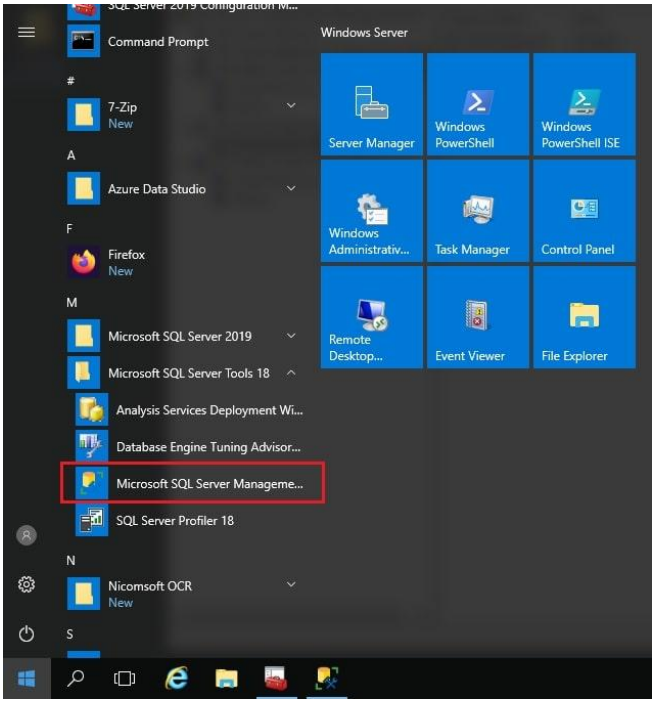
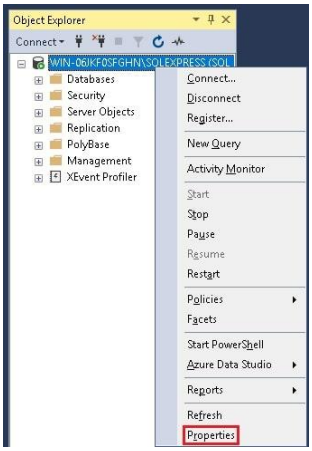
Steps to Configure Remote Access on a SQL Server

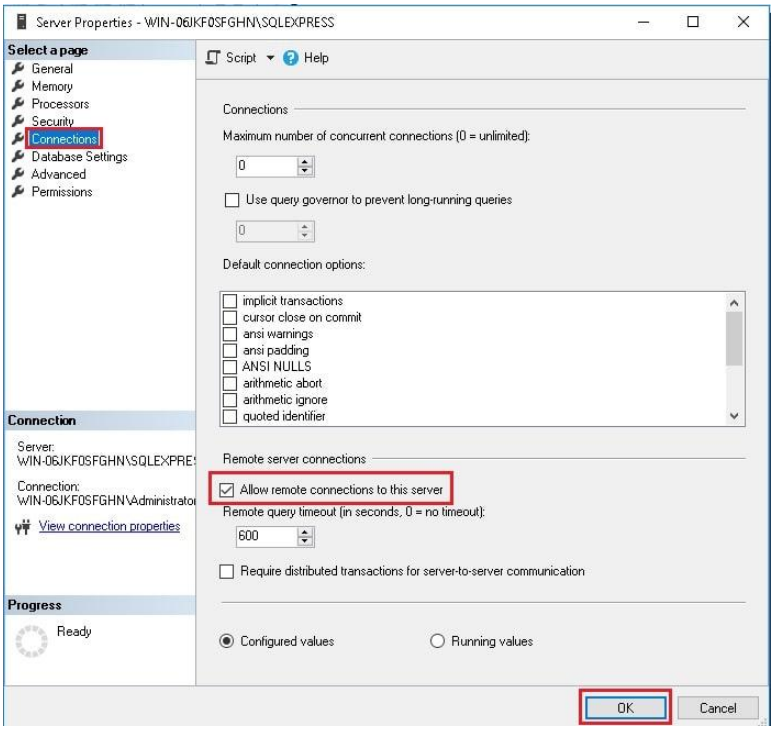
1. Open **Microsoft SQL Server Management Studio** by clicking on the **Windows** icon.



