Lab Exercise – I

Implement the topology given below on cisco packet tracer:

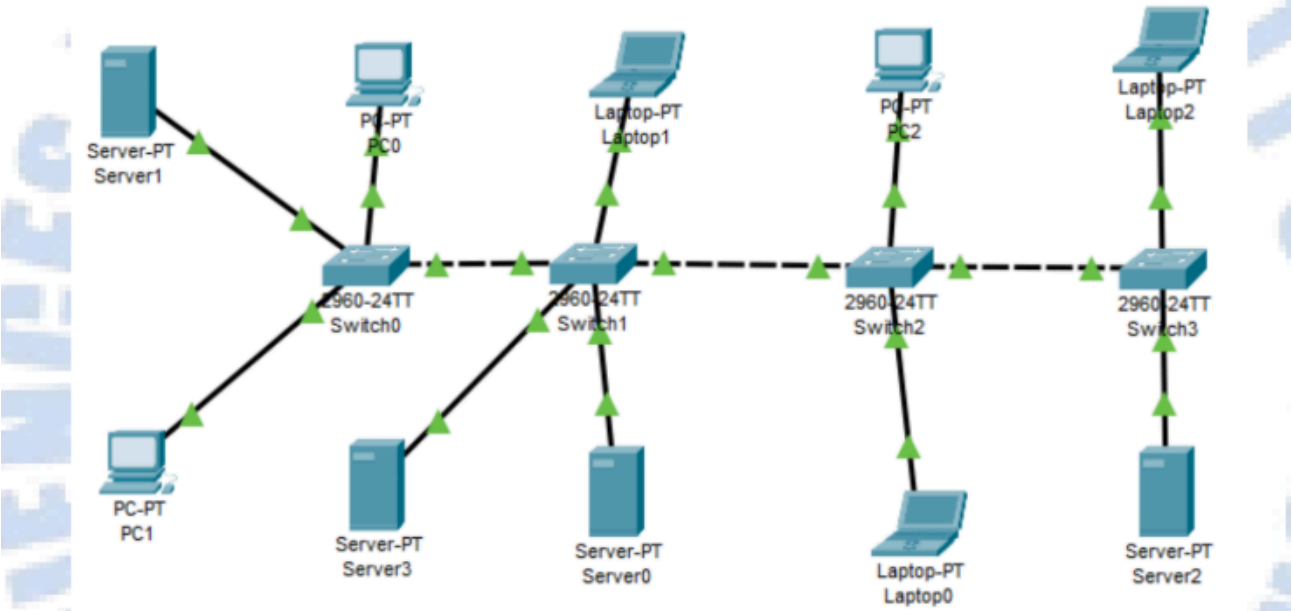
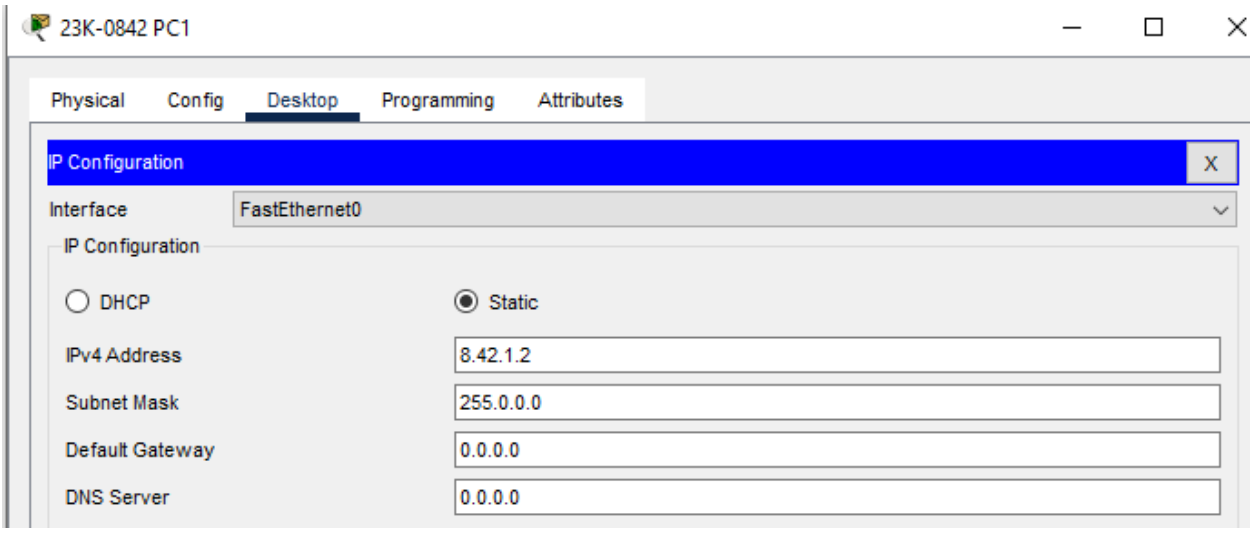


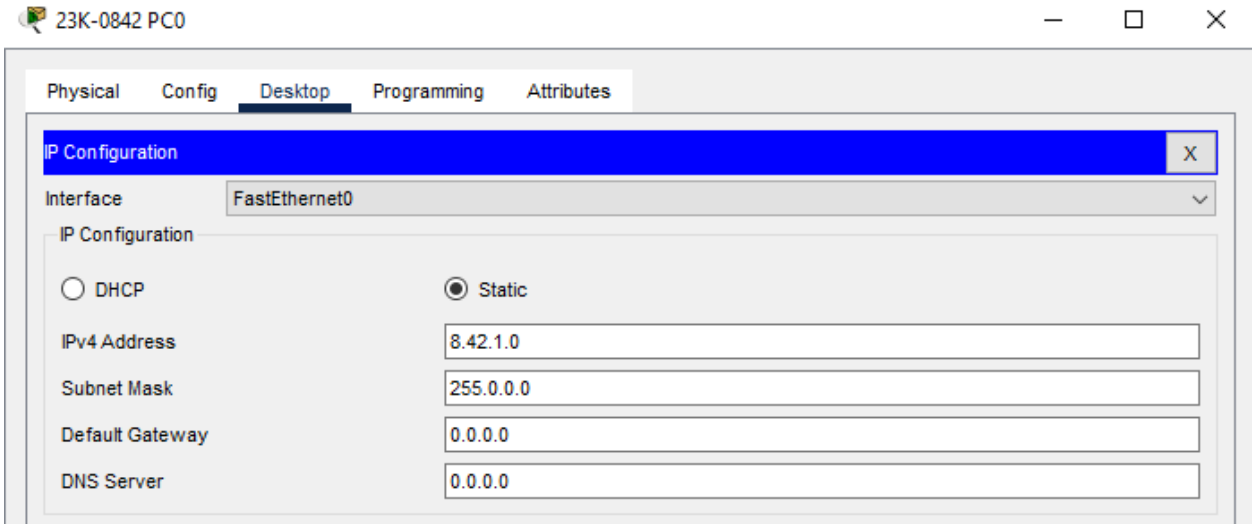
Figure 01

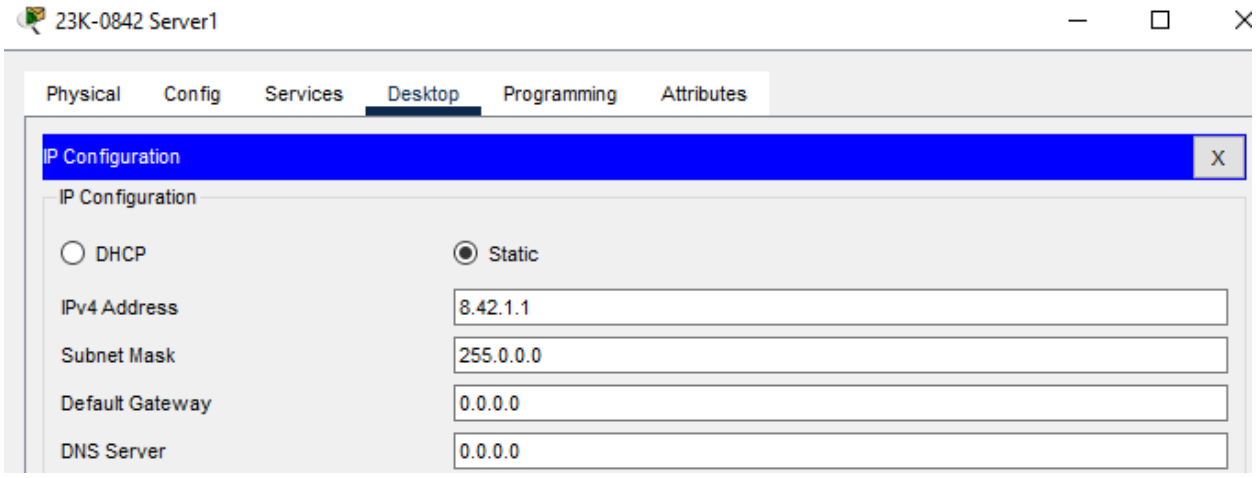
Do the following:

- Assign IP to the computers. The Network should like this XX.XX.YY.0. i.e. your roll number like 3879(38.79.1.0) and for all other networks Y should be replaced by 2, 3 and so on.
- Ping the server from any computer.
- Verify the telnet connection from all switches nearest to the computer.
- Do change the IP of Switch1 from Laptop1 and Switch2 from Laptop0 using its command prompt.

Assigning IP and Verifying telnet connections:




23K-0842 PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
8.42.1.0
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0


23K-0842 Server1
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IPv4 Address
8.42.1.1
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0

23K-0842 Switch0

Physical Config CLI Attributes

IOS Command Line Interface

```
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to u

%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to u

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to u


Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname S0
S0(config)#enable secret pass
S0(config)#interface vlan 1
S0(config-if)#ip add 8.42.1.3 255.0.0.0
S0(config-if)#no shutdown

S0(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S0(config-if)#exit
S0(config)#line vty 0 4
S0(config-line)#password pass1
S0(config-line)#login
S0(config-line)#exit
S0(config)#
S0#
```

23K-0842 PC1

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 8.42.1.3
Trying 8.42.1.3 ...Open


User Access Verification

Password:
S0>
```

23K-0842 PC0

Physical | Config | Desktop | Programming | Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 8.42.1.3
Trying 8.42.1.3 ...Open


User Access Verification

Password:
S0>
```

23K-0842 Laptop1

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

- DHCP
- Static

IPv4 Address	8.42.2.2
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

23K-0842 Server0

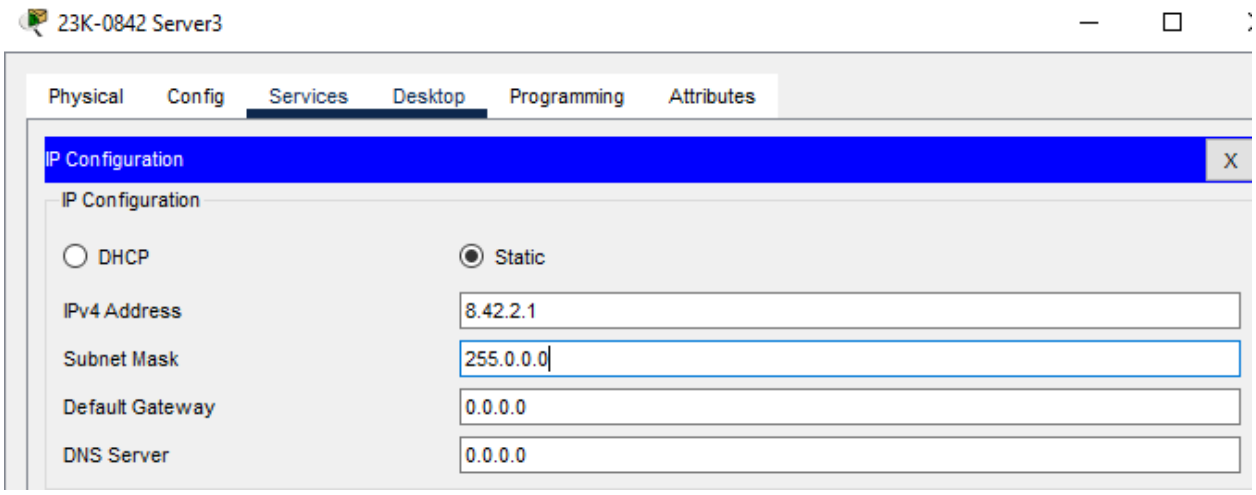
Physical | Config | Services | Desktop | Programming | Attributes

