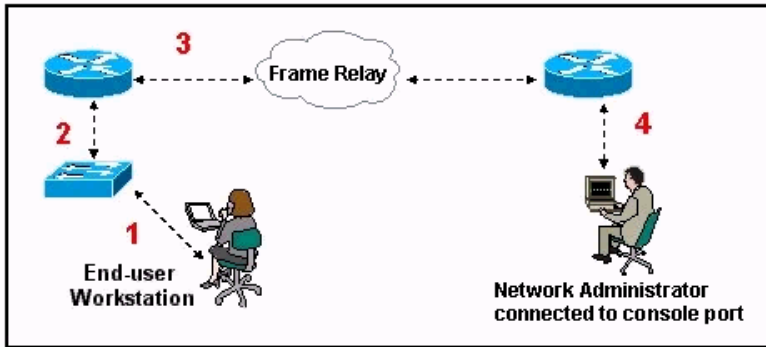


640-802: Cisco Certified Network Associate (CCNA 2010)

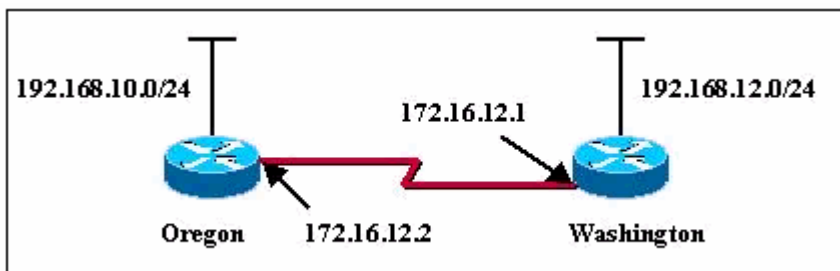
1.



Refer to the exhibit. What kind of cable should be used to make each connection that is identified by the numbers shown?

- A. 1 - Ethernet crossover cable
2 - Ethernet straight-through cable
3 - fiber optic cable
4 - rollover cable
- B. 1 - Ethernet straight-through cable
2 - Ethernet straight-through cable
3 - serial cable
4 - rollover cable
- C. 1 - Ethernet rollover cable
2 - Ethernet crossover cable
3 - serial cable
4 - null modem cable
- D. 1 - Ethernet straight-through cable
2 - Ethernet crossover cable
3 - serial cable
4 - rollover cable
- E. 1 - Ethernet straight-through cable
2 - Ethernet crossover cable
3 - serial cable
4 - Ethernet straight-through cable

2.



The network administrator of the Oregon router adds the following command to the router configuration: **ip route 192.168.12.0 255.255.255.0 172.16.12.1**. What are the results of adding this command? (Choose two.)

- A. The command establishes a static route.
- B. The command invokes a dynamic routing protocol for 192.168.12.0.
- C. Traffic for network 192.168.12.0 is forwarded to 172.16.12.1.
- D. Traffic for all networks is forwarded to 172.16.12.1.
- E. This route is automatically propagated throughout the entire network.
- F. Traffic for network 172.16.12.0 is forwarded to the 192.168.12.0 network.

3.

```

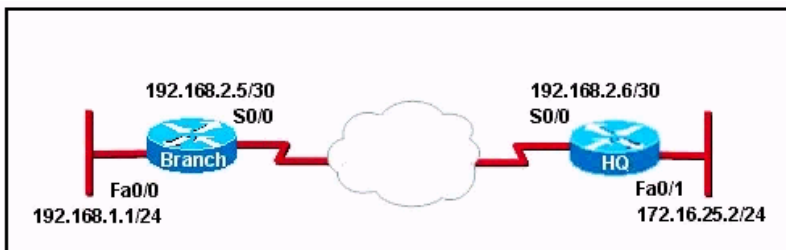
Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R1
!
ip subnet-zero
!
!
ip classless
ip route 0.0.0.0 0.0.0.0 Serial0/0
no ip http server
!
<output omitted>

```

The network with the IP address 172.31.0.0/19 is to be configured on the router with the partial configuration shown in the graphic. Which of the following statements describes the number of available subnets and hosts that will result from this configuration?

