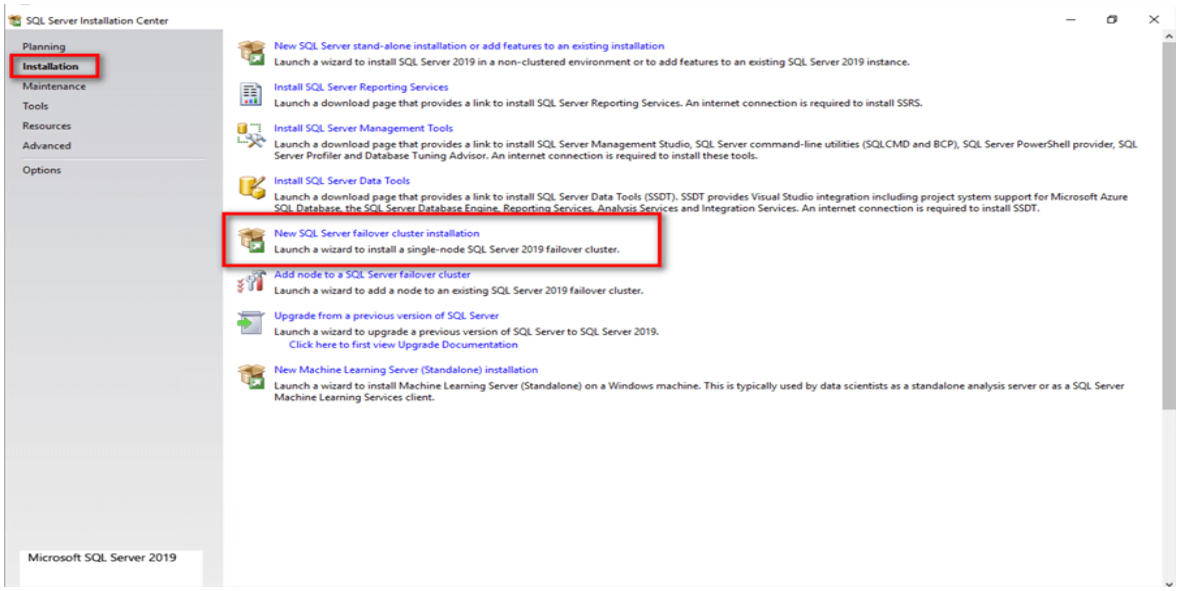
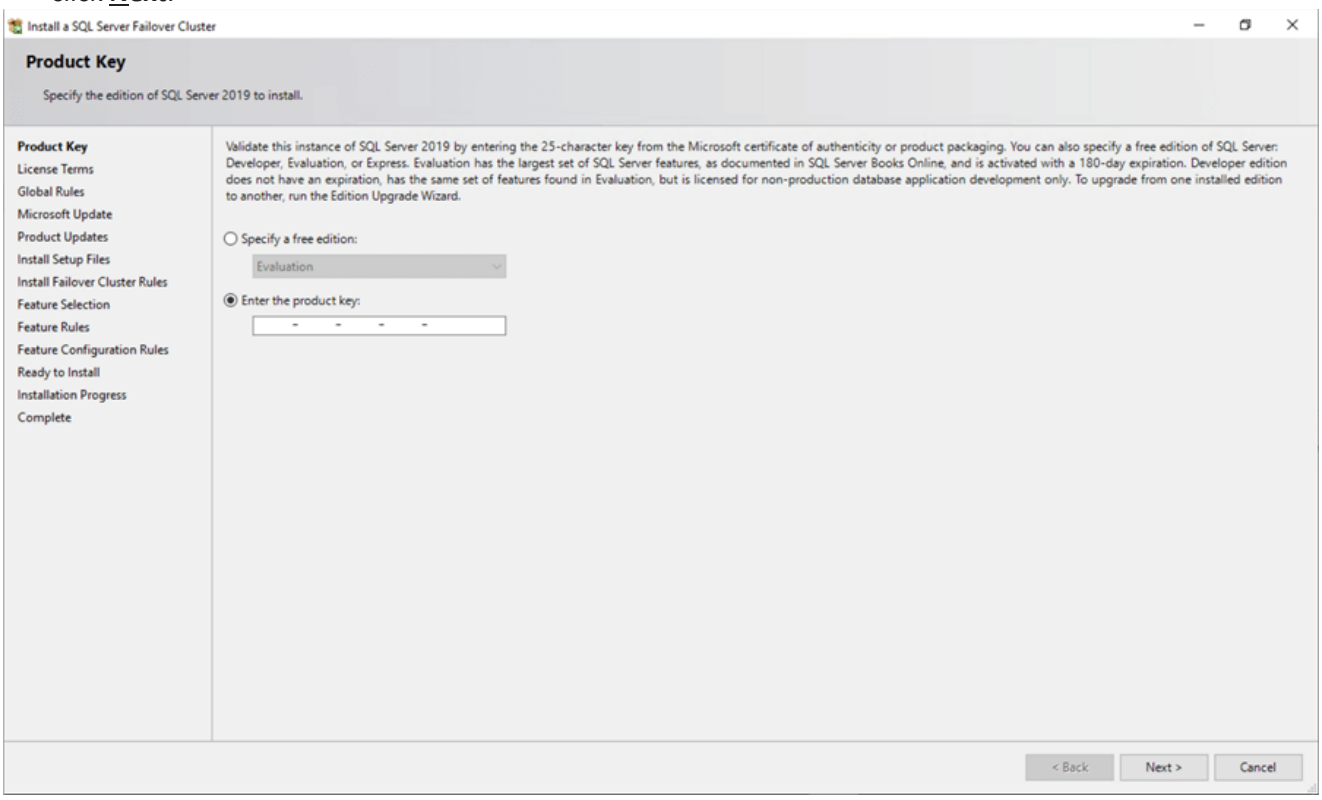
SQL CLUSTER INSTALLATION

INSTALL SQL SERVER FAILOVER CLUSTER INSTALLATION

Click the **New SQL Server failover cluster installation** link. This will run the SQL Server 2019 Setup wizard.

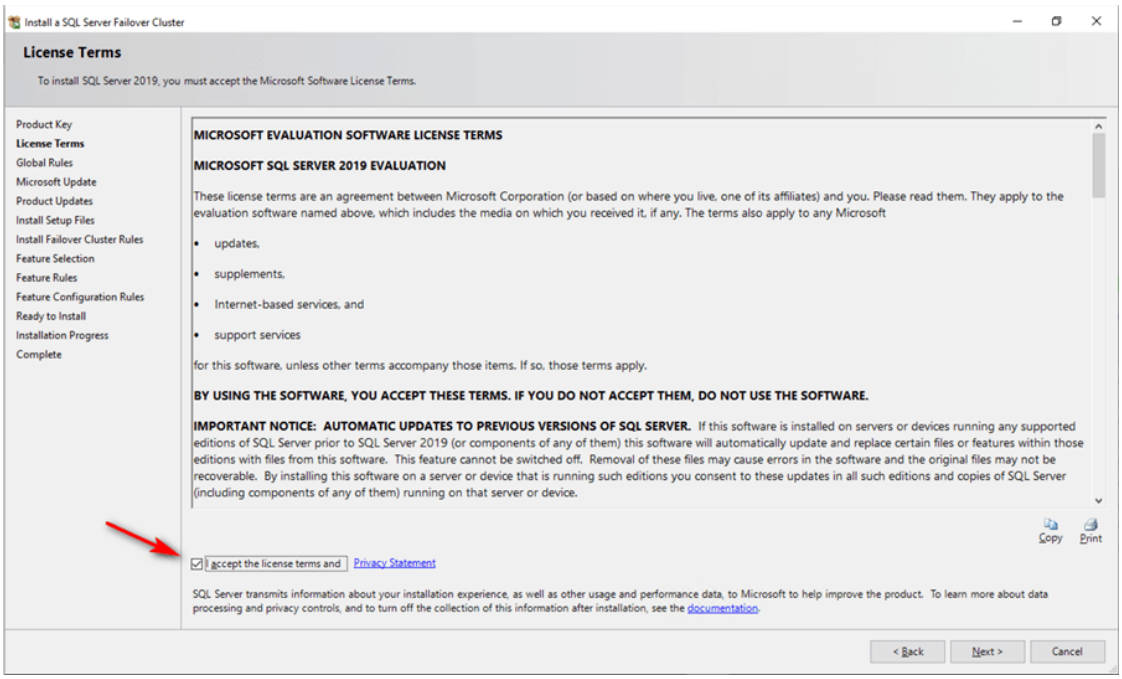


In the **Product Key** dialog box, enter the product key that came with your installation media and click **Next**.

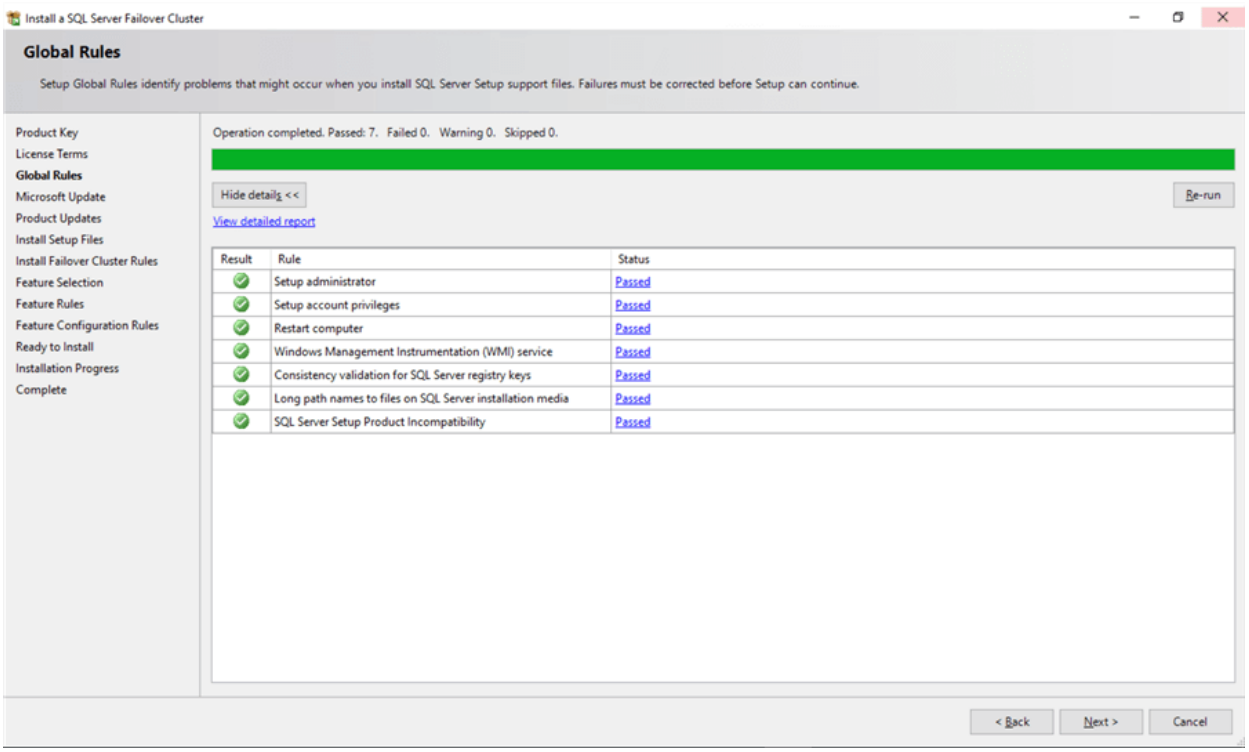


SQL CLUSTER INSTALLATION

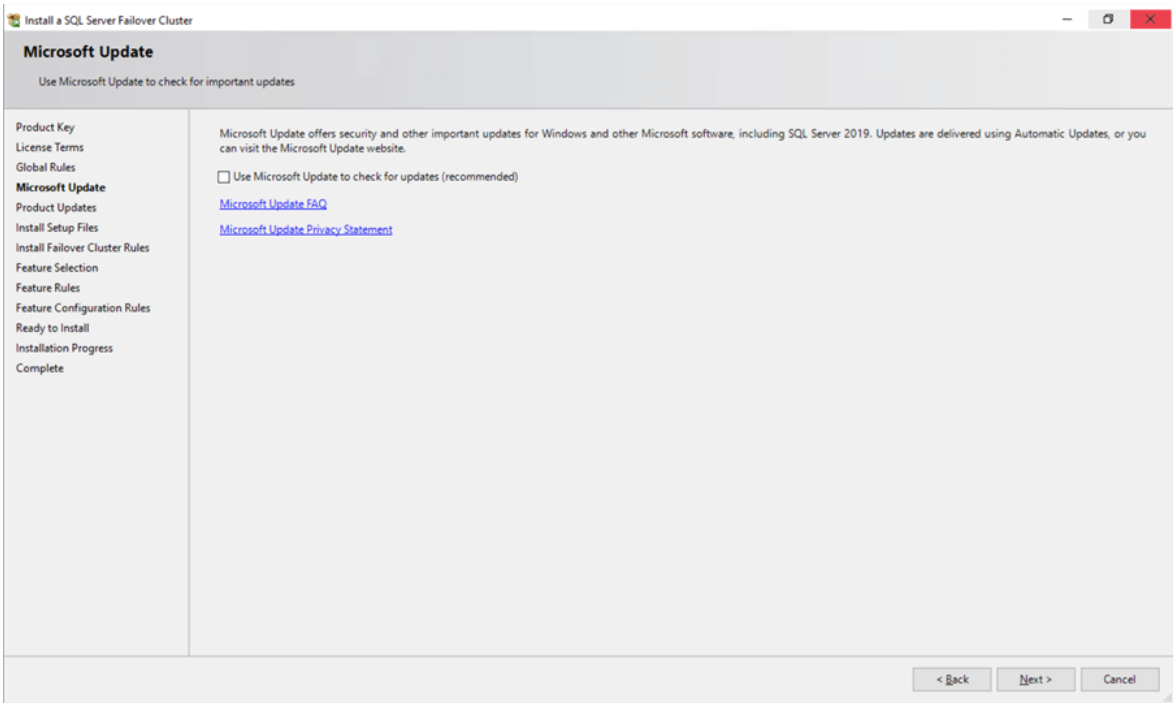
In the **License Terms** dialog box, click the **I accept the license terms** check box and click **Next**.



