Report

Lab 1: Variable Length Subnet Mask và Định tuyến tĩnh

Nhóm: 11

Nguyễn Vũ Anh Duy _ 21520211

Lưu Gia Huy _ 21520916

Yêu cầu 1 :

Sử dụng lớp mạng 10.x.y.0/24, với x và y là 2 số cuối của MSSV của

2 bạn trong nhóm để chia các mạng con cho mô hình của bài thực hành với số

host phù hợp.

Lưu ý: trường hợp nhóm 1 người thì lấy x và y là 4 số cuối của MSSV. VD: 1456

→ x = 14, y = 56.

Bài làm

- **Xét subnet có 100 host:**

2^7-2=126 host >= 120 host, cần 7 bit dành cho phần host, mượn 8 – 7 =1 bit để làm phần net

- Dải 10.11.16.0/24 được chia thành 2 subnet:
  - 10.11.16.0/25 (cài đặt 120 host)
  - 10.11.16.128/25 (còn dư)

- **Xét subnet có 15 host:**

2^5 – 2 = 30 host >= 15 host, cần 5 bit dành cho phần host, mượn 7 – 5 = 2 bit để làm phần net.

- Dải 10.11.16.128/25 chia thành 2 subnet:

- 10.11.16.128/27 (cài đặt cho 15 host)
- 10.11.16.160/27 (còn dư)

- **Xét subnet có 10 host:**

2^4 – 2 = 14 host >= 10 host, cần 4 bit dành cho phần host, mượn 5 – 4 = 1 bit để làm phần net.

- Dải 10.11.16.160/27 chia thành 2 subnet:
  - 10.11.16.160/28 (cài đặt cho 15 host)
  - 10.11.16.176/28 (còn dư)

- **Xét subnet có 2 host:**

2^2 – 2 = 2 host >= 2 host, cần 2 bit dành cho phần host, mượn 4 – 2 = 2 bit để làm phần net.

- Dải 10.11.16.176/28 chia thành 4 subnet:
  - 10.11.16.176/30 (cài đặt cho 2 host)
  - 10.11.16.180/30 (cài đặt cho 2 host)
  - 10.11.16.184/30 (cài đặt cho 2 host)
  - 10.11.16.188/30 (cài đặt cho 2 host)

Số hosts	Network	Subnet mask	Dải IP	Broadcast
100	10.11.16.0/25	255.255.255.128	10.11.16.1 - 10.11.16.126	10.11.16.127
15	10.11.16.128/27	255.255.255.224	10.11.16.129 - 10.11.16.158	10.11.16.159
10	10.11.16.160/28	255.255.255.240	10.11.16.161 - 10.11.16.174	10.11.16.175
2	10.11.16.176/30	255.255.255.252	10.11.16.177 - 10.11.16.178	10.11.16.179

2	10.11.16.180/30	255.255.255.252	10.11.16.181 - 10.11.16.182	10.11.16.183
2	10.11.16.184/30	255.255.255.252	10.11.16.185 - 6.186	10.11.16.187
2	10.11.16.188/30	255.255.255.252	10.11.16.189 - 6.190	10.11.16.191

Yêu cầu 2: Sử dụng các mạng con đã chia được ở Yêu cầu 1 cho các thiết bị của mô hình, lập bảng địa chỉ IP cho các thiết bị với lưu ý bên dưới

Bài làm

Thiết bị	Interface	Địa chỉ IP	Subnet Mask	Default Gateway
R1	G0/0/1	10.11.16.1	255.255.255.128	N/A
	S0/1/0	10.11.16.177	255.255.255.252	N/A
	S0/1/1	10.11.16.181	255.255.255.252	N/A
R2	S0/1/0	10.11.16.178	255.255.255.252	N/A
	S0/1/1	10.11.16.185	255.255.255.252	N/A
R3	G0/0/0	10.11.16.161	255.255.255.240	N/A
	G0/0/1	10.11.16.129	255.255.255.224	N/A
	S0/1/0	10.11.16.186	255.255.255.252	N/A

	S0/1/1	10.11.16.190	255.255.255.252	N/A
R4	S0/1/0	10.11.16.189	255.255.255.252	N/A
	S0/1/1	10.11.16.182	255.255.255.252	N/A
PC-A	NIC	10.11.16.4	255.255.255.128	10.11.16.1
ServerB1	NIC	10.11.16.163	255.255.255.240	10.11.16.161
ServerB2	NIC	10.11.16.131	255.255.255.224	10.11.16.129

Yêu cầu 3: Sinh viên thực hiện cấu hình cơ bản cho các thiết bị (các router và các switch)

Bài làm

- Cấu hình cơ bản R1

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#enable password inseclab
R1(config)#service password-encryption
R1(config)#line console 0
R1(config-line)#password inseclab
R1(config-line)#login
R1(config-line)#exit
R1(config)#line vty 0 4
R1(config-line)#password inseclab
R1(config-line)#login
R1(config-line)#exit
R1(config)#copy running-config startup-config
             ^
% Invalid input detected at '^' marker.

R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#show running-config
Building configuration...

Current configuration : 816 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
!
hostname R1
!
!
!
enable password 7 0828425D0C1A091610
!
!
!
!
!
!
no ip cef
no ipv6 cef
```

- Cấu hình cơ bản R2

```
Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R2
R2(config)#enable password inseclab
R2(config)#service password-encryption
R2(config)#line console 0
R2(config-line)#password inseclab
R2(config-line)#login
R2(config-line)#exit
R2(config)#line vty 0 4
R2(config-line)#password inseclab
R2(config-line)#login
R2(config-line)#exit
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R2#show running-config
Building configuration...

Current configuration : 816 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
!
hostname R2
!
!
!
enable password 7 0828425D0C1A091610
!
!
!
!
!
!
no ip cef
no ipv6 cef
 --More--
```

- Cấu hình cơ bản R3

```
Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R3
R3(config)#enable password inseclab
R3(config)#service password-encryption
R3(config)#line console 0
R3(config-line)#password inseclab
R3(config-line)#login
R3(config-line)#exit
R3(config)#line vty 0 4
R3(config-line)#password inseclab
R3(config-line)#login
R3(config-line)#exit
R3(config)#exit
R3#
%SYS-5-CONFIG_I: Configured from console by console

R3#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R3#show running-config
Building configuration...

Current configuration : 816 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
!
hostname R3
!
!
!
enable password 7 0828425D0C1A091610
!
!
!
!
!
!
no ip cef
no ipv6 cef
 --More--
```

- Cấu hình cơ bản R4

```
Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R4
R4(config)#enable password inseclab
R4(config)#service password-encryption
R4(config)#line console 0
R4(config-line)#password inseclab
R4(config-line)#login
R4(config-line)#exit
R4(config)#line vty 0 4
R4(config-line)#password inseclab
R4(config-line)#login
R4(config-line)#exit
R4(config)#exit
R4#
%SYS-5-CONFIG_I: Configured from console by console

R4#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R4#show running-config
Building configuration...

