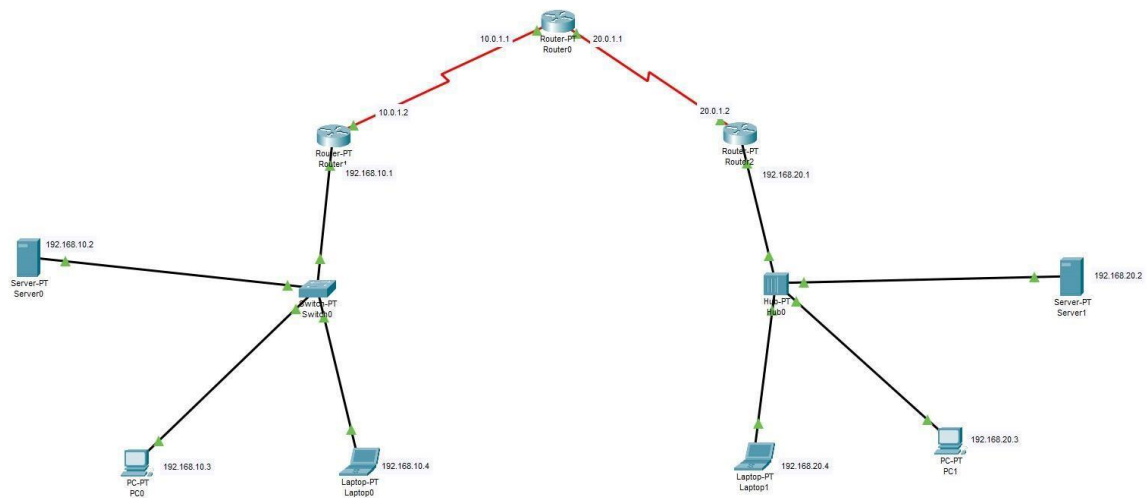**Practical 3**: Exploring Router and VLAN security, setting up access lists using cisco packet tracer


```
Router(config-if)#ip address 10.0.1.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#ip address 20.0.1.1 255.0.0.0
Router(config-if)#ip address 20.0.1.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#
%SYS-5-CONFIG_I: Configured from console by console
```

```
                 System Configuration Dialog

Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#ip address 10.0.1.2 255.0.0.0
Router(config-if)#ip address 10.0.1.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#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)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 192.168.10.0
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
%SYS-5-CONFIG_I: Configured from console by console
no network 10.0.0.0
Router(config-router)#network 10.0.0.0
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#
%SYS-5-CONFIG_I: Configured from console by console

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

```
Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#ip address 20.0.1.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.20.1 255.255.255.0
Router(config-if)#ip address 192.168.20.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 20.0.0.0
