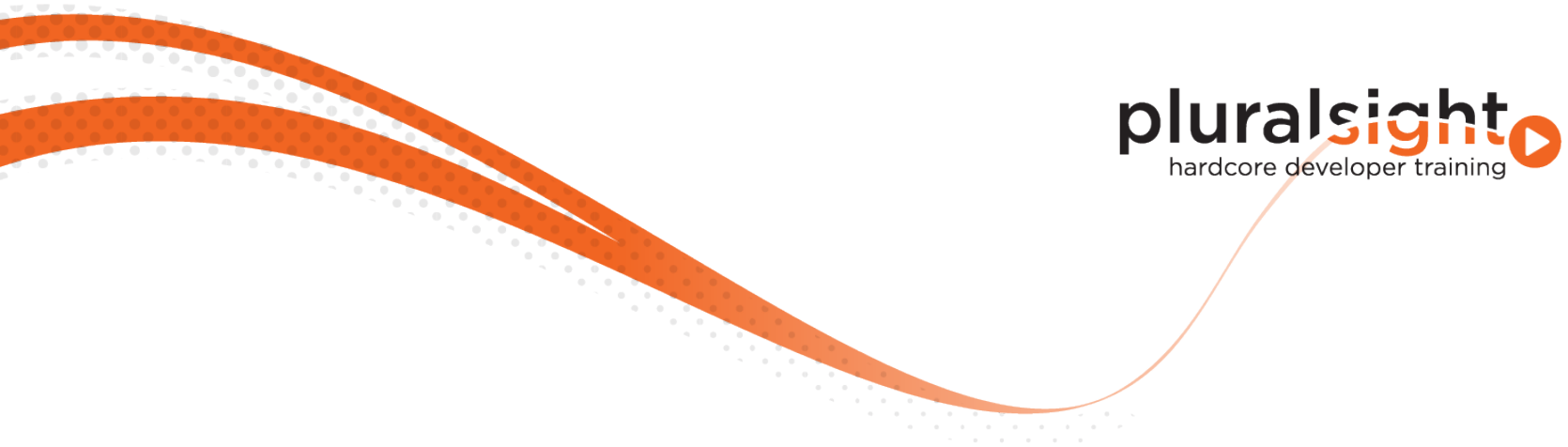
SQL Server 2012: Installation and Configuration

