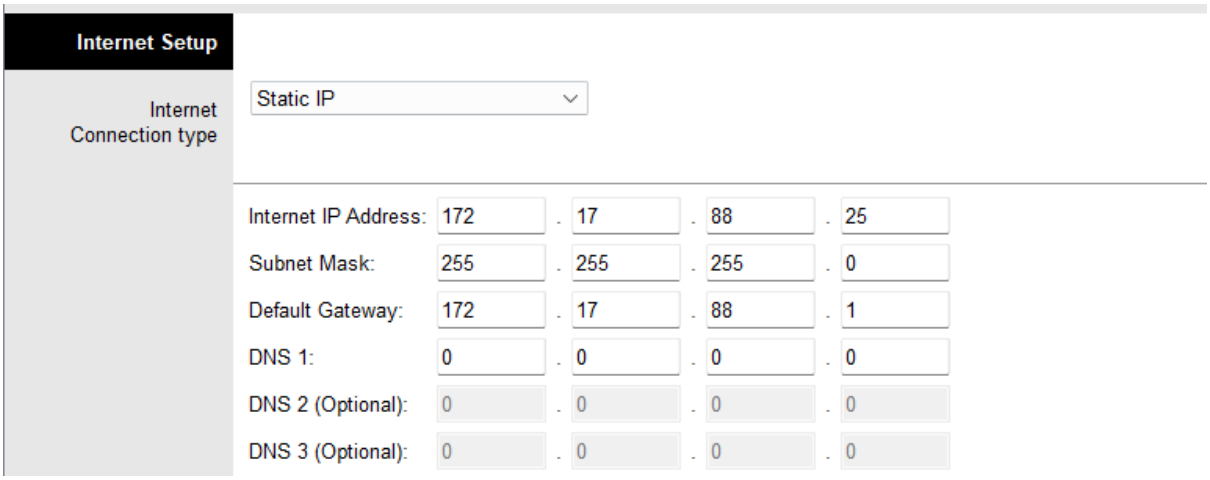
LAB 5: CẤU HÌNH THIẾT BỊ MẠNG

Họ và tên: Phan Trọng Tính – 21522683

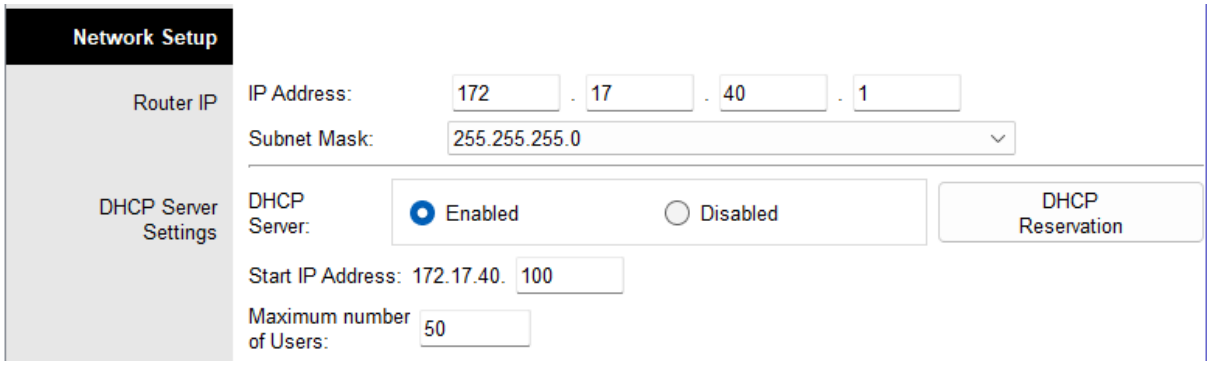
Task 1: Cấu hình thiết bị mạng không dây

