

## 200-125 Dumps

### CCNA Cisco Certified Network Associate CCNA (v3.0)

<https://www.certleader.com/200-125-dumps.html>



**NEW QUESTION 1**

which three technical services support cloud computing ?

- A. network-monitored power sources
- B. layer 3 network routing
- C. ip localization
- D. redundant connections
- E. VPN connectivity
- F. extended SAN services

**Answer:** DEF

**NEW QUESTION 2**

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 3**

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 4**

Where does a switch maintain DHCP snooping information?

- A. in the CAM table
- B. in the VLAN database
- C. in the DHCP binding database
- D. in the MAC address table

**Answer:** C

**NEW QUESTION 5**

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 6**

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 7**

Which keyword enables an HSRP router to take the active role immediately when it comes online?

- A. IP address
- B. Priority
- C. Preempt

D. Version

**Answer: C**

**NEW QUESTION 8**

Which address class includes network 191.168.0.1/27?

- A. Class C
- B. Class B
- C. Class D
- D. Class A

**Answer: B**

**NEW QUESTION 9**

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 10**

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 10**

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 13**

Which two options describe benefits of aggregated chassis technology (Choose 2)?

- A. it reduces management overhead.
- B. switches can be located anywhere regardless of their physical distance from one another.
- C. it requires only one IP address per VLAN.
- D. it requires only Three IP addresses per VLAN.
- E. it supports HSRP VRRP and GLBP.
- F. it support redundant configuration files.

**Answer: AC**

**NEW QUESTION 16**

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 18**

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 20**

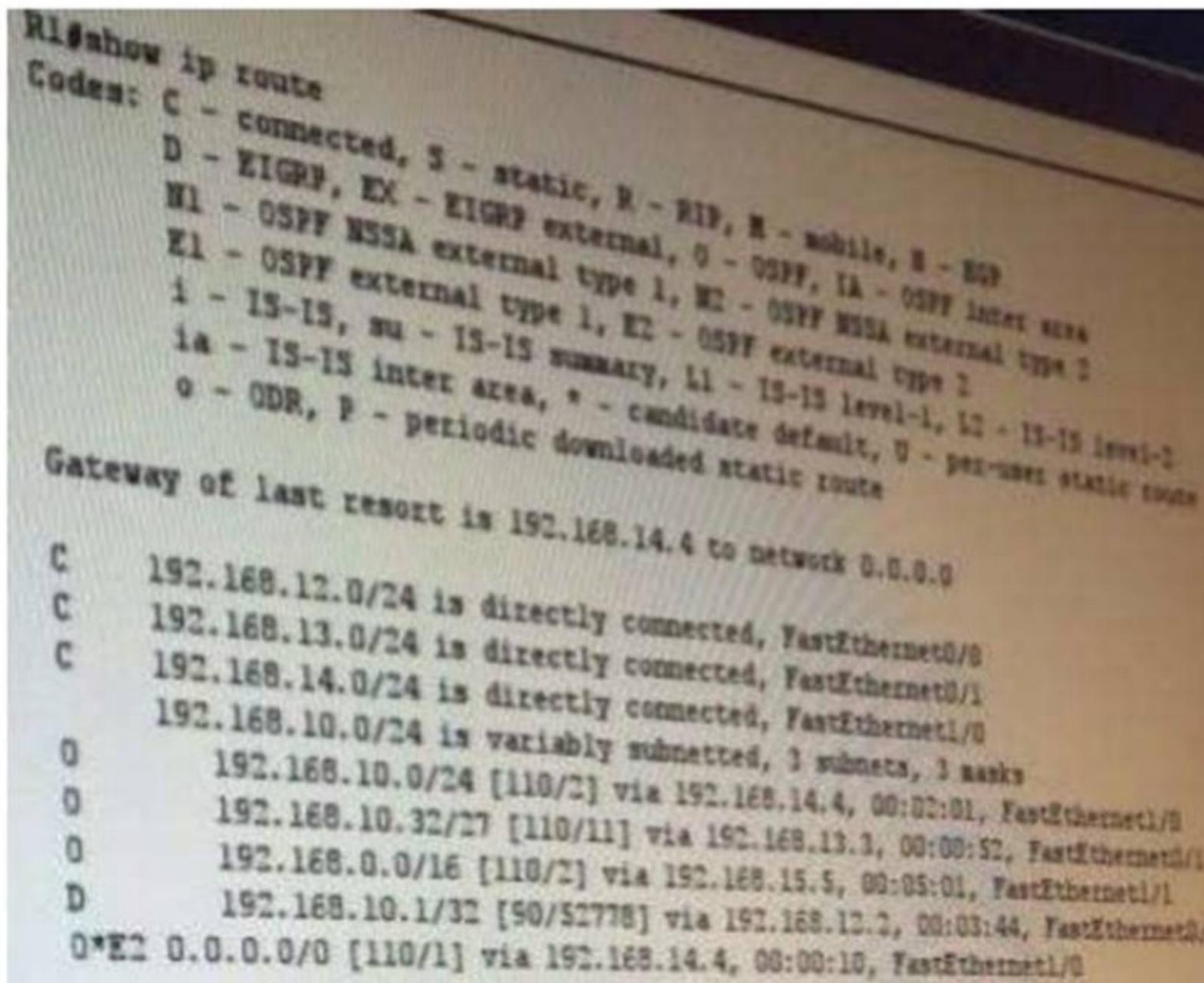
which feature must you enable to distribute vlans automatically across multiple switch ?

- A. configure NTP
- B. Configure the native VLAN
- C. Define Each vlan
- D. configure VTP

**Answer: D**

**NEW QUESTION 23**

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 27**

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 30**

Refer to the exhibit,

```
R1
interface Loopback0
 ip address 172.16.1.33 255.255.255.224

interface FastEthernet0/0
 ip address 192.168.12.1 255.255.255.0

router bgp 100
 neighbor 192.168.12.2 remote-as 100
```

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 35**

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 36**

Which option is the main function of congestion management ?

- A. providing long term storage of buffered data
- B. queuing traffic based on priority
- C. discarding excess traffic
- D. classifying traffic

**Answer: B**

**NEW QUESTION 41**

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 44**

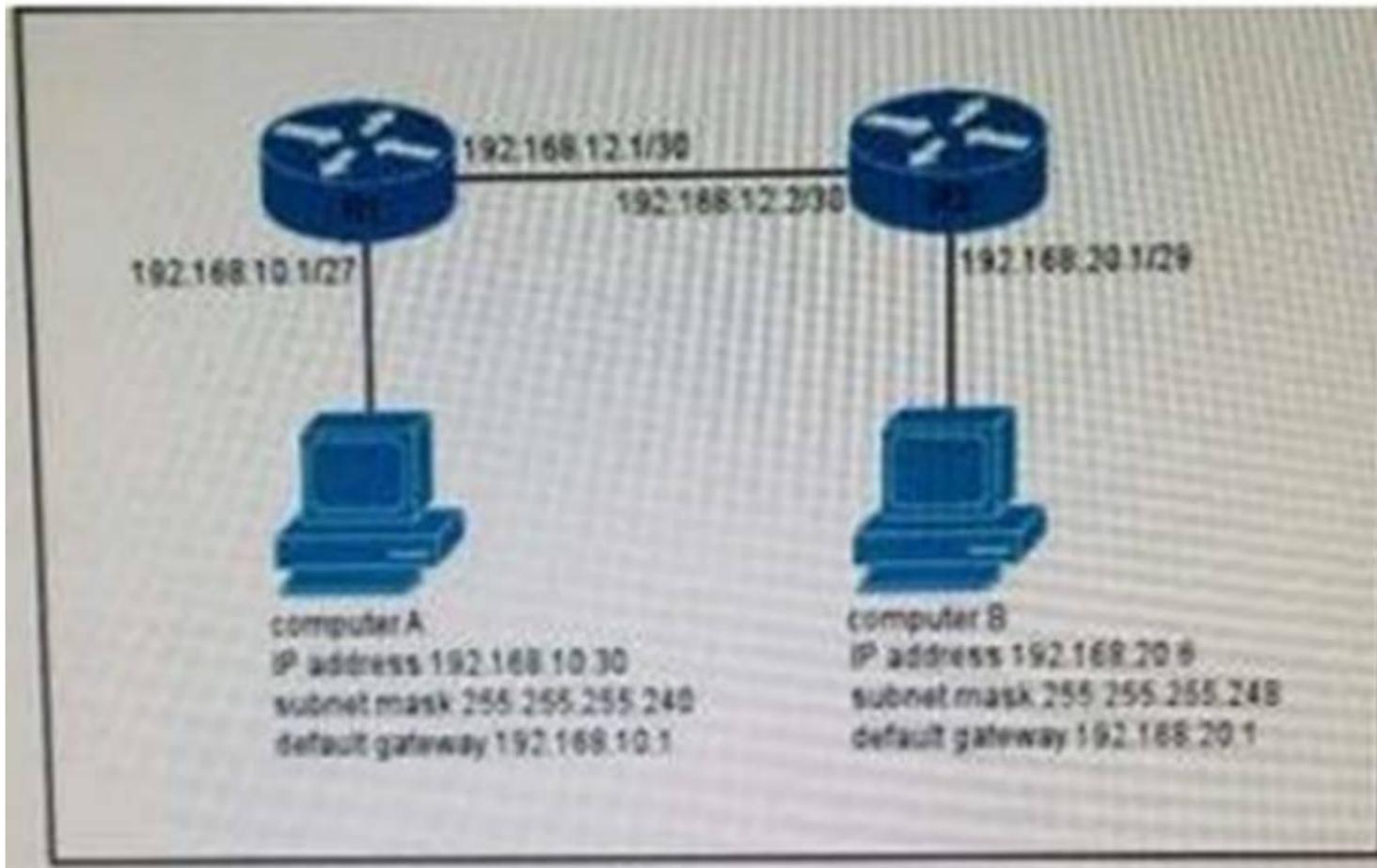
Which function does traffic shaping perform?

- 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 49**

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. 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 54**

Which header field is new in IPv6?

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

**Answer:** A

**NEW QUESTION 59**

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 64**

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 66**

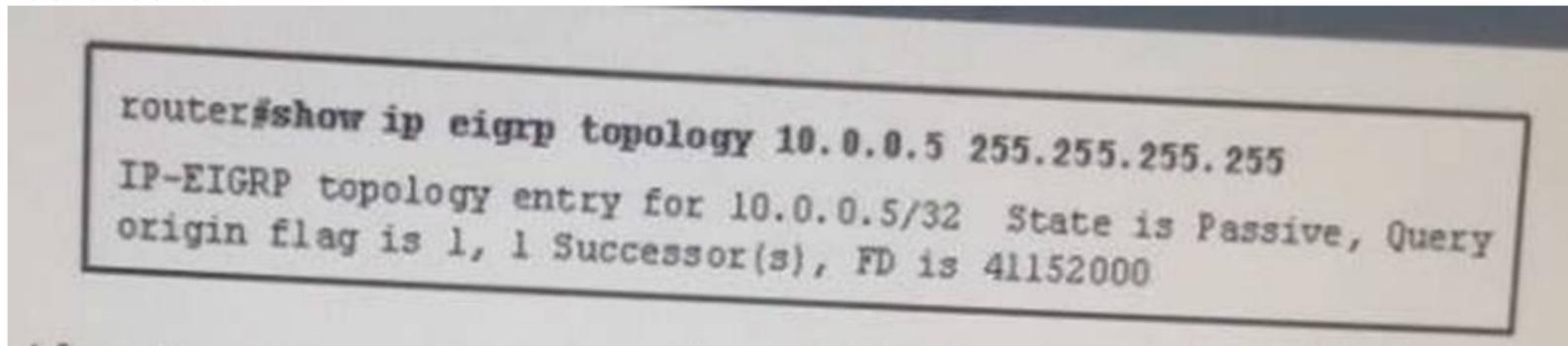
which command can you enter in a network switch configuration so that learned mac addresses are saved in configuration as they connect ?

- 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 71**

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 74**

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 77**

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 81**

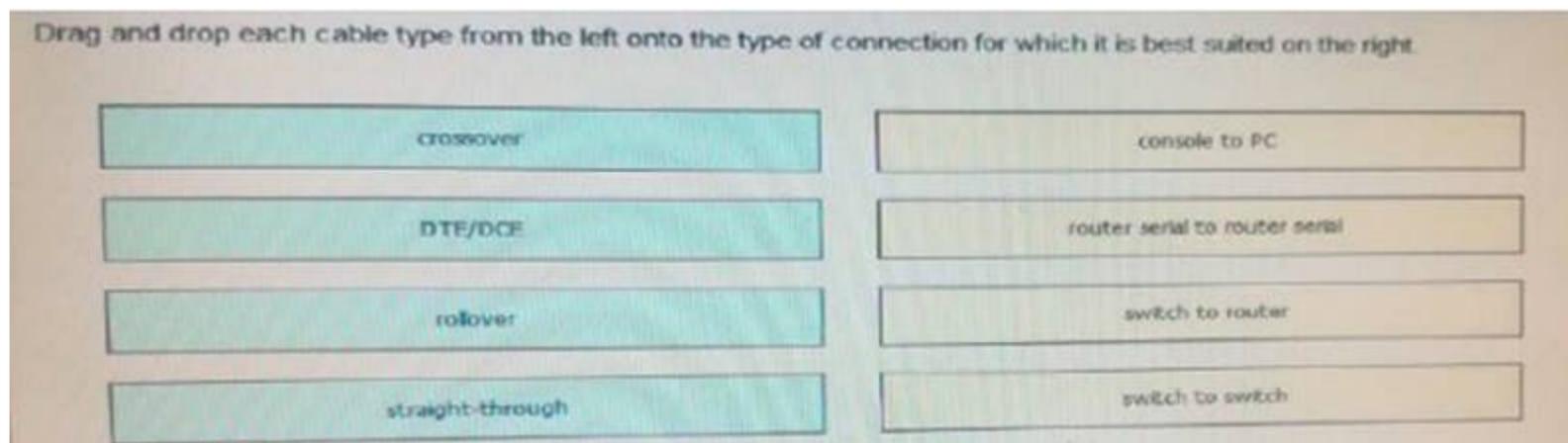
When you deploy multilink PPP on your network, where must you configure the group IP Address on each device?