Module 4: Installing SQL Server 2012

Glenn Berry
Glenn@SQLskills.com



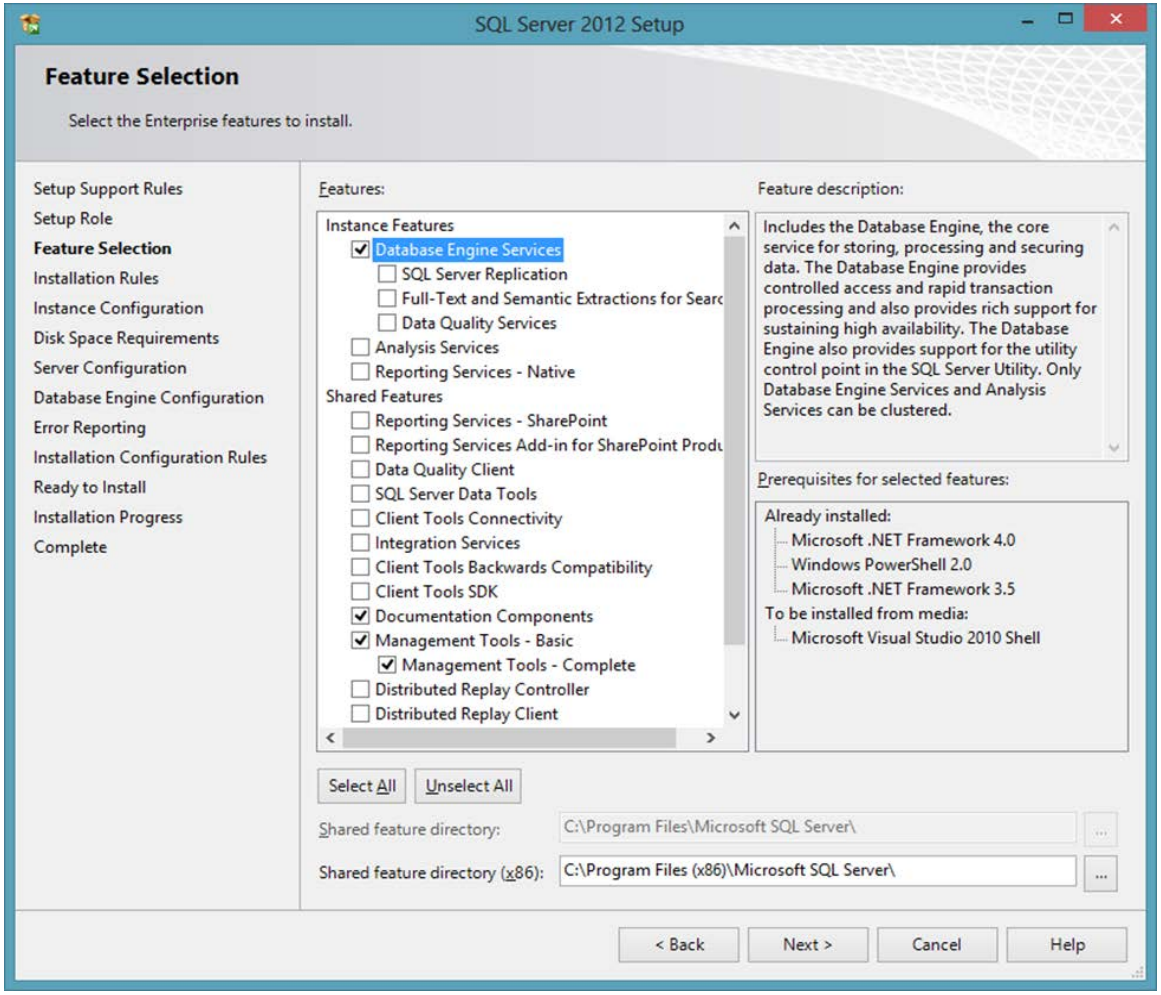
Introduction

- **There are several important choices to make during installation**
  - These affect security, performance, scalability, and maintainability
- **Selecting which instance and shared features to install**
  - Only install the features you actually need now
- **Instance configuration**
  - Default instance or a named instance
- **Specifying service accounts**
  - You must select which accounts to use for each service
  - Changing SQL Server Agent to automatic startup
- **Database Engine configuration tasks**
  - Server configuration tab
  - Data directories tab
  - FILESTREAM tab
- **Error reporting**
  - Disabled by default

Selecting Which Features to Install

- **Only install the features you actually need right now**
  - This reduces your attack surface
  - It reduces resource usage
  - It also reduces your patch surface, so fewer reboots are required
- **It is relatively easy to add additional features later**
  - Don't install features now that you "might" need later
  - Simply run setup from the Control Panel
- **Use a development or test instance for experimentation**
  - You can install all features there for learning purposes
  - You can use Developer Edition on a workstation
  - You can use the free Enterprise Evaluation Edition for experimentation

