

# Open Ports on a SQL

August 22, 2013

# Open Ports on SQL Server 2012

We will want to open the following TCP inbound and outbound ports on the SQL server.

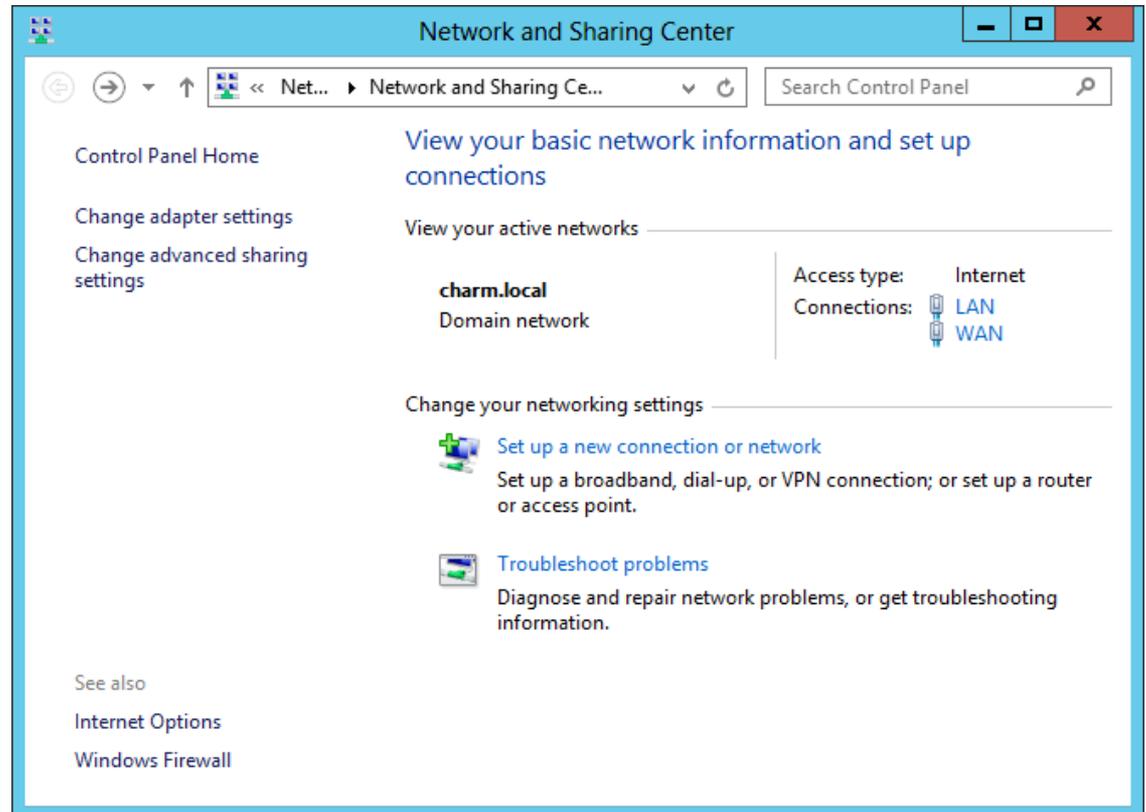
TCP Ports 80, 135, 443, 1433, 1434, 2382, 2383 and 4022 will need to be opened.

We will want to open the UDP inbound and outbound 1434 port on the SQL server.



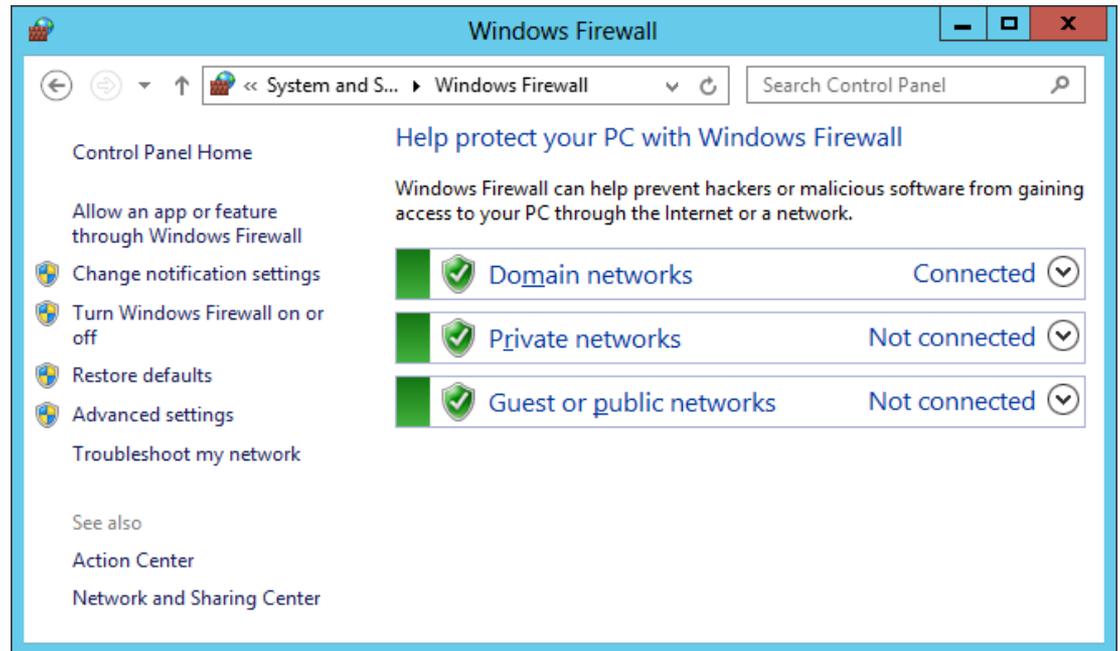
# Network and Sharing Center

Open the Network and Sharing Center window and click on the Windows Firewall hyperlink.



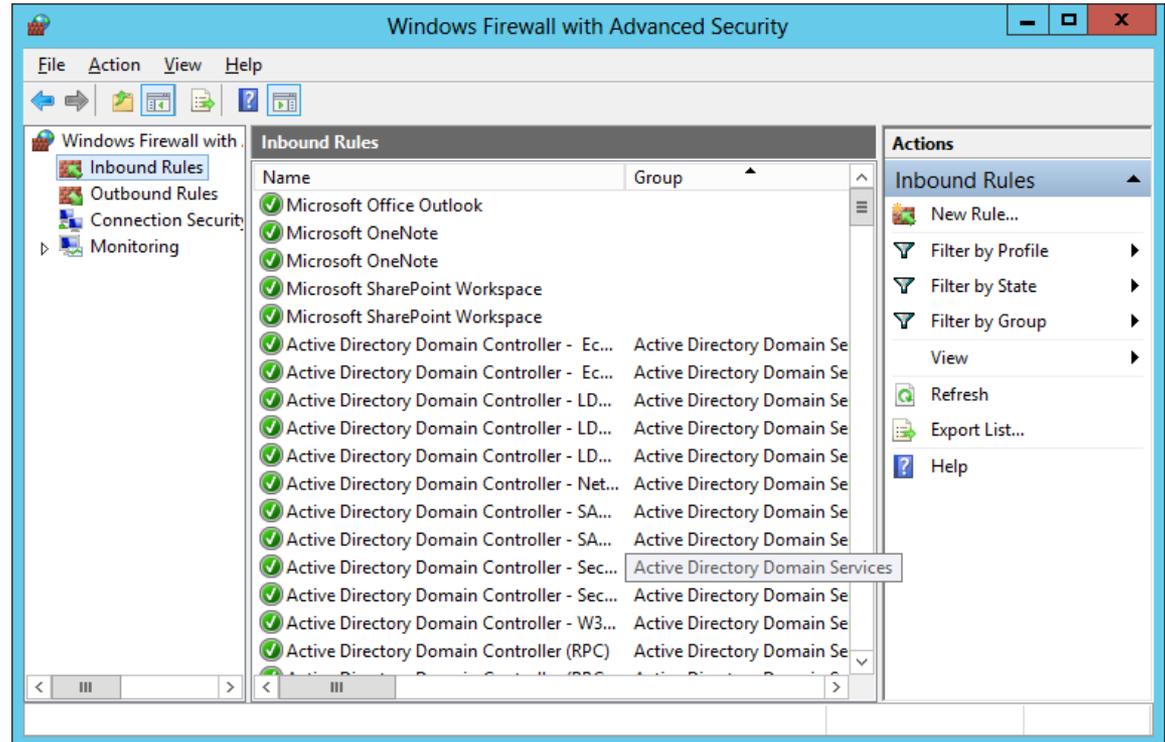
# Windows Firewall

On the Windows Firewall window, we select the Advance Settings hyperlink.



# Windows Firewall with Advanced Security

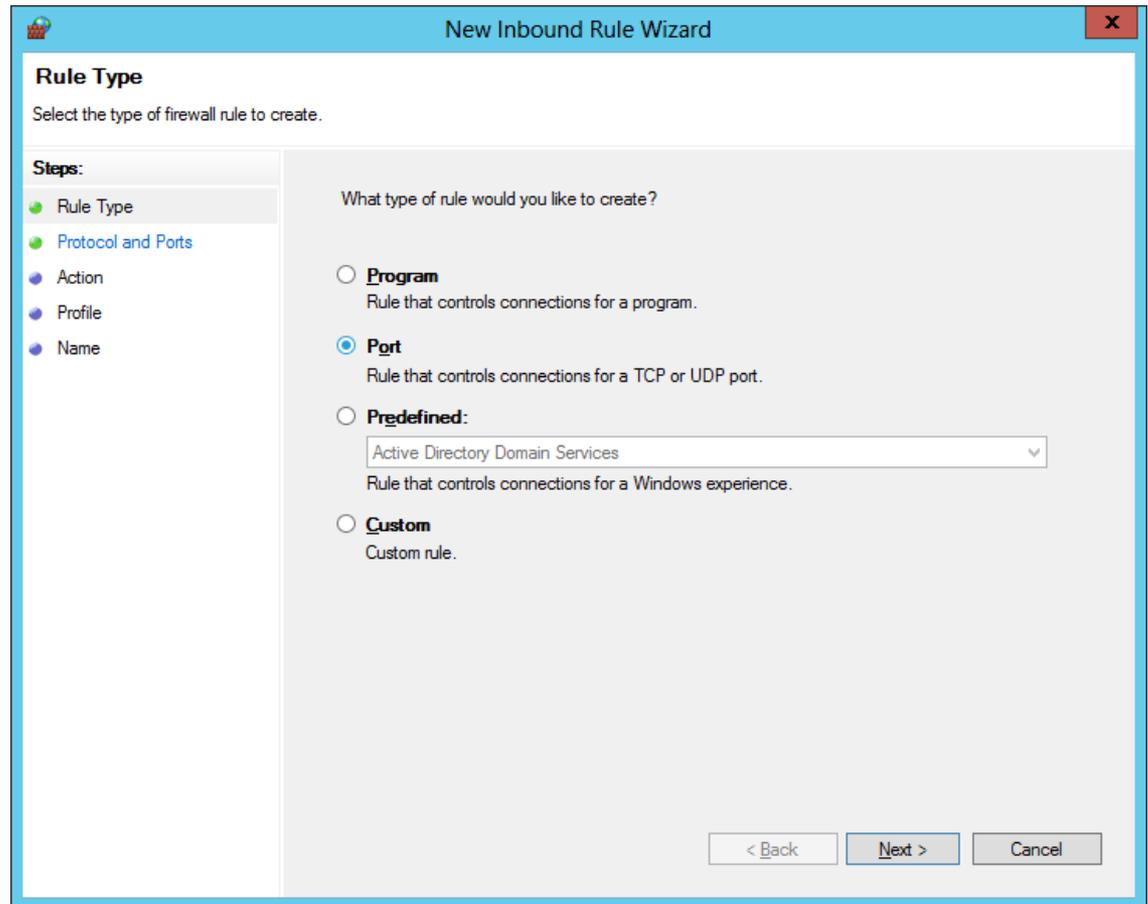
Then we highlight the Inbound Rule text in the left pane and we will see the New Rule link in the far right pane. Click on the New Rule hyperlink.



# New Inbound Rule Wizard

On the New Inbound Rule Wizard, we opt for Port so we can open the TCP ports.

