

Oracle® SQL Developer

Installation Guide



Release 23.1

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The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle SQL Developer Installation Guide, Release 23.1

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Preface

This guide provides information for those installing the Oracle SQL Developer tool on Windows, Linux, and Mac OS X systems.

Audience

This guide is intended for those who need to install the Oracle SQL Developer tool.

Documentation Accessibility

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

Access to Oracle Support

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

Related Documents

For conceptual, usage, and reference information about Oracle SQL Developer, see the online help available when you are running SQL Developer.

To download free release notes, installation documentation, white papers, or other collateral, go to the Oracle Technology Network (OTN) at

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

The documentation section of the OTN website is located at

<http://www.oracle.com/technetwork/indexes/documentation/>

Conventions

The following text conventions are used in this document:

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

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Installing Oracle SQL Developer



Note:

This guide assumes that you plan to download SQL Developer and run it as a freestanding tool.

Please read the information in this chapter before you install Oracle SQL Developer. This chapter contains the following major sections:

- [SQL Developer System Recommendations](#)
- [Installing and Starting SQL Developer](#)
- [Migrating User Settings from a Previous Release](#)
- [Migrating Information from Previous Releases](#)
- [Location of User-Related Information](#)
- [Database Certification for SQL Developer \(Oracle and Third-Party\)](#)
- [Advanced Security for JDBC Connection to the Database](#)
- [Finding SQL Developer Accessibility Information](#)
- [Uninstalling SQL Developer](#)
- [SQL Developer Documentation](#)
- [Oracle on the Web](#)

1.1 SQL Developer System Recommendations

SQL Developer requires JDK 11, which you can download from [Java Downloads](#).

For information about operating system versions supported for Oracle JDK 11, see [Oracle JDK 11 Certified System Configurations](#).

1.2 Installing and Starting SQL Developer

This section contains subsections with instructions for installing SQL Developer on all supported systems.

SQL Developer does not require an installer. To install SQL Developer, you will need an unzip tool. You can download a free, cross-platform unzip tool, Info-Zip, available at <http://infozip.sourceforge.net/>.

 **Note:**

Do not install SQL Developer into any existing `ORACLE_HOME`. You will not be able to uninstall it using Oracle Universal Installer.

Also, do not install SQL Developer into an existing `sqldeveloper` folder or directory. Either delete the existing `sqldeveloper` folder or directory first, or ensure that the new SQL Developer version is installed into a different location.

 **Note:**

If you are using a *prerelease (Early Adopter)* version of SQL Developer, and if you want to be able to continue to use this prerelease version after installing the official release kit, you **must** unzip the official release kit into a different directory than the one used for the prerelease version.

Before you install SQL Developer, look at the remaining sections of this guide to see if you need to know or do anything else first.

The steps for installing SQL Developer depend on whether or not you will be using it on a Windows system that does not have Java SDK (JDK) release 11 installed:

- For a Windows system with JDK release 11 installed, follow the instructions in [Windows Systems](#).
- For all other systems (Linux and Mac OS X systems, and Windows systems with no JDK release 11 installed), follow the instructions in [Linux and Mac OS X Systems](#).

1.2.1 Windows Systems

If a Windows 64-bit SQL Developer file that includes JDK is available, you can download and install that on a Windows 64-bit system, and SQL Developer will use the embedded JDK that is provided.

However, if you want to use a JDK on your Windows 64-bit system, you can install the JDK (if it is not already installed) and the Windows 32/64-bit SQL Developer file, and SQL Developer will use the JDK that is installed on your system. The bit level (32-bit or 64-bit) of the JDK that you install will determine if SQL Developer runs as a 32-bit or 64-bit application.

 **Note:**

Do not install SQL Developer into an existing `sqldeveloper` folder. Either delete the existing `sqldeveloper` folder first, or ensure that the new SQL Developer version is installed into a different location.