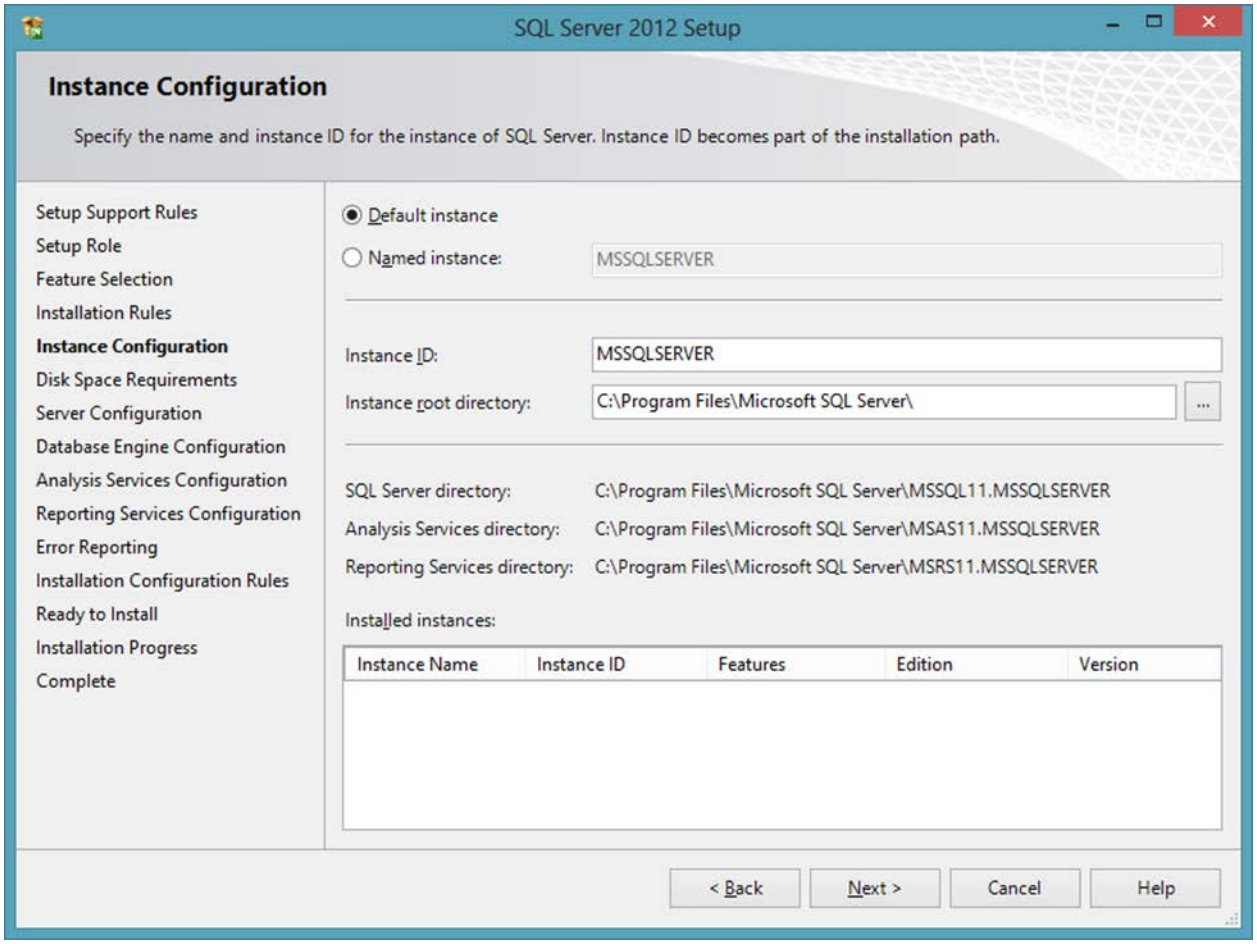
Feature Selection Screen



Instance Configuration

- **You must choose between the default instance or a named instance of SQL Server**
  - You can have only one default instance of SQL Server
    - Normally, the first installed instance is the default instance
  - You can have up to 49 named instances of SQL Server on a machine
    - There is a 16-character limit for the name of a named instance
- **It is more common for production servers to only have a single instance of SQL Server installed**
  - Multiple instances compete for resources
  - Multiple instance are harder to manage and maintain
- **Named instances are more useful for development and testing**
  - They allow you to have different versions of SQL Server on the same machine