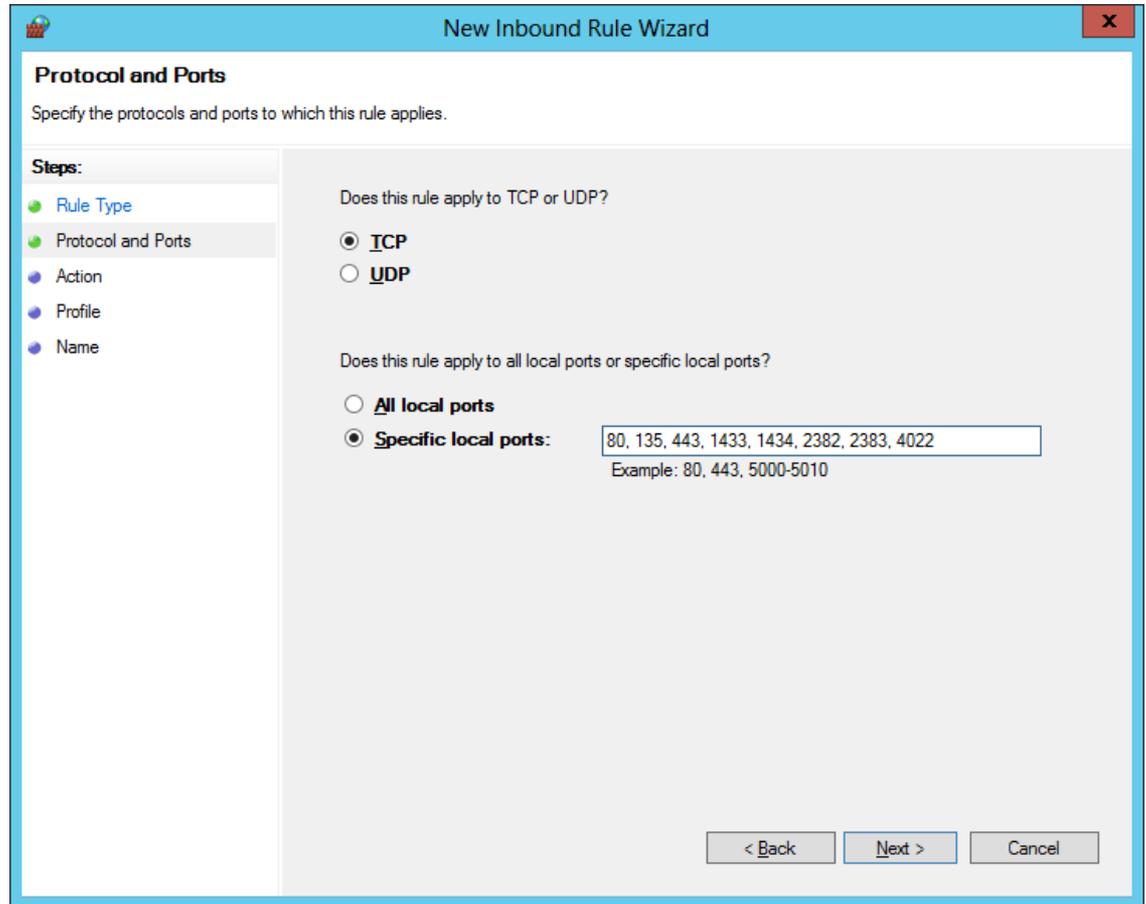
Then we choose the Next command button.



# Specify TCP Ports

Next, we select the TCP option button and then we specify the ports 80, 135, 443, 1433, 1434, 2382, 2383, 4022 as shown in the image. We place a comma between each port number.

Press the Next button to advance.

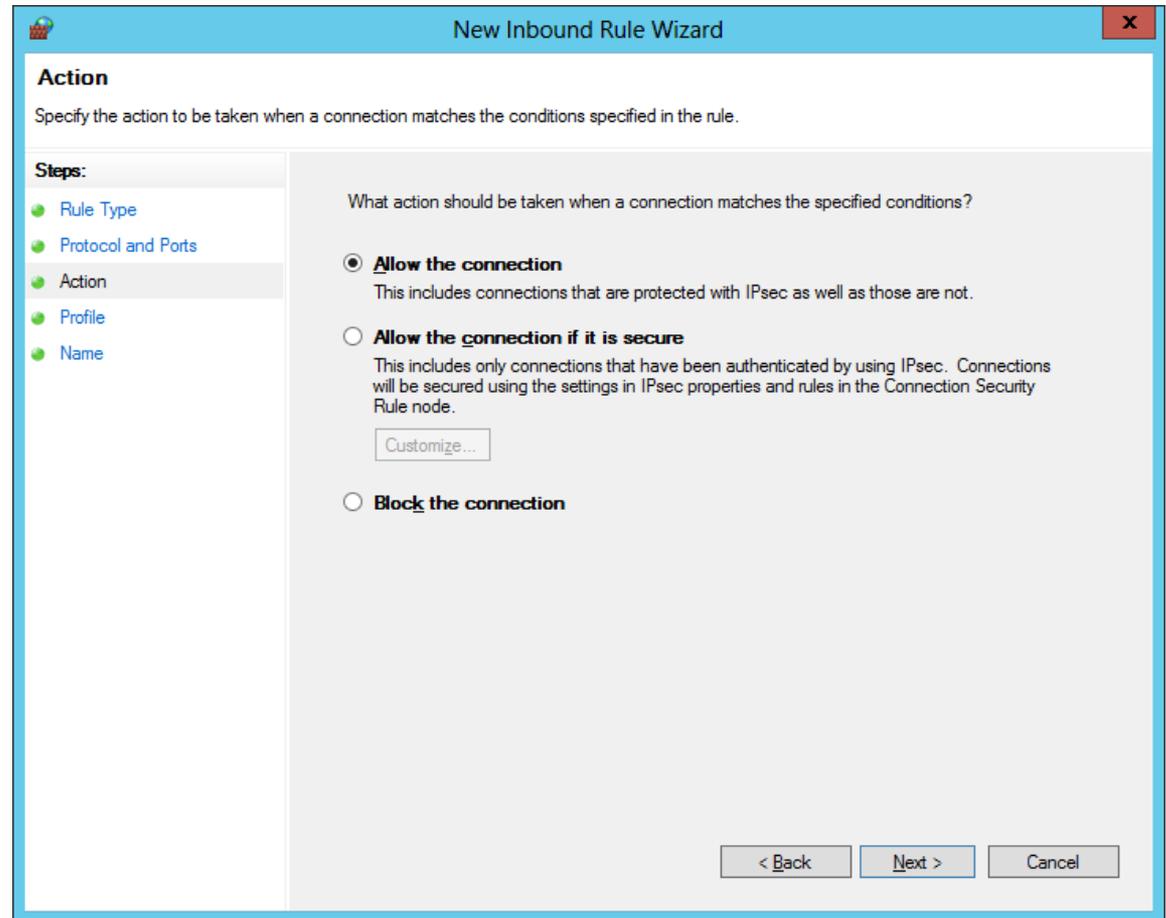


The screenshot shows the 'New Inbound Rule Wizard' dialog box, specifically the 'Protocol and Ports' step. The title bar reads 'New Inbound Rule Wizard' with a close button (X) in the top right corner. The main heading is 'Protocol and Ports' with the instruction 'Specify the protocols and ports to which this rule applies.' On the left, a 'Steps:' list shows 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name', with 'Protocol and Ports' selected. The main area contains two questions: 'Does this rule apply to TCP or UDP?' with radio buttons for 'TCP' (selected) and 'UDP'; and 'Does this rule apply to all local ports or specific local ports?' with radio buttons for 'All local ports' and 'Specific local ports:' (selected). The 'Specific local ports:' option has a text input field containing '80, 135, 443, 1433, 1434, 2382, 2383, 4022' and an example below it: 'Example: 80, 443, 5000-5010'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Allow the Connection

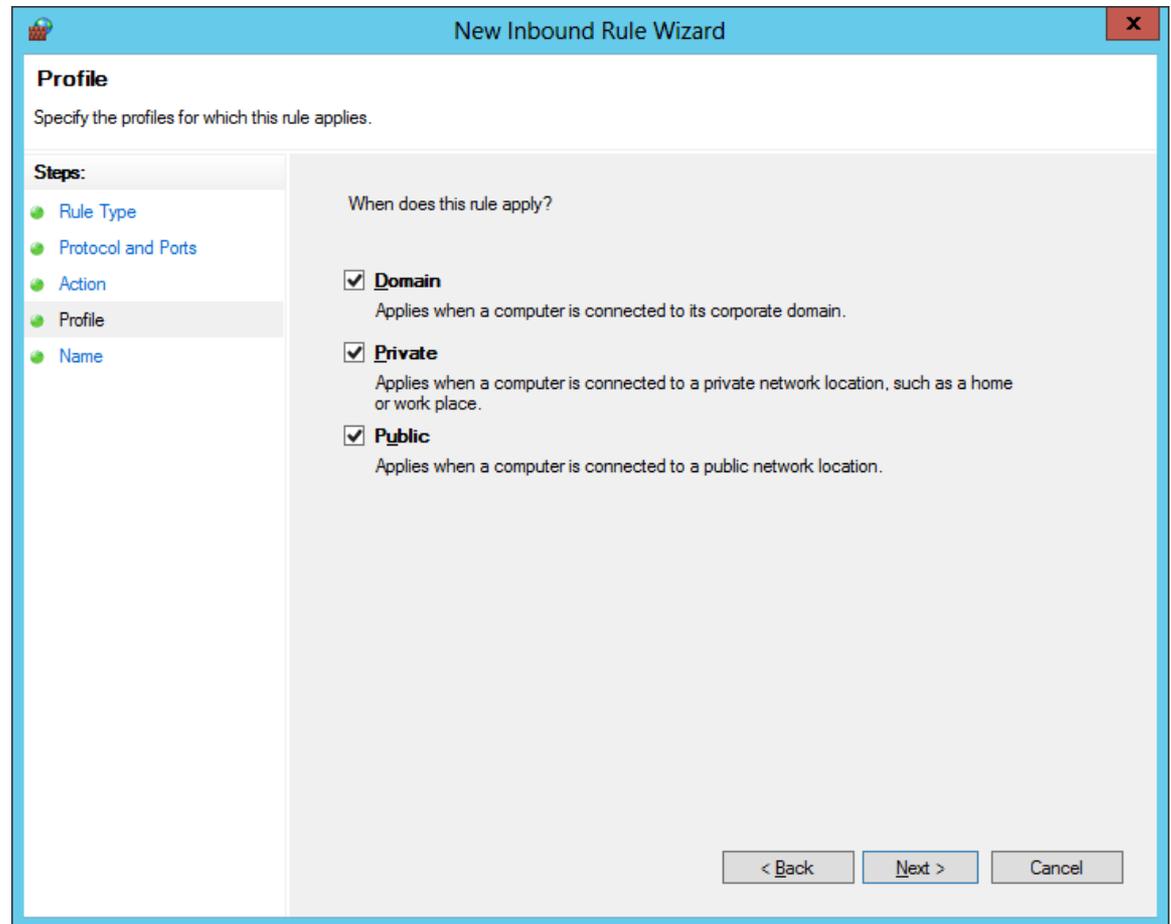
We will keep the “Allow the connection” option button selected.

Push the Next button to go on.



# Domain., Private and Public

We can see the checkboxes for Domain, Private and Public are annotated. We will except the default and we press the Next button to continue.



**New Inbound Rule Wizard**

**Profile**  
Specify the profiles for which this rule applies.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- **Profile**
- Name

When does this rule apply?