Current configuration : 816 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
!
hostname R4
!
!
!
enable password 7 0828425D0C1A091610
!
!
!
!
!
!
no ip cef
no ipv6 cef
 --More--
```

Yêu cầu 4: Sinh viên thực hiện cấu hình địa chỉ IP cho các Router và PC theo bảng chia địa chỉ IP ở Yêu cầu 2

Bài làm

- Cấu hình địa chỉ IP R1

```
User Access Verification

Password:

R1>enable
Password:
R1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface GigabitEthernet 0/0/1
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up

R1(config-if)#ip address 10.11.16.1 255.255.255.128
R1(config-if)#interface Serial 0/1/0
R1(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/1/0, changed state to down
R1(config-if)#ip address 10.11.16.177 255.255.255.252
R1(config-if)#interface Serial 0/1/1
R1(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/1/1, changed state to down
R1(config-if)#ip address 10.11.16.181 255.255.255.252
R1(config-if)#^Z
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  administratively down down
GigabitEthernet0/0/1   10.11.16.1      YES manual up                    up
Serial0/1/0            10.11.16.177    YES manual down                  down
Serial0/1/1            10.11.16.181    YES manual down                  down
Vlan1                  unassigned      YES unset  administratively down down
R1#
```

- Cấu hình địa chỉ IP R2

```
User Access Verification

Password:

R2>enable
Password:
R2#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#interface Serial 0/1/0
R2(config-if)#no shutdown

R2(config-if)#
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up

R2(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

R2(config-if)#ip address 10.11.16.178 255.255.255.252
R2(config-if)#interface Serial 0/1/1
R2(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/1/1, changed state to down
R2(config-if)#ip address 10.11.16.185 255.255.255.252
R2(config-if)#^Z
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  administratively down down
GigabitEthernet0/0/1   unassigned      YES unset  administratively down down
Serial0/1/0            10.11.16.178    YES manual up                    up
Serial0/1/1            10.11.16.185    YES manual down                  down
Vlan1                  unassigned      YES unset  administratively down down
R2#
```

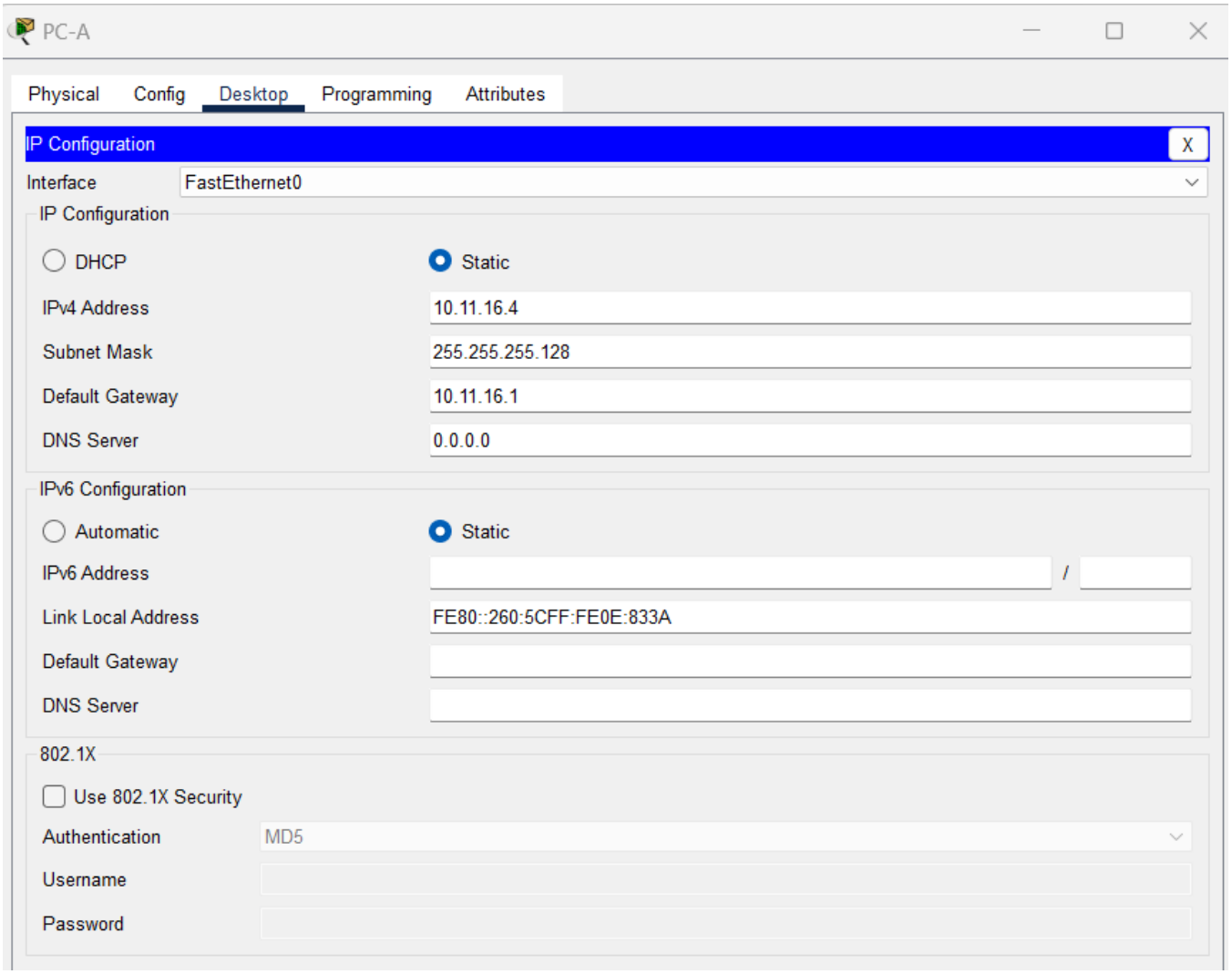
- Cấu hình địa chỉ IP R3

```
Password:
Password:
R3#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#interface GigabitEthernet 0/0/0
R3(config-if)#no shutdown

R3(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

R3(config-if)#ip address 10.11.16.161 255.255.255.240
R3(config-if)#interface GigabitEthernet 0/0/1
R3(config-if)#no shutdown

R3(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up

R3(config-if)#ip address 10.11.16.129 255.255.255.224
R3(config-if)#interface Serial0/1/0
R3(config-if)#no shutdown

R3(config-if)#
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up

R3(config-if)#ip address 10.11.16.129 255.255.255.224
%LINEPROTO-5-UPDOWN: Line protocol on Inteno shutdown
R3(config-if)#interface Serial0/1/0
R3(config-if)#no shutdown
R3(config-if)#ip address 10.11.16.186 255.255.255.252
R3(config-if)#interface Serial0/1/1
R3(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/1/1, changed state to down
R3(config-if)#ip address 10.11.16.190 255.255.255.252
R3(config-if)#^Z
R3#
%SYS-5-CONFIG_I: Configured from console by console