- A. There are 7 usable subnets, with 30 usable host addresses.
- B. There are 7 usable subnets, with 2046 usable host addresses.
- C. There are 7 usable subnets, with 8190 usable host addresses.
- D. There are 8 usable subnets, with 30 usable host addresses.
- E. There are 8 usable subnets, with 2046 usable host addresses.
- F. There are 8 usable subnets, with 8190 usable host addresses.

4.



Refer to the exhibit. A network associate has configured the internetwork that is shown in the exhibit, but has failed to configure routing properly. Which configuration will allow the hosts on the Branch LAN to access resources on the HQ LAN with the least impact on router processing and WAN bandwidth?

- A. HQ(config)# **ip route 192.168.1.0 255.255.255.0 192.168.2.5**
Branch(config)# **ip route 172.16.25.0 255.255.255.0 192.168.2.6**
- B. HQ(config)# **router rip**
HQ(config-router)# **network 192.168.2.0**
HQ(config-router)# **network 172.16.0.0**
Branch(config)# **router rip**
Branch (config-router)# **network 192.168.1.0**
Branch (config-router)# **network 192.168.2.0**
- C. HQ(config)# **router eigrp 56**
HQ(config-router)# **network 192.168.2.4**
HQ(config-router)# **network 172.16.25.0**
Branch(config)# **router eigrp 56**
Branch (config-router)# **network 192.168.1.0**
Branch (config-router)# **network 192.168.2.4**
- D. HQ(config)# **router ospf 1**
HQ(config-router)# **network 192.168.2.4 0.0.0.3 area 0**
HQ(config-router)# **network 172.16.25.0 0.0.0.255 area 0**
Branch(config)# **router ospf 1**
Branch (config-router)# **network 192.168.1.0 0.0.0.255 area 0**
Branch (config-router)# **network 192.168.2.4 0.0.0.3 area 0**

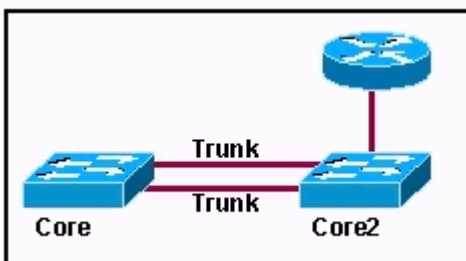
5.

```
Main#debug ip rip
RIP protocol debugging is on
Main#
*Mar 1 17:43:00.567: RIP: received v1 update from 192.168.255.21 on
Serial0/0
*Mar 1 17:43:00.571:   192.168.2.0 in 2 hops
*Mar 1 17:43:00.571:   192.168.255.16 in 1 hops
*Mar 1 17:43:41.419: RIP: received v1 update from 192.168.255.26 on
Serial0/1
*Mar 1 17:43:41.423:   192.168.2.0 in 1 hops
*Mar 1 17:43:41.427:   192.168.255.16 in 1 hops
*Mar 1 17:43:55.099: RIP: sending v1 update to 255.255.255.255 via
Serial0/0 (192.168.255.22)
*Mar 1 17:43:55.103: RIP: build update entries
*Mar 1 17:43:55.103: network 192.168.2.0 metric 2
*Mar 1 17:43:55.107: subnet 192.168.255.24 metric 1
*Mar 1 17:43:55.111: RIP: sending v1 update to 255.255.255.255 via
Serial0/1 (192.168.255.25)
*Mar 1 17:43:55.115: RIP: build update entries
*Mar 1 17:43:55.119: subnet 192.168.255.20 metric 1
```

Refer to the exhibit. Which route will be found in the routing table of the Main router?