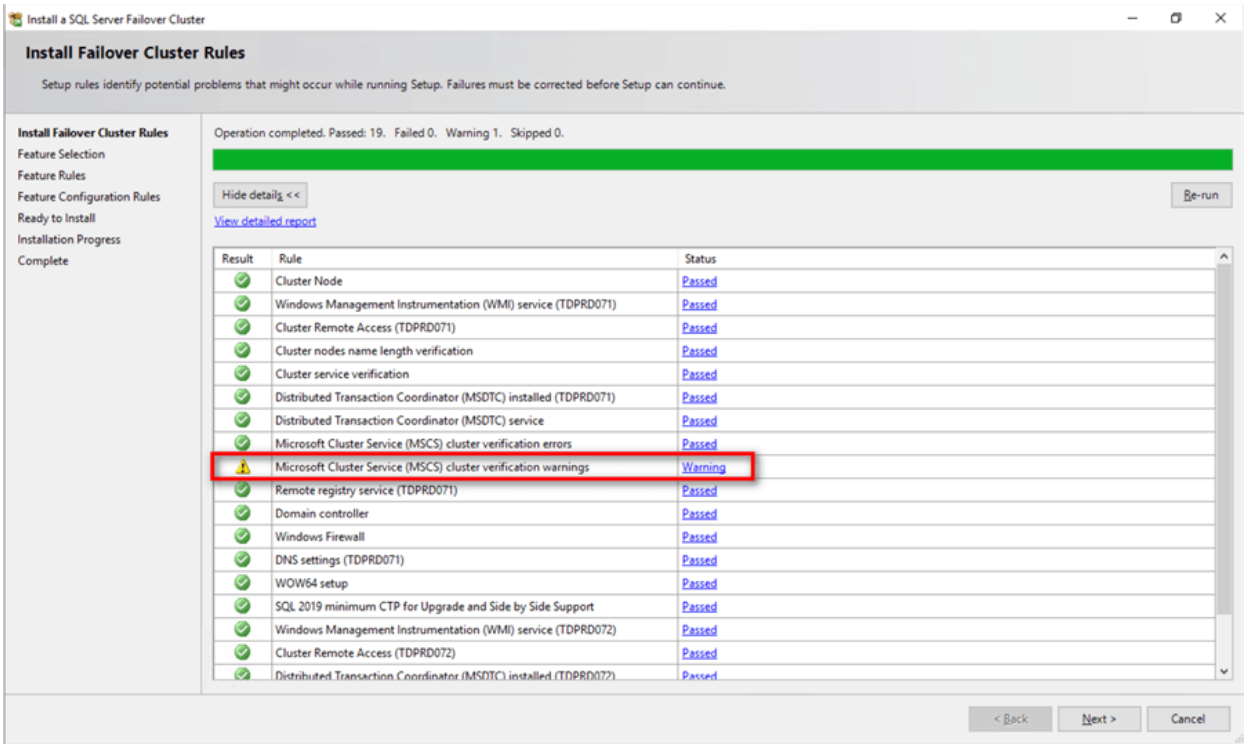
In the **Global Rules** dialog box, validate that the checks return successful results and click **Next**.



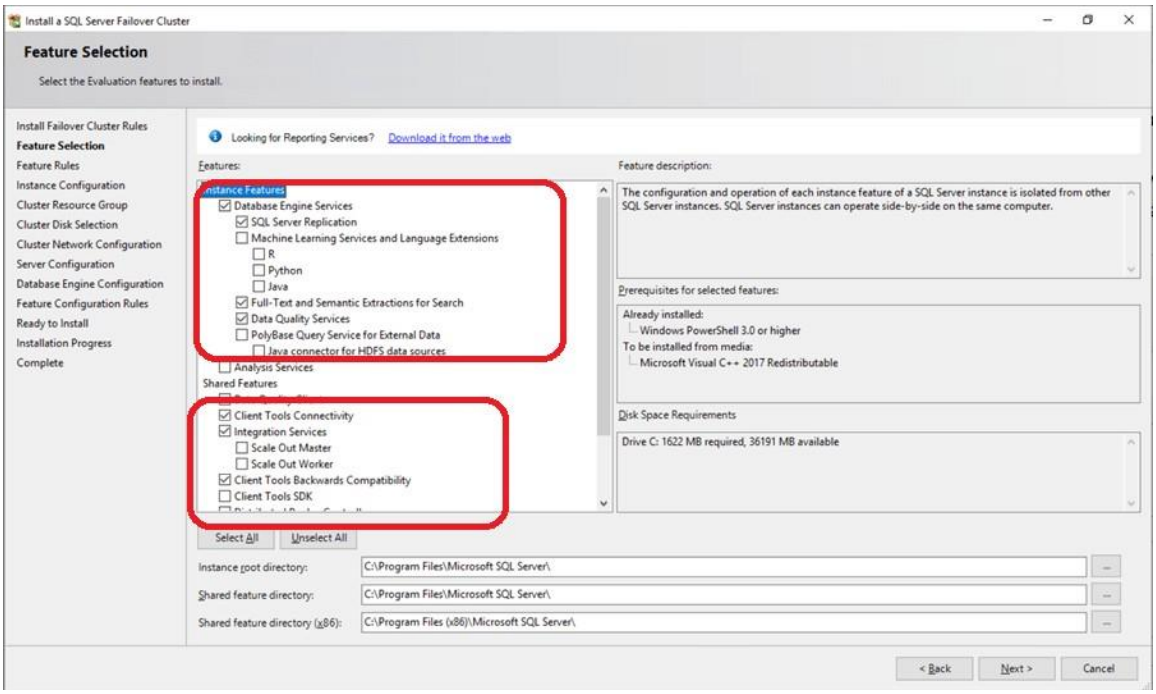
In the **Microsoft Update** dialog box don't select use Microsoft to check just Click **Next**



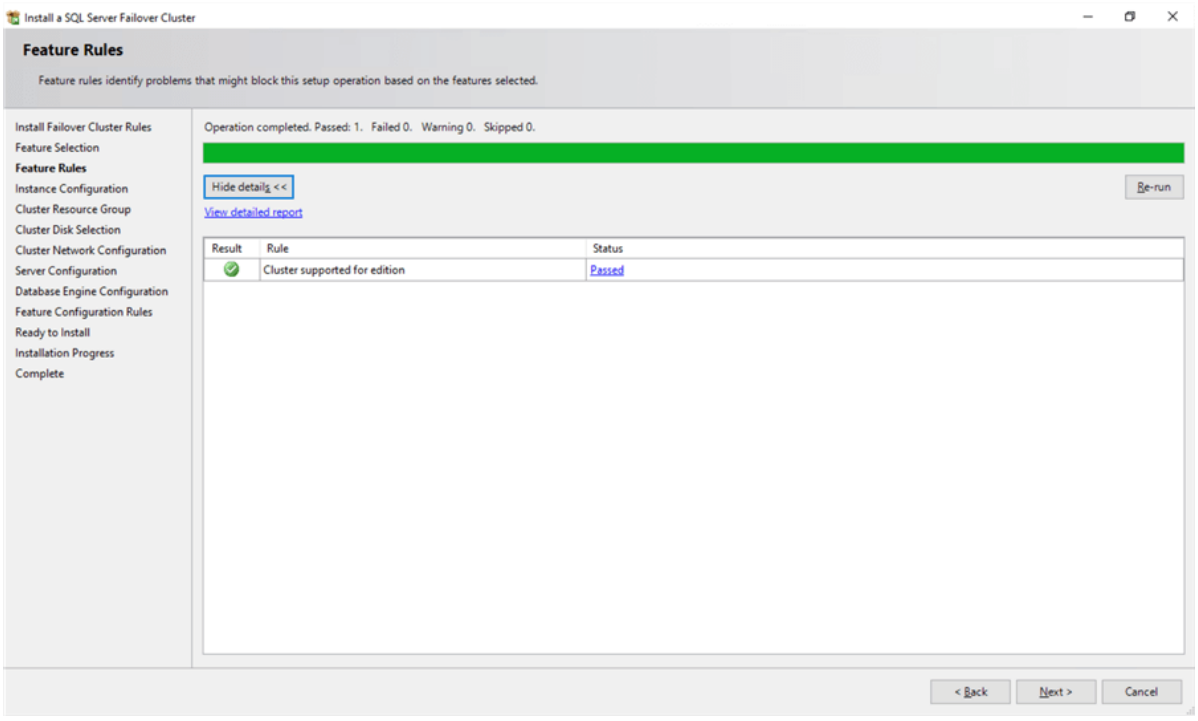
In the **Install Failover Cluster Rules** dialog box, validate that the checks return successful results. If the checks returned a few warnings, Click **Next**.



In the **Feature Selection** dialog box, select the following components: **Database Engine Services** and **Client Tools Connectivity, Integration service, Client tools Backward Compability**. Click **Next**.

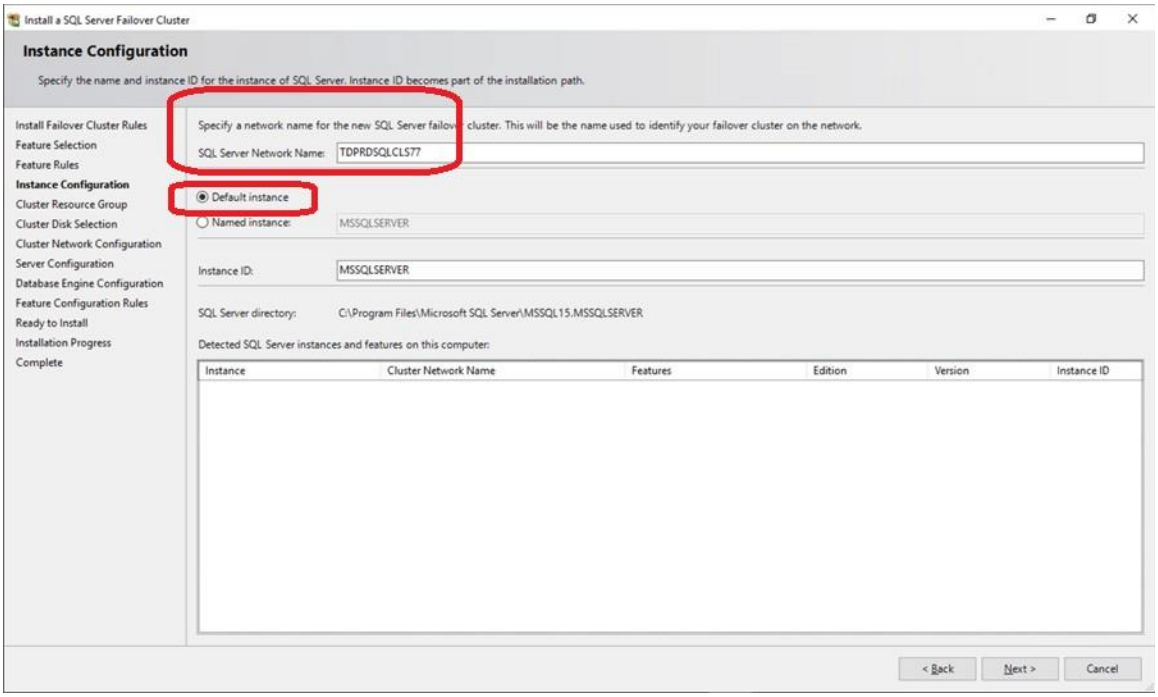


In the **Feature Rules** dialog box, verify that all the rules have passed. If the rules returned a few warnings, make sure you fix them before proceeding with the installation. Click **Next**.

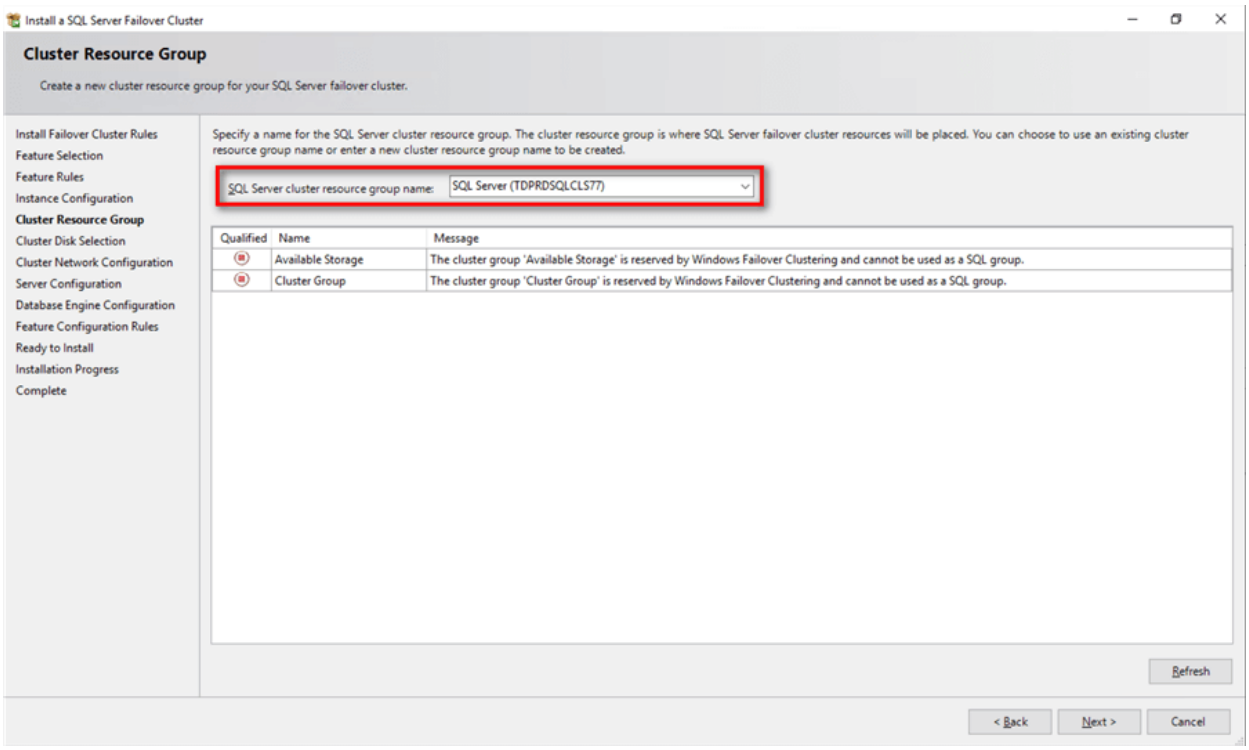


SQL CLUSTER INSTALLATION

In the **Instance Configuration** dialog box, provide a value for the SQL Server Network Name This is the name that the client applications will use to connect to this server.