R3#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   10.11.16.161    YES manual up                    up
GigabitEthernet0/0/1   10.11.16.129    YES manual up                    up
Serial0/1/0            10.11.16.186    YES manual up                    up
Serial0/1/1            10.11.16.190    YES manual down                  down
Vlan1                  unassigned      YES unset  administratively down down
R3#
```

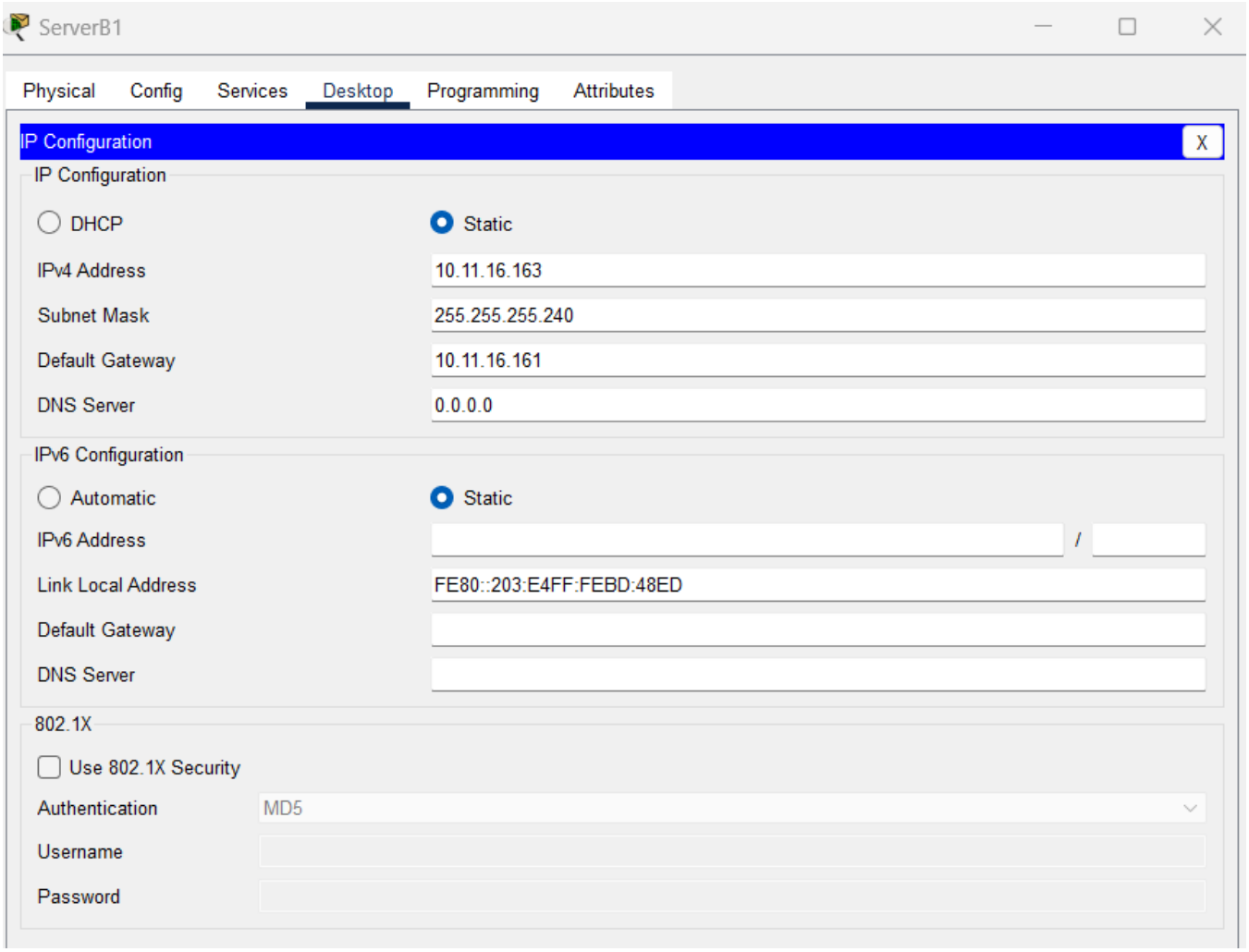
- Cấu hình địa chỉ IP R4

```
R4#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#interface Serial 0/1/0
R4(config-if)#no shutdown
R4(config-if)#ip address 10.11.16.189 255.255.255.252
R4(config-if)#interface Serial 0/1/1
R4(config-if)#no shutdown
R4(config-if)#ip address 10.11.16.182 255.255.255.252
R4(config-if)#^Z
R4#
%SYS-5-CONFIG_I: Configured from console by console