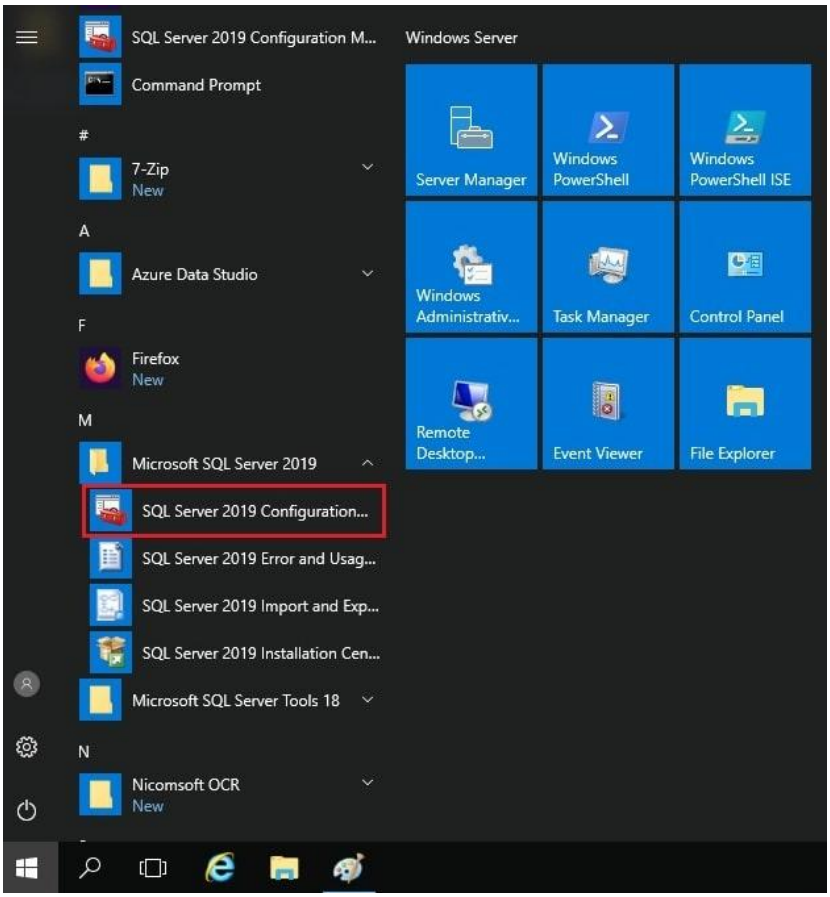
2. Then you will be prompted to connect to the server, here click on **Connect**.

3. To enable remote connection on SQL Server, right – click on the server and click on the **Properties** option. In the **Server Properties** dialog under the **Connections** tab, tick the **Allow remote connections to this server** option and click on **OK**.

