



Vendor: Cisco

Exam Code: 300-135

Exam Name: Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

Version: Demo

QUESTION 1

Refer to the Exhibit. Which output is expected in the blank line for the OSPF adjacency process?

```
R4#debug ip ospf adj
OSPF adjacency events debugging is on
*Jan 1 00:23:51.363: OSPF: Cannot see ourself in hello from 192.168.1.3 on Serial0/0/0, state INIT
*Jan 1 00:23:51.367: OSPF: Rcv DBD from 192.168.1.3 on Serial0/0/0 seq 0x17B opt 0x58 flag
0x7 len 32 mtu 1500 state INIT
*Jan 1 00:23:51.367: OSPF: 2 Way Communication to 192.168.1.3 on Serial0/0/0, state 2WAY
*Jan 1 00:23:51.371: OSPF: Rcv DBD from 192.168.1.3 on Serial0/0/0 seq 0x24EF opt 0x58 flag
0x2 len 112 mtu 1500 state _____
```

- A. DOWN
- B. EXSTART
- C. EXCHANGE
- D. LOADING

Correct Answer: B

Explanation:

You can check the output of "debug ip ospf adj" here:

debug ip ospf adj (adjacency)

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```
Router# debug ip ospf adj
04:19:46: OSPF: Rcv hello from 201.0.0.1 area 0 from FastEthernet0 192.168.20.1
04:19:46: OSPF: 2 Way Communication to 201.0.0.1 on FastEthernet0, state 2WAY
04:19:46: OSPF: End of hello processing
<text omitted>
04:20:22: OSPF: end of Wait on interface FastEthernet0
04:20:22: OSPF: DR/BDR election on FastEthernet0
04:20:22: OSPF: Elect BDR 200.0.0.1
04:20:22: OSPF: Elect DR 200.0.0.1
04:20:22: OSPF: Elect BDR 201.0.0.1
04:20:22: OSPF: Elect DR 200.0.0.1
04:20:22: DR: 201.0.0.1 (Id) BDR: 200.0.0.1 (Id)
04:20:23: OSPF: Rcv DBD from 201.0.0.1 on FastEthernet0 seq 0x2657 opt 0x2 flag
0x7 len 32 mtu 1500 state EXSTART
04:20:23: OSPF: NBR Negotiation Done. We are the SLAVE
04:20:23: OSPF: Send DBD to 201.0.0.1 on FastEthernet0 seq 0x2657 opt 0x2 flag 0 x2 len 92
04:20:23: OSPF: Rcv DBD from 201.0.0.1 on FastEthernet0 seq 0x2658 opt 0x2 flag
0x3 len 72 mtu 1500 state EXCHANGE
<text omitted>
04:20:23: OSPF: Synchronized with 201.0.0.1 on FastEthernet0, state FULL
```

- Displays adjacency information including Hello processing, DR/BDR election, authentication, and the “Steps to OSPF Operation.”

QUESTION 2

You are troubleshooting an issue with a GRE tunnel between R1 and R2 and find that routing is OK on all intermediary routers. The tunnel is up on R1, but down on R2. Which two possible issues can prevent the tunnel from coming up? (Choose Two)

- A. The tunnel does not come up unless traffic is sent through it.
- B. The tunnel source interface is down on R2.

- C. No specific route interface is down on R2.
- D. R2 does not know how to reach the tunnel destination.
- E. The tunnel keep alive timer doesn't match on R1 and R2.

Correct Answer: BD

Explanation:

Four Different Tunnel States

There are four possible states in which a GRE tunnel interface can be:

1. Up/up - This implies that the tunnel is fully functional and passes traffic. It is both administratively up and its protocol is up as well.
2. Administratively down/down - This implies that the interface has been administratively shut down.
3. Up/down - This implies that, even though the tunnel is administratively up, something causes the line protocol on the interface to be down.
4. Reset/down - This is usually a transient state when the tunnel is reset by software. This usually happens when the tunnel is misconfigured with a Next Hop Server (NHS) that is its own IP address.

When a tunnel interface is first created and no other configuration is applied to it, the interface is not shut by default:

```
Router#show run interface tunnel 1
Building configuration...

