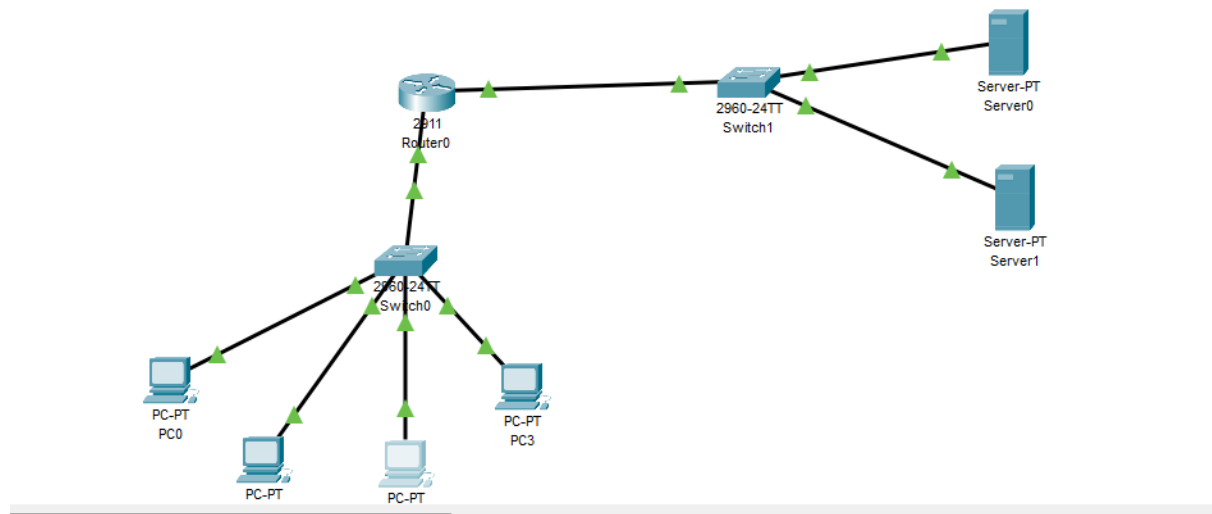


12 . Configure a standard Access Control List (ACL) on a router to permit traffic from a specific IP range. Test connectivity to verify the ACL is working as intended.

Network topology :



Configuring the router :

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
ip address 192.168.10.1 255.255.255.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
ip address 10.10.10.1 255.0.0.0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#ip address 10.10.10.1 255.255.255.0
Router(config-if)#ip address 10.10.10.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#
```

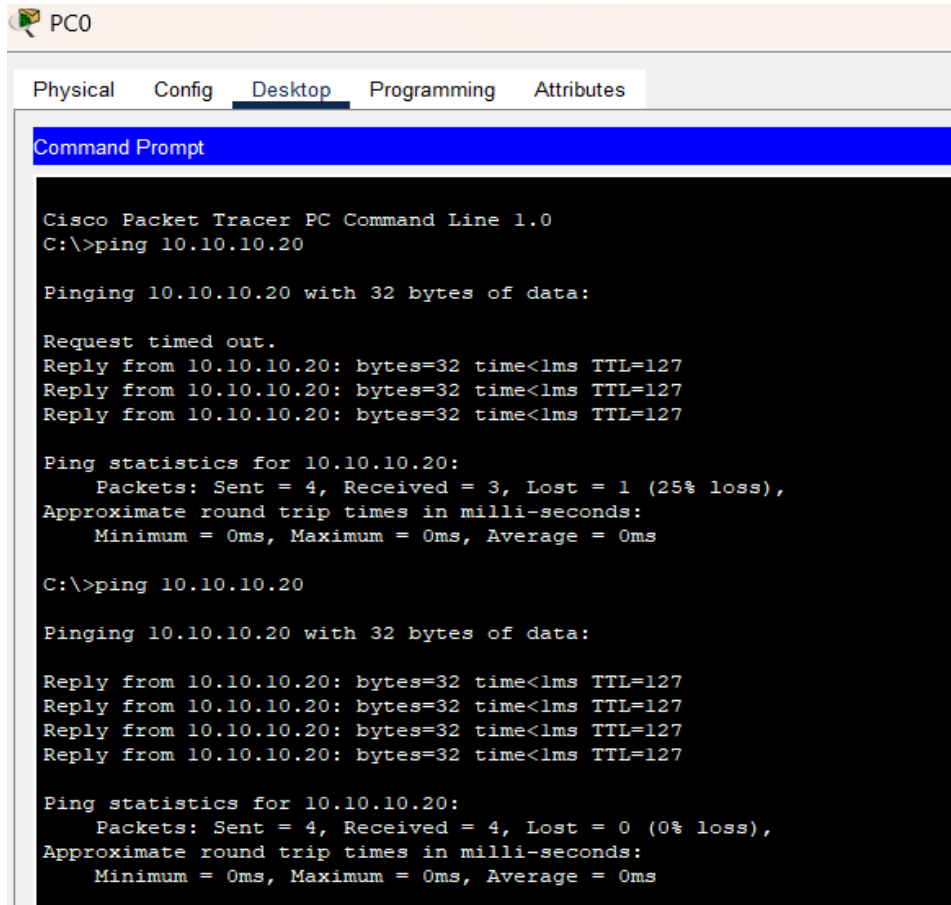
Implementing the ACL TO Stop the traffic of pc 2 and pc3 and allowing traffic from pc0 and pc1 to servers :

```
Router(config)#access-list 10 permit host 192.168.10.10
Router(config)#access-list 10 permit host 192.168.10.20
Router(config)#
Router(config)#
Router(config)#access-list 10 deny any
Router(config)#
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip access-group 10 in
Router(config-if)#exit
Router(config)#
Router(config)#do wr
Building configuration...
[OK]
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
Router#show access-list
      ^
% Invalid input detected at '^' marker.

Router#show access-list
Standard IP access list 10
    10 permit host 192.168.10.10
    20 permit host 192.168.10.20
    30 deny any
```

Pinging from pc0 to server and it is successful because it is allowed :



The screenshot shows the PC0 interface in Cisco Packet Tracer. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The command prompt shows the execution of two ping commands to the IP address 10.10.10.20. The first command, 'ping 10.10.10.20', results in a 'Request timed out' and a 25% packet loss. The second command, 'ping 10.10.10.20', results in successful replies with 0% packet loss.

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.20

Pinging 10.10.10.20 with 32 bytes of data:

Request timed out.
Reply from 10.10.10.20: bytes=32 time<lms TTL=127
Reply from 10.10.10.20: bytes=32 time<lms TTL=127
Reply from 10.10.10.20: bytes=32 time<lms TTL=127

Ping statistics for 10.10.10.20:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.10.10.20

Pinging 10.10.10.20 with 32 bytes of data:

Reply from 10.10.10.20: bytes=32 time<lms TTL=127
Reply from 10.10.10.20: bytes=32 time<lms TTL=127
Reply from 10.10.10.20: bytes=32 time<lms TTL=127
Reply from 10.10.10.20: bytes=32 time<lms TTL=127

Ping statistics for 10.10.10.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Now pinging from pc2 to server it not successful because it has been blocked by the ACL :

```
C:\>ping 10.10.10.10

Pinging 10.10.10.10 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 10.10.10.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```