- A. C 192.168.2.0 is directly connected, Serial0/1
- B. R 192.168.2.0/24 [120/1] via 192.168.255.26, 00:00:24, Serial0/0
- C. R 192.168.255.16 [120/1] via 192.168.255.26, 00:00:24, Serial0/1
- D. R 192.168.255.16 [120/2] via 192.168.255.21, 00:00:22, Serial0/0

6.



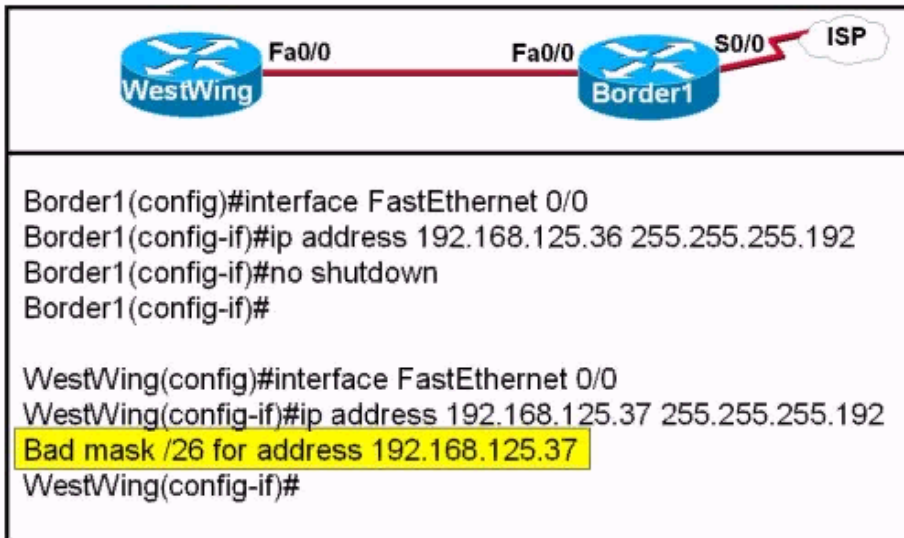
The switches shown in the diagram, Core and Core2, are both Catalyst 2950s. The addressing scheme for each company site is as follows:

Router Ethernet port - 1st usable address
Core - 2nd usable address
Core2 - 3rd usable address

For this network, which of the following commands must be configured on Core2 to allow it to be managed remotely from any subnet on the network? (Choose three.)

- A. Core2(config)# **interface f0/0**
Core2(config-if)# **ip address 192.168.1.10 255.255.255.248**
- B. Core2(config)# **interface vlan 1**
Core2(config-if)# **ip address 192.168.1.11 255.255.255.248**
- C. Core2(config)# **line con 0**
Core2(config-line)# **password cisco**
- D. Core2(config)# **line vty 0 4**
Core2(config-line)# **password cisco**
- E. Core2(config)# **ip default-gateway 192.168.1.9**
- F. Core2(config)# **ip route 0.0.0.0 0.0.0.0 192.168.1.8**

7.



Refer to the exhibit. A network technician attempts to configure the FastEthernet 0/0 interfaces on the two interconnected routers. The configuration of Border1 is performed without any problems. When the technician attempts to configure the interface on the WestWing router, the error message highlighted in the exhibit is displayed. What is the reason for the error message during the configuration of WestWing?

- A. The address being applied to the WestWing interface is a broadcast address.
- B. The WestWing router needs to be configured to re-enable the use of subnet zero.
- C. The FastEthernet 0/0 interfaces of the two routers are using different Layer 2 protocols.
- D. The FastEthernet 0/0 interface on the Border1 router has the bandwidth improperly configured.

8.

Which three statements are true about RIP? (Choose three.)

