**AIM:**

To setup an network based firewall using Cisco Packet Tracer.

**PROCEDURE:**

**Step 1: Replace Router\_A with Firewall\_1**

* **a.** Remove **Router\_A** and replace it with **Firewall\_1**.
* **b.** Connect the **FastEthernet 0/0** interface on **Firewall\_1** to the **FastEthernet 0/1** interface on **Switch\_A**.  
  Connect the **FastEthernet 0/1** interface on **Firewall\_1** to the **Ethernet 6** interface of the **ISP cloud**.  
  *(Use straight-through cables for both connections.)*
* **c.** Confirm that the host name of **Firewall\_1** is **Firewall\_1**.
* **d.** On **Firewall\_1**, configure the WAN IP address and subnet mask for the **FastEthernet 0/1** interface as **209.165.200.225** and **255.255.255.224**.
* **e.** Configure the LAN IP address and subnet mask for the **FastEthernet 0/0** interface on **Firewall\_1** as **192.168.1.1** and **255.255.255.0**.

**Step 2: Verify the Firewall\_1 Configuration**

* **a.** Use the **show run** command to verify your configuration. This is a partial example of the output:

Firewall\_1#show run

Building configuration...

hostname Firewall\_1

!

interface FastEthernet0/0

ip address 192.168.1.1 255.255.255.0

ip nat inside

duplex auto

speed auto

!

interface FastEthernet0/1

ip address 209.165.200.225 255.255.255.224

ip access-group 100 in

ip nat outside

duplex auto

speed auto

!

interface Vlan1

no ip address

shutdown

!

ip nat inside source list 1 interface FastEthernet0/0 overload

ip classless

ip route 192.168.2.0 255.255.255.0 192.168.1.2

ip route 192.168.3.0 255.255.255.0 192.168.1.3

!

access-list 1 permit 192.168.0.0 0.0.255.255

access-list 100 deny ip any host 209.165.200.225

<output omitted>

!

end

* **b.** From **PC\_B**, ping **209.165.200.225** to verify that the internal computer can access the Internet.

PC>ping 209.165.200.225

Pinging 209.165.200.225 with 32 bytes of data:

Reply from 209.165.200.225: bytes=32 time=107ms TTL=120

Reply from 209.165.200.225: bytes=32 time=98ms TTL=120

Reply from 209.165.200.225: bytes=32 time=104ms TTL=120

Reply from 209.165.200.225: bytes=32 time=95ms TTL=120

Ping statistics for 209.165.200.225:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 95ms, Maximum = 107ms, Average = 101ms

* **c.** From privileged EXEC mode on **Firewall\_1**, save the running configuration to the startup configuration using the **copy run start** command.

**DIAGRAM:**

A diagram of a network

Description automatically generated

RESULT:

Hence, the firewall setup is configured within the network interface.