- A. In the global config
- B. Under serial interface
- C. Under the routing protocol
- D. Under the multilink interface

Answer: D

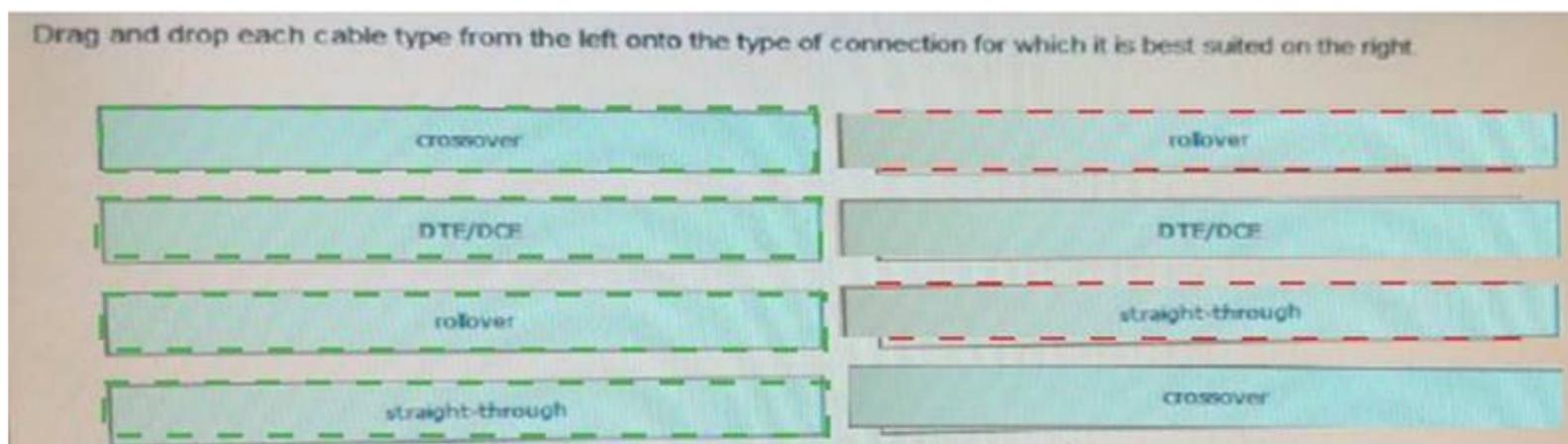
**NEW QUESTION 85**

Drag and drop each cable type from the left onto the type of connection for which it is best suited on the right .



**Answer:**

**Explanation:**



**NEW QUESTION 89**

Which address block identifies all link-local address

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

**Answer: C**

**NEW QUESTION 94**

How to trouble DNS issue ( choose two) ?

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

**Answer: BE**

**Explanation:**

Reference: [https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.cisco.com%2Fen%2FUS%2Fdocs%2Finternetworking%2Ftroubleshooting%2Fguide%2Ftr1907.html%23wp1021264&h=ATMT6hWMWKar6G3cbMd8vYoG64obKG4CluxXImCWtCLencP9vUG0hrC3C0azv18aRsmIsdrKko8ew\\_O6UkUwYCVqgYvxTz3TFquXNKyrnrAa1arE1V4HBFjg4\\_E2gJSawoz2\\_g](https://l.facebook.com/l.php?u=http%3A%2F%2Fwww.cisco.com%2Fen%2FUS%2Fdocs%2Finternetworking%2Ftroubleshooting%2Fguide%2Ftr1907.html%23wp1021264&h=ATMT6hWMWKar6G3cbMd8vYoG64obKG4CluxXImCWtCLencP9vUG0hrC3C0azv18aRsmIsdrKko8ew_O6UkUwYCVqgYvxTz3TFquXNKyrnrAa1arE1V4HBFjg4_E2gJSawoz2_g)  
Ping the destination by name perform a DNS lookup on the destination

**NEW QUESTION 99**

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 102**

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 104**

When a router is unable to find a known route in the routing table, how does it handle the packet?

- A. It discards the packet
- B. It sends the packet over the route with the best metric
- C. It sends the packet to the next hop address
- D. It sends the packet to the gateway of last resort

**Answer:** D

**NEW QUESTION 108**

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

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

**Answer:** D

**NEW QUESTION 112**

Which two options are benefits of dhcp snooping ?

- A. it prevents dhcp reservations
- B. it simplifies the process of adding DHCP Servers to the network
- C. it prevents the deployment of rogue DHCP Servers
- D. it prevents static reservations
- E. it Tracks the location of hosts in the network

**Answer:** CE

**NEW QUESTION 114**

Drag each IPv6 prefix on the left to its use on the right.

FF02::1	all EIGRPv6 routers
FF02::5	all link-local nodes on a segment
FF02::6	all OSPFv3 routers
FF02::A	all PIM routers
FF02::D	all site-local routers
FF05::2	OSPFv3 designated routers

**Answer:**

**Explanation:** FF02::1 = All link-local nodes on a segment  
 FF02::5 = all OSPFv3 routers  
 FF02::6 = OSPFv3 designated routers  
 FF02::A = all EIGRPv6 routers  
 FF02::D = All PIM routers  
 FF05::2 = all site local routers

**NEW QUESTION 116**

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

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

D. anycast

**Answer:** B

**NEW QUESTION 118**

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 123**

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 128**

Which three describe the reasons large OSPF networks use a hierarchical design? (Choose Three)

- A. to speed up convergence
- B. to reduce routing overhead
- C. to lower costs by replacing routers with distribution layer switches
- D. to decrease latency by increasing bandwidth
- E. to confine network instability to single areas of the network
- F. to reduce the complexity of router configuration

**Answer:** ABE

**NEW QUESTION 129**

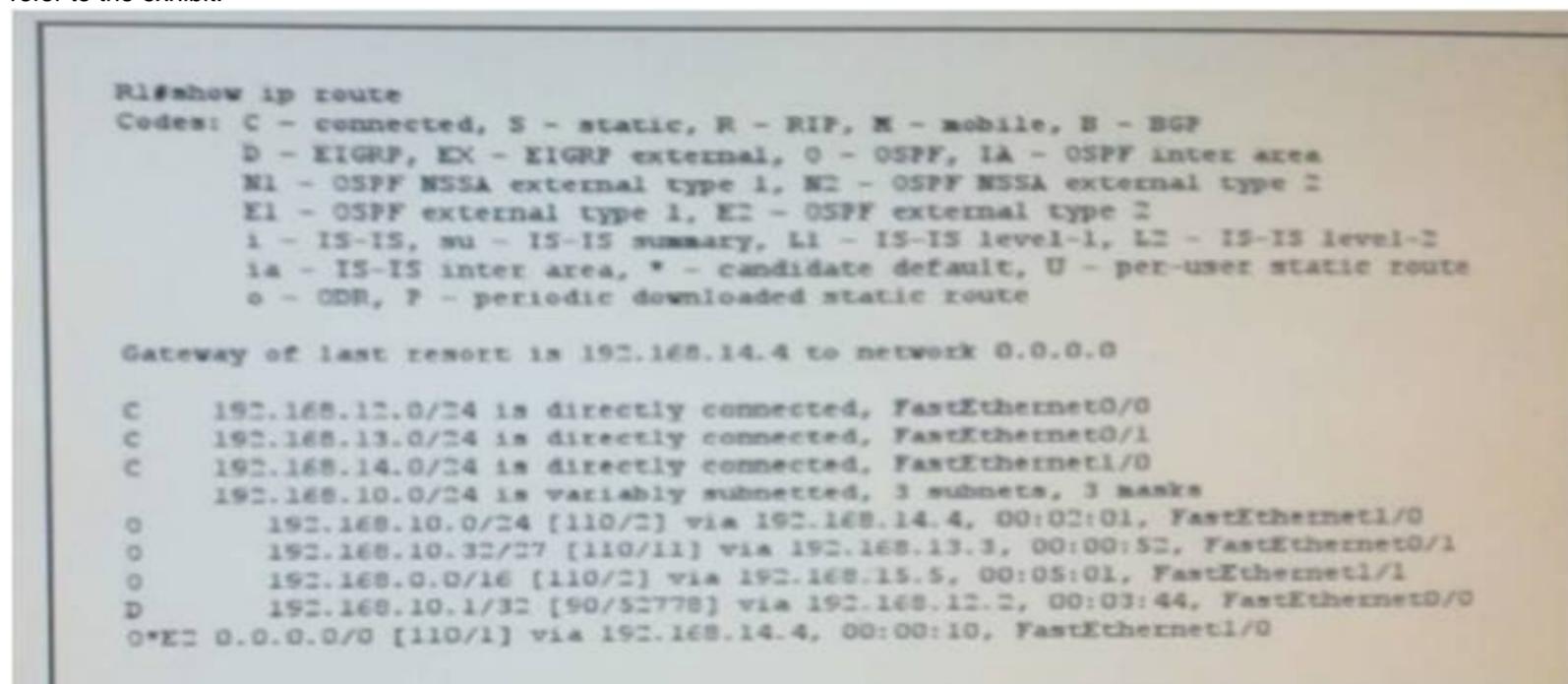
When is a routing table entry identified as directly connected?

- 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 133**

refer to the exhibit:



what is the metric for the router from R1 to 192.168.10.1 ?

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

**Answer:** D

**NEW QUESTION 136**

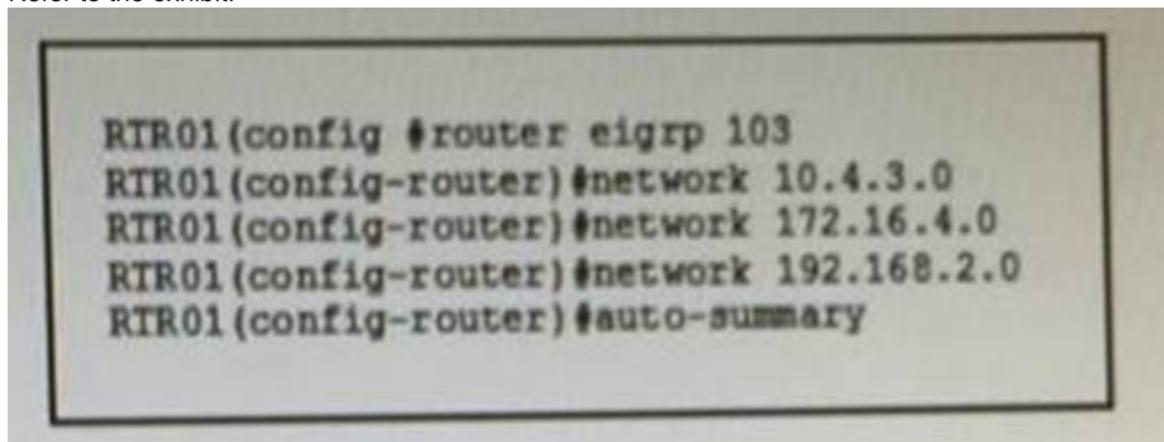
Which RPVST+ port state is excluded from all STP operations?

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

**Answer:** D

**NEW QUESTION 138**

Refer to the exhibit.



```
RTR01(config)#router eigrp 103
RTR01(config-router)#network 10.4.3.0
RTR01(config-router)#network 172.16.4.0
RTR01(config-router)#network 192.168.2.0
RTR01(config-router)#auto-summary
```

If RTR01 as configured as shown, which three addresses will be received by other routers that are running EIGRP on the network? (Choose three.)

- A. 172.16.4.0
- B. 10.0.0.0
- C. 172.16.0.0
- D. 192.168.2.0
- E. 192.168.0.0
- F. 10.4.3.0

**Answer:** ACD

**NEW QUESTION 139**

How many bits represent network id in a IPv6 address?

- A. 32
- B. 48
- C. 64
- D. 128

**Answer:** C

**Explanation:** <http://networkengineering.stackexchange.com/questions/30836/calculate-networking-bits-for-ipv6>  
64 bits for Network ID and 64 bits for Interface ID 64+64=128

**NEW QUESTION 144**

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 146**

How does a router handle an incoming packet whose destination network is missing from the routing table?

- A. it discards the packet.
- B. it broadcasts the packet to each network on the router.
- C. it routes the packet to the default route.

D. it broadcasts the packet to each interface on the router.

**Answer:** C

**NEW QUESTION 149**

Which statement about spanning-tree root-bridge election is true?

- A. Every root bridge must reside on the same 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 154**

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 159**

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 164**

Which configuration enables OSPF for network 192.168.1.0/24?

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

**Answer:** B

**NEW QUESTION 169**

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 saved to 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 flash memory to the router.

**Answer:** A

**NEW QUESTION 173**

Which Ethernet interface command is present when you boot a new Cisco router for the first time?

- A. speed 100
- B. shutdown
- C. ip address 192.168.1.1 255.255.255.0
- D. duplex half

**Answer:** B

**NEW QUESTION 178**

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 181**

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 186**

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 190**

After you configure a new router to connect to a host through the GigabitEthernet0/0 port of the router, you log in to the router and observe that the new link is down. Which action corrects the problem?

- A. Use a crossover cable between the host and R1.
- B. Use a straight through cable between the host and R1.
- C. Configure the host to use R1 as the default gateway.
- D. Use a rollover cable between the host and R1.