R4#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  administratively down down
GigabitEthernet0/0/1   unassigned      YES unset  administratively down down
Serial0/1/0            10.11.16.189    YES manual up                    up
Serial0/1/1            10.11.16.182    YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
R4#
```

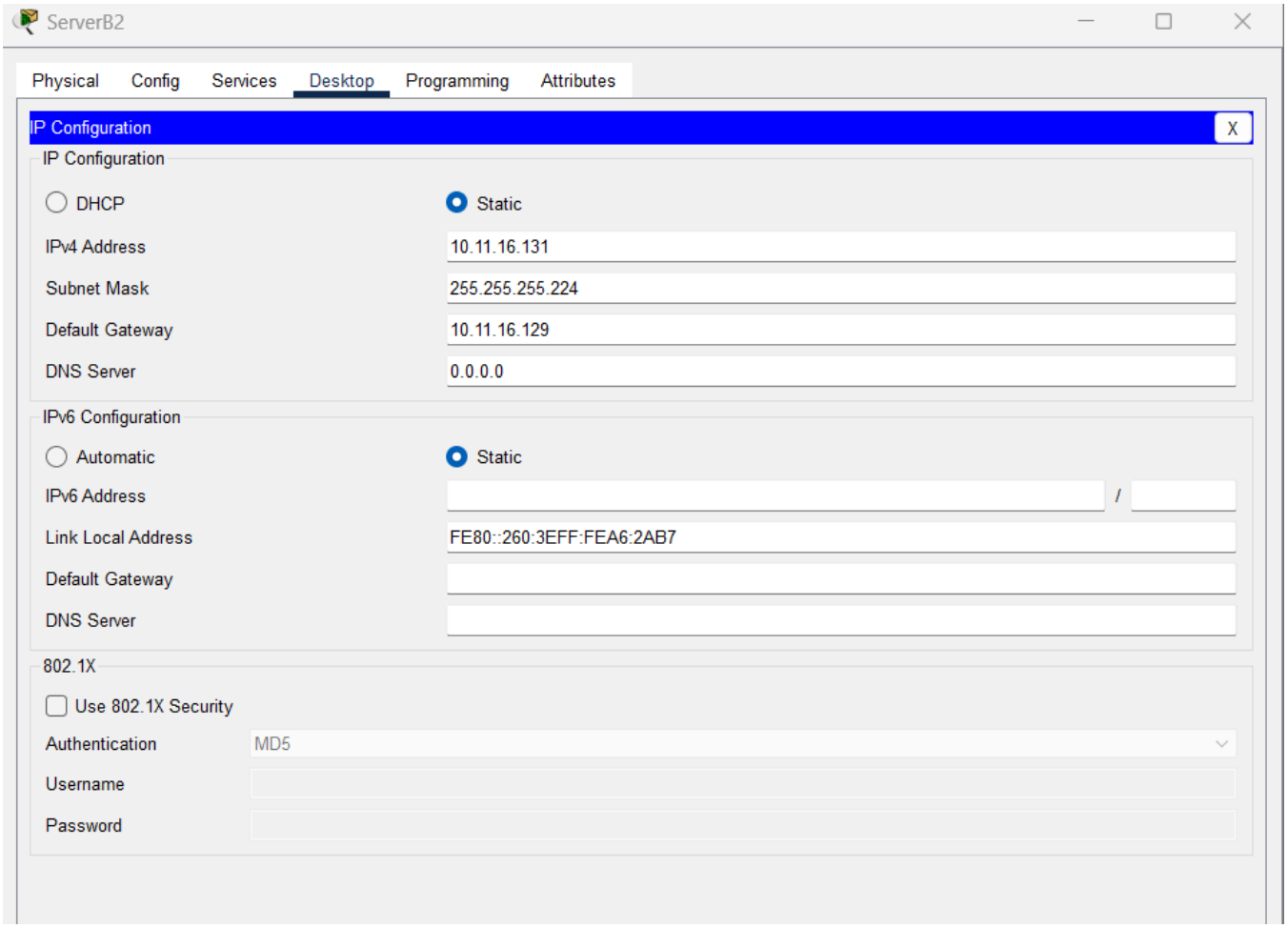
- Cấu hình địa chỉ IP PC-A



- Cấu hình địa chỉ IP Server B1



- Cấu hình địa chỉ IP Server B2



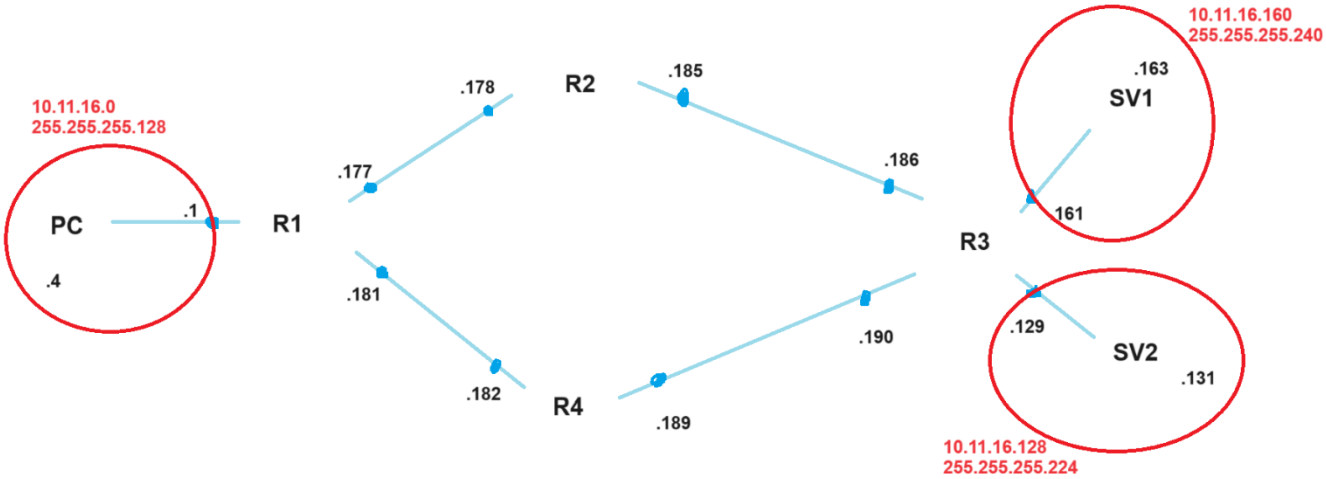
Yêu cầu 5: Sinh viên thực hiện cấu hình định tuyến tĩnh cho mô hình mạng với yêu cầu bên dưới

Bài làm

Ở đây em cấu hình 1 lần cho cả chính lẫn phụ
Với cấu trúc lệnh :
ip route <net> <mask> <next ip> distance

Thì với đường chính ta sẽ đặt chỉ số distance (trong khoảng từ 1-255) nhỏ hơn so với đường phụ, ở đây em chọn đường chính distane là 1, đường phụ distance là 2

Dưới đây là sơ đồ thể hiện tường minh hơn, dễ dàng cho việc định tuyến:



Cấu hình

- Configure R1

```
R1>
R1>enable
Password:
R1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#ip route 10.11.16.160 255.255.255.240 10.11.16.178 1
R1(config)#ip route 10.11.16.160 255.255.255.240 10.11.16.182 2
R1(config)#ip route 10.11.16.128 255.255.255.224 10.11.16.178 1
R1(config)#ip route 10.11.16.128 255.255.255.224 10.11.16.182 2
R1(config)#^Z
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 8 subnets, 5 masks
C       10.11.16.0/25 is directly connected, GigabitEthernet0/0/1
L       10.11.16.1/32 is directly connected, GigabitEthernet0/0/1
S       10.11.16.128/27 [1/0] via 10.11.16.178
S       10.11.16.160/28 [1/0] via 10.11.16.178
C       10.11.16.176/30 is directly connected, Serial0/1/0
L       10.11.16.177/32 is directly connected, Serial0/1/0
C       10.11.16.180/30 is directly connected, Serial0/1/1
L       10.11.16.181/32 is directly connected, Serial0/1/1

R1#
```

- Configure R2

```
R2>enable
Password:
R2#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ip route 10.11.16.160 255.255.255.240 10.11.16.186
R2(config)#ip route 10.11.16.128 255.255.255.224 10.11.16.186
R2(config)#ip route 10.11.16.0 255.255.255.128 10.11.16.177
R2(config)#^Z
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 7 subnets, 5 masks
S       10.11.16.0/25 [1/0] via 10.11.16.177
S       10.11.16.128/27 [1/0] via 10.11.16.186
S       10.11.16.160/28 [1/0] via 10.11.16.186
C       10.11.16.176/30 is directly connected, Serial0/1/0
L       10.11.16.178/32 is directly connected, Serial0/1/0
C       10.11.16.184/30 is directly connected, Serial0/1/1
L       10.11.16.185/32 is directly connected, Serial0/1/1