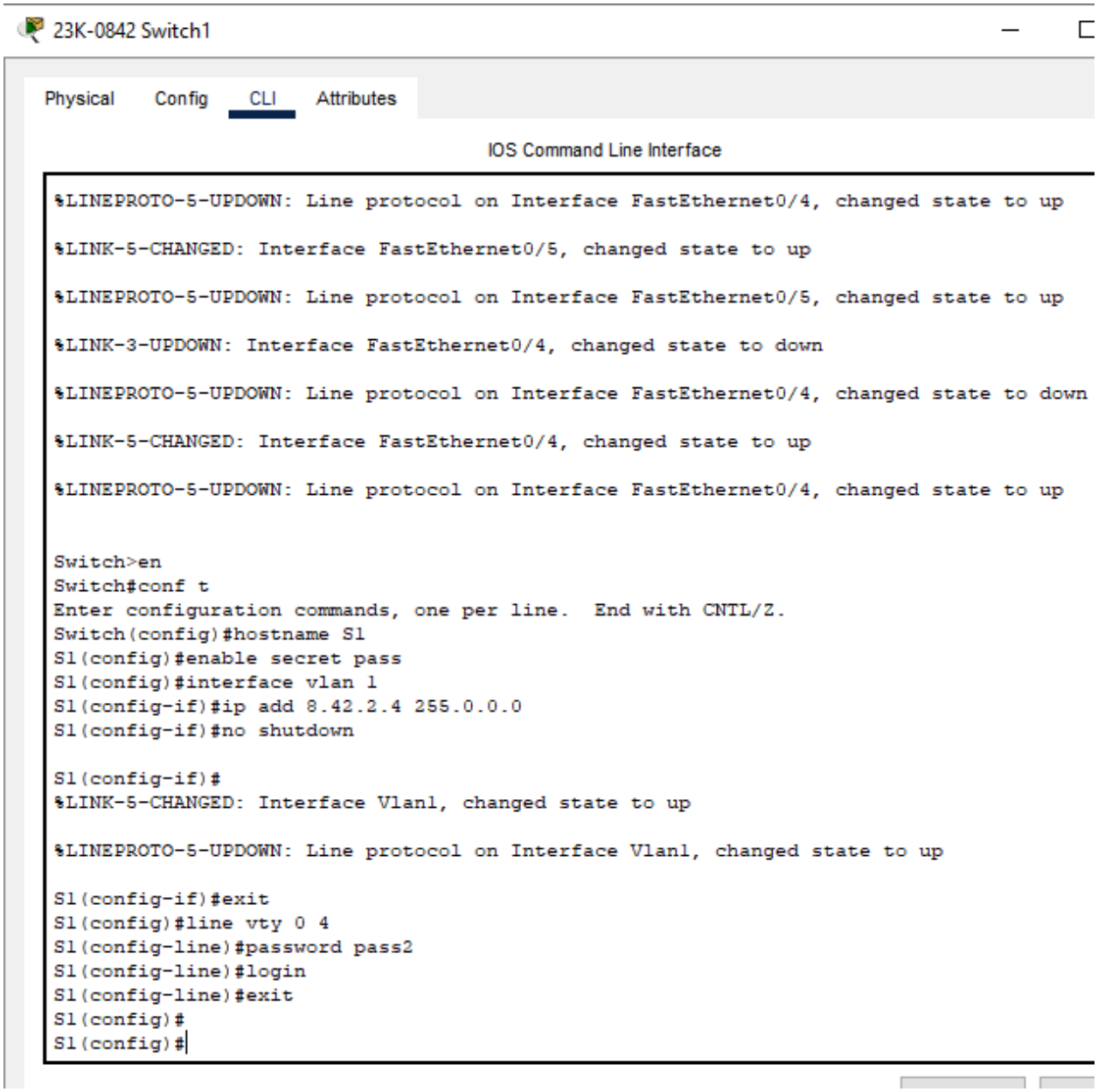
IP Configuration

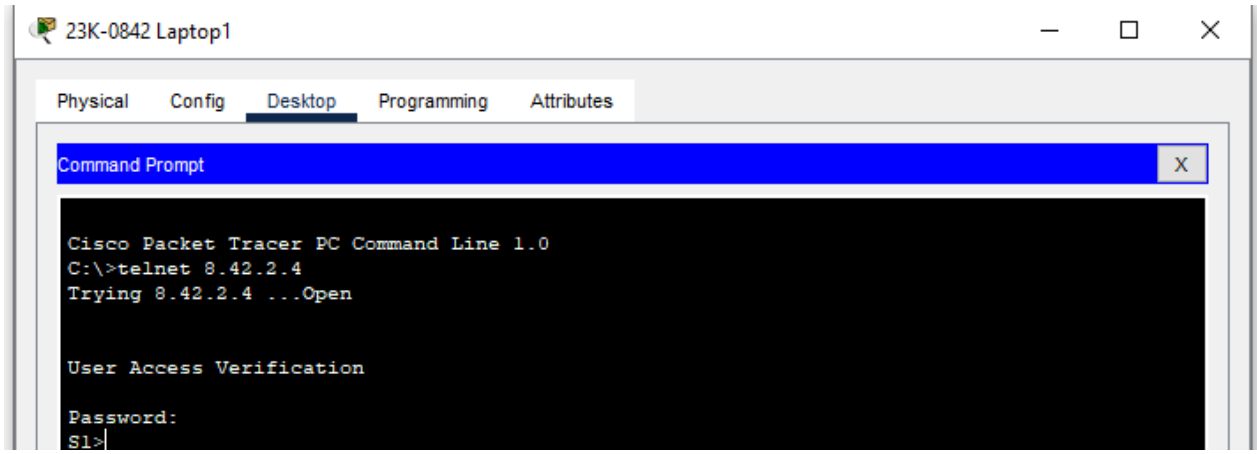
IP Configuration

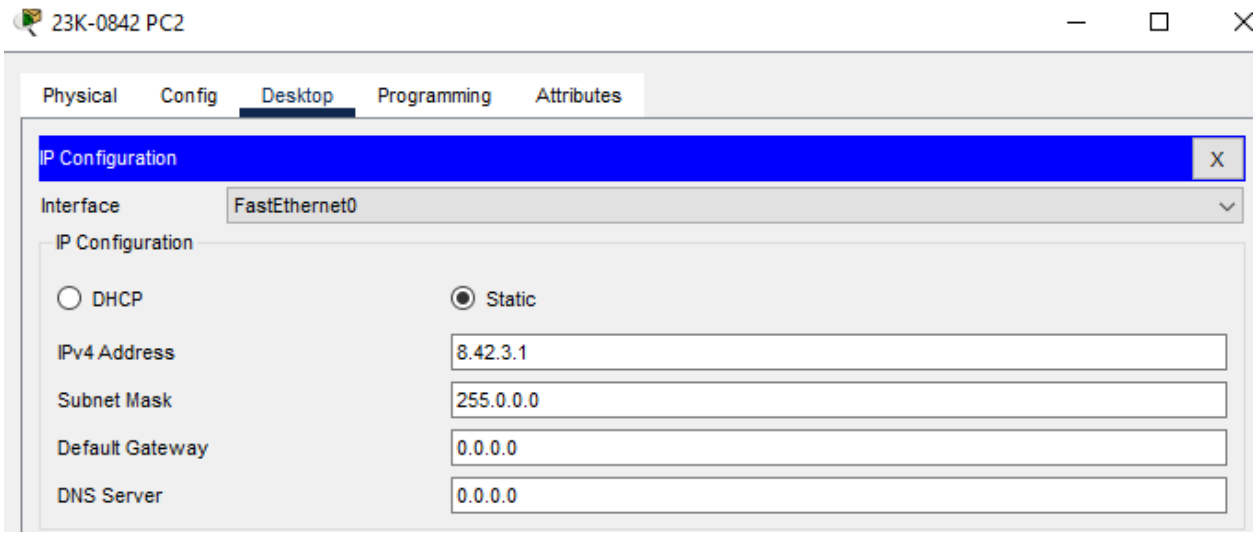
- DHCP
- Static

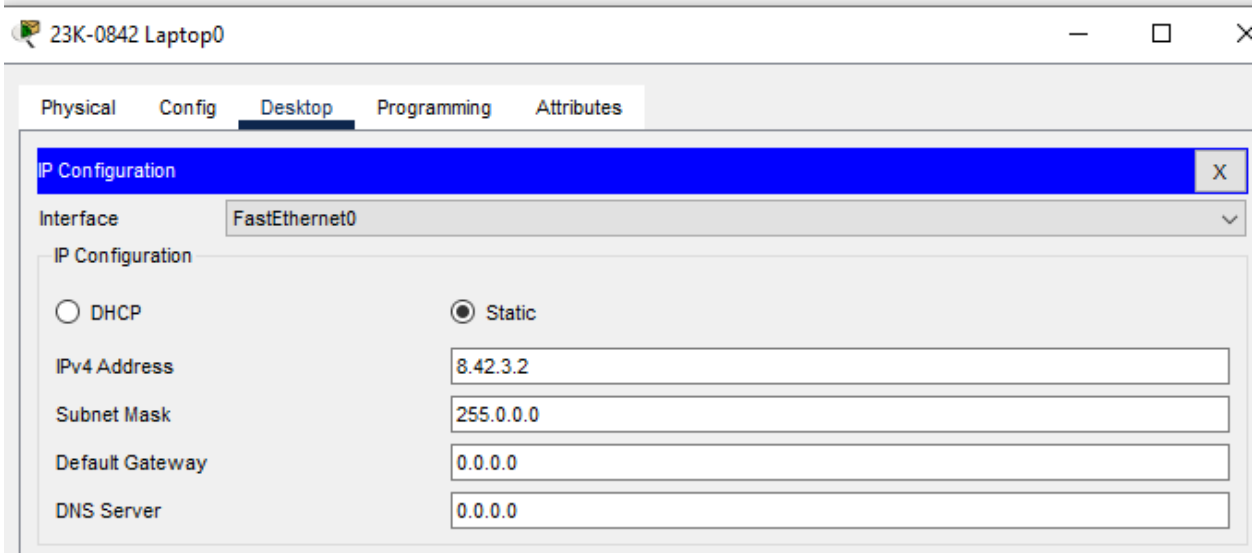
IPv4 Address	8.42.2.3
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0


23K-0842 Server3
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IPv4 Address
8.42.2.1
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0


23K-0842 Switch1
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
%LINK-3-UPDOWN: Interface FastEthernet0/4, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to down
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#enable secret pass
S1(config)#interface vlan 1
S1(config-if)#ip add 8.42.2.4 255.0.0.0
S1(config-if)#no shutdown
S1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
S1(config-if)#exit
S1(config)#line vty 0 4
S1(config-line)#password pass2
S1(config-line)#login
S1(config-line)#exit
S1(config)#
S1(config)#


23K-0842 Laptop1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 8.42.2.4
Trying 8.42.2.4 ...Open
User Access Verification
Password:
S1>


23K-0842 PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
8.42.3.1
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0


23K-0842 Laptop0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
8.42.3.2
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0

23K-0842 Switch2

Physical Config CLI Attributes

IOS Command Line Interface

```
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up


Switch>EN
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname S2
S2(config)#enable secret pass
S2(config)#interface vlan 1
S2(config-if)#ip add 8.42.3.3 255.0.0.0
S2(config-if)#no shutdown

S2(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S2(config-if)#exit
S2(config)#line vty 0 4
S2(config-line)#password pass3
S2(config-line)#login exit
                       ^
% Invalid input detected at '^' marker.

S2(config-line)#login
S2(config-line)#exit
S2(config)#
```

```
C:\>telnet 8.42.3.3
Trying 8.42.3.3 ...Open


User Access Verification

Password:
S2>
```

23K-0842 PC2

Physical | Config | Desktop | Programming | Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 8.42.3.3
Trying 8.42.3.3 ...Open


