Oracle® AI Database

Database Client Installation Guide

26ai for Microsoft Windows

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ORACLE®

Oracle AI Database Database Client Installation Guide, 26ai for Microsoft Windows

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A   Installing and Configuring Oracle AI Database Using Response Files

Preface

This guide explains how to install and configure Oracle Database Client.

This guide also provides information about postinstallation tasks and how to remove the database client software.

- [Audience](#)
- [Set Up Java Access Bridge to Implement Java Accessibility](#)
  Install Java Access Bridge so that assistive technologies on Microsoft Windows systems can use the Java Accessibility API.
- [Conventions](#)

Audience

This guide is intended for anyone responsible for installing Oracle Database Client 26ai.

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 the Oracle AI Database software
- Familiarity with object-relational database management concepts

Additional installation guides for Oracle AI Database, Oracle Real Application Clusters, Oracle Clusterware, Oracle AI Database Examples, and Oracle Enterprise Manager Cloud Control are available at the following URL:

http://docs.oracle.com

Set Up Java Access Bridge to Implement Java Accessibility

Install Java Access Bridge so that assistive technologies on Microsoft Windows systems can use the Java Accessibility API.

Java Access Bridge is a technology that enables Java applications and applets that implement the Java Accessibility API to be visible to assistive technologies on Microsoft Windows systems.

Refer to *Java Platform, Standard Edition Accessibility Guide* for information about the minimum supported versions of assistive technologies required to use Java Access Bridge. Also refer to this guide to obtain installation and testing instructions, and instructions for how to use Java Access Bridge.

Related Topics

- *Java Platform, Standard Edition Java Accessibility Guide*

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 Checklist

Use checklists to review system requirements, and to plan and carry out Oracle Database Client installation. Oracle recommends that you use checklists as part of your installation planning process. Using checklists can help you to confirm that your server hardware and configuration meet minimum requirements for this release, and can help you to ensure you carry out a successful installation.

- Server Hardware Checklist for Oracle Database Client Installation
  Use this checklist to check hardware requirements for Oracle Database Client.

- Operating System Checklist for Oracle Database Client Installation
  Use this checklist to check minimum operating system requirements for Oracle Database Client.

- Server Configuration Checklist for Oracle Database Client Installation
  Use this checklist to check minimum server configuration requirements for Oracle Database Client installations.

- Oracle User Environment Configuration Checklist for Oracle Database Client Installation
  Use this checklist to plan operating system users, groups, and environments for Oracle Database Client management.

- Storage Checklist for Oracle Database Client Installation
  Use this checklist to review storage minimum requirements and assist with configuration planning.

- Installer Planning Checklist for Oracle Database Client Installation
  Use this checklist to prepare yourself before starting Oracle Universal Installer.

Server Hardware Checklist for Oracle Database Client Installation

Use this checklist to check hardware requirements for Oracle Database Client.

Table 1-1   Server Hardware Checklist for Oracle Database Client Installation

Check	Task
Server Make and Architecture	Confirm that server make, model, core architecture, and host bus adaptors (HBA) or network interface controllers (NIC) are supported to run with Oracle AI Database and Oracle Grid Infrastructure.
Minimum RAM	2 GB RAM recommended
Minimum network connectivity	Server is connected to a network

Operating System Checklist for Oracle Database Client Installation

Use this checklist to check minimum operating system requirements for Oracle Database Client.

> ⓘ **Note**
>
> Oracle AI Database 26ai is currently not supported on non-Oracle hardware. For support, availability, and database offerings, see the *Oracle AI Database Licensing Information User Manual* and My Oracle Support Note 742060.1.

Table 1-2   Operating System Checklist for Oracle Database Client Installation on Microsoft Windows

Item	Task
Operating system general requirements	Oracle Database Client for Windows x64 is supported on the following operating system versions: • Windows 10 x64 - Pro, Pro for Workstations, Enterprise, and Education editions • Windows 11 x64 - Pro, Enterprise, and Education editions • Windows Server 2016 x64 - Standard, Datacenter, and Essentials editions • Windows Server 2019 x64 - Standard, Datacenter, and Essentials editions • Windows Server 2022 x64 - Standard, Datacenter, and Essentials editions • Windows Server 2025 x64 - Standard, Datacenter, and Essentials editions

Server Configuration Checklist for Oracle Database Client Installation

Use this checklist to check minimum server configuration requirements for Oracle Database Client installations.

Table 1-3   Server Configuration Checklist for Oracle Database Client Installation

Check	Task
Disk space allocated to the temporary directory	At least 130 MB of space in the temporary directory
Swap space allocation relative to RAM	Double the amount of RAM
Groups and Users	Oracle recommends that you create groups and user accounts required for your security plans before starting installation. Installation owners have resource limits settings and other requirements. Group and user names must use only ASCII characters.

Table 1-3   (Cont.) Server Configuration Checklist for Oracle Database Client Installation

Check	Task
Mount point paths for the software binaries	Oracle recommends that you create an Optimal Flexible Architecture configuration as described in the appendix "Optimal Flexible Architecture" in *Oracle AI Database Installation Guide for Microsoft Windows* for your platform.
Ensure that the Oracle home (the Oracle home path that you select for Oracle AI Database) uses only ASCII characters.	The ASCII character restriction includes installation owner user names, which are used as a default for some home paths, as well as other directory names you may select for paths.
Set locale (if needed)	Specify the language and the territory, or locale, in which you want to use Oracle components. A locale is a linguistic and cultural environment in which a system or program is running. National Language Support (NLS) parameters determine the locale-specific behavior on both servers and clients. 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.

Oracle User Environment Configuration Checklist for Oracle Database Client Installation

Use this checklist to plan operating system users, groups, and environments for Oracle Database Client management.

Table 1-4   Oracle User Environment Configuration Checklist for Oracle Database Client Installation

Check	Task
Oracle Inventory and `ORA_INSTALL` Group Requirements	The Oracle Inventory directory is the central inventory of Oracle software installed on your system. You do not need to create the Oracle central inventory or the `ORA_INSTALL` group as Oracle Universal Installer creates it for you.
Create operating system groups and users for standard or role-allocated system privileges	Create operating system groups and users depending on your security requirements, as described in this install guide.
Unset Oracle Software Environment Variables	If you have an existing installation on your system, and use the same user account to install this installation, then unset the `ORACLE_HOME`, `ORACLE_BASE`, `ORACLE_SID`, `TNS_ADMIN` environment variables and any other environment variable set for the Oracle installation user that is connected with Oracle software homes.

Storage Checklist for Oracle Database Client Installation

Use this checklist to review storage minimum requirements and assist with configuration planning.

Table 1-5   Storage Checklist for Oracle Database Client Installation

Check	Task
Minimum local disk storage space for Oracle software	At least 350 MB for an Instant Client installation
	At least 1536 MB for Administrator installation
	At least 1024 MB for Runtime installation
	At least 180 MB for Custom installation
Recommended file system	Ensure that you have one of the following storage options available:
	• Oracle Automatic Storage Management (Oracle ASM)
	• NTFS File System or Resilient File System (ReFS)
	Starting with Oracle Database 21c, the name of Oracle Automatic Storage Management Cluster File System (Oracle ACFS) is changed to Oracle Advanced Cluster File System (Oracle ACFS).
	Starting with Oracle Database 21c, the Oracle Grid Infrastructure feature Oracle Advanced Cluster File System (Oracle ACFS) is desupported with Microsoft Windows.
	The database files must be placed on Oracle ASM if you are using Oracle ACFS; otherwise they can be placed on NTFS or ReFS.

Related Topics

• [Disk Space Requirements](#)
  Oracle strongly recommends that you install the Oracle AI Database home (Oracle AI database binaries, trace files, and so on) on New Technology File System (NTFS).

Installer Planning Checklist for Oracle Database Client Installation

Use this checklist to prepare yourself before starting Oracle Universal Installer.

Table 1-6   Installer Planning Checklist for Oracle Database Client Installation

Check	Task
Read the Release Notes	Review release notes for your platform, which are available for your release at the following URL:
	https://docs.oracle.com/en/database/index.html
Reviewing the Licensing Information	You are permitted to use only those components in the Oracle AI Database media pack for which you have purchased licenses.
Review Oracle Support Certification Matrix	New platforms and operating system software versions might be certified after this guide is published, review the certification matrix on the My Oracle Support website for the most up-to-date list of certified hardware platforms and operating system versions:
	https://support.oracle.com/ You must register online before using My Oracle Support. After logging in, from the menu options, select the **Certifications** tab. On the Certifications page, use the **Certification Search** options to search by Product, Release, and Platform. You can also search using the **Certification Quick Link** options such as Product Delivery, and Lifetime Support.

Table 1-6   (Cont.) Installer Planning Checklist for Oracle Database Client Installation

Check	Task
Oracle Database Client and Oracle AI Database interoperability	32-bit Oracle Database clients are desupported in Oracle AI Database 26ai.
	Oracle has discontinued developing 32-bit Oracle Database clients. Oracle recommends that you use 64-bit Oracle Database clients. If you are using 32-bit applications, then you can continue to use older 32-bit Oracle Database clients, subject to "Client / Server Interoperability Support Matrix for Different Oracle Versions (Doc ID 207303.1)," and the release support lifecycle (My Oracle Support 742060.1).
	See, My Oracle Support Note 207303.1 and My Oracle Support Note 742060.1.
Decide the client installation type	You can choose one of the following installation types when installing Oracle Database Client:
	Instant Client: Enables you to install only the shared libraries required by Oracle Call Interface (OCI), Oracle C++ Call Interface (OCCI), Pro*C, or Java database connectivity (JDBC) OCI applications. This installation type requires much less disk space than the other Oracle Database Client installation types. For more information about Oracle Database Instant Client see the following URL:
	http://www.oracle.com/technetwork/database/features/instant-client/index.html
	Administrator: Enables applications to connect to an Oracle AI Database instance on the local system or on a remote system. It also provides tools that enable you to administer Oracle AI Database.
	Runtime: Enables applications to connect to an Oracle AI Database instance on the local system or on a remote system.
	Custom: Enables you to select individual components from the list of Administrator and Runtime components.
Obtain your My Oracle Support account information.	During installation, you require a My Oracle Support user name and password to configure security updates, download software updates, and other installation tasks. You can register for My Oracle Support at the following URL:
	https://support.oracle.com/

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Checking and Configuring Server Hardware for Oracle AI Database

Verify that servers where you install Oracle AI Database meet the minimum requirements for installation.