To install on a Windows system, follow these steps:

1. Go to the Oracle page for SQL Developer at <https://www.oracle.com/database/sqldeveloper/>.

2. If you do not need or want to install a suitable Java Development Kit, go to step 3. Otherwise, download and install the JDK as follows:
 - a. On the Java Downloads page, select the Java 11 tab (<https://www.oracle.com/java/technologies/downloads/#java11>).
 - b. Click the link for the download that you need (for example, the *Windows x64* link for a Windows 64-bit system).
 - c. Save the file anywhere on your system (such as a "temp" folder).
 - d. Install the JDK (for example, on Windows, double-click the .exe file name and follow the displayed instructions).
3. On the Oracle page for SQL Developer at <https://www.oracle.com/database/sqldeveloper/>, click **Download SQL Developer**.
4. Read and accept the license agreement.
5. Follow the instructions for downloading and installing SQL Developer.

If you are asked to enter the full pathname for the JDK, click **Browse** and find the JDK folder. For example, on a Windows system the path might have a name similar to `C:\Program Files\Java\jdk 11.0`.

1. Unzip the SQL Developer file into a folder (directory) of your choice, which will be referred to as `<sqldeveloper_install>`. Ensure that the **Use folder names** option is checked when unzipping the file.
2. Unzipping the SQL Developer file causes a folder named `sqldeveloper` to be created under the `<sqldeveloper_install>` folder. For example, if you unzip the file into `C:\`, the folder `C:\sqldeveloper` is created, along with several subfolders under it.

To start SQL Developer, go to `<sqldeveloper_install>\sqldeveloper`, and double-click `sqldeveloper.exe`. On Linux systems, type `sh sqldeveloper.sh`.

If you are asked to enter the full pathname for the JDK, click **Browse** and find the JDK folder. For example, the path might have a name similar to `C:\Program Files\Java\jdk11.0`.

After SQL Developer starts, you can connect to any database by right-clicking the Connections node in the Connections Navigator and selecting **New Connection**. Alternatively, if you have any exported connections (see [Migrating Information from Previous Releases](#) or [Uninstalling SQL Developer](#)), you can import these connections and use them.

You can learn about SQL Developer by clicking **Help**, then **Table of Contents**, and reading the help topics under *SQL Developer Concepts and Usage*.

1.2.2 Linux and Mac OS X Systems

SQL Developer requires that JDK 11 be installed on the system. If you need to install a JDK, go to <https://www.oracle.com/java/technologies/downloads/#java11>.

Note:

Do not install SQL Developer into an existing `sqldeveloper` directory. Either delete the existing `sqldeveloper` directory first, or ensure that the new SQL Developer version is installed into a different location.

 **Note:**

On Macintosh systems, a native Macintosh application in the form `sqldeveloperxxx.tar.gz` is provided. When it is expanded, it appears as a Macintosh application that can be put into the `applications` folder. If you choose to expand this file, it will replace any older `sqldeveloper` applications in that folder.

To install and start SQL Developer, follow these steps:

1. Unzip the SQL Developer kit into a directory (folder) of your choice. (Ensure that the **Use folder names** option is checked when unzipping the kit.) This directory location will be referred to as `<sqldeveloper_install>`.

Unzipping the SQL Developer kit causes a directory named `sqldeveloper` to be created under the `<sqldeveloper_install>` directory. It also causes many files and directories to be placed in and under that directory.

2. To start SQL Developer, go to the `sqldeveloper` directory under the `<sqldeveloper_install>` directory, and run `sh sqldeveloper.sh`.

After SQL Developer starts, you can connect to any database by right-clicking the Connections node in the Connections Navigator and selecting **New Connection**. Alternatively, if you have any exported connections (see [Migrating Information from Previous Releases](#) or [Uninstalling SQL Developer](#)), you can import these connections and use them.

You can learn about SQL Developer by clicking **Help**, then **Table of Contents**, and reading the help topics under *SQL Developer Concepts and Usage*.

1.3 Migrating User Settings from a Previous Release

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

If you choose not to migrate your user settings and then later want to do so, go to the SQL Developer user preferences location, which is `C:\Users\<user name>\AppData\Roaming\SQL Developer\systemn.n.n.n.n` for Windows and `~/sqldeveloper/systemn.n.n.n.n` for Linux or Mac, and delete the `system.n.n.n.n.n` folder. Then restart SQL Developer, and you will be asked about migrating settings from the previous release.