User Access Verification

Password:
S2>
```

23K-0842 Laptop2

Physical | Config | Desktop | Programming | Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

- DHCP
- Static

IPv4 Address	8.42.4.1
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

23K-0842 Server2

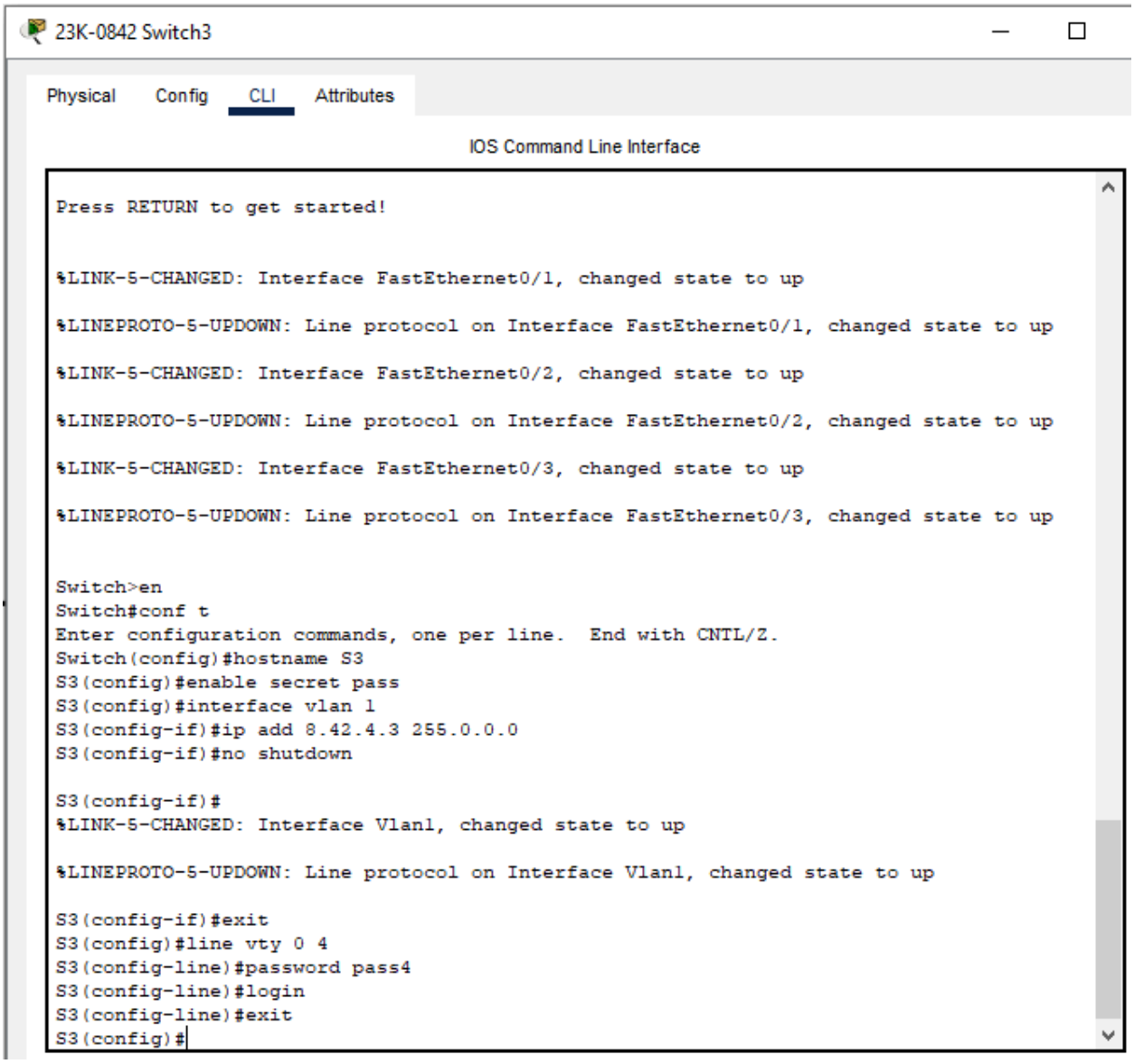
Physical | Config | Services | Desktop | Programming | Attributes

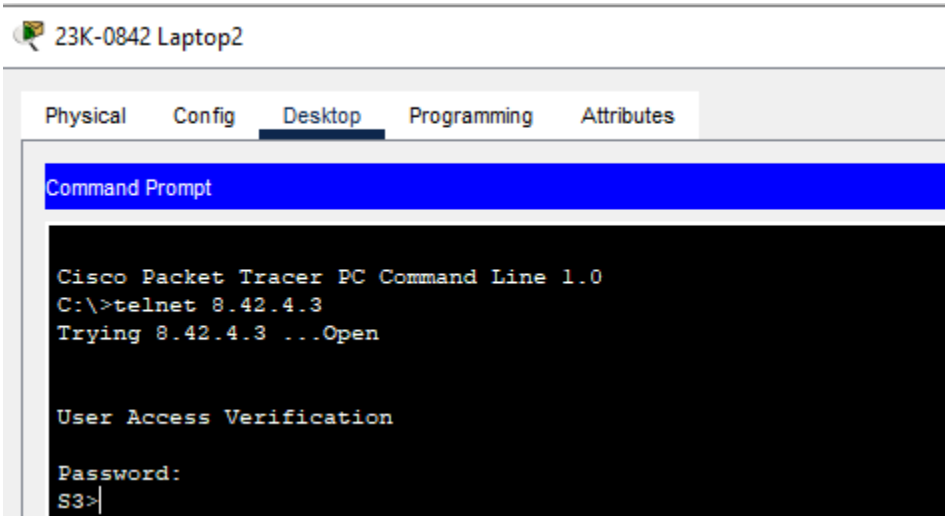
IP Configuration

IP Configuration

- DHCP
- Static

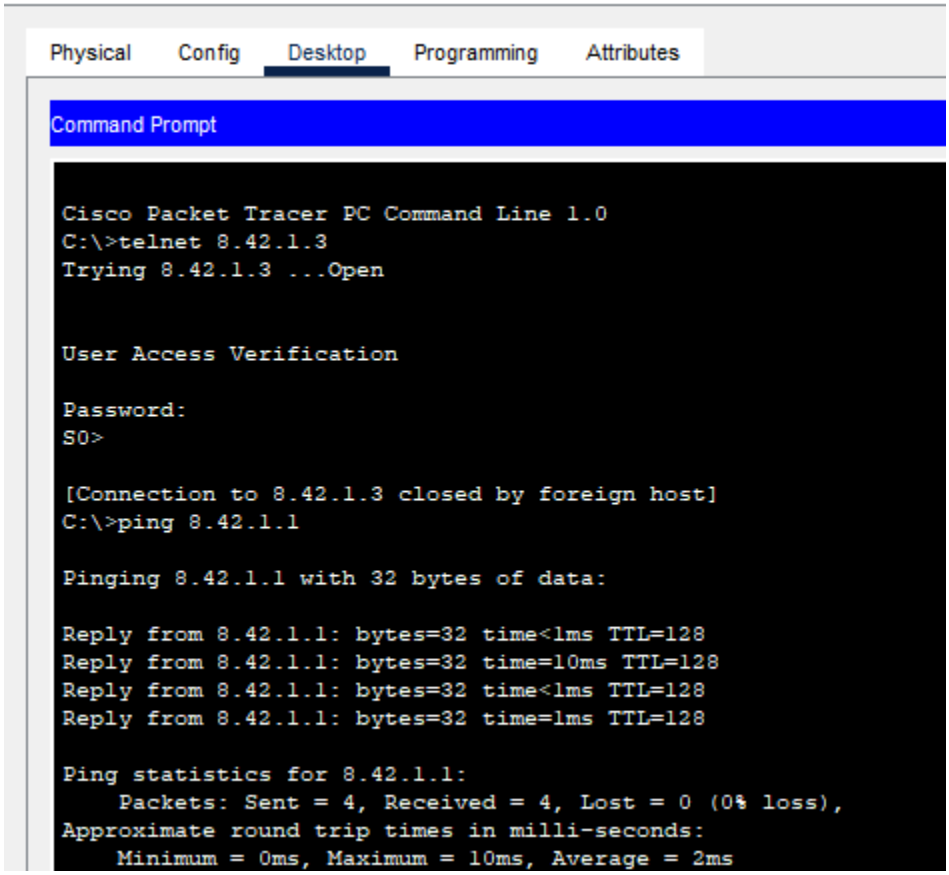
IPv4 Address	8.42.4.2
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0


23K-0842 Switch3
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started!
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S3
S3(config)#enable secret pass
S3(config)#interface vlan 1
S3(config-if)#ip add 8.42.4.3 255.0.0.0
S3(config-if)#no shutdown
S3(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
S3(config-if)#exit
S3(config)#line vty 0 4
S3(config-line)#password pass4
S3(config-line)#login
S3(config-line)#exit
S3(config)#

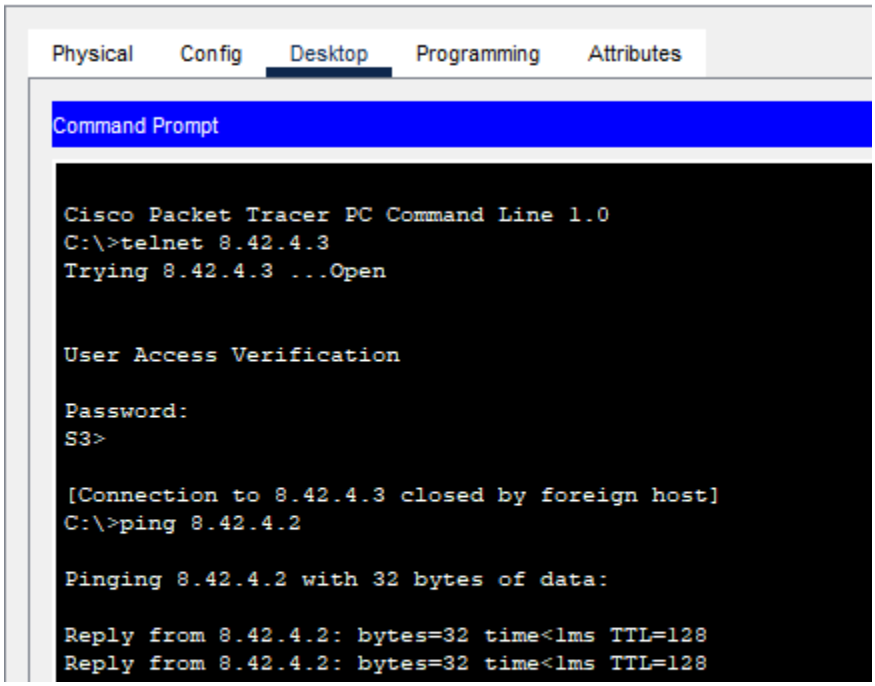

23K-0842 Laptop2
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 8.42.4.3
Trying 8.42.4.3 ...Open
User Access Verification
Password:
S3>

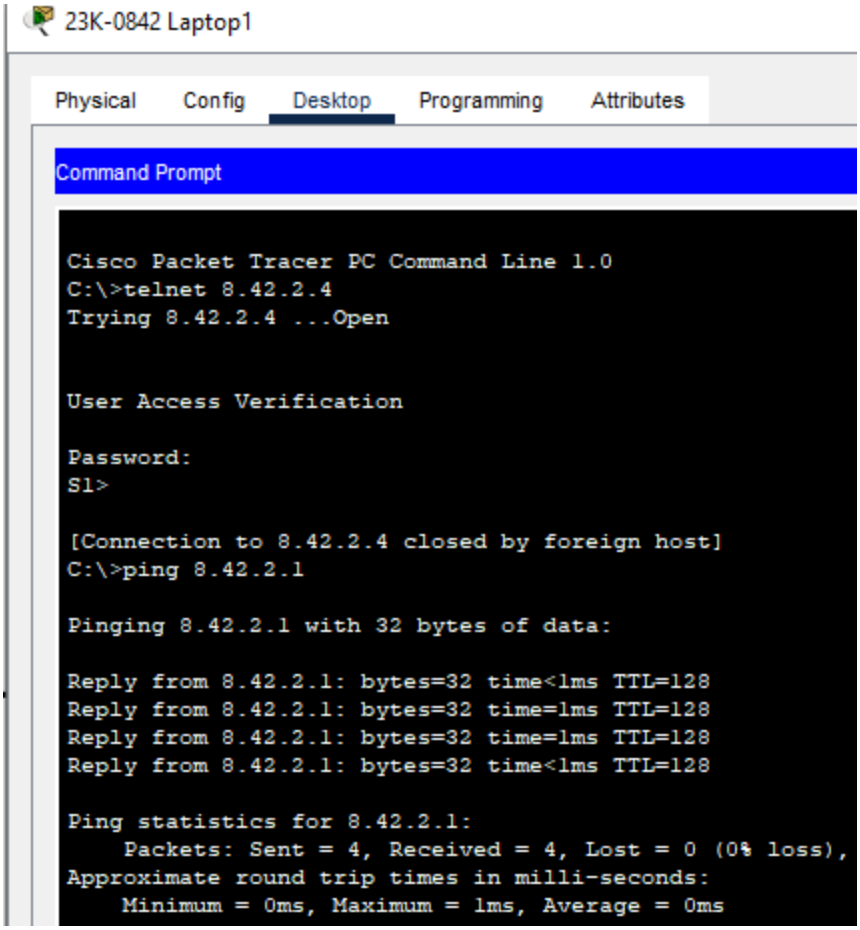
Pinging connection from server:

23K-0842 PC1



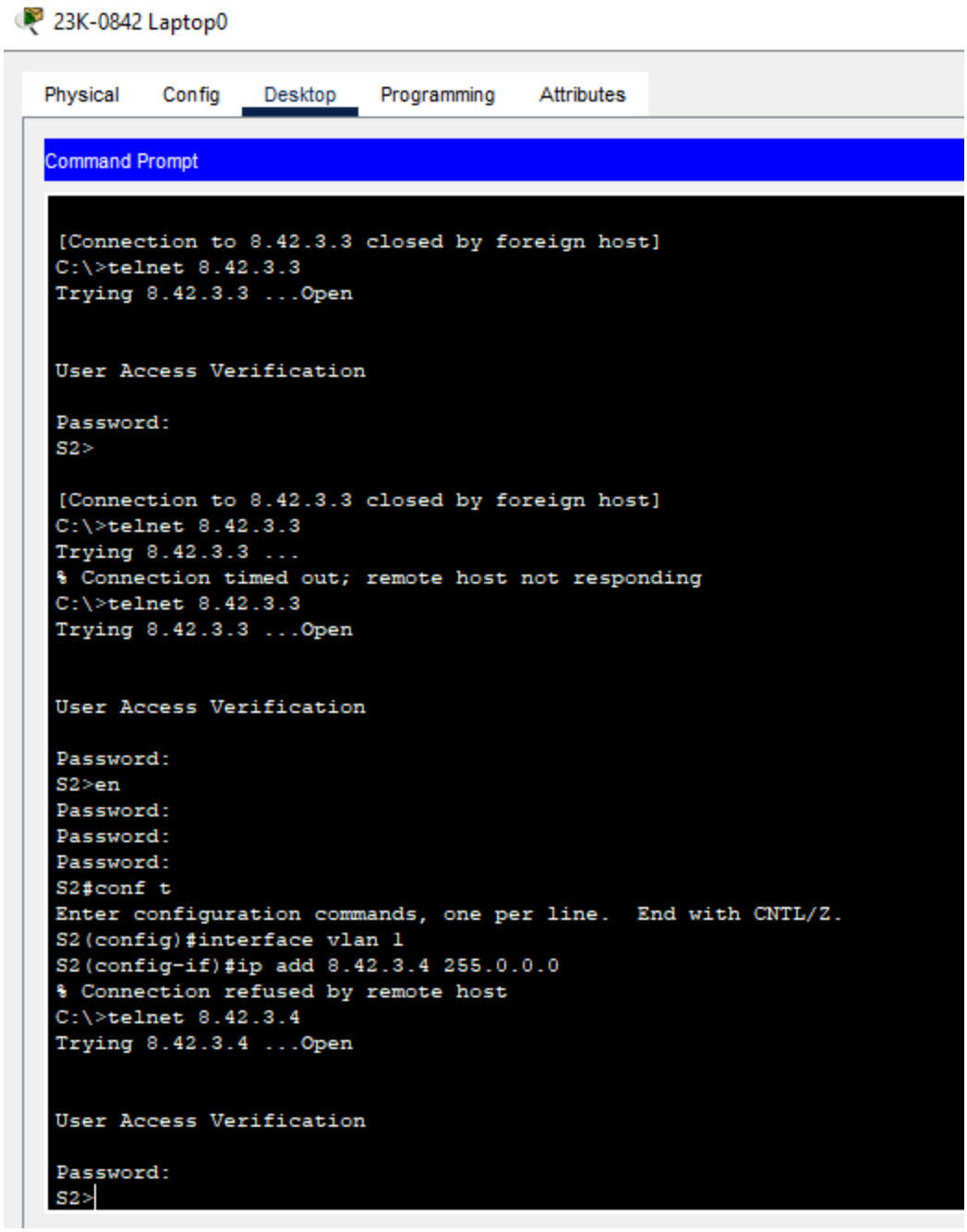
23K-0842 Laptop2

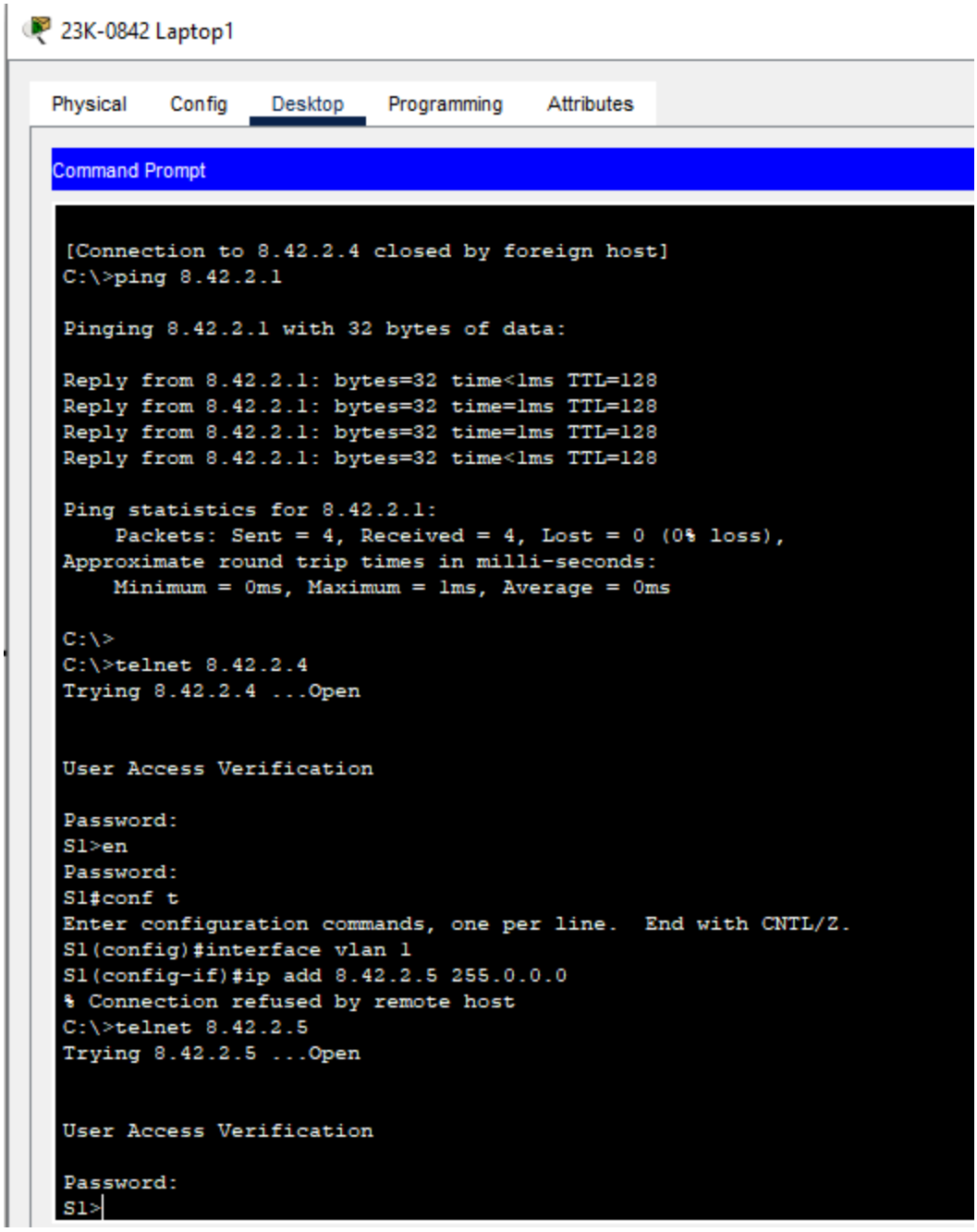




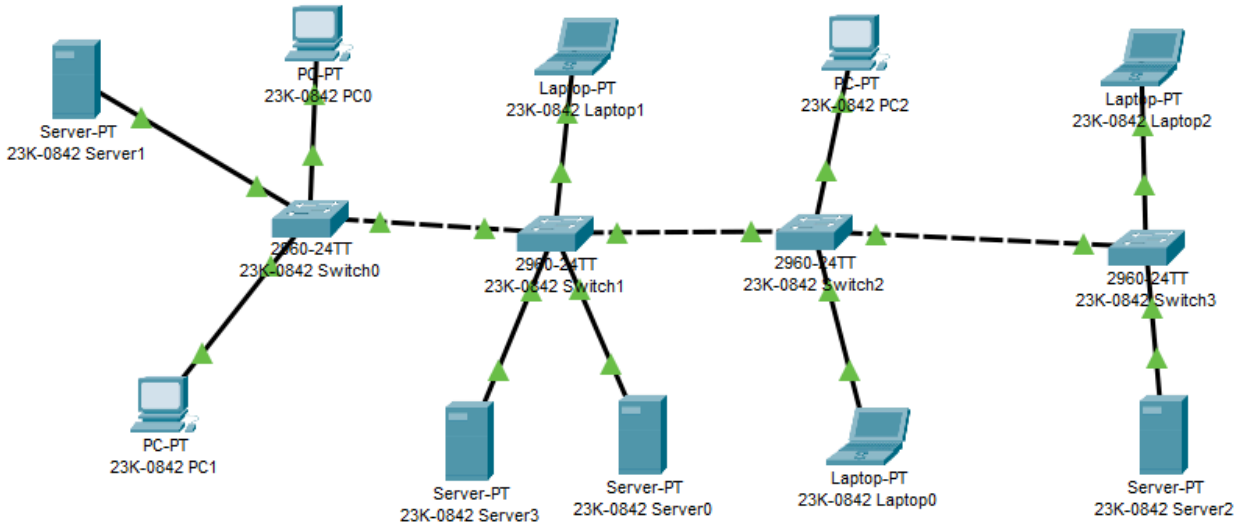
Changing the IP of Switch1 from Laptop1 and Switch2 from Laptop0 using its command Prompt.

Previously the IP of Switch2 was 8.42.3.3 so I changed it to 8.42.3.4 from Laptop0.