1.2 Cấu hình cơ bản

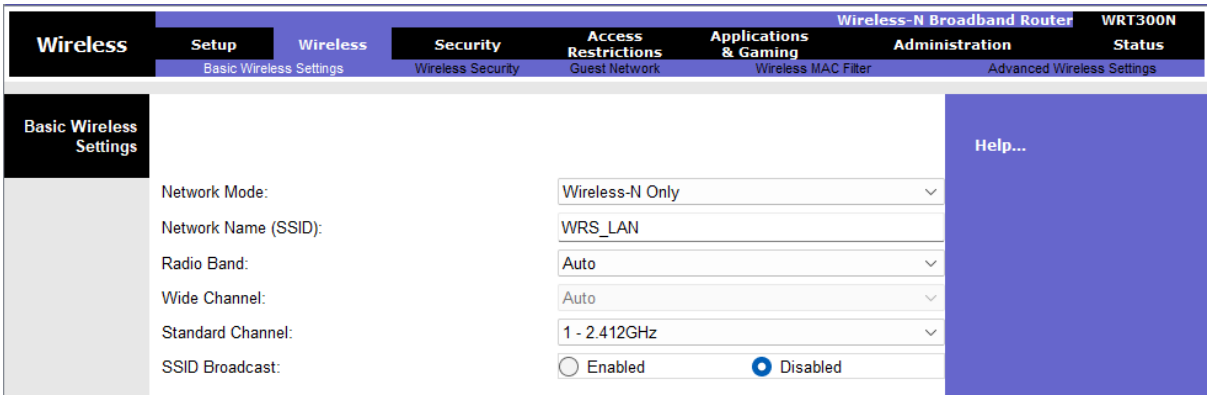
- Cấu hình phần Internet connection

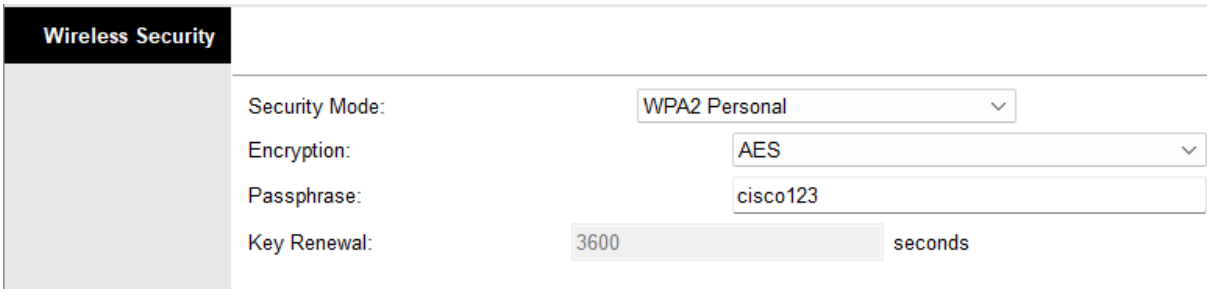


Cấu hình phần Network Setup

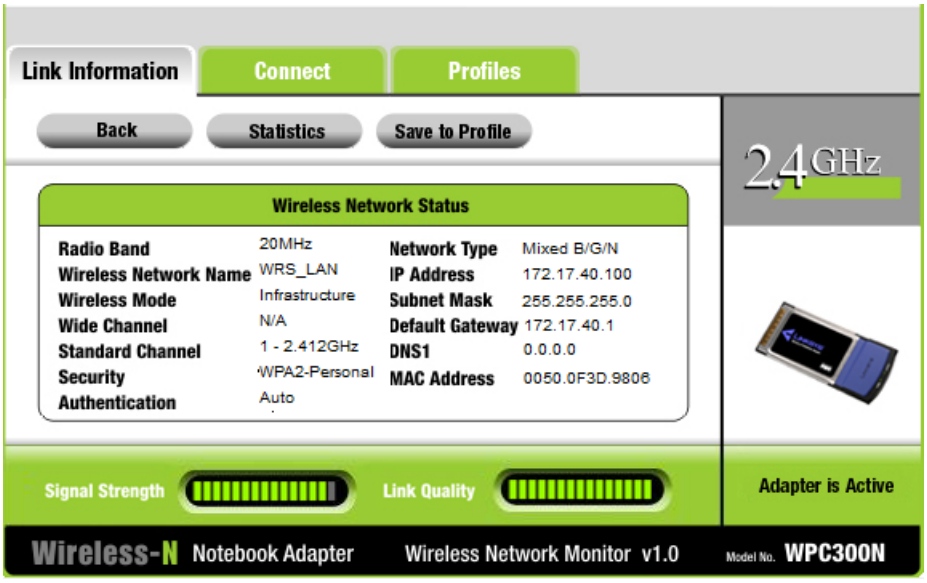


1.3 Cấu hình truy cập và bảo mật

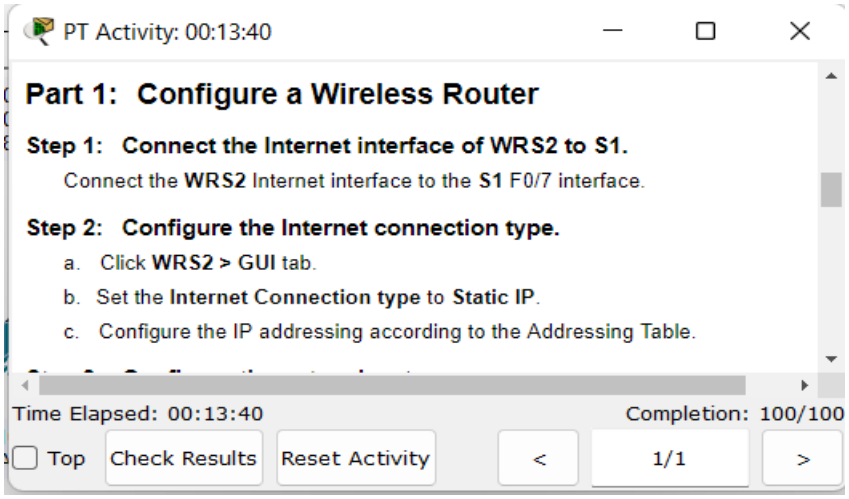