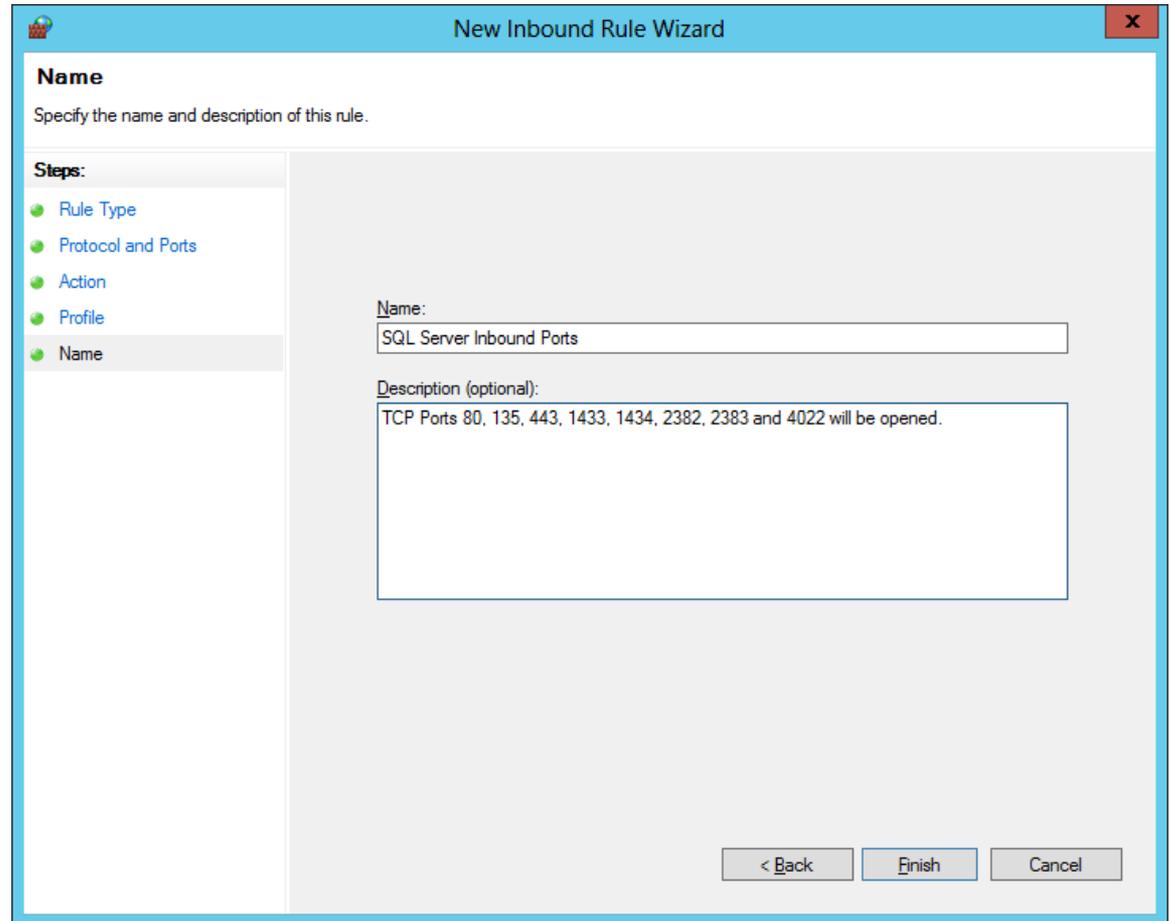
- Domain**  
Applies when a computer is connected to its corporate domain.
- Private**  
Applies when a computer is connected to a private network location, such as a home or work place.
- Public**  
Applies when a computer is connected to a public network location.

< Back   Next >   Cancel

# Name and Description

Name the rule SQL Server Inbound Ports and put the port numbers in in the description.

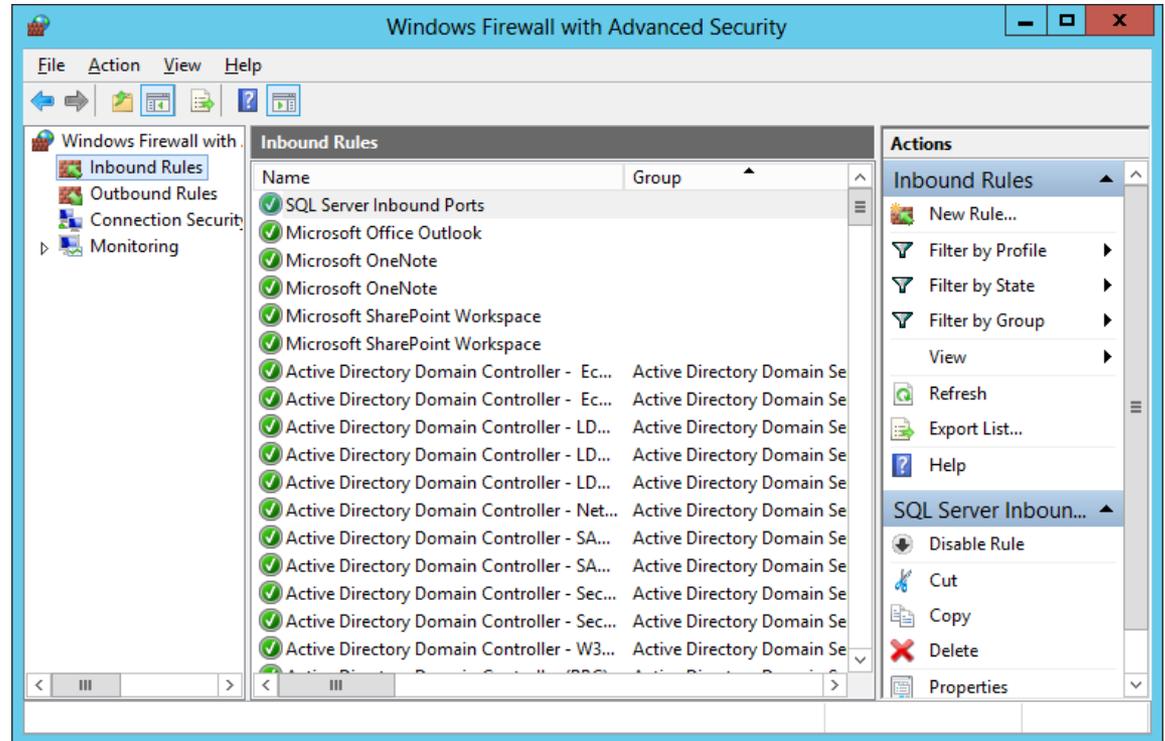
We will press the Finish button to add the rule to the inbound list.



The screenshot shows the 'New Inbound Rule Wizard' dialog box. The title bar reads 'New Inbound Rule Wizard'. The main heading is 'Name', with the instruction 'Specify the name and description of this rule.' Below this is a 'Steps:' list with five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The 'Name' step is currently selected and highlighted. The main area contains a 'Name:' label followed by a text box containing 'SQL Server Inbound Ports'. Below that is a 'Description (optional):' label followed by a text box containing 'TCP Ports 80, 135, 443, 1433, 1434, 2382, 2383 and 4022 will be opened.' At the bottom right, there are three buttons: '< Back', 'Finish', and 'Cancel'.

# New Rule Listed

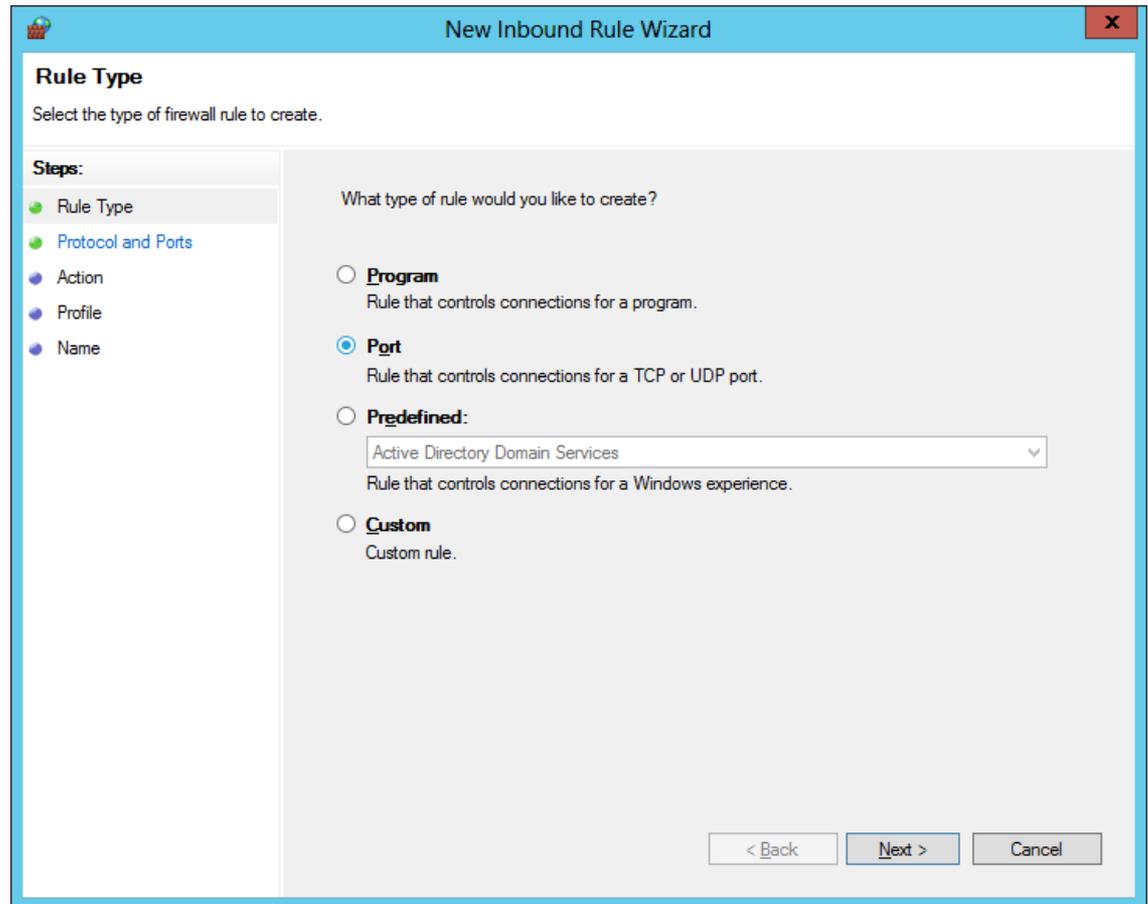
We can see our new rule at the top of the list. Now we need to open the 1434 UDP port. Highlight the Inbound Rule text in the left pane and we will see the New Rule link in the far right pane. Click on the New Rule hyperlink.



# New Inbound Rule Wizard

On the New Inbound Rule Wizard, we opt for Port so we can open the UDP ports.

Then we choose the Next command button.

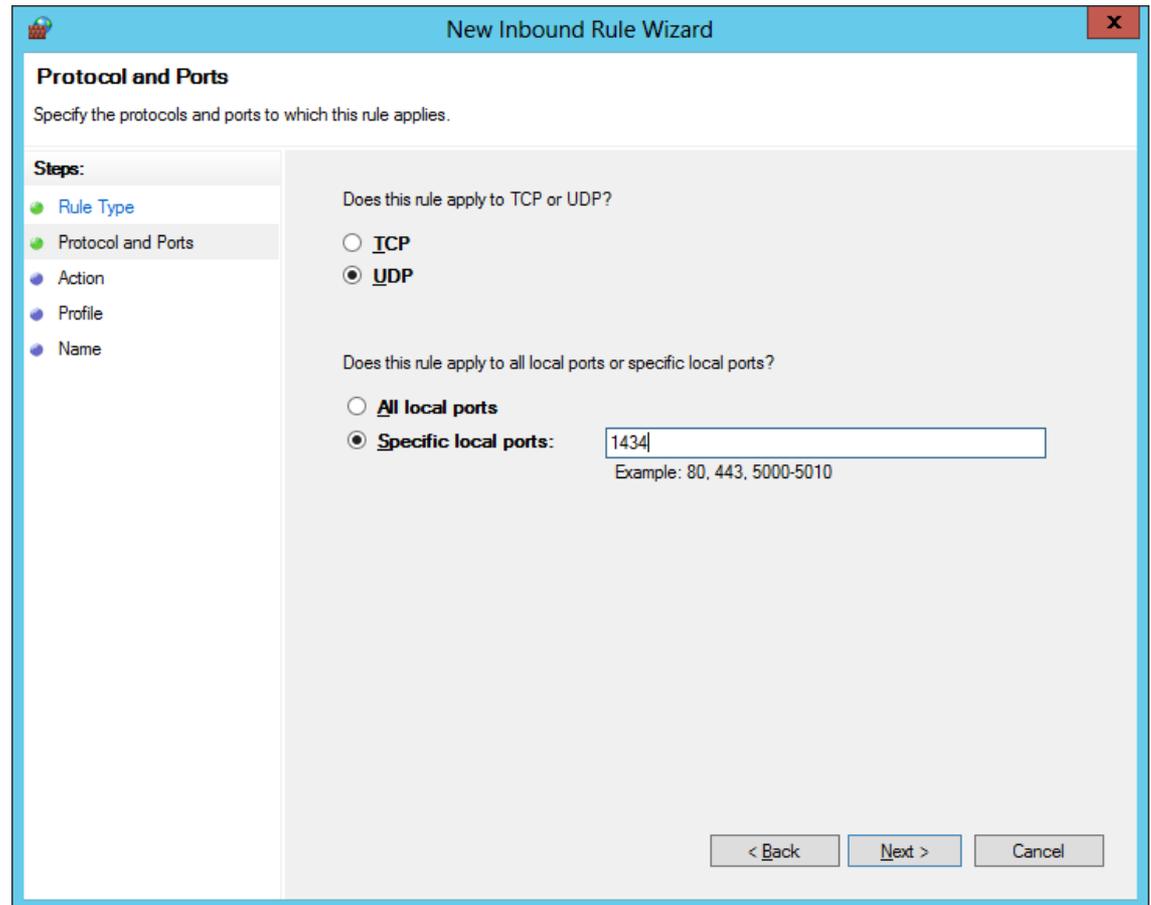


The screenshot shows the 'New Inbound Rule Wizard' dialog box. The title bar reads 'New Inbound Rule Wizard'. The main area is titled 'Rule Type' and contains the instruction 'Select the type of firewall rule to create.' On the left, a 'Steps:' pane lists 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name', with 'Protocol and Ports' highlighted in blue. The main content area asks 'What type of rule would you like to create?' and offers four radio button options: 'Program' (Rule that controls connections for a program.), 'Port' (Rule that controls connections for a TCP or UDP port.), 'Predefined:' (with a dropdown menu showing 'Active Directory Domain Services' and the description 'Rule that controls connections for a Windows experience.'), and 'Custom' (Custom rule.). At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Specify TCP Ports

Next, we select the UDP option button and then we specify the port 1434 as shown in the image.