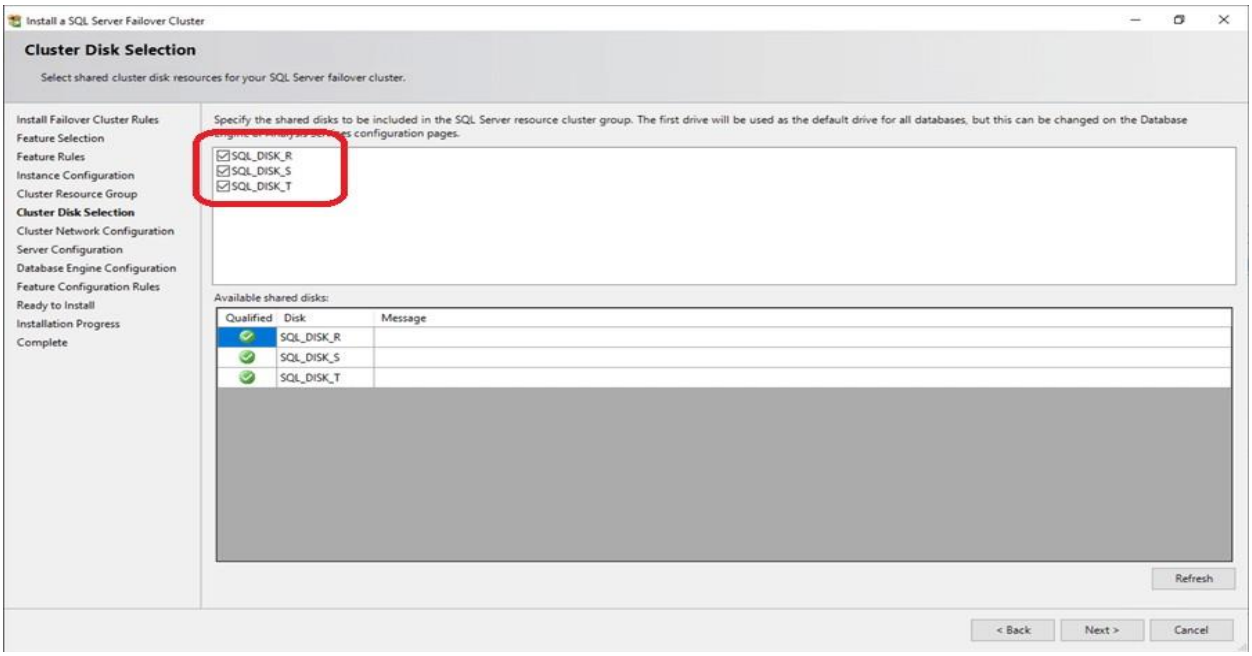


In the **Cluster Resource Group** dialog box, check the resources available on your WSFC. Click **Next**.



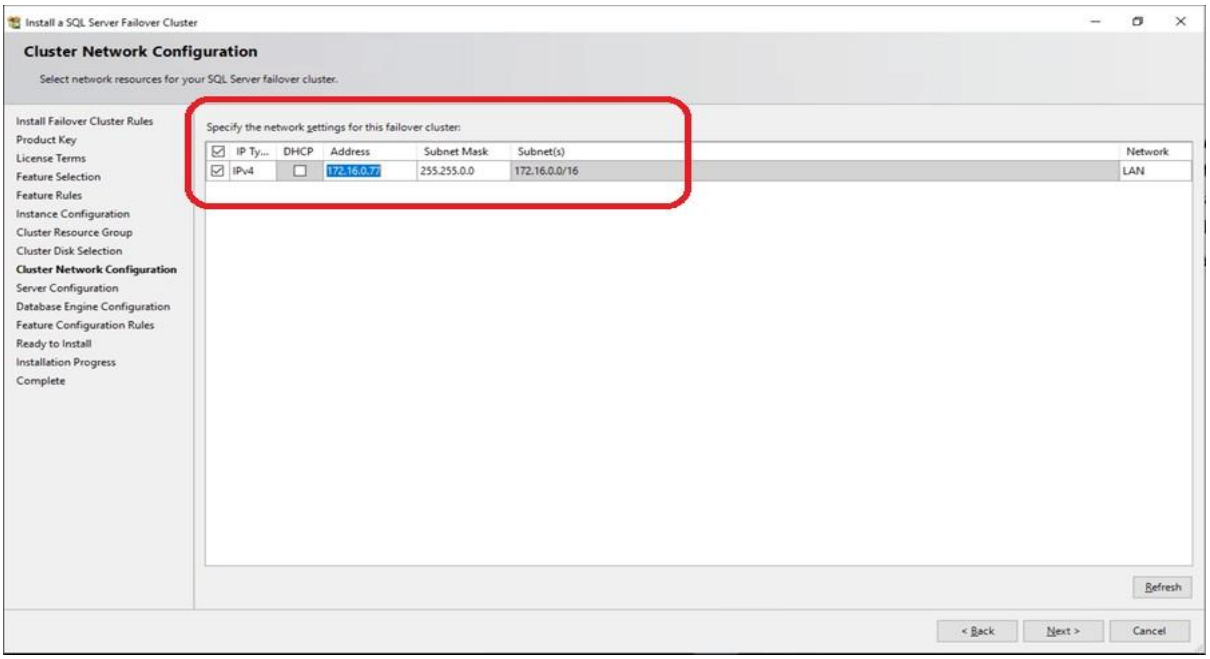
SQL CLUSTER INSTALLATION

In the **Cluster Disk Selection** dialog box, select the available disk groups that are on the WSFC for the SQL Server FCI to use. Or select when you kept system database and user databases Click **Next**.

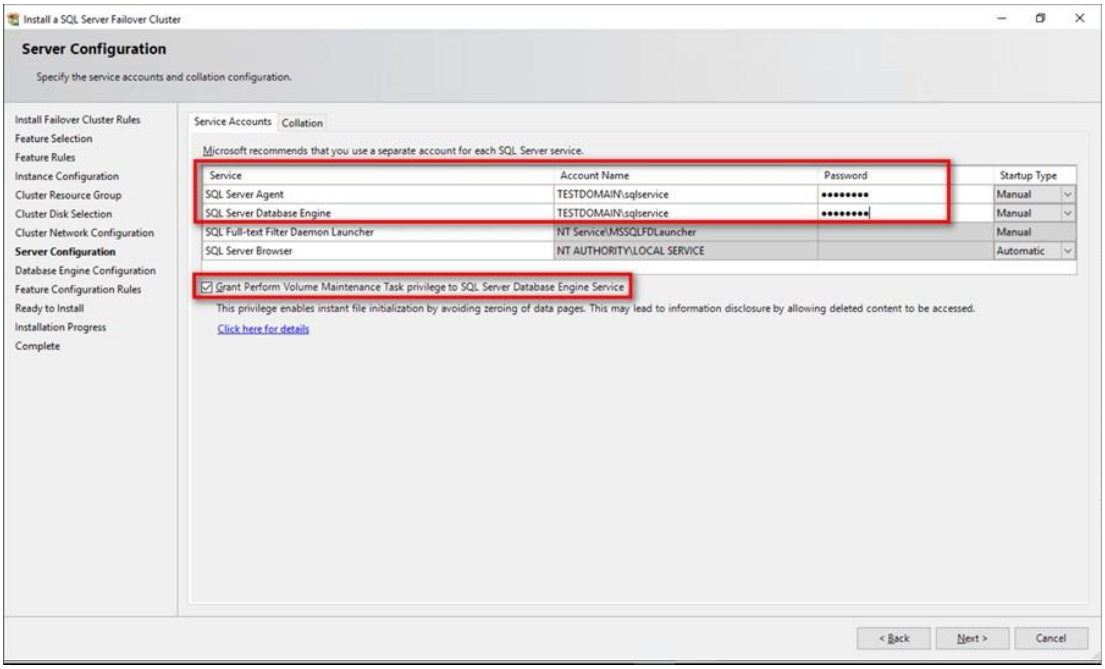


In the **Cluster Network Configuration** dialog box, enter the SQL IP address. Select the **IPv4** checkbox under the **IP Type** column as you will be using a static IP address. Click **Next**

Note - The SQL Server Network Name with this virtual IP address will be created as an entry in your DNS server.

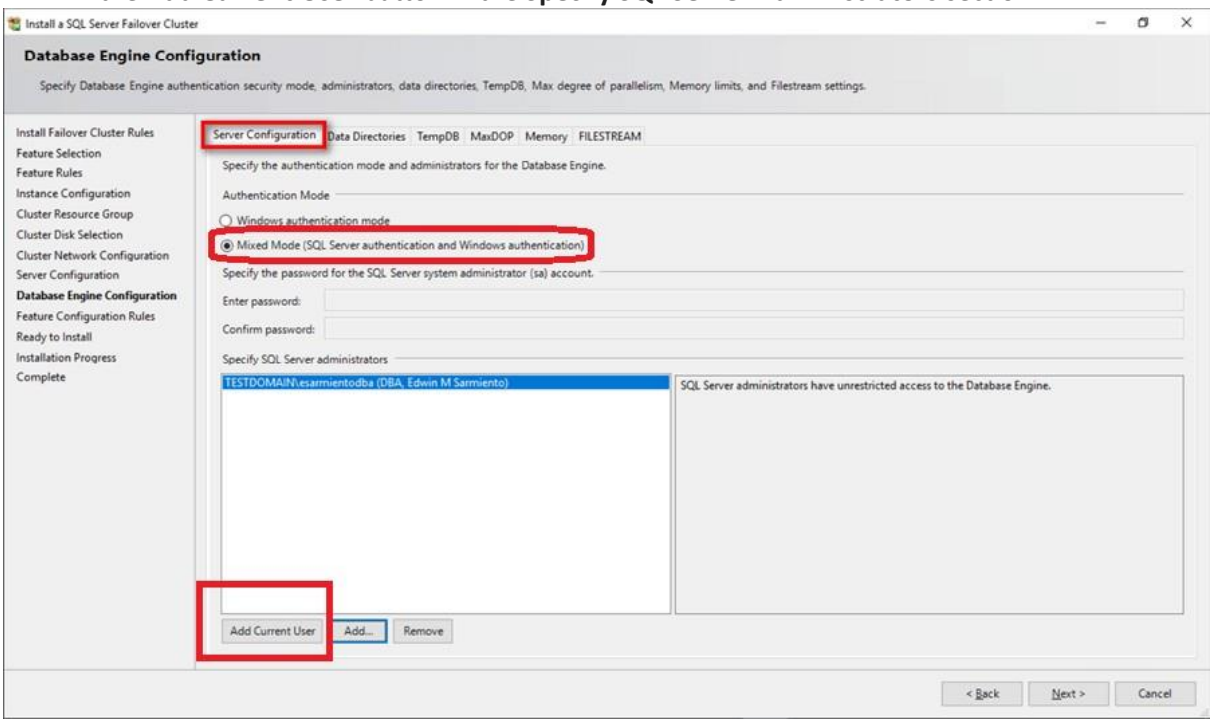


In the **Server Configuration** dialog box, provide the credentials for the SQL Server service accounts in the **Service Accounts** tab. Click **Next**.

