Firewall Configuration & Traffic Filtering

Steps to perform the Firewall Rules

1.Open Firewall Configuration Tool

- GUI: Press `Win + R` → type `wf.msc` → press Enter.
- CLI: Open Command Prompt as Administrator.

2. List Current Firewall Rules

.cmd

```
netsh advfirewall firewall show rule name=all
```

3. Add a Rule to Block Inbound Traffic on Port 23

cmd

```
netsh advfirewall firewall add rule name="Block Telnet" dir=in
action=block protocol=TCP localport=23
```

4. Test the Rule

- Try using **Telnet** to connect:

cmd

```
telnet localhost 23
```

5. (Skip for Windows – SSH is not standard)

6. Remove the Test Block Rule

cmd

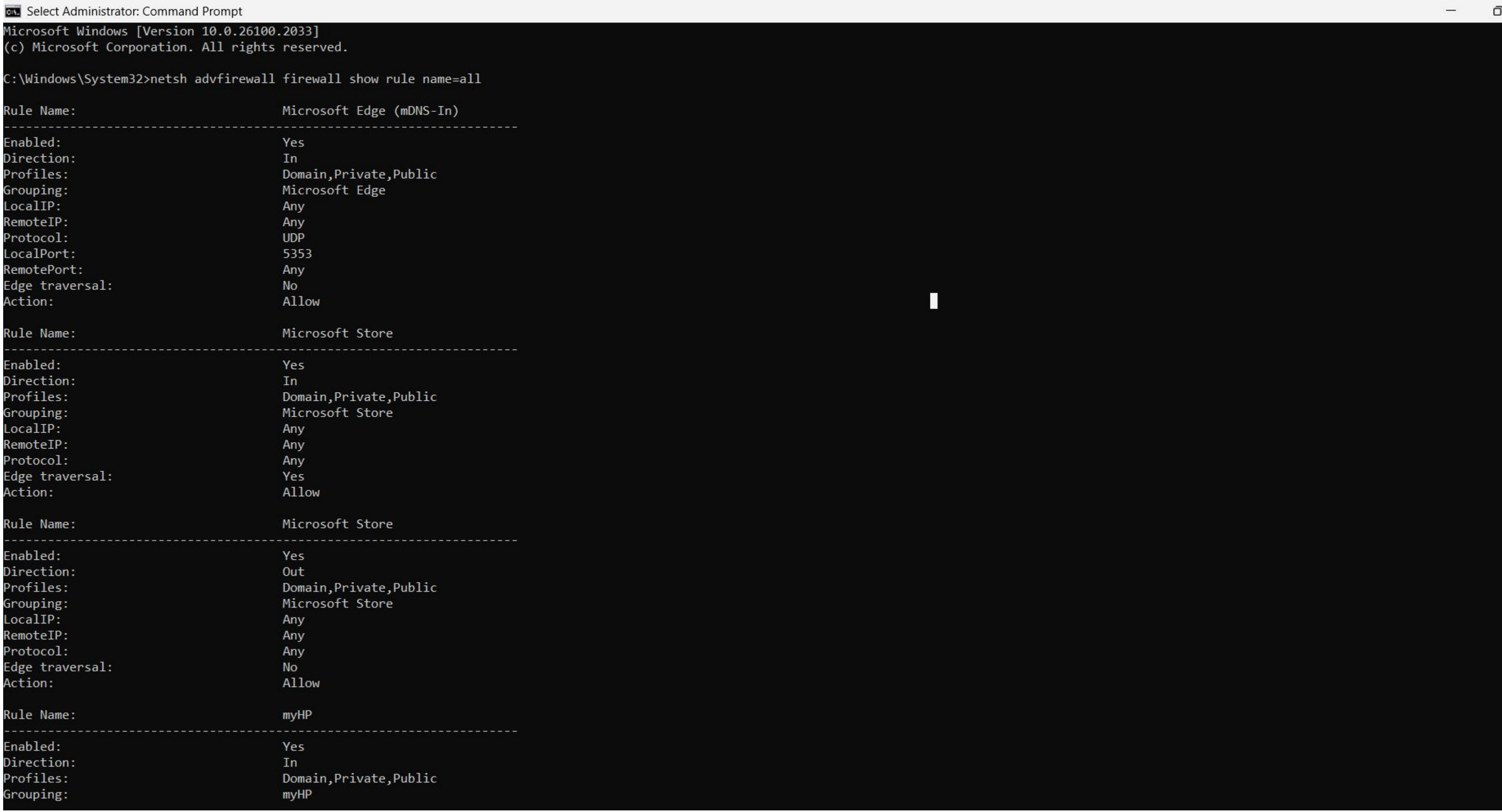
```
netsh advfirewall firewall delete rule name="Block Telnet"
```

