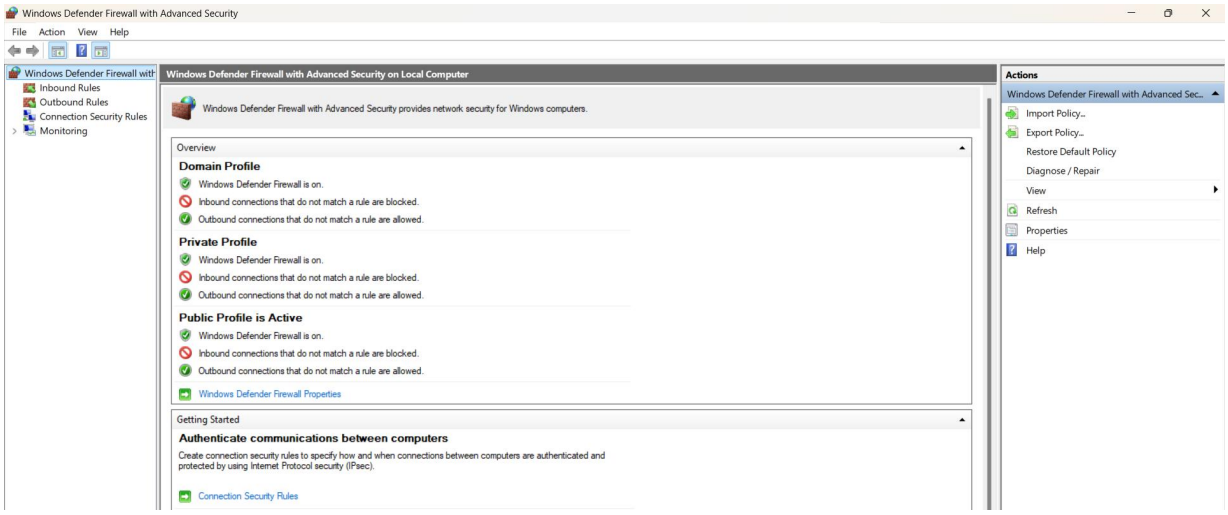
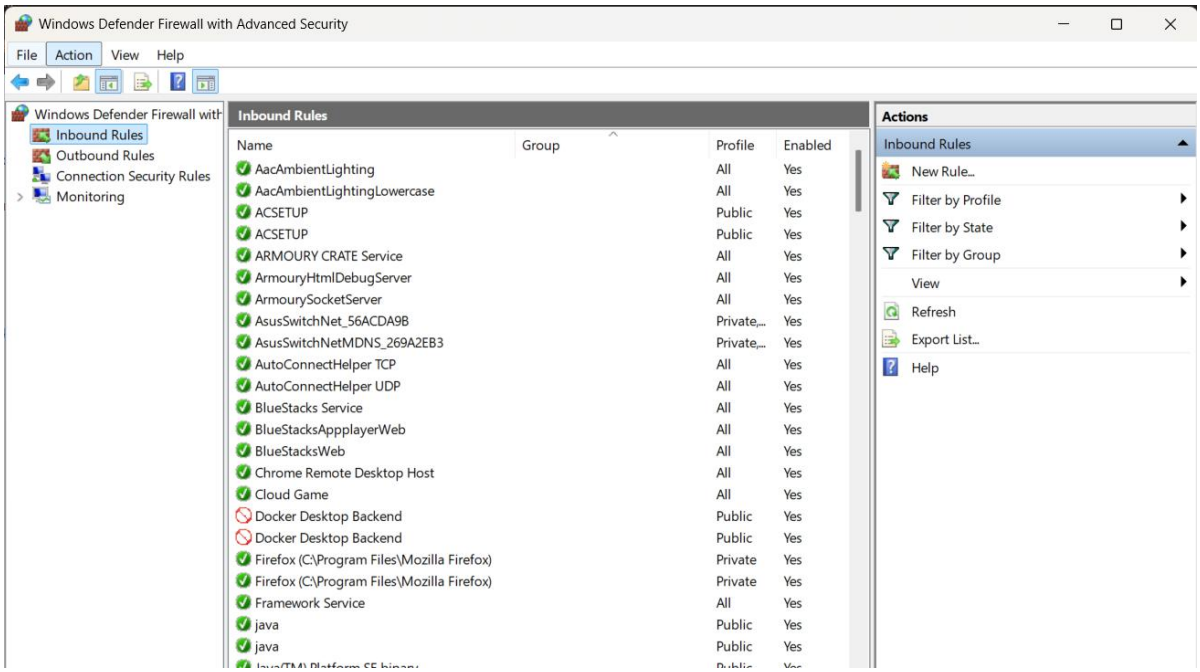
TASK - 4

Objective: Configure and test basic firewall rules to allow or block traffic.