- A. RIPv1 does not support routing update authentication. RIPv2 does support routing update authentication.
- B. RIPv1 does not include subnet information in routing updates. RIPv2 does include subnet information in routing updates.
- C. RIPv1 does not support advertising routes across WANs. RIPv2 supports advertising routes across LANs as well as WANs.
- D. RIPv1 uses hold-down timers and split horizon to prevent routing loops. RIPv2 does not require hold-down timers or split horizon to prevent routing loops.
- E. RIPv1 sends periodic routing updates over the multicast IP address 224.0.0.10. RIPv2 sends periodic routing updates over the multicast IP address 224.0.0.9.
- F. RIPv1 does not support a network addressing scheme in which hosts within the same major network have different subnetmasks. RIPv2 does allow hosts within the same major network to have different subnetmasks.

9.

It has become necessary to configure an existing serial interface to accept a second Frame Relay virtual circuit. Which of the following procedures are required to accomplish this task? (Choose three.)

- A. Remove the IP address from the physical interface.
- B. Encapsulate the physical interface with multipoint PPP.
- C. Create the virtual interfaces with the **interface** command.
- D. Configure each subinterface with its own IP address.
- E. Disable split horizon to prevent routing loops between the subinterface networks.
- F. Configure static Frame Relay map entries for each subinterface network.

10.

A Cisco router and a router from another manufacturer are directly connected via a serial link. Which command can be used on the Cisco router to form a WAN connection between the routers?

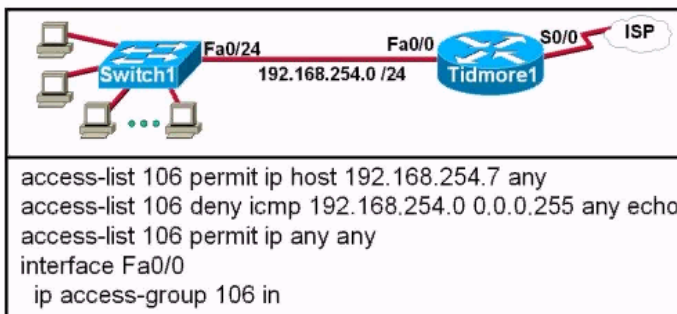
- A. Lab(config-if)# **encapsulation hdlc ansi**
- B. Lab(config-if)# **encapsulation ppp**
- C. Lab(config-if)# **encapsulation frame-relay default**
- D. Lab(config-if)# **encapsulation isdn**

11.

Unauthorized users have used Telnet to gain access to a company router. The network administrator wants to configure and apply an access list to allow Telnet access to the router, but only from the network administrator's computer. Which group of commands would be the best choice to allow only the IP address 172.16.3.3 to have Telnet access to the router?

- A. **access-list 3 permit host 172.16.3.3**
line vty 0 4
ip access-group 3 in
- B. **access-list 3 permit host 172.16.3.3**
line vty 0 4
access-class 3 in
- C. **access-list 101 permit tcp any host 172.16.3.3 eq telnet**
interface s0/0
ip access-group 101 in
- D. **access-list 101 permit tcp any host 172.16.3.3 eq telnet**
access-list 101 permit ip any any
interface s0/0
ip access-group 101 in

12.



Refer to the exhibit. A network technician enters the following line into the router.

Tidmore1(config)# **access-list 106 deny tcp 192.168.254.0 0.0.0.255 any eq www**

What is the effect of this configuration?

- A. The change has no effect on the packets being filtered.
- B. All traffic from the 192.168.254.0 LAN to the Internet is permitted.
- C. Web pages from the Internet cannot be accessed by hosts in the 192.168.254.0 LAN.
- D. No hosts in the 192.168.254.0 LAN except 192.168.254.7 can access web pages from the Internet.

13.

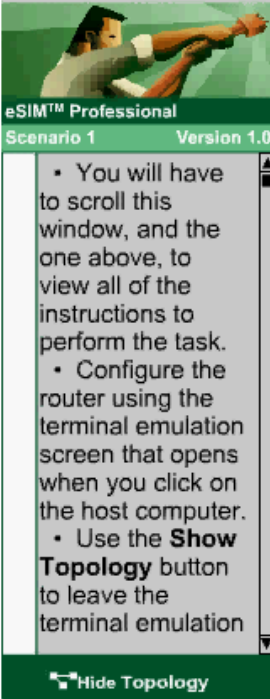
While troubleshooting a connectivity problem, a network administrator notices that a port status LED on a Cisco Catalyst series switch is alternating green and amber. Which condition could this indicate?

