SQL Server installation guide

Install SQL Server 2016

1. Insert the SQL Server installation media. From the root folder, double-click **setup.exe**. To install from a network share, locate the root folder on the share, and then double-click **setup.exe**.

2. The Installation Wizard runs the SQL Server Installation Center. To create a new installation of SQL Server, select **Installation** in the left navigation area, and then select **New SQL Server standalone installation or add features to an existing installation**.

3. On the **Product Key page**, select an option to indicate whether you're installing a free edition of SQL Server or a production version that has a PID key.

   To continue, select **Next**.

4. On the **License Terms** page, review the license agreement. If you agree, select the **I accept the license terms** check box, and then select **Next**.
   Note: SQL Server transmits information about your installation experience, as well as other usage and performance data to help Microsoft improve the product.

5. In the **Global Rules** page, Setup will automatically advance to the **Product Updates** page if there are no rule errors.

6. The **Microsoft Update** page will appear next if the **Microsoft Update** check box in **Control Panel** > **All Control Panel Items** > **Windows Update** > **Change settings** isn't selected. Selecting the Microsoft Update check box changes the computer settings to include the latest updates for all Microsoft products when you scan for Windows updates.

7. On the **Product Updates** page, the latest available SQL Server product updates are displayed. If no product updates are discovered, Setup doesn't display this page and automatically advances to the **Install Setup Files** page.

8. On the **Install Setup Files** page, Setup provides the progress of downloading, extracting, and installing the Setup files. If an update for Setup is found and you specify to include it, that update will also be installed. If no update is found, Setup will automatically advance.

9. On the **Install Rules** page, Setup checks for potential problems that might occur while running Setup. If failures occur, select an item in the **Status** column for more information. Otherwise, select **Next**.

10. If this is the first installation of SQL Server on the machine, Setup skips the **Installation Type** page and goes directly to the **Feature Selection** page. If SQL Server is already installed on the system, you can use the **Installation Type** page to select either to perform a new installation, or to add features to an existing installation. To continue, select **Next**.

11. On the **Feature Selection** page, select the components for your installation. For example, to install a new instance of SQL Server Database Engine, select **Database Engine Services**.

    A description for each component group appears in the Feature description pane after you select the feature name. You can select any combination of check boxes.The prerequisites for the selected features are displayed in the **Prerequisites for selected** features pane. Setup installs the prerequisites that aren't already installed during the installation step described later in this procedure.

    You can also specify a custom directory for shared components by using the field at the bottom of the **Feature Selection** page. To change the installation path for shared components, either update the path in the field at the bottom of the dialog box or select **Browse** to go to an installation directory. The default installation path is C:\Program Files\Microsoft SQL Server\nnn\.

    Note: The path specified for the shared components must be an absolute path. The folder must not be compressed or encrypted. Mapped drives aren't supported.

    SQL Server uses two directories for shared features:
    - Shared feature directory
    - Shared feature directory (x86)

    Note: The path specified for each of the above options must be different.

12. The **Feature Rules** page automatically advances if all rules pass.

13. On the **Instance Configuration** page, specify whether to install a default instance or a named instance.

    - **Instance ID**: By default, the instance name is used as the instance ID. This ID is used to identify the installation directories and registry keys for your instance of SQL Server. The same behavior occurs for default instances and named instances. For a default instance, the instance name and instance ID

are MSSQLSERVER. To use a nondefault instance ID, specify a different value in the **Instance ID** text box.

Note: Typical standalone instances of SQL Server, whether default or named instances, don't use a nondefault value for the instance ID.
All SQL Server service packs and upgrades apply to every component of an instance of SQL Server.

- **Installed instances**: The grid shows the instances of SQL Server that are on the computer where Setup is running. If a default instance is already installed on the computer, you must install a named instance of SQL Server.

The workflow for the rest of the installation depends on the features that you've specified for your installation. Depending on your selections, you might not see all the pages.

14. Selecting to install the PolyBase feature will add the **PolyBase Configuration** page to the SQL Server setup, displayed after the **Instance Configuration** page. PolyBase requires the Oracle JRE 7 Update 51 (at least), and if this hasn't already been installed, your installation will be blocked. On the **PolyBase Configuration** page, you can choose to use the SQL Server as a standalone PolyBase-enabled instance, or you can use this SQL Server as part of a PolyBase scale-out group. If you choose to use the scale-out group, you will need to specify a port range of up to 6 or more ports.

15. Use the **Server Configuration - Service Accounts** page to specify the accounts for SQL Server services. The actual services that you configure on this page depend on the features that you selected to install.

You can assign the same account to all SQL Server services, or you can configure each service account individually. You can also specify whether services start automatically, start manually, or are disabled. We recommend you configure service accounts individually to provide the least privileges for each service. Make sure SQL Server services are granted the minimum permissions they must have to complete their tasks.

To specify the same account for all service accounts in this instance of SQL Server, provide the credentials in the fields at the bottom of the page.

Important: Do not use a blank password. Use a strong password.

*Note: With SQL Server 2016 (13.x) and later, select the **Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service** check box to allow the SQL Server Database Engine service account to use **database instant file initialization**.*

16. Use the **Server Configuration - Collation** page to specify non-default collations for the Database Engine and Analysis Services.