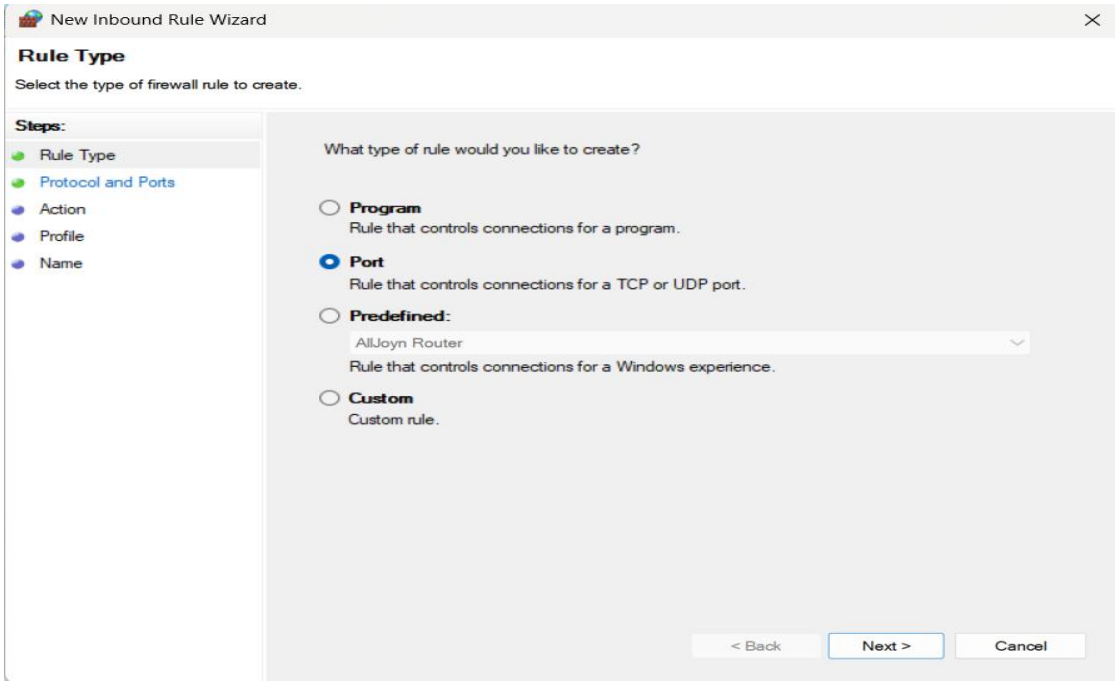
1. Open Firewall Configuration Tool
Access the firewall management interface to begin security configuration. Use Windows Firewall GUI.