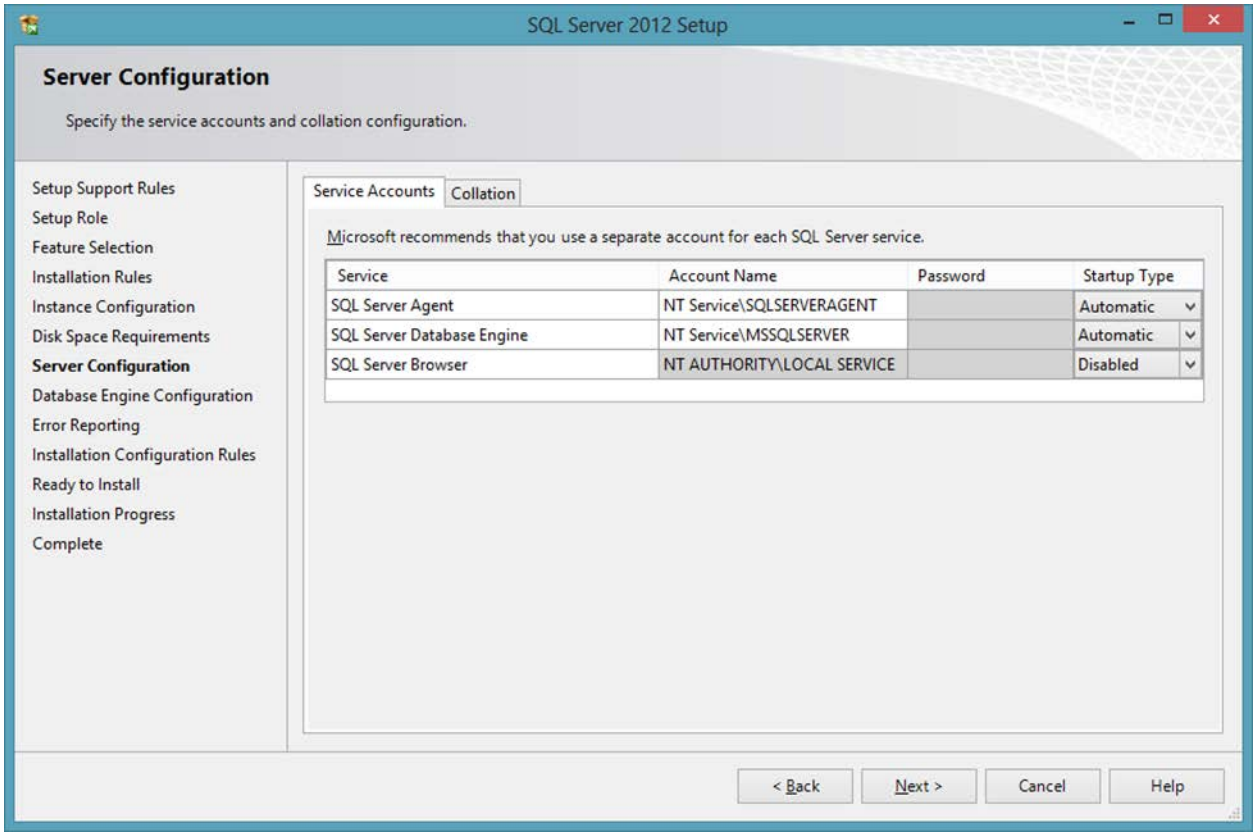
Instance Configuration Screen



Specifying Service Accounts

- **You need to specify accounts for each SQL-related service**
  - These should be the domain accounts that were previously created
  - This will depend on which services you decide to install:
    - SQL Server Agent service
    - SQL Server Database Engine service
    - SQL Server Analysis Services service
    - SQL Server Reporting Services service
    - SQL Server Integration Services 11.0 service
- **You must enter the credentials for each account during setup**
  - You need to have the Account Name and Password for each one