Summarize of how firewalls filter traffic

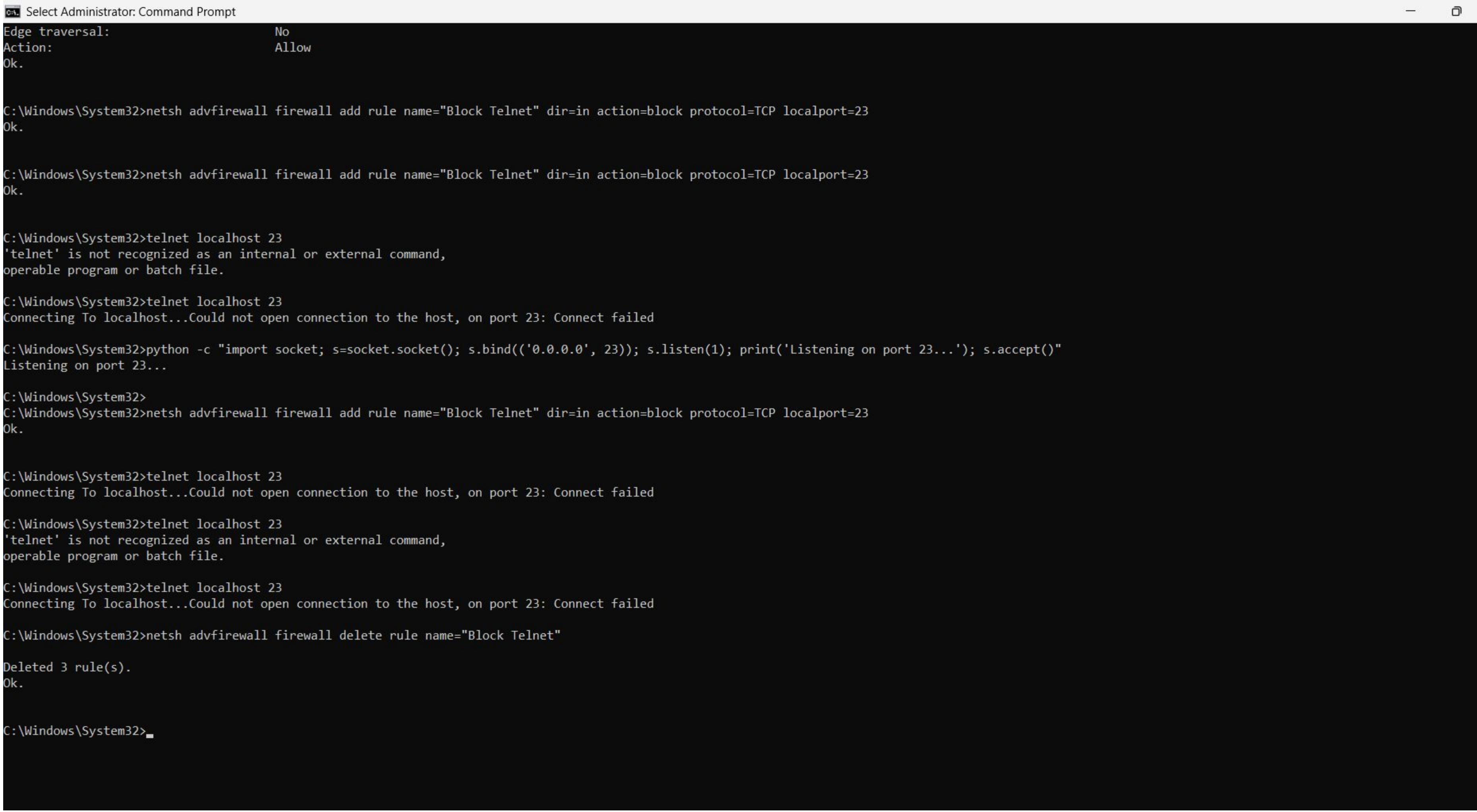
Firewalls act as **barriers between trusted and untrusted networks**. They filter traffic based on:

- **IP address**
- **Protocol** (TCP, UDP, ICMP, etc.)
- **Port number**
- **Direction** (inbound/outbound)
- **Application or service rules**

Rules are applied **sequentially** (in UFW) or by **priority/order** (in Windows), allowing or blocking traffic accordingly. This helps protect systems from unauthorized access or malicious traffic.



```
Microsoft Windows [Version 10.0.26100.2033]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>netsh advfirewall firewall show rule name=all

Rule Name:                            Microsoft Edge (mDNS-In)
----------------------------------------------------------------------
Enabled:                              Yes
Direction:                            In
Profiles:                             Domain,Private,Public
Grouping:                             Microsoft Edge
LocalIP:                              Any
RemoteIP:                             Any
Protocol:                             UDP
LocalPort:                            5353
RemotePort:                           Any
Edge traversal:                       No
Action:                               Allow

Rule Name:                            Microsoft Store
----------------------------------------------------------------------
Enabled:                              Yes
Direction:                            In
Profiles:                             Domain,Private,Public
Grouping:                             Microsoft Store
LocalIP:                              Any
RemoteIP:                             Any
Protocol:                             Any
Edge traversal:                       Yes
Action:                               Allow

Rule Name:                            Microsoft Store
----------------------------------------------------------------------
Enabled:                              Yes
Direction:                            Out
Profiles:                             Domain,Private,Public
Grouping:                             Microsoft Store
LocalIP:                              Any
RemoteIP:                             Any
Protocol:                             Any
Edge traversal:                       No
Action:                               Allow

Rule Name:                            myHP
----------------------------------------------------------------------
Enabled:                              Yes
Direction:                            In
Profiles:                             Domain,Private,Public
Grouping:                             myHP
```



```
Edge traversal:                       No
Action:                               Allow
Ok.


C:\Windows\System32>netsh advfirewall firewall add rule name="Block Telnet" dir=in action=block protocol=TCP localport=23
Ok.


C:\Windows\System32>netsh advfirewall firewall add rule name="Block Telnet" dir=in action=block protocol=TCP localport=23
Ok.


C:\Windows\System32>telnet localhost 23
'telnet' is not recognized as an internal or external command,
operable program or batch file.

C:\Windows\System32>telnet localhost 23
Connecting To localhost...Could not open connection to the host, on port 23: Connect failed

C:\Windows\System32>python -c "import socket; s=socket.socket(); s.bind(('0.0.0.0', 23)); s.listen(1); print('Listening on port 23...'); s.accept()"
Listening on port 23...

C:\Windows\System32>
C:\Windows\System32>netsh advfirewall firewall add rule name="Block Telnet" dir=in action=block protocol=TCP localport=23
Ok.


C:\Windows\System32>telnet localhost 23
Connecting To localhost...Could not open connection to the host, on port 23: Connect failed

C:\Windows\System32>telnet localhost 23
'telnet' is not recognized as an internal or external command,
operable program or batch file.

C:\Windows\System32>telnet localhost 23
Connecting To localhost...Could not open connection to the host, on port 23: Connect failed

C:\Windows\System32>netsh advfirewall firewall delete rule name="Block Telnet"

Deleted 3 rule(s).
Ok.


C:\Windows\System32>
```