**Answer:** A

**NEW QUESTION 195**

Which command do you enter to enable an interface to support PPPoE on a client?

- A. Dev1(config)# bba-group pppoe bba1
- B. Dev1(config-if)# pppoe-client dial-pool-number1
- C. Dev1(config-if)# pppoe enable group bba1
- D. Dev1(config-if)# pppoe enable

**Answer:** D

**NEW QUESTION 196**

How many host addresses are available on the network 192.168.1.0 subnet 255.255.255.240 ?

- A. 6
- B. 8
- C. 14
- D. 16

**Answer:** C

**NEW QUESTION 199**

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 202**

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 206**

Drag and drop the extended traceout option from the left onto the correct description on the right.

maximum time to live	A value that, when reached, terminates the traceroute command.
minimum time to live	IP header options.
numeric display	Overrides the router's selection of an outbound interface.
source address	Sets the interval for which the probe will wait for a response.
timeout	Suppresses the display of known hops.
timestamp, verbose	Suppresses the display of hostnames.

**Answer:**

**Explanation:** <https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13730-ext-ping-trace.html>

**NEW QUESTION 210**

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 211**

Refer to the exhibit.

```
R1 (config) #ip nat pool cisco 10.1.1.0 10.1.1.50 255.255.255.0
```

Which feature is enabled by this configuration?

- A. static NAT translation
- B. a DHCP pool
- C. a dynamic NAT address pool
- D. PAT

**Answer: C**

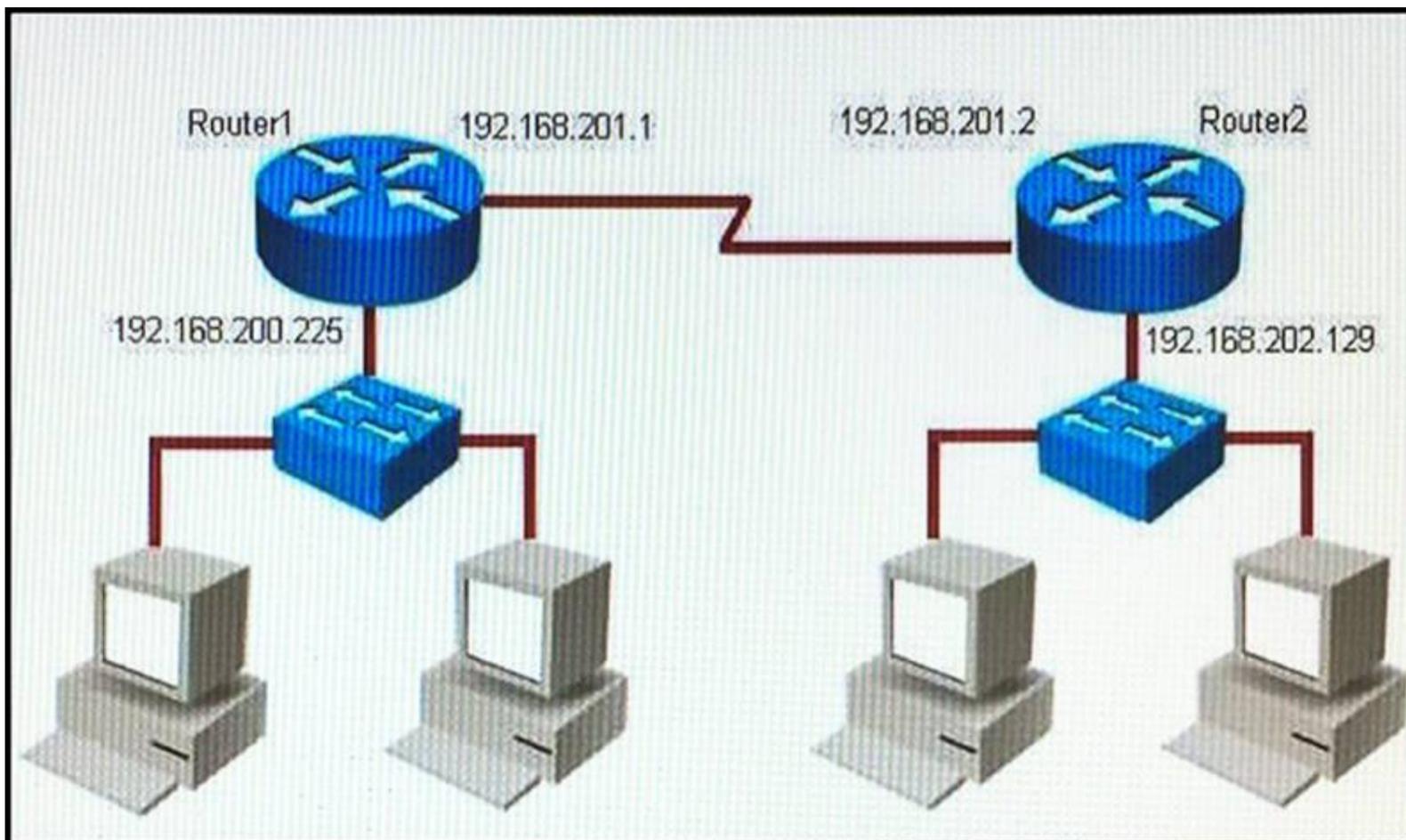
**NEW QUESTION 212**

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 213**



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 214**

After you configure a GRE tunnel between two networks, the tunnel comes up normally, but workstations on each side of the tunnel cannot communicate. Which reason for the problem is most likely true?

- A. The tunnel source address is incorrect.
- B. The tunnel destination address is incorrect.
- C. The route between the networks is undefined.
- D. The IP MTU is incorrect.
- E. The distance configuration is missing.

**Answer:** D

**NEW QUESTION 219**

Which command must you enter to enable OSPFv2 in an IPv4 network ?

- A. ip ospf hello-interval seconds
- B. router ospfv2 process-id
- C. router ospf value
- D. router ospf process-id

**Answer:** D

**NEW QUESTION 221**

Which two statements about switch stacking are true? (Choose two)

- A. The stack is powered by a single power cable
- B. The switches are connected in a daisy-chain fashion
- C. The first and last switch in the stack must be connected to one another
- D. The switches are connected by crossover cables
- E. The switches must be fully meshed

**Answer:** AB

**NEW QUESTION 225**

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 updated IOS images to Cisco switches

**Answer:** BD

**NEW QUESTION 228**

Which two statements describe the operation of the CSMA/CD access method? (Choose two.)

- A. After a collision, all stations run a random backoff algorithm
- B. When the backoff delay period has expired, all stations have equal priority to transmit data.
- C. In a CSMA/CD collision domain, multiple stations can successfully transmit data simultaneously.
- D. After a collision, the station that detected the collision has first priority to resend the lost data.
- E. The use of hubs to enlarge the size of collision domain is one way to improve the operation of the CSMA/CD access method.
- F. After a collision, all stations involved run an identical backoff algorithm and then synchronize with each other prior to transmitting data.
- G. In a CSMA/CD collision domain, stations must wait until media is not in use before transmitting.

**Answer:** AF

**NEW QUESTION 232**

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 234**

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

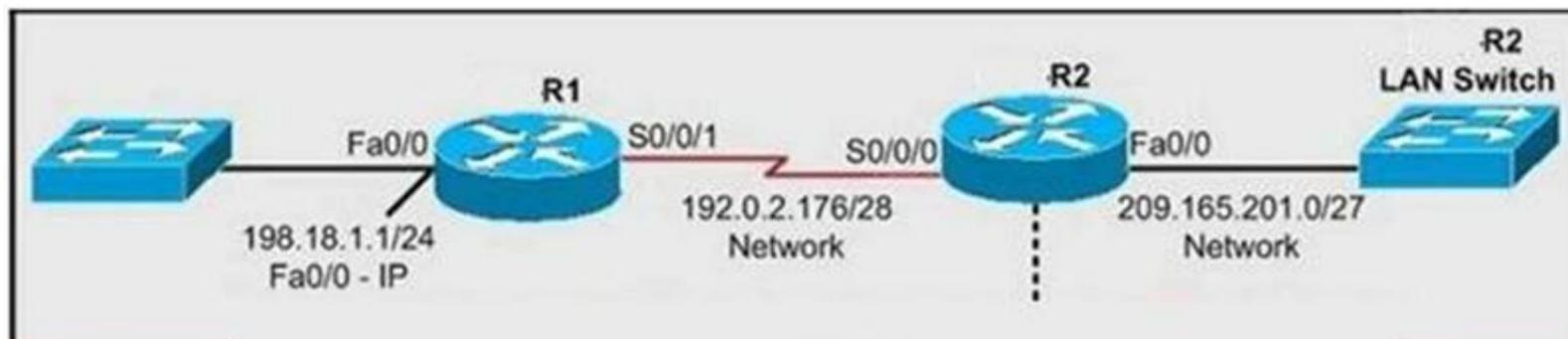
IPv4 addresses must be configured as follows:

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 237**

Which two IP SLA operations can you use to measure the end-to-end response time for all IP traffic between a Cisco router and an end device?

- A. ICMP path echo
- B. UDP echo
- C. ICMP path jitter
- D. UDP jitter
- E. TCP connect
- F. ICMP echo

**Answer:** AF

**NEW QUESTION 241**

Which three statements about IPv6 address fd14:920b:f83d:4079::/64 are true? (Choose three)

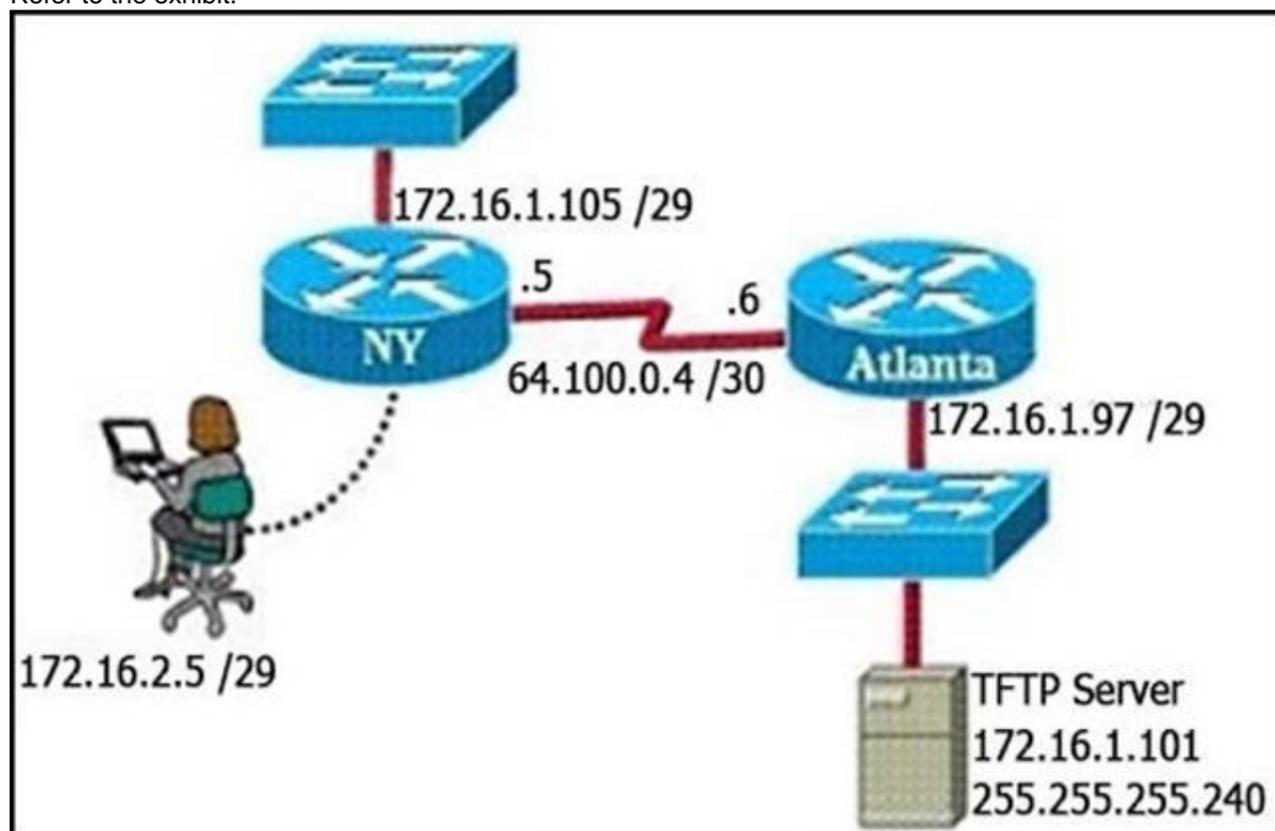
- A. The subnet ID is 14920bf83d
- B. The subnet ID is 4079
- C. The global ID is 14920bf83d
- D. The address is a link-local address
- E. The global ID is 4079
- F. The address is a unique local address

**Answer:** BCF

**Explanation:** [https://www.ripe.net/participate/member-support/lir-basics/ipv6\\_reference\\_card.pdf](https://www.ripe.net/participate/member-support/lir-basics/ipv6_reference_card.pdf)

**NEW QUESTION 243**

Refer to the exhibit.