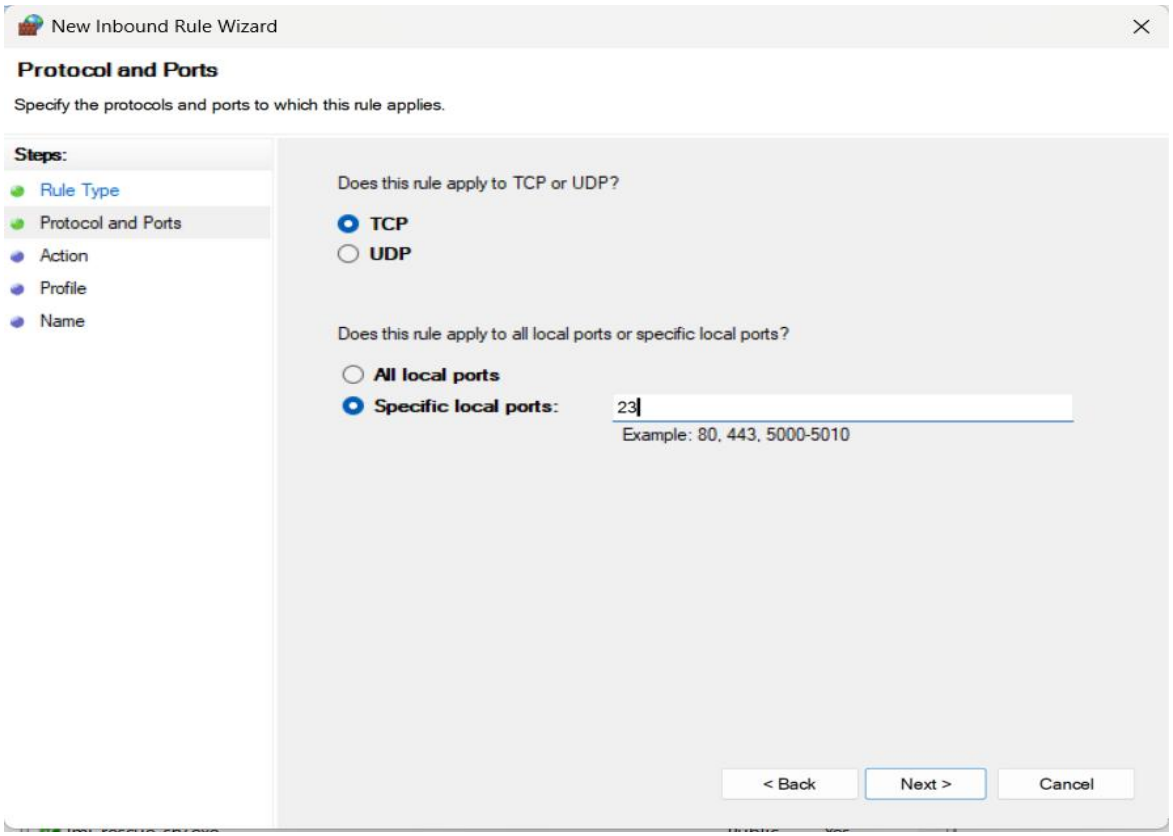


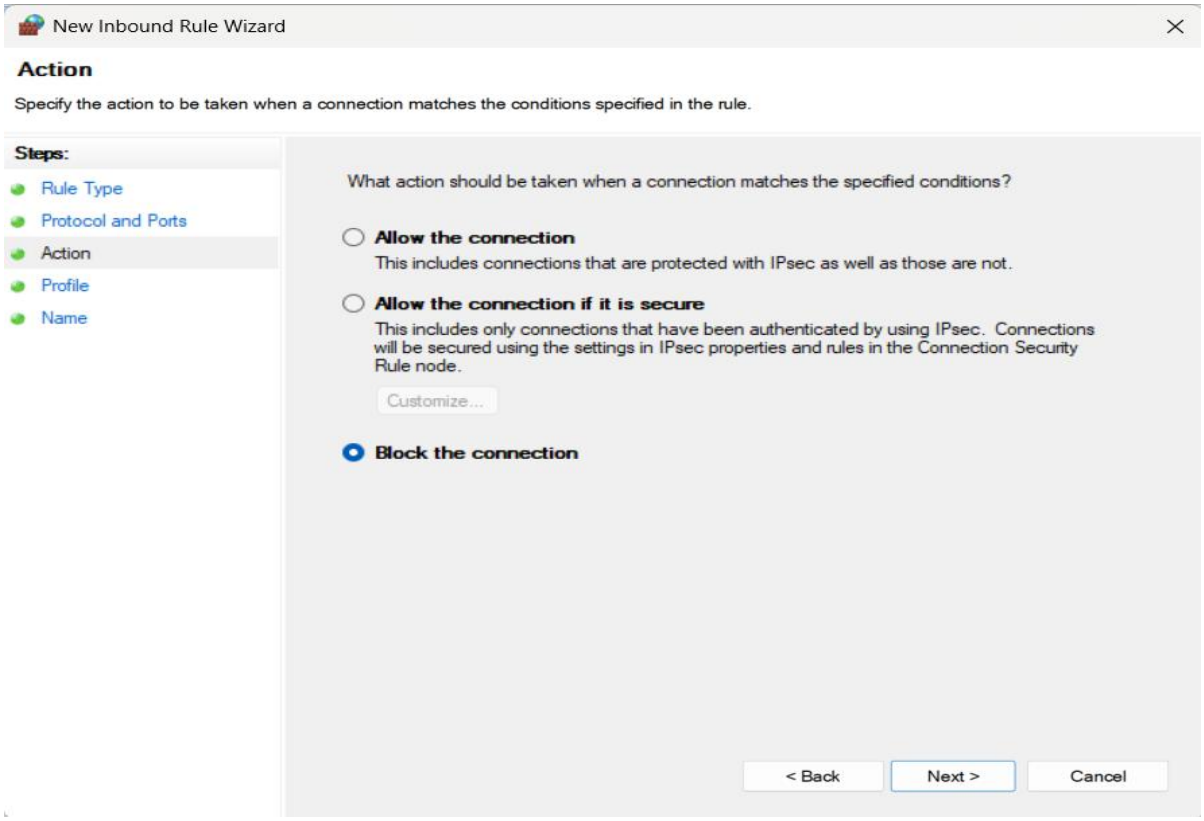
2. List Current Firewall Rules
Display all active firewall rules to understand current traffic permissions. This baseline assessment helps identify existing allowed and blocked services.

