Installing SQL Server Developer

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- 1. Run Setup.Exe to start the setup of SQL Server 2008 Developer
- 2. On some OS installations (i.e. Windows 7) you will be prompted a reminder to install SP1 for compatibility purposes, select Run Program at this point.
- 3. Once the SQL Server Installation Center launches run the System Configuration Checker to make check for conditions that prevent SQL Server installation. This will tell you if you need to do anything before the install.
- 4. After you perform the required tasks in the previous step go to the Installation tab (second on the right)

- In most cases you will want to run a new SQL Server stand alone installation, but other options are available, for example if you have SQL Server 2005 installed, you have an option to update.
- 6. (CS779Note) If you are configuring the installation for CS779 and you might want to explore fallover clustering. Note that you can go back and install this component at a later time.



SQESERVER INStallation Center	
Planning Installation	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2008 in a non-clustered environment or to add features to a existing SQL Server 2008 instance.
Maintenance Tools Resources	New SQL Server failover cluster installation Launch a wizard to install a single-node SQL Server 2008 failover cluster.
Advanced	Add node to a SQL Server failover cluster Launch a wizard to add a node to an existing SQL Server 2008 failover cluster.
Options	Upgrade from SQL Server 2000 or SQL Server 2005 Launch a witzer to upgrade SQL Server 2000 or SQL Server 2005 to SQL Server 2008. Before you upgrade, you should run the Upgrade Advisor to detect potential problems. Search for product updates Search Microsoft Update for SQL Server 2008 product updates.
SQL Server 2008	

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- 7. The installer will check again to see if there are any issues with your system and prompt you to fix them (i.e. it will ask you to restart the computer), if everything passes press OK to continue.
- 8. Enter Product Key and agree to License Terms
- 9. Setup the Support Files (click Install). This will go through and install windows components for SQL Server.
- 10. Feature installation: Select the components of SQL server to install on your computer.
 - a. Database Engine Services: This installs SQL Server engine on your system. (needed for both courses)
 - b. SQL Server Replication: Allows for having synchronized copies of the data in two different locations. For example, this can be used in data distribution, synchronization, load balancing and disaster recovery.
 - i. (CS669) Not needed for this course
 - ii. (CS779) This is a worthy subject for a term project, and can be installed at a later time. Note that you may need two separate systems.
 - c. Full Text Search: In some database implementations where there are a lot of text data that needs to be searched, full text search allows for additional indexing for faster data retrieval.
 - i. (CS669) Not needed for this course
 - ii. (CS779) This is a worthy subject for a term project, and can be installed at a later time.
 - d. Analysis Services: Provides support for analytical processing (OLTP) and data mining, such as when you set up a data warehouse and want to perform some ad hoc queries against cubes
 - i. (CS669) Not needed for this course, as this is an advanced topic.
 - ii. (CS779) If you plan to do a Data Warehouse project or data mining you will need this.
 - e. Reporting Services: Allows for creation of Reports based on data in Online Transaction Processing (most common databases) and Data Warehouses. The reports can be in the form of tables, charts, and other formats.
 - i. (CS669) Not needed for this course
 - ii. (CS779) This is a worthy component to explore as part of a term project.
 - f. Business Intelligence Development studio: A version of Visual Studio 2008 with some DBMS components for Analysis services, Replication Services, etc.
 - i. (CS669) You will probably not need this component, but it is recommended that you install it for future courses as it's an integral part of SQL Server.
 - ii. (CS779) This component is needed for most advanced topics so it should be installed.

