

### Hardware Requirements

Hardware	Minimum	Recommend
Processor	x86: 1.0 GHz x64: 1.4 GHz	2.0 GHz or faster.
Memory	Express Editions: 512 MB All other edition: 1 GB	Express Editions: 1 GB All other edition: At least 4GB
Disk Space	6 GB	
Graphic	Super-VGA (800x600)	

### Ports used by SQL Server

Description	Port
Analysis Services	TCP 2383
Database Mirroring	Chosen by administrator
Dedicated Admin Connection	TCP 1434
Default Instance	TCP 1433
Integration Services: Microsoft remote procedure calls	TCP 135
Integration services run time	TCP 135
Microsoft Distributed Transaction Coordinator (MS DTC)	TCP 135
Named instances in default configuration	Configure named instances to use fixed TCP ports
Replication	TCP 1433
Reporting Services Web Services	TCP 80
Reporting Services configured for use through HTTPS	TCP 443
Service Broker	TCP 4022
SQL Server Browser service	TCP 1434
SQL Server Browser Service	TCP 2382 (Only used for an analysis service named instance)
SQL Server instance running over an HTTP endpoint	TCP port 80 for CLEAR_PORT traffic TCP port 443 for SSL_PORT traffic
SQL Server Management Studio browse connection to browser service	UDP 1434
Transact-SQL Debugger	TCP 135

### Software Requirements

Software	Version
.Net Framework	3.5.1 + 4.0 4.0 is installed during feature installation
Powershell	2.0
Internet Explorer	7.0 or later

### Fixed Server-Level Roles

Role	Description
<i>Note</i>	An instance lies between the SQL Software and the databases.
Sysadmin	Can perform all activities possible on the Database Engine instance.
Server-admin	Can perform instance-wide configuration tasks. Can shut down the instance
Securityadmin	Able to manage instance-level permissions
Processadmin	Can terminate processes running on a Database Engine instance
Setupadmin	Can add linked servers to and remove linked servers from the Database Engine instance.
Bulkadmin	Allowed to use the BULK INSERT statement on databases hosted on a instance.
Diskadmin	Can manage instance-related files
Dbcreator	Able to create, alter, drop, and restore databases hosted on the Database Engine instance.
Public	All logins are forced members of this role. By default has no rights and shouldn't be given rights
Custom Roles	Custom roles with Custom rights, can be created on server/Database level. Database level, allows per table custom rights. Can be defined by: Security -> Database role -> new -> Securables (search) -> all objects -> tables, and ticking what you want of rights, defined per-table.



### SQL Server Agent Setup

SQL Server Agent is a protocol to automate the execution of jobs.

It is by default disabled.

When SQL Server Agent is started, it automatically creates an account for it self.

This account must be a member of the sysadmin group, and is so by default during creation.

The SQL Server Agent should never be a member of the Administrators Group on the local host.

### Dynamic Management Objects

Category	Description
sys.dm- _exec_*	Provide information about connections, sessions, requests and query execution.
sys.dm- _os_*	Provide access to SQL Server operating system-related information.
sys.dm- _tran_*	Provide access to transaction management.
sys.dm- _io_*	Provide information on I/O processes.
sys.dm- _db_*	Provide database-scoped information.

### Backup Types

Name	Description
Full Database Backup	Includes all database objects, system tables, and data. Transaction occurring during backup is also included. File attributes are altered.
Incremental Backup	Back up data that has been changed since last full backup and incremental backup. File attributes are altered.
Copy-only Backup	Includes all database objects, system tables, and data. Transaction occurring during backup is also included. File attributes are not altered. Copy backups cannot be used as the basis for a differential backup or transaction log backup.
Differential Backup	Back up data that has been changed since the last full backup. Use differential backups in conjunction with the last full backup. File attributes are not altered.

### Backup Types (cont)

Transaction Log Backup	Makes a backup of all transactions which has occurred in a database. When the backup is finished the transaction log can be truncated/cleaned up.
File & Filegroup Backup	Back up individual database files and filegroups rather than performing a full database backup. Transaction Log backup must also be performed, without truncate.