Press the Next button to advance.

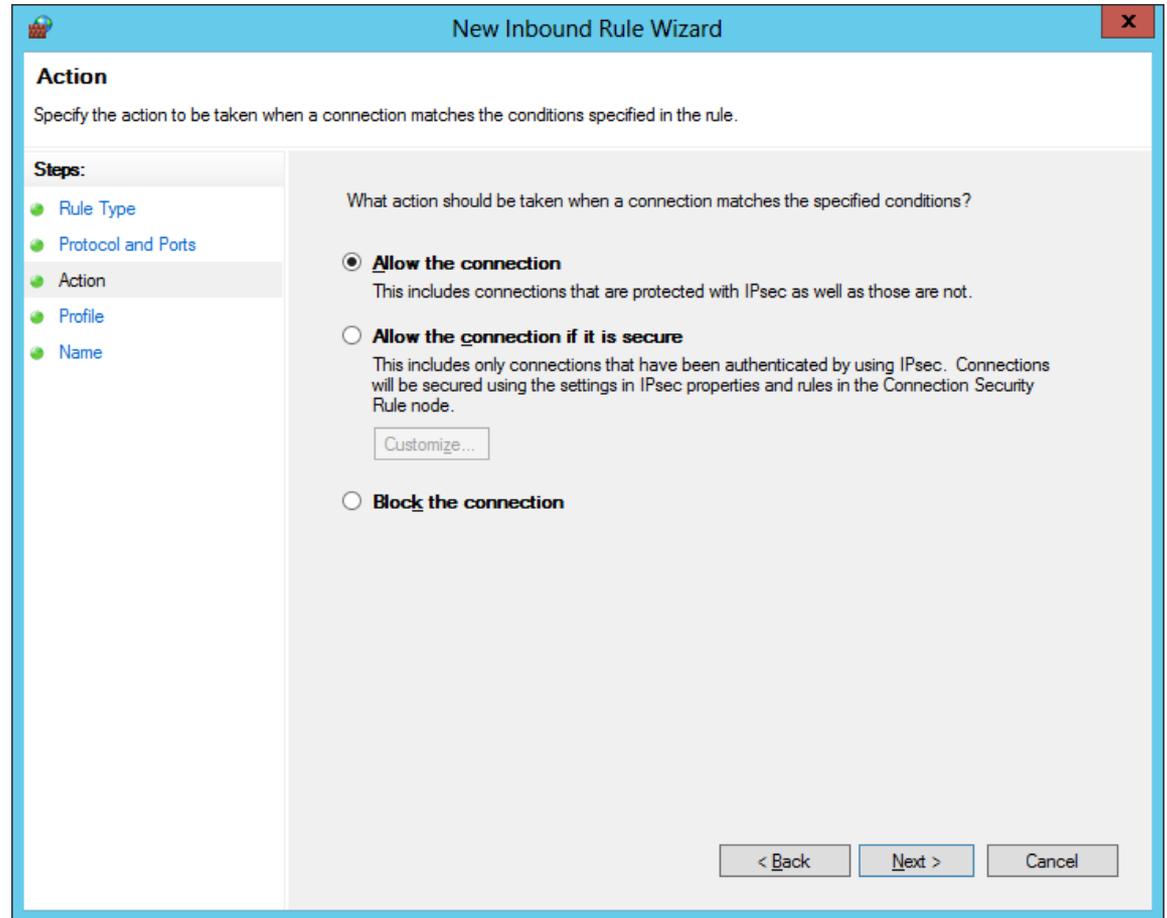


The screenshot shows the 'New Inbound Rule Wizard' dialog box, specifically the 'Protocol and Ports' step. The title bar reads 'New Inbound Rule Wizard' with a close button (X) in the top right corner. The main heading is 'Protocol and Ports' with the instruction 'Specify the protocols and ports to which this rule applies.' On the left, a 'Steps:' pane lists: 'Rule Type', 'Protocol and Ports' (highlighted), 'Action', 'Profile', and 'Name'. The main area contains two questions: 'Does this rule apply to TCP or UDP?' with radio buttons for 'TCP' and 'UDP' (selected), and 'Does this rule apply to all local ports or specific local ports?' with radio buttons for 'All local ports' and 'Specific local ports:' (selected). Below the 'Specific local ports:' radio button is a text input field containing '1434' and an example text 'Example: 80, 443, 5000-5010'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Allow the Connection

We will keep the “Allow the connection” option button selected.

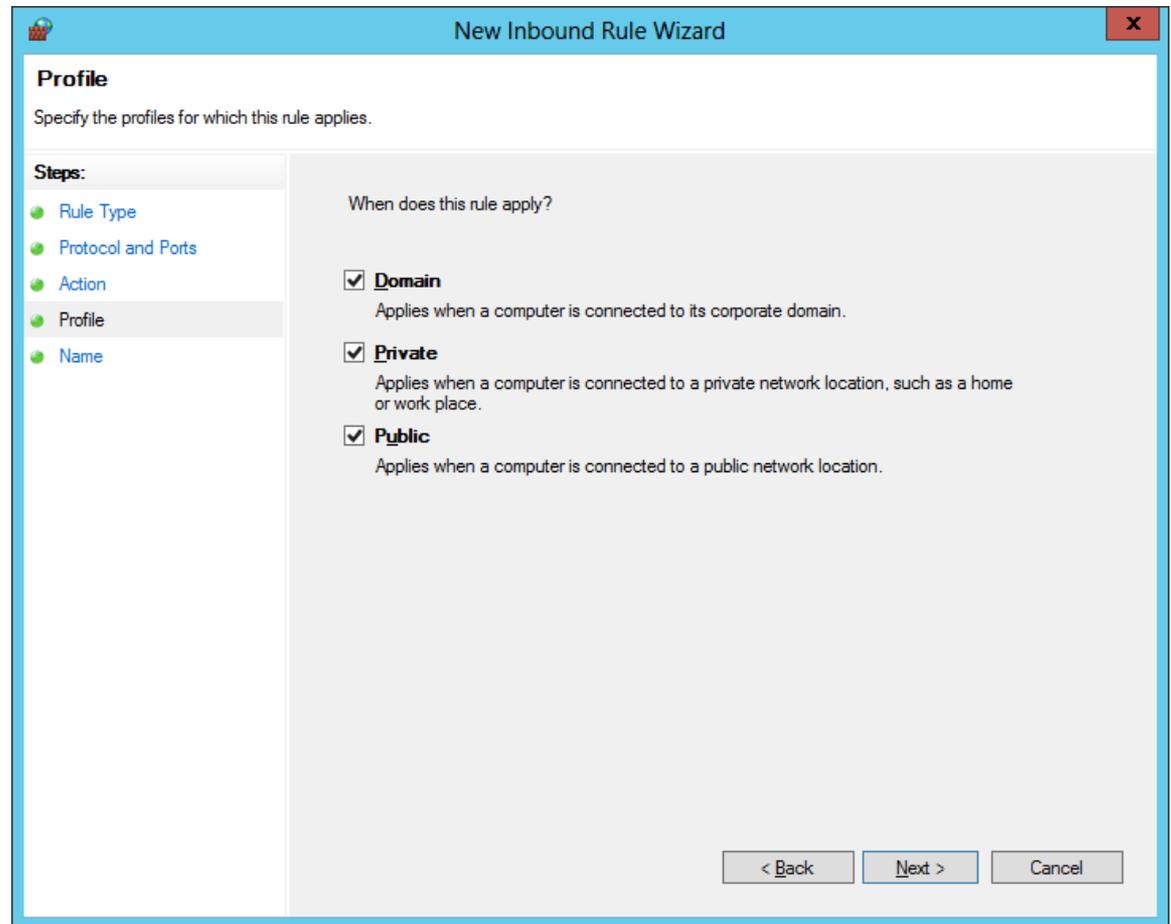
Push the Next button to go on.



The screenshot shows a window titled "New Inbound Rule Wizard" with a close button (X) in the top right corner. The window is divided into two main sections. On the left, there is a "Steps:" list with five items: "Rule Type", "Protocol and Ports", "Action", "Profile", and "Name". The "Action" step is currently selected and highlighted. The main area on the right contains the text "Specify the action to be taken when a connection matches the conditions specified in the rule." Below this, a question asks "What action should be taken when a connection matches the specified conditions?". There are three radio button options: "Allow the connection" (which is selected), "Allow the connection if it is secure", and "Block the connection". The "Allow the connection" option has a sub-description: "This includes connections that are protected with IPsec as well as those are not." The "Allow the connection if it is secure" option has a sub-description: "This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node." Below the "Allow the connection if it is secure" option is a "Customize..." button. At the bottom right of the window, there are three buttons: "< Back", "Next >", and "Cancel".

# Domain., Private and Public

We can see the checkboxes for Domain, Private and Public are annotated. We will except the default and we press the Next button to continue.



**New Inbound Rule Wizard**

**Profile**  
Specify the profiles for which this rule applies.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- **Profile**
- Name

When does this rule apply?

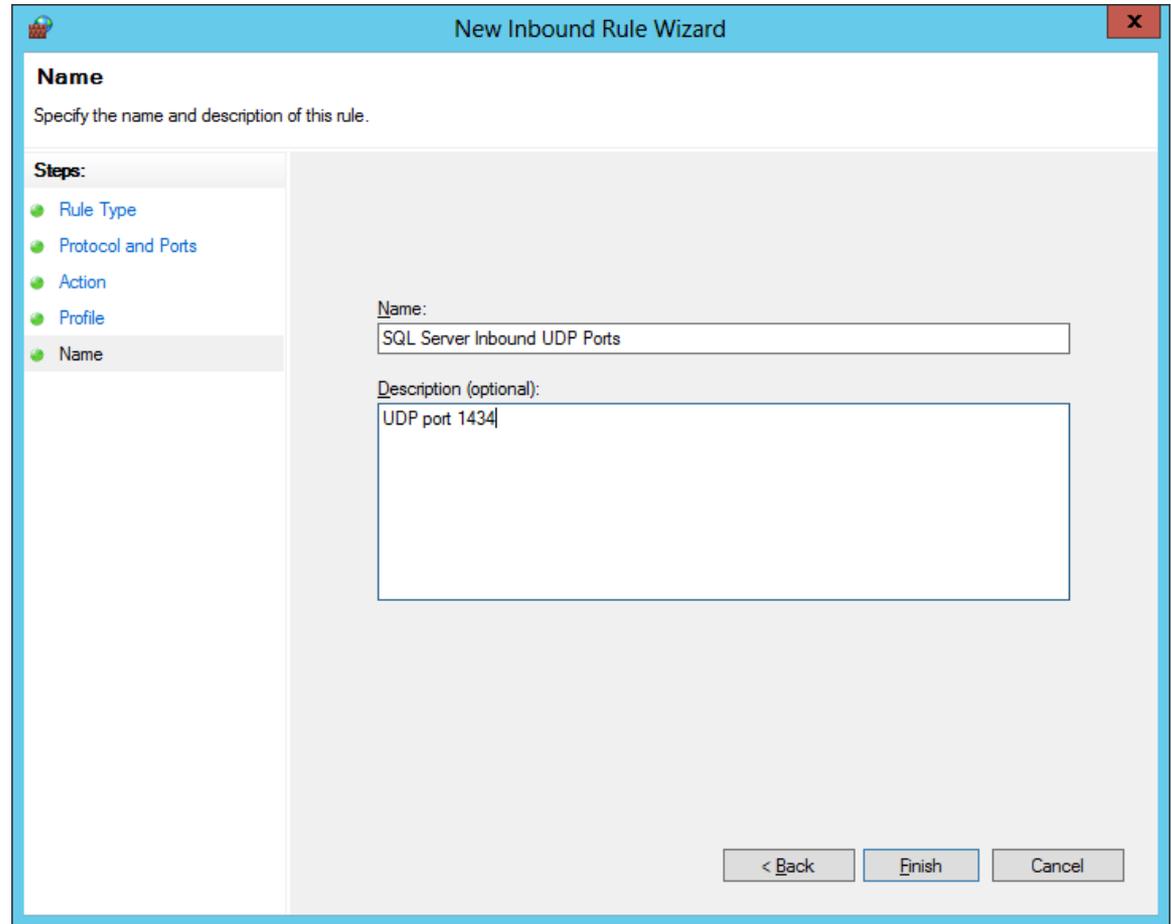
- Domain**  
Applies when a computer is connected to its corporate domain.
- Private**  
Applies when a computer is connected to a private network location, such as a home or work place.
- Public**  
Applies when a computer is connected to a public network location.

