

Project Engineering Tools Installation Requirements

1) Database Server Requirements

It is strongly recommended that the Microsoft SQL Server for Project Engineering Tools be installed on a dedicated database server.

The following versions of Microsoft SQL Server are compatible with Project Engineering Tools:

- SQL Server 2005
- SQL Server 2008

The SQL Server install should be performed with the Default Options.

Information for SQL Server 2008 follows.

Hardware and Software Requirements for Installing SQL Server 2008

The following information was copied from <http://msdn.microsoft.com/en-us/library/ms143506.aspx#EE32>

The following sections list the minimum hardware and software requirements to install and run SQL Server 2008.

For both 32-bit and 64-bit editions of SQL Server 2008, the following apply:

- SQL Server 2008 Enterprise is available for evaluation during a 180-day trial period. For more information, see the [SQL Server: How to Buy](#) Web site.
- Microsoft recommends that you run SQL Server 2008 on computers with the NTFS file format. For upgrades to SQL Server 2008, FAT32 file systems will not be blocked.
- SQL Server Setup will block installations on read-only or compressed drives.
- For information about using SQL Server 2008 tools to prepare for an upgrade to SQL Server 2008, see [Using Upgrade Advisor to Prepare for Upgrades](#).
- SQL Server does not install the .NET Framework 3.5 software development kit (SDK). However, the SDK contains tools that are useful when you use the .NET Framework for SQL Server development. You can download the .NET Framework SDK from the [.NET Framework](#) Web site.
- Requirements to restart computers during SQL Server Setup: Installation of the .NET Framework requires a restart of the operating system. If Windows Installer installation also requires a restart, Setup will wait until the .NET Framework and Windows Installer components have installed before restarting.
- For more information about features of SQL Server 2008, see the following:
 - [Editions and Components of SQL Server 2008](#)
 - [Features Supported by the Editions of SQL Server 2008](#)

Component	Requirement
Framework ²	<p>SQL Server Setup installs the following software components required by the product:</p> <ul style="list-style-type: none"> • .NET Framework 3.5 SP1¹ • SQL Server Native Client • SQL Server Setup support files
Software ²	<p>SQL Server Setup requires Microsoft Windows Installer 4.5 or a later version. After installing required components, SQL Server Setup will verify that the computer where SQL Server 2008 will be installed also meets all the other requirements for a successful installation. For more information, see Check Parameters for the System Configuration Checker.</p>
Network Software	<p>Network software requirements for the 64-bit versions of SQL Server 2008 are the same as the requirements for the 32-bit versions. Supported operating systems have built-in network software. Stand-alone named and default instances support the following network protocols:</p> <ul style="list-style-type: none"> • Shared memory • Named Pipes • TCP/IP • VIA <p>Note Shared memory and VIA are not supported on failover clusters.</p>
Virtualization	<p>SQL Server 2008 is supported in virtual machine environments running on the Hyper-V role in Windows Server 2008 Standard, Enterprise and Data Center editions. The virtual machine must run an operating system supported for the specific SQL Server 2008 edition listed later in this topic.</p> <p>In addition to resources required by the parent partition, each virtual machine (child partition) must be provided with sufficient processor resources, memory, and disk resources for its SQL Server 2008 instance. Requirements are listed later in this topic.³</p> <p>Within the Hyper-V role on Windows Server 2008, a maximum of four virtual processors can be allocated to virtual machines running Windows Server 2008 32-bit or 64-bit editions. A maximum of 2 virtual processors can be allocated to virtual computers that are running Windows Server 2003 32-bit editions. For virtual computer that host other operating systems, a maximum of one virtual processor can be allocated to virtual computers.</p> <p>Notes:</p> <ul style="list-style-type: none"> • It is recommended that SQL Server 2008 be shut down before shutting down or the virtual machine. • Guest failover clustering (configuring failover clustering in SQL Server 2008) is not supported in a Hyper-V environment.

	<ul style="list-style-type: none"> For more information about the Hyper-V role in Windows Server 2008, see the Windows Server 2008 Web site. For more information about the support for virtualization including Hyper-V, see the Server Virtualization Validation Program.
Internet Software	Microsoft Internet Explorer 6 SP1 or a later version is required for all installations of SQL Server 2008. Internet Explorer 6 SP1 or a later version is required for Microsoft Management Console (MMC), SQL Server Management Studio, Business Intelligence Development Studio, the Report Designer component of Reporting Services, and HTML Help.
Hard Disk	Disk space requirements will vary with the SQL Server 2008 components you install. For more information, see Hard disk space requirements later in this topic.
Drive	A CD or DVD drive, as appropriate, is required for installation from disc.
Display	SQL Server 2008 graphical tools require VGA or higher resolution: at least 1,024x768 pixel resolution.
Other Devices	Pointing device: A Microsoft mouse or compatible pointing device is required.

¹The following .NET Framework versions are required:

- SQL Server 2008 on Windows Server 2003 (64-bit) IA64 — .NET Framework 2.0 SP2
- SQL Server Express — .NET Framework 2.0 SP2
- All other editions of SQL Server 2008 — .NET Framework 3.5 SP1

Installation of .NET Framework requires a restart of the operating system. If Windows Installer installation also requires a restart, Setup will wait until .NET Framework and Windows Installer components have installed before restarting.

 **Note:**

Installing .NET Framework 2.0 SP2: .NET Framework 2.0 SP2 is not available as a separate download. You will need to install .NET Framework 3.5 SP1 which includes .NET Framework 2.0 SP2.