Previously the IP of Switch1 was 8.42.2.4 so I changed it to 8.42.2.5 from Laptop1.


23K-0842 Laptop0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
[Connection to 8.42.3.3 closed by foreign host]
C:\>telnet 8.42.3.3
Trying 8.42.3.3 ...Open
User Access Verification
Password:
S2>
[Connection to 8.42.3.3 closed by foreign host]
C:\>telnet 8.42.3.3
Trying 8.42.3.3 ...
% Connection timed out; remote host not responding
C:\>telnet 8.42.3.3
Trying 8.42.3.3 ...Open
User Access Verification
Password:
S2>en
Password:
Password:
Password:
S2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S2(config)#interface vlan 1
S2(config-if)#ip add 8.42.3.4 255.0.0.0
% Connection refused by remote host
C:\>telnet 8.42.3.4
Trying 8.42.3.4 ...Open
User Access Verification
Password:
S2>


23K-0842 Laptop1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
[Connection to 8.42.2.4 closed by foreign host]
C:\>ping 8.42.2.1
Pinging 8.42.2.1 with 32 bytes of data:
Reply from 8.42.2.1: bytes=32 time<1ms TTL=128
Reply from 8.42.2.1: bytes=32 time=1ms TTL=128
Reply from 8.42.2.1: bytes=32 time=1ms TTL=128
Reply from 8.42.2.1: bytes=32 time<1ms TTL=128
Ping statistics for 8.42.2.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\>
C:\>telnet 8.42.2.4
Trying 8.42.2.4 ...Open
User Access Verification
Password:
S1>en
Password:
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#interface vlan 1
S1(config-if)#ip add 8.42.2.5 255.0.0.0
% Connection refused by remote host
C:\>telnet 8.42.2.5
Trying 8.42.2.5 ...Open
User Access Verification
Password:
S1>

Implementation:



Lab Exercise – II

Implement the topology given below on cisco packet tracer:

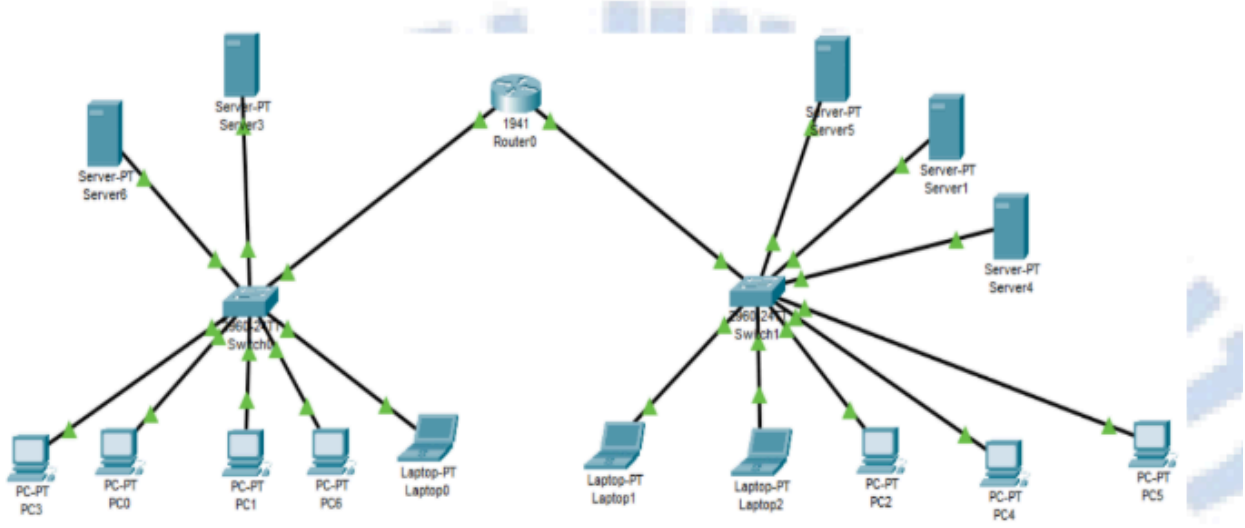
