



Cisco

Exam Questions 200-125

CCNA Cisco Certified Network Associate CCNA (v3.0)

NEW QUESTION 1

Which utility can you use to identify redundant or shadow rules ?

- A. The ACL trace tool in Cisco APIC-EM.
- B. The ACL analysis tool in Cisco APIC-EM.
- C. The Cisco APIC-EM automation scheduler.
- D. The Cisco IWAN application.

Answer: B

NEW QUESTION 2

Drag the cable type on the left to the purpose for which is it best suited on the right. (Not all options are used.)

crossover	switch access port to router
roll modem	switch to switch
straight-through	PM COM port to switch
rollover	
9-25 pin serial	

Answer:

Explanation: Switch to router : rollover Switch to switch : crossover PM Com port: 9 - 25 pin

NEW QUESTION 3

Which protocol is a Cisco proprietary implementation of STP?

- A. CST
- B. RSTP
- C. MSTP
- D. PVST+

Answer: D

NEW QUESTION 4

Which command is used to show the interface status of a router?

- A. show interface status
- B. show ip interface brief
- C. show ip route
- D. show interface

Answer: B

NEW QUESTION 5

Which IPV6 function serves the same purpose as ARP entry verification on an IPv4 network?

- A. interface ip address verification.
- B. MAC address table verification
- C. neighbor discovery verification
- D. routing table entry verification

Answer: C

NEW QUESTION 6

Which type of MAC address is aged automatically by the switch?

- A. automatic

- B. manual
- C. dynamic
- D. static

Answer: C

NEW QUESTION 7

In which byte of an IP packet can traffic be marked ?

- A. the Tos byte
- B. the Qos byte
- C. the Cos byte
- D. the Dscp byte

Answer: A

Explanation: Reference:

<http://flylib.com/books/2/686/1/html/2/images/1587051990/graphics/13fig01.gif>

NEW QUESTION 8

Which statement about EIGRP on IPv6 device is true?

- A. It is configured directly on the interface
- B. the configuration uses secondary ip address
- C. the neighbors of each device are directly configured
- D. the configuration uses process numbers

Answer: A

Explanation:

<http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol-eigrp/113267-eigrp-i>

NEW QUESTION 9

Which command can you enter to determine the addresses that have been assigned on a DHCP Server?

- A. Show ip DHCP database.
- B. Show ip DHCP pool.
- C. Show ip DHCP binding.
- D. Show ip DHCP server statistic.

Answer: C

Explanation: Reference: <http://www.aubrett.com/InformationTechnology/RoutingandSwitching/Cisco/CiscoRouters/DHCPBindings.aspx>

“Router#show ip dhcp binding

Bindings from all pools not associated with VRF: IP address Client-ID/ Lease expiration Type

10.16.173.1 24d9.2141.0ddd Jan 12 2013 03:42 AM Automatic”

NEW QUESTION 10

How does NAT overloading provide one-to-many address translation?

- A. it uses a pool of addresses.
- B. it converts IPv4 addresses to unused IPv6 addresses.
- C. it assigns a unique TCP/UDP port to each session.
- D. it uses virtual MAC address and virtual IP addresses.

Answer: C

NEW QUESTION 10

which port security mode can assist with troubleshooting by keeping count of violations?

- A. access.
- B. protect.
- C. restrict.
- D. shutdown.

Answer: C

NEW QUESTION 12

Which VTP mode prevents you from making changes to VLANs?

- A. server
- B. off
- C. client

D. transparent

Answer: C

NEW QUESTION 17

which technology supports multiple dynamic secure connections an unsecure transport network ?

- A. DMVPN
- B. VPN
- C. Site-to-site VPN
- D. client VPN

Answer: A

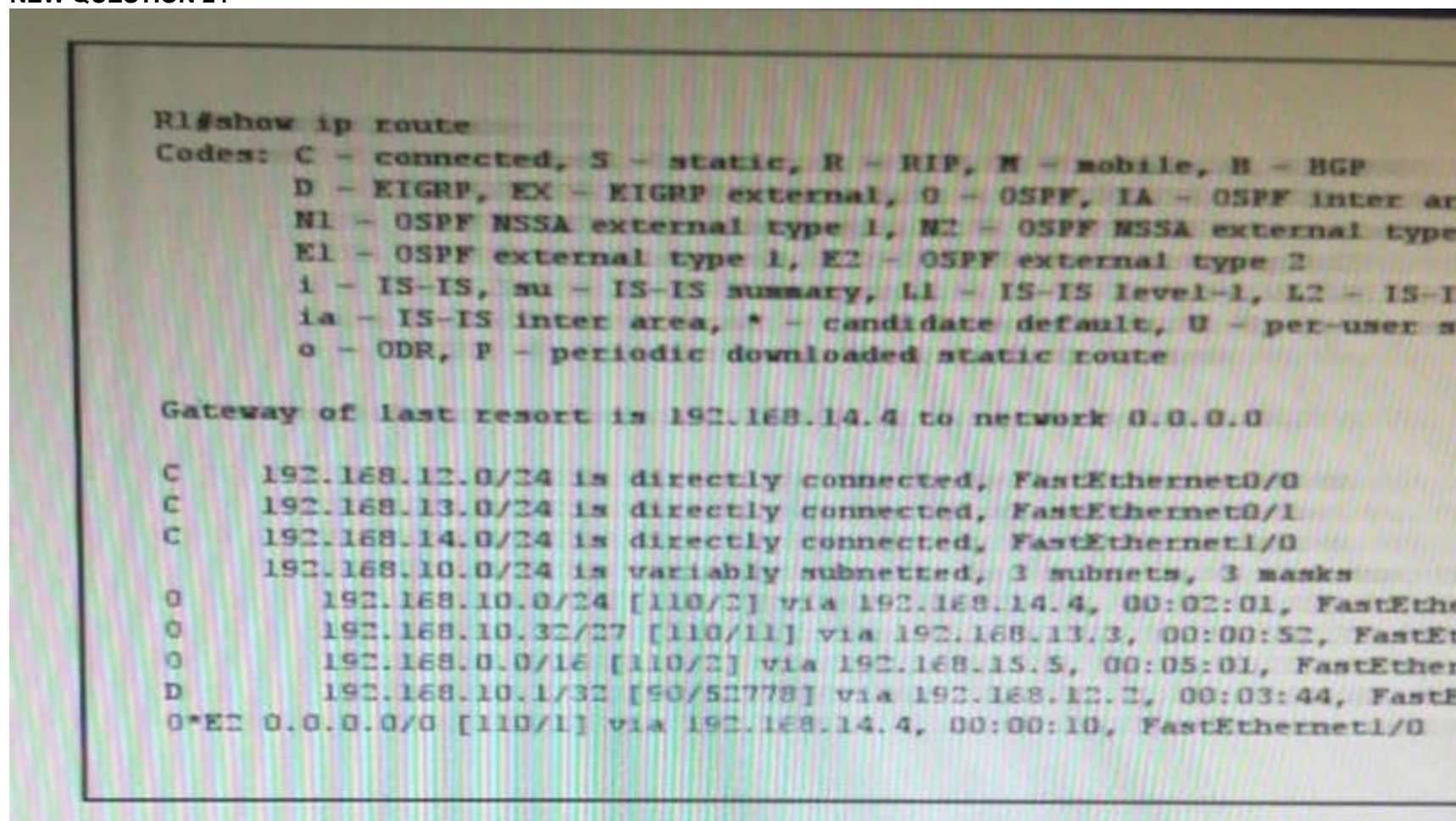
NEW QUESTION 21

Which port security mode can assist with troubleshooting by keeping count of violations?

- A. access.
- B. protect.
- C. restrict.
- D. shutdown.

Answer: C

NEW QUESTION 24



```
R1#show ip route
Codes: 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
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is 192.168.14.4 to network 0.0.0.0

C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
O    192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O      192.168.10.0/24 [110/2] via 192.168.14.4, 00:02:01, FastEthernet1/0
O      192.168.10.32/27 [110/11] via 192.168.13.3, 00:00:52, FastEthernet1/0
O      192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, FastEthernet1/0
D    192.168.10.1/32 [90/52778] via 192.168.12.2, 00:03:44, FastEthernet1/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, FastEthernet1/0
```

refer to the exhibit , on R1, which routing protocol is in use on the route to 192.168.10.1?

- A. EIGRP
- B. OSPF
- C. RIP
- D. BGP

Answer: A

NEW QUESTION 29

On which type of port can switches interconnect for multi-VLAN communication?

- A. interface port
- B. access port
- C. switch port
- D. trunk port

Answer: D

NEW QUESTION 32

Which two options are fields in an ethernet frame ? choose two

- A. destination ip address
- B. source ip address
- C. type

- D. frame check sequence
- E. header

Answer: CD

NEW QUESTION 37

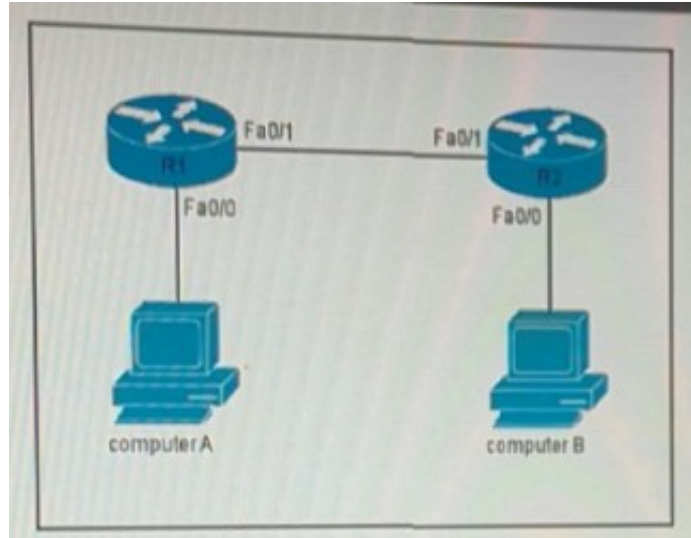
Which Two options are features of the extended ping command?

- A. it can send packets from a specified interface or ip address
- B. it can resolve the destination host name
- C. it can ping multiple hosts at the same time
- D. it can count the number of hops to the remote host
- E. it can send a specified number of packets

Answer: AE

NEW QUESTION 42

Refer to Exhibit.



If Computer A is sending traffic to computer B, which option is the source ip address when a packet leaves R1 on interface F0/1?

- A. IP address of the R2 interface F0/1
- B. Ip address of computer B
- C. Ip address of R1 interface F0/1
- D. Ip address of Computer A

Answer: C

NEW QUESTION 45

which layer of the osi model does PPP perform ?

- A. Layer 2
- B. Layer 3
- C. Layer 5
- D. Layer 1

Answer: A

NEW QUESTION 48

Which options are requirements for configuring RIPv2 on an IPv4 network router? (Choose two.)

- A. enabling RIP on the router
- B. allowing unicast updates for RIP
- C. enabling RIP authentication
- D. connecting RIP to a WAN interface
- E. enabling automatic route summarization

Answer: AB

NEW QUESTION 51

Which type of attack can be mitigated by configuring the default native vlan to be unused ?

- A. switch spoofing
- B. cam table overflow
- C. vlan hopping
- D. MAC spoofing

Answer: C

NEW QUESTION 54

Which configuration command can you apply to a router so that its local interface becomes active if all other routers in the group fail?

- A. Router(config)#standby 1 preempt
- B. No additional configuration is required
- C. Router(config)#standby 1 Priority 250
- D. Router(config)#standby 1 track Ethernet

Answer: A

NEW QUESTION 55

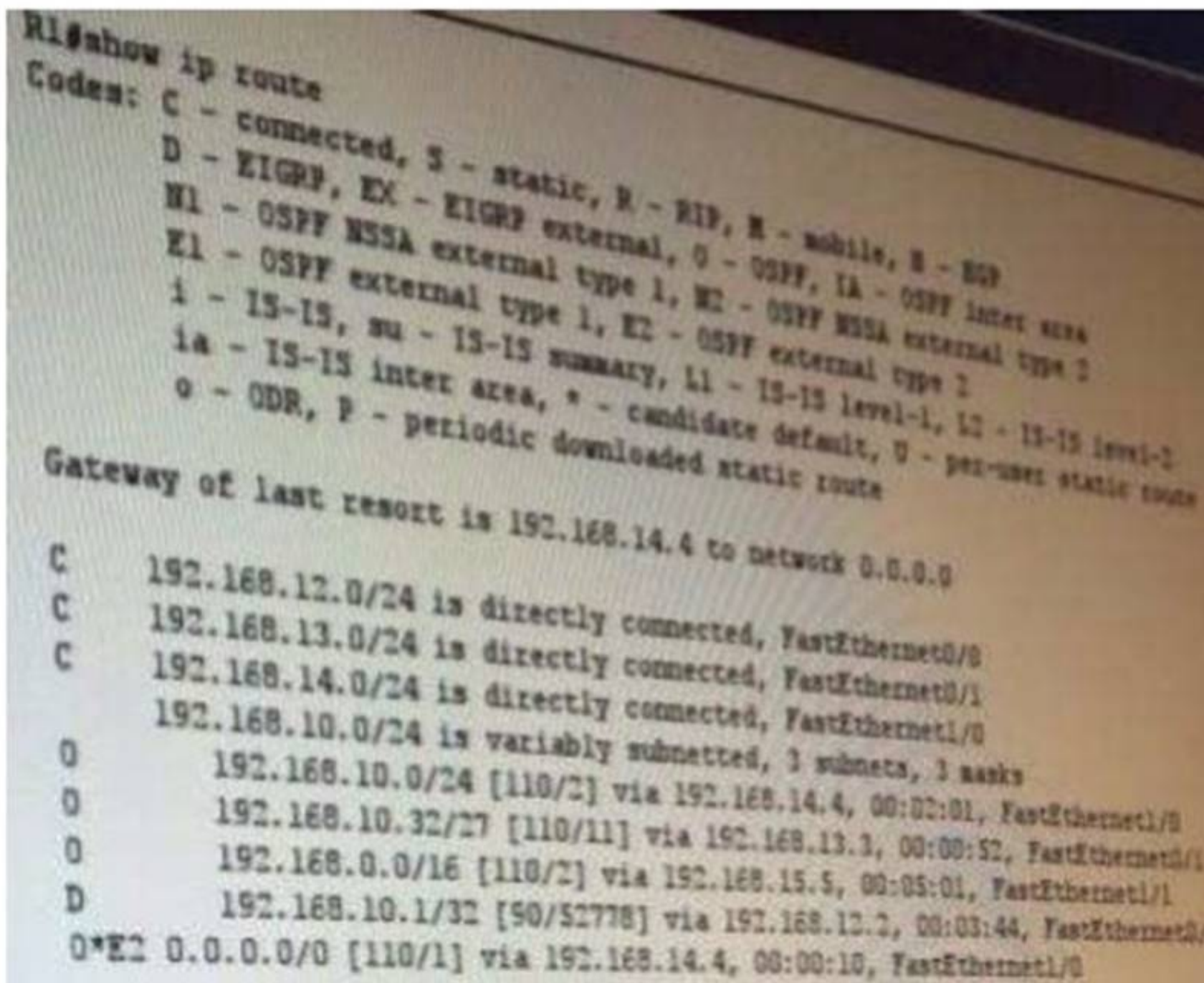
Which WAN topology provides a direct connection from each site to all other sites on the network?

- A. single-homed
- B. full mesh
- C. point-to-point
- D. hub-and-spoke

Answer: B

NEW QUESTION 58

Refer to the exhibit.



If R1 receives a packet destined to 172.16.1.1, to which IP address does it send the packet ?

- A. 192.168.14.4
- B. 192.168.12.2
- C. 192.168.13.3
- D. 192.168.15.5

Answer: A

NEW QUESTION 62

Which type of routing protocol operates by using first information from each device peers?

- A. link-state protocols
- B. distance-vector protocols
- C. path-vector protocols
- D. exterior gateway protocols

Answer: A

NEW QUESTION 66

Which HSRP Feature was new in HSRPv2 ?

- A. Virtual MAC Address
- B. Preemption
- C. Tracking
- D. VLAN Group Numbers that are greater than 255

Answer: D

NEW QUESTION 67

What type of MAC address is aged automatically by the switch?

- A. Dynamic
- B. Manual
- C. Automatic
- D. Static

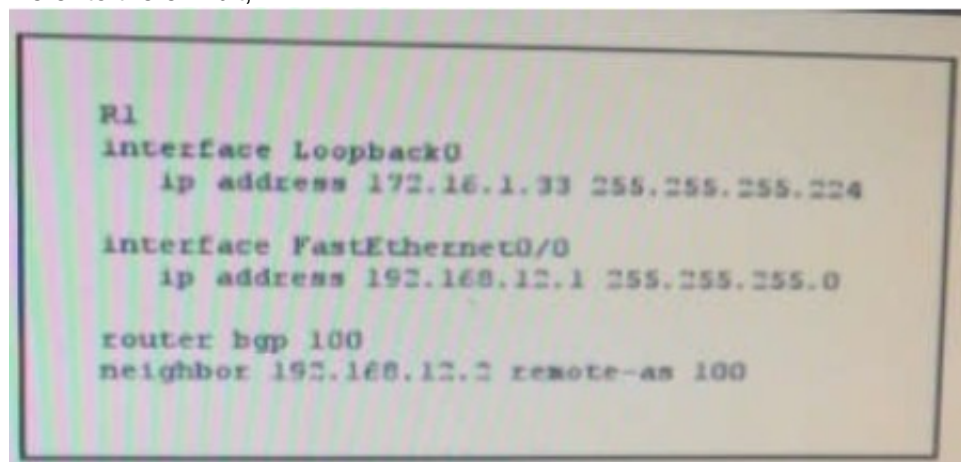
Answer: A

Explanation: Reference:

<http://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/configuration/guide/cli/CLIConfigurationGuide/MACAddress.htm>

NEW QUESTION 70

Refer to the exhibit,



which command do you enter so that R1 advertises the loopback0 interface to the BGP peers?

- A. network 172.16.1.32 mask 255.255.255.224
- B. network 172.16.1.0 0.0.0.0.255
- C. network 172.16.1.32 255.255.255.224
- D. network 172.16.1.33 mask 255.255.255.224
- E. network 172.16.1.32 mask 0.0.0.31
- F. network 172.16.1.32 0.0.0.31

Answer: A

NEW QUESTION 75

While troubleshooting a connection problem on a computer, you determined that the computer can ping a specific web server but it cannot connect to TCP port 80 on that server. Which reason for the problem is most likely true?

- A. A VLAN number is incorrect.
- B. A Route is missing
- C. An ARP table entry is missing.
- D. An ACL is blocking the TCP port.

Answer: D

NEW QUESTION 76

Which option is the master redundancy scheme for stacked switches?

- A. 1:N
- B. 1:1
- C. N:1
- D. 1+N

Answer: A

NEW QUESTION 79

Refer to the exhibit.


```

R1
ipv6 cef

interface FastEthernet0/0
no ip address
ipv6 enable
  ipv6 address 2001:DB8:1::1/64
  ipv6 ospf 1 area 0

ipv6 router ospf 1
  router-id 172.16.1.1
  
```

After you apply the given configuration to R1, you notice that it failed to enable OSPF. Which action can you take to correct the problem?

- A. Configure a loopback interface on R1
- B. Enable IPv6 unicast routing on R1.
- C. Configure an IPv4 address on interface FO/0.
- D. Configure an autonomous system number on OSPF.

Answer: C

NEW QUESTION 83

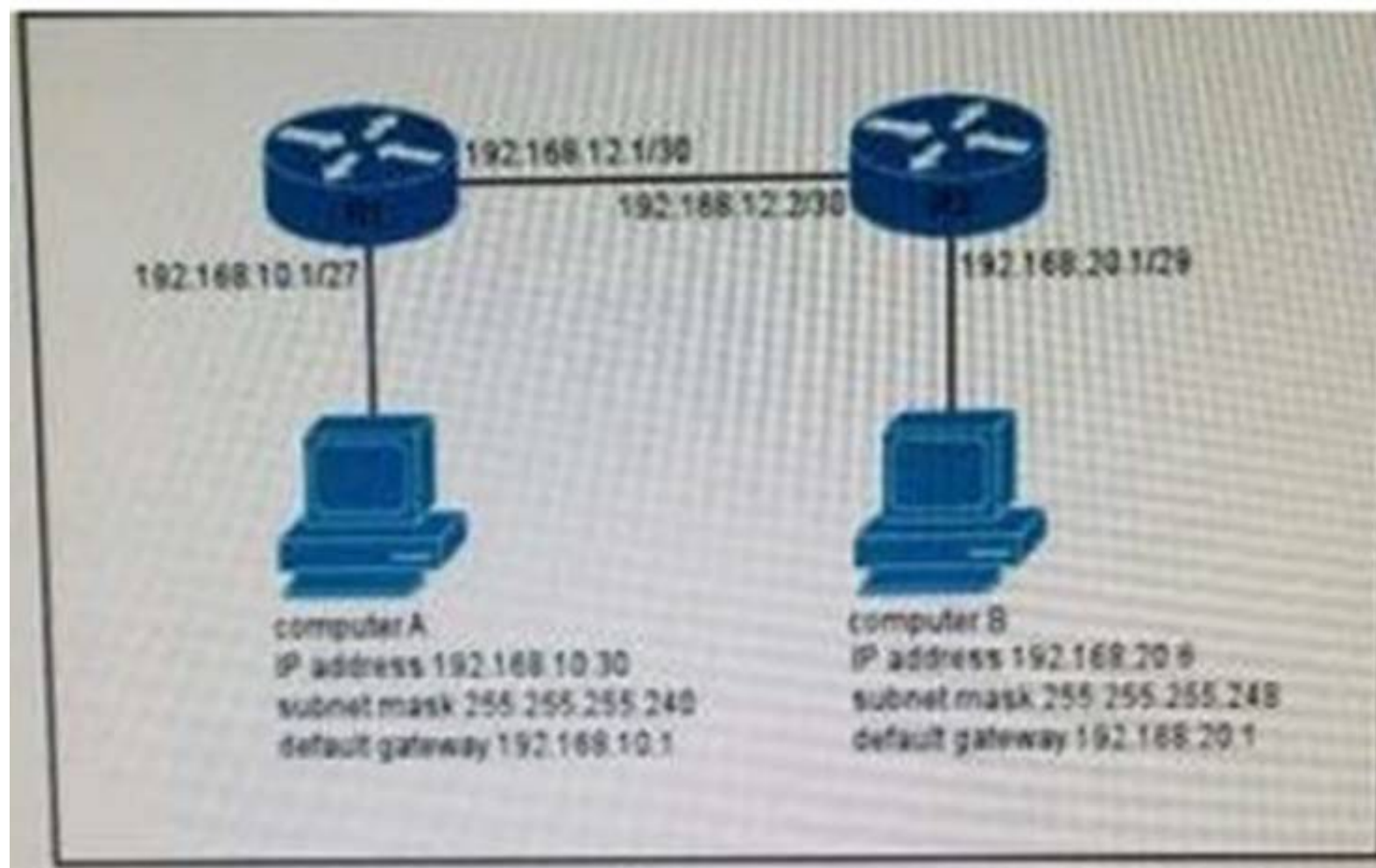
ABPDU guard is configured on an interface that has PortFast Enable. Which state does the interface enter when it receives a BPDU?

- A. Blocking.
- B. Shutdown.
- C. Listening.
- D. Errdisable.

Answer: D

NEW QUESTION 85

Refer to the exhibit,



you determine that Computer A cannot ping Computer

Which reason for the problem is most likely true?

- A. The Subnet mask for Computer A is incorrect
- B. The subnet mask for computer B is incorrect
- C. The default gateway address for Computer A is incorrect.
- D. The default gateway address for computer B is incorrect.

Answer: A

Explanation:

255.255.255.224 =/27

NEW QUESTION 90

Which port security violation mode allows traffic from valid mac address to pass but block traffic from invalid mac address?

- A. protect
- B. shutdown
- C. shutdown vlan
- D. restrict

Answer: A

NEW QUESTION 95

Which function does traffic shaping perform?

- A. it buffers traffic without queuing it
- B. it queues traffic without buffering it
- C. it drops packets to control the output rate
- D. it buffers and queues excess packets

Answer: D

NEW QUESTION 96

which add prefix does OSPFv3 use when multiple IPv6 address are configured on a single interface ?

- A. all prefix on the interface
- B. the prefix that the administrator configure for OSPFv3 use
- C. the lowest prefix on the interface
- D. the highest prefix on the interface

Answer: A

Explanation:

Reference:

http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/15-sy/iro-15-sy-book/ip6-routeospfv3.html#GUID-05F3F09C-FE3E-41D6-9845-111FB17AD030

“In IPv6, you can configure many address prefixes on an interface. In OSPFv3, all address prefixes on an interface are included by default. You cannot select some address prefixes to be imported into OSPFv3; either all address prefixes on an interface are imported, or no address prefixes on an interface are imported.”

NEW QUESTION 99

which command can you enter to create a NAT Pool of 6 addresses ?

- A. Router(config)#ip nat pool test 175.17.12.69 175.17.12.74 prefix-length 24
- B. Router(config)#ip nat pool test 175.17.12.66 175.17.12.72 prefix-length 8
- C. Router(config)#ip nat pool test 175.17.12.69 175.17.12.74 prefix-length 16
- D. Router(config)#ip nat pool test 175.17.12.69 175.17.12.76 prefix-length 8

Answer: B

NEW QUESTION 100

Under normal operations, cisco recommends that you configure switch ports on which vlan ?

- A. on the default vlan
- B. on the management vlan
- C. on the native vlan
- D. on any vlan except the default vlan

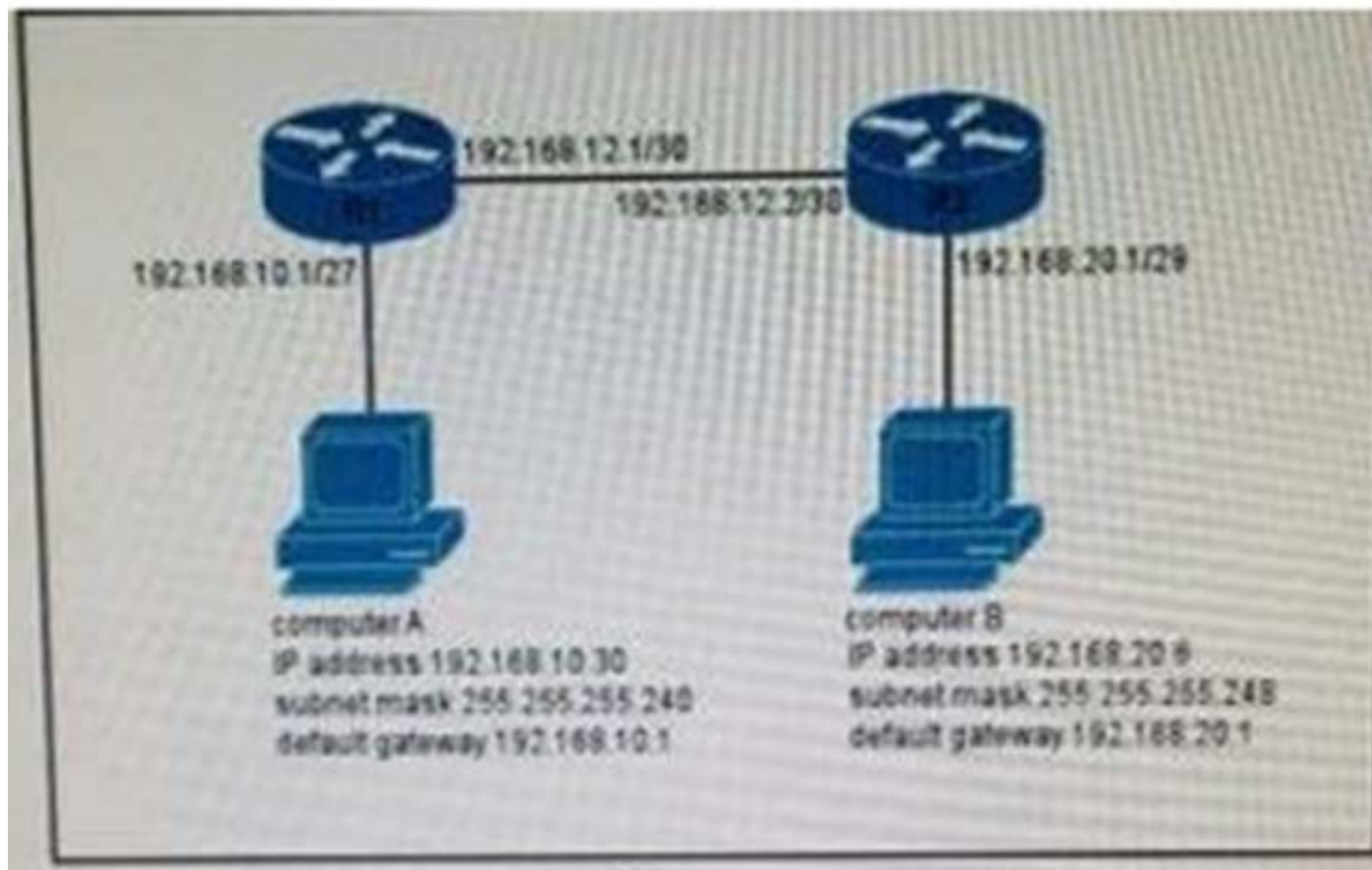
Answer: D

Explanation: Reference:

<http://www.cisco.com/c/en/us/support/docs/switches/catalyst-6500-series-switches/24330-185.html>

NEW QUESTION 102

Refer to the exhibit, you determine that Computer A cannot ping Computer B. Which reason for the problem is most likely true?



you determine that Computer A cannot ping Computer B. Which reason for the problem is most likely true?

- A. The Subnet mask for Computer A is incorrect.
- B. The default gateway address for Computer A is incorrect.
- C. The subnet mask for computer B is incorrect.
- D. The default gateway address for computer B is incorrect.

Answer: A

Explanation: 255.255.255.224 = /27

NEW QUESTION 106

which two statements about vtp are true ?

- A. all switches must be configured with the same VTP domain name
- B. all switches must be configured with a unique vtp domain name
- C. all switches must be configured to perform trunk negotiation
- D. all switches must use the same VTP Version
- E. The VTP Server must have the highest revision number in the domain

Answer: AD

NEW QUESTION 107

Which major component of the network virtualization architecture isolates users according to policy?

- A. network services virtualization
- B. access control.
- C. path isolation
- D. policy enforcement

Answer: A

NEW QUESTION 111

Which header field is new in IPv6?

- A. Hop Limit
- B. Flow Label
- C. Version
- D. Traffic Class

Answer: A

NEW QUESTION 114

which six-byte field in a basic ethernet frame must be an individual address ?

- A. FCS
- B. SOF
- C. SA

D. DA

Answer: C

NEW QUESTION 117

Which two statements about MPLS are true?

- A. it encapsulates all traffic in an ipv4 header
- B. it provides automatic authentication
- C. it uses labels to separate and forward customer traffic
- D. it can carry multiple protocols, including ipv4 and ipv6
- E. it tags customer traffic using 802.1q

Answer: CD

NEW QUESTION 121

Which definition of default route is true?

- A. A route that is manually configured.
- B. A route used when a destination route is missing.
- C. A route to the exact /32 destination address
- D. Dynamic route learned from the server.

Answer: C

NEW QUESTION 124

Which two statements about firewalls are true ?

- A. They can be used with an intrusion prevention system.
- B. They can limit unauthorized user access to protect data.
- C. Each wireless access point requires its own firewall.
- D. They must be placed only at locations where the private network connects to the internet.
- E. They can prevent attacks from the internet only.

Answer: AB

NEW QUESTION 129

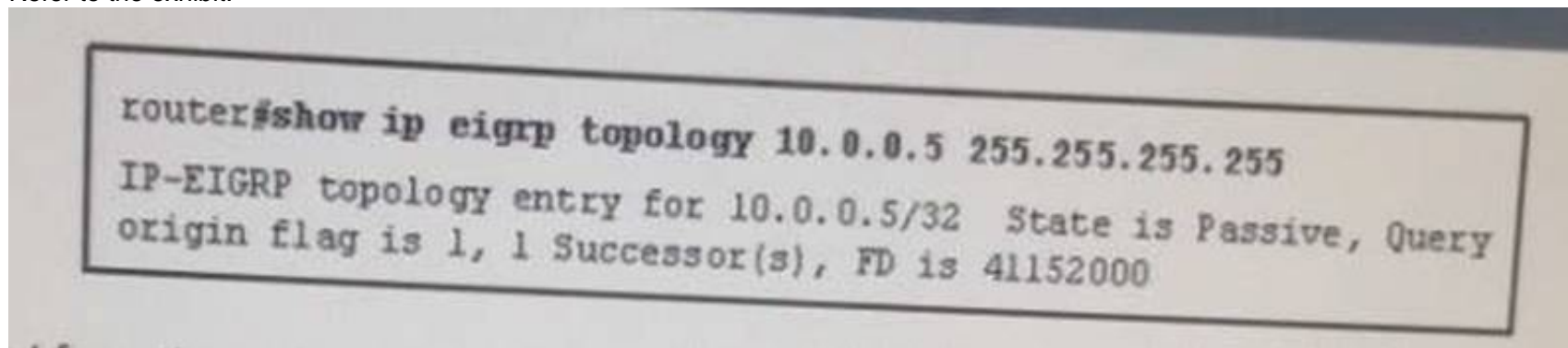
which command can you enter in a network switch configuration so that learned mac addresses are saved in configuration as they connect ?

- A. Switch(config-if)#Switch port-security
- B. Switch(config-if)#Switch port-security Mac-address sticky
- C. Switch(config-if)#Switch port-security maximum 10
- D. Switch(config-if)#Switch mode access

Answer: B

NEW QUESTION 134

Refer to the exhibit.



Given the output from the show ip eigrp topology command, which router is the feasible successor?

- A. 10.1.0.1 (Serial0), from 10.1.0.1, Send flag is 0x0 Composite metric is (46152000/41640000), Route is Internal Vector metric:Minimum bandwidth is 64 Kbit Total delay is 45000 Microseconds Reliability is 255/255Load is 1/255 Minimum MTU is 1500 Hop count is 2
- B. 10.0.0.2 (Serial0.1), from 10.0.0.2, Send flag is 0x0 Composite metric is (53973248/128256), Route is Internal Vector Metric:Minimum bandwidth is 48 Kbit Total delay is 25000 Microseconds Reliability is 255/255Load is 1/255 Minimum MTU is 1500 Hop count is 1
- C. 10.1.0.3 (Serial0), from 10.1.0.3, Send flag is 0x0 Composite metric is (46866176/46354176), Route is Internal Vector metric:Minimum bandwidth is 56 Kbit Total delay is 45000 microseconds Reliability is 255/255Load is 1/255 Minimum MTU is 1500 Hop count is 2
- D. 10.1.1.1 (Serial0.1), from 10.1.1.1, Send flag is 0x0Composite metric is (46763776/46251776), Route is External Vector metric:Minimum bandwidth is 56 Kbit Total delay is 41000 microseconds Reliability is 255/255Load is 1/255 Minimum MTU is 1500 Hop count is 2

Answer: B

NEW QUESTION 139

which option is the correct CIDR notation for 192.168.0.0 subnet 255.255.255.252?

- A. /29
- B. /30

C. /31
D. /32

Answer: B

NEW QUESTION 140

Which two options are primary responsibilities of the APIC-EM controller? (Choose two.)

- A. It automates network actions between different device types.
- B. It provides robust asset management.
- C. It tracks license usage and Cisco IOS versions.
- D. It automates network actions between legacy equipment.
- E. It makes network functions programmable.

Answer: AE

Explanation: <http://www.cisco.com/c/en/us/products/cloud-systems-management/application-policy-infrastructure-controlleremodule/index.html>

Automate network configuration and setup Deploy network devices faster

Automate device deployment and provisioning across the enterprise. Provide a programmable network

Enable developers to create new applications that use the network to fuel business growth.

NEW QUESTION 143

Which two protocols can detect native vlan mismatch errors?

- A. STP
- B. Cisco Discovery Protocol
- C. VTP
- D. DTP
- E. PAgP

Answer: BC

NEW QUESTION 147

Which HSRP feature was new in HSRPv2?

- A. VLAN group numbers that are greater than 255
- B. virtual MAC addresses
- C. tracking
- D. preemption

Answer: A

NEW QUESTION 149

Which address block identifies all link-local address

- A. fc00::/7
- B. fc00::/8
- C. fe80::/10

Answer: C

NEW QUESTION 151

If three devices are plugged into one port on a switch and two devices are plugged into a different port, how many collision domains are on the switch?

- A. 2
- B. 4
- C. 5
- D. 6

Answer: C

NEW QUESTION 153

Which mode is compatible with Trunk, Access, and desirable ports?

- A. Trunk Ports
- B. Access Ports
- C. Dynamic Auto
- D. Dynamic Desirable

Answer: C

Explanation:

The 'dynamic auto' will configure the port to accept incoming negotiation and will accept becoming either a trunk or an access port. Dynamic Auto allows the port to negotiate DTP (Dynamic Trunking Protocol) if the other side is set to trunk or desirable. Otherwise it will become an access port.

NEW QUESTION 155

Which two steps must you perform on each device that is configured for ipv4 routing before you implement OSPFv3? (choose two)

- A. configure an autonomous system number
- B. configure a loopback interface
- C. configure a router ID
- D. enable IPv6 on an interface
- E. enable IPv6 unicast routing

Answer: CE

NEW QUESTION 160

Which statement about recovering a password on a cisco router is true ?

- A. it requires physical access to the router
- B. the default reset password is cisco
- C. a factory reset is required if you forget the password
- D. it requires a secure SSL/VPN connection

Answer: A

NEW QUESTION 164

Which DTP switch port mode allows the port to create a trunk link if the neighboring port is in trunk mode, dynamic desirable mode, or desirable auto mode?

- A. trunk
- B. access
- C. dynamic desirable
- D. dynamic auto

Answer: C

NEW QUESTION 168

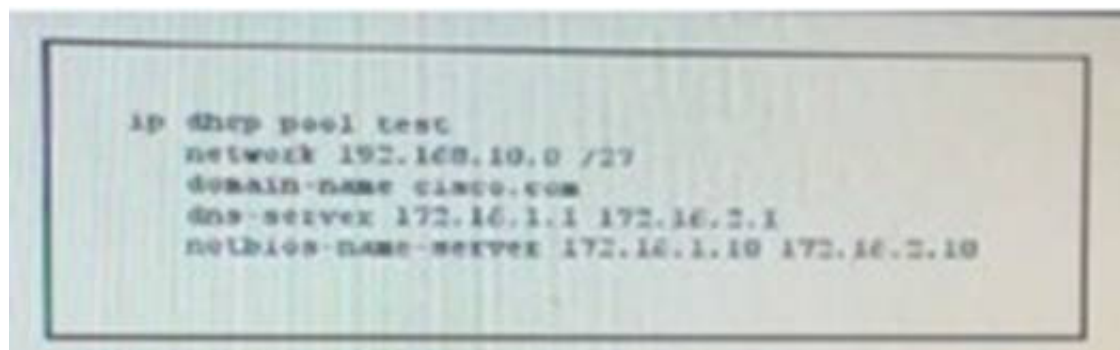
Which statement about spanning tree root bridge election is true ?

- A. every root bridge must reside on the root switch
- B. it is always performed automatically
- C. every VLAN must use the same root bridge
- D. Each VLAN must have its own root bridge

Answer: D

NEW QUESTION 169

Refer to the exhibit.



After you apply the given configuration to a router, the DHCP clients behind the device cannot communicate with hosts outside of their subnet. Which action is most likely to correct the problem?

- A. Configure the dns server on the same subnet as the clients
- B. Activate the dhcp pool
- C. Correct the subnet mask
- D. configure the default gateway

Answer: D

NEW QUESTION 170

What is the benefit of point-to-point leased line ?

- A. Low cost
- B. Full-mesh capability
- C. Flexibility of design
- D. Simple configuration

Answer: D

NEW QUESTION 172

Where does the configuration reside when a helper address is configured to support DHCP ?

- A. on the switch trunk interface.
- B. on the router closest to the client.
- C. on the router closest to the server.
- D. on every router along the path.

Answer: B

NEW QUESTION 175

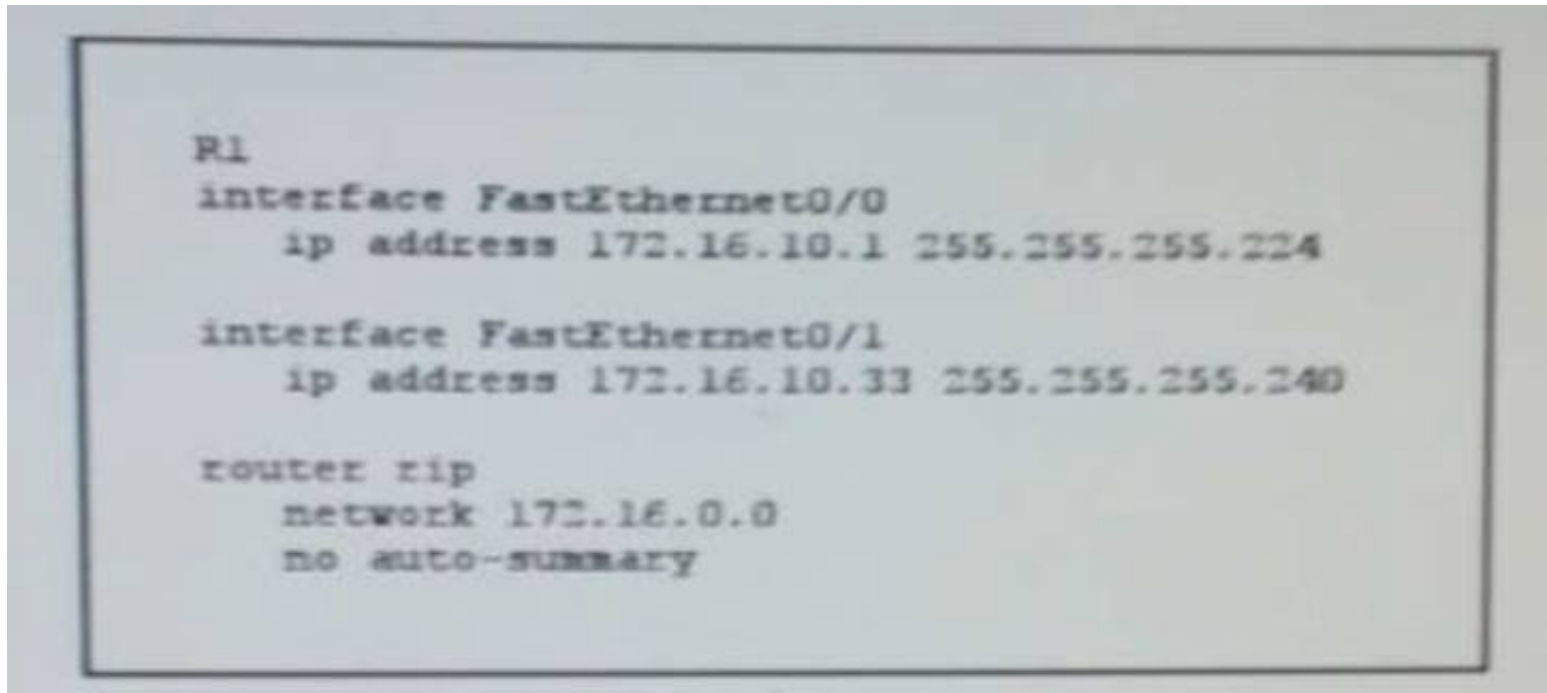
which major ipv6 address type is supported in ipv4 but rarely used ?

- A. Broadcast
- B. multicast
- C. unicast
- D. anycast

Answer: B

NEW QUESTION 180

Exhibit:



After you apply the given configuration to R1, you determine that it is failing to advertise the 172.16.10.32/27 network which action is most likely to correct the problem ?

- A. enable passive interface
- B. enable manual summarization
- C. enable autosummarization
- D. enable RIPv2

Answer: D

NEW QUESTION 185

which NTP type designates a router without an external referee clock as an authoritative time source ?

- A. Client
- B. Server
- C. peer
- D. master

Answer: D

NEW QUESTION 186

Which VTP mode prevents you from making changes to vlans?

- A. Server.
- B. Client.
- C. Transparent.
- D. Off

Answer: B

Explanation:

VTP Client

- VTP clients function the same way as VTP servers, but you cannot create, change, or delete VLANs on a VTP client.
- A VTP client only stores the VLAN information for the entire domain while the switch is on.
- A switch reset deletes the VLAN information.
- You must configure VTP client mode on a switch.

NEW QUESTION 191

Which type of cable must you use to connect two device with mdi interfaces ?

- A. rolled
- B. crosseover
- C. crossed
- D. straight through

Answer: C

NEW QUESTION 193

When is a routing table entry identified as directly connected?

- A. when the local router is in use as the network default gateway
- B. when the network resides on a remote router that is physically connected to the local router
- C. when an interface on the route is configure with an ip address and enabled
- D. when the route is statically assigned to reach a specific network

Answer: C

NEW QUESTION 194

When troubleshooting ethernet connectivity issues how can you verify that an ip address is known to a router?

- A. Check Whether the ip address is in the routing table
- B. Check Whether an ACL is blocking the ip address
- C. Check Whether the ip address is in the CAM Table
- D. Check Whether the ip address is in the ARP Table

Answer: D

NEW QUESTION 196

which command can you enter to re enable cisco discovery protocol on a local router after it has been disabled ?

- A. Router (config)# cdp run
- B. Router (config-if)# cdp run
- C. Router (config)# cdp enable
- D. Router (config-if)# cdp enable

Answer: A

NEW QUESTION 200

Which type of secure MAC address must be configured manually?

- A. static
- B. dynamic
- C. sticky
- D. bia

Answer: A

NEW QUESTION 205

Which RPVST+ port state is excluded from all STP operations?

- A. learning
- B. forwarding
- C. blocking
- D. disabled

Answer: D

NEW QUESTION 207

Which three options are the major components of a network virtualization architecture? (Choose three.)

- A. virtual network services
- B. authentication services
- C. network access control
- D. network resilience
- E. path isolation
- F. policy enforcement

Answer: ACE

NEW QUESTION 210

Under which circumstance is a router on a stick most appropriate?

- A. When the router must route a single across multiple physical links.

- B. When the router must route multiple subnets across multiple physical links.
- C. When the router must route a single across single physical links.
- D. When the router must route multiple subnets across single physical links.

Answer: B

NEW QUESTION 212

when you troubleshoot an IPv4 connectivity issue on a router, which three router configuration checks you must perform?

- A. Verify that the router interface IP address IP address is correct.
- B. Verify that the DNS is configured correctly.
- C. Verify that the router and the host use the same subnet mask.
- D. Verify that the router firmware is up-to-date.
- E. Verify that a default route is configured.
- F. Verify that the route appears in the routing table

Answer: ABF

NEW QUESTION 217

Which action can change the order of entries in a named access list?

- A. opening the access list in Notepad.
- B. resequecing
- C. removing an entry
- D. adding an entry

Answer: B

NEW QUESTION 221

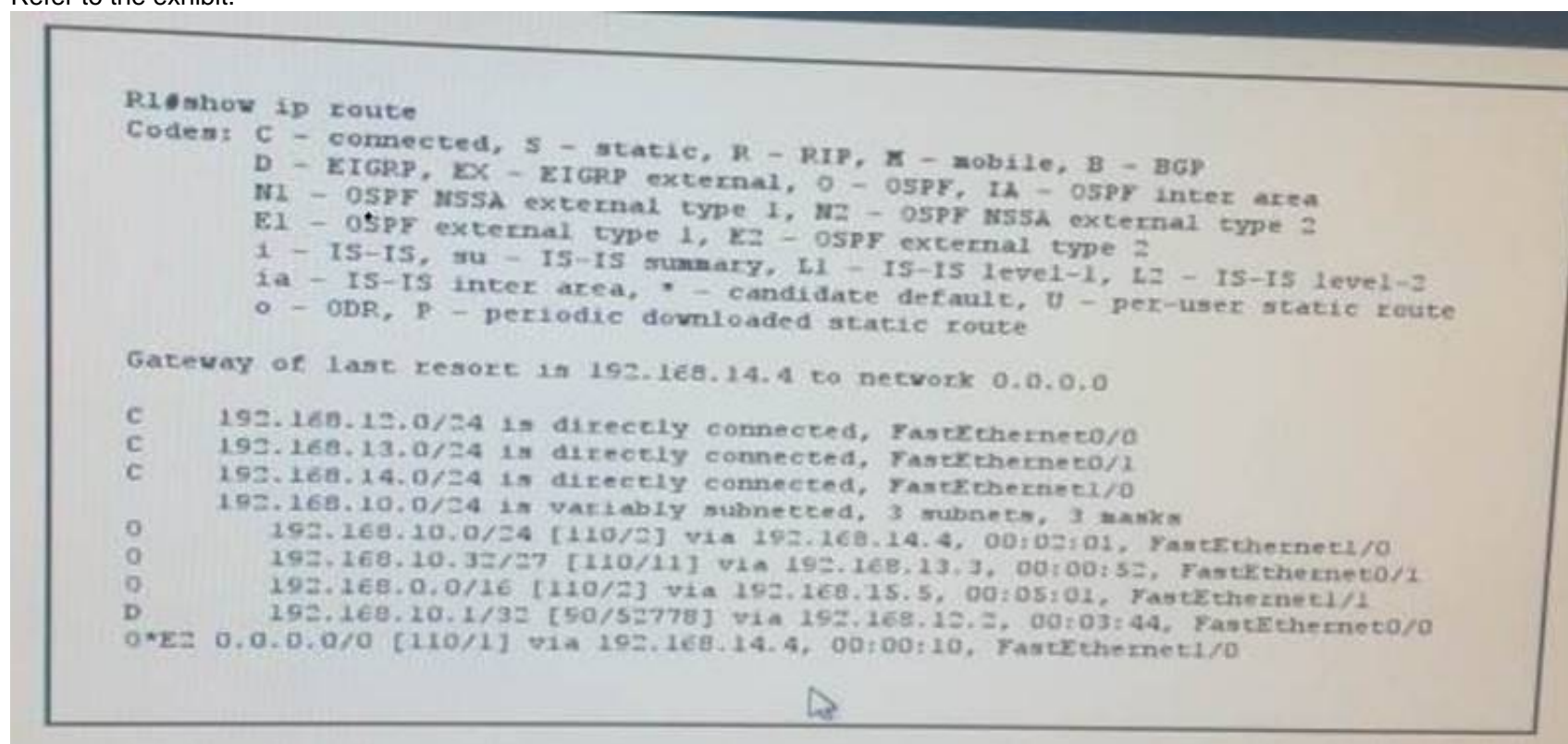
Which option describes the best way to troubleshoot and isolate a network problem?

- A. Gather the facts
- B. Change one variable at a time.
- C. Implement an action plan
- D. Create an Action plan

Answer: C

NEW QUESTION 222

Refer to the exhibit.



```
R1#show ip route
Codes: 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
       i - IS-IS, su - IS-IS summary, 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 192.168.14.4 to network 0.0.0.0

C    192.168.13.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
C    192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O    192.168.10.0/24 [110/3] via 192.168.14.4, 00:02:01, FastEthernet1/0
O    192.168.10.32/27 [110/11] via 192.168.13.3, 00:00:52, FastEthernet0/1
O    192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, FastEthernet1/1
D    192.168.10.1/32 [90/52778] via 192.168.12.2, 00:03:44, FastEthernet0/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, FastEthernet1/0
```

IF R1 sends traffic to 192.168.101.45 the traffic is sent through which interface?

- A. FastEthernet0/1
- B. FastEthernet0/0
- C. FastEthernet1/0
- D. FastEthernet1/1

Answer: C

NEW QUESTION 224

which three options are fields in a basic ethernet data frame ?

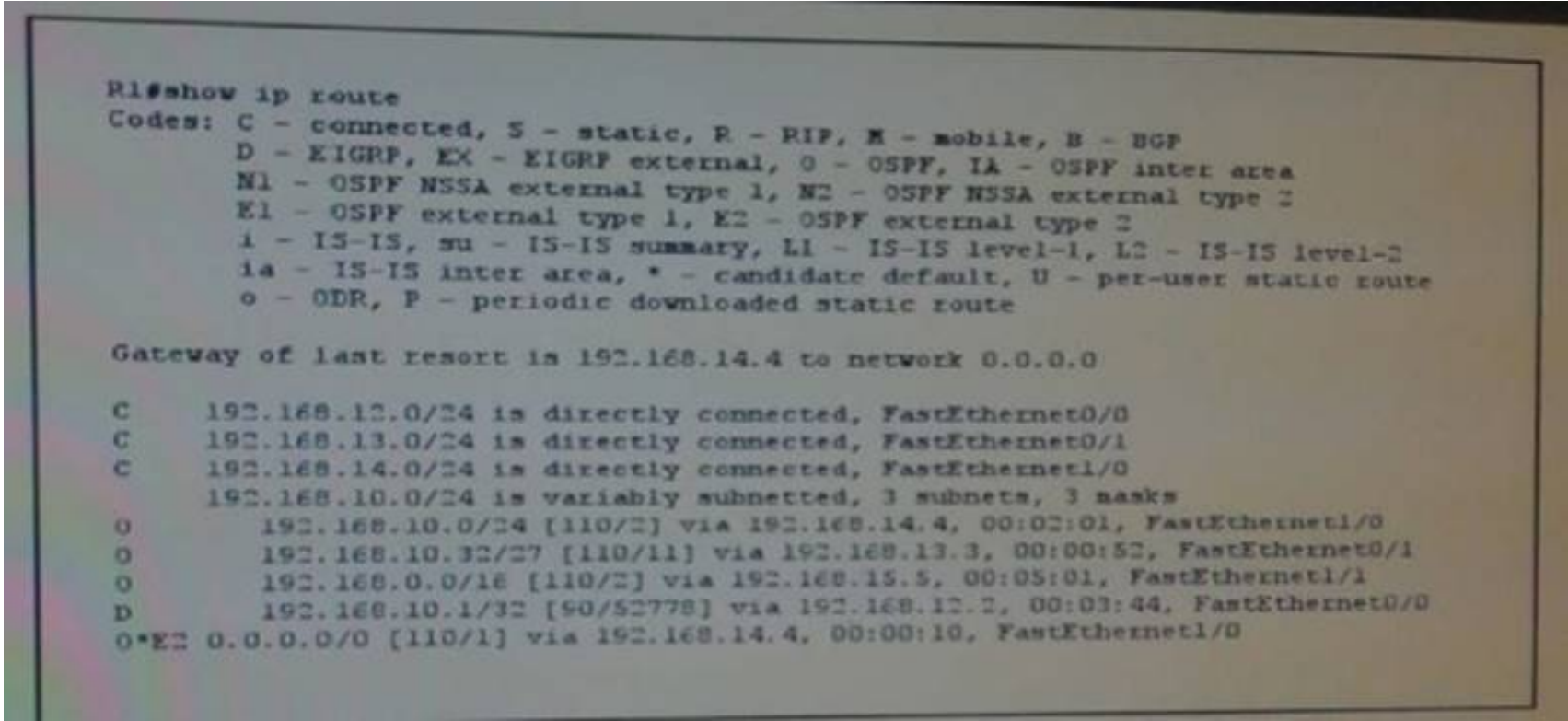
- A. preamble
- B. time to live

- C. version
- D. header checksum
- E. length type
- F. frame check sequence

Answer: AEF

NEW QUESTION 225

Refer to the exhibit .



if R1 sends Traffic to 192.168.10.45 the traffic is sent through which interface ?

- A. FastEthernet 0/1
- B. FastEthernet 0/0
- C. FastEthernet 1/0
- D. FastEthernet 1/1

Answer: A

NEW QUESTION 229

which WAN topology provides a direct conntection from each site to all other sites on the network ?

- A. single-homed
- B. full mesh
- C. point-to-point
- D. hub-and-spoke

Answer: B

NEW QUESTION 233

Which two statements about IPv6 address 2002:ab10:beef::/48 are true?(choose two)

- A. The embedded IPv4 address can be globally routed.
- B. It is used for an ISATAP tunnel
- C. The embedded IPv4 address is an RFC 1918 address
- D. The MAC address 20:02:b0:10:be:ef is embedded into the IPv6 address
- E. It is used for a 6to4 tunnel

Answer: AE

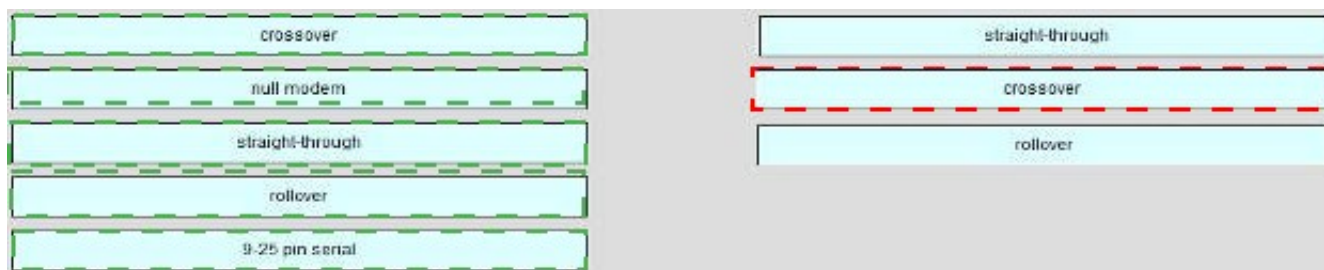
NEW QUESTION 234

DRAG DROP

crossover	switch access port to router
null modem	switch to switch
straight-through	PC COM port to switch
rollover	
9-25 pin serial	

Answer:

Explanation:



Topic 2, New Pool Exam B

NEW QUESTION 236

Which statement about unique local IPv6 addresses is true?

- A. Summarization is not supported.
- B. They require all prefixes to be unique.
- C. Their global IDs are assigned sequentially.
- D. They are routable to the public Internet.

Answer: B

NEW QUESTION 239

What is the most efficient subnet mask for a point to point ipv6 connection?

- A. /127
- B. /128
- C. /64
- D. /48
- E. /32

Answer: B

Explanation: ref : <https://tools.ietf.org/html/rfc6164>

NEW QUESTION 244

Which configuration enables OSPF for network 192.168.1.0/24?

- A. router ospfrouter-id 192.168.1.0
- B. router ospf 1network 192.168.1.0 255.255.255.0 area 0
- C. router ospf 1neighbor 192.168.1.0
- D. router ospf 1area 0 virtual-link 192.168.1.0

Answer: B

NEW QUESTION 248

Which WAN technology uses labels to make decisions about data forwarding?

- A. Metro Ethernet
- B. Frame Relay
- C. MPLS
- D. ISDN
- E. VSAT

Answer: C

NEW QUESTION 249

Which statement describes the effect of the copy run start command on a router in enable mode?

- A. The running configuration of the router is savedto NVRAM and used during the boot process.
- B. The router reboots and loads the last saved running configuration.
- C. A copy of the running configuration of the router is sent by FTP to a designated server.
- D. A new running configuration is loaded from flashmemory to the router.

Answer: A

NEW QUESTION 254

Which set of conditions comprises a successful ping attempt between two connected routers configured with IP addresses on the same subnet?

- A. The destination host receives an echo reply from the source host within one second and the source host receives an echo request from the destination host.
- B. The destination host receives an echo request from the source host within one second.
- C. The destination host receives an echo replyfrom the source host within one second and the source host receives an echo reply from the destination host within two seconds.
- D. The destination host receives an echo request from the source host and the source host receives an echo request from the destination host within one second.
- E. The destination host receives an echo request from the source host and the source host receives an echo reply from the destination host within two seconds.

Answer: E

NEW QUESTION 258

Which IPv6 routing protocol uses multicast group FF02::9 to send updates?

- A. static
- B. RIPng
- C. OSPFv3
- D. IS-IS for IPv6

Answer: B

NEW QUESTION 259

Which two statements about fiber cable are true? (Choose two)

- A. Single-mode fiber supports SC and LC connectors only.
- B. Multimode cable supports speeds between 100 Mbps and 9.92 Gbps.
- C. Single-mode cable is most appropriate for installations longer than 10 km.
- D. Fiber cable is relatively inexpensive and supports a higher data rate than coaxial cable.
- E. Multimode cable supports speeds between 100 Mbps and 100 Gbps.

Answer: CD

NEW QUESTION 261

How does a Cisco switch respond if you boot it without a valid configuration in the NVRAM?

- A. it enters setup mode.
- B. it uses the running –configuration
- C. It prompts you to restore the startup configuration
- D. it enters user EXEC mode.

