

SmartPTT Enterprise 9.1
Dispatcher Remote Database

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1 Remote Database

You can create or connect to the SmartPTT Dispatcher database on a remote computer (remote database).

Before creating or connecting, make sure the remote computer has the following software installed:

- Microsoft SQL Server,
- Microsoft SQL Server Configuration Manager,
- Microsoft SQL Server Management Studio.

You can download this software from <http://www.microsoft.com/en-US/download/details.aspx?id=42299>. For installation details, see the corresponding installation guides.

If both your computer and remote computer has the active firewall, make sure the following ports are unblocked:

- TCP port 1433,
- UDP port 1434.

2 Configuring Protocols

To configure Protocols, perform the following actions:

1. Start **Microsoft SQL Server Configuration Manager**.
2. Expand **SQL Server Network Configuration** node.

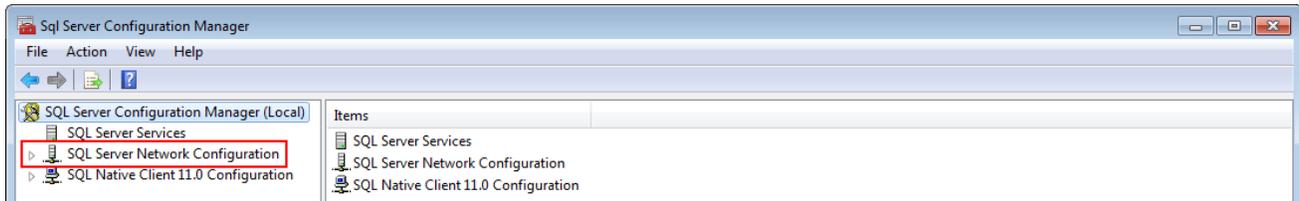


Figure 1 – SQL Server Network Configuration Node

3. Click **Protocols for <Your SQL Server Name>**.

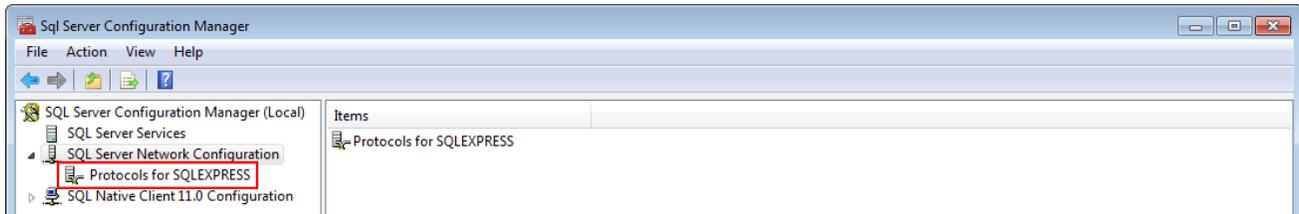


Figure 2 – Protocols for <Your SQL Server Name>

4. In the right pane of the **Sql Server Configuration Manager** window, right-click **Shared Memory** and click **Enable**.

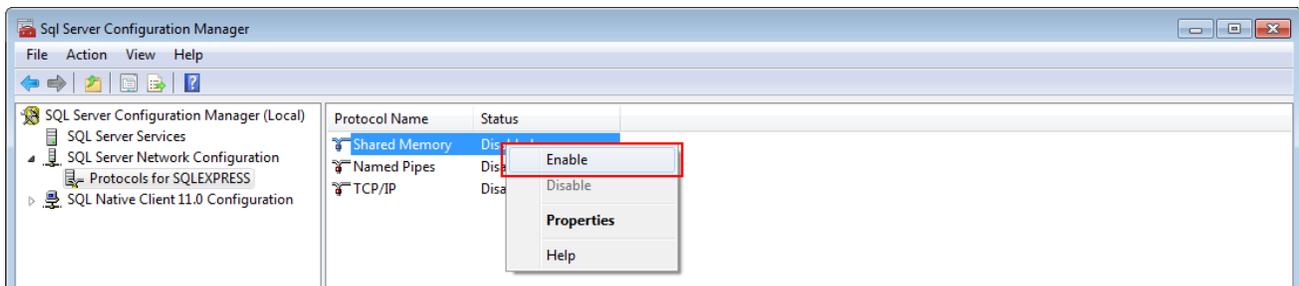


Figure 3 – Enabling Shared Memory

5. In the **Warning** window, click **OK**.

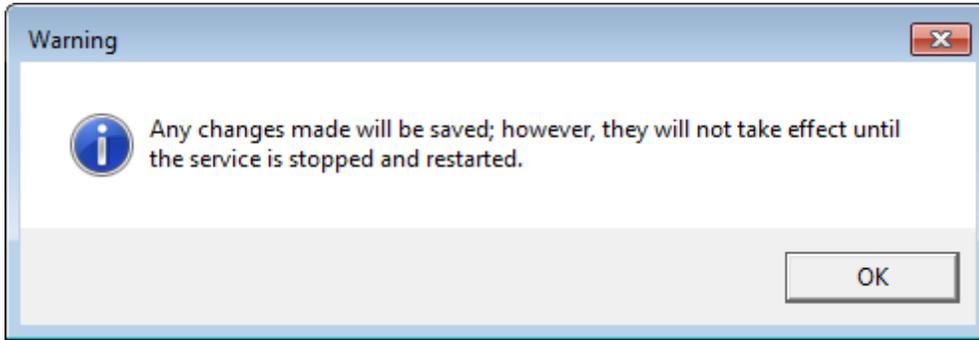


Figure 4 – Warning Window Confirmation

6. In the right pane of the **Sql Server Configuration Manager** window, right-click **TCP/IP** and then click **Enable**.

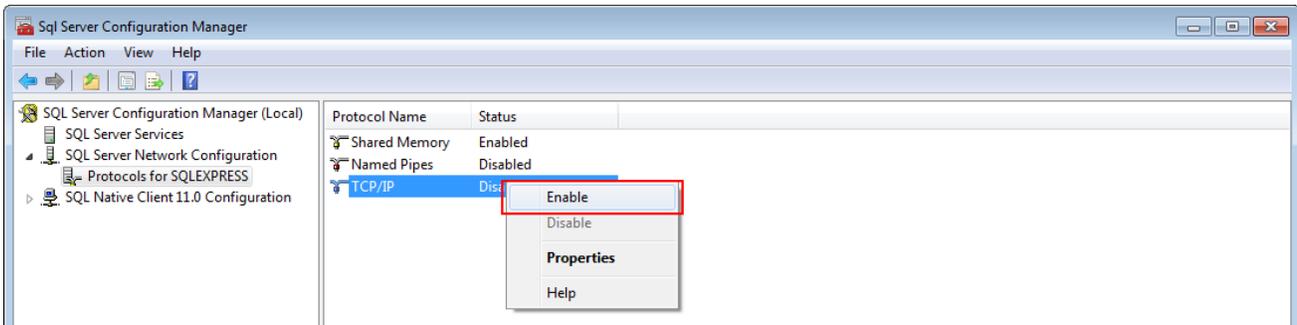


Figure 5 – TCP/IP Enabling

7. In the **Warning** window, click **OK**.

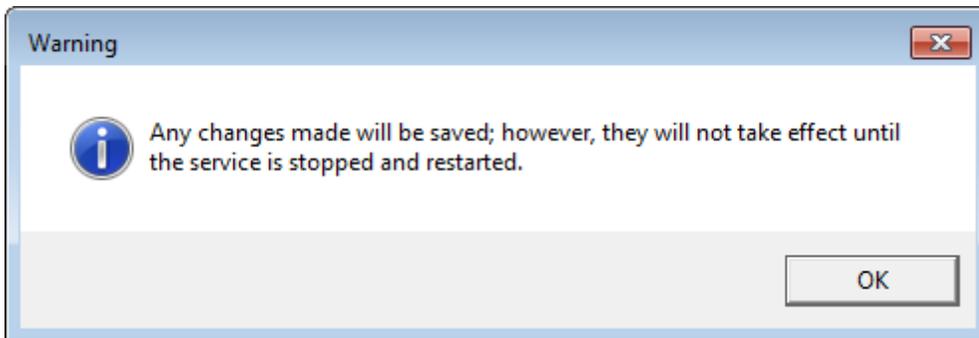


Figure 6 – Warning Window Confirmation

8. Configure Services.

Protocols configuration complete.

3 Configuring Services

To configure Services, perform the following actions:

1. In the left pane of the **Sql Server Configuration Manager** window, click **SQL Server Services**.

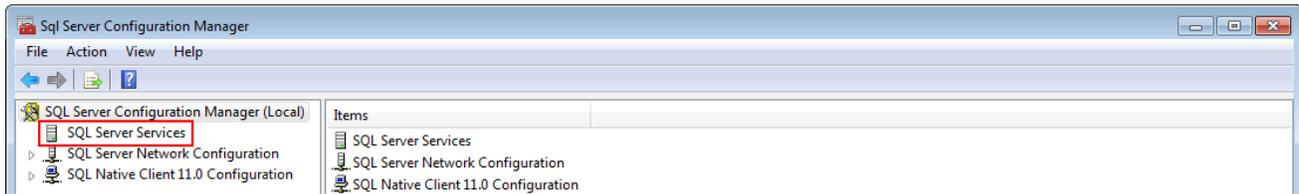


Figure 7 – SQL Server Services

2. In the right pane of the **Sql Server Configuration Manager** window, stop the following services if they are active:
 - **SQL Server Services (<Your SQL Server Name>),**
 - **SQL Server Browser.**
3. Right-click **SQL Server (<Your SQL Server Name>)** and then click **Properties**.

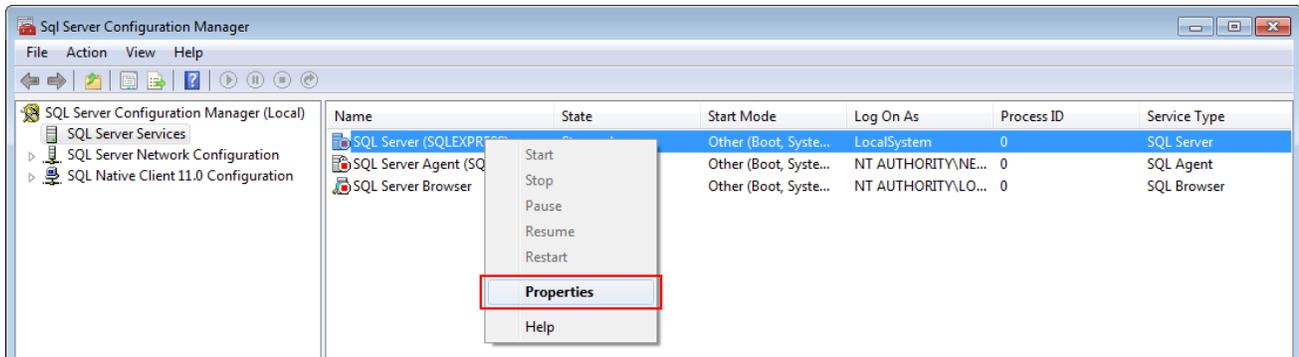


Figure 8 – Properties of SQL Server (<Your SQL Server Name>)

4. On the **Service** tab of the **SQL Server (<Your SQL Server Name>) Properties** window, click **Disabled**.

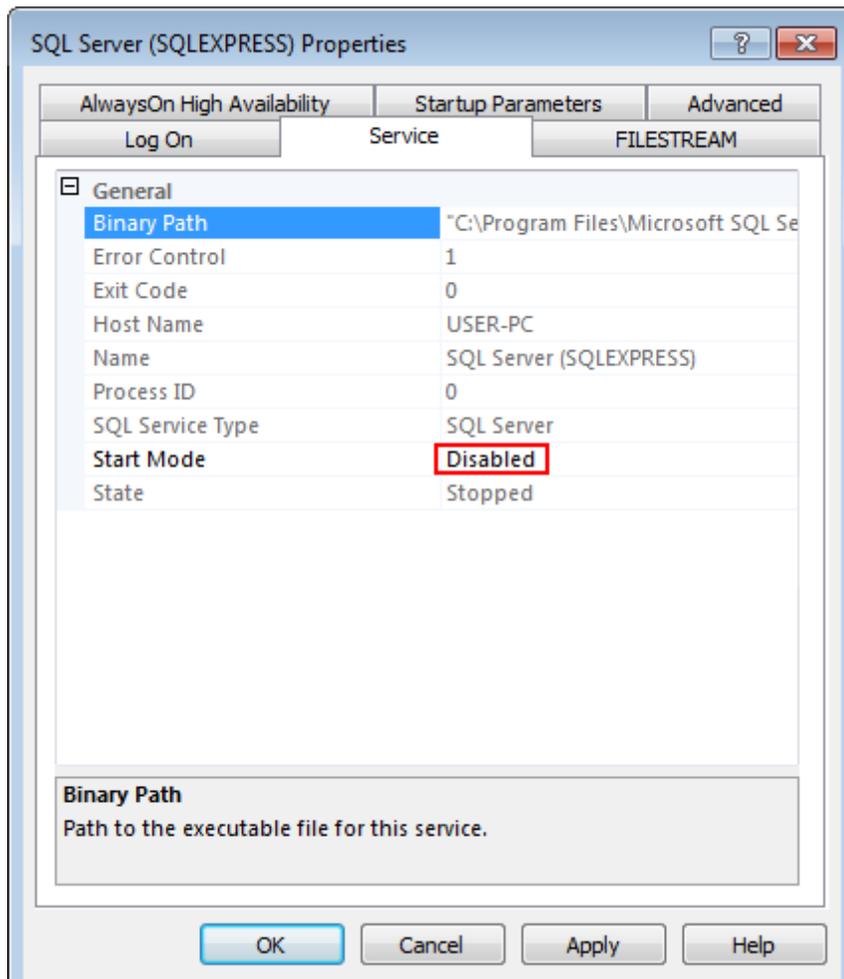


Figure 9 – Start Mode of SQL Server Properties

- In the list, click **Automatic** and then click **OK**.