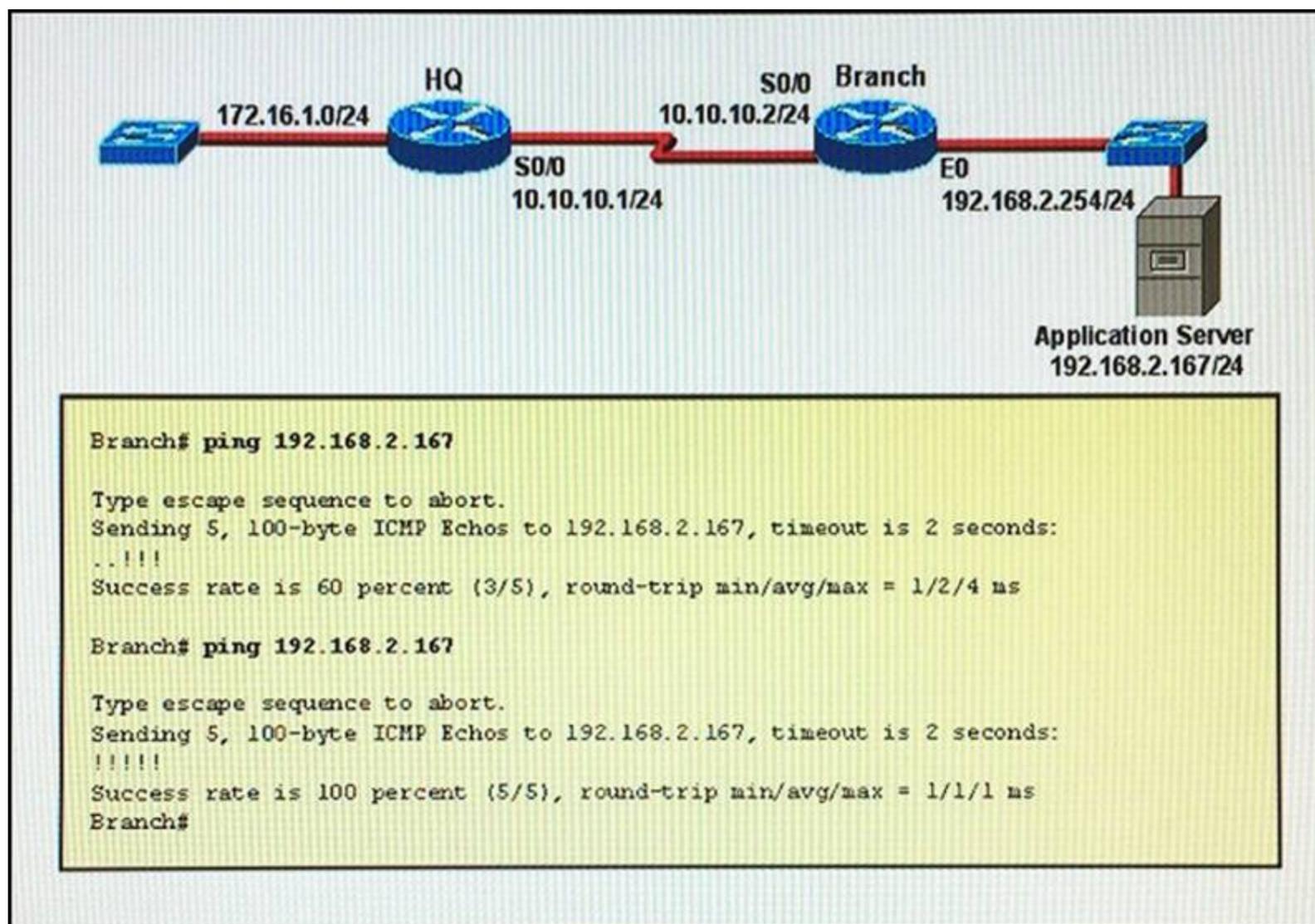


A TFTP server has recently been instated in the Atlanta office. The network administrator is located in the NY office and has made a console connection to the NY router. After establishing the connection they are unable to backup the configuration file and iOS of the NY router to the TFTP server. What is the cause of this problem?

- A. The TFTP server has an incorrect subnet mask.
- B. The TFTP server has an incorrect IP address.
- C. The network administrator computer has an incorrect IP address.
- D. The NY router has an incorrect subnet mask.

**Answer:** A

**NEW QUESTION 244**



Refer to the exhibit. The network administrator is testing connectivity from the branch router to the newly installed application server. Which reason is the most likely for the first ping having a success rate of only 60 percent?

- A. The branch router LAN interface should be upgraded to FastEthernet.
- B. The branch router had to resolve the application server MAC address.
- C. The network is likely to be congested, with the result that packets are being intermittently dropped.
- D. There is a short delay while NAT translates the server IP address.

**Answer: B**

**NEW QUESTION 246**

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&tbn=isch&sa=X&ved=0ahUKEwjg7ebXjtLVAh>

**NEW QUESTION 247**

CCNA.com has a small network that is using EIGRP as its IGP. All routers should be running an EIGRP AS number of 12. Router MGT is also running static routing to the ISP.

CCNA.com has recently added the ENG router. Currently, the ENG router does not have connectivity to the ISP router. All over interconnectivity and Internet access for the existing locations of the company are working properly.

The task is to identify the fault(s) and correct the router configuration(s) to provide full connectivity between the routers.

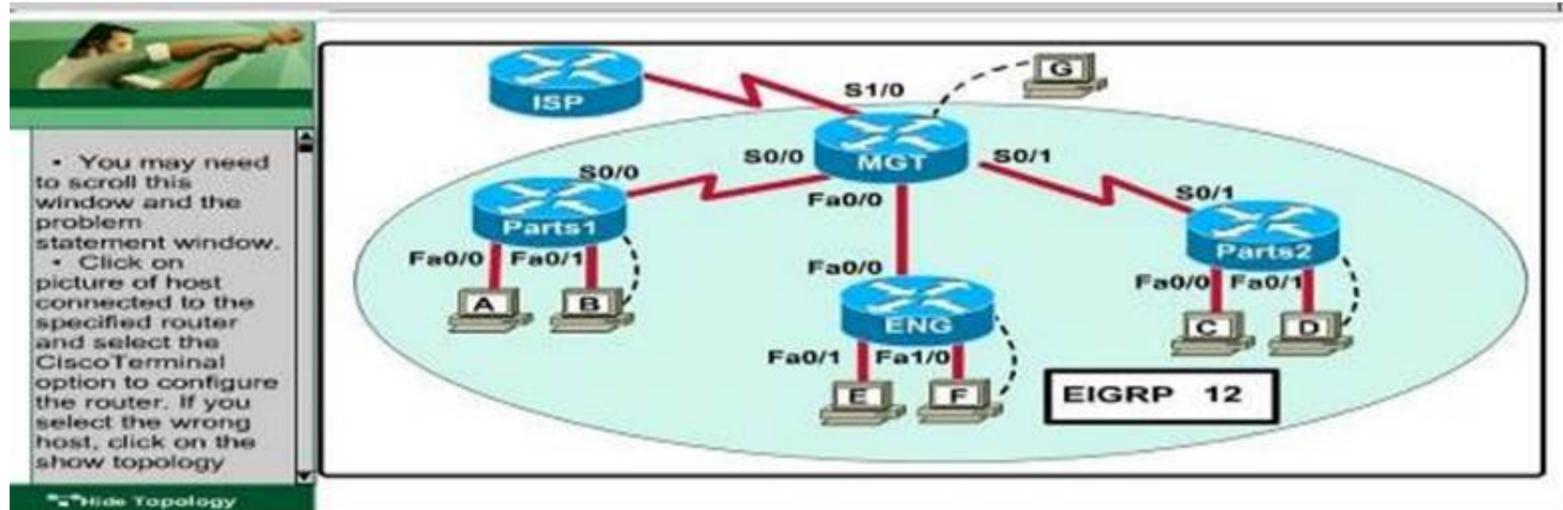
Access to the router CLI can be gained by clicking on the appropriate host.

All passwords on all routers are cisco.

IP addresses are listed in the chart below.

- MGT
  - Fa0/0 – 192.168.77.33
  - S1/0 – 198.0.18.6
  - S0/0 – 192.168.27.9
  - S0/1 – 192.168.50.21
- ENG
  - Fa0/0 – 192.168.77.34
  - Fa1/0 – 192.168.12.17
  - Fa0/1 – 192.168.12.1
- Parts1
  - Fa0/0 – 192.168.12.33
  - Fa0/1 – 192.168.12.49
  - S0/0 – 192.168.27.10
- Parts2

Fa0/0 – 192.168.12.65  
Fa0/1 – 192.168.12.81  
S0/1 – 192.168.50.22



**Answer:**

**Explanation:** On the MGT Router: Config t  
Router eigrp 12  
Network 192.168.77.0

**NEW QUESTION 250**

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

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

**Answer:** D

**NEW QUESTION 254**

Which three statements accurately describe CDP? (Choose three.)

- A. CDP can discover Cisco devices that are not directly connected.
- B. CDP is a network layer protocol.
- C. CDP can discover directly connected neighboring Cisco devices.
- D. CDP is a datalink layer protocol.
- E. CDP is a Cisco proprietary protocol.
- F. CDP is an IEEE standard protocol.

**Answer:** CDE

**NEW QUESTION 258**

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 262**

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

- A. It can transmit data at a rate higher than the path capacity
- B. It uses a three-way handshake to ensure that traffic is transmitted properly
- C. It guarantees packet delivery
- D. it includes protection against duplicate packets
- E. it can be used for multicast and broadcast traffic

**Answer:** AE

**NEW QUESTION 263**

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

**NEW QUESTION 268**

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 273**

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

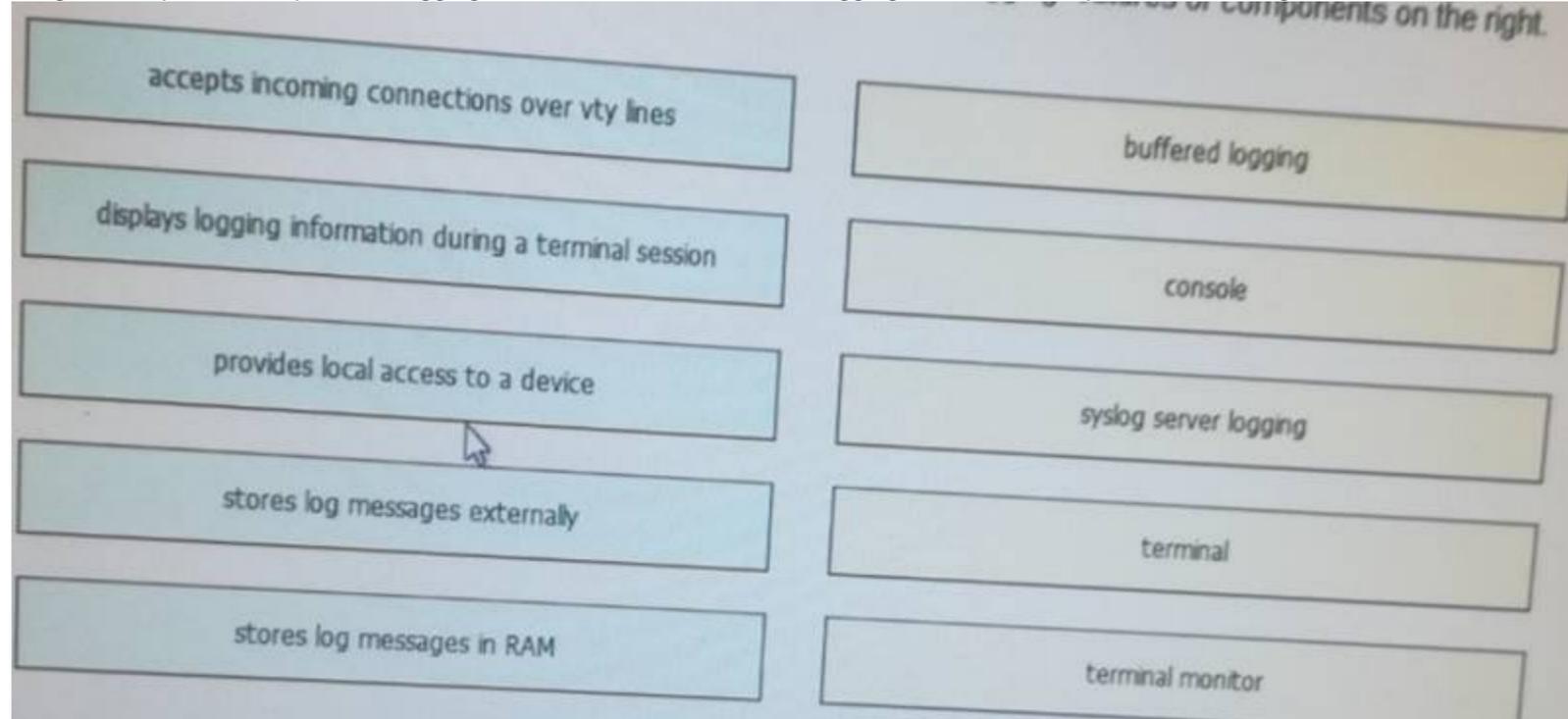
**Explanation:** show snmp group

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

**NEW QUESTION 274**

Drag and drop the descriptions of logging from the left onto the correct logging features or components on the right.



**Answer:**

**Explanation:** Accespt incoming cnc over vty lines-----terminal Display logging inf during a terminal session-----terminal monitor Provides loval access to a device-----console Stores log msg externally -----syslog server logging Stores log msg in RAM-----buffered logging

**NEW QUESTION 279**

How does a Layer 2 switch differ from a hub?

- A. A switch tracks MAC addresses of directly-connected devices.
- B. A switch always induces latency into the frame transfer time.
- C. A switch operates at a lower, more efficient layer of the OSI model.
- D. A switchdecreases the number of collision domains.

Answer: A

**NEW QUESTION 280**

Which information is used to install the best route to a destination in IP routing table?