Current configuration : 40 bytes
!
interface Tunnel1
  no ip address
end
```

In this state, the interface is always up/down:

```
Router(config-if)#do show ip interface brief
Interface          IP-Address      OK? Method Status           Protocol
GigabitEthernet0/0  172.16.52.1    YES NVRAM  administratively down  down
GigabitEthernet0/1  14.36.128.49   YES NVRAM  down            down
GigabitEthernet0/2  unassigned     YES NVRAM  down            down
GigabitEthernet0/3  unassigned     YES NVRAM  down            down
Loopback1          192.168.2.1    YES NVRAM  up             up
Tunnel1            unassigned     YES unset  up             down
```

This is because the interface is administratively enabled, but since it does not have a tunnel source or a tunnel destination, the line protocol is down.

In order to make this interface up/up, a valid tunnel source and tunnel destination must be configured:

```
Router#show run interface tunnel 1
Building configuration...
```

```
Current configuration : 113 bytes
!
interface Tunnel1
 ip address 1.1.1.1 255.255.255.0
 tunnel source Loopback1
 tunnel destination 10.0.0.1
end
```

```
Router#show ip interface brief
Interface          IP-Address      OK? Method Status        Protocol
GigabitEthernet0/0 172.16.52.1    YES NVRAM up           up
GigabitEthernet0/1 14.36.128.49   YES NVRAM down        down
GigabitEthernet0/2  unassigned     YES NVRAM down        down
GigabitEthernet0/3  unassigned     YES NVRAM down        down
Loopback0          unassigned     YES unset up          up
Loopback1          192.168.2.1   YES manual up         up
Tunnel1            1.1.1.1       YES manual up         up
```

The previous sequence shows that:

- A valid tunnel source consists of any interface that is itself in the up/up state and has an IP address configured on it. For example, if the tunnel source was changed to **Loopback0**, the tunnel interface would go down even though **Loopback0** is in the up/up state:

```
Router(config-if)#int tun 1
Router(config-if)#tunnel source loopback 0
Router(config-if)#
*Sep 6 19:51:31.043: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Tunnel1, changed state to down
```

- A valid tunnel destination is one which is routable. However, it does not have to be reachable, which can be seen from this ping test:

```
Router#show ip route 10.0.0.1
% Network not in table
Router#show ip route | inc 0.0.0.0
Gateway of last resort is 172.16.52.100 to network 0.0.0.0
S*   0.0.0.0/0 [1/0] via 172.16.52.100
Router#ping 10.0.0.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.0.1, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
```

QUESTION 3

Refer to the exhibit. Which two statements are correct? (Choose Two)

