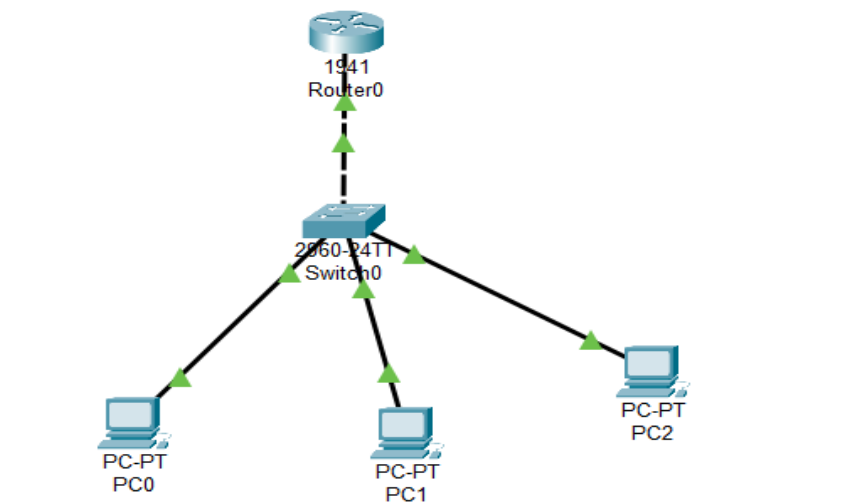


Implement ACLs to restrict traffic based on source and destination ports. Test rules by simulating legitimate and unauthorized traffic.

Network Topology :



Configuration of Switch for vlan :

```
Switch>enable
Switch#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name Data_VLAN
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name Voice_VLAN
Switch(config-vlan)#exit
Switch(config)#interface FastEthernet 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface FastEthernet 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface Ethernet 0/1
%Invalid interface type and number
Switch(config)#interface Ethernet 0/3
%Invalid interface type and number
Switch(config)#interface FastEthernet 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#
Switch(config)#interface GigabitEthernet0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
```

Configuring 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

Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
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

Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

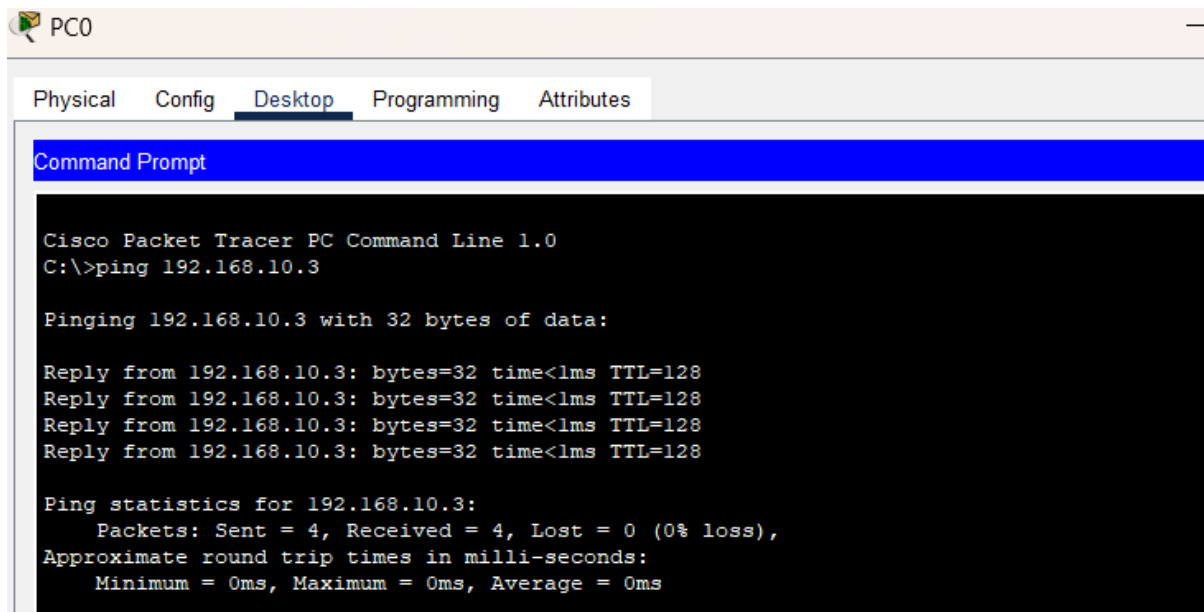
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface GigabitEthernet 0/0.10
Router(config-subif)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0.10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.10, changed state to up
```

Configuring ACL to RESTRICT Traffic :

```
Router(config)#access-list 100 deny ip 192.168.20.0 0.0.0.255 192.168.10.0 0.0.0.255
Router(config)#access-list 100 permit ip any any
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Now plnging from pcs to test ACL :



The screenshot shows the 'PC0' window in Cisco Packet Tracer. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The text in the command prompt is as follows:

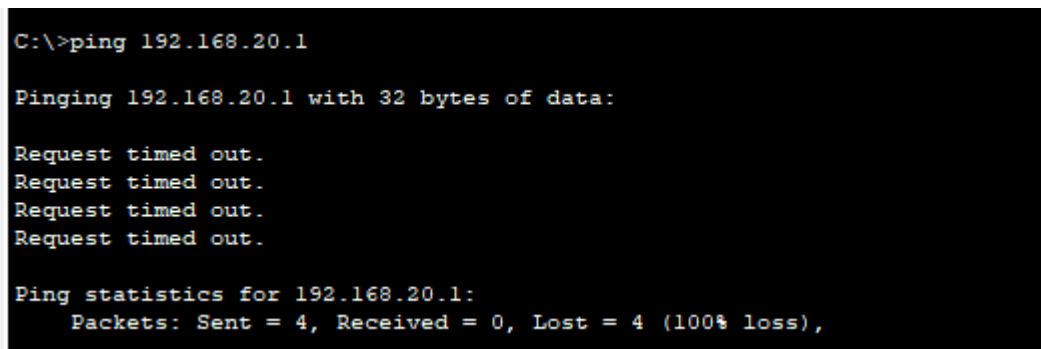
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.3

Pinging 192.168.10.3 with 32 bytes of data:

Reply from 192.168.10.3: bytes=32 time<lms TTL=128
Reply from 192.168.10.3: bytes=32 time<lms TTL=128
Reply from 192.168.10.3: bytes=32 time<lms TTL=128
Reply from 192.168.10.3: bytes=32 time<lms TTL=128

Ping statistics for 192.168.10.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Ping is successful for 192.168.10.3



The screenshot shows a Command Prompt window with the following text:

```
C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping is not successful Because of ACL .