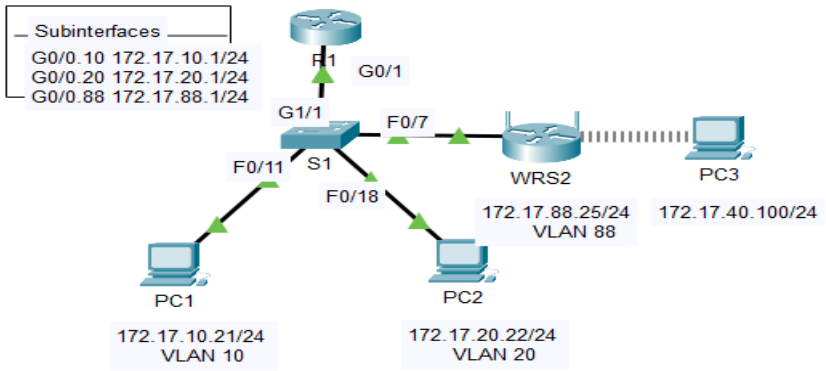
1.5 Kiểm tra kết nối

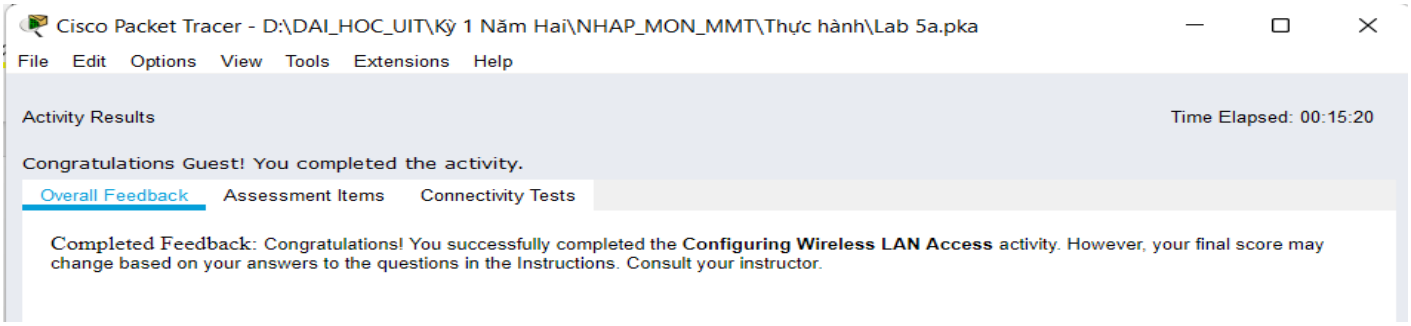


1.6 Kiểm tra kết quả thực hành

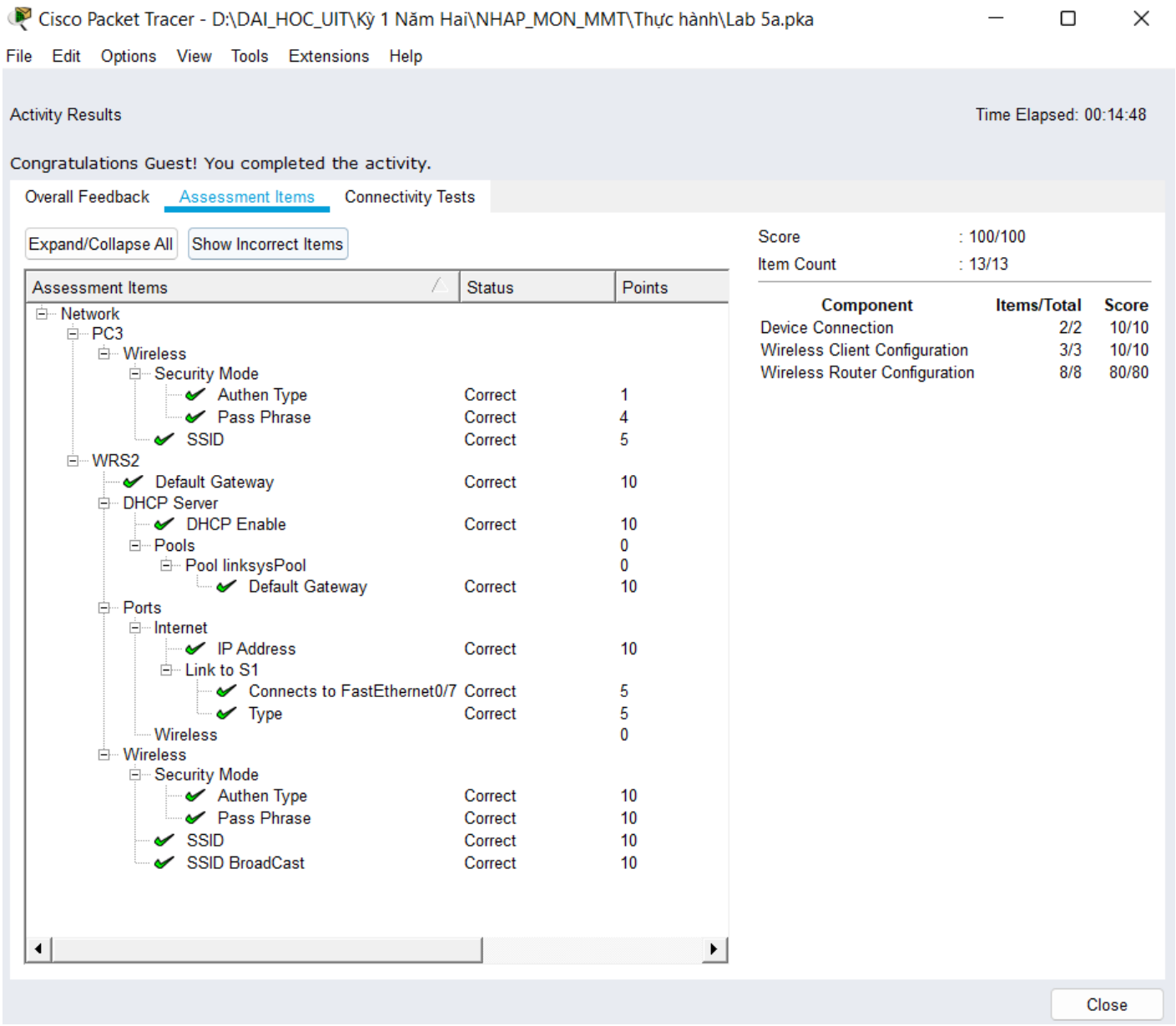


Kết quả





Kết quả tổng quát



Kết quả chi tiết

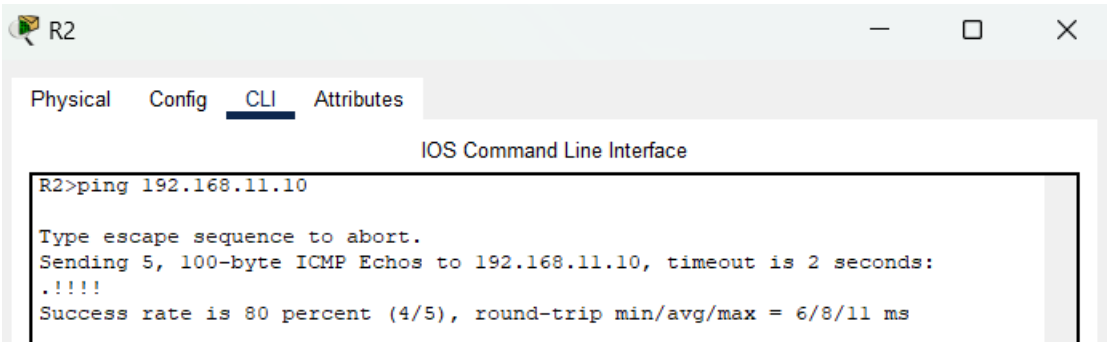