R2#
```

- Configure R3

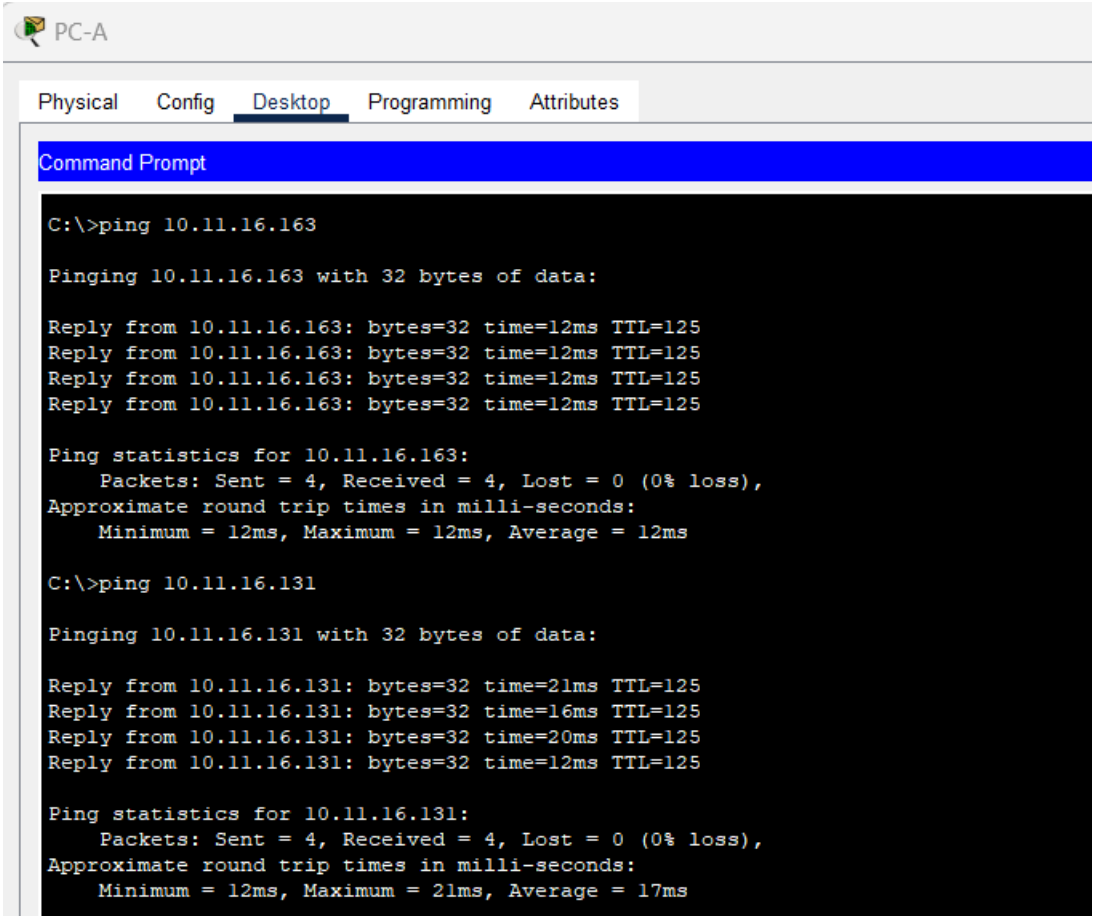
```
R3>enable
Password:
R3#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#ip route 10.11.16.0 255.255.255.128 10.11.16.185 1
R3(config)#ip route 10.11.16.0 255.255.255.128 10.11.16.189 2
R3(config)#^Z
R3#
%SYS-5-CONFIG_I: Configured from console by console

R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 9 subnets, 5 masks
S       10.11.16.0/25 [1/0] via 10.11.16.185
C       10.11.16.128/27 is directly connected, GigabitEthernet0/0/1
L       10.11.16.129/32 is directly connected, GigabitEthernet0/0/1
C       10.11.16.160/28 is directly connected, GigabitEthernet0/0/0
L       10.11.16.161/32 is directly connected, GigabitEthernet0/0/0
C       10.11.16.184/30 is directly connected, Serial0/1/0
L       10.11.16.186/32 is directly connected, Serial0/1/0
C       10.11.16.188/30 is directly connected, Serial0/1/1
L       10.11.16.190/32 is directly connected, Serial0/1/1

R3#
```

- Configure R4

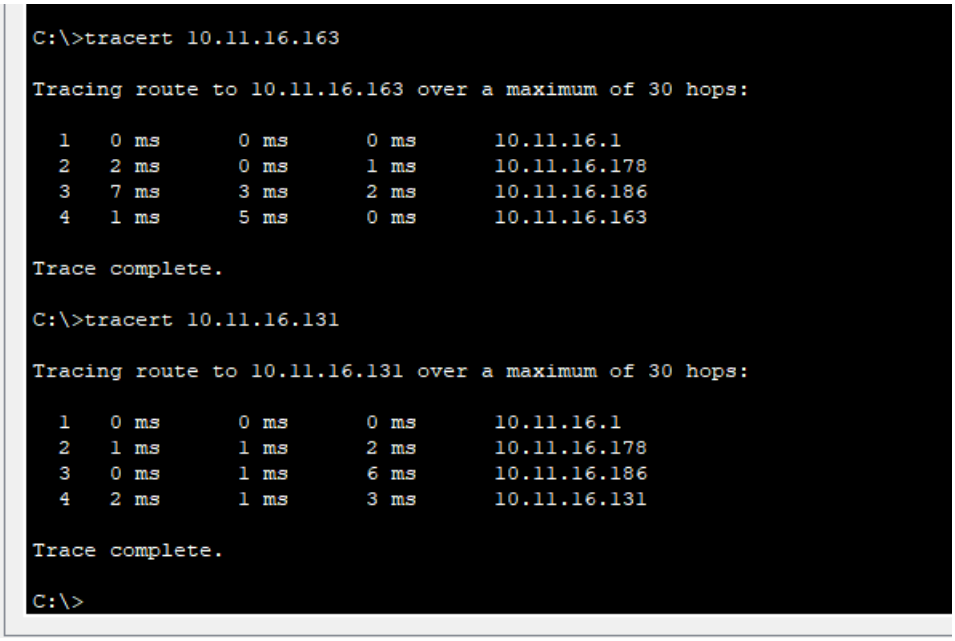
```
R4>enable
Password:
R4#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#ip route 10.11.16.160 255.255.255.240 10.11.16.190
R4(config)#ip route 10.11.16.128 255.255.255.224 10.11.16.190
R4(config)#ip route 10.11.16.0 255.255.255.128 10.11.16.181
R4(config)#^Z
R4#
%SYS-5-CONFIG_I: Configured from console by console

R4#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 7 subnets, 5 masks
S       10.11.16.0/25 [1/0] via 10.11.16.181
S       10.11.16.128/27 [1/0] via 10.11.16.190
S       10.11.16.160/28 [1/0] via 10.11.16.190
C       10.11.16.180/30 is directly connected, Serial0/1/0
L       10.11.16.182/32 is directly connected, Serial0/1/0
C       10.11.16.188/30 is directly connected, Serial0/1/1
L       10.11.16.189/32 is directly connected, Serial0/1/1