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

To migrate user settings from a previous SQL Developer release:

1. Unzip the kit for the current release so as to create a new `sqldeveloper` directory.
2. When you start the SQL Developer current release, click **Yes** when asked if you want to migrate settings from a previous release.
3. In the dialog box that is displayed, you can accept the default option to migrate the settings from the most recent SQL Developer installation. Or, if you want to migrate the settings from an earlier installation, you can click to show all builds and then select the desired one.

Related Topics

- [Migrating Information from Previous Releases](#)

1.4 Migrating Information from Previous Releases

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

If you want to use any user-defined reports or the SQL history from a previous version, see [Location of User-Related Information](#) for information about where these are located. If you have user-defined reports and SQL history from Release 1.0, they are modified by any later SQL Developer release to a format that is different from and incompatible with Release 1.0.

To migrate the SQL Developer preferences (specified by clicking Tools and then Preferences) from a previous release, ensure that the previous installation of the software is available in the same system.



Note:

If you want to uninstall your prerelease version of SQL Developer before installing this release, see [Uninstalling SQL Developer](#).

1.5 Location of User-Related Information

SQL Developer stores user-related information in several places, with the specific location depending on the operating system and certain environment specifications. User-related information includes user-defined reports, user-defined snippets, SQL Worksheet history, code templates, and SQL Developer user preferences. In most cases, your user-related information is stored outside the SQL Developer installation directory hierarchy, so that it is preserved if you delete that directory and install a new version.

The user-related information is stored in or under the `IDE_USER_DIR` environment variable location, if defined; otherwise as indicated in [Table 1-1](#), which shows the typical default locations (under a directory or in a file) for specific types of resources on different operating systems. (Note the period in the name of any directory named `.sqldeveloper`.)

Table 1-1 Default Locations for User-Related Information

Resource Type	System (Windows, Linux, or Mac OS X)
User-defined reports	Windows: C:\Users\ <i><user-name></i> \AppData\Roaming\SQL Developer\UserReports.xml Linux or Mac OS X: ~/.sqldeveloper/UserReports.xml
User-defined snippets	Windows: C:\Users\ <i><user-name></i> \AppData\Roaming\SQL Developer\UserSnippets.xml Linux: ~/.sqldeveloper/UserSnippets.xml Mac OS X: /Users/ <i><Your user></i> /Library/Application Support/SQLDeveloper/UserSnippets.xml

Table 1-1 (Cont.) Default Locations for User-Related Information

Resource Type	System (Windows, Linux, or Mac OS X)
SQL history	Windows: C:\Users\ <i><user-name></i> \AppData\Roaming\SQL Developer\SqlHistory.xml Linux: ~/.sqldeveloper/SqlHistory.xml Mac OS X: /Users/<Your user>/Library/Application Support/ SQLDeveloper/SqlHistory.xml
Code templates	Windows: C:\Users\ <i><user-name></i> \AppData\Roaming\SQL Developer\CodeTemplate.xml Linux: ~/.sqldeveloper/CodeTemplate.xml Mac OS X: /Users/<Your user>/Library/Application Support/ SQLDeveloper/CodeTemplate.xml
SQL Developer user preferences	Windows: C:\Users\ <i><user-name></i> \AppData\Roaming\SQL Developer\system <i>n.n.n.n</i> Linux or Mac OS X: ~/.sqldeveloper/system <i>n.n.n.n</i>

If you want to prevent other users from accessing your user-specific SQL Developer information, you must ensure that the appropriate permissions are set on the directory where that information is stored or on a directory above it in the path hierarchy. For example, on a Windows system you may want to ensure that the `SQL Developer` folder and the `\<user-name>\AppData\SQL Developer` folder under `Users` are not sharable; and on a Linux or Mac OS X system you may want to ensure that the `~/.sqldeveloper` directory is not world-readable.

1.6 Database Certification for SQL Developer (Oracle and Third-Party)

This section describes Oracle and non-Oracle (third-party) databases that are certified for use with SQL Developer.

[Table 1-2](#) lists the Oracle database certifications.

Table 1-2 Oracle Database Certification for SQL Developer

Product	Releases
Oracle Database	Oracle 11gR2, Oracle 19c, Oracle 23ai

SQL Developer can be used to view metadata and data of several non-Oracle (third-party) databases. [Table 1-3](#) lists the third-party database certifications.