```
Internal#traceroute
Protocol [ip]:
Target IP address: cisco.com
Source address:
Numeric display [n]:
Timeout in seconds [3]:
Probe count [3]: 2
Minimum Time to Live [1]:
Maximum Time to Live [30]:
Port Number [33434]:
Loose, Strict, Record, Timestamp, Verbose[none]: Verbose
Loose, Strict, Record, Timestamp, Verbose[V]:
Type escape sequence to abort.
Tracing the route to cisco.com (72.163.4.162)
VRF info: (vrf in name/id, vrf out name/id)
 1 46.16.251.157 [AS 5713] 1 msec
   46.16.251.158 [AS 5713] 2 msec
 2 46.16.251.169 [AS 5713] 1 msec
   134.222.97.8 [AS 5713] 2 msec
 3 134.222.97.8 [AS 5713] 1 msec
   71.185.45.21 [AS 5713] 1 msec
 4 71.185.45.21 [AS 5713] 2 msec !H
```

- A. The source device has name resolution configured.
- B. The source device is using two routes for the destination, learned from different protocols.
- C. A device on the path is introducing considerable delay.
- D. The source device is load balancing traffic.

Correct Answer: AD

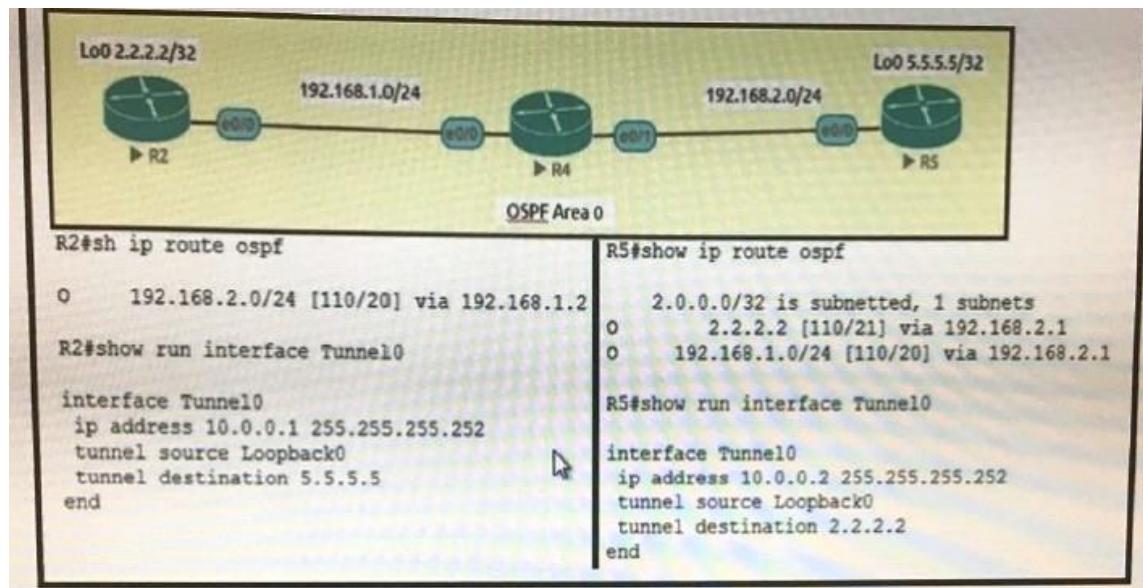
Explanation:

Router traces domain name (cisco.com) and it gets ICMP answers, so name resolution has happened.

Per hop output shows 2 lines, hence 2 active paths exist.

QUESTION 4

Refer to exhibit. The tunnel between R2 and R5 is not coming up. R2, R4 and R5 do not have any routing information sources other than OSPF and no route filtering is implemented anywhere in the network. Which two actions fix the issue? (Choose Two)



- A. Redistribute connected routes to OSPF on R5.
- B. Change the tunnel destination on R2 to 192.168.2.1
- C. Advertise interface Lo0 to OSPF on R5.
- D. Configure a static route on R5 to 2.2.2.2 via 192.168.2.1
- E. Fix the OSPF adjacency issue between R2 and R5.

Correct Answer: AC

Explanation:

In order for the tunnel to be established between R2-R5 ,the R2 should have a path for the 5.5.5.32 route in its own routing table , and because the ospf is the only routing protocol here , so R5 has to advertise the route 5.5.5.32, and that is possible through these option:

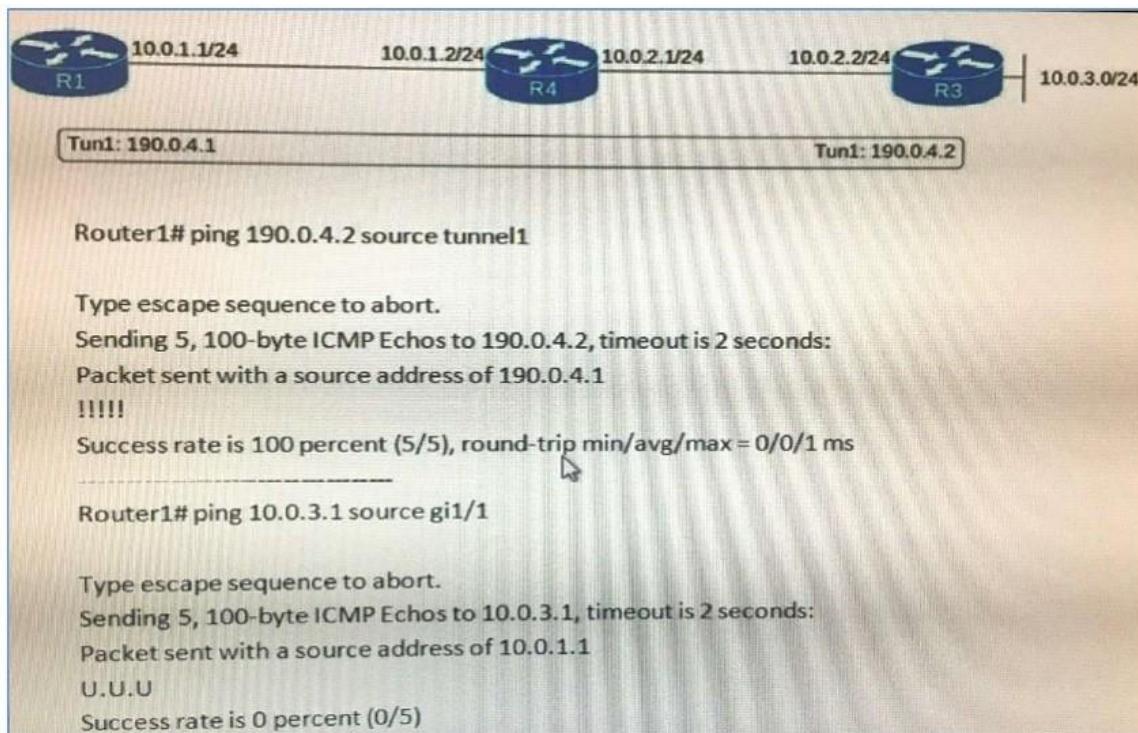
- 1-redistribute connected route to ospf on R5
- 2-Advertise interface lo0 to OSPF on R5

For knowing more about the rules for the gre channel to be established, check the link below:

<http://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulation-gre/118361-technote-gre-00.html>

QUESTION 5

Refer to exhibit. After a junior technician configures a new branch office GRE tunnel, which step is missing from the configuration to pass traffic through tunnel on Router 1?



- A. static route to 10.0.3.0/24 via 10.0.1.1
- B. static route to 10.0.3.0/24 via 10.0.2.1
- C. static route to 10.0.3.0/24 via 190.0.4.1
- D. static route to 10.0.3.0/24 via 190.0.4.2

Correct Answer: D

QUESTION 6

Which statement is true about an IPsec/GRE tunnel?

- A. The GRE tunnel source and destination addresses are specified within the IPsec transform set.
- B. An IPsec/GRE tunnel must use IPsec tunnel mode.
- C. GRE encapsulation occurs before the IPsec encryption process.
- D. Crypto map ACL is not needed to match which traffic will be protected.

Correct Answer: C

QUESTION 7

You enabled CDP on two Cisco Routers which are connected to each other. The Line and Protocol status for the interfaces on both routers show as UP but the routers do not see each other as CDP neighbors. Which layer of the OSI model does the problem most likely exist?