This section provides minimum server requirements to complete installation of Oracle AI Database. It does not provide system resource guidelines, or other tuning guidelines for particular workloads.

- Oracle Database Client Minimum Hardware Requirements
  Learn about the hardware component and hard disk space requirements.

Oracle Database Client Minimum Hardware Requirements

Learn about the hardware component and hard disk space requirements.

- Hardware Component Requirements for Windows x64
  The following table lists the hardware components that are required for Oracle Database Client on Windows x64.

- Disk Space Requirements
  Oracle strongly recommends that you install the Oracle AI Database home (Oracle AI database binaries, trace files, and so on) on New Technology File System (NTFS).

- Verifying Hardware Requirements
  Use this procedure to verify your server configuration requirements.

Hardware Component Requirements for Windows x64

The following table lists the hardware components that are required for Oracle Database Client on Windows x64.

Table 2-1   Windows x64 Hardware Requirements

Requirement	Value
System Architecture	Processor: AMD64 and Intel EM64T
Physical memory (RAM)	128 MB minimum
Virtual memory (swap)	Double the amount of RAM
Disk space	Total ranges from 430 - 1570 MB
Screen Resolution	1024 X 768 minimum

Disk Space Requirements

Oracle strongly recommends that you install the Oracle AI Database home (Oracle AI database binaries, trace files, and so on) on New Technology File System (NTFS).

The database files must be placed on Oracle Automatic Storage Management (Oracle ASM) if using NTFS. Oracle recommends usage of Oracle ASM or NTFS to ensure security of these files.

The NTFS system requirements listed 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 includes space to install Java Runtime Environment (JRE) and Oracle Universal Installer on the partition where the operating system is installed. If sufficient space is not available, the installation fails and an error message appears.

The following table lists the disk space requirements on NTFS. The values in this table include the starter database.

Table 2-2   Windows x64 Disk Space Requirements on NTFS

Installation Type	TEMP Space	*Directory*:\ Program Files\Oracle\Inventory	Oracle Home	Total
Instant Client	136 MB	166 KB	361 MB	485 MB
Administrator	140 MB	1.6 MB	1.85 GB	1635 MB
Runtime	130 MB	1.55 MB	1.35 GB	1235 MB
Custom (all components installed)	145 MB	2.0 MB *	1.86 GB *	1635 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, then you need 30–32 MB of disk space to store the related files.

Verifying Hardware Requirements

Use this procedure to verify your server configuration requirements.

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

1. Determine the physical RAM size.

    For example, on a computer running Windows Server 2022, click **System and Security**, 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 computer running Windows Server 2022, 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 computer running Windows Server 2022, 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 is required for the Oracle software to be installed.

   On Windows x64, if there is less than 130 MB of disk space available in the `temp` directory, then delete all unnecessary files. If the temp disk space is still less than 130 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 computer running Windows Server 2022, click **System and Security**, then click **System**, click **Advanced System Settings**, click the **Advanced** tab on System Properties page, and then click **Environment Variables**.

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Configuring Operating Systems for Oracle Database Client

Complete operating system configuration requirements and checks for Microsoft Windows operating systems before you start installation.

> ⓘ **Note**
>
> Oracle AI Database 26ai is currently not supported on non-Oracle hardware. For support, availability, and database offerings, see the *Oracle AI Database Licensing Information User Manual* and My Oracle Support Note 742060.1.

- Oracle Database Client Software Requirements
  Lists the software requirements for Oracle Database client.

- Verifying Digital Signature and Integrity of Installation Archive Files
  Starting with Oracle AI Database 26ai, Oracle digitally signs the installation archive files with Oracle certificates to ensure the integrity of the packages before you deploy them in your environments.

- Windows Certification and Web Browser Support
  Review the Windows Certification and Web Browser Support information.

Oracle Database Client Software Requirements

Lists the software requirements for Oracle Database client.

Table 3-1   Windows x64 Software Requirements

Item	Requirement
Operating System	Oracle AI Database for Windows x64 is supported on the following operating systems: • Windows 10 x64 - Pro, Pro for Workstations, Enterprise, and Education editions • Windows 11 x64 - Pro, Enterprise, and Education editions • Windows Server 2016 x64 - Standard, Datacenter, and Essentials editions • Windows Server 2019 x64 - Standard, Datacenter, and Essentials editions • Windows Server 2022 x64 - Standard, Datacenter, and Essentials editions • Windows Server 2025 x64 - Standard, Datacenter, and Essentials editions

Table 3-1   (Cont.) Windows x64 Software Requirements

Item	Requirement
Virtualization	Oracle certifies the following virtualization technologies with Oracle Database Client on Windows: • KVM Hypervisor • Microsoft Hyper-V • Oracle VM Server For more information on certified Hyper-V combinations and other virtualization technologies, visit: https://www.oracle.com/database/technologies/virtualization-matrix.html
Compiler and SDK	The following components are supported with the compilers based on Microsoft Visual C++ 2022 Version 17.8.2 or later and Intel C++ 2021.10.1 Compiler Classic (oneAPI 2023.2 Release) or later SDK: • Oracle Call Interface • Pro*C/C++ • External callouts • Oracle XML Developer's Kit (XDK) Oracle C++ Call Interface supports: • Compilers based on Microsoft Visual C++ 2022 Version 17.8.2 or later and Intel C++ Compiler Classic 2021.10.1 (oneAPI 2023.2 Release) with Microsoft Visual Studio 2022 STLs Pro*COBOL supports: • Micro Focus Visual COBOL (Version 9)
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
Oracle AI Database	To connect with Oracle Database Client 26ai, the following are required: • Oracle Database Server 19c or later. • For information about interoperability between Oracle Database Client and Oracle AI Database releases, see My Oracle Support Note 207303.1. • If the earlier Oracle AI Database Server is running on the same computer as Oracle Database Client 26ai, a bequeath connection cannot be used. Oracle recommends upgrading Oracle AI Database to the latest patchset. You can download the patchset from the Patches and Updates section of My Oracle Support at `https://support.oracle.com`
Unzip utility	Install the latest version of unzip.

Verifying Digital Signature and Integrity of Installation Archive Files

Starting with Oracle AI Database 26ai, Oracle digitally signs the installation archive files with Oracle certificates to ensure the integrity of the packages before you deploy them in your environments.

Use the Java utility `jarsigner` to verify the integrity of your Oracle AI Database, Oracle Database Client, Oracle Grid Infrastructure, Oracle Examples, Oracle Gateways, or Oracle GSM installation archive files. You can verify the integrity of the installation archive files before you extract the installation files.

Quick Verification

To quickly verify the installation archive files, use the `jarsigner` command with the `-verify` option:

1. Go to the directory where you have downloaded the installation archive files.

2. Run this command to check your installation archive file:

```
jarsigner -verify installation_archive_file
```

For example, to check the Oracle AI Database gold image:

```
jarsigner -verify db_home.zip
```

```
jar verified.
```

Detailed Certificate Information

If you want detailed certificate information, then use the `-verbose:summary` and `-certs` along with the `-verify` option.

1. Go to the directory where you have downloaded the installation archive files.

2. Run this command to check your installation archive file:

```
jarsigner -verify -verbose:summary -certs installation_archive_file
```

For example, to check the Oracle AI Database gold image:

```
jarsigner -verify -verbose:summary -certs db_home.zip
```

The output is similar to the following:

```
2237119 Fri Feb 17 07:02:30 UTC 2023 META-INF/MANIFEST.MF

      >>> Signer
      X.509, CN="Oracle America, Inc.", O="Oracle America, Inc.",
L=Redwood City, ST=California, C=US
      [
```

```
        Signature algorithm: SHA256withRSA, 3072-bit key
        [certificate is valid from 8/19/21 12:00 AM to 8/19/23 11:59 PM]
        X.509, CN=DigiCert Trusted G4 Code Signing RSA4096 SHA384 2021 CA1,
O="DigiCert, Inc.", C=US
        [
        Signature algorithm: SHA384withRSA, 4096-bit key
        [certificate is valid from 4/29/21 12:00 AM to 4/28/36 11:59 PM]
        X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
        [
        Signature algorithm: SHA384withRSA, 4096-bit key
        [trusted certificate]
        >>> TSA
        X.509, CN=DigiCert Timestamp 2022 - 2, O=DigiCert, C=US
        [
        Signature algorithm: SHA256withRSA, 4096-bit key
        [certificate is valid from 9/21/22 12:00 AM to 11/21/33 11:59 PM]
        X.509, CN=DigiCert Trusted G4 RSA4096 SHA256 TimeStamping CA,
O="DigiCert, Inc.", C=US
        [
        Signature algorithm: SHA256withRSA, 4096-bit key
        [certificate is valid from 3/23/22 12:00 AM to 3/22/37 11:59 PM]
        X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
        [
        Signature algorithm: SHA384withRSA, 4096-bit key
        [certificate is valid from 8/1/22 12:00 AM to 11/9/31 11:59 PM]

        2237281 Fri Feb 17 07:02:32 UTC 2023 META-INF/ORACLE_C.SF (and 1
more)

        (Signature related entries)

             0 Fri Feb 17 05:41:24 UTC 2023 OPatch/ (and 1897 more)

        (Directory entries)

        2977 Tue Dec 20 08:02:16 UTC 2022 OPatch/README.txt (and 20199 more)

        [entry was signed on 2/17/23 7:02 AM]
        >>> Signer
        X.509, CN="Oracle America, Inc.", O="Oracle America, Inc.",
L=Redwood City, ST=California, C=US
        [
        Signature algorithm: SHA256withRSA, 3072-bit key
        [certificate is valid from 8/19/21 12:00 AM to 8/19/23 11:59 PM]
        X.509, CN=DigiCert Trusted G4 Code Signing RSA4096 SHA384 2021 CA1,
O="DigiCert, Inc.", C=US
        [
        Signature algorithm: SHA384withRSA, 4096-bit key
        [certificate is valid from 4/29/21 12:00 AM to 4/28/36 11:59 PM]
        X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
        [
        Signature algorithm: SHA384withRSA, 4096-bit key
        [trusted certificate]
        >>> TSA
        X.509, CN=DigiCert Timestamp 2022 - 2, O=DigiCert, C=US
        [
```

```
        Signature algorithm: SHA256withRSA, 4096-bit key
        [certificate is valid from 9/21/22 12:00 AM to 11/21/33 11:59 PM]
        X.509, CN=DigiCert Trusted G4 RSA4096 SHA256 TimeStamping CA,
O="DigiCert, Inc.", C=US
        [
        Signature algorithm: SHA256withRSA, 4096-bit key
        [certificate is valid from 3/23/22 12:00 AM to 3/22/37 11:59 PM]
        X.509, CN=DigiCert Trusted Root G4, O=DigiCert Inc, C=US
        [
        Signature algorithm: SHA384withRSA, 4096-bit key
        [certificate is valid from 8/1/22 12:00 AM to 11/9/31 11:59 PM]


  s = signature was verified
  m = entry is listed in manifest
  k = at least one certificate was found in keystore
  i = at least one certificate was found in identity scope

- Signed by "CN="Oracle America, Inc.", O="Oracle America, Inc.",
L=Redwood City, ST=California, C=US"
    Digest algorithm: SHA-256
    Signature algorithm: SHA256withRSA, 3072-bit key
  Timestamped by "CN=DigiCert Timestamp 2022 - 2, O=DigiCert, C=US" on Fri
Feb 17 07:02:33 UTC 2023
    Timestamp digest algorithm: SHA-256
    Timestamp signature algorithm: SHA256withRSA, 4096-bit key

jar verified.

The signer certificate will expire on 2023-08-19.
The timestamp will expire on 2031-11-09.
```

For more `jarsigner` options, type `jarsigner -h` or review the `jarsigner` documentation:

jarsigner Reference

Windows Certification and Web Browser Support

Review the Windows Certification and Web Browser Support information.