Router(config-router)#network 192.168.20.0
Router(config-router)#
```
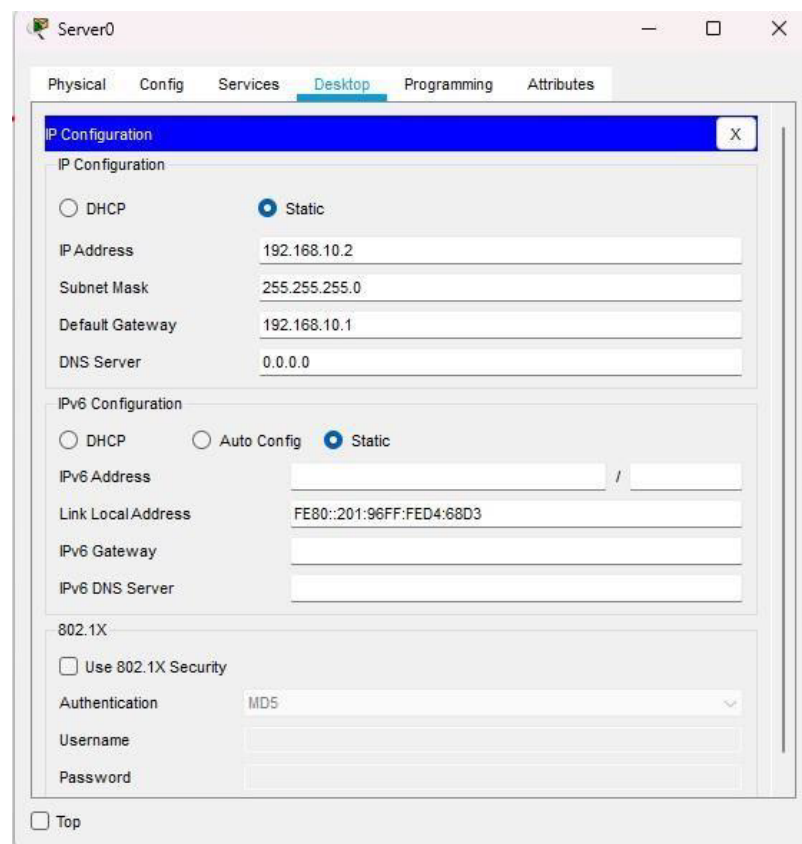
Server1

Physical　Config　Services　Desktop　Programming　Attributes

IP Configuration

IP Configuration

○ DHCP　　● Static

IP Address　　192.168.20.2

Subnet Mask　　255.255.255.0

Default Gateway　　192.168.20.1

DNS Server　　0.0.0.0

IPv6 Configuration

○ DHCP　　○ Auto Config　　● Static

IPv6 Address　　　　　　　/

Link Local Address　　FE80::20C:85FF:FE69:6981

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication　　MD5

Username

Password

☐ Top

PC0

Physical　Config　Desktop　Programming　Attributes

IP Configuration

Interface　　FastEthernet0

IP Configuration

○ DHCP　　● Static

IP Address　　192.168.10.3

Subnet Mask　　255.255.255.0

Default Gateway　　192.168.10.1

DNS Server　　0.0.0.0

IPv6 Configuration

○ DHCP　　○ Auto Config　　● Static

IPv6 Address　　　　　　　/

Link Local Address　　FE80::201:43FF:FE98:6CA3

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication　　MD5

Username

☐ Top

PC1

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

○ DHCP ● Static

IP Address: 192.168.20.3
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.20.1
DNS Server: 0.0.0.0

IPv6 Configuration

○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::201:42FF:FECE:3CC6
IPv6 Gateway:
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5
Username:

☐ Top

Laptop0

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

○ DHCP ● Static

IP Address: 192.168.10.4
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.10.1
DNS Server: 0.0.0.0

IPv6 Configuration

○ DHCP ○ Auto Config ● Static

IPv6 Address: /
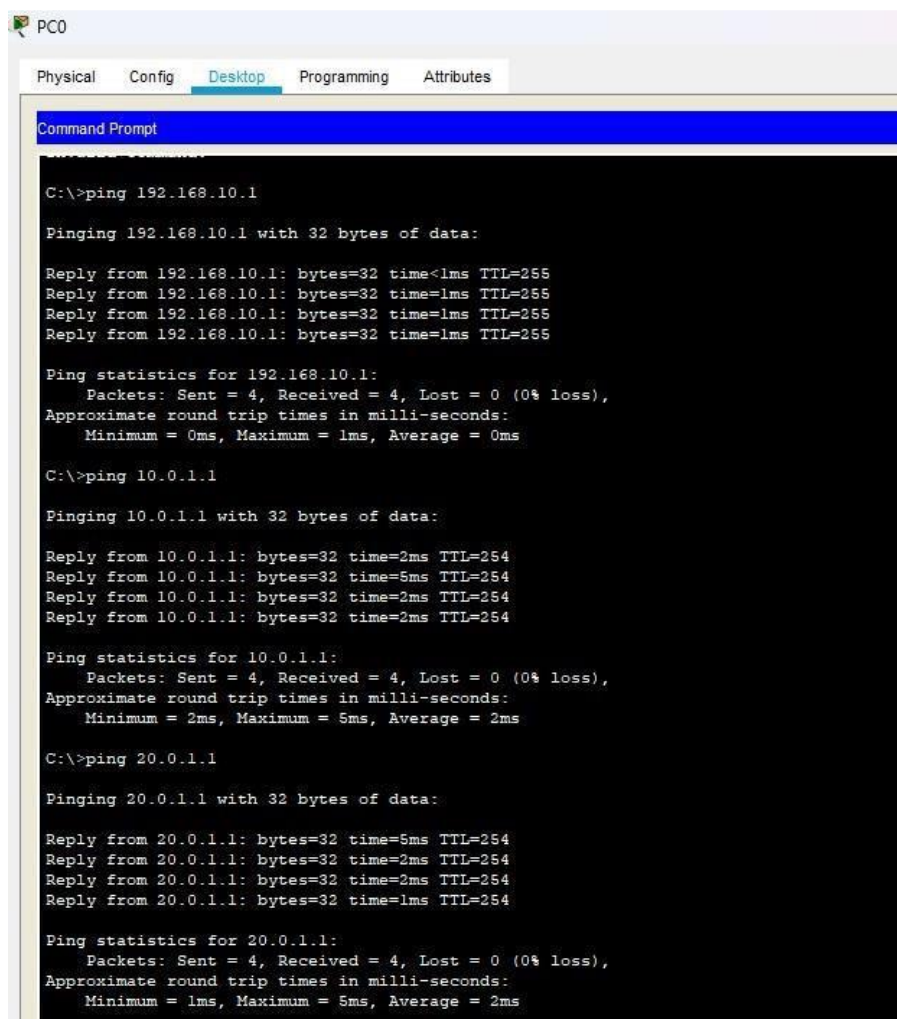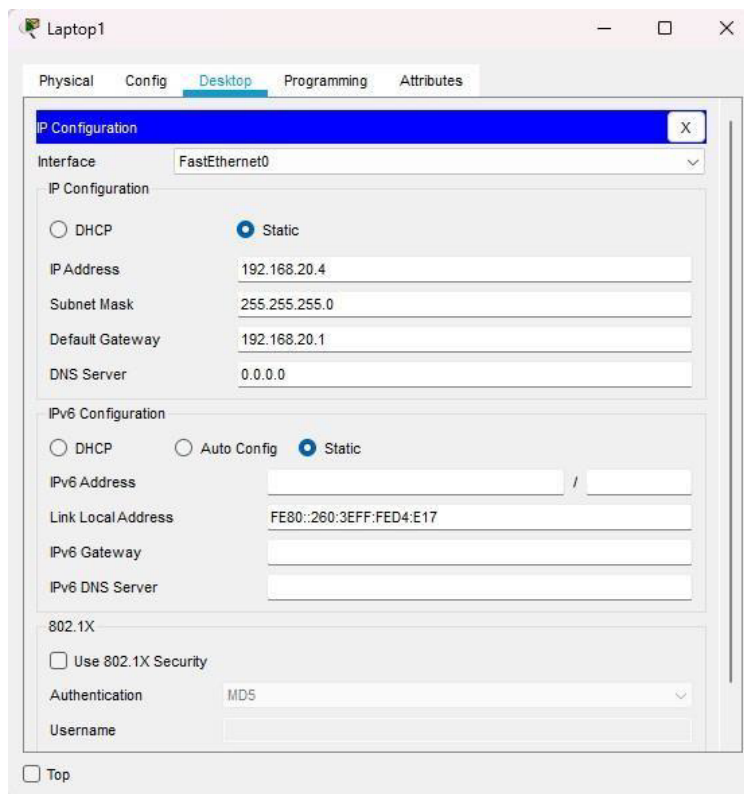Link Local Address: FE80::201:43FF:FE12:B1B8
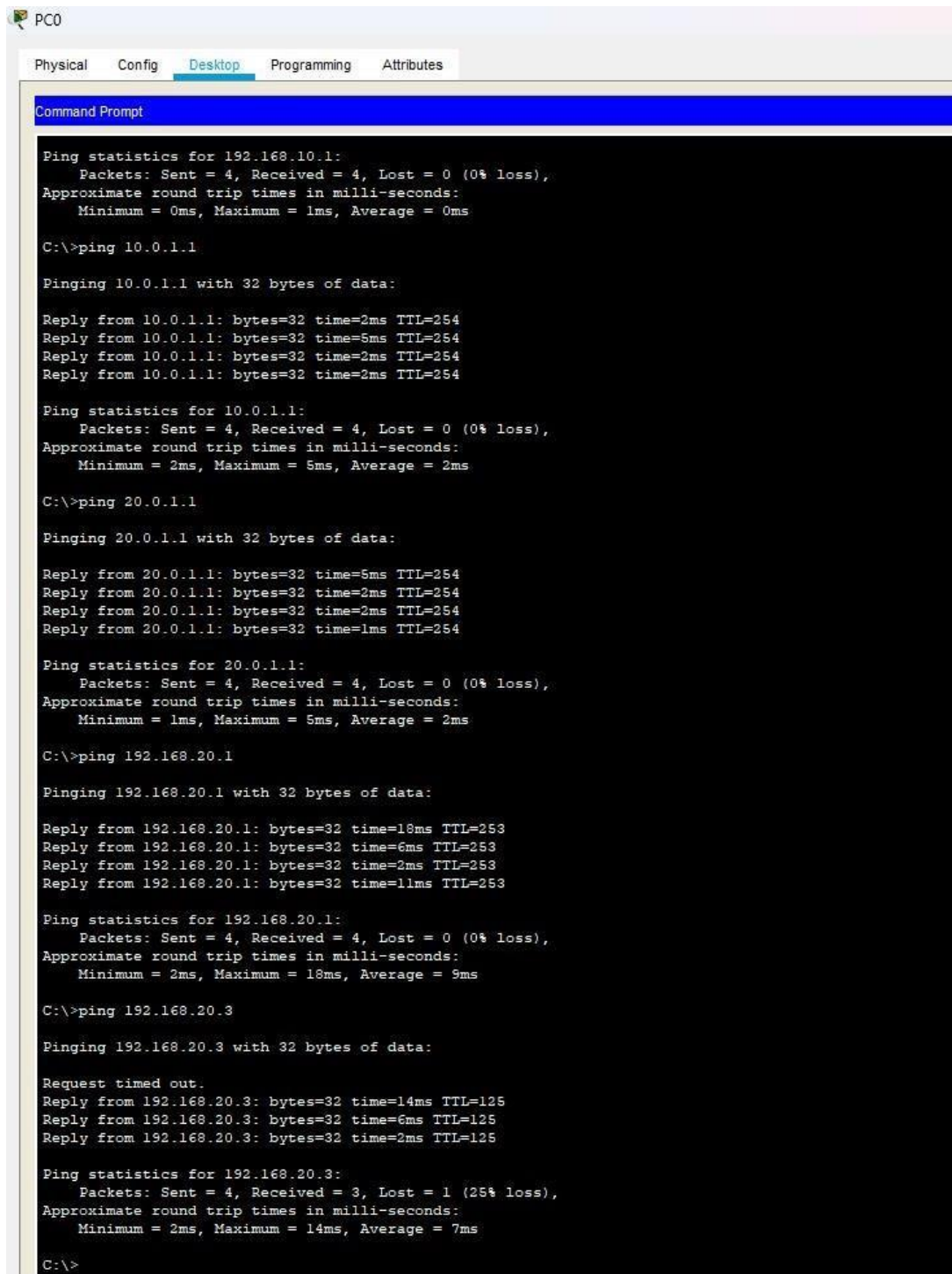IPv6 Gateway:
IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5
Username:

☐ Top

Laptop1

Physical   Config   Desktop   Programming   Attributes

IP Configuration   X

Interface   FastEthernet0

IP Configuration

○ DHCP   ● Static

IP Address   192.168.20.4

Subnet Mask   255.255.255.0

Default Gateway   192.168.20.1

DNS Server   0.0.0.0

IPv6 Configuration

○ DHCP   ○ Auto Config   ● Static

IPv6 Address   /

Link Local Address   FE80::260:3EFF:FED4:E17

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication   MD5

Username

☐ Top

PC0

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
C:\>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 10.0.1.1

Pinging 10.0.1.1 with 32 bytes of data:

Reply from 10.0.1.1: bytes=32 time=2ms TTL=254
Reply from 10.0.1.1: bytes=32 time=5ms TTL=254
Reply from 10.0.1.1: bytes=32 time=2ms TTL=254
Reply from 10.0.1.1: bytes=32 time=2ms TTL=254