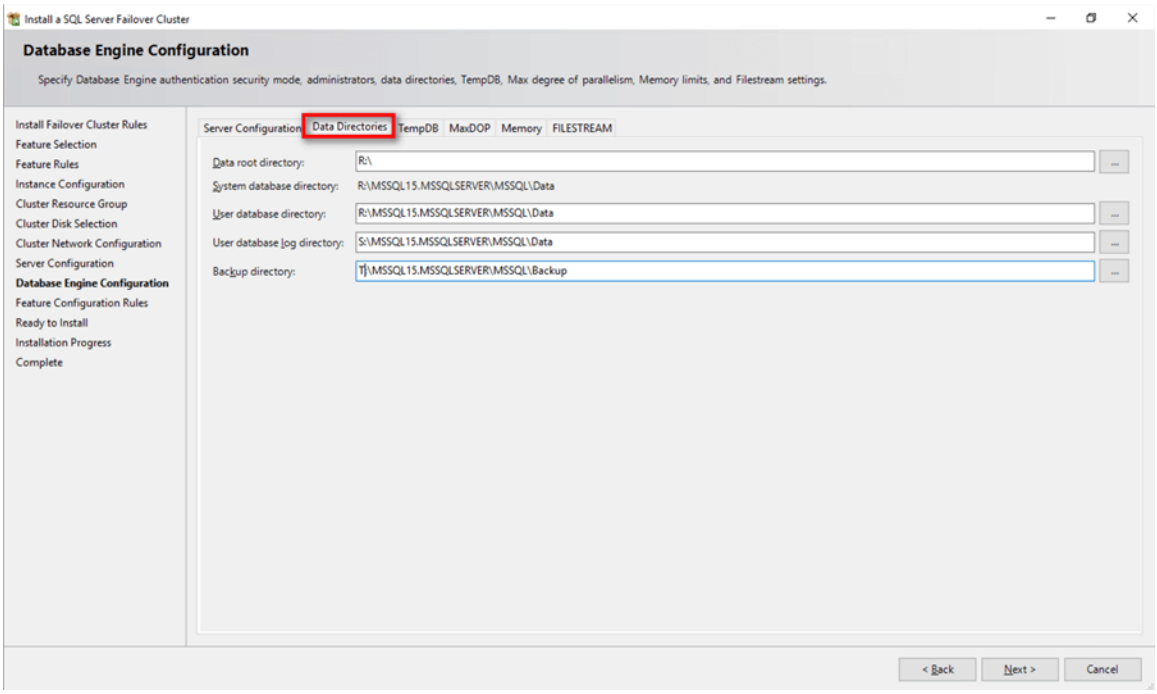


In the **Database Engine Configuration** dialog box, under the **Server Configuration** tab,

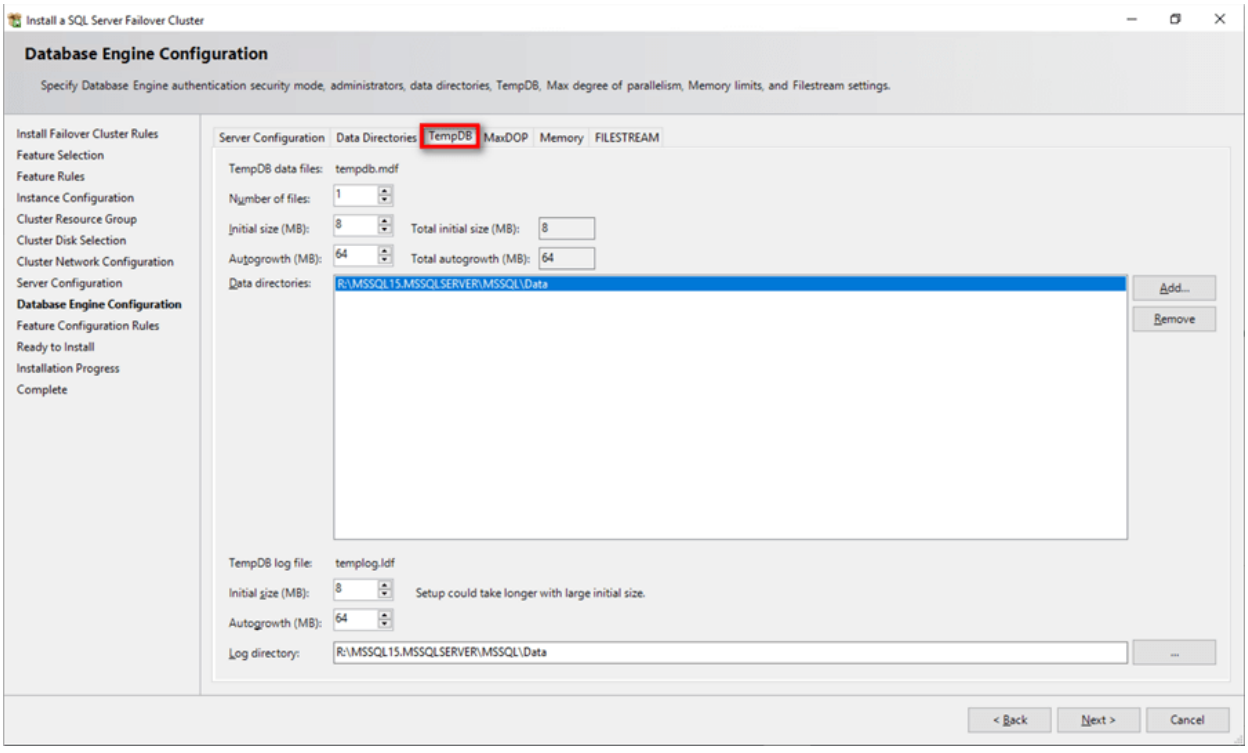
- Select **Mixed mode** in the **Authentication Mode** section. If required, you can change it later after the installation is complete.
- Add the currently logged on user to be a part of the SQL Server administrators group by clicking the **Add Current User** button in the **Specify SQL Server Administrators** section.



In the **Data Directories** tab, specify the location of the **system databases** data files, the log files, and thebackup files.

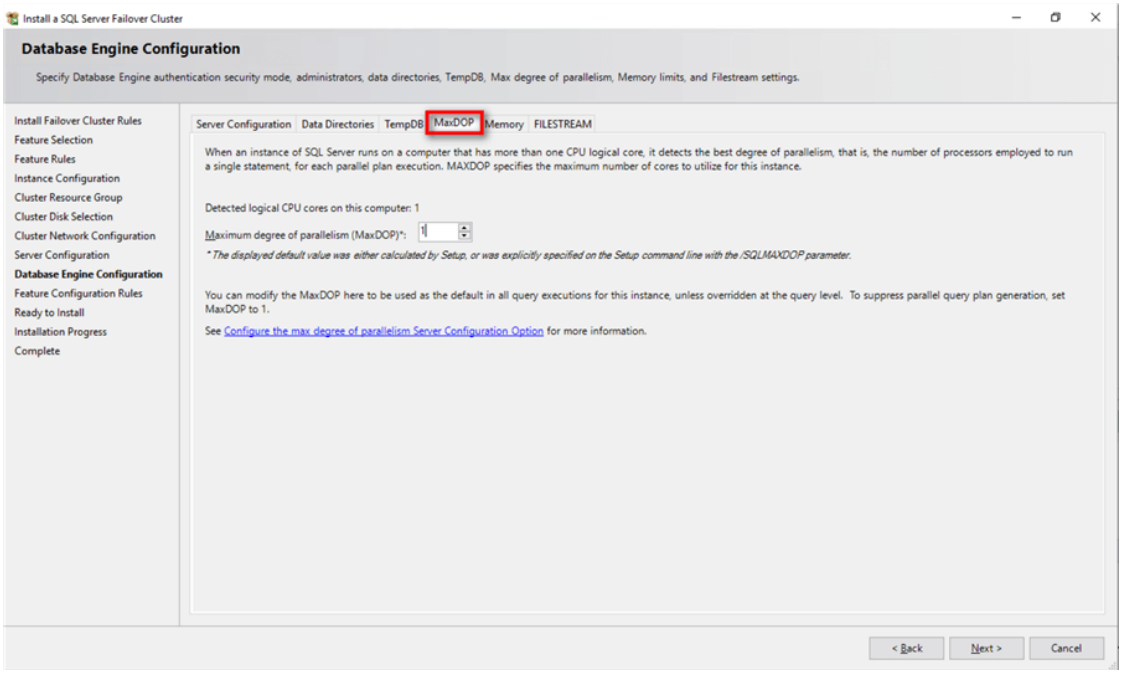


In the **TempDB** tab, you can set the number of **TempDB** data files, initial size and auto growth settings ofboth data and log files as well as their corresponding locations.

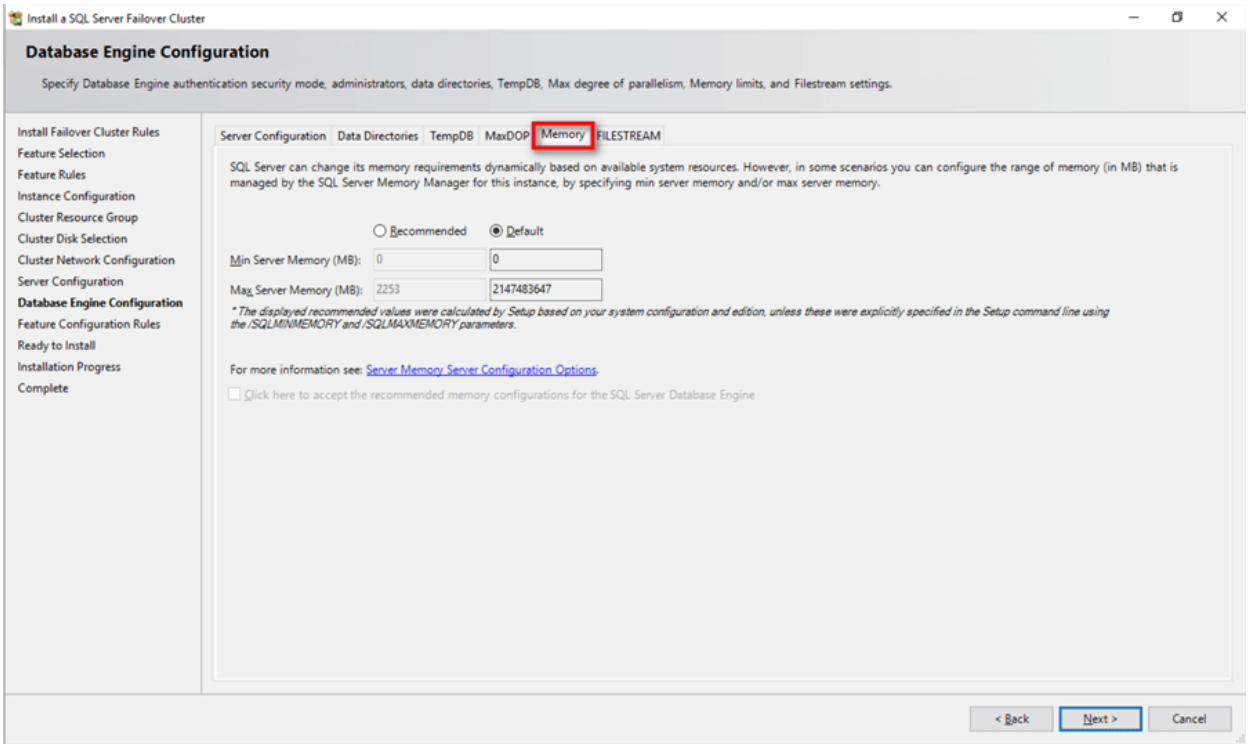


SQL CLUSTER INSTALLATION

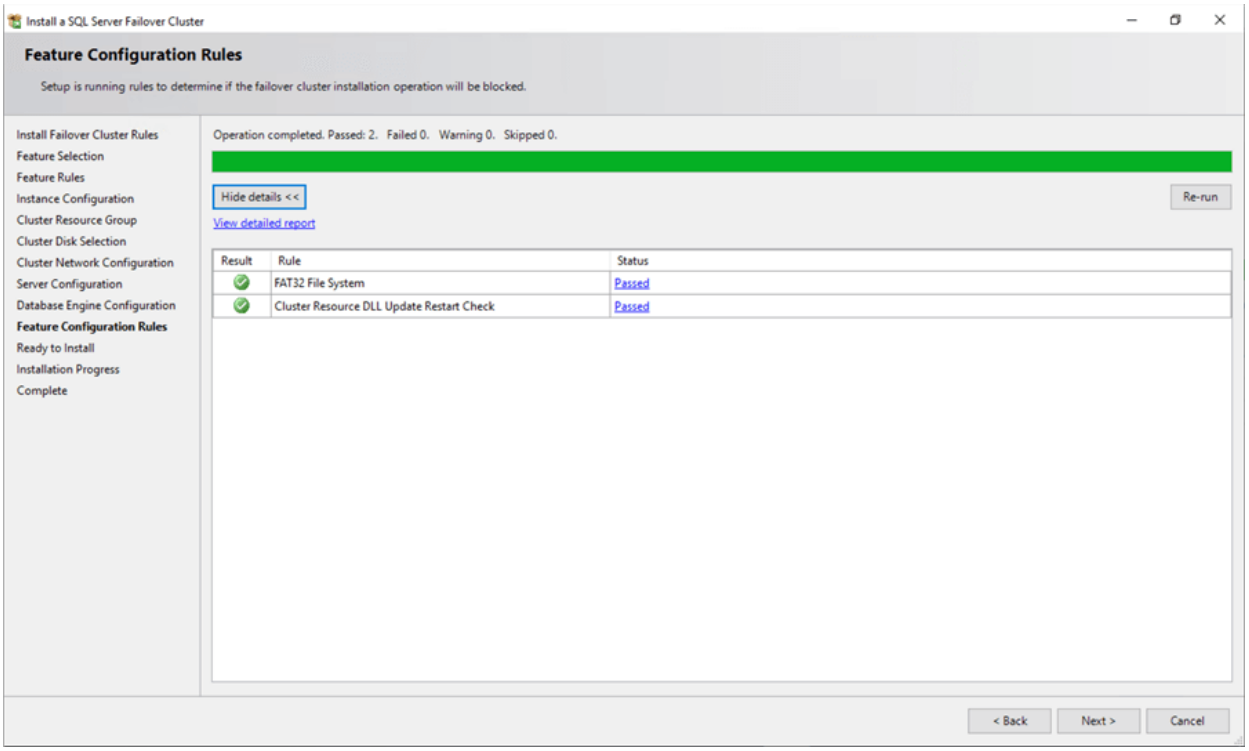
New in SQL Server 2019 is the **MaxDOP** tab which introduces automatic recommendations for setting the MAXDOP server configuration option during the installation process. The recommended MAXDOP setting is based on the number of logical CPU cores detected on the server.