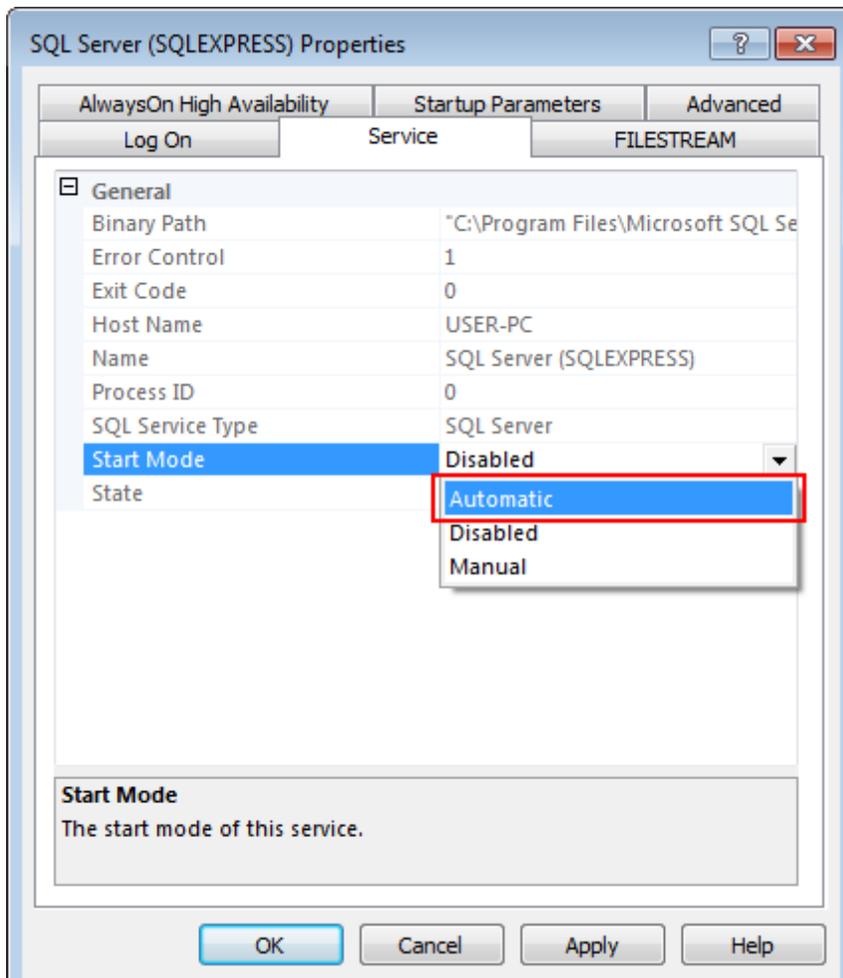


Figure 10 – Changing Start Mode

- Click **OK** to apply changes and close the window.

- In the right pane of the **Sql Server Configuration Manager** window, right-click **SQL Server (<Your SQL Server Name>)** and click **Start**.

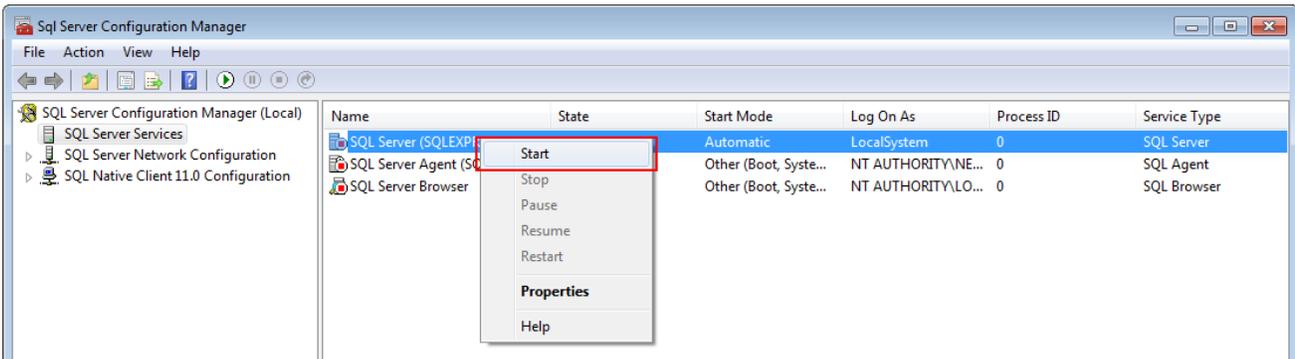


Figure 11 – SQL Server (<Your SQL Server Name>) Starting

- In the right pane of the **Sql Server Configuration Manager** window, right-click **SQL Server Browser** and click **Properties**.

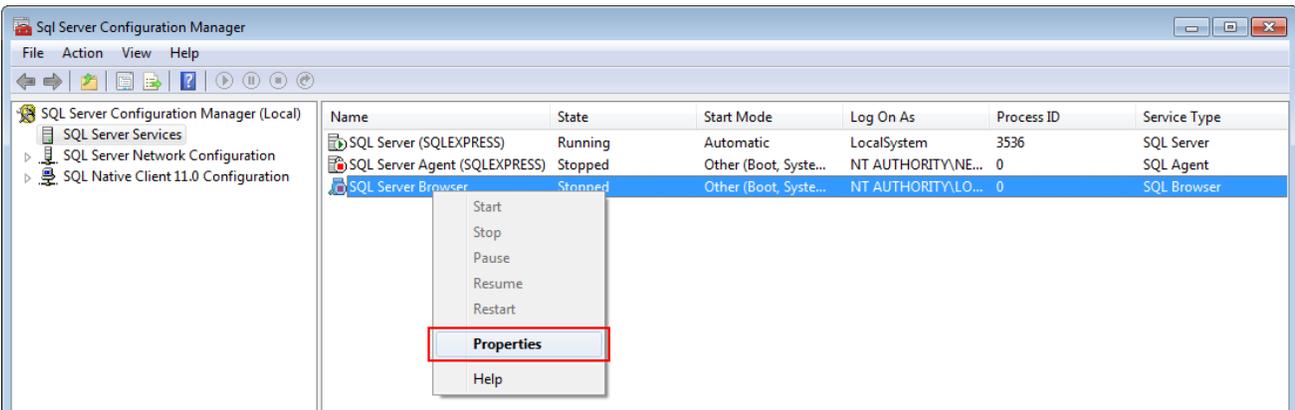


Figure 12 – Properties of SQL Server Browser

9. On the **Service** tab of the **Sql Server Browser Properties** window, click **Disabled**.

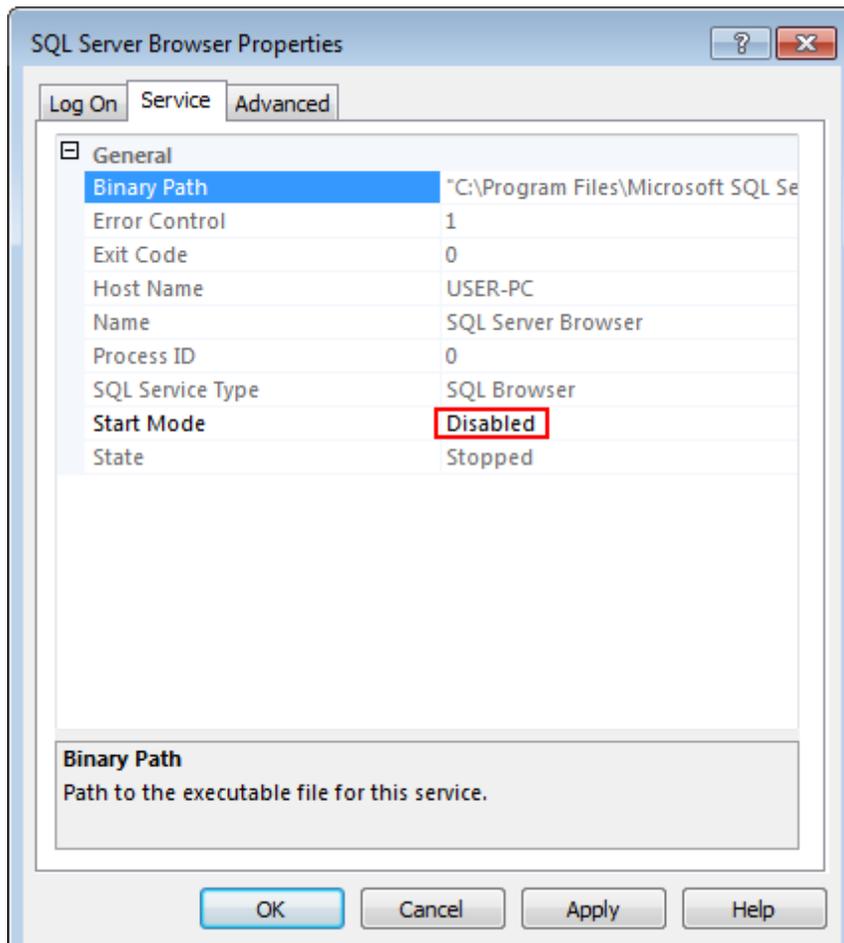


Figure 13 – Start Mode

10. In the list, click **Automatic** and then click **OK**.

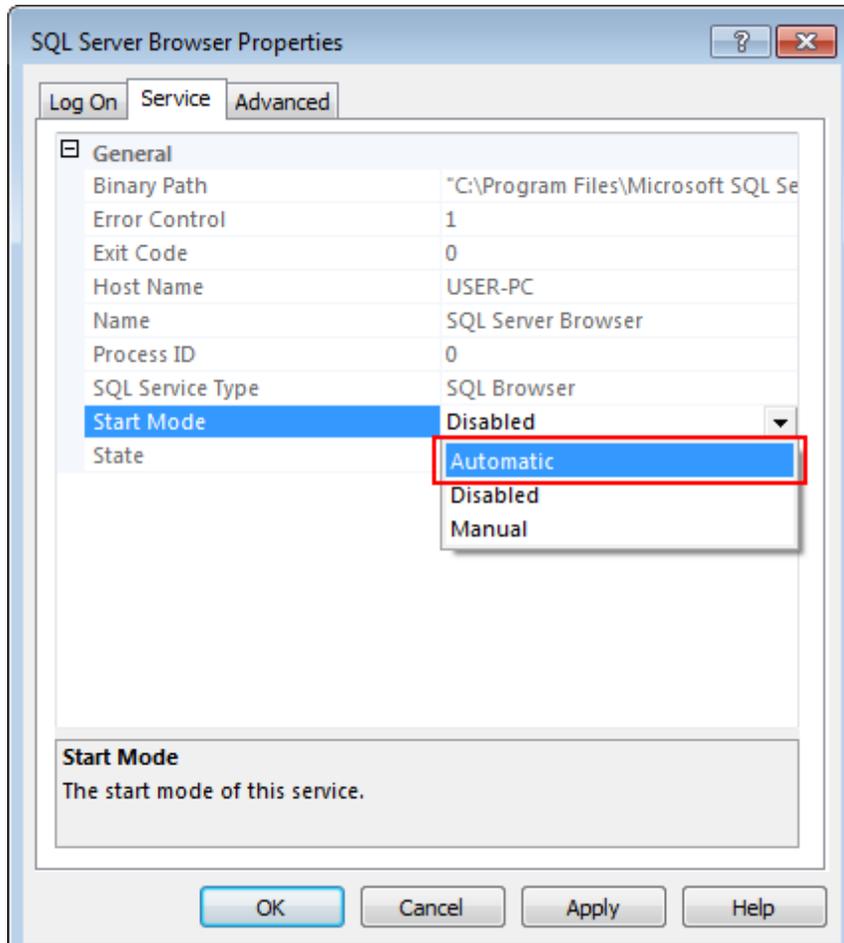


Figure 14 – Changing Start Mode

11. In the right pane of the **Sql Server Configuration Manager** window, right-click **SQL Server Browser** and click **Start**.

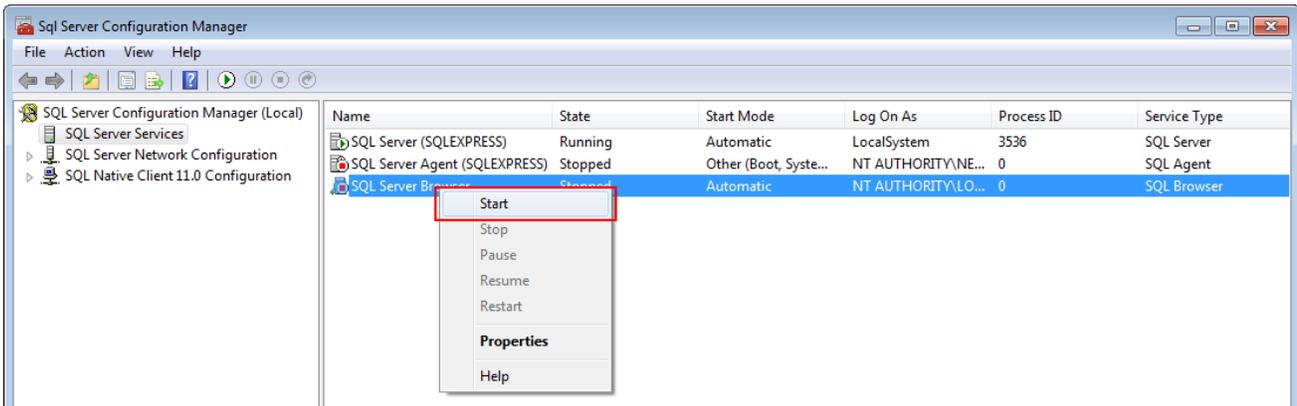


Figure 15 – Starting SQL Server Browser

12. Close **Sql Server Configuration Manager**.

Services configuration complete.

4 Configuring SQL Server

To configure the SQL server, perform the following actions:

1. Run **Microsoft SQL Server Management Studio**.
2. In the **Server name** field of the **Connect to Server** window, enter the name of your SQL server and click **Connect**.