Answer: B

NEW QUESTION 264

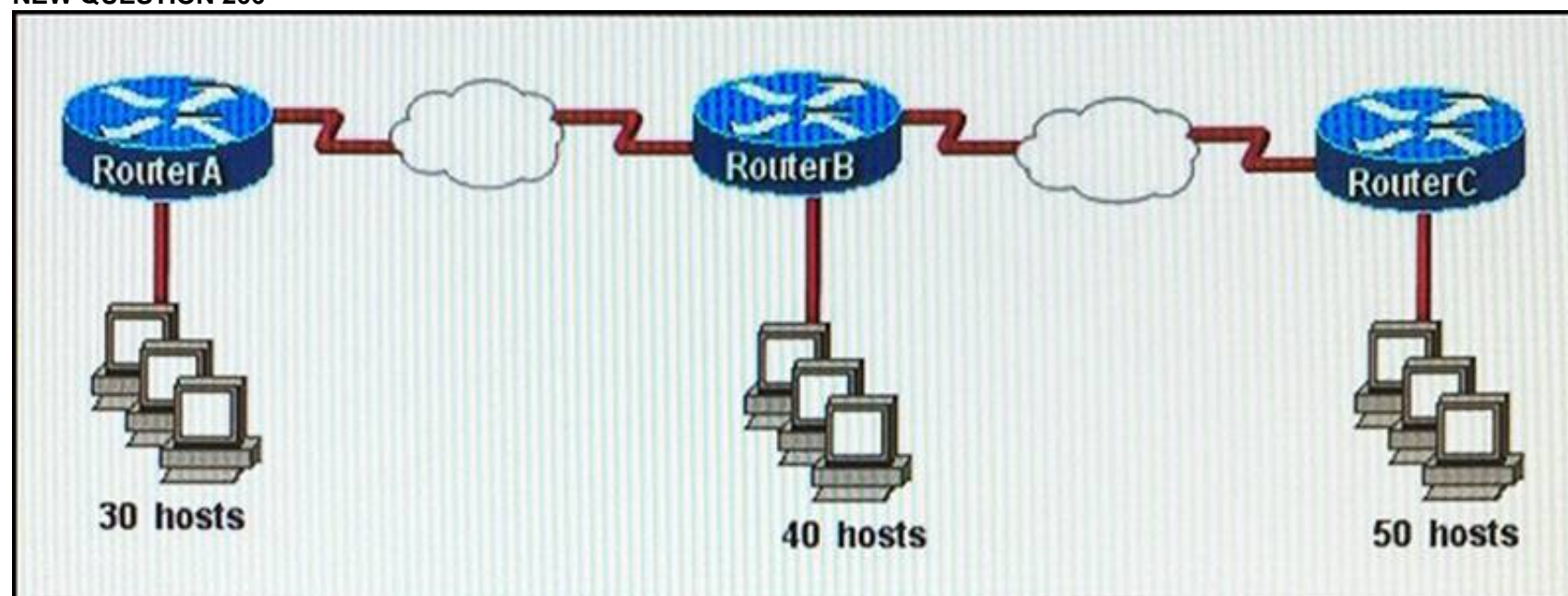
Which APIC-EM tool allows an administrator to verify ACLs throughout the network?

- A. Cisco Intelligent WAN application
- B. traceroute
- C. Network Topology
- D. Path Trace

Answer: D

Explanation: One of the most important features of the APIC-EM controller is the capability to manage policies across the entire network. APIC-EM ACL Analysis and Path Trace provide tools to allow the administrator to analyze and understand ACL policies and configurations. Administrators are hesitant to change ACLs, for fear of breaking them and causing new problems. Together, ACL Analysis and Path Trace enable the administrator to easily visualize traffic flows and discover any conflicting, duplicate, or shadowed ACL entries.

NEW QUESTION 266



Refer to the exhibit. The enterprise has decided to use the network address 172.16.0.0. The network administrator needs to design a classful addressing scheme to accommodate the three subnets, with 30, 40, and 50 hosts, as shown. Which subnet mask would accommodate this network?

- A. 255.255.255.224
- B. 255.255.255.240
- C. 255.255.255.252
- D. 255.255.255.248
- E. 255.255.255.192

Answer: E

NEW QUESTION 269

Which adverse situation can occur if an Ethernet cable is too long?

- A. late collisions
- B. giants
- C. interface resets
- D. runts

Answer: A

NEW QUESTION 270

Which three checks must you perform when troubleshooting EIGRPv6 adjacencies? (Choose three.)

- A. Verify that IPv6 enabled.
- B. Verify that thenetworkcommand has been configured.
- C. Verify that auto summary is enabled.
- D. Verify that the interface is up.
- E. Verify that an IPv4 address has been configured.
- F. Verify that the router ID has been configured.

Answer: ADF

NEW QUESTION 272

Which statement about VLAN configuration is true?

- A. The switch must be in config-vlan mode before you configure an extended VLAN.
- B. Dynamic inter-VLAN routing is supported on VLAN 2 through VLAN 4064.
- C. A switch in VTP transparent mode saves the VLAN database to the running configuration only.
- D. The switch must be in VTP server or transparent mode before you configure a VLAN.

Answer: D

NEW QUESTION 274

Which network configuration can you use to segregate broadcast traffic for two different departments in your organization?

- A. Configure two VTP domains and configure the switches in transparent mode.
- B. Enable spanning-tree load balancing.
- C. Implement switch port security on designated ports.
- D. Configure a separate VLAN for each department.

Answer: D

NEW QUESTION 279

For which two reasons was RFC 1918 address space define (Choose two)

- A. to preserve public IPv4 address space
- B. to reduce the occurrence of overlapping IP addresses
- C. to preserve public IPv6 address space
- D. reduce the size of ISP routing tables
- E. to support the NAT protocol

Answer: AE

NEW QUESTION 283

Which functionality does an SVI provide?

- A. OSI Layer 2 connectivity to switches
- B. remote switch administration
- C. traffic routing for VLANs
- D. OSI Layer 3 connectivity to switches

Answer: C

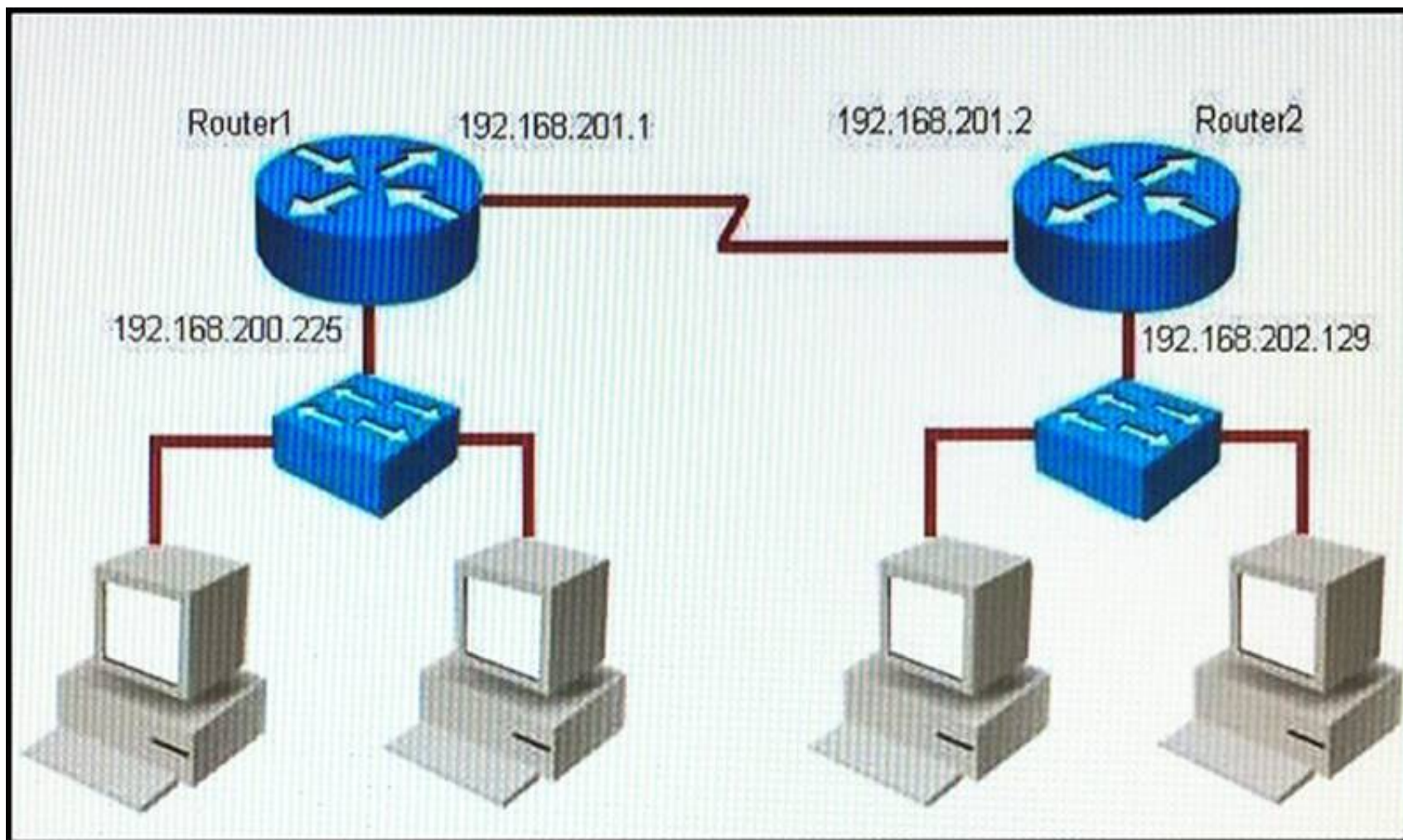
NEW QUESTION 285

Which two statements about eBGP neighbor relationships are true? (Choose two)

- A. The two devices must reside in different autonomous systems
- B. Neighbors must be specifically declared in the configuration of each device
- C. They can be created dynamically after the network statement is configured.
- D. The two devices must reside in the same autonomous system
- E. The two devices must have matching timer settings

Answer: AB

NEW QUESTION 286



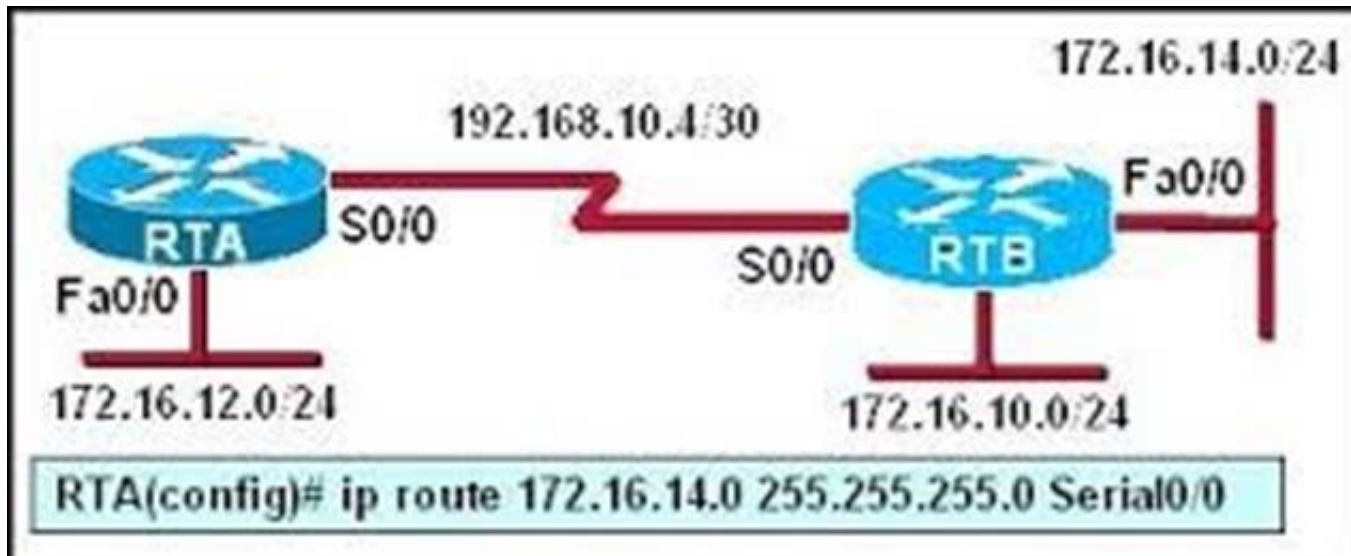
Refer to the exhibit. Which command would you use to configure a static route on Router1 to network 192.168.202.0/24 with a nondefault administrative distance?

- A. router1(config)#ip route 192.168.202.0 255.255.255.0 192.168.201.2 1
- B. router1(config)#ip route 192.168.202.0 255.255.255.0 192.168.201.2 5
- C. router1(config)#ip route 1 192.168.201.1 255.255.255.0 192.168.201.2
- D. router1(config)#ip route 5 192.168.202.0 255.255.255.0 192.168.201.2

Answer: A

NEW QUESTION 290

Refer to the exhibit.

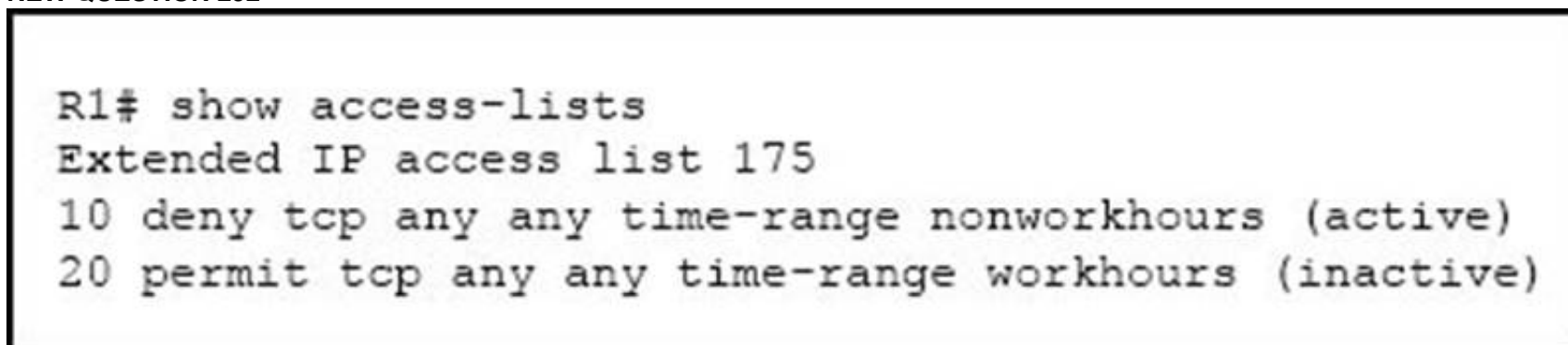


RTA is configured with a basic configuration. The link between the two routers is operational and no routing protocols are configured on either router. The line shown in the exhibit is then added to router RTA. Should interface Fa0/0 on router RTB shut down, what effect will the shutdown have on router RTA?

- A. A route to 172.16.14.0/24 will remain in the RTA routing table.
- B. Because router RTB will send a poison reverse packet to router RTA, RTA will remove the route.
- C. Router RTA will send an ICMP packet to attempt to verify the route.
- D. A packet to host 172.16.14.225 will be dropped by router R.

Answer: A

NEW QUESTION 292



Refer to the exhibit. While you troubleshoot a connectivity issue to a PC behind R1, you enter the show access-lists command to generate this output. Which reason for the problem is most likely true?

- A. The permit all ACL entry on R1 is inactive.
- B. The ACL of R1 is misconfigured.
- C. A deny all ACL entry is currently active on R1.
- D. An implicit deny is causing R1 to block network traffic.

Answer: D

NEW QUESTION 297

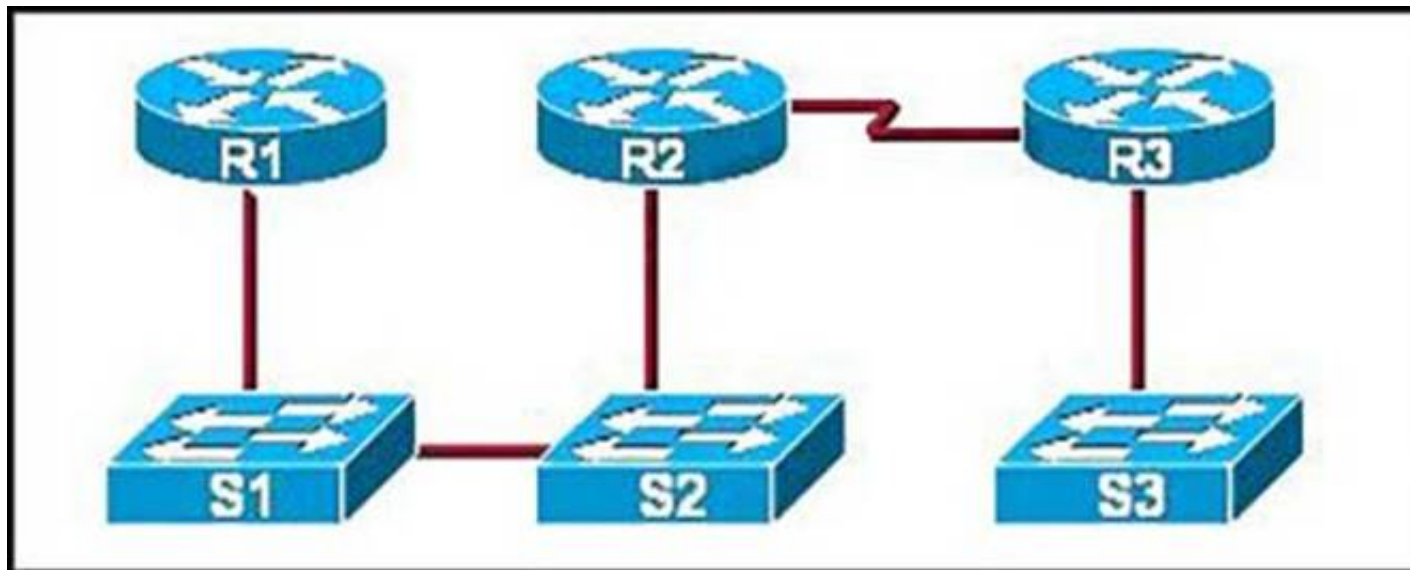
Under which two circumstances is network traffic most likely to use an Exterior Gateway Routing Protocol? (Choose two)

- A. When an employee connects to an employer branch office in a different city.
- B. When network traffic is routing to a different building on a corporate campus.
- C. When an employee is browsing the public internet.
- D. When an employee checks email while working onsite at the data center.
- E. When a user browsing the web site of a business partner.

Answer: AD

NEW QUESTION 302

Refer to the exhibit.



If CDP is enabled on all devices and interfaces, which devices will appear in the output of a show cdp neighbors command issued from R2?

- A. R1, S1, S2, R3 and S3
- B. R2 and R3
- C. R3 and S2
- D. R1 and R3
- E. R1, S1, S2, and R3

Answer: C

NEW QUESTION 306

Which protocol does ipv6 use to discover other ipv6 nodes on the same segment?

- A. CLNS
- B. TCPv6
- C. NHRP
- D. NDP
- E. ARP

Answer: D

Explanation: ref : <https://tools.ietf.org/html/rfc4861>

NEW QUESTION 309

Which three options are types of slow VLAN connectivity? (Choose three.)

- A. slow broadcast domain connectivity
- B. slow routing domain connectivity
- C. slow default gateway connectivity
- D. slow application domain connectivity
- E. slow collision domain connectivity
- F. slow inter-VLAN connectivity

Answer: ADE

NEW QUESTION 313

Which two statements about the spanning-tree bridge ID are true? (Choose two.)

- A. It is composed of a 4-bit bridge priority and a 12-bit system ID extension.
- B. The bridge ID is transmitted in the IP header to elect the root bridge.

- C. The system ID extension is a value between 1 and 4095.
- D. It is composed of an 8-bit bridge priority and a 16-bit system ID extension.
- E. The bridge priority must be incremented in blocks of 4096.

Answer: AE

NEW QUESTION 315

The following have already been configured on the router:

The basic router configuration

The appropriate interfaces have been configured for NAT inside and NAT outside.

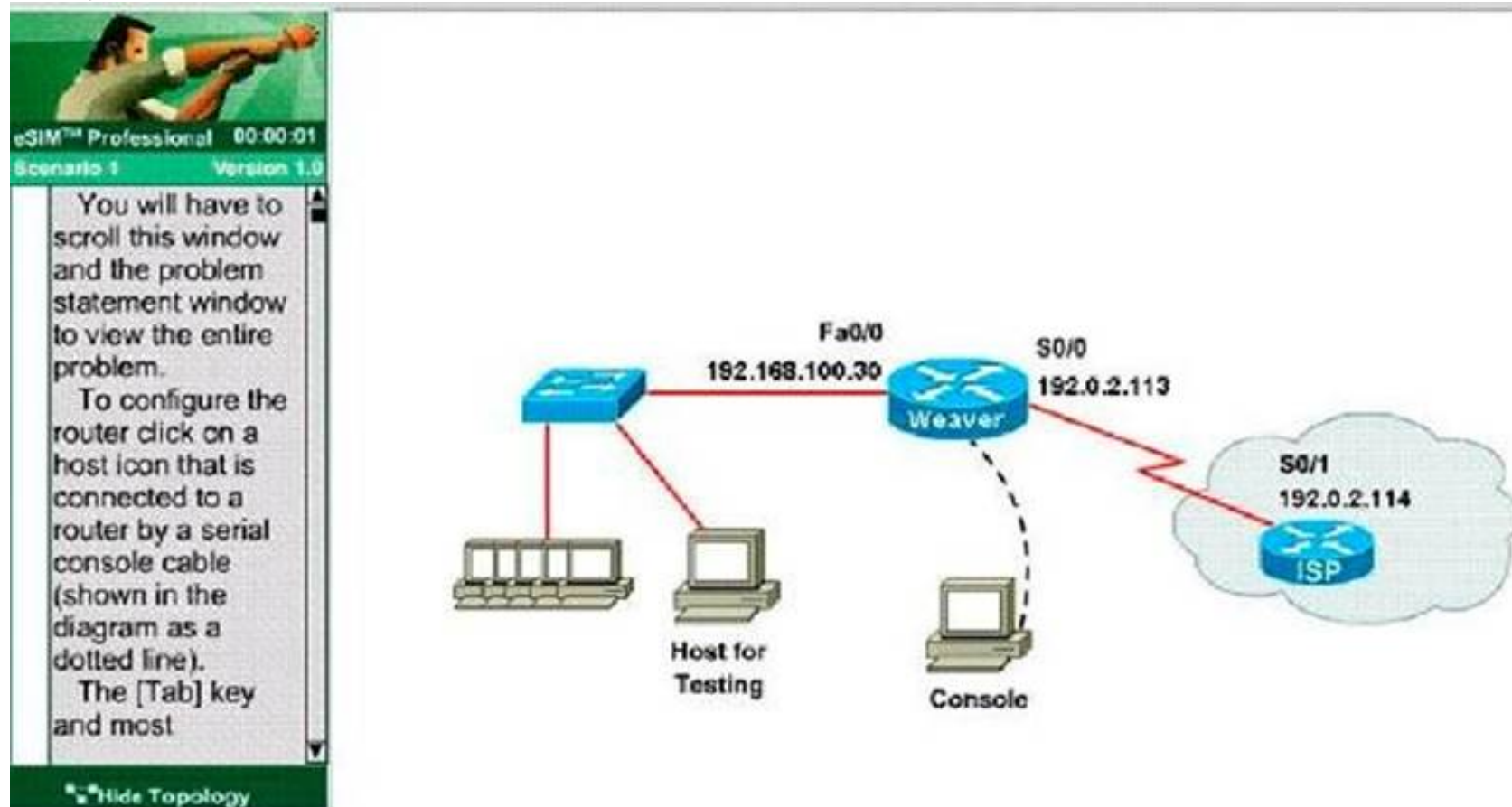
The appropriate static routes have also been configured (since the company will be a stub network, no routing protocol will be required)

All passwords have been temporarily set to "cisco".

The task is to complete the NAT configuration using all IP addresses assigned by the ISP to provide Internet access for the hosts in the Weaver LAN. Functionality can be tested by clicking on the host provided for testing.

Configuration information: router name – Weaver

inside global addresses – 198.18.184.105 - 198.18.184.110/29 inside local addresses - 192.168.100.17 – 192.168.100.30/28 number of inside hosts – 14



A network associate is configuring a router for the weaver company to provide internet access. The ISP has provided the company six public IP addresses of 198.18.184.105 198.18.184.110. The company has 14 hosts that need to access the internet simultaneously. The hosts in the company LAN have been assigned private space addresses in the range of 192.168.100.17 – 192.168.100.30.

Answer:

Explanation: The company has 14 hosts that need to access the internet simultaneously but we just have 6 public IP addresses from 198.18.184.105 to 198.18.184.110/29.

Therefore we have to use NAT overload (or PAT) Double click on the Weaver router to open it Router>enable

Router#configure terminal

First you should change the router's name to Weaver

Router(config)#hostname Weaver

Create a NAT pool of global addresses to be allocated with their netmask. Weaver(config)#ip nat pool mypool 198.18.184.105 198.18.184.110 netmask 255.255.255.248

Create a standard access control list that permits the addresses that are to be translated.

Weaver(config)#access-list 1 permit 192.168.100.16 0.0.0.15

Establish dynamic source translation, specifying the access list that was defined in the prior step.

Weaver(config)#ip nat inside source list 1 pool mypool overload

This command translates all source addresses that pass access list 1, which means a source address from 192.168.100.17 to 192.168.100.30, into an address from the pool named mypool (the pool contains addresses from 198.18.184.105 to 198.18.184.110).

Overload keyword allows to map multiple IP addresses to a single registered IP address (many-to-one) by using different ports.

The question said that appropriate interfaces have been configured for NAT inside and NAT outside statements.

This is how to configure the NAT inside and NAT outside, just for your understanding:

Weaver(config)#interface fa0/0 Weaver(config-if)#ip nat inside Weaver(config-if)#exit Weaver(config)#interface s0/0 Weaver(config-if)#ip nat outside Weaver(config-if)#end

Finally, we should save all your work with the following command:

Weaver#copy running-config startup-config

Check your configuration by going to "Host for testing" and type:

C :\>ping 192.0.2.114

The ping should work well and you will be replied from 192.0.2.114

NEW QUESTION 317

Which VLAN bridge priority value will make a switch as root for a given VLAN from the below options by the spanning-tree vlan vlan-id root command?

- A. 16384

- B. 8192
- C. 28672
- D. 32768

Answer: B

NEW QUESTION 320

Which two functions can be performed by a local DNS server? (Choose two)

- A. transferring spirt horizon traffic between zones
- B. Forwarding name resolution requests to an external DNS server
- C. assigning IP addresses to local clients
- D. resolving names locally
- E. copying updatedIOS images to Cisco switches

Answer: BD

NEW QUESTION 323

Which keyword in a NAT configuration enables the use of one outside IP address for multiple inside hosts?

- A. source
- B. static
- C. pool
- D. overload

Answer: D

NEW QUESTION 325

Why would a network administrator configure port security on a switch?

- A. to limit the number of Layer 2 broadcasts on a particular switch port
- B. to prevent unauthorized Telnet access to a switch port
- C. to prevent unauthorized hosts from accessing the LAN
- D. block unauthorized access to the switch management interfaces

Answer: C

NEW QUESTION 330

Which VLAN bridge priority value is assigned by the set spantree root command?

- A. 8192
- B. 16384
- C. 28672
- D. 32768

Answer: A

NEW QUESTION 334

Which two statements are true regarding ICMP packets? (Choose two.)

- A. They are encapsulated within IP datagrams.
- B. They guarantee datagram delivery.
- C. TRACERT uses ICMP packets.
- D. They acknowledge receipt of TCP segments.
- E. They are encapsulated within UDP datagrams.

Answer: AC

NEW QUESTION 339

Which command can you enter in a network switch configuration so that learned mac addresses are saved in configuration as they connect ?

- A. Switch(config-if)#Switch port-security
- B. Switch(config-if)#Switch port-security Mac-address sticky
- C. Switch(config-if)#Switch port-security maximum 10
- D. Switch(config-if)#Switch mode access

Answer: B

NEW QUESTION 340

Which two statements about access points are true? (Choose Two)

- A. They can provide access within enterprises and to the public.
- B. in Most cases, they are physically connected to other network devices to provide network connectivity.
- C. They can proterct a network from internal and external threats.
- D. Most access points provide Wi-Fi and Bluetooth connectivity.

E. They must be hardwired to a modem.

Answer: CD

NEW QUESTION 342

Central Florida Widgets recently installed a new router in their office. Complete the network installation by performing the initial router configurations and configuring R1PV2 routing using the router command line interface (CLI) on the RC.

Configure the router per the following requirements: Name of the router is R2

Enable. secret password is cisco

The password to access user EXEC mode using the console is cisco2 The password to allow telnet access to the router is cisco3

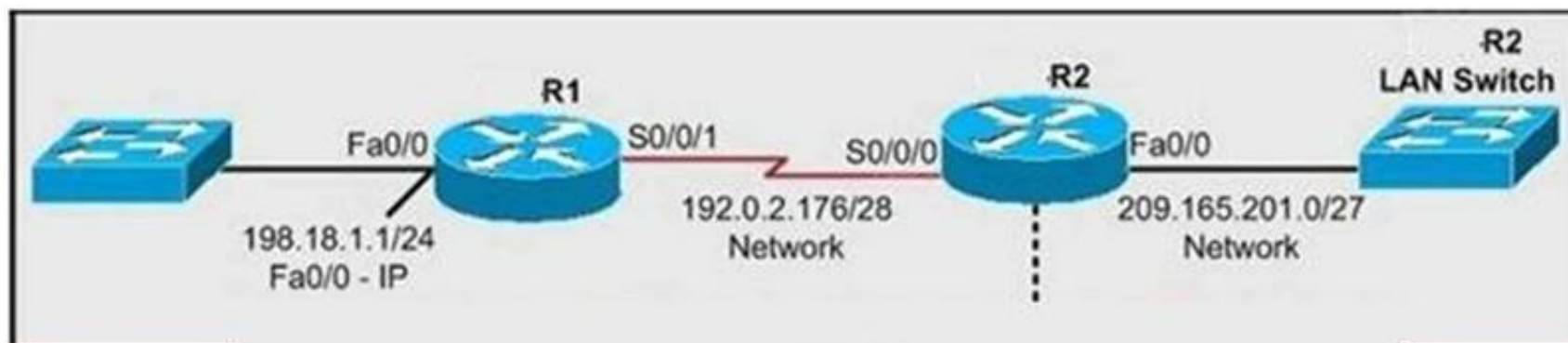
IPv4 addresses must be configured as follows:

Ethernet network 209.165.201.0/27 - router has fourth assignable host address in subnet Serial network is 192.0.2.176/28 - router has last assignable host address in the subnet. Interfaces should be enabled.

Router protocol is RIPv2 Attention:

In practical examinations, please note the following, the actual information will prevail.

1. Name of the router is xxx
2. Enable. secret password is xxx
3. Password In access user EXEC mode using the console is xxx
4. The password to allow telnet access to the router is xxx
5. IP information



Answer:

Explanation: Router>enable

Router#config terminal

Router(config)#hostname R2

R2(config)#enable secret Cisco 1

R2(config)#line console 0

R2(config-line)#password Cisco 2

R2(config-line)#exit

R2(config)#line vty 0 4

R2(config-line)#password Cisco 3

R2(config-line)#login

R2(config-line)#exit

R2(config)#interface fa0/0

R2(config-if)#ip address 209.165.201.4 255.255.255.224

R2(config)#interface s0/0/0

R2(config-if)#ip address 192.0.2.190 255.255.255.240

R2(config-if)#no shutdown

R2(config-if)#exit

R2(config)#router rip

R2(config-router)#version 2

R2(config-router)#network 209.165.201.0

R2(config-router)#network 192.0.2.176

R2(config-router)#end

R2#copy run start

NEW QUESTION 345

Which option must occur before a workstation can exchange HTTP packets with a web server?

- A. An ICMP connection must be established between the workstation and the web server.
- B. A UDP connection must be established between the workstation and its default gateway.
- C. A TCP connection must be established between the workstation and its default gateway.
- D. A UDP connection must be established between the workstation and the web server.
- E. An ICMP connection must be established between the workstation and its default gateway.
- F. A TCP connection must be established between the workstation and the web server.

Answer: F

NEW QUESTION 349

If two OSPF neighbors have formed complete adjacency and are exchanging link-state advertisements, which state have they reached?

- A. Exstart
- B. 2-Way
- C. FULL
- D. Exchange

Answer: C

Explanation: <https://www.google.com/search?q=state+ospf&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjg7ebXjtLVAh>

NEW QUESTION 350

Which command do you enter to view EIGRPv6 adjacencies?

- A. show ipv6 eigrp 1 interface
- B. show ipv6 route eigrp
- C. showipv6 eigrp neighbors
- D. show running-configuration eigrp

Answer: C

NEW QUESTION 351

Which IPsec security protocol should be used when confidentiality is required?

- A. MD5
- B. PSK
- C. AH
- D. ESP

Answer: D

NEW QUESTION 355

Which three statements are typical characteristics of VLAN arrangements? (Choose three.)

- A. VLANs cannot span multiple switches.
- B. VLANs typically decrease the number of collision domains.
- C. Connectivity between VLANs requires a Layer 3 device.
- D. Each VLAN uses a separate address space.
- E. A new switch has no VLANs configured.
- F. A switch maintains a separate bridging table for each VLAN.

Answer: CDF

NEW QUESTION 356

Which command do we use to see SNMP version

- A. show snmp pending
- B. show snmp engineID
- C. snmp-server something

Answer: A

Explanation: ref: https://www.cisco.com/c/en/us/td/docs/ios/12_2/configfun/command/reference/ffun_r/frf014.html#wp1053304

NEW QUESTION 359

Which command can you enter to configure an IPv6 static route?

- A. router(config)#ipv6 route FE80:0202::/32 serial 0/1 1
- B. router(config)#ipv6 route FE80:0202::/32 serial 0/1 201
- C. router(config)#ipv6 route ::/0 serial 0/1
- D. router(config)#ipv6 route static resolve default

Answer: B

NEW QUESTION 360

Which command can you enter on a switch to determine the current SNMP security model ?

- A. Show snmp pending
- B. show snmp group
- C. snmp server contact
- D. show snmp engineID

Answer: B

Explanation: show snmp group

To display the names of groups on the router and the security model, the status of the different views, and the storage type of each group, use the show snmp group EXEC command.

https://www.cisco.com/c/en/us/td/docs/ios/12_2/configfun/command/reference/ffun_r/frf014.html

NEW QUESTION 361

Which NAT term is defined as a group of addresses available for NAT use?

- A. NAT pool
- B. dynamic NAT
- C. static NAT
- D. one-way NAT

Answer: A

NEW QUESTION 363

You work as a network engineer for SASCOM Network Ltd company. On router HQ, a provider link has been enabled and you must configure an IPv6 default route on HQ and make sure that this route is advertised in IPv6 OSPF process. Also, you must troubleshoot another issue. The router HQ is not forming an IPv6 OSPF neighbor relationship with router BR.

Topology Details

Two routers HQ and BR are connected via serial links.

Router HQ has interface Ethernet0/1 connected to the provider cloud and interface Ethernet 0/0 connected to RA1

Router BR has interface Ethernet 0/0 connected to another router RA2.

IPv6 Routing Details

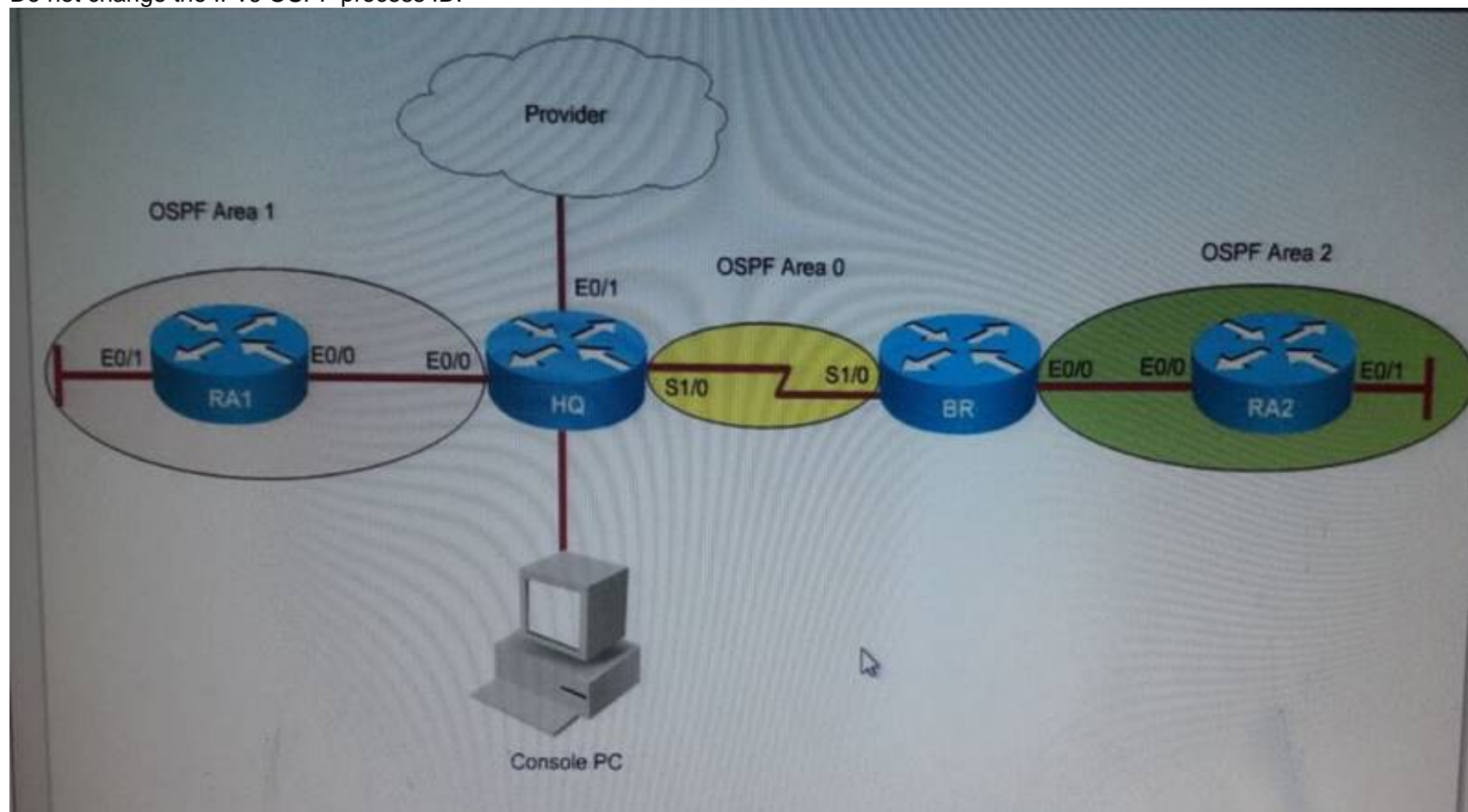
All routers are running IPv6 OSPF routing with process ID number 100 Refer to the topology diagram for information about the OSPF areas The Loopback 0 IPv4 address is the OSPF router ID on each router

Configuration requirements

- Configure IPv6 default route on router HQ with default gateway as 2001:DB8:B:B1B2::1.
- Verify by pinging provider test IPv6 address 2001:DB8:0:1111:1 after configuring default route on HQ.
- Make sure that the default route is advertised in IPv6 OSPF on router HQ This default route should be advertised only when HQ has a default route in its routing table.
- Router HQ is not forming IPv6 OSPF neighbor with BR. You must troubleshoot and resolve this issue Special Note: To gain the maximum number of points, you must complete the necessary configurations and fix

IPv6 OSPF neighbor issue with router BR IPv6 OSPFv3 must be configured without using address families.

Do not change the IPv6 OSPF process ID.



Answer:

Explanation: 1- configure default route on router HQ : `ipv6 unicast-routing` `ipv6 route ::/0 2001:DB8:B:B1B2::1`

2- advertise this route under ospfv3

`ipv6 router ospf 100`

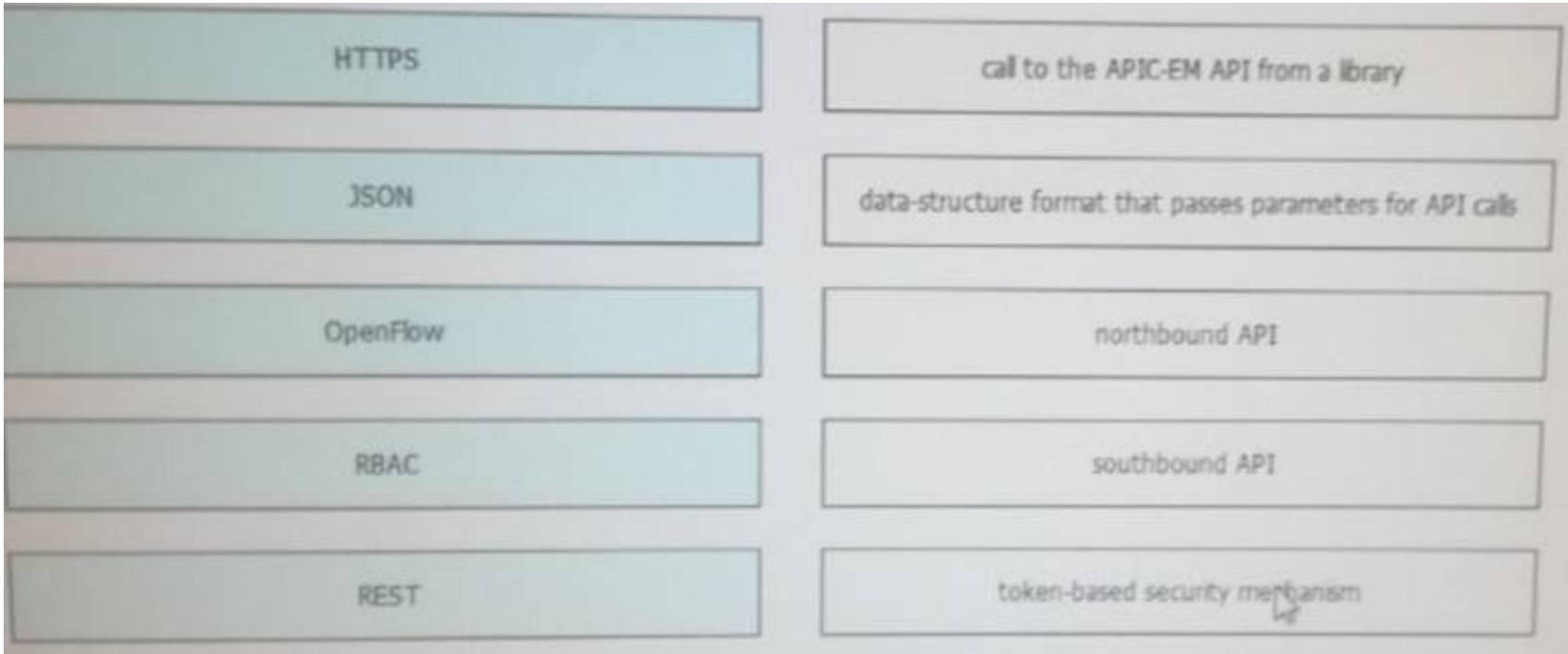
`Default-information originate`

3- fix adjacency problem if a area mismatches We need to enter in s1/0

`ipv6 ospf 100 area 0`

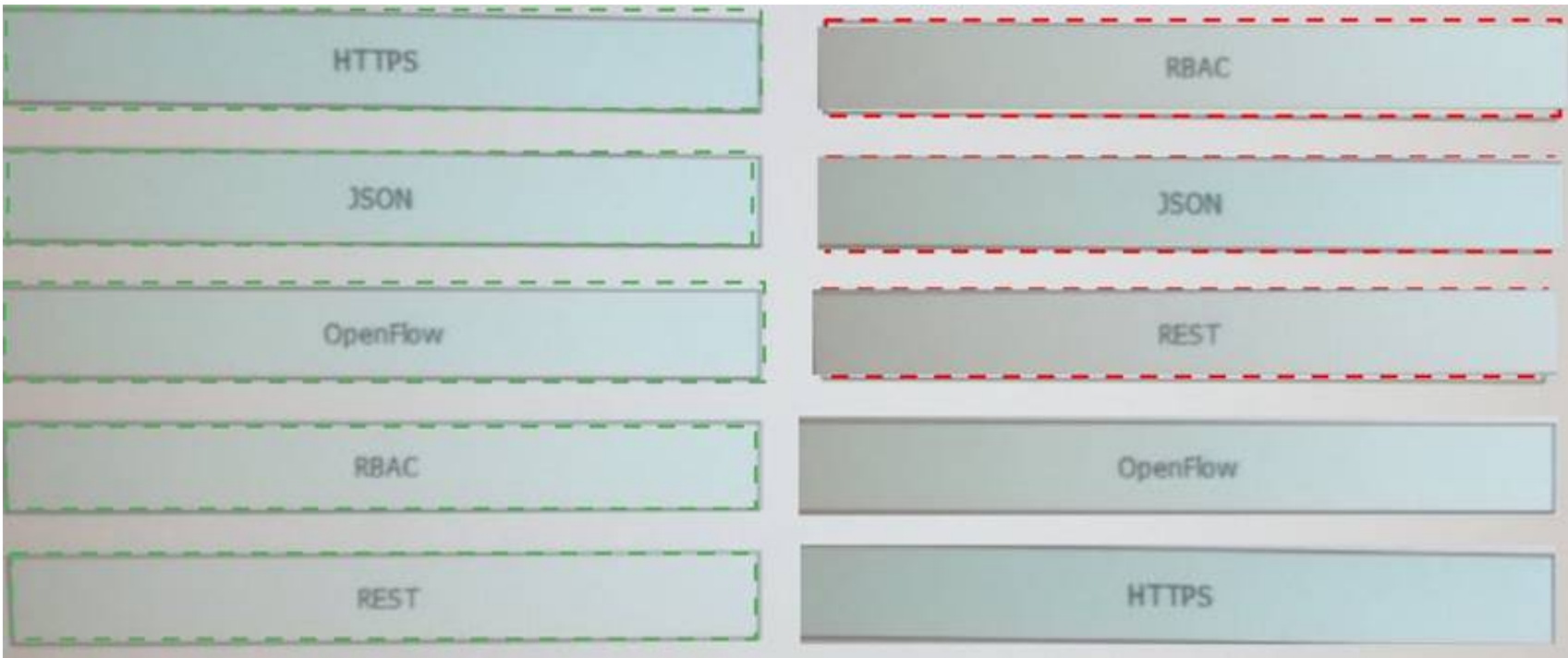
NEW QUESTION 364

Drag and drop the network programmability features from the left onto the correct description on the right.



Answer:

Explanation:



NEW QUESTION 366

Which purpose of the network command in OSPF configuration mode is true?

- A. It defines a wildcard mask to identify the size of the network.
- B. It defines the area ID.
- C. It defines the network by its classful entry.
- D. It defines which networks are used for virtual links.

Answer: A

NEW QUESTION 367

In which CLI configuration mode can you configure the hostname of a device?

- A. line mode
- B. interface mode
- C. global mode
- D. router mode

Answer: C

NEW QUESTION 369

Drag and Drop the route source codes in a routing table from the left onto the correct meanings on the right.

C	directly connected network
D	manually configured static route
I	route learned dynamically by EIGRP
I	route learned dynamically by IGRP
O	route learned dynamically by IS-IS
S	route learned dynamically by OSPF

Answer:

Explanation:

C	C
D	S
I	D
I	I
O	I
S	O

NEW QUESTION 371

After you configure a default route to the Internet on a router, the route is missing from the routing table. Which option describes a possible reason for the problem?

- A. The next-hop address is unreachable.
- B. The default route was configured on a passive interface.
- C. Dynamic routing is disabled.
- D. Cisco Discovery Protocol is disabled on the interface used to reach the next hop.

Answer: A

NEW QUESTION 375

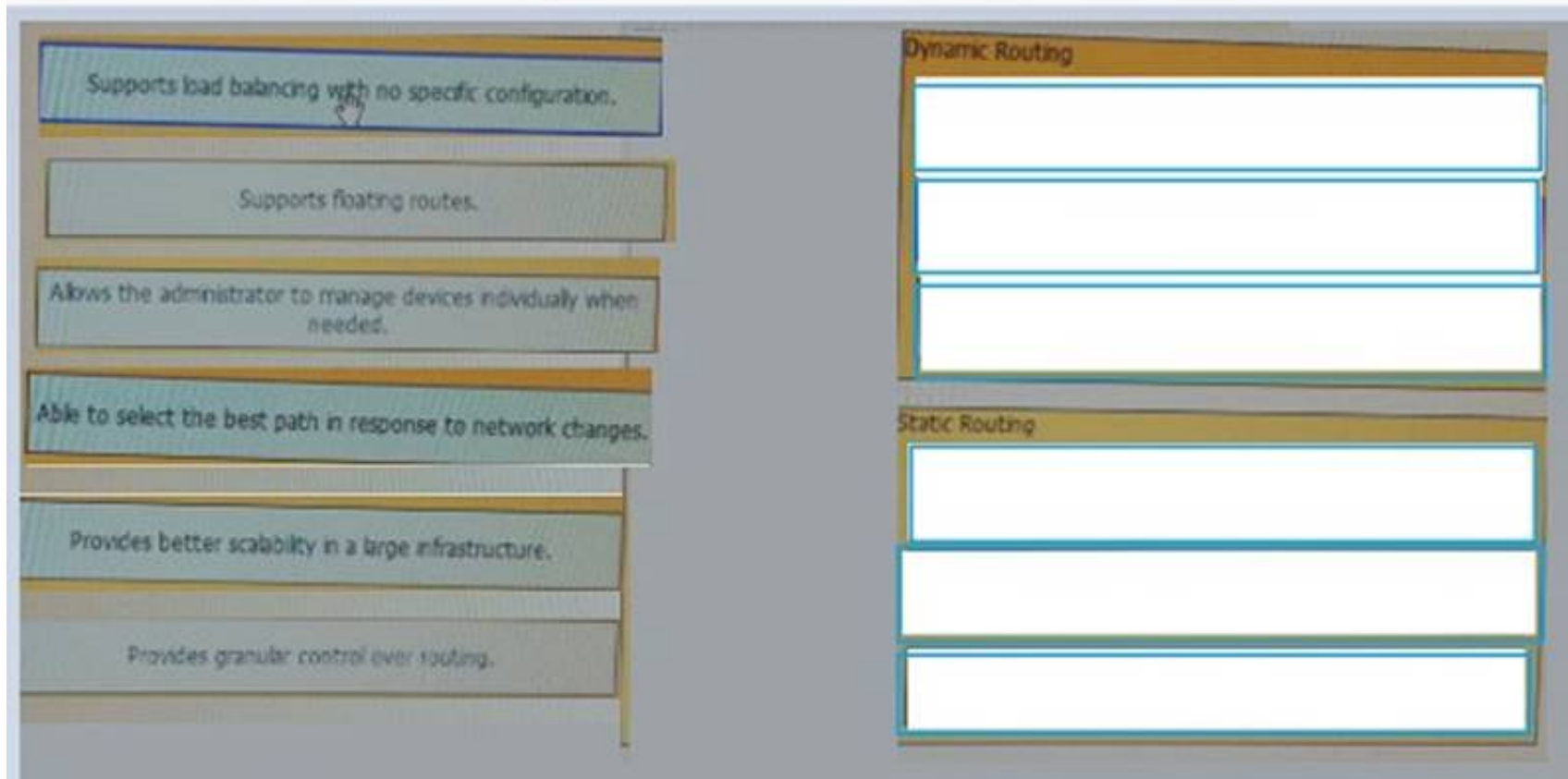
The command `ip route 192.168.100.160 255.255.255.224 192.168.10.2` was issued on a router. No routing protocols or other static routes are configured on the router. Which statement is true about this command?

- A. The interface with IP address 192.168.10.2 is on this router.
- B. The command sets a gateway of last resort for the router.
- C. Packets that are destined for host 192.168.100.160 will be sent to 192.168.10.2.
- D. The command creates a static route for all IP traffic with the source address 192.168.100.160.

Answer: C

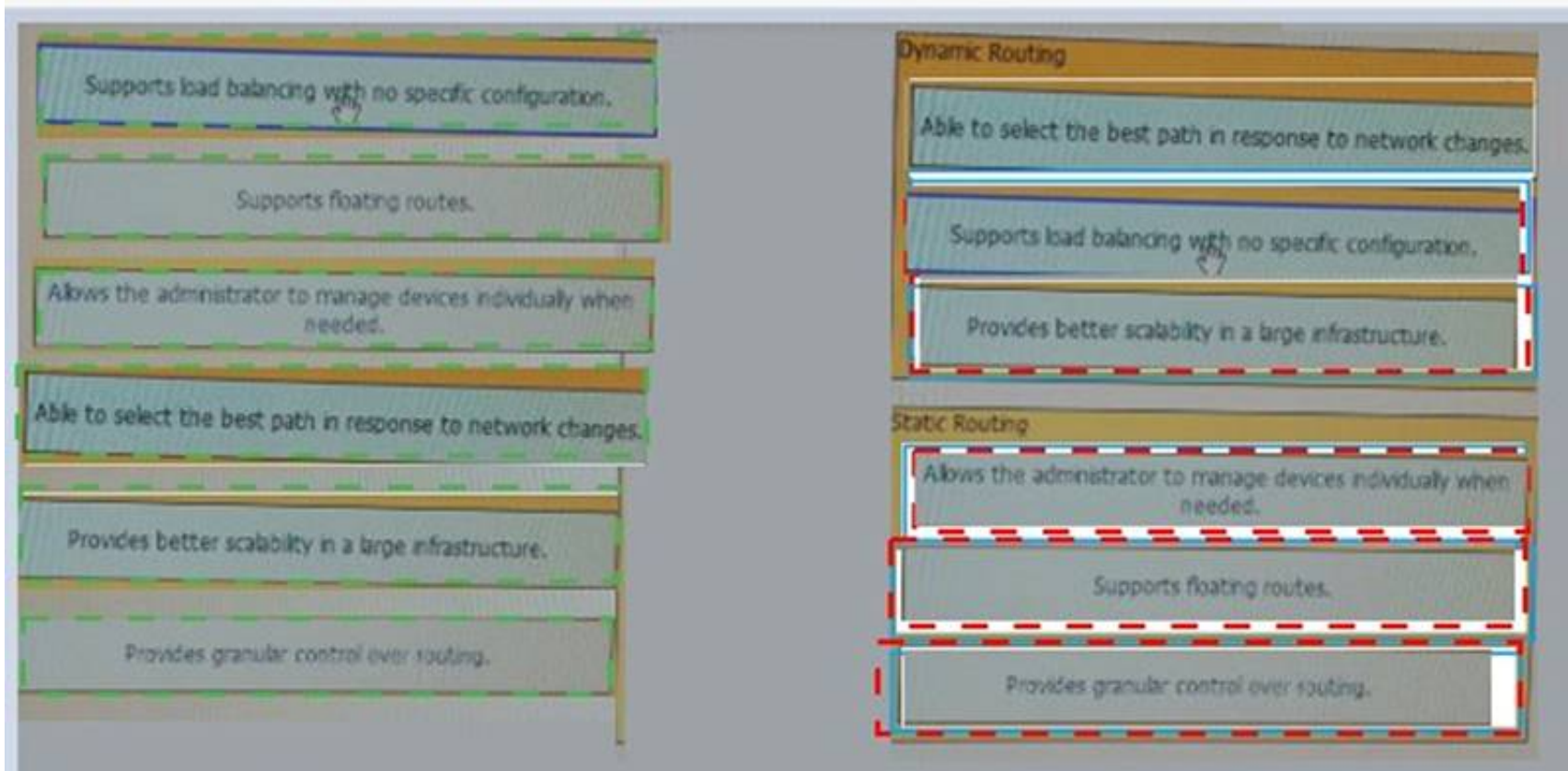
NEW QUESTION 379

Drag and drop each advantage of static or dynamic routing from the left onto the correct routing type on the right.



Answer:

Explanation:



NEW QUESTION 383

An administrator is working with the 192.168.4.0 network, which has been subnetted with a /26 mask. Which two addresses can be assigned to hosts within the same subnet? (Choose two.)

- A. 192.168.4.67
- B. 192.168.4.61
- C. 192.168.4.128
- D. 192.168.4.132
- E. 192.168.4.125
- F. 192.168.4.63

Answer: AE

NEW QUESTION 387

Which subnet address is for the IP address 172.19.20.23/28?

- A. 172.19.20.20
- B. 172.19.20.0
- C. 172.19.20.32
- D. 172.19.20.15

E. 172.19.20.16

Answer: E

NEW QUESTION 392

SwitchA# **show mac-address-table**
 < non-essential output omitted >

Destination Address	Address Type	VLAN	Destination Port
00b0.d056.fe4d	Dynamic	1	FastEthernet0/3
00b0.d043.ac2e	Dynamic	1	FastEthernet0/4
00b0.d0fe.ac32	Dynamic	1	FastEthernet0/5
00b0.d0da.cb56	Dynamic	1	FastEthernet0/6

Frame received by SwitchA:

Source MAC	Destination MAC	Source IP	Destination IP
00b0.d056.fe4d	00b0.d0da.cb56	192.168.40.5	192.168.40.6


Refer to the exhibit. Which option describes how SwitchA will handle the frame just received?

- A. It will flood the frame out of all the ports except Fa0/3.
- B. It will drop the frame.
- C. It will flood the frame out all ports.
- D. It will forward the frame out of port Fa0/3 only.
- E. It will forward the frame out of port Fa0/6 only.

Answer: E

NEW QUESTION 393

Refer to the exhibit.



Switch A MAC Address Table

Address	Port
00b0.d043.ac2e	FastEthernet0/4
00b0.d0fe.ac32	FastEthernet0/6
00b0.d0da.cb56	FastEthernet0/9

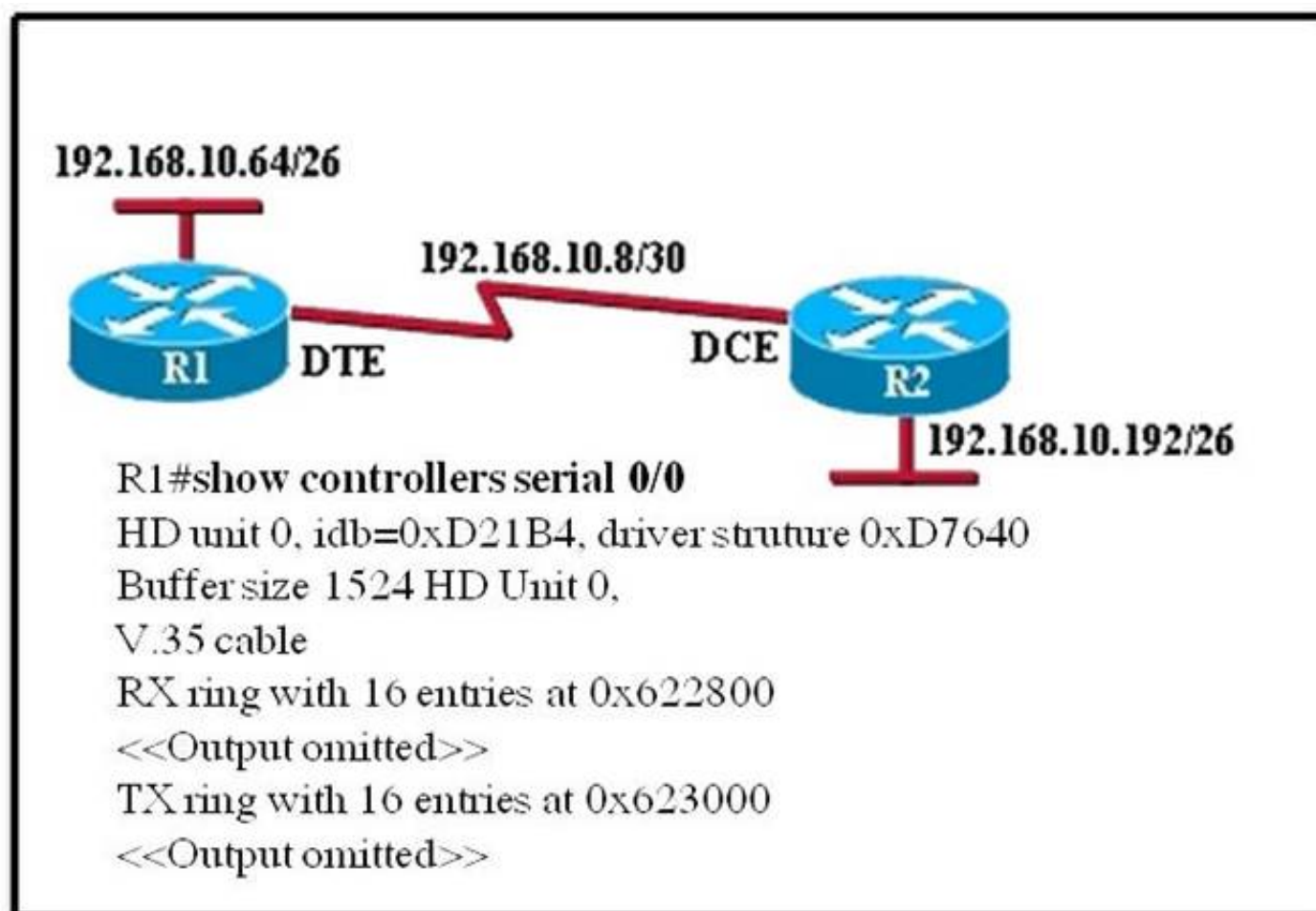
The exhibit is showing the topology and the MAC address table. Host A sends a data frame to host D. Which option describes what the switch will do when it receives the frame from host A?

- A. The switch will flood the frame out of all ports except for port Fa0/3.
- B. The switch will add the destination address of the frame to the MAC address table and forward the frame to host D.
- C. The switch will add the source address and port to the MAC address table and forward the frame to host D.
- D. The switch will discard the frame and send an error message back to host A.

Answer: C

NEW QUESTION 395

Refer to the exhibit.



An administrator cannot connect from R1 to R2. To troubleshoot this problem, the administrator has entered the command shown in the exhibit. Based on the output shown, what could be the problem?

- A. The serial interface is configured for the wrong frame size.
- B. The serial interface does not have a cable attached.
- C. The serial interface has the wrong type of cable attached.
- D. The serial interface has a full buffer.
- E. The serial interface is configured for half duplex.