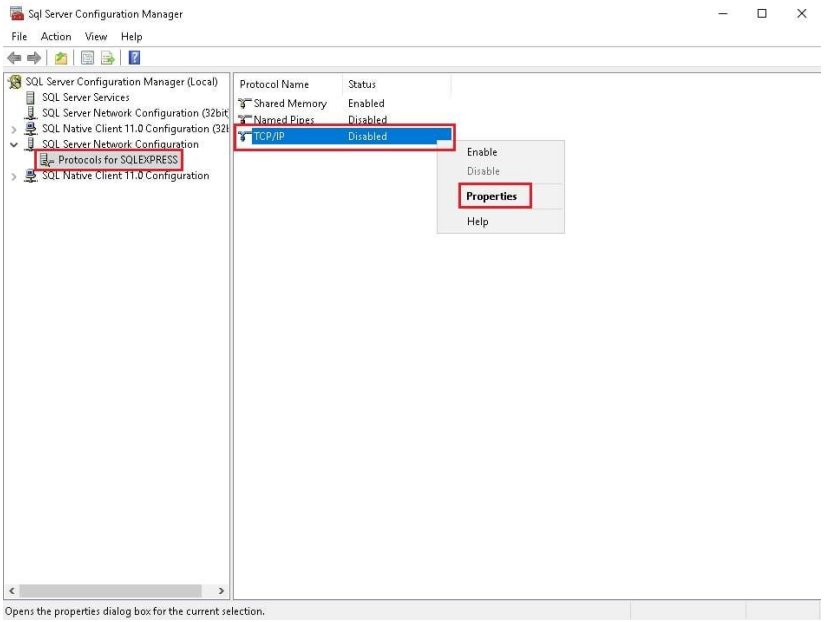




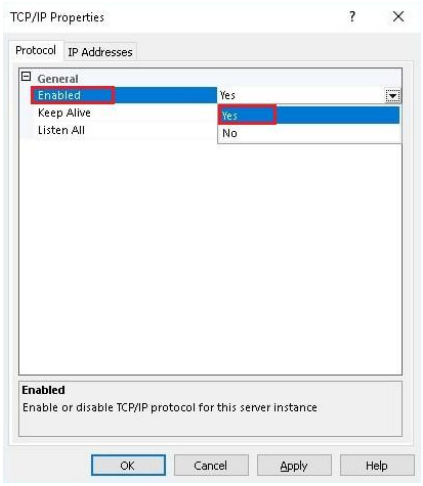
4. Click on the **Windows** icon on the desktop and click on **Microsoft SQL Server 2019**. Then click on the drop-down and select the **SQL Server Configuration Manager**.



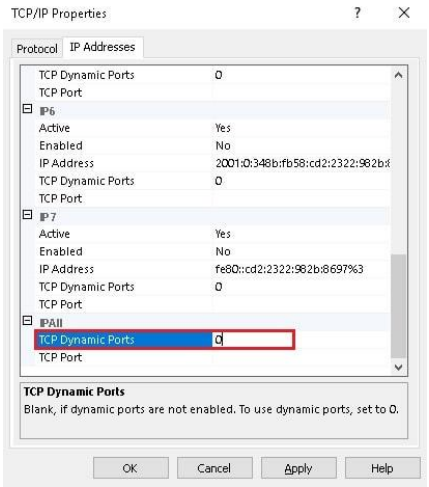
5. Then from the **SQL Server Network Configuration** select **Protocols** for your server. Ensure that **TCP/IP** protocol is enabled, if it's not then right-click on **TCP/IP** and select the **Properties** option.

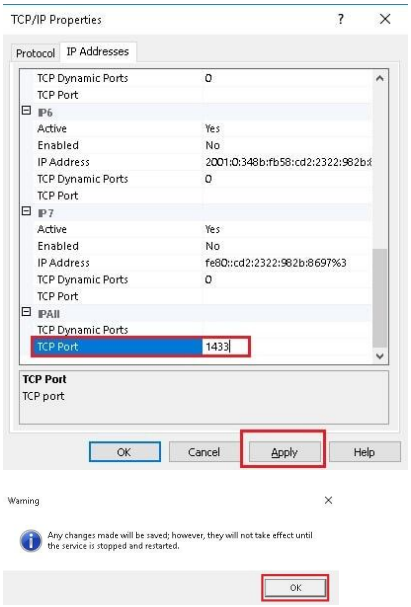


6. Under the **Protocol** tab, click on the drop-down for **Enabled** and select **Yes**. Then go to the **IP Addresses** tab and scroll down to **IPAll**.