    The default installation setting is determined by the operating system (OS) locale. The server-level collation can either be changed during setup, or by changing the OS locale before installation. The default collation is set to the oldest available version that is associated with each specific locale. This is due to backwards compatibility reasons. Therefore, this isn't always the recommended collation. To take full advantage of SQL Server features, change the default installation settings to use Windows collations. For example, for the OS locale **English (United States)** (code page 1252), the default collation during setup is **SQL_Latin1_General_CP1_CI_AS** and can be changed to its closest Windows collation counterpart **Latin1_General_100_CI_AS_SC**.

17. Use the **Database Engine Configuration - Server Configuration** page to specify the following options:

    - **Security Mode:** Select **Windows Authentication** or **Mixed Mode Authentication** for your instance of SQL Server. If you select **Mixed Mode Authentication**, you must provide a strong password for the built-in SQL Server system administrator account.

      After a device establishes a successful connection to SQL Server, the security mechanism is the same for both Windows authentication and mixed mode authentication.

    - **SQL Server Administrators:** You must specify at least one system administrator for the instance of SQL Server. To add the account under which SQL Server Setup is running, select **Add Current User**. To add or remove accounts from the list of system administrators, select **Add** or **Remove**, and then edit the list of users, groups, or computers that have administrator privileges for the instance of SQL Server.

    Use the **Database Engine Configuration - Data Directories** page to specify nondefault installation directories. To install to the default directories, select **Next**.

    Important: If you specify nondefault installation directories, ensure that the installation folders are unique to this instance of SQL Server. None of the directories in this dialog box should be shared with directories from other instances of SQL Server.

    Use the **Database Engine Configuration - TempDB** page to configure the file size, number of files, nondefault installation directories, and file-growth settings for tempdb.

Use the **Database Engine Configuration - FILESTREAM** page to enable FILESTREAM for your instance of SQL Server.

18. Use the **Analysis Services Configuration** page to specify the server mode and the users or accounts that have administrator permissions for Analysis Services. The server mode determines which memory and storage subsystems are used on the server. Different solution types run in different server modes. **Tabular mode** is the default.

    You must specify at least one system administrator for Analysis Services:

    - To add the account under which SQL Server Setup is running, select **Add Current User**.

    - To add or remove accounts from the list of system administrators, select **Add** or **Remove**, and then edit the list of users, groups, or computers that have administrator privileges for Analysis Services.

    When you're finished editing the list, select **OK**. Verify the list of administrators in the configuration dialog box.

    Use the **Analysis Services Configuration - Data Directories** tab to specify non-default installation directories. To install to the default directories, select **Next**.

    Important:

    When installing SQL Server, if you specify the same directory path for INSTANCEDIR and SQLUSERDBDIR, SQL Server Agent and Full Text Search won't start due to missing permissions.

    If you specify non-default installation directories, ensure that the installation folders are unique to this instance of SQL Server. None of the directories in this dialog box should be shared with directories from other instances of SQL Server.

19. Use the **Distributed Replay Controller Configuration** page to specify the users you want to grant administrative permissions to for the Distributed Replay controller service. Users that have administrative permissions have unlimited access to the Distributed Replay controller service.

    - To grant access permissions for the Distributed Replay controller service to the user who's running SQL Server Setup, select the **Add Current User** button.

- To grant access permissions for the Distributed Replay controller service to other users, select the **Add** button.

- To remove access permissions from the Distributed Replay controller service, select the **Remove** button.

- To continue, select **Next**.

20. Use the **Distributed Replay Client Configuration** page to specify the users you want to grant administrative permissions to for the Distributed Replay client service. Users that have administrative permissions have unlimited access to the Distributed Replay client service.

   - **Controller Name** is optional. The default value is <blank>. Enter the name of the controller that the client computer will communicate with for the Distributed Replay client service:

      o If you've already set up a controller, enter the name of the controller while configuring each client.

      o If you haven't yet set up a controller, you can leave the controller name blank. However, you must manually enter the controller name in the **client configuration** file.

      o Specify the **Working Directory** for the Distributed Replay client service. The default working directory is <drive letter>:\Program Files\Microsoft SQL Server\DReplayClient\WorkingDir\.

      o Specify the **Result Directory** for the Distributed Replay client service. The default result directory is <drive letter>:\Program Files\Microsoft SQL Server\DReplayClient\ResultDir\.

      o To continue, select **Next**.

21. The **Ready to Install** page shows a tree view of the installation options that you specified during Setup. On this page, Setup indicates whether the **Product Update** feature is enabled or disabled and the final update version.

   To continue, select **Install**. SQL Server Setup first installs the required prerequisites for the selected features, then it installs the selected features.

22. During installation, the **Installation Progress** page provides status updates so that you can monitor the installation progress as Setup continues.

23. After installation, the **Complete** page provides a link to the summary log file for the installation and other important notes.

Important: *Make sure you read the message from the Installation Wizard when you've finished with Setup.*

To complete the SQL Server installation process, select **Close**.

24. If you're instructed to restart the computer, do so now.