Ping statistics for 10.0.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 5ms, Average = 2ms

C:\>ping 20.0.1.1

Pinging 20.0.1.1 with 32 bytes of data:

Reply from 20.0.1.1: bytes=32 time=5ms TTL=254
Reply from 20.0.1.1: bytes=32 time=2ms TTL=254
Reply from 20.0.1.1: bytes=32 time=2ms TTL=254
Reply from 20.0.1.1: bytes=32 time=1ms TTL=254

Ping statistics for 20.0.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 5ms, Average = 2ms
```

F-006

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#access-list?
access-list
Router(config)#access-list
% Incomplete command.
Router(config)#access-list?
access-list
Router(config)#access-list
% Incomplete command.
Router(config)#access-list?
access-list
Router(config)#access-list ?
  <1-99>     IP standard access list
  <100-199>  IP extended access list
Router(config)#access-list
% Incomplete command.
Router(config)#interface FastEthernet0/0
Router(config-if)#access-list 10 deny 192.168.10.2 0.0.0.0
Router(config)#access-list 10 permit any
Router(config)#access-list 10 deny 192.168.10.2 0.0.0.0
Router(config)#interface s0
                            ^
% Invalid input detected at '^' marker.

Router(config)#interface FastEthernet0/0
Router(config-if)#interface Se
Router(config-if)#interface Serial2/0
Router(config-if)#ip access-group 10 out
Router(config-if)#exit
Router(config)#
```