THE EDGE®

SQL Server Installation

Part 1

Table of Contents

Introduction

The conversion from MS Access to MS SQL Server Express involves two primary steps: Loading SQL Server Express Management Studio and conducting the data conversion. In this step, Part 1, we will handle some administrative tasks and load SQL Server onto the workstation running The Edge.
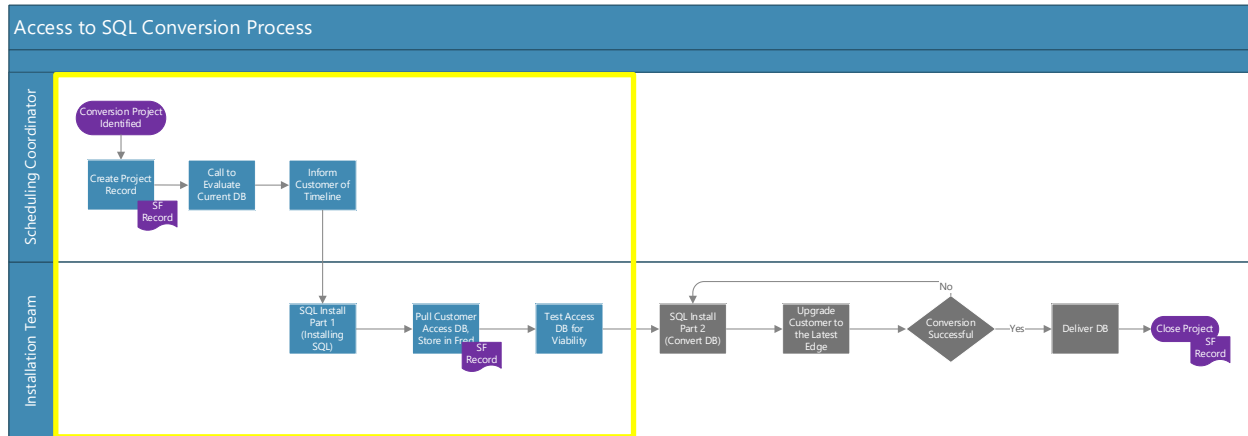
Getting Started

The following paragraphs describe pre-install activities and managing the upgrade.

Client's Upgrade to SQL Project in Salesforce

The Scheduling Coordinator must update the customer's SalesForce record with upgrade data and activities about the actual upgrade. Tasks include:

- Create a SQL project record
- Evaluate the current Access database (see below)
- Inform the customer of the upgrade timeline
- Data Pull:
  - Check off Pulled
  - Pulled by
  - Pulled date
- Make a client folder (store name) on: \\fred\CustomerData\SQLFiles\Clients to store database for testing
- Setup Environment:
  - Password
  - Check off SQL Installed
  - Environment Set By
  - SQL Date
  - Make any notes of errors/problems you ran into

- Email Client's Version # and link on \\fred to: christen@edge.software and julianna@edge.software so the database can be tested and scheduled for Part 2.

Evaluate Database and Coordinate with Customer

The Scheduling Coordinator will contact the customer to evaluate the existing database to determine the scope of the project. This includes determining:

1. Database size
2. Whether it is multi-store
3. Current Edge version
4. Current operating system.

A target conversion date should be set with the customer.
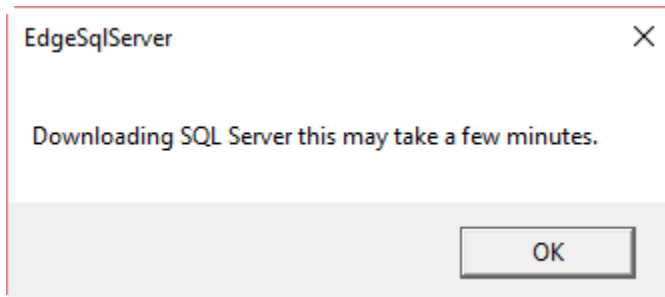
SQL Server Installation

After the project data is collected, SalesForce will trigger a workflow item to begin installation. Follow the correct installation from one of the sections below.
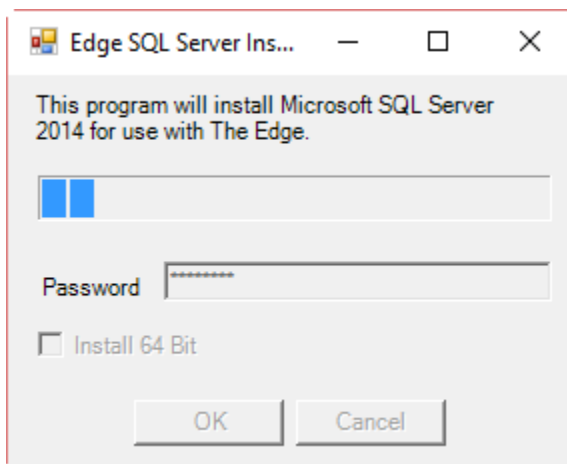
New SQL Server Express 2014 Installation

1. The customer must be on the most recent version of The Edge. If they are not, an update must be done prior to setting up the Access to SQL conversion. It is probably best to do it now.

2. Make sure the customer is running the most recent versions of Windows® and .Net Framework®.

3. Copy the SQL files to client's desktop.

4. Copy the current Edge database to the desktop and transfer for testing.

5. Download the EdgeSQL installer file (EdgeSQLServer2014.zip). It is located in \\fred\ajsllc\CustomerData\SQLFiles.
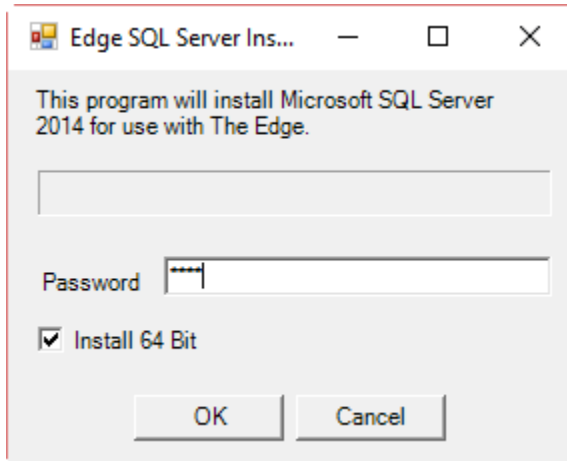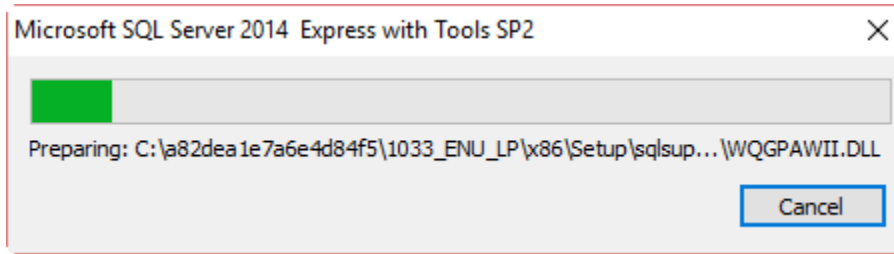
6. Put in the SQL password from SalesForce.

7. Uncheck **Install 64 Bit**.

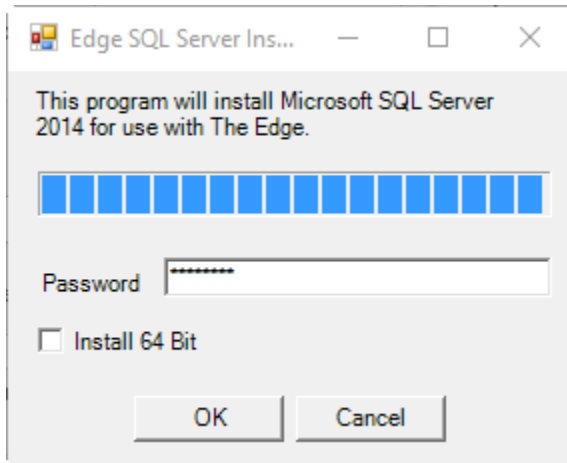8. Select **OK**. The EdgeSQL installer will download MSSQL Server.

9. Select **OK**. The EdgeSQL Installer will return.

10. When it is complete, the MSSQL Server installer will appear.

Microsoft SQL Server 2014 Express with Tools SP2 ✕

Preparing: C:\a82dea1e7a6e4d84f5\1033_ENU_LP\x86\Setup\sqlsup...\WQGPAWII.DLL

Cancel

11. That will close and the installer will open again.

Edge SQL Server Ins... — □ ✕

This program will install Microsoft SQL Server 2014 for use with The Edge.

Password ••••••••

☐ Install 64 Bit

OK   Cancel

12. Reboot the machine.

## SQL Service Express Upgrade from 2008

1. The customer must be on the most recent version of The Edge. If they are not, an update must be done prior to step 2 of this process, setting up the access to SQL conversion. Probably best to do it now.

2. Make sure the customer is running the most recent versions of Windows® and .Net Framework®.

3. Copy the SQL files to client's desktop.

4. Copy the current Edge database to the desktop and transfer for testing.

5. Locate EdgeSQLServer2014.zip and extract and install it on the server as described in the next section. It is located on \\fred\ajsllc\customerdata\SQLFiles.

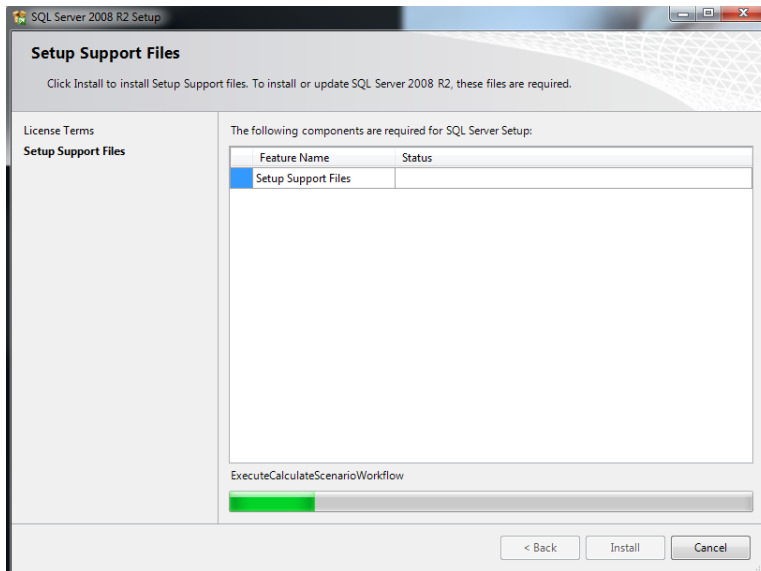6. Start the SQL Server installer.
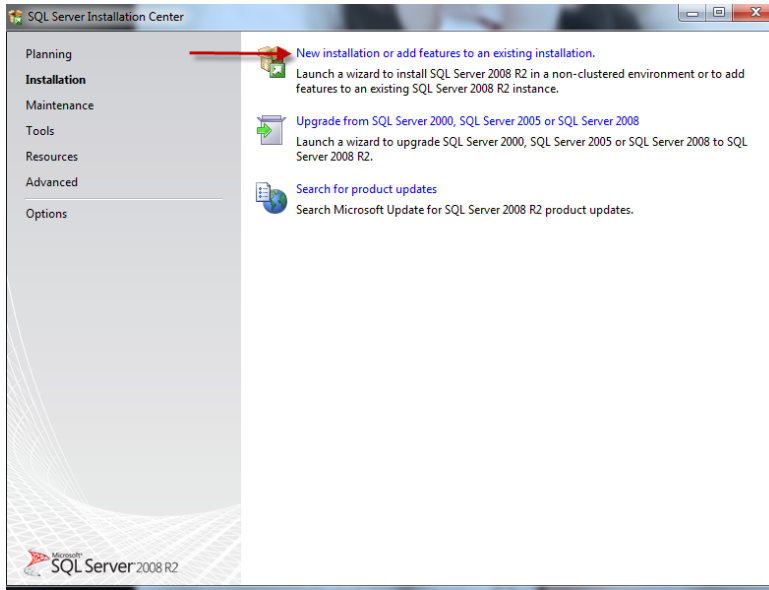
7. Click **New installation or add features to an existing installation**. A progress screen will appear.
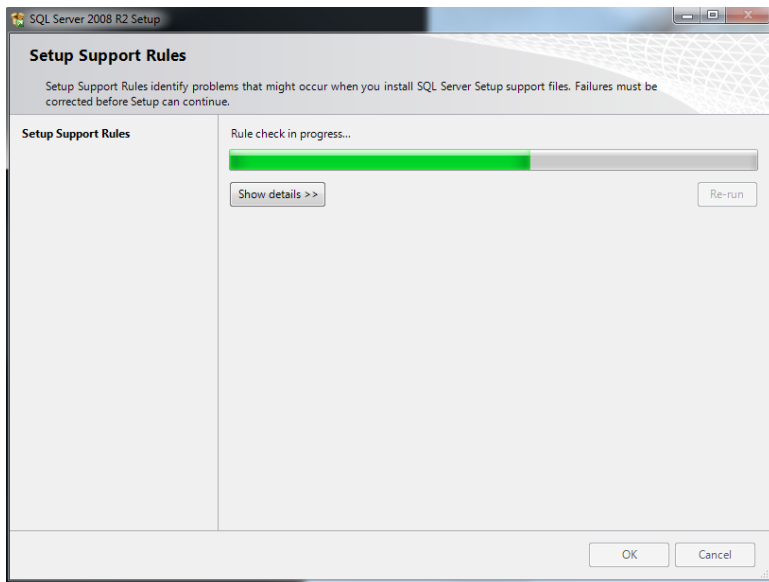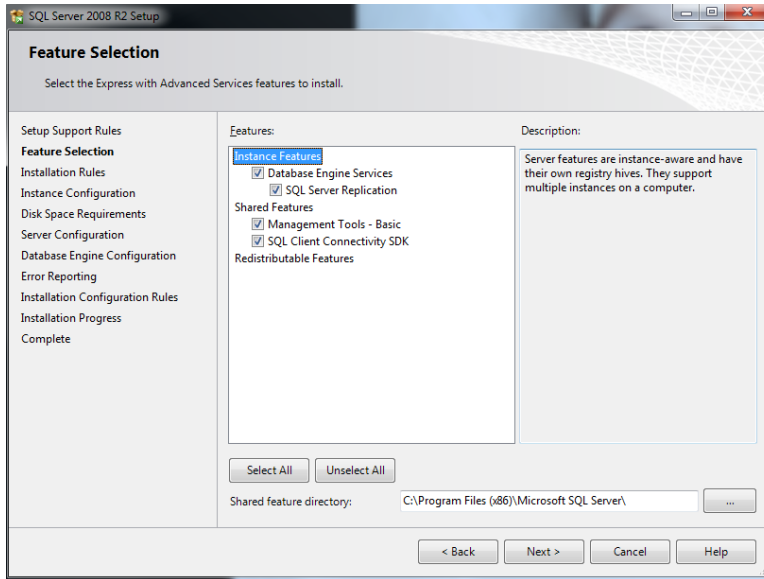