- A. the tunnel ID
- B. the prefix length
- C. the interface number
- D. the autonomous system

Answer: B

**NEW QUESTION 283**

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 284**

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 288**

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

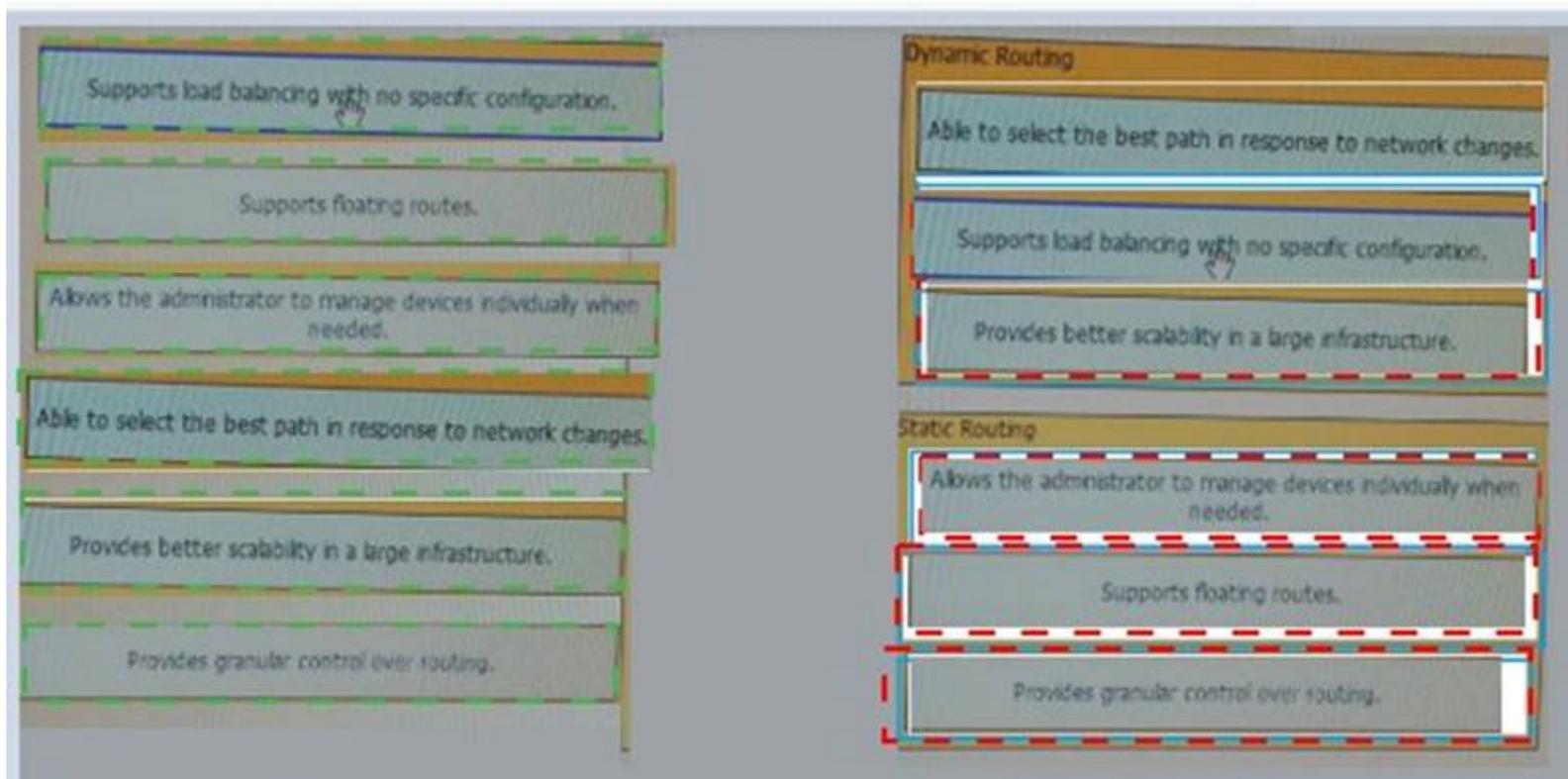
**NEW QUESTION 293**

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

The image shows a drag-and-drop interface. On the left, there are six text boxes with the following advantages: "Supports load balancing with no specific configuration.", "Supports floating routes.", "Allows the administrator to manage devices individually when needed.", "Able to select the best path in response to network changes.", "Provides better scalability in a large infrastructure.", and "Provides granular control over routing.". On the right, there are two columns of empty boxes. The top column is labeled "Dynamic Routing" and has three empty boxes. The bottom column is labeled "Static Routing" and has three empty boxes.

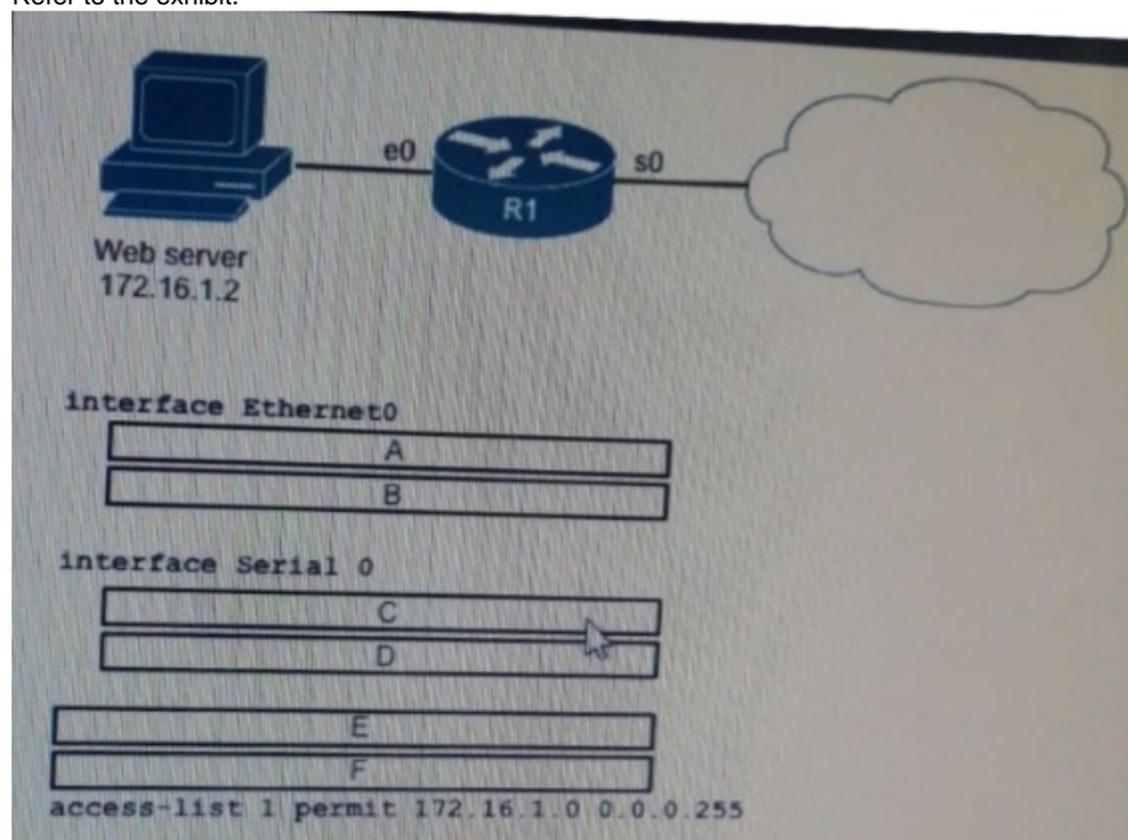
Answer:

Explanation:

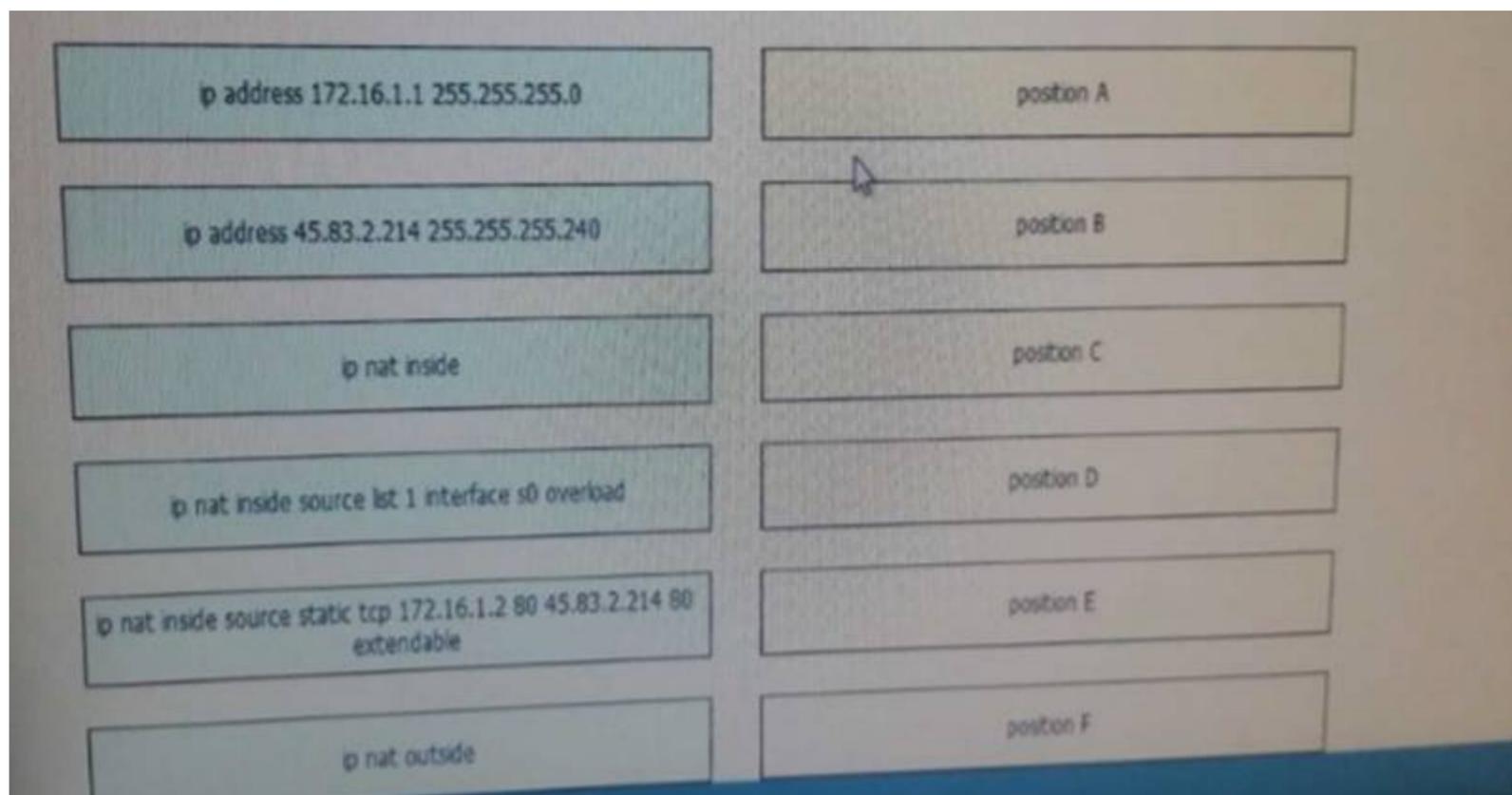


**NEW QUESTION 294**

Refer to the exhibit.

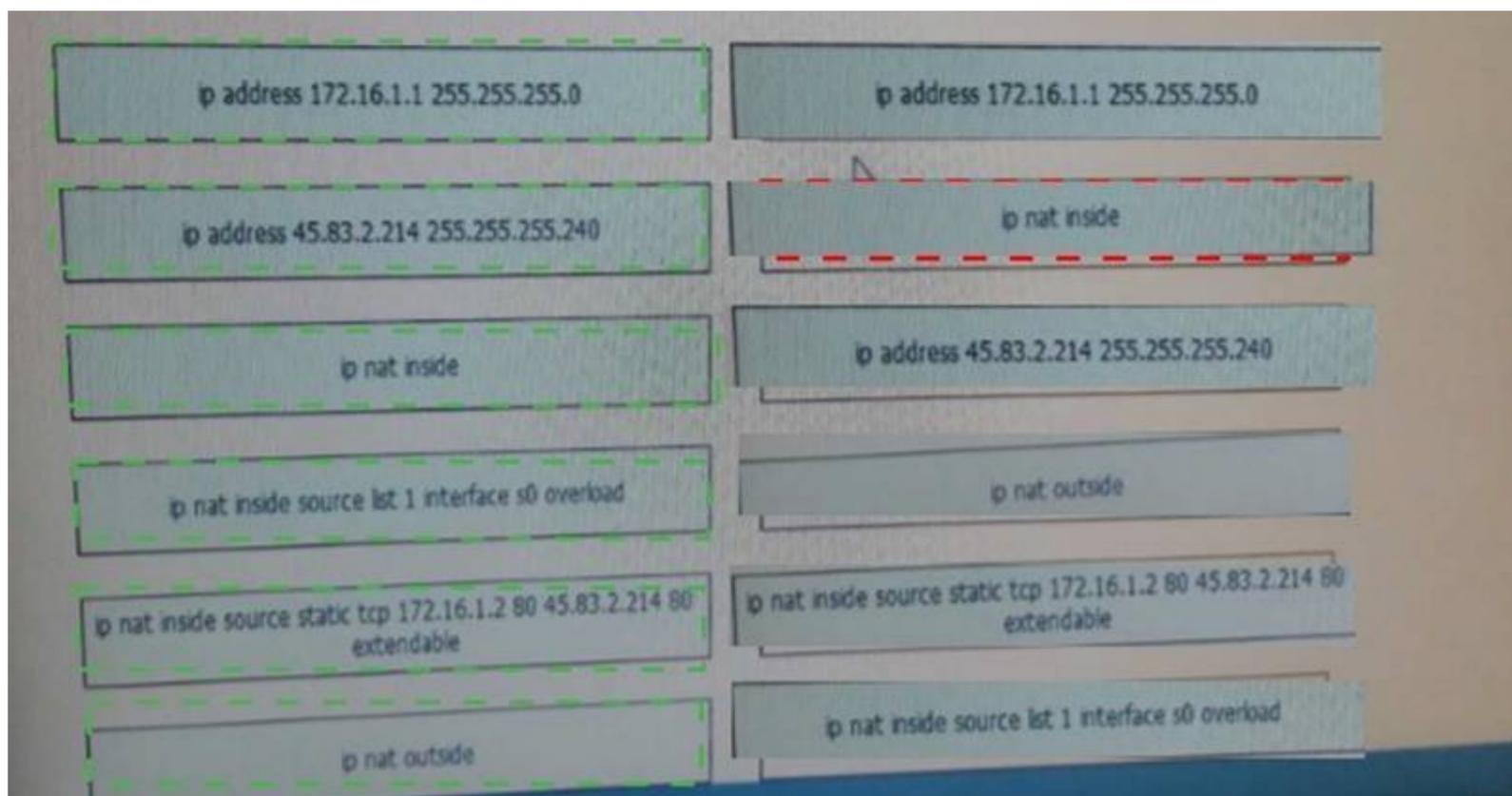


You are configuring the router to provide Static NAT for the web server. Drag and drop the configuration commands from left onto the letters that correspond to its position in the configuration on the right.



