Lab 5

BÁO CÁO BÀI THỰC HÀNH SỐ 5
Cấu hình thiết bị mạng

Configuring Network Devices

Môn học: Nhập môn Mạng máy tính

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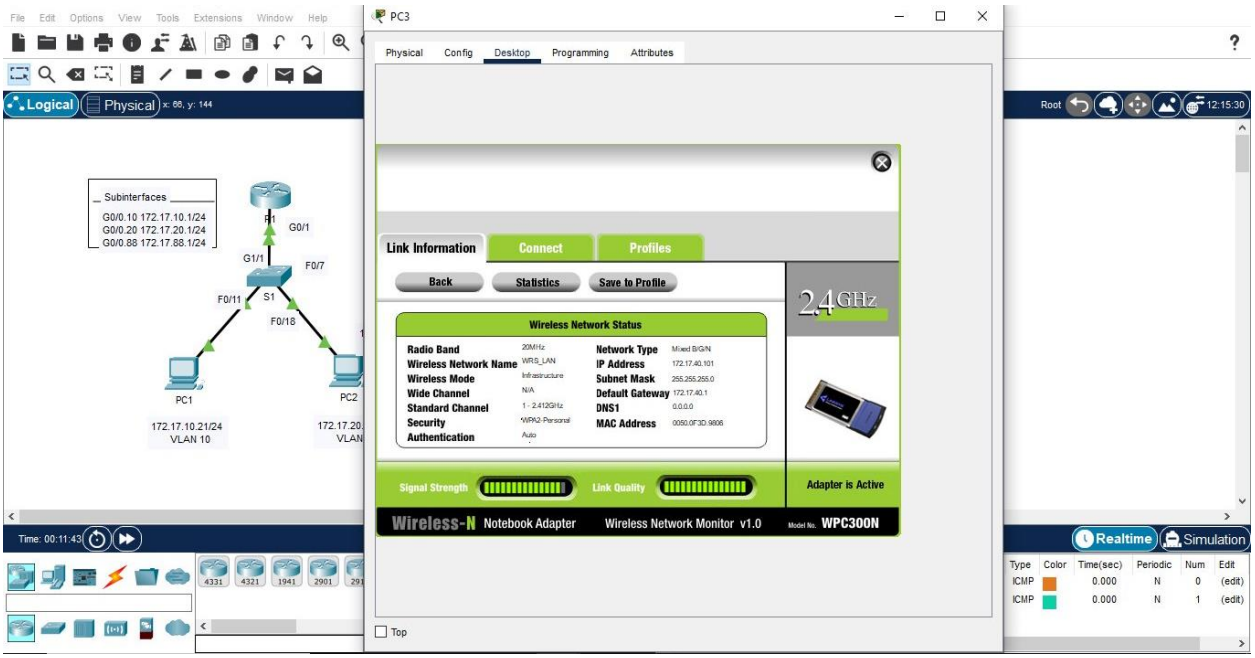
Thời gian thực hiện	13/12/2019 – 20/12/2019
Tự chấm điểm	10/10