- Remote Desktop Services
  Oracle supports installing, configuring, and running Oracle AI Database through Remote Desktop Services on Windows.

- Microsoft Windows Servicing Options
  Microsoft introduced new Windows servicing options.

- Installation Requirements for Web Browsers
  Web browsers are required only if you intend to use Oracle Enterprise Manager Cloud Control. Web browsers must support JavaScript, and the HTML 4.0 and CSS 1.0 standards.

- Default Share Configuration Requirement
  The prerequisite checks during Oracle AI Database installation require that the system drive on your computer has default share configured on it.

Remote Desktop Services

Oracle supports installing, configuring, and running Oracle AI Database through Remote Desktop Services on Windows.

To install Oracle AI Database, Oracle recommends that you start all configuration tools from the Remote Desktop console session of the server.

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.

Related Topics

- http://www.microsoft.com/

- https://support.oracle.com/

Microsoft Windows Servicing Options

Microsoft introduced new Windows servicing options.

Oracle AI Database Server and Client supports the following servicing options:

- For Windows server, Oracle only supports Long-Term Servicing Channel. Windows Server Annual Channel releases only supports Server Core option at this time.

- For Windows client, Oracle supports long-Term Servicing Channel and General Availability Channel.

Oracle AI Database previously supported the former Windows servicing option, Semi-Annual Channel, for Windows clients only.

> ⓘ **Note**
>
> Oracle supports its database products on these channel releases that become generally available for as long as Microsoft supports the channel version. Once Microsoft support ends for a specific channel version, Oracle's support ends for that version as well. Oracle may recommend that customers wait until relevant Oracle patches have been released before upgrading to a particular channel version. Oracle may recommend or discourage the installation of a specific channel version if it significantly affects the operation of Oracle software, either positively or negatively. If such a statement is deemed necessary, Oracle will disseminate this statement on My Oracle Support.

Installation Requirements for Web Browsers

Web browsers are required only if you intend to use Oracle Enterprise Manager Cloud Control. Web browsers must support JavaScript, and the HTML 4.0 and CSS 1.0 standards.

https://support.oracle.com

Related Topics

- *Oracle Enterprise Manager Cloud Control Basic Installation Guide*

Default Share Configuration Requirement

The prerequisite checks during Oracle AI Database 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
```

4

Configuring Users, Groups and Environments for Oracle Database Client

Learn about the users, groups, and environment settings to complete before you install Oracle AI Database and Grid Infrastructure for a standalone server.

- **Creating Oracle Home User**
  During Oracle Database Client installation, you can specify an optional Oracle Home User associated with the Oracle home.

- **Creating Users, Groups and Environments for Oracle Database Client**
  Before installation, create operating system groups, users, and configure user environments.

- **Managing User Accounts with User Account Control**
  To ensure that only trusted applications run on your computer, the Windows operating systems supported for Oracle Database Client provide User Account Control.

- **Microsoft Hyper-V Requirements**
  Microsoft Hyper-V enables you to create and manage a virtualized computing environment by running multiple operating systems simultaneously on a single computer and isolate operating systems from each other.

> ⓘ **See Also**
>
> *Oracle AI Database Administrator's Reference for Microsoft Windows*

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\OraDb` domain user as the Oracle Home User for this installation. The specified Oracle home domain user must exist before you install the Oracle Database Client software.

The Oracle Home User can be either the Windows Built-in Account (LocalService) or a Windows User Account. This account is used for running the Windows services for the Oracle home. Do not log in using this account to perform administrative tasks.

Windows User Account can be a Windows Local User, Windows Domain User, Managed Services Account (MSA), or Group Managed Services Account (gMSA). Starting with Oracle Database 19c, Group Managed Services Account (gMSA) is introduced as an additional option.

Using Windows built-in account, MSA, or gMSA enables you to install Oracle Database Client, and create and manage Database services without passwords.

If you specify an existing user as the Oracle Home User, then the Windows User Account you specify can either be a Windows Domain User or a Windows Local User. If you specify a non-existing user as the Oracle Home User, then the Windows User Account you specify must be a Windows Local User. The new user is then created during installation and the created user is denied interactive logon privileges to the Windows computer. However, a Windows administrator can manage this account like any other Windows account.

For enhanced security, Oracle recommends that you use the standard Windows User Account or Windows Built-in Account (LocalService), which is not an administrator account, to install Oracle Database Client.

> ⓘ **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.

When you specify an Oracle Home User, the installer configures that user as the Oracle Service user for all software services that run from the Oracle home. The Oracle Service user is the operating system user that the Oracle software services run as, or the user from which the services inherit privileges.

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

Creating Users, Groups and Environments for Oracle Database Client

Before installation, create operating system groups, users, and configure user environments.

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

The groups that are created are explained as follows:

- **ORA_INSTALL:** This is a system wide group for Oracle's internal use, which is automatically populated with Oracle Home users. If a database server is running on this system, it grants dupsocket privilege to the group's members to allow listeners to operate. If no database server is present, this group is not used.

- **ORA_CLIENT_LISTENERS:** This group is for internal Oracle use. It contains listeners installed on client homes through custom installs. If a database server is running on this system, it grants dupsocket privilege to the group's members to allow listeners to work. If no database server is present, this group is not used.

- **ORA_*HOMENAME*_SVCSIDS:** This group is for Oracle's internal use and is automatically populated. It contains Service SIDs for all Windows services (e.g. Oracle Services for MTS, Listener, and Connection Manager) on client homes installed through custom installs. This group is granted full control to the specific client Oracle Home and client Oracle Base.

- **ORA_DBA and ORA_*HOMENAME*_DBA:** If the system is only used for clients, membership provides start/stop privileges to Oracle Windows services running from client

homes. `ORA_DBA` members are granted start/stop privileges for all Oracle Windows services on the system, while membership in `ORA_HOMENAME_DBA` gives start/stop privileges to Oracle Windows services running from the specific home.

Managing User Accounts with User Account Control

To ensure that only trusted applications run on your computer, the Windows operating systems supported for Oracle Database Client 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 Client. Provide either the consent or your Windows Administrator credentials as appropriate.

If User Account Control is enabled, and you are logged in as the local Administrator, then you can successfully run each of these commands. However, if you are logged in as "a member of the Administrator group," then you must explicitly start these tasks with Windows Administrator privileges. All the Oracle shortcuts that require Administrator privileges start 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.

> ⓘ **Note**
>
> You must have Administrator privileges to run some Oracle tools, such as Database Configuration Assistant, Oracle Net Configuration Assistant, and OPatch, or to run any tool or application that writes to any directory within the Oracle home.
> OPatch does not have a shortcut and has to be run from an Administrator command prompt.

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.

> ⓘ **See Also**
>
> *Oracle AI Database Administrator's Reference for Microsoft Windows*

Microsoft Hyper-V Requirements

Microsoft Hyper-V enables you to create and manage a virtualized computing environment by running multiple operating systems simultaneously on a single computer and isolate operating systems from each other.

Microsoft Hyper-V enables built-in integration services for supported guest operating systems to improve the integration between a computer and a virtual machine.

Oracle AI Database supports Hyper-V Dynamic Memory. See, [Certified Virtualization and Partitioning Technologies for Oracle Database and RAC Product Releases](#) for the certification matrix.

5
Installing Oracle Database Client

The Oracle Database Client software is available as an image file for download and installation. Oracle Database Client installation binaries continue to be available in the traditional format as non-image zip files.

> ⓘ **Note**
>
> For this Oracle Database Client 26ai release, only the Instant Client installation is available and the full client installation is not yet available.

- [About Image-Based Oracle Database Client Installation](#)
  Starting with Oracle Database 19c, installation and configuration of Oracle Database Client software is simplified with image-based installation.

- [Downloading Oracle Software](#)
  Select the method you want to use to download the software.

- [Installing the Oracle Database Client Software](#)
  These topics explain how to run the Setup Wizard to perform most database client installations.

About Image-Based Oracle Database Client Installation

Starting with Oracle Database 19c, installation and configuration of Oracle Database Client software is simplified with image-based installation.

To install Oracle Database Client, create the new Oracle home, extract the image file into the newly-created Oracle home, and run the setup wizard to register the Oracle AI Database product.

You must extract the image software (`client_home.zip`) into the directory where you want your Oracle Database Client home to be located, and then run the Setup Wizard to start the Oracle Database Client installation and configuration. Oracle recommends that the Oracle home directory path you create is in compliance with the Oracle Optimal Flexible Architecture recommendations.

As with Oracle AI Database and Oracle Grid Infrastructure image file installations, Oracle Database Client image installations simplify Oracle Database Client installations and ensure best practice deployments. Oracle Database Client installation binaries continue to be available in the traditional format as non-image zip files.

Using image-based installation, you can install Oracle Database Client 64-bit configurations of the Administrator installation type.

32-bit Oracle Database clients are desupported in Oracle AI Database 26ai.

Oracle has discontinued developing 32-bit Oracle Database clients. Oracle recommends that you use 64-bit Oracle Database clients. If you are using 32-bit applications, then you can continue to use older 32-bit Oracle Database clients, subject to "Client / Server Interoperability

Support Matrix for Different Oracle Versions (Doc ID 207303.1)," and the release support lifecycle (My Oracle Support 742060.1).

Downloading Oracle Software

Select the method you want to use to download the software.

You can download Oracle AI Database software from the Oracle website or the Oracle Software Delivery Cloud portal and extract them to the Oracle home. Ensure that you review and understand the terms of the license.

• [Downloading the Installation Archive Files from the Oracle AI Database Website](#)
  Download the installation archive files from the Oracle AI Database downloads page.

• [Downloading the Software from Oracle Software Delivery Cloud Portal](#)
  You can download the software from Oracle Software Delivery Cloud.

Downloading the Installation Archive Files from the Oracle AI Database Website

Download the installation archive files from the Oracle AI Database downloads page.

1. Use any browser to access the Oracle AI Database software downloads page:

   https://www.oracle.com/database/technologies/oracle-database-software-downloads.html

2. Go to the download page for the product 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 file names.

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 of the archive files.

5. On the file system, create a parent directory for each product (for example, `OraDB26ai`) to hold the installation directories.

6. Download all of the installation archive files to the directory you created for the product.

   > ⓘ **Note**
   >
   > For Oracle Database Client installations, there are two installation archive files available for download. The first file is the client installation binary and the second file is a client gold image file. Download the appropriate zip file based on the type of installation you want to perform.

7. Verify that the files you downloaded are the same size as the corresponding files on the Oracle website. Also verify the checksums are the same as noted on the Oracle website using a command similar to the following, where *filename* is the name of the file you downloaded:

   ```
   cksum filename.zip
   ```

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

Downloading the Software from Oracle Software Delivery Cloud Portal

You can download the software from Oracle Software Delivery Cloud.

1. Use a browser to access the Oracle Software Delivery Cloud portal:

    https://edelivery.oracle.com/

2. Click **Sign In** and enter your Oracle account username and password.

3. Type **Oracle AI Database** in the search bar. Click the **Add to Cart** button corresponding to the Oracle AI Database version that you want to download

4. In the Checkout page, click **Checkout** and deselect any products that you do not want to download.

5. Select the operating system platform on which you want to install the software from the **Platform/Languages** column.

6. Click **Continue**.

7. Review the license agreement.

8. Select the **I reviewed and accept the Oracle License Agreement** checkbox. Click **Continue**.

9. Click **Download** to start downloading the software.

10. After you download the files, click **View Digest** to verify that the checksum matches the value listed on the download page.

Installing the Oracle Database Client Software

These topics explain how to run the Setup Wizard to perform most database client installations.

> ⓘ **Note**
>
> For this Oracle Database Client 26ai release, only the Instant Client installation is available and the full client installation is not yet available.

The Oracle Database Client software is also available as an image file for download and installation. Oracle Database client installation binaries continue to be available in the traditional format as non-image zip files.

Starting with Oracle Database Client 26ai, the Setup Wizard no longer provides the option to install Oracle Instant Client.

*   Running Setup Wizard to Install Oracle Database Client
    Use the `setup.exe` command to start the Oracle Database Client installation.

*   Installing Oracle Database Client Using Image File
    Extract the Oracle Database Client image files and use the `setup.exe` command to start the Oracle Database Client installation.

- **Installing Oracle Connection Manager Using an Image File**
  Starting with Oracle Database Client 26ai, Oracle Connection Manager is available as an image file for installation and configuration.

- **Using Oracle Net Configuration Assistant**
  Run Oracle Net Configuration Assistant in standalone mode after the Oracle Database Client installation is complete to configure the listener, naming methods, net service names, and directory server usage.

Running Setup Wizard to Install Oracle Database Client

Use the `setup.exe` command to start the Oracle Database Client installation.

> ⓘ **Note**
>
> For this Oracle Database Client 26ai release, only the Instant Client installation is available and the full client installation is not yet available.

To install Oracle Database Client, perform the following steps:

1. Log in to Windows as an Administrator user. 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. Navigate to the location of the installation media for Oracle Database Client, open a command prompt with administrator privileges, and run the `setup.exe` command to start the Oracle setup wizard. Use the same installation media to install Oracle AI Database on all supported Windows platforms.

3. Select your installation type.

   Installation screens vary depending on the installation option you select. Respond to the configuration prompts as needed.

   > ⓘ **Note**
   >
   > At any time during installation, if you have a question about what you are being asked to do, click **Help**.

Installing Oracle Database Client Using Image File

Extract the Oracle Database Client image files and use the `setup.exe` command to start the Oracle Database Client installation.

Starting with 19c, the Oracle Database Client software is also available as an image file for download and installation.

Have all the information you need to provide regarding storage paths before you start the installation. Oracle recommends that you have your My Oracle Support credentials available during installation. During installation, you are asked to run configuration scripts as the `root` user. You must run these scripts manually as `root` when prompted.

1. Log in to Windows as an Administrator user. 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. Download the Oracle Database Client installation image files (`client_home.zip`) to a directory of your choice.

3. Create the Oracle home directory and extract the client image files that you have downloaded.

> ⓘ **Note**
>
> Oracle recommends that the Oracle home directory path you create is in compliance with the Oracle Optimal Flexible Architecture recommendations.

4. From the Oracle home directory, run the `setup.exe` command to start the Oracle Database Client Setup Wizard.