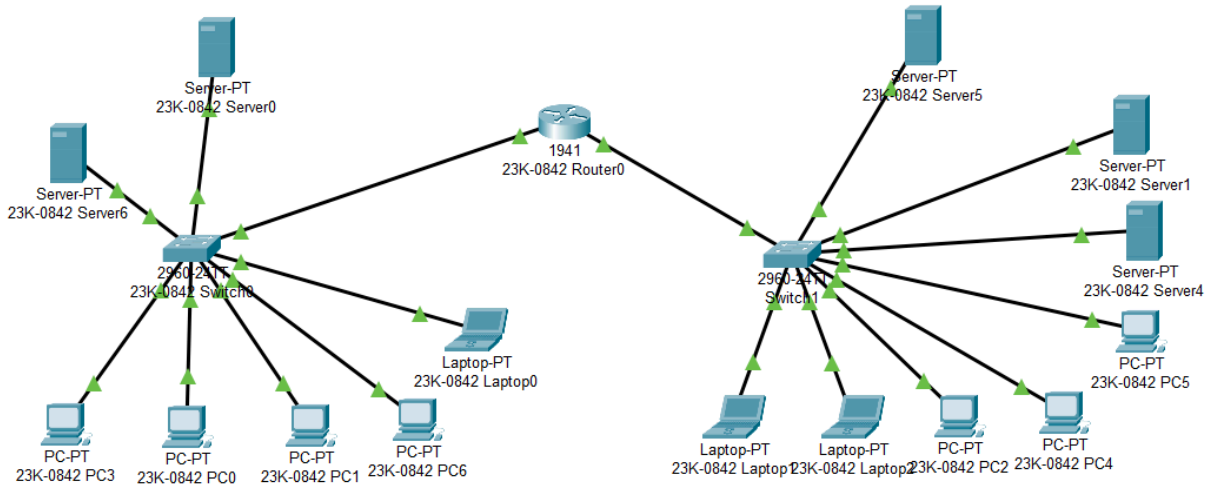


Figure 02

Do the following:

- The IPs should be assigned to the computer using static method and to the router using CLI. The Network on one side of FastEthernet should like this XX.XX.YY.0 i.e. your roll number like 3879(38.79.1.0) and on another side it should be 3880(38.80.2.0).
- Run the command of show run on Switch0 and Switch1 and take a screenshot of it.
- Verify SSH and assign IP to another router interface. It should be done through PC2. Take a screenshot of it.



23K-0842 Server0

Physical | Config | Services | Desktop | Programming | Attributes

IP Configuration

IP Configuration

DHCP	Static
IPv4 Address	8.42.1.0
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

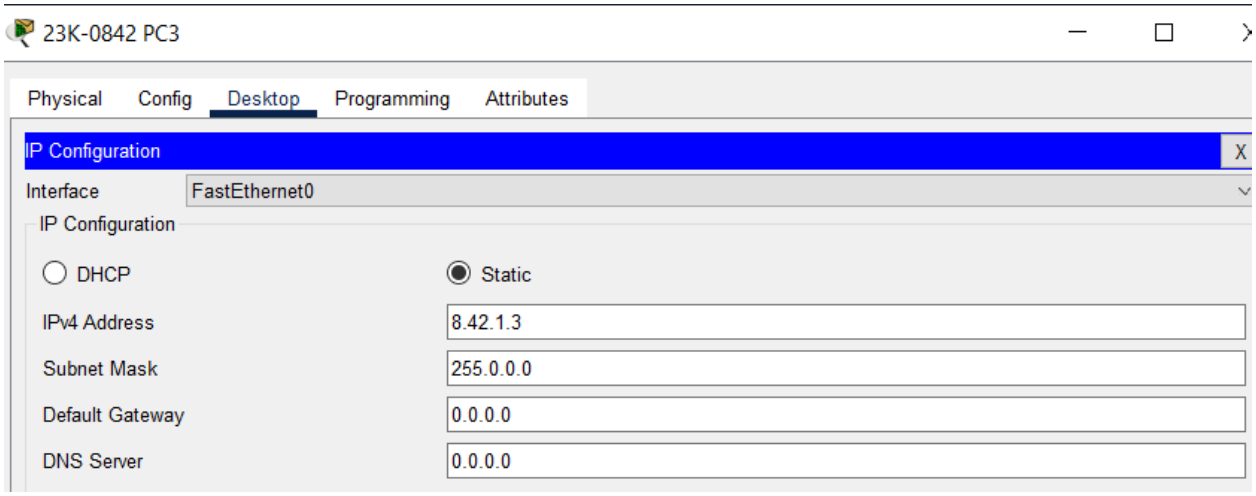
23K-0842 Server6

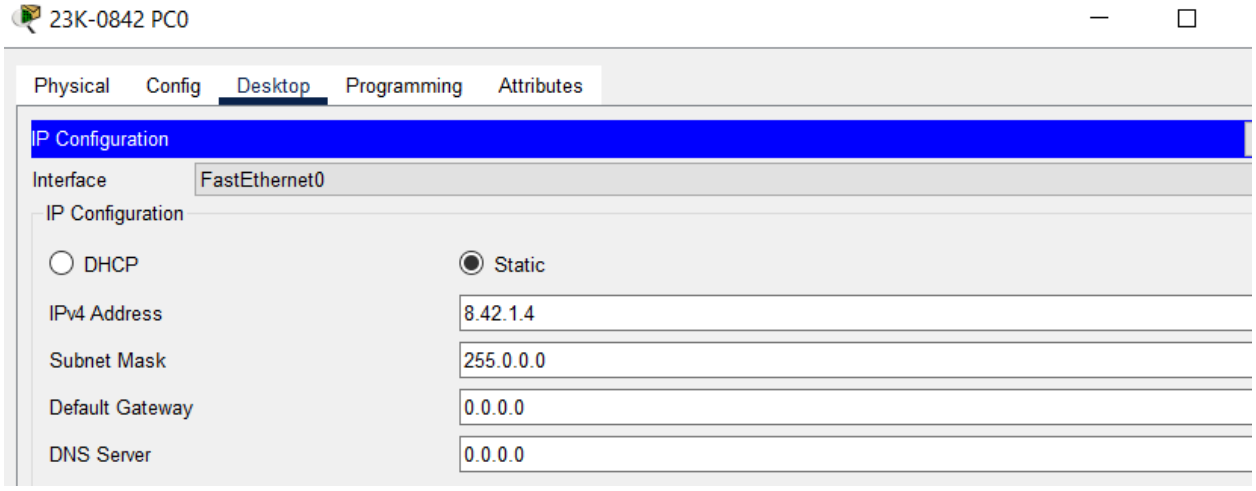
Physical | Config | Services | Desktop | Programming | Attributes

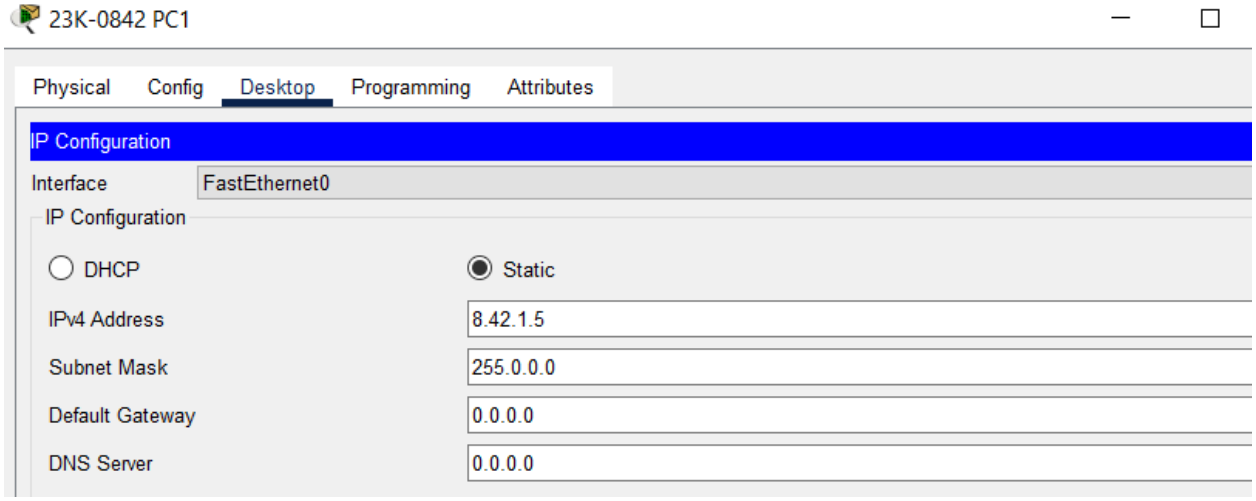
IP Configuration

IP Configuration

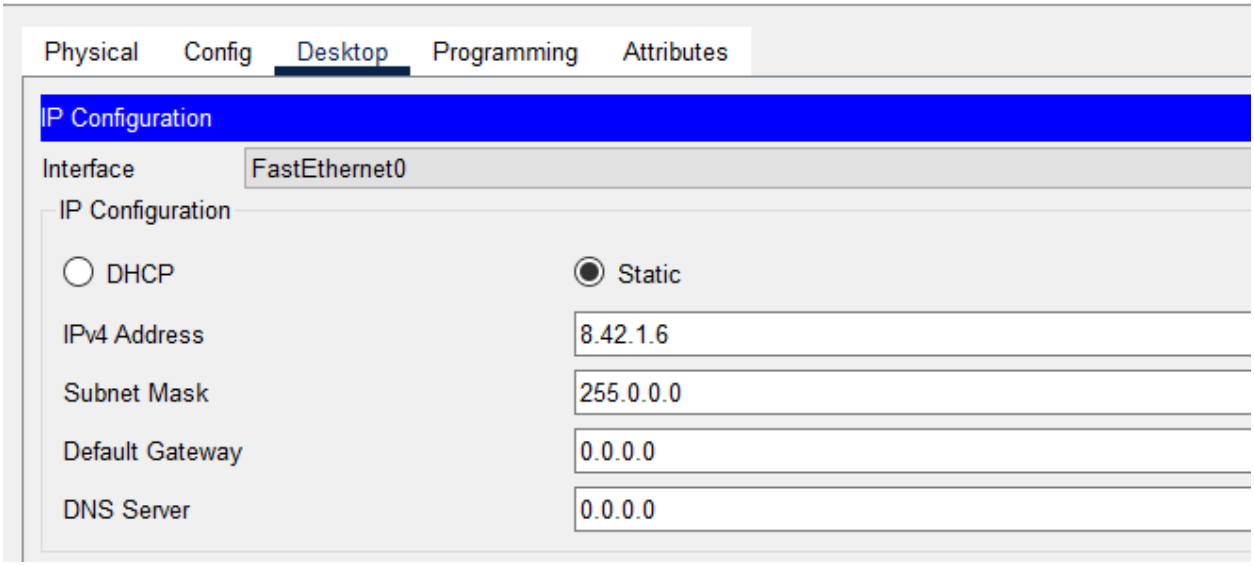
DHCP	Static
IPv4 Address	8.42.1.1
Subnet Mask	255.0.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0


23K-0842 PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
8.42.1.3
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0

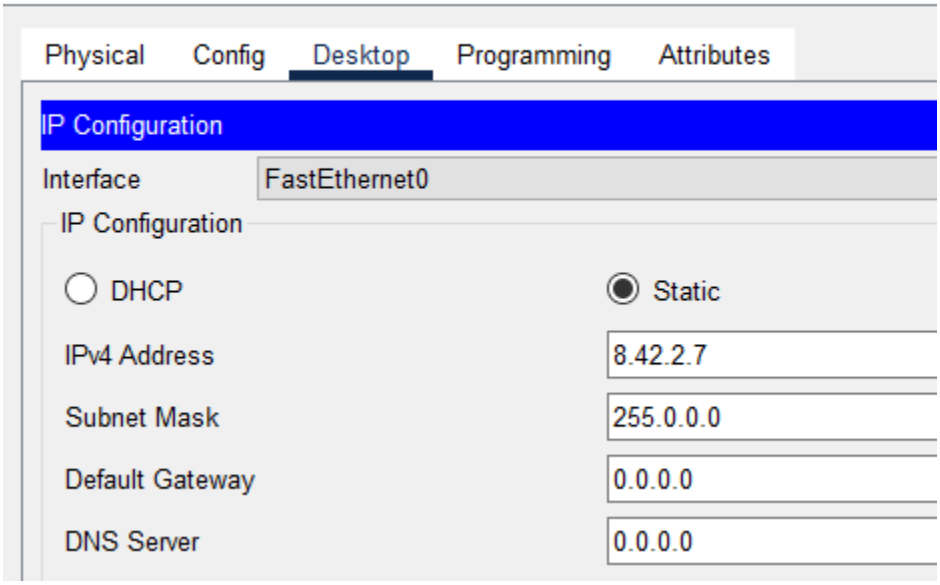

23K-0842 PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
8.42.1.4
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0


23K-0842 PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
8.42.1.5
Subnet Mask
255.0.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0

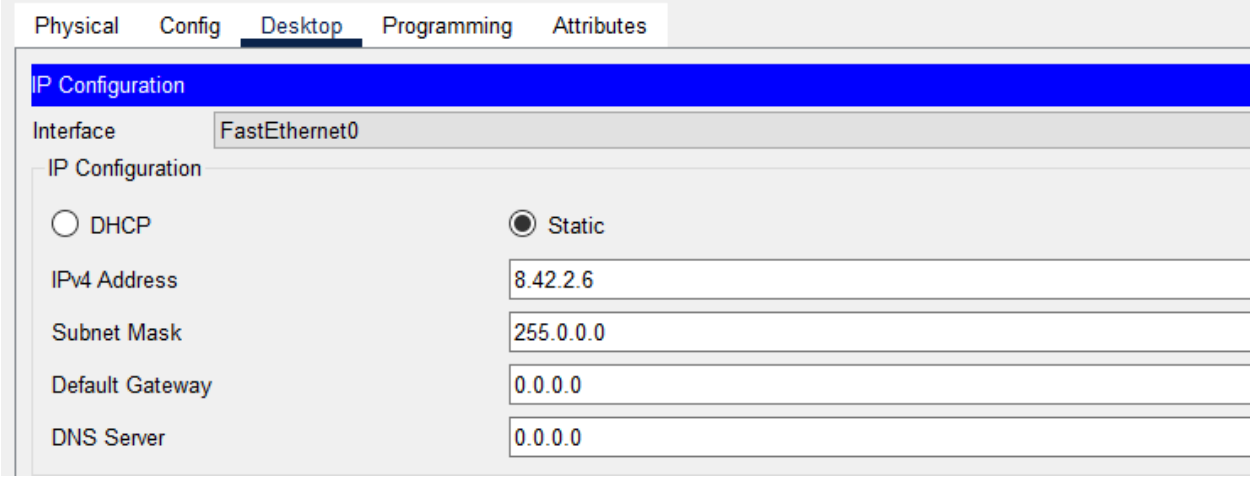
23K-0842 PC6