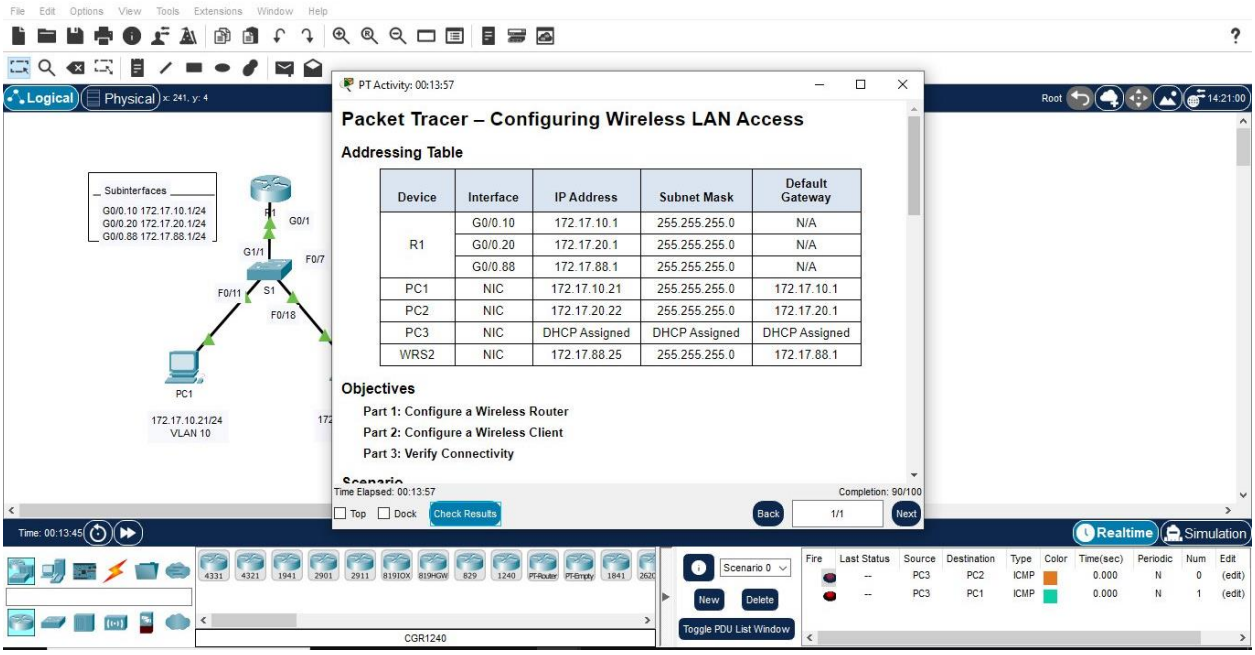
TRẢ LỜI CÁC CÂU HỎI

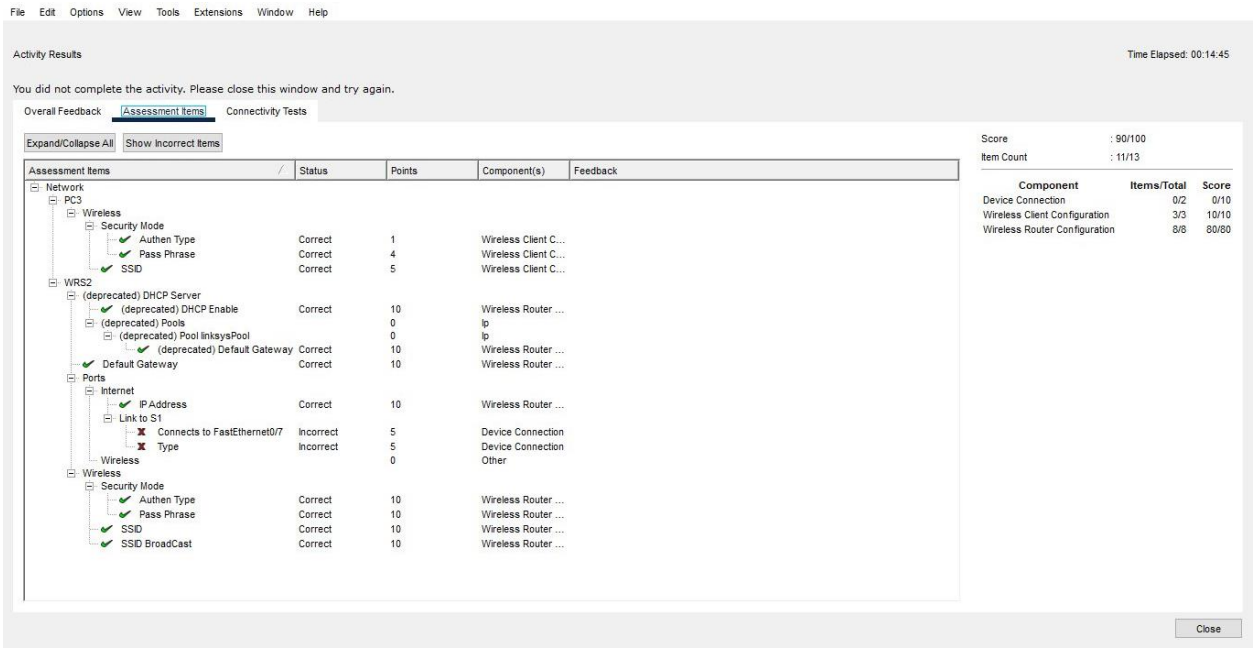
Ví dụ:

Câu 1. Lab 5a

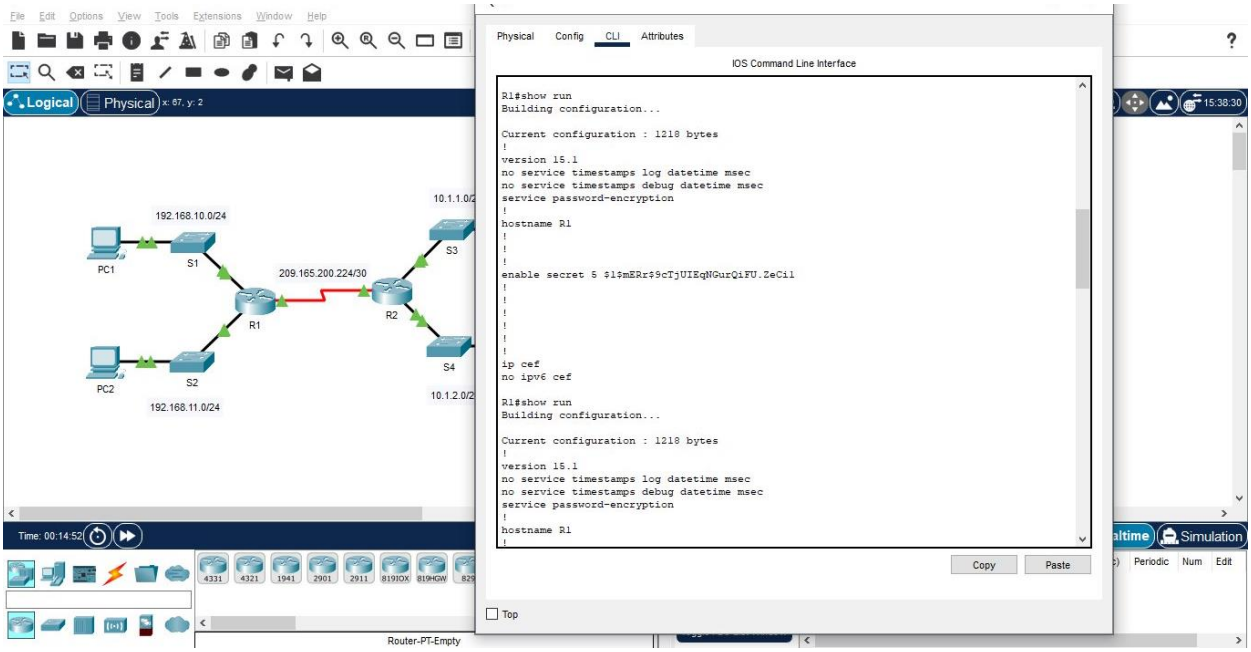
Trả lời:

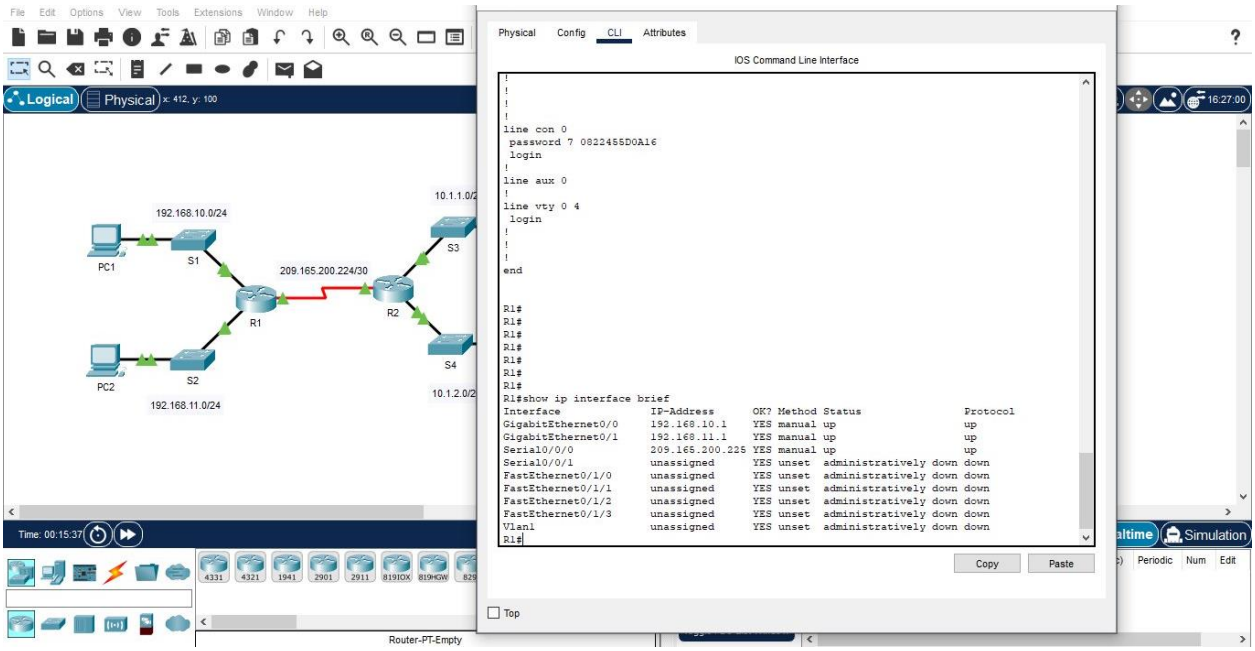

PC3
Physical
Config
Desktop
Programming
Attributes
Link Information
Connect
Profiles
Back
Statistics
Save to Profile
Wireless Network Status
Radio Band
Wireless Network Name
Wireless Mode
Wide Channel
Standard Channel
Security
Authentication
Network Type
IP Address
Subnet Mask
Default Gateway
DNS1
MAC Address
2.4GHz
Signal Strength
Link Quality
Adapter is Active
Wireless-N Notebook Adapter
Wireless Network Monitor v1.0
WPC300N
Top
Logical
Physical
Subinterfaces
G0/0.10 172.17.10.1/24
G0/0.20 172.17.20.1/24
G0/0.88 172.17.88.1/24
R1
S1
PC1
PC2
172.17.10.21/24
VLAN 10
Realtime
Simulation