```
C:\> cd \app\oracle\product\23.0.0\client_1
C:\> setup.exe
```

> ⓘ **Note**
>
> Run the `setup.exe` command from the Oracle home directory only. Do not use the `setup.exe` command that resides at `C:\> ORACLE_HOME\oui\bin\`, or any other location, to install Oracle AI Database, Oracle Database Client, or Oracle Grid Infrastructure.

5. The setup wizard starts an Administrator type installation of Oracle Database Client.

   Installation screens vary depending on the installation option you select. Respond to the configuration prompts as needed.

> ⓘ **Note**
>
> At any time during installation, if you have a question about what you are being asked to do, click **Help**.

Installing Oracle Connection Manager Using an Image File

Starting with Oracle Database Client 26ai, Oracle Connection Manager is available as an image file for installation and configuration.

You must extract the image software (`client_cman_home.zip`) into the directory where you want your Oracle Database Client home to be located, and then run the Setup Wizard to start the Oracle Connection Manager installation and configuration.

Have all the information you need to provide regarding storage paths before you start the installation.

1. Log in as the Oracle installation owner user account (`oracle`).

2. Download the Oracle Database Client installation image files (`client_cman_home.zip`) to a directory of your choice. For example, you can download the image files to the `/tmp` directory.

3. Create the Oracle home directory and extract the image files that you have downloaded in to this Oracle home directory. For example:

```
C:\> mkdir \app\oracle\product\23.0.0\client_1
C:\> chgrp:oinstall \app\oracle\product\23.0.0\client_1
C:\> cd \app\oracle\product\23.0.0\client_1
C:\> unzip -q \tmp\client_cman_home.zip
```

> ⓘ **Note**
>
> - Oracle recommends that the Oracle home directory path you create is in compliance with the Oracle Optimal Flexible Architecture recommendations. Also, unzip the installation image files only in this Oracle home directory that you created.
>
> - Oracle home or Oracle base cannot be `symlinks`, nor can any of their parent directories, all the way to up to the `root` directory.

4. From the Oracle home directory, run the `setup.exe` command to start the Oracle Database Client Setup Wizard.