- A. The port is experiencing errors.
- B. The port is administratively disabled.
- C. The port is blocked by spanning tree.
- D. The port has an active link with normal traffic activity.

Router Simulation: IP Configuration

The routers in the computer dealer network shown in the diagram have been partially configured. Your task is to complete the addressing configuration of the Southern router and the LAN interface configuration of the Branch router. Layer 3 connectivity should be established between the host B on the Branch router LAN and the parts server attached to the Southern router. Use various router show commands to determine the correct configuration values that must be used. The only usable router console is attached to the Southern router. You can access host B to test your results.

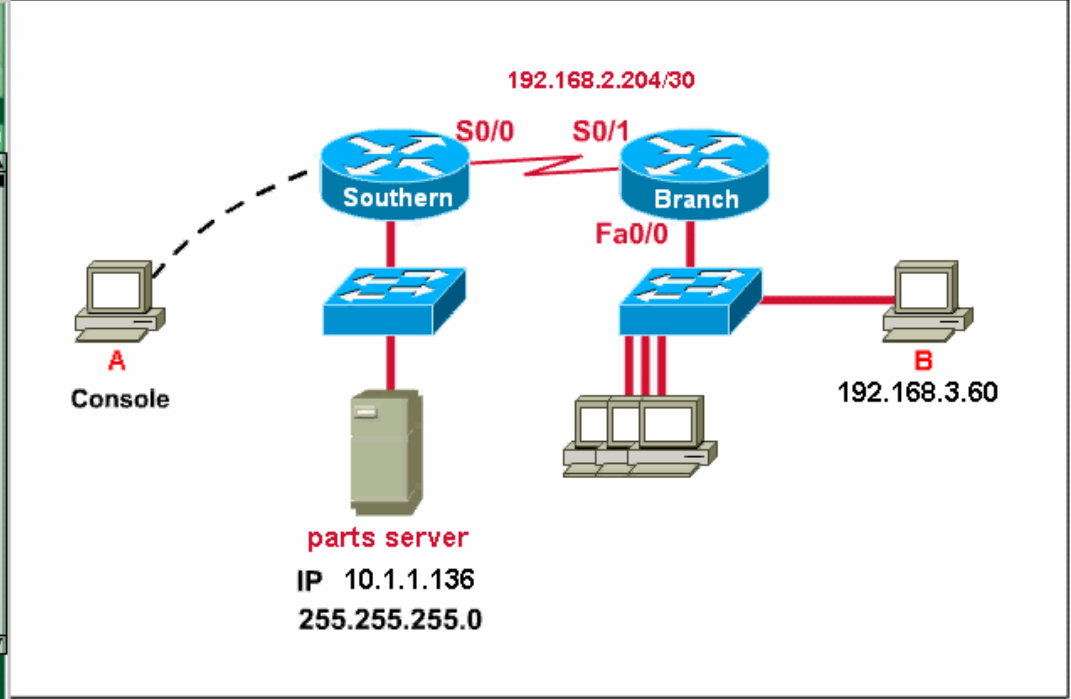
Enable secret password on all routers: "cisco".
Console password: "cisco".
Vty lines 0-4 password: "cisco".