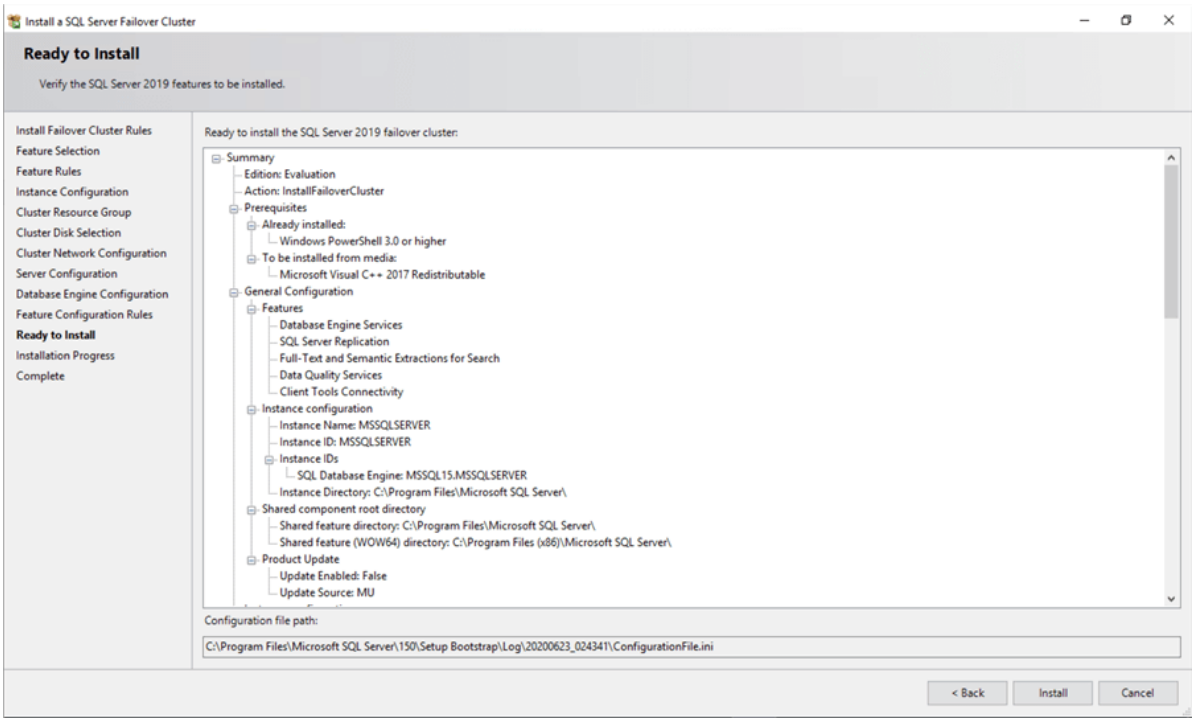
Also new in SQL Server 2019 is the **Memory** tab which introduces the ability to set the minimum and maximum server memory during installation, just like how you would with **sp_configure** after installation. Click **Next**



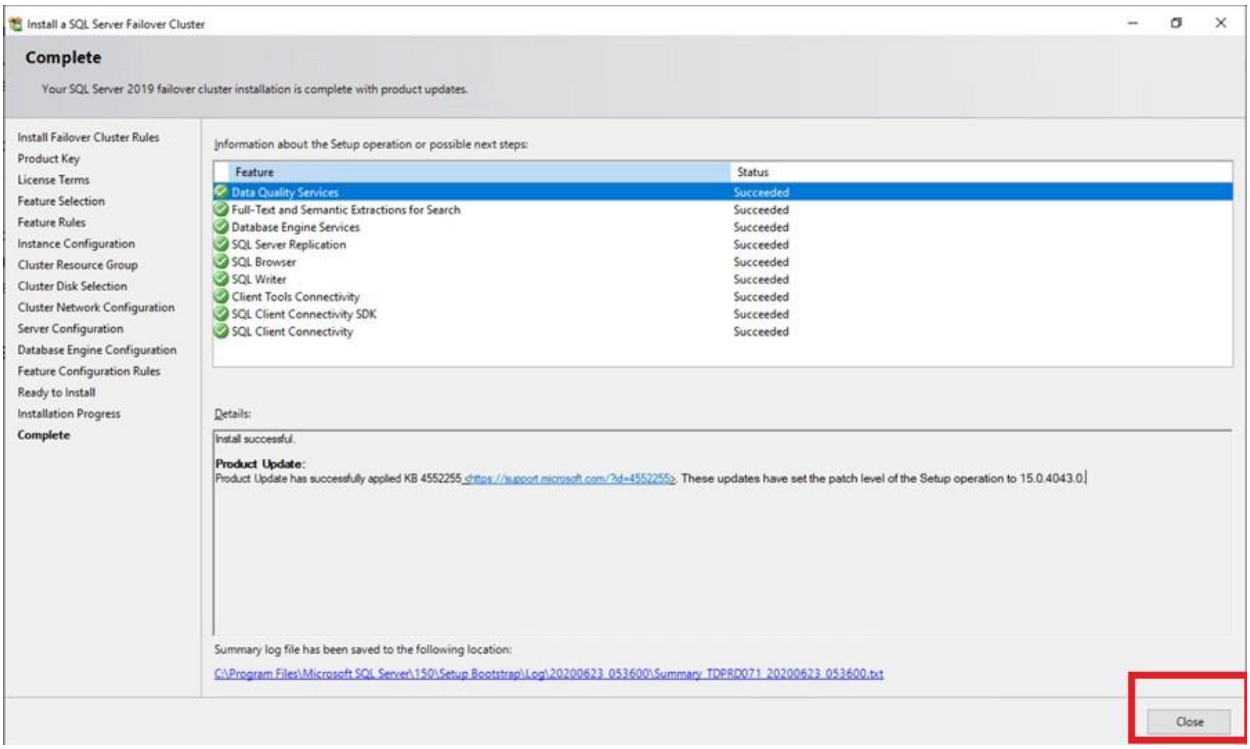
In the **Feature Configuration Rules** dialog box, verify that all checks are successful. Click **Next**.



In the **Ready to Install** dialog box, verify that all configuration settings are correct. Click **Install** to proceed with the installation.



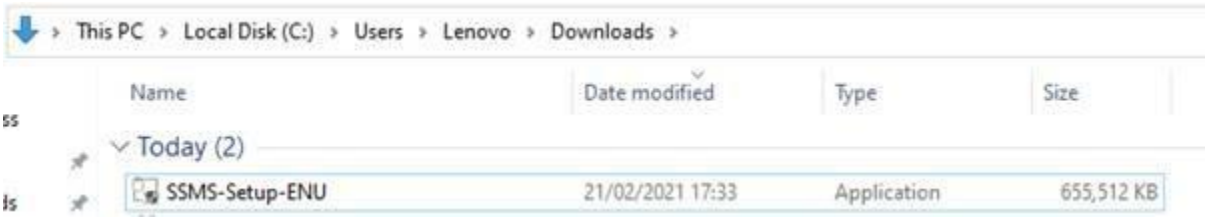
In the **Complete** dialog box, click **Close**.



After installation complete take reboot the server

After completing the reboot now install **SQL Server Management Studio** on server.

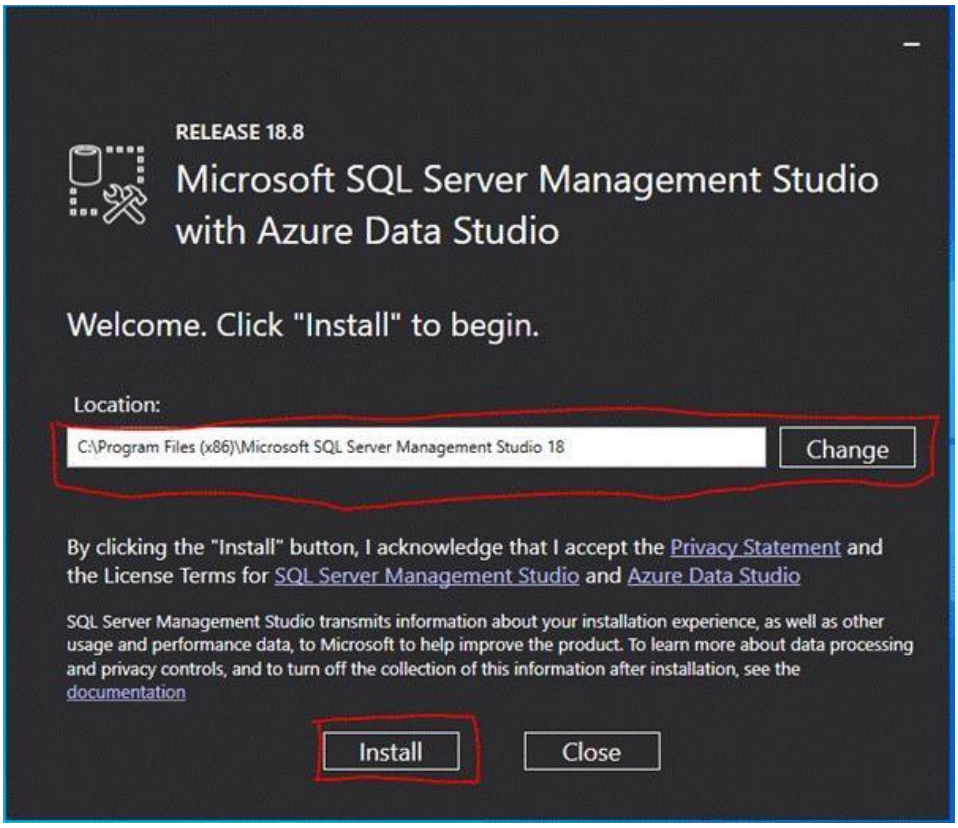
Double-click the .exe file **SSMS-Setup-ENU.exe** to starting installing.



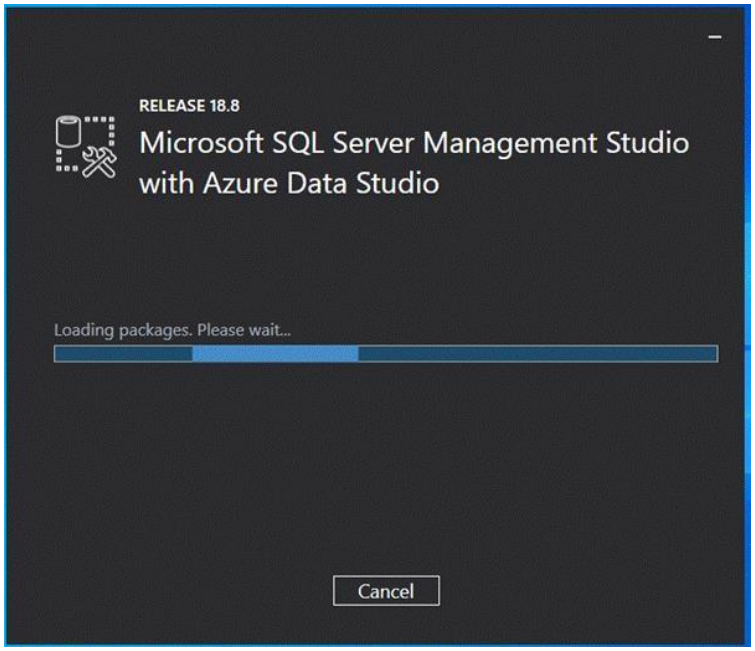
After double-clicking, the system will ask the permission: “Do you want to allow the following to make a change to this computer? Click yes to continue installing the SQL Server Management Studio 2019, or...

Click “Yes” on any security prompt.

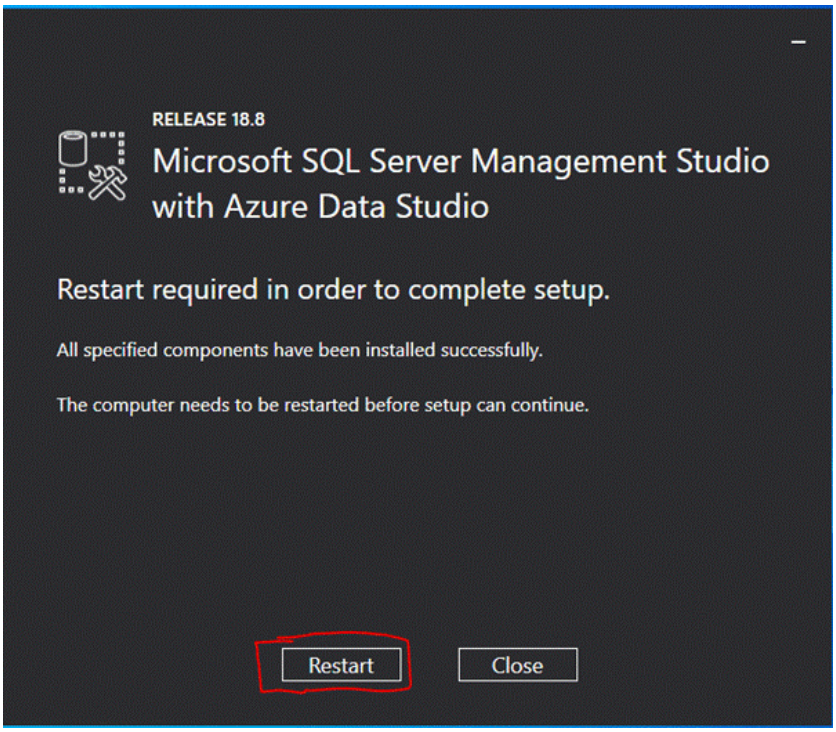
The installation window will be open after giving permission to install. Click the **Install button.**



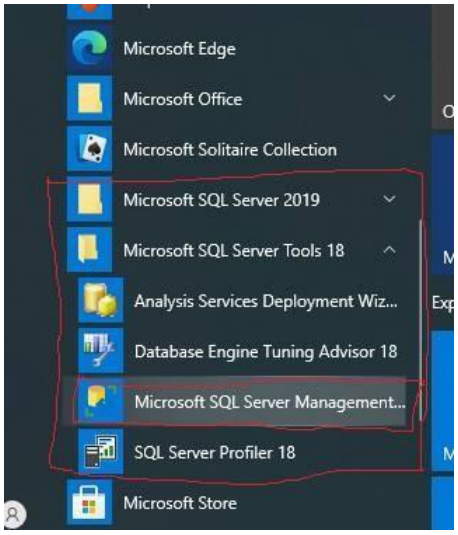
After loading packages progress bar will be shown. One is Package Progress and Overall Progress. Wait for few minutes while the installer sets up the software.