Task 2: Cấu hình địa chỉ IP trên router

Kiểm tra cấu hình

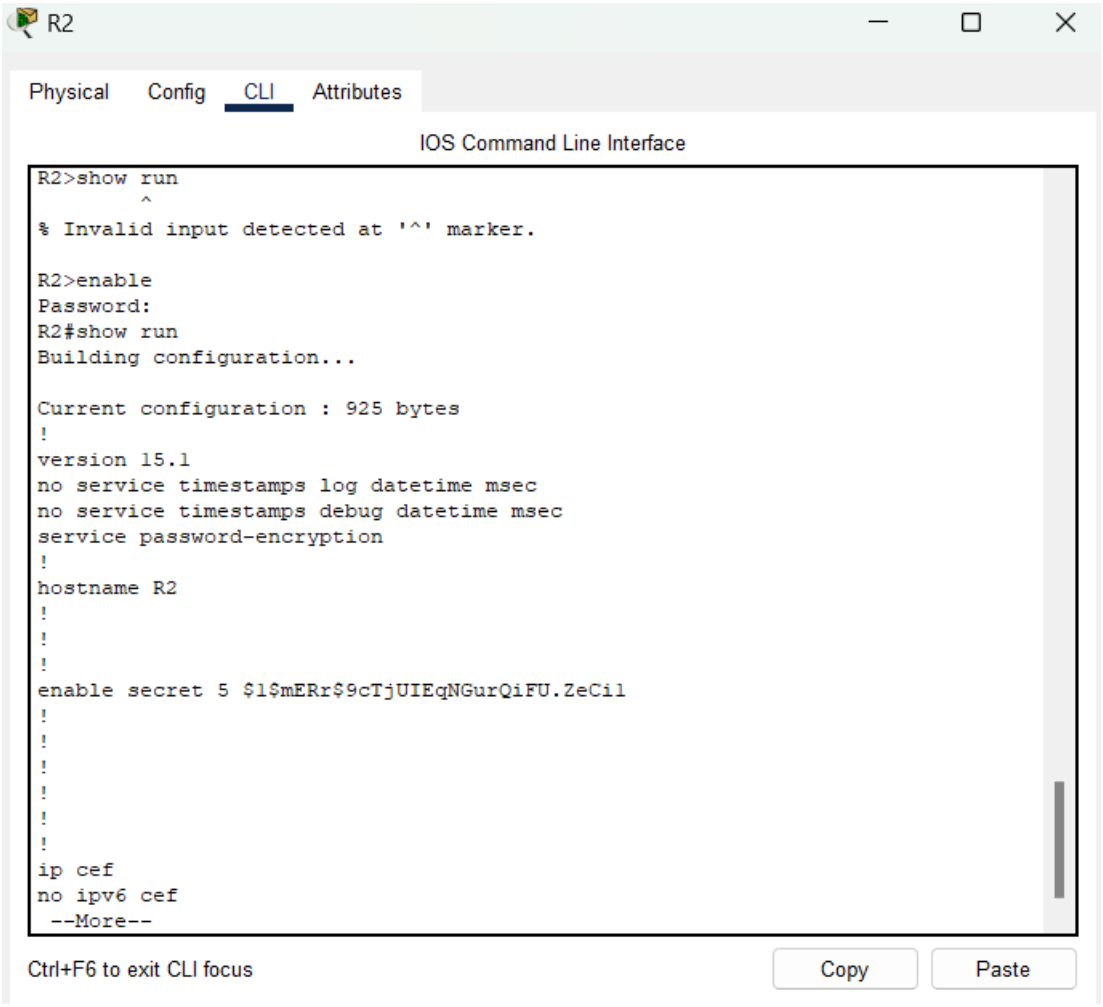
Ping từ PC1->PC4

```
C:\>ping 10.1.2.10

Pinging 10.1.2.10 with 32 bytes of data:

Request timed out.
Reply from 10.1.2.10: bytes=32 time=1ms TTL=126