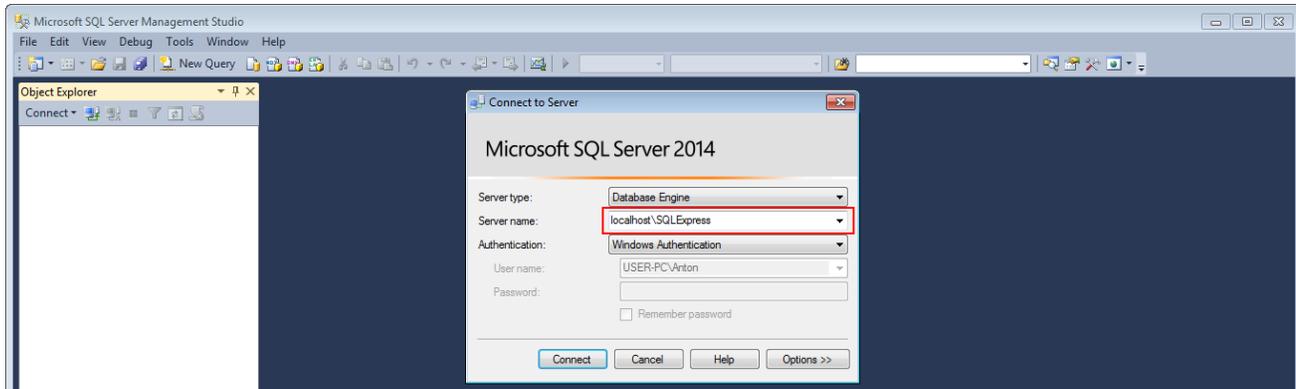


Figure 16 – Entering SQL Server Name

3. In the **Object Explorer** window, right-click the server name and click **Properties**.

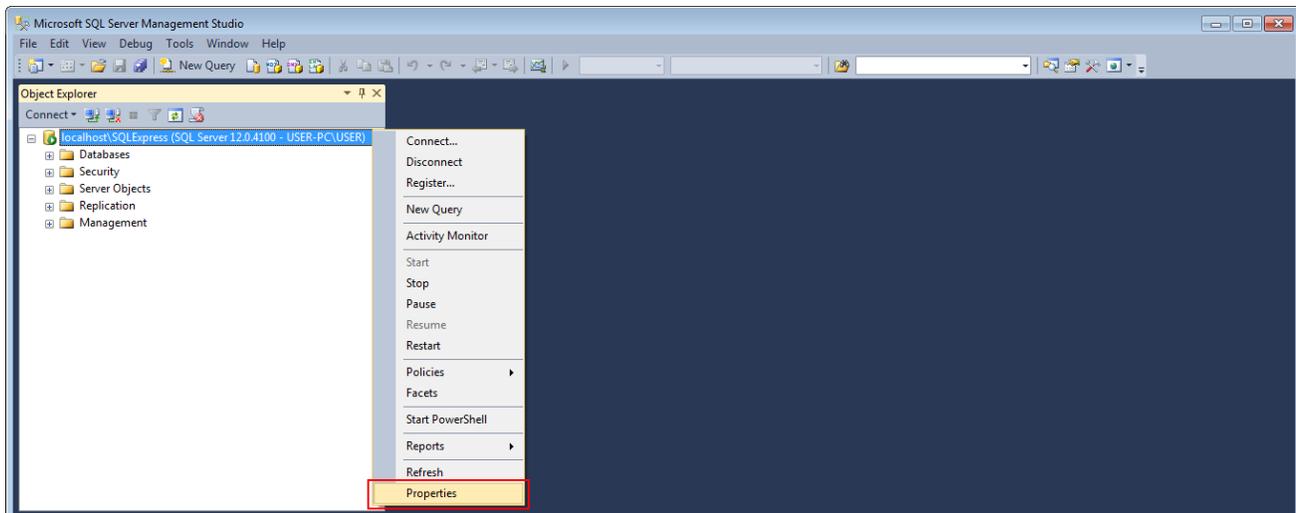


Figure 17 – SQL Server Properties

4. In the **Select a page** pane of the **Server Properties** window, click **Security**.

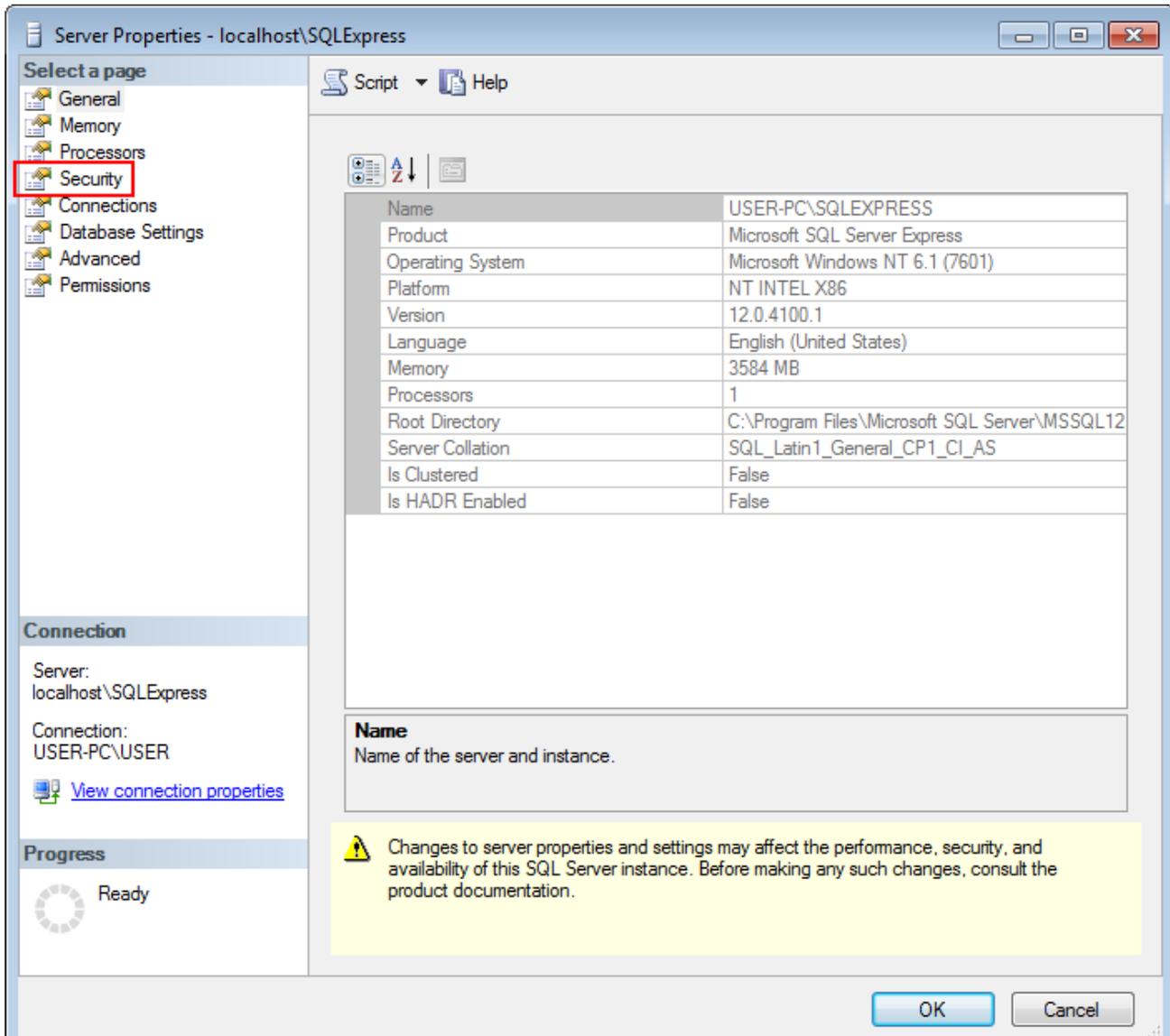


Figure 18 – Selecting SQL Server Security

5. In the right pane of the **Server Properties** window, click **SQL Server and Windows Authentication mode**.

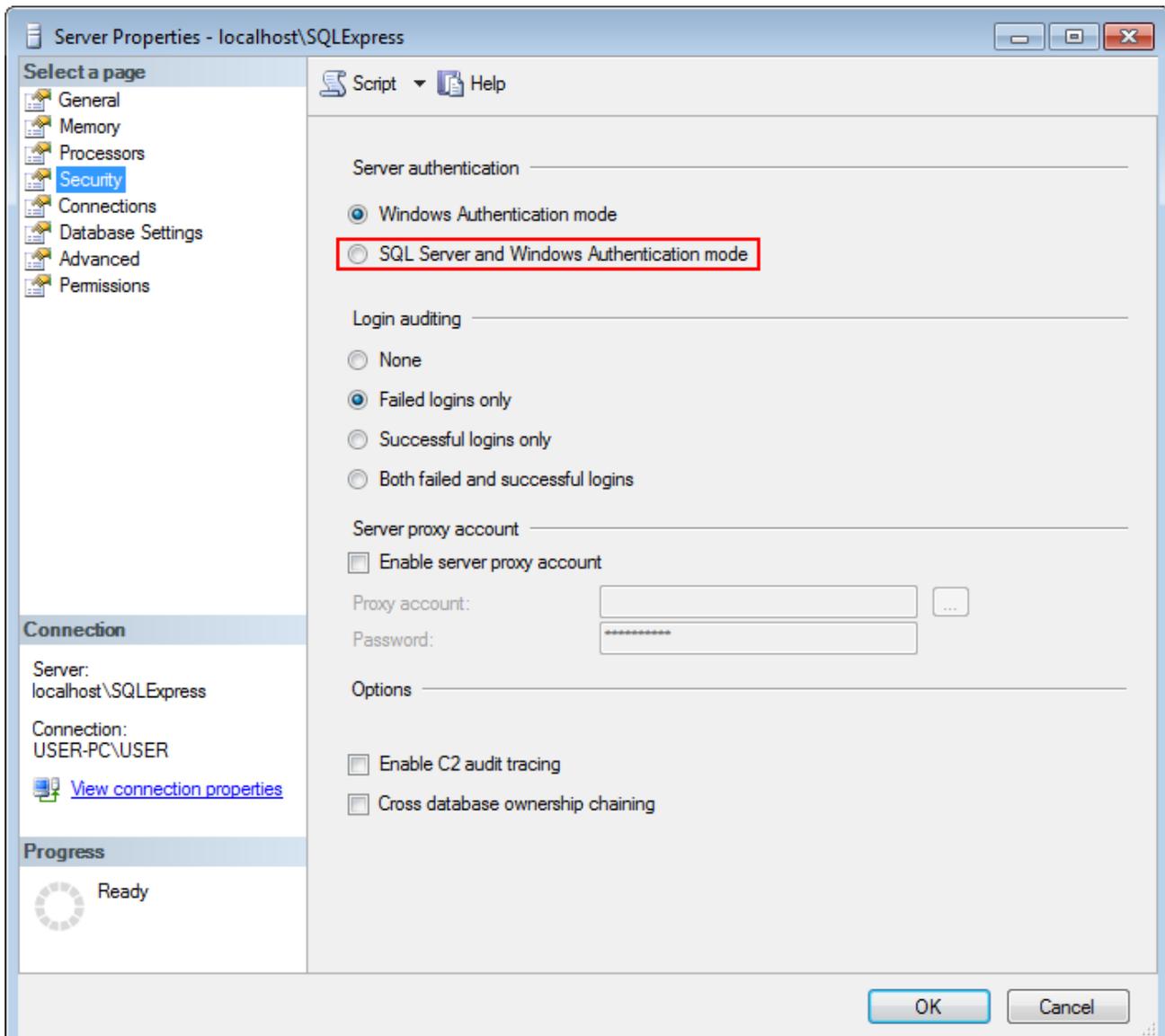


Figure 19 – SQL Server Authentication Mode

6. In the **Select a page** pane of the **Server Properties** window, click **Connections**.

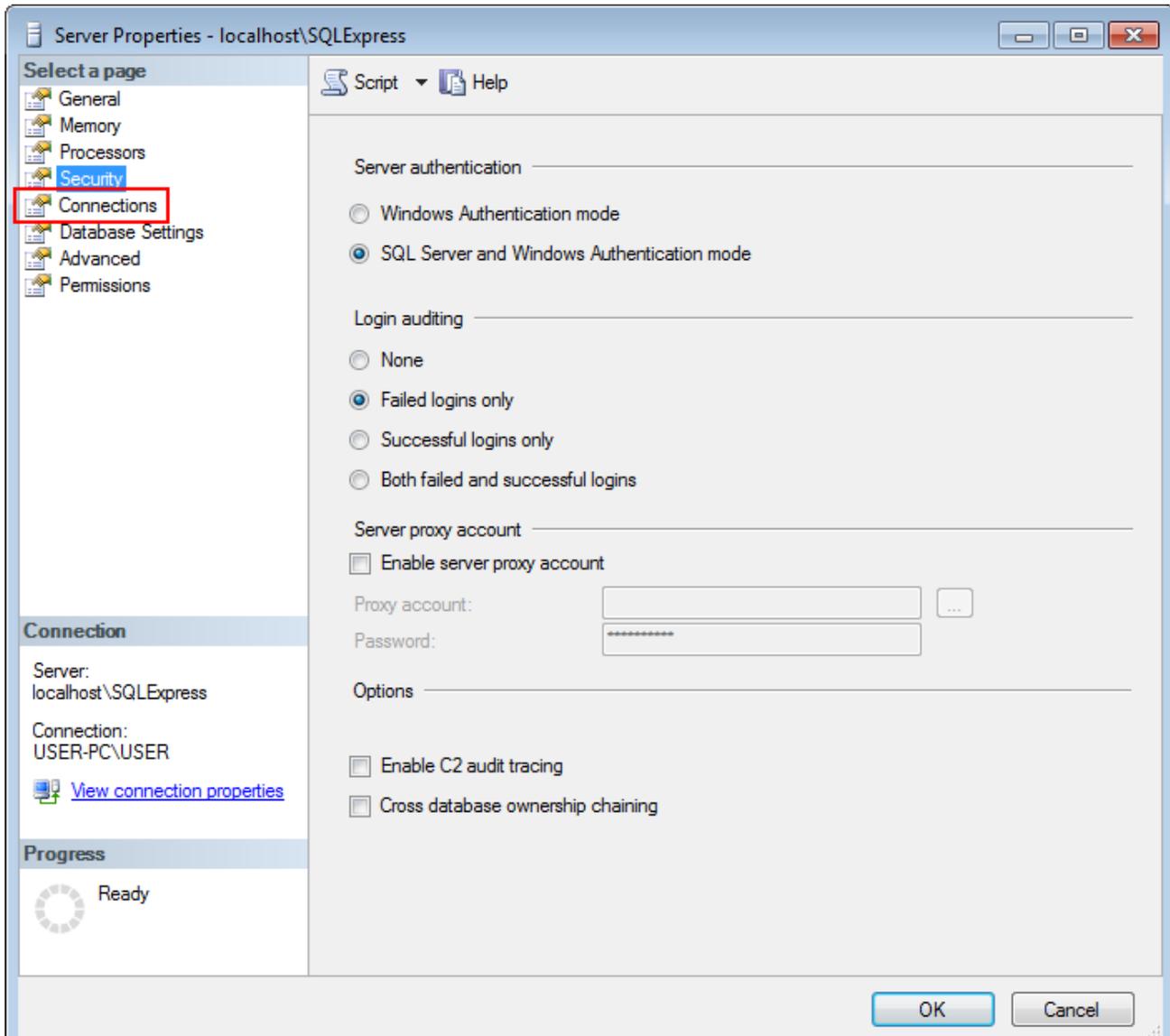


Figure 20 – Selecting SQL Server Connections

7. In the right pane of the **Server Properties** window, select **Allow remote connections to this server**.

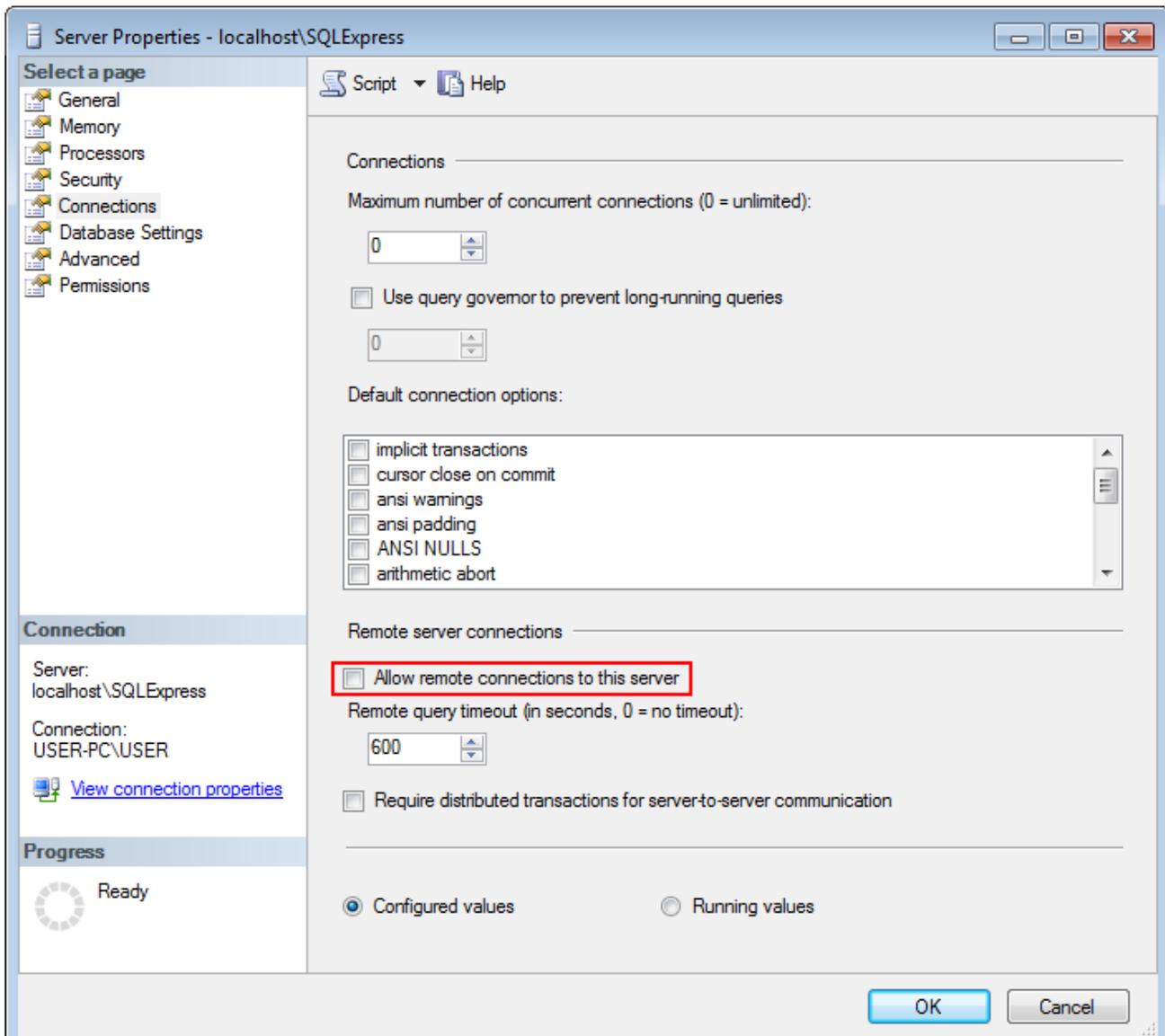


Figure 21 – Allowing Remote Server Connections

8. Click **OK** to close the window.
9. In the **Object Explorer** window, right-click the server name and click **Restart**.

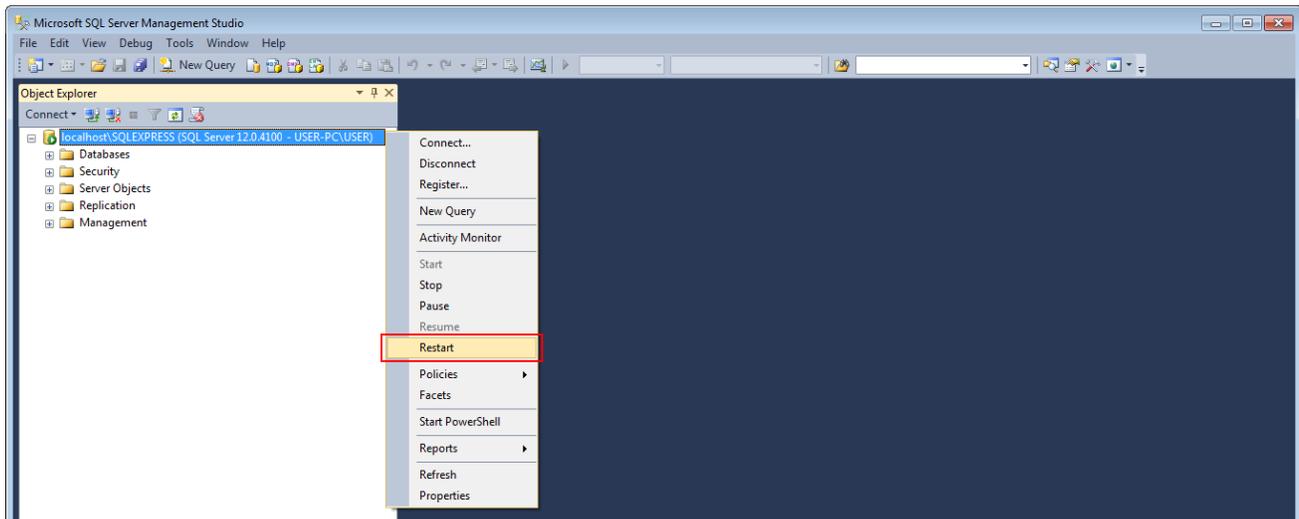


Figure 22 – SQL Server Restart

10. Add [Windows](#)⁽¹⁹⁾ or [SQL Server](#)⁽²³⁾ logins to the SQL Server.

Configuration of the SQL Server complete.