**Answer:**

**Explanation:**



**NEW QUESTION 298**

On which OSI layer does a VLAN operate?

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 4

**Answer:** B

**NEW QUESTION 300**

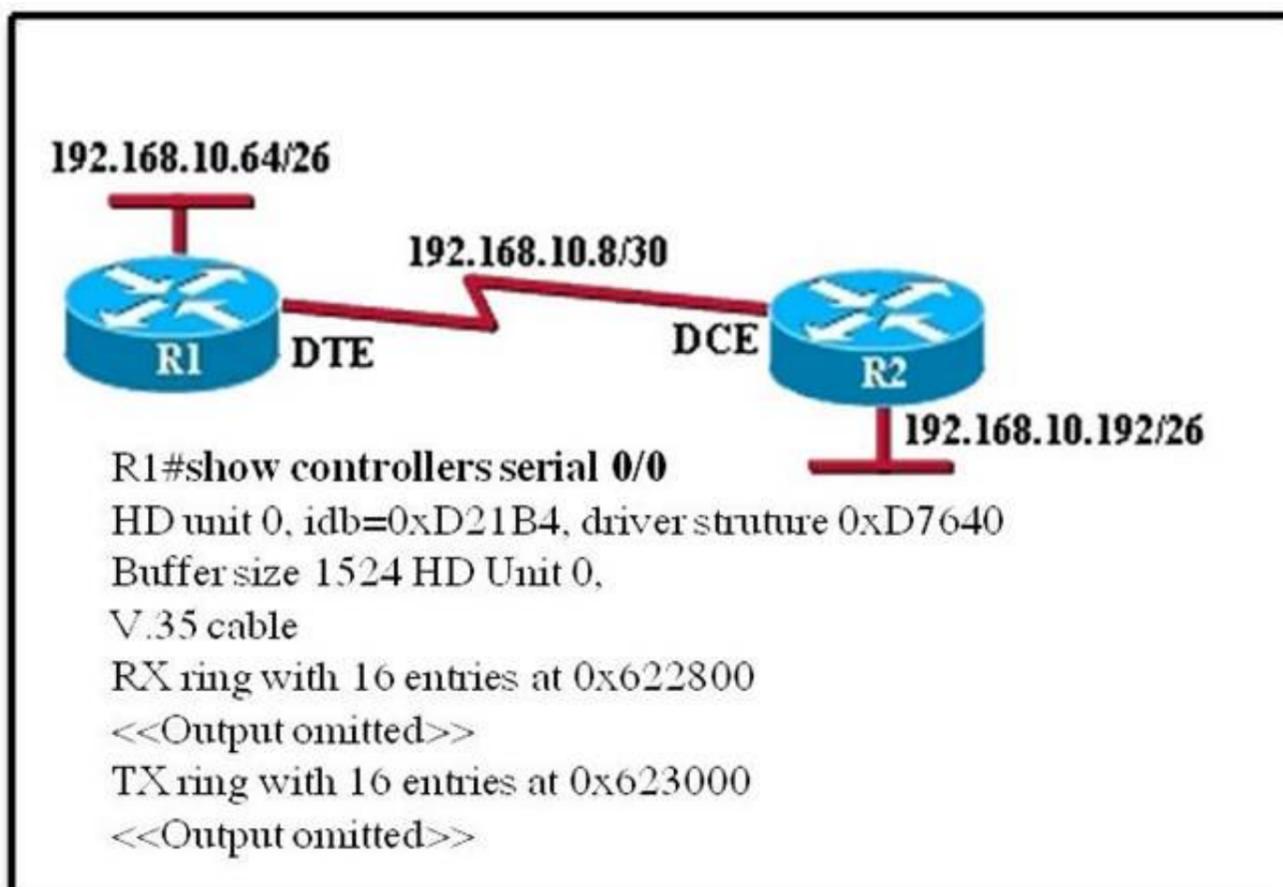
Which three features are represented by the letter A in AAA authentication? (Choose three.)

- A. authorization
- B. accountability
- C. authority
- D. authentication
- E. accounting
- F. accessibility

**Answer:** ADE

**NEW QUESTION 302**

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 307**

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

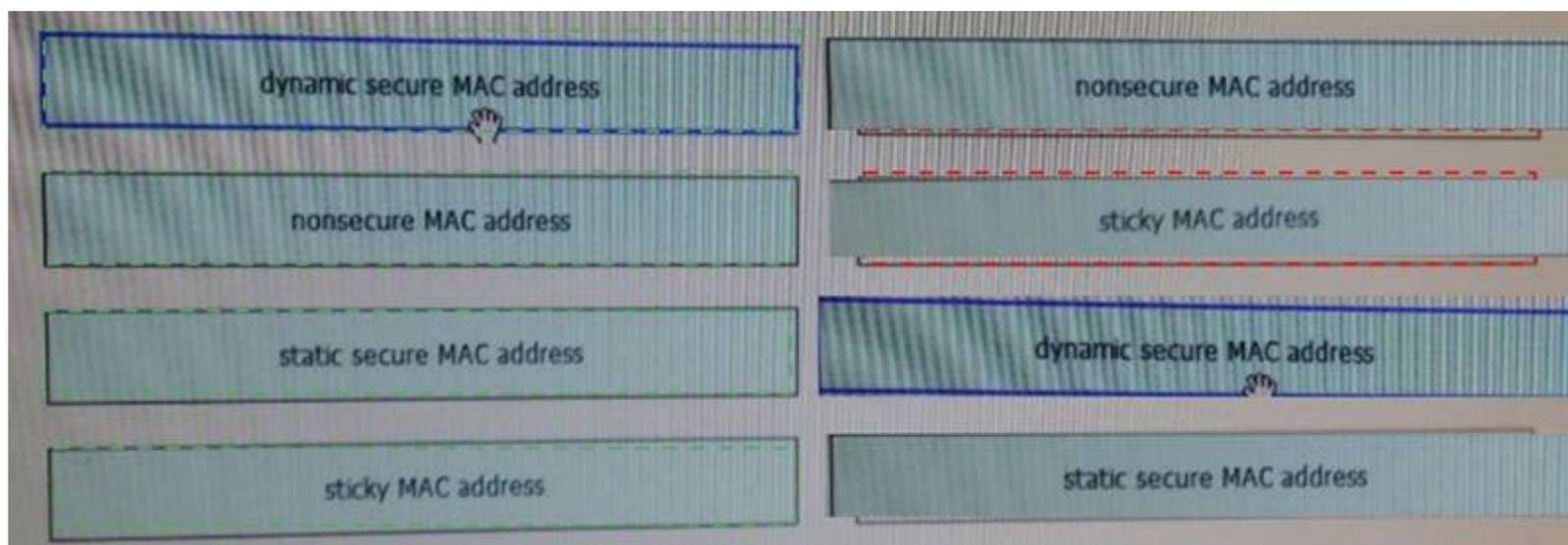
**NEW QUESTION 310**

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 314**

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 318**

Which two actions must you take to configure a PAgP EthernetChannel between two switches, S1 and S2? (Choose two.)

- A. Configure thechannel-group 1 mode autocommand on S1.
- B. Configure thechannel-group1 mode desirablecommand on S2.
- C. Configure thechannel-group 1 mode activecommand on S2.
- D. Configure thechannel-group 1 mode oncommand on S2.
- E. Configure thechannel-group 1 mode activecommand on S1.

**Answer:** AB

**NEW QUESTION 320**

Drag and drop the steps to configure a basic GRE tunnel from the left into the correct sequence on the right (Not all options are used)

Create a logical tunnel interface	
Specify the carrier protocol	
Install a point to point link between the tunnel source and destination	
Specify the cryptographic protocol	
Specify the source and destination address for the tunnel endpoints	
Specify the passenger Protocol.	

**Answer:**

**Explanation:** Create a logical tunnel interface Specify the carrier protocol Specify the passenger protocol Specify the source and destination address for the tunnel endpoints.

**NEW QUESTION 321**

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 323**

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 324**

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 327**

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 331**

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 336**

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 338**

An administrator has connected devices to a switch and, for security reasons, wants the dynamically learned MAC addresses from the address table added to the running configuration. Which action must be taken to accomplish this?

- A. Use theno switchport port-securitycommand to allow MAC addresses to be added to the configuration.
- B. Enable port security and use the keywordsticky.
- C. Set the switchport mode to trunk and save the running configuration.
- D. Use theswitchport protectedcommand to have the MAC addresses added to the configuration.

**Answer:** B

**NEW QUESTION 339**

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 344**

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 345**

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 346**

Which statement about NTP is true?

- A. The default authentication key number is 1.
- B. The default source address of an NTP message is the interface connected to the next-hop for the server peer address.
- C. The default stratum number is 5.
- D. Each device is enabled as a server by default and propagates NTP messages to all peers on its default LAN.

**Answer:** B

**NEW QUESTION 347**

A corporation wants to add security to its network. The requirements are:

Host C should be able to use a web browser (HTTP) to access the Finance Web Server.

Other types of access from host C to the Finance Web Server should be blocked.

All access from hosts in the Core or local LAN to the Finance Web Server should be blocked.

All hosts in the Core and on local LAN should be able to access the Public Web Server.

You have been tasked to create and apply a numbered access list to a single outbound interface. This access list can contain no more than three statements that meet these requirements.

Access to the router CLI can be gained by clicking on the appropriate host.

All passwords have been temporarily set to "cisco".

The Core connection uses an IP address of 198.18.209.65.

The computers in the Hosts LAN have been assigned addresses of 192.168.78.1 – 192.168.78.254.

host A 192.168.78.1

host B 192.168.78.2

host C 192.168.78.3

host D 192.168.78.4

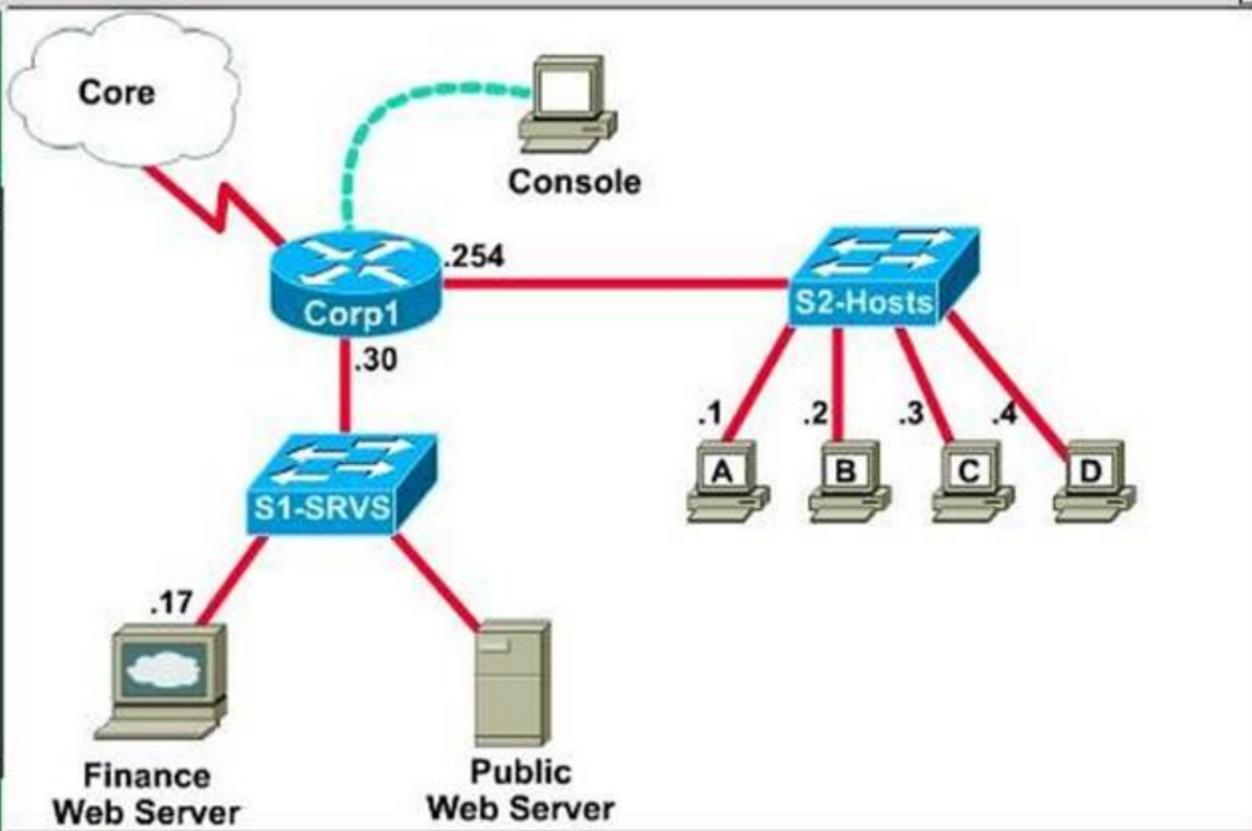
The Finance Web Server has been assigned an address of 172.22.146.17.