Reply from 10.1.2.10: bytes=32 time=1ms TTL=126
Reply from 10.1.2.10: bytes=32 time=1ms TTL=126

Ping statistics for 10.1.2.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

Ping từ R2->PC2



R2# show run



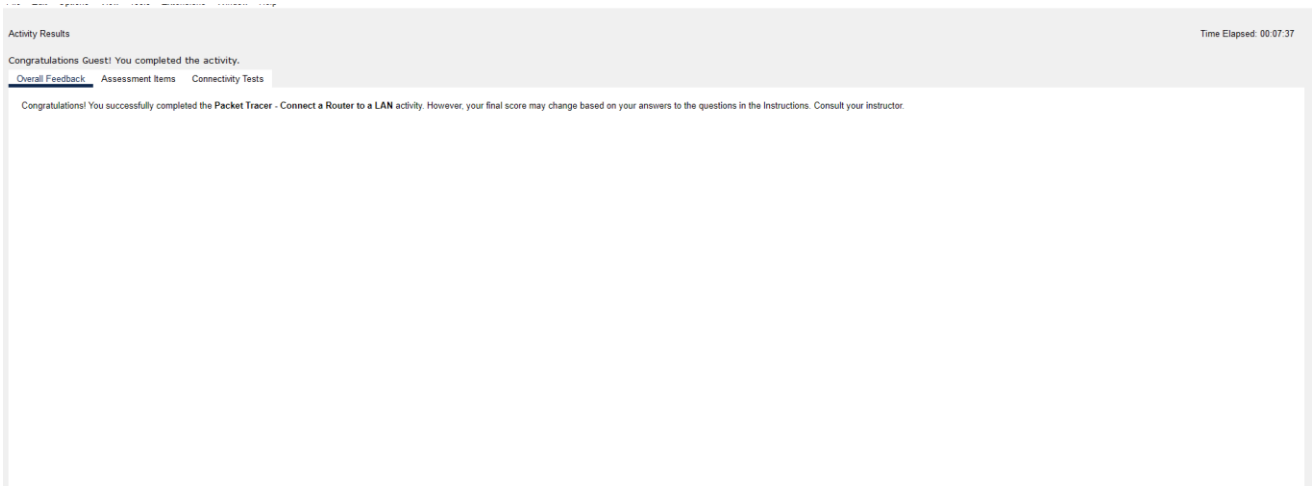
R2# show ip interface brief