```
C:\> cd \app\oracle\product\23.0.0\client_1
setup.exe
```

> ⓘ **Note**
>
> Run the `setup.exe` command from the Oracle home directory only. Do not use the `setup.exe` command that resides at `ORACLE_HOME\oui\bin\`, or any other location, to install Oracle AI Database, Oracle Database Client, or Oracle Grid Infrastructure.

5. The setup wizard starts the Oracle Connection Manager type installation of Oracle Database Client.

   Respond to the configuration prompts as needed to provide information such as the Oracle base and Oracle inventory.

> ⓘ **Note**
>
> At any time during installation, if you have a question about what you are being asked to do, click **Help**.

Using Oracle Net Configuration Assistant

Run Oracle Net Configuration Assistant in standalone mode after the Oracle Database Client installation is complete to configure the listener, naming methods, net service names, and directory server usage.

Oracle recommends that you have information ready about the host name of the computer where the Oracle AI Database is installed.

To start Oracle Net Configuration Assistant in standalone mode:

1. Run `netca` from the `$ORACLE_HOME/bin` directory.

2. Respond to the configuration prompts and screens as needed. The screens vary depending on the options you select. At any time during the configuration, if you have a question about what you are being asked to do, click **Help.**

Related Topics

- *Oracle AI Database Net Services Administrator's Guide*

6
Installing Oracle Instant Client

You can install Oracle Instant Client by downloading the zip files from the Oracle Instant Client download page on the Oracle website.

- [About Oracle Instant Client](#)
  Learn how Oracle Instant Client enables applications to connect to a local or remote Oracle AI Database for development and production deployment.

- [Installing Oracle Instant Client Using Zip Files](#)
  Learn how to download and use zip files to install Oracle Instant Client Basic.

- [Verifying Signed Oracle Instant Client Zip Files](#)
  Starting with Oracle Database Client 19c (19.22), you can verify the code-signing for Oracle Instant Client zips to ensure the integrity of the packages before you deploy them in your environments.

- [Installing Oracle Instant Client Basic Light](#)
  Learn how to install Oracle Instant Client Basic Light.

- [Instant Client Libraries for OCI](#)
  Learn about the Oracle AI Database client-side files used by Oracle Call Interface (OCI) applications.

- [Environment Variables for Oracle Instant Client](#)
  Learn about some common Oracle environment variables that can influence Oracle Instant Client installations.

- [About the Oracle Instant Client SDK](#)
  Learn about the software development kit (SDK) development tools for Oracle Instant Client.

- [Connecting Instant Client or Instant Client Light to an Oracle Database Client](#)
  Before you can connect Instant Client or Instant Client Light to an Oracle Database Client, ensure that the PATH environment variable specifies the directory that contains the Instant Client libraries.

About Oracle Instant Client

Learn how Oracle Instant Client enables applications to connect to a local or remote Oracle AI Database for development and production deployment.

The Oracle Instant Client libraries provide the necessary network connectivity, as well as Oracle AI Database client-side files to create and run Oracle Call Interface (OCI), OCCI, ODBC, unmanaged ODP.NET, and JDBC OCI applications to make full use of Oracle AI Database.

Oracle Instant Client is commonly used by the Oracle APIs of popular languages and environments including Node.js, Python and PHP. Tools included in Oracle Instant Client, such as SQL*Plus, SQL*Loader, and Oracle Data Pump provide quick and convenient data access. Oracle Instant Client simplifies the deployment of applications by eliminating the need for an Oracle home on the client machines.

The Oracle JDBC Oracle Call Interface (OCI) Type 2 client driver (also known as a "thick" driver) is deprecated in Oracle AI Database 26ai.

Most Java applications that use Open Database Connectivity (ODBC) with Oracle JDBC drivers use the Thin driver. To enable Oracle to allocate resources to better address customer requirements, Oracle is deprecating the JDBC-OCI driver.

Oracle Data Provider for .NET (ODP.NET), Unmanaged Driver is deprecated in Oracle AI Database 26ai.

Oracle's standard client-server network interoperability allows connections between different versions of Oracle Instant Client and Oracle AI Database. For certified configurations, refer to My Oracle Support note 207303.1. Tools such as Data Pump may have other restrictions.

Oracle Instant Client supports the Federal Information Processing Standard (FIPS) for 140-2. For more information about configuring FIPS on Oracle Instant Client, see Oracle Database Security Guide.

Benefits of Oracle Instant Client

- Easy installation by extracting and installing zip files.

- Storage space requirement of applications running in Instant Client-mode is significantly reduced compared to the same application running in a full client-side installation.

- No loss of functionality or performance for applications deployed using Oracle Instant Client.

- Easy for independent software vendors to package applications.

Oracle Instant Client Packages

Various Oracle Instant Client packages are available that help you run applications.

Table 6-1   Oracle Instant Client Packages

Package Name	Description
Basic	All files required to run Oracle Call Interface (OCI), OCCI, and JDBC-OCI applications for Oracle AI Database
Basic Light	Smaller version of the Basic package, with only English error messages and Unicode, ASCII, and Western European character set support.
SDK	Additional header files and an example `makefile` for developing OCI and OCCI applications.
SQL*Plus	Additional package providing the SQL*Plus command-line tool for executing SQL and PL/SQL statements and scripts.
Tools	Additional tools including Data Pump, SQL*Loader and Workload Replay Client.
ODBC	Additional libraries providing ODBC.
Precompilers	Additional tools and libraries providing the Pro*C and Pro*COBOL precompilers.
JDBC-OCI Supplement	Additional libraries to support Internationalization.

Oracle Instant Client Utilities

Oracle Instant Client Basic and Oracle Instant Client Basic Light contain the following utilities:

- **genezi**: You can retrieve information about your Oracle Instant Client installation using the `genezi` utility. This utility displays information such as the time zone files that are part of the Oracle Instant Client data shared library. The timezone information shows either the embedded timezone files, or those specified by the ORA_TZFILE environment variable, if it is set.

Run the `genezi -v command` to determine the client library information.

- **adrci**: Automatic Diagnostic Repository Command Interpreter (`adrci`) is a command-line tool that you can use to manage Oracle AI Database diagnostic data. `adrci` enables you to investigate problems, view health check reports, and package first-failure diagnostic data, all within a command-line environment.

- **uidrvci**: Do not use the `uidrvci.exe` file as it is used to access diagnostic data.

Licensing information for Oracle Instant Client can be found in the downloaded packages or can be accessed from the Oracle License Agreement window that appears before downloading these packages, where applicable.

Installing Oracle Instant Client Using Zip Files

Learn how to download and use zip files to install Oracle Instant Client Basic.

> ⓘ **Note**
>
> Starting with Oracle Database Client 26ai, the Setup Wizard in the full client installation no longer provides the option to install Oracle Instant Client.

1. Use any browser to access the Oracle Instant Client Downloads page:

   https://www.oracle.com/database/technologies/instant-client/downloads.html

2. Download Oracle Instant Client Basic or Oracle Instant Client Basic Light zip files. Select the correct platform, architecture, and packages of your choice. For example, if your application is 64-bit, then ensure that you select 64-bit Instant Client and download the Basic or Basic Light package zip file. Also, download any optional packages that you intend to use.

   > ⓘ **Note**
   >
   > Oracle Instant Client 32-bit is not available on Oracle Database 26ai and later releases. However, you can continue to use Oracle Instant Client 19c 32-bit to connect to Oracle AI Database 26ai.

3. To verify the code-signing for Oracle Instant Client zip files, see Verifying Signed Oracle Instant Client Zip Files.

4. Use the unzip utility to unzip the desired packages to a directory such as `C:\oracle\`. You can also zip and unzip the files by running the `tar` command in the Windows Command Prompt (CMD) for the latest Windows platforms. For example, to unzip files using the `tar` command, run:

   ```
   C:\Users\username\Downloads tar -xf "instantclient-basic-
   windows.x64-23.26.zip" -C "C:\oracle\instantclient_23_26"
   ```

   In this example, the package unzips into `C:\oracle\instantclient_23_26`.

5. Add this directory to the PATH environment variable. If you have multiple versions of Oracle libraries installed, make sure the new directory occurs first in the path. Restart any terminal windows or otherwise make sure the new PATH is used by your applications.

6. Download and install the latest Visual Studio C++ Redistributable from Microsoft. Oracle Instant Client 26ai requires this redistributable to run on Windows.

7. If you intend to colocate optional Oracle configuration files such as `tnsnames.ora`, `sqlnet.ora`, `ldap.ora`, or `oraaccess.xml` with Oracle Instant Client, then move these files to the `C:\oracle\instantclient_23_26\network\admin` subdirectory.

   This is the default Oracle configuration directory for applications linked with this Oracle Instant Client.

   Alternatively, you can move the Oracle configuration files to another, accessible directory. Then set the environment variable TNS_ADMIN to that directory name.

8. Start your application.

ODBC users must follow the Oracle Instant Client ODBC Installation Notes.

Verifying Signed Oracle Instant Client Zip Files

Starting with Oracle Database Client 19c (19.22), you can verify the code-signing for Oracle Instant Client zips to ensure the integrity of the packages before you deploy them in your environments.

Use the Java utility `jarsigner` to verify the integrity of your Oracle Instant Client zip files. To verify the integrity of the Oracle Instant Client installation zip files before you extract the installation files:

1. Go to the directory where you have downloaded the zip file.

2. Run the `jarsigner` command with the `-verify` option to quickly check your installation zip file:

   For example, to check the Oracle Instant Client Basic package zip file for Windows:

   ```
   jarsigner -verify instantclient-basic-windows.x64-23.26.1.0.0.zip
   jar verified.
   ```

   If you want detailed certificate information, then use the `-verify` option along with the `-verbose:summary` and `-certs` options. For example:

   ```
   jarsigner -verify -verbose:summary -certs instantclient-basic-windows.x64-23.26.1.0.0.zip
   ```

   For more `jarsigner` options, type `jarsigner -h` or review the [jarsigner reference documentation.](#)

Installing Oracle Instant Client Basic Light

Learn how to install Oracle Instant Client Basic Light.

- [About Oracle Instant Client Basic Light](#)
  The size of the Instant Client Basic Light library is smaller than Oracle Instant Client. This is because Instant Client Basic Light contains only English language error message files, only 37 most common character set definitions out of around 250, and only monolingual collations.

- [Globalization Settings for Oracle Instant Client Basic Light](#)
  Oracle Instant Client Basic Light supports the following client character sets.

- [Installing Oracle Instant Client Basic Light Packages](#)
  Learn how to install Oracle Instant Client Basic Light by downloading zip files or by using the package repository.

About Oracle Instant Client Basic Light

The size of the Instant Client Basic Light library is smaller than Oracle Instant Client. This is because Instant Client Basic Light contains only English language error message files, only 37 most common character set definitions out of around 250, and only monolingual collations.

The Instant Client Basic Light version is geared toward applications that do not use legacy, rare character sets. There is no restriction on the language and the territory fields of the NLS_LANG setting, hence, Instant Client Basic Light operates with any language and territory settings supported by Oracle AI Database. However, the value of the NLS_SORT setting cannot be a multilingual or Unicode collation, that is, a collation with the suffix _M or prefix UCA in its name. Collations BIG5, GBK, and HKSCS are not supported either.

Only English error messages are provided with Instant Client Basic Light, hence, error messages generated by the client, such as Net connection errors, are always reported in English, even if you set NLS_LANG to a language other than AMERICAN. Error messages generated by the database server, such as SQL statement syntax errors, are generated in the selected language.

Globalization Settings for Oracle Instant Client Basic Light

Oracle Instant Client Basic Light supports the following client character sets.

Single-byte

- US7ASCII
- WE8DEC
- WE8ISO8859P1
- EE8ISO8859P2
- NEE8ISO8859P4
- CL8ISO8859P5
- AR8ISO8859P6
- EL8ISO8859P7
- IW8ISO8859P8
- WE8ISO8859P9
- NE8ISO8859P10
- TH8TISASCII
- VN8MSWIN1258
- WE8ISO8859P15
- BLT8ISO8859P13
- EE8MSWIN1250
- CL8MSWIN1251
- EL8MSWIN1253

- IW8MSWIN1255

- TR8MSWIN1254

- WE8MSWIN1252

- BLT8MSWIN1257

- AR8MSWIN1256

Multibyte

- JA16EUC

- JA16SJIS

- JA16EUCTILDE

- JA16SJISTILDE

- KO16MSWIN949

- ZHS16GBK

- ZHT32EUC

- ZHT16MSWIN950

- ZHT16HKSCS

Unicode

- UTF8

- AL32UTF8

- AL16UTF16 (only as NCHAR character set)

The preceding character sets, except AL16UTF16, can be specified in the NLS_LANG setting and can be the character set of a database to which the Instant Client Basic Light connects. The following character sets can also be the character set of a database to which the Instant Client Basic Light connects:

- WE8EBCDIC37C

- WE8EBCDIC1047

Oracle Instant Client Basic Light returns an error if any other character set is used as the client or database character set. Oracle Instant Client Basic Light can also operate with the OCI Environment handles created in the `OCI_UTF16` mode.

Installing Oracle Instant Client Basic Light Packages

Learn how to install Oracle Instant Client Basic Light by downloading zip files or by using the package repository.

Installing Oracle Instant Client Basic Light Using Zip Files

To download and use zip files to install Oracle Instant Client Basic Light, follow the instructions in Installing Oracle Instant Client Using Zip Files. However, unzip the `basiclite` file instead of the `basic`. For example, unzip the `instantclient-basiclite-windows.x64-23.26.1.0.0.zip` instead of `instantclient-basic-windows.x64-23.26.1.0.0.zip`.

Instant Client Libraries for OCI

Learn about the Oracle AI Database client-side files used by Oracle Call Interface (OCI) applications.

Table 6-2   Instant Client Basic Package Shared Libraries for OCI

File Name	Description
`oci.dll`	Forwarding functions that applications link with
`oraociei.sym`	Data and code
`orannz.sym`	Security Library

`oci.sym`
`oraociei.sym`
`orannzsbb.sym`
	Symbol tables

Table 6-3   Instant Client Basic Light Package Shared Libraries for OCI

File Name	Description
`oci.dll`	Forwarding functions that applications link with
`oraociicus.sym`	Data and code
`orannz.sym`	Security Library

`oci.sym`
`oraociicus.sym`
`orannzsbb.sym`
	Symbol tables

Guidelines for Basic and Basic Light Packages

*   The libraries must reside in the same directory in order to use Oracle Instant Client.

*   Other libraries and utilities are available when you install Oracle Instant Client, but are not needed for OCI runtime use. For example, you can delete files such as `ojdbc8.jar`.

*   In general, all OCI functionality is available to applications run using Oracle Instant Client, except that the Instant Client is for client-side operations only. Therefore, server-side external procedures cannot use Oracle Instant Client libraries.

Guidelines for Running OCI Applications

*   You should have only one set of Oracle libraries in the operating system library search path. If you have multiple directories containing Oracle Instant Client libraries, then only one such directory should be in the operating system library search path.

*   If an Oracle AI Database installation or full Oracle Database Client installation exists on the same system, then you should not have `ORACLE_HOME\bin` and the Oracle Instant Client directory on the operating system library search path simultaneously regardless of the order in which they appear in the operating system library search path. Either the `ORACLE_HOME\bin` directory (for non-Instant Client operations) or Oracle Instant Client

directory (for Oracle Instant Client operations) should be in the operating system library search path variable, but not both.

- If you intend to colocate optional Oracle configuration files such as `tnsnames.ora`, `sqlnet.ora`, `ldap.ora`, or `oraaccess.xml` with Oracle Instant Client, then move these files to the `network\admin` subdirectory.

Environment Variables for Oracle Instant Client

Learn about some common Oracle environment variables that can influence Oracle Instant Client installations.

Table 6-4   Common Environment Variables for Oracle Instant Client

Environment Variable	Description	For More Information
PATH	Set PATH environment variable to include the Instant Client directory. For example, instantclient_23_26. Update the PATH environment variable in **Control Panel, System, Advanced System Settings, Advanced, Environment Variables, System Variables, PATH**.	*Oracle AI Database Administrator's Reference*
NLS_LANG	If necessary, set the NLS_LANG environment variable. The NLS_LANG environment variable sets the language and territory used by the client application and the database server. It also sets the client's character set, which is the character set for data entered or displayed by a client program. If not set, a default value will be chosen by Oracle Instant Client.	*Oracle AI Database Globalization Support Guide*
TNS_ADMIN	The location of the optional Oracle Net configuration files and Oracle Instant Client configuration files, including `tnsnames.ora`, `sqlnet.ora`, and `oraaccess.xml`, if they are not in the default location. If TNS_ADMIN is not set, then the `instantclient_23_26\network\admin` subdirectory should contain your Oracle Net Services configuration files.	*Oracle AI Database Net Services Administrator's Guide*

Table 6-4   (Cont.) Common Environment Variables for Oracle Instant Client

Environment Variable	Description	For More Information
ORA_TZFILE	Oracle Instant Client can use the ORA_TZFILE environment variable to read the time zone file from the file system when this environment variable is set. If ORA_TZFILE is not set, then Oracle Instant Client uses the larger, default, `timezlrg_n.dat` file from the shared libraries. If you want Oracle Instant Client to use the smaller `timezone_n.dat` file, then set the ORA_TZFILE environment variable to the name of the file without any absolute or relative path names. For example: `set ORA_TZFILE=timezone_n.dat` Where, `n` is the time zone data file version number. Run the `genezi -v` command to determine the client library timezone information. To use an external time zone file, create an `oracore\zoneinfo` subdirectory under the Oracle Instant Client directory, and move the time zone file into this `oracore\zoneinfo` subdirectory. Now, set ORA_TZFILE to the time zone file name, without any absolute or relative path names.	*Oracle AI Database Administrator's Reference*
ORA_SDTZ	Specifies the default session time zone.	*Oracle AI Database Globalization Support Guide*

About the Oracle Instant Client SDK

Learn about the software development kit (SDK) development tools for Oracle Instant Client.

The software development kit (SDK) is a set of development tools that you can use to create applications for Oracle AI Database. The SDK is available for download as a zip file. For example, `instantclient-sdk-windows.x64-23.26.1.0.0.zip`.

The SDK contains the following:

- Both C and C++ header files and a `make.bat` for developing OCI and OCCI applications while in an Oracle Instant Client environment. Developed applications can be deployed in any client environment.

- Both C and C++ demonstration programs.

- The Object Type Translator (OTT) utility and its classes to generate application header files.

- On Microsoft Windows, the SDK includes the libraries required to link the OCI or OCCI applications. The `make.bat` file is also included to build demos.

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

Before you can connect Instant Client or Instant Client Light to an Oracle Database Client, ensure that the PATH environment variable specifies the directory that contains the Instant Client libraries.

- [Specifying a Connection by Using the Easy Connect Naming Method](#)
  You can specify a connection address to an Oracle AI Database directly from a client application, without having to configure a `tnsnames` setting for the Instant Client.

- [Specifying a Connection by Configuring a tnsnames.ora File](#)
  By default, when you install an 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.

- [Specifying a Connection by Using an Empty Connect String and the LOCAL Variable](#)
  Describes how to specify a connection to an empty connect string and set the LOCAL environment variable.

Specifying a Connection by Using the Easy Connect Naming Method

You can specify a connection address to an Oracle AI 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, then 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 AI 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, 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)))"
  ```