The Public Web Server in the Server LAN has been assigned an address of 172.22.146.18.

Version 1.0 00:00:13

- You may need to scroll this window and the problem statement window.
- Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology

Hide Topology



Version 1.0 00:02:36

- You may need to scroll this window and the problem statement window.
- Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology

Show Topology

CiscoTerminal

```
--
```

Version 1.0 00:03:33

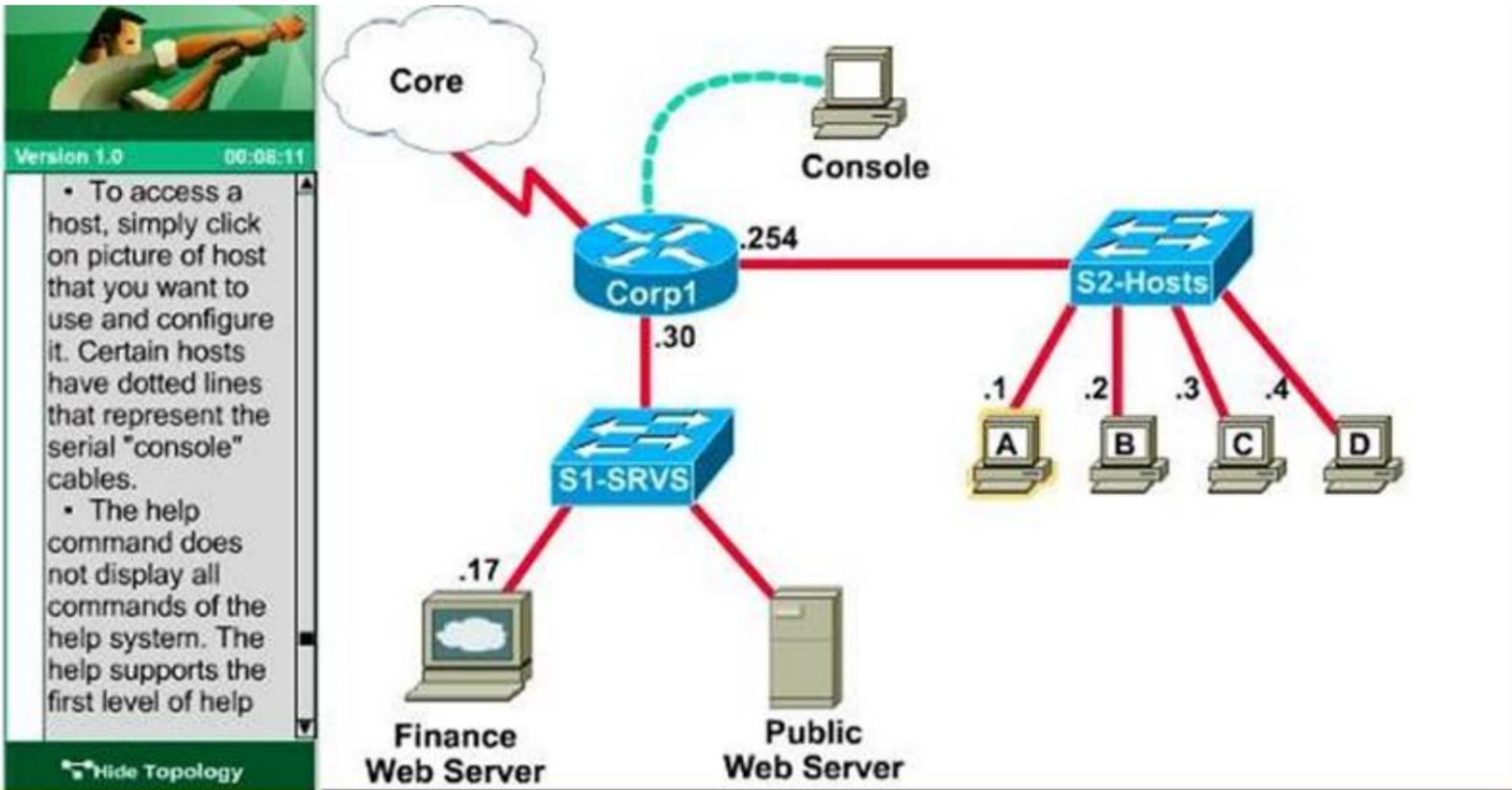
- You may need to scroll this window and the problem statement window.
- Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology

Show Topology

CiscoTerminal

```
Corp1 con0 is now available

Press RETURN to get started.
```



Version 1.0 00:04:3

- You may need to scroll this window and the problem statement window.
- Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology

Hide Topology

File Edit View Favorites Tools Help

Click on the "X" button on the top right corner to close the browser window and view the Topology.

Address  Go

Done Internet

Version 1.0 00:04:3

- You may need to scroll this window and the problem statement window.
- Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology

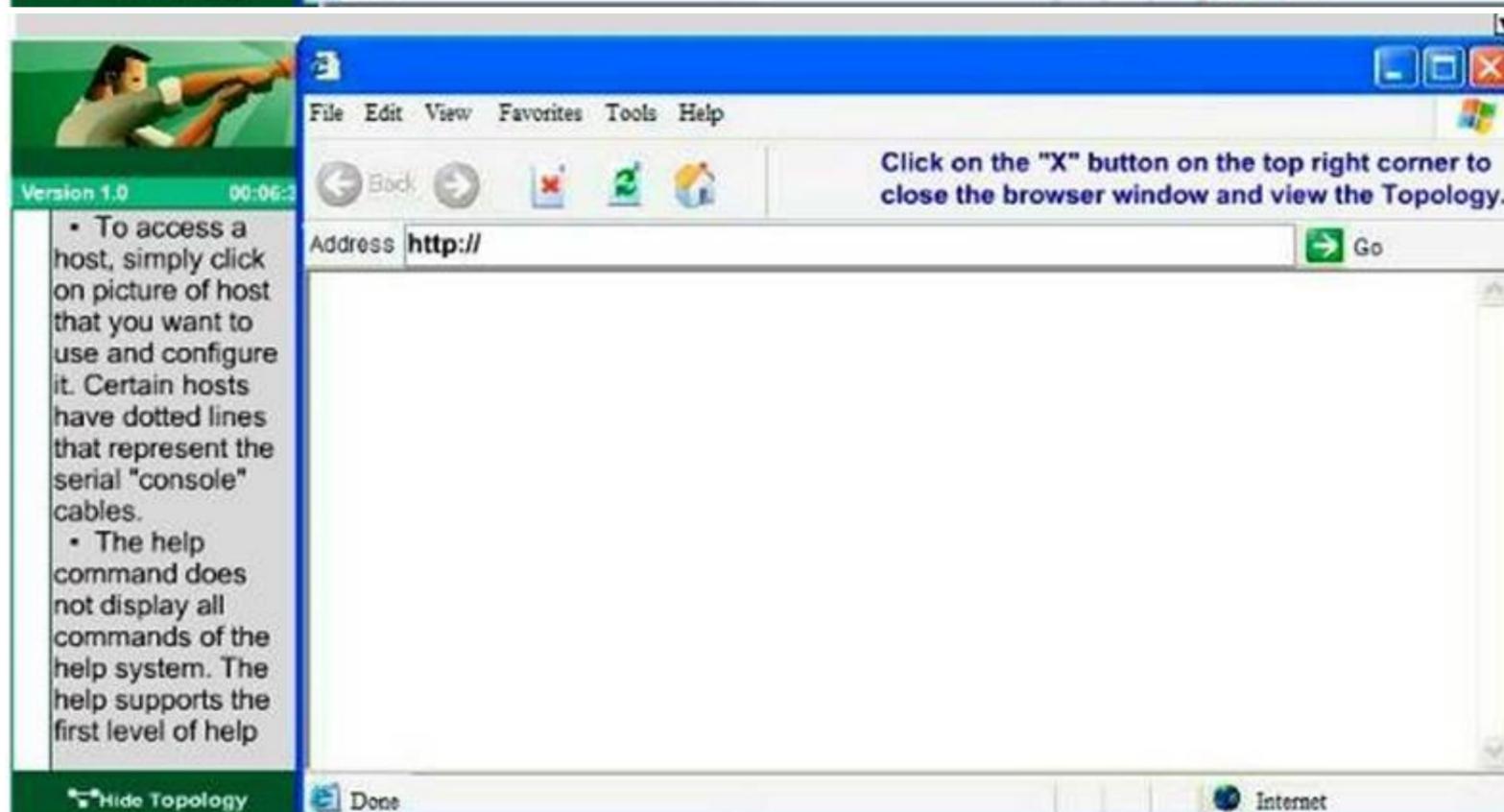
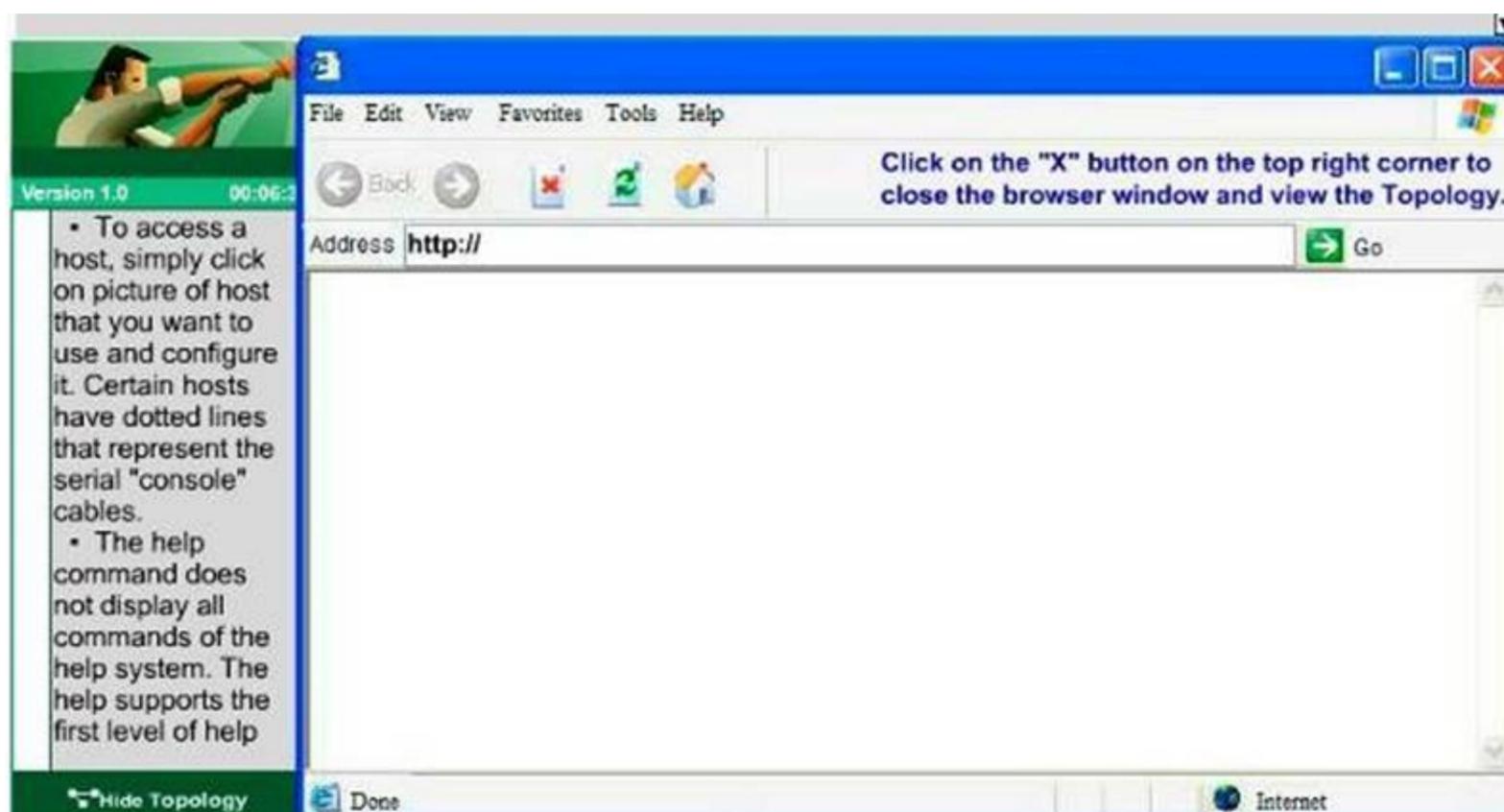
Hide Topology

File Edit View Favorites Tools Help

Click on the "X" button on the top right corner to close the browser window and view the Topology.

Address  Go

Done Internet



**Answer:**

**Explanation:** We should create an access-list and apply it to the interface that is connected to the Server LAN because it can filter out traffic from both S2 and Core networks. To see which interface this is, use the "show ip int brief" command:

```
Corpl#show ip int brief
Interface                IP-Address      OK? Method Status Protocol
FastEthernet0/0          192.168.125.254 YES manual  up      up
FastEthernet0/1          172.22.109.30  YES manual  up      up
Serial0/0                 192.168.94.65  YES manual  up      up
Corpl#
```

From this, we know that the servers are located on the fa0/1 interface, so we will place our numbered access list here in the outbound direction.