5 Adding Windows Login

This topic is alternative to the [“Adding SQL Server Login”^{\(23\)}](#).

To connect to a remote database using the [Windows NT Authorization](#)⁽⁴⁰⁾ mode, Windows login access should be configured. It is applicable only if remote computer is in the same domain as your computer.

To add a Windows login to the SQL Server, perform the following actions:

1. In the **Object Explorer** window, expand **<Your Server Name>** → **Security**.

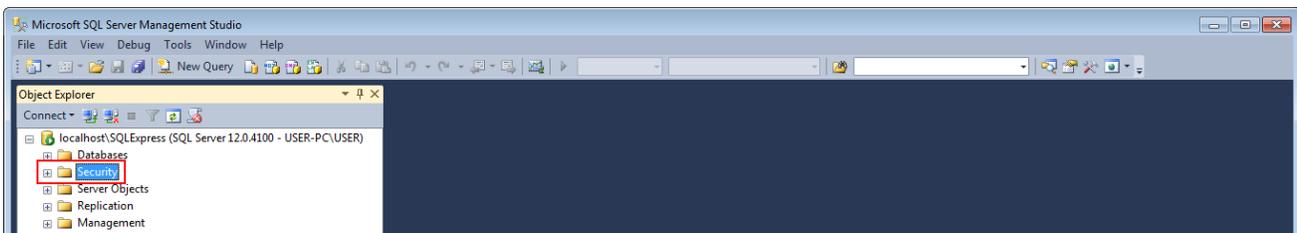


Figure 23 – Security Node

2. Right-click **Logins** then click **New Login**.

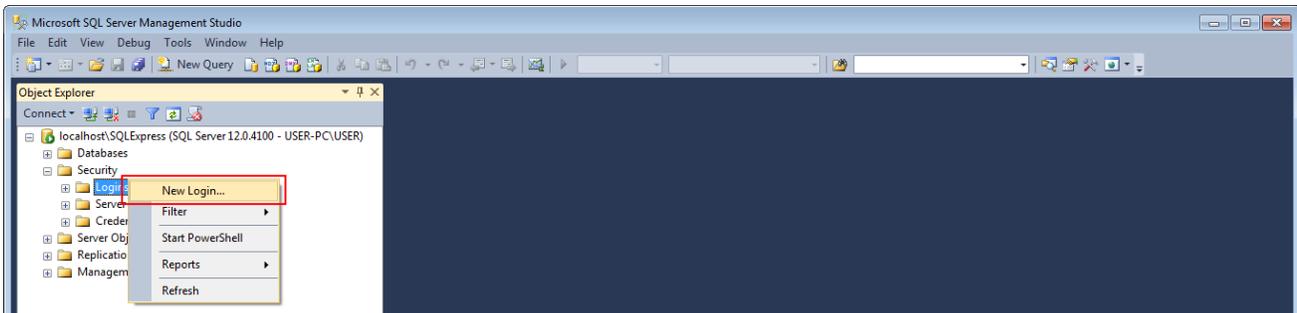


Figure 24 – New Login Creation

3. In the **Login name** field of the **Login** window, enter login name.

The screenshot shows the 'Login - New' dialog box. The 'Login name' field is highlighted with a red rectangle. The dialog is configured for Windows authentication. The 'Connection' section shows the server as 'localhost\SQLEXPRESS' and the connection as 'USER-PC\USER'. The 'Progress' section shows 'Ready'. The 'Default database' is set to 'master' and the 'Default language' is '<default>'. Buttons for 'OK' and 'Cancel' are at the bottom.

Figure 25 – Entering Login Name

NOTE

The login name consists of domain name and user name. For example, "DOMAIN\User".