Answer: C

NEW QUESTION 400

Which task must you perform to enable an IOS device to use DNS services?

- A. Configure manual bindings
- B. Configure a name server
- C. Configure the relay agent information option.
- D. Configure a relay agent information reforwarding policy

Answer: B

Explanation: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipaddr_dns/configuration/15-mt/dns-15-mt-book/dns-config-

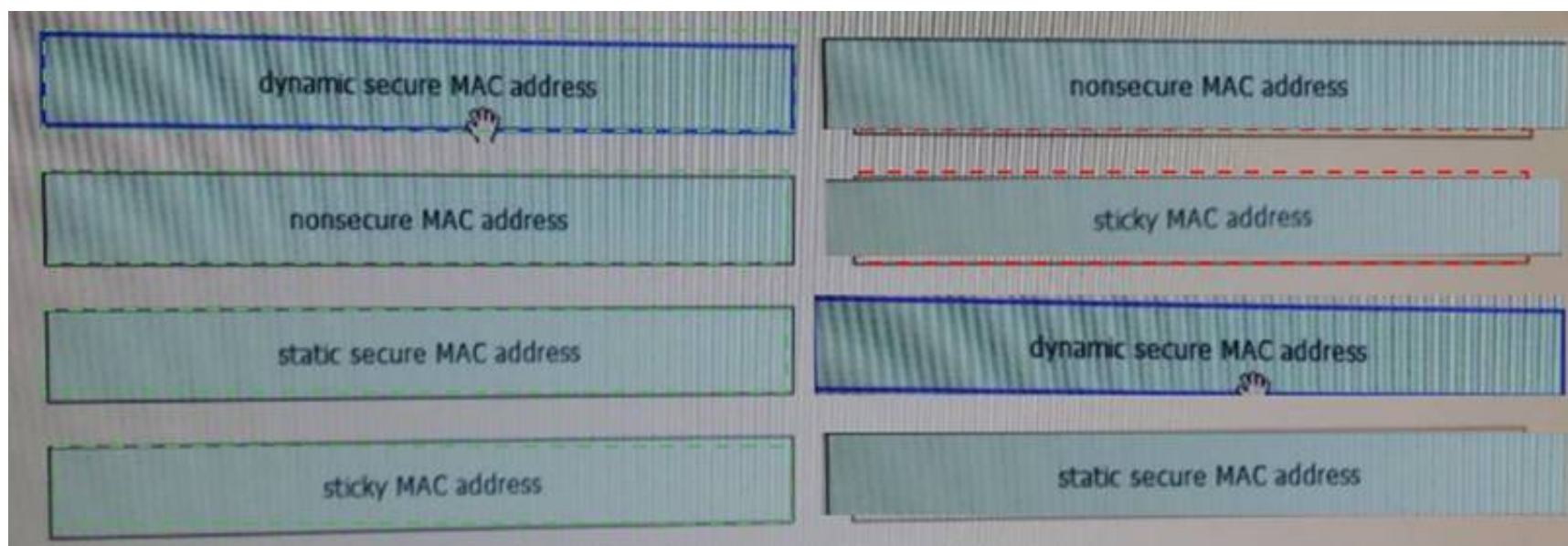
NEW QUESTION 402

Drag and drop the MAC address types from the left onto the correct descriptions on the right?

dynamic secure MAC address	cleared from the CAM table when the switch reboots
nonsecure MAC address	configured with the switchport port-security mac-address command
static secure MAC address	dynamically learned addresses that can be retained permanently
sticky MAC address	requires access VLAN configuration only

Answer:

Explanation:



NEW QUESTION 406

Which functions can be centralized by an SDN controller?

- A. services-plane functions
- B. control-plane functions
- C. data-plane functions
- D. management-plane functions

Answer: C

NEW QUESTION 410

What is the subnet address of 192.168.1.42 255.255.255.248?

- A. 192.168.1.16/28
- B. 192.168.1.32/27
- C. 192.168.1.40/29
- D. 192.168.1.8/29
- E. 192.168.1.48/29

Answer: C

NEW QUESTION 412

On a Cisco switch, which protocol determines if an attached VoIP phone is from Cisco or from another vendor?

- A. CDP
- B. RTP
- C. UDP
- D. TCP

Answer: A

NEW QUESTION 413

Which statement about DHCP address pools is true?

- A. A network must be defined before you can configure a manual binding.
- B. Only one DNSserver can be identified for an individual DHCP group.
- C. You can use a subnet mask of prefix length to define a network.
- D. The domain name of the DHCP pool is specified in the global configuration of the router.

Answer: C

NEW QUESTION 415

At which layer of the OSI model does the protocol that provides the information that is displayed by the show cdp neighbors command operate?

- A. data link
- B. application
- C. network
- D. transport
- E. physical

Answer: A

NEW QUESTION 416

Which value can you modify to configure a specific interface as the preferred forwarding interface?

- A. the VLAN priority
- B. the hello time

- C. the port priority
- D. the interface number

Answer: C

NEW QUESTION 421

Which statement about 6to4 tunneling is true?

- A. One tunnel endpoint must be configured with IPv4 only.
- B. Both tunnel endpoint must be configured with IPv4 only.
- C. It establishes a point-to-point tunnel.
- D. Both tunnel endpoints must support IPv4 and IPv6.

Answer: D

NEW QUESTION 422

Which technique can you use to route IPv6 traffic over an IPv4 infrastructure?

- A. NAT
- B. 6to4 tunneling
- C. L2TPv3
- D. dual-stack

Answer: B

NEW QUESTION 425

What are two advantages of dynamic routing? (Choose two)

- A. It produces minimal CPU load.
- B. It can load-balance traffic over multiple link without manual intervention
- C. It allows the network administrator to choose the best route.
- D. it can be implemented easily even in large environments.
- E. it can operate without a Layer 3 device

Answer: BD

Explanation: <http://www.ciscopress.com/articles/article.asp?p=2180210&seqNum=5>

NEW QUESTION 430

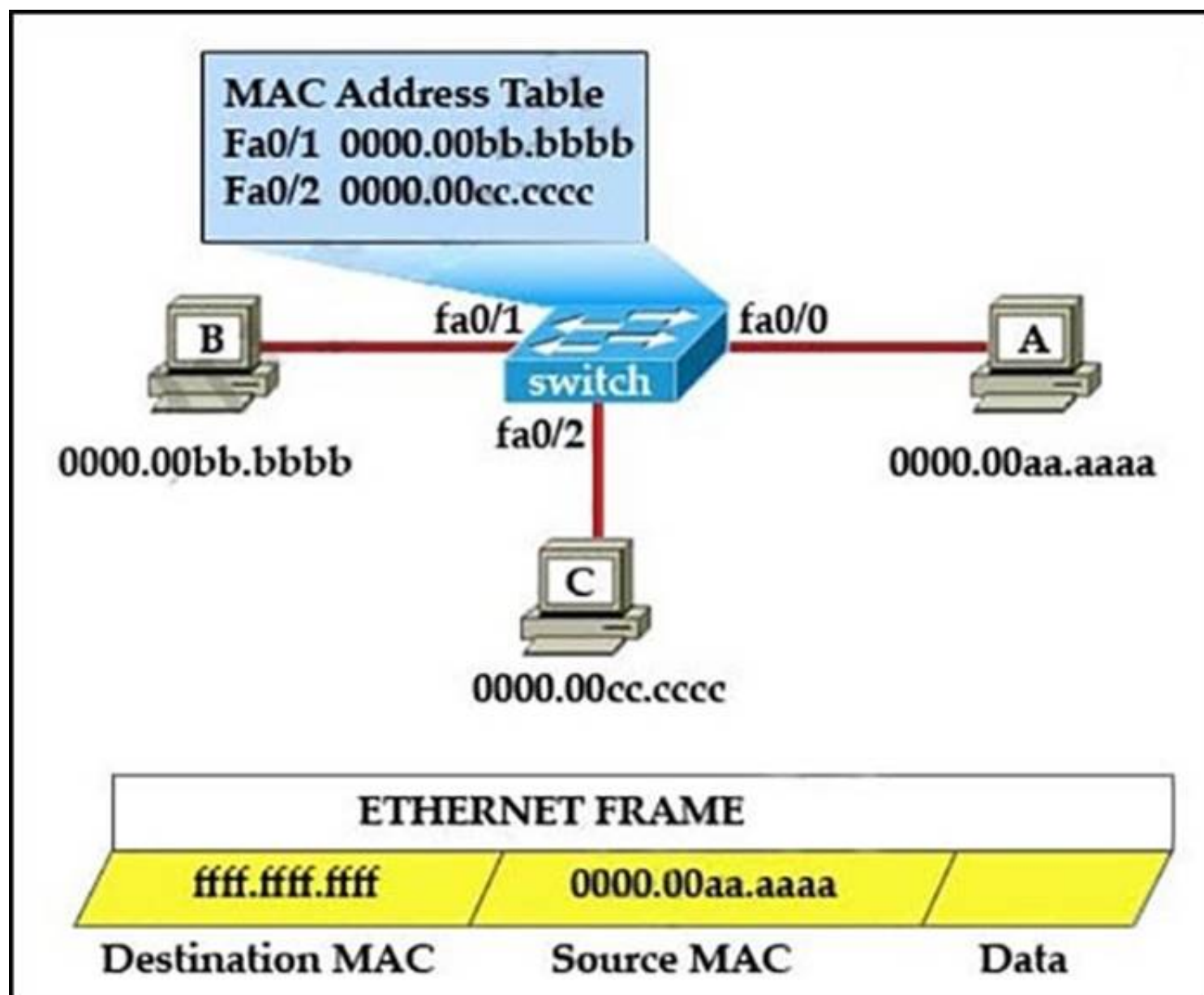
From which PPPoE server configuration does a PPPoE client get an IP address?

- A. AAA authentication
- B. DHCP
- C. dialer interface
- D. virtual-template interface

Answer: D

NEW QUESTION 432

Refer to the exhibit.



The MAC address table is shown in its entirety. The Ethernet frame that is shown arrives at the switch. What two operations will the switch perform when it receives this frame? (Choose two.)

- A. The switch will not forward a frame with this destination MAC address.
- B. The frame will be forwarded out of all the ports on the switch.
- C. The MAC address of ffff.ffff.ffff will be added to the MAC address table.
- D. The frame will be forwarded out of all the active switch ports except for port fa0/0.
- E. The MAC address of 0000.00aa.aaaa will be added to the MAC Address Table.
- F. The frame will be forwarded out of fa0/0 and fa0/1 only.

Answer: DE

NEW QUESTION 433

Which two of these functions do routers perform on packets? (Choose two.)

- A. update the Layer 3 headers of outbound packets so that the packets are properly directed to valid next hops
- B. update the Layer 2 headers of outbound packets with the MAC addresses of the next hops
- C. examine the Layer 3 headers of inbound packets and use that information to determine the complete paths along which the packets will be routed to their ultimate destinations
- D. examine the Layer 3 headers of inbound packets and use that information to determine the next hops for the packets
- E. examine the Layer 2 headers of inbound packets and use that information to determine the next hops for the packets
- F. update the Layer 3 headers of outbound packets so that the packets are properly directed to their ultimate destinations

Answer: BD

NEW QUESTION 436

Which port-security feature allows a switch to learn MAC addresses dynamically and add them to the running configuration?

- A. security violation restrict mode
- B. switch port protection
- C. sticky learning
- D. security violation protect mode

Answer: C

Explanation: You can configure an interface to convert the dynamic MAC addresses to sticky secure MAC addresses and to add them to the running configuration by enabling sticky learning. To enable sticky learning, enter the switchport port-security mac-address sticky interface configuration command. When you enter this command, the interface converts all the dynamic secure MAC addresses, including those that were dynamically learned before sticky learning was enabled, to sticky secure MAC addresses.

NEW QUESTION 439

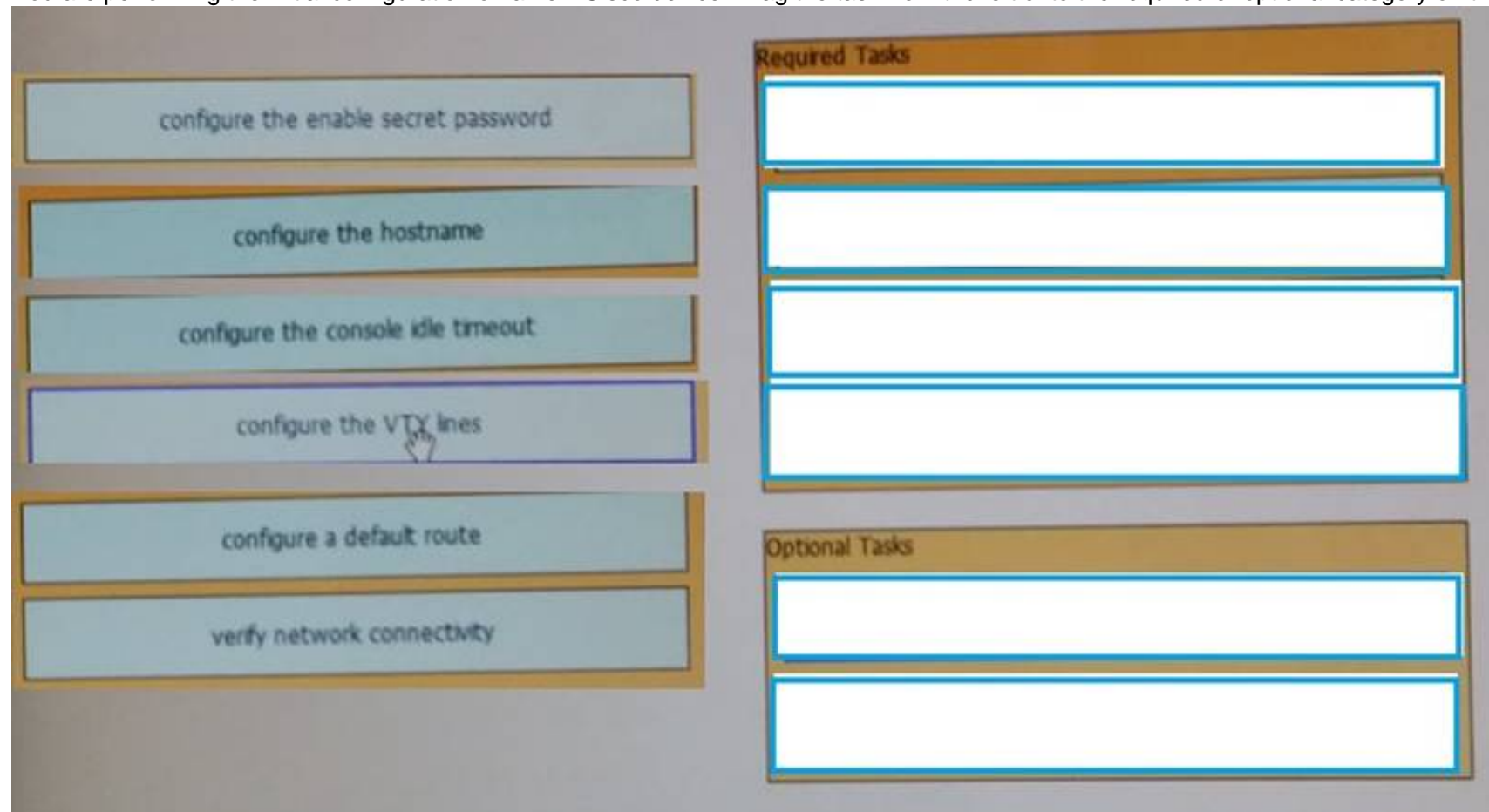
A workstation has just resolved a browser URL to the IP address of a server. Which protocol will the workstation now use to determine the destination MAC address to be placed into frames directed toward the server?

- A. ARP
- B. RARP
- C. DNS
- D. DHCP
- E. HTTP

Answer: A

NEW QUESTION 443

You are performing the initial configuration on a new Cisco device. Drag the task from the left onto the required or optional category on the right.



Answer:

Explanation: https://www.cisco.com/c/en/us/td/docs/routers/access/1900/software/configuration/guide/Software_Configuration.html

NEW QUESTION 444

Which command can you enter to configure an IPv6 floating static route?

- A. router(config)#ipv6 route FE80:0202::/32 serial 0/1 1
- B. router (config)#ipv6 route ::/0 serial 0/1
- C. router(config)#ipv6 route static resolve default
- D. router(config)#ipv6 route FE80.0202::/32 serial 0/1 201

Answer: D

NEW QUESTION 445

In which circumstance is static routing most useful?

- A. on a stub network
- B. on a network with frequent routing changes
- C. on a network that experiences frequent link failures
- D. on a large network that must share routes quickly between routers

Answer: A

NEW QUESTION 448

Which two options will help to solve the problem of a network that is suffering a broadcast storm? (Choose two.)

- A. a Layer 3 switch
- B. a hub
- C. a bridge
- D. an access point
- E. a router

Answer: AE

NEW QUESTION 453

What are types of IPv6 static routes? (Choose Three)

- A. Recursive Static routes
- B. Directly connected static routes
- C. Fully specified static routes
- D. Dynamically specified static routes
- E. injected static routes
- F. Redistributed static routes

Answer: ABC

Explanation: Static Routes
Directly Attached Static Routes
Recursive Static Routes
Fully Specified Static Routes
Floating Static Routes

NEW QUESTION 456

Which statement about using MPLS for WAN connectivity is true?

- A. it cannot be deployed using a single carrier.
- B. It can be deployed in redundant and nonredundant topologies.
- C. It can be deployed using LAN aggregation.
- D. It must be deployed in a redundant topology.

Answer: A

NEW QUESTION 457

How many primary IPv4 addresses can be assigned to an interface?

- A. unlimited
- B. 8
- C. 2
- D. 1

Answer: A

Explanation: Cisco IOS software supports multiple IP addresses per interface. You can specify an unlimited number of secondary addresses.

NEW QUESTION 460

Which Cisco SDN controller supports existing enterprise network devices?

- A. APIC-EM
- B. OpenFlow
- C. Open SDN
- D. ACI

Answer: C

NEW QUESTION 464

Which two statements about RIPv2 are true? (Choose two)

- A. It must be manually enabled after RIP is configured as the routing protocol
- B. It uses multicast address 224.0.0.2 to share routing information between peers
- C. its default administrative distances 120
- D. It is a link-state routing protocol
- E. It is an EGP routing protocol

Answer: AC

NEW QUESTION 465

For which two protocols can PortFast alleviate potential host startup issues? (Choose two.)

- A. DHCP
- B. DNS
- C. OSPF
- D. RIP
- E. CDP

Answer: AE

NEW QUESTION 466

Which two VLANs are reserved for system use only? (Choose two.)

- A. 2
- B. 4095

- C. 1001
D. 4096
E. 1

Answer: B

Explanation:

VLANs	Range	Usage	Propagated by VTP
0, 4095	Reserved	For system use only. You cannot see or use these VLANs.	N/A
1	Normal	Cisco default. You can use this VLAN but you cannot delete it.	Yes
2-1001	Normal	Used for Ethernet VLANs; you can create, use, and delete these VLANs.	Yes
1002-1005	Normal	Cisco defaults for FDDI and Token Ring. You cannot delete VLANs 1002-1005.	Yes
1006-4094	Extended	For Ethernet VLANs only. When configuring extended-range VLANs, note the following: <ul style="list-style-type: none"> Layer 3 ports and some software features require internal VLANs. Internal VLANs are allocated from 1006 and up. You cannot use a VLAN that has been allocated for such use. To display the VLANs used internally, enter the show vlan internal usage command. Switches running Catalyst product family software do not support configuration of VLANs 1006-1024. If you configure VLANs 1006-1024, ensure that the VLANs do not extend to any switches running Catalyst product family software. You must enable the extended system ID to use extended range VLANs. See the "Enabling the Extended System ID" section. 	No

NEW QUESTION 470

Which statements is true about Router on Stick?

- A. When a router have multiple subnets on a single physical link.
B. When a router have single subnet on multiple physical links.
C. When a router have multiple interface on single physical links.
D. When a router have single interface on multiple physical links

Answer: A

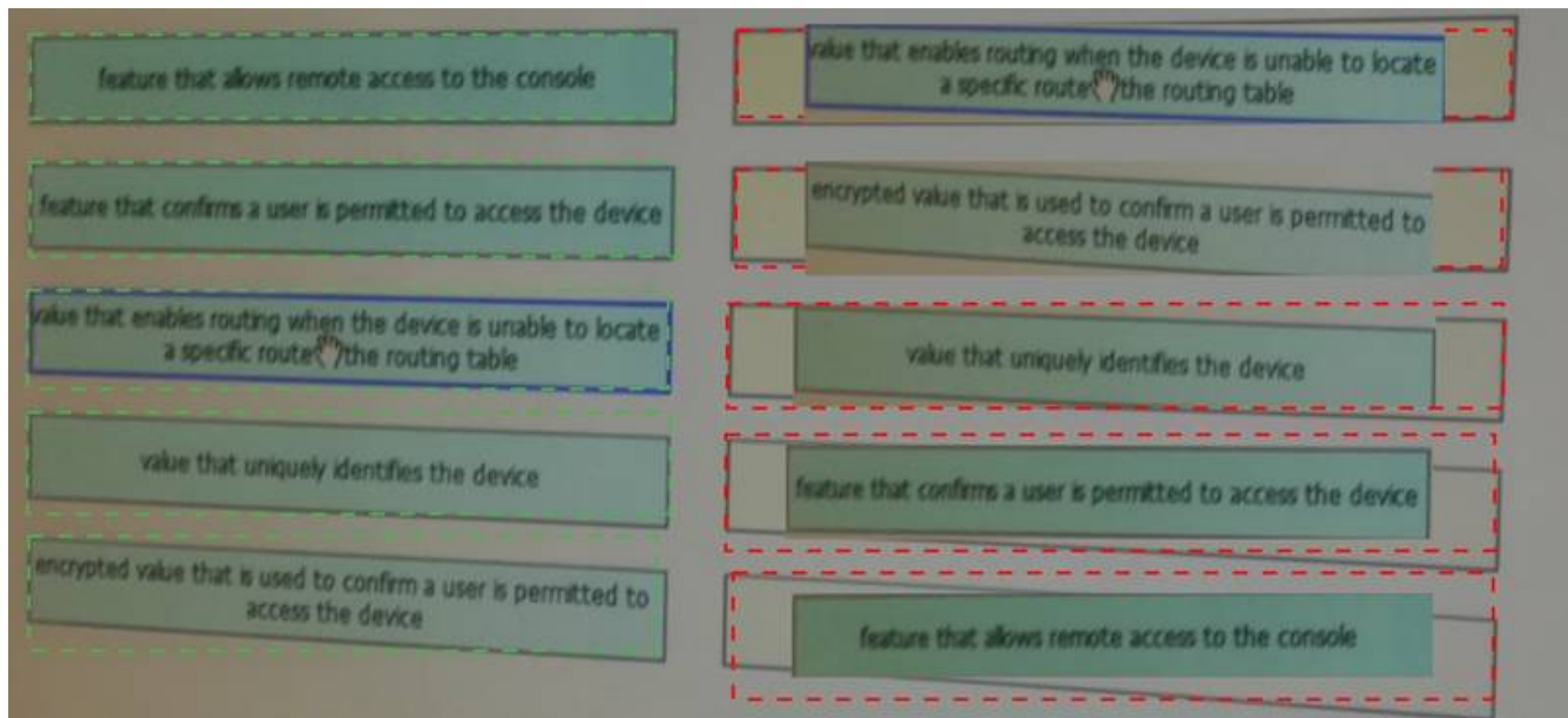
NEW QUESTION 475

Drag and drop the descriptions of performing an initial device configuration from the left onto the correct features or components on the right.

feature that allows remote access to the console	default gateway
feature that confirms a user is permitted to access the device	enable secret password
value that enables routing when the device is unable to locate a specific route in the routing table	hostname
value that uniquely identifies the device	password
encrypted value that is used to confirm a user is permitted to access the device	VTY line

Answer:

Explanation:



NEW QUESTION 476

Which feature can you use to restrict SNMP queries to a specific OID tree?

- A. server group
- B. a community
- C. a view record
- D. an access group

Answer: C

NEW QUESTION 481

Which statement about the default switch configuration for remote access managements is true?

- A. The system name is set to Cisco.
- B. The Telnet password is set to cisco.
- C. No default gateway is defined.
- D. One IP address is preconfigured.

Answer: C

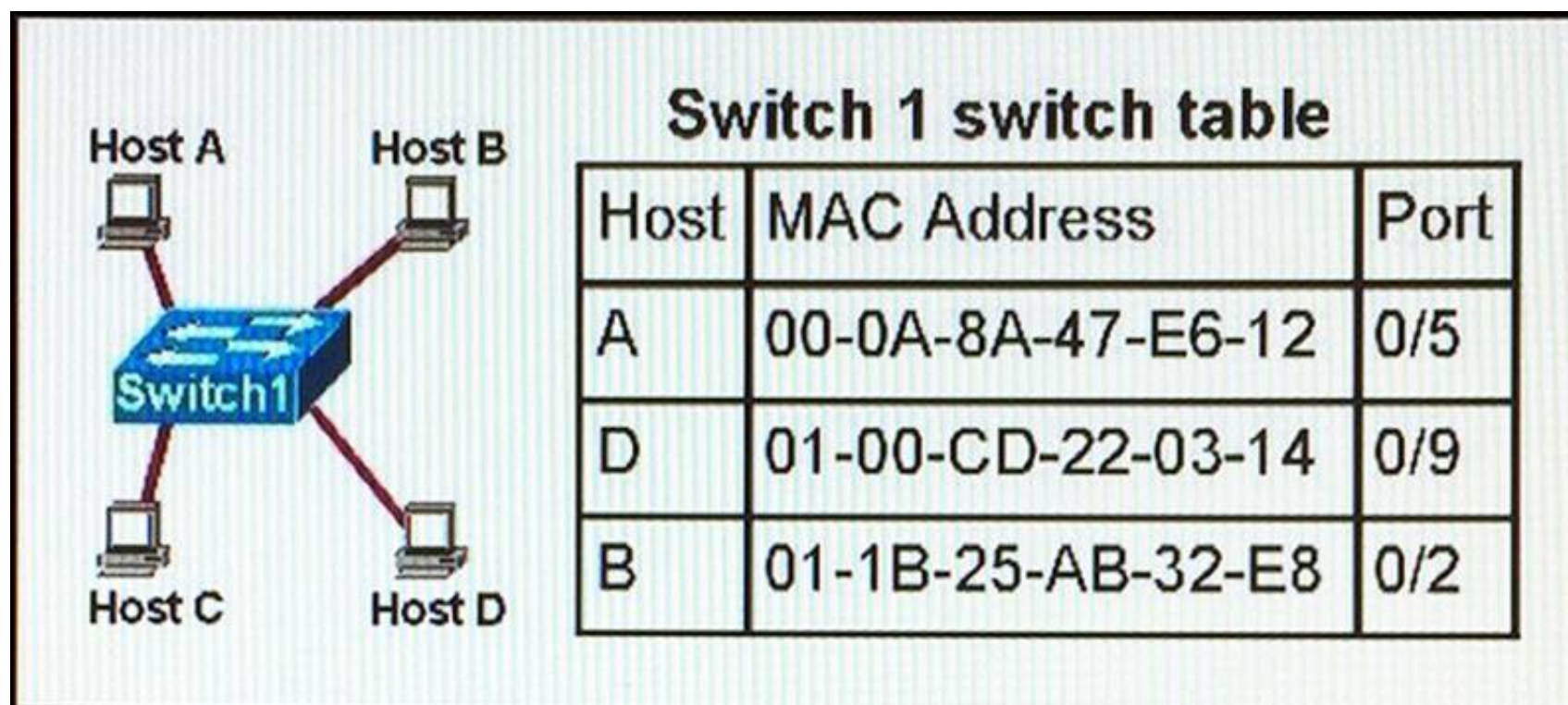
NEW QUESTION 485

Which three are the possible trunking modes for a switch port? (Choose three.)

- A. forwarding
- B. desirable
- C. transparent
- D. Auto
- E. on
- F. off

Answer: BDE

NEW QUESTION 489



Refer to the topology and switching table shown in the graphic. Host B sends a frame to Host C. Which option describes what the switch will do with the frame?

- A. send an ICMP Host Unreachable message to Host B
- B. return the frame to Host B
- C. drop the frame
- D. send the frame out all ports except port 0/2
- E. record the destination MAC address in the switching table and send the frame directly to Host C
- F. send an ARP request for Host C

Answer: D

NEW QUESTION 494

Which sequence begins a unique local IPv6 address in binary notation?

- A. 11111110
- B. 11111111
- C. 00000000
- D. 11111100

Answer: A

Explanation: Topic 3, New Pool Exam C

NEW QUESTION 498

Which of the following correctly describe steps in the OSI data encapsulation process? (Choose two)

- A. The transport layer divides a data stream into segments and may add reliability and flow control information.
- B. The data link layer adds physical source and destination addresses and an FCS to the segment.
- C. Packets are created when the network layer encapsulates a frame with source and destination host addresses and protocol-related control information.
- D. Packets are created when the network layer adds Layer 3 addresses and control information to a segment.
- E. The presentation layer translates bits into voltages for transmission across the physical link.

Answer: AD

Explanation:

The transport layer segments data into smaller pieces for transport. Each segment is assigned a sequence number, so that the receiving device can reassemble the data on arrival.

The transport layer also use flow control to maximize the transfer rate while minimizing the requirements to retransmit. For example, in TCP, basic flow control is implemented by acknowledgment by the receiver of the receipt of data; the sender waits for this acknowledgment before sending the next part.

NEW QUESTION 503

Which two characteristics of an ICMP echo based IP SLA are true ? (choose two)

- A. it requires a remote device to log and maintain collected data
- B. it can use RSPAN to report network statistics to a designated remote port
- C. it aggregates traffic statistics for reporting on a configurable basis
- D. it generates continuous traffic to monitor network performance
- E. it measures traffic to determine the reliability of a connection from a cisco router to a designated end device.

Answer: AE

NEW QUESTION 504

Refer to the exhibit.


```
R1#show ip route
Codes: 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
       i - IS-IS, su - IS-IS summary, 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 192.168.14.4 to network 0.0.0.0

C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
     192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O     192.168.10.0/24 [110/2] via 192.168.14.4, 00:02:01, FastEthernet1/0
O     192.168.10.32/27 [110/11] via 192.168.13.3, 00:00:52, FastEthernet0/1
O     192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, FastEthernet1/1
D     192.168.10.1/32 [90/52778] via 192.168.12.2, 00:03:44, FastEthernet0/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, FastEthernet1/0
```

What is the metric for the route from R1 to 192.168.10.1?

- A. 2
- B. 90
- C. 110
- D. 52778

Answer: D

NEW QUESTION 509

Which option is the benefit of implementing an intelligent DNS for a cloud computing solution?

- A. It reduces the need for a backup data center.
- B. It can redirect user requests to locations that are using fewer network resources.
- C. It enables the ISP to maintain DNS records automatically.
- D. It eliminates the need for a GSS.

Answer: B

NEW QUESTION 511

Which Layer 2 protocol encapsulation type supports synchronous and asynchronous circuits and has built-in security mechanisms?

- A. HDLC
- B. PPP
- C. X.25
- D. Frame Relay

Answer: B

Explanation: PPP: Provides router-to-router and host-to-network connections over synchronous and asynchronous circuits. PPP was designed to work with several network layer protocols, including IP. PPP also has built-in security mechanisms, such as Password Authentication Protocol (PAP) and Challenge Handshake Authentication Protocol (CHAP).

NEW QUESTION 513

Which type of address is the public IP address of a NAT device?

- A. outside global
- B. outside local
- C. inside global
- D. inside local
- E. outside public
- F. inside public

Answer: C

NEW QUESTION 517

Drag and drop the QoS features from the left onto the correct descriptions on the right

best effort	service level that provides basic connectivity without differentiation
CAR	service level that provides preferred handling
hard QoS	service level that provides reserved network resources
NBAR	identification tool ideal for handling web applications
PBR	polices traffic based on its bandwidth allocation
soft QoS	uses route maps to match traffic criteria

Answer:

Explanation: Best effort = service level that provides basic connectivity without differentiation
 CAR = Polices traffic based on its bandwidth allocation
 Hard Qos = service level that provides reserved network resources
 NBAR = identification tool ideal for handling web application
 PBR = uses route maps to match traffic criteria
 Soft Qos = service level that provides preferred handling
http://docwiki.cisco.com/wiki/Quality_of_Service_Networking#CAR:_Setting_IP_Precedence

NEW QUESTION 519

Which two address are defined as private ip addresses ? (Choose two.)

- A. 192.169.32.10
- B. 10.172.76.200
- C. 172.15.2.250
- D. 12.17.1.20
- E. 172.31.255.100

Answer: BE

NEW QUESTION 522

Drag and Drop the PPPoE message types from the left into the sequence in which PPPoE messages are sent on the right.

PADI	1
PADO	2
PADR	3
PADS	4

Answer:

Explanation: PADI PADO PADR PADS

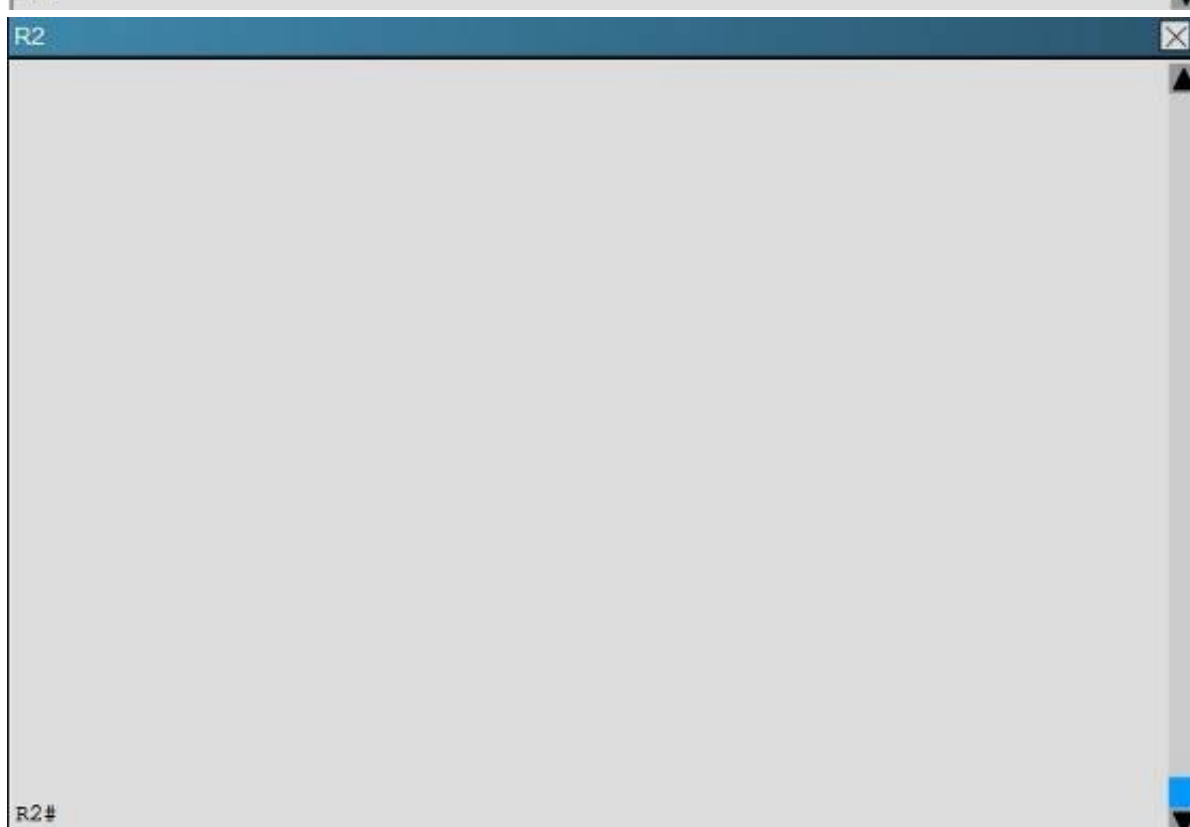
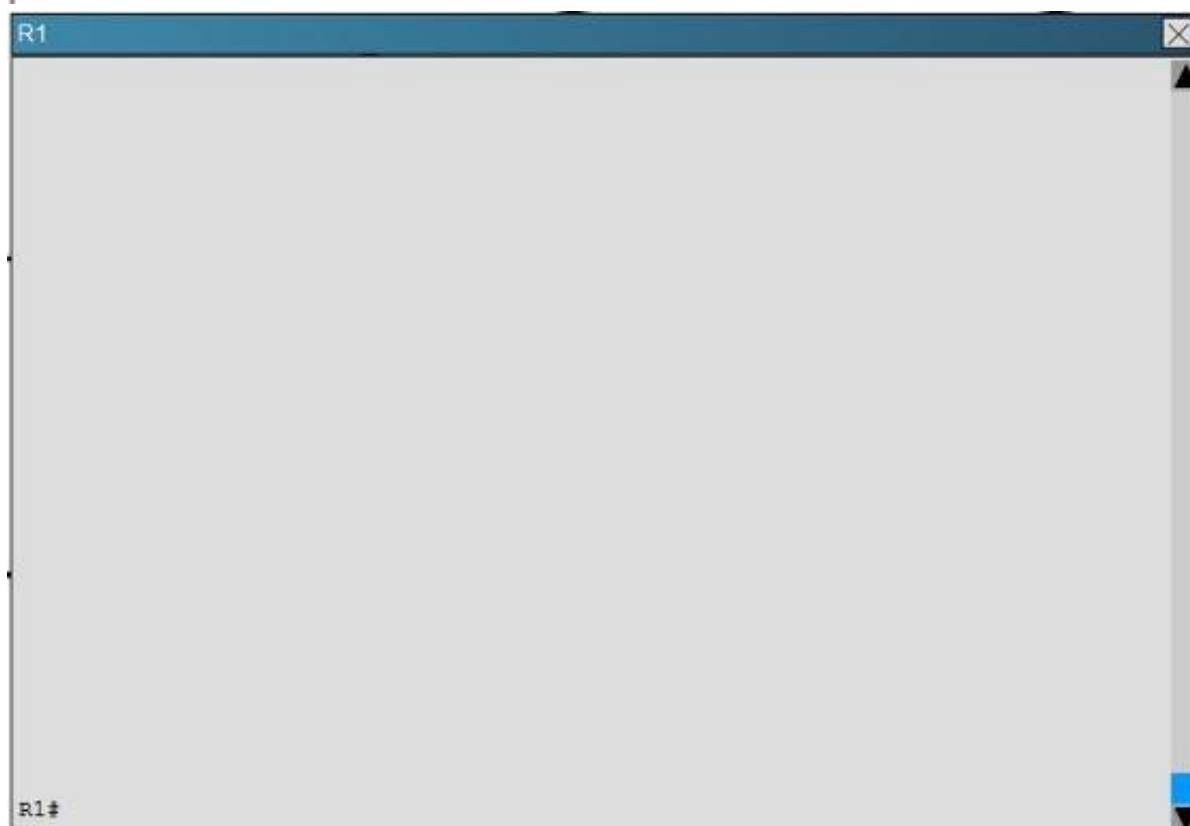
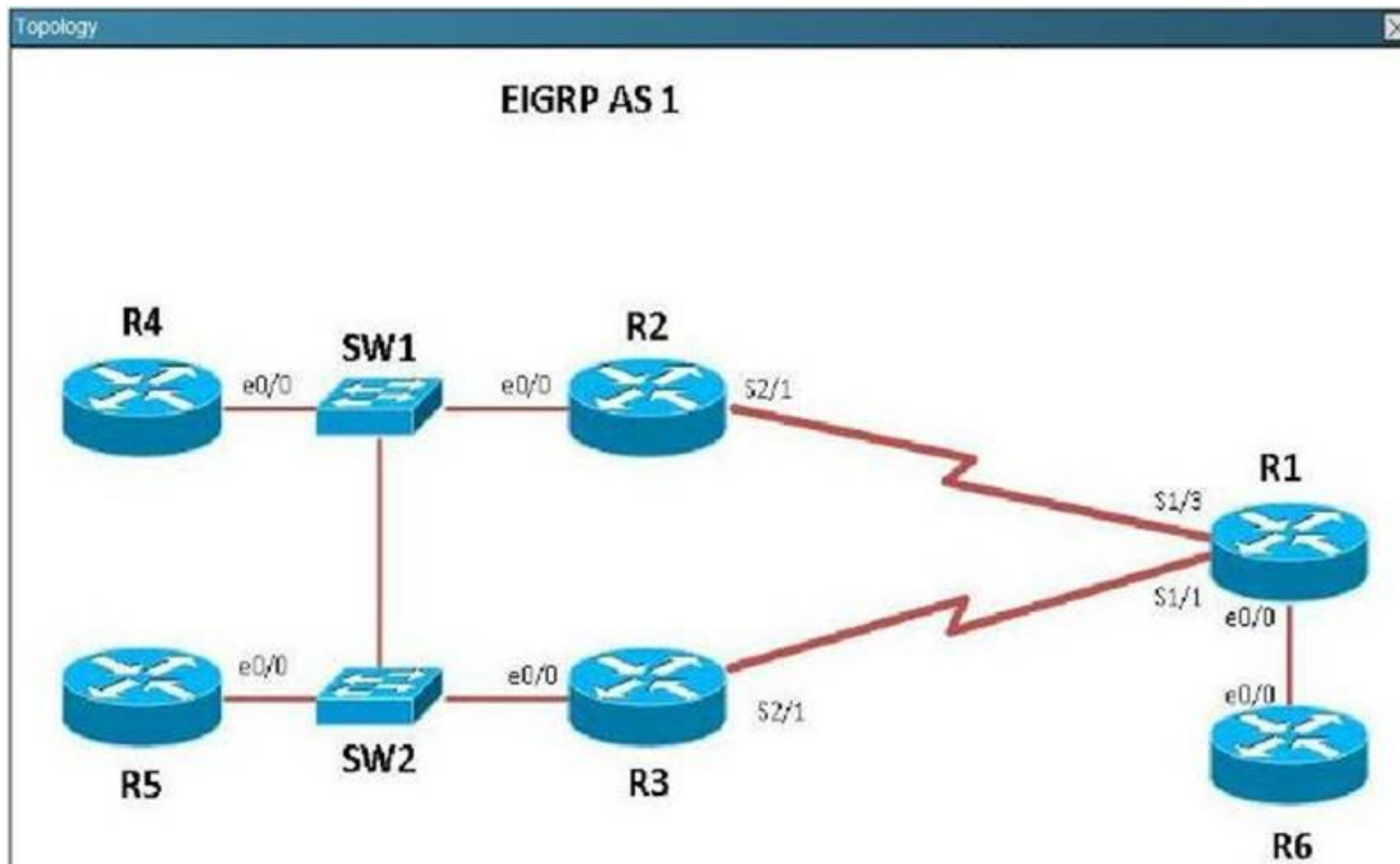
NEW QUESTION 527

Scenario

Refer to the topology. Your company has connected the routers R1, R2, and R3 with serial links. R2 and R3 are connected to the switches SW1 and SW2, respectively. SW1 and SW2 are also connected to the routers R4 and R5.

The EIGRP routing protocol is configured.

You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.



R3

R3#

R4

R4#

R5

R5#



The loopback interfaces on R4 with the IP addresses of 10.4.4.4/32, 10.4.4.5/32, and 10.4.4.6/32 are not appearing in the routing table of R5. Why are the interfaces missing?

- A. The interfaces are shutdown, so they are not being advertised.
- B. R4 has been incorrectly configured to be in another AS, so it does not peer with R5.
- C. Automatic summarization is enabled, so only the 10.0.0.0 network is displayed.
- D. The loopback addresses haven't been advertised, and the network command is missing on R4.

Answer: B

Explanation: For an EIGRP neighbor to form, the following must match:
- Neighbors must be in the same subnet

- K values
- AS numbers
- Authentication method and key strings

Here, we see that R4 is configured for EIGRP AS 2, when it should be AS 1.

R4	R5
<pre> ! interface Ethernet0/2 no ip address shutdown ! interface Ethernet0/3 no ip address shutdown ! ! router eigrp 2 network 10.4.4.4 0.0.0.0 network 10.4.4.5 0.0.0.0 network 10.4.4.6 0.0.0.0 network 192.168.123.0 ! ip forward-protocol nd ! ! no ip http server no ip http secure-server ! ! ! </pre>	<pre> interface Ethernet0/2 no ip address shutdown ! interface Ethernet0/3 no ip address shutdown ! ! router eigrp 1 network 10.5.5.5 0.0.0.0 network 10.5.5.55 0.0.0.0 network 10.10.10.0 0.0.0.255 network 192.168.123.0 ! ip forward-protocol nd ! ! no ip http server no ip http secure-server ! ! ! </pre>
<p>--- More (18) ---</p>	<p>control-plane</p>

NEW QUESTION 531

Which three statements accurately describe Layer 2 Ethernet switches? (Choose three.)

- A. Spanning Tree Protocol allows switches to automatically share VLAN information.
- B. Establishing VLANs increases the number of broadcast domains.
- C. Switches that are configured with VLANs make forwarding decisions based on both Layer 2 and Layer 3 address information.
- D. Microsegmentation decreases the number of collisions on the network.
- E. In a properly functioning network with redundant switched paths, each switched segment will contain one root bridge with all its ports in the forwarding state.
- F. All other switches in that broadcast domain will have only one root port.
- G. If a switch receives a frame for an unknown destination, it uses ARP to resolve the address.

Answer: BDE

Explanation: Microsegmentation is a network design (functionality) where each workstation or device on a network gets its own dedicated segment (collision domain) to the switch. Each network device gets the full bandwidth of the segment and does not have to share the segment with other devices. Microsegmentation reduces and can even eliminate collisions because each segment is its own collision domain ->.

Note: Microsegmentation decreases the number of collisions but it increases the number of collision domains.

NEW QUESTION 535

Which two statements about IPv6 and routing protocols are true? (Choose two.)

- A. Link-local addresses are used to form routing adjacencies.
- B. OSPFv3 was developed to support IPv6 routing.
- C. EIGRP, OSPF, and BGP are the only routing protocols that support IPv6.
- D. Loopback addresses are used to form routing adjacencies.
- E. EIGRPv3 was developed to support IPv6 routing.

Answer: AB

NEW QUESTION 536

Which three are benefits of VLANs? (Choose three.)

- A. They increase the size of collision domains.
- B. They allow logical grouping of users by function.
- C. They can enhance network security.
- D. They increase the size of broadcast domains while decreasing the number of collision domains.
- E. They increase the number of broadcast domains while decreasing the size of the broadcast domains.
- F. They simplify switch administration.

Answer: BCE

Explanation:

When using VLAN the number and size of collision domains remain the same -> VLANs allow to group users by function, not by location or geography -> . VLANs help minimize the incorrect configuration of VLANs so it enhances the security of the network -> . VLAN increases the size of broadcast domains but does not decrease the number of collision domains -> .
 VLANs increase the number of broadcast domains while decreasing the size of the broadcast domains which increase the utilization of the links. It is also a big advantage of VLAN -> .
 VLANs are useful but they are more complex and need more administration ->

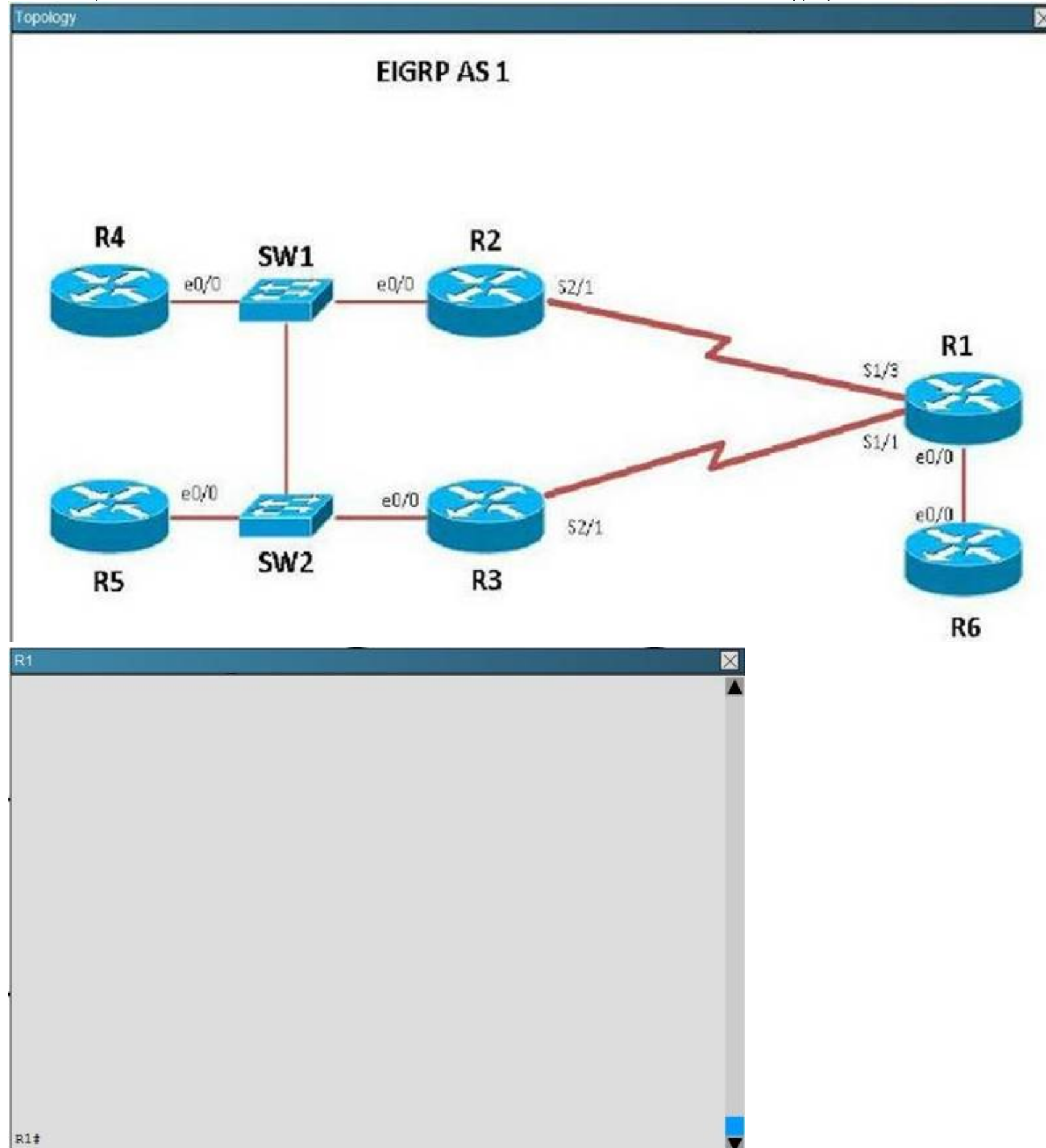
NEW QUESTION 539

Scenario

Refer to the topology. Your company has connected the routers R1, R2, and R3 with serial links. R2 and R3 are connected to the switches SW1 and SW2, respectively. SW1 and SW2 are also connected to the routers R4 and R5.

The EIGRP routing protocol is configured.

You are required to troubleshoot and resolve the EIGRP issues between the various routers. Use the appropriate show commands to troubleshoot the issues.



R2

R2#

R3

R3#

R4

R4#

R5

R5#

R6

R6#

SW1

SW1#

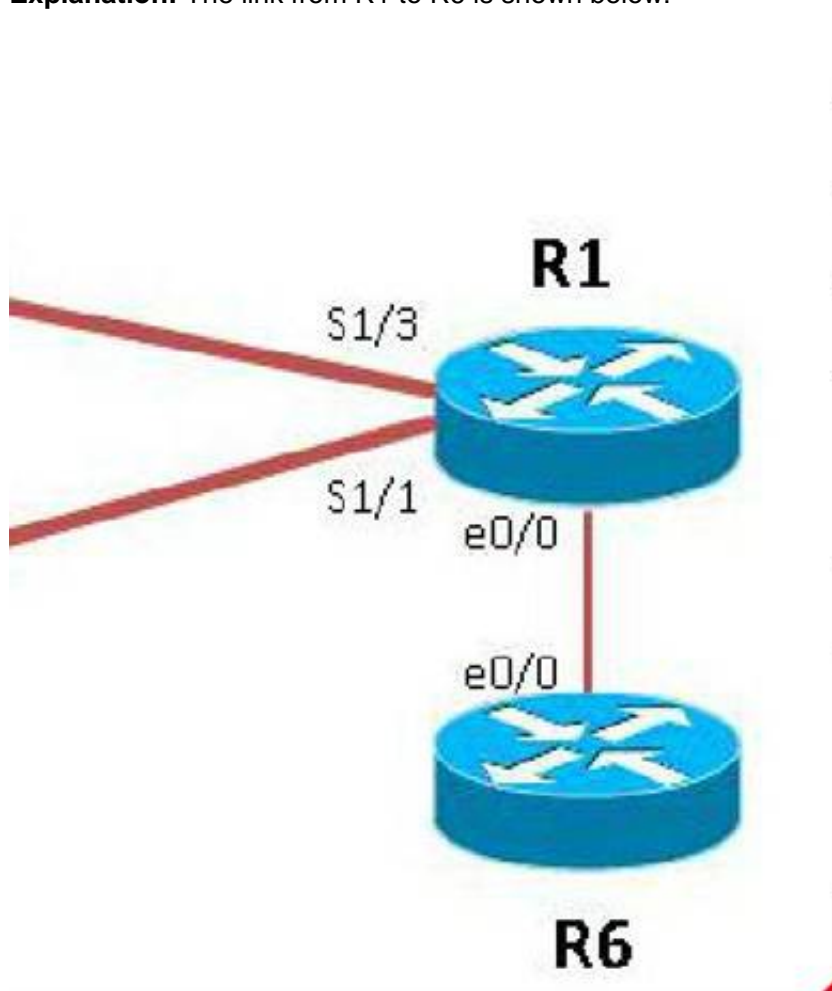


Router R6 does not form an EIGRP neighbor relationship correctly with router R1. What is the cause for this misconfiguration?

- A. The K values mismatch.
- B. The AS does not match.
- C. The network command is missing.
- D. The passive interface command is enabled.

Answer: C

Explanation: The link from R1 to R6 is shown below:



As you can see, they are both using e0/0. The IP addresses are in the 192.168.16.0 network:

R1					R6				
Interface	IP-Address	OK?	Method	Sta	R6#				
Ethernet0/0	192.168.16.1	YES	NVRAM	up	R6#				
Ethernet0/1	unassigned	YES	NVRAM	adm	R6#				
Ethernet0/2	unassigned	YES	NVRAM	adm	R6#show ip int brief				
Ethernet0/3	unassigned	YES	NVRAM	adm	Interface	IP-Address	OK?	Method	Status
Serial1/0	unassigned	YES	NVRAM	adm	Ethernet0/0	192.168.16.6	YES	NVRAM	up
Serial1/1	192.168.13.1	YES	NVRAM	up	Ethernet0/1	unassigned	YES	NVRAM	administratively down
Serial1/2	unassigned	YES	NVRAM	up	Ethernet0/2	unassigned	YES	NVRAM	administratively down
Serial1/3	192.168.12.1	YES	NVRAM	up	Ethernet0/3	unassigned	YES	NVRAM	administratively down
Serial2/0	unassigned	YES	NVRAM	adm	Serial1/0	unassigned	YES	NVRAM	administratively down
Serial2/1	unassigned	YES	NVRAM	up	Serial1/1	unassigned	YES	NVRAM	up
Serial2/2	unassigned	YES	NVRAM	adm	Serial1/2	unassigned	YES	NVRAM	administratively down
					Serial1/3	unassigned	YES	NVRAM	administratively down
					Loopback0	10.6.6.6	YES	NVRAM	up
R1#					R6#				

But when we look at the EIGRP configuration, the “network 192.168.16.0” command is missing on R6.

R1		R6	
<pre> shutdown serial restart-delay 0 ! interface Serial2/1 no ip address serial restart-delay 0 ! interface Serial2/2 no ip address shutdown serial restart-delay 0 ! interface Serial2/3 no ip address shutdown serial restart-delay 0 ! ! router eigrp 1 network 192.168.12.0 network 192.168.13.0 network 192.168.16.0 ! ip forward-protocol nd </pre>		<pre> serial restart-delay 0 ! interface Serial1/1 no ip address serial restart-delay 0 ! interface Serial1/2 no ip address shutdown serial restart-delay 0 ! interface Serial1/3 no ip address shutdown serial restart-delay 0 ! ! router eigrp 1 network 10.6.6.6 0.0.0.0 ! ip forward-protocol nd ! ! no ip http server </pre>	
R1#		R6#	

NEW QUESTION 542

Which two statements about ipv6 any cast addresses are true ?

- A. They receive packets on the closest interface that is dissolved by the routing protocol
- B. They are used in conjunction with source specific multicast for ipv6
- C. They are allocated from the ipv6 broadcast address space
- D. They are allocated from the ipv6 unicast address space
- E. They use the prefix fC00: /8

Answer: AD

NEW QUESTION 543

Drag the security features on the left to the specific security risks they help protect against on the right. (Not all options are used.)

Drag the security features on the left to the specific security risks they help protect against on the right. (Not all options are used.)

access-group	remote access to device console
console password	access to the console 0 line
enable secret	access to connected networks or resources
CHAP authentication	viewing of passwords
VTY password	access to privileged mode
service password-encryption	

Answer:

Explanation:

Drag the security features on the left to the specific security risks they help protect against on the right. (Not all options are used.)

access-group	VTY password
console password	console password
enable secret	access-group
CHAP authentication	service password-encryption
VTY password	enable secret
service password-encryption	

NEW QUESTION 545

Drag and drop the switching concepts from the left onto the correct descriptions on the right.

dynamic MAC address	feature that determines whether incoming traffic will be allowed
MAC ACL	MAC address that remains in the MAC table after a reboot
MAC address table	MAC address that is learned by the switch through normal traffic flows
MAC aging	adding a previously unknown MAC address to the address table
MAC learning	associates a learned MAC address with its connected interface
static MAC Address	removing an inactive MAC address from the address table after a specified period

Answer:

Explanation:



NEW QUESTION 548

Instructions

- Enter Cisco IOS commands on the device to verify network operation and answer for multiple-choice questions.
- THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION.**
- Click the device icon to gain access to the console of the router. No console or enable passwords are required.
- To access the multiple-choice questions, click the numbered boxes on the left of the top panel.
- This task has **four** multiple-choice questions. Be sure to answer all four questions before clicking the Next button.