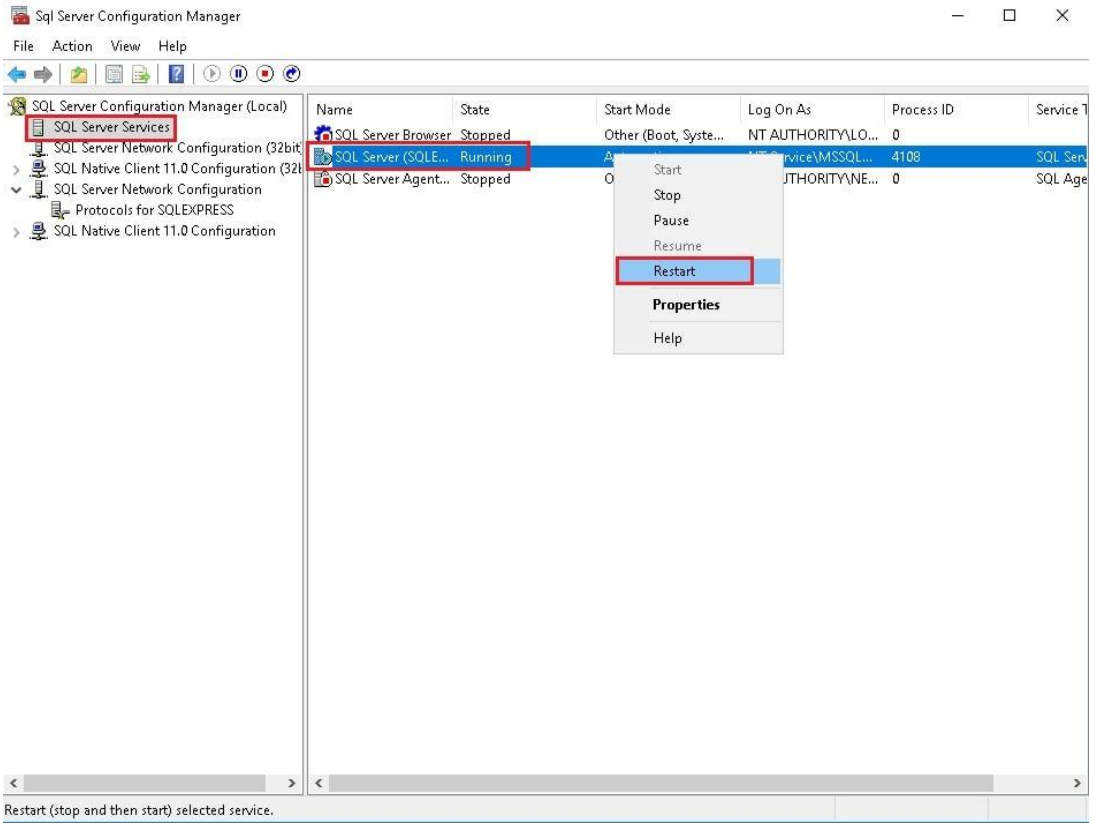


7. If the **TCP Dynamic Ports** dialog box displays **0**, it indicates that the **Database Engine** is listening on dynamic ports, delete the 0 and leave the TCP Dynamic Ports blank and set the **TCP Port** to **1433** and click on **Apply**. SQL Server uses port 1433 as the default instance.





8. You will be prompted for confirmation, click on **OK**. Then again click on **OK** on the TCP/IP Properties.
9. From the left pane of **SQL Server Configuration Manager**, click **SQL Server Services** and right-click **SQL Server**, and click **Restart**.