Table 1-3 Non-Oracle (Third-Party) Database Certification for SQL Developer

Database	Releases	Notes
IBM DB2	DB2 UDB DB2 8.x DB2 9.x	For any DB2 release: db2jcc.jar and db2jcc_license_cu.jar files required; available from IBM.

Table 1-3 (Cont.) Non-Oracle (Third-Party) Database Certification for SQL Developer

Database	Releases	Notes
Microsoft SQL Server	SQL Server 7 SQL Server 2000 SQL Server 2005 SQL Server 2008	For any Microsoft SQL Server release: JDBC driver jtids-1.2.jar required; included in jtids-1.2-dist.zip available from sourceforge.net; also available through Help, Check for Updates .
MySQL	MySQL 3.x MySQL 4.x MySQL 5.x	For any MySQL release: JDBC driver required. For MySQL 5.x: mysql-connector-java-5.0.4-bin.jar, which is included in mysql-connector-java-5.0.4.zip; also available through Help, Check for Updates . (Do <i>not</i> use the latest MySQL driver 5.1.)
Sybase Adaptive Server	Sybase 12 Sybase 15	For any Sybase Adaptive Server release: JDBC driver jtids-1.2.jar required; included in jtids-1.2-dist.zip available from sourceforge.net; also available through Help, Check for Updates .
Teradata	Teradata 12 Teradata 13	JDBC driver files tdgssconfig.jar and terajdbc4.jar required; included (along with a readme.txt file) in the TeraJDBC__indep_indep.12.00.00.110.zip or TeraJDBC__indep_indep.12.00.00.110.tar download.

For information about creating and using connections to third-party databases, see the information about database connections in the SQL Developer online help or *Oracle SQL Developer User's Guide*.

1.7 Advanced Security for JDBC Connection to the Database

You are encouraged to use Oracle Advanced Security to secure a JDBC connection to the database. Both the JDBC OCI and the JDBC Thin drivers support at least some of the Oracle Advanced Security features. If you are using the OCI driver, you can set relevant parameters in the same way that you would in any Oracle client setting. The JDBC Thin driver supports the Oracle Advanced Security features through a set of Java classes included with the JDBC classes in a Java Archive (JAR) file and supports security parameter settings through Java properties objects.

For more information about using Oracle Advanced Security, see *Oracle Database JDBC Developer's Guide*.

1.8 Finding SQL Developer Accessibility Information

For the latest configuration information or for information on addressing accessibility and assistive technology issues, see the Oracle Accessibility FAQ at <http://www.oracle.com/us/corporate/accessibility/faqs/>.

Also, check the SQL Developer release notes (`readme.txt` file) to see if there are any currently known issues regarding accessibility.

1.9 Uninstalling SQL Developer

Before you uninstall SQL Developer, if you plan to install SQL Developer (the same or an updated version) later, you may want to save your existing database connections; and if so, see [Migrating Information from Previous Releases](#) before uninstalling.

To uninstall SQL Developer, remove the entire SQL Developer installation directory (that is, the directory named `sqldeveloper` and all directories and files under it in the hierarchy).

If you also want to remove all user-specific SQL Developer information, you should also delete the directory under which that information is stored (that is, the SQL Developer user information directory). For the location of this directory, see [Location of User-Related Information](#).

If you have created a shortcut for SQL Developer, and if you do not plan to install SQL Developer into the same location again, you should remove that shortcut or modify the shortcut properties to reflect the new location.

1.10 SQL Developer Documentation

SQL Developer provides user documentation in the *Oracle SQL Developer User's Guide* and in the online help. To see the help, click the **Help** menu, or click the **Help** button or press the F1 key in relevant contexts while you are using SQL Developer.

1.11 Oracle on the Web

Oracle provides a number of resources on the web. These are some sites you may find helpful:

- SQL Developer home page (OTN): <https://www.oracle.com/database/sqldeveloper/>
- SQL Developer discussion forum (OTN): <https://forums.oracle.com/ords/apexds/domain/dev-community/category/sql-developer>
- PL/SQL page on OTN: <https://www.oracle.com/database/technologies/appdev/plsql.html>
- Oracle Accessibility Program: <https://www.oracle.com/corporate/accessibility/>