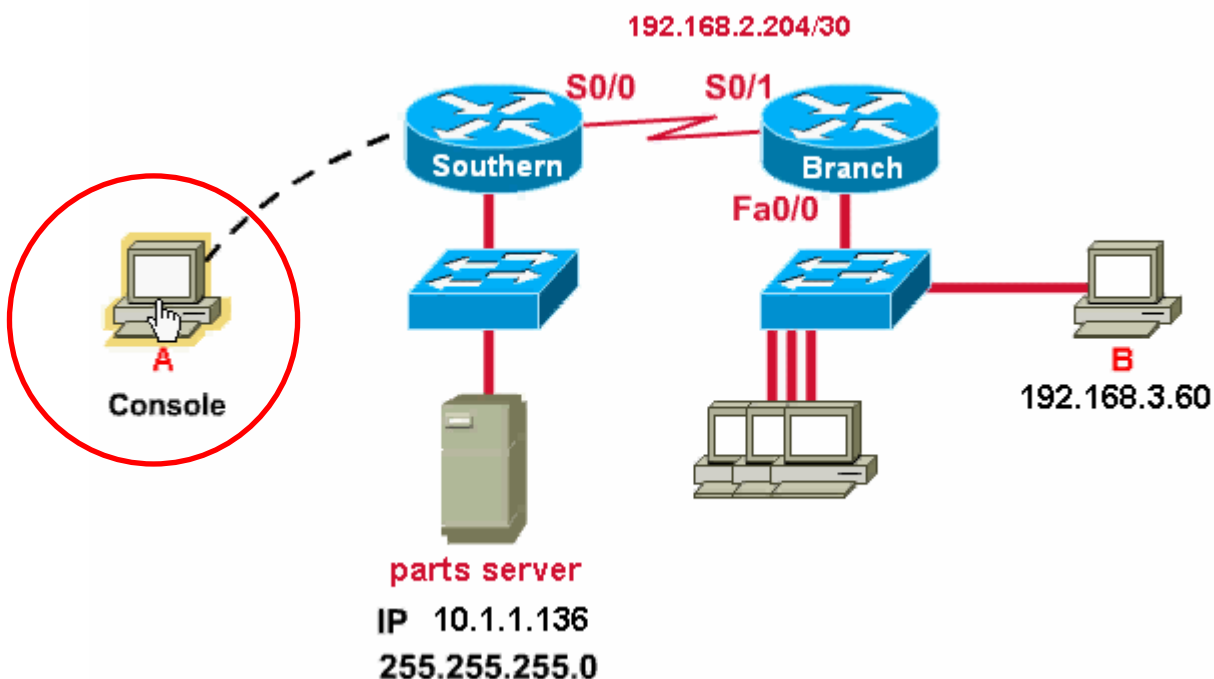
eSIM™ Professional
Scenario 1 Version 1.0

- You will have to scroll this window, and the one above, to view all of the instructions to perform the task.
- Configure the router using the terminal emulation screen that opens when you click on the host computer.
- Use the **Show Topology** button to leave the terminal emulation

Hide Topology



- 用滑鼠 click 向 Host A 使用 **Console** 方式連接 Router “**Southern**” 進行設定



- 進入後須輸入 Console 密碼 “cisco”，然後再輸入“enable” 指令進入 Privileged Mode，密碼亦是 “cisco”，再用 “show run” 指令查看 router 的各項基本設定。
從以下設定來看，您需要在 **S0/0** 介面設定適當的 IP Address。