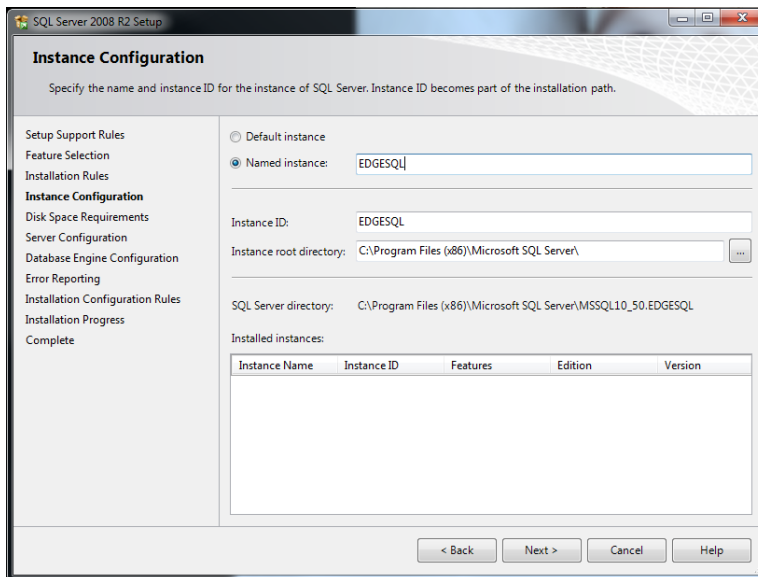8. You will be prompted to accept terms.
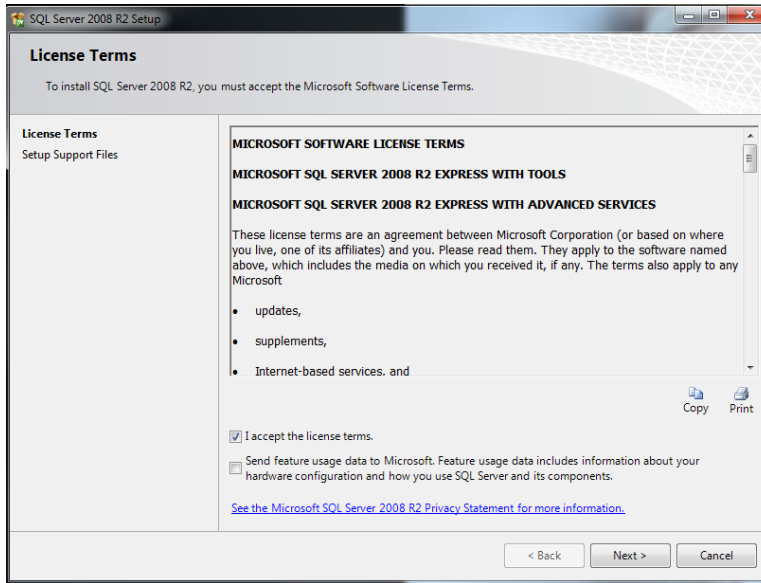
9. Check **I accept the license terms** and click **Next**. Another progress screen will appear.

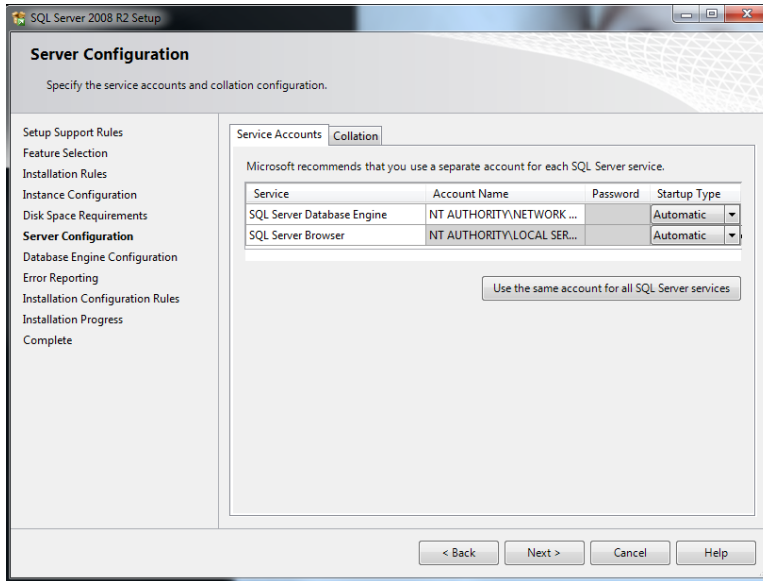10. You will be prompted to select features.

11. Select ALL **Instance Features** and click **Next**. The **Instance Configuration** screen will appear.

12. **Instance Configuration** should be set to **Named Instance** and enter EDGESQL in the **Named Instance** field. The other fields will populate automatically.

13. Click **Next**. The **Server Configuration** screen will appear.

14. Set **Server Configuration Database Engine** and **Server Browser** to NT Authority/Network.

15. For both services, the **Startup Type** should be set to Automatic.

NOTE!

By default, SQL Server Browser only allows Local in the initial setup; this can be changed later.

16. Click **Next**. The **Database Engine Configuration** screen will appear.
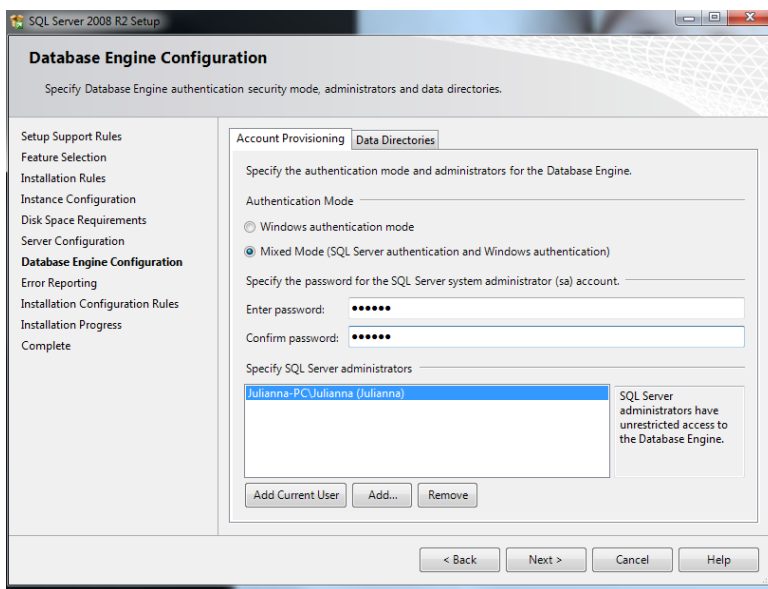
17. Set **Authentication Mode** to Mixed Mode.

18. Enter the password; for older systems, it is either `EdgeSA` or `EdgeSA22`. Newer systems have an AJS-generated password for each customer. To generate a password, use the tool http://fred/sqlpw and save it in the customer record in Fred.

19. Click **Next**. The **Error Reporting** screen will appear.
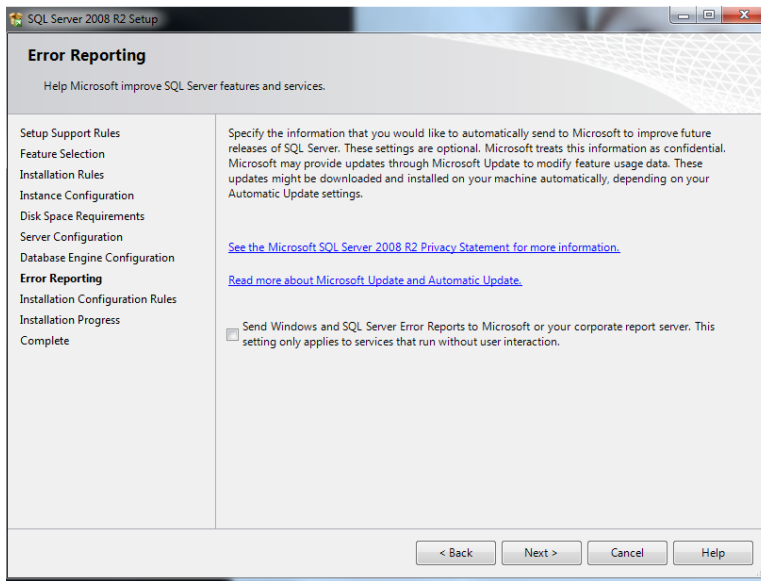
20. The **Error Reporting** settings are optional; click **Next**. Another progress screen will appear.
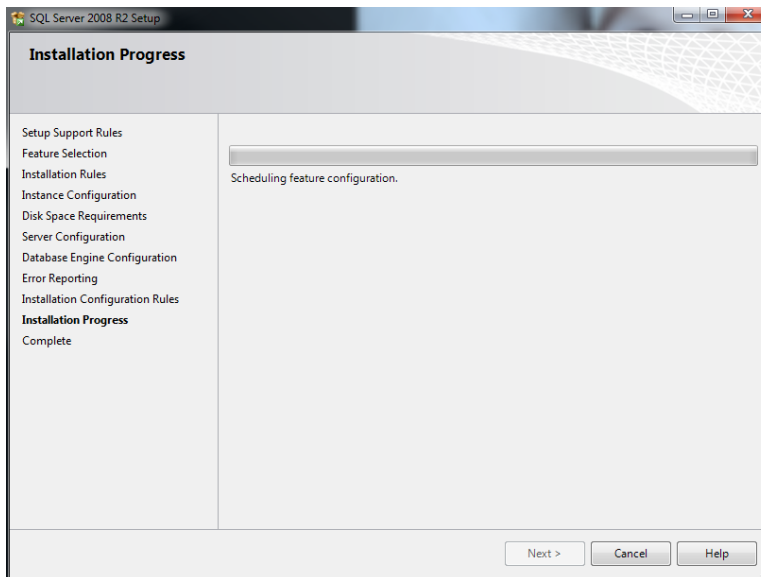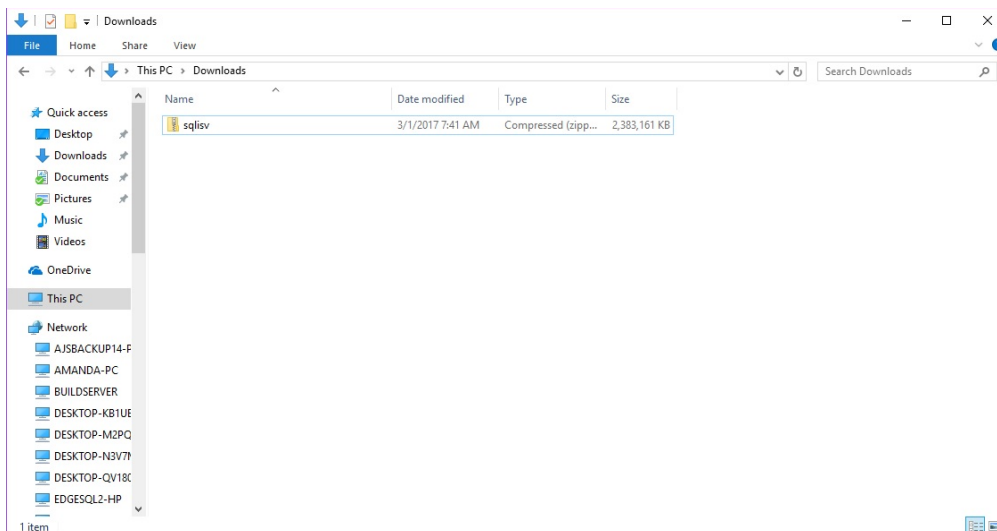

21. The **Complete** screen will appear.
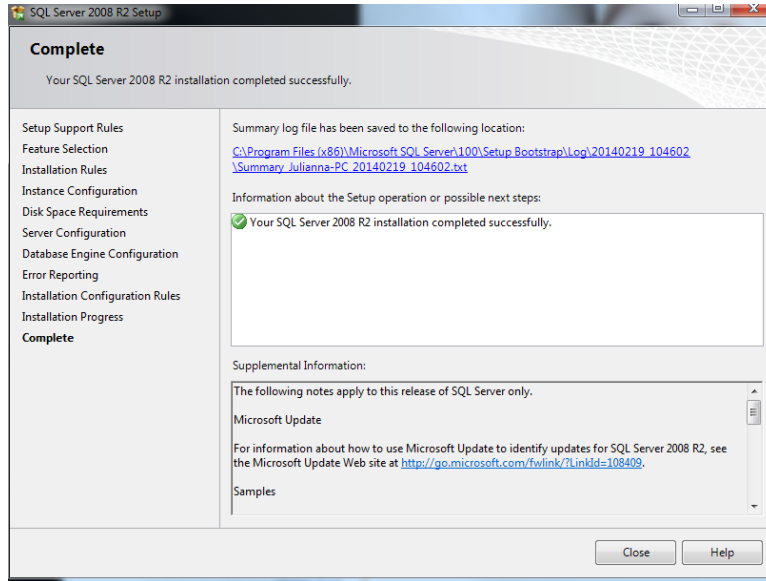
22. Click **Close**.

New SQL Server Standard 2016 Installation

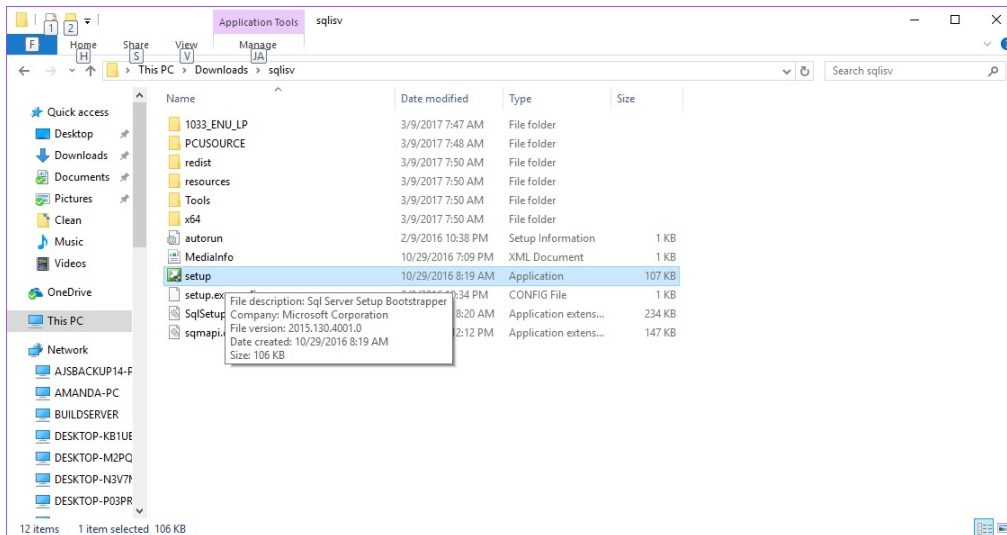To install MS SQL Standard for the first time:

1. Obtain a copy of SQL Standard (`SQLISV.zip`) from `\\FRED\ajsllc\Software\SQL` and copy it to a temporary directory on the machine where SQL Server is to be installed. The desktop is a good location.


