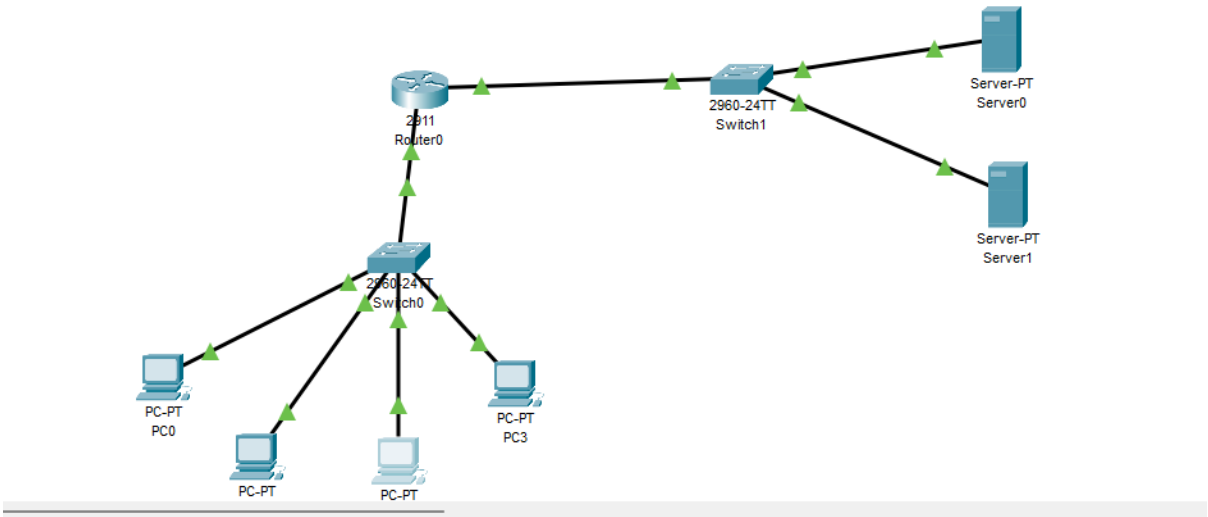
12 . Configure a standard Access Control List (ACL) on a router to permit traffic from a specific IP range. Test connectivity to verify the ACL is working as intended.

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)#
```

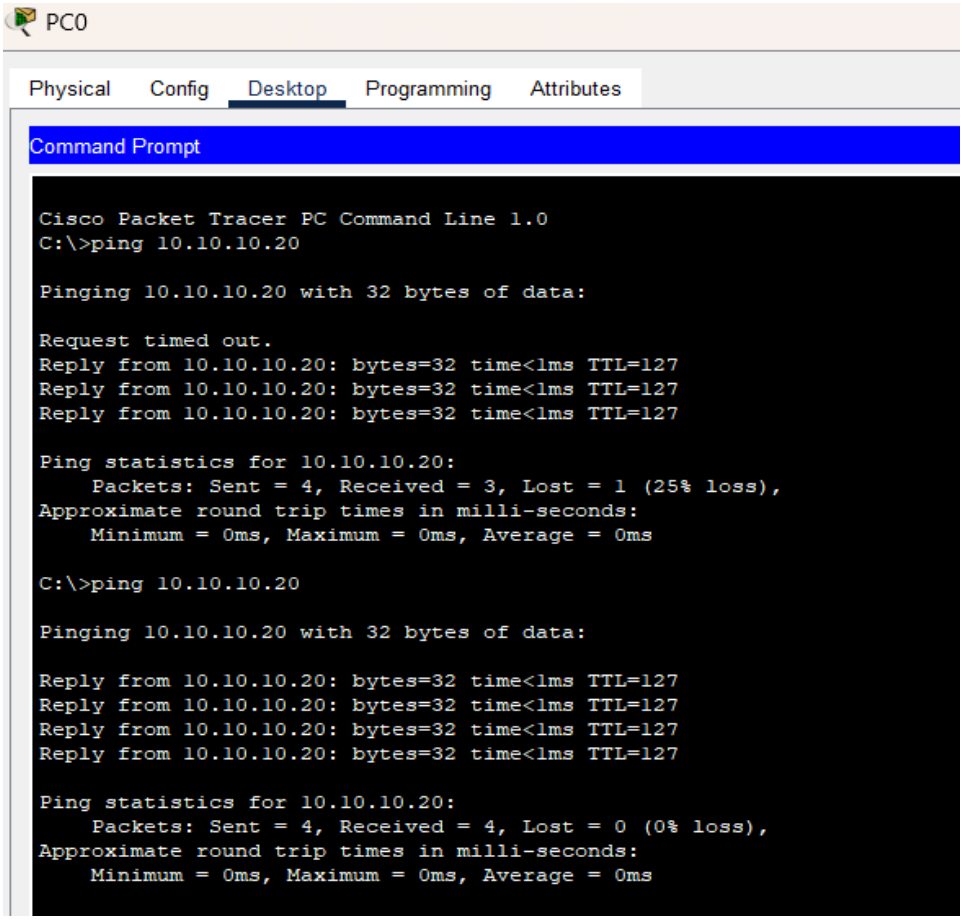
Implementing the ACL TO Stop the traffic of pc 2 and pc3 and allowing trafiic from pc0 and pc1 to servers :

```
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#ahow 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 suucessfull because it is allowed :



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),
```