R4#
```

Kiểm tra cho trường hợp đường chính

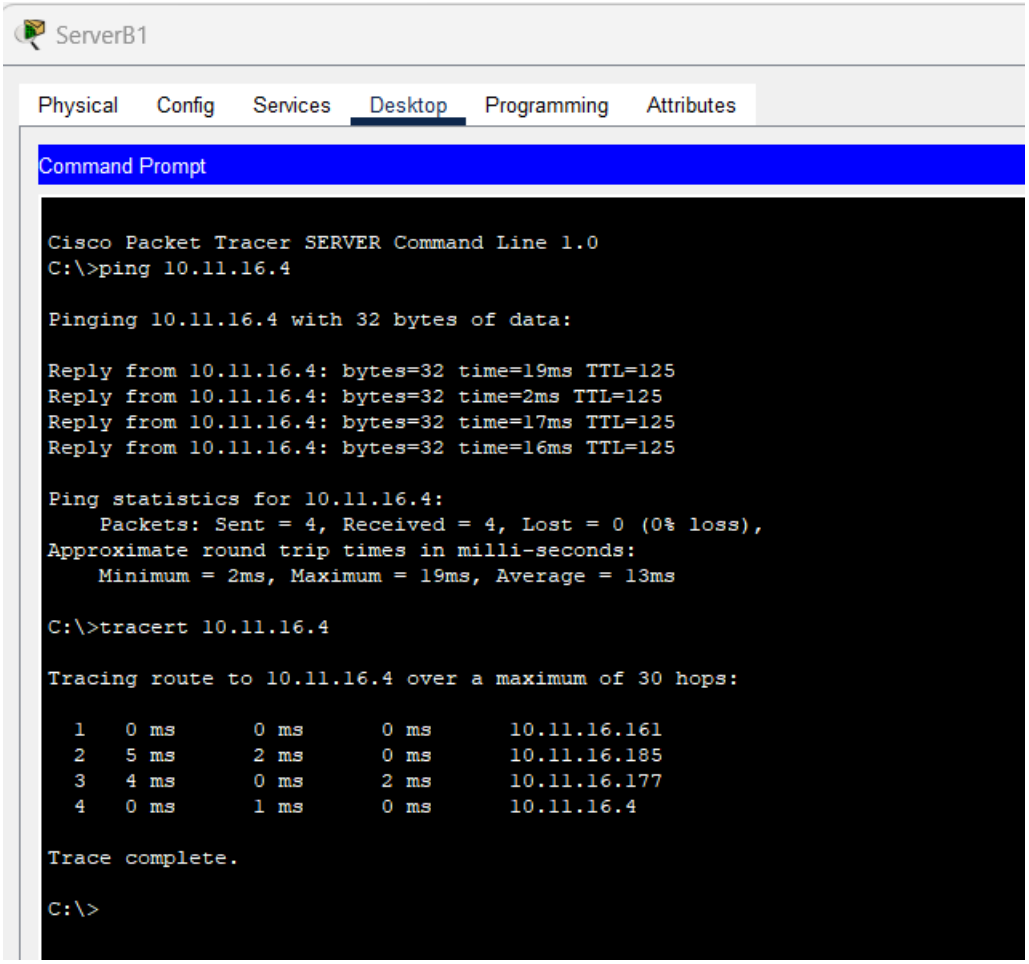
- Ping từ PC đến server B1 và B2



- Tracert từ PC tới server B1 và B2



- Ping và tracert từ server B1 tới PC-A



- Ping và tracert từ server B2 đến PC-A

ServerB2

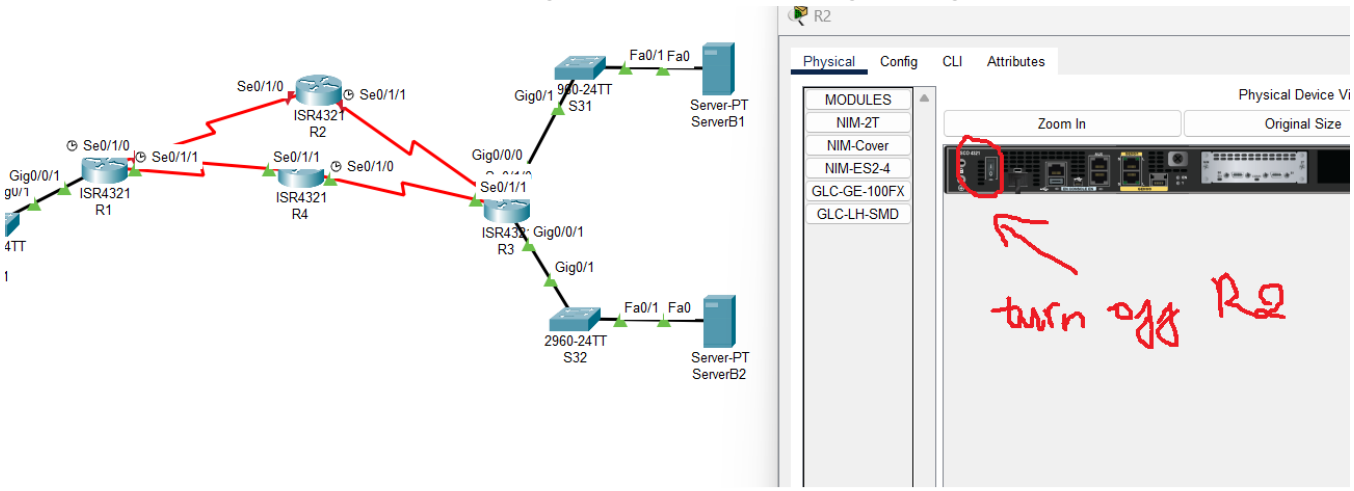
Physical | Config | Services | Desktop | Programming | Attributes

Command Prompt

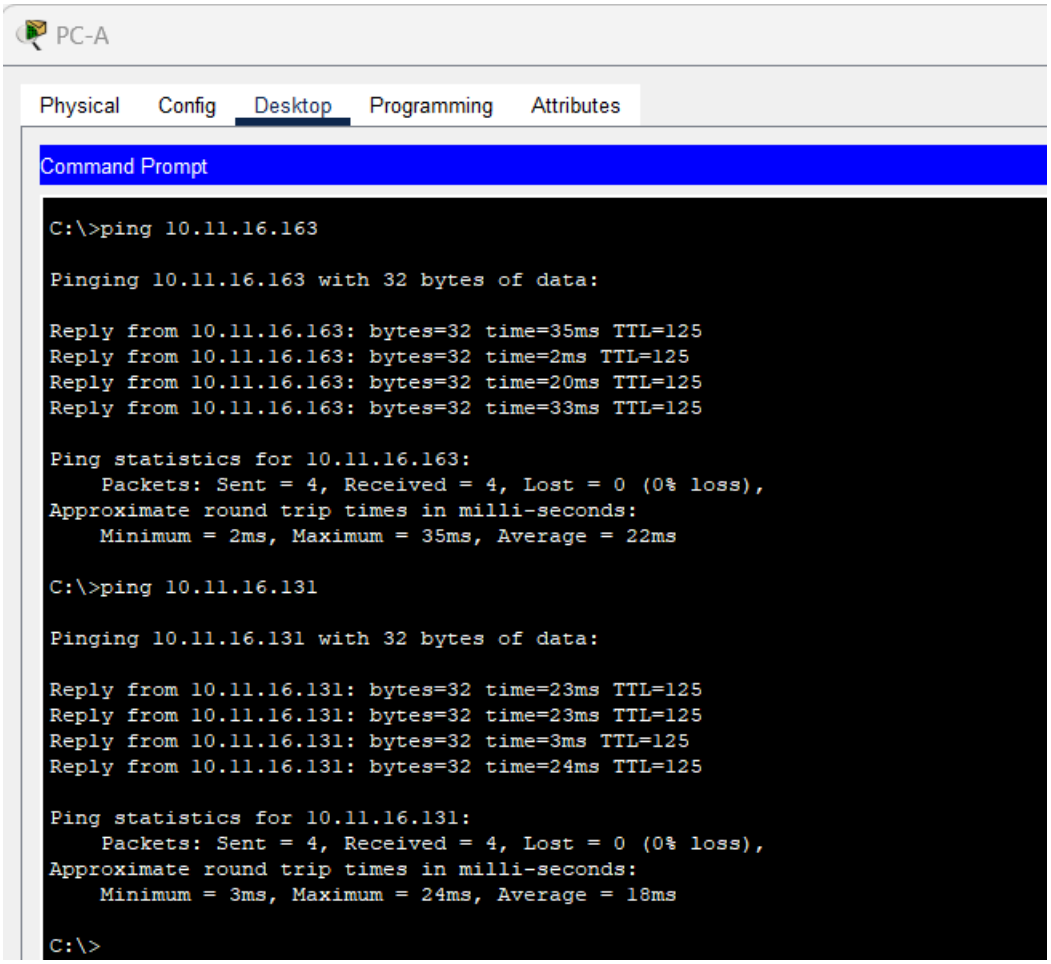
```
Cisco Packet Tracer SERVER Command Line 1.0
C:\>ping 10.11.16.4