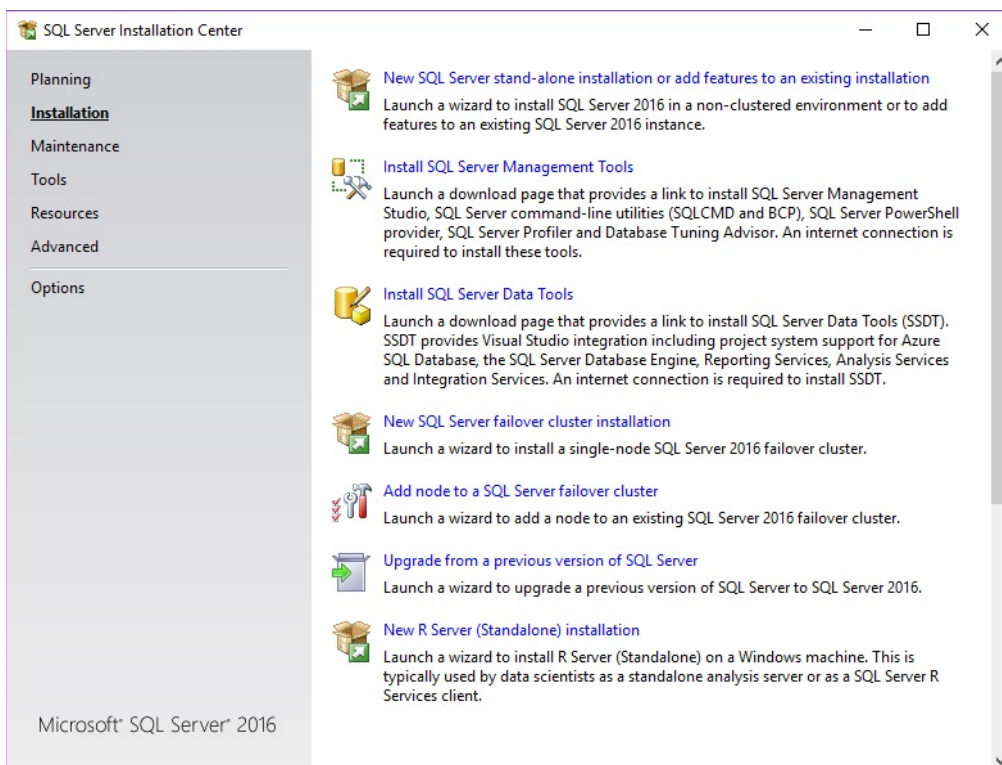2. By double-clicking the file, extract `SQLISV.zip`. You will be prompted to select a save location.
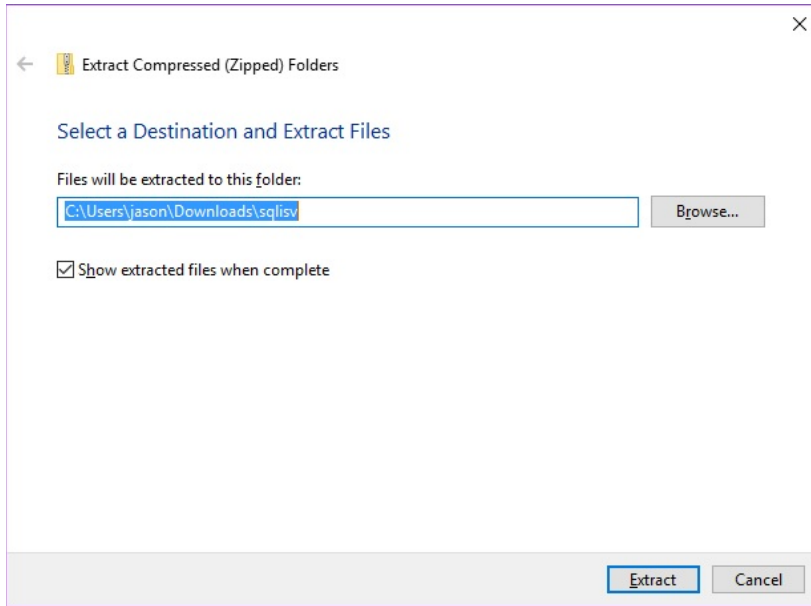
3. Browse a location that you will access later and select **Extract**. The directly will open.
4. Run `setup.exe` from the extracted directory by double-clicking it.

5. When asked "Would you like to allow this program to make changes to your computer?" select **Yes** and the **SQL Server Installation Center** will open.
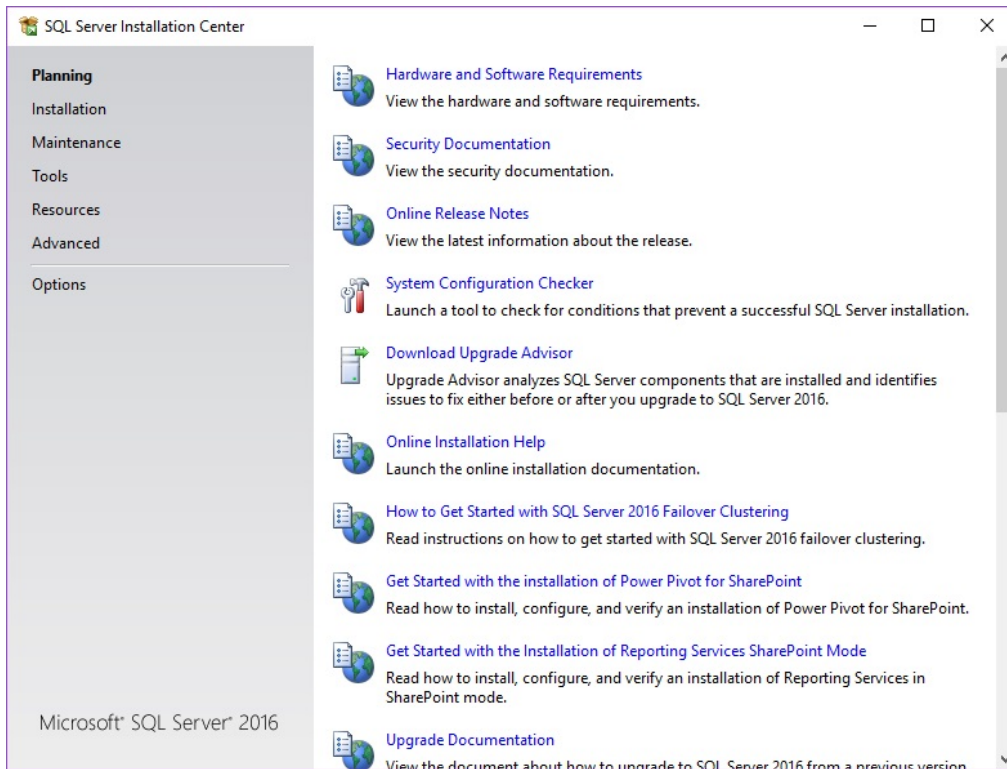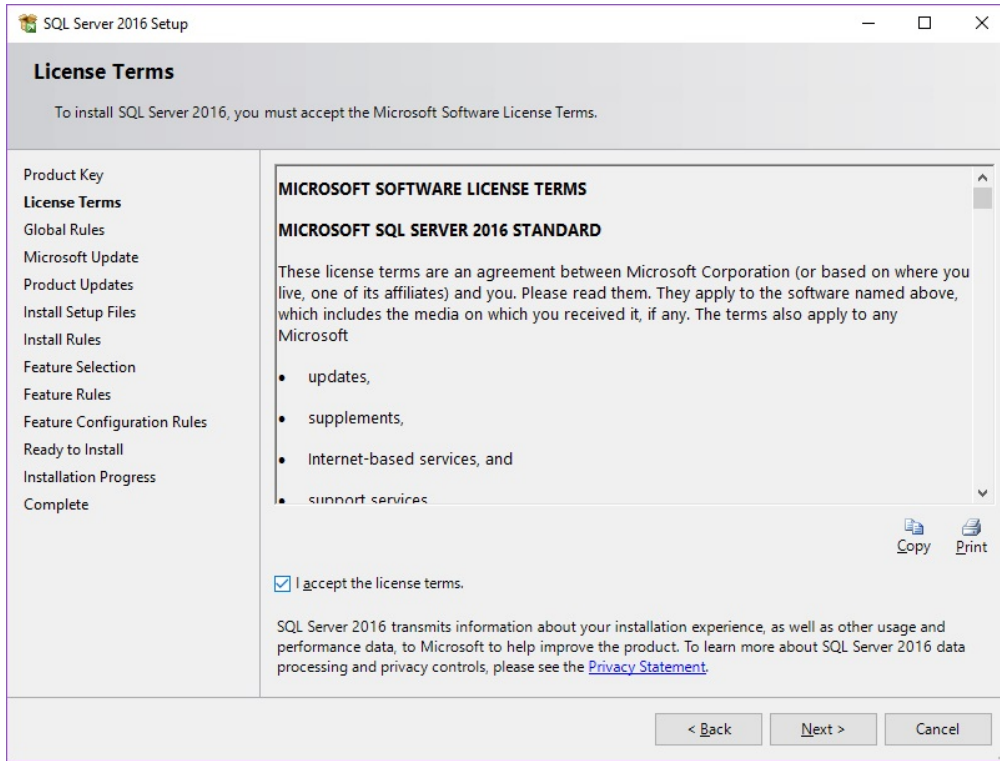
6. From the left pane, select **Installation**. New installation options will appear in the right pane.

7. Select **New SQL Server stand-alone installation or add features to an existing installation**. You will be prompted to enter a product key.

8. The product key should be pre-filled on this screen. Be sure the **Enter the product key:** option is selected.
9. Select **Next**. You will be prompted to accept the license terms.

10. Select the **I accept the license terms** option. The **Global Rules** screen will run.
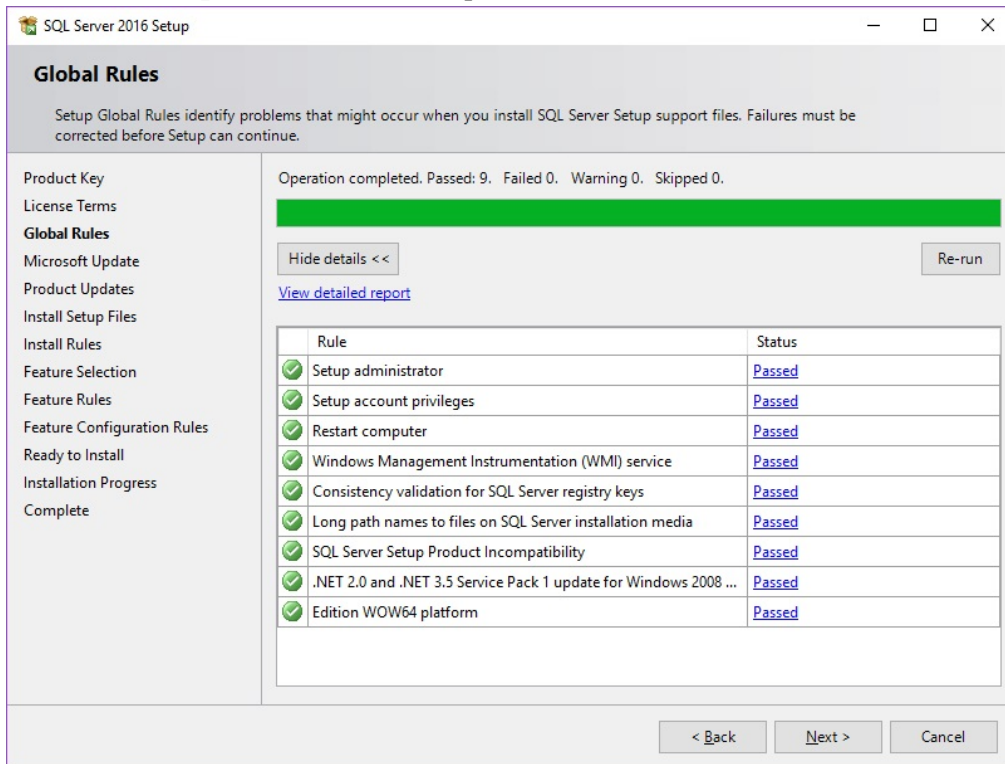
11. There is no action required. The **Microsoft Update** screen will appear.
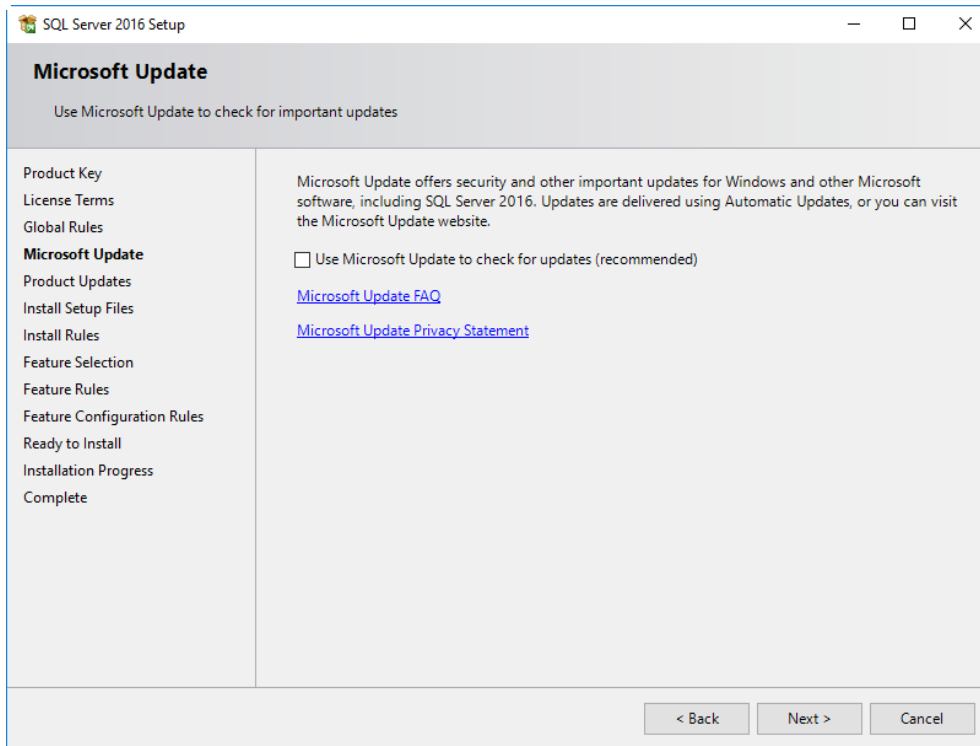
12. Check the box labeled **Use Microsoft Update to check for updates (recommended)**.
13. Select **Next**. The installer will run through a series of prerequisite tests.
14. The **Install Setup Files** screen will appear while updates are installed.
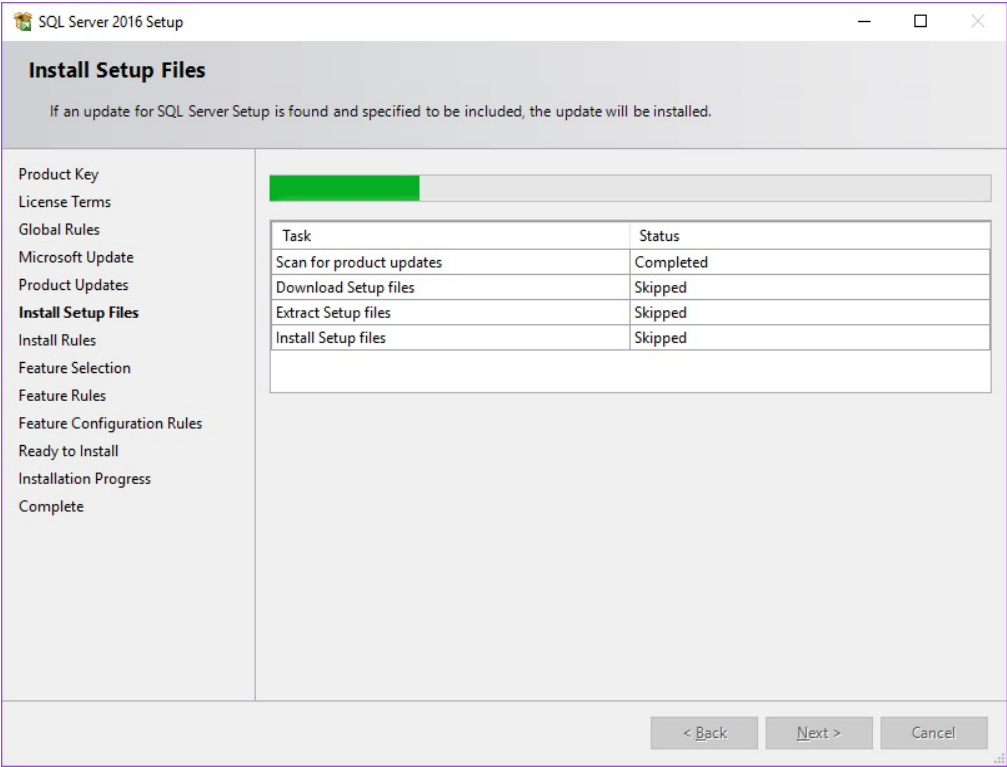
15. This will run after updates are installed, and indicate any setup issues.
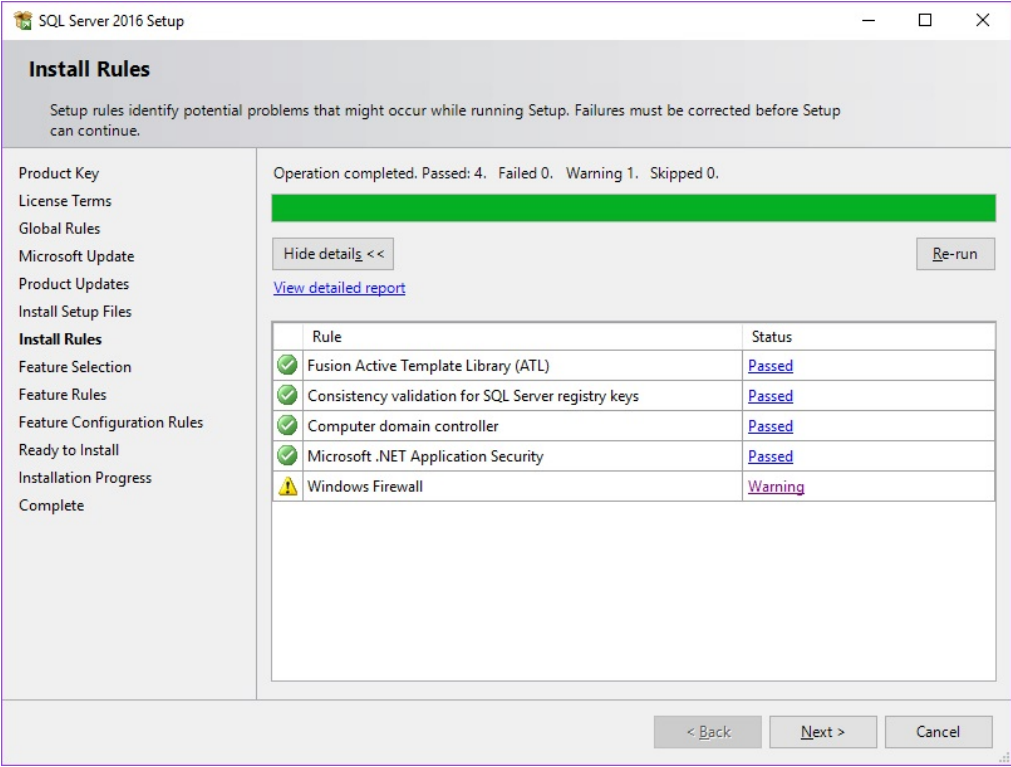
If there are "Windows Firewall" warnings, see the section entitled Firewall Configuration.