Server Configuration Screen



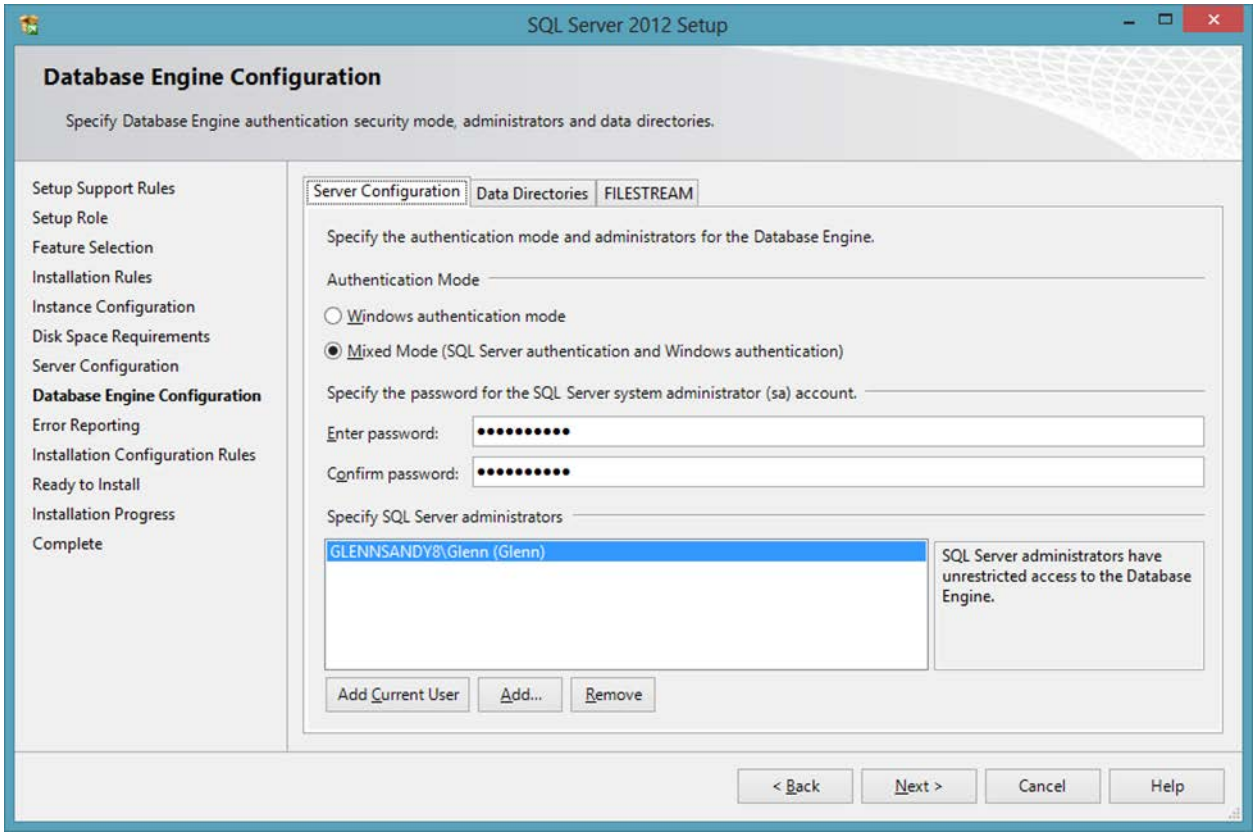
Changing SQL Server Agent Properties

- **By default, the SQL Server Agent service is set to Manual start**
  - You should change this to Automatic start during installation
  - Otherwise you may forget to change it later
  - This is especially important for replication and for log shipping
- **Use SQL Server Configuration Manager to change it later**
  - Do not use the Windows Services applet to make changes to SQL Server-related services
  - The Windows Services applet does not handle all SQL Server settings properly

Database Engine Configuration Tasks 1

- **Server Configuration tab**
- **You must choose the Authentication Mode**
  - Windows authentication mode
    - More secure, but requires domain logins
  - Mixed Mode authentication
    - Less secure, but required for many legacy applications
    - With Mixed Mode you must enter a system administrator password
      - Make sure to use a strong password, and don't forget what it is
- **You should also add at least one SQL Server administrator**
  - Typically, you add your current Windows domain account
  - You can add more administrators after installation