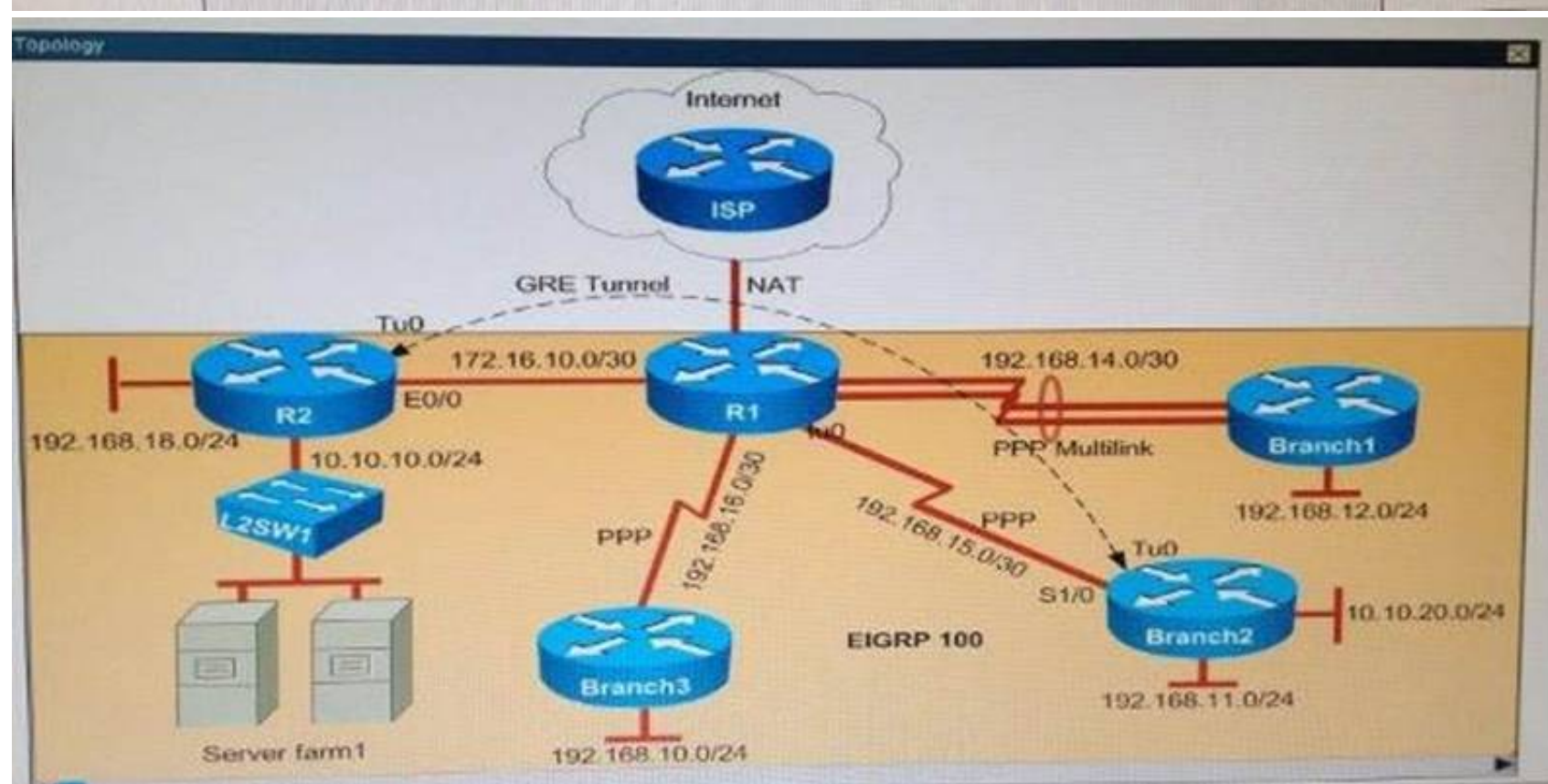
Scenario

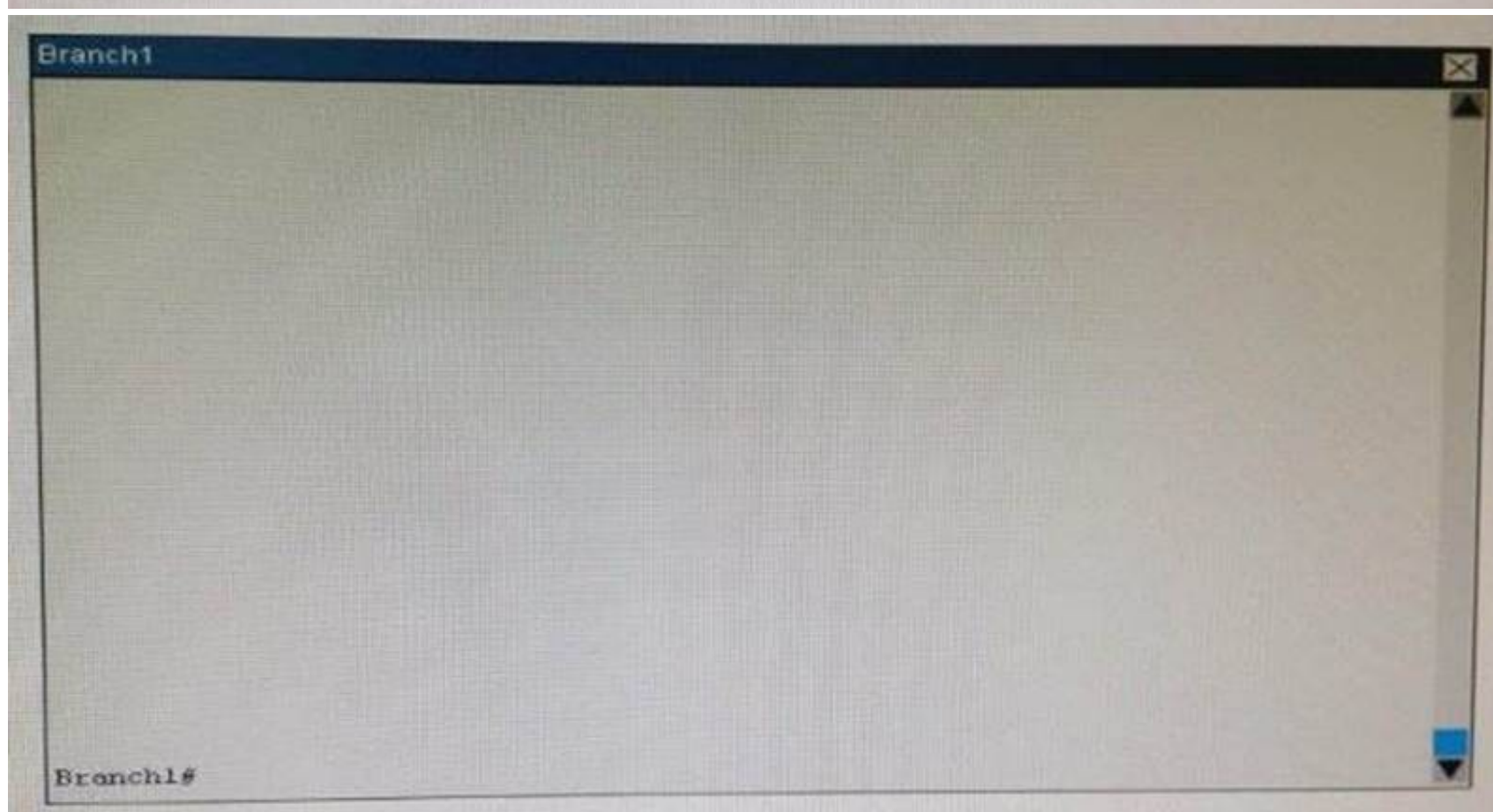
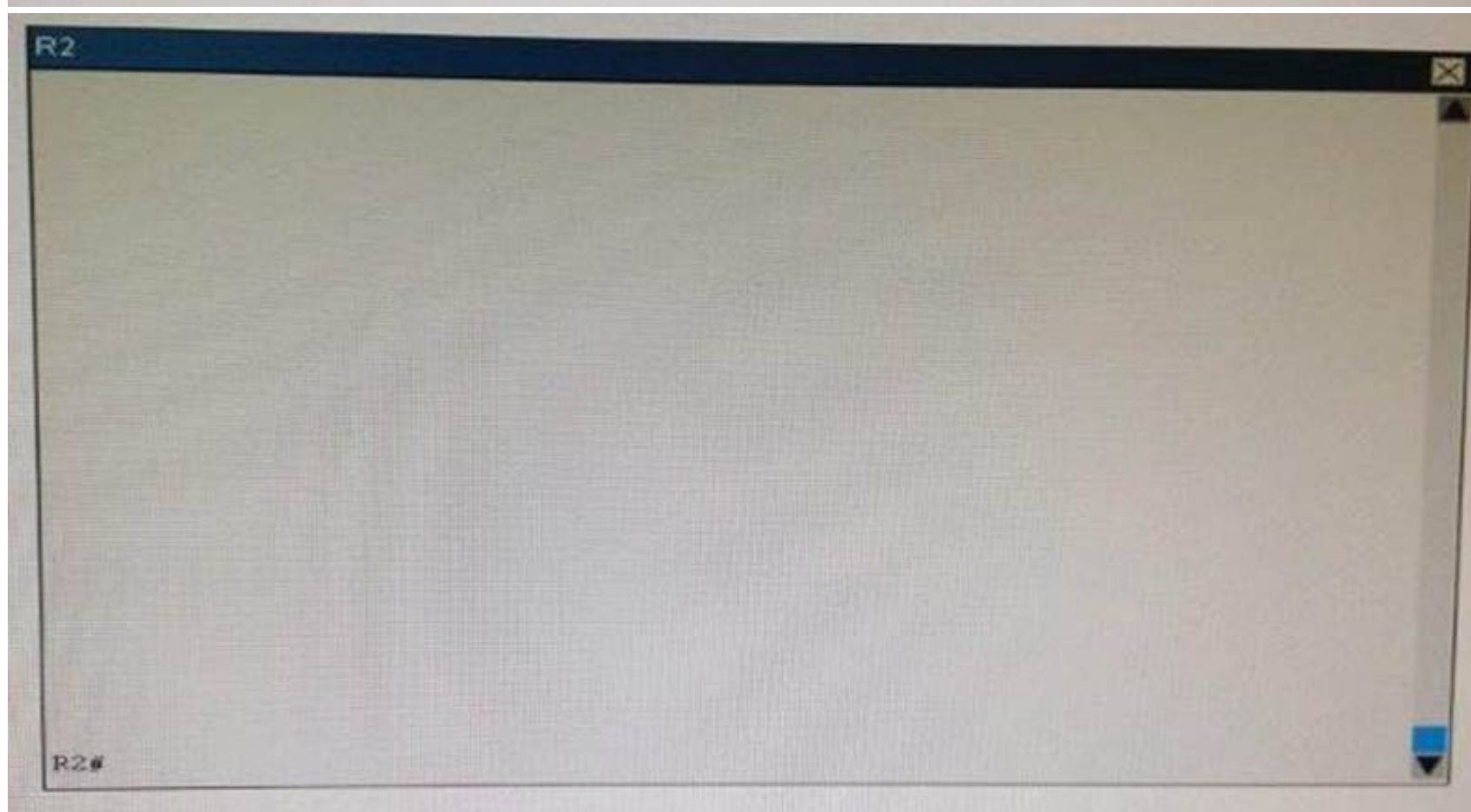
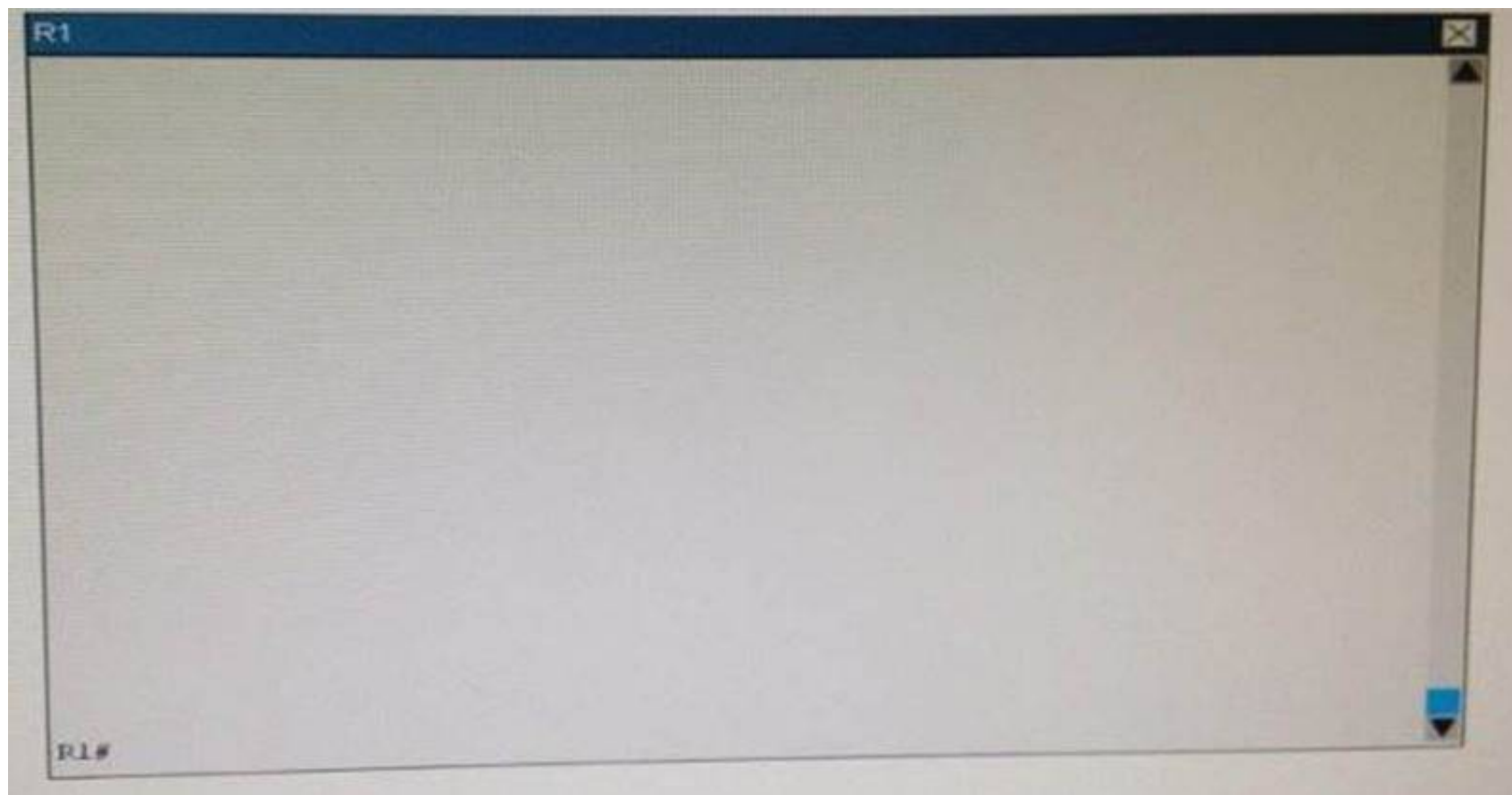
You are implementing PPP over serial links between R1 router and branch offices. In Phase 1 you must implement and verify PPP and GRE tunnel configurations as mentioned in the topology. In Phase 2 your colleague is expected to do NAT and ISP configurations between R1 and ISP router.

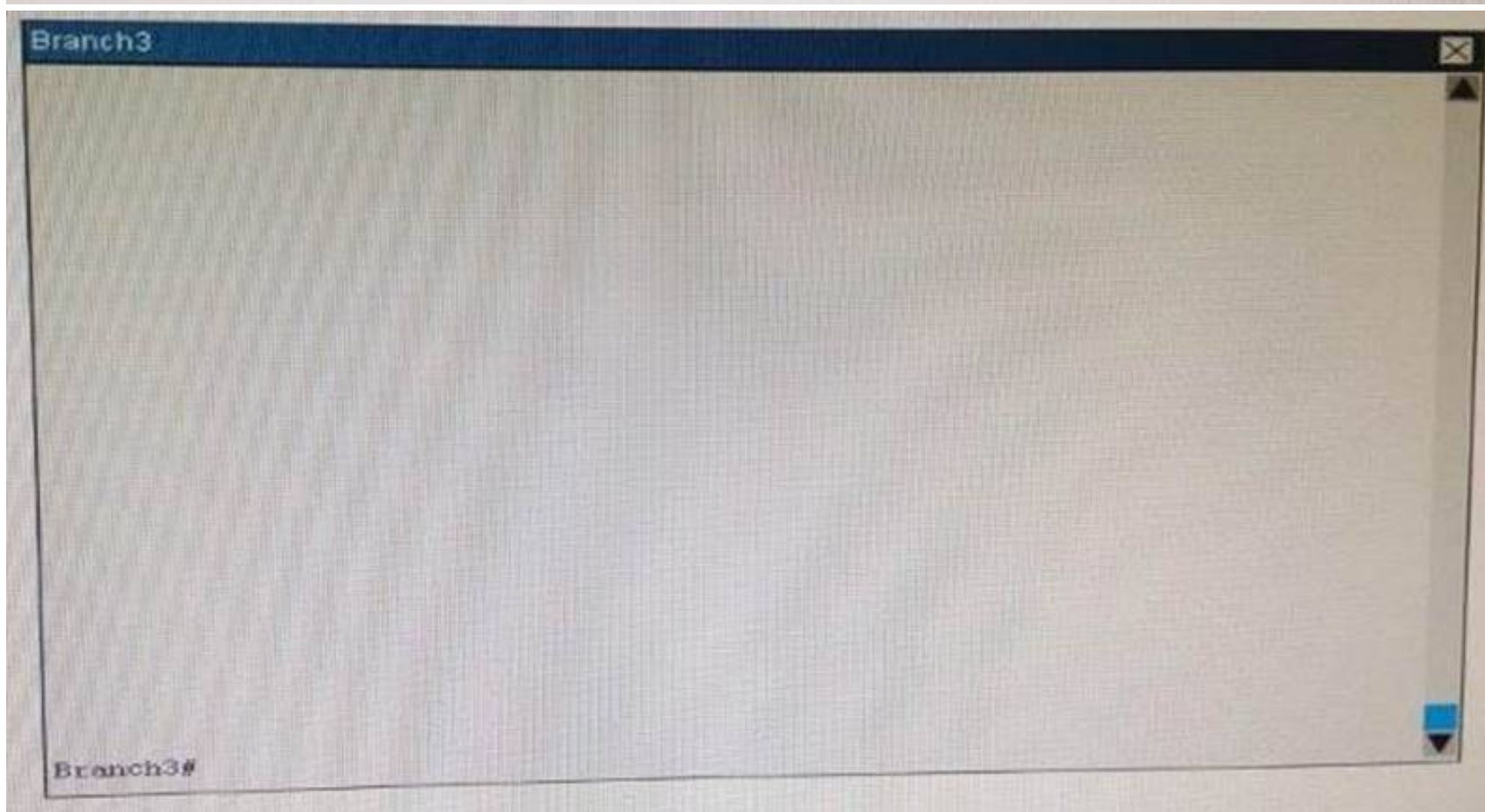
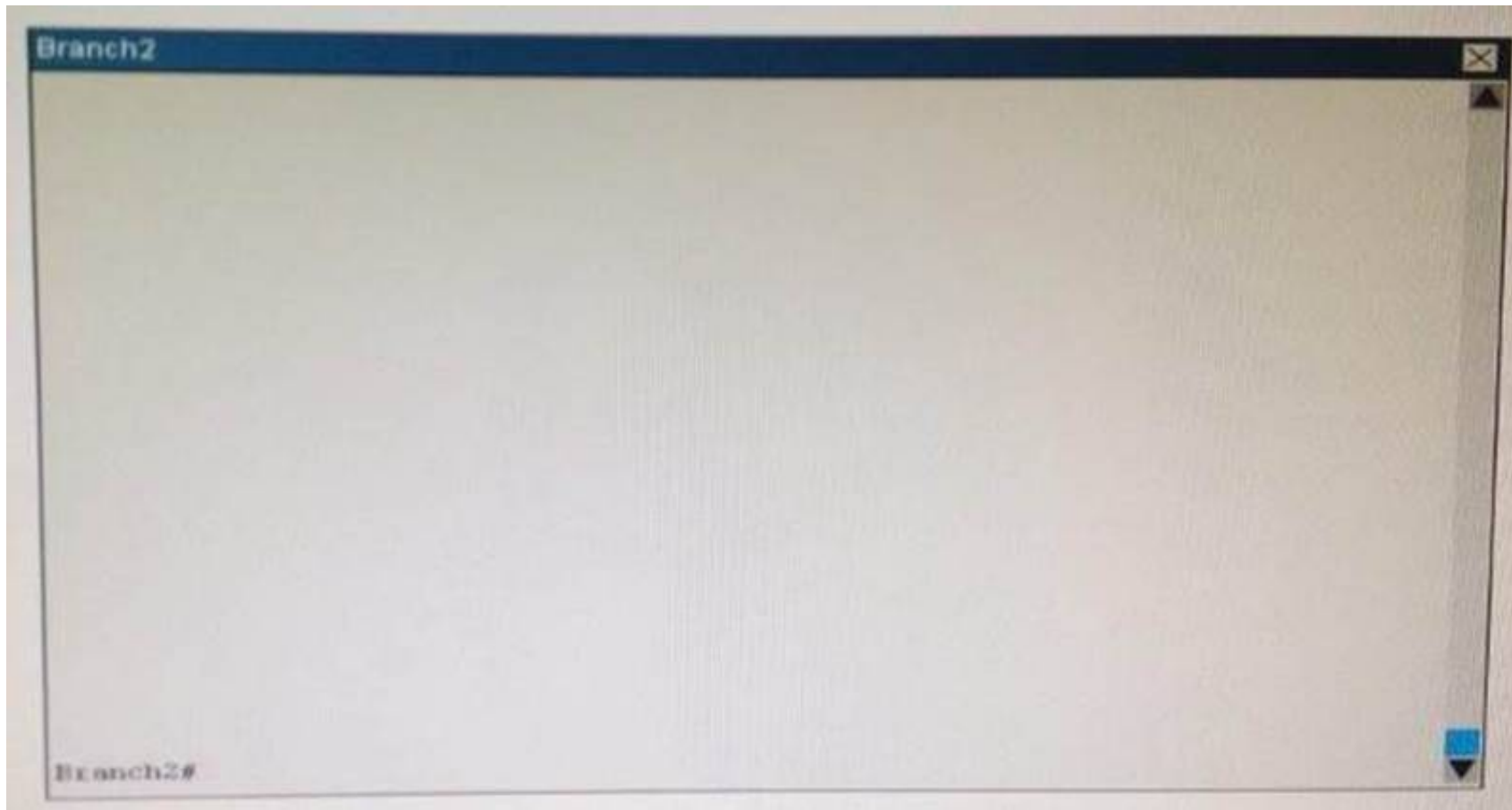
Identify the issues that you encounter during PPP over serial links implementation.

Routers Branch1, Branch2, and Branch3 connect to Router R1 in the main office over serial links. PPP multilink implementation is recommended between R1 and Branch1 routers. The GRE tunnel is configured between R2 and Branch2 routers, and traffic between Server farm1 10.10.10.0/24 network and Branch2 LAN 10.10.20.0/24 network is routed over GRE tunnel using static route.

You have console access on R1, R2, Branch1, Branch2, and Branch3 devices. Use only show commands to troubleshoot the issues.







Why did Branch1 router lose WAN connectivity with R1 router?

- A. The IP address is misconfigured on PPP multilink interface on the Branch1 router.
- B. The PPP multilink group is misconfigured on the Branch1 serial interfaces.
- C. The PPP multilink group is misconfigured on the R1 serial interfaces.
- D. The Branch1 serial interfaces are placed in a shutdown condition.

Answer: A

Explanation: This question clearly stated there is a WAN connectivity issue between R1 and Branch1 so we should check both of them with the “show ip interface brief” command. On R1:

R1#show ip interface brief

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	172.16.10.1	YES	manual	up	up
Ethernet0/1	203.1.1.2	YES	manual	up	up
Ethernet0/2	unassigned	YES	unset	administratively down	down
Ethernet0/3	unassigned	YES	unset	administratively down	down
Serial1/0	unassigned	YES	unset	up	up
Serial1/1	unassigned	YES	unset	up	up
Serial1/2	192.168.16.1	YES	manual	up	down
Serial1/3	192.168.15.1	YES	manual	up	up
<u>Multilink1</u>	<u>192.168.14.1</u>	YES	manual	up	up
NVI0	unassigned	NO	unset	up	up

On Branch1:

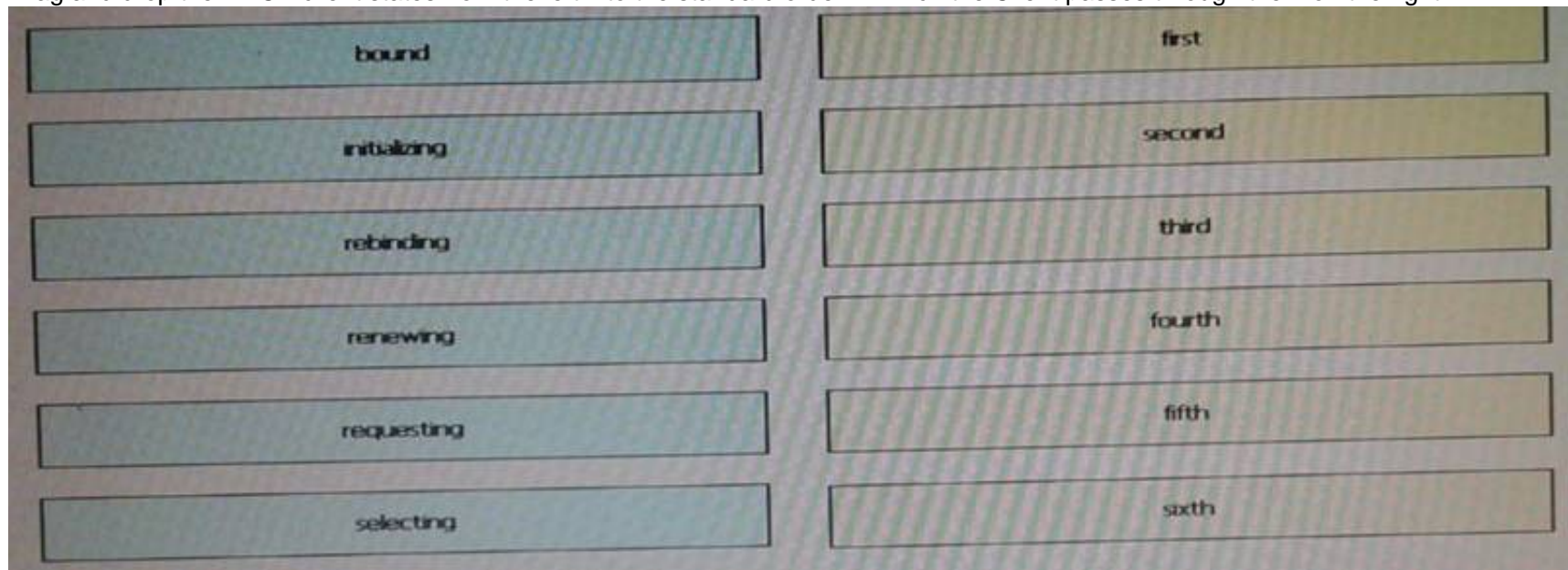
Branch1#show ip interface brief

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	192.168.12.1	YES	manual	up	up
Ethernet0/1	unassigned	YES	unset	administratively down	down
Ethernet0/2	unassigned	YES	unset	administratively down	down
Ethernet0/3	unassigned	YES	unset	administratively down	down
Serial1/0	unassigned	YES	unset	up	up
Serial1/1	unassigned	YES	unset	up	up
Serial1/2	unassigned	YES	unset	administratively down	down
Serial1/3	unassigned	YES	unset	administratively down	down
Multilink1	192.168.41.2	YES	manual	up	up

We can see that although the Multilink1 interfaces are in “up/up” state but they are not in the same subnet. According to the IP address scheme shown on the topology we can deduce the Multilink interface on Branch1 has been misconfigured, it should be 192.168.14.2 instead.

NEW QUESTION 549

Drag and drop the DHCP client states from the left into the standard order in which the Client passes through them on the right.



Answer:

Explanation: Initializing

Selecting
 Requesting
 Bound
 Renewing
 Rebinding

<https://www.cisco.com/c/en/us/support/docs/ip/dynamic-address-allocation-resolution/27470-100.html>

NEW QUESTION 550

In which STP state does MAC address learning take place on a PortFast-enabled port?

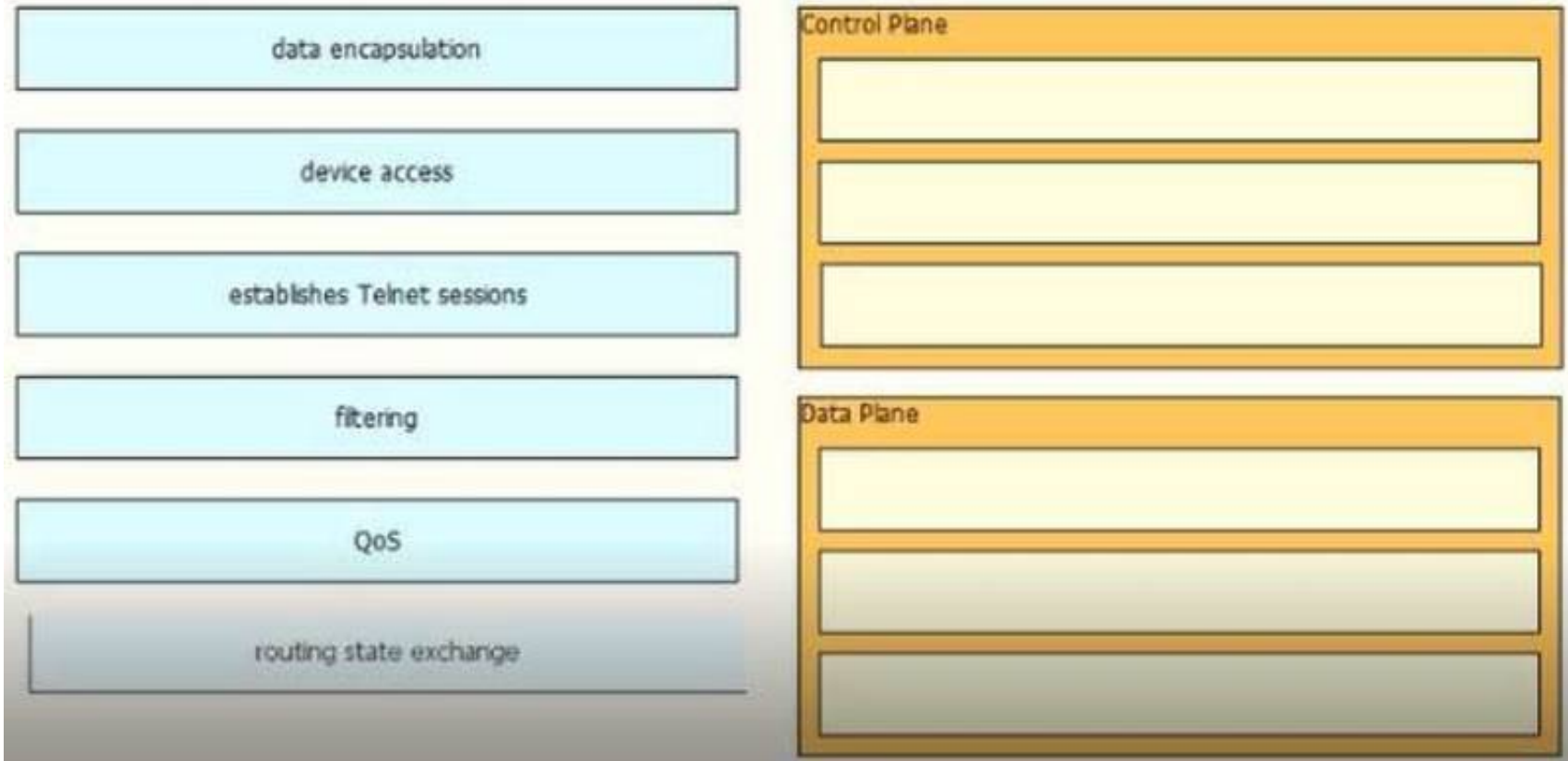
- A. learning
- B. listening
- C. discarding
- D. forwarding

Answer: D

Explanation: <http://www.omniseu.com/cisco-certified-network-associate-ccna/spanning-tree-port-states.php>

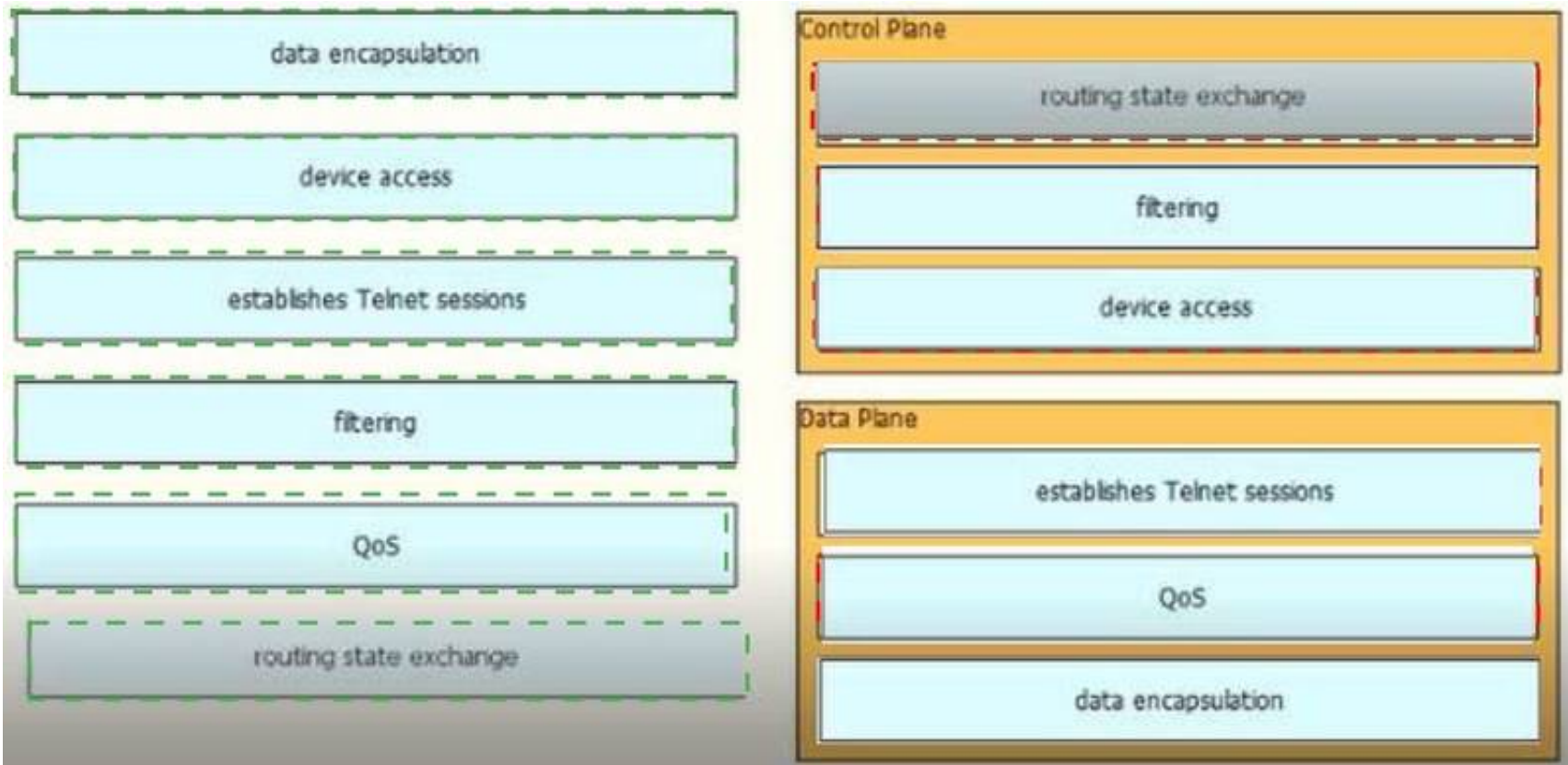
NEW QUESTION 555

Drag and drop the networking features or functions from the left onto the planes on which they operate on the right .



Answer:

Explanation:



NEW QUESTION 556

Scenario:

You work as Junior Network Engineer for RADO Network Ltd company. Your colleague has set up a Layer 2 network for testing purpose in one of your client locations. You must verify the configuration and fix if any issues identified as per customer requirements.

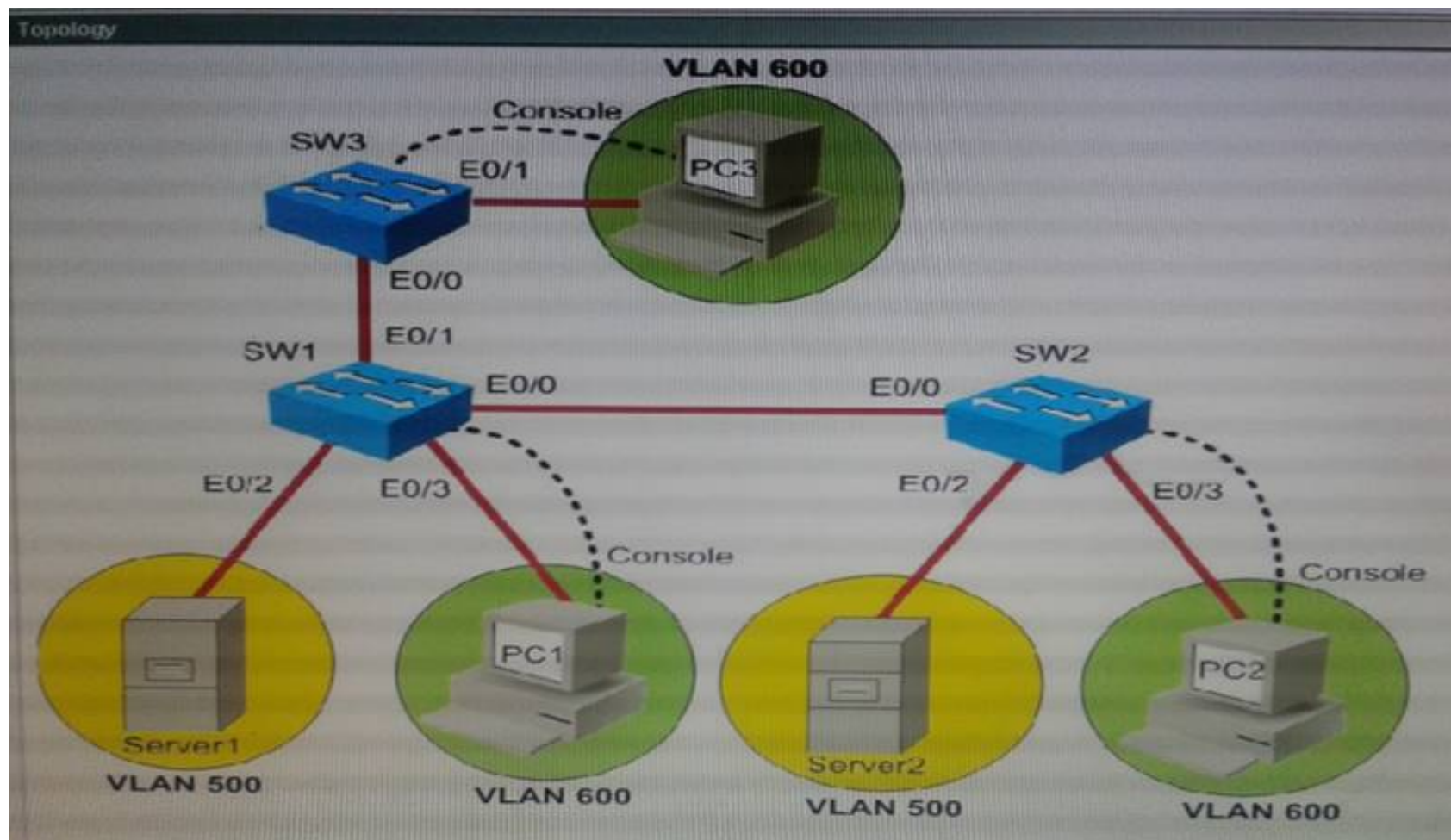
Topology Details

- Three switches (SVV1, SW2, and SW3) are connected using Ethernet link as shown in the topology diagram.
- Server1 and PC1 are connected to SW1 and are assigned to VLAN 500 and VLAN 600 respectively.
- Server2 and PC2 are connected to SW2 and are assigned to VLAN 500 and VLAN 600 respectively.
- PC3 is connected to SW3 and assigned to VLAN 600.

Customer requirements

- Verify if switch ports are assigned in correct VLANs as per topology diagram Identify and fix any misconfigurations found in three switches.
- Verify if trunk links are operational between switches and the IEEE 802.1 q trunk encapsulation method is used Identify and fix if any misconfigurations are found in the trunk configuration
- You must make sure the ports connected between switches are set as trunk ports.

Special Note: To gain the maximum number you must make sure that VLANs are assigned to switch ports as per customer requirements and make sure the trunk links are operational between switches Do not change VLAN names and VLAN number that are already configured in the switches



Answer:

Explanation: Switch 1 port E0/1 WAS CONNECTED TO ACOMPUTER WITH A STRAIGHT THROUGH CABLE AND AS WELL AS ROLLOVER CABLE (FOR CONFIGURATION OF SWITCH PORTS ON THIS SWITCH) WHICH WAS SHOWN IN VLAN 600 IN THE DIAGRAM BUT ACTUALLY THAT PC WAS NOT IN VLAN 600 AFTER CHECKING THE VLAN CONFIGURATION USING SHOW VLAN COMMAND. INSTEAD THIS PORT WAS CONFIGURED IN VLAN 1. SO WE NEEDED TO PUT THAT PC IN VAN 600 USING FOLLOWING COMMANDS-SW1(CONFIG)# INTERFACE E0/0SW1(CONFIG-IF)#SWITCHPORT MODE ACCESSSW1(CONFIG-IF)#SWITCHPORT ACCESS VLAN 600 NOW THE E0/0-PORT OF THIS SWITCH-SW1 WAS RECEIVING NATIVE VLAN MISMATCH FROM SW3 SWITCH-PORT E0/1. ALSO E0/0 OF SW1 ANDE0/1 OF SW3 WERE NOT IN TRUNKING MODE. AND THE QUESTION WAS ASKED TO MAKE SURE THAT CONNECTION BETWEEN BOTH SWITCHES SHOULD BE IN TRUNKING MODE WITH 802.1Q ENCAPSULATION ENABLEDSO USED THE BELOW COMMANDS-SW1(CONFIG)#INT E0/0SW1(CONFIG-IF)#SWITCHPORT TRUNK ENCAPSULATION DOT1QSW1(CONFIG-IF)# SWITCHPORT MODE TRUNK. ON OTHER SWITCH WHICH IS SWITCH3 SW3(CONFIG)#INT E0/0SW3(CONFIG-IF)#SWITCHPORT TRUNK ENCAPSULATION DOT1QSW3(CONFIG-IF)# SWITCHPORT MODE TRUNK.SW3(CONFIG-IF)# SWITCHPORT TRUNK NATIVE VLAN 1 ALSO PORT E0/2 OF SW3 WAS CONNECTED TO SERVER AND IN VLAN 600 AND PORT E0/3 WAS ASSIGNED TO VLAN 500 AND TO ACOMPUTER AGAIN IN VLAN 500 ITSELF. SO THAT COMPUTER HAD ACONSOLE CABLE CONNECTED TO SW3 AS WELL IN ORDER TO CONFIGURE SW3 PORTS AS TRUNK PORTS AND SWITCHPORTS USING THE ABOVE STEPS FOR SW1 WHICH WAS MENTIONED ABOVE. SIMILARLY SW2 PORT E0/1 PORT WAS CONNECTED TO E0/4 PORT OF SW3 SO AGAIN TRUNK LINK CONFIGURATIONS BETWEEN E0/1 ANDE0/4 PORTS BETWEEN TWO SWITCHES NEED TO EBDONE HERE. BUT YOU NEDD NOT TO AGAIN RUN THAT NATIVE VLAN COMMAND CHANGE ON SW3 OR SW2 SINCE ON SW3 WE AKREADY CHANGED IN ABOVE STEP AND IN SW2 ITS FINE IN VLAN 1 ONLY. ACOMPUTER WAS CONNECTED TO PORT E0/2 OF SW2 AND WAS IN VLAN 600 ANDE0/3 WAS CONNECTED TIO SERVER WHICH WAS IN VLAN 600 AGAIN. ALSO AGAIN THIS TIME THE COMPUTER WAS CONNECTED TO THE SWITCH USING ACONSOLE CABLE ASWELL TO GIVE YOU CONSOLE ACCESS TO CONFIGURE AND VERIFY THE CONFIGURATIONS ON SW2. SO JUST VERIFY THE ACCESS PORTS ARE CORRECTLY ASSIGNED AND TRUNK PORTS AS WELL USING BELOW COMMANDS.

NEW QUESTION 559

Which type of device can be replaced by the use of sub interfaces for VLAN routing?

- A. Layer 2 bridge
- B. Layer 2 switch
- C. Layer 3 switch
- D. router

Answer: C

NEW QUESTION 564

Which two statements about stateful firewalls in an enterprise network are true? (Choose two)

- A. They can fitter HTTP and HTTPS traffic in the inbound direction only
- B. They can use information about previous packets to make decisions about future packets.
- C. They are most effective when placed in front of the router connected to the Internet
- D. They are more susceptible to DoS attacks than stateless firewalls
- E. They can track the number of active TCP connections

Answer: CE

NEW QUESTION 565

What parameter can be different on ports within an EtherChannel?

- A. speed
- B. DTP negotiation settings
- C. trunk encapsulation
- D. duplex

Answer: B

Explanation: For an etherchannel to come up, the speed, duplex and the trunk encapsulation must be the same on each end.

NEW QUESTION 567

For which two reasons might you choose chassis aggregation instead of stacking switches? (Choose two)

- A. to avoid the use of a centralized configuration manager
- B. to increase the maximum port count
- C. to increase the number of devices in use
- D. to allow hot-swapping modules
- E. to avoid relying solely on Ethernet interfaces

Answer: BC

NEW QUESTION 569

Scenario:

You work for a company that provides managed network services, and of your real estate clients running a small office is experiencing network issues, Troubleshoot the network issues.

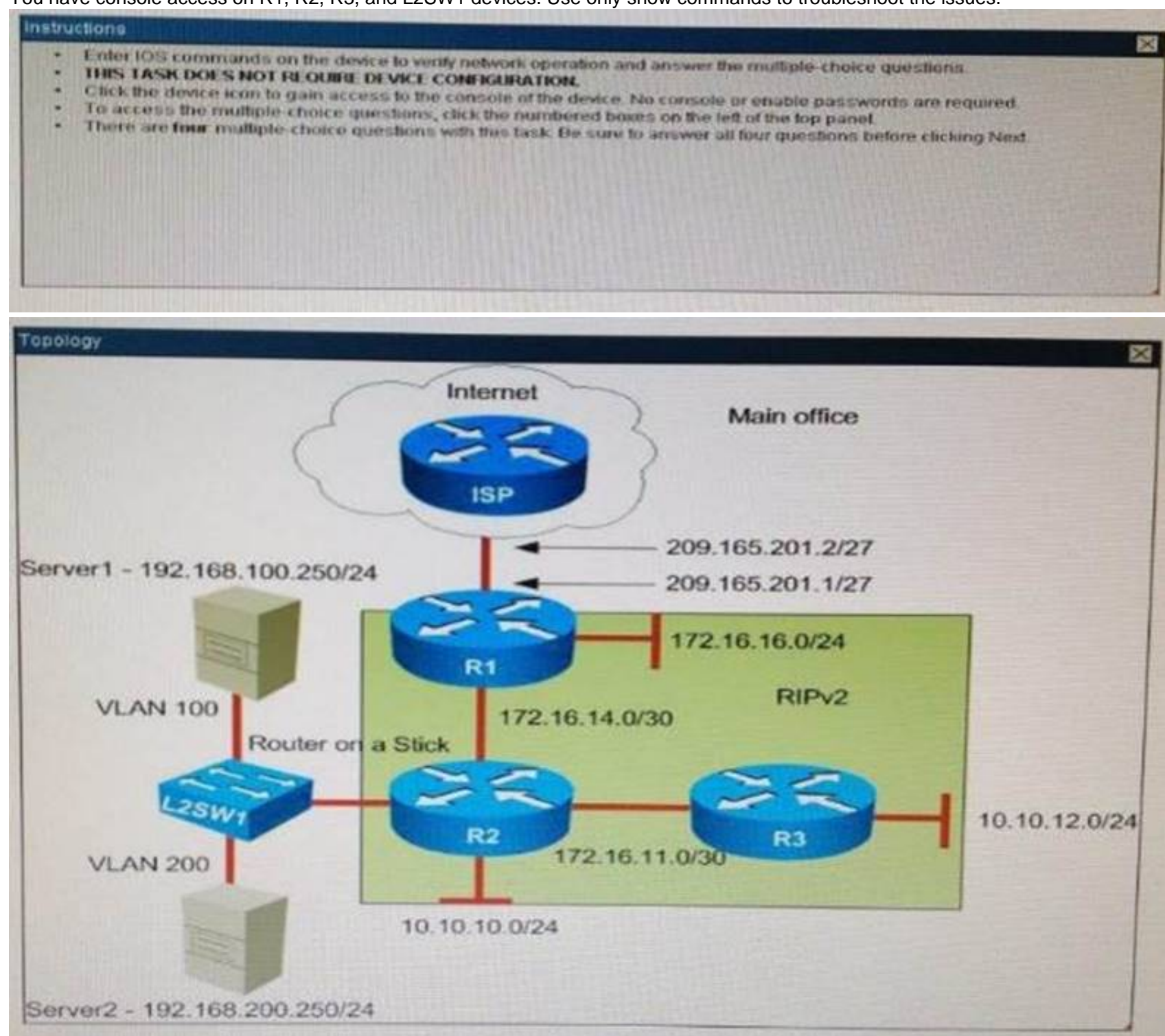
Router R1 connects the main office to internet, and routers R2 and R3 are internal routers NAT is enabled on Router R1.

The routing protocol that is enable between routers R1, R2, and R3 is RIPv2.

R1 sends default route into RIPv2 for internal routers to forward internet traffic to R1.

Server1 and Server2 are placed in VLAN 100 and 200 respectively, and dare still running router on stick configuration with router R2.

You have console access on R1, R2, R3, and L2SW1 devices. Use only show commands to troubleshoot the issues.




```
R1#show r
R1#show run
R1#show running-config
Building configuration...

Current configuration : 1438 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
```

```
R1
!
!
no aaa new-model
clock timezone PST -8 0
nmi polling-interval 60
no nmi auto-configure
no nmi pvc
nmi snmp-timeout 180
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
```

redundancy

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```

R1
!
router rip
 version 2
 network 172.16.0.0
 default-information originate
 no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
!
ip access-list standard LOCAL
 permit 10.0.0.0 0.255.255.255
 permit 172.16.0.0 0.0.255.255
 permit 192.168.0.0 0.0.255.255
!
!
!
control-plane
!

```

```

R1
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input all
!
!
end
R1#show interfaces
Ethernet0/0 is up, line protocol is up
 Hardware is AndP2, address is aabb.cc00.4100 (bia aabb.cc00.4100)
 Description: ***Link to ISP***
 Internet address is 209.165.201.1/27
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation ARPA, loopback not set
 Keepalive set (10 sec)
 ARP type: ARPA, ARP Timeout 04:00:00
 Last input 00:00:53, output 00:00:07, output hang never
 Last clearing of "show interface" counters never
 Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
 Queueing strategy: fifo
 Output queue: 0/40 (size/max)

```

```

R1
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 40 packets input, 11786 bytes, 0 no buffer
Received 39 broadcasts (0 IP multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
191 packets output, 20271 bytes, 0 underruns
 0 output errors, 0 collisions, 1 interface resets
 4 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4110 (bia aabb.cc00.4110)
Description: ***Link to LAN***
Internet address is 172.16.16.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00

```

```

R1
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
245 packets output, 30725 bytes, 0 underruns
 0 output errors, 0 collisions, 4 interface resets
 0 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4120 (bia aabb.cc00.4120)
Description: ***Link to R2***
Internet address is 172.16.14.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,

```



```

R1
Internet address is 172.16.14.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:16, output 00:00:07, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  98 packets input, 20097 bytes, 0 no buffer
Received 97 broadcasts (54 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
247 packets output, 25359 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  4 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
  
```

```

R1
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
Hardware is Am287, address is aabb.cc00.4130 (bia aabb.cc00.4130)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  
```



```

R1
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
NVIO is up, line protocol is up
Hardware is NVI
Interface is unnumbered. Using address of Ethernet0/0 (209.165.201.1)
MTU 1514 bytes, BW 56 Kbit/sec, DLY 5000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation UNKNOWN, loopback not set
Keepalive set (10 sec)
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 unknown protocol drops
  0 output buffer failures, 0 output buffers swapped out
R1#
R1#show ip interface brief

```

```

R1
R1#
R1#show ip interface brief

```

Interface	IP-Address	OK?	Method	Status	Prot
Ethernet0/0	209.165.201.1	YES	NVRAM	up	up
Ethernet0/1	172.16.16.1	YES	NVRAM	up	up
Ethernet0/2	172.16.14.1	YES	NVRAM	up	up
Ethernet0/3	unassigned	YES	NVRAM	administratively down	down
NVIO	209.165.201.1	YES	unset	up	up

```

R1#
R1#
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
R    10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2

```



```

R1
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2
i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
+ - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
R    10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
R    172.16.11.0/30 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
C    172.16.14.0/30 is directly connected, Ethernet0/2
L    172.16.14.1/32 is directly connected, Ethernet0/2
C    172.16.16.0/24 is directly connected, Ethernet0/1
L    172.16.16.1/32 is directly connected, Ethernet0/1
R    192.168.1.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R    192.168.100.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R    192.168.200.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C    209.165.201.0/27 is directly connected, Ethernet0/0
L    209.165.201.1/32 is directly connected, Ethernet0/0
R1#
R1#

```

```

R2
R2#show run
R2#show running-config
Building configuration...

Current configuration : 1505 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc

```

```
R2
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
```

```
R2
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
!
redundancy
```



```

R2
!
interface Ethernet0/0
  description ***Link to R3***
  ip address 172.16.11.1 255.255.255.252
!
interface Ethernet0/1
  no ip address
!
interface Ethernet0/1.1
  description ***Link to Mangement Segment***
  encapsulation dot1q 1 native
  ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/1.100
  description ***Link to Server1 Segment***
  encapsulation dot1q 200
  ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
  description ***Link to Server2 Segment***
  encapsulation dot1q 100
  ip address 192.168.200.1 255.255.255.0
!
interface Ethernet0/2
  description ***Link to R1***

```

```

R2
!
interface Ethernet0/2
  description ***Link to R1***
  ip address 172.16.14.2 255.255.255.252
!
interface Ethernet0/3
  description ***Link to LAN***
  ip address 10.10.10.1 255.255.255.0
!
router rip
  version 2
  network 10.0.0.0
  network 172.16.0.0
  network 192.168.1.0
  network 192.168.100.0
  network 192.168.200.0
  no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!

```



```
R2
!
control-plane
!
!
!
!
!
!
line con 0
logging synchronous
line aux 0
line vty 0 4
login
transport input all
!
end
R2#show interfaces
Ethernet0/0 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
Description: ***Link to R3***
Internet address is 172.16.11.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
```

```
R2
R2#show interfaces
Ethernet0/0 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
Description: ***Link to R3***
Internet address is 172.16.11.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:32, output 00:00:06, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 50 packets input, 15683 bytes, 0 no buffer
Received 50 broadcasts (0 IP multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
343 packets output, 42566 bytes, 0 underruns
 0 output errors, 0 collisions, 1 interface resets
 2 unknown protocol drops
```



```

R2
 2 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
 Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation ARPA, loopback not set
 Keepalive set (10 sec)
 ARP type: ARPA, ARP Timeout 04:00:00
 Last input 00:00:00, output 00:00:08, output hang never
 Last clearing of "show interface" counters never
 Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
 Queueing strategy: fifo
 Output queue: 0/40 (size/max)
 5 minute input rate 1000 bits/sec, 2 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
 4632 packets input, 308536 bytes, 0 no buffer
 Received 4421 broadcasts (0 IP multicasts)
 0 runts, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
 512 packets output, 73148 bytes, 0 underruns
 0 output errors, 0 collisions, 0 interface resets

```

```

R2
 512 packets output, 73148 bytes, 0 underruns
 0 output errors, 0 collisions, 0 interface resets
 73 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/1.1 is up, line protocol is up
 Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
 Description: ***Link to Mangement Segment***
 Internet address is 192.168.1.1/24
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation 802.1Q Virtual LAN, Vlan ID 1.
 ARP type: ARPA, ARP Timeout 04:00:00
 Keepalive set (10 sec)
 Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
 Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
 Description: ***Link to Server1 Segment***
 Internet address is 192.168.100.1/24
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation 802.1Q Virtual LAN, Vlan ID 200.
 ARP type: ARPA, ARP Timeout 04:00:00
 Keepalive set (10 sec)

```



```

R2
Keepalive set (10 sec)
Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
Description: ***Link to Server1 Segment***
Internet address is 192.168.100.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation 802.1Q Virtual LAN, Vlan ID 200.
ARP type: ARPA, ARP Timeout 04:00:00
Keepalive set (10 sec)
Last clearing of "show interface" counters never
Ethernet0/1.200 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
Description: ***Link to Server2 Segment***
Internet address is 192.168.200.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation 802.1Q Virtual LAN, Vlan ID 100.
ARP type: ARPA, ARP Timeout 04:00:00
Keepalive set (10 sec)
Last clearing of "show interface" counters never
Ethernet0/2 is up, line protocol is up
Hardware is AndP2, address is aabb.cc00.4220 (bia aabb.cc00.4220)
Description: ***Link to R1***

```

```

R2
Description: ***Link to R1***
Internet address is 172.16.14.2/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:08, output 00:00:02, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  128 packets input, 21994 bytes, 0 no buffer
    Received 127 broadcasts (77 IP multicasts)
      0 runs, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 input packets with dribble condition detected
  345 packets output, 39952 bytes, 0 underruns
      0 output errors, 0 collisions, 1 interface resets
      0 unknown protocol drops
      0 babbles, 0 late collision, 0 deferred
      0 lost carrier, 0 no carrier
      0 output buffer failures, 0 output buffers swapped out

```



```

R2
0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is up, line protocol is up
Hardware is Am287, address is aabb.cc00.4230 (bia aabb.cc00.4230)
Description: ***Link to LAN***
Internet address is 10.10.10.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    344 packets output, 42752 bytes, 0 underruns
    0 output errors, 0 collisions, 6 interface resets
    0 unknown protocol drops

```

```

R2
0 output errors, 0 collisions, 6 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
R2#
R2#
R2#show ip interface brief

```

Interface	IP-Address	OK?	Method	Status	Prot
Ethernet0/0	172.16.11.1	YES	NVRAM	up	up
Ethernet0/1	unassigned	YES	NVRAM	up	up
Ethernet0/1.1	192.168.1.1	YES	NVRAM	up	up
Ethernet0/1.100	192.168.100.1	YES	NVRAM	up	up
Ethernet0/1.200	192.168.200.1	YES	NVRAM	up	up
Ethernet0/2	172.16.14.2	YES	NVRAM	up	up
Ethernet0/3	10.10.10.1	YES	NVRAM	up	up

```

R2#
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
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
ia - IS-IS inter area, * - candidate default, U - per-user static route

```



```

R2
R2#
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
i - IS-IS, su - IS-IS summary, 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, H - NHRP, I - LISP
+ - replicated route, % - next hop override

Gateway of last resort is 172.16.14.1 to network 0.0.0.0

R*  0.0.0.0/0 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
    C    10.10.10.0/24 is directly connected, Ethernet0/3
    L    10.10.10.1/32 is directly connected, Ethernet0/3
    172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
    C    172.16.11.0/30 is directly connected, Ethernet0/0
    L    172.16.11.1/32 is directly connected, Ethernet0/0
    C    172.16.14.0/30 is directly connected, Ethernet0/2
    L    172.16.14.2/32 is directly connected, Ethernet0/2
    R    172.16.16.0/24 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
    C    192.168.1.0/24 is directly connected, Ethernet0/1.1

```

```

R2
o - ODR, P - periodic downloaded static route, H - NHRP, I - LISP
+ - replicated route, % - next hop override

Gateway of last resort is 172.16.14.1 to network 0.0.0.0

R*  0.0.0.0/0 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
    C    10.10.10.0/24 is directly connected, Ethernet0/3
    L    10.10.10.1/32 is directly connected, Ethernet0/3
    172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
    C    172.16.11.0/30 is directly connected, Ethernet0/0
    L    172.16.11.1/32 is directly connected, Ethernet0/0
    C    172.16.14.0/30 is directly connected, Ethernet0/2
    L    172.16.14.2/32 is directly connected, Ethernet0/2
    R    172.16.16.0/24 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
    C    192.168.1.0/24 is directly connected, Ethernet0/1.1
    L    192.168.1.1/32 is directly connected, Ethernet0/1.1
    192.168.100.0/24 is variably subnetted, 2 subnets, 2 masks
    C    192.168.100.0/24 is directly connected, Ethernet0/1.100
    L    192.168.100.1/32 is directly connected, Ethernet0/1.100
    192.168.200.0/24 is variably subnetted, 2 subnets, 2 masks
    C    192.168.200.0/24 is directly connected, Ethernet0/1.200
    L    192.168.200.1/32 is directly connected, Ethernet0/1.200
R2#

```



```
R3
!
no aaa new-model
clock timezone PST -8 0
nmi polling-interval 60
no nmi auto-configure
no nmi pvc
nmi snap-timeout 180
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
```


redundancy

```
R3
interface Ethernet0/0
  description ***Link to LAN***
  ip address 10.10.12.1 255.255.255.0
!
interface Ethernet0/1
  description ***Link to R2***
  ip address 172.16.11.2 255.255.255.252
!
interface Ethernet0/2
  no ip address
  shutdown
!
interface Ethernet0/3
  no ip address
  shutdown
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
```

```

R3
!
control-plane
!
!
!
!
!
!
!
!
!
!
line con 0
  logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
!
!
end
R3#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4300 (bia aabb.cc00.4300)
  Description: ***Link to LAN***
  Internet address is 10.10.12.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255

```

```

R3
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    666 packets output, 71699 bytes, 0 underruns
    0 output errors, 0 collisions, 11 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
  Description: ***Link to R2***

```



```

R3
Hardware is AndP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
Description: ***Link to R2***
Internet address is 172.16.11.2/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:21, output 00:00:05, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  316 packets input, 74089 bytes, 0 no buffer
    Received 316 broadcasts (200 IP multicasts)
      0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  669 packets output, 71888 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier

```

```

R3
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is administratively down, line protocol is down
Hardware is AndP2, address is aabb.cc00.4320 (bia aabb.cc00.4320)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
      0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops

```



```

R3
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
Hardware is AmdP2, address is aabb.cc00.4330 (bia aabb.cc00.4330)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets

```

```

R3
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
R3#
R3#
R3#show ip interface brief
Interface                IP-Address      OK? Method Status      Prot
ocol
Ethernet0/0              10.10.12.1      YES NVRAM  up          up
Ethernet0/1              172.16.11.2     YES NVRAM  up          up
Ethernet0/2              unassigned      YES NVRAM  administratively down down
Ethernet0/3              unassigned      YES NVRAM  administratively down down
R3#
R3#
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
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route

```



```

R3
Ethernet0/2                unassigned      YES NVRAM  administratively down down
Ethernet0/3                unassigned      YES NVRAM  administratively down down
R3#
R3#
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       10.10.12.0/24 is directly connected, Ethernet0/0
L       10.10.12.1/32 is directly connected, Ethernet0/0
    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.11.0/30 is directly connected, Ethernet0/1
L       172.16.11.2/32 is directly connected, Ethernet0/1
R3#
R3#
R3#

```

```
L2SW1  
!  
no aaa new-model  
clock timezone PST -8 0  
!  
ip cef  
!  
!  
  
no ipv6 cef  
ipv6 multicast rpf use-bgp  
!  
!  
!  
!  
!  
! spanning-tree mode pvst  
spanning-tree extend system-id  
!  
!  
!  
vlan internal allocation policy ascending  
!
```



```

L2SW1

L2SW1#show run
L2SW1#show running-config
Building configuration...