Installation completed. After completing the installation **restart** your computer for a complete setup.

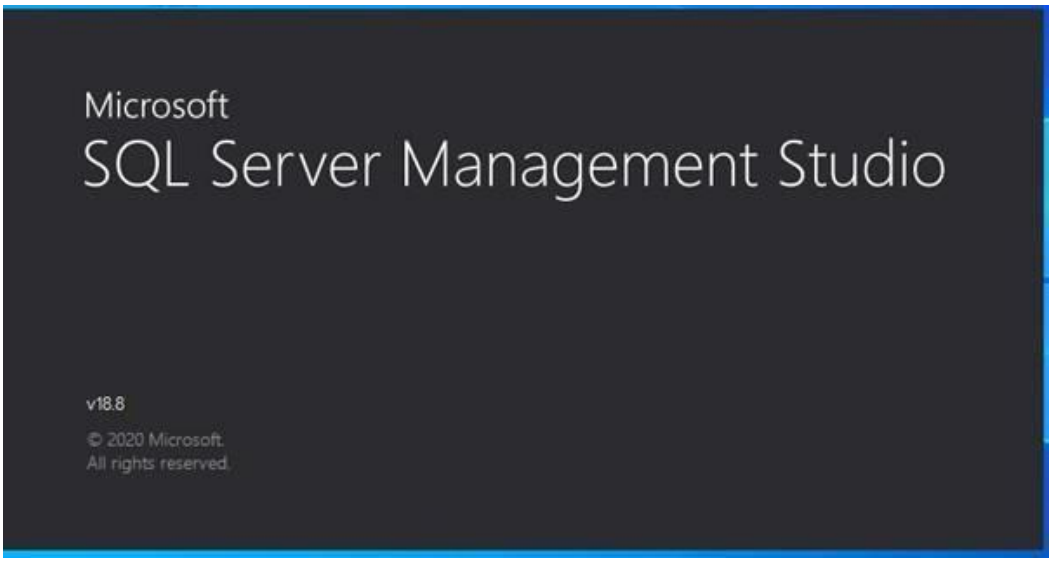


Once the serve restart Go to all programs in your systems, we can see two folders one is Microsoft SQL Server 2019 and another one is Microsoft SQL Server Tool 2018.

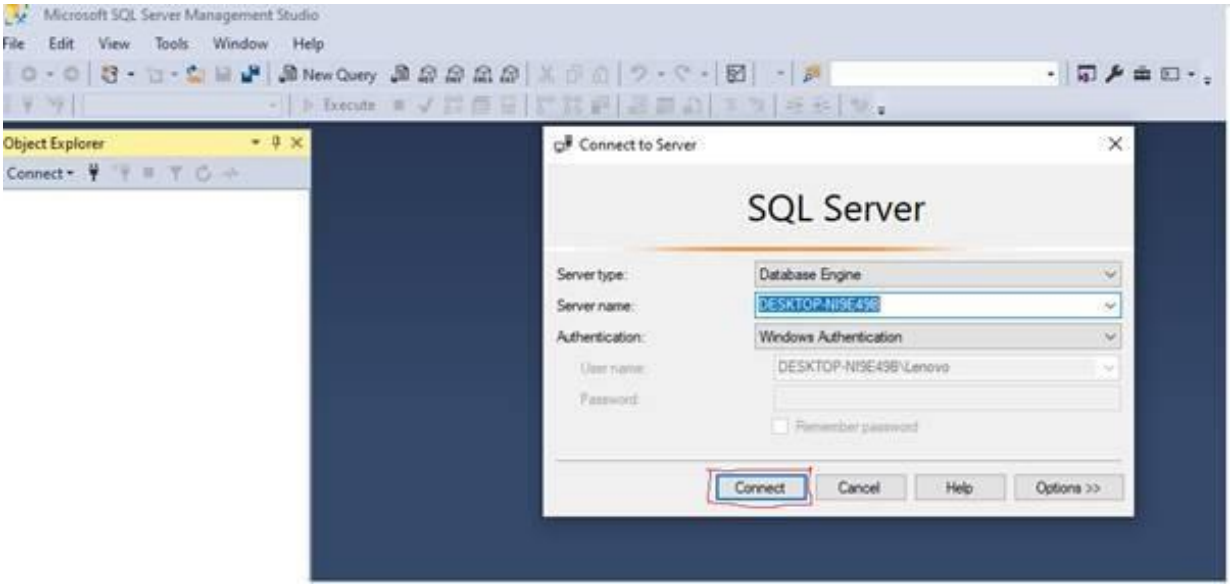


SQL CLUSTER INSTALLATION

Double-click on SQL Server Management Studio 18 and it will open looks like the below screenshot. The first time opening it will take a few minutes.



After opening SQL Server Management Studio 2018, we can see that it looks like the below screenshot.

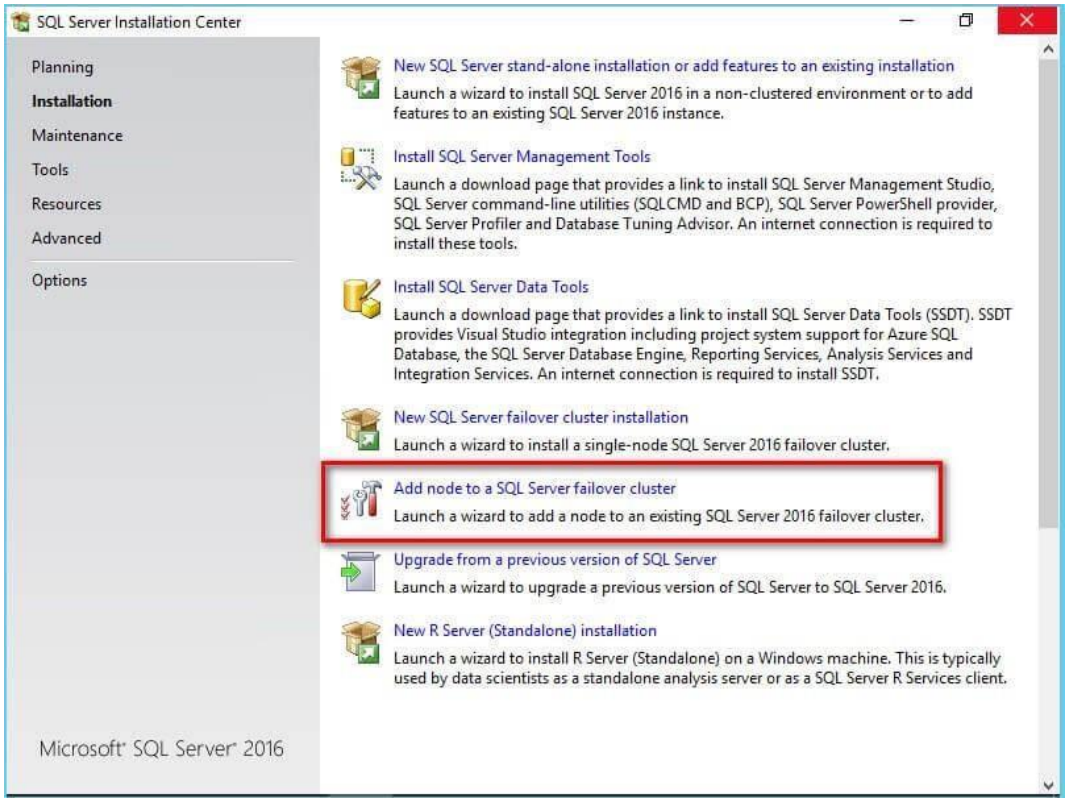


Now Go to 2nd Node to install SQL Server 2019 Failover Cluster Instance Installation - Install Secondary (Failover) Cluster Node

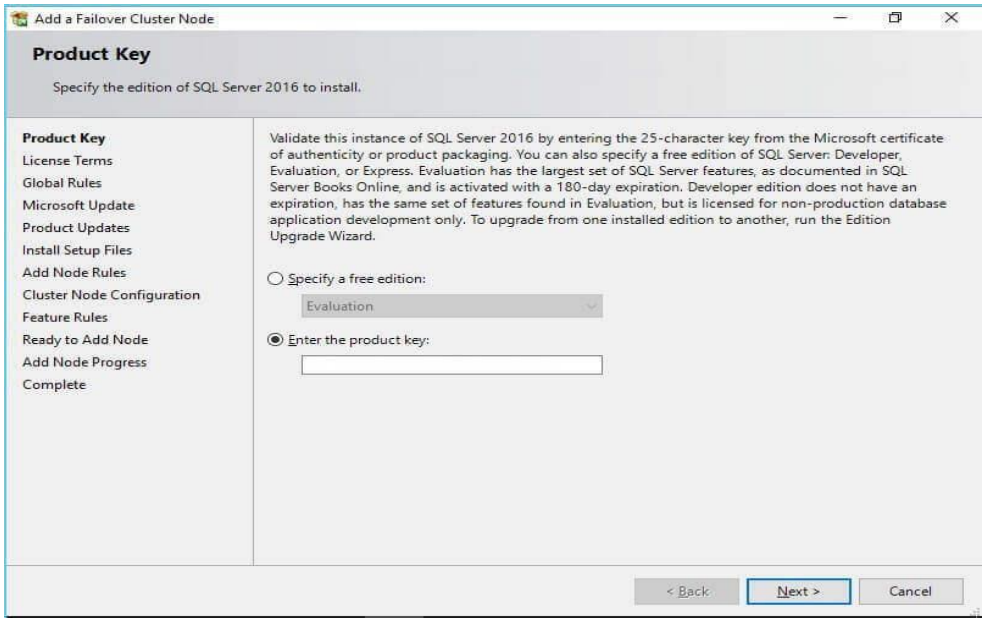
Now that you have a working SQL Server 2019 FCI, you make it highly available by adding nodes. To add a node to an existing SQL Server 2019.

Run **setup.exe** from the SQL Server 2019 installation media to launch **SQL Server Installation Center**. Click on the **Installation** link on the left-hand side.

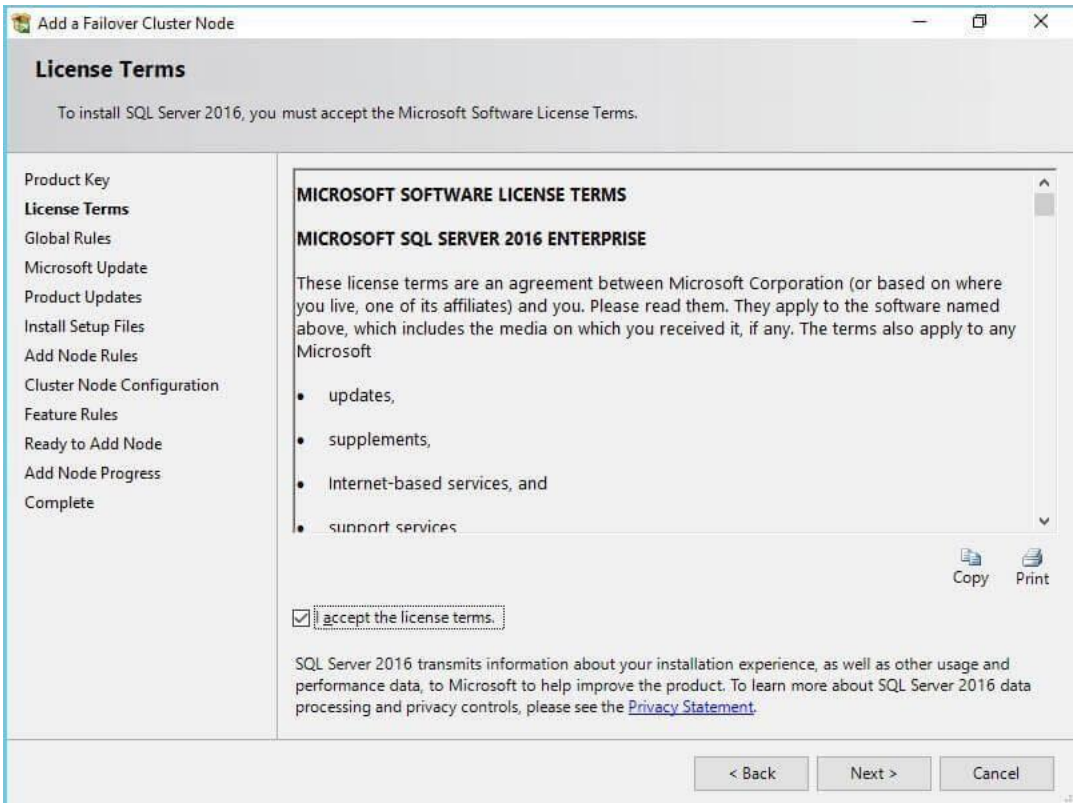
Click the **Add node to a SQL Server failover cluster** link. This will run the SQL Server 2019 Setup wizard.