Pinging 10.11.16.4 with 32 bytes of data:

Reply from 10.11.16.4: bytes=32 time=17ms TTL=125
Reply from 10.11.16.4: bytes=32 time=10ms TTL=125
Reply from 10.11.16.4: bytes=32 time=15ms TTL=125
Reply from 10.11.16.4: bytes=32 time=14ms TTL=125

Ping statistics for 10.11.16.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 10ms, Maximum = 17ms, Average = 14ms

C:\>tracert 10.11.16.4

Tracing route to 10.11.16.4 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      10.11.16.129
  2    0 ms      0 ms      0 ms      10.11.16.185
  3    1 ms      10 ms     8 ms      10.11.16.177
  4    0 ms      0 ms      0 ms      10.11.16.4

Trace complete.

C:\>
```

Kiểm tra cho trường hợp đường dự trữ

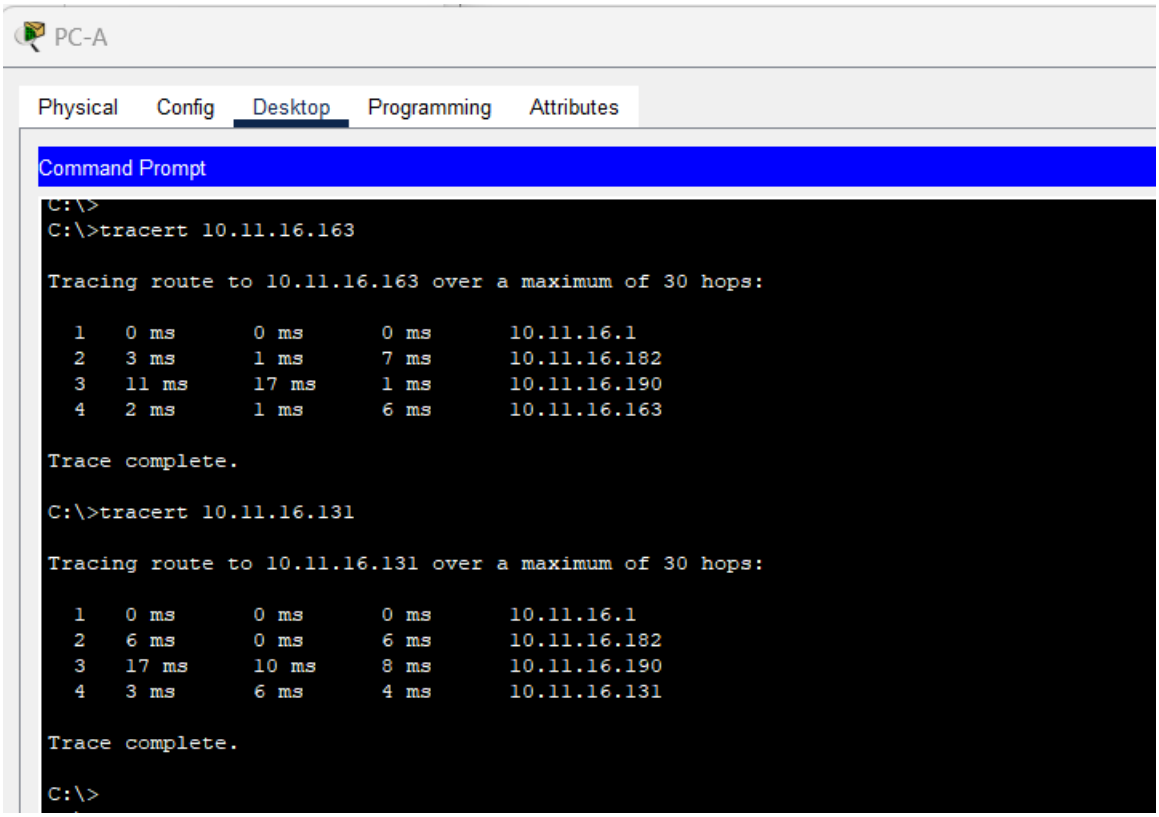
- Tắt R2 để kiểm tra xem đường dự trữ có hoạt động không



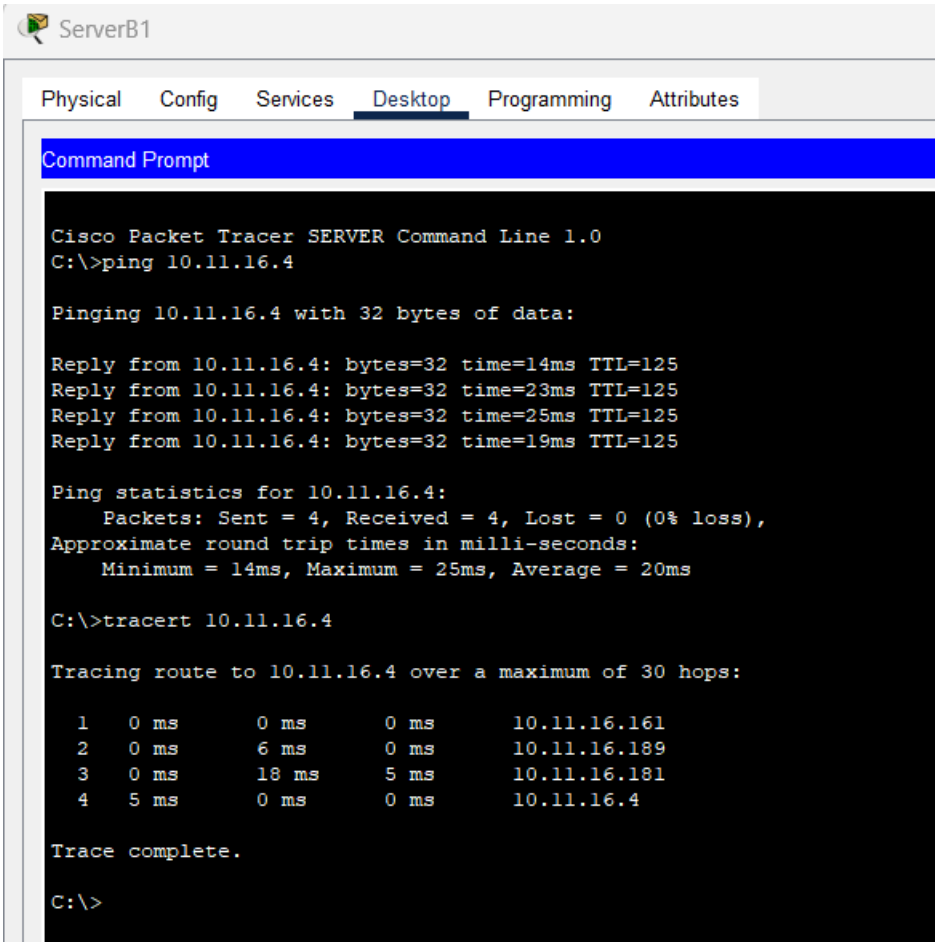
- Ping từ PC-A tới server B1 và B2