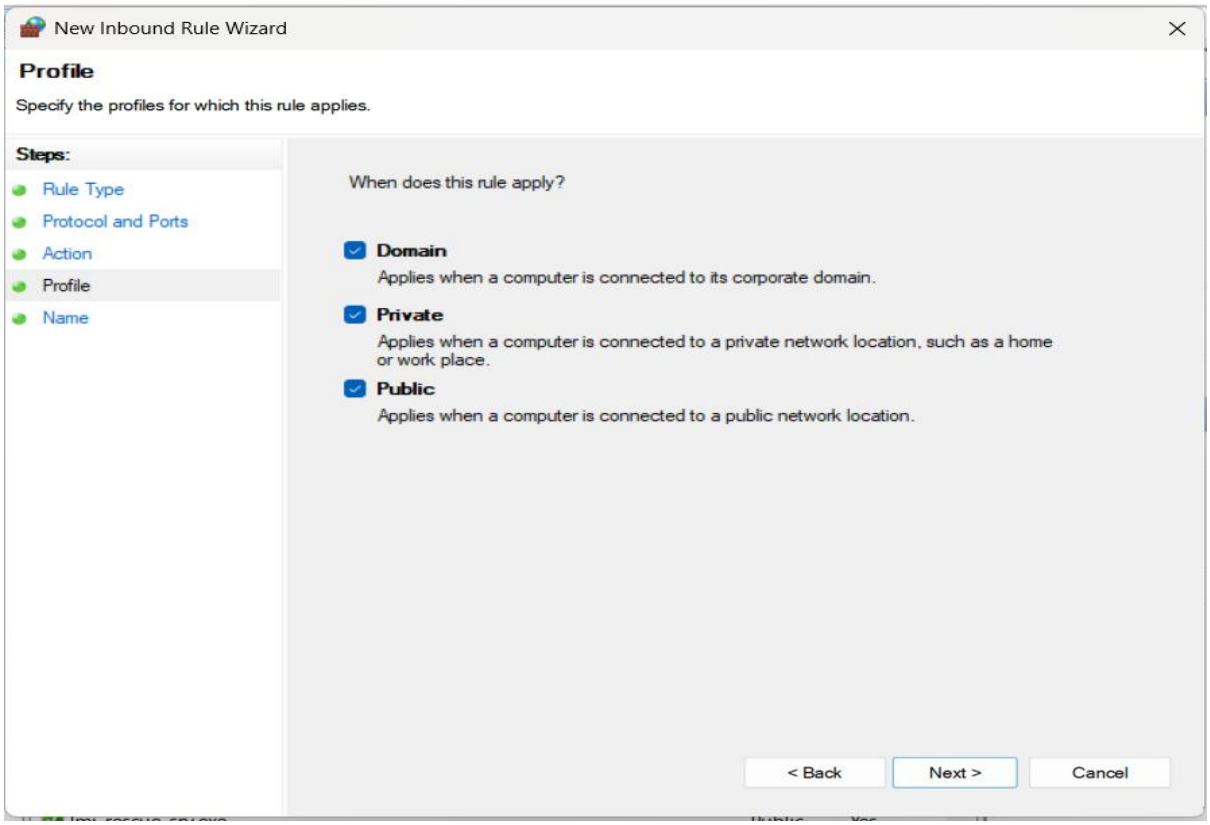


3. Add Rule to Block Telnet (Port 23)
Create a new inbound rule explicitly blocking TCP port 23 to prevent Telnet access. This enhances security by closing an unused network service port.