Current configuration : 1074 bytes
!
version 15.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service compress-config
!
hostname L2SW1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
!
ip cef
!

```

```

L2SW1

interface Vlan1
 ip address 192.168.1.254 255.255.255.0
 !
 ip default-gateway 192.168.1.1
 !
 no ip http server
 !
 !
 !
 !
 !
 control-plane
 !
 !
 line con 0
  logging synchronous
 line aux 0
 line vty 0 4
  login
 !
end
L2SW1#
L2SW1#
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)

```

```
L2SW1
:
interface Ethernet0/0
  description ***Link to R2***
  switchport trunk encapsulation dot1q
  switchport mode trunk
  duplex auto
:
interface Ethernet0/1
  description ***Link to Server1 segment***
  switchport access vlan 100
  switchport mode access
  duplex auto
:
interface Ethernet0/2
  description ***Link to Server2 Segment***
  switchport access vlan 200
  switchport mode access
  duplex auto
:
interface Ethernet0/3
  duplex auto
:
interface Vlan1
  ip address 192.168.1.254 255.255.255.0
:
```

```
L2SW1
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
  Hardware is Am79C96, address is 8abb.cc00.4500 (bia 8abb.cc00.4500)
  Description: ***Link to R2***
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is unknown
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:07, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 12/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 1000 bits/sec, 2 packets/sec
    1447 packets input, 208877 bytes, 0 no buffer
    Received 139 broadcasts (0 multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  13457 packets output, 919293 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
```



```

L2SW1
13457 packets output, 919293 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4510 (bia aabb.cc00.4510)
Description: ***Link to Server1 segment***
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:07, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
755 packets input, 80219 bytes, 0 no buffer
Received 123 broadcasts (0 multicasts)

```

```

L2SW1
755 packets input, 80219 bytes, 0 no buffer
Received 123 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
3867 packets output, 268544 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4520 (bia aabb.cc00.4520)
Description: ***Link to Server2 Segment***
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:07, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo

```



```

L2SW1
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 758 packets input, 81010 bytes, 0 no buffer
Received 125 broadcasts (0 multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
3867 packets output, 268544 bytes, 0 underruns
 0 output errors, 0 collisions, 0 interface resets
 0 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4530 (bia aabb.cc00.4530)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
  
```

```

L2SW1
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
3566 packets output, 252186 bytes, 0 underruns
 0 output errors, 0 collisions, 55 interface resets
 0 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Vlan1 is up, line protocol is up
Hardware is Ethernet SVI, address is aabb.cc80.4500 (bia aabb.cc80.4500)
Internet address is 192.168.1.254/24
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
  
```



```
L2SW1
Keepalive not supported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:12, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 235 packets input, 42480 bytes, 0 no buffer
Received 235 broadcasts (0 IP multicasts)
 0 runts, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 11 packets output, 830 bytes, 0 underruns
 0 output errors, 0 interface resets
 0 unknown protocol drops
 0 output buffer failures, 0 output buffers swapped out
L2SW1#
L2SW1#
L2SW1#show ip interface brief
Interface                IP-Address      OK? Method Status          Protocol
Ethernet0/0              unassigned     YES unset  up              up
Ethernet0/1              unassigned     YES unset  up              up
Ethernet0/2              unassigned     YES unset  up              up
Ethernet0/3              unassigned     YES unset  up              up
```

```
L2SW1
 0 output buffer failures, 0 output buffers swapped out
L2SW1#
L2SW1#
L2SW1#show ip interface brief
Interface                IP-Address      OK? Method Status          Protocol
Ethernet0/0              unassigned     YES unset  up              up
Ethernet0/1              unassigned     YES unset  up              up
Ethernet0/2              unassigned     YES unset  up              up
Ethernet0/3              unassigned     YES unset  up              up
Vlan1                   192.168.1.254   YES NVRAM  up              up
L2SW1#
L2SW1#
L2SW1#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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
```

```
L2SW1
Ethernet0/0      unassigned      YES unset  up      up
Ethernet0/1      unassigned      YES unset  up      up
Ethernet0/2      unassigned      YES unset  up      up
Ethernet0/3      unassigned      YES unset  up      up
Vlan1            192.168.1.254  YES NVRAM  up      up
L2SW1#
L2SW1#
L2SW1#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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

    192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected, Vlan1
L       192.168.1.254/32 is directly connected, Vlan1
L2SW1#
L2SW1#
L2SW1#
```

Examine R2 configuration, the traffic that is destined to R3 LAN network sourced from Router R2 is forwarded to R1 instead R3. What could be an issue?

```
R2#traceroute 10.10.12.1 source 10.10.10.1
Type escape sequence to abort.
Tracing the route to 10.10.12.1
VRF info: (vrf in name/id, vrf out name/id)
 1 172.16.14.1 0 msec 1 msec 0 msec
 2 172.16.14.1 IH IH *
R2#
```

- A. RIPv2 routing updates are suppressed between R2 and R3 using passive interface feature.
- B. RIPv2 enabled on R3, but R3 LAN network that is not advertised into RIPv2 domain.
- C. No issue that is identified; this behavior is normal since default route propagated into RIPv2 domain by Router R1.
- D. RIPv2 not enabled on R3.

Answer: D

Explanation: As per R3


```

R3
interface Ethernet0/3
  no ip address
  shutdown
  !
ip forward-protocol nd
!
no ip http server
no ip http secure-server
!
!
!
!
control-plane
!
!
!
!
!
!
!
!
line con 0
  logging synchronous
line aux 0
  
```

NO RIPv2 CONFIG!

NEW QUESTION 572

What is the first step in the NAT configuration process?

- A. Define inside and outside interfaces.
- B. Define public and private IP addresses.
- C. Define IP address pools.
- D. Define global and local interfaces.

Answer: A

NEW QUESTION 574

Drag and Drop the protocols from the left onto the correct IP traffic types on the right.

<div style="background-color: #e0f0ff; padding: 5px; margin-bottom: 5px; text-align: center;">DHCP</div> <div style="background-color: #e0f0ff; padding: 5px; margin-bottom: 5px; text-align: center;">HTTP</div> <div style="background-color: #e0f0ff; padding: 5px; margin-bottom: 5px; text-align: center;">SMTP</div> <div style="background-color: #e0f0ff; padding: 5px; margin-bottom: 5px; text-align: center;">SNMP</div> <div style="background-color: #e0f0ff; padding: 5px; margin-bottom: 5px; text-align: center;">Telnet</div> <div style="background-color: #e0f0ff; padding: 5px; margin-bottom: 5px; text-align: center;">VoIP</div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> TCP <div style="border: 1px solid black; height: 30px; margin: 2px 0;"></div> <div style="border: 1px solid black; height: 30px; margin: 2px 0;"></div> <div style="border: 1px solid black; height: 30px; margin: 2px 0;"></div> </div> <div style="border: 1px solid black; padding: 5px;"> UDP <div style="border: 1px solid black; height: 30px; margin: 2px 0;"></div> <div style="border: 1px solid black; height: 30px; margin: 2px 0;"></div> <div style="border: 1px solid black; height: 30px; margin: 2px 0;"></div> </div>
---	--

Answer:

Explanation: TCP HTTP SMTP
 Telnet UDP DHCP SNMP VOIP

NEW QUESTION 575

What feature you should use to analyse and monitor your traffic for troubleshooting?

- A. RSPAN
- B. SPAN
- C. Netflow
- D. SNMP

Answer: C

NEW QUESTION 576

Scenario:

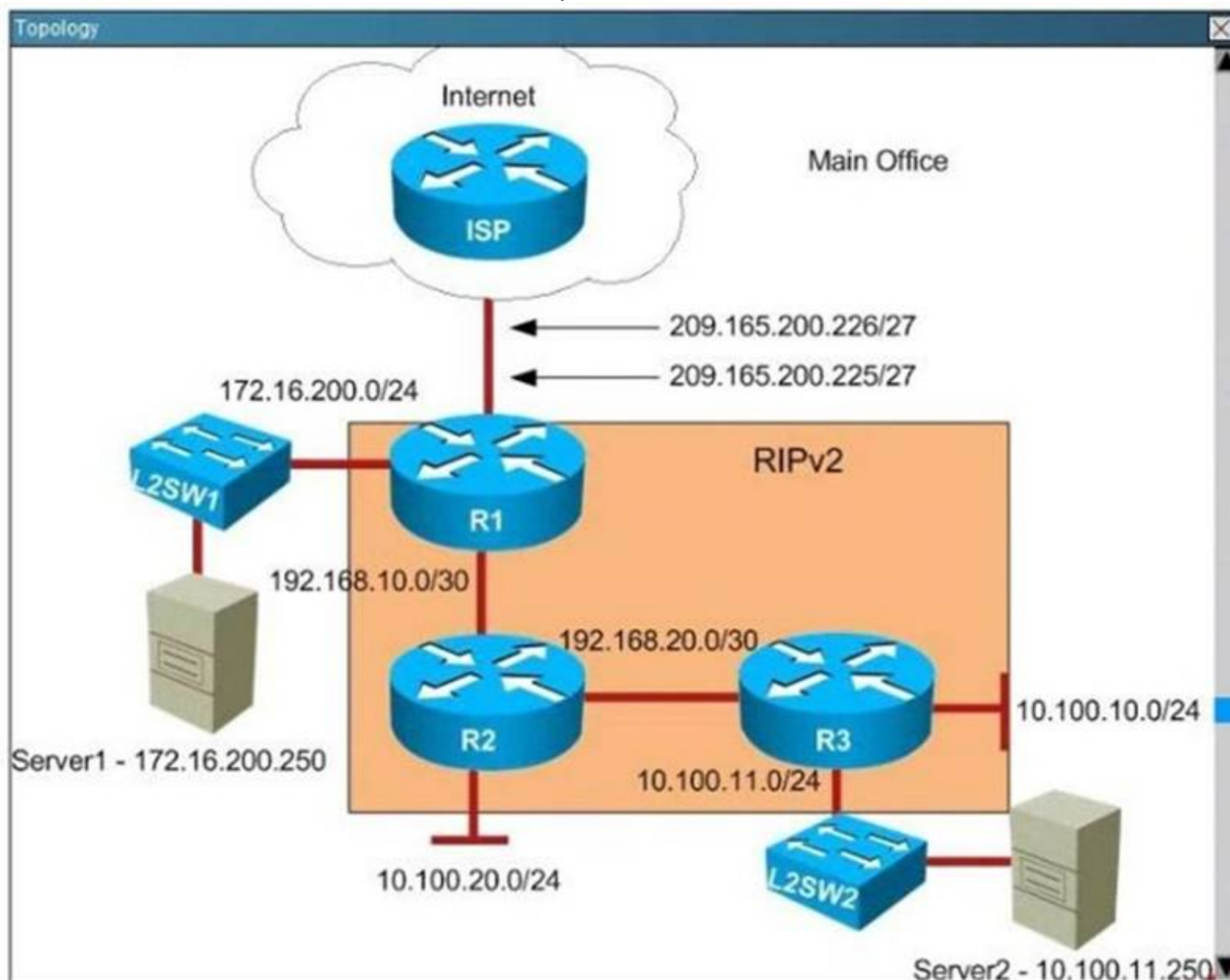
You are a junior network engineer for a financial company, and the main office network is experiencing network issues. Troubleshoot the network issues.

Router R1 connects the main office to the internet, and routers R2 and R3 are internal routers. NAT is enabled on router R1.

The routing protocol that is enabled between routers R1, R2 and R3 is RIPv2.

R1 sends the default route into RIPv2 for the internal routers to forward internet traffic to R1.

You have console access on R1, R2 and R3 devices. Use only show commands to troubleshoot the issues.



```

R1
Current configuration : 1651 bytes
!
! No configuration change since last restart
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
--- More (105) ---

```



```
R1
```

```
!  
!  
!  
!  
!  
!  
ip cef  
no ipv6 cef  
!  
multilink bundle-name authenticated  
!  
!  
!  
!  
!  
!  
!  
!  
!  
redundancy  
!  
!  
!  
!  
!  
!  
--- More (79) ---
```

```
R1
interface Ethernet0/0
  description ***Link to ISP***
  ip address 209.165.200.225 255.255.255.224
  ip nat outside
  ip virtual-reassembly in
!
interface Ethernet0/1
  description ***Link to Server1 segment***
  ip address 172.16.200.1 255.255.255.0
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/2
  description ***Link to R2***
  ip address 192.168.10.1 255.255.255.252
  ip access-group R2LANBLOCK in
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/3
  no ip address
  shutdown
!
router rip
  version 2
```

```
R1
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 0.0.0.0 0.0.0.0 209.165.200.226
!
ip access-list standard R2LANBLOCK
deny 10.100.20.0 0.0.0.255
permit any
!
ip access-list extended LOCAL
permit ip host 127.0.0.1 any
!
!
!
!
!
control-plane
!
!
!
!
!
!
!
line con 0
logging synchronous
line aux 0
--- More (7) ---
```

```
R1
ip access-list extended LOCAL
 permit ip host 127.0.0.1 any
!
!
!
!
control-plane
!
!
!
!
!
!
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input all
!
ntp server 209.165.200.226
!
end
R1#
```

```
R2
Building configuration...

Current configuration : 1243 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
--- More (92) ---
```

```
R2
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
!
```



```
R3
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
redundancy
!
!
!
!
!
!
!
--- More (60) ---
```

```
R3
!
!
interface Loopback0
 ip address 192.168.250.3 255.255.255.255
!
interface Ethernet0/0
 description ***Link to LAN***
 ip address 10.100.10.1 255.255.255.0
!
interface Ethernet0/1
 description ***Link to R2***
 ip address dhcp
!
interface Ethernet0/2
 description ***Link to Server2 Segment***
 ip address 10.100.11.1 255.255.255.0
!
interface Ethernet0/3
 no ip address
 shutdown
!
router rip
 version 2
 network 10.0.0.0
 network 192.168.20.0
```

```
R3
 description ***Link to Server2 Segment***
 ip address 10.100.11.1 255.255.255.0
!
interface Ethernet0/3
 no ip address
 shutdown
!
router rip
 version 2
 network 10.0.0.0
 network 192.168.20.0
 network 192.168.250.0
 no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
!
control-plane
!
```

```
R3
 network 192.168.250.0
 no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
!
control-plane
!
!
!
!
!
!
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 --- More (5) ---
```



```
R3
!
no ip http server
no ip http secure-server
!
!
!
!
!
control-plane
!
!
!
!
!
!
!
!
line con 0
  logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
!
!
end
R3#
```

R1 router clock is synchronized with ISP router R2 is supposed to receive NTP updates from R1. But you observe that R2 clock is not synchronized with R1. What is the reason R2 is not receiving NTP updates from R1?

- A. The IP address that is used in the NTP configuration on R2 router is incorrect.
B. The NTP server command not configured on R2 router.
C. R2 router Ethernet interface that is connected to R1 is placed in shutdown condition.
D. R1 router Ethernet interface that is connected to R2 is placed in shutdown condition.

Answer: A

Explanation: Check the below configuration for this

Explanation/show commands:

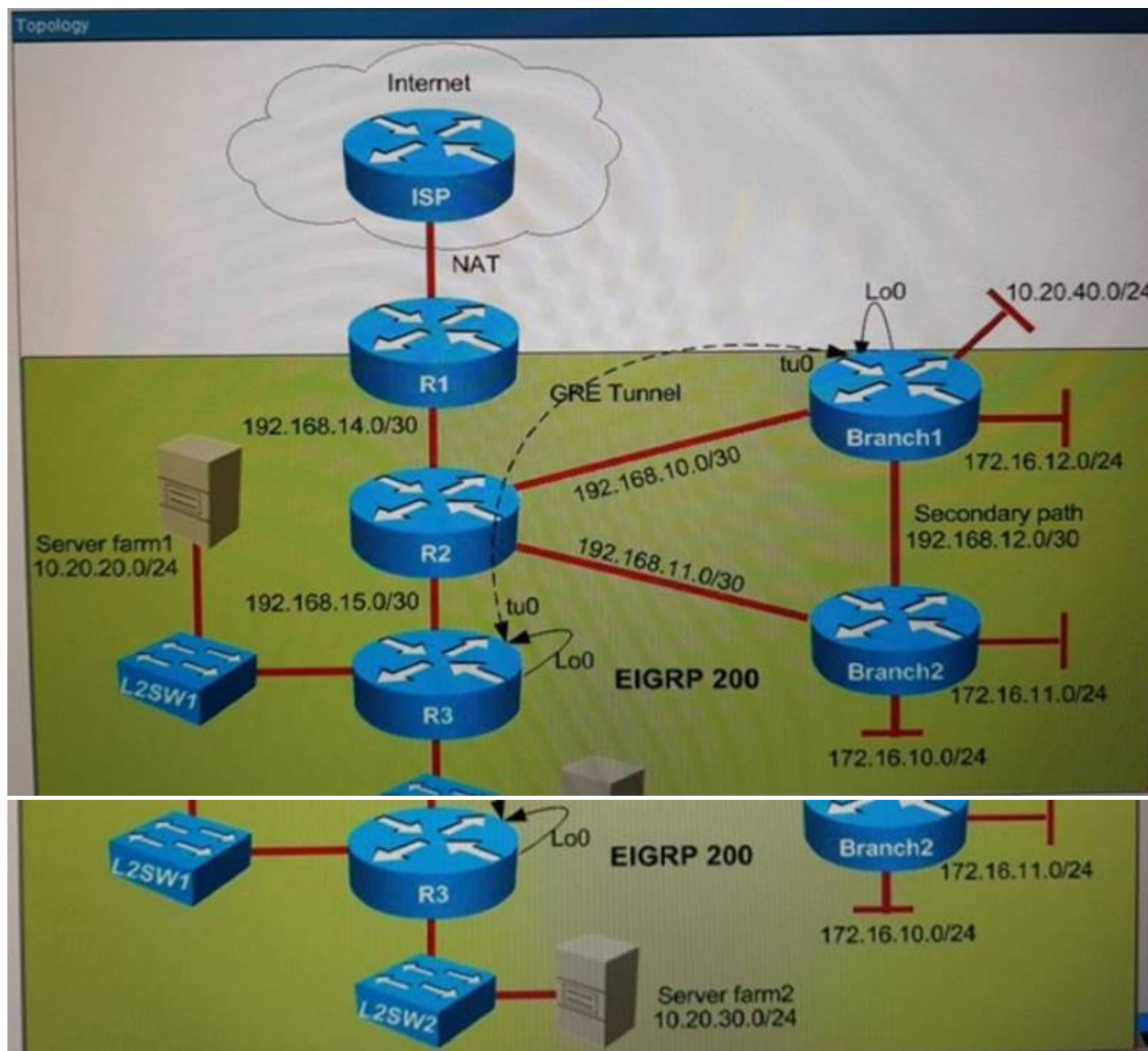
<pre> R2 deny 172.16.200.0 0.0.0.255 permit any ! ! ! control-plane ! ! ! ! ! ! ! ! line con 0 logging synchronous line aux 0 line vty 0 4 login transport input all ! ntp server 192.168.100.1 ! end R2# </pre>	<pre> R1 no ip address shutdown ! router rip version 2 network 172.16.0.0 network 192.168.10.0 network 192.168.250.0 default-information originate no auto-summary ! ip forward-protocol nd ! ! no ip http server no nat inside source list LOCAL interface Ethernet0 ip route 0.0.0.0 0.0.0.0 209.165.200.226 ! ip access-list standard LOCAL permit 10.0.0.0 0.255.255.255 permit 172.16.0.0 0.0.255.255 permit 192.168.0.0 0.0.255.255 ! ! </pre>
---	---

NEW QUESTION 580

You are implementing EIGRP between the main office and branch offices. In Phase 1 you must implement and verify EIGRP configurations as mentioned in the topology in Phase 2. your colleague is expected to do NAT and ISP configurations

Identity the issues that you are encountering during Phase 1 EIGRP implementation.

- Router R1 connects the main office to the Internet and routers R2 and R3 are internal routers
 - Routers Branch 1 and Branch2 connect to router R2 in the main office.
 - Users from the Branch1 LAN network 10.20.40.0/24 are expected to perform testing of the application that is hosted on the servers in Server farm1, before servers are available for production
 - The GRE tunnel is configured between R3 and Branch1, and traffic between server farm1 and Branch1 LAN network 10.20.40.0/24 is routed through the GRE tunnel using static routes
 - The link between Branch1 and Branch2 is used as a secondary path in the event of failure of the primary path to main office
- You have console access on R1, R2, R3, Branch1, and Branch2 devices Use only show commands to troubleshoot the issues
- Topology:



```
Branch1
ip address 10.20.40.1 255.255.255.0
!
!
router eigrp 200
 network 10.16.200.2 0.0.0.0
 network 172.16.12.0 0.0.0.255
 network 192.168.10.0
 network 192.168.12.0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip route 10.20.20.0 255.255.255.0 Tunnel
!
```



```
R3
interface Ethernet0/0
description ***Link to Server farm2***
ip address 10.20.30.1 255.255.255.0
!
interface Ethernet0/1
description ***Link to Server farm1***
ip address 10.20.20.1 255.255.255.0
!
interface Ethernet0/2
description ***Link to R2***
ip address 192.168.15.2 255.255.255.252
!
interface Ethernet0/3
no ip address
shutdown
!
router eigrp 300
```

Examine the R1 routing table. None of the internal routes other than locally connected appear in the routing table Which cause of the issue is true?

- A. EIGRP neighbor relationship was not formed due to AS mismatch between routers R1 and R2.
- B. EIGRP neighbor relationship was not formed due to K values mismatch between routers R1 and R2.
- C. EIGRP packets were blocked by the inbound ACL on R1.
- D. IP address was misconfigured between the R1 and R2 interfaces

Answer: C

NEW QUESTION 584

Drag and Drop the CSMAComponents from the left onto the correct description on the right

1-persistent	access mode used for Ethernet networks
CSMA/CA	access mode used for Wi-Fi networks
CSMA/CD	access mode used in the controller area network
O-persistent	rules that define the system response when a collision occurs on an Ethernet network
P-persistent	rules that define the system response when a collision occurs on a Wi-Fi network

Answer:

Explanation:

1-persistent	1-persistent
CSMA/CA	P-persistent
CSMA/CD	O-persistent
O-persistent	CSMA/CD
P-persistent	CSMA/CA

NEW QUESTION 587

When troubleshooting client DNS issues, which two tasks must you perform? (Choose two.)

- A. Ping a public website IP address.
- B. Determine whether a DHCP address has been assigned.
- C. Determine whether the hardware address is correct.
- D. Ping the DNS server.
- E. Determine whether the name servers have been configured.

Answer: CD

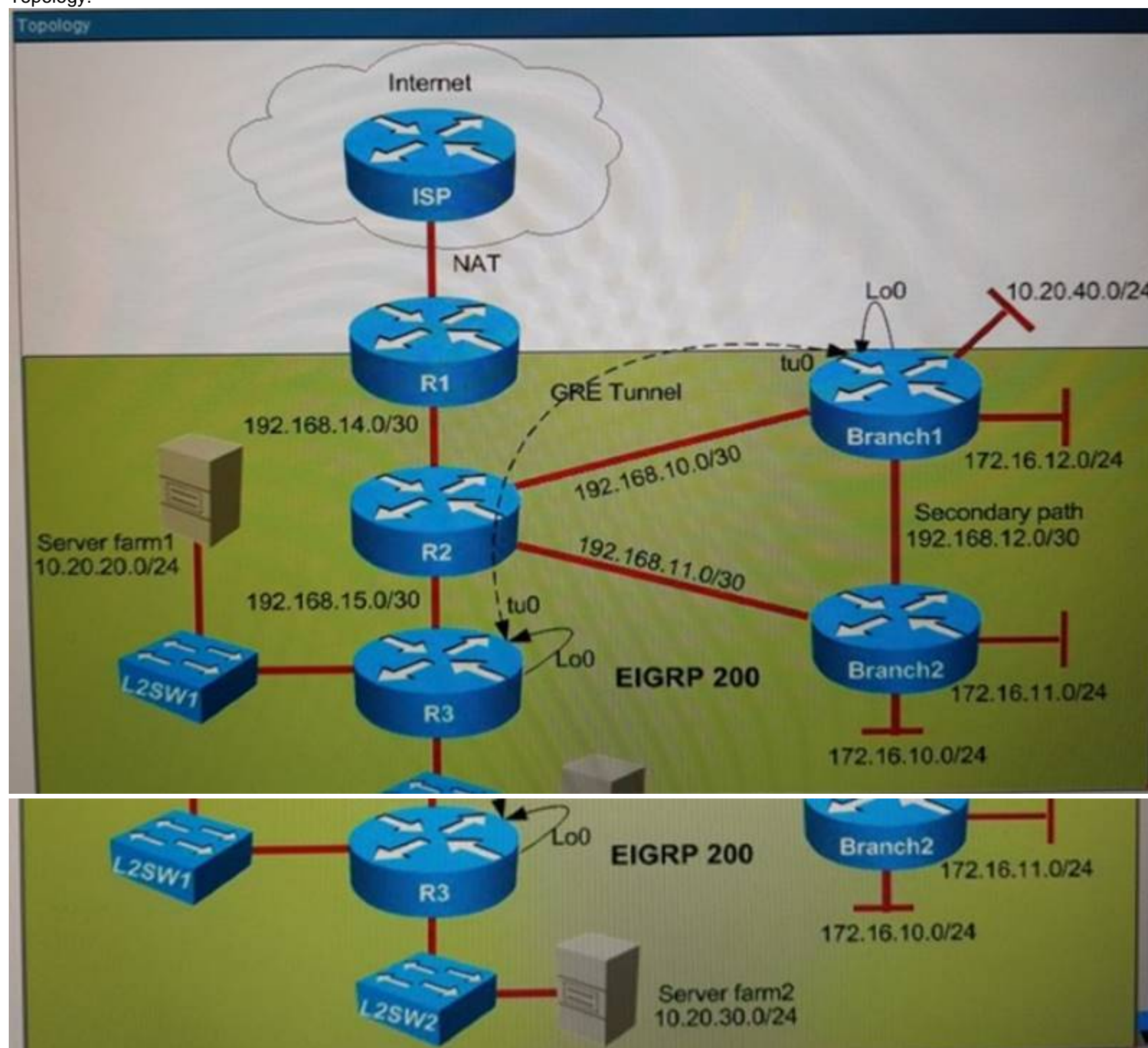
NEW QUESTION 588

You are implementing EIGRP between the main office and branch offices. In Phase 1 you must implement and verify EIGRP configurations as mentioned in the topology in Phase 2. your colleague is expected to do NAT and ISP configurations

Identify the issues that you are encountering during Phase 1 EIGRP implementation.

- Router R1 connects the main office to the Internet and routers R2 and R3 are internal routers
 - Routers Branch 1 and Branch2 connect to router R2 in the main office.
 - Users from the Branch1 LAN network 10.20.40.0/24 are expected to perform testing of the application that is hosted on the servers in Server farm1, before servers are available for production
 - The GRE tunnel is configured between R3 and Branch1, and traffic between server farm1 and Branch1 LAN network 10.20.40.0/24 is routed through the GRE tunnel using static routes
 - The link between Branch1 and Branch2 is used as a secondary path in the event of failure of the primary path to mam office
- You have console access on R1. R2. R3. Branch1, and Branch2 devices Use only show commands to troubleshoot the issues

Topology:




```
Branch1
ip address 10.20.40.1 255.255.255.0
!
!
router eigrp 200
 network 10.16.200.2 0.0.0.0
 network 172.16.12.0 0.0.0.255
 network 192.168.10.0
 network 192.168.12.0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip route 10.20.20.0 255.255.255.0 Tunnel
!
!
```

```
R3
interface Ethernet0/0
 description ***Link to Server farm2***
 ip address 10.20.30.1 255.255.255.0
!
interface Ethernet0/1
 description ***Link to Server farm1***
 ip address 10.20.20.1 255.255.255.0
!
interface Ethernet0/2
 description ***Link to R2***
 ip address 192.168.15.2 255.255.255.252
!
interface Ethernet0/3
 no ip address
 shutdown
!
router eigrp 200
```

The traffic from Branch2 to the main office is using the secondary path instead of the primary path connected to R2. Which cause of the issue is true?

- A. The network 192.163.11,0/30 was not advertised into EIGRP on Branch2.
- B. The IP address was misconfigured between the Branch2 and R2 interfaces.
- C. EIGRP packets were blocked by the inbound ACL on Branch2.
- D. The primary path has more link delay configured then secondary path which causes EIGRP to choose the secondary path.

Answer: B

NEW QUESTION 591

If you change the weight and distance parameters on a device with an established bgp neighbor, which additional task must you perform to allow two devices to continue exchanging routes ?

- A. Change the weight and distance settings on the other device to match
- B. reset the gateway interface
- C. reset the BGP connections on the device
- D. Clear the IP routers on the device

Answer: C

NEW QUESTION 596

Scenario:

You work for a company that provides managed network services, and of your real estate clients running a small office is experiencing network issues, Troubleshoot the network issues.

Router R1 connects the main office to internet, and routers R2 and R3 are internal routers NAT is enabled on Router R1.

The routing protocol that is enable between routers R1, R2, and R3 is RIPv2.

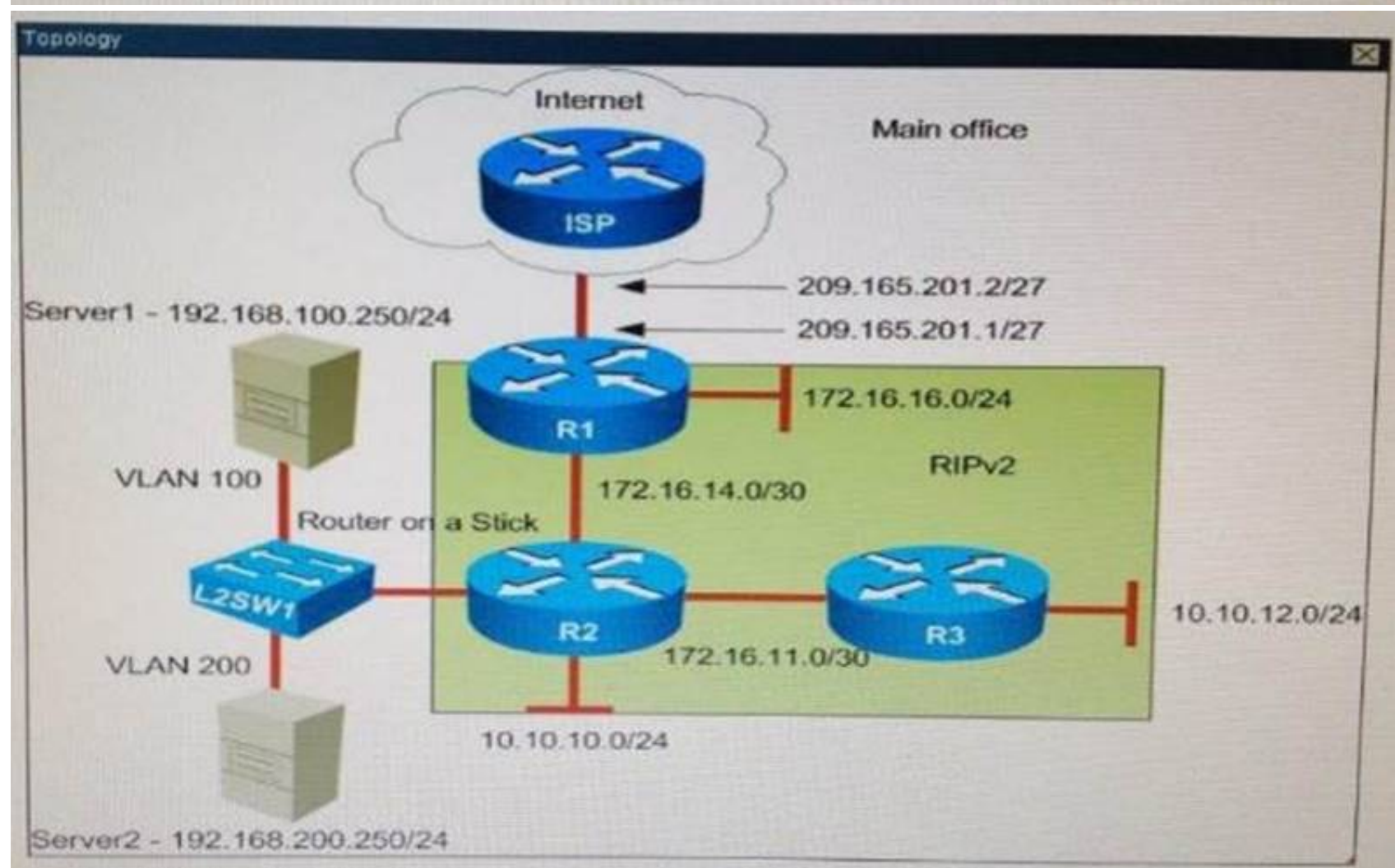
R1 sends default route into RIPv2 for internal routers to forward internet traffic to R1.

Server1 and Server2 are placed in VLAN 100 and 200 respectively, and dare still running router on stick configuration with router R2.

You have console access on R1, R2, R3, and L2SW1 devices. Use only show commands to troubleshoot the issues.

Instructions

- Enter IOS commands on the device to verify network operation and answer the multiple-choice questions.
- THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION.**
- Click the device icon to gain access to the console of the device. No console or enable passwords are required.
- To access the multiple-choice questions, click the numbered boxes on the left of the top panel.
- There are **four** multiple-choice questions with this task. Be sure to answer all four questions before clicking Next.



R1

```

R1#show r
R1#show run
R1#show running-config
Building configuration...

Current configuration : 1438 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
clock timezone PST -8 0
nmi polling-interval 60
no nmi auto-configure

```



```
ip cef
no ipv6 cef
```

```
multilink bundle-name authenticated
```

```
multilink bundle-name authenticated
```

redundancy

```

!
interface Ethernet0/0
  description ***Link to ISP***
  ip address 209.165.201.1 255.255.255.224
  ip nat outside
  ip virtual-reassembly in
!
interface Ethernet0/1
  description ***Link to LAN***
  ip address 172.16.16.1 255.255.255.0
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/2
  description ***Link to R2***
  ip address 172.16.14.1 255.255.255.252
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/3
  no ip address
  shutdown
!
router rip
  version 2

```

```

router rip
  version 2
  network 172.16.0.0
  default-information originate
  no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
!
ip access-list standard LOCAL
  permit 10.0.0.0 0.255.255.255
  permit 172.16.0.0 0.0.255.255
  permit 192.168.0.0 0.0.255.255
!
!
!
!
control-plane
!

```



```

line con 0
logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
!
!
end
R1#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4100 (bia aabb.cc00.4100)
  Description: ***Link to ISP***
  Internet address is 209.165.201.1/27
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:53, output 00:00:07, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)

```

```

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  40 packets input, 11786 bytes, 0 no buffer
  Received 39 broadcasts (0 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  191 packets output, 20271 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  4 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4110 (bia aabb.cc00.4110)
  Description: ***Link to LAN***
  Internet address is 172.16.16.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00

```



```
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  245 packets output, 30725 bytes, 0 underruns
  0 output errors, 0 collisions, 4 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4120 (bia aabb.cc00.4120)
  Description: ***Link to R2***
  Internet address is 172.16.14.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
```

```
Internet address is 172.16.14.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:16, output 00:00:07, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  98 packets input, 20097 bytes, 0 no buffer
  Received 97 broadcasts (54 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  247 packets output, 25359 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  4 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
```



```

0 output buffer failures, 0 output buffers swapped out
Ethernet0/0 is administratively down, line protocol is down
Hardware is FastEthernet, address is cabb.cc00.4130 (bia cabb.cc00.4130)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier

```

```

    0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/0 is up, line protocol is up
Hardware is NVI
Interface is unnumbered. Using address of Ethernet0/0 (209.165.201.1)
MTU 1514 bytes, BW 56 Kbit/sec, DLY 5000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation UNKNOWN, loopback not set
Keepalive set (10 sec)
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops
    0 output buffer failures, 0 output buffers swapped out
R1#
R1#show ip interface brief

```



```

Interface Configuration brief
Interface      IP-Address      OK? Method Status      Prot
Ethernet0/0    209.165.201.1   YES NVRAM   up          up
Ethernet0/1    172.16.16.1     YES NVRAM   up          up
Ethernet0/2    172.16.14.1     YES NVRAM   up          up
Ethernet0/3    unassigned      YES NVRAM   administratively down down
NVI0          209.165.201.1   YES unset   up          up
R1#
R1#
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, I - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
R      10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2

```

```

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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, I - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
R      10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
R      172.16.11.0/30 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
C      172.16.14.0/30 is directly connected, Ethernet0/2
L      172.16.14.1/32 is directly connected, Ethernet0/2
C      172.16.16.0/24 is directly connected, Ethernet0/1
L      172.16.16.1/32 is directly connected, Ethernet0/1
R      192.168.1.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R      192.168.100.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R      192.168.200.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C      209.165.201.0/27 is directly connected, Ethernet0/0
L      209.165.201.1/32 is directly connected, Ethernet0/0
R1#
R1#

```



```

...configuration...
...configuration : 1505 bytes
...
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
nmi polling-interval 60
no nmi auto-configure
no nmi pvc

```

```
!
!  
!  
!  
!  
ip cef  
no ipv6 cef  
!  
multilink bundle-name authenticated
```

redundancy

```

interface Ethernet0/0
  description ***Link to R3***
  ip address 172.16.11.1 255.255.255.252
!
interface Ethernet0/1
  no ip address
!
interface Ethernet0/1.1
  description ***Link to Management Segment***
  encapsulation dot1q 1 native
  ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/1.100
  description ***Link to Server1 Segment***
  encapsulation dot1q 200
  ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
  description ***Link to Server2 Segment***
  encapsulation dot1q 100
  ip address 192.168.200.1 255.255.255.0
!
interface Ethernet0/2
  description ***Link to R1***

```



```

line con 0
logging synchronous
line aux 0
line vty 0 4
login
transport input all
!
!
end
R2#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
  Description: ***Link to R3***
  Internet address is 172.16.11.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255

```



```

Ethernet0/0 is up, line protocol is up
Hardware is AndP2, address is eabb.cc00.4200 (bia eabb.cc00.4200)
Description: ***Link to R3***
Internet address is 172.16.11.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:32, output 00:00:08, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    50 packets input, 15683 bytes, 0 no buffer
    Received 50 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    343 packets output, 42566 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    2 unknown protocol drops

```

```

    2 unknown protocol drops
    0 babblers, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
Hardware is AndP2, address is eabb.cc00.4210 (bia eabb.cc00.4210)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:00, output 00:00:08, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 1000 bits/sec, 2 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    4632 packets input, 308536 bytes, 0 no buffer
    Received 4421 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    512 packets output, 73148 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets

```



```

0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/1.1 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Mangement Segment***
  Internet address is 192.168.1.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 1.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server1 Segment***
  Internet address is 192.168.100.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 200.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)

```

```

  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server1 Segment***
  Internet address is 192.168.100.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 200.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/1.200 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server2 Segment***
  Internet address is 192.168.200.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 100.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/2 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4220 (bia aabb.cc00.4220)
  Description: ***Link to R1***

```



```

0 output buffer failures, 0 output buffers swapped out
Ethernet is up, line protocol is up
Hardware is FastEthernet0/24, address is 0800.0c2c.4230 (bia 0800.0c2c.4230)
Description: ***Link to LAN***
Internet address is 10.10.10.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:08, output 00:00:02, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  128 packets input, 21994 bytes, 0 no buffer
Received 127 broadcasts (77 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 345 packets output, 39952 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out

```

```

0 output buffer failures, 0 output buffers swapped out
Ethernet is up, line protocol is up
Hardware is FastEthernet0/24, address is 0800.0c2c.4230 (bia 0800.0c2c.4230)
Description: ***Link to LAN***
Internet address is 10.10.10.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 344 packets output, 42752 bytes, 0 underruns
  0 output errors, 0 collisions, 6 interface resets
  0 unknown protocol drops

```



```

0 late collisions, 0 interface resets
0 protocol drops
0 runts, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
R2#
R2#
R2#show ip interface brief
Interface                IP-Address      OK? Method Status      Prot
o0/0
Ethernet0/0              172.16.11.1     YES NVRAM  up         up
Ethernet0/1              unassigned      YES NVRAM  up         up
Ethernet0/1.1            192.168.1.1     YES NVRAM  up         up
Ethernet0/1.100          192.168.100.1   YES NVRAM  up         up
Ethernet0/1.200          192.168.200.1   YES NVRAM  up         up
Ethernet0/2              172.16.14.2     YES NVRAM  up         up
Ethernet0/3              10.10.10.1      YES NVRAM  up         up
R2#
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
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
ia - IS-IS inter area, * - candidate default, U - per-user static 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
i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
+ - replicated route, % - next hop override

Gateway of last resort is 172.16.14.1 to network 0.0.0.0

R*  0.0.0.0/0 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    10.10.10.0/24 is directly connected, Ethernet0/3
L    10.10.10.1/32 is directly connected, Ethernet0/3
    172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
C    172.16.11.0/30 is directly connected, Ethernet0/0
L    172.16.11.1/32 is directly connected, Ethernet0/0
C    172.16.14.0/30 is directly connected, Ethernet0/2
L    172.16.14.2/32 is directly connected, Ethernet0/2
R    172.16.16.0/24 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.1.0/24 is directly connected, Ethernet0/1.1

```

```

R3#show ip route
...
R3#show ip route 172.16.14.1 to source 0.0.0.0
...
R3#show ip route 10.10.0.0 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
10.10.0.0/8 is variably subnetted, 2 subnets, 2 masks
10.10.10.0/24 is directly connected, Ethernet0/3
10.10.10.1/32 is directly connected, Ethernet0/3
172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
C 172.16.11.0/30 is directly connected, Ethernet0/0
L 172.16.11.1/32 is directly connected, Ethernet0/0
C 172.16.14.0/30 is directly connected, Ethernet0/2
L 172.16.14.2/32 is directly connected, Ethernet0/2
R 172.16.16.0/24 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.0/24 is directly connected, Ethernet0/1.1
L 192.168.1.1/32 is directly connected, Ethernet0/1.1
192.168.100.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.100.0/24 is directly connected, Ethernet0/1.100
L 192.168.100.1/32 is directly connected, Ethernet0/1.100
192.168.200.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.200.0/24 is directly connected, Ethernet0/1.200
L 192.168.200.1/32 is directly connected, Ethernet0/1.200
R2#

```

```

R3#show running-config
Running configuration...

Running configuration : 913 bytes

version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R3
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mai polling-interval 60
no mai auto-configure

```



```

interface Ethernet0/0
  description ***Link to LAN***
  ip address 10.10.12.1 255.255.255.0
!
interface Ethernet0/1
  description ***Link to R2***
  ip address 172.16.11.2 255.255.255.252
!
interface Ethernet0/2
  no ip address
  shutdown
!
interface Ethernet0/3
  no ip address
  shutdown
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
!

```

```
line con 0
  logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
```

```

reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  666 packets output, 71699 bytes, 0 underruns
    0 output errors, 0 collisions, 11 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out

```



```

R3
Hardware is AndP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
Description: ***Link to R2***
Internet address is 172.16.11.2/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:21, output 00:00:05, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  316 packets input, 74089 bytes, 0 no buffer
Received 316 broadcasts (200 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
669 packets output, 71888 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier

```

```

R3
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is administratively down, line protocol is down
Hardware is AndP2, address is aabb.cc00.4320 (bia aabb.cc00.4320)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 unknown protocol drops

```



```

R3
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
Hardware is AmdP2, address is aabb.cc00.4330 (bia aabb.cc00.4330)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets

```

```

R3
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
R3#
R3#
R3#show ip interface brief
Interface              IP-Address      OK? Method Status      Prot
ocol
Ethernet0/0             10.10.12.1      YES NVRAM  up          up
Ethernet0/1             172.16.11.2     YES NVRAM  up          up
Ethernet0/2             unassigned      YES NVRAM  administratively down down
Ethernet0/3             unassigned      YES NVRAM  administratively down down
R3#
R3#
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
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route

```



```

R3#
Ethernet0/2                unassigned      YES NVRAM  administratively down down
Ethernet0/3                unassigned      YES NVRAM  administratively down down
R3#
R3#
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, I - IGRP
       + - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       10.10.12.0/24 is directly connected, Ethernet0/0
L       10.10.12.1/32 is directly connected, Ethernet0/0
172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.11.0/30 is directly connected, Ethernet0/1
L       172.16.11.2/32 is directly connected, Ethernet0/1
R3#
R3#
R3#

```

```
L2SW1
!
no aaa new-model
clock timezone PST -8 0
!
ip cef
!
!
no ipv6 cef
ipv6 multicast rpf use-bgp
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
!
!
!
vlan internal allocation policy ascending
!
```

```
L2SW1

L2SW1#show run
L2SW1#show running-config
Building configuration...

Current configuration : 1074 bytes
!
version 15.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service compress-config
!
hostname L2SW1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
!
ip cef
!
```

```
L2SW1

interface Vlan1
 ip address 192.168.1.254 255.255.255.0
!
ip default-gateway 192.168.1.1
!
no ip http server
!
!
!
!
!
control-plane
!
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 login
!
end
L2SW1#
L2SW1#
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
```



```

L2SW1
:
interface Ethernet0/0
  description ***Link to R2***
  switchport trunk encapsulation dot1q
  switchport mode trunk
  duplex auto
:
interface Ethernet0/1
  description ***Link to Server1 segment***
  switchport access vlan 100
  switchport mode access
  duplex auto
:
interface Ethernet0/2
  description ***Link to Server2 Segment***
  switchport access vlan 200
  switchport mode access
  duplex auto
:
interface Ethernet0/3
  duplex auto
:
interface Vlan1
  ip address 192.168.1.254 255.255.255.0
:

```

```

L2SW1
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
  Hardware is Am79C96, address is 88bb.cc00.4500 (bia 88bb.cc00.4500)
  Description: ***Link to R2***
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is unknown
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:07, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 12/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 1000 bits/sec, 2 packets/sec
    1447 packets input, 208877 bytes, 0 no buffer
    Received 139 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  13457 packets output, 919293 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets

```



```

L2SW1
13457 packets output, 919293 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4510 (bia aabb.cc00.4510)
Description: ***Link to Server1 segment***
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:07, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
755 packets input, 80219 bytes, 0 no buffer
Received 123 broadcasts (0 multicasts)
  
```

```

L2SW1
755 packets input, 80219 bytes, 0 no buffer
Received 123 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
3867 packets output, 268544 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4520 (bia aabb.cc00.4520)
Description: ***Link to Server2 Segment***
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:07, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
  
```



```

L2SW1
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 758 packets input, 81010 bytes, 0 no buffer
Received 125 broadcasts (0 multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
3867 packets output, 268544 bytes, 0 underruns
 0 output errors, 0 collisions, 0 interface resets
 0 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4530 (bia aabb.cc00.4530)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never

```

```

L2SW1
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 multicasts)
 0 runs, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 0 input packets with dribble condition detected
3566 packets output, 252186 bytes, 0 underruns
 0 output errors, 0 collisions, 55 interface resets
 0 unknown protocol drops
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
Vlan1 is up, line protocol is up
Hardware is Ethernet SVI, address is aabb.cc80.4500 (bia aabb.cc80.4500)
Internet address is 192.168.1.254/24
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported

```



```
L2SW1
Keepalive not supported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:12, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 235 packets input, 42480 bytes, 0 no buffer
Received 235 broadcasts (0 IP multicasts)
 0 runts, 0 giants, 0 throttles
 0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
 11 packets output, 830 bytes, 0 underruns
 0 output errors, 0 interface resets
 0 unknown protocol drops
 0 output buffer failures, 0 output buffers swapped out
L2SW1#
L2SW1#
L2SW1#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	unassigned	YES	unset	up	up
Ethernet0/1	unassigned	YES	unset	up	up
Ethernet0/2	unassigned	YES	unset	up	up
Ethernet0/3	unassigned	YES	unset	up	up

```
0 output buffer failures, 0 output buffers swapped out
L2SW1#
L2SW1#
L2SW1#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	unassigned	YES	unset	up	up
Ethernet0/1	unassigned	YES	unset	up	up
Ethernet0/2	unassigned	YES	unset	up	up
Ethernet0/3	unassigned	YES	unset	up	up
Vlan1	192.168.1.254	YES	NVRAM	up	up

```
L2SW1#
L2SW1#
L2SW1#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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
```



```

L2SW1
Ethernet0/0      unassigned      YES unset  up      up
Ethernet0/1      unassigned      YES unset  up      up
Ethernet0/2      unassigned      YES unset  up      up
Ethernet0/3      unassigned      YES unset  up      up
Vlan1            192.168.1.254    YES HVRAN  up      up
L2SW1#
L2SW1#
L2SW1#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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

      192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected, Vlan1
L       192.168.1.254/32 is directly connected, Vlan1
L2SW1#
L2SW1#
L2SW1#

```

Server1 and Server2 are unable to communicate with the rest of the network. Your initial check with system administrators shows that IP address settings are correctly configured on the server side. What could be an issue?

- A. The VLAN encapsulation is misconfigured on the router subinterfaces.
- B. The IP address is misconfigured on the primary router interface.
- C. The Router is missing subinterface configuration.
- D. The Trunk is not configured on the L2SW1 switch.

Answer: A

Explanation:

```

R2
!
interface Ethernet0/1.100
description ***Link to Server1 Segment***
encapsulation dot1Q 200
ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
description ***Link to Server2 Segment***
encapsulation dot1Q 100
ip address 192.168.200.1 255.255.255.0
!

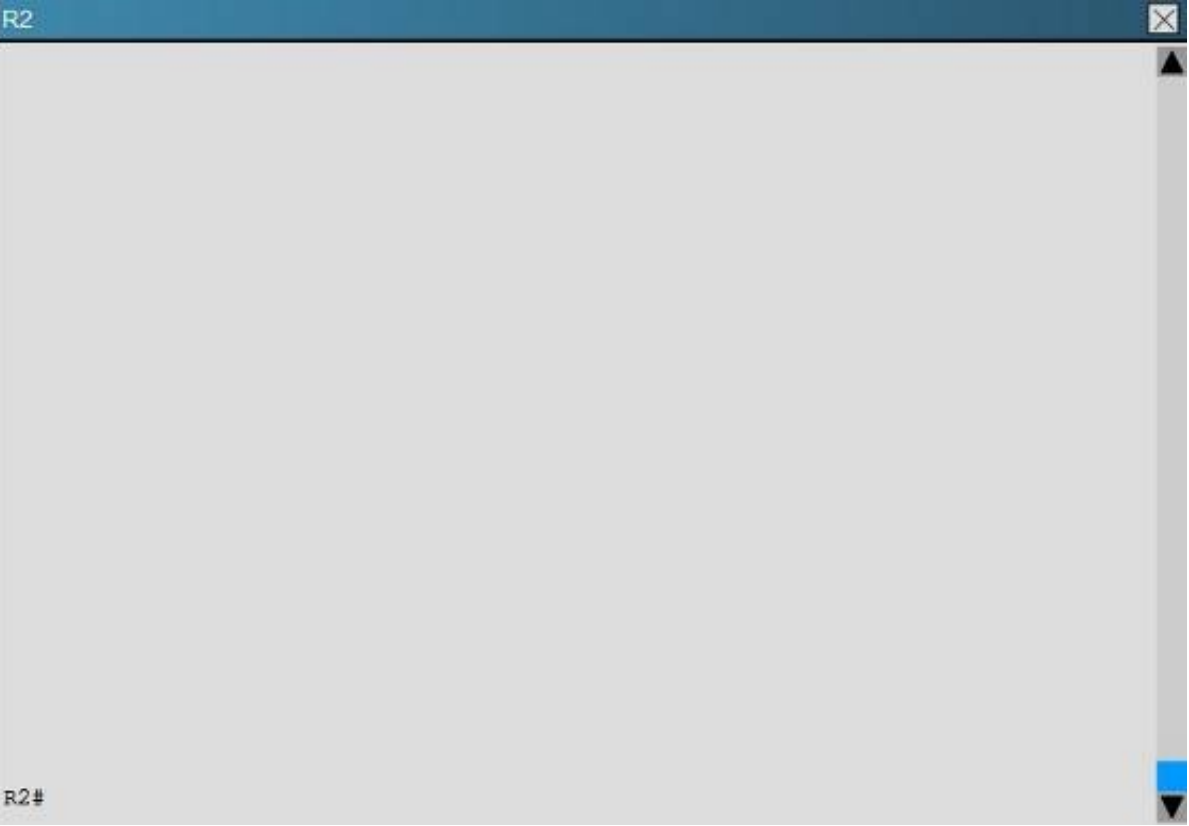
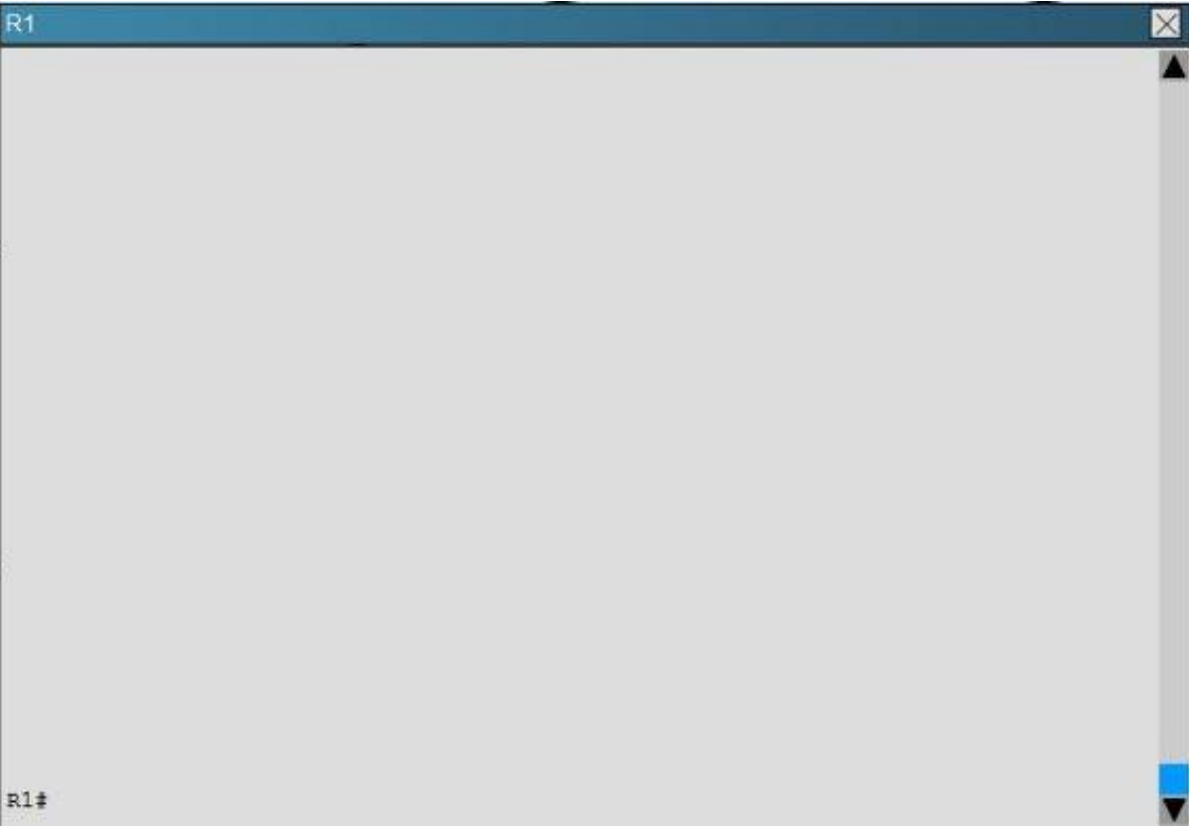
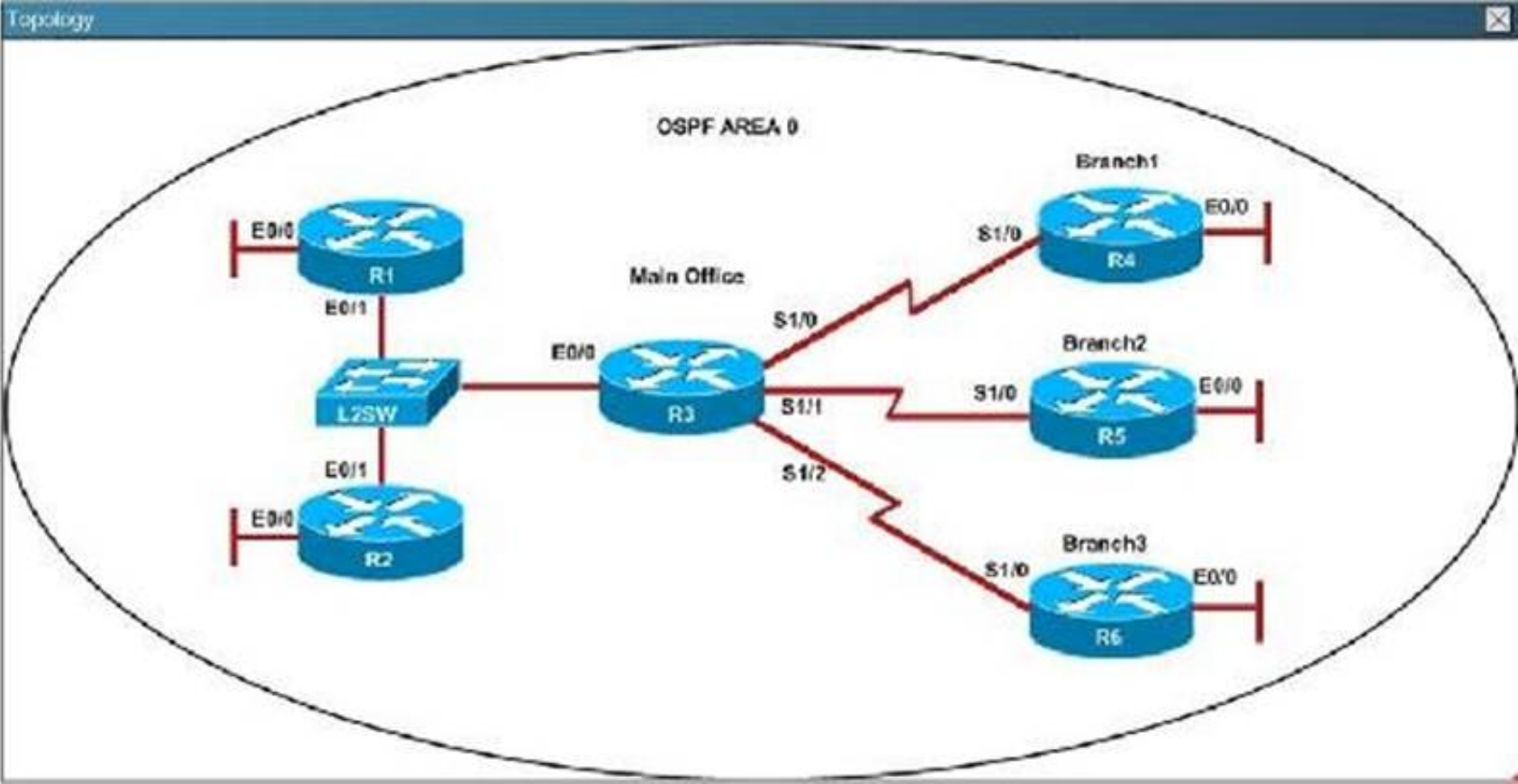
```

NEW QUESTION 600

Scenario

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links.

You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



R3

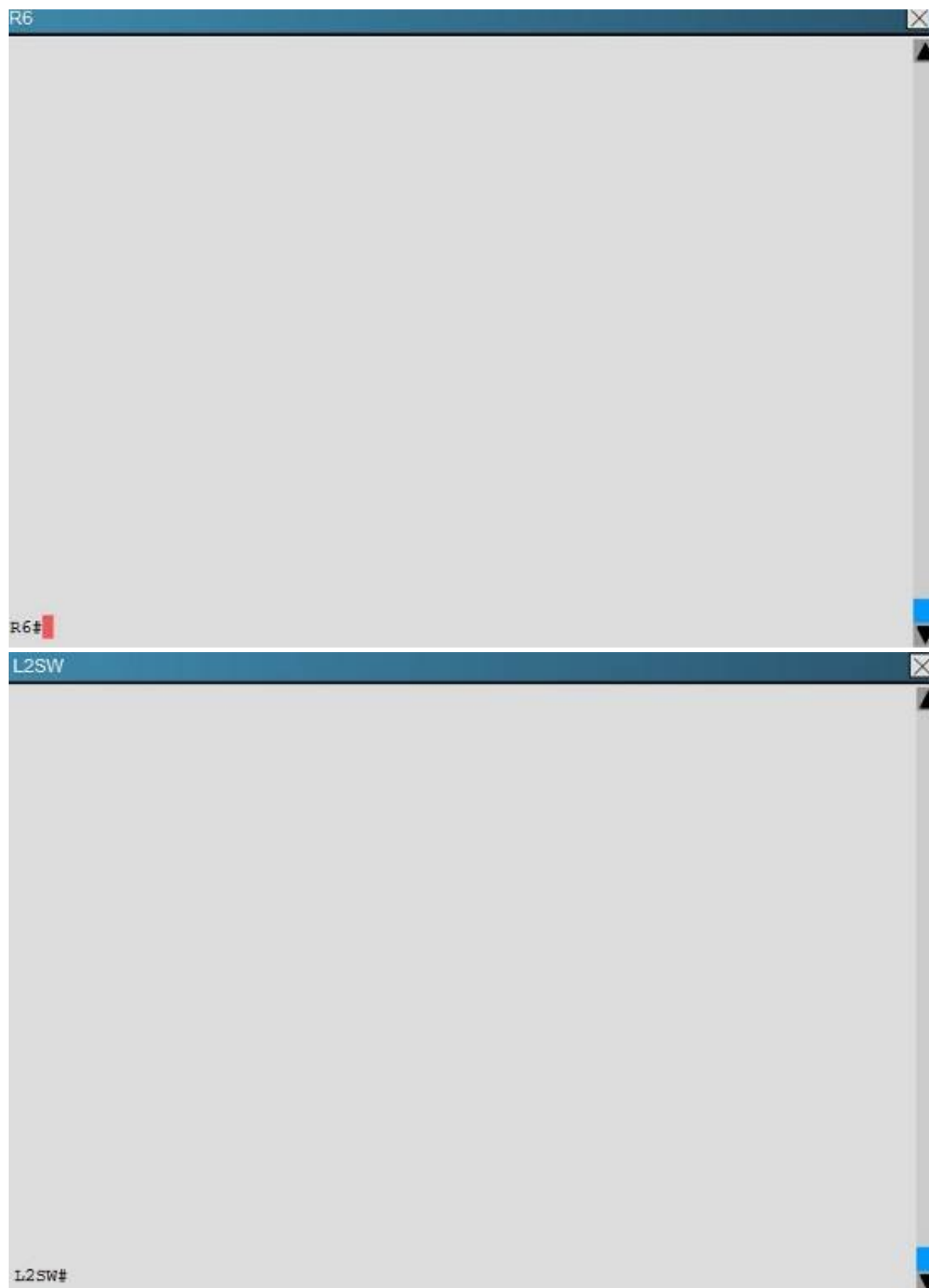
R3#

R4

R4#

R5

R5#

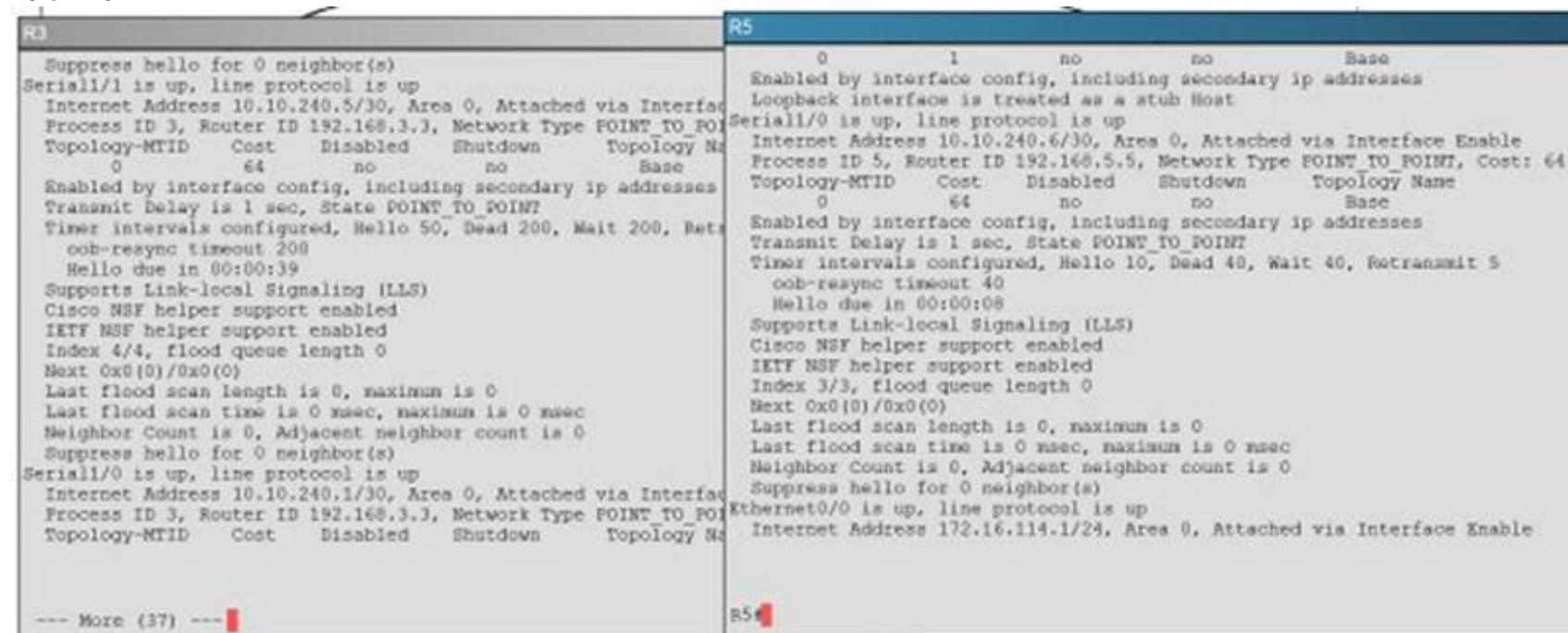


An OSPF neighbor adjacency is not formed between R3 in the main office and R5 in the Branch2 office. What is causing the problem?

- A. There is an area ID mismatch.
- B. There is a PPP authentication issue; a password mismatch.
- C. There is an OSPF hello and dead interval mismatch.
- D. There is a missing network command in the OSPF process on R5.

Answer: C

Explanation: The “show ip ospf interface command on R3 and R5 shows that the hello and dead intervals do not match. They are 50 and 200 on R3 and 10 and 40 on R5.



NEW QUESTION 604

Which two statements about EUI-64 addressing are true? (Choose two)

- A. A 64-bit interface identifier is derived from the interface MAC address
- B. A 96-bit interface identifier is derived from the interface MAC address.
- C. A locally administered address has the universal/local bit set to 0.
- D. The address includes the hex digits FFFE after the first 24 bits of the interface MAC address
- E. The address includes the hex digits FFFE after the last 24 bits of the interface MAC address

Answer: CD

NEW QUESTION 608

What is a valid HSRP virtual MAC address?

- A. 0000.5E00.01A3
- B. 0007.B400.AE01
- C. 0000.0C07.AC15
- D. 0007.5E00.B301

Answer: C

Explanation: With HSRP, two or more devices support a virtual router with a fictitious MAC address and unique IP address. There are two version of HSRP.
+ With HSRP version 1, the virtual router's MAC address is 0000.0c07.ACxx , in which xx is the HSRP group.
+ With HSRP version 2, the virtual MAC address if 0000.0C9F.Fxxx, in which xxx is the HSRP group. Note: Another case is HSRP for IPv6, in which the MAC address range from 0005.73A0.0000 through 0005.73A0.0FFF.

NEW QUESTION 609

What SNMP message alerts the manager to a condition on the network?

- A. response
- B. get
- C. trap
- D. capture

Answer: C

Explanation: An agent can send unsolicited traps to the manager. Traps are messages alerting the SNMP manager to a condition on the network. Traps can mean improper user authentication, restarts, link status (up or down), MAC address tracking, closing of a TCP connection, loss of connection to a neighbor, or other significant events.

Reference:

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2950/software/release/12-1_9_ea1/configuration/guid

NEW QUESTION 611

Which three statements about the features of SNMPv2 and SNMPv3 are true? (Choose three.)

- A. SNMPv3 enhanced SNMPv2 security features.
- B. SNMPv3 added the Inform protocol message to SNMP.
- C. SNMPv2 added the Inform protocol message to SNMP.
- D. SNMPv3 added the GetBulk protocol messages to SNMP.
- E. SNMPv2 added the GetBulk protocol message to SNMP.
- F. SNMPv2 added the GetNext protocol message to SNMP.

Answer: ACE

Explanation: SNMPv1/v2 can neither authenticate the source of a management message nor provide encryption. Without authentication, it is possible for nonauthorized users to exercise SNMP network management functions. It is also possible for nonauthorized users to eavesdrop on management information as it passes from managed systems to the management system. Because of these deficiencies, many SNMPv1/v2 implementations are limited to simply a read-only capability, reducing their utility to that of a network monitor; no network control applications can be supported. To correct the security deficiencies of SNMPv1/v2, SNMPv3 was issued as a set of Proposed Standards in January 1998. -> A is correct.

The two additional messages are added in SNMP2 (compared to SNMPv1)

GetBulkRequest The GetBulkRequest message enables an SNMP manager to access large chunks of data. GetBulkRequest allows an agent to respond with as much information as will fit in the response PDU. Agents that cannot provide values for all variables in a list will send partial information. -> E is correct.

InformRequest The InformRequest message allows NMS stations to share trap information. (Traps are issued by SNMP agents when a device change occurs.)

InformRequest messages are generally used between NMS stations, not between NMS stations and agents. -> C is correct.

Note: These two messages are carried over SNMPv3.

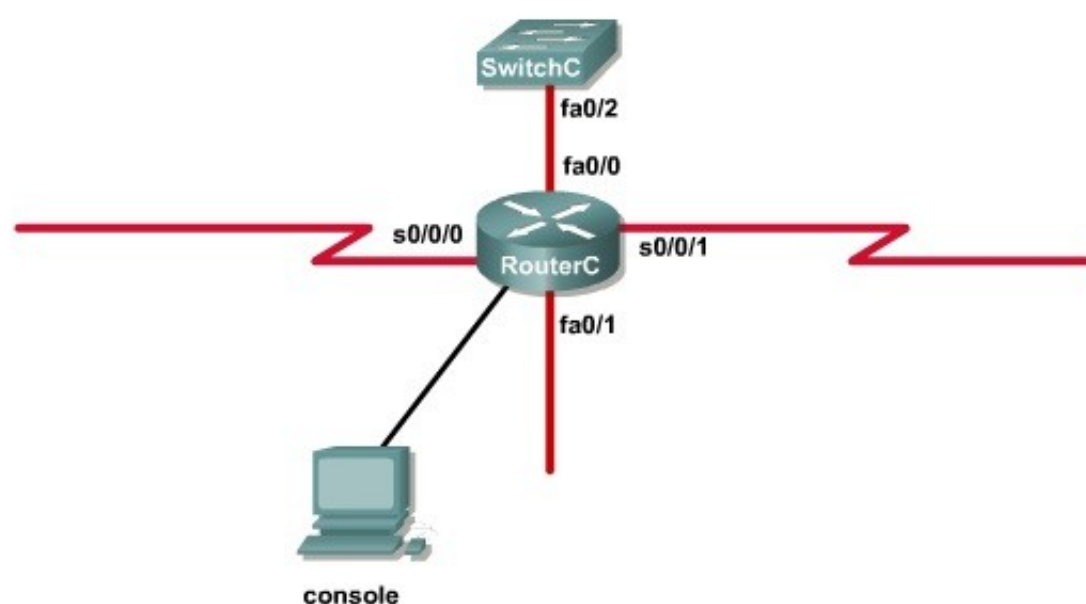
NEW QUESTION 612

An administrator is trying to ping and telnet from SwitchC to RouterC with the results shown below.

