software installed on it. If there is an existing Oracle software installation on this system, see *Oracle Database Client Installation Guide for Microsoft Windows* for more detailed installation instructions.

This guide describes how to complete a default installation of Oracle Database Client in a new Oracle home directory. It describes how to perform one of the following installation types:

- **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.

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- **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.

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

Where to Get Additional Installation Information

For more detailed information about installing Oracle Database Client, see *Oracle Database Client Installation Guide for Microsoft Windows*.

The product documentation for Oracle Database products is available in both HTML and PDF formats online on the Oracle Technology Network (OTN) website:

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

2 Hardware Requirements

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

Table 1   Hardware Requirements

Requirement	Minimum Value
Physical memory (RAM)	1 GB minimum
Virtual memory	Double the amount of RAM
Hard disk space	Total ranges between 300 - 1160 MB. See Table 2 for details.
Processor Type	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 3 lists the operating systems supported on Windows 32-bit.
Video adapter	256 colors
Screen Resolution	1024 X 768 minimum

2.1 Hard Disk Space Requirements

This section lists system requirements for Windows platforms that use the NT File System (NTFS).

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 lists the Windows 32-Bit disk space requirements on NTFS.

Table 2   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	5 MB	350 MB	485 MB
Administrator	130 MB	5 MB	1.5 GB	1635 MB
Runtime	130 MB	5 MB	1.1 GB	1235 MB
Custom (all components installed)	130 MB	5 MB *	1.5 GB *	1635 MB *

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

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

2.2 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 Server 2008 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 Server 2008 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 Server 2008 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.

   For example, to change the environment variables on a Windows Server 2008 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**.

3 Software Requirements

Table 3 lists the software requirements for Oracle Database Client on on Windows 32-bit.

Table 3   Windows 32-Bit Software Requirements

Requirement	Value
Operating System	Oracle Database Client for Windows is supported on the following operating systems:
	■ Windows Server 2008 - Standard, Enterprise, Datacenter, and Web editions. The Server Core option is not supported.
	■ Windows 7 - Professional, Enterprise, and Ultimate editions
	■ Windows 8 and Windows 8.1 - Pro and Enterprise editions
	Note:
	■ Windows Multilingual User Interface Pack is supported.
	■ For information about Hyper-V support, visit My Oracle Support at
	https://support.oracle.com

Table 3 (Cont.) Windows 32-Bit Software Requirements

Requirement	Value
Compiler	Pro*COBOL has been tested and certified with Net Express 5.1.
	The following components are supported with the Microsoft Visual C++ 2010 SP1, Microsoft Visual C++ 2012, Microsoft Visual C++ 2013 Update 2, and Intel 12.1 C compilers:
	■ Oracle Call Interface
	■ External callouts
	■ Pro*C/C++ (not supported with Microsoft Visual C++ 2013 Update 2 at this time of release.)
	■ Oracle XML Developer's Kit (XDK)
	Oracle C++ Call Interface is supported with
	■ Microsoft Visual C++ 2010 SP1
	■ Microsoft Visual C++ 2012 - OCCI libraries are installed under `ORACLE_HOME\oci\lib\msvc\vc11`. When developing OCCI applications with MSVC++ 2012, ensure that the OCCI libraries are correctly selected from this directory for linking and executing.
	■ Microsoft Visual C++ 2013 - OCCI libraries are installed under `ORACLE_HOME\oci\lib\msvc\vc12`. When developing OCCI applications with MSVC++ 2013, ensure that the OCCI libraries are correctly selected from this directory for linking and executing.
	■ Intel 12.1 C compilers with Microsoft Visual Studio 2010 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

3.1 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.

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4 Creating Oracle Home User

During Oracle Database Client installation, you can specify an optional Oracle Home User associated with the Oracle home. For example, assume that you use an Administrator user named `OraSys` to install the software (Oracle Installation user), then you can specify the `ORADOMAIN\OraClient` domain user as the Oracle Home user for this installation. The specified Oracle Home domain user must exist before you install the Oracle Database software.

Oracle Home User can be Windows Built-in Account or a standard Windows User Account (not an Administrator account). Windows User Account can be a Windows Local User, Windows Domain User or Managed Services Account (MSA). If you want to create a new user during installation, then it can only be a Windows Local User and not a Windows Domain User or an MSA. The new user created is denied interactive logon privileges to the Windows computer. However, a Windows administrator can manage this account like any other Windows account.