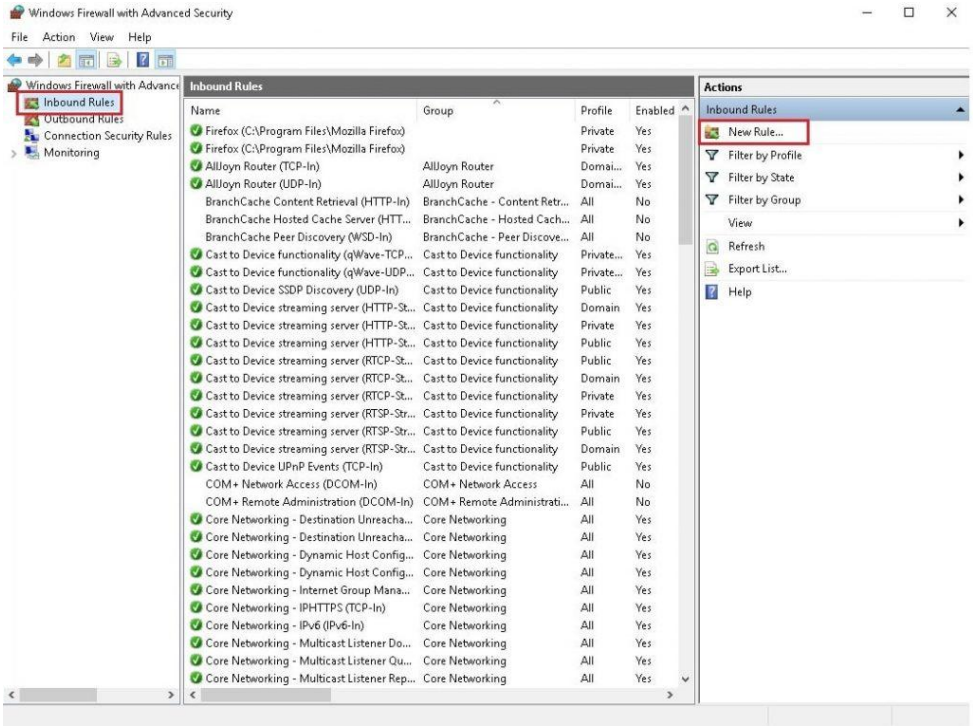


Steps to Configure a Windows Firewall for Database Engine Access

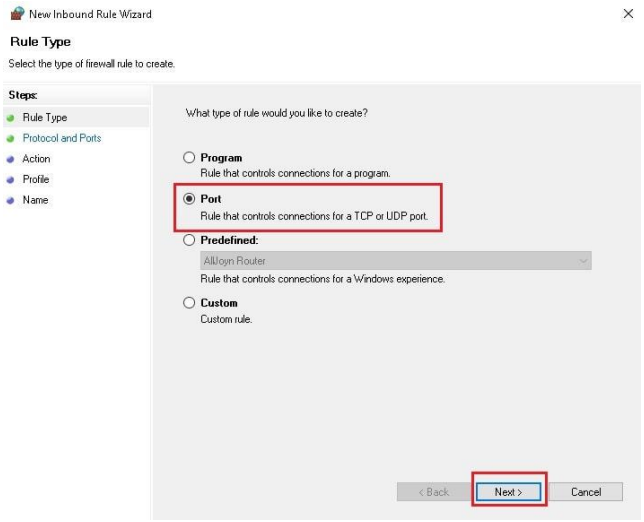
For adding a firewall exception for the 1433 port, follow the below steps:

1. Click on **Windows** icon. Then click on **Windows Administrative Tools** drop-down, scroll-down and select the **Windows Firewall with Advanced Security** option.

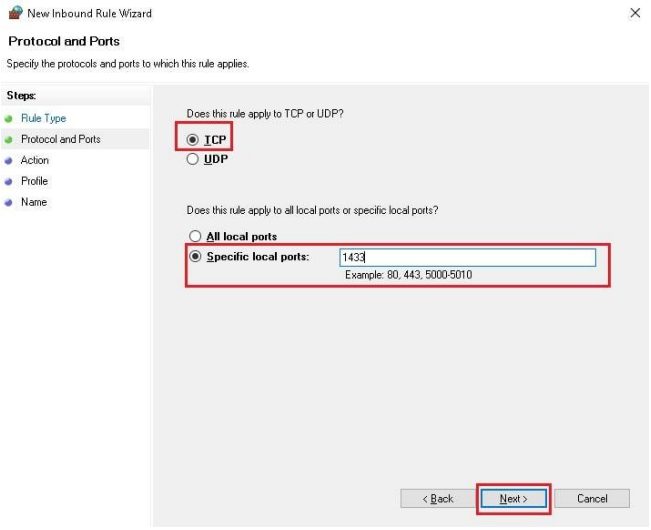
2. In the **Windows Firewall with Advanced Security** dialog, click on the **Inbound Rules** option in the left panel and select the **New Rule** from the **Actions** panel. This will open the **New Inbound Rule Wizard**.



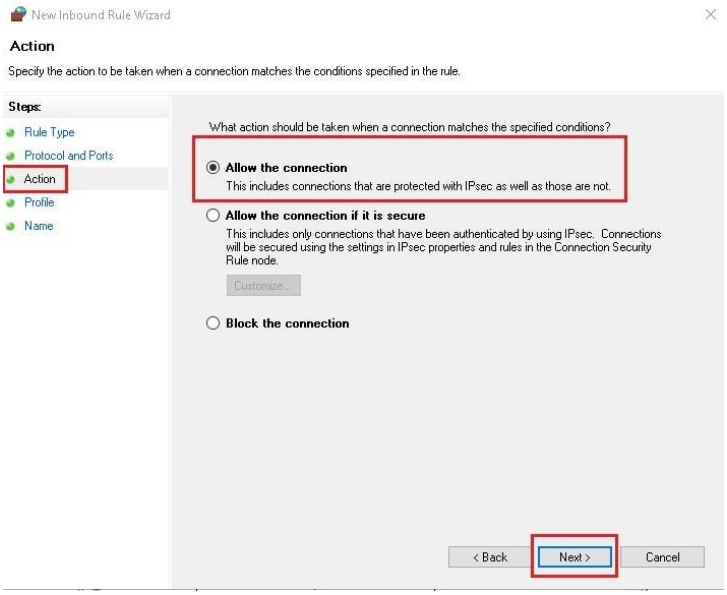
3. In the **New Inbound Rule Wizard**, under **Rule Type**, click on the **Port** option and click **Next**.