- A. Physical
- B. Session

- C. Application
- D. Data-Link
- E. Network

Correct Answer: D

QUESTION 8

FCAPS is a network maintenance model defined by ISO. It stands for which of the following?

- A. Fault Management
- B. Action Management
- C. Configuration Management
- D. Protocol Management
- E. Security Management

Correct Answer: ACE

QUESTION 9

Which three management categories are contained in the FCAPS network maintenance model?
(Choose three.)

- A. Config
- B. Fault
- C. Storage
- D. Accounting
- E. Redundancy
- F. Telecommunications

Correct Answer: ABD

QUESTION 10

What is the result of configuring the logging console warning command?

- A. Messages with a severity level of 4 and higher will be logged to all available TTY lines.
- B. Only warning messages will be logged on the console.
- C. Warning, error, critical, and informational messages will be logged on the console.
- D. Warning, critical, alert, and emergency messages will be logged on the console.
- E. The logging console warning command needs to be followed in the configuration with logging buffered byte size to specify the message buffer size for the console.

Correct Answer: D

QUESTION 11

Refer to the shown below.

%LINK-3-UPDOWN: Interface Serial0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up

What statement is correct regarding the output shown in the graphic?

- A. These two log messages will not have a severity level. They are not errors but are just informational messages.
- B. The first log message is categorized as a warning message.
- C. These messages regarding interface status are normal output and will always be displayed when you exit config mode.
- D. The first log message is an error message with a severity level of 3.
- E. The second message would be shown if the logging console warning command had been issued.

Correct Answer: D

QUESTION 12

Refer to the configuration statements shown in the graphic above.

```
R1(config)#access-list 199 permit tcp host 10.1.1.1 host 172.16.1.1
R1(config)#access-list 199 permit tcp host 172.16.1.1 host 10.1.1.1
R1(config)#end
R1#debug ip packet 199 detail
```

Which statement reflects what the effect is of this configuration sequence?

- A. These commands will generate an error message because you cannot use an access list with any debug commands.
- B. These commands will have no effect at all. The debug ip packet command will work as normal and display info for all IP packets.
- C. These commands turn on debug ip packet only for packets between hosts 10.1.1.1 and 172.16.1.1.
- D. These commands will only work when you specify only one host rather than two.

Correct Answer: C

QUESTION 13

What is the result if you configure two devices with the ntp server command?

- A. Nothing will happen until one of the devices is configured with the prefer parameter.
- B. The NTP protocol will determine which server is most reliable and will synchronize to that server.
- C. The device with the highest priority will become the active server and the other device will become the backup server.
- D. The device with the lowest MAC address will become the active server and the other device will become the backup server.

Correct Answer: B