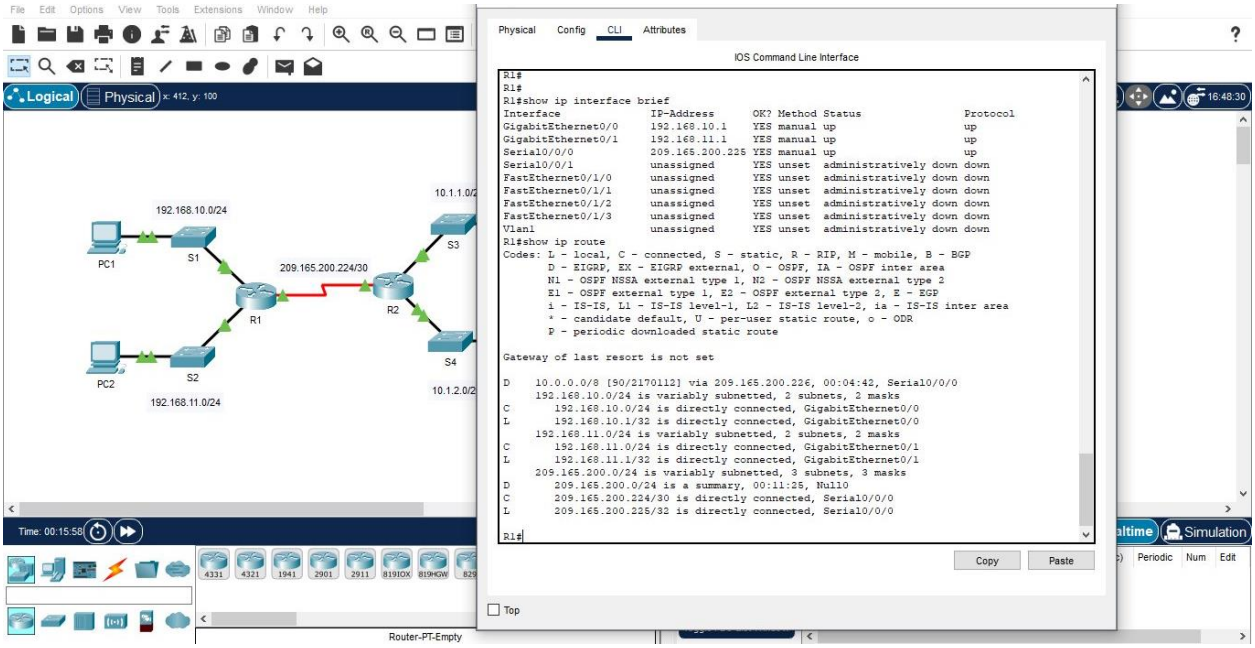

PT Activity: 00:13:57
Packet Tracer – Configuring Wireless LAN Access
Addressing Table
Device
Interface
IP Address
Subnet Mask
Default Gateway
R1
G0/0.10
172.17.10.1
255.255.255.0
N/A
G0/0.20
172.17.20.1
255.255.255.0
N/A
G0/0.88
172.17.88.1
255.255.255.0
N/A
PC1
NIC
172.17.10.21
255.255.255.0
172.17.10.1
PC2
NIC
172.17.20.22
255.255.255.0
172.17.20.1
PC3
NIC
DHCP Assigned
DHCP Assigned
DHCP Assigned
WRS2
NIC
172.17.88.25
255.255.255.0
172.17.88.1
Objectives
Part 1: Configure a Wireless Router
Part 2: Configure a Wireless Client
Part 3: Verify Connectivity
Time Elapsed: 00:13:57
Completion: 90/100
Top
Dock
Check Results
Back
1/1
Next
Logical
Physical
Realtime
Simulation
CGR1240
Scenario 0
New
Delete
Toggle PDU List Window

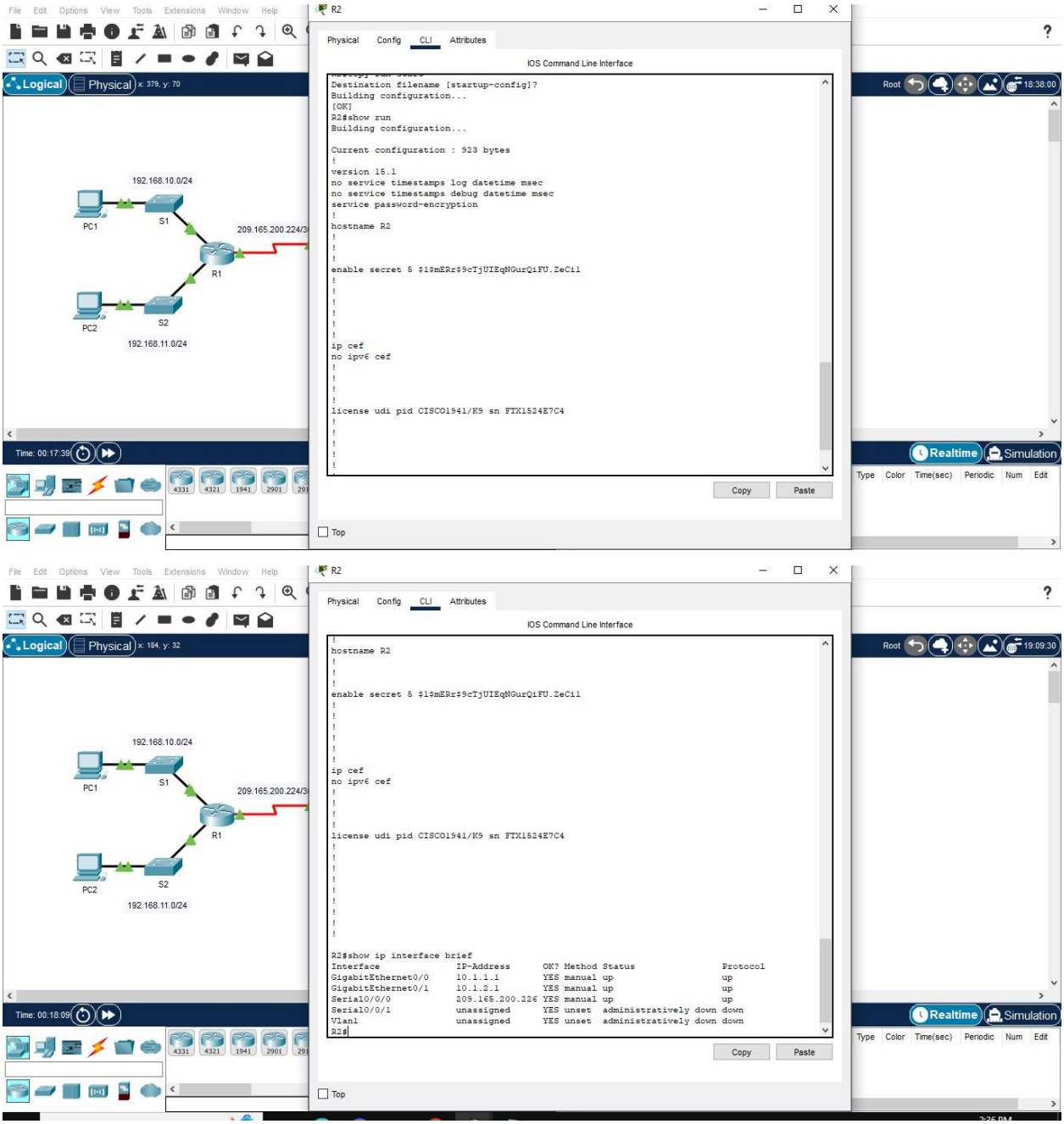

File Edit Options View Tools Extensions Window Help
Activity Results
Time Elapsed: 00:14:45
You did not complete the activity. Please close this window and try again.
Overall Feedback
Assessment Items
Connectivity Tests
Expand/Collapse All
Show Incorrect Items
Score : 90/100
Item Count : 11/13
Component Items/Total Score
Device Connection 0/2 0/10
Wireless Client Configuration 3/3 10/10
Wireless Router Configuration 8/8 80/80
Assessment Items Status Points Component(s) Feedback
Network
PC3
Wireless
Security Mode
Authen Type Correct 1 Wireless Client C...
Pass Phrase Correct 4 Wireless Client C...
SSID Correct 5 Wireless Client C...
WRS2
(deprecated) DHCP Server
(deprecated) DHCP Enable Correct 10 Wireless Router ...
(deprecated) Pools 0 Ip
(deprecated) Pool linksysPool 0 Ip
(deprecated) Default Gateway Correct 10 Wireless Router ...
Default Gateway Correct 10 Wireless Router ...
Ports
Internet
IP Address Correct 10 Wireless Router ...
Link to S1
Connects to FastEthernet0/7 Incorrect 5 Device Connection
Type Incorrect 5 Device Connection
Wireless 0 Other
Wireless
Security Mode
Authen Type Correct 10 Wireless Router ...
Pass Phrase Correct 10 Wireless Router ...
SSID Correct 10 Wireless Router ...
SSID BroadCast Correct 10 Wireless Router ...
Close