```
R2#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol
GigabitEthernet0/0     10.1.1.1        YES manual up                    up
GigabitEthernet0/1     10.1.2.1        YES manual up                    up
Serial0/0/0            209.165.200.226 YES manual up                    up
Serial0/0/1            unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
```

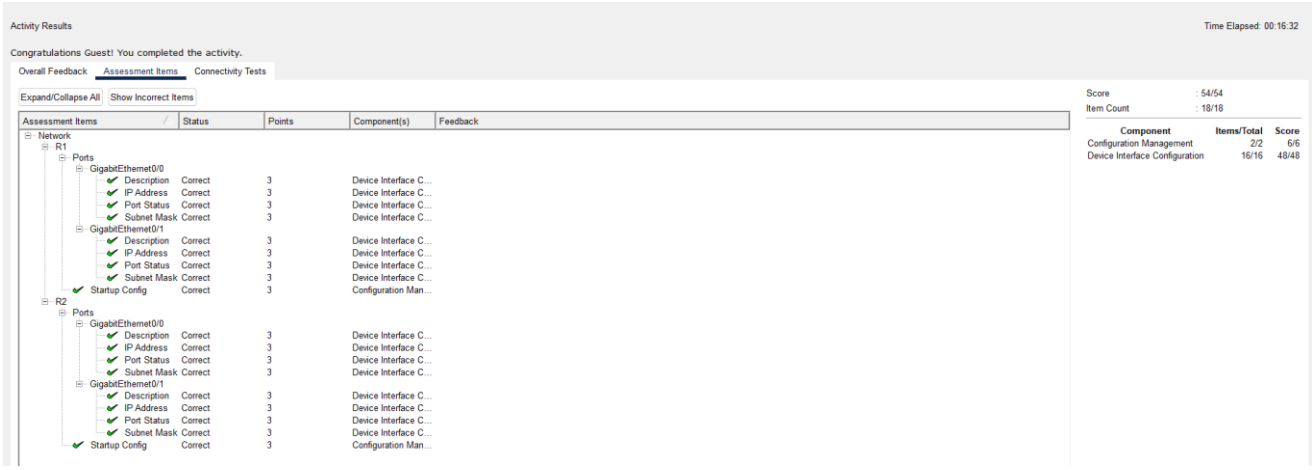
R2# show ip route