< Back   Next >   Cancel

# Name and Description

Name the rule SQL Server Inbound Ports and put the port numbers in in the description.

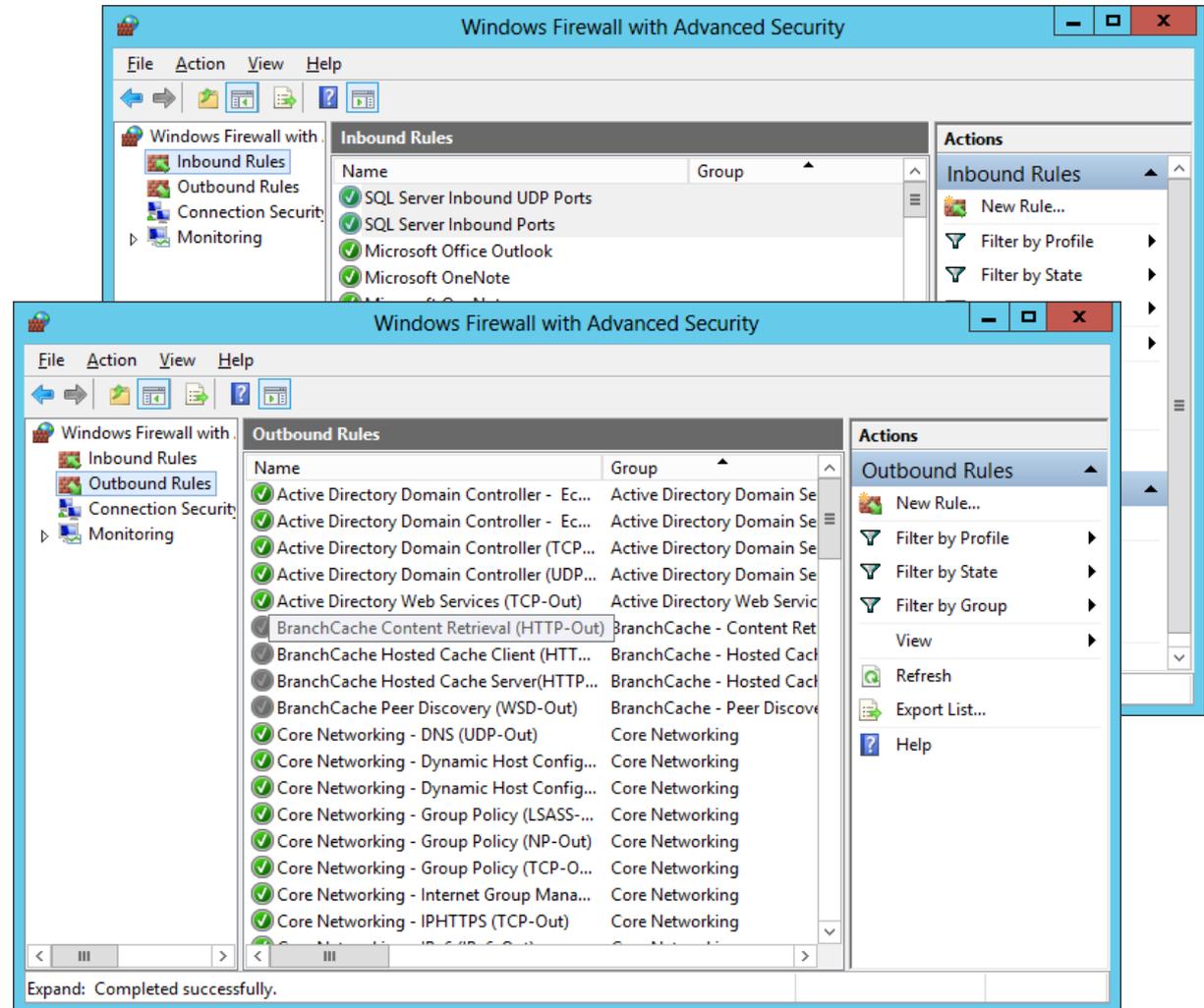
We will press the Finish button to add the rule to the inbound list.



The screenshot shows the 'New Inbound Rule Wizard' dialog box. The title bar reads 'New Inbound Rule Wizard'. The main area is titled 'Name' and contains the instruction 'Specify the name and description of this rule.' On the left, a 'Steps' list shows 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name' (which is selected). The main area has a 'Name:' label above a text box containing 'SQL Server Inbound UDP Ports'. Below that is a 'Description (optional):' label above a larger text box containing 'UDP port 1434'. At the bottom right, there are three buttons: '< Back', 'Finish', and 'Cancel'. The 'Finish' button is highlighted in blue.

# New Rule Listed

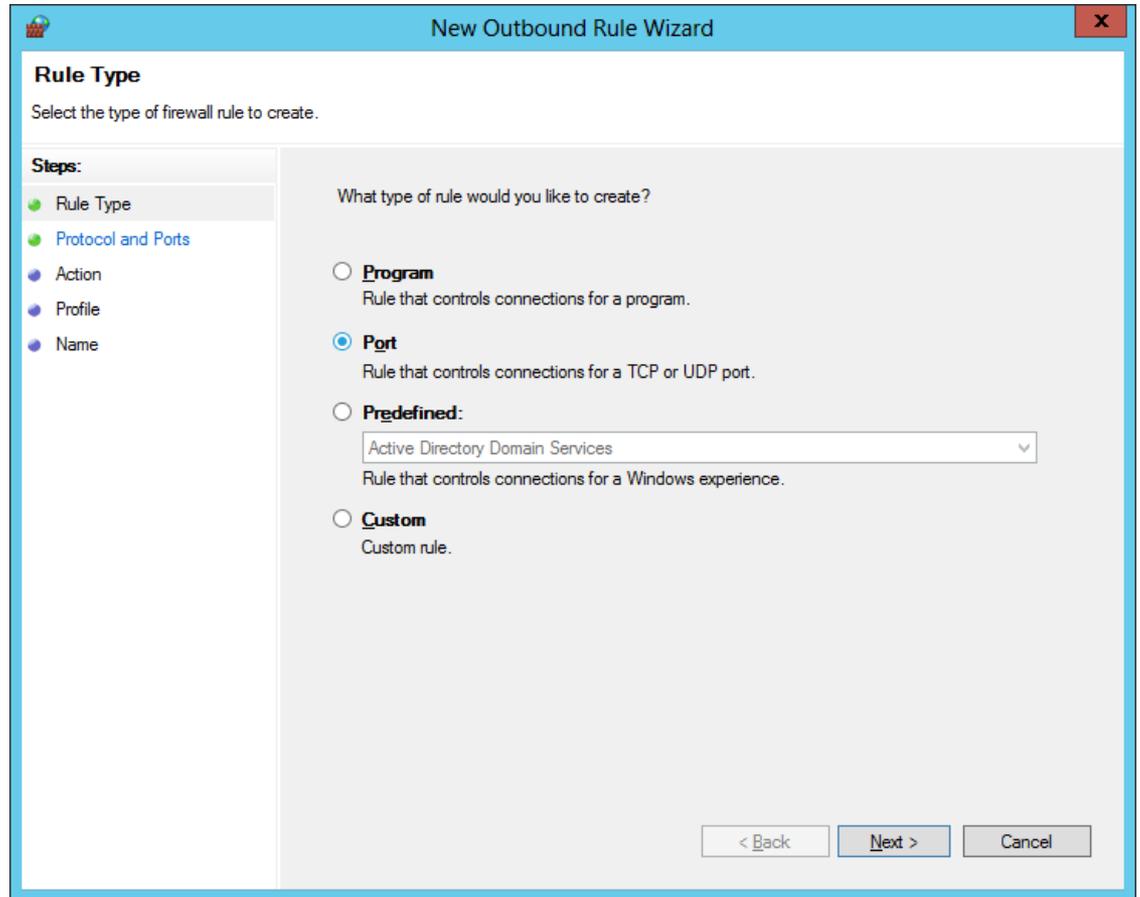
We can see our new rule at the top of the list. Now we need to open the TCP port. Highlight the Outbound Rule text in the left pane and we will see the New Rule link in the far right pane. Click on the New Rule hyperlink.



# New Outbound Rule Wizard

On the New Outbound Rule Wizard, we opt for Port so we can open the TCP ports.

Then we choose the Next command button.

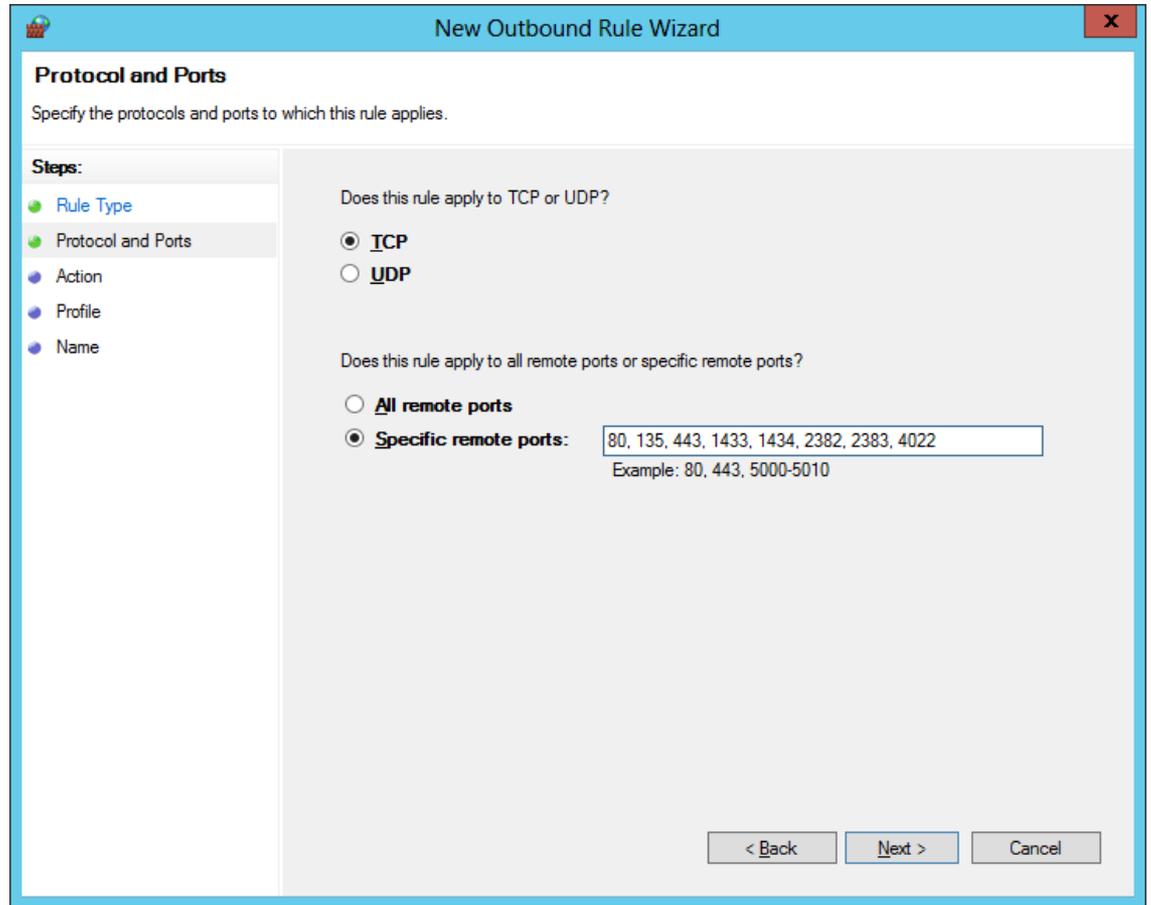


The screenshot shows the "New Outbound Rule Wizard" dialog box. The title bar reads "New Outbound Rule Wizard" with a close button (X) on the right. The main area is titled "Rule Type" and contains the instruction "Select the type of firewall rule to create." On the left, a "Steps:" pane lists "Rule Type", "Protocol and Ports", "Action", "Profile", and "Name", with "Rule Type" selected. The main content area asks "What type of rule would you like to create?" and offers four options: "Program" (Rule that controls connections for a program.), "Port" (Rule that controls connections for a TCP or UDP port.), "Predefined:" (with a dropdown menu showing "Active Directory Domain Services" and the description "Rule that controls connections for a Windows experience."), and "Custom" (Custom rule.). At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

# Specify TCP Ports

Next, we select the TCP option button and then we specify the ports 80, 135, 443, 1433, 1434, 2382, 2383, 4022 as shown in the image. We place a comma between each port number.