OL Server 2008 Setur Feature Selection ietup Support Rules Feature Selection ance Features Database Engine Services V SQL Server Replication Full-Text Search Analysis Services Reporting Services nstance Configuration Disk Space Requireme ierver Configuration Natabase Engine Configu nalysis Services Configuratio ess Intelligence De porting Services Config Client Tools Co Error and Usage Reportin Installation Rule Client Tools Back Ready to Install Tient Tools SDK nstallation omplete Select All Unselect All hared feature directory: C:\Program Files\Microsoft SOL Server < gack Next > Cancel Help

- g. Client Tools Connectivity: components to communicate between clients and servers. (This is needed for all courses)
- h. Integration Services: This is needed for data warehouse Extraction Transformation Loading Processes when data needs to be transformed and loaded into the database.
 - i. (CS669) Not needed for this course
 - ii. (CS779) If you plan to do a DW project or data mining you will need this.
- i. Client Tools Backwards Compatibility: This is not needed for the courses in this program, but in production environments if you connect to older versions of SQL Server from management tools this option is needed.
- j. Client Tools SDK: Additional Software Development Kit with recourses for developers.
 - i. (CS669) Not needed for this course
 - ii. (CS779) You might want to do some research to see if there might be anything here of interest for a term project, especially if you enjoy programming in Object Oriented languages.
- k. SQL Server Books Online: This is the documentation for SQL Server. Note that this information is also available online.
- 1. Management Tools Basic & Complete: you will need this to work with SQL server, this is the GUI interface that include components such as the GUI Query interface as well as components for advanced topics such as analysis and integration services as well as the database tuning advisor. It is recommended that you install the Management Tools Complete for all courses.
- m. SQL Client Connectivity SDK: Additional Software Development Kit with recourses for developers.
 - i. (CS669) Not needed for this course
 - ii. (CS779) You might want to do some research to see if there might be anything here of interest for a term project.
- n. Microsoft Sync Framework- Synchronization platform for collaboration with offline applications
 - i. (CS669) Not needed for this course
 - ii. (CS779) You might want to do some research to see if there might be anything here of interest for a term project.

11. Feature Configuration

- a. Generally you can leave the Default Instance. The Named instances would be used if you want to create multiple instances of SQL Server on the same machine. If you are installing SQL Server for CS779 this might be a worthy topic to explore for the term project.
- b. Choose the installation path for SQL Server (default is Program Files folder within C drive.)
- 12. Review the Disk Space Requirements and click next

SQL Server 2008 Setup Instance Configuration Specify the name and instance ID	ገ for the SQL Server insta	ince.				
Setup Support Rules Feature Selection Instance Configuration	Default instance Marred instance: Instance [D: Instance got directory: SQL Server directory: Analysis Services directory: Installed instances:		MSSQLSE	RVER		
Dek Space Requirements Server Configuration Database Engine Configuration Analysis Services Configuration Error and Usage Reporting Installation Rules Ready to Install Installation Progress Comelete			MSSQLSERVER C: Program Files Microsoft SQL Server\			
			C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER C:\Program Files\Microsoft SQL Server\MSAS10.MSSQLSERVER C:\Program Files\Microsoft SQL Server\MSRS10.MSSQLSERVER			
	Instance	Feat	ures	Edition	Version	Instance ID
				< <u>B</u> ac	k Next >	Cancel Help

- 13. Under Server Configuration set both SQL Server Agent and SQL Server Database Engine to Manual (unless you want it to run all the time with your system which will use up a lot of system recourses when you are not using the sql server). These are services that run components of SQL Server.
 - a. **SQL Server Agent** is used for running scheduled jobs, such as backups, scheduled sql scripts and db maintenance. If this was a production environment you would want this service set to automatic.
 - b. You will need **SQL Server Database Engine** to run SQL Server. Since DBMS uses a lot of system recourses I would recommend to run it manually when you need it.
 - c. If you installed other components for SQL Server for advanced topics, you should also set them to manual so that they don't run on system startup.

Server Configuration Specify the configuration.					
ietup Support Rules Feature Selection Instance Configuration	Service Accounts Collation Microsoft recommends that you use a separate account for each SQL Server service.				
Disk Space Requirements	Service	Account Name	Password	Startup Type	
Server Configuration Database Engine Configuration Analysis Services Configuration Reporting Services Configuration Error and Usage Reporting Installation Rules Ready to Install Installation Progress Complete	SQL Server Agent			Manual 🗸	
	SQL Server Database Engine			Automatic 🖌	
	SQL Server Analysis Services			Automatic 🗸 🗸	
	Sql Server Reporting Services			Automatic 😪	
	SQL Server Integration Services 10.0	NT AUTHORITY\Network		Automatic 🗸	
	Lise the same account for all SQL Server services These services will be configured automatically where possible to use a low privilege account. On some older Windows versions the user will need to specify a low privilege account. For more information, click Help.				
	Service	Account Name	Password	Startup Type	
	SQL Full-text Filter Daemon Launcher			Manual	
	SQL Server Browser	NT AUTHORITY\LOCAL S		Disabled 😽	