```
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, 5 subnets, 3 masks
D       10.0.0.0/8 is a summary, 00:07:29, Null0
C       10.1.1.0/24 is directly connected, GigabitEthernet0/0
L       10.1.1.1/32 is directly connected, GigabitEthernet0/0
C       10.1.2.0/24 is directly connected, GigabitEthernet0/1
L       10.1.2.1/32 is directly connected, GigabitEthernet0/1
D    192.168.10.0/24 [90/2170112] via 209.165.200.225, 00:07:29, Serial0/0/0
D    192.168.11.0/24 [90/2170112] via 209.165.200.225, 00:07:29, Serial0/0/0
     209.165.200.0/24 is variably subnetted, 3 subnets, 3 masks
D       209.165.200.0/24 is a summary, 00:07:29, Null0
C       209.165.200.224/30 is directly connected, Serial0/0/0
L       209.165.200.226/32 is directly connected, Serial0/0/0
 --More--
```

Kiểm tra kết quả thực hanh



Kết quả tổng quát



Kết quả chi tiết

Task 3: Áp dụng chia địa chỉ IP

Cho địa chỉ 192.168.100.0/24

Dựa vào hình ta thấy cần tìm ít nhất 4 mạng con mà mỗi mạng con có 25 máy. Mỗi mạng con cần ít nhất là 25 máy => cần 5 bit phần host ID.

Mượn 3 bit để chia mạng con, vì vậy ta có 2^3 = 8 mạng con và 2^5 - 2 = 30 máy sử dụng được trên 1 mạng con

STT	Địa chỉ mạng	Địa chỉ đầu	Địa chỉ cuối	Địa chỉ Boardcast
0	192.168.100.0	192.168.100.1	192.168.100.30	192.168.100.31
1	192.168.100.32	192.168.100.33	192.168.100.62	192.168.100.63
2	192.168.100.64	192.168.100.65	192.168.100.94	192.168.100.95
3	192.168.100.96	192.168.100.97	192.168.100.126	192.168.100.127
4	192.168.100.128	192.168.100.129	192.168.100.158	192.168.100.159
5	192.168.100.160	192.168.100.161	192.168.100.190	192.168.100.191
6	192.168.100.192	192.168.100.193	192.168.100.222	192.168.100.223
7	192.168.100.224	192.168.100.225	192.168.100.254	192.168.100.255

Device	Interface	ID Addres	Subnet Mask	Default Gateway
R1	G0/0	192.168.100.1	255.255.255.224	N/A
	G0/1	192.168.100.33	255.255.255.224	N/A
	S/0/0/0	192.168.100.129	255.255.255.224	N/A
R2	G0/0	192.168.100.65	255.255.255.224	N/A
	G0/1	192.168.100.97	255.255.255.224	N/A
	S/0/0/0	192.168.100.158	255.255.255.224	N/A
S1	VLAN1	192.168.100.2	255.255.255.224	192.168.100.1
S2	VLAN1	192.168.100.33	255.255.255.224	192.168.100.34
S3	VLAN1	192.168.100.66	255.255.255.224	192.168.100.65
S4	VLAN1	192.168.100.98	255.255.255.224	192.168.100.97
PC1	NIC	192.168.100.30	255.255.255.224	192.168.100.1
PC2	NIC	192.168.100.62	255.255.255.224	192.168.100.33
PC3	NIC	192.168.100.94	255.255.255.224	192.168.100.65
PC4	NIC	192.168.100.126	255.255.255.224	192.168.100.97

Cấu hình thiết bị

Cấu hình R1

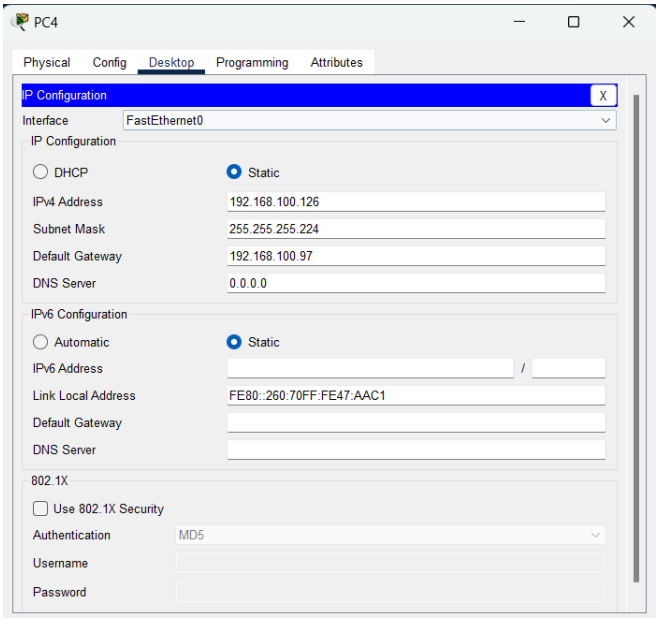
```
R1>enable
R1#config t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)# interface gigabitethernet 0/0
R1(config-if)#ip address 192.168.100.1 255.255.255.224
R1(config-if)#no shutdown
R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to
up
%LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet0/0, changed state to up
R1(config-if)#exit
R1(config)# interface gigabitethernet 0/1
```