Câu 2. Lab 5b

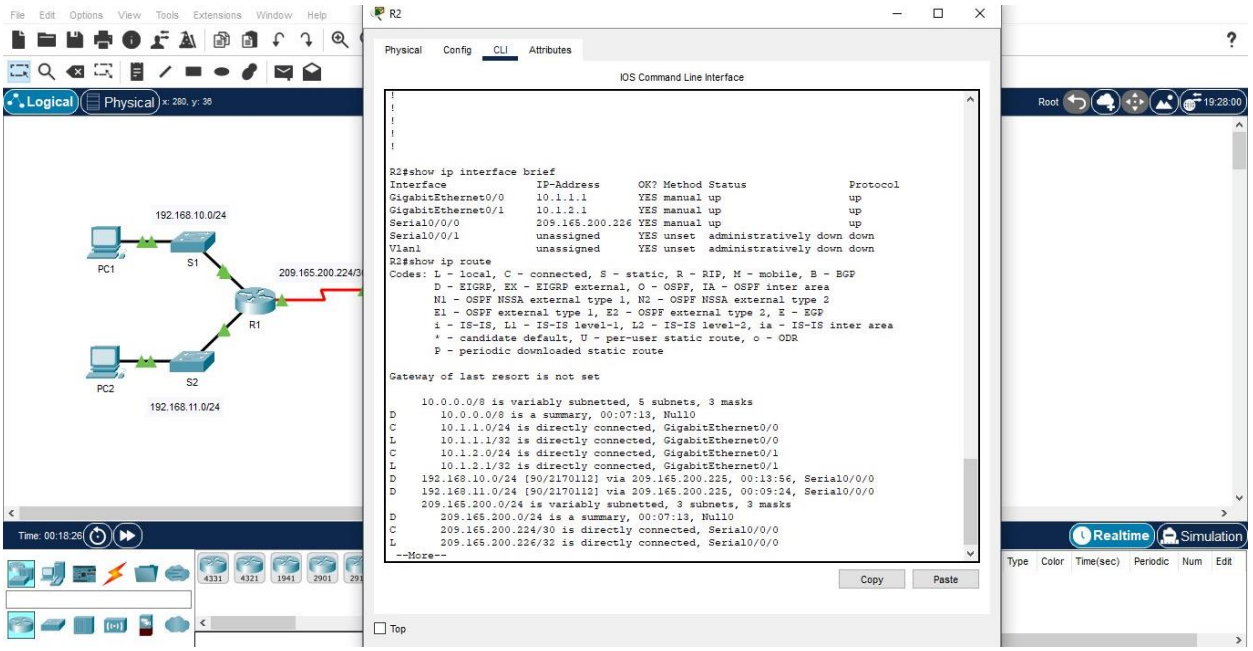

Logical
Physical
192.168.10.0/24
PC1
S1
209.165.200.224/30
R1
R2
S3
S4
PC2
S2
192.168.11.0/24
Physical Config CLI Attributes
IOS Command Line Interface
R1#show run
Building configuration...
Current configuration : 1218 bytes
version 15.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
hostname R1
enable secret 5 1mERr$9cTjUIEqNGurQiFU.ZeCi1
ip cef
no ipv6 cef
R1#show run
Building configuration...
Current configuration : 1218 bytes
version 15.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
hostname R1
Copy
Paste
Top
Time: 00:14:52
Router-PT-Empty
Simulation