```
SwitchC>
SwitchC> ping 10.4.4.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.4.4.3, timeout is 2 seconds:
U.U.U
Success rate is 0 percent (0/5)
SwitchC>
SwitchC> telnet 10.4.4.3
Trying 10.4.4.3 ...
% Destination unreachable; gateway or host down
SwitchC>
```

Click the console connected to RouterC and issue the appropriate commands to answer the questions.

Topology



RouterC

```
Press RETURN to get started!
RouterC>
```


<output omitted>

```
interface Loopback1
 ip address 172.16.4.1 255.255.255.0
!
interface Loopback2
 ip address 10.145.145.1 255.255.255.0
 ipv6 address 2001:410:2:3::/64 eui-64
!
interface FastEthernet0/0
 ip address 10.4.4.3 255.255.255.0
 ip access-group 106 in
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface Serial0/0/0
 bandwidth 64
 no ip address
 ip access-group 102 out
 encapsulation frame-relay
 ip ospf authentication
 ip ospf authentication
 ip ospf authentication-key san-fran
!
interface Serial0/0/0.1 point-to-point
 ip address 10.140.3.2 255.255.255.0
 ip authentication mode eigrp 100 md5
 ip authentication key-chain eigrp 100 icndchain
 frame-relay interface-dlci 120
!
interface Serial0/0/1
 bandwidth 64
 ip address 10.45.45.1 255.255.255.0
 ip access-group 102 in
 ip authentication mode eigrp 100 md5
 ip authentication key-chain eigrp 100 icndchain
```

```
router eigrp 100
 network 10.0.0.0
 network 172.16.0.0
 network 192.168.2.0
 not auto-summary
!
router ospf 100
 log-adjacency-changes
 network 10.4.4.3 0.0.0.0 area 0
 network 10.45.45.1 0.0.0.0 area 0
 network 10.140.3.2 0.0.0.0 area 0
 network 192.168.2.62 0.0.0.0 area 0
!
router rip
 version 2
 network 10.0.0.0
 network 172.16.0.0
!
ip default-gateway 10.1.1.2
!
!
ip http server
no ip http secure-server
!
```



```
access-list 102 permit tcp any any eq ftp
access-list 102 permit tcp any any eq ftp-data
access-list 102 deny tcp any any eq telnet
access-list 102 deny icmp any any echo-reply
access-list 102 permit ip any any

access-list 104 permit tcp any any eq ftp
access-list 104 permit tcp any any eq ftp-data
access-list 104 deny tcp any any eq telnet
access-list 104 permit icmp any any echo
access-list 104 deny icmp any any echo-reply
access-list 104 permit ip any any

access-list 106 permit tcp any any eq ftp
access-list 106 permit tcp any any ftp-data
access-list 106 deny tcp any any eq telnet
access-list 106 permit icmp any any echo-reply
access-list 110 permit udp any any eq domain
access-list 110 permit udp any eq domain any
access-list 110 permit tcp any any eq domain
access-list 110 permit tcp any eq domain any
access-list 110 permit tcp any any

access-list 114 permit ip 10.4.4.0.0.0.255 any

access-list 115 permit ip 0.0.0.0 255.255.255.0 any

access-list 122 deny tcp any any
access-list 122 deny imp any any echo-reply
access-list 122 permit ip any any
!
```

<output omitted>

Which will fix the issue and allow ONLY ping to work while keeping telnet disabled?

- A. Correctly assign an IP address to interface fa0/1.
- B. Change the ip access-group command on fa0/0 from "in" to "out".
- C. Remove access-group 106 in from interface fa0/0 and add access-group 115 in.
- D. Remove access-group 102 out from interface s0/0/0 and add access-group 114 in.
- E. Remove access-group 106 in from interface fa0/0 and add access-group 104 in.

Answer: E

Explanation: Let's have a look at the access list 104:

```
access-list 104 permit tcp any any eq ftp
access-list 104 permit tcp any any eq ftp-data
access-list 104 deny tcp any any eq telent
access-list 104 permit icmp any any echo
access-list 104 permit icmp any any echo-reply
access-list 104 permit ip any any
```

The question does not ask about ftp traffic so we don't care about the two first lines. The 3rd line denies all telnet traffic and the 4th line allows icmp traffic to be sent (ping). Remember that the access list 104 is applied on the inbound direction so the 5th line "access-list 104 deny icmp any any echo-reply" will not affect our icmp traffic because the "echo-reply" message will be sent over the outbound direction.

NEW QUESTION 616

Which two statements about Ethernet standards are true? (Choose two)

- A. Ethernet is defined by IEEE standard 802.2.
- B. Ethernet is defined by IEEE standard 802.3.
- C. Ethernet 10BASE-T does not support full-duplex.
- D. When an Ethernet network uses CSMA/CD, it terminates transmission as soon as a collision occurs.
- E. When an Ethernet network uses CSMA/C
- F. it terminates transmission as soon as a collision occurs.

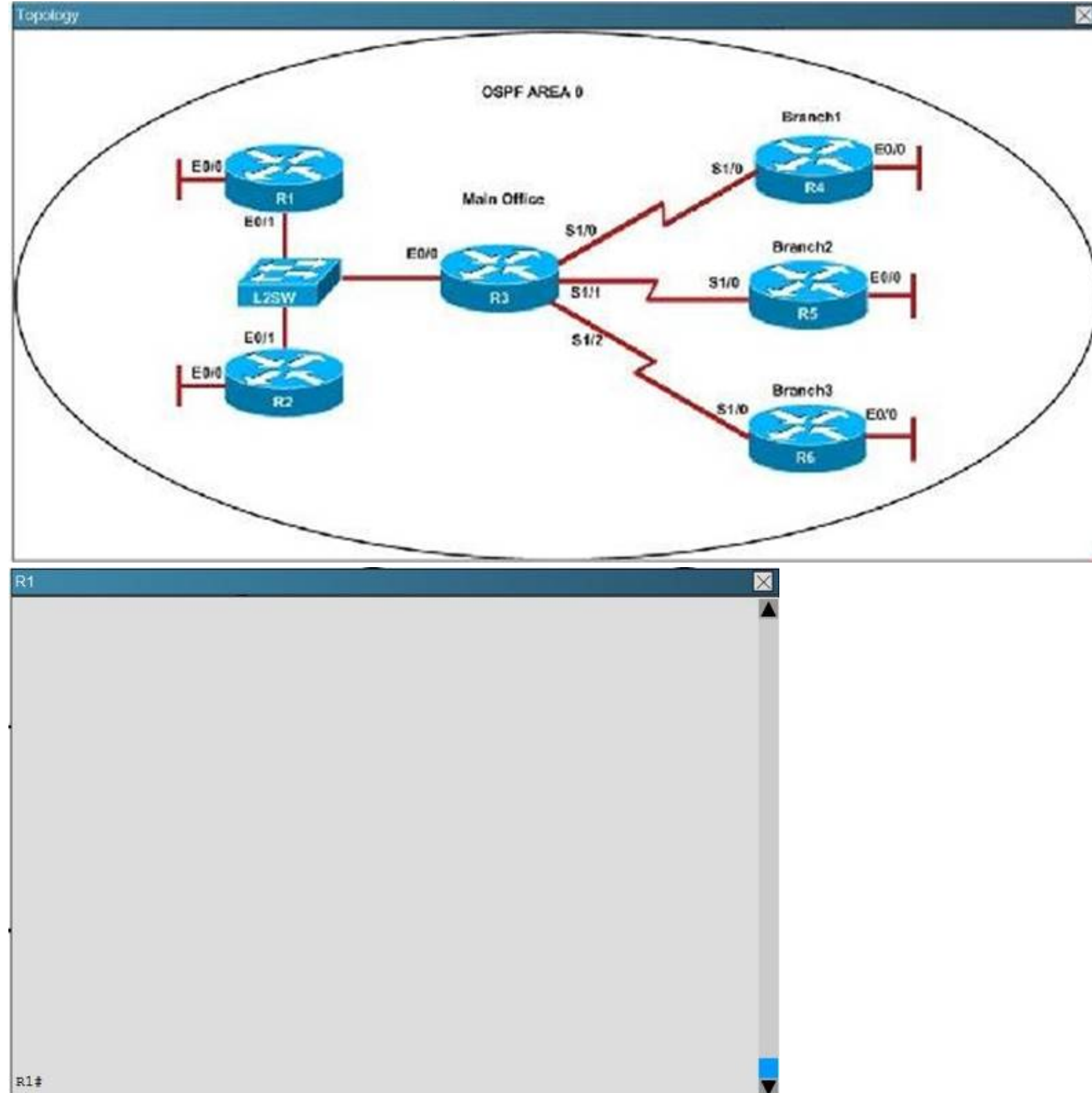
Answer: BD

NEW QUESTION 619

Scenario:

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links.

You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



R2

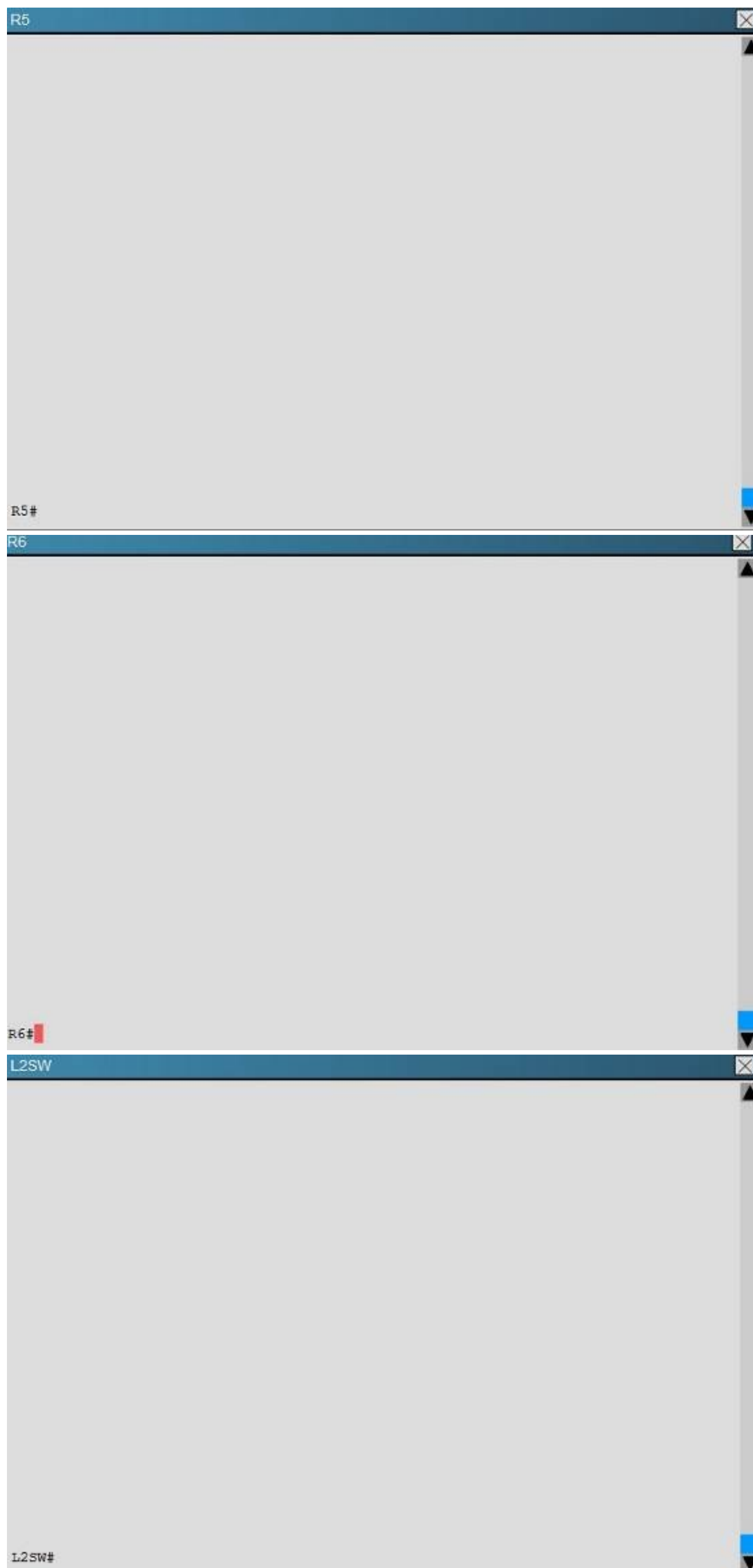
R2#

R3

R3#

R4

R4#



An OSPF neighbor adjacency is not formed between R3 in the main office and R4 in the Branch1 office. What is causing the problem?

- A. There is an area ID mismatch.
- B. There is a Layer 2 issue; an encapsulation mismatch on serial links.
- C. There is an OSPF hello and dead interval mismatch.
- D. The R3 router ID is configured on R4.

Answer: A

Explanation: A show running-config command on R3 and R4 shows that R4 is incorrectly configured for area 2:

R3	R4
<pre>no ip address shutdown ! interface Ethernet0/2 no ip address shutdown ! interface Ethernet0/3 no ip address shutdown ! interface Serial1/0 description ***Connected to R4-Branch1 office*** ip address 10.10.240.1 255.255.255.252 encapsulation ppp ip ospf 3 area 0 serial restart-delay 0 ! interface Serial1/1 description ***Connected to R5-Branch2 office*** ip address 10.10.240.5 255.255.255.252 encapsulation ppp ip ospf hello-interval 50 ip ospf 3 area 0 ppp authentication chap</pre>	<pre>! interface Ethernet0/2 no ip address shutdown ! interface Ethernet0/3 no ip address shutdown ! interface Serial1/0 description ***Connected to R3-Main Branch office*** ip address 10.10.240.2 255.255.255.252 encapsulation ppp ip ospf 4 area 2 serial restart-delay 0 ! interface Serial1/1 no ip address shutdown serial restart-delay 0 ! interface Serial1/2 no ip address shutdown --- More (37) ---</pre>

NEW QUESTION 624

Which two features can you enable on a switch to capture and analyze frames that transit an interface ? (choose two)

- A. IP SLA
- B. SPAN
- C. NetFlow
- D. SNMP
- E. RSPAN

Answer: CD

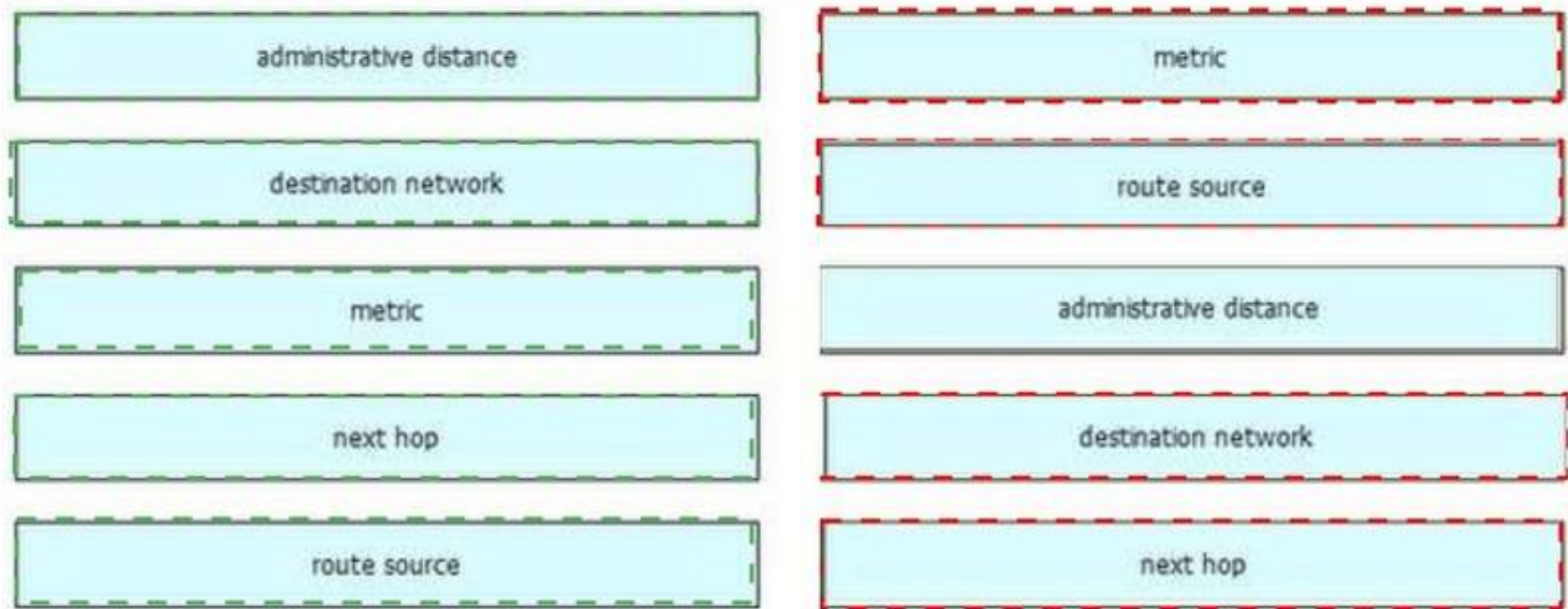
NEW QUESTION 625

Drag and drop the values in a routing table from the left onto the correct meanings on the right .

administrative distance	code that indicates the method by which the router learned the route
destination network	value used by the router to determine the preferred route
metric	indicator of the trustworthiness of the route
next hop	network to which the router forwards packets on the associated route
route source	remote network address

Answer:

Explanation:



NEW QUESTION 628

Which two states are the port states when RSTP has converged? (Choose two.)

- A. discarding
- B. listening
- C. learning
- D. forwarding
- E. disabled

Answer: AD

Explanation: There are only three port states left in RSTP that correspond to the three possible operational states. The 802.1D disabled, blocking, and listening states are merged into a unique 802.1w discarding state.

STP (802.1D) Port State RSTP (802.1w) Port State

Is Port Included in Active Topology? Is Port Learning MAC Addresses? Disabled

Discarding No

No Blocking Discarding No

No Listening Discarding Yes

No Learning Learning

Yes Yes

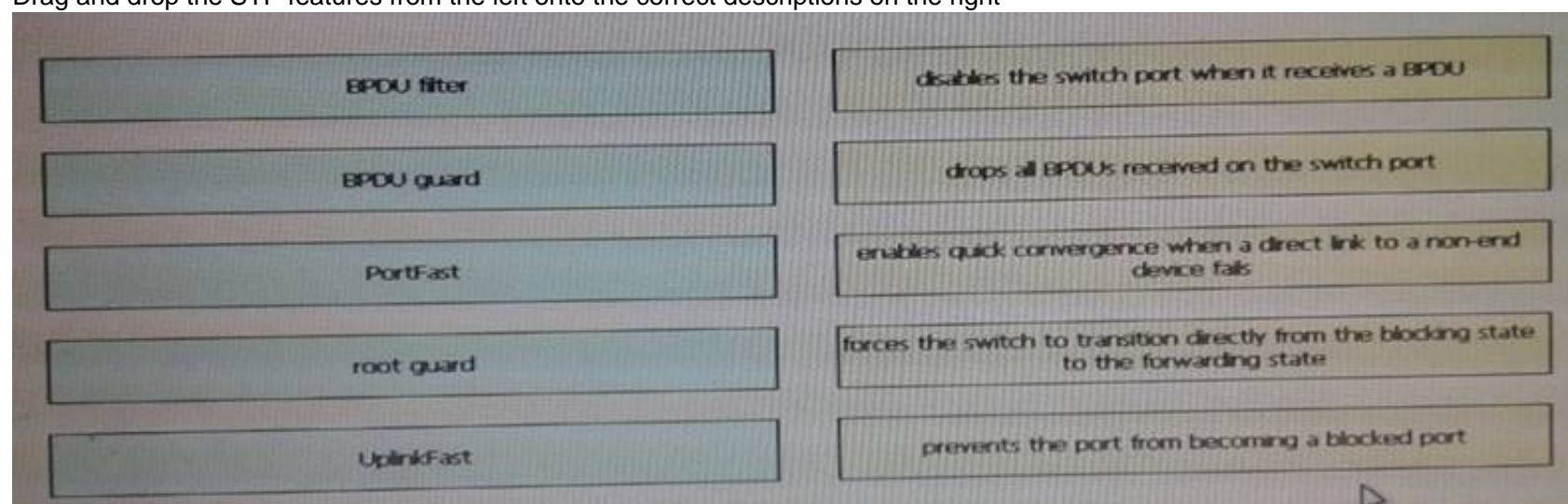
Forwarding Forwarding Yes

Yes Reference:

http://www.cisco.com/en/US/tech/tk389/tk621/technologies_white_paper09186a0080094cfa.shtml#states

NEW QUESTION 630

Drag and drop the STP features from the left onto the correct descriptions on the right



Answer:

Explanation: Disables the switch port when it receives a BPDU = BPDU Filter Drops all BPDUs received on the switch port = PortFast

Enable quick convergence when a direct link to a non-end device fails. = UplinkFast

Forces the switch to transition directly from the blocking state to the forwarding state = BPDU guard Prevents the port from becoming a blocked port = root guard

NEW QUESTION 635

Which command can you enter to display the operational status of the network ports on a router?

- A. show interface status
- B. show ip interface brief

- C. show running-config interface fastethernet 0/1
- D. show interface switchport

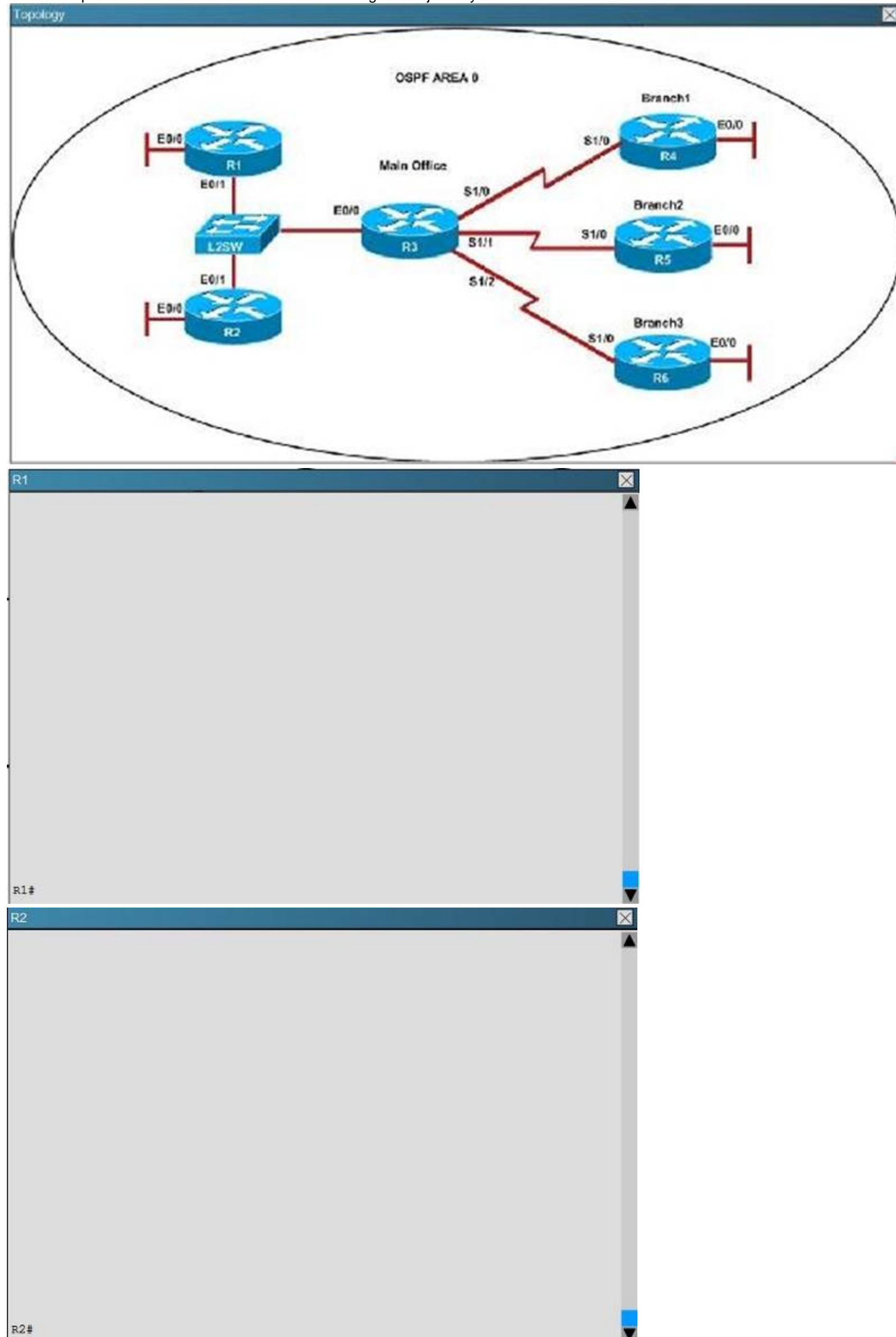
Answer: B

NEW QUESTION 640

Scenario

Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links.

You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.



R3

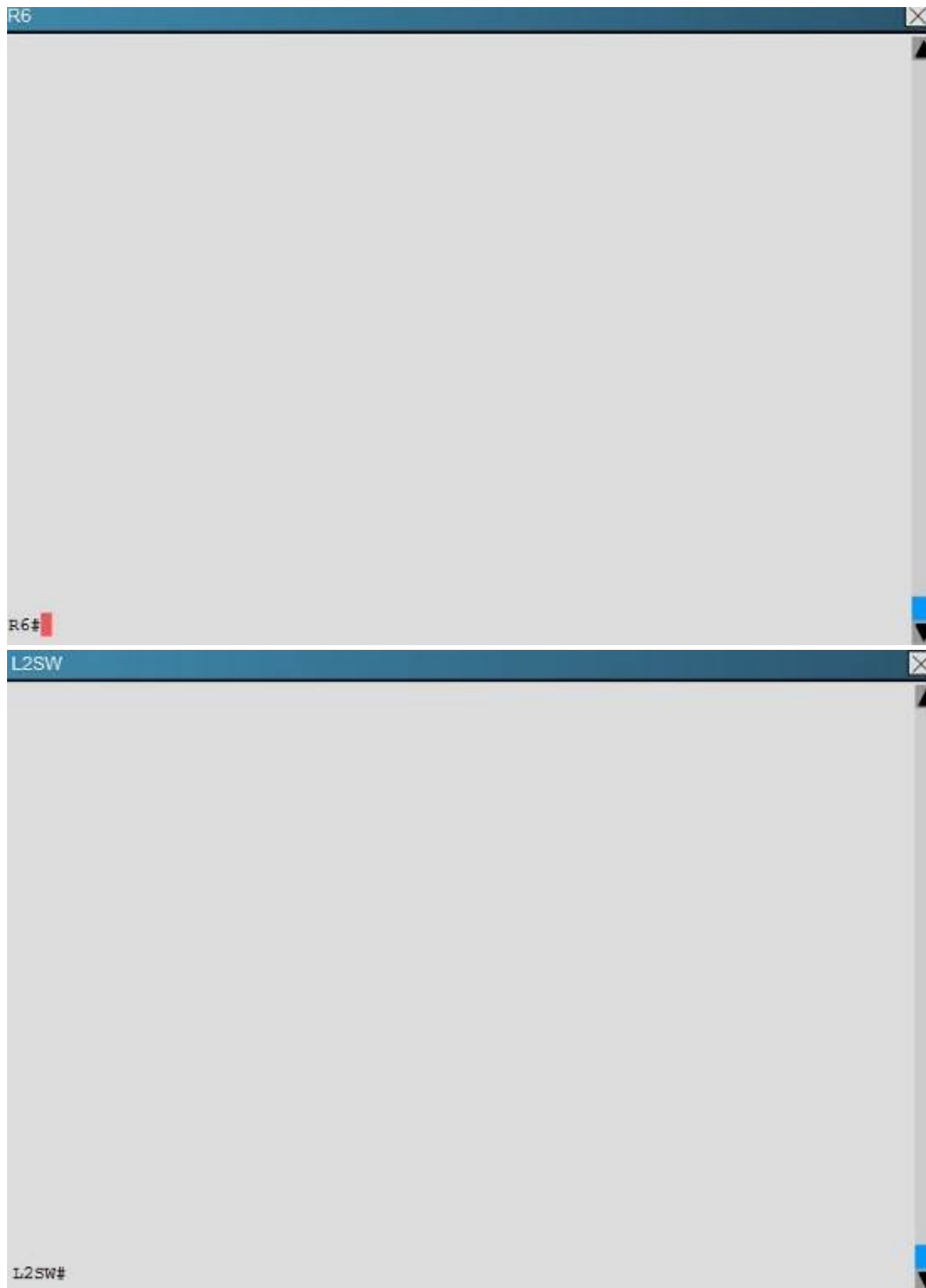
R3#

R4

R4#

R5

R5#



An OSPF neighbor adjacency is not formed between R3 in the main office and R6 in the Branch3 office. What is causing the problem?

- A. There is an area ID mismatch.
- B. There is a PPP authentication issue; the username is not configured on R3 and R6.
- C. There is an OSPF hello and dead interval mismatch.
- D. The R3 router ID is configured on R6.

Answer: D

Explanation: Using the show running-config command we see that R6 has been incorrectly configured with the same router ID as R3 under the router OSPF process.

R3	R6
<pre> ip address 10.10.240.5 255.255.255.252 encapsulation ppp ip ospf hello-interval 50 ip ospf 3 area 0 ppp authentication chap serial restart-delay 0 ! interface Serial1/2 description ***Connected to R6-Branch3 office*** ip address 10.10.240.9 255.255.255.252 encapsulation ppp ip ospf 3 area 0 ppp authentication chap serial restart-delay 0 ! interface Serial1/3 no ip address shutdown serial restart-delay 0 ! router ospf 3 router-id 192.168.3.3 ! ip forward-protocol nd ! </pre>	<pre> no ip address shutdown serial restart-delay 0 ! interface Serial1/2 no ip address shutdown serial restart-delay 0 ! interface Serial1/3 no ip address shutdown serial restart-delay 0 ! router ospf 6 router-id 192.168.3.3 ! ip forward-protocol nd ! ! no ip http server no ip http secure-server ! ! </pre>

NEW QUESTION 642

Which step in the router boot process searches for an IOS image to load into the router?

- A. bootstrap
- B. POST
- C. mini-IOS
- D. ROMMON mode

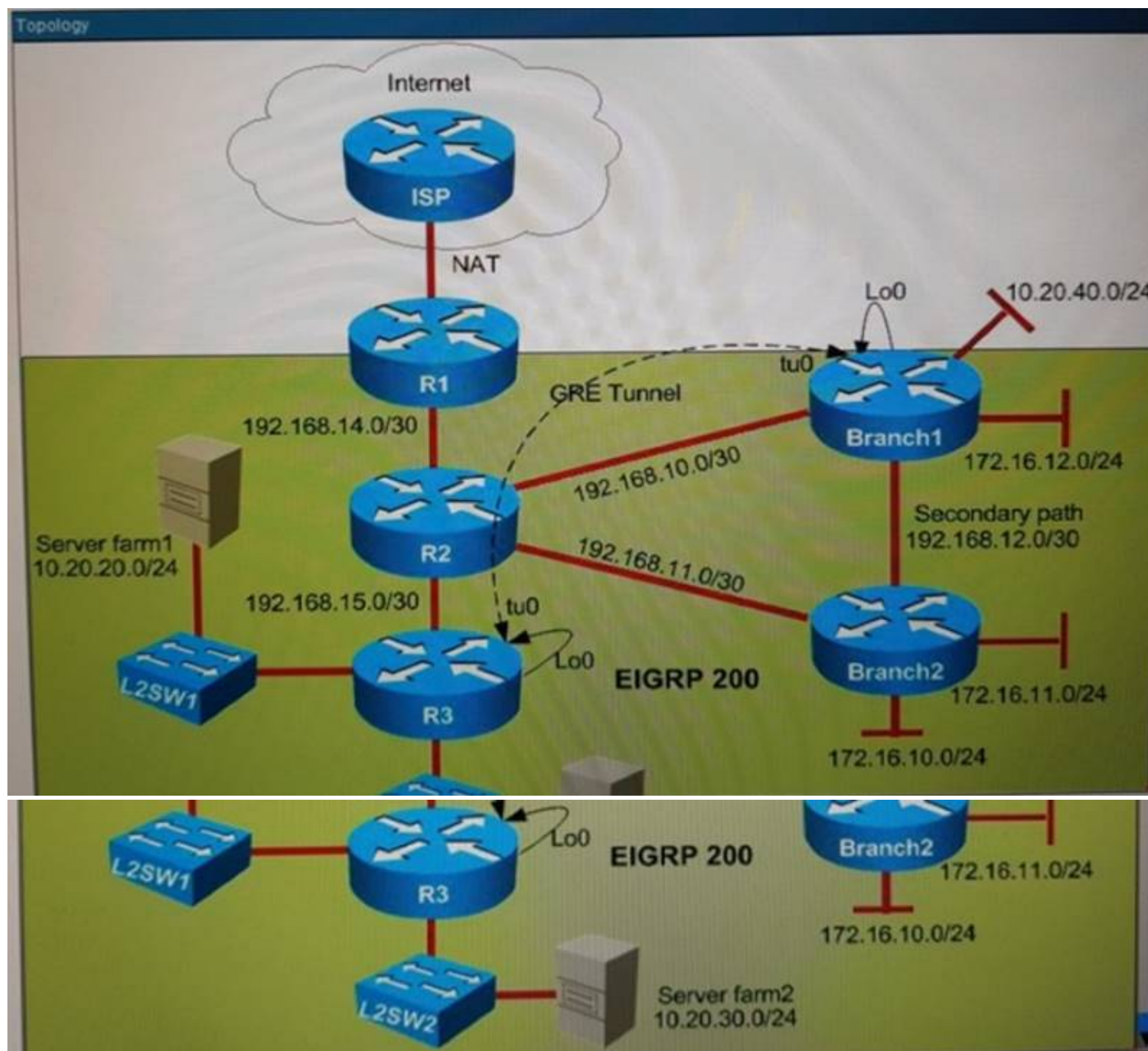
Answer: A

NEW QUESTION 644

You are implementing EIGRP between the main office and branch offices. In Phase 1 you must implement and verify EIGRP configurations as mentioned in the topology in Phase 2. your colleague is expected to do NAT and ISP configurations

Identity the issues that you are encountering during Phase 1 EIGRP implementation.

- Router R1 connects the main office to the Internet and routers R2 and R3 are internal routers
 - Routers Branch 1 and Branch2 connect to router R2 in the main office.
 - Users from the Branch1 LAN network 10 20 40 0724 are expected to perform testing of the application that is hosted on the servers in Server farm1, before servers are available for production
 - The GRE tunnel is configured between R3 and Branch1, and traffic between server farm1 and Branch1 LAN network 10 20 40 0/24 is routed through the GRE tunnel using static routes
 - The link between Branch1 and Branch2 is used as a secondary path in the event of failure of the primary path to mam office
- You have console access on R1. R2. R3. Branch1, and Branch2 devices Use only show commands to troubleshoot the issues
- Topology:



```
Branch1
ip address 10.20.40.1 255.255.255.0
!
!
router eigrp 200
 network 10.16.200.2 0.0.0.0
 network 172.16.12.0 0.0.0.255
 network 192.168.10.0
 network 192.168.12.0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip route 10.20.20.0 255.255.255.0 Tunnel
!
```

```

R3
interface Ethernet0/0
  description ***Link to Server farm2***
  ip address 10.20.30.1 255.255.255.0
!
interface Ethernet0/1
  description ***Link to Server farm1***
  ip address 10.20.20.1 255.255.255.0
!
interface Ethernet0/2
  description ***Link to R2***
  ip address 192.168.15.2 255.255.255.252
!
interface Ethernet0/3
  no ip address
  shutdown

```

The GRE tunnel between R3 and Branch1 is down. Which cause of the issue is true?

- A. The tunnel source loopback0 interface is not advertised into EIGRP in Branch1.
- B. The tunnel source loopback0 interface is not advertised into EIGRP in R3.
- C. The EIGRP neighbor relationship was not formed due to EIGRP packets blocked by the inbound ACL on R3.
- D. The EIGRP neighbor relationship was not formed due the IP address being misconfigured between the R2 and R3 interfaces.

Answer: B

NEW QUESTION 649

Refer to the exhibit.

```

Switch1# show mac-address-table
Dynamic Addresses Count: 19
Secure Addresses (User-defined) Count: 0
Static Addresses (User-defined) Count: 0
System Self Addresses Count: 41
Total MAC addresses: 50
Non-static Address Table:
Destination Address  AddressType  VLAN  Destination Port
-----
0010.0de0.e289      Dynamic      1      FastEthernet0/1
0010.7b00.1540      Dynamic      2      FastEthernet0/5
0010.7b00.1545      Dynamic      2      FastEthernet0/5
0060.5cf4.0076      Dynamic      1      FastEthernet0/1
0060.5cf4.0077      Dynamic      3      FastEthernet0/1
0060.5cf4.1315      Dynamic      1      FastEthernet0/1
0060.70cb.f301      Dynamic      2      FastEthernet0/1
0060.70cb.3f01      Dynamic      5      FastEthernet0/2
00e0.1e42.9978      Dynamic      4      FastEthernet0/1
00e0.1e9f.3900      Dynamic      3      FastEthernet0/1
0060.70cb.33f1      Dynamic      6      FastEthernet0/3
0060.70cb.103f      Dynamic      6      FastEthernet0/4

<output omitted>

Switch1# show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater

Device ID    Local Intrfce  Holdtime    Capability  Platform  Port ID
Switch2      Fas 0/1        157         S           2950-12   Fas 0/1
Switch3      Fas 0/2        143         S           2950-12   Fas 0/5

Switch1#

```

Which two statements are true of the interfaces on Switch1? (Choose two.)

- A. Multiple devices are connected directly to FastEthernet0/1.
- B. A hub is connected directly to FastEthernet0/5.
- C. FastEthernet0/1 is connected to a host with multiple network interface cards.
- D. FastEthernet0/5 has statically assigned MAC addresses.
- E. FastEthernet0/1 is configured as a trunk link.
- F. Interface FastEthernet0/2 has been disabled.

Answer: BE

Explanation: Carefully observe the information given after command show. Fa0/1 is connected to Switch2, seven MAC addresses correspond to Fa0/1, and these MAC are in different VLAN. From this we know that Fa0/1 is the trunk interface. From the information given by show cdp neighbors we find that there is no Fa0/5 in CDP neighbor. However, F0/5 corresponds to two MAC addresses in the same VLAN. Thus we know that Fa0/5 is connected to a Hub. Based on the output shown, there are multiple MAC addresses from different VLANs attached to the FastEthernet 0/1 interface. Only trunks are able to pass information from devices in multiple VLANs.

NEW QUESTION 653

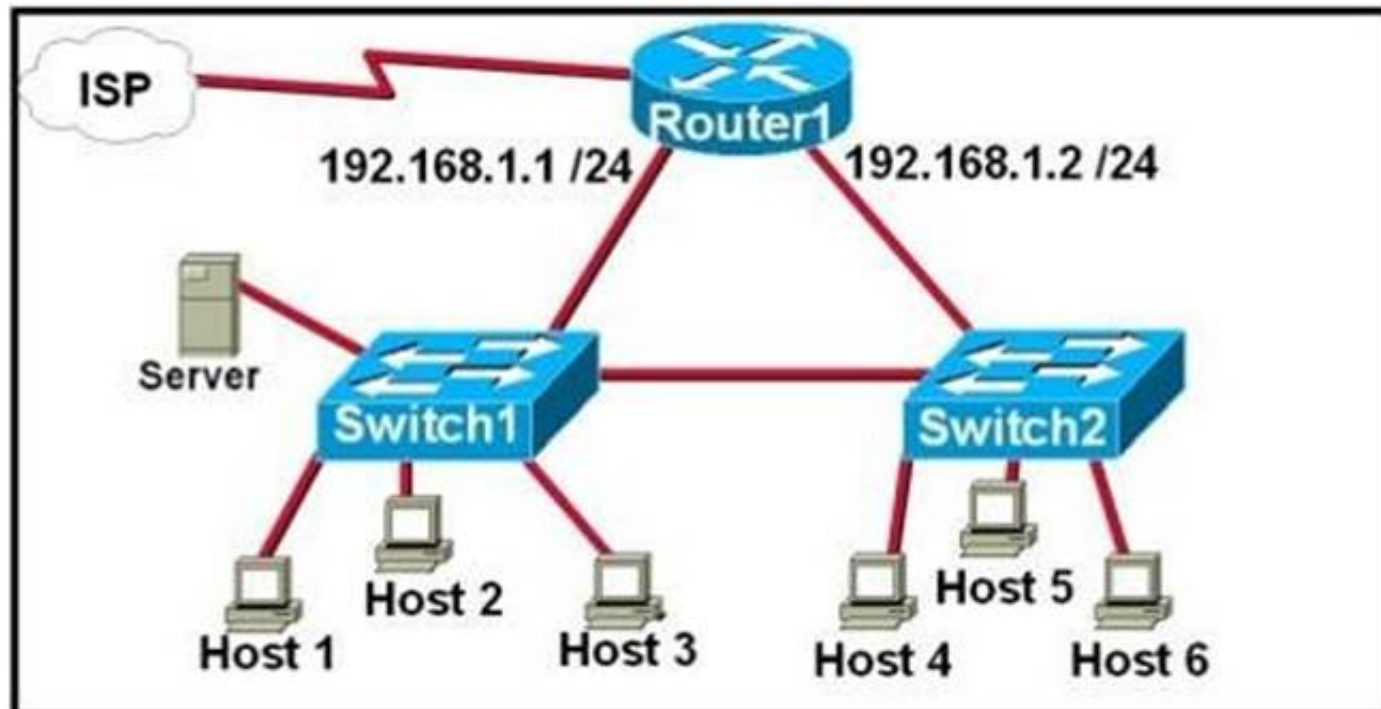
Which two statements about EUI-64 addressing are true? (Choose two)

- A. A 64-bit interface identifier is derived from the interface MAC address
- B. A 96-bit interface identifier is derived from the interface MAC address.
- C. A locally administered address has the universal/local bit set to 0.
- D. The address includes the hex digits FFFE after the first 24 bits of the interface MAC address
- E. The address includes the hex digits FFFE after the last 24 bits of the interface MAC address

Answer: AD

NEW QUESTION 658

Refer to the exhibit.



A network technician is asked to design a small network with redundancy. The exhibit represents this design, with all hosts configured in the same VLAN. What conclusions can be made about this design?

- A. This design will function as intended.
- B. Spanning-tree will need to be used.
- C. The router will not accept the addressing scheme.
- D. The connection between switches should be a trunk.
- E. The router interfaces must be encapsulated with the 802.1Q protocol.

Answer: C

Explanation: Each interface on a router must be in a different network. If two interfaces are in the same network, the router will not accept it and show error when the administrator assigns it.

NEW QUESTION 663

Instructions

- Enter Cisco IOS commands on the device to verify network operation and answer for multiple-choice questions.
- THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION.**
- Click the device icon to gain access to the console of the router. No console or enable passwords are required.
- To access the multiple-choice questions, click the numbered boxes on the left of the top panel.
- This task has **four** multiple-choice questions. Be sure to answer all four questions before clicking the Next button.

Scenario

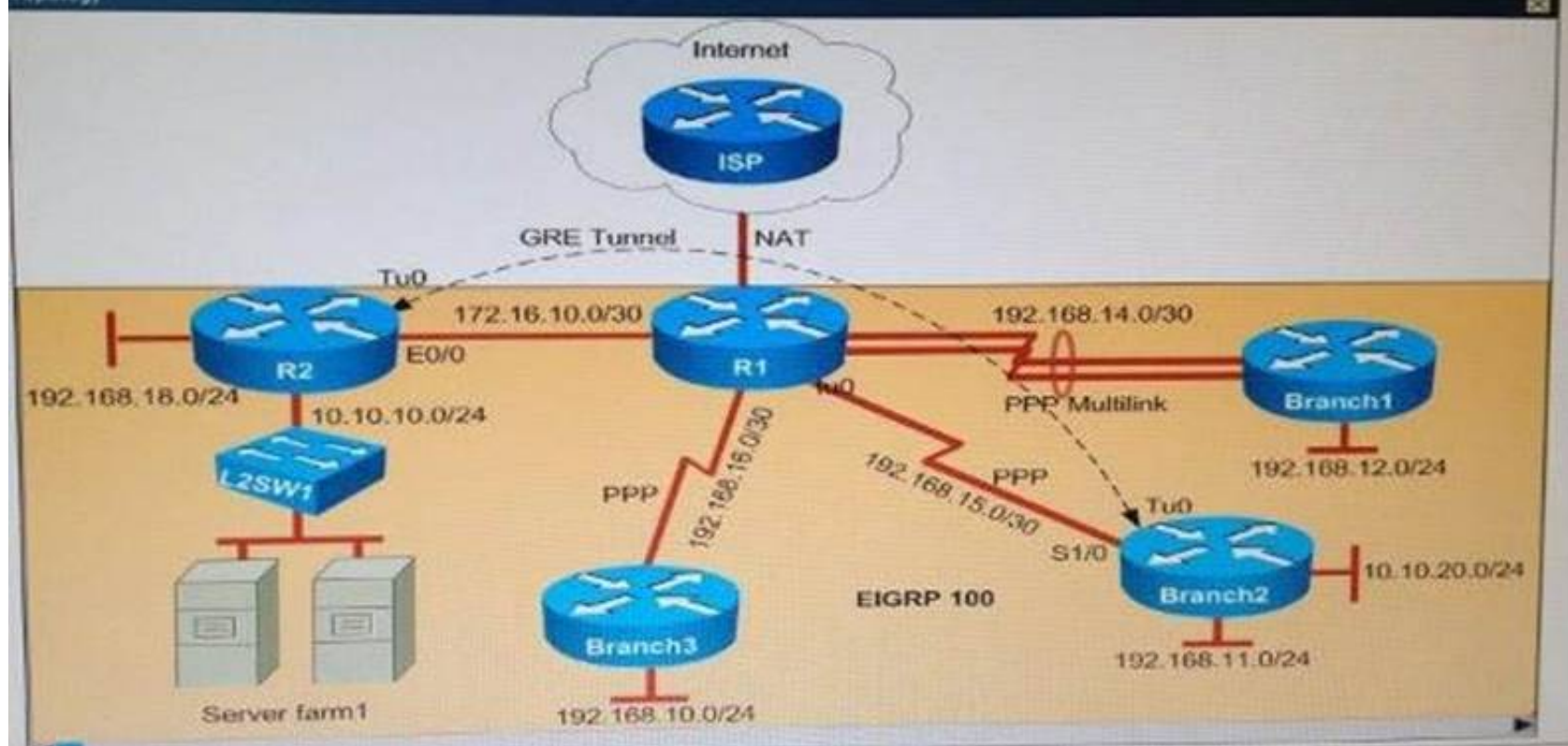
You are implementing PPP over serial links between R1 router and branch offices. In Phase 1 you must implement and verify PPP and GRE tunnel configurations as mentioned in the topology. In Phase 2 your colleague is expected to do NAT and ISP configurations between R1 and ISP router.

Identify the issues that you encounter during PPP over serial links implementation.

Routers Branch1, Branch2, and Branch3 connect to Router R1 in the main office over serial links. PPP multilink implementation is recommended between R1 and Branch1 routers. The GRE tunnel is configured between R2 and Branch2 routers, and traffic between Server farm1 10.10.10.0/24 network and Branch2 LAN 10.10.20.0/24 network is routed over GRE tunnel (using static route).

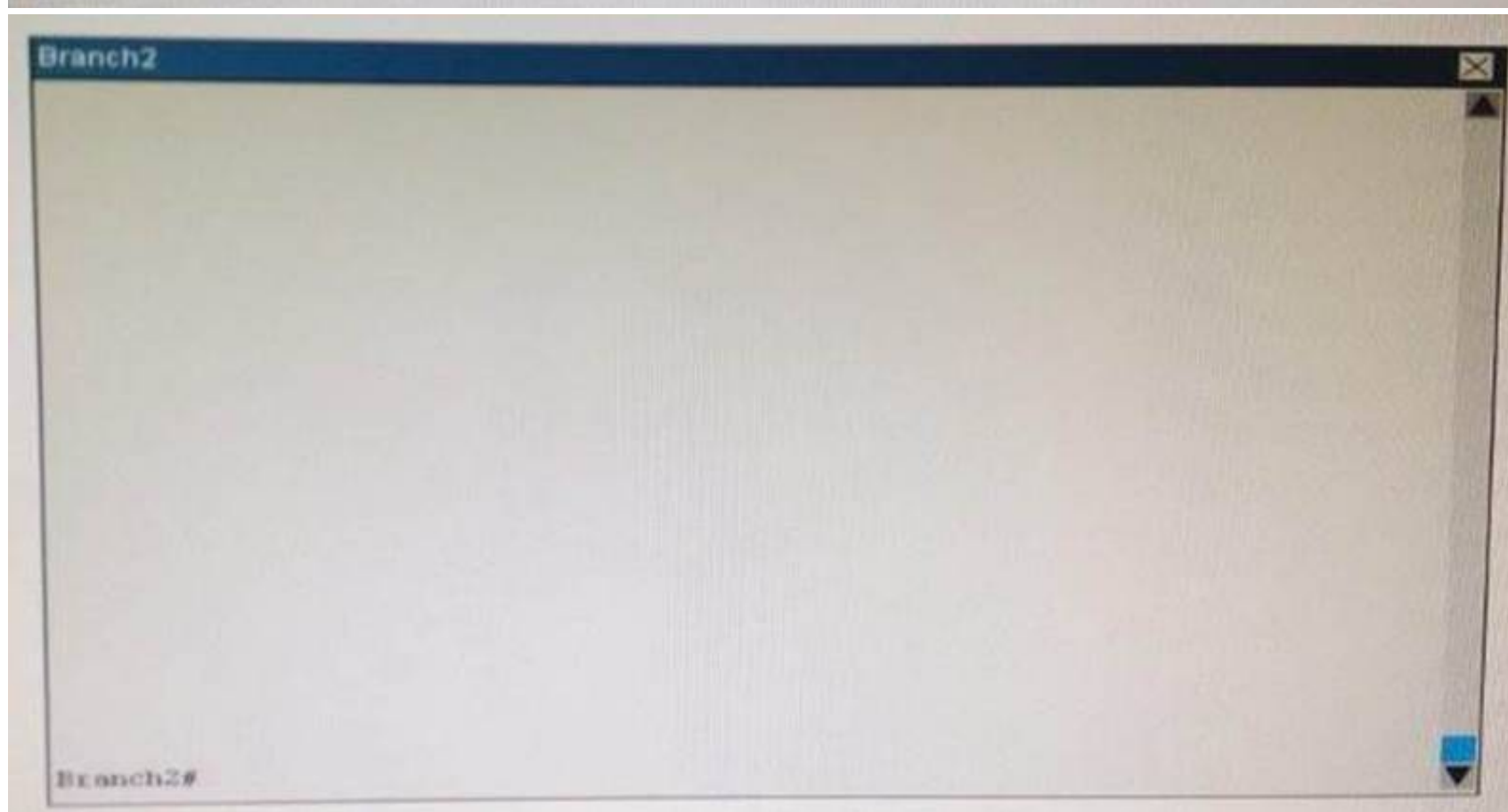
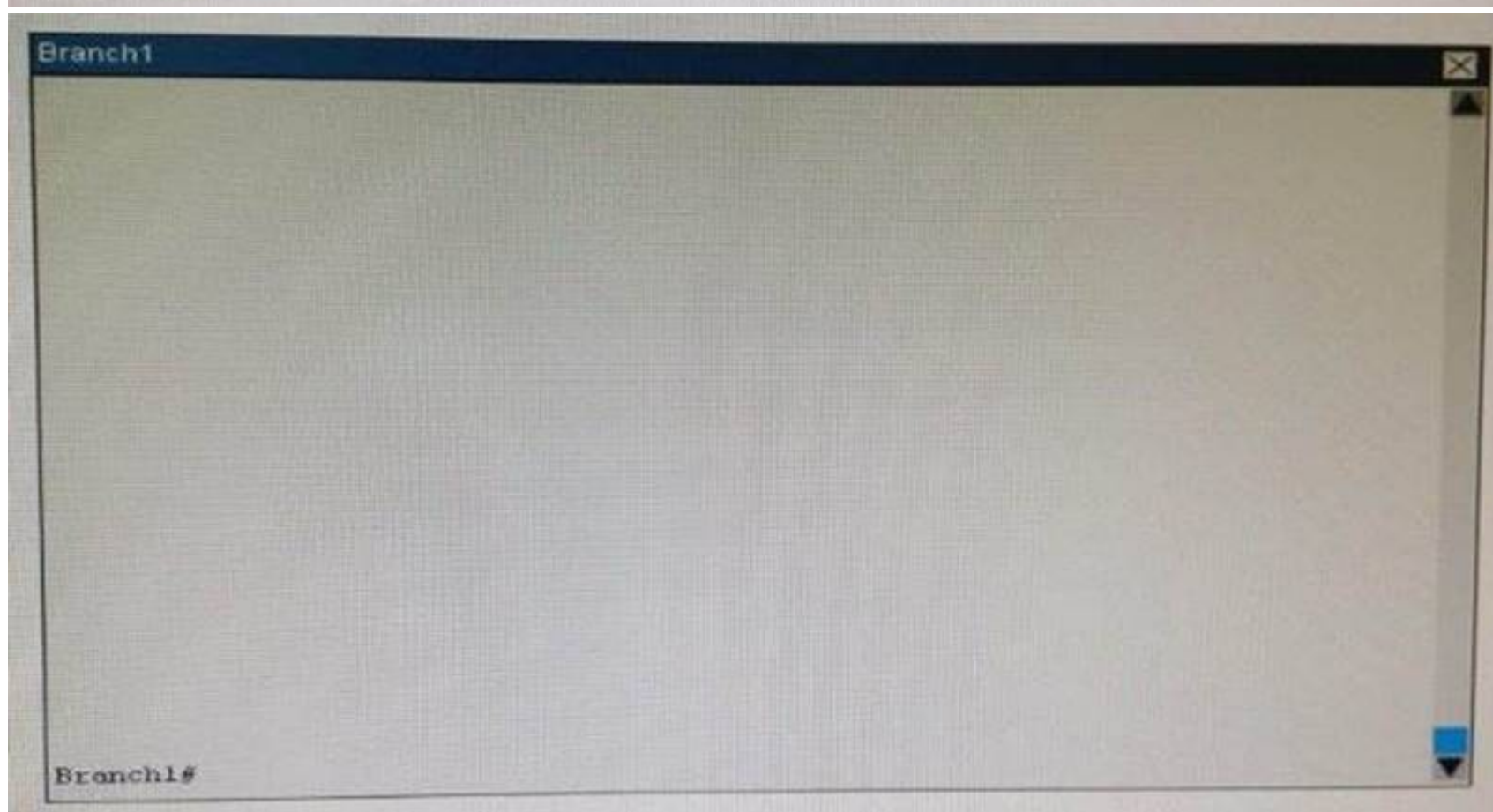
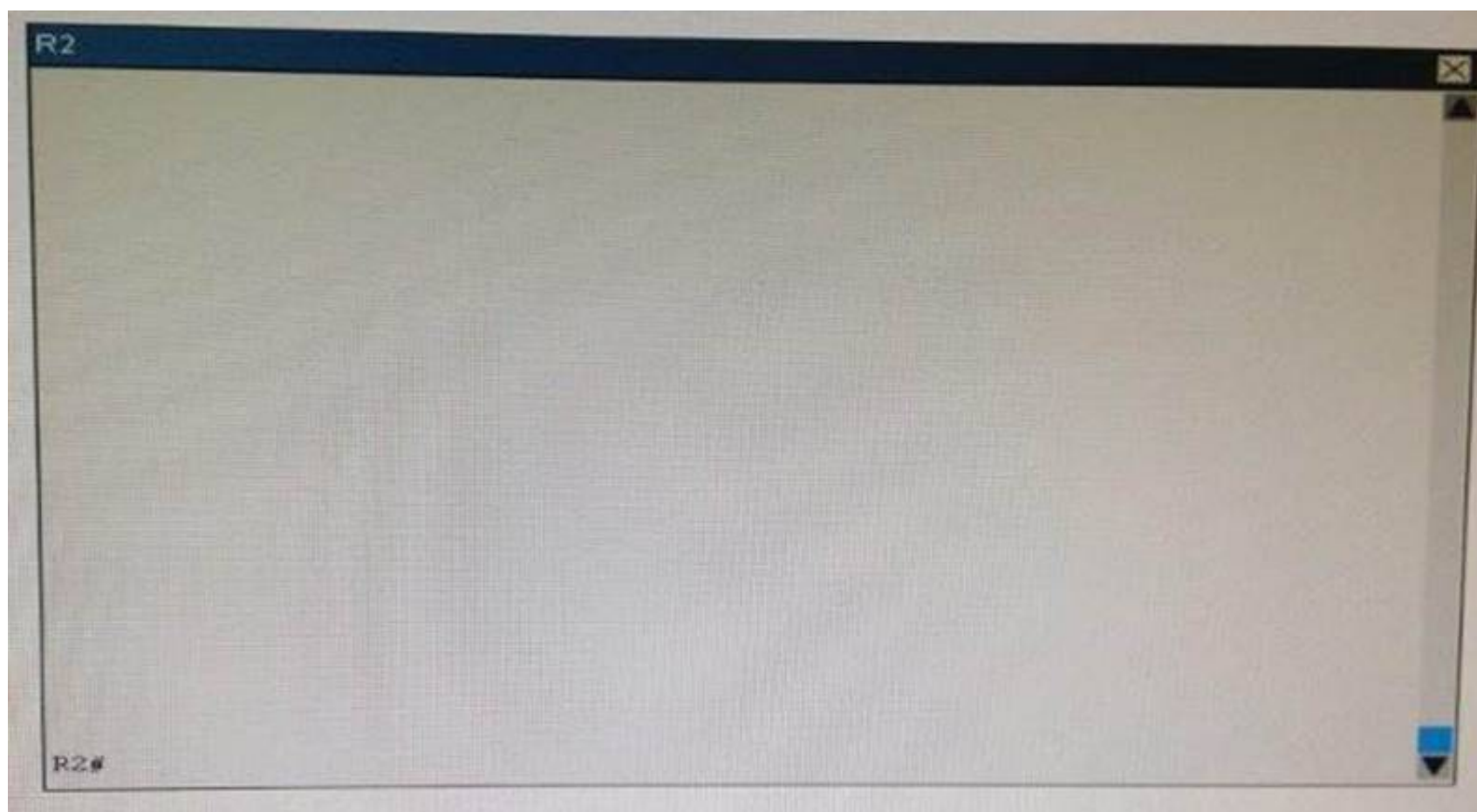
You have console access on R1, R2, Branch1, Branch2, and Branch3 devices. Use only show commands to troubleshoot the issues.

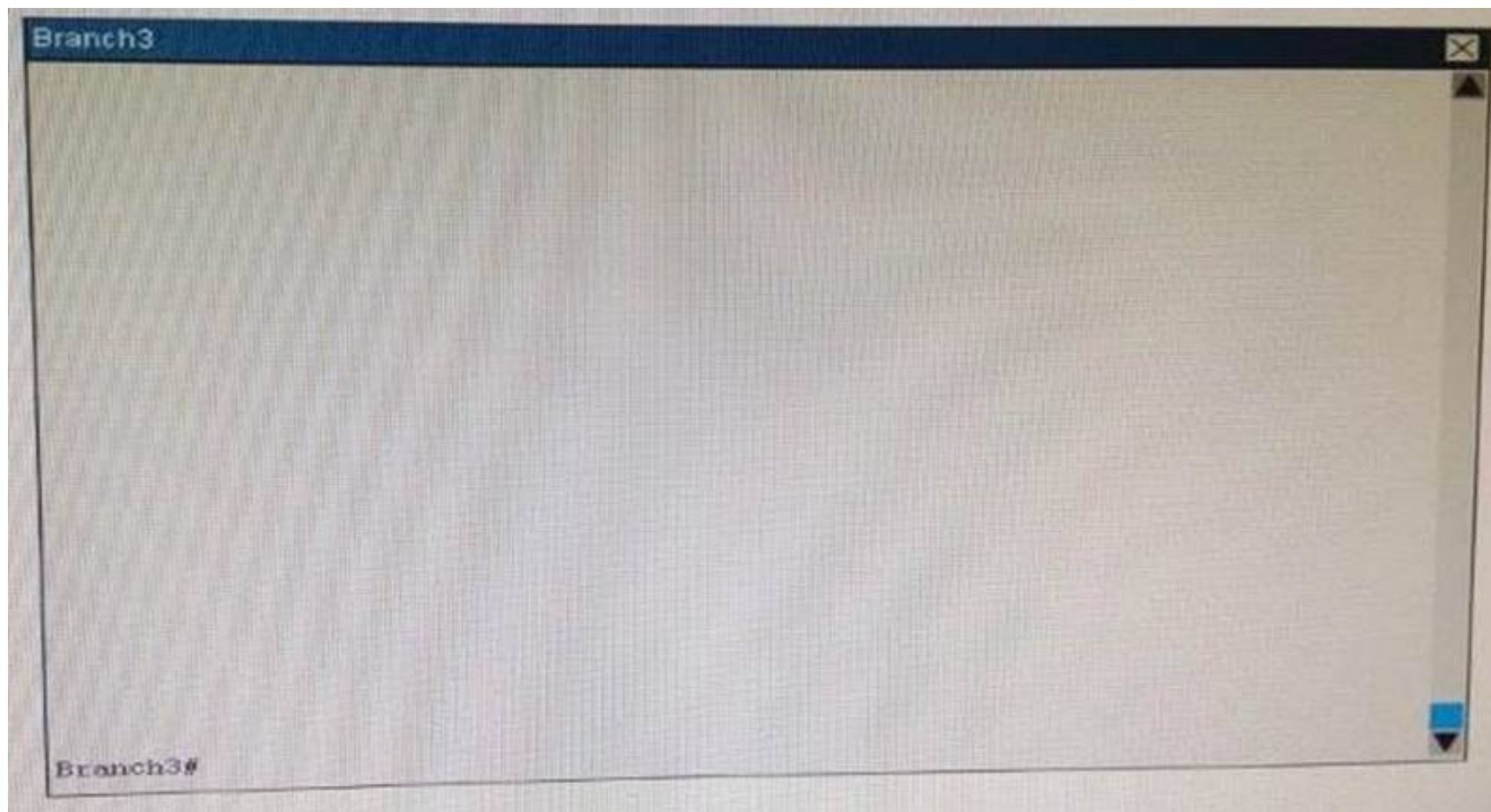
Topology



R1

R1#





Why is the Branch2 network 10.1 0.20.0/24 unable to communicate with the Server farm1 network 10.1 0.10.0/24 over the GRE tunnel?

- A. The GRE tunnel destination is not configured on the R2 router.
- B. The GRE tunnel destination is not configured on the Branch2 router.
- C. The static route points to the tunnel0 interface that is misconfigured on the Branch2 router.
- D. The static route points to the tunnel0 interface that is misconfigured on the R2 router.

Answer: C

Explanation: The Branch2 network is communicating to the Server farm, which is connected to R2, via GRE Tunnel so we should check the GRE tunnel first to see if it is in "up/up" state with the "show ip interface brief" command on the two routers.

On Branch2:

```
Branch2#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	10.10.20.1	YES	manual	up	up
Ethernet0/1	192.168.11.1	YES	manual	up	up
Ethernet0/2	unassigned	YES	unset	administratively down	down
Ethernet0/3	unassigned	YES	unset	administratively down	down
Serial1/0	192.168.15.2	YES	manual	up	up
Serial1/1	unassigned	YES	unset	administratively down	down
Serial1/2	unassigned	YES	unset	administratively down	down
Serial1/3	unassigned	YES	unset	administratively down	down
Tunnel0	192.168.24.2	YES	manual	up	up

On R2:

```
R2#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	172.16.10.2	YES	manual	up	up
Ethernet0/1	10.10.10.1	YES	manual	up	up
Ethernet0/2	192.168.18.1	YES	manual	up	up
Ethernet0/3	unassigned	YES	unset	administratively down	down
Tunnel0	192.168.24.1	YES	manual	up	up

We see interfaces Tunnel0 at two ends are "up/up" which are good so we should check for the routing part on two routers with the "show running-config" command and pay attention to the static routing of each router. On Branch2 we see:

```
Branch2#show running-config
```

```
<output omitted>
```

```
ip route 10.10.10.0 255.255.255.0 192.168.24.10
```

R2_show_run_static.jpg

The destination IP address for this static route is not correct. It should be 192.168.24.1 (Tunnel0's IP address of R2), not 192.168.24.10 -> Answer C is correct.

Note: You can use the "show ip route" command to check the routing configuration on each router but if the destination is not reachable (for example: we configure "ip route 10.10.10.0 255.255.255.0 192.168.24.10" on Branch2, but if 192.168.24.10 is unknown then Branch2 router will not display this routing entry in its routing table.

NEW QUESTION 665

Which three statements about IPv6 prefixes are true? (Choose three.)

- A. FF00::/8 is used for IPv6 multicast.
- B. FE80::/10 is used for link-local unicast.
- C. FC00::/7 is used in private networks.
- D. 2001::1/127 is used for loopback addresses.
- E. FE80::/8 is used for link-local unicast.
- F. FEC0::/10 is used for IPv6 broadcast.

Answer: ABC

NEW QUESTION 666

A national retail chain needs to design an IP addressing scheme to support a nationwide network. The company needs a minimum of 300 sub-networks and a maximum of 50 host addresses per subnet. Working with only one Class B address, which of the following subnet masks will support an appropriate addressing scheme? (Choose two.)

- A. 255.255.255.0
- B. 255.255.255.128
- C. 255.255.252.0
- D. 255.255.255.224
- E. 255.255.255.192
- F. 255.255.248.0

Answer: BE

Explanation: Subnetting is used to break the network into smaller more efficient subnets to prevent excessive rates of Ethernet packet collision in a large network. Such subnets can be arranged hierarchically, with the organization's network address space (see also Autonomous System) partitioned into a tree-like structure. Routers are used to manage traffic and constitute borders between subnets.

A routing prefix is the sequence of leading bits of an IP address that precede the portion of the address used as host identifier. In IPv4 networks, the routing prefix is often expressed as a "subnet mask", which is a bit mask covering the number of bits used in the prefix. An IPv4 subnet mask is frequently expressed in quad-dotted decimal representation, e.g., 255.255.255.0 is the subnet mask for the 192.168.1.0 network with a 24-bit routing prefix (192.168.1.0/24).

NEW QUESTION 668

Scenario:

You work for a company that provides managed network services, and of your real estate clients running a small office is experiencing network issues, Troubleshoot the network issues.

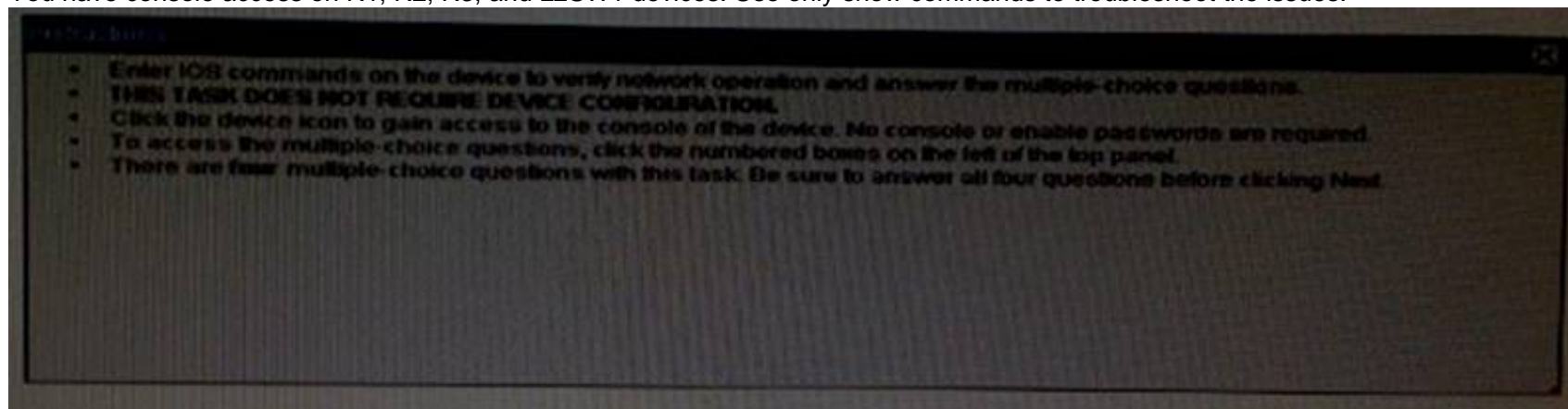
Router R1 connects the main office to internet, and routers R2 and R3 are internal routers NAT is enabled on Router R1.

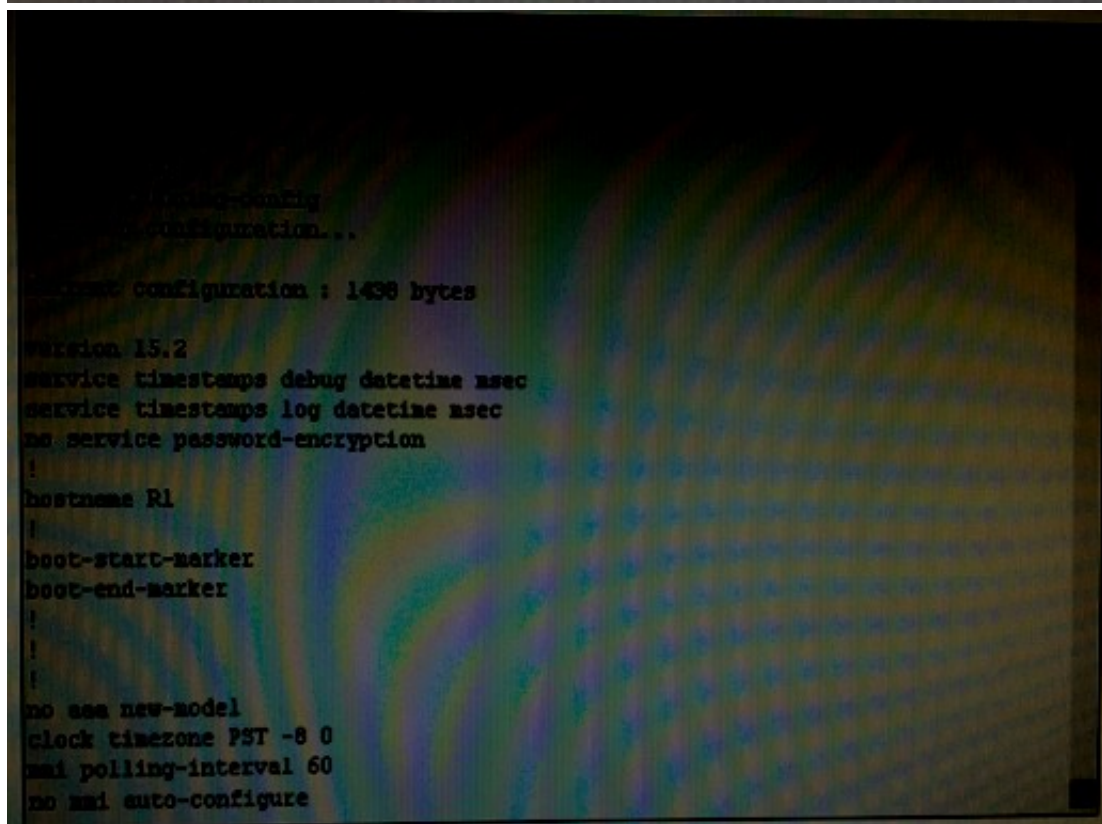
The routing protocol that is enable between routers R1, R2, and R3 is RIPv2.

R1 sends default route into RIPv2 for internal routers to forward internet traffic to R1.

Server1 and Server2 are placed in VLAN 100 and 200 respectively, and dare still running router on stick configuration with router R2.

You have console access on R1, R2, R3, and L2SW1 devices. Use only show commands to troubleshoot the issues.






```
R1
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
redundancy
```

```

R1
!
interface Ethernet0/0
  description ***Link to ISP***
  ip address 209.165.201.1 255.255.255.224
  ip nat outside
  ip virtual-reassembly in
!
interface Ethernet0/1
  description ***Link to LAN***
  ip address 172.16.16.1 255.255.255.0
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/2
  description ***Link to R2***
  ip address 172.16.14.1 255.255.255.252
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/3
  no ip address
  shutdown
!
router rip
  version 2

```

```

R1
!
router rip
  version 2
  network 172.16.0.0
  default-information originate
  no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
!
ip access-list standard LOCAL
  permit 10.0.0.0 0.255.255.255
  permit 172.16.0.0 0.0.255.255
  permit 192.168.0.0 0.0.255.255
!
!
!
control-plane
!

```



```

R1
!
line con 0
  logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
!
!
end
R1#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4100 (bia aabb.cc00.4100)
  Description: ***Link to ISP***
  Internet address is 209.165.201.1/27
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:53, output 00:00:07, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)

```

```

R1
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  40 packets input, 11786 bytes, 0 no buffer
  Received 39 broadcasts (0 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  191 packets output, 20271 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  4 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4110 (bia aabb.cc00.4110)
  Description: ***Link to LAN***
  Internet address is 172.16.16.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00

```



```

R1
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  245 packets output, 30725 bytes, 0 underruns
  0 output errors, 0 collisions, 4 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4120 (bia aabb.cc00.4120)
  Description: ***Link to R2***
  Internet address is 172.16.14.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,

```

```

R1
Internet address is 172.16.14.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:16, output 00:00:07, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  98 packets input, 20097 bytes, 0 no buffer
  Received 97 broadcasts (54 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  247 packets output, 25359 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  4 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down

```



```

R1
 0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
Hardware is Am2P2, address is aabb.cc00.4130 (bia aabb.cc00.4130)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier

```

```

R1
 0 babbles, 0 late collision, 0 deferred
 0 lost carrier, 0 no carrier
 0 output buffer failures, 0 output buffers swapped out
NV10 is up, line protocol is up
Hardware is NV1
Interface is unnumbered. Using address of Ethernet0/0 (209.165.201.1)
MTU 1514 bytes, BW 56 Kbit/sec, DLY 5000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation UNKNOWN, loopback not set
Keepalive set (10 sec)
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 unknown protocol drops
  0 output buffer failures, 0 output buffers swapped out
R1#
R1#show ip interface brief

```



```

R1
R1#
R1#show ip interface brief
Interface          IP-Address      OK? Method Status  Prot
ocol
Ethernet0/0        209.165.201.1   YES NVRAM  up      up
Ethernet0/1        172.16.16.1     YES NVRAM  up      up
Ethernet0/2        172.16.14.1     YES NVRAM  up      up
Ethernet0/3        unassigned      YES NVRAM  administratively down down
NVI0               209.165.201.1   YES unset  up      up
R1#
R1#
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
R    10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2

```

```

R1
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2
i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
+ - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
R    10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
R    172.16.11.0/30 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
C    172.16.14.0/30 is directly connected, Ethernet0/2
L    172.16.14.1/32 is directly connected, Ethernet0/2
C    172.16.16.0/24 is directly connected, Ethernet0/1
L    172.16.16.1/32 is directly connected, Ethernet0/1
R    192.168.1.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R    192.168.100.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R    192.168.200.0/24 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C    209.165.201.0/27 is directly connected, Ethernet0/0
L    209.165.201.1/32 is directly connected, Ethernet0/0
R1#
R1#

```



```
R2#show run
R2#show running-config
Building configuration...

Current configuration : 1505 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
```

```
R2
no nni auto-configure
no nni pvc
nni snap-timeout 180
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
```

redundancy

```
R2
!
interface Ethernet0/0
  description ***Link to R3***
  ip address 172.16.11.1 255.255.255.252
!
interface Ethernet0/1
  no ip address
!
interface Ethernet0/1.1
  description ***Link to Management Segment***
  encapsulation dot1q 1 native
  ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/1.100
  description ***Link to Server1 Segment***
  encapsulation dot1q 200
  ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
  description ***Link to Server2 Segment***
  encapsulation dot1q 100
  ip address 192.168.200.1 255.255.255.0
!
interface Ethernet0/2
  description ***Link to R1***
```



```

R2
!
interface Ethernet0/2
  description ***Link to R1***
  ip address 172.16.14.2 255.255.255.252
!
interface Ethernet0/3
  description ***Link to LAN***
  ip address 10.10.10.1 255.255.255.0
!
router rip
  version 2
  network 10.0.0.0
  network 172.16.0.0
  network 192.168.1.0
  network 192.168.100.0
  network 192.168.200.0
  no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!

```

```

R2
!
control-plane
!
!
!
!
!
!
line con 0
  logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
!
end
R2#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdF2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
  Description: ***Link to R3***
  Internet address is 172.16.11.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255

```



```

R2
R2#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
  Description: ***Link to R3***
  Internet address is 172.16.11.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:32, output 00:00:08, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    50 packets input, 15683 bytes, 0 no buffer
    Received 50 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    343 packets output, 42566 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    2 unknown protocol drops
  
```

```

R2
    2 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:08, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 1000 bits/sec, 2 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    4632 packets input, 308536 bytes, 0 no buffer
    Received 4421 broadcasts (0 IP multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    512 packets output, 73148 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
  
```



```

R2
512 packets output, 73148 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
73 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/1.1 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Mangement Segment***
  Internet address is 192.168.1.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 1.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server1 Segment***
  Internet address is 192.168.100.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 200.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)

```

```

R2
Keepalive set (10 sec)
Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server1 Segment***
  Internet address is 192.168.100.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 200.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/1.200 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server2 Segment***
  Internet address is 192.168.200.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation 802.1Q Virtual LAN, Vlan ID 100.
  ARP type: ARPA, ARP Timeout 04:00:00
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/2 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4220 (bia aabb.cc00.4220)
  Description: ***Link to R1***

```



```

R2
Description: ***Link to R1***
Internet address is 172.16.14.2/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:08, output 00:00:02, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  128 packets input, 21994 bytes, 0 no buffer
Received 127 broadcasts (77 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 345 packets output, 39952 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out

```

```

R2
  0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is up, line protocol is up
Hardware is AmdP2, address is aabb.cc00.4230 (bia aabb.cc00.4230)
Description: ***Link to LAN***
Internet address is 10.10.10.1/24
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
  0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 344 packets output, 42752 bytes, 0 underruns
  0 output errors, 0 collisions, 6 interface resets
  0 unknown protocol drops

```



```
R2
0 output errors, 0 collisions, 6 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
R2#
R2#
R2#show ip interface brief
Interface                IP-Address      OK? Method Status      Prot
ocol
Ethernet0/0              172.16.11.1     YES NVRAM  up          up
Ethernet0/1              unassigned      YES NVRAM  up          up
Ethernet0/1.1            192.168.1.1     YES NVRAM  up          up
Ethernet0/1.100          192.168.100.1   YES NVRAM  up          up
Ethernet0/1.200          192.168.200.1   YES NVRAM  up          up
Ethernet0/2              172.16.14.2     YES NVRAM  up          up
Ethernet0/3              10.10.10.1      YES NVRAM  up          up
R2#
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
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
ia - IS-IS inter area, * - candidate default, U - per-user static route
```

```
R2
R2#
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
i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
+ - replicated route, % - next hop override

Gateway of last resort is 172.16.14.1 to network 0.0.0.0

R*  0.0.0.0/0 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    10.10.10.0/24 is directly connected, Ethernet0/3
L    10.10.10.1/32 is directly connected, Ethernet0/3
172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
C    172.16.11.0/30 is directly connected, Ethernet0/0
L    172.16.11.1/32 is directly connected, Ethernet0/0
C    172.16.14.0/30 is directly connected, Ethernet0/2
L    172.16.14.2/32 is directly connected, Ethernet0/2
R    172.16.16.0/24 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.1.0/24 is directly connected, Ethernet0/1.1
```



```

R2
o - ODR, P - periodic downloaded static route, H - MHRP, I - LISP
+ - replicated route, & - next hop override

Gateway of last resort is 172.16.14.1 to network 0.0.0.0

R*  0.0.0.0/0 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    10.10.10.0/24 is directly connected, Ethernet0/3
L    10.10.10.1/32 is directly connected, Ethernet0/3
    172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
C    172.16.11.0/30 is directly connected, Ethernet0/0
L    172.16.11.1/32 is directly connected, Ethernet0/0
C    172.16.14.0/30 is directly connected, Ethernet0/2
L    172.16.14.2/32 is directly connected, Ethernet0/2
R    172.16.16.0/24 [120/1] via 172.16.14.1, 00:00:23, Ethernet0/2
    192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.1.0/24 is directly connected, Ethernet0/1.1
L    192.168.1.1/32 is directly connected, Ethernet0/1.1
    192.168.100.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.100.0/24 is directly connected, Ethernet0/1.100
L    192.168.100.1/32 is directly connected, Ethernet0/1.100
    192.168.200.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.200.0/24 is directly connected, Ethernet0/1.200
L    192.168.200.1/32 is directly connected, Ethernet0/1.200
R2#
  
```

```

R3
R3#show run
R3#show running-config
Building configuration...

Current configuration : 913 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R3
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
  
```



```
R3
!
no aaa new-model
clock timezone PST -8 0
nmi polling-interval 60
no nmi auto-configure
no nmi pvc
nmi snap-timeout 180
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
```

R3
multilink bundle-name authenticated

redundancy

```
R3
interface Ethernet0/0
  description ***Link to LAN***
  ip address 10.10.12.1 255.255.255.0
!
interface Ethernet0/1
  description ***Link to R2***
  ip address 172.16.11.2 255.255.255.252
!
interface Ethernet0/2
  no ip address
  shutdown
!
interface Ethernet0/3
  no ip address
  shutdown
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
!
```

```
R3
!
control-plane
!
!
!
!
!
line con 0
  logging synchronous
line aux 0
line vty 0 4
  login
  transport input all
!
!
end
R3#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4300 (bia aabb.cc00.4300)
  Description: ***Link to LAN***
  Internet address is 10.10.12.1/24
  MTU 1500 bytes, BU 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
```



```

R3
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  666 packets output, 71699 bytes, 0 underruns
    0 output errors, 0 collisions, 11 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up
  Hardware is AndP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
  Description: ***Link to R2***
  
```

```

R3
  Hardware is AndP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
  Description: ***Link to R2***
  Internet address is 172.16.11.2/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:21, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    316 packets input, 74089 bytes, 0 no buffer
  Received 316 broadcasts (200 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
  669 packets output, 71888 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
  
```



```

R3
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is administratively down, line protocol is down
Hardware is AndP2, address is aabb.cc00.4320 (bia aabb.cc00.4320)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops
  
```

```

R3
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is administratively down, line protocol is down
Hardware is AndP2, address is aabb.cc00.4330 (bia aabb.cc00.4330)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
  
```



```

R3
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
R3#
R3#
R3#show ip interface brief
Interface                IP-Address      OK? Method Status      Prot
ocol
Ethernet0/0              10.10.12.1      YES NVRAM    up          up
Ethernet0/1              172.16.11.2     YES NVRAM    up          up
Ethernet0/2              unassigned      YES NVRAM    administratively down down
Ethernet0/3              unassigned      YES NVRAM    administratively down down
R3#
R3#
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
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route

```

```

R3
Ethernet0/2              unassigned      YES NVRAM    administratively down down
Ethernet0/3              unassigned      YES NVRAM    administratively down down
R3#
R3#
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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C      10.10.12.0/24 is directly connected, Ethernet0/0
L      10.10.12.1/32 is directly connected, Ethernet0/0
172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C      172.16.11.0/30 is directly connected, Ethernet0/1
L      172.16.11.2/32 is directly connected, Ethernet0/1
R3#
R3#
R3#

```



```
L2SW1
!
no aaa new-model
clock timezone PST -8 0
!
ip cef
!
!
no ipv6 cef
ipv6 multicast rpf use-bgp
!
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
!
!
!
!
!
!
!
!
!
vlan internal allocation policy ascending
!
!
```

```
L2SW1
L2SW1#show run
L2SW1#show running-config
Building configuration...

Current configuration : 1074 bytes
!
version 15.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service compress-config
!
hostname L2SW1
!
boot-start-marker
boot-end-marker
!
!
!
!
no aaa new-model
clock timezone PST -8 0
!
ip cef
!
```



```
L2SW1
interface Vlan1
 ip address 192.168.1.254 255.255.255.0
 !
 ip default-gateway 192.168.1.1
 !
 no ip http server
 !
 !
 !
 !
 control-plane
 !
 !
 line con 0
 logging synchronous
 line aux 0
 line vty 0 4
 login
 !
end
L2SW1#
L2SW1#
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
```

```
L2SW1
!
interface Ethernet0/0
 description ***Link to R2***
 switchport trunk encapsulation dot1q
 switchport mode trunk
 duplex auto
 !
interface Ethernet0/1
 description ***Link to Server1 segment***
 switchport access vlan 100
 switchport mode access
 duplex auto
 !
interface Ethernet0/2
 description ***Link to Server2 Segment***
 switchport access vlan 200
 switchport mode access
 duplex auto
 !
interface Ethernet0/3
 duplex auto
 !
interface Vlan1
 ip address 192.168.1.254 255.255.255.0
 !
```



```

L2SW1
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
  Hardware is AndP2, address is aabb.cc00.4500 (bia aabb.cc00.4500)
  Description: ***Link to R2***
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is unknown
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:07, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 12/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 1000 bits/sec, 2 packets/sec
    1447 packets input, 208877 bytes, 0 no buffer
    Received 139 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 input packets with dribble condition detected
    13457 packets output, 919293 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
  
```

```

L2SW1
    13457 packets output, 919293 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
Ethernet0/1 is up, line protocol is up (connected)
  Hardware is AndP2, address is aabb.cc00.4510 (bia aabb.cc00.4510)
  Description: ***Link to Server1 segment***
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is unknown
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:07, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    755 packets input, 80219 bytes, 0 no buffer
    Received 123 broadcasts (0 multicasts)
  
```



```

L2SW1
755 packets input, 80219 bytes, 0 no buffer
Received 123 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
3867 packets output, 268544 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4520 (bia aabb.cc00.4520)
Description: ***Link to Server2 Segant***
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:07, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 5/2000/0/0 (size/max/drops/flushes): Total output drops: 0
Queueing strategy: fifo
  
```

```

L2SW1
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
758 packets input, 81010 bytes, 0 no buffer
Received 125 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
3867 packets output, 268544 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Ethernet0/3 is up, line protocol is up (connected)
Hardware is AndP2, address is aabb.cc00.4530 (bia aabb.cc00.4530)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is unknown
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
  
```



```

L2SW1
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 input packets with dribble condition detected
 3566 packets output, 252186 bytes, 0 underruns
  0 output errors, 0 collisions, 55 interface resets
  0 unknown protocol drops
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier
  0 output buffer failures, 0 output buffers swapped out
Vlan1 is up, line protocol is up
  Hardware is Ethernet SVI, address is aabb.cc80.4500 (bia aabb.cc80.4500)
  Internet address is 192.168.1.254/24
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  
```

```

L2SW1
Keepalive not supported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:12, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  235 packets input, 42480 bytes, 0 no buffer
  Received 235 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  11 packets output, 830 bytes, 0 underruns
  0 output errors, 0 interface resets
  0 unknown protocol drops
  0 output buffer failures, 0 output buffers swapped out
L2SW1#
L2SW1#
L2SW1#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
Ethernet0/0        unassigned      YES unset    up          up
Ethernet0/1        unassigned      YES unset    up          up
Ethernet0/2        unassigned      YES unset    up          up
Ethernet0/3        unassigned      YES unset    up          up
  
```



```

L2SW1
0 output buffer failures, 0 output buffers swapped out
L2SW1#
L2SW1#
L2SW1#show ip interface brief
Interface                IP-Address      OK? Method Status      Protocol
Ethernet0/0              unassigned     YES unset  up          up
Ethernet0/1              unassigned     YES unset  up          up
Ethernet0/2              unassigned     YES unset  up          up
Ethernet0/3              unassigned     YES unset  up          up
Vlan1                    192.168.1.254  YES NVRAM  up          up
L2SW1#
L2SW1#
L2SW1#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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, I - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks

```

```

L2SW1
Ethernet0/0              unassigned     YES unset  up          up
Ethernet0/1              unassigned     YES unset  up          up
Ethernet0/2              unassigned     YES unset  up          up
Ethernet0/3              unassigned     YES unset  up          up
Vlan1                    192.168.1.254  YES NVRAM  up          up
L2SW1#
L2SW1#
L2SW1#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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, I - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected, Vlan1
L       192.168.1.254/32 is directly connected, Vlan1
L2SW1#
L2SW1#
L2SW1#

```

Users in the main office complain that they are unable to reach internet sites.
 You observe that internet traffic that is destined towards ISP router is not forwarded correctly on Router R1. What could be an issue?
 Ping to Internet server shows the following results from R1: R1#ping 209.165.200.225
 Type escape sequence to abort.
 Sending 5, 100-byte ICMP Echos to 209.165.200.225, timeout is 2 seconds: Success rate is 0 percent (0/5)

- A. The next hop router address for the default route is incorrectly configured.
- B. Default route pointing to ISP router is configured with AD of 255.
- C. Default route pointing to ISP router is not configured on Router R1

D. Router R1 configured as DHCP client is not receiving default route via DHCP from ISP router.

Answer: C

Explanation: (Default Static Route will fix the problem to connect to ISP router)

Explanation/show command:

```
172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
R      172.16.11.0/30 [ 120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
C      172.16.14.0/30 is directly connected, Ethernet0/2
L      172.16.14.1/32 is directly connected, Ethernet0/2
C      172.16.16.0/24 is directly connected, Ethernet0/1
L      172.16.16.1/32 is directly connected, Ethernet0/1
R      192.168.1.0/24 [ 120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R      192.168.100.0/24 [ 120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
R      192.168.200.0/24 [ 120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
209.165.201.0/24 is variably subnetted, 2 subnets, 2 masks
C      209.165.201.0/27 is directly connected, Ethernet0/0
L      209.165.201.1/32 is directly connected, Ethernet0/0
R1#
```

```
R1
interface Ethernet0/2
description ***Link to R2***
ip address 172.16.14.1 255.255.255.252
ip nat inside
ip virtual-reassembly in
!
interface Ethernet0/3
no ip address
shutdown
!
router rip
version 2
network 172.16.0.0
default-information originate
no auto-summary
!
ip forward-protocol nd
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
```

NEW QUESTION 673

What is the simplest IP SLA operation that can measure end-to-end response time between devices?

- A. ICMP path jitter
- B. ICMP path echo
- C. ICMP echo
- D. ICMP Jitter

Answer: D

NEW QUESTION 678

While troubleshooting a GRE tunnel interface issue, show interface command output displays tunnel status up, but line protocol is down. Which reason for this problem is the most likely?

- A. The route to the tunnel destination address is through the tunnel itself.
- B. The tunnel was just reset.
- C. The interface has been administratively shut down.
- D. The next hop server is misconfigured.

Answer: A

NEW QUESTION 683

You apply a new inbound access list to routers, blocking UDP packets to the HSRP group. Which two effects does this action have on HSRP group process?

(Choose two)

- A. HSRP redundancy works as expected.
- B. HSRP redundancy fails
- C. The active router immediately becomes the standby router
- D. Both the active and standby routers become active
- E. The routers in the group generate duplicate IP address warnings

Answer: BD

NEW QUESTION 685

Which three options are switch port configuration, that can always avoid duplex mismatch errors between two switches? (Choose three)

- A. Set one side of the connection to full duplex and the other side to half duplex.
- B. Set both Sides of the connection to half duplex.
- C. Set one side of the connection to auto-negotiate and the other side to half duplex
- D. Set both sides of the connection to full duplex
- E. Set one side of the connection to auto-negotiate and the other side to full duplex.
- F. Set both sides of the connection to auto-negotiate.

Answer: BDF

NEW QUESTION 687

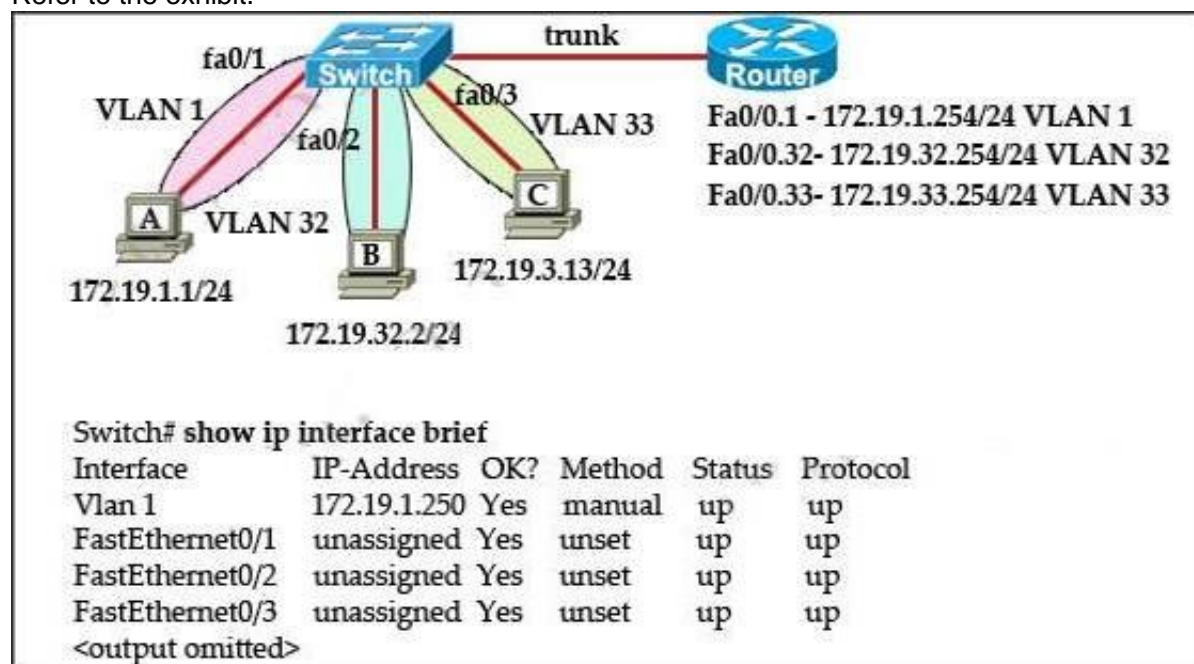
Which command can you enter to display duplicate IP addresses that the DHCP server assigns?

- A. show ip dhcp database 10.0.2.12
- B. show ip dhcp server statistics
- C. show ip dhcp conflict 10.0.2.12
- D. show ip dhcp binding 10.0.2.12

Answer: D

NEW QUESTION 692

Refer to the exhibit.



The network administrator normally establishes a Telnet session with the switch from host A. However, host A is unavailable. The administrator's attempt to telnet to the switch from host B fails, but pings to the other two hosts are successful. What is the issue?

- A. Host B and the switch need to be in the same subnet.
- B. The switch interface connected to the router is down.
- C. Host B needs to be assigned an IP address in VLAN 1.
- D. The switch needs an appropriate default gateway assigned.
- E. The switch interfaces need the appropriate IP addresses assigned.

Answer: D

Explanation: Ping was successful form host B to other hosts because of intervlan routing configured on router. But to manage switch via telnet the VLAN32 on the switch needs to be configured interface vlan32 along with ip address and its appropriate default-gateway address. Since VLAN1 interface is already configure on switch Host A was able to telnet switch.

NEW QUESTION 695

When an interface is configured with PortFast BPDU guard, how does interface respond when it receives a BPDU?

- A. It goes into an errdisable state.
- B. It goes into a down/down state.
- C. It becomes the root bridge for the configured VLAN.
- D. It continues operating normally.

Answer: A

NEW QUESTION 696

How does a Cisco IP phone handle untagged traffic that it receives from an attached PC?

- A. It drops the traffic.
- B. It allows the traffic to pass through unchanged.
- C. It tags the traffic with the default VLAN
- D. It tags the traffic with the native VLAN.

Answer: B

Explanation: Untagged data traffic from the device attached to the Cisco IP phone passes through the Cisco IP phone unchanged, regardless of the trust state of the access port on the Cisco IP phone.

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SY/configuration/guide/sy_swcg/voip.

NEW QUESTION 698

Which command should you enter to configure an LLDP delay time of 5 seconds?

- A. lldp reinit 5000
- B. lldp reinit 5
- C. lldp holdtime 5
- D. lldp timer 5000

Answer: B

NEW QUESTION 702

Which task do you need to perform first when you configure IP SLA to troubleshoot a network connectivity issue?

- A. Verify the ICMP echo operation
- B. Specify the test frequency
- C. Enable the ICMP echo operation.
- D. Schedule the ICMP echo operation.

Answer: C

NEW QUESTION 704

Which two conditions can StackWise use to determine the master of the stack? (Choose two)

- A. the lowest member priority
- B. the lowest system MAC address
- C. the greatest number of configured VLANs
- D. the highest system MAC address
- E. the highest member priority

Answer: BE

NEW QUESTION 705

Refer to the exhibit.

```
Switch# show spanning-tree interface fastethernet 0/10
Vlan          Role Sts Cost      Prio.Nbr Type
-----
VLAN0001      Root FWD 19        128.1    P2p
VLAN0002      Altn BLK 19        128.2    P2p
VLAN0003      Root FWD 19        128.2    P2p
```

Given the output shown from this Cisco switch, what is the reason that interface FastEthernet 0/10 is not the root port for VLAN 2?

- A. This switch has more than one interface connected to the root network segment in VLAN 2.
- B. This switch is running RSTP while the elected designated switch is running 802.1d Spanning Tree.
- C. This switch interface has a higher path cost to the root bridge than another in the topology.
- D. This switch has a lower bridge ID for VLAN 2 than the elected designated switch.

Answer: C

Explanation: Since the port is in the blocked status, we must assume that there is a shorter path to the root bridge elsewhere.

NEW QUESTION 706

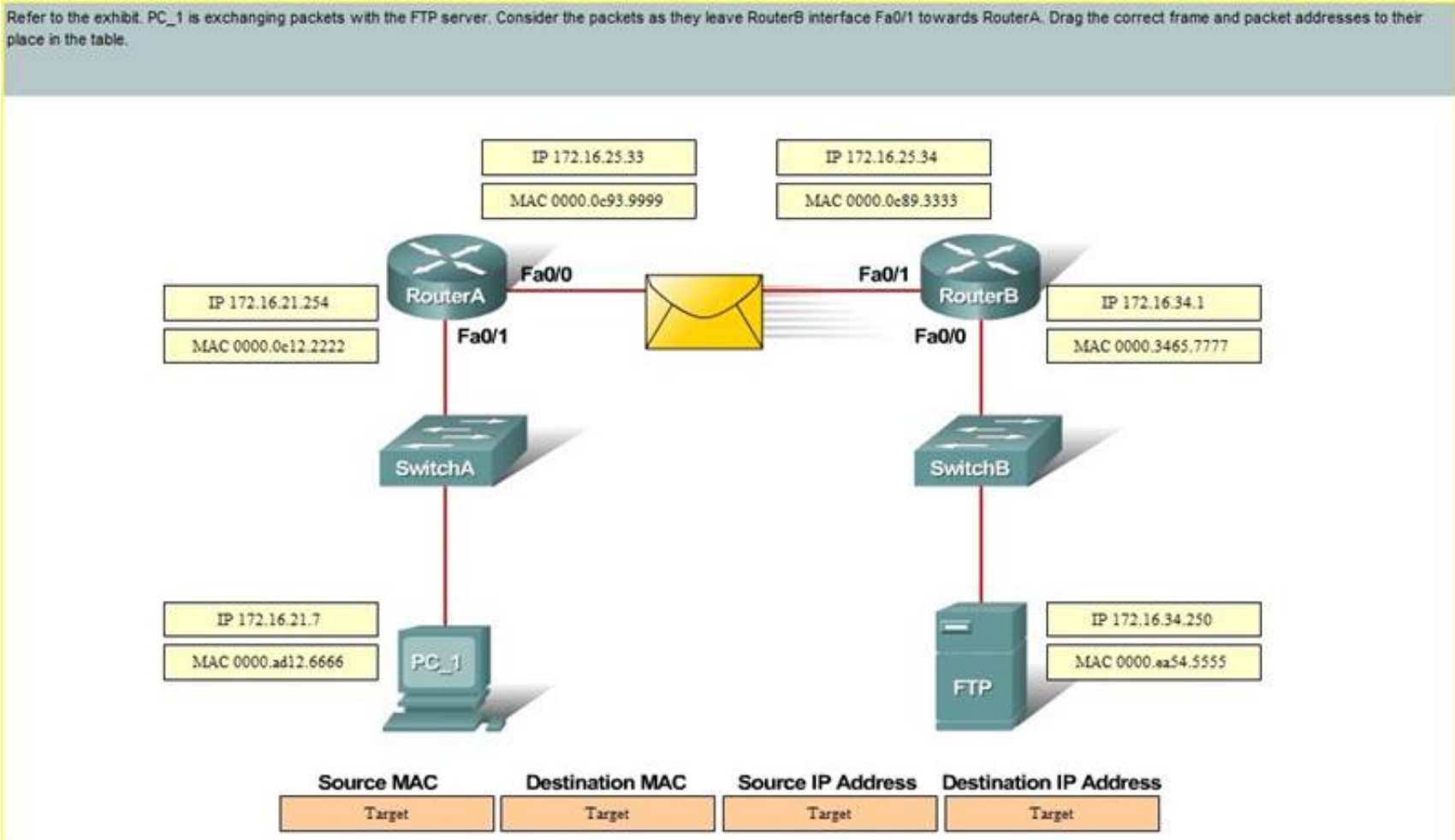
Which chassis-aggregation technology combines two physical switches into one virtual switch?

- A. LACP
- B. VRRP
- C. VSS
- D. StackWise

Answer: C

NEW QUESTION 708

Refer to the exhibit. PC_1 is exchanging packets with the FTP server. Consider the packets as they leave RouterB interface Fa0/1 towards RouterA. Drag the correct frame and packet addresses to their place in the table.



Answer:

Explanation: Source Mac AddressDestination Mac AddressSource IP addressDestination MAC address MAC 0000.0c89.3333MAC 0000.0c89.9999 IP 172.16.34.250IP 172.16.21.7

NEW QUESTION 712

Which two features can mitigate spanning tree issues that are caused by broken fiber cables on interswitch links? (Choose Two)

- A. root guard
- B. DTP
- C. UDLD
- D. BPDU guard
- E. loop guard

Answer: DE

NEW QUESTION 715

Which two statements about static routing are true? (Choose two)

- A. It provides only limited security unless the administrator performs additional configuration
- B. Its default administrative distance is lower than EIGRP.
- C. It allows packets to transit a different path if the topology changes
- D. It allows the administrator to determine the entire path of a packet
- E. Its initial implementation is more complex than OSPF.

Answer: BD

NEW QUESTION 717

Which component of the Cisco SDN solution serves as the centralized management system?

- A. Cisco OpenDaylight
- B. Cisco ACI
- C. Cisco APIC
- D. Cisco IWAN

Answer: C

NEW QUESTION 721

Which IEEE mechanism is responsible for the authentication of devices when they attempt to connect to a local network?

- A. 802.1x
- B. 802.3x
- C. 802.11
- D. 802.2x

Answer: A

NEW QUESTION 725

Which two of these statements regarding mode allows traffic? (Choose two)

- A. 802.1Q trunks require full-duplex, point-to-point connectivity.
- B. 802.1Q trunking ports can also be secure ports.
- C. 802.1Q native VLAN frames are always untagged and cannot be tagged.
- D. 802.1Q trunks should have native VLANs that are the same at both ends.
- E. 802.1Q native VLAN frames are untagged by default.

Answer: DE

NEW QUESTION 726

Which NAT function can map multiple inside addresses to a single outside address?

- A. PAT
- B. SFTP
- C. RARP
- D. TFTP
- E. ARP

Answer: A

NEW QUESTION 728

Which technology provides chassis redundancy in a VSS environment?

- A. OBFD
- B. Stack Wise
- C. VRRP
- D. multichassis EtherChannels

Answer: D

NEW QUESTION 730

Which feature or method can you use to isolate physical layer problems on a serial link?

- A. autonegotiation
- B. UDLD
- C. protocol analyzer
- D. loopback tests

Answer: A

NEW QUESTION 731

Which two values can identify a switch stack on the network? (Choose two)

- A. the bridge ID
- B. the spanning tree priority
- C. the switch BIA
- D. the switch priority
- E. the management IP address of the device

Answer: AD

NEW QUESTION 734

Which two values must you specify to define a static route? (Choose two)

- A. next-hop address or exit interface
- B. incoming interface
- C. source network and mask
- D. administrative distance of the route
- E. destination network and mask

Answer: AD

NEW QUESTION 736

Which command should you enter on an interface in a vendor-neutral EtherChannel so that it will be selected first to transmit packets?

- A. lacp system-priority 1024

- B. pagp port-priority 1024
- C. lacp port-priority 1024
- D. pagp system-priority 1024

Answer: A

NEW QUESTION 737

A switch is configured with all ports assigned to VLAN 2 with full duplex FastEthernet to segment existing departmental traffic. What is the effect of adding switch ports to a new VLAN on the switch?

- A. More collision domains will be created.
- B. IP address utilization will be more efficient.
- C. More bandwidth will be required than was needed previously.
- D. An additional broadcast domain will be created.

Answer: D

Explanation: Each VLAN creates its own broadcast domain. Since this is a full duplex switch, each port is a separate collision domain.

NEW QUESTION 742

Which two descriptions of TACACS+ are true? (Choose two)

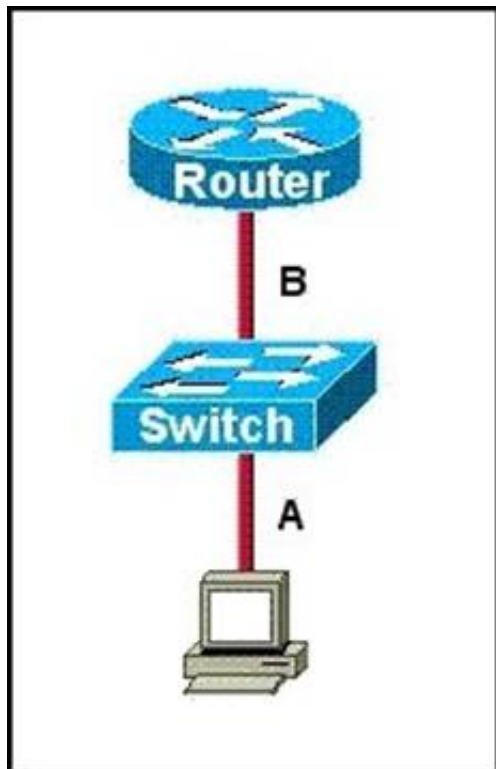
- A. It can authorize specific router commands.
- B. It encrypts only the password.
- C. It separates authentication, authorization, and accounting functions
- D. It combines authentication and authorization.
- E. It uses UDP as its transport protocol

Answer: AC

Explanation: <https://www.cisco.com/c/en/us/support/docs/security-vpn/remote-authentication-dial-user-service-radius/13838->

NEW QUESTION 745

Refer to the exhibit.



The two connected ports on the switch are not turning orange or green. Which steps would be the most effective to troubleshoot this physical layer problem?

- A. Ensure the switch has power.
- B. Reseat all cables.
- C. Ensure cable A is plugged into a trunk port.
- D. Ensure that the Ethernet encapsulations match on the interconnected router and switch ports.
- E. Reboot all of the devices.
- F. Ensure that cables A and are straight-through cables.

Answer: ABF

NEW QUESTION 748

Which two commands should you enter to prevent a Cisco device from sharing information with upstream devices? (Choose two)

- A. R1(config)#no cdp enable
- B. R1(config-if)#no cdp run
- C. R1(config-if)#no cdp enable
- D. R1(config)#no cdp run
- E. R1(config)#no cdp advertise-v2

Answer: AE

NEW QUESTION 750

Which IP address can send traffic to all hosts on network 10.101.0.0/16?

- A. 10.101.0.1
- B. 10.101.254.254
- C. 10.101.254.255
- D. 224.0.0.1

Answer: A

NEW QUESTION 753

Which command is needed to send RIPv2 updates as broadcast when configured for RIPv2?

- A. ip rip v2-broadcast
- B. ip rip receive version 1
- C. ip rip receive version 2
- D. version 2

Answer: A

NEW QUESTION 756

Which command should you enter to configure a DHCP client?

- A. ip dhcp client
- B. ip helper-address
- C. ip address dhcp
- D. ip dhcp pool

Answer: A

NEW QUESTION 757

In which three ways is an IPv6 header simpler than an IPv4 header? (Choose three.)

- A. Unlike IPv4 headers, IPv6 headers have a fixed length.
- B. IPv6 uses an extension header instead of the IPv4 Fragmentation field.
- C. IPv6 headers eliminate the IPv4 Checksum field.
- D. IPv6 headers use the Fragment Offset field in place of the IPv4 Fragmentation field.
- E. IPv6 headers use a smaller Option field size than IPv4 headers.
- F. IPv6 headers use a 4-bit TTL field, and IPv4 headers use an 8-bit TTL field.

Answer: ABC

NEW QUESTION 760

Which two pieces of information about a Cisco device can Cisco Discovery Protocol communicate? (Choose two.)

- A. the native VLAN
- B. the VTP domain
- C. the spanning tree protocol
- D. the spanning-tree priority
- E. the trunking protocol

Answer: BE

NEW QUESTION 764

Which two benefits of implementing a full-mesh WAN topology are true? (Choose two)

- A. increased latency
- B. redundancy
- C. reduced jitter
- D. improved scalability
- E. reliability

Answer: BE

NEW QUESTION 769

Which type of access list compares source and destination IP addresses?

- A. extended
- B. standard
- C. IP named
- D. reflexive

Answer: A

Explanation: Extended ACLs compare the source and destination addresses of the IP packets to the addresses configured in the ACL in order to control traffic. You can also make extended ACLs more granular and configured to filter traffic by criteria such as: Protocol Port numbers Differentiated services code point (DSCP) value Precedence value State of the synchronize sequence number (SYN) bit

NEW QUESTION 774

Refer to the exhibit.