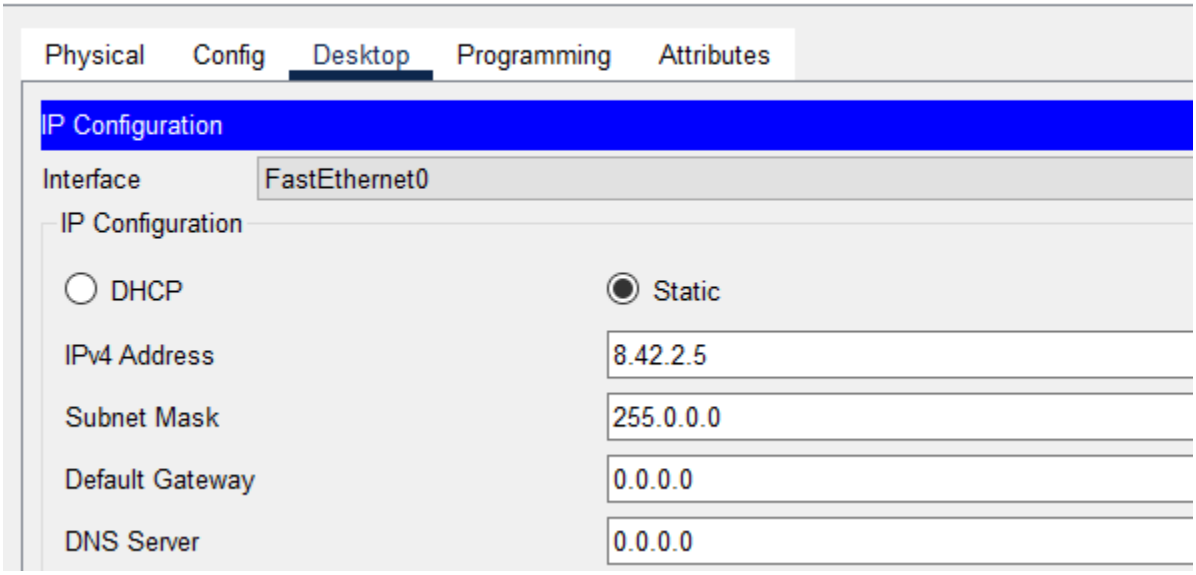
23K-0842 Laptop1



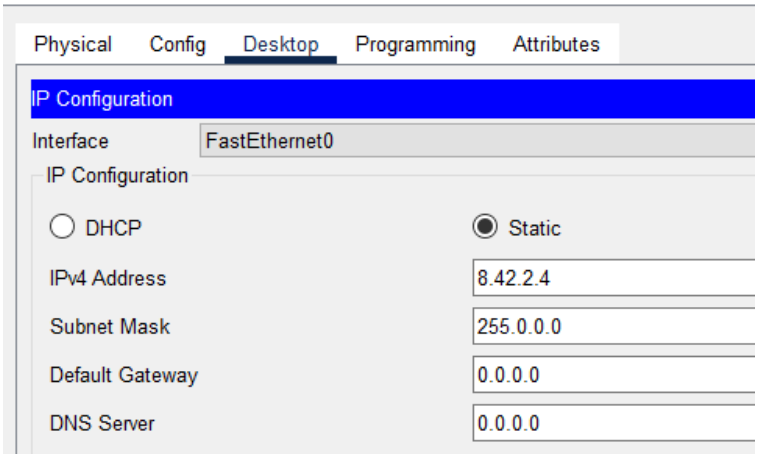
23K-0842 Laptop2



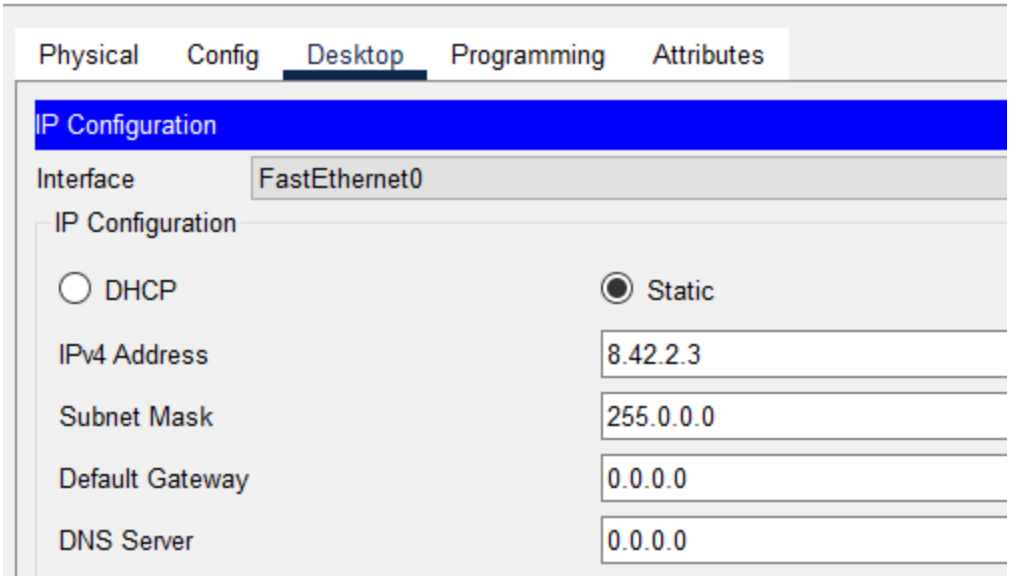
23K-0842 PC2



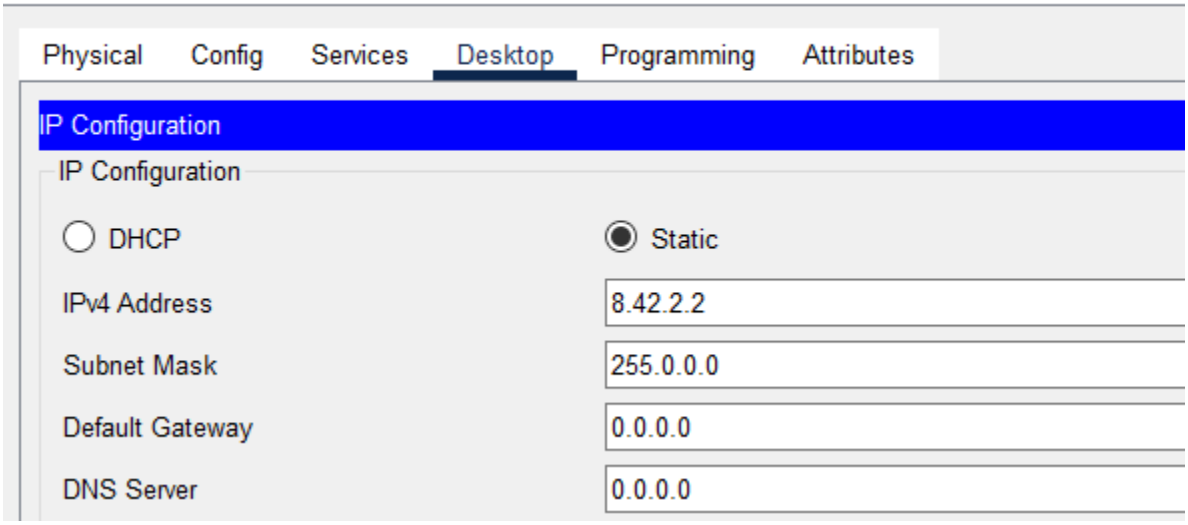
23K-0842 PC4



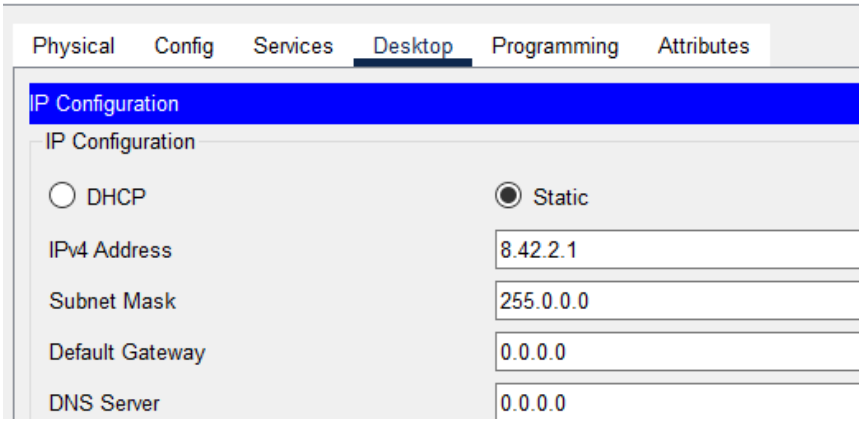
23K-0842 PC5



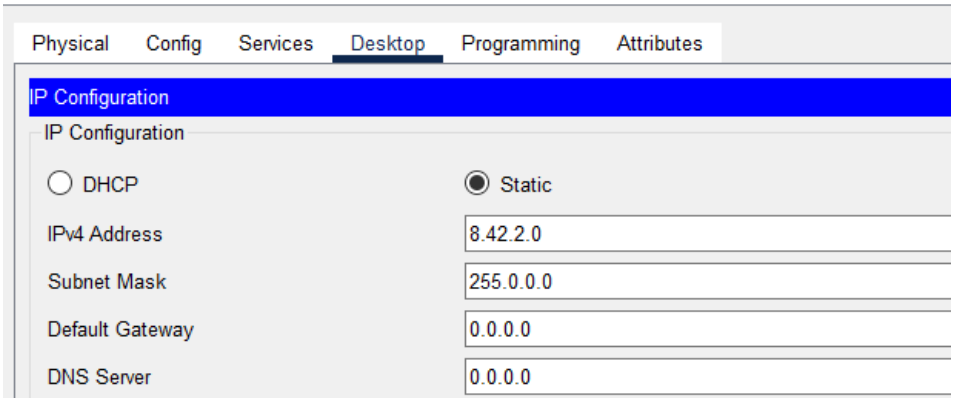
23K-0842 Server4



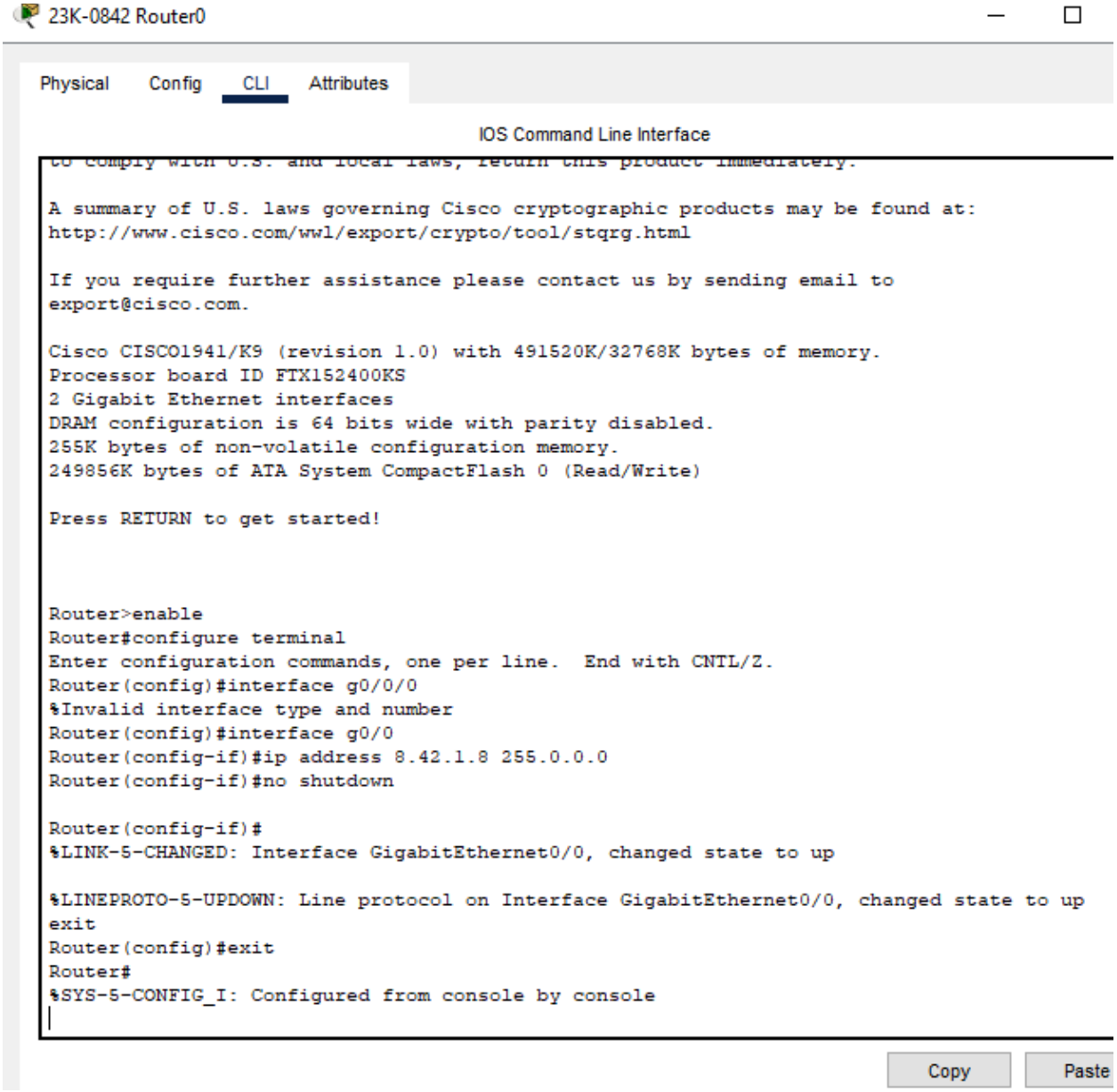
23K-0842 Server1

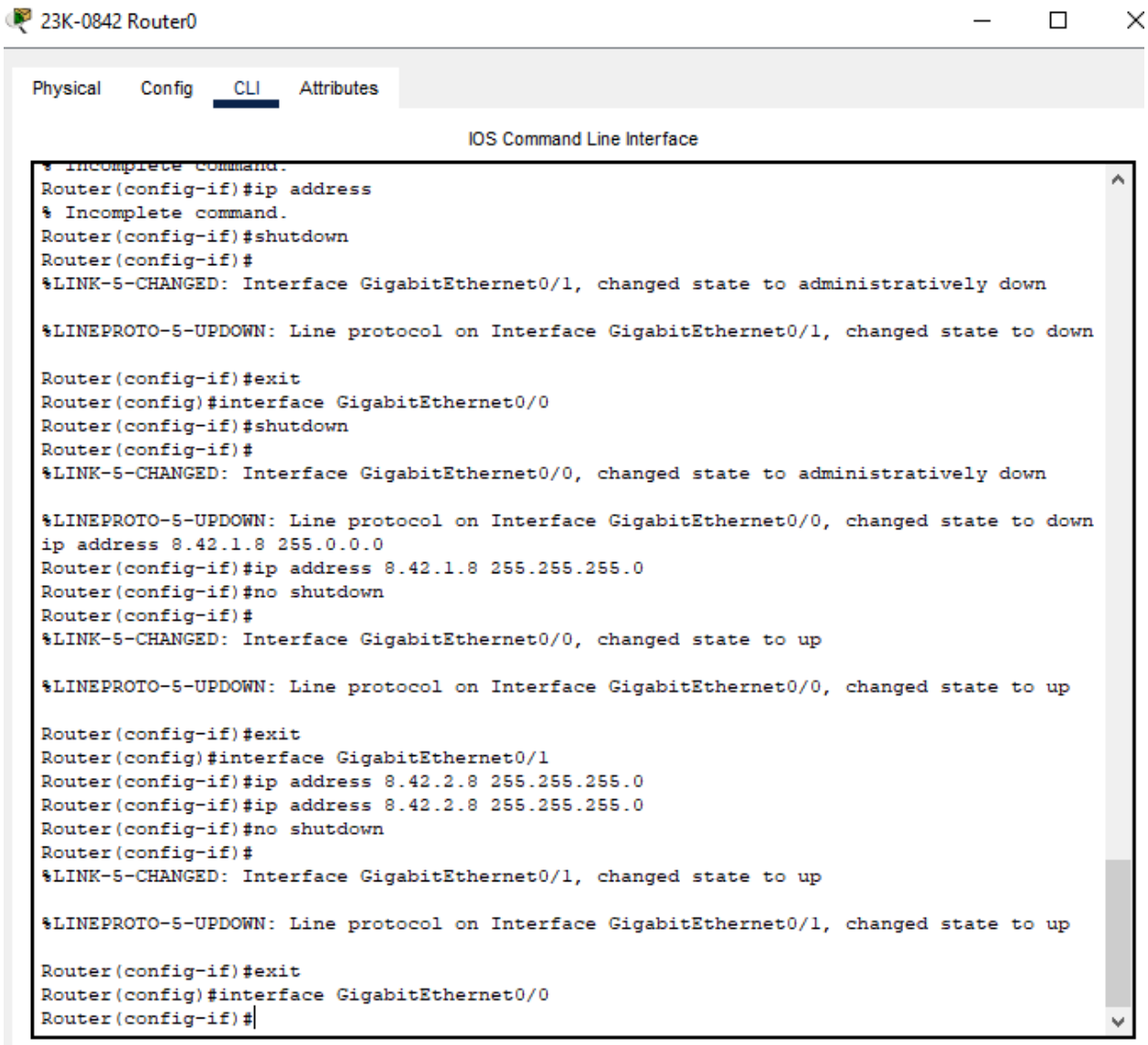


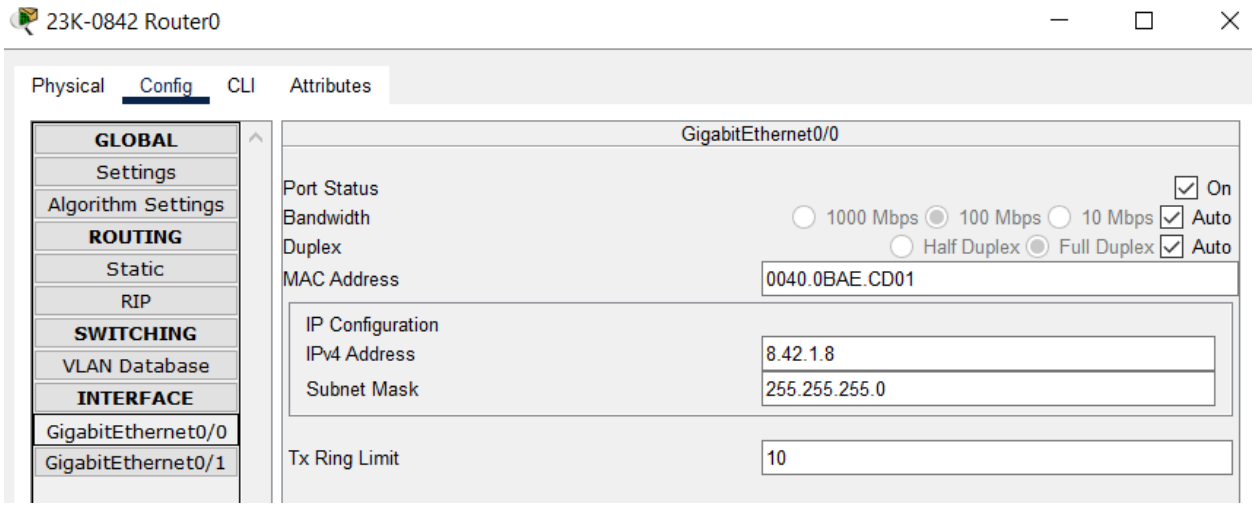
23K-0842 Server5

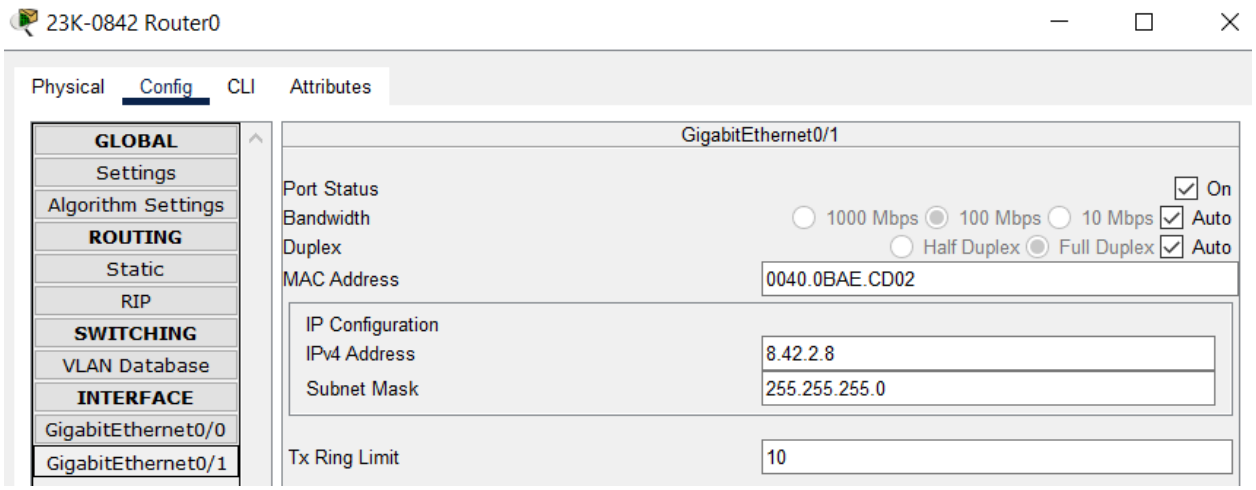


23K-0842 Router0

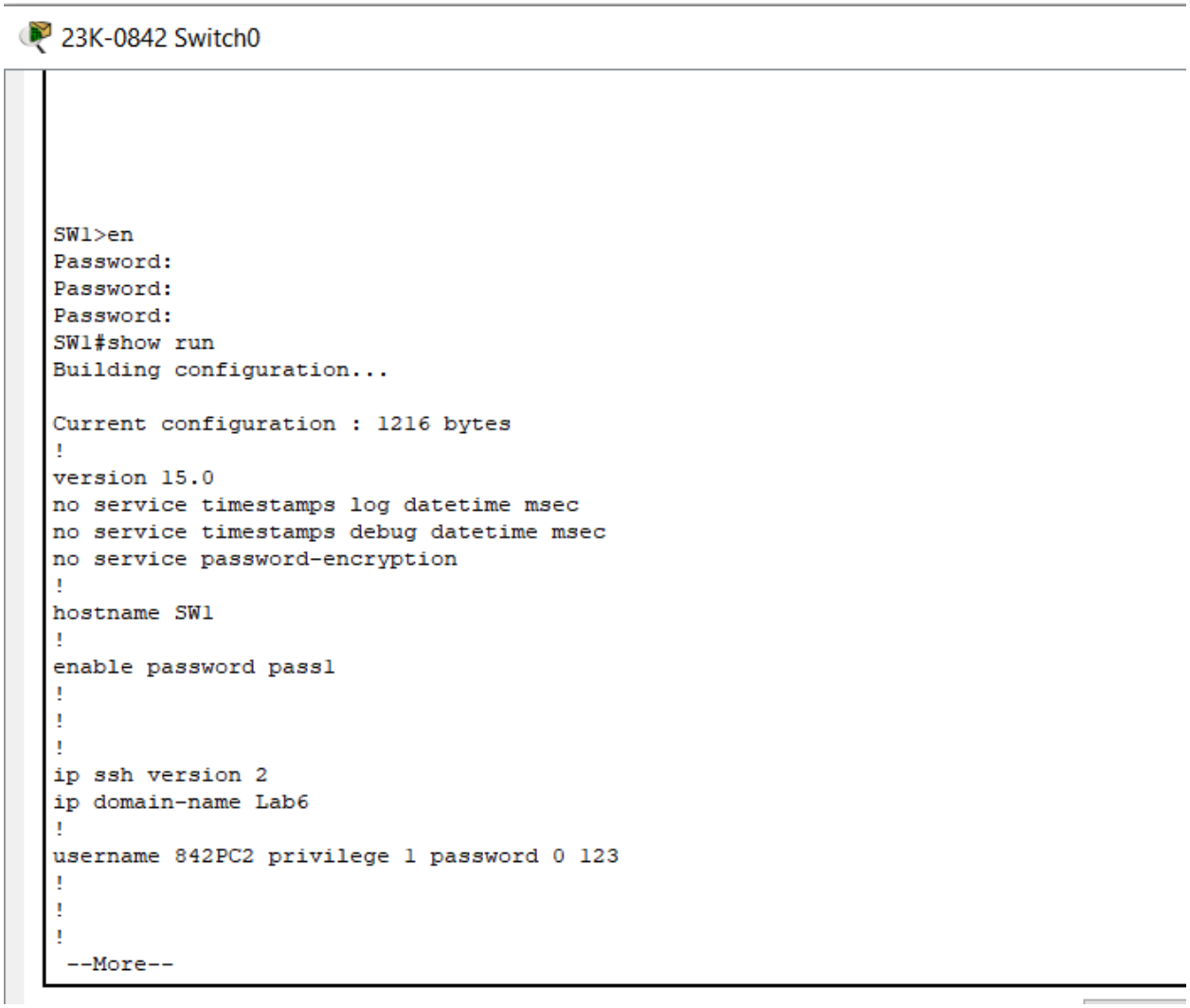



23K-0842 Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
% Incomplete command.
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to administratively down
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to administratively down
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to down
ip address 8.42.1.8 255.0.0.0
Router(config-if)#ip address 8.42.1.8 255.255.255.0
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)#ip address 8.42.2.8 255.255.255.0
Router(config-if)#ip address 8.42.2.8 255.255.255.0
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
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#


23K-0842 Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0040.0BAE.CD01
IP Configuration
IPv4 Address
8.42.1.8
Subnet Mask
255.255.255.0
Tx Ring Limit
10



Running show run command:



23K-0842 Switch1

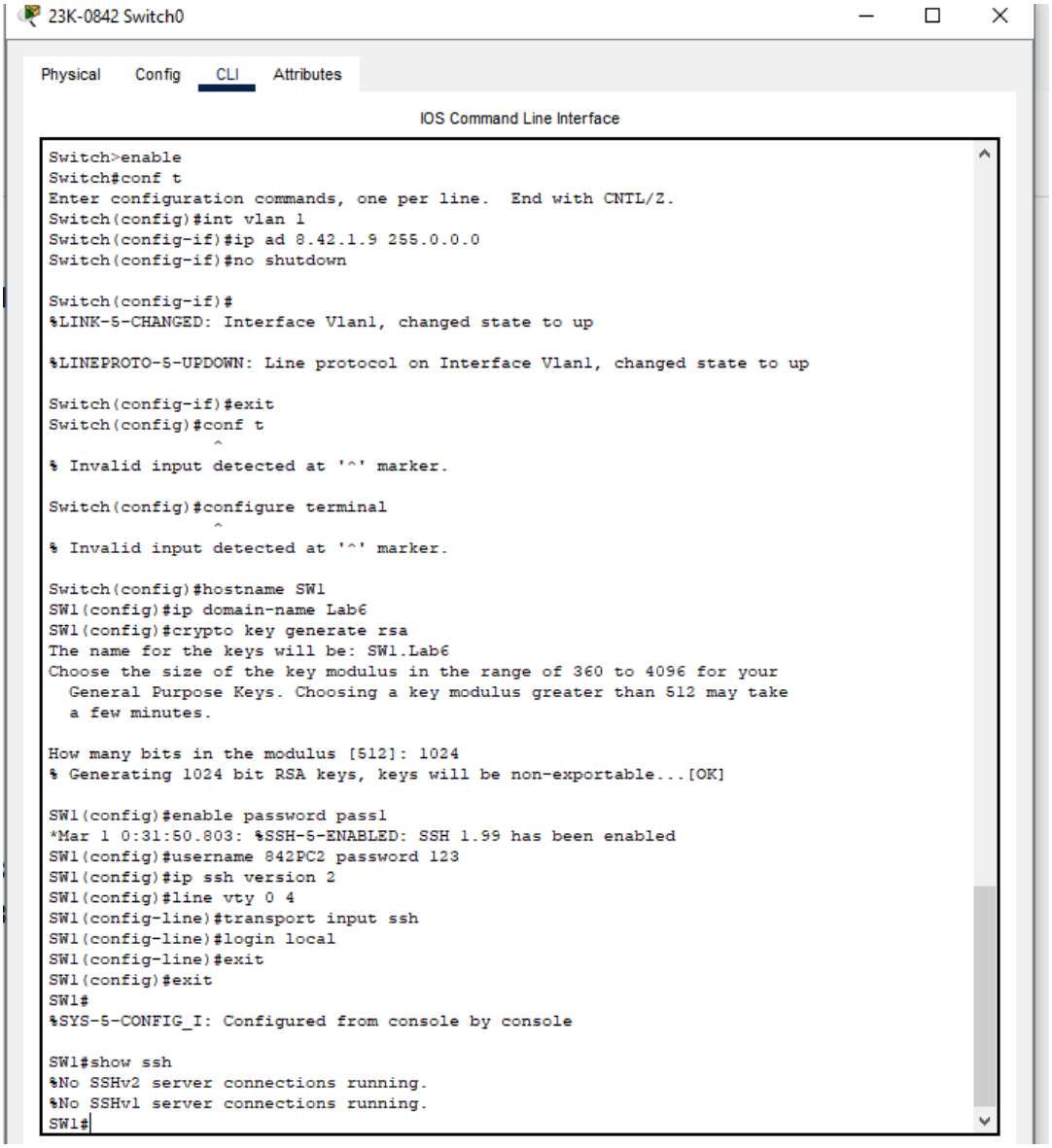
Physical Config CLI Attributes

IOS Command Line Interface

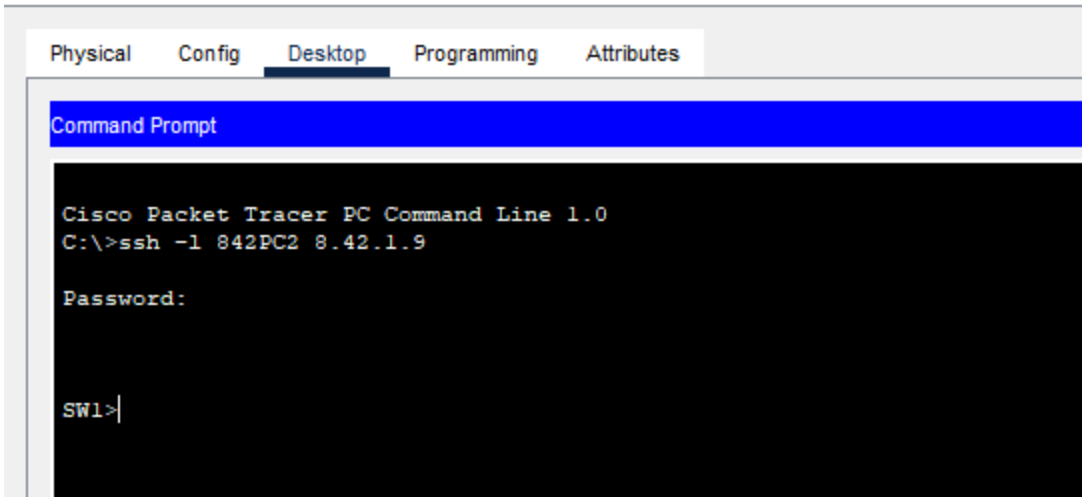
```
Switch>en
Switch#show run
Building configuration...