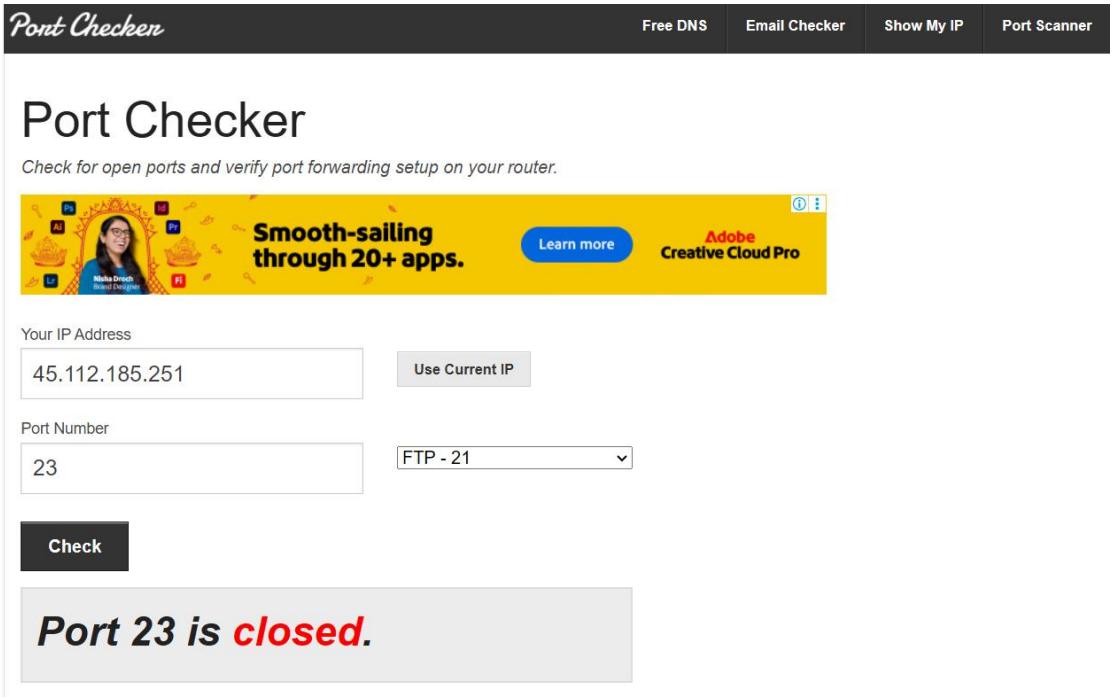





New Inbound Rule Wizard
Action
Specify the action to be taken when a connection matches the conditions specified in the rule.
Steps:
Rule Type
Protocol and Ports
Action
Profile
Name
What action should be taken when a connection matches the specified conditions?
Allow the connection
This includes connections that are protected with IPsec as well as those are not.
Allow the connection if it is secure
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.
Customize...
Block the connection
< Back
Next >
Cancel


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

4. Test the Block Rule
Verify the blocking rule's effectiveness by attempting Telnet connections to the secured port. Confirm connection failures to validate proper firewall functionality.



Summary of How the firewall filters traffic:

Firewalls act as security guards for computer networks by monitoring and controlling incoming and outgoing traffic. They examine data packets based on predefined rules to determine whether to allow or block communication.
Key Filtering Methods:

Packet Inspection: Analyzes source/destination IP addresses, port numbers, and protocols

Rule-Based Filtering: Follows configured rules in sequence (allow/deny specific services)

Stateful Tracking: Remembers active connections and only allows legitimate response traffic

Default Security: Typically blocks all traffic by default, only permitting explicitly allowed services