Press the Next button to advance.

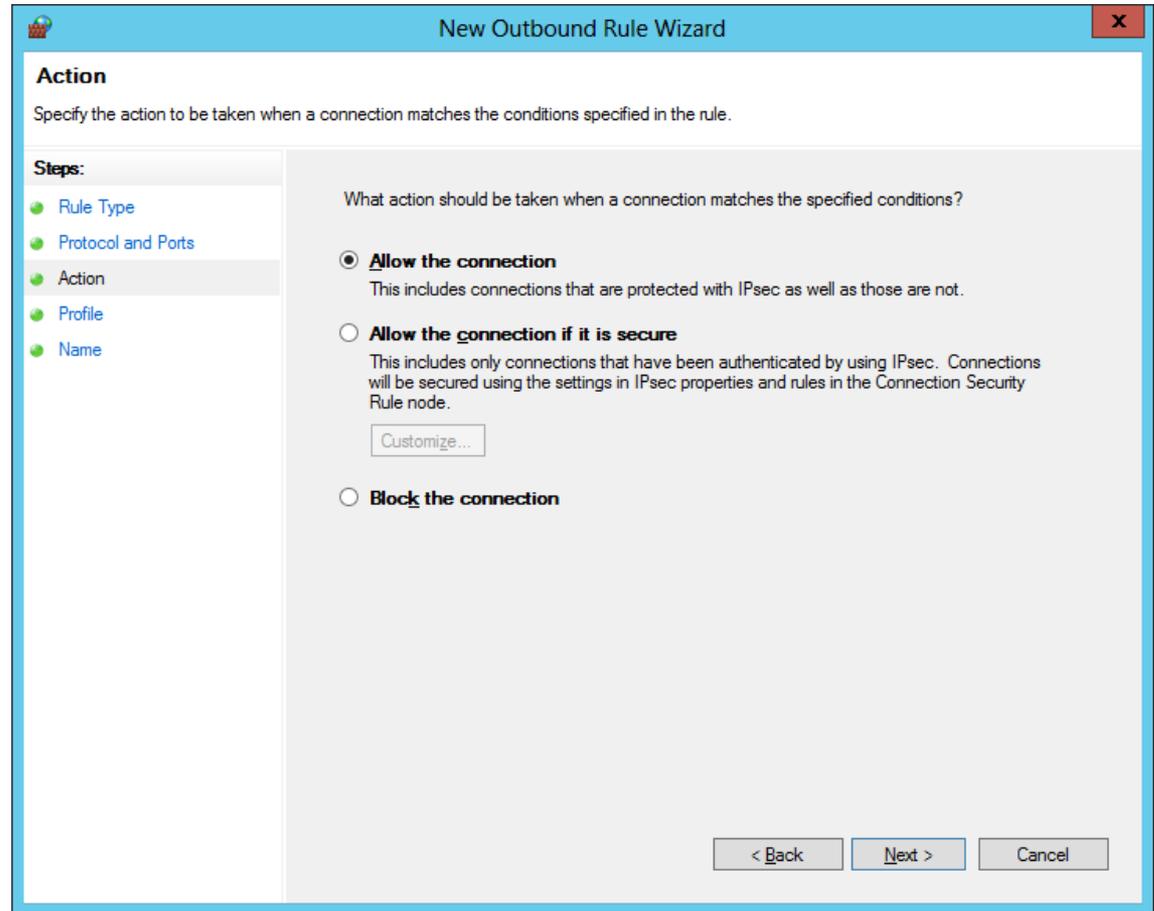


The screenshot shows the 'New Outbound Rule Wizard' dialog box, specifically the 'Protocol and Ports' step. The title bar reads 'New Outbound Rule Wizard'. The main heading is 'Protocol and Ports' with the instruction 'Specify the protocols and ports to which this rule applies.' On the left, a 'Steps:' pane lists 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name', with 'Protocol and Ports' selected. The main area contains two questions: 'Does this rule apply to TCP or UDP?' with radio buttons for 'TCP' (selected) and 'UDP'; and 'Does this rule apply to all remote ports or specific remote ports?' with radio buttons for 'All remote ports' and 'Specific remote ports:' (selected). The 'Specific remote ports:' field contains the text '80, 135, 443, 1433, 1434, 2382, 2383, 4022' and an example 'Example: 80, 443, 5000-5010'. At the bottom right are buttons for '< Back', 'Next >', and 'Cancel'.

# Allow the Connection

We will keep the “Allow the connection” option button selected.

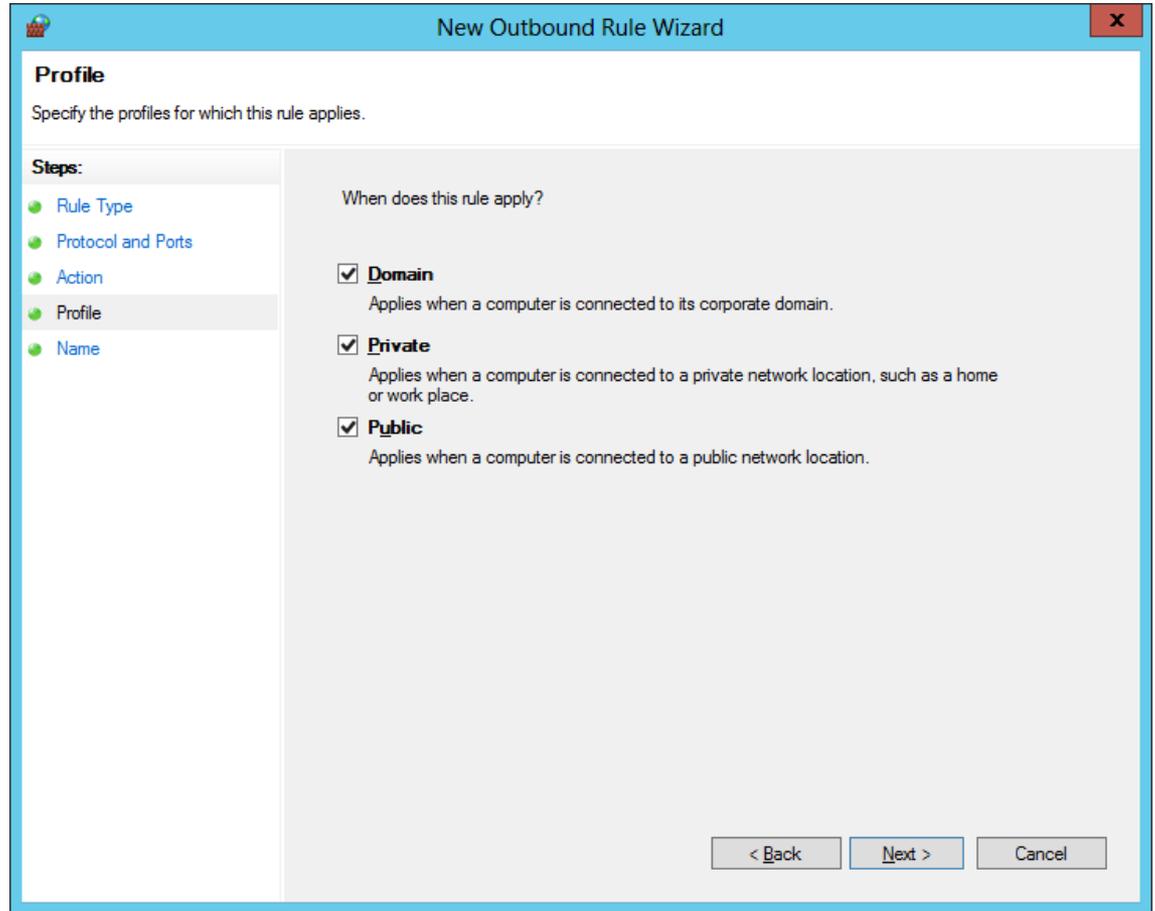
Push the Next button to go on.



The screenshot shows the 'New Outbound Rule Wizard' dialog box. The title bar reads 'New Outbound Rule Wizard' with a close button (X) in the top right corner. The main area is titled 'Action' and contains the instruction: 'Specify the action to be taken when a connection matches the conditions specified in the rule.' On the left side, there is a 'Steps:' list with five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The 'Action' step is currently selected and highlighted. The main content area asks, 'What action should be taken when a connection matches the specified conditions?' and provides three radio button options: 1. 'Allow the connection' (selected), with the description: 'This includes connections that are protected with IPsec as well as those are not.' 2. 'Allow the connection if it is secure', with the description: 'This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.' Below this option is a 'Customize...' button. 3. 'Block the connection'. At the bottom right of the dialog, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Domain., Private and Public

We can see the checkboxes for Domain, Private and Public are annotated. We will except the default and we press the Next button to continue.

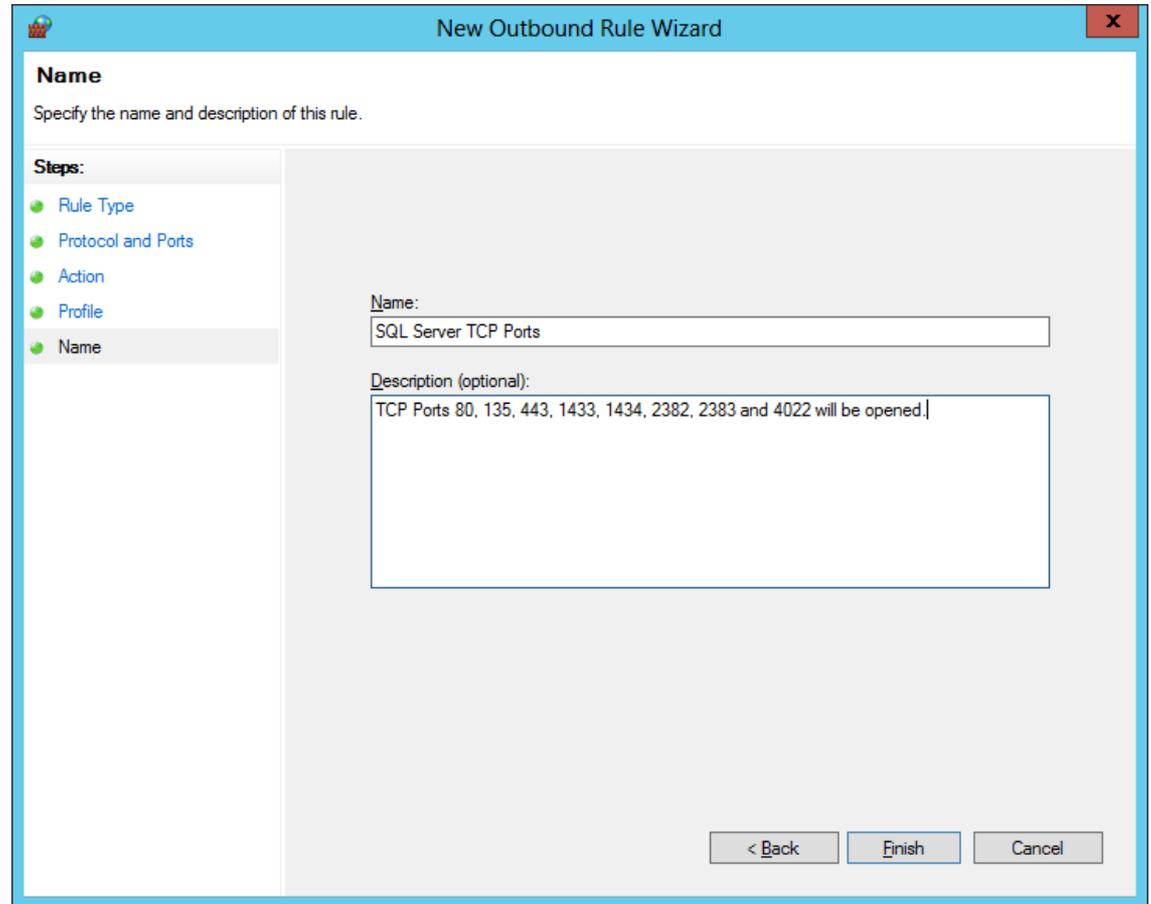


The screenshot shows the 'New Outbound Rule Wizard' dialog box, specifically the 'Profile' step. The title bar reads 'New Outbound Rule Wizard' with a close button (X) in the top right corner. The main heading is 'Profile' with the instruction 'Specify the profiles for which this rule applies.' On the left, a 'Steps:' list shows 'Rule Type', 'Protocol and Ports', 'Action', 'Profile' (highlighted), and 'Name'. The main area is titled 'When does this rule apply?' and contains three checked options: 'Domain' (Applies when a computer is connected to its corporate domain.), 'Private' (Applies when a computer is connected to a private network location, such as a home or work place.), and 'Public' (Applies when a computer is connected to a public network location.). At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Name and Description

Name the rule SQL Server TCP Ports and put the port numbers in in the description.