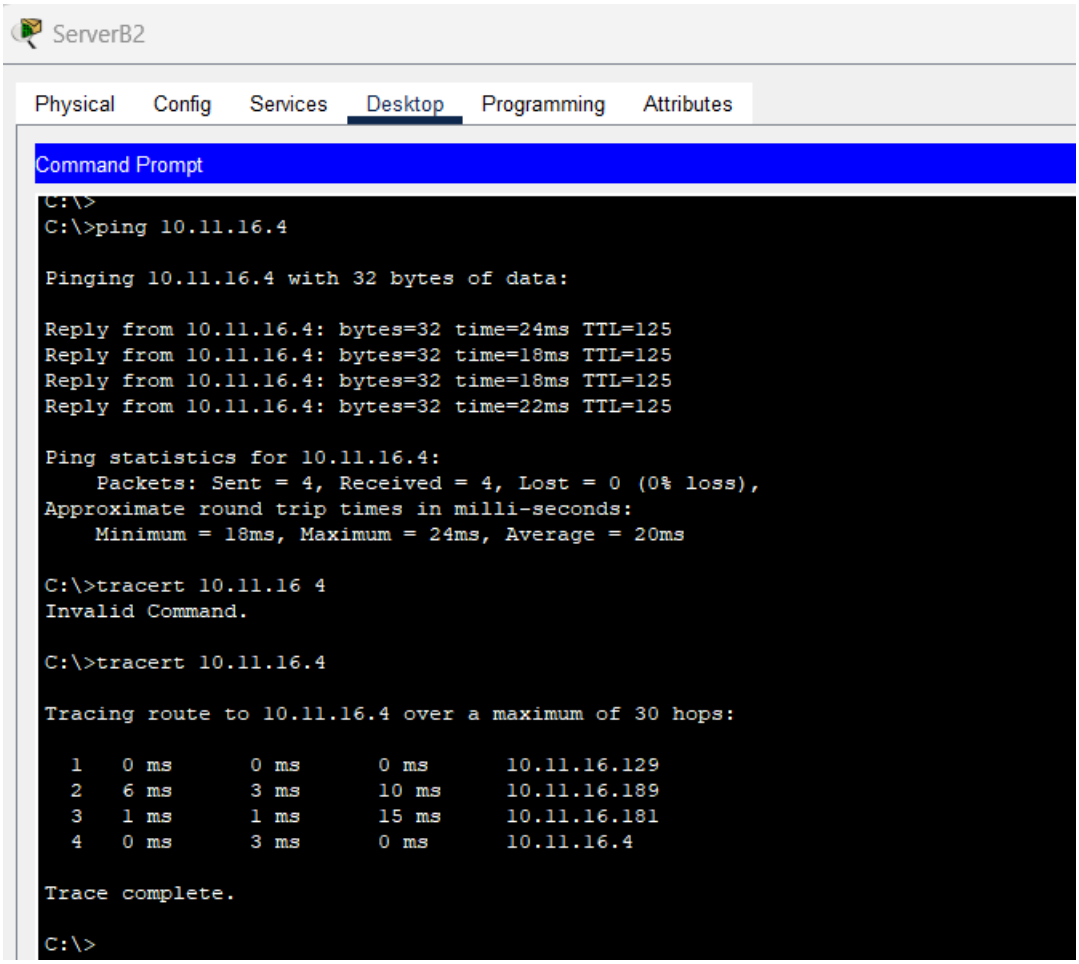
- Tracert từ PC-A tới server B1 và B2



- Ping và tracert từ server B1 tới PC-A



- Ping và tracert từ server B2 tới PC-A


ServerB2
Physical
Config
Services
Desktop
Programming
Attributes
Command Prompt
C:\>
C:\>ping 10.11.16.4
Pinging 10.11.16.4 with 32 bytes of data:
Reply from 10.11.16.4: bytes=32 time=24ms TTL=125
Reply from 10.11.16.4: bytes=32 time=18ms TTL=125
Reply from 10.11.16.4: bytes=32 time=18ms TTL=125
Reply from 10.11.16.4: bytes=32 time=22ms TTL=125
Ping statistics for 10.11.16.4:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 18ms, Maximum = 24ms, Average = 20ms
C:\>tracert 10.11.16 4
Invalid Command.
C:\>tracert 10.11.16.4
Tracing route to 10.11.16.4 over a maximum of 30 hops:
1 0 ms 0 ms 0 ms 10.11.16.129
2 6 ms 3 ms 10 ms 10.11.16.189
3 1 ms 1 ms 15 ms 10.11.16.181
4 0 ms 3 ms 0 ms 10.11.16.4
Trace complete.
C:\>