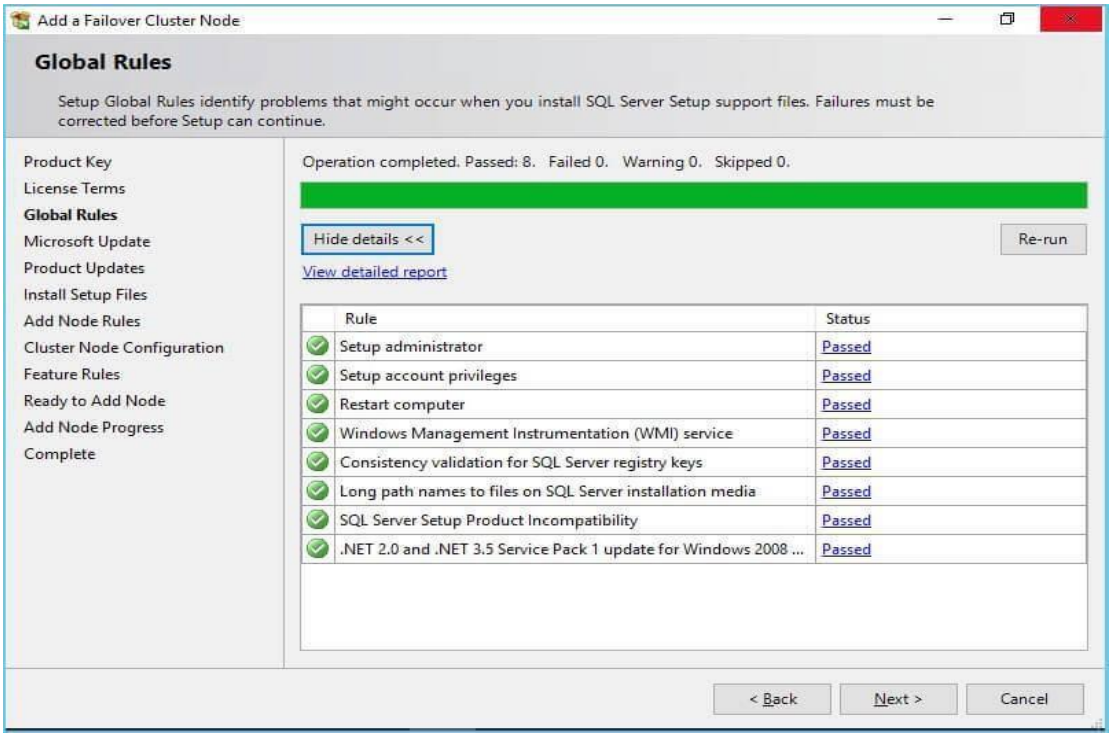
In the **Product Key** dialog box, enter the product key that came with your installation media andclick **Next**.



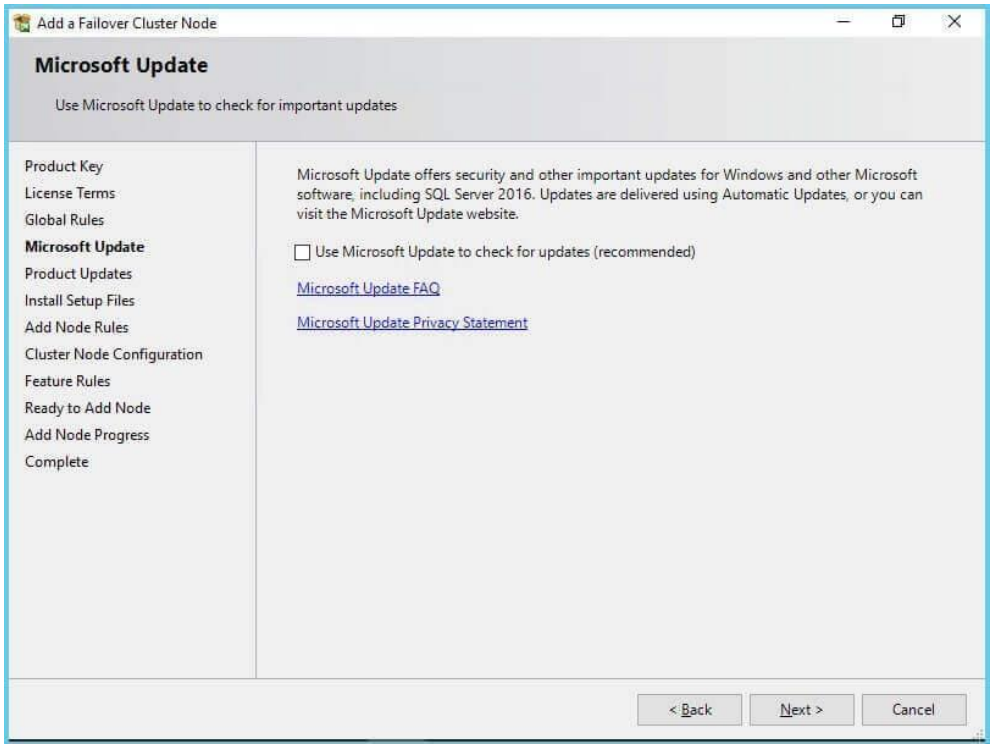
In the **License Terms** dialog box, click the **I accept the license terms** check box and click **Next**.



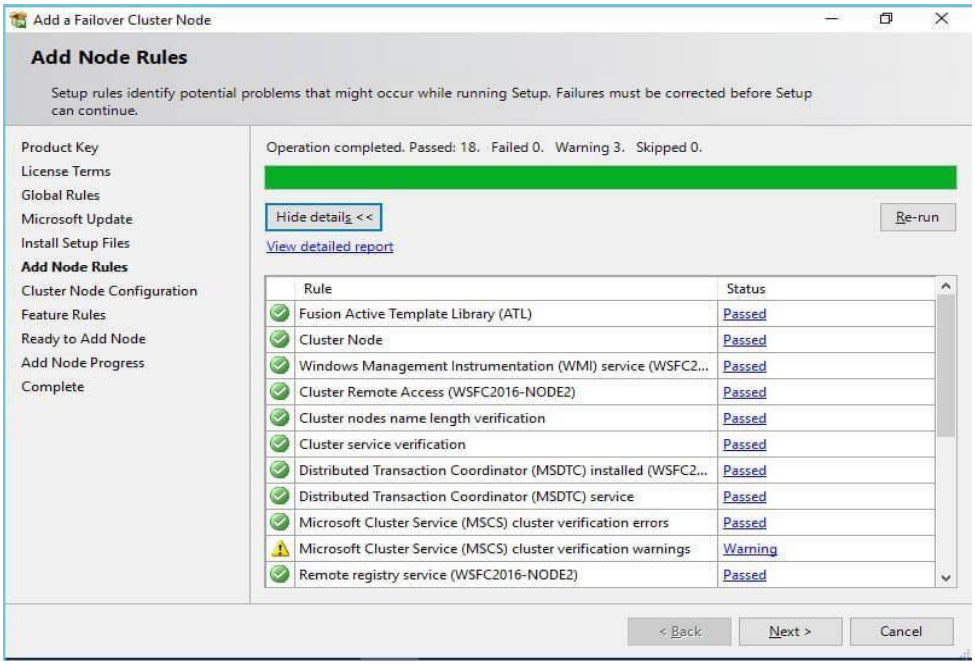
In the **Global Rules** dialog box, validate that the checks return successful results and click **Next**.



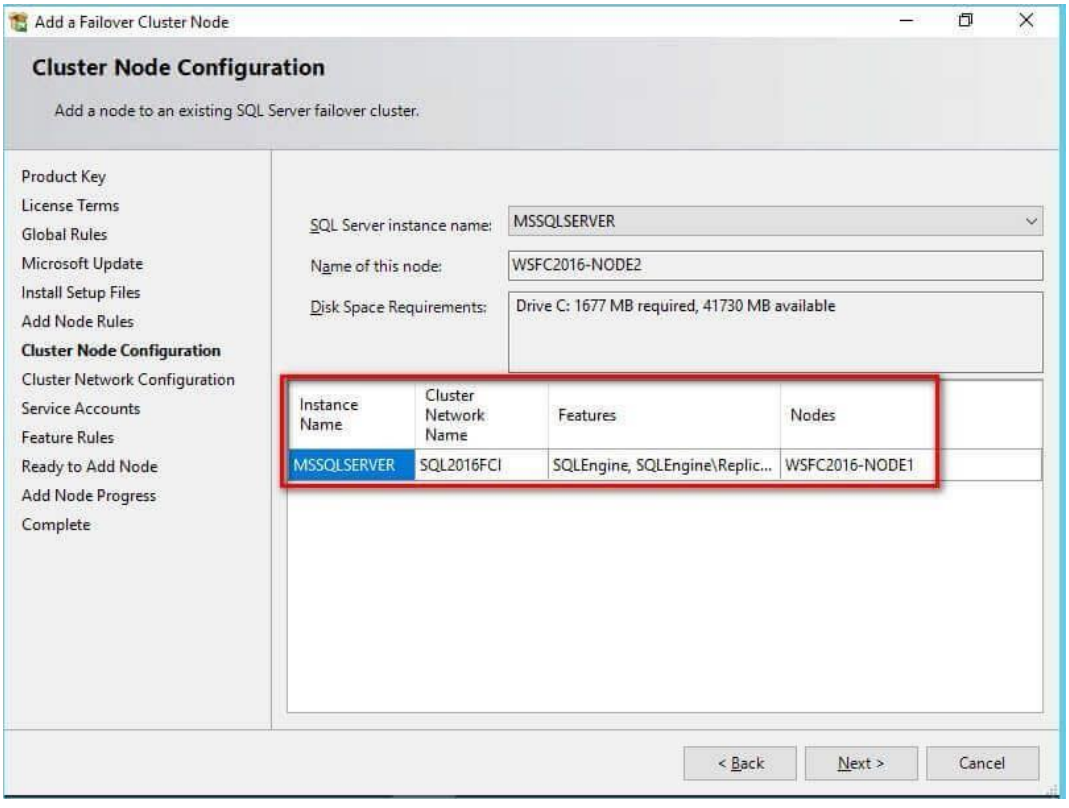
In the **Microsoft Update** dialog box, click **Next**.



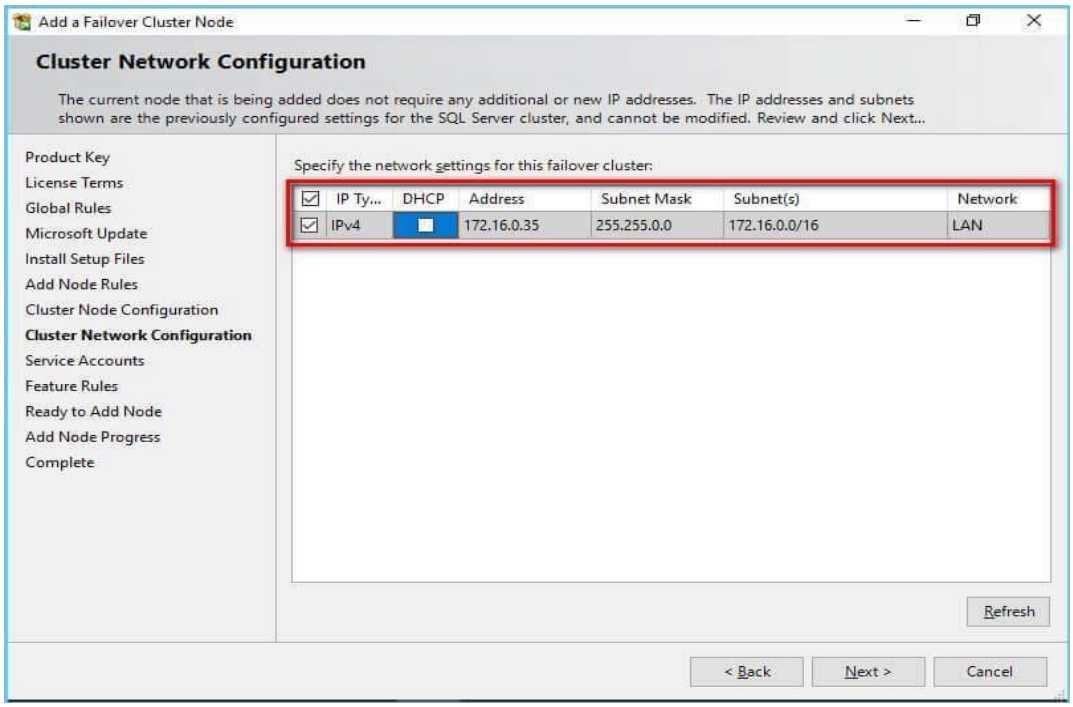
In the **Add Node Rules** dialog box, validate that the checks return successful results. If the checks returned a few warnings, make sure you fix them before proceeding with the installation. Click **Next**.