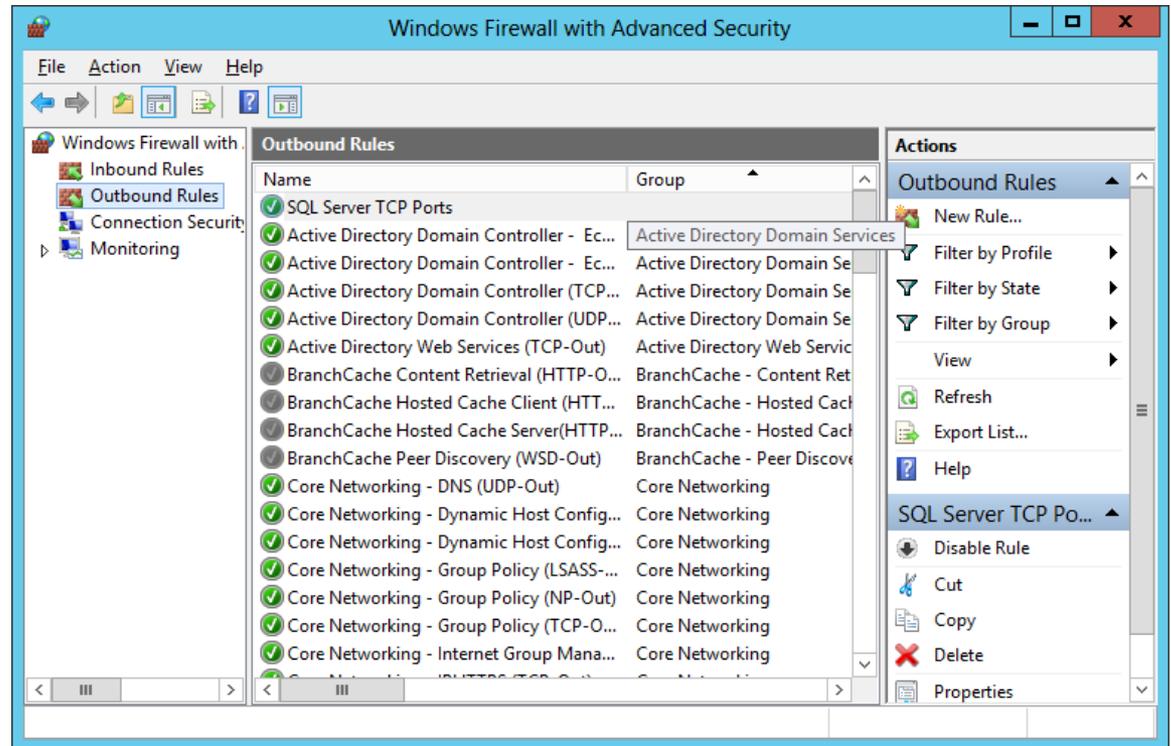
We will press the Finish button to add the rule to the Outbound list.



The screenshot shows the 'New Outbound Rule Wizard' dialog box, specifically the 'Name' step. The title bar reads 'New Outbound Rule Wizard' with a close button (X) on the right. Below the title bar, the section is titled 'Name' and contains the instruction 'Specify the name and description of this rule.' On the left side, there is a 'Steps:' list with five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The 'Name' step is currently selected and highlighted. The main area of the dialog contains two text input fields. The first is labeled 'Name:' and contains the text 'SQL Server TCP Ports'. The second is labeled 'Description (optional):' and contains the text 'TCP Ports 80, 135, 443, 1433, 1434, 2382, 2383 and 4022 will be opened.'. At the bottom right of the dialog, there are three buttons: '< Back', 'Finish', and 'Cancel'.

# New Rule Listed

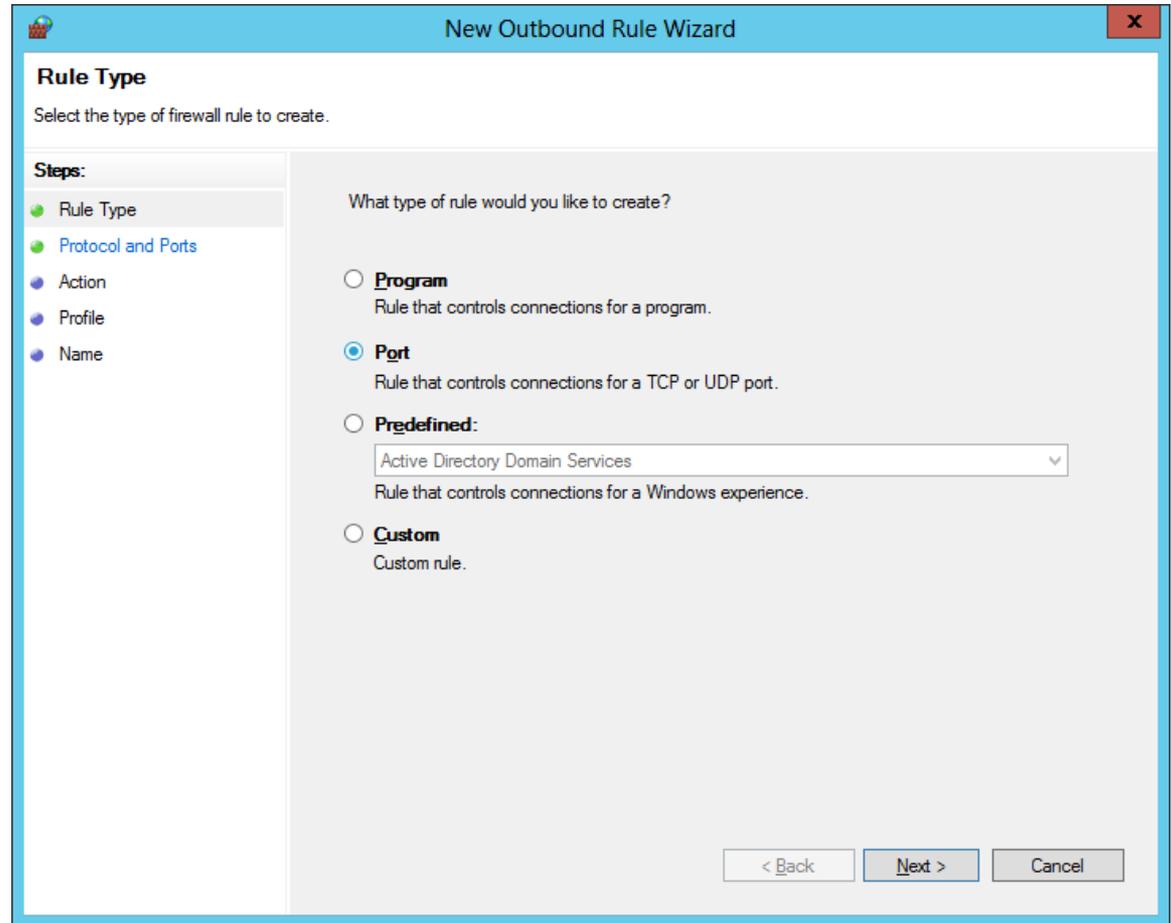
We can see our new rule at the top of the list. Now we need to open the 1434 UDP port. Highlight the Outbound Rule text in the left pane and we will see the New Rule link in the far right pane. Click on the New Rule hyperlink.



# New Outbound Rule Wizard

On the New Outbound Rule Wizard, we opt for Port so we can open the UDP ports.

Then we choose the Next command button.



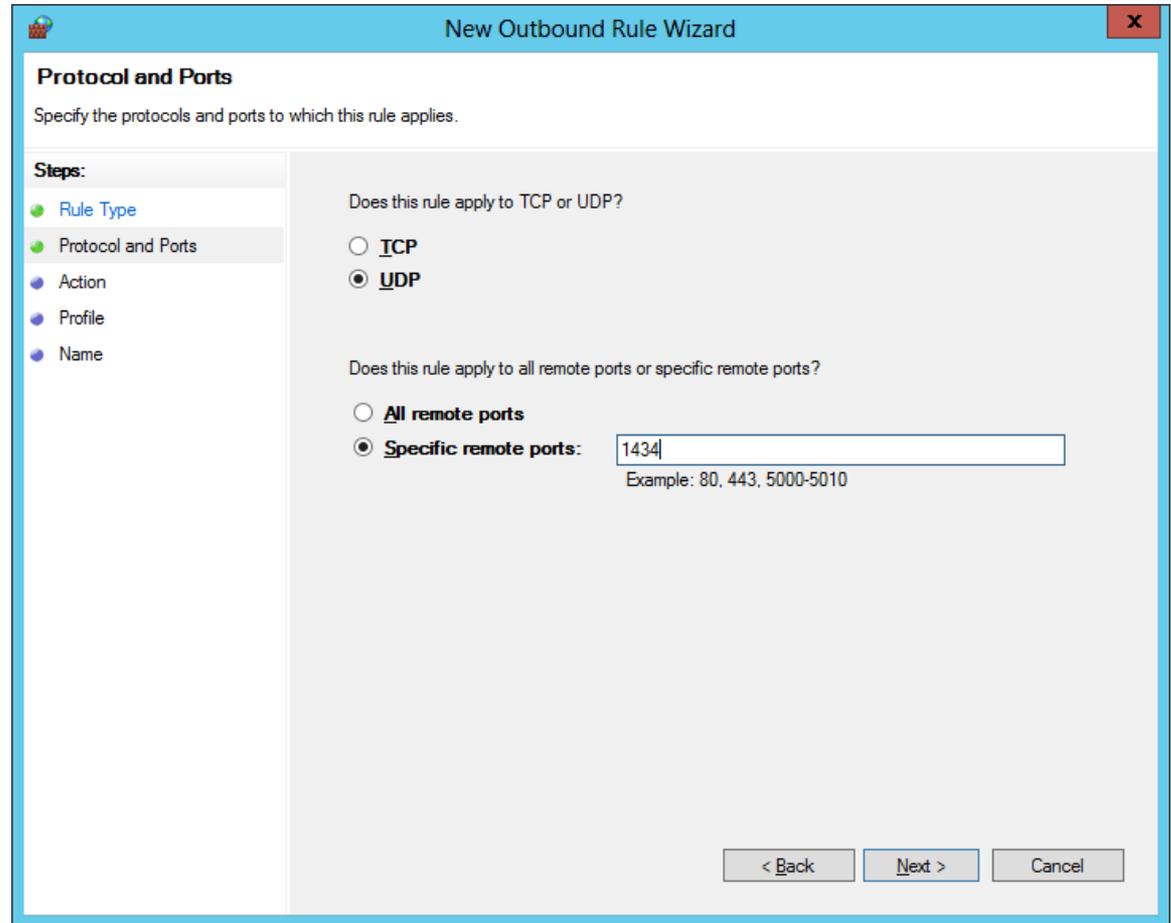
The screenshot shows the 'New Outbound Rule Wizard' dialog box. The title bar is blue and contains the text 'New Outbound Rule Wizard' and a close button (X). The main area is white and contains the following elements:

- Rule Type**: Select the type of firewall rule to create.
- Steps:** A list of steps with progress indicators:
  - Rule Type (selected, green dot)
  - Protocol and Ports (green dot)
  - Action (blue dot)
  - Profile (blue dot)
  - Name (blue dot)
- What type of rule would you like to create?**: A list of radio button options:
  - Program**: Rule that controls connections for a program.
  - Port**: Rule that controls connections for a TCP or UDP port.
  - Predefined:**: A dropdown menu showing 'Active Directory Domain Services'. Below it, the text reads: 'Rule that controls connections for a Windows experience.'
  - Custom**: Custom rule.
- Navigation Buttons:** '< Back', 'Next >', and 'Cancel' buttons.

# Specify TCP Ports

Next, we select the UDP option button and then we specify the port 1434 as shown in the image.

Press the Next button to advance.