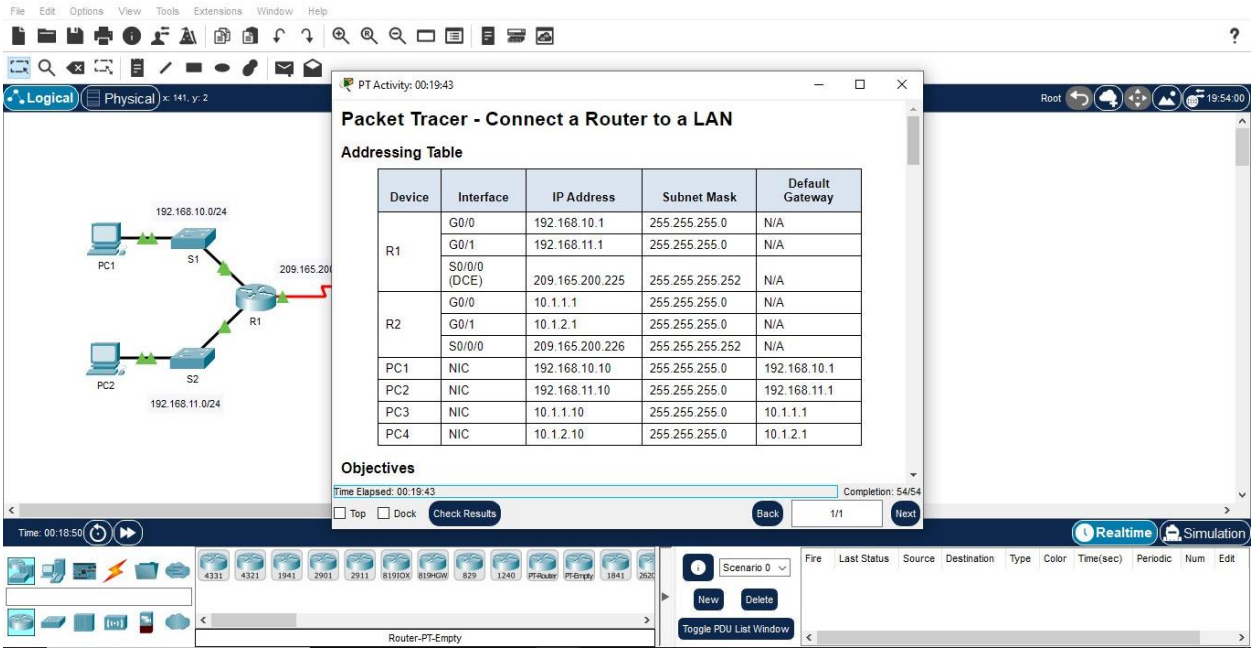

Physical Config CLI Attributes
IOS Command Line Interface
line con 0
password 7 0822455D0A16
login
line aux 0
line vty 0 4
login
end
R1#
R1#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 192.168.10.1 YES manual up up
GigabitEthernet0/1 192.168.11.1 YES manual up up
Serial0/0/0 209.165.200.225 YES manual up up
Serial0/0/1 unassigned YES unset administratively down down
FastEthernet0/1/0 unassigned YES unset administratively down down
FastEthernet0/1/1 unassigned YES unset administratively down down
FastEthernet0/1/2 unassigned YES unset administratively down down
FastEthernet0/1/3 unassigned YES unset administratively down down
Vlan1 unassigned YES unset administratively down down
Copy
Paste
Top
192.168.10.0/24
209.165.200.224/30
192.168.11.0/24
PC1
PC2
S1
S2
S3
S4
R1
R2
Router-PT-Empty

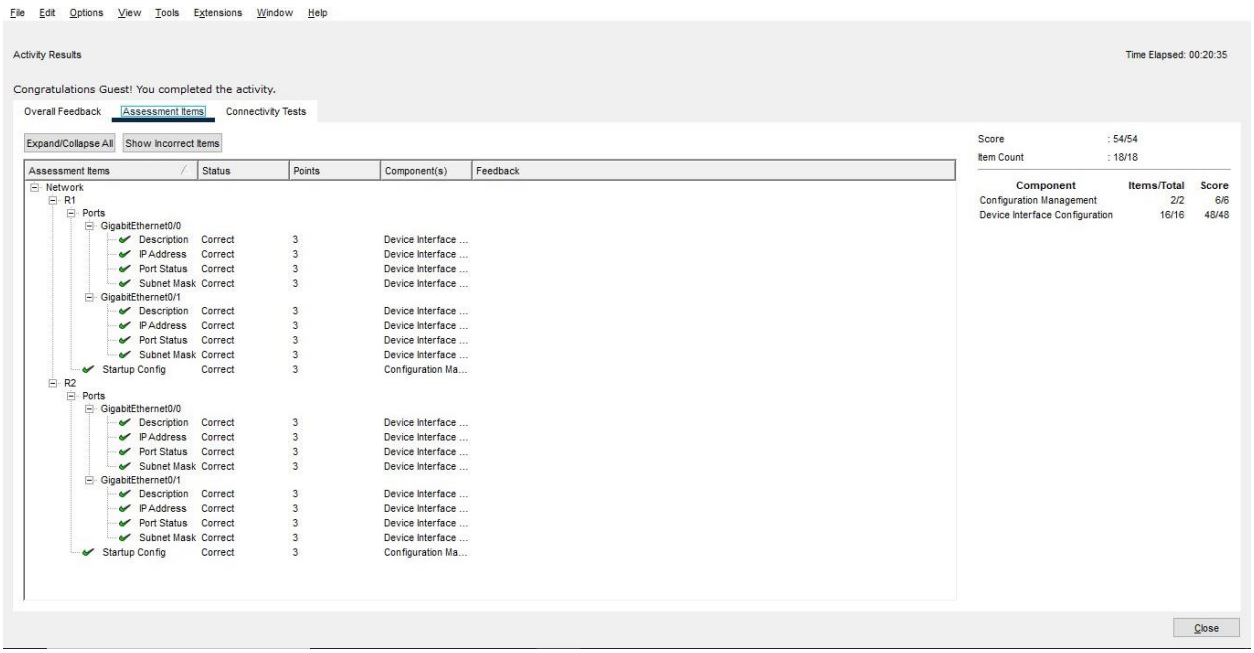

Physical Config CLI Attributes
IOS Command Line Interface
R1#
R1#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 192.168.10.1 YES manual up up
GigabitEthernet0/1 192.168.11.1 YES manual up up
Serial0/0/0 209.165.200.225 YES manual up up
Serial0/0/1 unassigned YES unset administratively down down
FastEthernet0/1/0 unassigned YES unset administratively down down
FastEthernet0/1/1 unassigned YES unset administratively down down
FastEthernet0/1/2 unassigned YES unset administratively down down
FastEthernet0/1/3 unassigned YES unset administratively down down
Vlan1 unassigned YES unset administratively down down
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
D 10.0.0.0/8 [90/2170112] via 209.165.200.226, 00:04:42, Serial0/0/0
192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.10.0/24 is directly connected, GigabitEthernet0/0
L 192.168.10.1/32 is directly connected, GigabitEthernet0/0
192.168.11.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.11.0/24 is directly connected, GigabitEthernet0/1
L 192.168.11.1/32 is directly connected, GigabitEthernet0/1
209.165.200.0/24 is variably subnetted, 3 subnets, 3 masks
D 209.165.200.0/24 is a summary, 00:11:25, Null0
C 209.165.200.224/30 is directly connected, Serial0/0/0
L 209.165.200.225/32 is directly connected, Serial0/0/0
R1#
Copy
Paste
Top
192.168.10.0/24
209.165.200.224/30
192.168.11.0/24
PC1
PC2
S1
S2
S3
S4
R1
R2
Router-PT-Empty