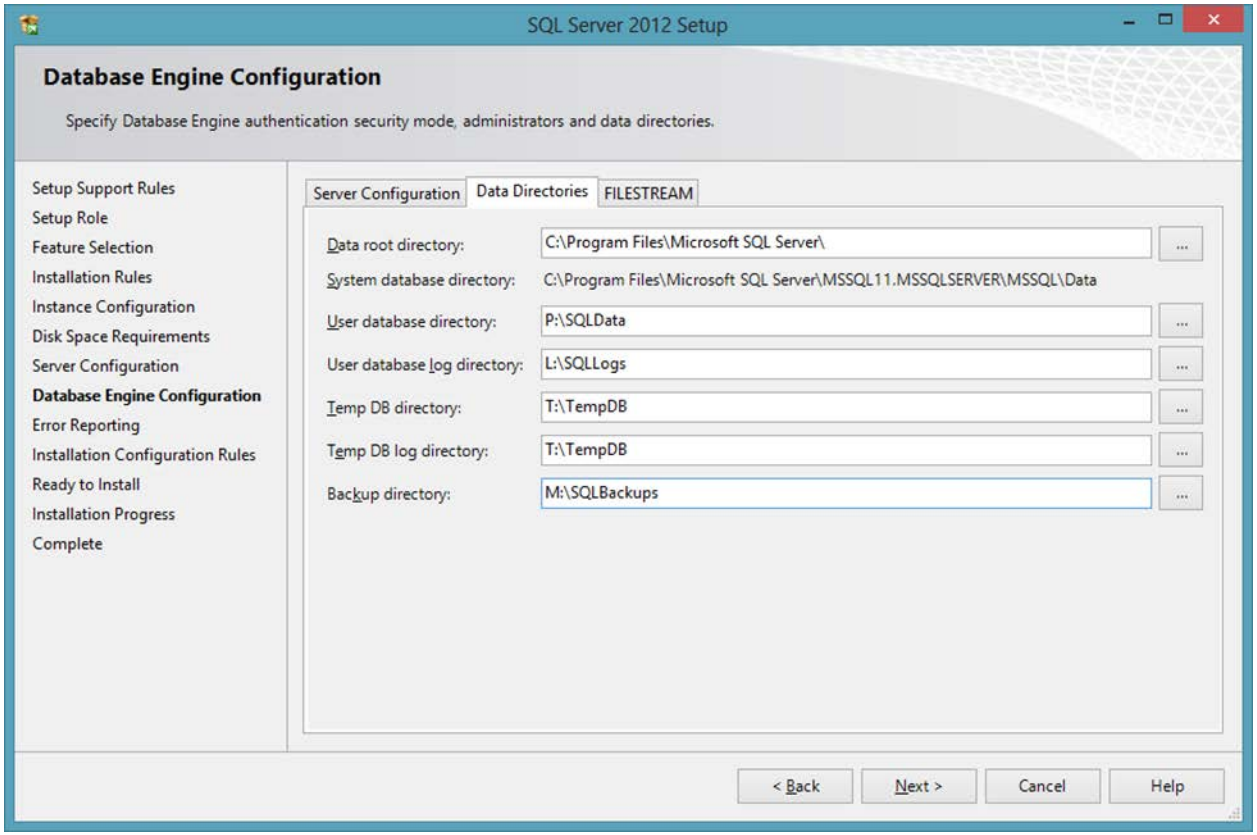
Database Engine – Server Configuration tab



Database Engine Configuration Tasks 2

- **Data Directories tab**
- **Make sure to change the default data directories**
  - They will be on the C: drive by default, which is usually not optimal
  - They are located on the Data Directories tab, so they are easy to miss
- **Change these from the defaults:**
  - User database directory
  - User database log directory
  - Temp DB directory
  - Temp DB log directory
  - Backup directory