Current configuration : 1080 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
 --More--
```

Verifying ssh, done through PC2:



23K-0842 PC2



23K-0842 PC2

```
C:\>ssh -l 842PC2 8.42.1.9

Password:



SW1>en
Password:
SW1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
SW1(config)#interface g0/1
SW1(config-if)#ip address 8.42.1.9 255.0.0.0
                           ^
% Invalid input detected at '^' marker.

SW1(config-if)#ip address 8.42.1.9 255.255.255.0
                           ^
% Invalid input detected at '^' marker.

SW1(config-if)#no shutdown
SW1(config-if)#exit
SW1(config)#exit
```

Lab Exercise – III

Implement the topology given below on cisco packet tracer:

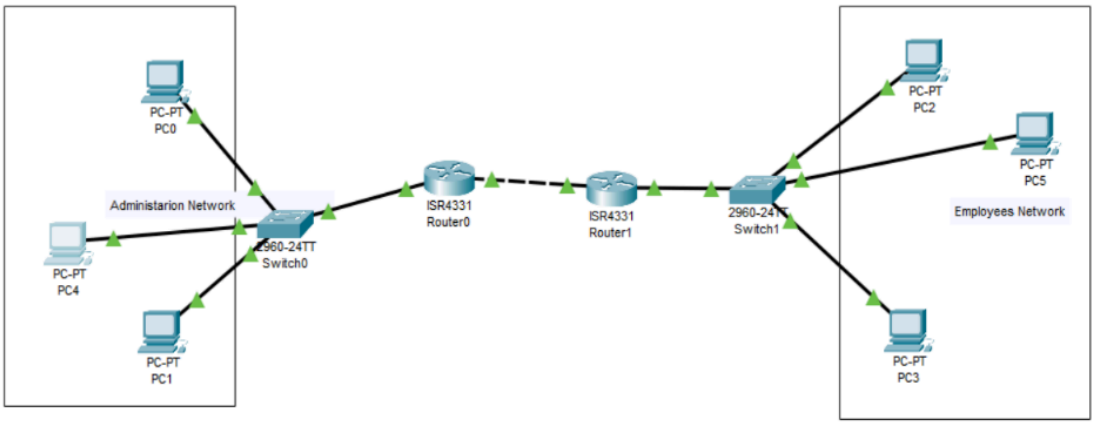
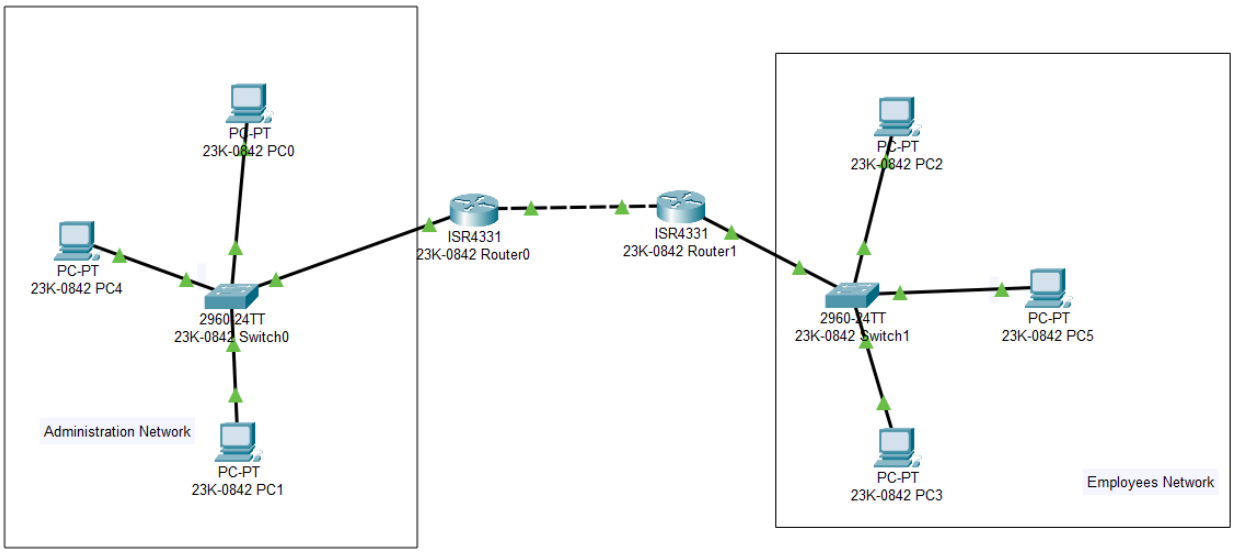
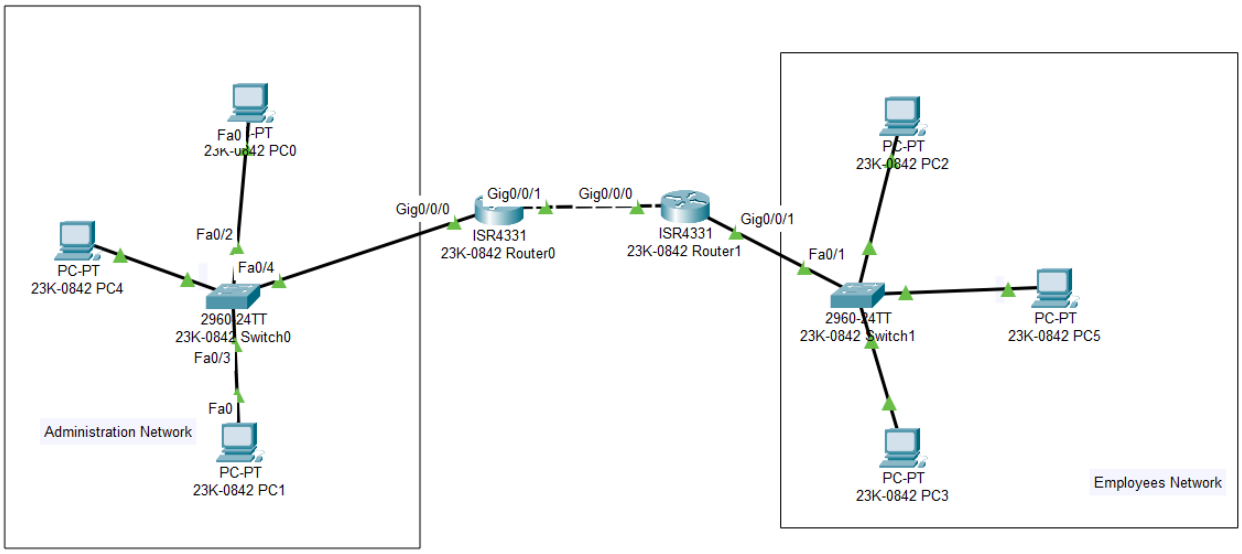


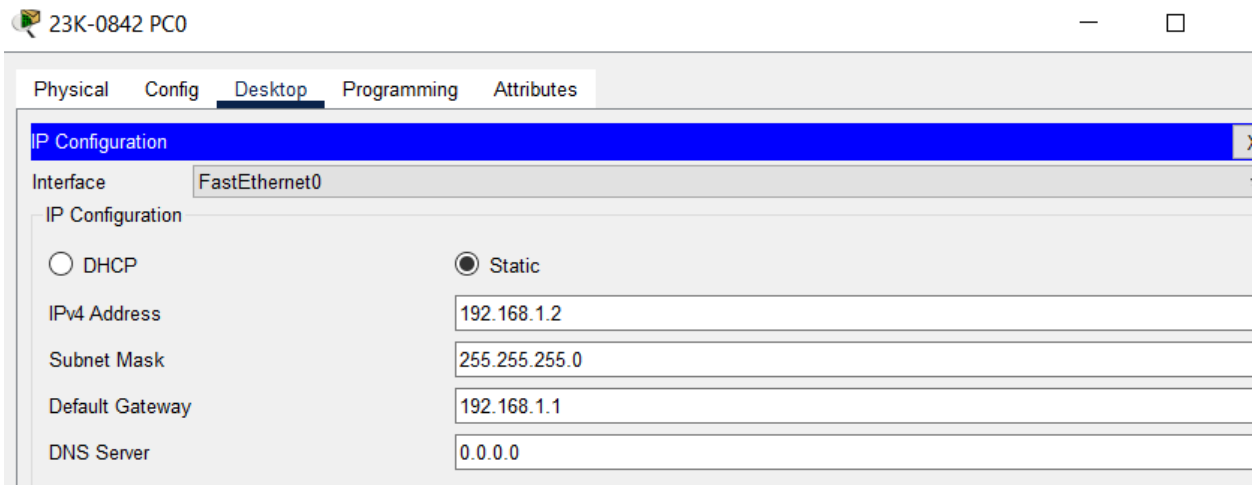
Figure 03

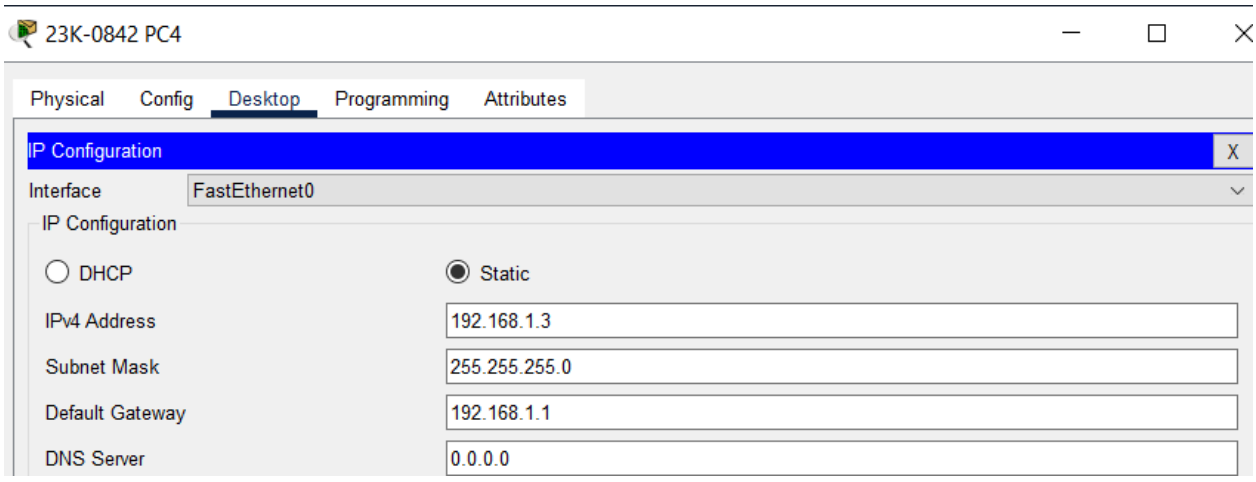
1. Prevent PCs in the network from communicating with any device in the **Employee** network. But, **Administration** should be able to communicate with the Employees.

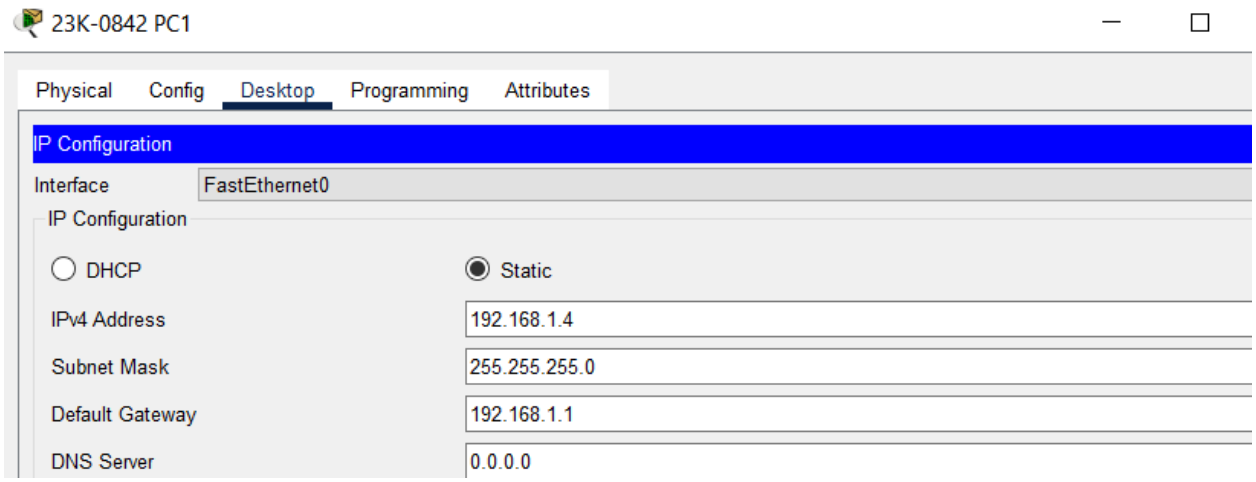
2. Only allow any two PC's in the **Employee** network (for example: as a GM and Manager communicates with **Administration**) to access and communicate with the **Administration** network, blocking every other device in the **Employee** network.

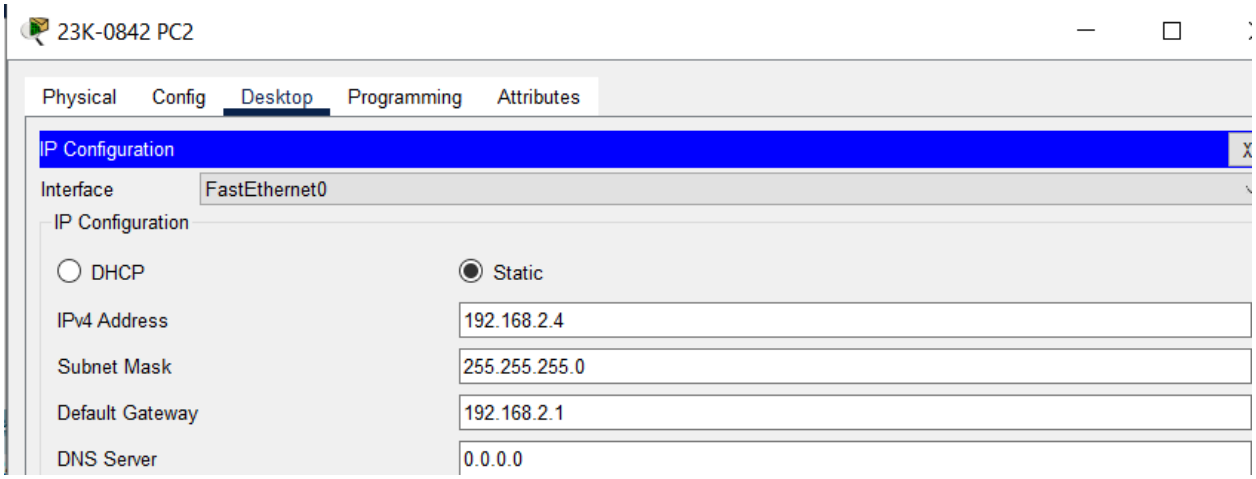


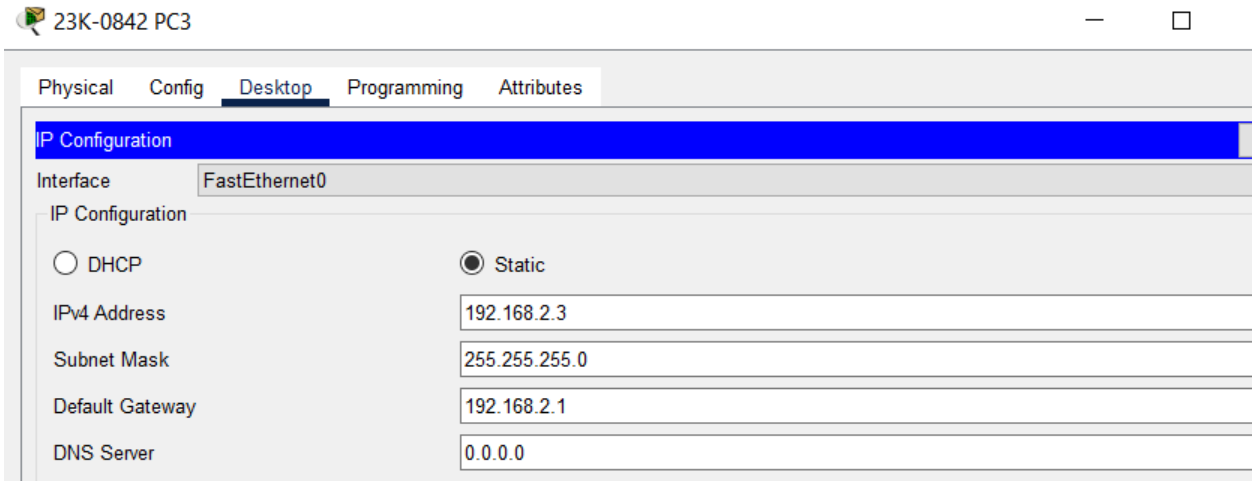

Fa0
23K-0842 PC0
Fa0/2
Fa0/4
PC-PT
23K-0842 PC4
2960-24TT
23K-0842 Switch0
Fa0/3
Fa0
Administration Network
PC-PT
23K-0842 PC1
Gig0/0/0
Gig0/0/1
ISR4331
23K-0842 Router0
Gig0/0/0
ISR4331
23K-0842 Router1
Gig0/0/1
Fa0/1
PC-PT
23K-0842 PC2
2960-24TT
23K-0842 Switch1
PC-PT
23K-0842 PC5
PC-PT
23K-0842 PC3
Employees Network

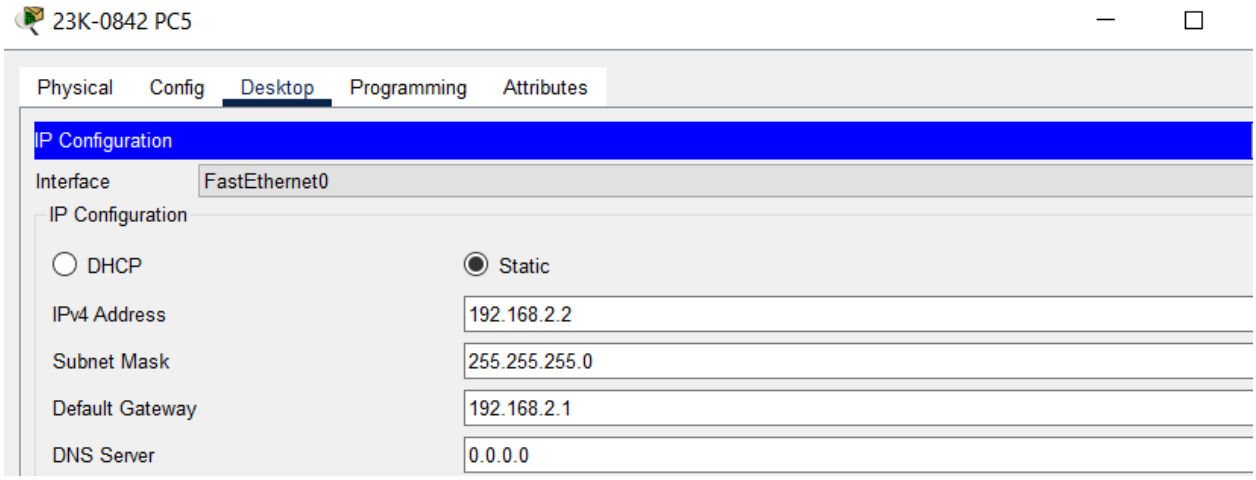

23K-0842 PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0

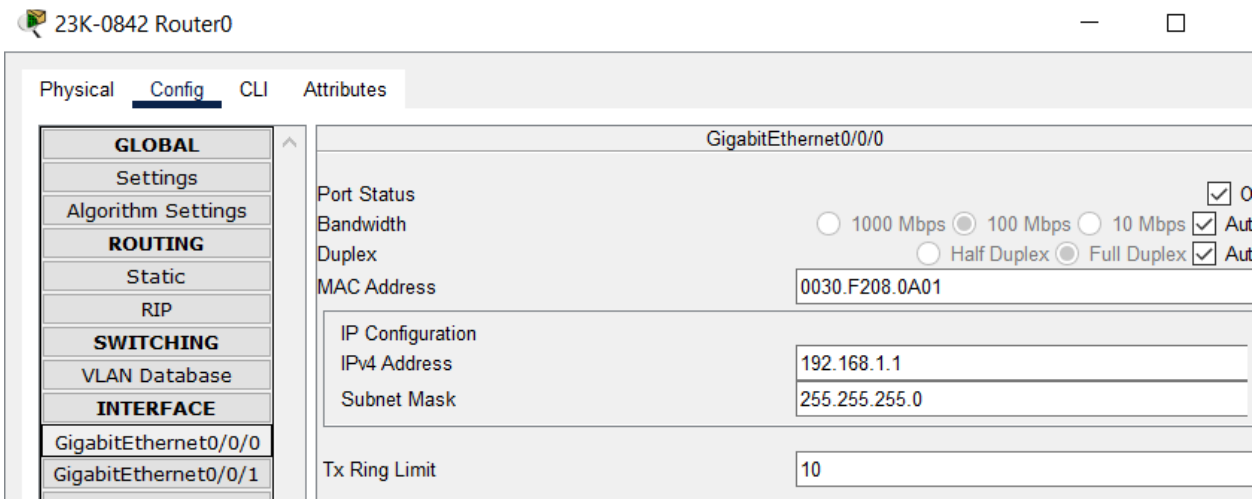

23K-0842 PC4
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0

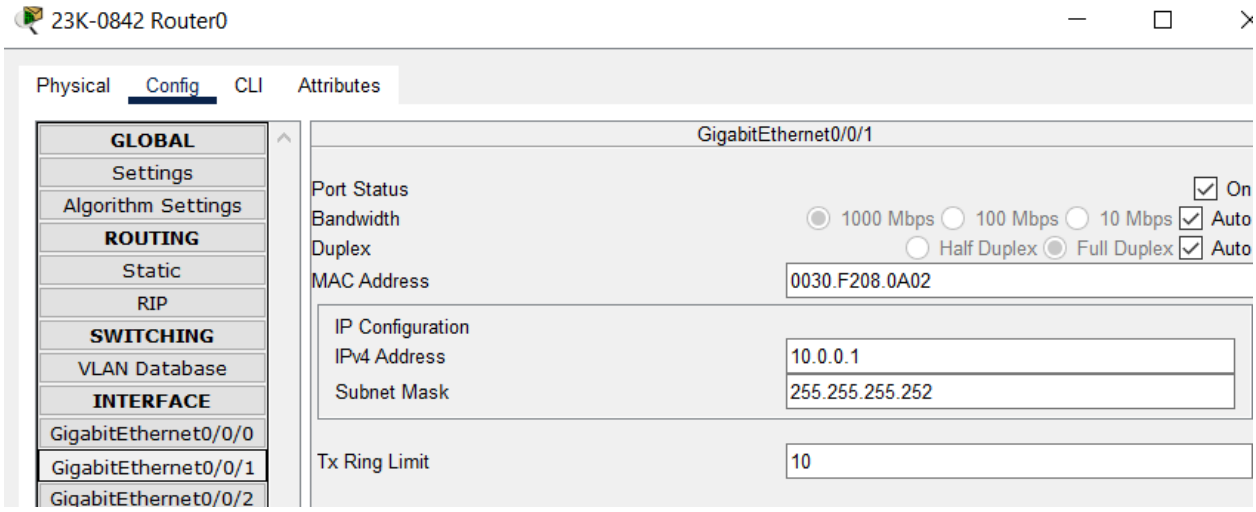

23K-0842 PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.4
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0

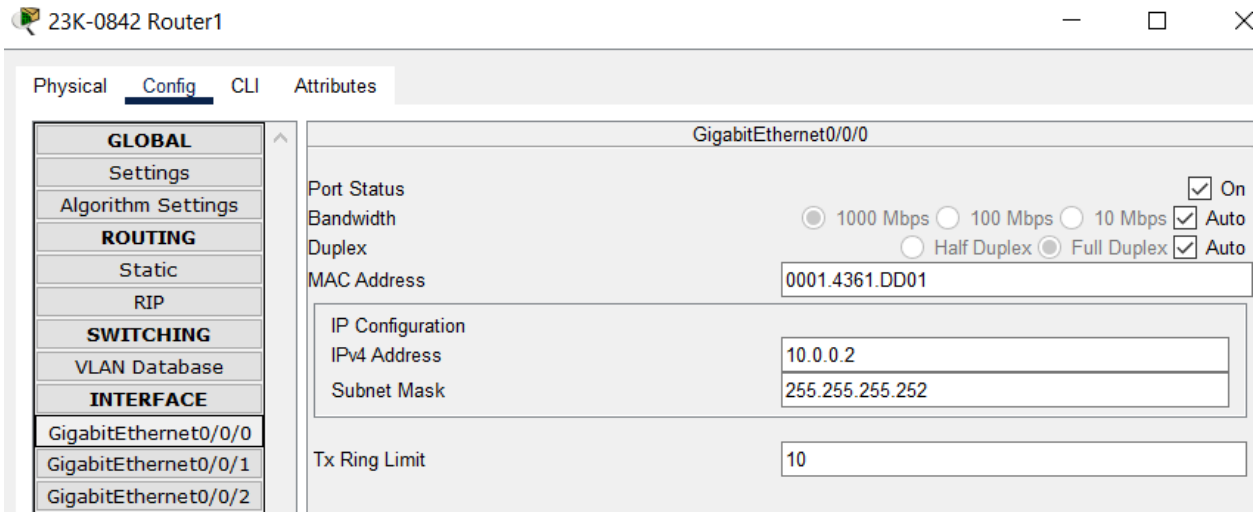

23K-0842 PC2
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.2.4
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
0.0.0.0

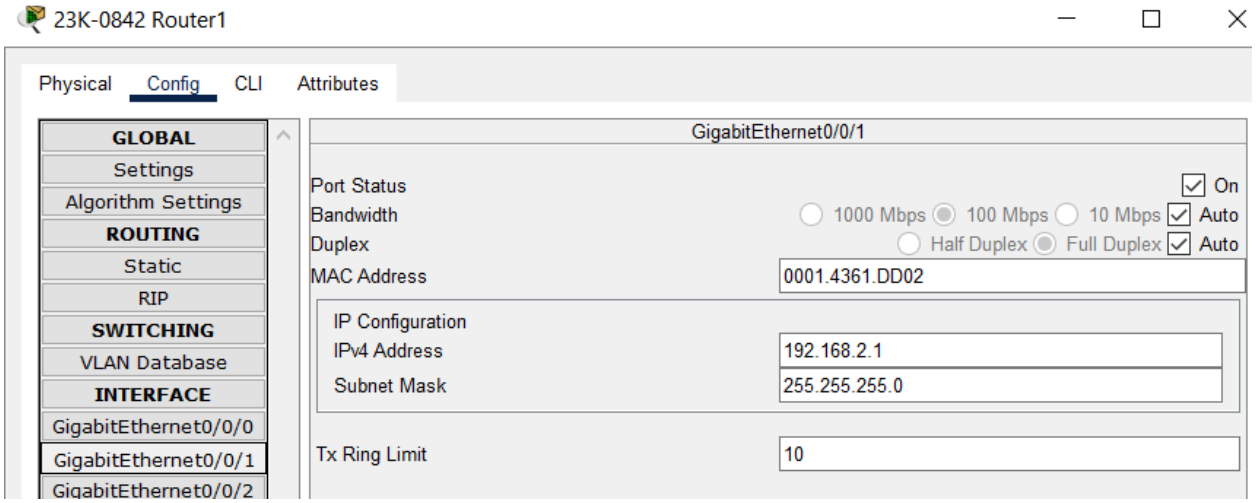

23K-0842 PC3
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.2.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
0.0.0.0

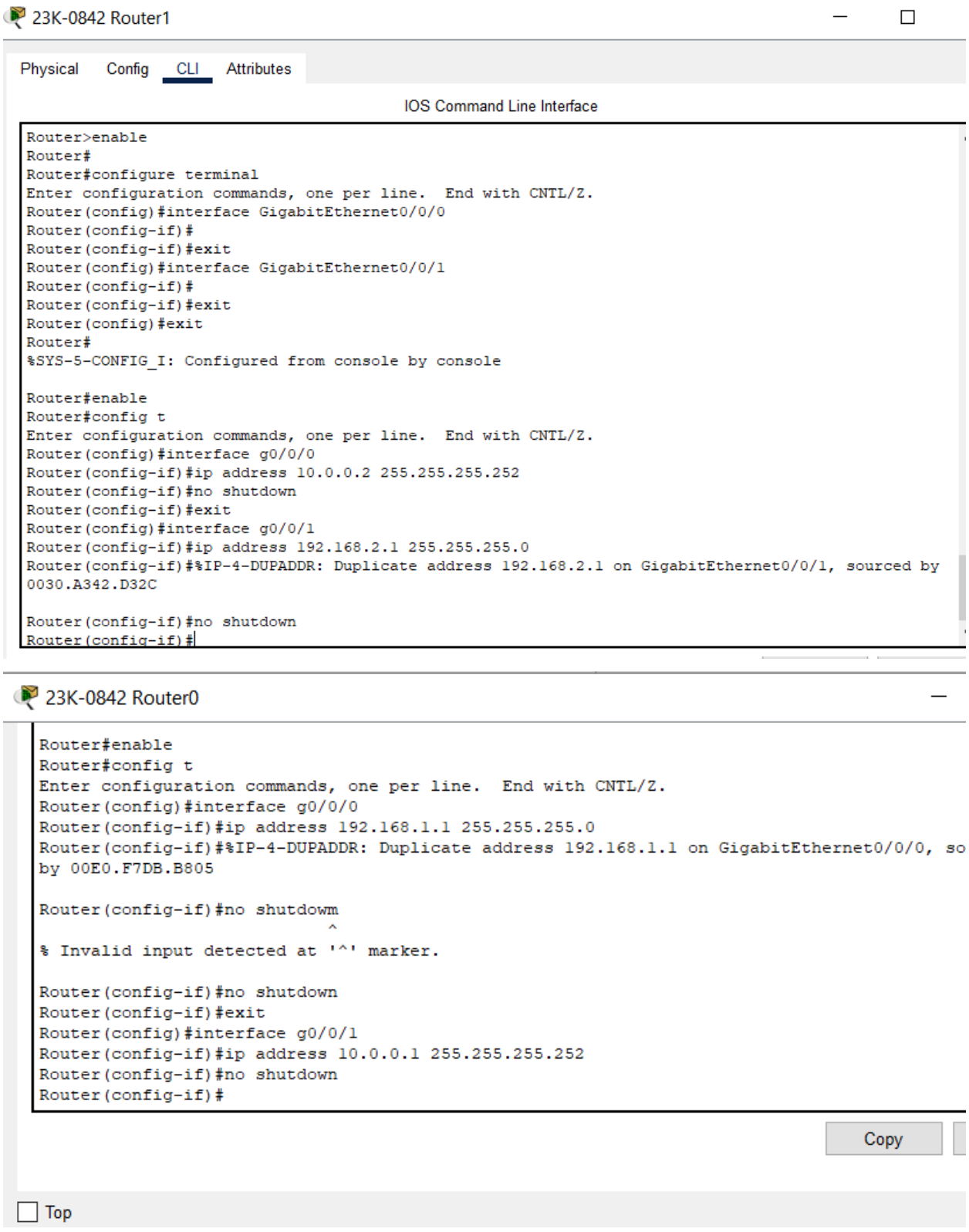

23K-0842 PC5
Physical
Config
Desktop
Programming
Attributes
IP Configuration
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.2.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
0.0.0.0


23K-0842 Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/0
Port Status
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Duplex
Half Duplex
Full Duplex
MAC Address
0030.F208.0A01
IP Configuration
IPv4 Address
192.168.1.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10


23K-0842 Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/2
GigabitEthernet0/0/1
Port Status
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Duplex
Half Duplex
Full Duplex
MAC Address
0030.F208.0A02
IP Configuration
IPv4 Address
10.0.0.1
Subnet Mask
255.255.255.252
Tx Ring Limit
10


23K-0842 Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/2
GigabitEthernet0/0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0001.4361.DD01
IP Configuration
IPv4 Address
10.0.0.2
Subnet Mask
255.255.255.252
Tx Ring Limit
10


23K-0842 Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/2
GigabitEthernet0/0/1
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0001.4361.DD02
IP Configuration
IPv4 Address
192.168.2.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10


23K-0842 Router1
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface g0/0/0
Router(config-if)#ip address 10.0.0.2 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface g0/0/1
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#%IP-4-DUPADDR: Duplicate address 192.168.2.1 on GigabitEthernet0/0/1, sourced by
0030.A342.D32C
Router(config-if)#no shutdown
Router(config-if)#
23K-0842 Router0
Router#enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface g0/0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#%IP-4-DUPADDR: Duplicate address 192.168.1.1 on GigabitEthernet0/0/0, so
by 00E0.F7DB.B805
Router(config-if)#no shutdowm
^
% Invalid input detected at '^' marker.
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface g0/0/1
Router(config-if)#ip address 10.0.0.1 255.255.255.252
Router(config-if)#no shutdown
Router(config-if)#
Copy
Top

23K-0842 Router0