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
Destination filename [startup-config]?
Building configuration...
[OK]
R2#show run
Building configuration...
Current configuration : 923 bytes
version 15.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
hostname R2
enable secret 5 1mERr$9cTjUIEqNGurQiFU.ZeCi1
ip cef
no ipv6 cef
license udi pid CISCO1941/K9 sn FTX1524E7C4
Copy
Paste
Top
192.168.10.0/24
PC1
S1
R1
PC2
S2
192.168.11.0/24
209.165.200.224/3
Logical
Physical
Realtime
Simulation

R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
hostname R2
enable secret 5 1mERr$9cTjUIEqNGurQiFU.ZeCi1
ip cef
no ipv6 cef
license udi pid CISCO1941/K9 sn FTX1524E7C4
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#
Copy
Paste
Top
192.168.10.0/24
PC1
S1
R1
PC2
S2
192.168.11.0/24
209.165.200.224/3
Logical
Physical
Realtime
Simulation


R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
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
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, 00:07:13, 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, 00:13:56, Serial0/0/0
D 192.168.11.0/24 [90/2170112] via 209.165.200.225, 00:09:24, Serial0/0/0
209.165.200.0/24 is variably subnetted, 3 subnets, 3 masks
D 209.165.200.0/24 is a summary, 00:07:13, 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--
Copy
Paste
Top
192.168.10.0/24
PC1
S1
209.165.200.224/3
R1
PC2
S2
192.168.11.0/24
Logical
Physical
Root
Time: 00:18:26
Realtime
Simulation


PT Activity: 00:19:43
Packet Tracer - Connect a Router to a LAN
Addressing Table
Device | Interface | IP Address | Subnet Mask | Default Gateway
R1 | G0/0 | 192.168.10.1 | 255.255.255.0 | N/A
G0/1 | 192.168.11.1 | 255.255.255.0 | N/A
S0/0/0 (DCE) | 209.165.200.225 | 255.255.255.252 | N/A
R2 | G0/0 | 10.1.1.1 | 255.255.255.0 | N/A
G0/1 | 10.1.2.1 | 255.255.255.0 | N/A
S0/0/0 | 209.165.200.226 | 255.255.255.252 | N/A
PC1 | NIC | 192.168.10.10 | 255.255.255.0 | 192.168.10.1
PC2 | NIC | 192.168.11.10 | 255.255.255.0 | 192.168.11.1
PC3 | NIC | 10.1.1.10 | 255.255.255.0 | 10.1.1.1
PC4 | NIC | 10.1.2.10 | 255.255.255.0 | 10.1.2.1
Objectives
Time Elapsed: 00:19:43
Completion: 54/54
Top
Dock
Check Results
Back
1/1
Next
Logical
Physical
Root
Time: 00:18:50
Realtime
Simulation
Router-PT-Empty
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit



Câu 3. Lab 5c

3.1)

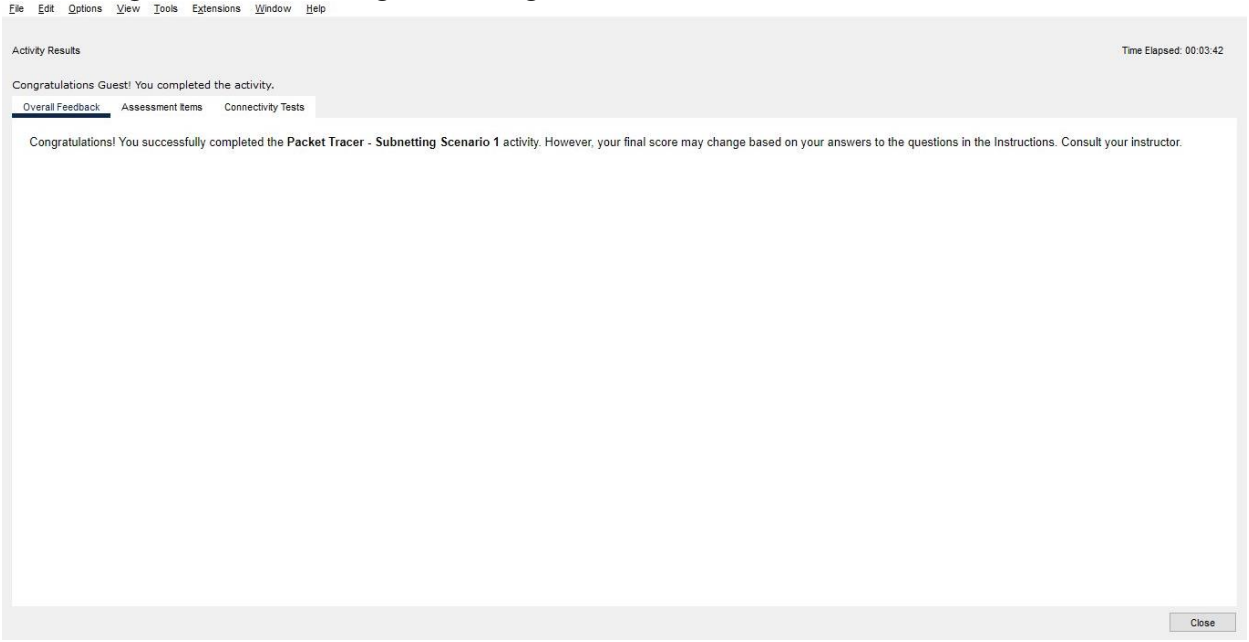
- Có 5 mạng con
- Chia mạng con:

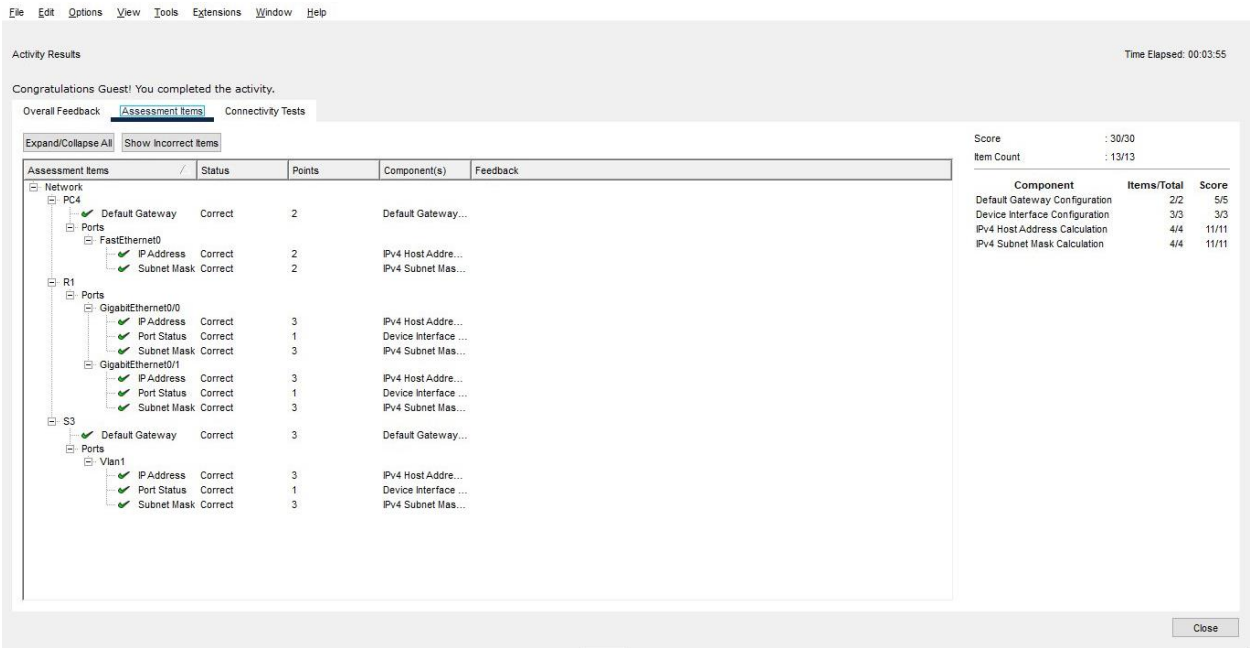
Subnet Number	Subnet Address	First Usable Host Address	Last Usable Host Address	Broadcast Address
0	192.168.100.0	192.168.100.1	192.168.100.30	192.168.100.31
1	192.168.100.32	192.168.100.33	192.168.100.62	192.168.100.63
2	192.168.100.64	192.168.100.65	192.168.100.94	192.168.100.95
3	192.168.100.96	192.168.100.97	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

Sau khi chia mạng con ta gán các mạng con vào từng mạng trong mô hình như sau
+ Gán Subnet 0 cho mạng LAN kết nối đến GigabitEthernet 0/0 interface của R1
+ Gán Subnet 1 cho mạng LAN kết nối đến GigabitEthernet 0/1 interface của R1
+ Gán Subnet 2 cho mạng LAN kết nối đến GigabitEthernet 0/0 interface of R2
+ Gán Subnet 3 cho mạng LAN kết nối đến GigabitEthernet 0/1 interface of R2
+ Gán Subnet 4 cho kết nối giữa R1 to R2
Sau khi gán mạng con, hoàn thành bảng địa chỉ sau:

Device	Interface	IP Address	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
	S0/0/0	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
	S0/0/0	192.168.100.158	255.255.255.224	N/A
S1	VLAN 1	192.168.100.2	255.255.255.224	192.168.100.1
S2	VLAN 1	192.168.100.34	255.255.255.224	192.168.100.33
S3	VLAN 1	192.168.100.66	255.255.255.224	192.168.100.65
S4	VLAN 1	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

Biết rằng:
- Sử dụng địa chỉ đầu tiên của mạng con cho Interfaces GigabitEthernet của R1, R2.
- Với kết nối giữa R1 và R2, sử dụng địa chỉ đầu tiên của mạng con cho Interface S0/0/0 của R1 và địa chỉ cuối cùng cho Interface S0/0/0 của R2.
- Sử dụng địa chỉ thứ 2 của mạng con cho các Switch.
- Sử dụng địa chỉ cuối cùng của mạng con cho các PC.




File Edit Options View Tools Extensions Window Help
Activity Results
Time Elapsed: 00:03:55
Congratulations Guest! You completed the activity.
Overall Feedback
Assessment Items
Connectivity Tests
Expand/Collapse All
Show Incorrect Items
Assessment Items
Status
Points
Component(s)
Feedback
Network
PC4
Default Gateway Correct 2 Default Gateway...
Ports
FastEthernet0
IP Address Correct 2 IPv4 Host Addre...
Subnet Mask Correct 2 IPv4 Subnet Mas...
R1
Ports
GigabitEthernet0/0
IP Address Correct 3 IPv4 Host Addre...
Port Status Correct 1 Device Interface ...
Subnet Mask Correct 3 IPv4 Subnet Mas...
GigabitEthernet0/1
IP Address Correct 3 IPv4 Host Addre...
Port Status Correct 1 Device Interface ...
Subnet Mask Correct 3 IPv4 Subnet Mas...
S3
Default Gateway Correct 3 Default Gateway...
Ports
Vlan1
IP Address Correct 3 IPv4 Host Addre...
Port Status Correct 1 Device Interface ...
Subnet Mask Correct 3 IPv4 Subnet Mas...
Score : 30/30
Item Count : 13/13
Component Items/Total Score
Default Gateway Configuration 2/2 5/5
Device Interface Configuration 3/3 3/3
IPv4 Host Address Calculation 4/4 11/11
IPv4 Subnet Mask Calculation 4/4 11/11
Close