² SQL Server Setup will not install the following required components for SQL Server Express ,SQL Server Express with Tools, and SQL Server Express with Advanced Services. You must install these components manually before you run SQL Server Setup:

- SQL Server Express — .NET Framework 2.0 SP2 and Windows installer 4.5. On Windows Vista, use .NET Framework 3.5 SP1.
- SQL Server Express with Advanced Services — .NET Framework 3.5 SP1, Windows Installer 4.5, and Windows PowerShell 1.0.

- SQL Server Express with Tools — .NET Framework 3.5 SP1, Windows Installer 4.5, and Windows PowerShell 1.0.

³As with all virtualization technologies, SQL Server 2008 running in a Windows Server 2008 Hyper-V virtual computer will be slower than on a physical computer with the same physical resources.

Processor, Memory, and Operating System Requirements

To view system requirements, select an edition of SQL Server 2008:

Server Editions of SQL Server 2008

- [SQL Server 2008 Enterprise \(64-bit\) IA64](#)
- [SQL Server 2008 Enterprise \(64-bit\) x64](#)
- [SQL Server 2008 Standard \(64-bit\) x64](#)
- [SQL Server 2008 Enterprise \(32-bit\)](#)
- [SQL Server 2008 Standard \(32-bit\)](#)

SQL Server 2008 Enterprise (32-bit)

The following table shows the system requirements for SQL Server 2008 Enterprise (32-bit):

Component	Requirement
Processor	Processor type: <ul style="list-style-type: none"> • Pentium III-compatible processor or faster Processor speed: <ul style="list-style-type: none"> • Minimum: 1.0 GHz • Recommended: 2.0 GHz or faster
Operating System	Windows Server 2003 SP2 Small Business Server R2 Standard Windows Server 2003 SP2 Small Business Server R2 Premium Windows Server 2003 SP2 Standard Windows Server 2003 SP2 Enterprise Windows Server 2003 SP2 Data Center Windows Server 2003 Small Business Server SP2 Standard Windows Server 2003 Small Business Server SP2 Premium Windows Server 2003 SP2 64-bit x64 Standard ¹ Windows Server 2003 SP2 64-bit x64 Data Center ¹ Windows Server 2003 SP2 64-bit x64 Enterprise ¹ Windows Server 2008 Standard (with and without Hyper-V) Windows Server 2008 Web Windows Server 2008 Data Center Windows Server 2008 Data Center without Hyper-V Windows Server 2008 Enterprise Windows Server 2008 Enterprise without Hyper-V Windows Server 2008 x64 Standard Windows Server 2008 x64 Standard without Hyper-V ¹ Windows Server 2008 x64 Data Center Windows Server 2008 x64 Data Center without Hyper-V ¹ Windows Server 2008 x64 Enterprise Windows Server 2008 x64 Enterprise without Hyper-V ¹

Memory	RAM: <ul style="list-style-type: none"> • Minimum: 512 MB • Recommended: 2.048 GB or more • Maximum: Operating system maximum
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¹This edition of SQL Server can be installed to the Windows on Windows (WOW64) 32-bit subsystem of a 64-bit server.

Hard Disk Space Requirements (32-Bit and 64-Bit)

During installation of SQL Server 2008, Windows Installer creates temporary files on the system drive. Before you run Setup to install or upgrade SQL Server, verify that you have at least 2.0 GB of available disk space on the system drive for these files. This requirement applies even if you install SQL Server components to a non-default drive.

Actual hard disk space requirements depend on your system configuration and the features that you decide to install. The following table provides disk space requirements for SQL Server 2008 components:

Feature	Disk space requirement
Database Engine and data files, Replication, and Full-Text Search	280 MB
Analysis Services and data files	90 MB
Reporting Services and Report Manager	120 MB
Integration Services	120 MB
Client Components	850 MB
SQL Server Books Online and SQL Server Compact Books Online	240 MB

The system (administration) level Project Engineering Tools databases will require approximately 300 MB of disk space.

Project Engineering Tools project level databases will in size. The minimum project database size is 60 MB. Depending on the program features that are used, a project database size can be in excess of 4 GB for a project with 25,000 tags.

To allow room for multiple projects it is recommended that the database server hard disk drive be a minimum of 100 GB.

2) Application Server Requirements

Project Engineering Tools may be installed on a shared application server. The minimum processor requirement is a Pentium III-compatible processor or faster. Minimum processor speed required is 1 GHz. A processor speed of 2 GHz is recommended.

Memory requirements are 500 MB RAM, with 1 GB RAM recommended.

The application files for Project Engineering Tools will require 255 MB.

Important: Project Engineering Tools users should be granted READ-ONLY privileges to the application directory.

3) Workstation Requirements

In order to access Microsoft SQL Server data objects, Microsoft Data Access Components (commonly abbreviated MDAC; also known as Windows DAC) must be installed on each user's workstation.

The minimum processor requirement is a Pentium III-compatible processor or faster. Minimum processor speed required is 1 GHz. A processor speed of 2 GHz is recommended.

Memory requirements are 500 MB RAM, with 1 GB RAM recommended.

Operating systems supported are:

- Windows NT
- Windows 2000
- Windows XP
- Windows Vista

A private disk directory area is required for each user. This private directory may be located on the user's workstation or it can be located on a network drive. The space required in this private directory area can vary from 10 MB to 200 MB depending upon program use.

The application uses the workstation's registry to store program settings from within the application.

A desktop icon is used to access the program located on the application server. No Project Engineering Tools application files are located on the user's workstation.