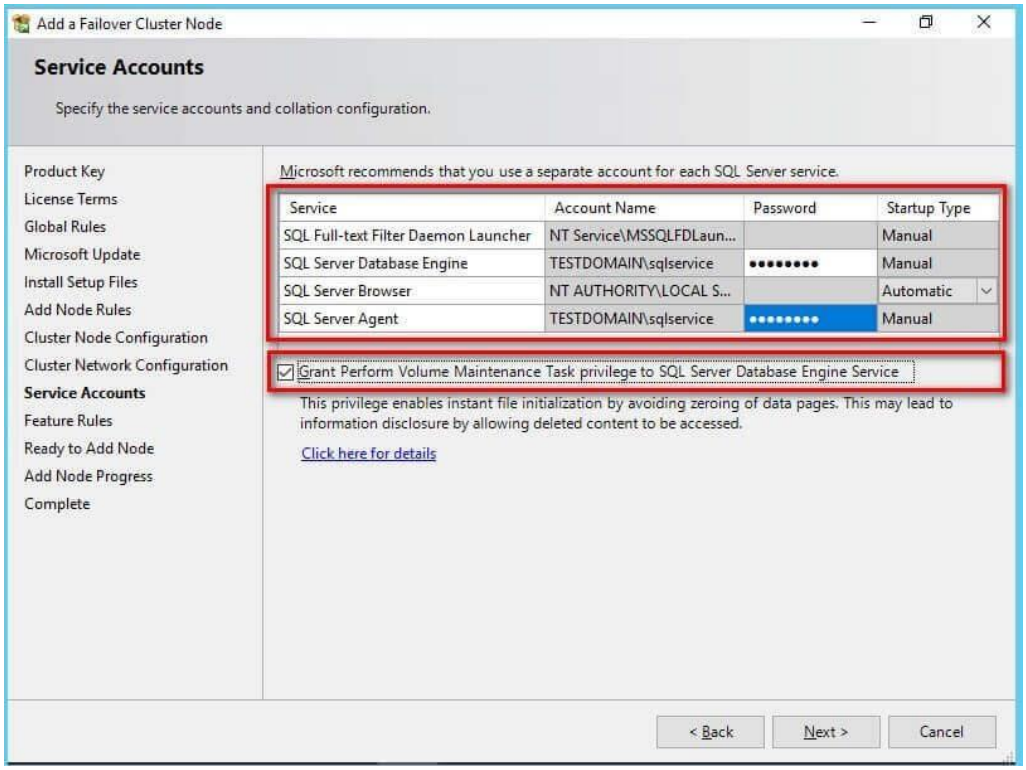
In the **Cluster Node Configuration** dialog box, validate that the information for the existing SQL Server 2019 FCI is correct. Click **Next**.



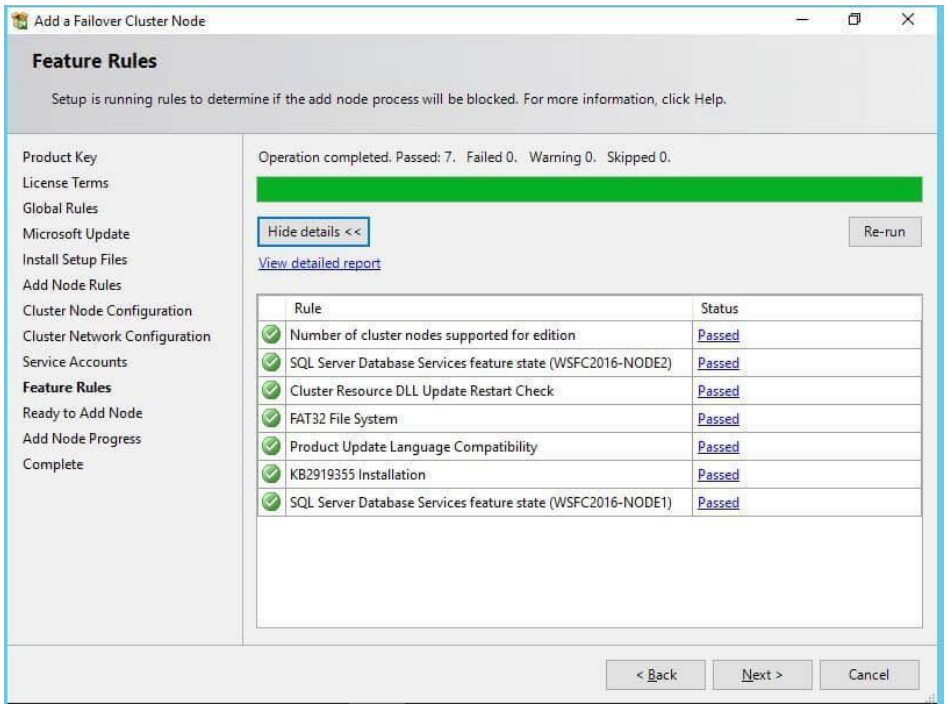
In the **Cluster Network Configuration** dialog box, validate that the IP address information is the same asthe one you provided



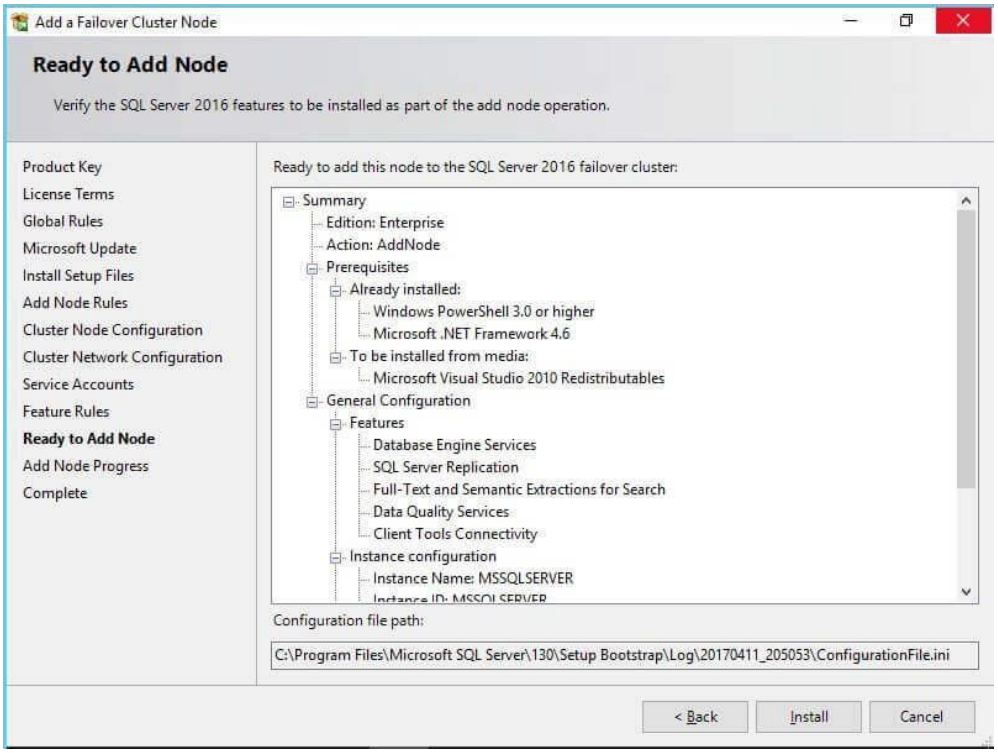
In the **Service Accounts** dialog box, verify that the information is the same as what was used to configure the first node. Provide the appropriate credentials for the corresponding SQL Server serviceaccounts.



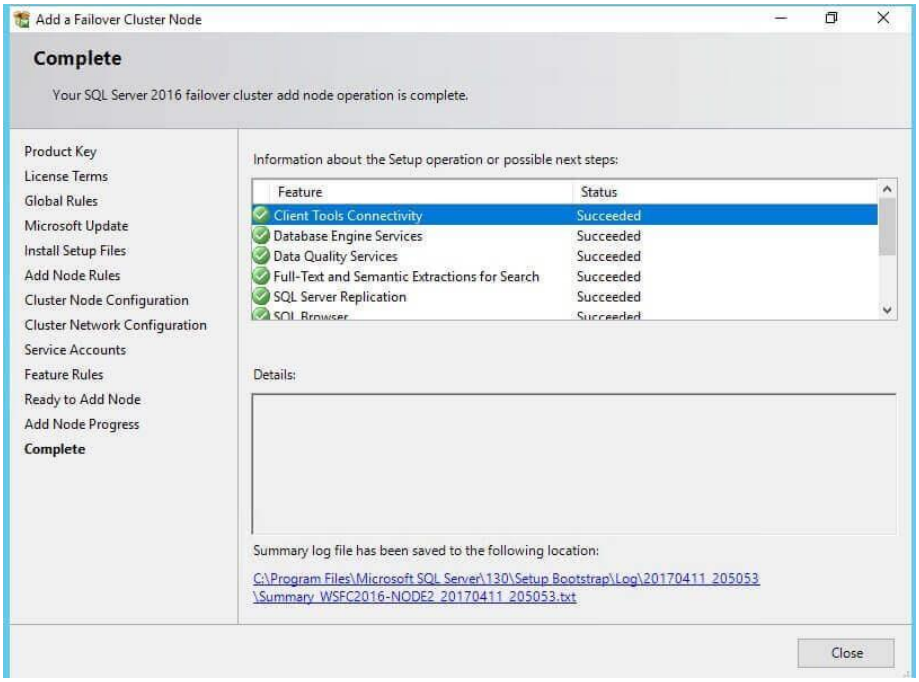
In the **Feature Rules** dialog box, verify that all checks are successful. Click **Next**.



In the **Ready to Add Node** dialog box, verify that all configuration settings are correct. Click **Install** to proceed with the installation.



In the **Complete** dialog box, click **Close**.



After installation complete take reboot the server

After completing the reboot now install SQL Server Management Studio on 2nd Node.

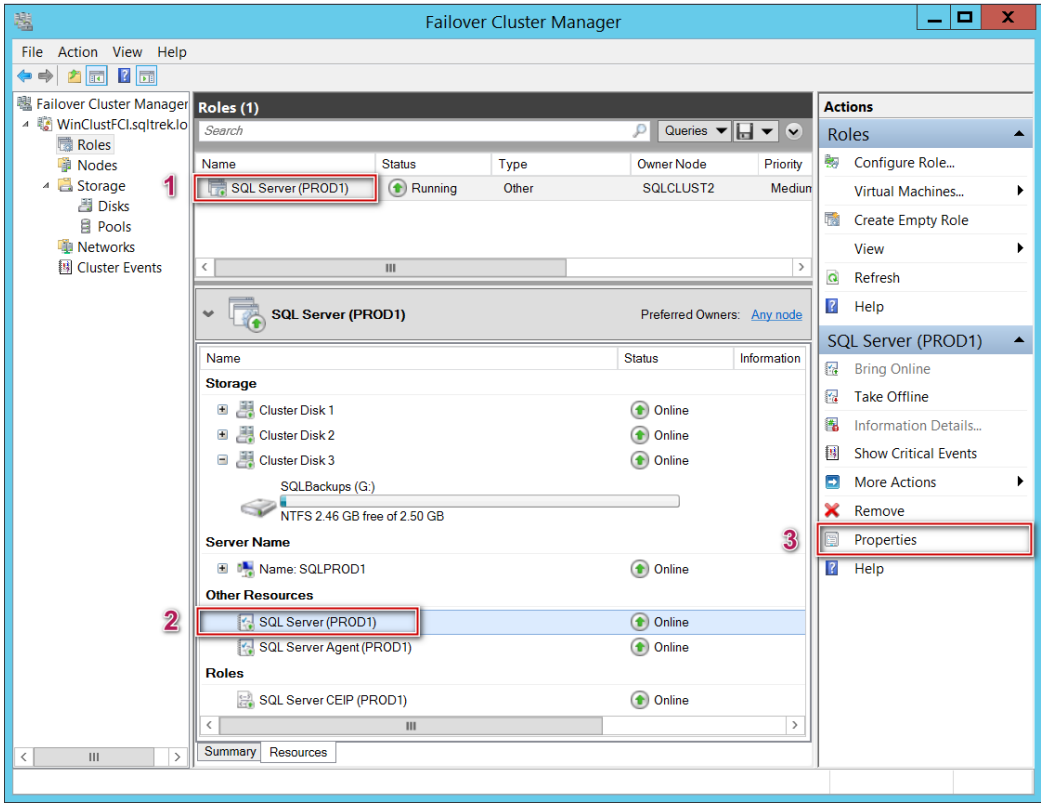
Prerequisite of SQL Cluster Installation

- SQL CLUSTER **IP** ADDRESS
- **SQL NETWORK NAME** (i.e., SQL server instance name)
- Both SQL Cluster IP Address & SQL Network Name **Entry** in Active Directory **DNS** Server
- Create one **OBJECT** in Active Directory **OU** (Organization Unit) with the name of **SQL Network Name** and provide Full Rights on that **OBJECT**.
- **SQL server (MSSQLSERVER)** Role not created on **Cluadmin.msc**
- **SQL Cluster Disk** is not assigned to any ROLE in **cluadmin.msc.**
- Note Down the cluster **DISK number** where you kept system database and user databases.
- Dot Net **3.5 & 4**. Framework
- Require **2 GB** space on **C Drive** for SQL Cluster installation Binaries on both NODE.

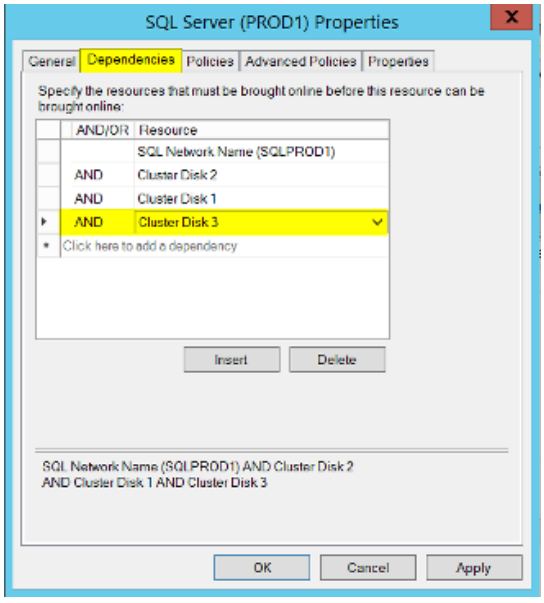
SQL CLUSTER INSTALLATION

How to add new disk on SQL Server Dependencies

Open **Cluadmin.msc** and go to SQL server **ROLE**, navigate to SQL Server **Resource** and go to **Properties**



In Properties choose "**Dependencies**" tab



Click on **Insert** and select **Cluster Disk 4** from the drop-down box in the **Resources** column.