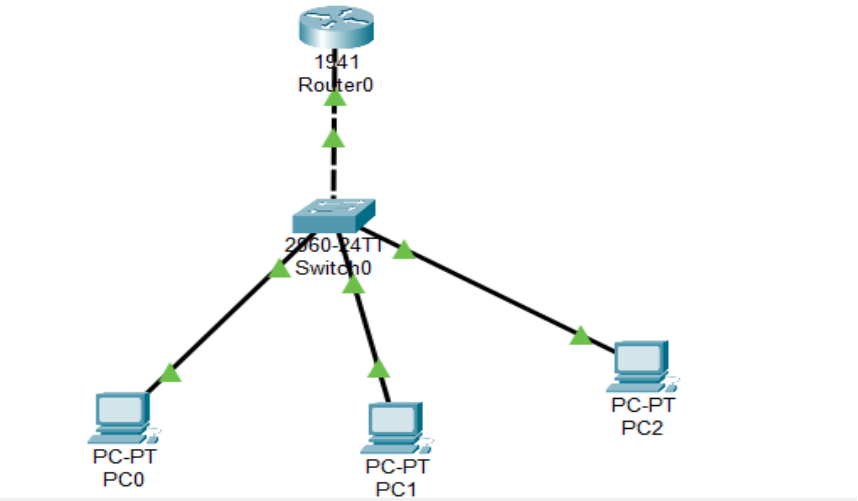
Implement ACLs to restrict traffic based on source and destination ports. Test rules by simulating legitimate and unauthorized traffic.

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
```

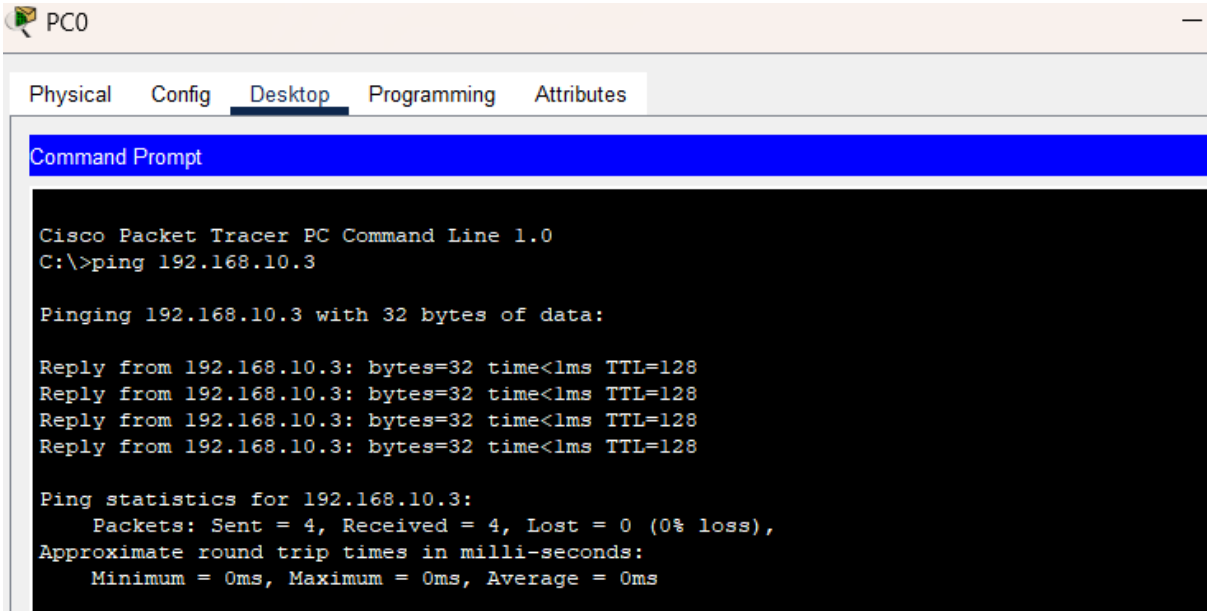
Configuring router :

```
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
```

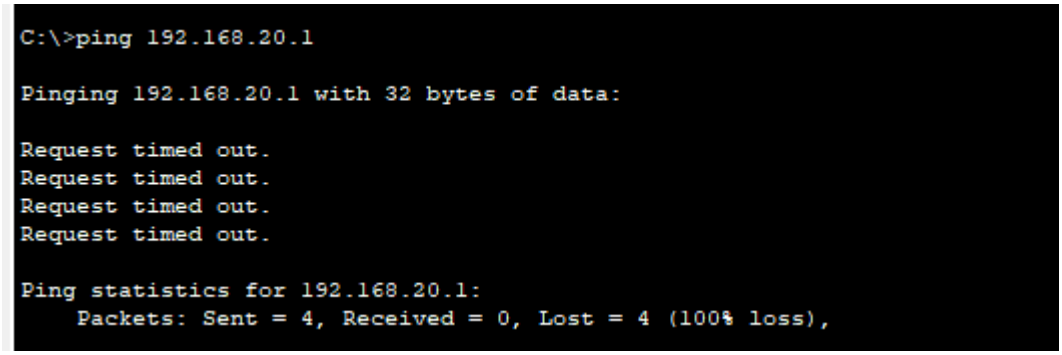
Configuring ACL to RESTRICT Traffic :

```
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 pInging from pcs to test ACL :



Ping is successful for 192.168.10.3



Ping is not successful Because of ACL .