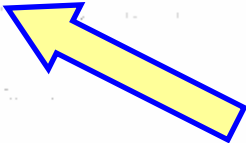
```
CiscoTerminal

Southern con0 is now available

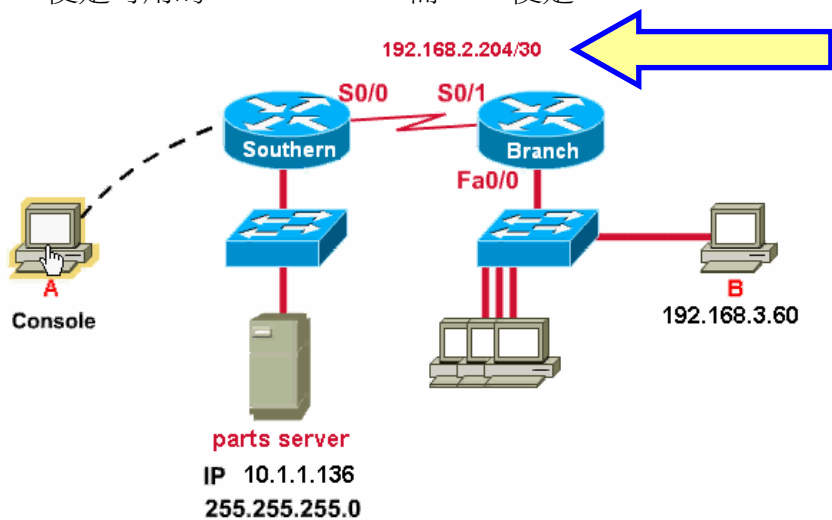
Press RETURN to get started.

User Access Verification

Password:
Southern>en
Password:
Southern#sh run
Building configuration...
Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Southern
!
enable secret 5 $1$0/yW$toqA0XRiCtY8gh7pM06fS0
!
ip subnet-zero
!
interface FastEthernet0/0
description Connected to servers
ip address 10.1.1.135 255.255.255.0
keepalive 10
!
interface FastEthernet0/1
no description
no ip address
shutdown
!
interface Serial0/0
description connected to Branch
no ip address
encapsulation hdlc
clockrate 64000
!
interface Serial0/1
no description
no ip address
shutdown
!
router rip
network 10.0.0.0
network 192.168.2.0
no auto-summary
!
ip classless
!
line con 0
transport input none
password cisco
login
line aux 0
line vty 0 4
password cisco
login
!
end
Southern#
```



- 根據試題內容，Southern Router 的 S0/0 介面位於 192.168.2.204 /30 的 subnet 中， /30 bit 的 subnet 中只有 2 個 IP Address 是可以用的，當 204 是 subnet number，那麼 205 和 206 便是可用的 IP Address，而 207 便是 broadcast address。



- 但首先要用 “show cdp nei detail” 指令查看對方 Router “Branch” 用了那一個 IP Address，在以下例子中得知 “Branch” 的 S0/0 介面的 IP Address 是 192.168.2.206，所以 “Southern” 只可以用另一個 IP Address，即就是 192.168.2.205。

```

CiscoTerminal
Southern#sh cdp nei detail
-----
Device ID: Branch
Entry address(es):
  IP address: 192.168.2.206
Platform: cisco 2600, Capabilities: Router
Interface: Serial0/0, Port ID (outgoing port): Serial0/1
Holdtime : 164 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) 2600 Software (C2600-D-L), Version 12.0(9), RELEASE SOFTWARE (fc1)
Copyright (c) 1986-1999 by cisco Systems, Inc.
Compiled Mon 08-Feb-99 17:45 by phanguye

```

- 然後進入 Interface Configure Mode 設定適合的 IP Address，可以的話更可使用 ping 測試連線。

```

CiscoTerminal
Southern#config t
Enter configuration commands, one per line. End with END.
Southern(config)#int s0/0
Southern(config-if)#ip address 192.168.2.205 255.255.255.252
Southern(config-if)#no shutdown
Southern(config-if)#^Z
00:01:05: %SYS-5-CONFIG_I: Configured from console by console

Southern#ping 192.168.2.206
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echoes to 192.168.2.206, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/33/36 ms

```

- 現在需要使用 “telnet” 連接 Router “Branch”，輸入 Telnet 密碼 “cisco”，然後輸入 “enable” 指令進入 Privileged Mode，密碼亦為 “cisco”。

```
CiscoTerminal
Southern#telnet 192.168.2.206
Trying 192.168.2.206... Open

User Access Verification

Password:
Branch>en
Password:
Branch#
```