```
R1(config-if)#ip address 192.168.100.33 255.255.255.224
R1(config-if)#no shutdown
R1(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
```

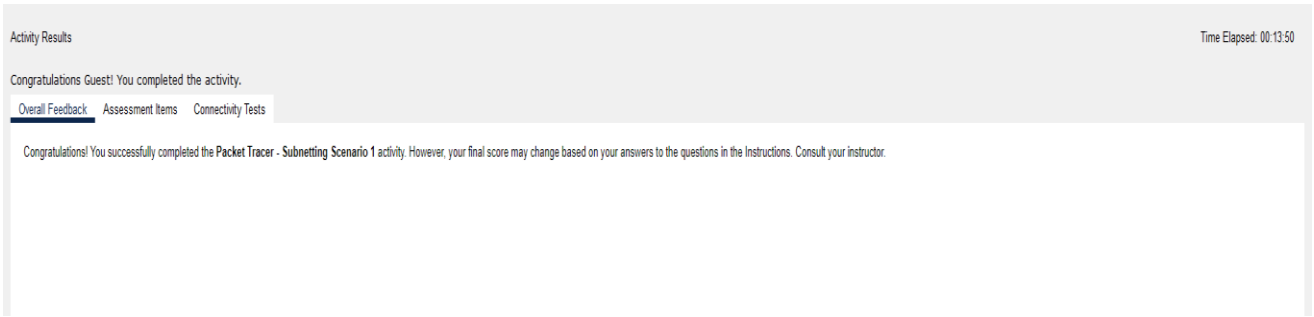
Cấu hình S3

```
S3>enable
S3#config t
Enter configuration commands, one per line. End with CNTL/Z.
S3(config)#interface vlan 1
S3(config-if)#ip address 192.168.100.66 255.255.255.224
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)#ip de
S3(config)#ip default-gateway 192.168.100.65
S3(config)#
```

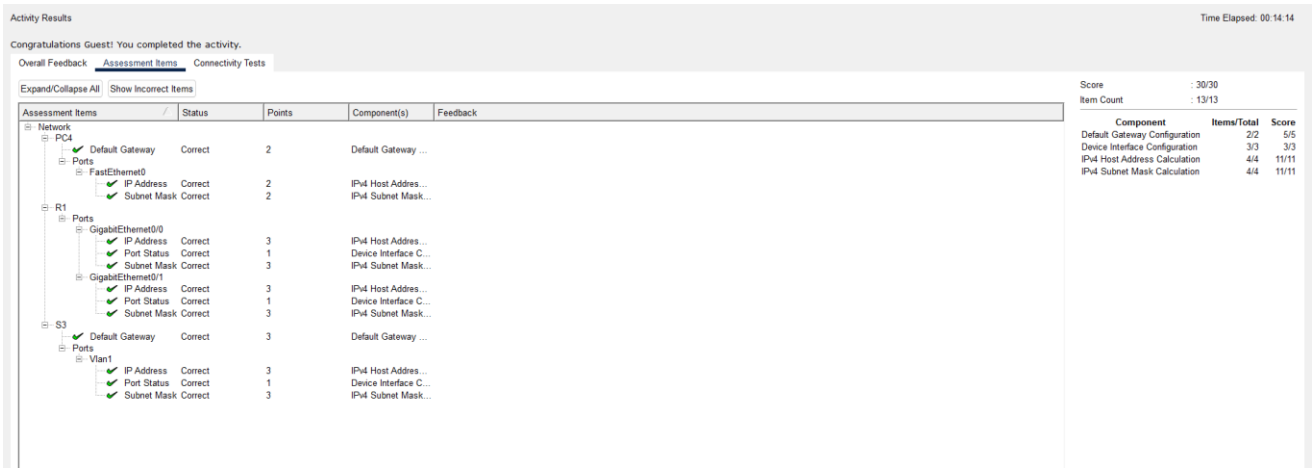
Cấu hình PC4



Bảng kết quả



Kết quả tổng quát



Kết quả chi tiết