4. In the **Select a page** pane of the **Login** window, click **Server Roles**.

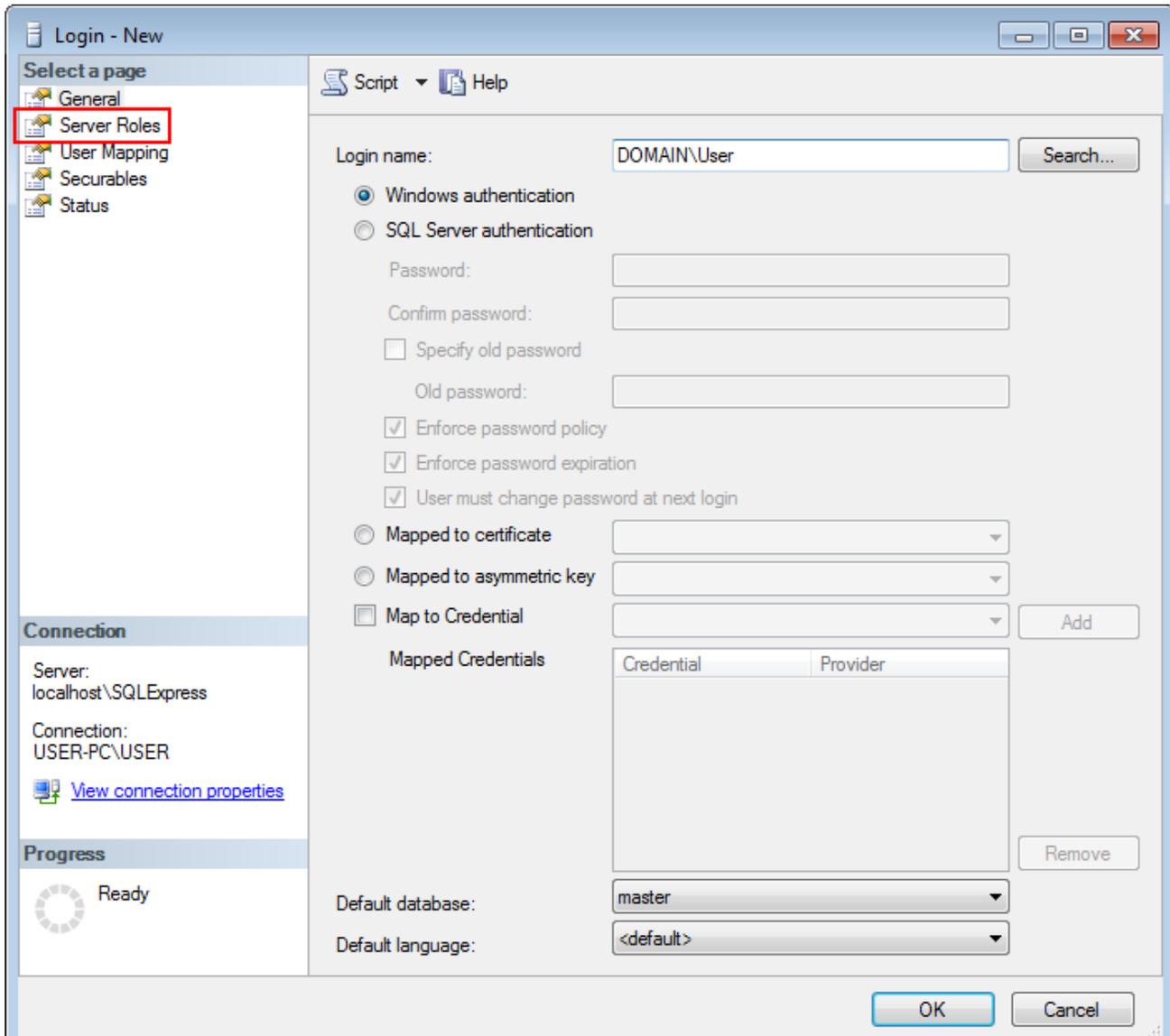


Figure 26 – Selecting Server Roles

5. In the right pane of the **Login** window, select **sysadmin** and click **OK**.

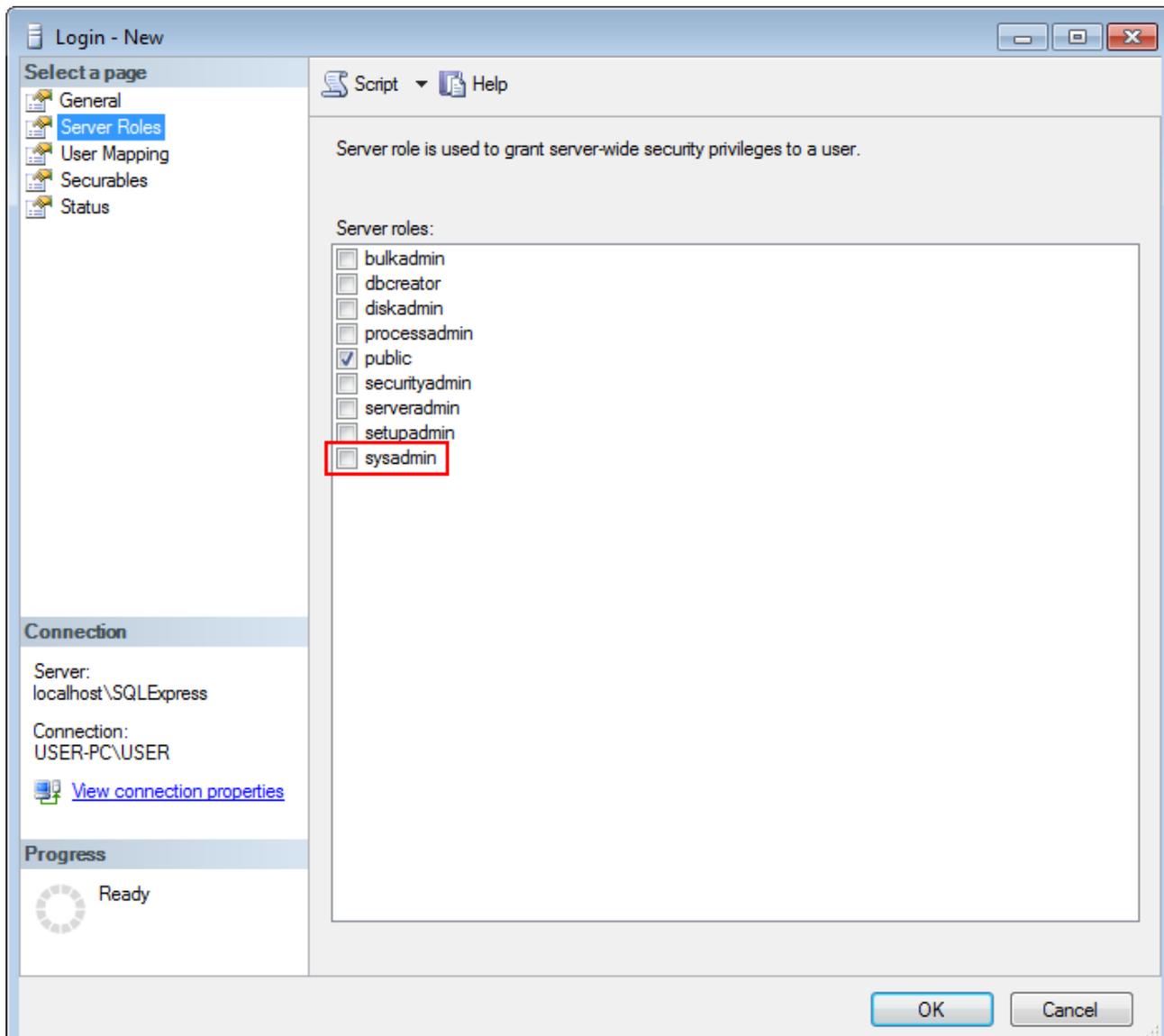


Figure 27 – Sysadmin Security Privelege

6. Close **SQL Server Management Studio**.

Adding Windows login complete.

6 Adding SQL Server Login

This topic is alternative to the [“Adding Windows Login”](#)⁽¹⁹⁾.

To connect to a remote database using the [SQL Server authorization](#)⁽⁴⁰⁾ mode, SQL login access should be configured. This is a universal method of the remote database access.

To add a SQL Server login to the SQL Server, perform the following actions:

1. In the **Object Explorer** window, expand **<Your Server Name>** → **Security**.

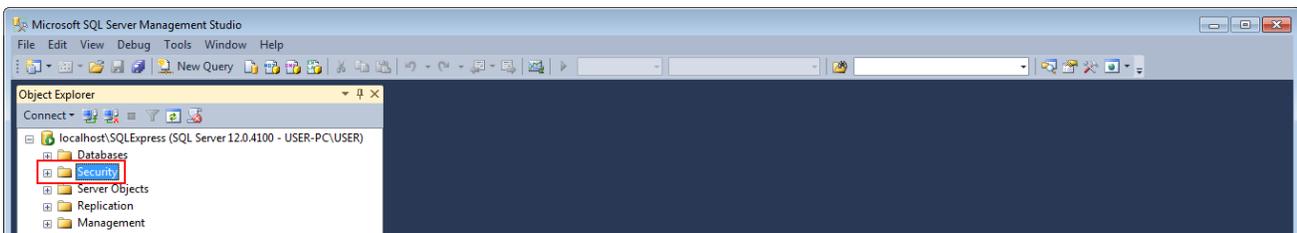


Figure 28 – Security Node

2. Right-click **Logins** and click **New Login**.

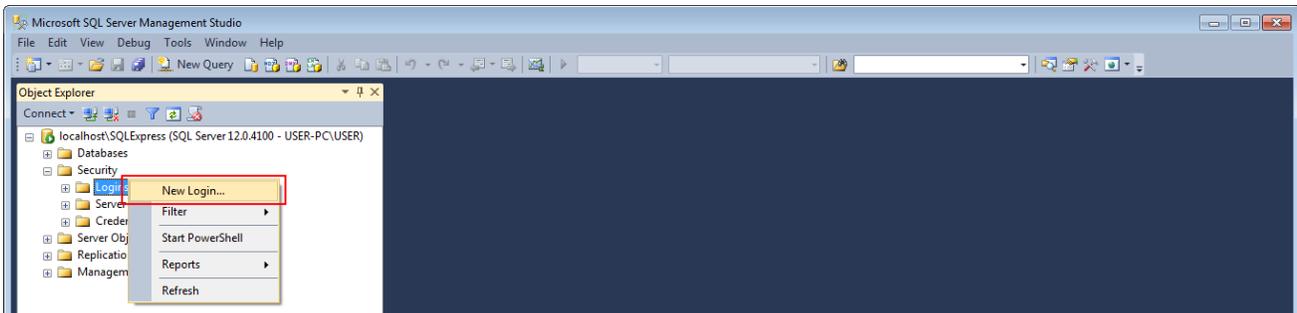


Figure 29 – New Login

3. In the right pane of the **Login** window, enter **Login name**.

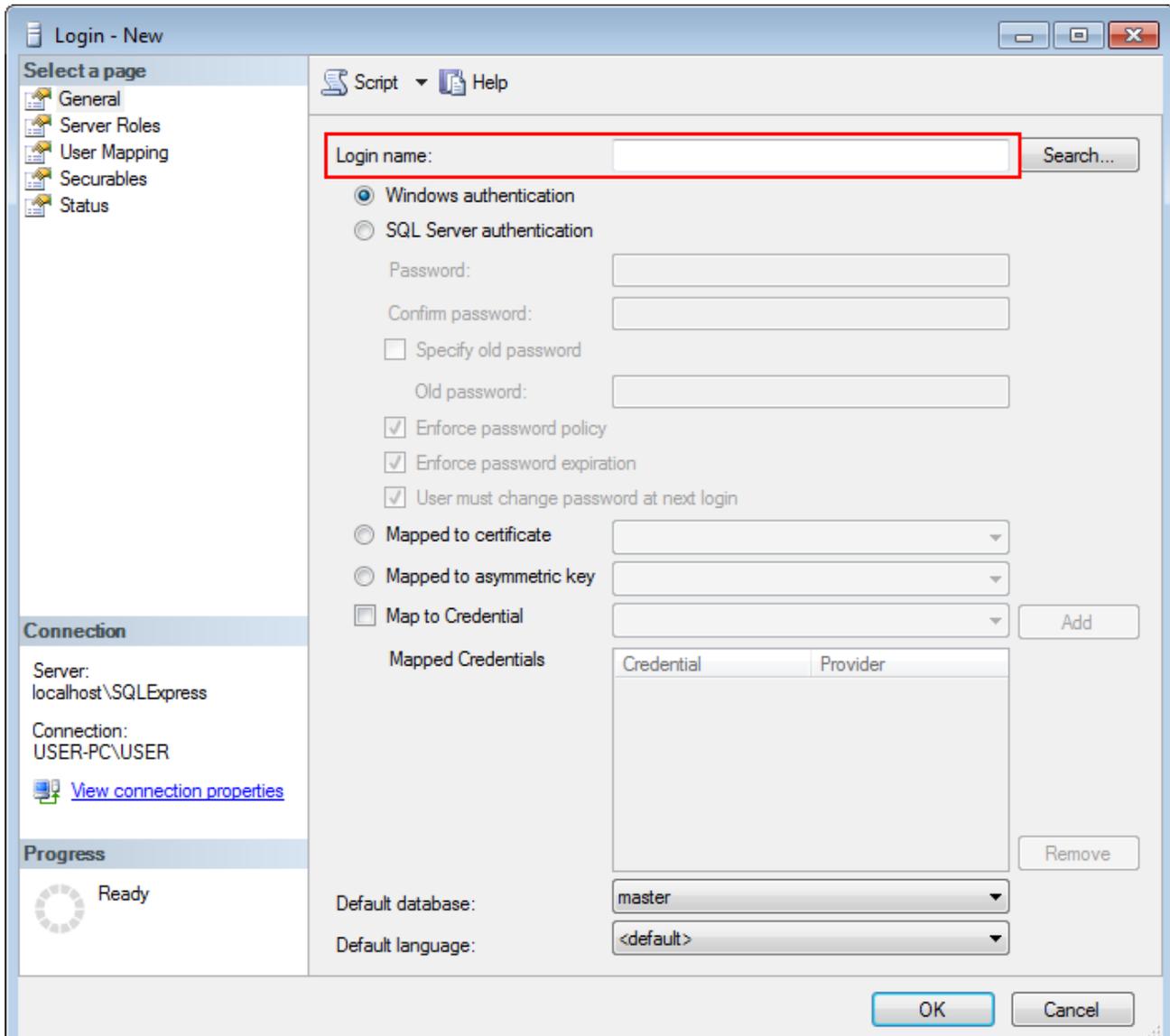


Figure 30 – Entering Login Name

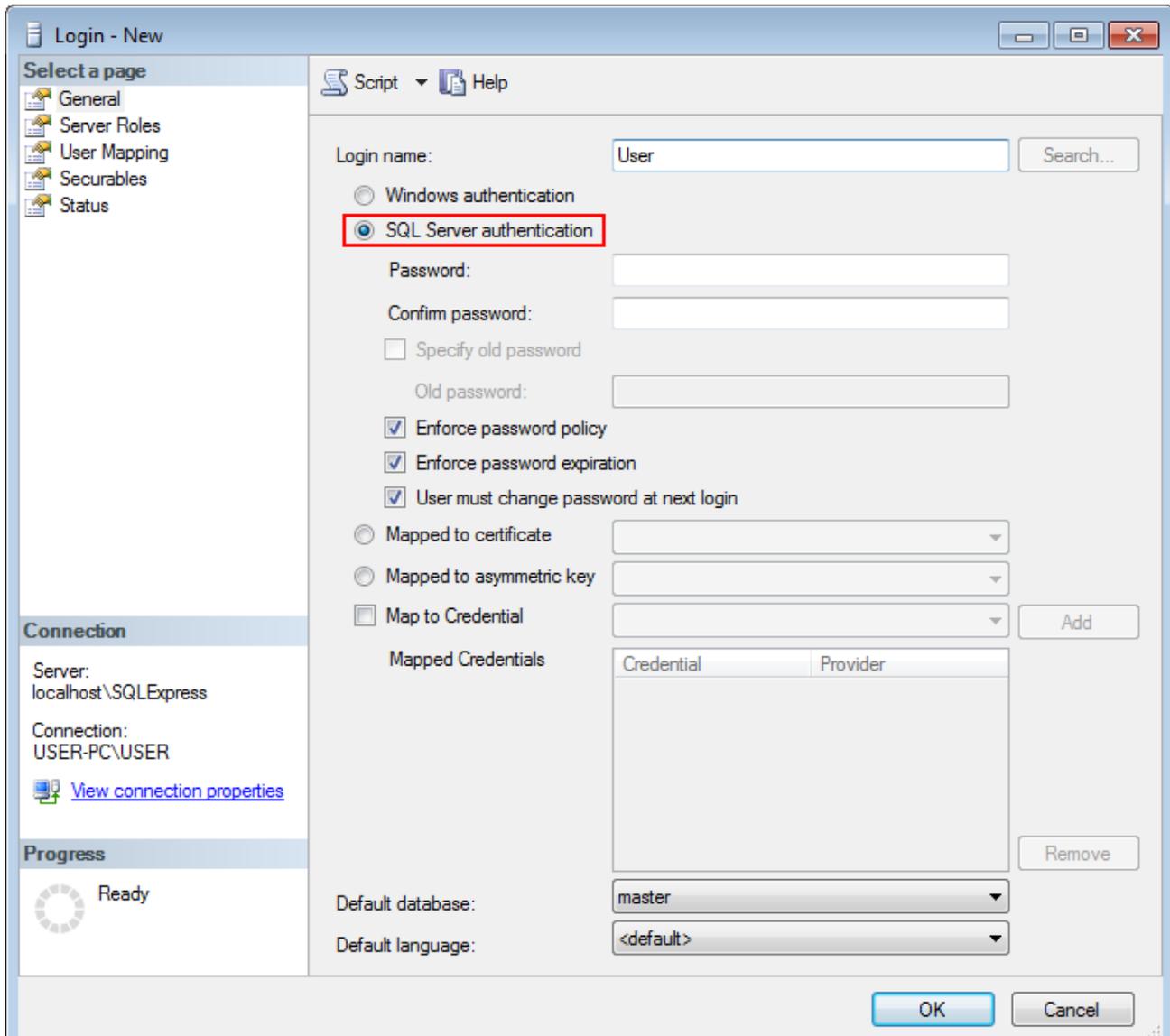
4. Click **SQL server authentication**.

Figure 31 – SQL Server Authentication

5. Enter and confirm the password.

The screenshot shows the 'Login - New' dialog box in SQL Server Enterprise Manager. The 'SQL Server authentication' radio button is selected. The 'Password' and 'Confirm password' fields are highlighted with a red box. The 'Login name' field contains 'User'. The 'Default database' is set to 'master' and the 'Default language' is '<default>'. The 'Connection' section shows 'Server: localhost\SQLEXPRESS' and 'Connection: USER-PC\USER'. The 'Progress' section shows a 'Ready' status.