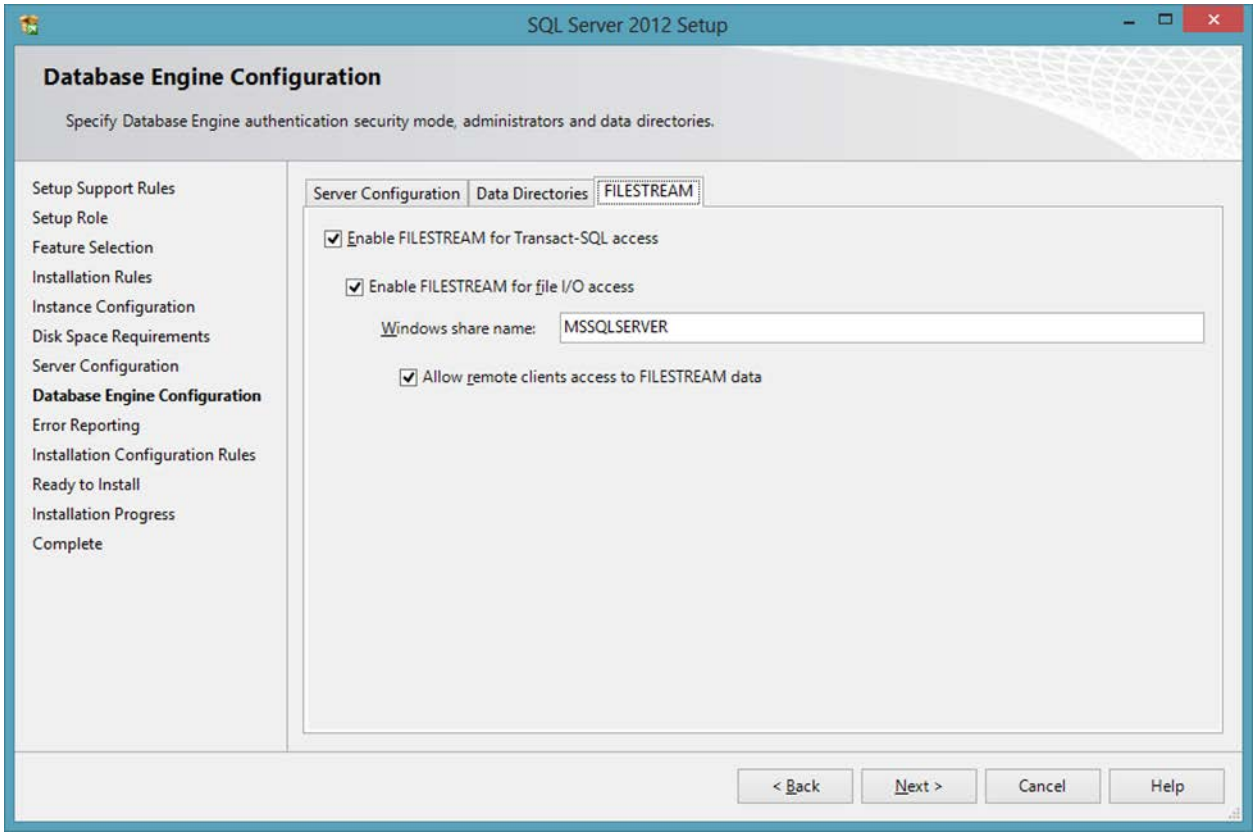
Database Engine – Data Directories



Database Engine Configuration Tasks 3

- **FILESTREAM tab**
- **If you are going to use the FILESTREAM feature, you need to enable it here**
  - Enable FILESTREAM for Transact-SQL access
    - Required before the other options are available
  - Enable FILESTREAM for file I/O streaming access
    - Allows Win32 streaming access for FILESTREAM
  - Windows share name
    - The name of the file share where the FILESTREAM data will be stored
  - Allow remote clients to have streaming access to FILESTREAM data
    - You must enable this in order for remote access to function