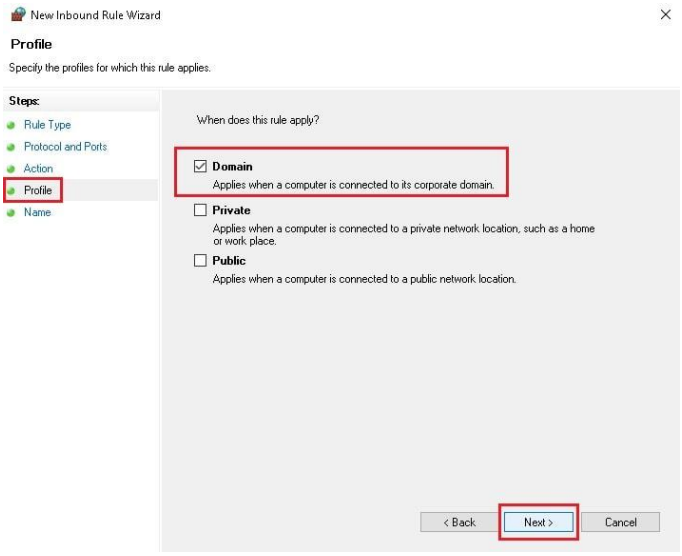
4. In the **Protocol and Ports** window, mention the protocols and ports to which a rule applies. Select the **TCP** option under **Does this rule apply to TCP or UDP?** and in the **Specific local ports**, text box enter the **1433** port, and click **Next**.



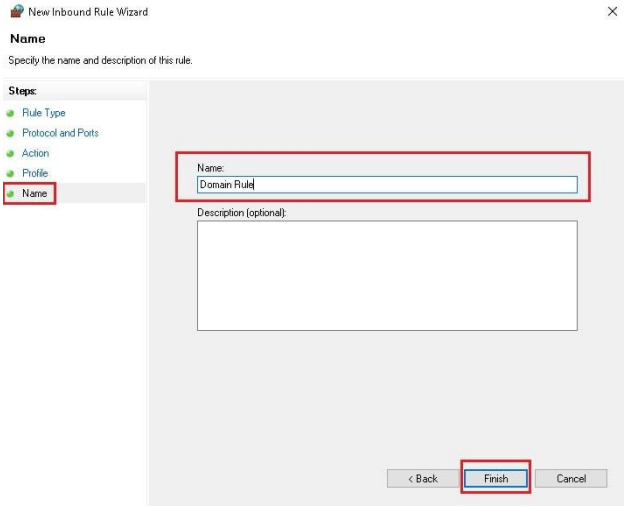
5. In the **Action** window, select the **Allow the connection** option to specify the action to be taken when a connection matches the conditions specified in the rule and click on **Next**.