Specifying a Connection by Configuring a tnsnames.ora File

By default, when you install an 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 AI 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.

   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.

Related Topics

• [Connecting Oracle Database Client to an Oracle Database](link)
  After you run Oracle Universal Installer to install Oracle Database Client, you must use Oracle Net Configuration Assistant (NETCA) to configure Oracle Database Client to connect to an Oracle AI Database.

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

Describes how to specify a connection to an empty connect string and set the LOCAL environment 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

• 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 uses an empty connection string. The benefit of an empty connect string is that the application 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 for your application to connect to the database.

Related Topics

- [Specifying a Connection by Using the Easy Connect Naming Method](link)
  You can specify a connection address to an Oracle AI Database directly from a client application, without having to configure a `tnsnames` setting for the Instant Client.

7

Oracle Database Client Postinstallation Tasks

Complete configuration task after you install Oracle Database Client.

You must complete some configuration tasks after Oracle Database Client is installed. In addition, Oracle recommends that you complete additional tasks immediately after installation. You must also complete product-specific configuration tasks before you use those products.

- [Required Postinstallation Tasks](#)
  Download and apply required patches for your software release after completing your initial installation.

- [Recommended Postinstallation Tasks](#)
  Oracle recommends that you perform the tasks in the following sections after completing an installation:

Required Postinstallation Tasks

Download and apply required patches for your software release after completing your initial installation.

- [Downloading Release Update Patches](#)
  Download and install Release Updates (RU) and Monthly Recommended Patches (MRPs) patches for your Oracle software after you complete your installation.

- [Windows Authentication No Longer Uses NTLM by Default](#)
  For Microsoft Windows installations with `AUTHENTICATION_SERVICES=NTS`, in this Oracle Database release, the `SQLNET.NO_NTLM` parameter setting in the `sqlnet.ora` file defaults to `TRUE`, which can cause ORA-12638 errors.

- [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.

Downloading Release Update Patches

Download and install Release Updates (RU) and Monthly Recommended Patches (MRPs) patches for your Oracle software after you complete your installation.

Oracle provides quarterly updates in the form of Release Updates (RU) and Monthly Recommended Patches (MRPs). Oracle no longer releases patch sets. For more information, see [My Oracle Support Note 2285040.1](#).

Check the My Oracle Support website for required updates for your installation.

1. Log in to the My Oracle Support website:

   https://support.oracle.com

> ⓘ **Note**
>
> If you are not a My Oracle Support registered user, then click **Register for My Oracle Support** and register.

2.   On the main My Oracle Support page, click **Patches & Updates**.

3.   In the **Patch Search** region, select **Product or Family (Advanced)**.

4.   On the **Product or Family (Advanced)** display, provide information about the product, release, and platform for which you want to obtain patches, and click **Search**.

     The Patch Search pane opens, displaying the results of your search.

5.   Select the patch number and click **ReadMe**.

     The README page is displayed. It contains information about the patch and how to apply the patches to your installation.

6.   Uncompress the Oracle patch updates that you downloaded from My Oracle Support.

> ⓘ **Note**
>
> The use of OPatch and OPatchAuto for out-of-place patching continues to be deprecated.
> For patching in Oracle AI Database 26ai, Oracle recommends that you use out-of-place patching using Gold images to apply quarterly release updates (RUs). This deprecation does not affect in-place patching. If you want to perform in-place patching, then OPatch and OPatchAuto continue to be available for this purpose. The Oracle AI Database 26ai Free release is not supported for patching with RUs.

Related Topics

*   [My Oracle Support note 888.1](#)

*   [Patch Delivery Methods for Oracle Database](#)

Windows Authentication No Longer Uses NTLM by Default

For Microsoft Windows installations with `AUTHENTICATION_SERVICES=NTS`, in this Oracle Database release, the `SQLNET.NO_NTLM` parameter setting in the `sqlnet.ora` file defaults to `TRUE`, which can cause ORA-12638 errors.

Date: August 2023

In previous releases, the default for `AUTHENTICATION_SERVICES=NTS` was `FALSE`. `SQLNET.NO_NTLM` controls whether NTLM can be used with NTS authentication. A `TRUE` setting means that NTLM cannot be used in NTS authentication. Because NTLM does not normally provide mutual authentication and is hence less secure, a `TRUE` setting for `SQLNET.NO_NTLM` makes the database and client more secure.

The `SQLNET.NO_NTLM` parameter is used on both the server and the client. If you have upgraded a Microsoft Windows installation of Oracle Database, or upgraded a client in which `SQLNET.NO_NTLM` had not been set, then its default will be `TRUE`. In that case, when you have `SQLNET.AUTHENTICATION_SERVICES=NTS` in your `sqlnet.ora`, clients can encounter the error `ORA-12638: Credential retrieval failed`.