16. If any warnings appear, you can correct them. If you get a failure, you must stop and correct it. The most common would be in an upgrade to be missing the proper service packs.

17. When all the rules have passed, select **Next**. The **Feature Selection** screen will appear.
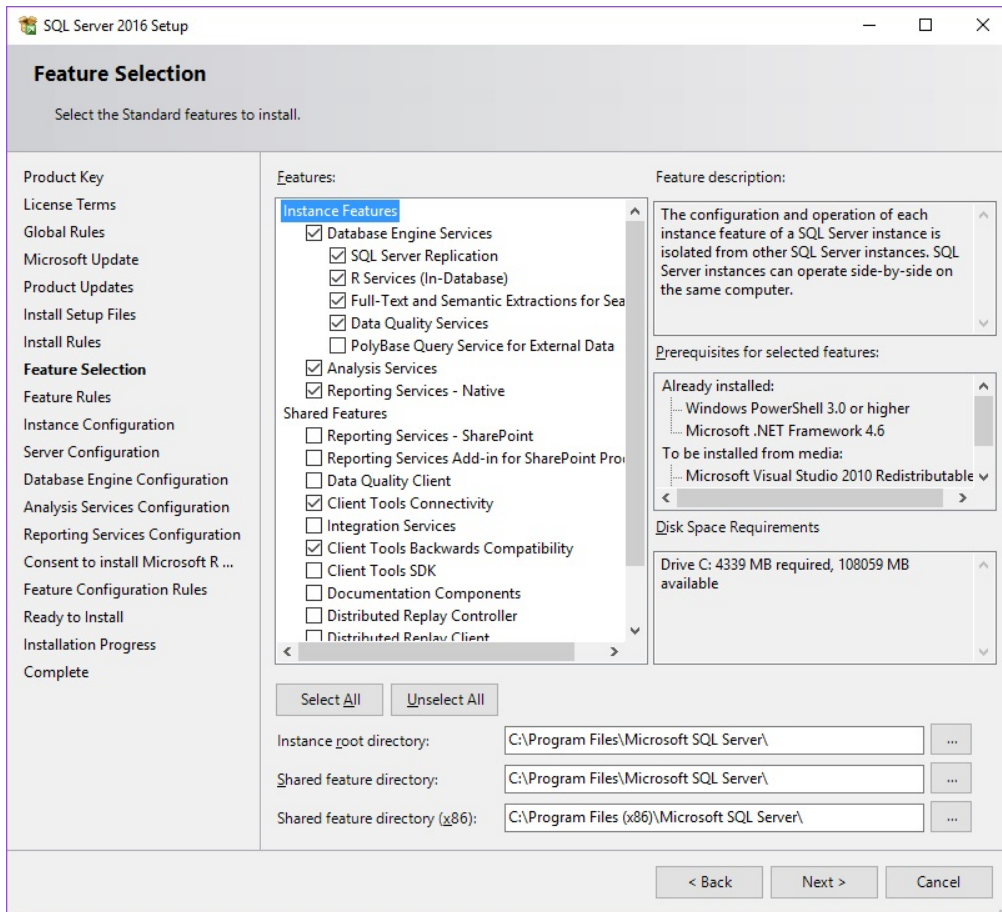
18. In the **Feature Selection** screen, select all boxes as shown above.