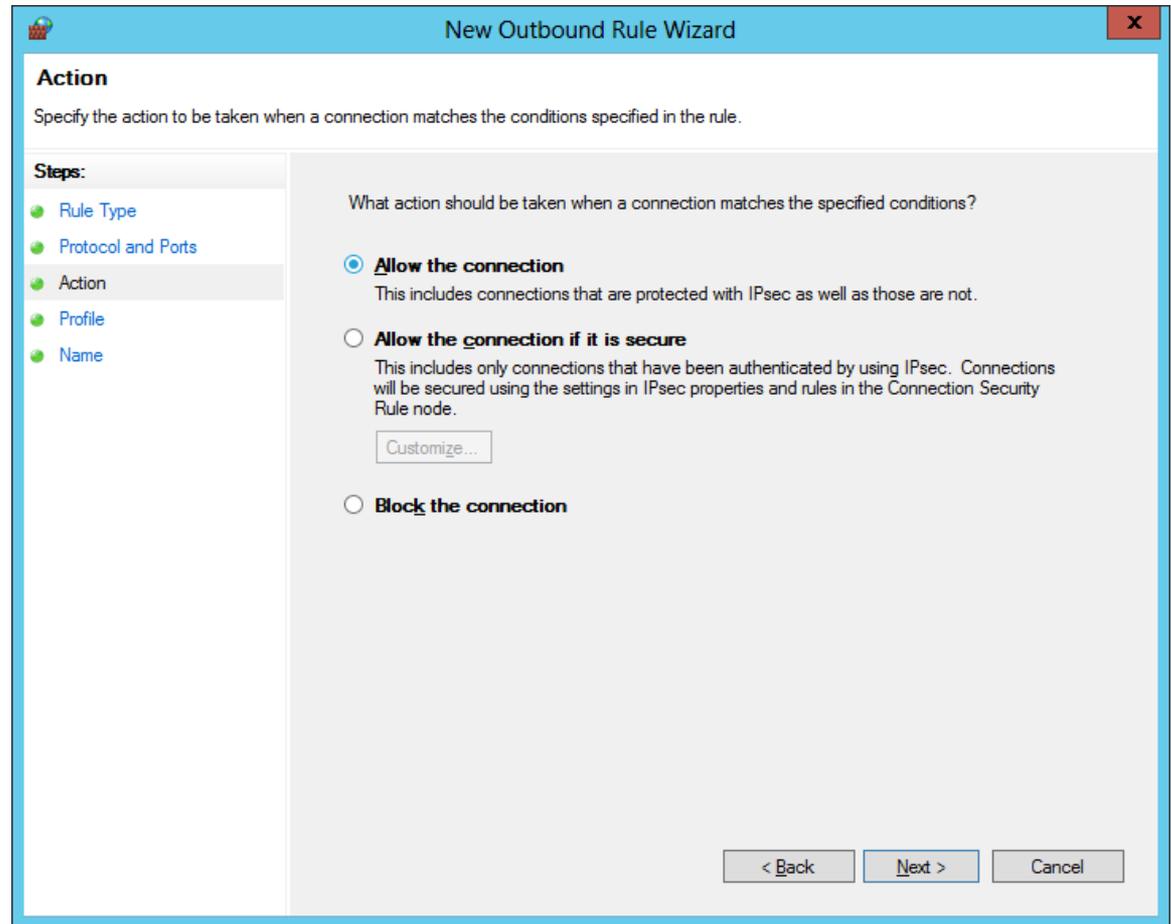


The image shows a screenshot of the 'New Outbound Rule Wizard' dialog box, specifically the 'Protocol and Ports' step. The dialog box has a blue title bar with the text 'New Outbound Rule Wizard' and a close button (X) in the top right corner. The main content area is titled 'Protocol and Ports' and contains the instruction 'Specify the protocols and ports to which this rule applies.' On the left side, there is a 'Steps:' list with five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The 'Protocol and Ports' step is currently selected and highlighted. The main area contains two questions with radio button options. The first question is 'Does this rule apply to TCP or UDP?' with 'TCP' unselected and 'UDP' selected. The second question is 'Does this rule apply to all remote ports or specific remote ports?' with 'All remote ports' unselected and 'Specific remote ports:' selected. Below the 'Specific remote ports:' option is a text input field containing the number '1434'. Below the input field is an example text: 'Example: 80, 443, 5000-5010'. At the bottom right of the dialog box, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Allow the Connection

We will keep the “Allow the connection” option button selected.

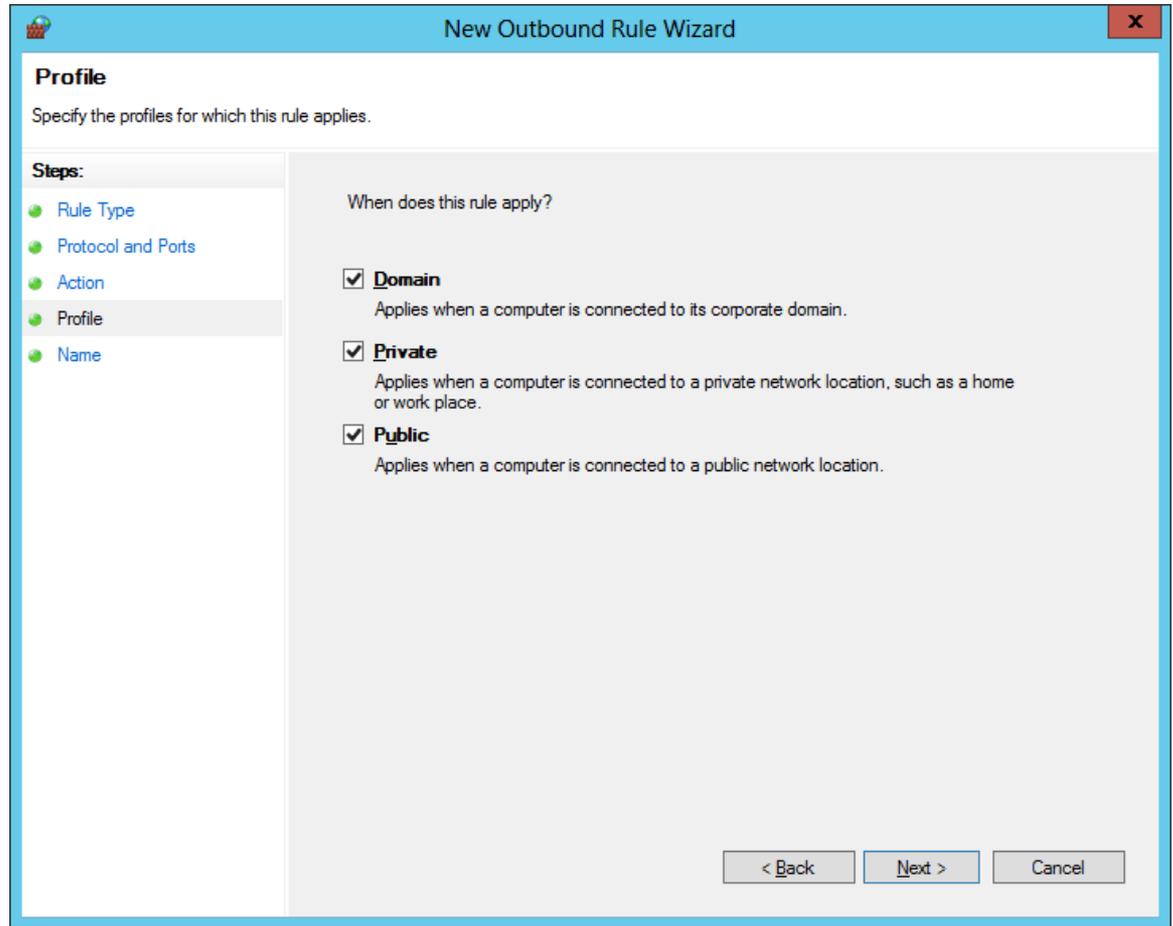
Push the Next button to go on.



The screenshot shows a window titled "New Outbound Rule Wizard" with a close button (X) in the top right corner. The window is divided into two main sections. On the left, there is a "Steps:" list with five items: "Rule Type", "Protocol and Ports", "Action", "Profile", and "Name". The "Action" step is currently selected and highlighted. The main area on the right contains the following text: "Specify the action to be taken when a connection matches the conditions specified in the rule." Below this, a question asks: "What action should be taken when a connection matches the specified conditions?". There are three radio button options: 1. "Allow the connection" (selected), with a sub-description: "This includes connections that are protected with IPsec as well as those are not." 2. "Allow the connection if it is secure" (unselected), with a sub-description: "This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node." Below this option is a "Customize..." button. 3. "Block the connection" (unselected). At the bottom right of the window, there are three buttons: "< Back", "Next >", and "Cancel".

# Domain., Private and Public

We can see the checkboxes for Domain, Private and Public are annotated. We will except the default and we press the Next button to continue.



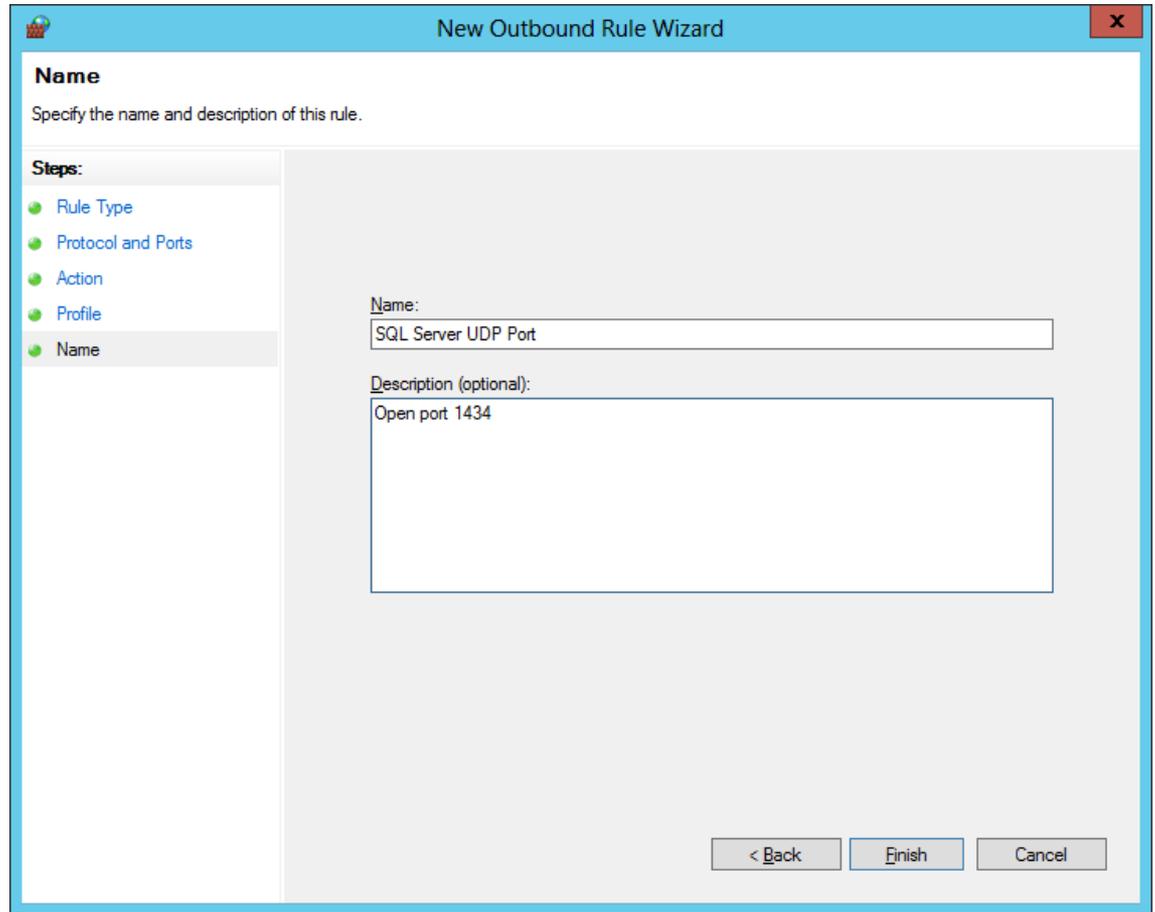
The screenshot shows the 'New Outbound Rule Wizard' dialog box. The title bar reads 'New Outbound Rule Wizard'. The main content area is titled 'Profile' and contains the instruction 'Specify the profiles for which this rule applies.' On the left, a 'Steps:' list shows 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name', with 'Profile' selected. The main area asks 'When does this rule apply?' and lists three options, each with a checked checkbox: 'Domain' (Applies when a computer is connected to its corporate domain.), 'Private' (Applies when a computer is connected to a private network location, such as a home or work place.), and 'Public' (Applies when a computer is connected to a public network location.). At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

# Name and Description

Name the rule SQL Server Outbound Ports and put the port numbers in in the description.

We will press the Finish button to add the rule to the Outbound list.

Our new rule is at the top of the list and we can close the Firewall window.



The screenshot shows the 'New Outbound Rule Wizard' dialog box. The title bar reads 'New Outbound Rule Wizard'. The main heading is 'Name', with the instruction 'Specify the name and description of this rule.' Below this is a 'Steps' list with five items: 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The 'Name' step is currently selected and highlighted. The main area contains two text input fields: 'Name:' with the text 'SQL Server UDP Port' and 'Description (optional):' with the text 'Open port 1434'. At the bottom right, there are three buttons: '< Back', 'Finish', and 'Cancel'. The 'Finish' button is highlighted in blue.