Credential	Provider
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Figure 32 – Password Fields

6. Clear **User must change the password at next login** to keep user password.

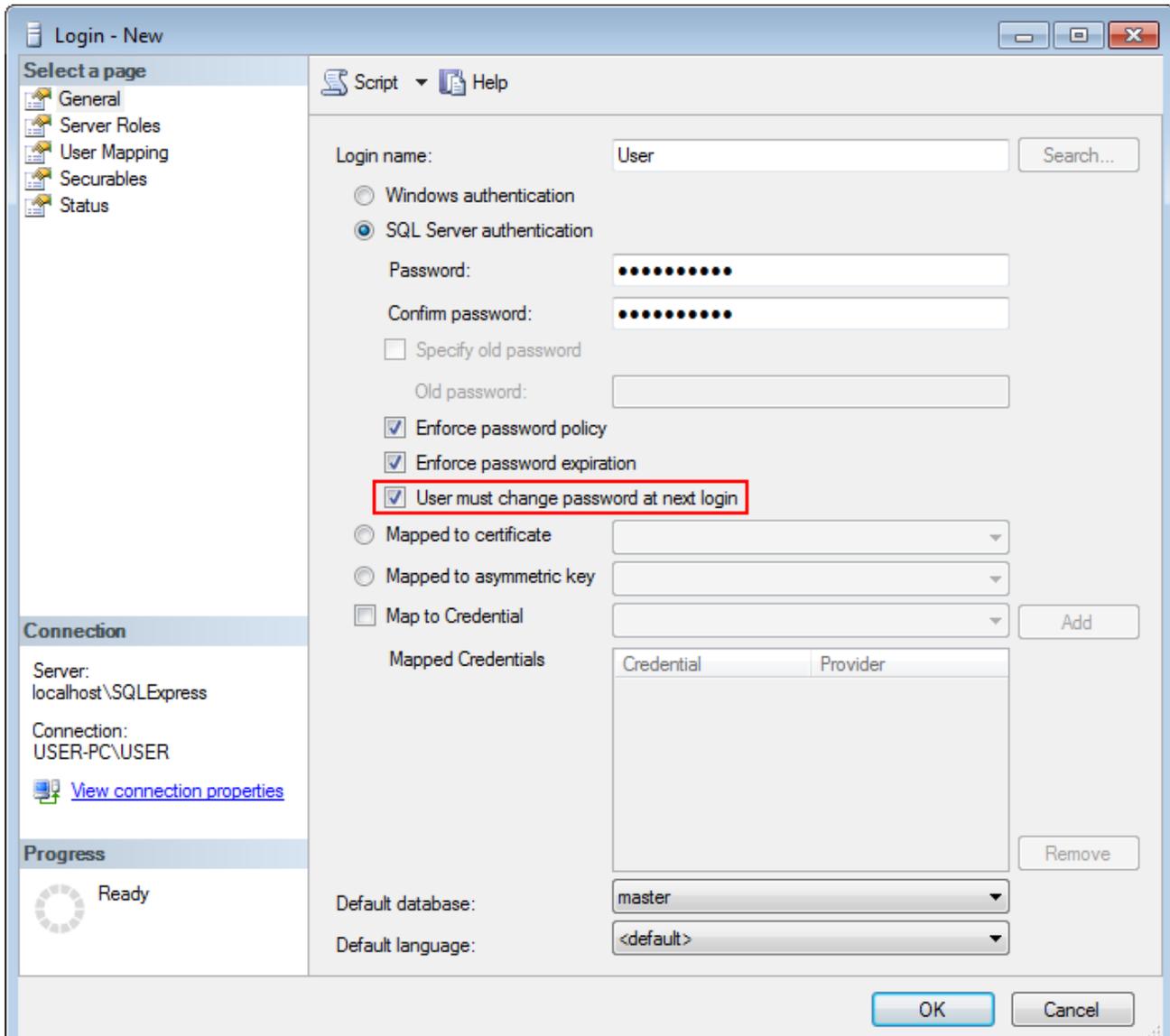


Figure 33 – Option for Password Keeping

7. In the left **Select a page** pane of the **Login** window, click **Server Roles**.

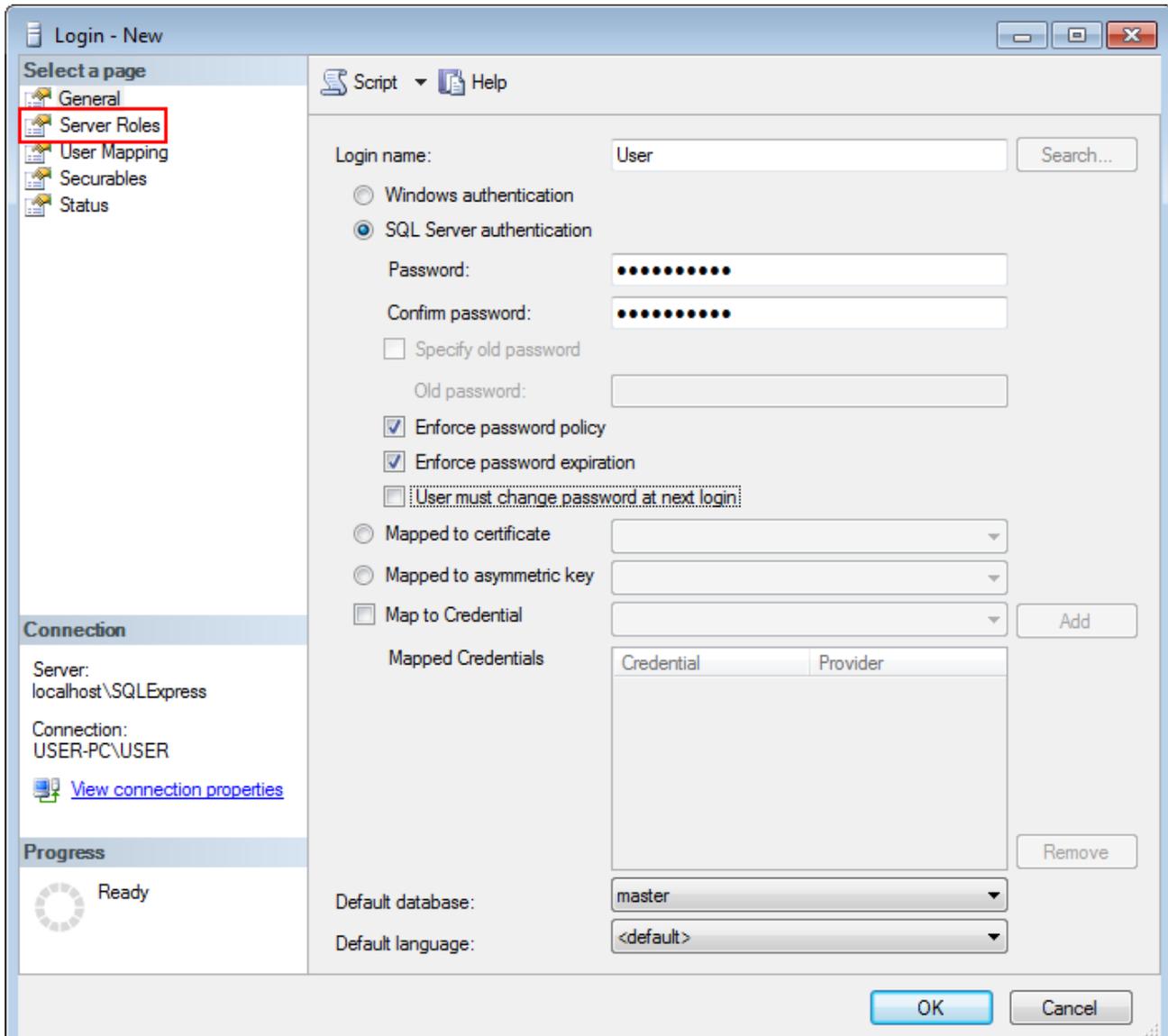


Figure 34 – Selecting Server Roles

- In the right pane of the **Login** window, select **sysadmin** and click **OK**.

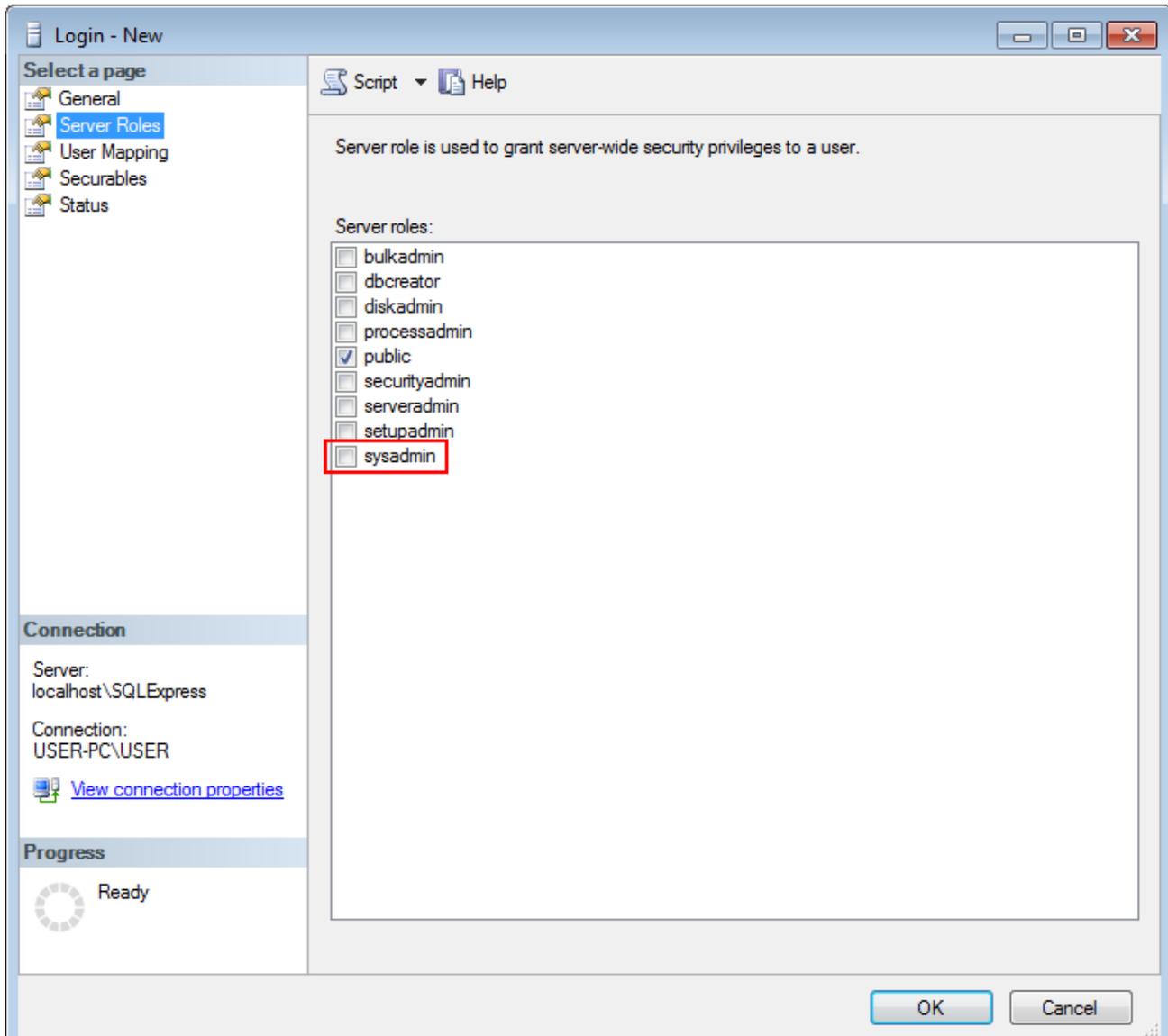


Figure 35 – Sysadmin Security Privelege

- Close **SQL Management Studio**.

Adding SQL Server login complete.

7 Creating Firewall Rules

You should allow the connection to the following ports of the remote and your computers:

- port 1433, TCP protocol,
- port 1434, UDP protocol.

The following instruction describes Windows Firewall configuration. If you are using other firewall software, please refer to the corresponding user guides.

To create Rules for TCP/UDP ports in the Windows Firewall, perform the following actions:

1. Open **Windows Firewall**.
2. Click **Advanced Settings**.



Figure 36 – Advanced Settings

3. Enter administrator password if required.

- In the left pane of the **Windows Firewall with Advanced Security** window, select the needed group of rules:

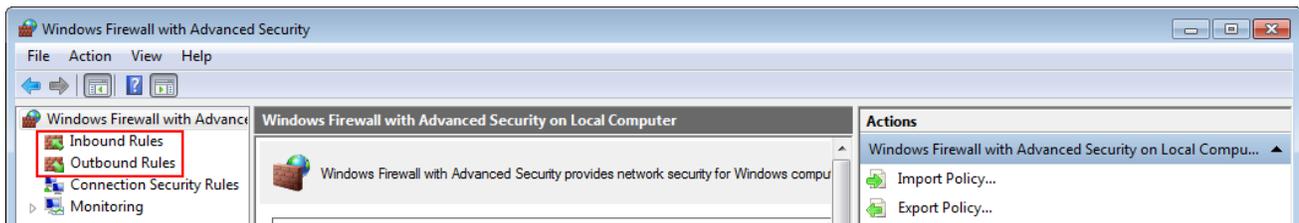


Figure 37 – Selecting Needed Group of Rules

- **Inbound Rules:** Should be created on the remote computer,
- **Outbound Rules:** Should be created on your computer.

NOTE

Creating and configuring rules are identical for both Inbound Rules and Outbound Rules. The following steps are presented for Inbound Rule.

- In the right pane of the **Windows Firewall with Advanced Security** window, click **New Rule...**

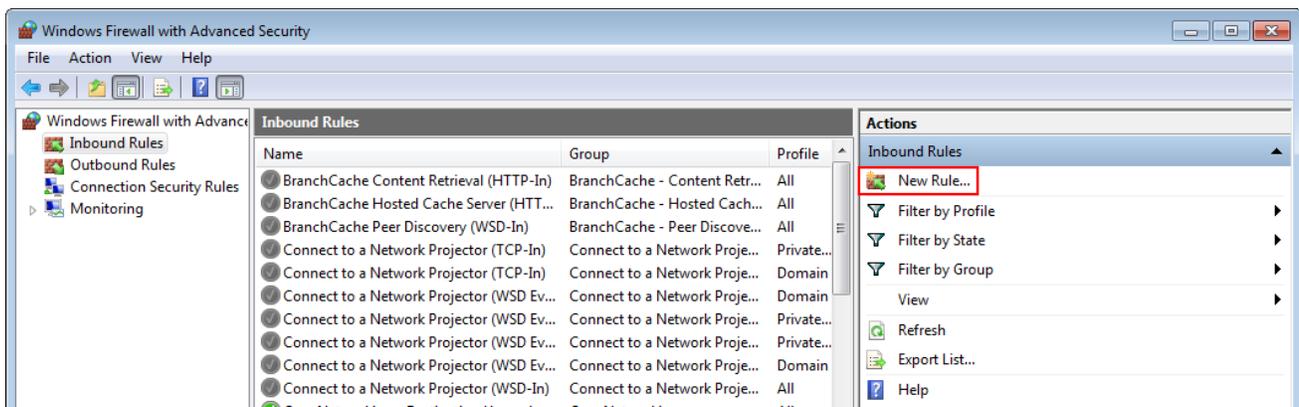


Figure 38 – Creating New Rule

- In the right pane of the **New Inbound Rule Wizard** or **New Outbound Rule Wizard window** (if you create rules on your computer), click **Port** and then click **Next**.