19. Select **Next**. The **Instance Configuration** screen will appear.
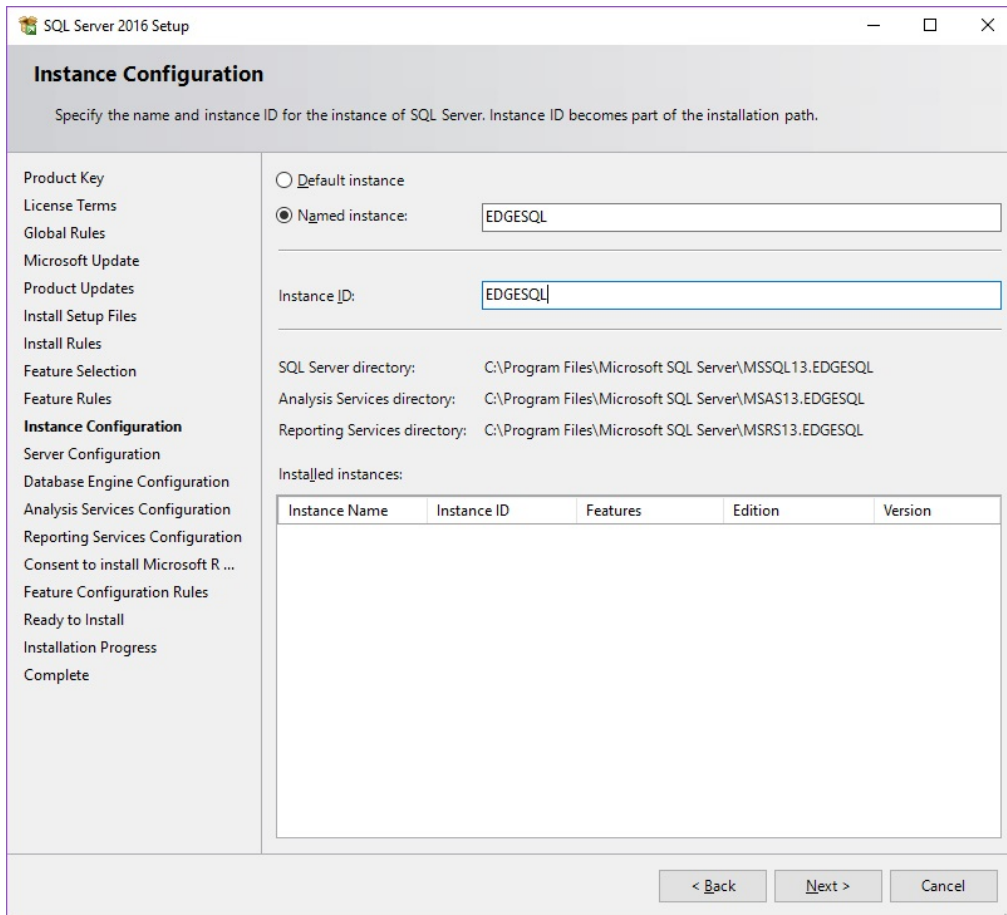
20. In the **Instance Configuration** screen, select the **Named instance** radio button, and type `EDGESQL` in both the **Named Instance** and **Instance ID** fields.
21. Select **Next**. The **Server Configuration** screen will appear.
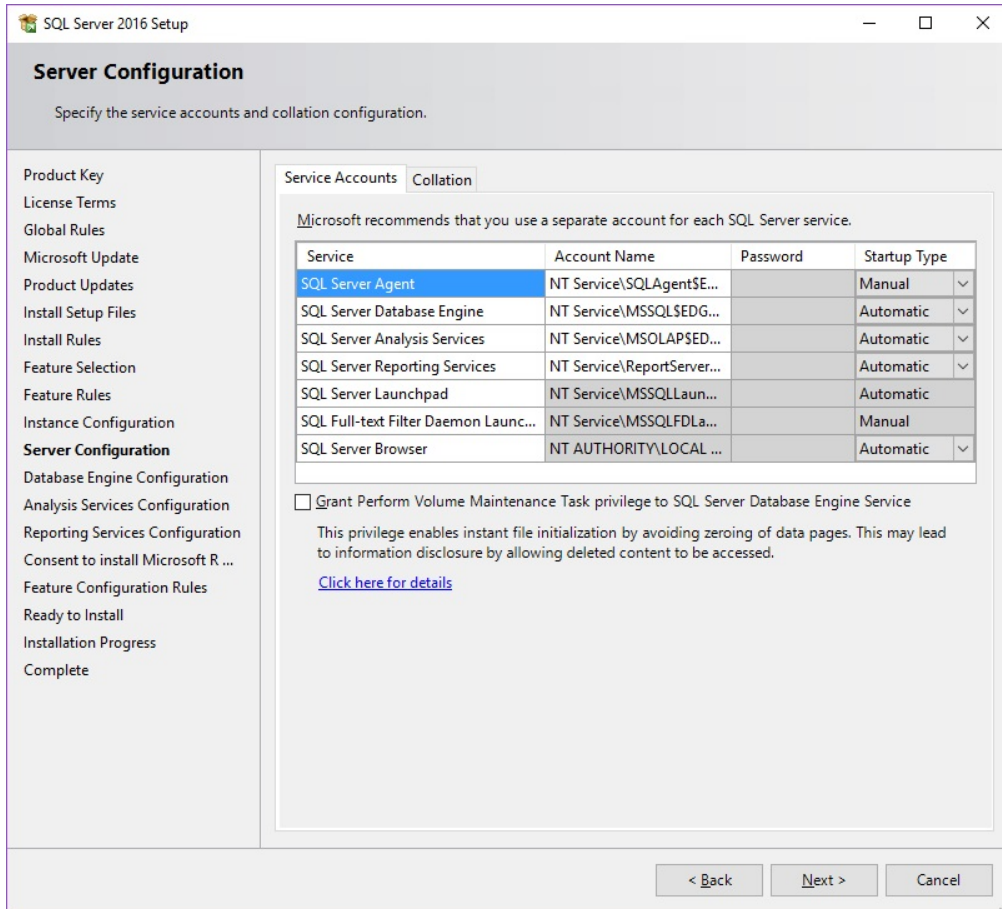
22. In the **Server Configuration** screen, accept the default values. Make sure the **Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service** option is NOT checked.
23. Select **Next**. The **Database Engine Configuration** screen will appear.
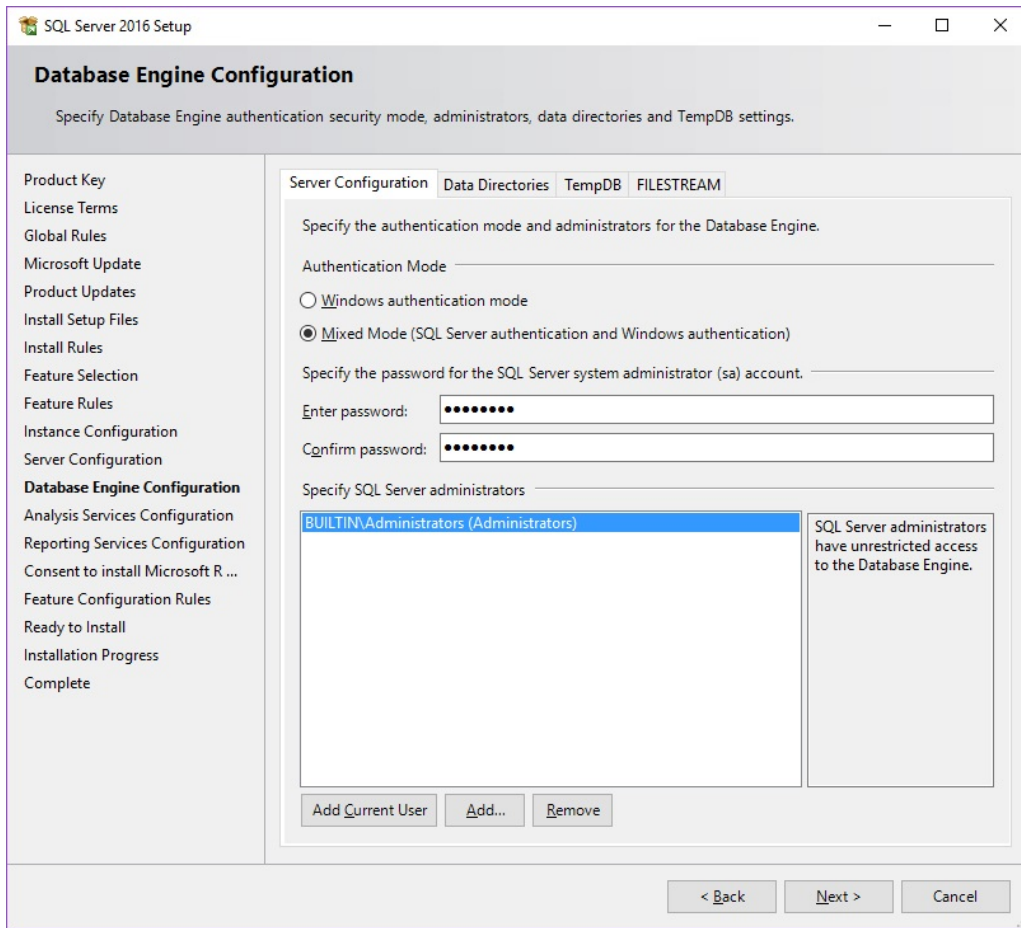
24. In the **Database Engine Configuration** screen, from the **Server Configuration** tab, select **Mixed Mode** and in the **Enter Password** field, enter the system administrator (sa) password.
25. Enter the password again in the **Confirm Password** field.
26. In the **Specify SQL Server Administrators** section, select **Add**. The **Select Users or Groups** window will appear.
27. In the **Select Users or Groups** window, type `Administrators` and select **Check Names**. The wizard will find the matching group from the local machine.
28. Select **OK**. The **Select User or Groups** window will close.
29. From the **Database Engine Configuration** screen, select **Next**. The **Analysis Services Configuration** screen will appear.
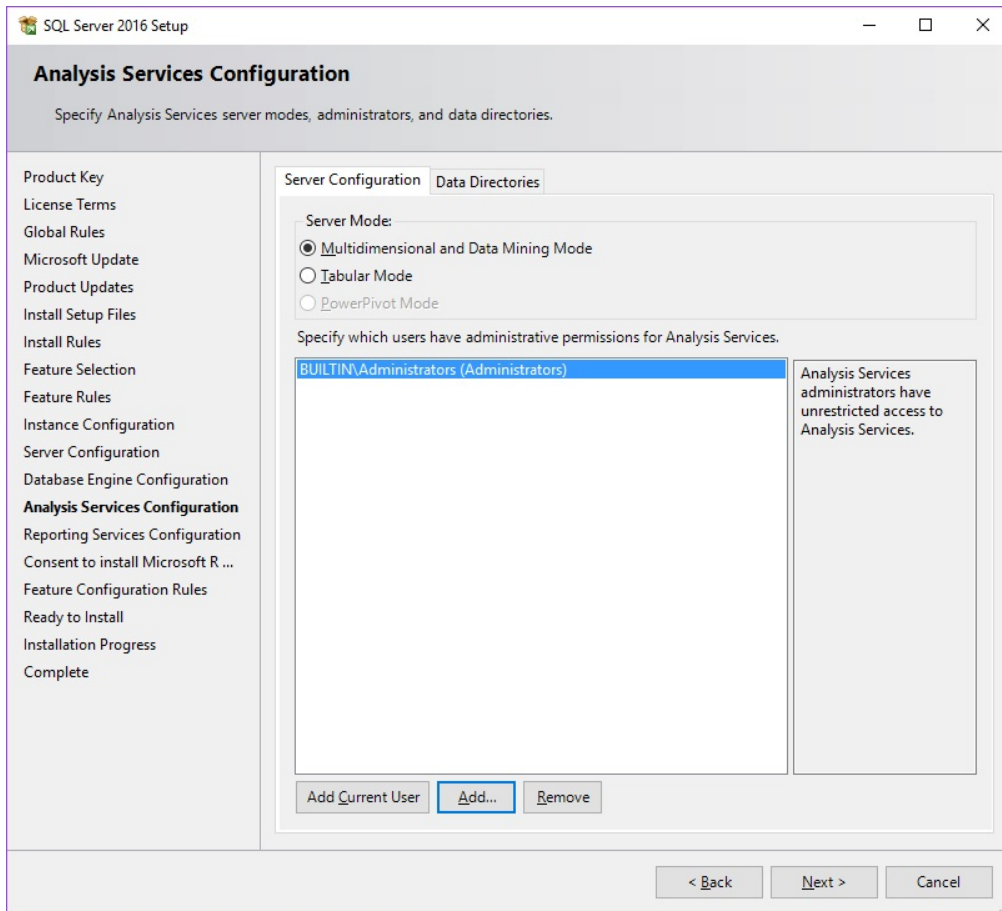
30. In the **Analysis Services Configuration** screen, from the **Specify which users have administrative permissions for analysis services** section, select **Add**
31. The **Select Users or Groups** window will appear.
32. In the **Select Users or Groups** window, type `Administrators` and select **Check Names**. The wizard will find the matching group from the local machine.
33. Select **OK**. The **Select User or Groups** window will close.
34. Select **Next**. The **Reporting Services Configuration** screen will appear.
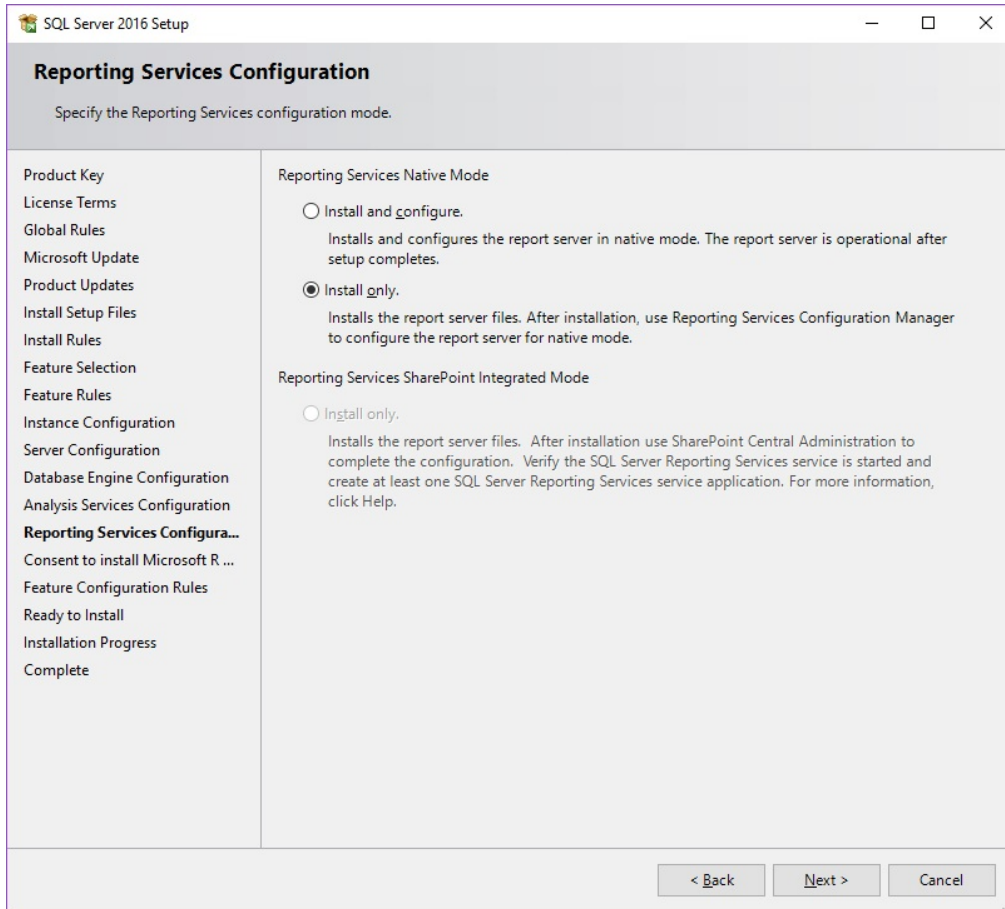
35. In the **Reporting Services Configuration** screen, select the **Install Only** radio button.
36. Select **Next**. The **Consent to install Microsoft R Open** screen will appear.
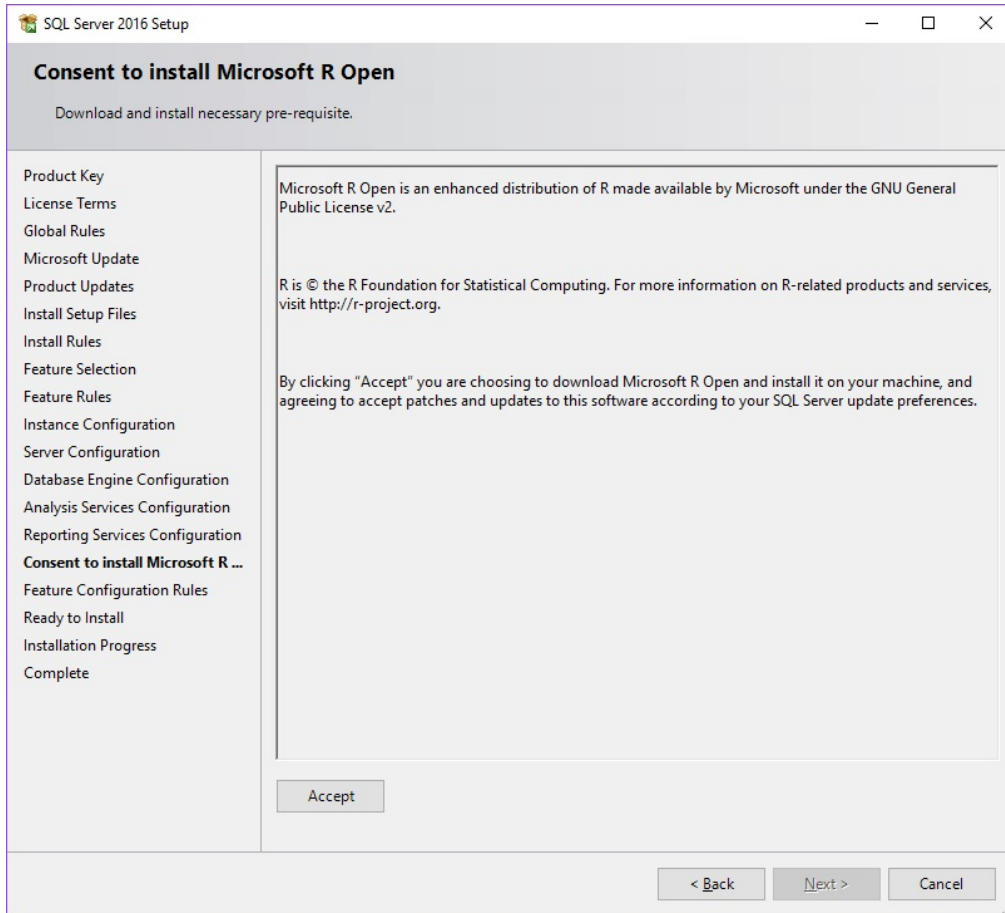
37. In the **Consent to install Microsoft R Open** screen, select **Accept**.
38. Select **Next**. The **Ready to Install** screen will appear.
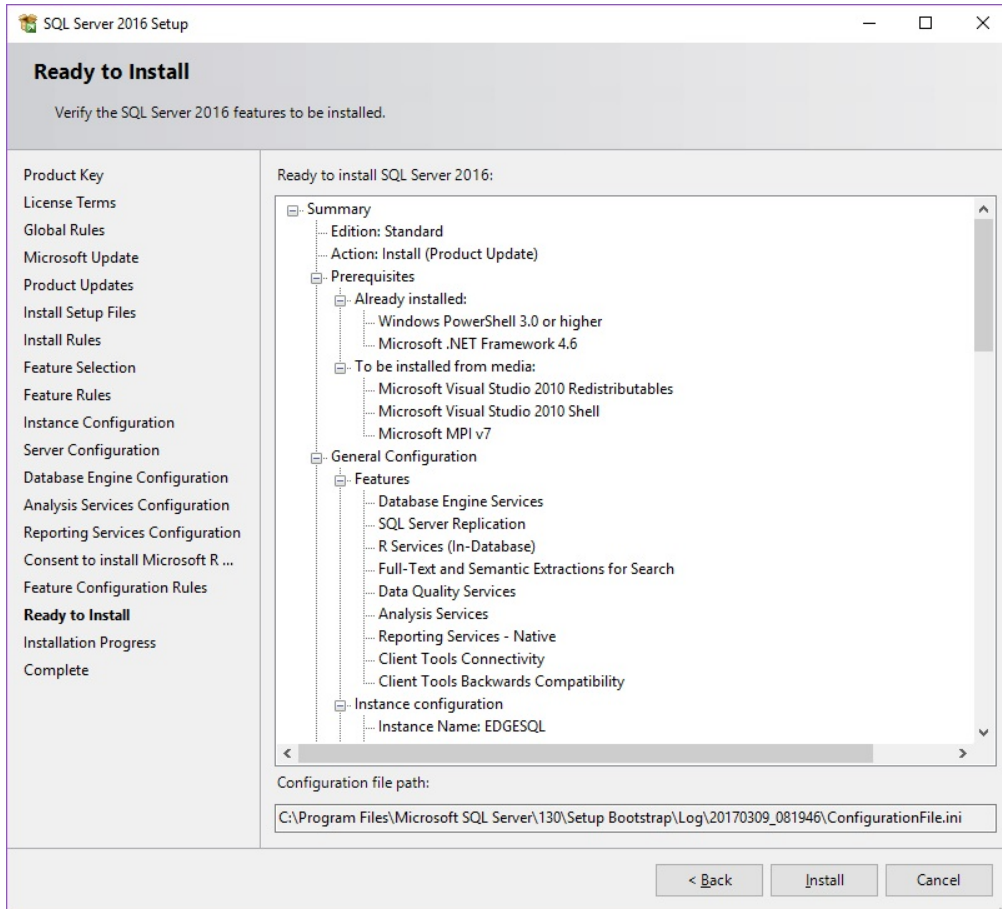
39. In the **Ready to Install** screen, select **Install** and wait while the actual installation takes place. A progress bar will appear.
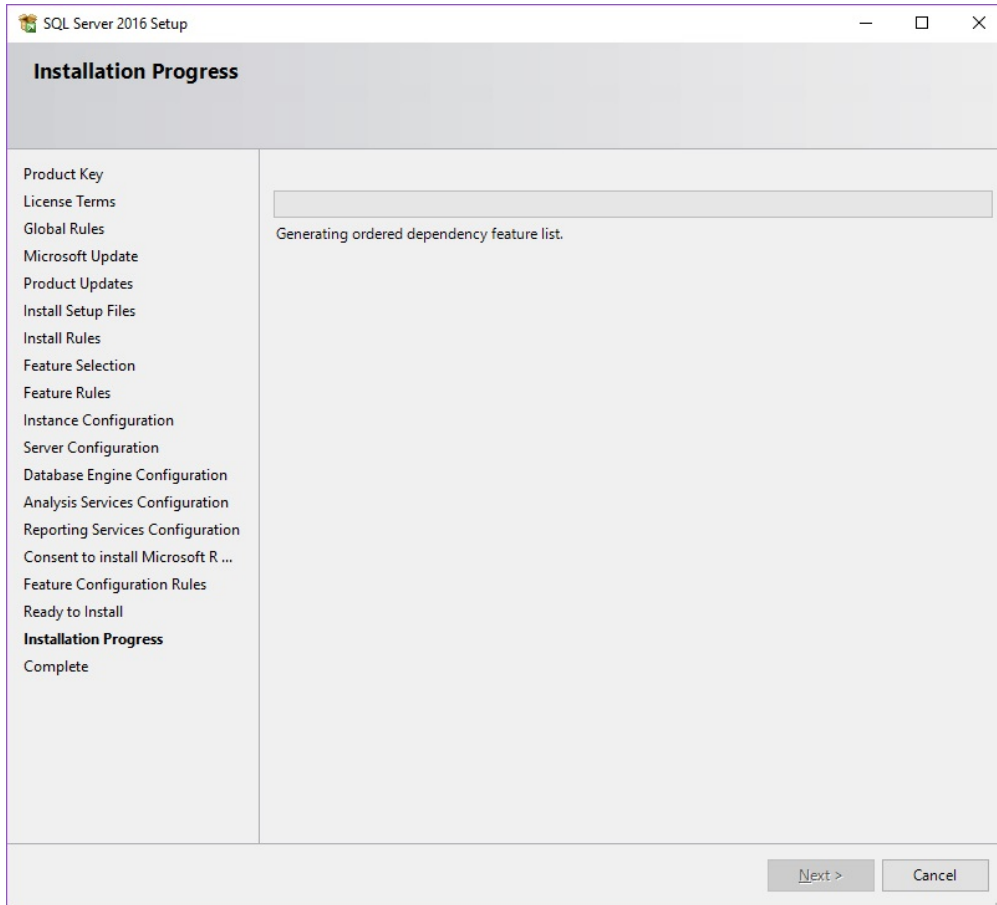
40. When the progress bar is complete, select **Close**. A confirmation screen will appear and you are done.
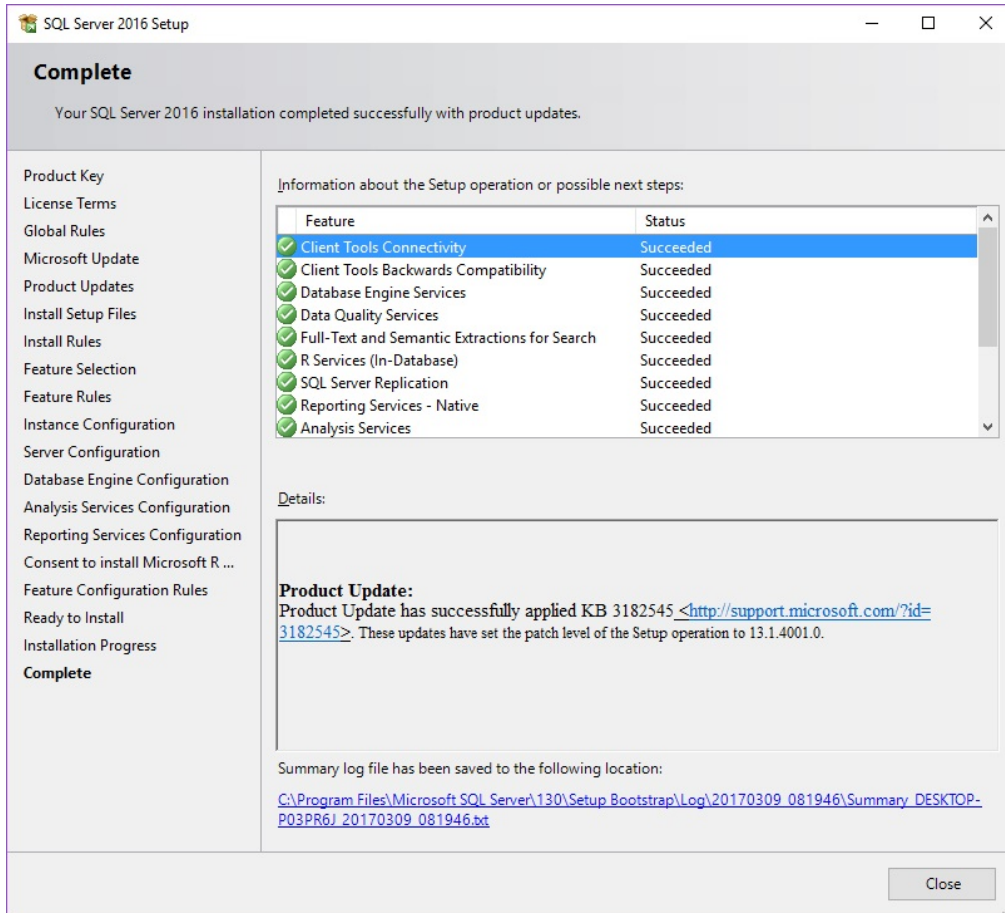
Upgrade from SQL Standard 2014 or SQL Standard 2008r2