- d. Select **Use the same account for all SQL Server Services** and select **NT AUTHORITY\SYSTEM**. This will allow the services to run with your system account.
- e. SQL Server Browser can be left disabled.
- f. Check the collation tab at the top. For our purposes this can be left at default SQL_Latin1_General_CP1_CI_AS which is Latin1-General case insensitive. This drives how SQL server recognizes commands, for example you can choose a different language or set it to be case sensitive. Some applications require for you to choose a specific collation.

14. Database Engine Configuration

- a. Account Provisioning:
 - i. Choose the authentication mode for the system. Windows authentication will use your windows account privileges to connect to SQL Server. I recommend using Mixed Mode so that there is an additional built in SA account with a separate user name and password as well as your built in windows account.
 - Make sure to add users (such as your account) to SQL Server Administrators (click on Add Current User).
 - iii. These accounts will allow you to log into SQL Server.
 - iv. Note that the server itself does not need these accounts and runs as a service which you specified in previous step.

Specify Database Engine authentica	tion security mode, administrators and data directories.	
Setup Support Rules Feature Selection Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Analysis Services Configuration Error and Usage Reporting Installation Rules Ready to Install Installation Progress Complete	Account Provisioning Data Directories FILESTREAM Specify the authentication mode and administrators for the Database I Authentication Mode Windows authentication mode Mixed Mode (SQL Server authentication and Windows authenticatio Bull-in SQL Server system administrator account Enter password: Confirm password: Specify SQL Server administrators AD()paylee Add Current User Add Remove	SQL Server administrators have unrestricted access to the Database Engine.

- b. You can leave Data Directories to defaults. Data Directories can be changed if you have a multiple disk environment and for performance want to separate out where different parts of the DBMS go. For example, in production environments the LOG components should go on a separate disk array, which will improve performance of the system.
- c. If you are installing SQL Server for CS779 you might want to enable FILESTREAM if you plan to explore large file types such as Binary language objects (BLOB)
- 15. (CS779 Only) If you selected Analysis Services during the install, you will need to provision accounts for those services. You can just click on the "Add Current User".

- 16. (CS779 Only) If you selected Reporting Services during the install, choose the native mode to enable it after install.
- 17. It's up to you to select Error and Usage Reporting, click next.
- 18. Run the Installation Rules so that the installer can double check the installation options.
- 19. Ready To Install reviews your configuration.-Click Install (this will take some time)
- 20. Once the installation is complete, run a service pack installation. You can download the latest service pack from here: http://support.microsoft.com/kb/968382

Installing service Pack

- 1. Start the Service Pack Installer after you download it.
- 2. Agree to the License Terms
- 3. Confirm the Installed Features (this is what you installed earlier)
- 4. Check File Use, if some components of SQL Server are running, the system will shut them down/reboot as part of the install. Make sure to wait for the check to complete before clicking Next.
- 5. Ready to Update will confirm what will be updated. Click on Update to start the process.

You are now ready to use SQL Server.

Working with SQL Server 2008

Starting SQL Server

If during setup you selected for SQL Server to start manually then you will need to go to the Windows Control Panel->Administrative Tools->Services

- Start the following service: SQL Server (Instance Name)
- Note that when you are no longer using SQL Server you can shut the service down to save on system resources.
- You may want to put the services shortcut to your desktop for quick access

Logging into SQL Server

- To work with SQL Server you will use the SQL Server Management Studio. You will find it under Microsoft SQL Server 2008 program group.
- In the Connect to Server dialog box you can choose the Windows Authentication and your account or the SA account that you created earlier.