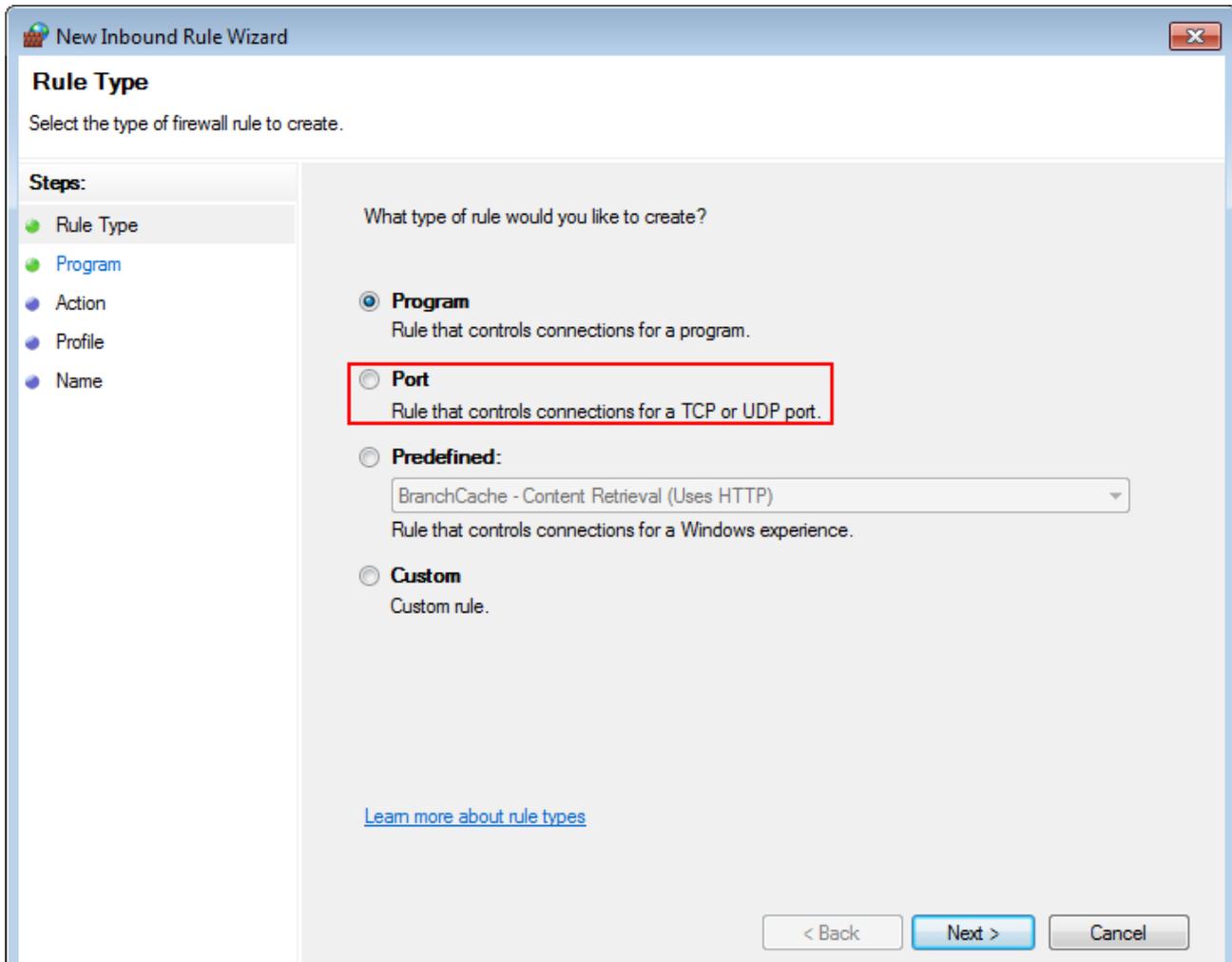


Figure 39 – Rule Type

7. Click **TCP** and then click **Next**.

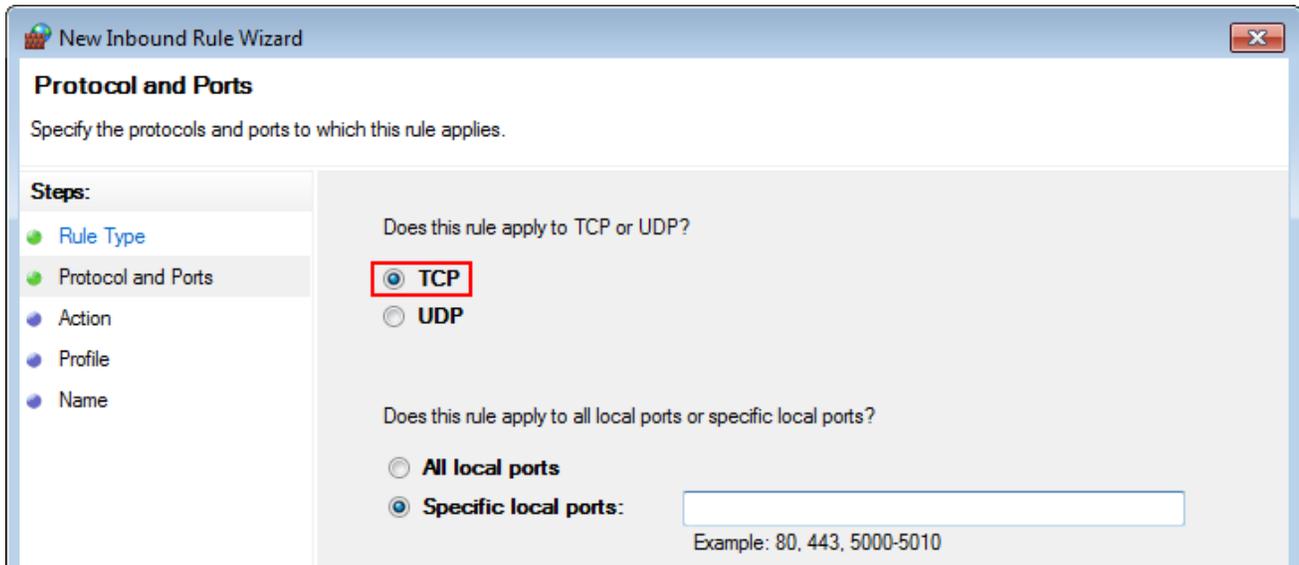


Figure 40 – Port Type

8. In the **Specific local ports** field, enter **1433** and click **Next**.

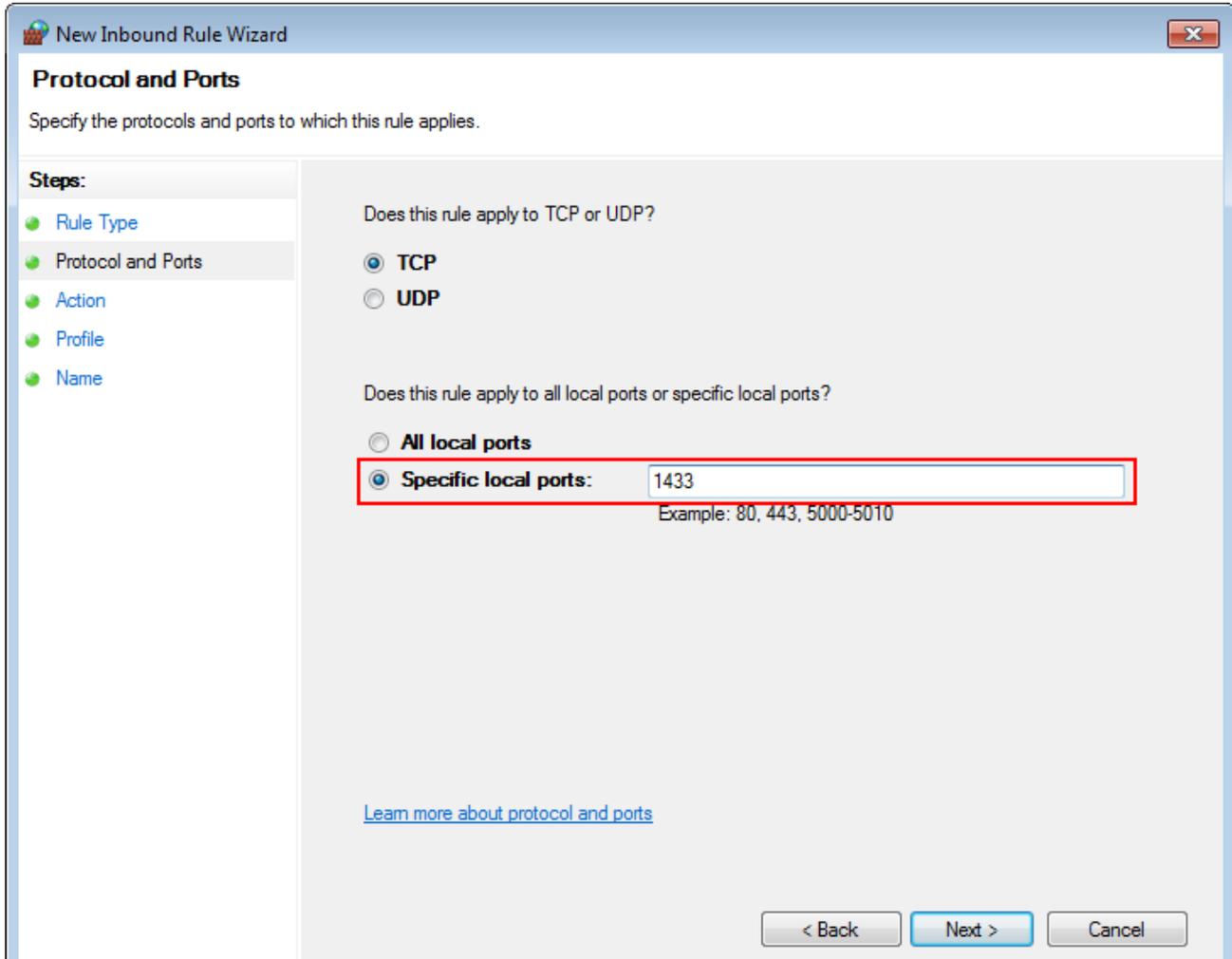


Figure 41 – Entering Port Number

9. Click **Allow the connection** and then click **Next**.

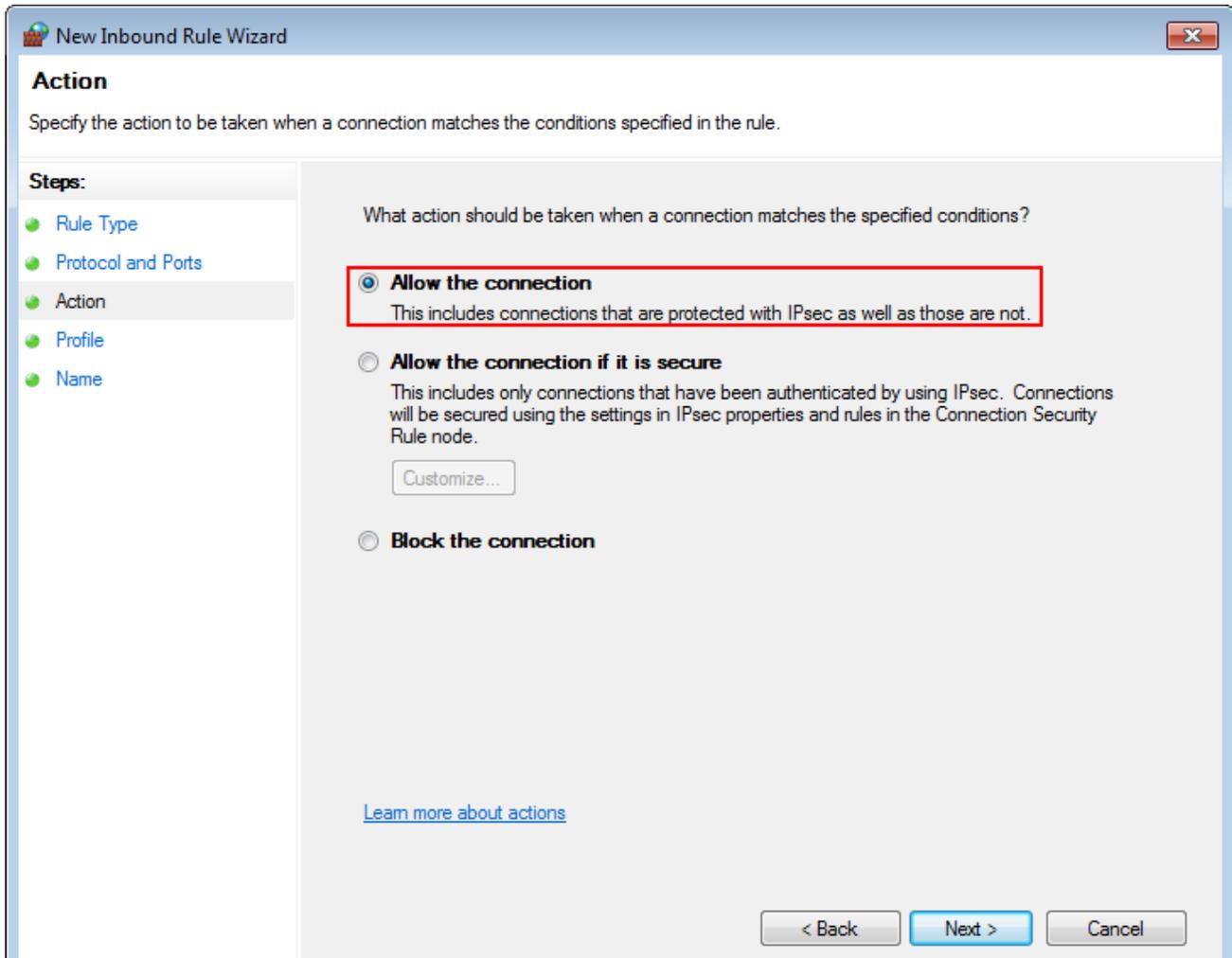


Figure 42 – Selecting Action

10. Select the needed profiles according to their description and click **Next**.

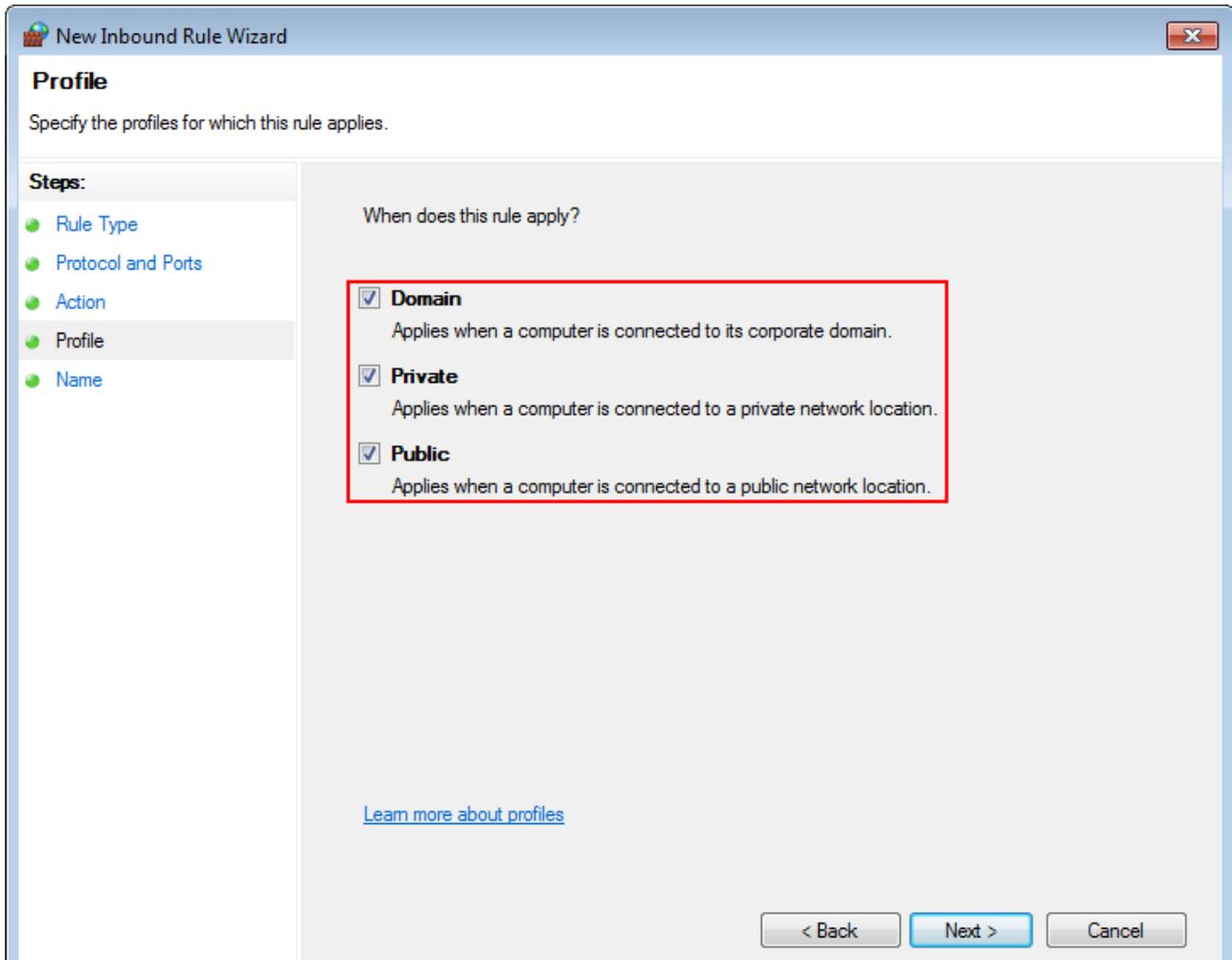


Figure 43 – Selecting Profile

11. In the **Name** field, enter the name of the rule and click **Finish**.

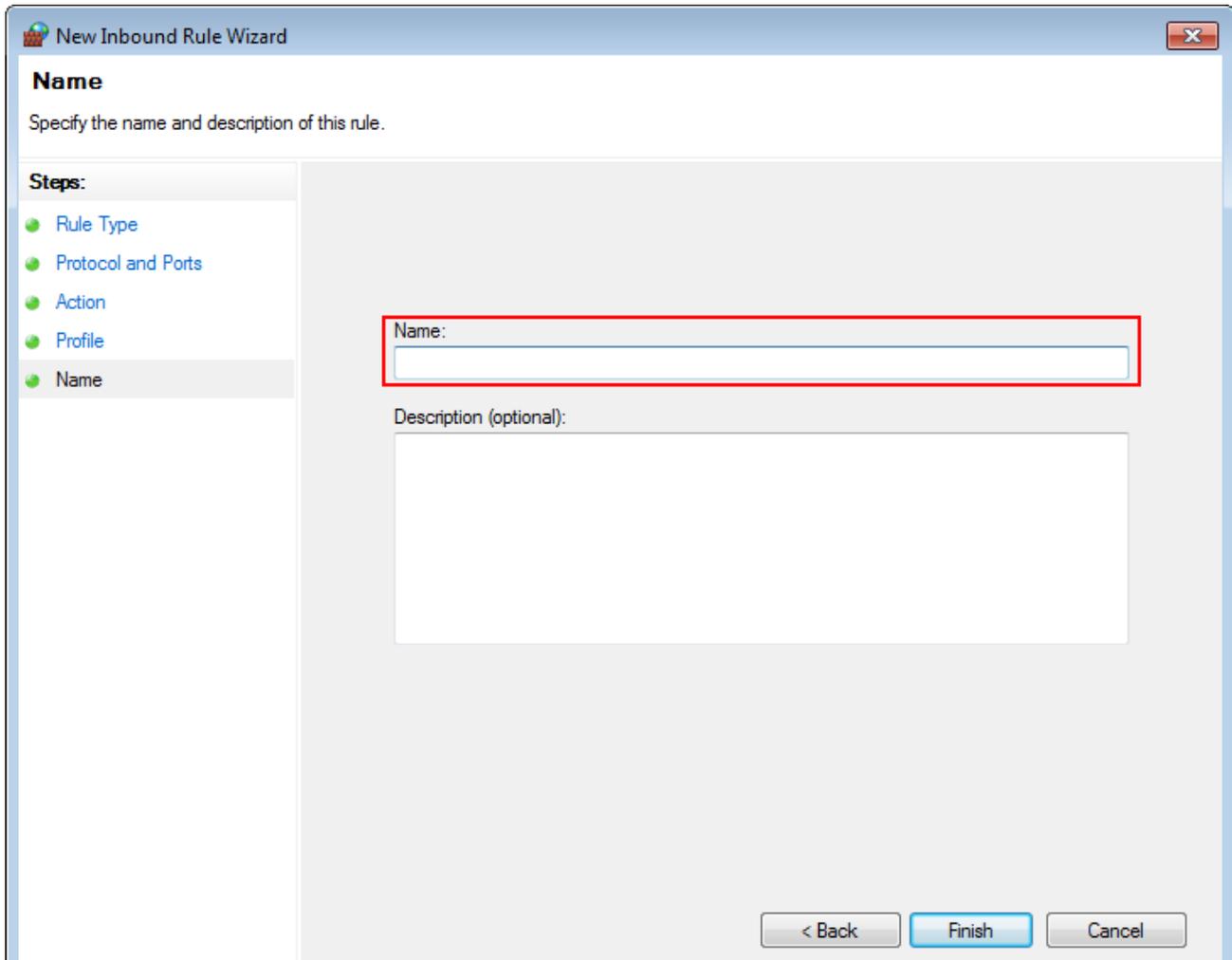


Figure 44 – Name Entering

12. Repeat step 6 to step 12 for 1434 port (UDP protocol).

Creation of firewall rules complete.

8 Connecting Remote Database

To connect to a remote SmartPTT Dispatcher database, perform the following actions:

1. If you are not started SmartPTT Dispatcher for the first time, click **Settings**  and then click **Database**.
2. In the **Database server name** field of the **Database** window, enter the name of the remote SQL Server using the following format: **<IP address of a remote computer>\<Name of a remote SQL server>**.

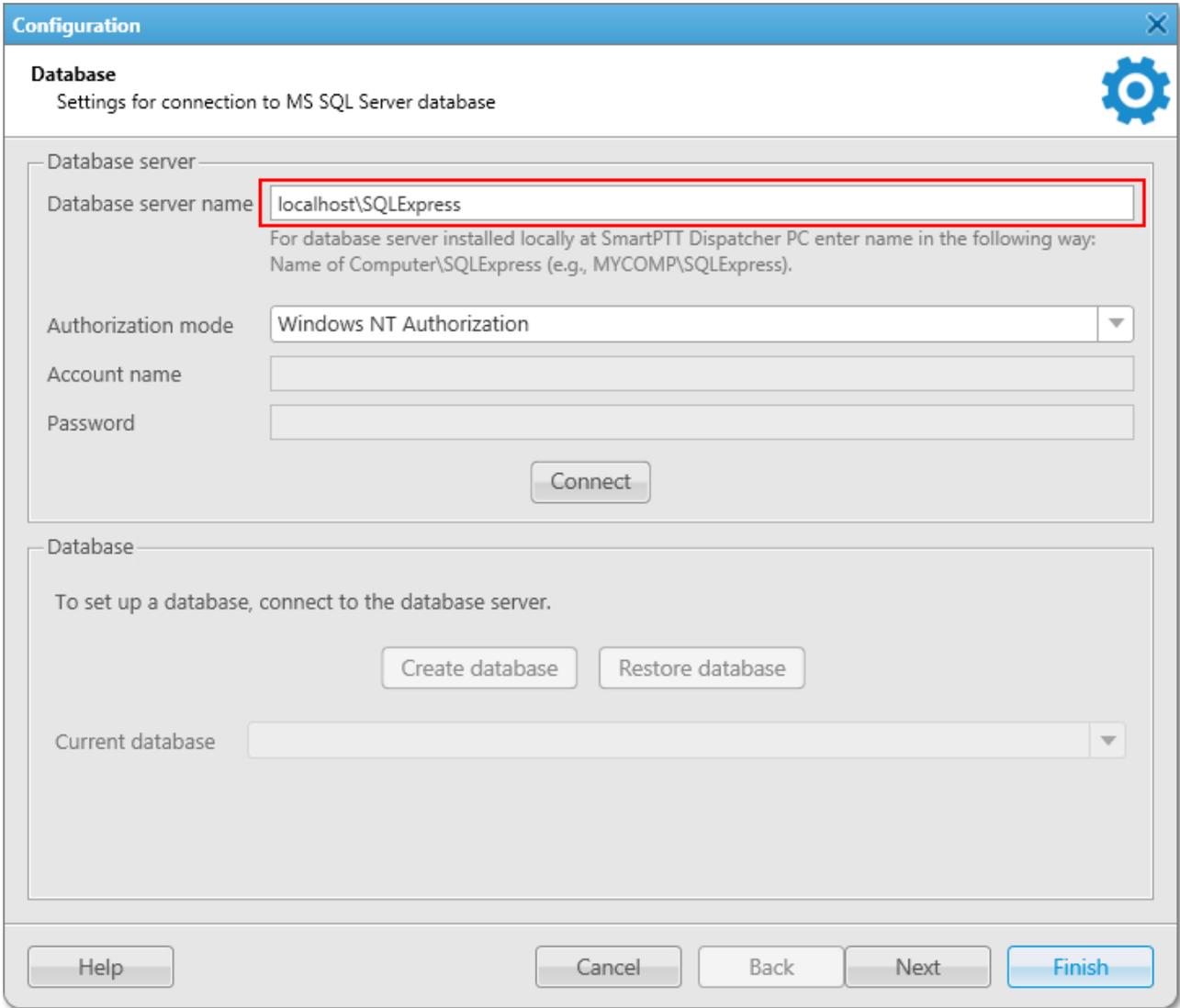


Figure 45 – Local SQL Server Name

- In the **Authorization Mode** list, click the needed authorization type and then click **Connect**:

Configuration

Database
Settings for connection to MS SQL Server database

Database server

Database server name: 192.0.2.0\SQLExpress
For database server installed locally at SmartPTT Dispatcher PC enter name in the following way:
Name of Computer\SQLExpress (e.g., MYCOMP\SQLExpress).

Authorization mode: Windows NT Authorization (selected)

Account name: Windows NT Authorization

Password: SQL Server Authorization

Connect

Database

To set up a database, connect to the database server.

Create database Restore database

Current database

Help Cancel Back Next Finish

Figure 46 – Authorization Mode

- Windows NT Authorization:** Select to use your Windows login for connecting to a remote SQL Server from the same domain or if [Windows login is added](#)⁽¹⁹⁾.