> **Note:** You cannot change the Oracle Home User after the installation is complete. If you must change the Oracle Home User, then you must reinstall the Oracle Database Client software.

> **See Also:** "Managing Oracle Home User" in *Oracle Database Platform Guide for Microsoft Windows*

Silent install is enhanced to support password prompt for Oracle Home User. So, customers and independent software vendors (ISV) can use response files without hard coding the password into the source code.

5 Operating System Groups for Oracle Database Client Installations

Oracle Universal Installer creates groups, such as, `ORA_INSTALL`, `ORA_CLIENT_LISTENERS`, `ORA_HOMENAME_SVCSIDS` during installation and you should not change these groups, memberships, and ACLs associated with various Oracle created groups.

6 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 client operating systems: The Remote Desktop is only available in Single User Mode.

- Windows server operating systems: You can have multiple Remote Desktop sessions.

> **See Also:**
>
> - The Microsoft website for more information about Remote Desktop Services
>
>   http://www.microsoft.com/
>
> - The My Oracle Support website for the latest Terminal Services and Remote Desktop Services certification information
>
>   https://support.oracle.com/

7 Installation Requirements for Web Browsers

Web browsers are required to use Oracle Enterprise Manager Database Express and Oracle Enterprise Manager Cloud Control. Web browsers must support Java Script, and the HTML 4.0 and CSS 1.0 standards. For a list of browsers that meet these requirements, see the Oracle Enterprise Manager certification matrix on My Oracle Support:

https://support.oracle.com

> **See Also:** *Oracle Enterprise Manager Cloud Control Basic Installation Guide* for information on accessing the Oracle Enterprise Manager certification matrix

8 Default Share Configuration Requirement

The prerequisite checks during Oracle Database Client installation require that the system drive on your computer has default share configured on it. Use the `net use` command to verify, for example:

```
C:\>net use\\hostname\c$
The command completed successfully.
```

Ensure that the current user, the user in the Administrator group, has all the privileges on the default share.

9 Install the Oracle Database Client Software

The following sections describe how to install the Oracle software:

- Guidelines for Installing Oracle Database Client
- Procedure for Installing Oracle Database Client

9.1 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" in *Oracle Database Client Installation Guide for Microsoft Windows* for information about silent or response file 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" in *Oracle Database Client Installation Guide for Microsoft Windows* 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

9.2 Procedure for Installing Oracle Database Client

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

To install Oracle Database Client:

1. Log on as a member of the Administrators group to the computer on which you want 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.

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

    > **See Also:**   "Oracle Database Client Installation Types" section in *Oracle Database Client Installation Guide for Microsoft Windows* for more information on these installation types

5. 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 4.

6. Starting with Oracle Database 12*c*, during installation, you can specify an Oracle Home user associated with the Oracle Database home on the Specify Oracle Home User screen. The Oracle Home user owns all the services run by the Oracle Database software. You can either specify an existing user, or have the installer create the user for you. The Oracle Home user and several database services with the proper Access Control Lists (ACLs) are configured during installation.

Select **Use Windows Built-in Account** if you do not specify an Oracle Home User during installation. Then the services for the Oracle home run as the LocalService or LocalSystem user.

See Also: "Supporting Oracle Home User on Windows" in *Oracle Database Platform Guide for Microsoft Windows*

The Oracle Home User is not available if you select Instant Client as the type of installation in step 4.

7. 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 4.

   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**.

8. If you selected Custom as the type of installation in step 4, then the Available Product Components screen is displayed. Select the products that you want to install and click **Next**.

   > **Note:** Starting with Oracle Database 11*g* Release 2 (11.2), you can install Oracle Connection Manager, Oracle Net Listener, and Oracle Scheduler Agent using the Custom install option.

9. In step 8, 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**.

10. 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.

11. 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.

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

13. If you are performing a Custom installation, and selected Oracle Net Listener from the list of components to install in step 8, then see section "Using Oracle Net

Configuration Assistant" in *Oracle Database Client Installation Guide for Microsoft Windows* for instructions.

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

10 What's Next?

After you have successfully installed Oracle Database Client, refer to Chapter 4, "Oracle Database Client Postinstallation Tasks" in *Oracle Database Client Installation Guide for Microsoft Windows* for information about required and optional postinstallation steps.

11 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.