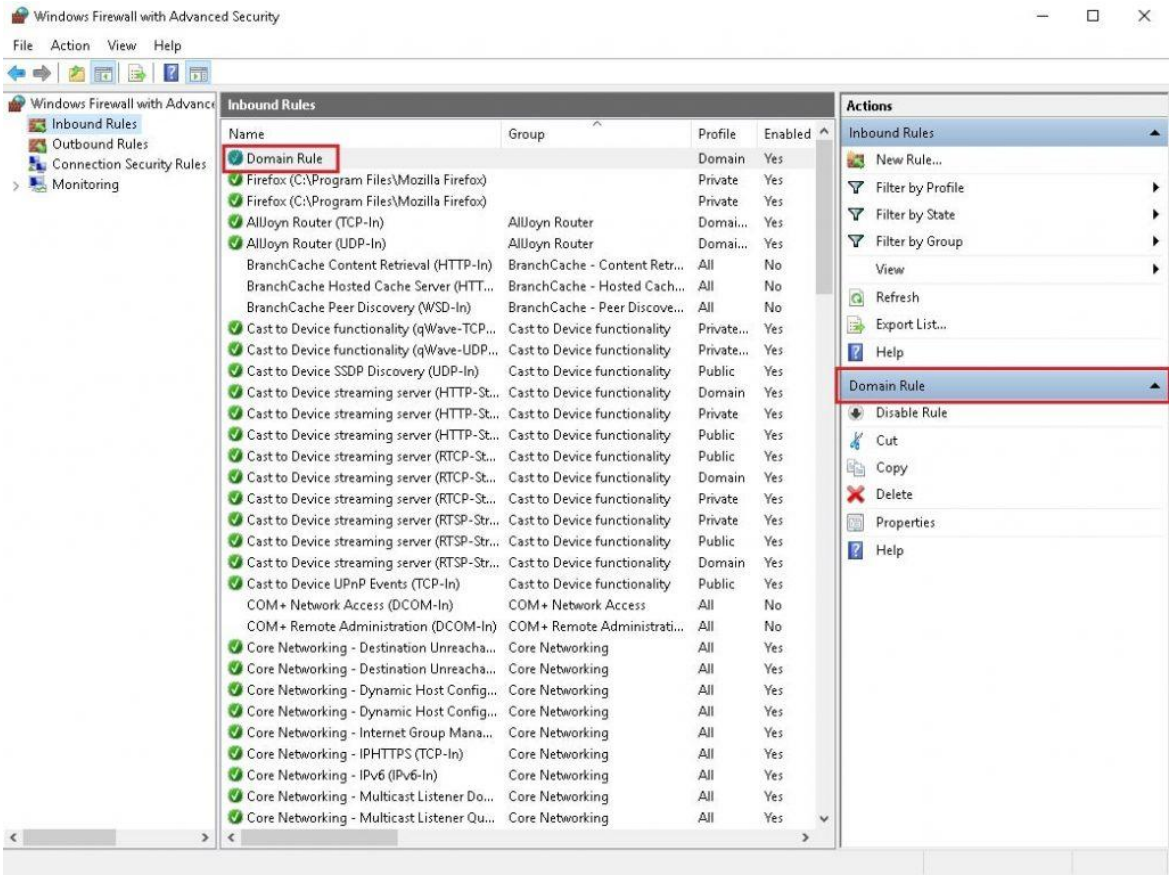
6. In the **Profile** window, specify the profile for which the rule applies. Here we have selected **Domain**. Then click on **Next**.



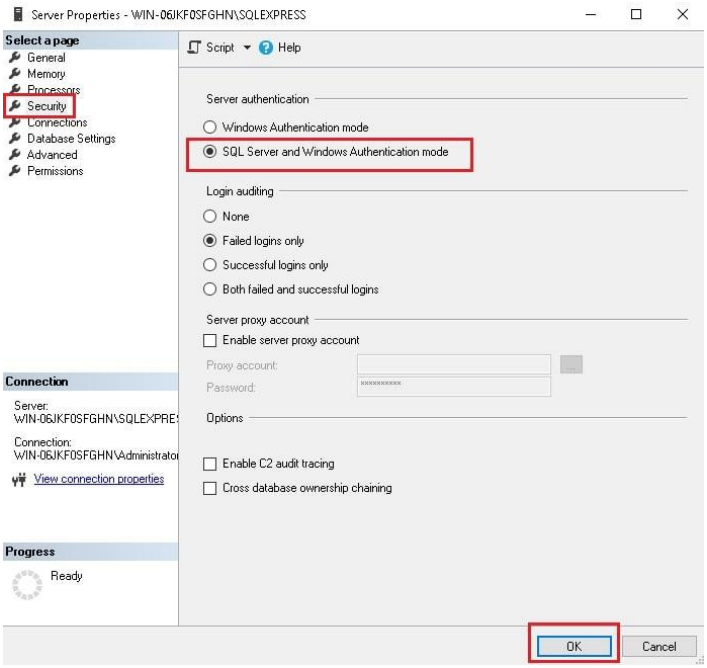
7. In the **Name** window, enter the name of the created rule and click on **Finish**.



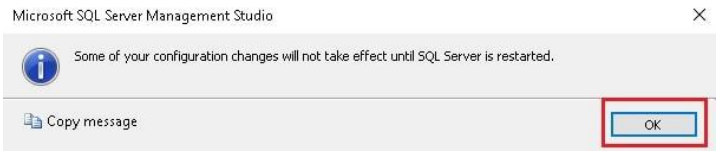
8. You can now see the created rule in the list of inbound rules.



9. Now to connect to a remote server using the **Windows Authentication**, go to **Server Properties** and under the **Security** tab set the **Server authentication to SQL Server and Windows Authentication mode** and click on **OK**.



10. Then you will be prompted for restarting the server or else the changes won't be reflected. Here, click on **OK**.



In this way, you can configure remote access and connect to a remote SQL server 2019.