```
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#exit
Router(config)#ip route 192.168.2.0 255.255.255.0 10.0.0.2
Router(config)#
```

23K-0842 Router1

```
Router(config-if)#exit
Router(config)#ip route 192.168.1.0 255.255.255.0 10.0.0.1
Router(config)#
```

Scenario 0 | New | Delete | Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Period	Num	Edit	Delete
	Successful	23K-0842 PC1	23K-0842 PC3	ICMP		0.000	N	9	(edit)	(delete)
	Successful	23K-0842 PC1	23K-0842 PC2	ICMP		0.000	N	10	(edit)	(delete)
	Successful	23K-0842 PC1	23K-0842 PC5	ICMP		0.000	N	11	(edit)	(delete)

Scenario 0 | New | Delete | Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Period	Num	Edit	Delete
	Successful	23K-0842 PC2	23K-0842 PC1	ICMP		0.000	N	12	(edit)	(delete)
	Successful	23K-0842 PC2	23K-0842 PC4	ICMP		0.000	N	13	(edit)	(delete)
	Successful	23K-0842 PC2	23K-0842 PC0	ICMP		0.000	N	14	(edit)	(delete)

Right now, 2- way communication is established…. Messages can go from Admin to Employee and from Employee to Admin.

23K-0842 Router1

```
Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip access-list extended BLOCK_EMP_TO_ADMIN
Router(config-ext-nacl)#deny ip 192.168.2.0 0.0.0.255 192.168.1.0 0.0.0.255
Router(config-ext-nacl)#permit ip any any
Router(config-ext-nacl)#exit
Router(config)#interface g0/0/1
Router(config-if)#ip access-group BLOCK_EMP_TO_ADMIN in
Router(config-if)#
```

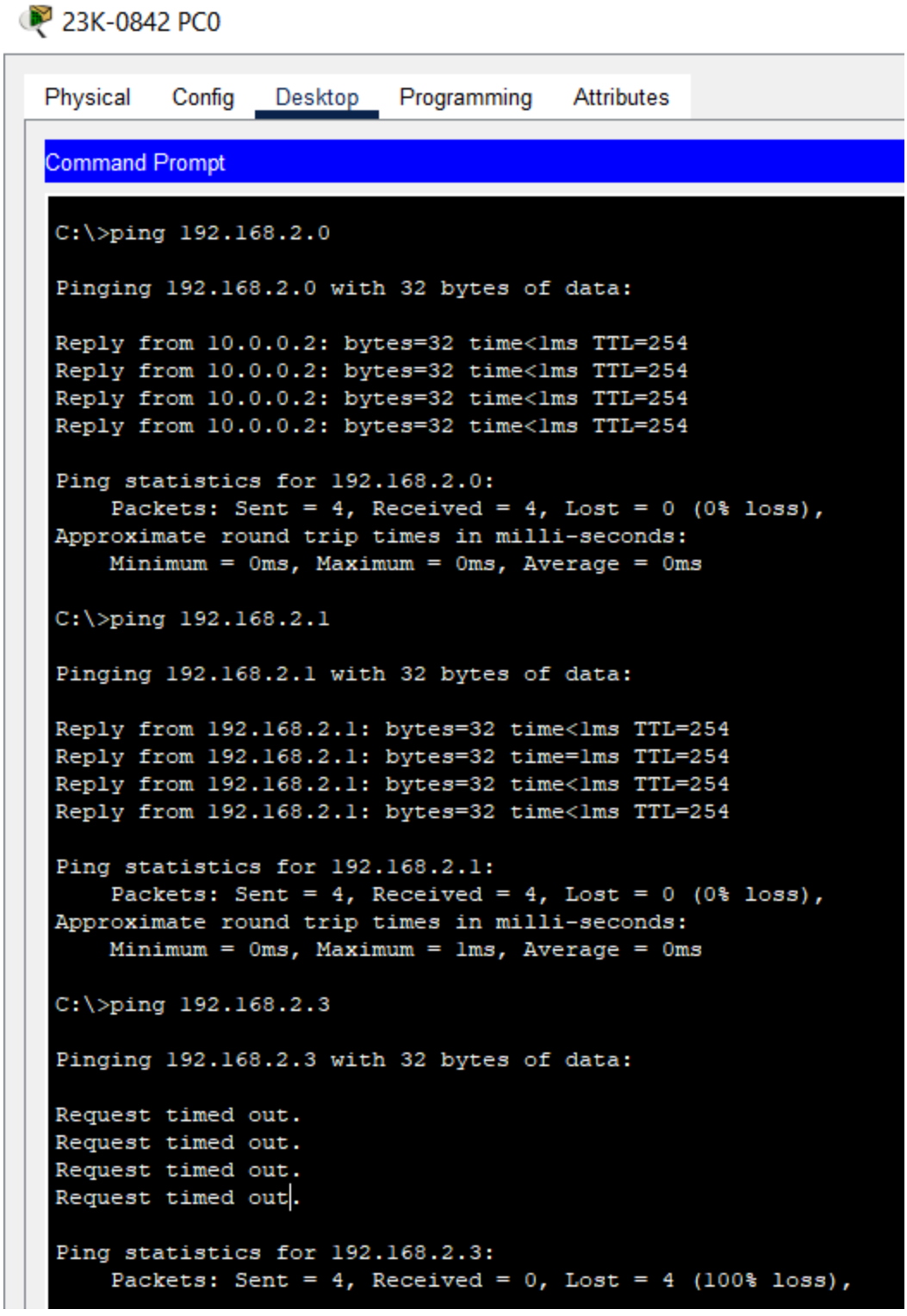
Copy | Pas

Top

Scenario 0 | New | Delete | Toggle PDU List Window

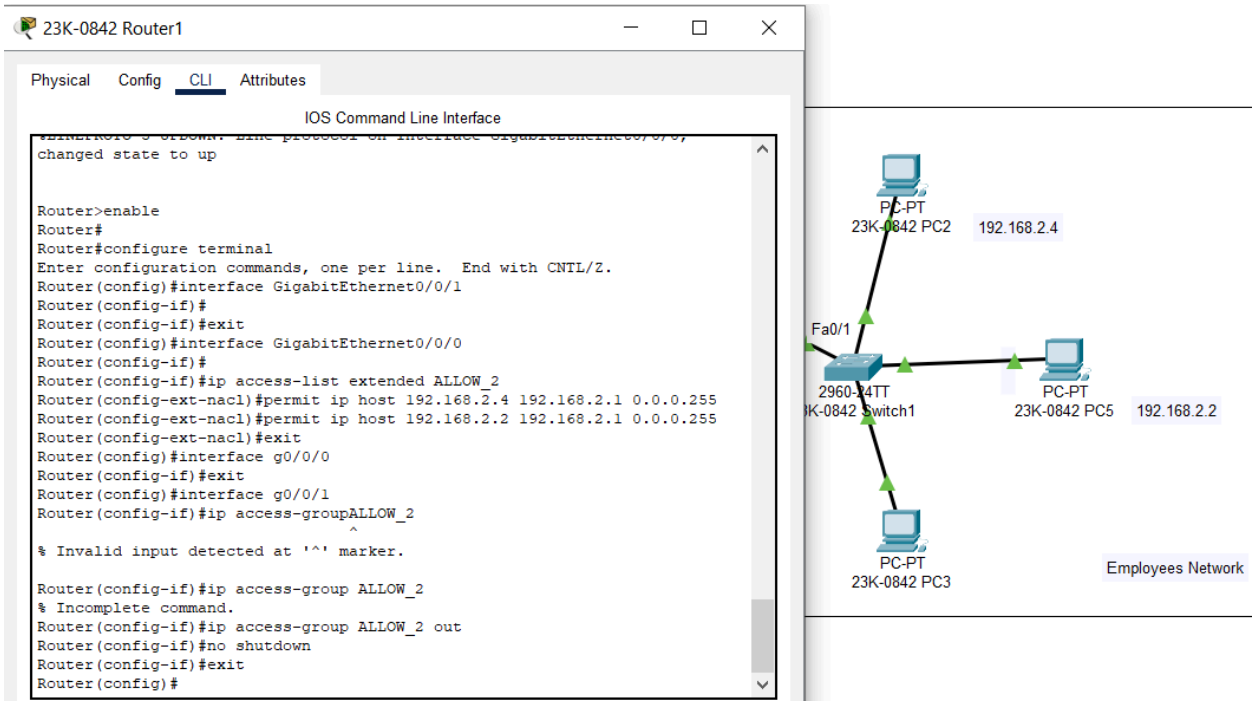
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Period	Num	Edit	Delete
	Failed	23K-0842 PC3	23K-0842 PC1	ICMP		0.000	N	0	(edit)	(delete)
	Failed	23K-0842 PC5	23K-0842 PC1	ICMP		0.000	N	1	(edit)	(delete)
	Failed	23K-0842 PC2	23K-0842 PC1	ICMP		0.000	N	2	(edit)	(delete)

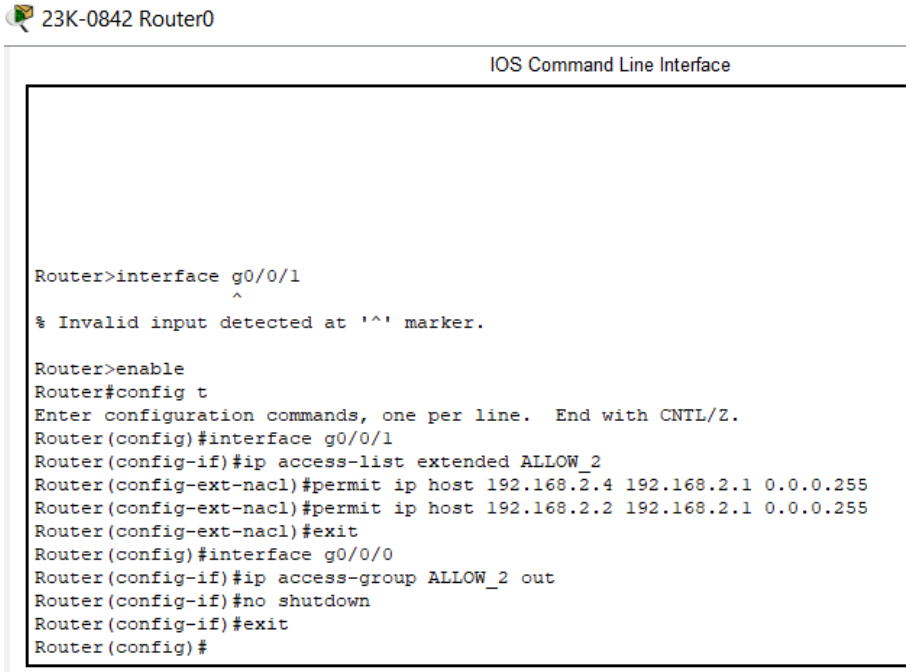
Now, after applying the commands, employee network cannot send in messages to admin.



Admin can send messages to Employee network.

2.


23K-0842 Router1
Physical
Config
CLI
Attributes
IOS Command Line Interface
changed state to up
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#ip access-list extended ALLOW_2
Router(config-ext-nacl)#permit ip host 192.168.2.4 192.168.2.1 0.0.0.255
Router(config-ext-nacl)#permit ip host 192.168.2.2 192.168.2.1 0.0.0.255
Router(config-ext-nacl)#exit
Router(config)#interface g0/0/0
Router(config-if)#exit
Router(config)#interface g0/0/1
Router(config-if)#ip access-groupALLOW_2
% Invalid input detected at '^' marker.
Router(config-if)#ip access-group ALLOW_2
% Incomplete command.
Router(config-if)#ip access-group ALLOW_2 out
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
PC-PT
23K-0842 PC2
192.168.2.4
Fa0/1
2960-24TT
PC-PT
23K-0842 PC5
192.168.2.2
PC-PT
23K-0842 PC3
Employees Network


23K-0842 Router0
IOS Command Line Interface
Router>interface g0/0/1
% Invalid input detected at '^' marker.
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface g0/0/1
Router(config-if)#ip access-list extended ALLOW_2
Router(config-ext-nacl)#permit ip host 192.168.2.4 192.168.2.1 0.0.0.255
Router(config-ext-nacl)#permit ip host 192.168.2.2 192.168.2.1 0.0.0.255
Router(config-ext-nacl)#exit
Router(config)#interface g0/0/0
Router(config-if)#ip access-group ALLOW_2 out
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#

23K-0842 Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router(config-if)#exit
Router(config)#int g0/0/1
Router(config-if)#ip access-group 120 in
Router(config-if)#exit
Router(config)#interface g0/0/1
Router(config-if)#ip access-list extended ALLOW_2
Router(config-ext-nacl)#permit ip host 192.168.2.4 192.168.2.1 0.0.0.255
Router(config-ext-nacl)#permit ip host 192.168.2.2 192.168.2.1 0.0.0.255
Router(config-ext-nacl)#deny ip host 192.168.2.3 192.
                                                 ^
% Invalid input detected at '^' marker.

Router(config-ext-nacl)#exit
Router(config)#ip access-list extended ALLOW_2
Router(config-ext-nacl)#permit ip host 192.168.2.4 192.168.1.0 0.0.0.255
Router(config-ext-nacl)#permit ip host 192.168.2.2 192.168.1.0 0.0.0.255
Router(config-ext-nacl)#deny ip 192.168.2.3 192.168.1.0 0.0.0.255
% Incomplete command.
Router(config-ext-nacl)#deny ip host 192.168.2.3 192.168.1.0 0.0.0.255
Router(config-ext-nacl)#permit ip any any
Router(config-ext-nacl)#exit
Router(config)#interface g0/0/1
Router(config-if)#ip access-group ALLOW_2 in
Router(config-if)#exit
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
```

Copy Paste

23K-0842 PC2

Physical Config Desktop Programming Attributes

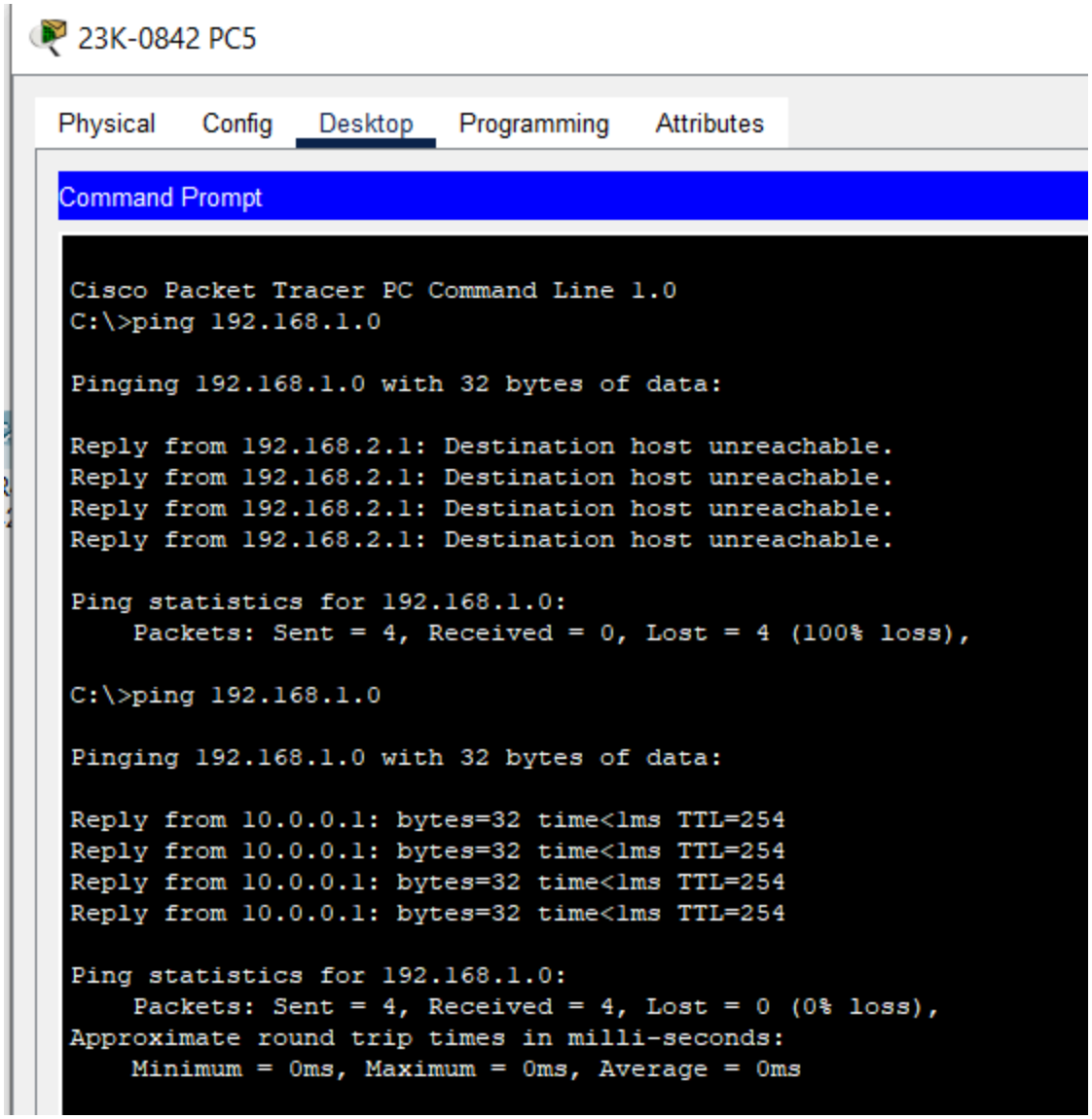
Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.0

Pinging 192.168.1.0 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time<1ms TTL=254
Reply from 10.0.0.1: bytes=32 time<1ms TTL=254
Reply from 10.0.0.1: bytes=32 time<1ms TTL=254
Reply from 10.0.0.1: bytes=32 time<1ms TTL=254

Ping statistics for 192.168.1.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```



Only PC2 and PC5 can talk to ADMIN.