NOTE!

For upgrades from SQL Server 2008, the 2008 R2 Service Pack 3 must be installed first. If you need to install it, be sure to install the right (32- or 64-bit) version.

To upgrade from SQL Standard 2014 or 2008r2 to SQL Standard 2016:

1. Obtain a copy of SQL Standard (`SQLISV.zip`) from `\\FRED\ajsllc\Software\SQL` and copy it to a temporary directory on the machine where SQL Server is to be installed. The desktop is a good location.
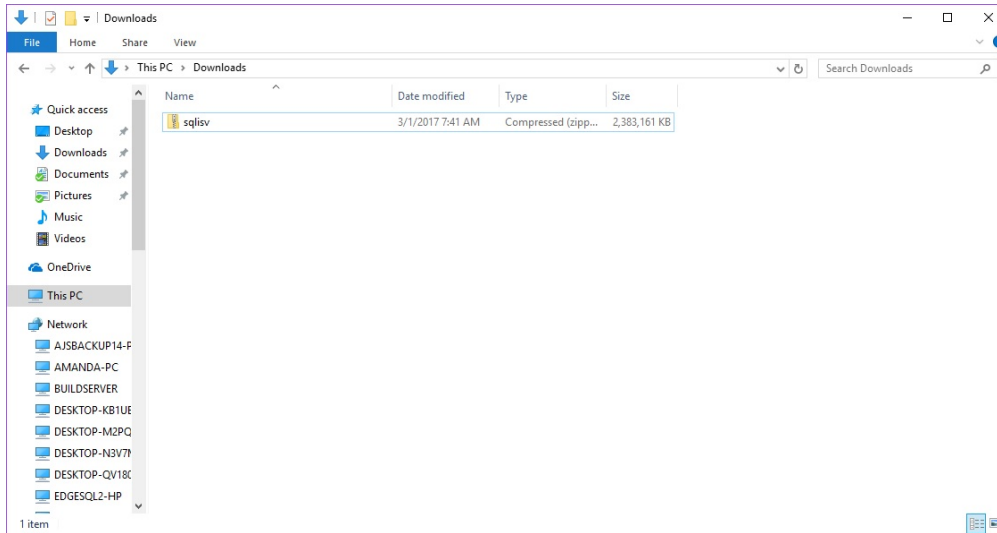
2. By double-clicking the file, extract `SQLISV.zip`. You will be prompted to select a save location.
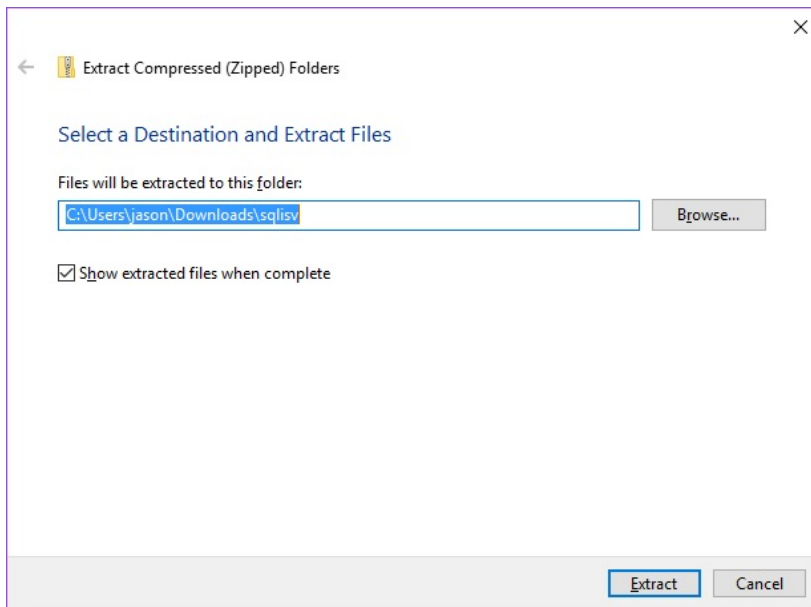
3. Browse a location that you will access later and select **Extract**. The directory will open.
4. Run `setup.exe` from the extracted directory by double-clicking it.
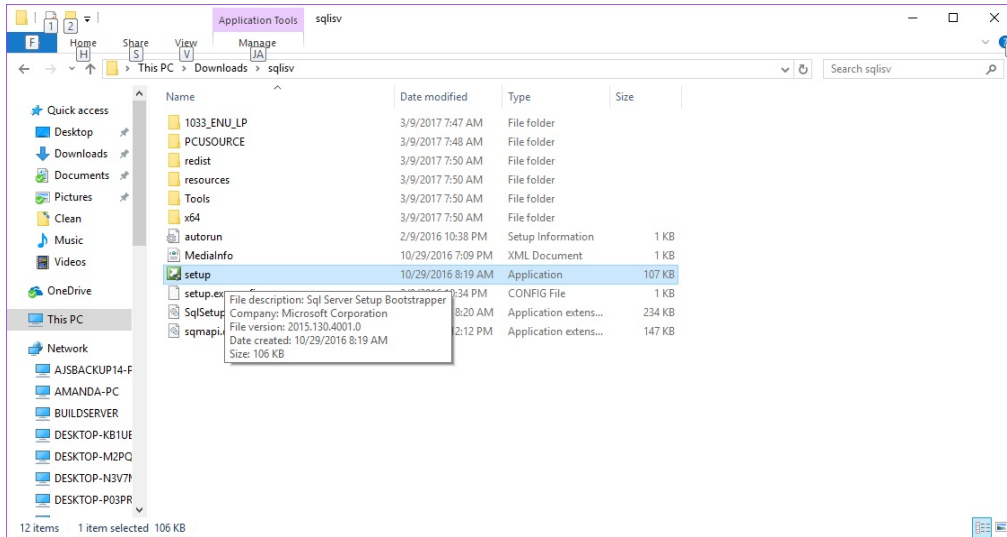
5. When asked "Would you like to allow this program to make changes to your computer?" select **Yes** and the **SQL Server Installation Center** will open.
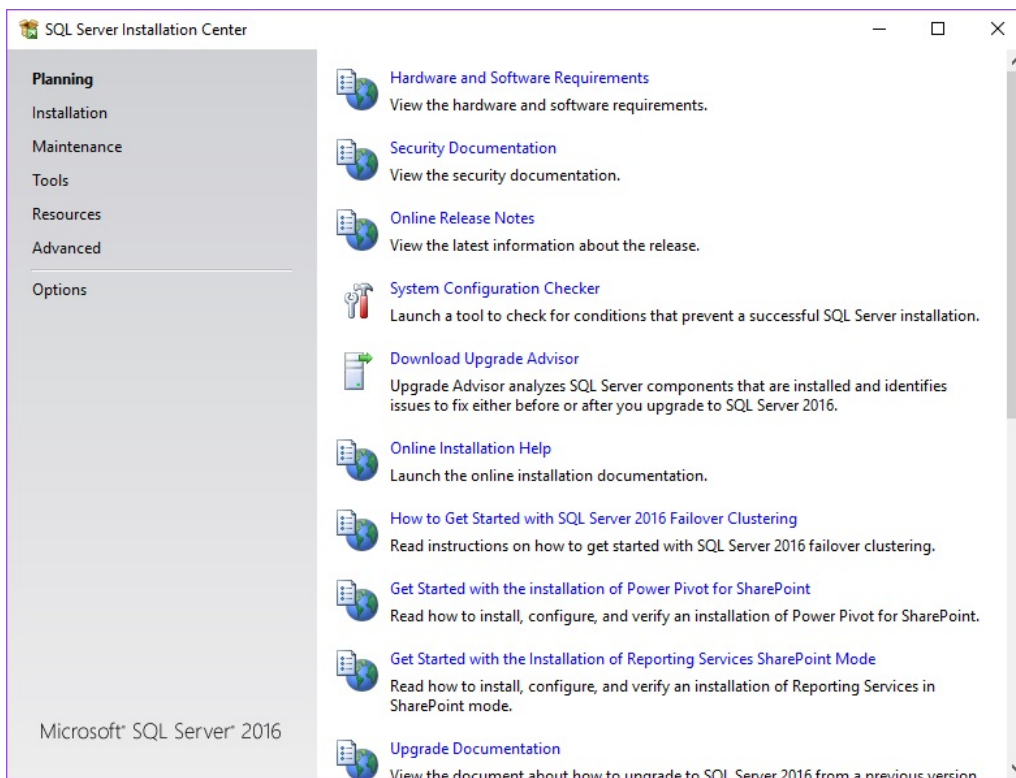
6. From the left pane, select **Installation**. Installation options will appear in the right pane.
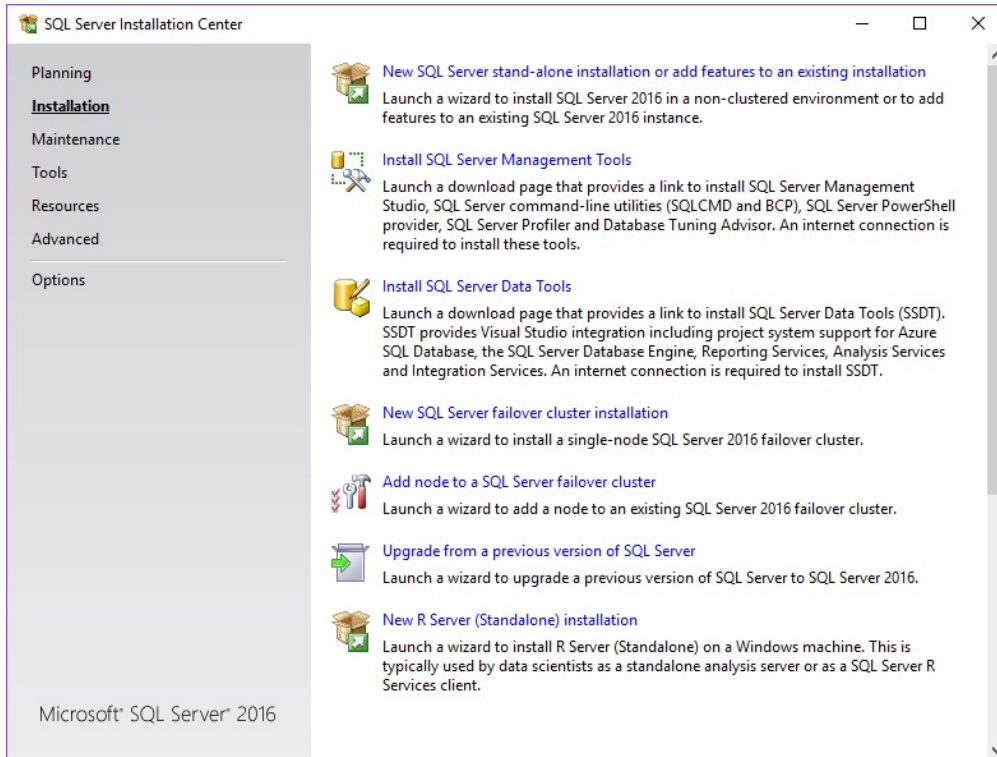
7. Select **Upgrade from a previous version of SQL Server**. You will be prompted to enter a product key.
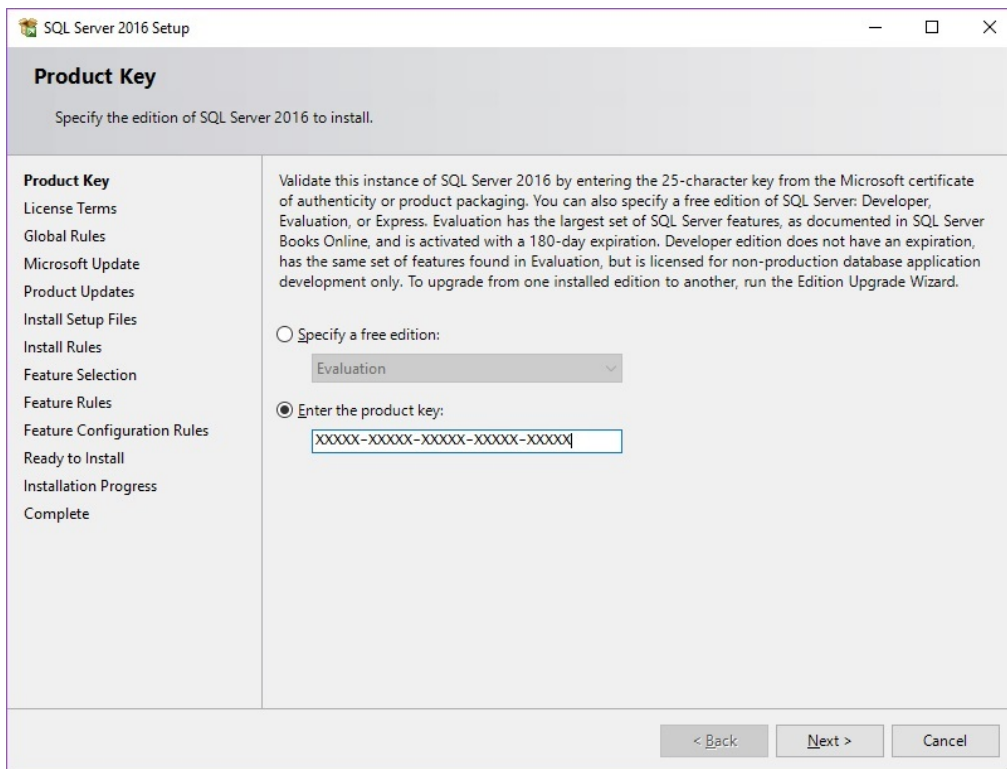
8. The product key should be pre-filled on this screen. Be sure the **Enter the product key:** option is selected.