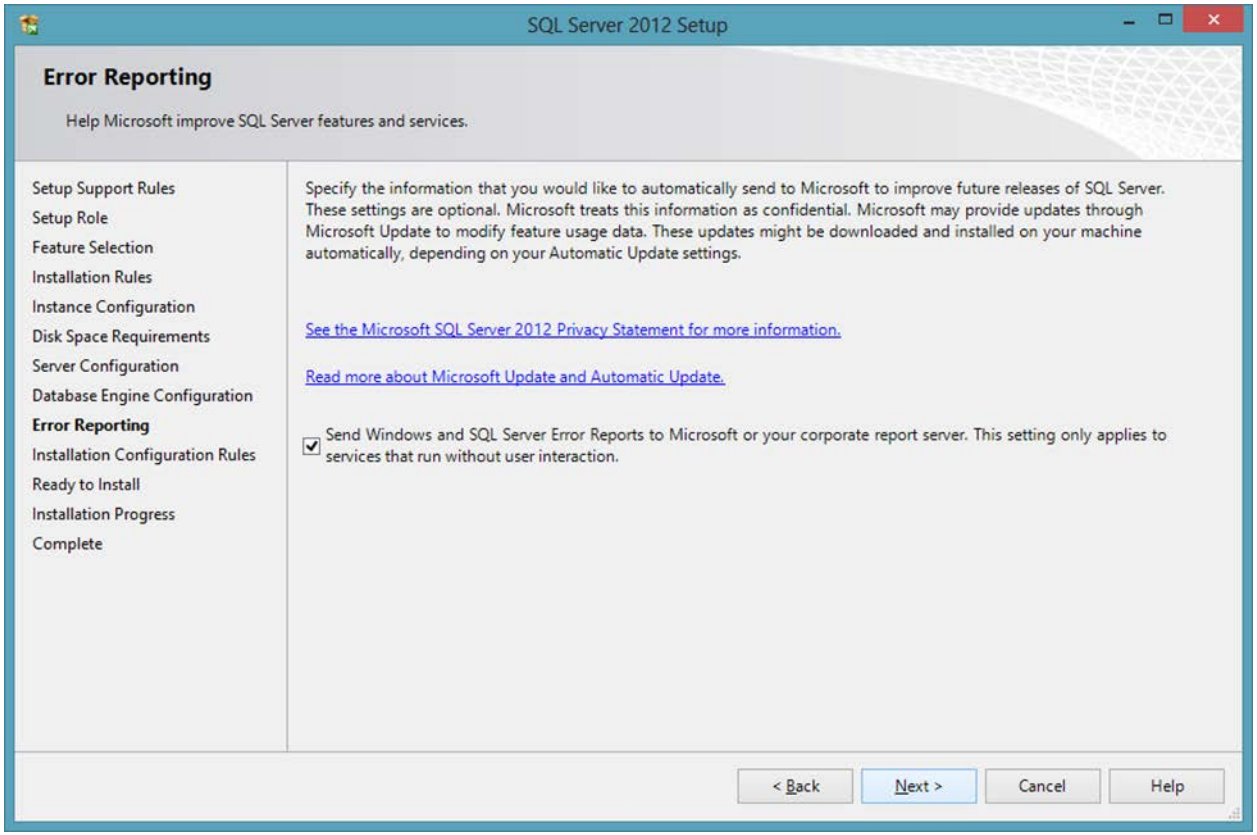
Database Engine - FILESTREAM



Error Reporting

- **Microsoft collects telemetry information about fatal SQL Server errors for these components:**
  - Database Engine
  - SQL Server Agent
  - Analysis Services
  - Reporting Services
  - Integration Services
  - Replication
- **This is very useful information for Microsoft**
  - This helps them improve the product over time
- **It is your decision whether to allow this or not**
  - You can change this setting later
    - Use the Error and Usage Report Settings dialog

Error Reporting Screen



Summary

- **Proper SQL Server installation is very important**
  - Provides better performance, scalability and security
  - Reduces the amount of configuration work needed after installation
  - Makes the instance easier to maintain in the future
- **Take your time and be detail oriented**
  - It is very easy to miss important settings

What is Next?

- **Module 5 will cover post-installation configuration tasks for SQL Server 2012**
  - The importance of updating SQL Server 2012
  - Obtaining Service Packs and Cumulative Updates
  - Setting instance-level properties with the SSMS user interface
  - Setting instance-level properties with T-SQL
  - Configuring tempdb data files
  - Adding common instance-level trace flags