- 然後用 “show run” 指令查看各項設定，但可否察覺 F0/0 介面已 shutdown 我的需要用 “no shutdown” 指令重新啟動介面恢復正常連線。

```
CiscoTerminal
Branch#sh running-config
Building configuration...
Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Branch
!
enable secret 5 $1$0/yW$toqA0XRiCtY8gh7pM06fS0
!
ip subnet-zero
!
interface FastEthernet0/0
description Connected to LAN hosts
ip address 192.168.3.59 255.255.255.0
shutdown
keepalive 10
!
interface Serial0/0
no description
no ip address
encapsulation hdlc
shutdown
!
interface Serial0/1
description connected to Southern
ip address 192.168.2.206 255.255.255.252
!
router rip
network 192.168.2.0
network 192.168.3.0
no auto-summary
!
ip classless
!
line con 0
transport input none
password cisco
login
line aux 0
line vty 0 4
password cisco
login
!
end
Branch#
```

- 進入 Interface Configure Mode，輸入 “no shutdown” 指令重新啟動介面恢復正常連潔，可以的話更可使用 ping 測試和 Host B 的連線。

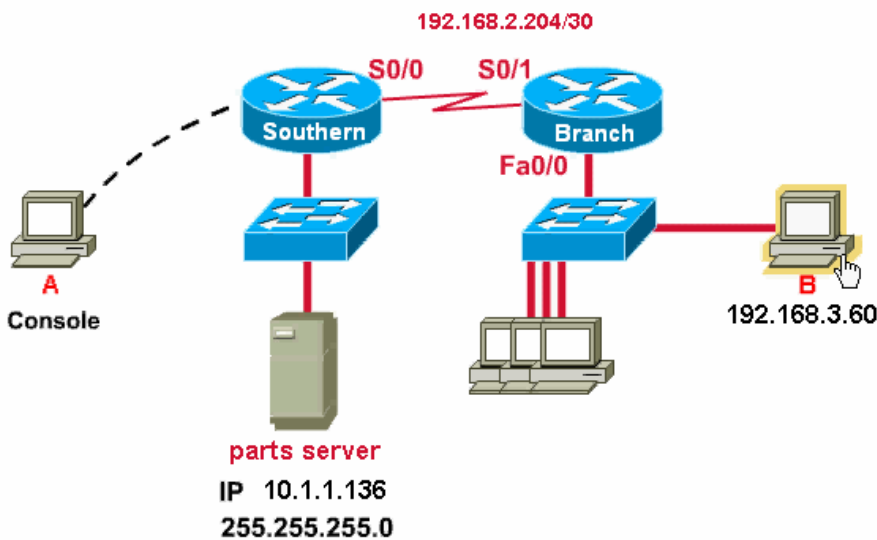
```

CiscoTerminal
Branch#config t
Enter configuration commands, one per line.  End with END.
Branch(config)#int f0/0
Branch(config-if)#no shutdown
Branch(config-if)#^Z
00:01:05: %SYS-5-CONFIG_I: Configured from console by console

Branch#ping 192.168.3.60
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echoes to 192.168.3.60, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/33/36 ms
Branch#

```

- 最後用滑鼠 click 向 Host B。



- 利用 ping 指令測試和 Server 之間的連線是否正常，成功的話便代表一切設定正常，大功告成 !!

```

CiscoTerminal

%%The ping command is the only command supported in this version.  The host will
be able to ping only after Branch router is configured and the Fa0/0 line is up
.

Press RETURN to start.

C:\>ping 10.1.1.136
Pinging 10.1.1.136 with 32 bytes of data:

Reply from 10.1.1.136 : bytes=32 time=3ms TTL=255
Reply from 10.1.1.136 : bytes=32 time=3ms TTL=255
Reply from 10.1.1.136 : bytes=32 time=3ms TTL=255
Reply from 10.1.1.136 : bytes=32 time=3ms TTL=255

Ping statistics for 10.1.1.136 :
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Minimum = 3ms, Maximum = 3ms, Average = 3ms

C:\>

```