9. Select **Next**. You will be prompted to accept the license terms.
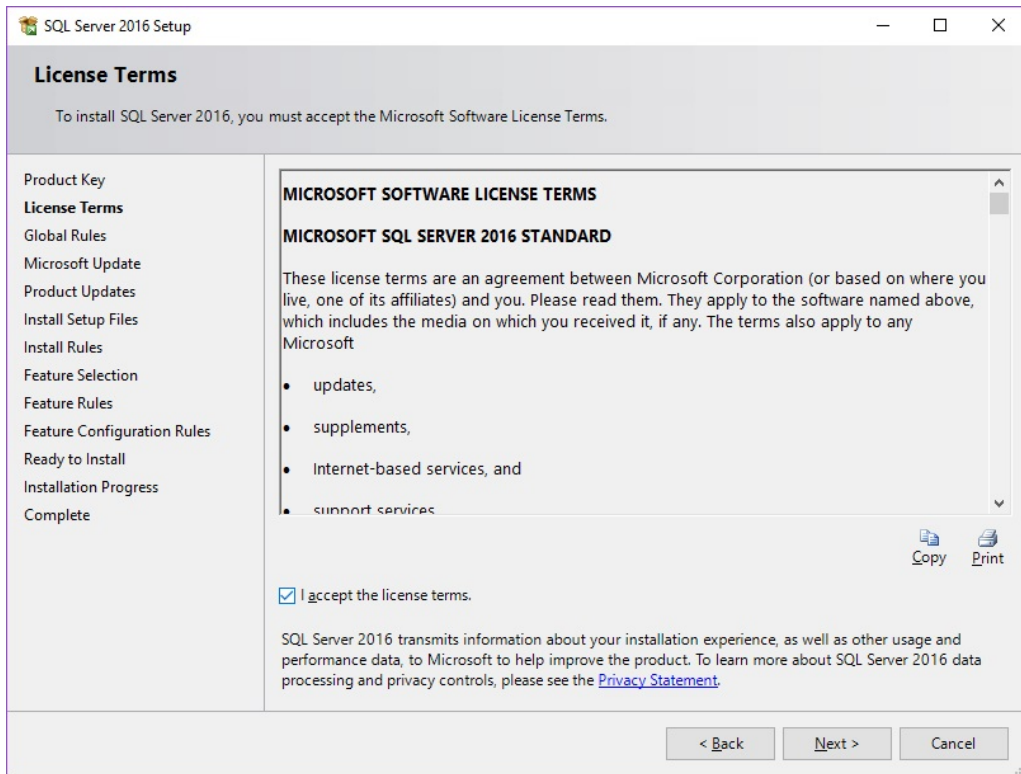
10. Check the **I accept the license terms** option. The Microsoft Update screen will appear.
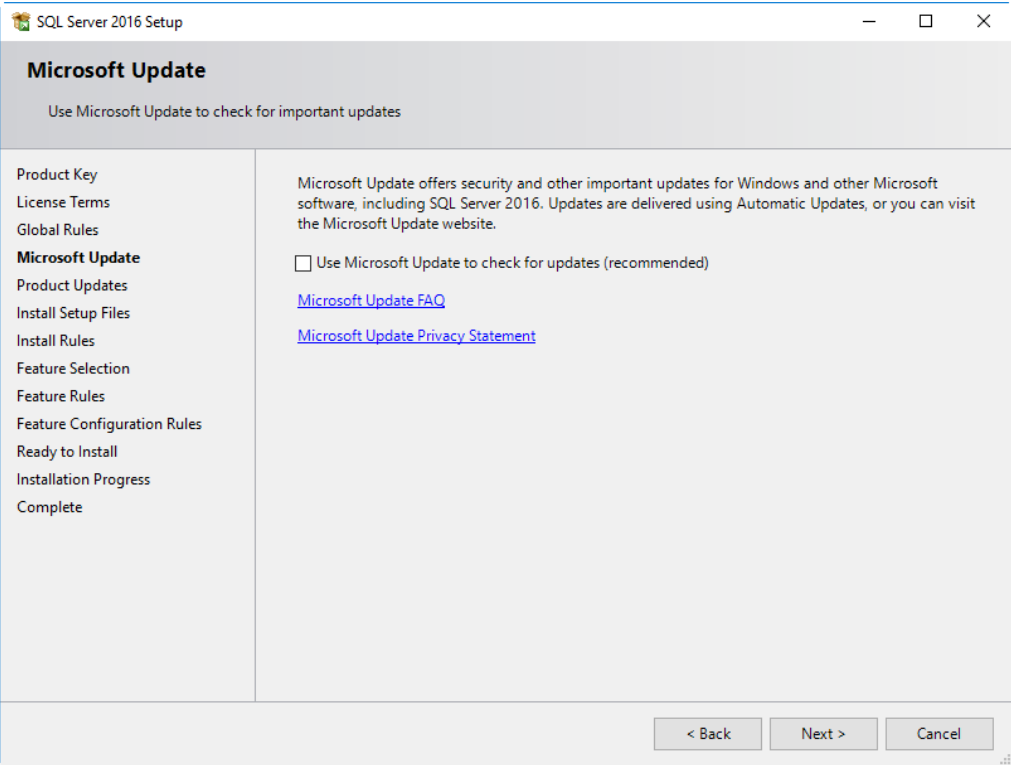
11. Check the box labeled **Use Microsoft Update to check for updates (recommended)**.
12. Select **Next**. The **Global Rules** screen will show completed.
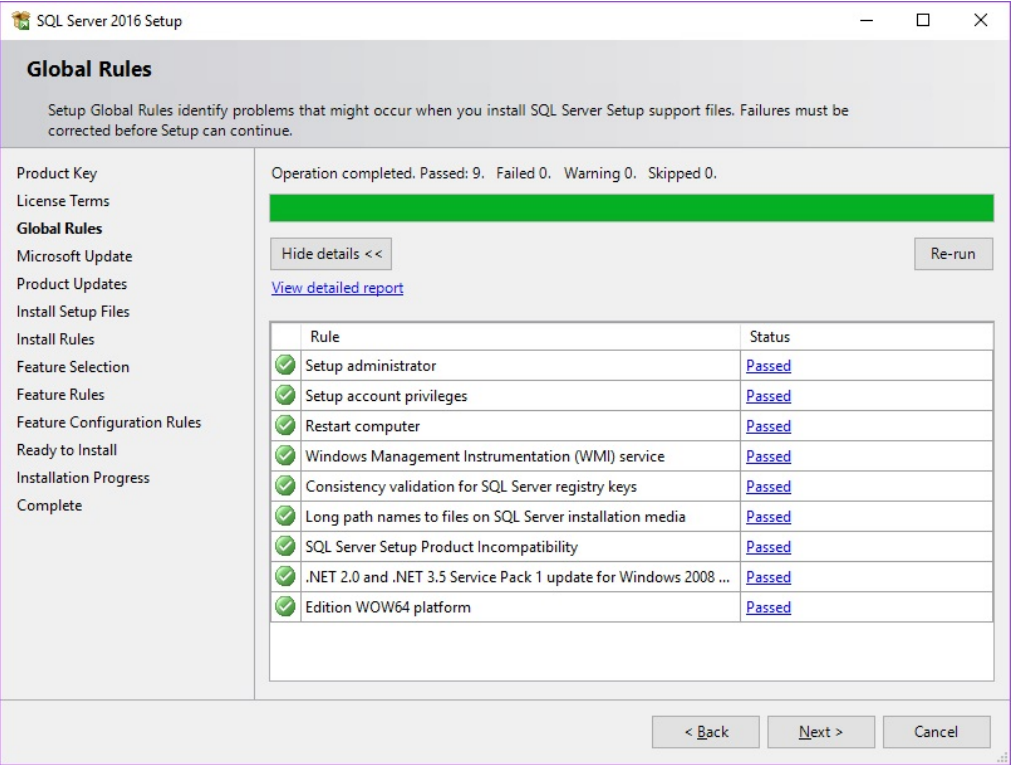
13. There is no action required. The **Microsoft Update** screen will appear.
14. Select **Next**. The **Install Setup Files** screen will appear.
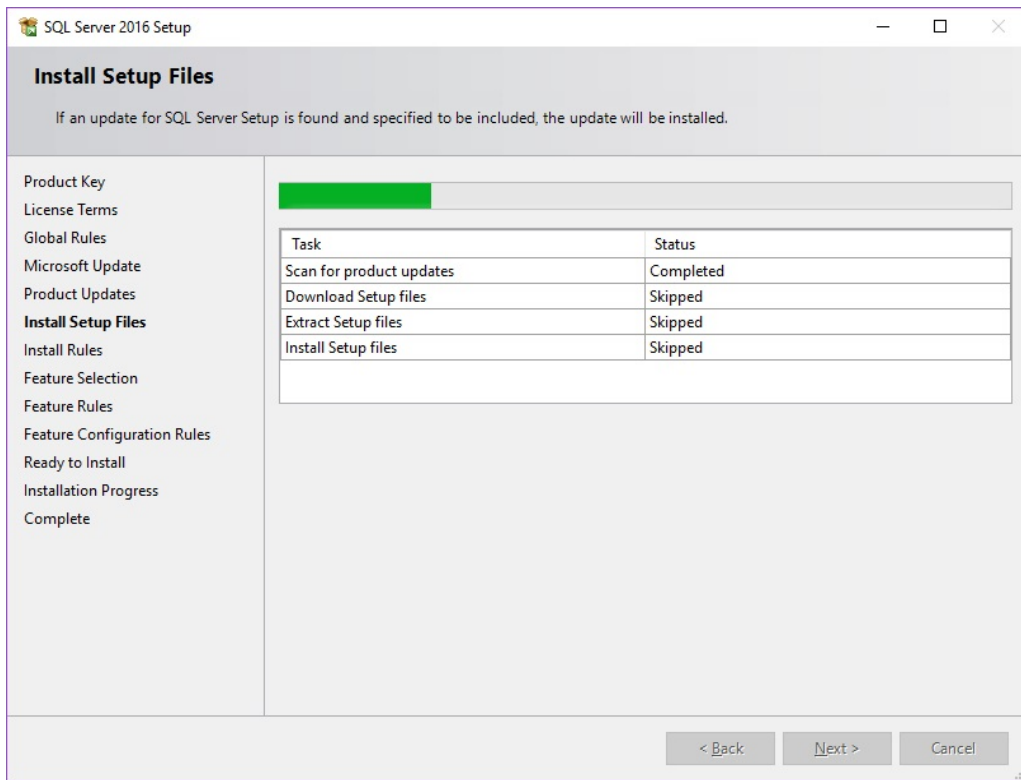
15. When the **Install Setup Files** screen is complete, select **Next**. The **Select Features** screen will appear.
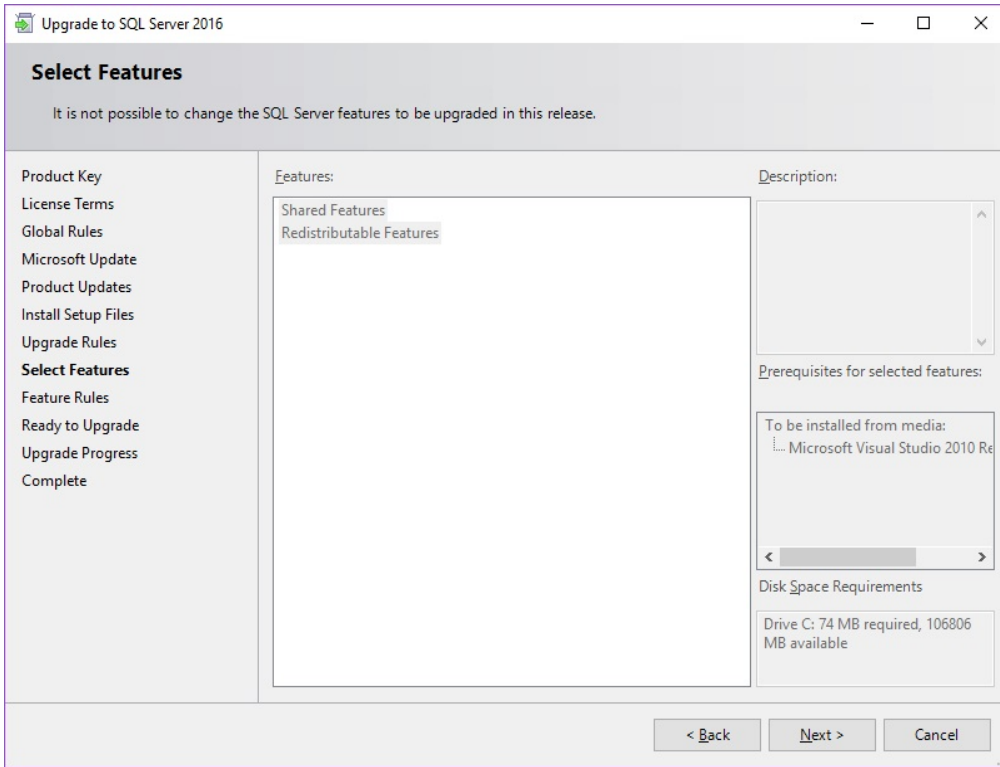
16. From the **Select Features** select **Next**. The **Ready to Upgrade** screen will appear.
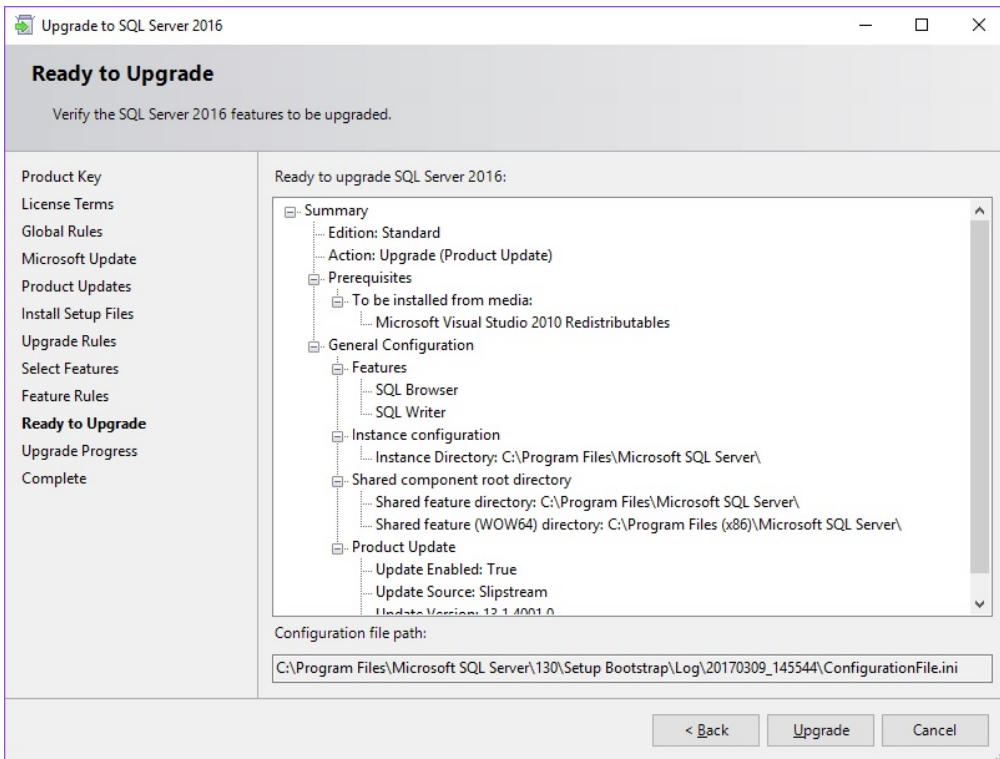
17. From the **Ready to Upgrade** screen, select **Upgrade**. The upgrade will take place and a confirmation screen will appear.
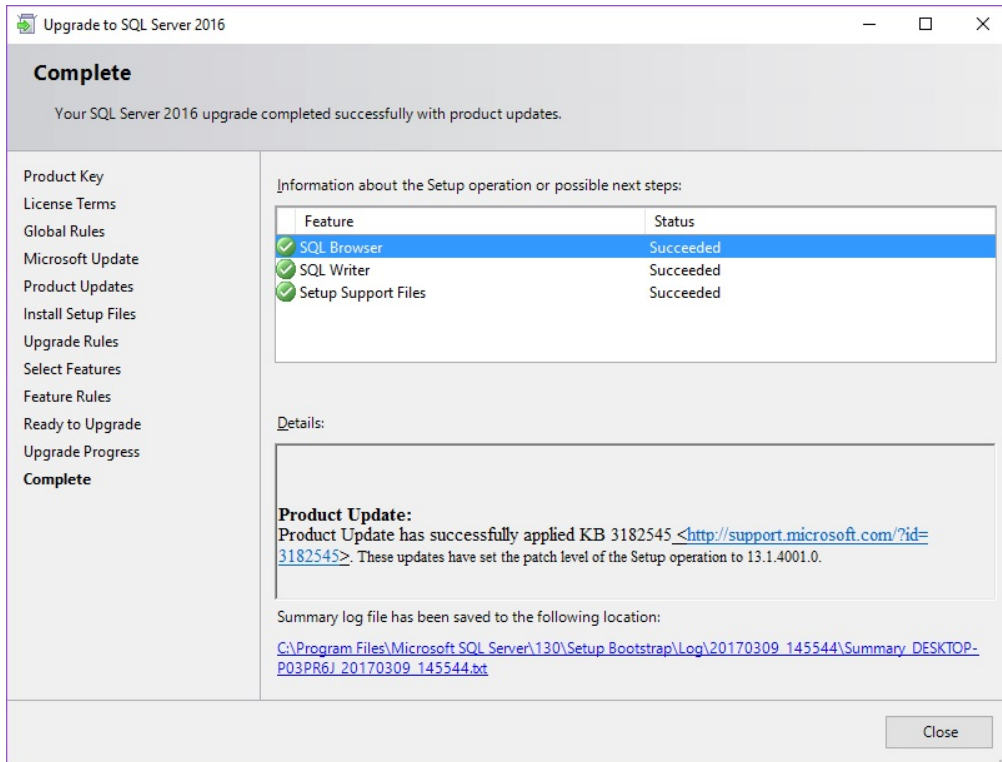
Post-Installation