If you prefer to use NTLM authentication for certain clients, then set this parameter as required in client-side `sqlnet.ora` files:

```
SQLNET.NO_NTLM=FALSE
```

You must include this setting on both the server and client, and this setting should be the same on both. Ideally, you should ensure that `SQLNET.NO_NTLM` is set to `TRUE`. However, if there is an authentication failure in `extproc`, a virtual account, or a local account on Windows, set the client `SQLNET.NO_NTLM` to `FALSE`, and then retry the login. If you change `SQLNET.NO_NTLM` on the server, then you must restart the database.

Related Topics

- [Upgrade Your Database Now - ORA-12638 on Windows only from Oracle 19.10.0 onwards](#)
- [Windows : While Connect to Database Getting ORA-12638 After Applying Jan 2021 WINDBBP 19.10.0.0.210119 On Windows 64/32 Bit Database Client (Doc ID 2757734.1)](#)

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.

To create Oracle Connection Manager (CMAN) services, create a CMAN alias entry in `cman.ora` under `ORACLE_HOME\network\admin`. For example:

```
cman_proxy=

(CONFIGURATION=

(ADDRESS=(PROTOCOL=tcp)(HOST=host_name)(PORT=1521))

(RULE_LIST=

(RULE=(SRC=*)(DST=*)(SRV=*)(ACT=accept)))

(PARAMETER_LIST=

(MIN_GATEWAY_PROCESSSES=1)

(MAX_GATEWAY_PROCESSES=2)))
```

This accepts connection from all clients as mentioned in the rule.

CMAN services are created when CMAN is started for the first time using `cmctl` command-line tool. When creating services, `cmctl` prompts for a password if Windows User Account is specified as Oracle Home User during installation. If Windows Built-in Account is specified as Oracle Home User during installation, then `cmctl` does not prompt for password.

Listener can be configured by adding an alias entry in `listener.ora.` Listener service is created when the listener is started for the first time. The listener control utility, `lsnrctl` prompts for a password if Windows User Account is specified as Oracle Home User during installation. If Windows Built-in Account is specified as Oracle Home User during installation, then it does not prompt for password.

Recommended Postinstallation Tasks

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

- Connecting Oracle Database Client to an Oracle AI Database
  After you run Oracle Universal Installer to install Oracle Database Client, you must use Oracle Net Configuration Assistant (NETCA) to configure Oracle Database Client to connect to an Oracle AI Database.

- Changing the Oracle Home User Password
  Oracle Home User Control is a command-line utility that allows an administrator to update the password for an Oracle Home User.

- Creating the Scheduler Agent
  The Oracle Scheduler Execution Agent permits Oracle Database clients to run Scheduler jobs at the request of an Oracle instance which can be located on a remote host.

Connecting Oracle Database Client to an Oracle AI Database

After you run Oracle Universal Installer to install Oracle Database Client, you must use Oracle Net Configuration Assistant (NETCA) to configure Oracle Database Client to connect to an Oracle AI Database.

At the end of the 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.

To connect Oracle Database Client to an Oracle AI Database:

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

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

   `ORACLE_HOME\network\admin\tnsnames.ora`

Changing the Oracle Home User Password

Oracle Home User Control is a command-line utility that allows an administrator to update the password for an Oracle Home User.

This tool updates the password for Windows services in the Oracle home. The input password must match the password for the Windows User Account used as the Oracle Home User. So, first use Windows operating system tools to change the Windows password and then use this tool to update the Windows services in the Oracle home to use the same password.

> ⓘ **Note**
>
> You must have Administrator privileges to run this Oracle Home User Control utility.

Syntax Overview:

The following is the command syntax:

```
orahomeuserctl list | updpwd [-user username] [-host hostname1, hostname2, . . .] [-log logfilename]
```

where:

- `orahomeuserctl` is used to display the Oracle Home User name associated with the current Oracle home or to update the Oracle Home User password.

- `list` displays the Oracle Home User name associated with the current Oracle home.

- `updpwd` prompts for the new password and updates the password for the named Oracle Service User. The following are the options for `updpwd`:

  - `-user username`

    This option determines the Oracle Home User name. If this option is not present, then the user name associated with the current Oracle home is used. If the named user, be it the *username* or user of the current Oracle home, is an MSA or Windows Built-in account, then an error message is displayed and the command is terminated.

  - `-host hostname1, hostname2,...`

    When this option is present, the utility updates the passwords for all services belonging to the named Oracle Home User on the specified hosts. Otherwise, the Oracle Home User Control utility updates the passwords for all the services belonging to the named Oracle Home User on a specified host with single instance installation, or updates the passwords for all services belonging to the named Oracle Home User on all the specified hosts.

    When the update completes, the utility displays the number of successful updates and any services that failed to update with the new password.

  - `-log logfilename`

    This option adds the password update operation results to a log file for every service name receiving the new password. By default, the log files are located in the `ORACLE_HOME\log` directory. If `logfilename` specifies only a file name, then the log is stored in the named file in the default directory. However, if the `logfilename` contains a path, then that path is used without modification.

Creating the Scheduler Agent

The Oracle Scheduler Execution Agent permits Oracle Database clients to run Scheduler jobs at the request of an Oracle instance which can be located on a remote host.

This allows for centralized control over several hosts using Oracle Scheduler and can perform jobs at the operating system level and jobs that run on another Oracle AI Database.

The Oracle Scheduler Execution Agent is installed with the Oracle Database Client software.

The Oracle Scheduler Execution Agent permits Oracle Database clients to run Scheduler jobs at the request of an Oracle instance which can be located on a remote host. This allows for centralized control over several hosts using Oracle Scheduler and can perform jobs at the operating system level and jobs that run on another Oracle AI Database.

To create the Scheduler Agent service after performing a software-only installation for Oracle Database Client, perform the following steps:

1. Open a command window.

2. Change directories to *ORACLE_HOME*\bin.

3. Run the executable utility, schagent to create the Scheduler Agent service:

   ```
   C:\ORACLE_HOME\bin> schagent.exe -new
   ```

8
Removing Oracle AI Database Software

Use the `deinstall` command that is included in Oracle homes to remove Oracle software. Oracle does not support the removal of individual products or components.

> ⚠ **Caution**
>
> If you have a single-instance database on a node in a cluster, and if you have multiple databases with the same global database name (GDN), then you cannot use the `deinstall` command to remove one database only.

- [About Oracle Deinstallation Options](#)
  You can stop and remove Oracle AI Database software and components in an Oracle AI Database home with Oracle Universal Installer.

- [Deinstallation Examples for Oracle Database Client](#)
  Use these examples to learn how to run deinstallation using a standalone tool (`deinstall`).

- [Example of Running the Deinstallation Tool](#)
  Review the examples to help you understand how to run the deinstallation tool.

- [Deinstallation Response File Example for Oracle Database Client](#)
  You can run the deinstallation tool with the `-paramfile` option to use the values you specify in the response file.

About Oracle Deinstallation Options

You can stop and remove Oracle AI Database software and components in an Oracle AI Database home with Oracle Universal Installer.

Using Oracle Universal Installer with the deinstall option, or running the deinstallation tool from the Oracle home, stops and removes Oracle software and it's components, such as database client and configuration files for a specific Oracle home.

You can remove the following software using Oracle Universal Installer or the Oracle deinstallation tool:

- Oracle AI Database

- Oracle Grid Infrastructure, which includes Oracle Clusterware and Oracle Automatic Storage Management (Oracle ASM)

- Oracle Real Application Clusters (Oracle RAC)

- Oracle Database Client

The deinstallation tool is integrated with the database client installation media. You can run the deinstallation tool with the `-deinstall` and `-home` options from the base directory of the Oracle AI Database, Oracle Database Client, or Oracle Grid Infrastructure installation media.

The deinstallation tool is also available as a separate command (`deinstall`) in Oracle home directories after installation. It is located in `ORACLE_HOME\deinstall` directory.

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

Using Oracle Universal Installer with the deinstall option, or running the deinstallation tool from the Oracle home, stops and removes Oracle software and its components, such as database and configuration files for a specific Oracle home.

If the software in the Oracle home is not running (for example, after an unsuccessful installation), then the deinstallation tool cannot determine the configuration, and you must provide all the configuration details either interactively or in a response file.

> ⚠ **Caution**
>
> When you install Oracle AI Database, 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 AI 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 deinstallation tool deletes this data.
>
> In addition, for Oracle Grid Infrastructure installations:
>
> - Oracle ACFS must be dismounted and Oracle Automatic Storage Management Dynamic Volume Manager (Oracle ADVM) must be disabled.
> - If Grid Naming Service (GNS) is in use, then the entry for the subdomain needs to be deleted from DNS by your DNS administrator.

Oracle recommends that you run the deinstallation tool as the Oracle software installation owner. The default method for running the deinstallation tool is from the deinstall directory in the Oracle home as the installation owner:

```
ORACLE_HOME\deinstall
DRIVE_LETTER:\> deinstall\deinstall.bat
```

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

```
deinstall.bat [-silent] [-checkonly]
[-paramfile complete path of input parameter property file] [-params name1=value
name2=value . . .]
[-o complete path of directory for saving files] [-help]
[-tmpdir complete path of temporary directory to use]
```

```
[-logdir complete path of log directory to use] [-help]
```

To run the deinstallation tool from the database installation media, use the `setup.exe` command with the `-deinstall` option, followed by the `-home` option to specify the path of the Oracle home you want to remove using the following syntax, where variable content is indicated in italics:

```
setup.exe -deinstall -home complete path of Oracle home [-silent] [-checkonly] [-local]
[-paramfile complete path of input parameter property file] [-params name1=value
name2=value . . .] [-o complete path of directory for saving files] [-help]
[-tmpdir complete path of temporary directory to use]
[-logdir complete path of log directory to use] [-help]
```

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

> ⓘ **Note**
>
> If User Account Control is enabled, then you must create a desktop shortcut to a DOS command window. Open the command window through the **Run as administrator**, right-click context menu, and start the deinstallation tool.

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

- `-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, located in the Oracle home you plan to deinstall, provide a response file in a location outside the Oracle home, and do not use the `-home` flag.

  If you run the deinstallation tool from the `ORACLE_HOME\deinstall` path, then the `-home` flag is not required because the tool identifies the location of the home where it is run. If you run the tool using `setup.exe -deinstall` from the installation media, then `-home` is mandatory.