```
00:00:39: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:00:40: %SPANTREE-5-EXTENDED_SYSID: Extended Sysid enabled for type vlan
00:00:42: %SYS-5-CONFIG_: Configured from memory by console
00:00:42: %SYS-5-RESTART: System restarted --
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 12.2(25)SEE2, RELEASE SOFTWARE (fc1)
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Fri 28-Jul-06 11:57 by yenanrh
00:00:44: %LINK-5-CHANGED: Interface Vlan1, changed state to administratively down
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/2, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/11, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed state to up
00:00:48: %LINK-3-UPDOWN: Interface FastEthernet0/12, changed state to up
00:00:49: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/12, changed state to up
```

Which of these statements correctly describes the state of the switch once the boot process has been completed?

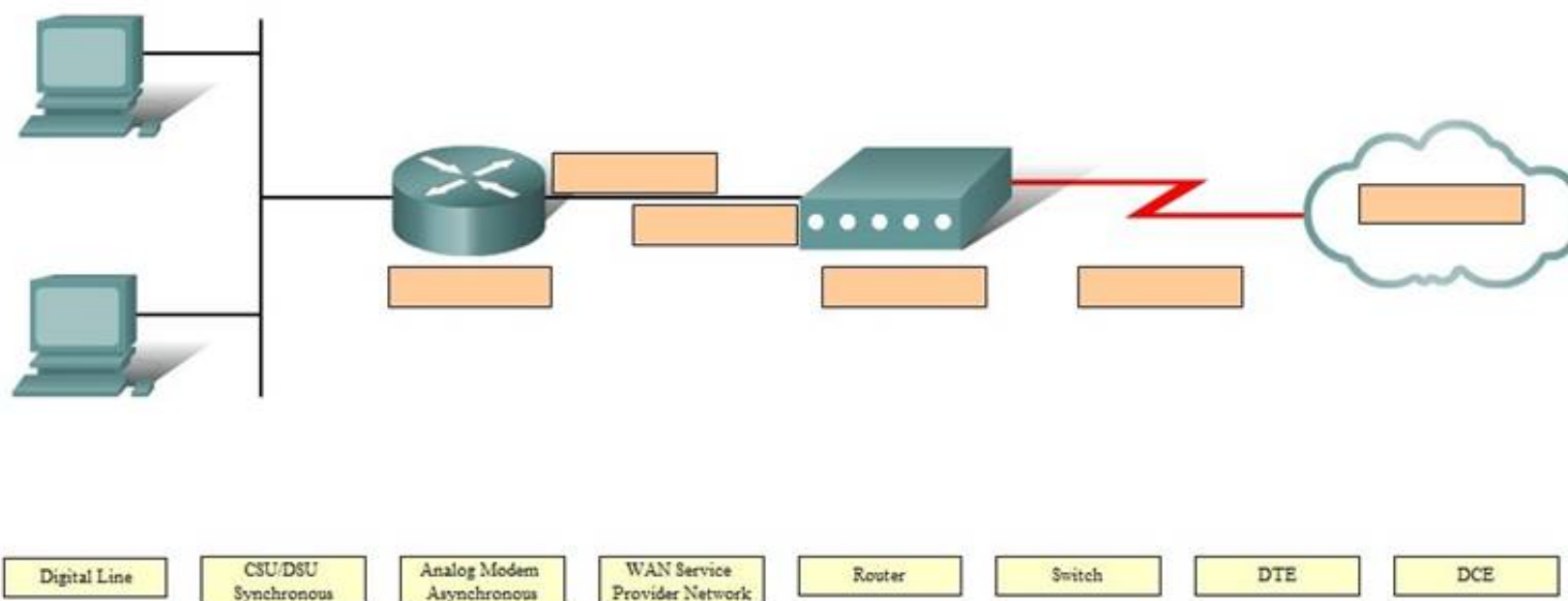
- A. More VLANs will need to be created for this switch.
- B. As FastEthernet0/12 will be the last to come up, it will be blocked by STP.
- C. The switch will need a different IOS code in order to support VLANs and STP.
- D. Remote access management of this switch will not be possible without configuration change.

Answer: D

NEW QUESTION 777

Refer to the exhibit. Complete this network diagram by dragging the correct device name or description to the correct location. Not all the names or descriptions will be used.

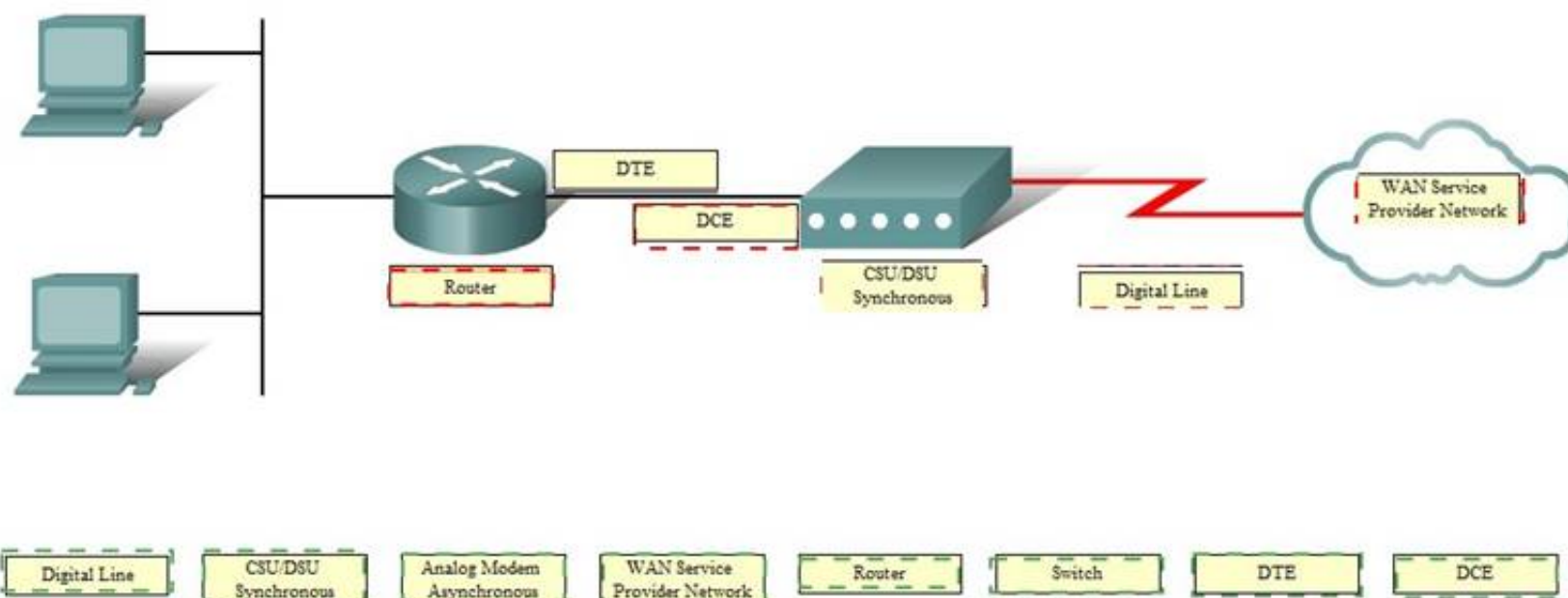
Refer to the exhibit. Complete this network diagram by dragging the correct device name or description to the correct location. Not all the names or descriptions will be used.



Answer:

Explanation:

Refer to the exhibit. Complete this network diagram by dragging the correct device name or description to the correct location. Not all the names or descriptions will be used.



Topic 5, New Pool E (Latest)

NEW QUESTION 778

Which three commands can you use to set a router boot image? (Choose three.)

- A. Router(config)#boot system flash c4500-p-mz .121-20.bin
- B. Router(config)#boot flash:c180x-adventerprisek9-mz-124-6T.bin
- C. Router>noot flash:c180-adventerprisek9-mz-124-6t.bin
- D. Router(config)#boot bootldr bootflash:c4500-jk9s-mz.122-23f.bin
- E. Router(config)#boot system tftp c7300-js-mz.122-33.SB8a.bin
- F. Router(Config)#boot system rom c7301-adviservicek9-mz.124-24.T4.bin

Answer: AF

NEW QUESTION 781

Which benefit of a hub-and-spoke WAN topology is true?

- A. It allows you to implement access restrictions between subscriber sites
- B. It supports application optimization.
- C. It supports Layer 2 VPNs
- D. It allows you to provide direct connections between subscribers.

Answer: A

NEW QUESTION 784

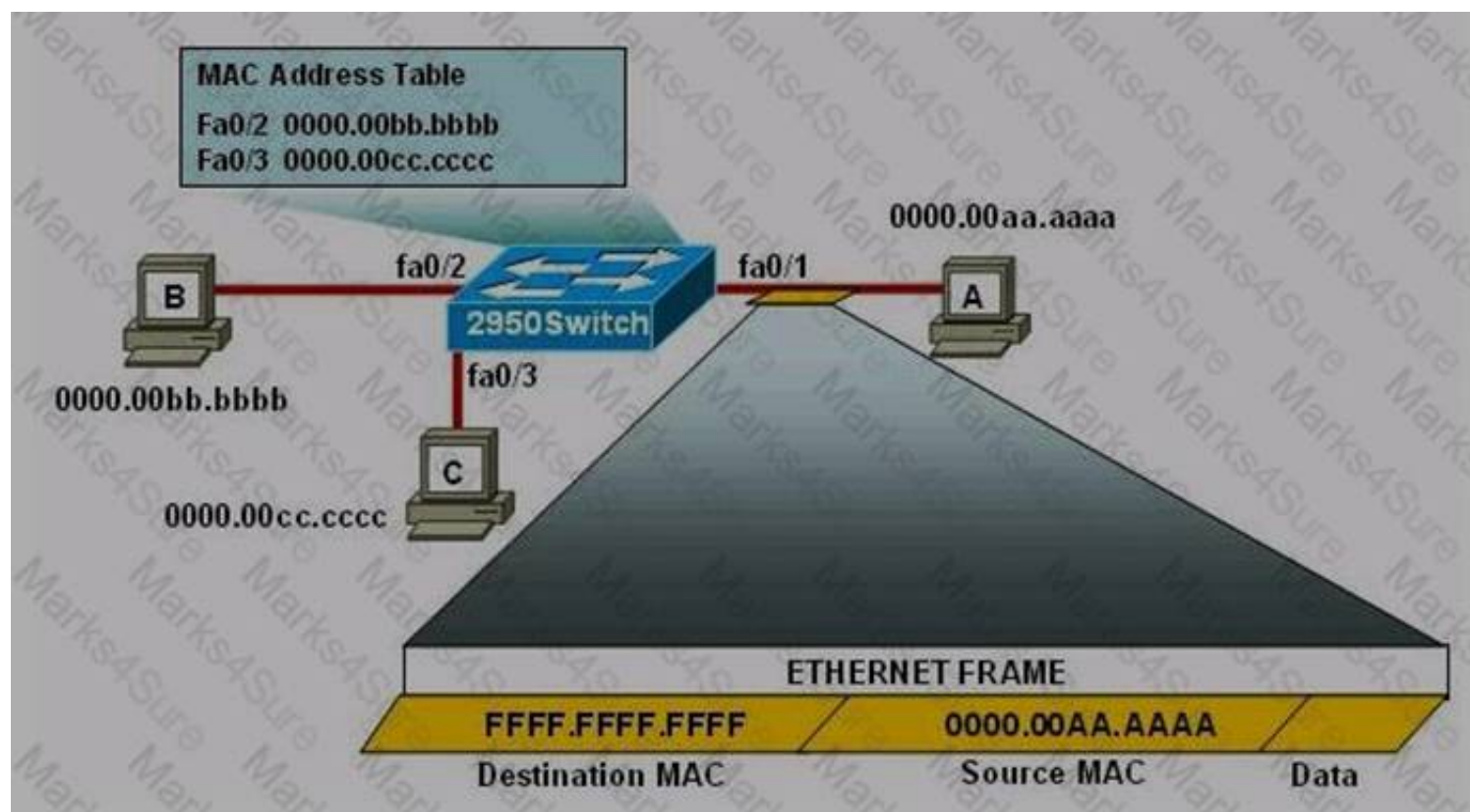
Which two are displayed with the show ipv6 ospf command? (Choose two)

- A. transmit and receive rates of each local interface
- B. OSPF interface of the local router
- C. number of interfaces in each area on the device
- D. number of times the SPF algorithm executed on the device
- E. ID of the advertised router

Answer: CD

NEW QUESTION 788

Refer to the exhibit.



The following commands are executed on interface fa0/1 of 2950Switch.

```
2950Switch(config-if)# switchport port-security mac-address sticky
```

```
2950Switch(config-if)# switchport port-security maximum 1
```

The Ethernet frame that is shown arrives on interface fa0/1. What two functions will occur when this frame is received by 2950Switch? (Choose two.)

- A. Hosts B and C may forward frames out fa0/1 but frames arriving from other switches will not be forwarded out fa0/1.
- B. Only host A will be allowed to transmit frames fa0/1.
- C. The MAC address table will now have an additional entry of fa0/1 FFF
- D. FFFF,FFFF.
- E. This frame will be discarded when it is received by 2950Switch.
- F. All frames arriving on 2950Switch with a destination of 0000.00a
- G. Aaaa will be forwarded out fa0/1.
- H. Only frame from source 0000.00bb bbbb, the first learned MAC address of 2950Switch, will be forwarded out fa0/1.

Answer: BE

NEW QUESTION 790

Which condition that service password-encryption is enabled?

- A. the enable secret is in clear text in the configuration.
- B. The enable secret is encrypted in the configuration.
- C. The local username password is in clear text in the configuration.
- D. The local username password is encrypted in the configuration.

Answer: D

NEW QUESTION 791

Which two neighbor types are supported in a BGP environment? (Choose two)

- A. remote
- B. directly attached
- C. external
- D. autonomous
- E. internal

Answer: CE

NEW QUESTION 793

Which three options are types of Layer 2 network attacks? (Choose three.)

- A. botnet attacks
- B. spoofing attacks
- C. brute force attacks
- D. DDOS attacks
- E. VLAN hopping
- F. ARP attacks

Answer: BEF

NEW QUESTION 798

Which feature or utility enables a switch or router to monitor network performance and availability using a responder?

- A. traceroute
- B. NetFlow
- C. ping
- D. IPSLA

Answer: D

NEW QUESTION 803

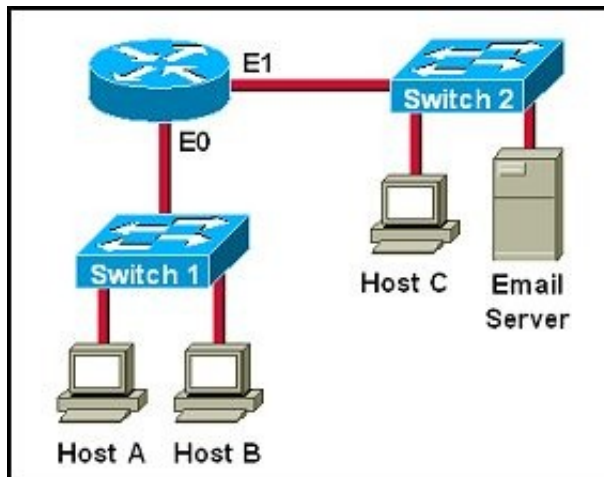
Which two server types are used to support DNS lookup? (Choose two.)

- A. web server
- B. ESX host
- C. authoritative name server
- D. file transfer server
- E. name resolver

Answer: AC

NEW QUESTION 804

Refer to exhibit:



Which two destination addresses will be used by Host A to send data to Host C? (Choose two.)

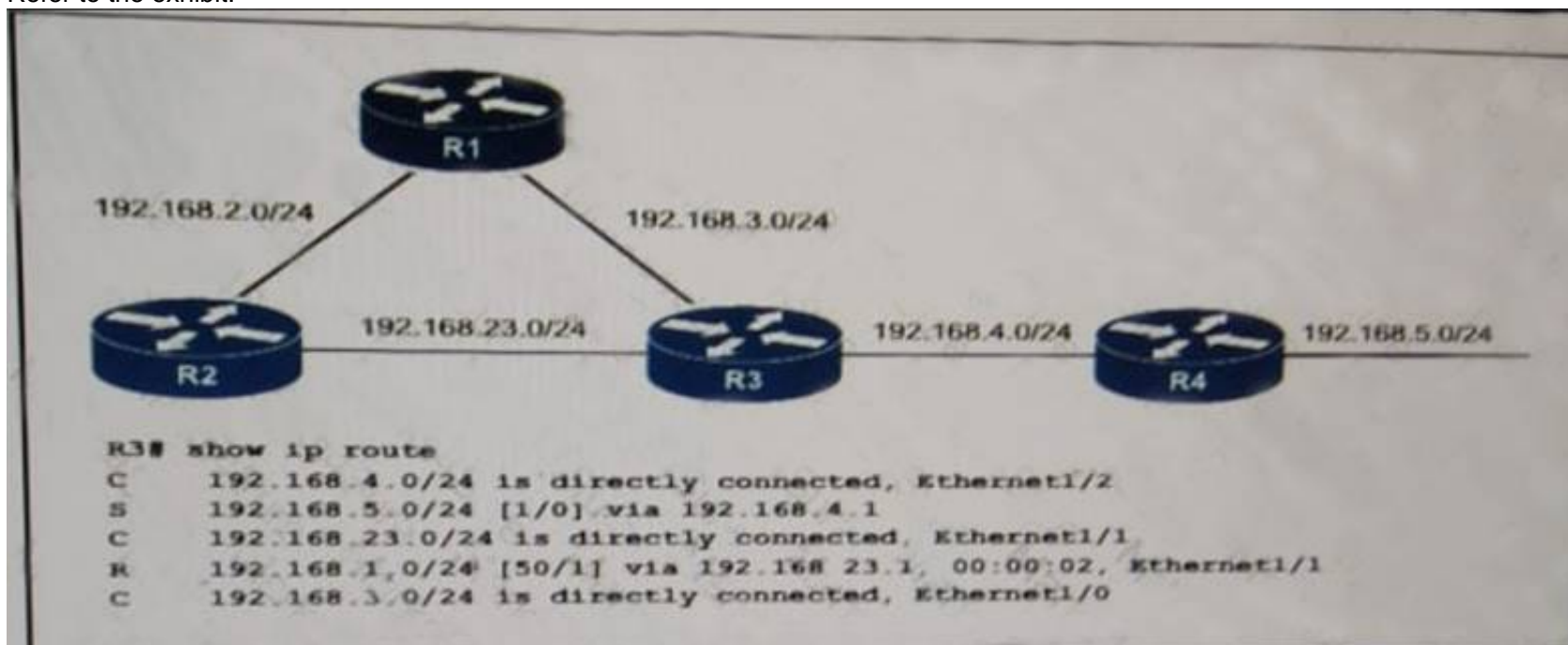
- A. the IP address of Switch 1
- B. the MAC address of Switch 1
- C. the IP address of Host C
- D. the MAC address of Host C
- E. the IP address of the router's E0 interface
- F. the MAC address of the router's E0 interface

Answer: CF

Explanation: While transferring data through many different networks, the source and destination IP addresses are not changed. Only the source and destination MAC addresses are changed. So in this case Host A will use the IP address of Host C and the MAC address of E0 interface to send data. When the router receives this data, it replaces the source MAC address with its own E1 interface's MAC address and replaces the destination MAC address with Host C's MAC address before sending to Host C.

NEW QUESTION 807

Refer to the exhibit.



If all routers on this network run RIPv2, which configuration should you apply router R3 to produce this routing table

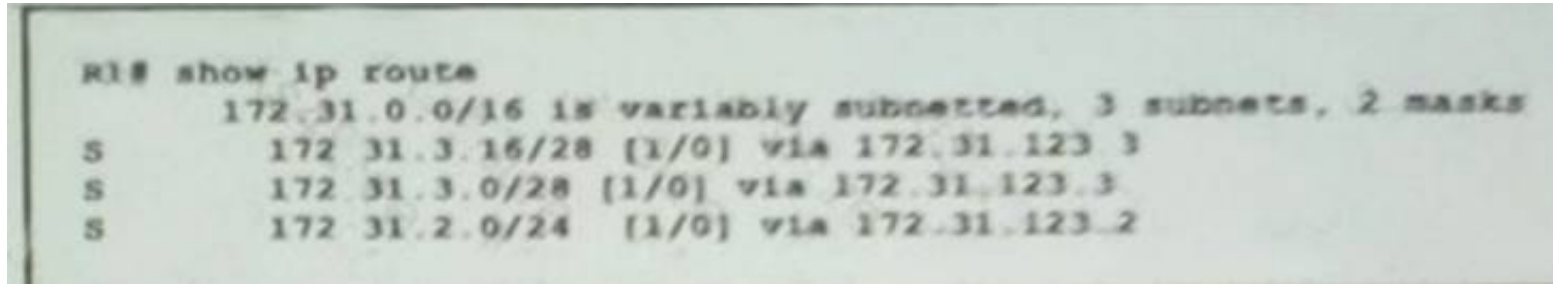
- A. router ripnetwork 192.168.3.0network 192.168.4.0network 192.168.23.0 Passive-interface default.
- B. router rip Version 2network 192.168.3.0network 192.168.4.0network 192.168.23.0Distance 70Passive-interface default
- C. routernetwork 192.168.3.0network 192. 168.4.0network 192.168.23.0passive-interface default
- D. router rip Version 2network 192.168.3.0network 192.168.4.0network 192.168.23.0distance 70passive-interface default
- E. router ri

F. version2network 192.168.3.0network 192.168.4.0network 192. 168.23.0Distance 50

Answer: D

NEW QUESTION 811

Refer to the exhibit.



Which two statements about the route 172.61.3.16/28 are true? (Choose two)

- A. It has a metric of 1
- B. It is less preferred than dynamically learned routes
- C. It is preferred over dynamically learned routes
- D. It was learned from a remote router
- E. It has a default administrative distance of 1

Answer: CE

NEW QUESTION 813

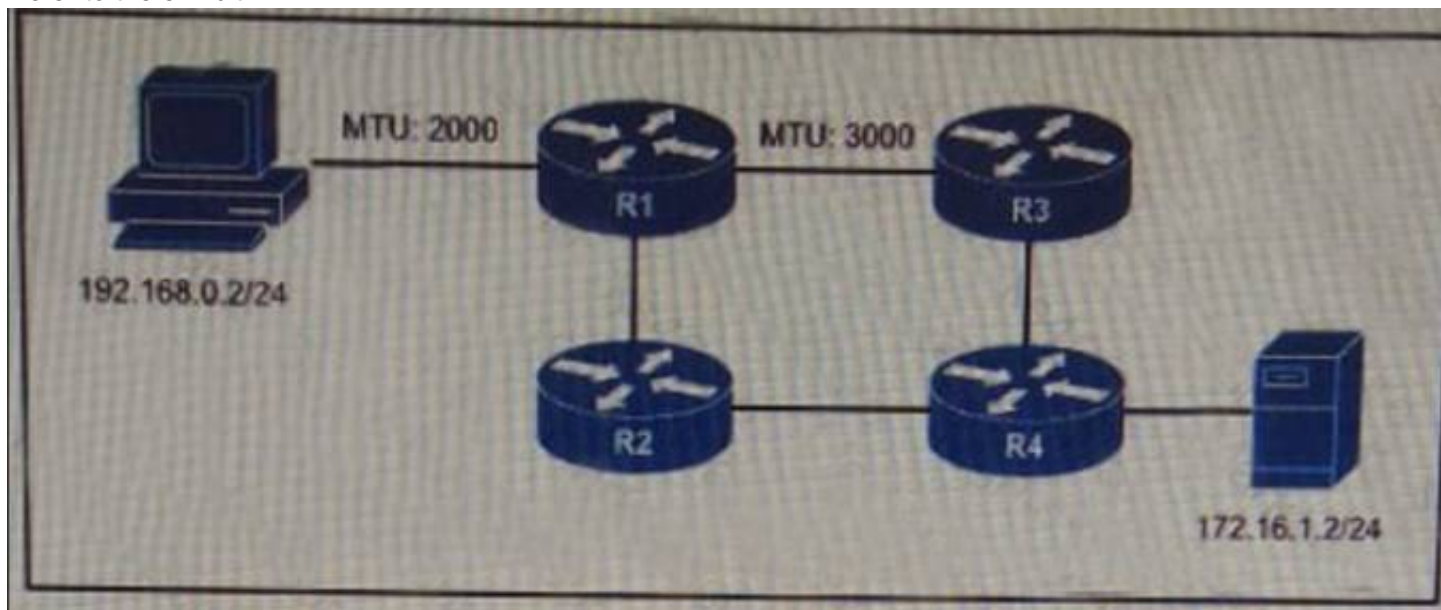
Which effects of the terminal monitor command is true?

- A. It displays the configuration of the syslog server.
- B. It configuration the device to log messages to the console.
- C. it configures a syslog server
- D. It pulls the device into global configuration mode.

Answer: A

NEW QUESTION 817

Refer to the exhibit.



The server on this network is configured with an MTU of 9216, and the two interfaces on router R1 are configured for MTUs of 2000 and 3000 as shown. What is the largest packet size that can pass between the workstation and the server?

- A. 1500 bytes
- B. 2000 bytes
- C. 3000 bytes
- D. 9216 bytes

Answer: D

NEW QUESTION 819

Which two statements about the APIC-EM ACL Trace tool are true? (Choose two)

- A. Traffic analysis is performed for an entire path from source to destination, even if an ACL along the path would have blocked the actual traffic
- B. It analyzes egress traffic flow only
- C. It can analyze ingress and egress traffic flows
- D. If an ACL along the path from source to destination would have blocked the actual traffic, the traffic analysis stops at that ACL.
- E. If traffic matches more than one entry in a single ACL, higher and lower priority entries are applied

Answer: CD

NEW QUESTION 822

Which two descriptions of distance-vector routing protocols are true? (Choose two)

- A. Each router is aware of only its neighbor routers.
- B. Each router determines its own path to a destination.
- C. Each router views the network as if it were the root of its own topology.
- D. The hop count metric is used to determine the best path to a destination.
- E. Each router in the network shares a database of known routes.

Answer: DE

NEW QUESTION 827

Which two options are features of the extended ping command? (Choose two.)

- A. It can send a specified number of packets.
- B. It can resolve the destination host name.
- C. It can ping multiple hosts at the same time.
- D. It can send packets from a specified interface or IP address.
- E. It can count the number of hops to the remote host.

Answer: AD

NEW QUESTION 828

Which two types of NAT addresses are used in a Cisco NAT device? (Choose two.)

- A. external global
- B. inside local
- C. inside private
- D. external local
- E. inside global
- F. outside private

Answer: BE

NEW QUESTION 831

Which command can you enter to set the default route for all traffic to an IP address router interface?

- A. router(config)#ip router 0.0.0.0 255.255.255.255GigabitEthernet0/1
- B. router(config)#ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/1
- C. router(config)#ip default-gateway GigabitEthernet0/1
- D. router(config-router) #default-information originate

Answer: B

NEW QUESTION 832

Which two statements about LLDP are true? (Choose two.)

- A. It enables systems to learn about one another over the data-link layer.
- B. It is a Cisco-proprietary technology.
- C. It is implemented in accordance with the 802.11a specification.
- D. It uses mandatory TLVs to discover the neighboring devices.
- E. It functions at Layer 2 and Layer 3.

Answer: AD

NEW QUESTION 836

Which effect of the copy tftp:flash: command is true?

- A. It copies the startup configuration from a remote server to the local device.
- B. It copies the system image from the local device to a remote server.
- C. It copies the running configuration from the local device to a remote server.
- D. It copies the system image from a remote server to the local device.

Answer: D

NEW QUESTION 838

On which type of interface can you perform an ACL-based Path Trace with APIC-EM?

- A. Layer 2
- B. Layer 4
- C. Layer 3
- D. Layer 1

Answer: C

NEW QUESTION 840

Which impact of the passive-interface serial0/0 command is true when configuring RIPv2?

- A. The interface begins transmitting RIPv1 and RIPv2 routes
- B. The interface stops sending outbound routing updates.
- C. The interface begins ignoring inbound routing updates
- D. The interface begins accepting RIPv1 and RIPv2 routes

Answer: B

NEW QUESTION 844

Which two statements about wireless LAN controllers are true? (Choose two)

- A. They can manage mobility policies at a systemwide level
- B. They rely on external firewalls for WLAN security.
- C. They can simplify the management and deployment of wireless LANs.
- D. They are ideal for small wireless networks.
- E. They must be configured through a GUI over HTTP or HTTPS.

Answer: AC

NEW QUESTION 845

Which two values must you specify to perform an ACL-based Path Trace using APIC-EM? (Choose two)

- A. destination port
- B. source port
- C. source interface
- D. destination IP address
- E. source IP address

Answer: DE

NEW QUESTION 846

Which command can you enter on a router to identify the path a packet takes to a remote device?

- A. trace path
- B. ping
- C. debug ip packet
- D. traceroute

Answer: D

NEW QUESTION 850

Which two characteristics of a link-state routing protocol are true? (Choose two)

- A. Each router in the network maintains a separate routing database of its own neighbors.
- B. Each router uses LSAs to exchange the information about the network topology.
- C. Each router uses Dijkstra's algorithm to determine the shortest path.
- D. Each router establishes an adjacency to every other router in the network
- E. Each router uses the same path to each network in the topology.

Answer: BC

NEW QUESTION 855

Which command can you enter on a Cisco IOS device to enable a schedule algorithm that directs lookup calls to multiple DNS hosts?

- A. ip name-server 192.168.10.14.192.168.10.15
- B. ip domain lookup
- C. ip domain round-robin
- D. ip domain list

Answer: A

NEW QUESTION 859

A network administrator needs to configure port security on a switch. Which two statements are true? (Choose two.)

- A. The network administrator can apply port security to dynamic access ports.
- B. When dynamic MAC address learning is enabled on an interface, the switch learns new addresses, up the maximum defined.
- C. The network administrator can configure static secure or sticky secure MAC address in the voice a VLAN.
- D. The sticky learning feature allows the addition of dynamic learned address to the running configuration.
- E. The network administrator can apply security to EtherChannels.

Answer: BD

NEW QUESTION 861

You notice that packets that are sent from a local host to well-known service on TCP port 80 remote host are sometimes lost. You suspect an ACL issue. Which two APIC-EM path Trace ACL-analysis option should you use to troubleshooting the problem? (Choose two.)

- A. destination port
- B. QoS
- C. debug
- D. protocol
- E. performance Monitor

Answer: AC

NEW QUESTION 865

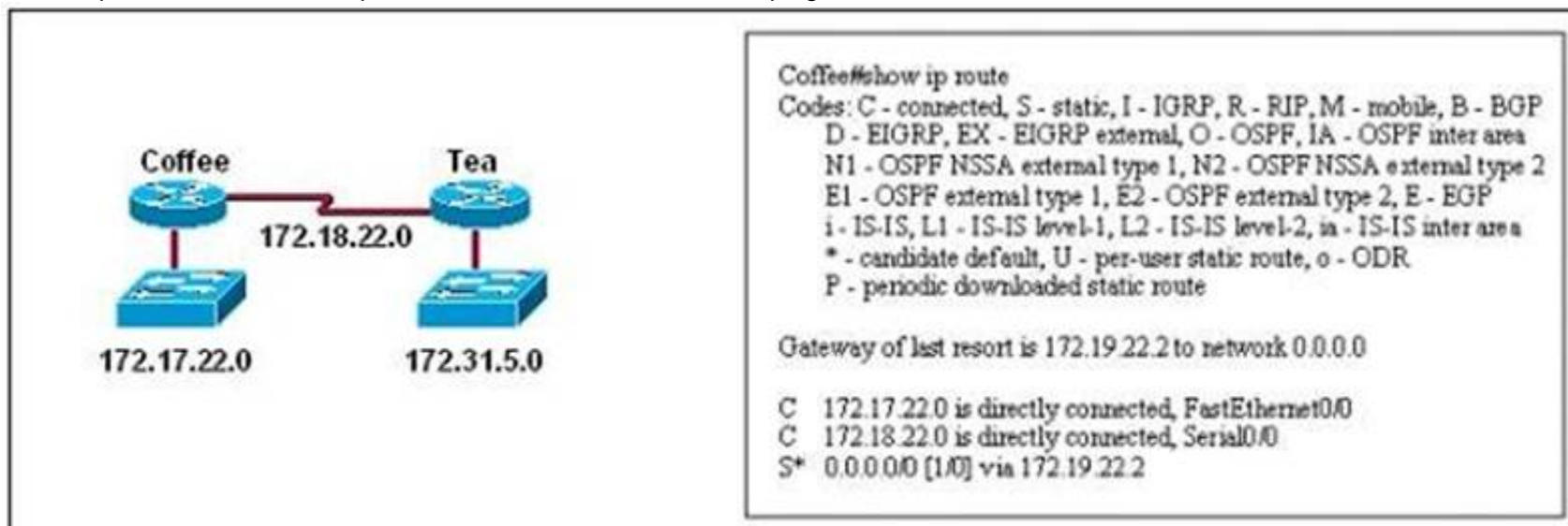
If Router R1 knows a static route to a destination network and then learns about the same destination through a dynamic routing protocol does R1 respond?

- A. it disables the routing protocol
- B. it refuses to advertise the dynamic route to other neighbors
- C. it prefers the static route
- D. It sends a withdrawal notification to the neighboring router.

Answer: C

NEW QUESTION 866

Users on the 172.17.22.0 network cannot reach the server located on the 172.31.5.0 network. The network administrator connected to router Coffee via the console port, issued the show ip route command, and was able to ping the server.



Based on the output of the show ip route command and the topology shown in the graphic, what is the cause of the failure?

- A. The network has not fully converged.
- B. IP routing is not enabled.
- C. A static route is configured incorrectly.
- D. The FastEthernet interface on Coffee is disabled.
- E. The neighbor relationship table is not correctly updated.
- F. The routing table on Coffee has not updated.

Answer: C

Explanation: The default route or the static route was configured with incorrect next-hop ip address 172.19.22.2. The correct IP address will be 172.18.22.2 to reach server located on 172.31.5.0 network. IP route 0.0.0.0 0.0.0.0 172.18.22.2

NEW QUESTION 868

Which command can you execute to set the user inactivity timer to 10 seconds?

- A. SW1(config-line)#exec-timeout 0 10
- B. SW1(config-line)#exec-timeout 10
- C. SW1(config-line)#absolute-timeout 0 10
- D. SW1(config-line)#absolute-timeout 10

Answer: A

NEW QUESTION 870

Which two statements about private addresses are true? (Choose two)

- A. They can be used without tracking or registration
- B. They are used on a home network, they must be translated before they can connect to the Internet
- C. They can traverse the Internet when an outbound ACL is applied.
- D. The IP address authority issues them in conjunction with an autonomous system number
- E. An individual enterprise network can use up to 65,536 private addresses

Answer: AB

NEW QUESTION 871

Which functionality does split horizon provide?

- A. It prevents routing loops in link-state protocols.

- B. It prevents switching loops in distance-vector protocols.
- C. It prevents routing loops in distance-vector protocols.
- D. It prevents switching loops in link-state protocols.

Answer: C

NEW QUESTION 875

Which two addresses can be used to communicate with more than one device at a time? (Choose two)

- A. 01-00-53-ab-11-c1
- B. 10.1.1.255/22
- C. 01-00-5e-7b-11-c1
- D. 10.1.2.255/23
- E. 172.17.210.255/24

Answer: AC

NEW QUESTION 879

Which two EXEC mode commands can simplify DHCP lease management? (Choose two)

- A. release dhcp
- B. no ip dhcp conflict logging
- C. Renew dhcp
- D. ip address dhcp
- E. ip dhcp ping timeout 500

Answer: AC

NEW QUESTION 883

Which three statements about link-state routing are true? (Choose three)

- A. Updates are sent to a broadcast address.
- B. Updates are sent to a multicast address by default.
- C. Routes are updated when a change in topology occurs.
- D. It uses split horizon.
- E. OSPF is a link-state protocol.
- F. RIP is a link-state protocol.

Answer: BCE

NEW QUESTION 885

Which two pieces of information are displayed with the show ipv6 ospf 5 multi-area command? (Choose two)

- A. Interface ID number
- B. reliability of each local interface
- C. local OSPF area
- D. number of interfaces in the area
- E. transmit and receive rates of each local interface

Answer: AD

NEW QUESTION 887

Which command is used to enter IP SLA configuration mode?

- A. icmp-echo
- B. frequency
- C. ip sla
- D. enable

Answer: C

NEW QUESTION 888

What are two requirements for an HSRP group? (Choose two.)

- A. one or more standby routers.
- B. one or more backup virtual routers
- C. exactly one standby active router
- D. exactly one backup virtual router
- E. exactly one active router

Answer: AE

NEW QUESTION 889

What is the default Syslog facility level?

- A. livcal4
- B. local5
- C. local7
- D. local6

Answer: C

NEW QUESTION 891

Refer to the exhibit.

```
R1# show ip route
C    192.168.10.0/24 is directly connected, Vlan10
O    192.168.11.0/24 [19/2] via 172.20.3.2, 1w1d, GigabitEthernet0/1
S    192.168.12.0/24 [1/0] via 172.20.4.5
R    172.20.10.21 [20/0] via 192.168.250.35, 7w0d
U    192.168.20.0/24 is directly connected, GigabitEthernet 0/3
D    172.20.30.21 [20/0] via 192.168.200.45, 2d19h
```

Which two route codes indicate routes that use a Distance Vector Protocol? (Choose two)

- A. C
- B. D
- C. O
- D. R
- E. S

Answer: BD

NEW QUESTION 895

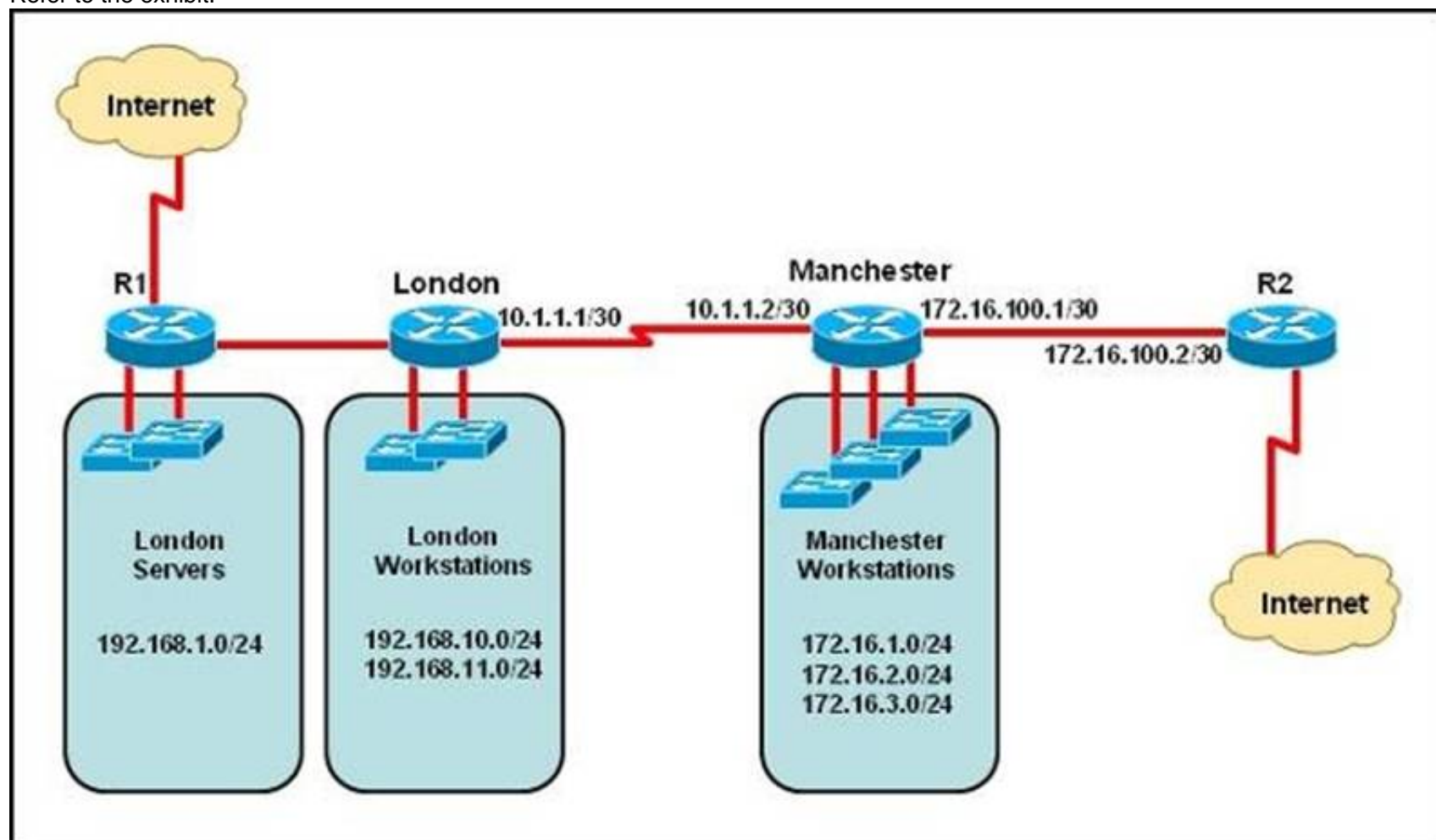
What two actions can be taken to secure the virtual terminal interfaces on a router? (Choose two.)

- A. Administratively shut down the interface.
- B. Physically secure the interface
- C. Create an access list and apply it to the virtual terminal interfaces with the access-group command.
- D. Enter an access list and apply it to the virtual terminal interfaces using the access command.
- E. Configure a virtual terminal password and login process.

Answer: DE

NEW QUESTION 897

Refer to the exhibit.



The network administrator must establish a route by which London workstations can forward traffic to the Manchester workstations. What is the simplest way to accomplish this?

- A. Configure a dynamic routing protocol on London to advertise all routes to Manchester.
- B. Configure a dynamic routing protocol on London to advertise summarized routes to Manchester.
- C. Configure a dynamic routing protocol on Manchester to advertise a default route to the London router.
- D. Configure a static default route on London with a next hop of 10.1.1.1.
- E. Configure a static route on London to direct all traffic destined for 172.16.0.0/22 to 10.1.1.2.
- F. Configure Manchester to advertise a static default route to London.

Answer: E

Explanation: Explanation

This static route will allow for communication to the Manchester workstations and it is better to use this more specific route than a default route as traffic destined to the Internet will then not go out the London Internet connection.

NEW QUESTION 899

Which two statements about IPv6 multicast addresses are true?(Choose two)

- A. If the lifetime parameter is set to 1, the route is permanent
- B. They use the prefix FF00::/8.
- C. They use the prefix FC80::/8.
- D. If the scope parameter is set to 5, the route is local to the node
- E. They identify a group of interfaces on different devices.

Answer: BE

NEW QUESTION 900

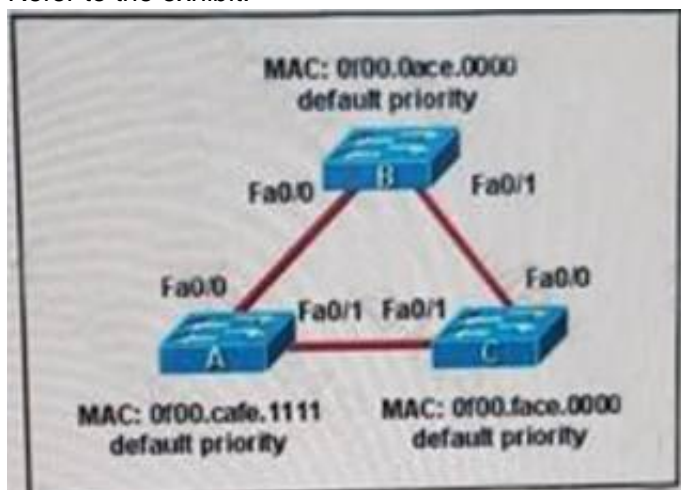
Which configuration gracefully brings down the line protocol status of a GRE tunnel interface if the tunnel destination becomes unreachable?

- A. Configure tunnel interface keepalives.
- B. Configure a static route for the tunnel
- C. Replace the tunnel with a loopback interface
- D. Configure an IGP such as OSPF on the tunnel

Answer: C

NEW QUESTION 903

Refer to the exhibit.



Which three ports will be STP designated if all the links are operating at the same bandwidth? (Choose three.)

- A. Switch A - Fa0/0
- B. Switch A - Fa0/1
- C. Switch B - Fa0/0
- D. Switch B - Fa0/1
- E. Switch C - Fa0/0
- F. Switch C - Fa0/1

Answer: BCD

NEW QUESTION 904

After you enable routing on a switch, which two tasks must you perform to configure inter-VLAN routing on an SVI interface? (Choose two)

- A. Configure a routing protocol to route the traffic
- B. Configure the ip default-gateway command on the switch
- C. Configure an ACL to route only the necessary traffic
- D. Configure an IP address on each VLAN interface.
- E. Ensure that the target VLANs are present in the switch database

Answer: CE

NEW QUESTION 905

What authentication type is used by SNMPv2?

- A. username and password
- B. community strings
- C. HMAC-SHA
- D. HMAC-MD5

Answer: B

NEW QUESTION 908

Which two statements about BPDU guard are true? (Choose two)

- A. It is supported on trunk ports
- B. It sends BPDUs on a port to maintain the up status.
- C. It error-disables a PortFast-configured port when the port receives a BPDU.
- D. It is required on private VLAN access ports
- E. It is supported on non-trunking access ports
- F. It can increase the likelihood of loops occurring in a network

Answer: CE

NEW QUESTION 910

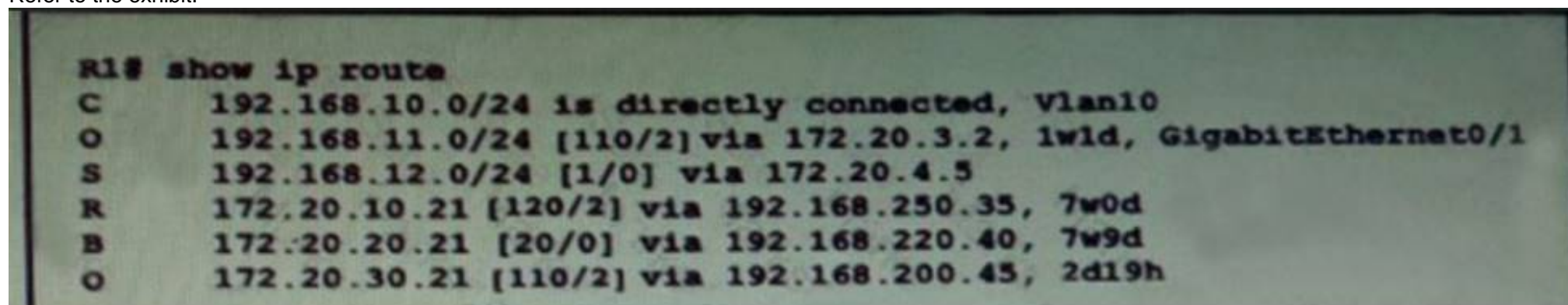
Which command is configure on a switch to enable neighbor discovery in a multivendor environment?

- A. lldp run
- B. lldp transmit
- C. lldp receive
- D. cdp run

Answer: A

NEW QUESTION 912

Refer to the exhibit.



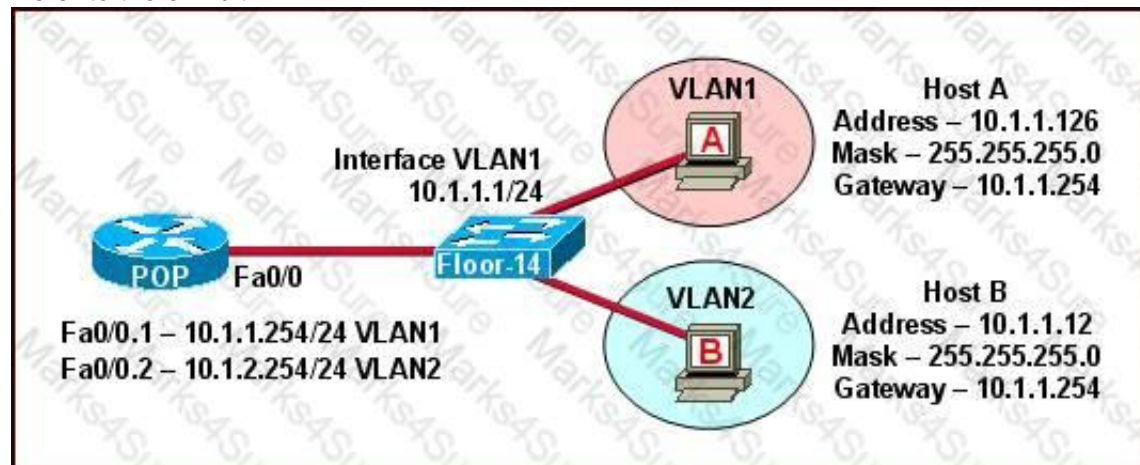
Which two routes originate from R1? (Choose two)

- A. 172.20.20.21
- B. 192.168.10.0/24
- C. 192.168.12.0/24
- D. 192.168.11.0/24
- E. 172.20.10.21

Answer: AD

NEW QUESTION 916

Refer to the exhibit.



The network shown in diagram is experiencing connectivity problems. Which two configuration changes will correct the problems? (Choose two.)

- A. Configure the gateway on Host A as 10.1.1.1.
- B. Configure the gateway on Host B as 10.1.2.254.
- C. Configure the IP address of Host A as 10.1.2.2.
- D. Configure the IP address of Host B as 10.1.2.2.
- E. Configure the masks on both hosts to be 255.255.255.224.
- F. Configure the masks on both hosts to be 255.255.255.240.

Answer: BD

Explanation: The switch 1 is configured with two VLANs: VLAN1 and VLAN2. The IP information of member Host A in VLAN1 is as follows: Address : 10.1.1.126
Mask : 255.255.255.0
Gateway : 10.1.1.254
The IP information of member Host B in VLAN2 is as follows: Address : 10.1.1.12
Mask : 255.255.255.0
Gateway : 10.1.1.254
The configuration of sub-interface on router 2 is as follows: Fa0/0.1 -- 10.1.1.254/24 VLAN1
Fa0/0.2 -- 10.1.2.254/24 VLAN2

It is obvious that the configurations of the gateways of members in VLAN2 and the associated network segments are wrong. The layer3 addressing information of Host B should be modified as follows:
 Address : 10.1.2.X Mask : 255.255.255.0

NEW QUESTION 917

ACisco router is booting and has just completed the POST process. It is now ready to find and load an IOS image. What function does the router perform next?

- A. It attempts to boot from a TFTP server.
- B. It checks the configuration register.
- C. It inspects the configuration file in NVRAM for boot instructions.
- D. It loads the first image file in flash memory.

Answer: B

NEW QUESTION 921

Which two benefits of implementing point-to-point links for WAN connections are true? (Choose two)

- A. You can configure multiple point-to-point connections on each interface.
- B. They can provide dedicated capacity
- C. They are a low-cost option
- D. They operate with low latency
- E. They can provide flexible routing.

Answer: BC

NEW QUESTION 924

Which utility can you use to identify redundant or shadow rules?

- A. the Cisco IWAN application
- B. the Cisco APIC-EM automation scheduler
- C. the ACL trace tool in Cisco APIC-EM
- D. the ACL analysis tool in Cisco APIC-EM

Answer: D

NEW QUESTION 928

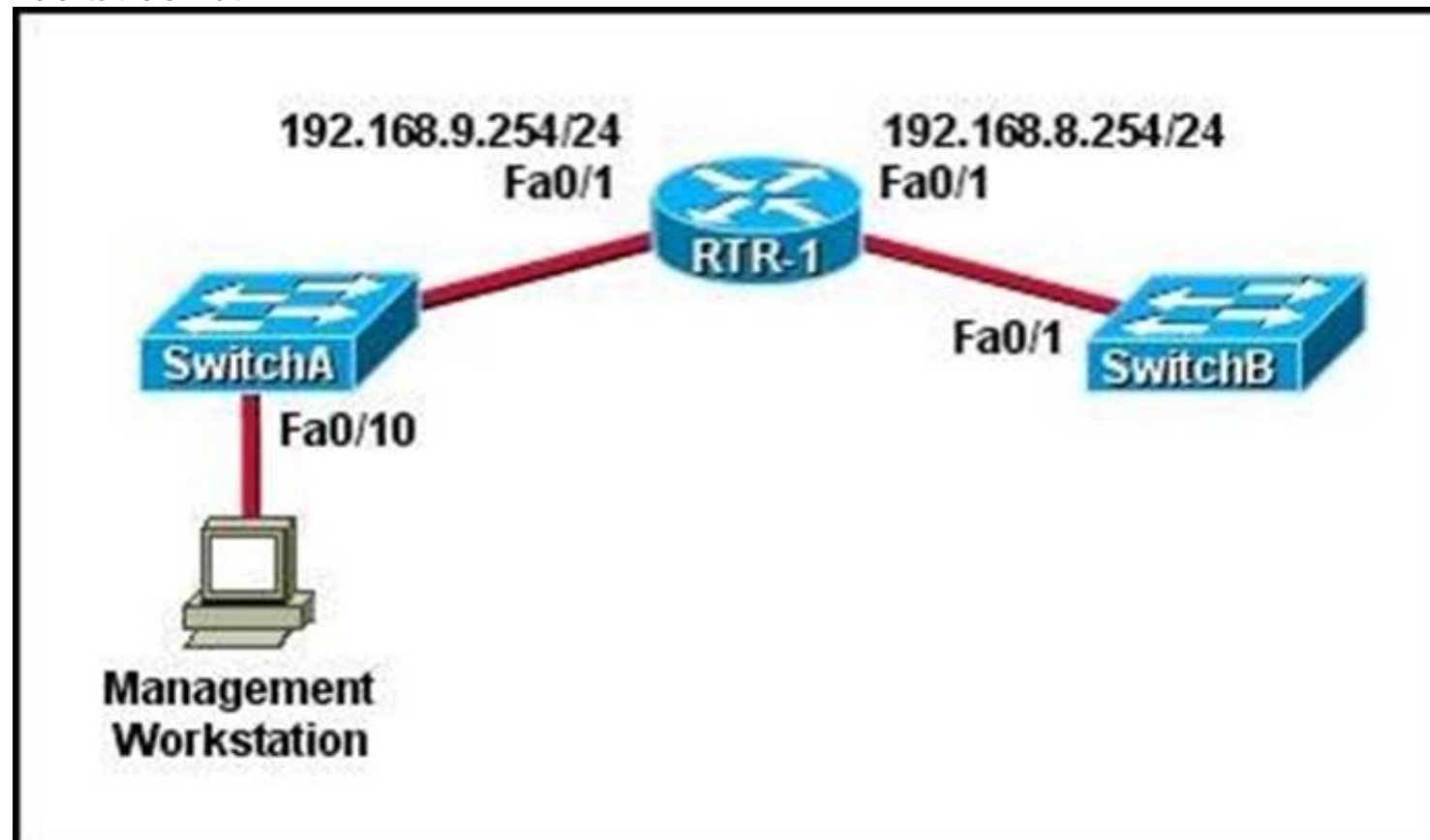
Which two addresses are broadcast addresses? (Choose two)

- A. 172.17.210.255/24
- B. 10.1.2.255/23
- C. 10.1.0.255/23
- D. 10.1.2.255/22
- E. 10.1.1.255/23

Answer: AE

NEW QUESTION 932

Refer to the exhibit.



A technician has installed SwitchB and needs to configure it for remote access from the management workstation connected to SwitchA. Which set of commands is required to accomplish this task?

- A. SwitchB(config)# interface FastEthernet 0/1SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- B. SwitchB(config)# interface vlan 1SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0SwitchB(config-if)# ip default-gateway 192.168.8.254 255.255.255.0 SwitchB(config-if)# no shutdown
- C. SwitchB(config)# ip default-gateway 192.168.8.254 SwitchB(config)# interface vlan 1SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- D. SwitchB(config)# ip default-network 192.168.8.254 SwitchB(config)# interface vlan 1SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown
- E. SwitchB(config)# ip route 192.168.8.254 255.255.255.0SwitchB(config)# interface FastEthernet 0/1SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0 SwitchB(config-if)# no shutdown

Answer: C

Explanation: To remote access to SwitchB, it must have a management IP address on a VLAN on that switch. Traditionally, we often use VLAN 1 as the management VLAN (but in fact it is not secure).

In the exhibit, we can recognize that the Management Workstation is in a different subnet from the SwitchB. For intersubnetwork communication to occur, you must configure at least one default gateway. This default gateway is used to forward traffic originating from the switch only, not to forward traffic sent by devices connected to the switch.

NEW QUESTION 936

Which two statements about multicast addresses are true? (Choose two)

- A. 01-00-53-ab-11-c1 is a multicast MAC address
- B. 01-00-5e-7b-11-c1 is a multicast MAC address
- C. They allow one-to-one communication
- D. They allow one-to-many communication
- E. 02-00-5e-7f-11-c1 is a multicast MAC address

Answer: AB

NEW QUESTION 940

Which two EtherChannel PAgP modes can you configure? (Choose two.)

- A. active
- B. passive
- C. desirable
- D. on
- E. auto

Answer: CE

NEW QUESTION 941

Which two tasks does a router perform when it receives a packet that is being forwarded from one network to another? (Choose two.)

- A. It removes the Layer 2 frame header and trailer.
- B. It encapsulates the Layer 2 packet.
- C. It removes the Layer 3 frame header and trailer.
- D. It examines the routing table for the best path to the destination IP address of the packet.
- E. It examines the MAC address table for the forwarding interface.

Answer: AD

NEW QUESTION 944

Which two QoS tools can you use to guarantee minimum bandwidth to certain traffic? (Choose two)

- A. WFQ
- B. RSVP
- C. LLC
- D. FIFO
- E. CBWFQ

Answer: AE

NEW QUESTION 947

Which two statements about the data field in an Ethernet frame are true? (Choose two)

- A. It includes 6 bytes of the source address and 6 bytes of the destination address
- B. The frame is marked as a jumbo frame if the data field is more than 512 bytes in length
- C. It can be padded so that the frame meets the minimum length requirement
- D. It contains a 32-bit CRC.
- E. The frame is marked as a runt if data field is less than 64 bytes in length

Answer: DE

NEW QUESTION 948

Which two statements about the extended traceroute command are true? (Choose two)

- A. It can validate the reply data
- B. It can use a specified ToS
- C. It can be repeated automatically at a specified interval
- D. It can send packets from a specified interface or IP address
- E. It can use a specified TTL value

Answer: BE

NEW QUESTION 952

Which factor must you take into consideration before deciding to use Metro Ethernet to connect to a WAN?

- A. It is most appropriate for networks that are limited to a small geographic area
- B. It requires VPLS to be supported by MPLS
- C. It supports only point-to-point connections.
- D. WAN aggregation is not supported.

Answer: B

NEW QUESTION 955

What would be the effect of issuing the command `Ip access-group 114 in` to the `fa0/0` interface?

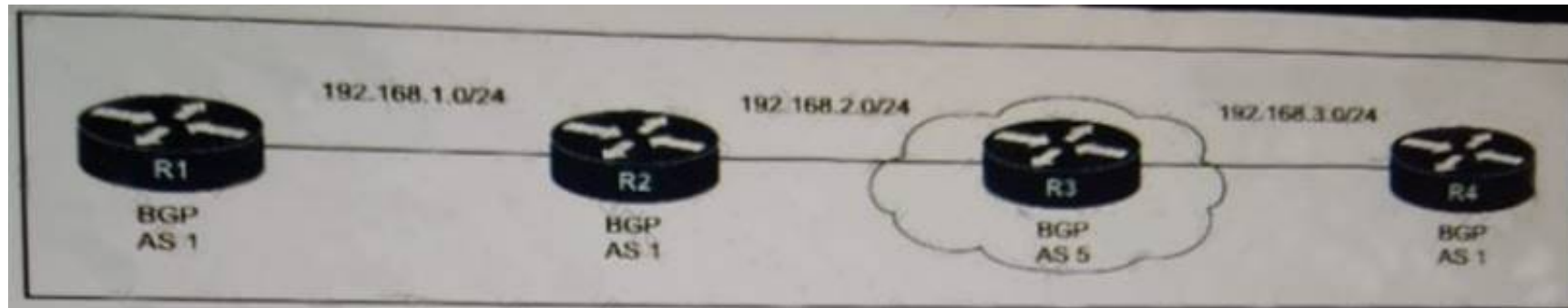
- A. Attempts to telnet to the router would fail.
- B. It would allow all traffic from the 10.4.4.0 network.
- C. IP traffic would be passed through the interface but TCP and UDP traffic would not.
- D. Routing protocol updates for the 10.4.4.0 network would not be accepted from the `fa0/0` interface.

Answer: B

Explanation: From the output of access-list 114: `access-list 114 permit ip 10.4.4.0 0.0.0.255 any` we can easily understand that this access list allows all traffic (ip) from 10.4.4.0/24 network

NEW QUESTION 959

Refer to the exhibit.



Which BGP configuration do you need to apply to router R4 to allow traffic to flow normally on this network?

- A. `router bgp 1`
`no synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.3.1 remote-as 5`
`no auto-summary`
- B. `router bgp 1`
`No synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.3.1 remote-as 5`
`no auto-summary`
- C. `router bgp 1`
`multi-hop 4`
`no synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.3.1 ebgp-multi-hop 4`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.2.1 ebgp-multi-hop 4`
`neighbor 192.168.3.1 remote-as 5`
`neighbor 192.168.3.1 ebgp-multi-hop 4`
- D. `router bgp 1`
`no synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.2.1 ebgp-multi-hop 4`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.2.1 ebgp-multi-hop 4`
`neighbor 192.168.3.1 remote-as 5`
`no auto-summary`
- E. `router bgp 1`
`no synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.3.1 remote-as 5`
- F. `router bgp 1`
`no synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.2.1 ebgp-multi-hop 4`
`neighbor 192.168.3.1 remote-as 5`
`no auto-summary`
`neighbor 192.168.3.1 ebgp-multi-hop 4`
`no auto-summary`
- G. `router bgp 1`
`no synchronization`
`neighbor 192.168.1.1 remote-as 1`
`neighbor 192.168.2.1 ebgp-multi-hop 4`
`neighbor 192.168.2.1 remote-as 1`
`neighbor 192.168.2.1 ebgp-multi-hop 4`
`neighbor 192.168.3.1 remote-as 5`

Answer: D

NEW QUESTION 964

Which API uses HTTP messages to transfer data to applications residing on different hosts?

- A. OpFlex
- B. OpenStack
- C. REST
- D. OpenFlow

Answer: C

NEW QUESTION 966

Which QoS tool can you use to optimize voice traffic on a network that is primarily intended for data traffic?

- A. WFQ
- B. PQ
- C. WRED
- D. FIFO

Answer: A

NEW QUESTION 971

Which command allows you to set the administrative distance for EIGRP for IPv6?

- A. metric weights
- B. ipv6 summary-address eigrp
- C. ipv6 next-hop-self eigrp
- D. ipv6 bandwidth-percent eigrp

Answer: B

NEW QUESTION 976

Which option is the primary purpose of traffic shaping?

- A. Providing best-effort service
- B. limiting bandwidth usage
- C. enabling policy-based routing
- D. enabling dynamic flow identification

Answer: B

NEW QUESTION 981

Which feature enables a router to pass DHCP OFFER messages to other interfaces on the same router?

- A. DHCP server address exclusions
- B. DNS helper addresses
- C. DHCP smart-relay
- D. DHCP server boot files

Answer: C

NEW QUESTION 985

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