After the software is installed, we should make sure the workstations can connect to the server. We will also make sure the firewall is properly configured.

To test the connection:

1. After installation is complete, go to **Start ► All Programs ► Microsoft SQL Server 2008 R2 ► Configuration Tools ► SQL Server Configuration Manager**. The **SQL Configuration Manager** will open.

2. Click **SQL Server Services**. The SQL Server Browser and instance will appear.

3. Double click on **SQL Server Browser**. The **SQL Server Browser Properties** screen will appear.
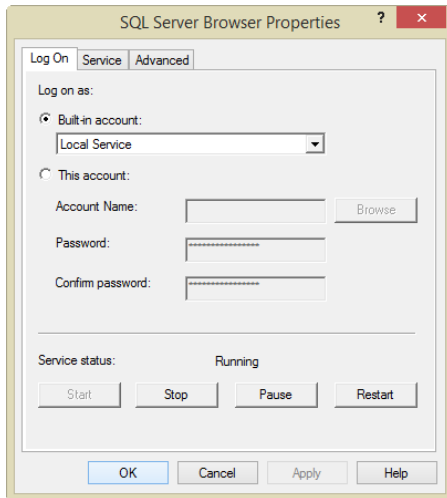
4. Make sure **Log On As** is set to `Network Service`.
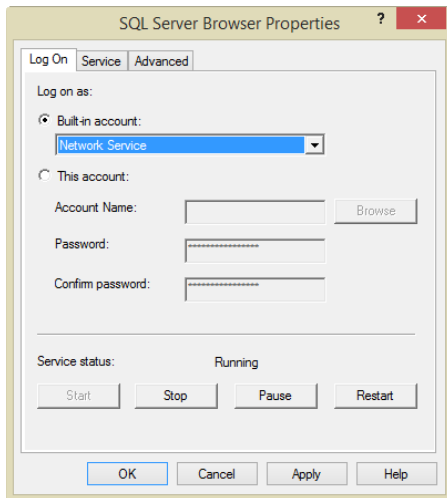
5. Go to the **Service** tab.
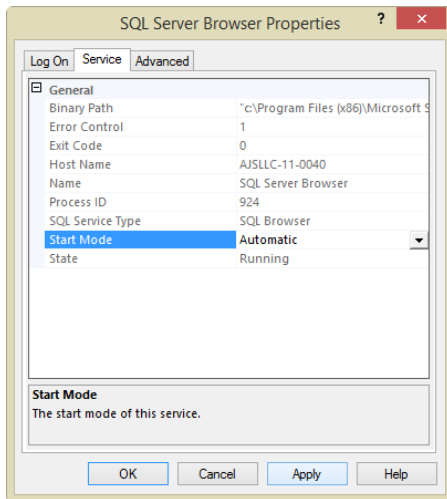
6. From the **Start Mode** drop-down menu, select `Automatic` and click **OK**. You'll be prompted to restart the service.

7. From the **SQL Server Configuration** screen, double-click `SQL Server (EDGESQL)`. The **SQL Server (EDGESQL Properties)** screen will appear.
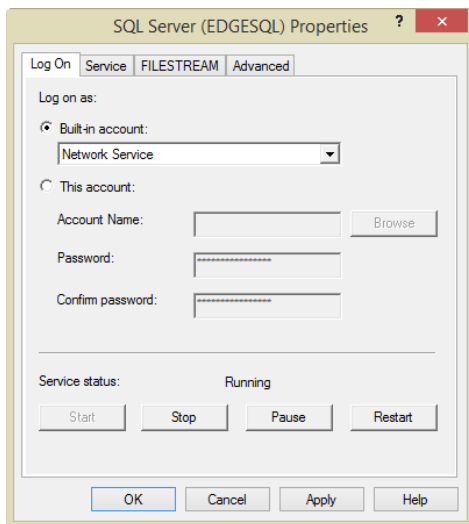
8. Make sure the **Log on as** is set to **Built-in account** and is also set to network service.

9. Go to the **Service** tab, and from the **Start Mode** drop-down menu, select `Automatic` and click **OK**. You'll be prompted to restart the service.

10. Select **OK**.

11. From the **SQL Server Configuration Manager** left navigation pane, click on **SQL server network configuration** and drill down to **Protocols for EDGE SQL**.

Protocol Name	Status
Shared Memory	Enabled
Named Pipes	Disabled
TCP/IP	Disabled
VIA	Disabled

12. Make sure **TCP/IP** and **Named Pipes** is enabled. Exit out of the Configuration Manager and the settings will be saved.

13. Go to **Start ► All programs ► Microsoft SQL Server 2008 R2** and click on **SQL server Management studio**. The **SQL Server Management Studio** will appear with the **Connect to Server** window will open.

14. From the **Server Type** drop-down menu, select `Database Engine`.

15. From the **Server name** drop-down menu, select your server name and SQL instance. If it is not there, type it in and the wizard should find it.

16. From the **Authentication** drop-down menu, select `SQL Server Authentication`, which will require a user name and password.
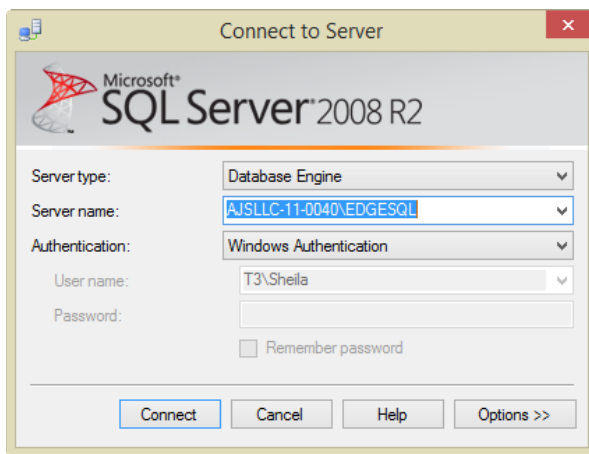
17. Enter the password; for older systems, it is either `EdgeSA` or `EdgeSA22`. Newer systems have an AJS-generated password for each customer as described earlier. To generate a password, use the tool http://fred/sqlpw and save it in the customer record in Fred.

18. Check the **Remember password** option.

19. Select **Connect**. The database will connect and you'll see the green arrow indicating it is running.

20. You can close out the **SQL Server Management Studio**.

Once SQL is configured, we can proceed with firewall configuration.

Services

Two services must be running:

- SQL Server Browser
- SQL Server Broadcast

To start these, go to **System Settings ► Services** and find this service. Start it. To make sure it always starts, go to properties and set **Start Up Type** to `Automatic`.

Firewall Configuration

Inbound settings

Open up the **Control Panel** in Windows and go to the **Windows Firewall**:
1. Click on **Advanced** settings.
2. Click on **Inbound Rules**.
3. Click on **New Rule**.
4. Click on **PORT** and click **Next**.
5. Select **UDP**.
6. In the **Specific local ports** field, enter `1434` and click **Next**.
7. Click on **Allow the connection**.
8. Click **Next**.
9. Click **Next**.
10. Enter **Name** of `Inbound SQL`.
11. Click **Finish**.

Outbound Rules

1. From the **Windows Firewall Advanced Security** screen, click on **Outbound Rules**.
2. Click on **New Rule**.
3. Click on **PORT** and click **Next**.
4. Select `UDP`.
5. In the **Specific local ports** field, enter `1434` and click **Next**.
6. Click on **Allow the connection**.
7. Click **Next**.
8. Click **Next**.
9. Enter **Name** of `Outbound SQL`.
10. Click **Finish**.

Allow SQL Server through the Windows Firewall

1. Open the **Control Panel** and go to **Windows Firewall**.
2. Click **Allow a program or feature through Windows Firewall**.
3. Click **Allow Another Program**.
4. Click **Browse** under the **Path** field.
5. Search for sqlservr under:
   a. `SQL Express:  C:\Program Files (x86)\Microsoft SQL Server\MSSQL10_50.EDGESQL\MSSQL\Binn\SQLServer`

      b. SQL Standard: `C:\Program Files\Microsoft SQL Server\MSSQL13.EDGESQL\MSSQL\Binn.`)
6. Highlight the record and click **Open**.
7. Click **Add**.
8. Make sure both **Home/Work** and **Public** are checked off.
9. Click **OK**.

Test the Firewall

Restart the computer and connect to a workstation and test the SQL configuration in The Edge.

Glossary of Terms

SQL Server Agent	The service that executes jobs, monitors, SQL Server, and allows automation of admin tasks.
SQL Server	The database engine.
SQL Server Browser	Provides SQL Server connection information to client PCs. Default logon account is NT/Authority/Local service and cannot be changed during SQL Server setup.
*NT Authority	The computer system that is acting as a security agent for Windows and is a non-user windows security account that is used for performing OS level tasks.
Enabling TCP/IP	The protocol that SQL Server uses to communicate across the network.
SQL Server Management Studio	Used to configure/managing/administering all components within the SQL Server.
Mixed Mode	Allows users to connect to an instance of SQL Server using either Windows Authentication or SQL Server Authentication.
SQL Server Authentication	A method for logging into SQL Server that uses your SQL Server username and password.