- `-silent`

  Use this flag to run the deinstallation tool in a noninteractive mode. This option requires one of the following:

  - A working system that it can access to determine the installation and configuration information. The `-silent` flag does not work with failed installations.

  - A response file that contains the configuration values for the Oracle home that is being deinstalled or deconfigured.

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

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

- `-checkonly`

  Use this flag to check the status of the Oracle software home configuration. Running the deinstallation tool with the `-checkonly` flag does not remove the Oracle configuration. The

`-checkonly` flag generates a response file that you can then use with the deinstallation tool and `-silent` option.

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

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

  The default location of the response file depends on the location of the deinstallation tool:

  – From the installation media or stage location: `\response`

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

- `-params` ["name1=*value*" "name2=*value*" "name3=*value*" . . .]

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

- `-o` *complete path of directory for saving response file*

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

  The default location of the response file depends on the location of deinstallation tool:

  – From the installation media or stage location before installation: `\response`

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

- `-tmpdir` *complete path of temporary directory*

  Specifies a non-default location where Oracle Deinstallation Tool writes the temporary files for the deinstallation.

- `-logdir` *complete path of log directory*

  Specifies a non-default location where Oracle Deinstallation Tool writes the log files for the deinstallation.

- `-help`

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

Related Topics

- [Managing User Accounts with User Account Control](#)
  To ensure that only trusted applications run on your computer, the Windows operating systems supported for Oracle Database Client provide User Account Control.

Deinstallation Examples for Oracle Database Client

Use these examples to learn how to run deinstallation using a standalone tool (`deinstall`).

Use the optional flag `-paramfile` to provide a path to a response file.

In the following example, the `deinstall` command is in the path `C:\app\oracle\product\23.0.0\client_1\deinstall`, and it uses a response file in the software owner location `C:\Documents and Settings\oracle\`:

```
DRIVE_LETTER:\> cd \app\oracle\product\23.0.0\client_1\deinstall\
DRIVE_LETTER:\> deinstall.bat -paramfile %HOMEPATH%\my_db_paramfile.tmpl
```

Example of Running the Deinstallation Tool

Review the examples to help you understand how to run the deinstallation tool.

If you perform a deinstallation by running the `setup.exe` command with the `-deinstall` option from the installation media, then help is displayed unless you enter a `-home` flag and provide a path to the home directory of the Oracle software to remove from your system.

Use the optional flag `-paramfile` to provide a path to a response file.

In the following example, the `setup.exe` command is in the path `\directory_path`, where `directory_path` is the path to the `database` directory on the installation media, and `C:\app\oracle\product\23.0.0\dbhome_1` is the path to the Oracle home which is removed:

```
DRIVE_LETTER:\> cd \directory_path
DRIVE_LETTER:\> setup.exe -deinstall -home C:\app\oracle\product\23.0.0\dbhome_1
```

The following example uses a response file in the software owner location `C:\Documents and Settings\oracle\`:

```
DRIVE_LETTER:\> cd \directory_path
DRIVE_LETTER:\> setup.exe -deinstall -paramfile C:\Documents and
Settings\oracle\my_db_paramfile.tmpl
```

Deinstallation Response File Example for Oracle Database Client

You can run the deinstallation tool with the `-paramfile` option to use the values you specify in the response file.

The following is an example of a response file, in which the Oracle AI Database binary owner is `oracle`, the Oracle AI Database home (Oracle home) is in the path `C:\app\oracle\product\23.0.0\client_1`, the Oracle base (where other Oracle software is installed) is `C:\app\oracle`, the Oracle Inventory home is `C:\Program Files\Oracle\Inventory`, and the local node (the node where you run the deinstallation session from) is `myserver`:

```
# Copyright (c) 2005, 2020, Oracle and/or its affiliates. All rights reserved.
ORACLE_HOME=C:\app\dbinstall3\23.3admnClnt\client_1
COMPS_TO_REMOVE=ntoledb,asp.net,odp.net
ORACLE_HOME_VERSION=23.0.0.0.0
ORACLE_BASE=C:\app\dbinstall3\23.3admnClnt\cbase
INVENTORY_LOCATION=C:\Program Files\Oracle\Inventory
CRS_HOME=false
HOME_TYPE=CLIENT
silent=false
WindowsRegistryCleanupList=C:\Users\DBINST~1\AppData\Local\Temp\2\deinstall2019-05-30_03-
29-28AM\utl\registry_cleanup.lst
MinimumSupportedVersion=11.2.0.1.0
LOCAL_NODE=<hostname>
local=false
ObaseCleanupPtrLoc=C:\Users\DBINST~1\AppData\Local\Temp\2\deinstall2019-05-30_03-29-28AM\
utl\orabase_cleanup.lst
ORACLE_HOME=C:\app\dbinstall3\23.3admnClnt\client_1
LOGDIR=C:\Program Files\Oracle\Inventory\logs\
OLD_ACTIVE_ORACLE_HOME=
ORACLE_HOME_VERSION_VALID=true
```

A

Installing and Configuring Oracle AI Database Using Response Files

Review how to install and configure Oracle products using response files.

Learn how to install and configure Oracle AI Database Using Response Files:

- [How Response Files Work](#)
  Response files can assist you with installing an Oracle product multiple times on multiple computers.
- [Preparing a Response File](#)
  Describest the methods that you can use to prepare a response file for use during silent-mode or response file-mode installations.
- [Running Oracle Universal Installer Using the Response File](#)
  After creating the response file, run Oracle Univeral Installer at the command line, specifying the response file you created, to perform the installation.

How Response Files Work

Response files can assist you with installing an Oracle product multiple times on multiple computers.

When you start Oracle Universal Installer (OUI), you can use a response file to automate the installation and configuration of Oracle software, either fully or partially. OUI uses the values contained in the response file to provide answers to some or all installation prompts.

Typically, the 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**: If you include responses for all of the prompts in the response file and specify the -silent option when starting the installer, then it runs in silent mode. During a silent mode installation, the installer does not display any screens. Instead, it displays progress information in the terminal that you used to start it.

- **Response file mode**: If you include responses for some or all of the prompts in the response file and omit the -silent option, then the installer runs in response file mode. During a response file mode installation, the installer displays all the screens, screens for which you specify information in the response file, and also screens for which you did not specify the required information in the response file. To use the response file mode, run `setup.exe` without the `-silent` parameter, but include the response file or any other parameters that apply.

Define the settings for a silent or response file installation by entering values for the variables listed in the response file. For instance, to specify the Oracle home, provide 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" ...
```

This method supports only the Oracle Home User passwords.

- [Reasons for Using Silent Mode or Response File Mode](#)
  Review this section for use cases for running the installer in silent mode or response file mode.

- [Using Response Files](#)
  Review this information to use response files.

Related Topics

- [My Oracle Support](#)

Reasons for Using Silent Mode or Response File Mode

Review this section for use cases for running the installer in silent mode or response file mode.

Table A-1   Reasons for Using Silent Mode or Response File Mode

Mode	Uses
Silent	Use silent mode to: • Complete an unattended installation, which you schedule using operating system utilities such as at. • Complete several similar installations on multiple systems without user interaction. • Install the software on a system that does not have X Window System software installed on it. The installer displays progress information on the terminal that you used to start it, but it does not display any of the installer screens.
Response file	Use response file mode to complete similar Oracle software installations on more than one system, providing default answers to some, but not all of the installer prompts. If you do not specify information required for a particular installer screen in the response file, then the installer displays that screen. It suppresses screens for which you have provided all of the required information.

Using Response Files

Review this information to use response files.

Use the following general steps to install and configure Oracle products using the installer in silent or response file mode:

1. If you plan to use Oracle Automatic Storage Management and configure new disks, then you must perform the following steps:

   a. Create partitions for DAS or SAN disks.

   b. Manually configure the disks using the `asmtoolg` or `asmtool` utility.

2. Customize or create a response file for the installation settings that you need.

You can create the response file by using one of the following methods:

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

- Run Oracle Universal Installer at a command prompt and save the inputs by selecting the **Save Response File** option.

3. Run Oracle Universal Installer from a command prompt, specifying the response file, using either silent or response file mode.

> ⓘ **Note**
>
> Windows requires Administrator privileges at the command prompt.

Related Topics

- [Running Oracle Universal Installer Using the Response File](#)

Preparing a Response File

Describest the methods that you can use to prepare a response file for use during silent-mode or response file-mode installations.

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

Editing a Response File Template

Oracle provides response file templates for each product and the installation type, and for each configuration tool. These files are located in the *ORACLE_BASE\ORACLE_HOME*\assistants directory, and the database\response directory on the Oracle AI Database installation media.

> ⓘ **Note**
>
> If you copied the software to a hard disk, the response files are located in the *stage_area*\database\response directory.

All response file templates contain comment entries, sample formats, examples, and other useful instructions. Read the response file instructions to understand how to specify values for the response file variables, so that you can customize your installation.

The following table lists the available sample response files:

Table A-2   Response Files

Response File Name	Description
client_install.rsp	Oracle Database Client installation
netca.rsp	Silent installation of Oracle Net Configuration Assistant

> ⚠ **Caution**
>
> When you modify a response file template and save a file for use, the response file may contain plain text passwords. Ownership of the response file must be given to the Oracle software installation owner only. Oracle strongly recommends that database administrators or other administrators delete or secure response files when they are not in use.

To copy and modify a response file:

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

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

3. Run the response file by following the instructions in the "Running Oracle Universal Installer Using the Response file" section.

Related Topics

- [Running Oracle Universal Installer Using the Response File](#)
  After creating the response file, run Oracle Univeral Installer at the command line, specifying the response file you created, to perform the installation.

Saving a Response File

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

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 Oracle Universal Installer on the Summary page, before it starts to copy the software to the system.

> ⓘ **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 Oracle AI Database Preinstallation Tasks.

   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.

   > ⓘ **Note**
   >
   > As an administrator, go to the Oracle home and run `setup.exe`.

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

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

   a. 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.

   b. Click **Finish** to continue with the installation.

      Click **Cancel** if you do not want to continue with the installation. The installation stops, but the saved response file is retained.

4. 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.

Running Oracle Universal Installer Using the Response File

After creating the response file, run Oracle Univeral Installer at the command line, specifying the response file you created, to perform the installation.

On Windows, you must open the command prompt with the 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, you must open command prompt with the Administrator privileges. For example:

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

   where:

   - `filename`: Identifies the full path of the response file.

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

   - `-silent`: Runs Oracle Universal Installer in silent mode and suppresses the Welcome window.

   - `"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.

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

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

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.