- SQL Server Authorization:** Select to use remote SQL Server login if [SQL Server login is added](#)⁽²³⁾.

- If **SQL Server Authorization** is selected, enter login and password and then click **Connect**.

The screenshot shows a 'Configuration' dialog box with a blue title bar and a close button. The main title is 'Database' with a subtitle 'Settings for connection to MS SQL Server database' and a gear icon. The 'Database server' section contains a text box for 'Database server name' with the value '192.0.2.0\SQLExpress'. Below it is a note: 'For database server installed locally at SmartPTT Dispatcher PC enter name in the following way: Name of Computer\SQLExpress (e.g., MYCOMP\SQLExpress)'. The 'Authorization mode' is set to 'SQL Server Authorization' in a dropdown menu. The 'Account name' is 'User' and the 'Password' is '*****', both fields are highlighted with a red border. A 'Connect' button is located below these fields. The 'Database' section below has the text 'To set up a database, connect to the database server.' and two buttons: 'Create database' and 'Restore database'. At the bottom, there is a 'Current database' dropdown menu. The footer contains 'Help', 'Cancel', 'Back', 'Next', and 'Finish' buttons.

Figure 47 – Login and Password of SQL Server Login

- From the **Current database** list select the needed remote database.

Configuration

Database
Settings for connection to MS SQL Server database

Database server

Database server name: 192.0.2.0\SQLExpress
For database server installed locally at SmartPTT Dispatcher PC enter name in the following way:
Name of Computer\SQLExpress (e.g., MYCOMP\SQLExpress).

Authorization mode: SQL Server Authorization

Account name: User

Password: *****

Connect

Database

Connection to the database server is established.

Create database Restore database

Current database

Help Cancel Back Next Finish

Figure 48 – Selecting Remote Database

- Click **Finish** to connect to the database.

7. If the **Warning** window appears, click **OK** and restart the SmartPTT Dispatcher.

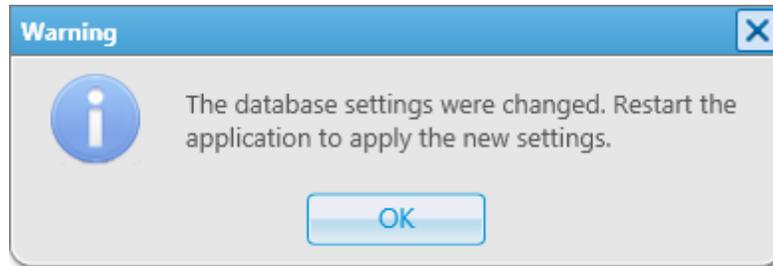


Figure 49 - Warning Window

Connection to the remote SmartPTT Dispatcher database complete.