Corpl#configure terminal

Our access-list needs to allow host C – 192.168.125.3 to the Finance Web Server 172.22.109.17 via HTTP (port 80), so our first line is this:

Corpl(config)#access-list 100 permit tcp host 192.168.125.3 host 172.22.109.17 eq 80

Then, our next two instructions are these:

Other types of access from host C to the Finance Web Server should be blocked.

All access from hosts in the Core or local LAN to the Finance Web Server should be blocked.

This can be accomplished with one command (which we need to do as our ACL needs to be no more than 3 lines long), blocking all other access to the finance web server:

Corpl(config)#access-list 100 deny ip any host 172.22.109.17

Our last instruction is to allow all hosts in the Core and on the local LAN access to the Public Web Server (172.22.109.18)

Corpl(config)#access-list 100 permit ip host 172.22.109.18 any Finally, apply this access-list to Fa0/1 interface (outbound direction) Corpl(config)#interface fa0/1

Corpl(config-if)#ip access-group 100 out

Notice: We have to apply the access-list to Fa0/1 interface (not Fa0/0 interface) so that the access-list can filter traffic coming from both the LAN and the Core networks.

To verify, just click on host C to open its web browser. In the address box type http://172.22.109.17

to check  
if you are allowed to access Finance Web Server or not. If your configuration is correct then you can access it.  
Click on other hosts (A, B and D) and check to make sure you can't access Finance Web Server from these hosts. Then, repeat to make sure they can reach the public server at 172.22.109.18. Finally, save the configuration  
Corp1(config-if)#end  
Corp1#copy running-config startup-config

**NEW QUESTION 350**

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 352**

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

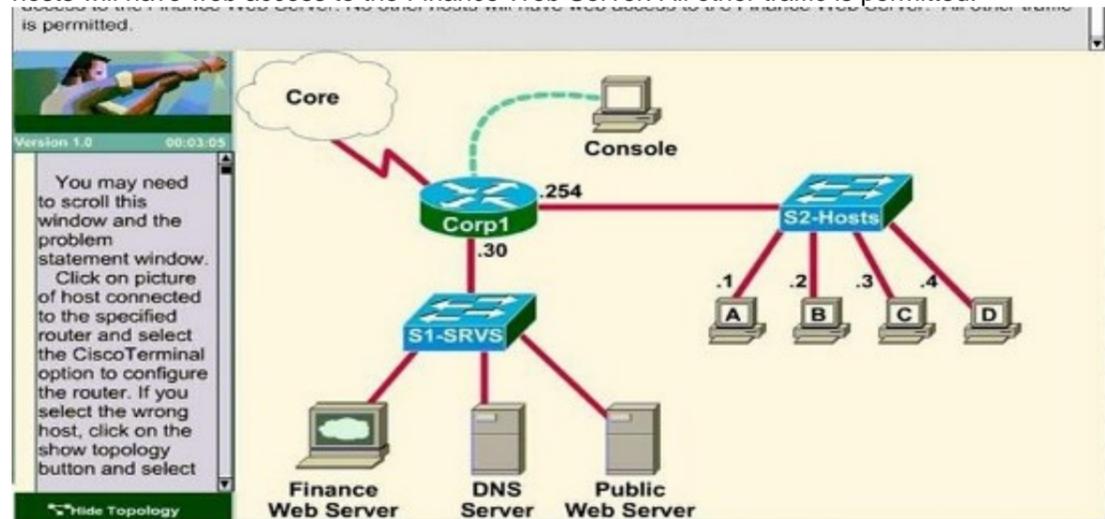
- A. Recursive Static routes
- B. Directly connected static routes
- C. Fully specified static routes
- D. Dynamically specified static routes
- E. injected static routes
- F. Redistributed static routes

**Answer:** ABC

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

**NEW QUESTION 357**

A network associate is adding security to the configuration of the Corp1 router. The user on host C should be able to use a web browser to access financial information from the Finance Web Server. No other hosts from the LAN nor the Core should be able to use a web browser to access this server. Since there are multiple resources for the corporation at this location including other resources on the Finance Web Server, all other traffic should be allowed. The task is to create and apply an access-list with no more than three statements that will allow ONLY host C web access to the Finance Web Server. No other hosts will have web access to the Finance Web Server. All other traffic is permitted.



Access to the router CLI can be gained by clicking on the appropriate host. All passwords have been temporarily set to "cisco".  
The Core connection uses an IP address of 198.18.247.65  
The computers in the Hosts LAN have been assigned addresses of 192.168.240.1 - 192.168.240.254  
host A 192.168.240.1  
host B 192.168.240.2  
host C 192.168.240.3

**Answer:**

**Explanation:** Corp1#conf t  
Corp1(config)# access-list 128 permit tcp host 192.168.240.1 host 172.22.141.26 eq www Corp1(config)# access-list 128 deny tcp any host 172.22.141.26 eq www  
Corp1(config)# access-list 128 permit ip any any Corp1(config)#int fa0/1  
Corp1(config-if)#ip access-group 128 out Corp1(config-if)#end  
Corp1#copy run startup-config

**NEW QUESTION 361**

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

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

**Answer:** A

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

**NEW QUESTION 364**

Which two characteristics are representatives of a link-state routing protocol? (Choose two.)

- A. provides common view of entire topology
- B. exchanges routing tables for its own routes with neighbors
- C. calculates feasible path
- D. utilizes event-triggered updates
- E. utilizes frequent periodic updates

**Answer:** AD

**NEW QUESTION 365**

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 369**

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"> <li>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 <b>show vlan internal usage</b> command.</li> <li>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.</li> <li>You must enable the extended system ID to use extended range VLANs. See the "Enabling the Extended System ID" section.</li> </ul>	No

**NEW QUESTION 373**

```
***ip dhcp pool my pool*****
***network 192.168.10.0/27***
***domain name cisco.com***
***name server some ip***
```

Dhcp client in the back can not communicate with hosts in the outside of their subnet ?

- A. need to activate dhcp pool
- B. need to configure default gateway
- C. other option
- D. other option

**Answer: B**

**NEW QUESTION 374**

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.
- C. When a router have single interface on multiple physical links

**Answer: A**

**NEW QUESTION 377**

A switch has 48 ports and 4 VLANs. How many collision and broadcast domains exist on the switch (collision, broadcast)?

- A. 4,48
- B. 48,4
- C. 48,1
- D. 4,1
- E. 1,48

**Answer: B**

**NEW QUESTION 381**

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

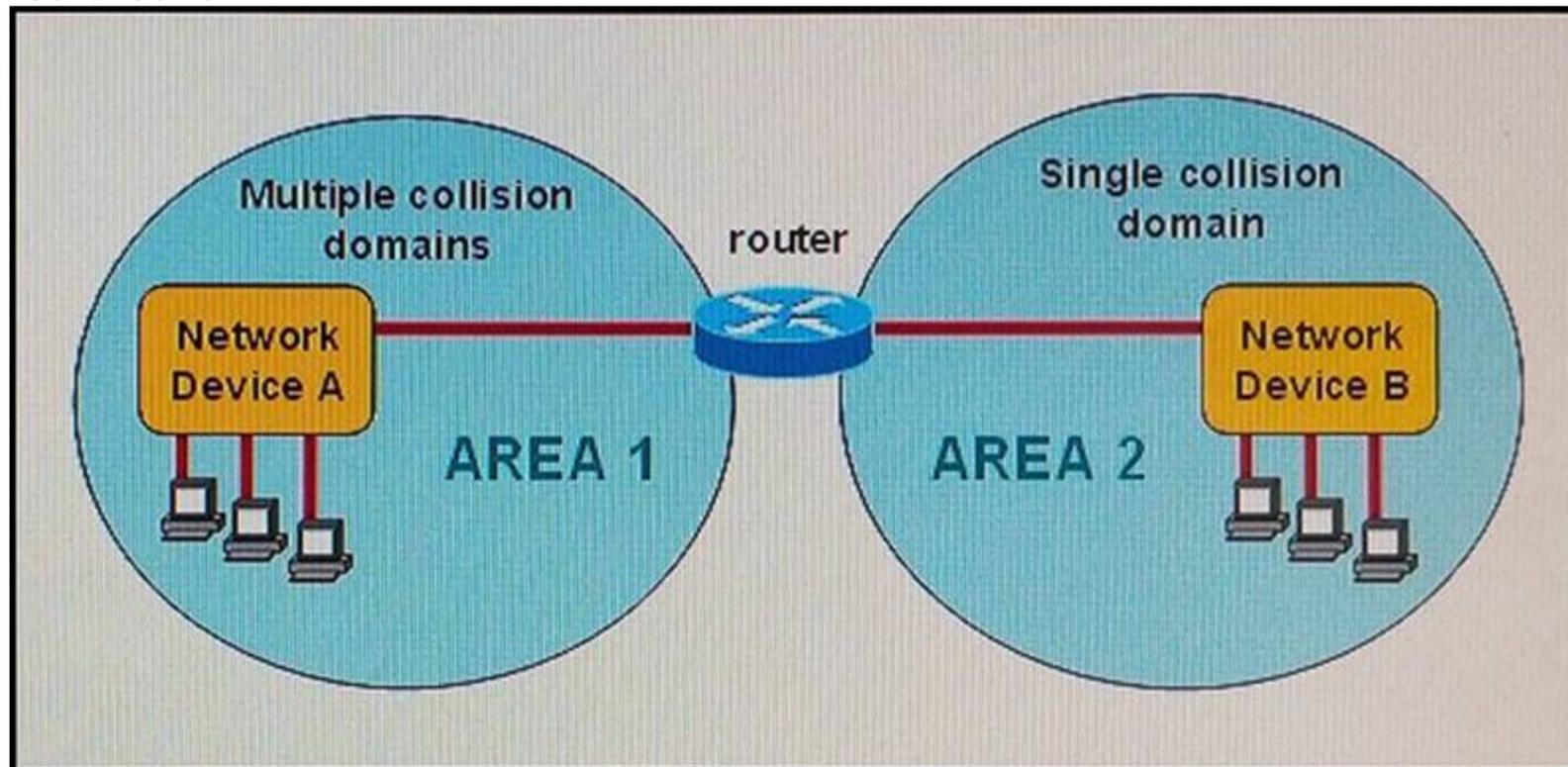
- A. forwarding

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

**Answer:** BDE

**NEW QUESTION 383**

Refer to the exhibit.



A network has been planned as shown. Which three statements accurately describe the areas and devices in the network plan? (Choose three.)

- A. Area 2 contains a Layer 2 device.
- B. Network Device B is a hub.
- C. Network Device A is a hub.
- D. Network Device A is a switch.
- E. Area 1 contains a Layer 2 device.
- F. Network Device B is a switch.

**Answer:** BDE

**NEW QUESTION 386**

Which feature automatically disables Cisco Express Forwarding when it is enabled?

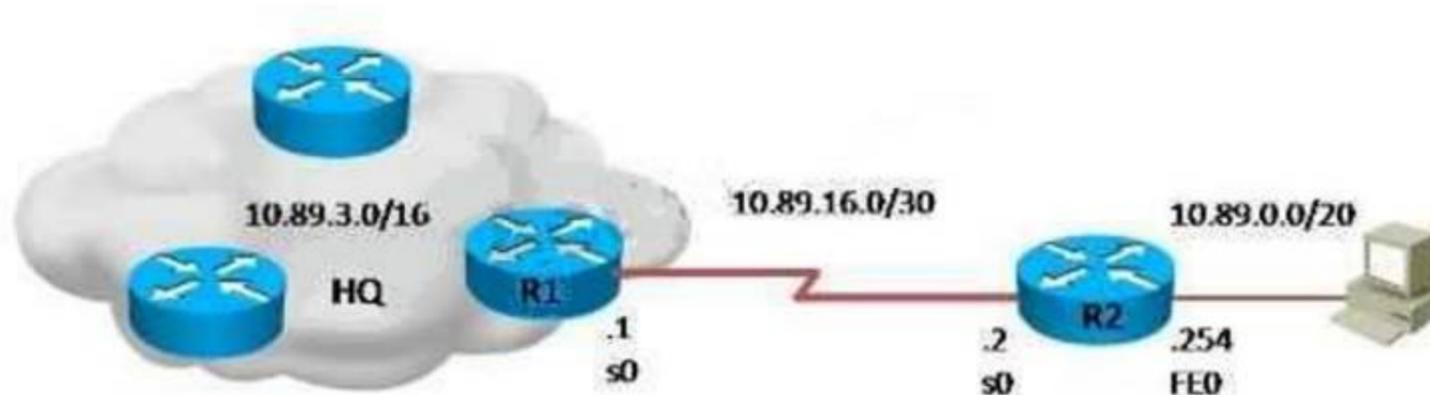
- A. multicast
- B. IP redirects
- C. RIB
- D. ACL logging

**Answer:** D

**Explanation:** If you enable Cisco Express Forwarding and then create an access list that uses the logkeyword, the packets that match the access list are not Cisco Express Forwarding switched. They are process switched. Logging disables Cisco Express Forwarding.

**NEW QUESTION 388**

Refer to the exhibit.



Which command is simplest to configure routing between the regional office network 10.89.0.0/20 and the corporate network?

- A. router2(config)#ip route 0.0.0.0 0.0.0.0 10.89.16.1

- B. router2(config)#ip route 10.89.3.0 255.255.0.0 10.89.16.2
- C. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.1
- D. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.2

**Answer:** A

#### NEW QUESTION 392

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 396

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 401

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.

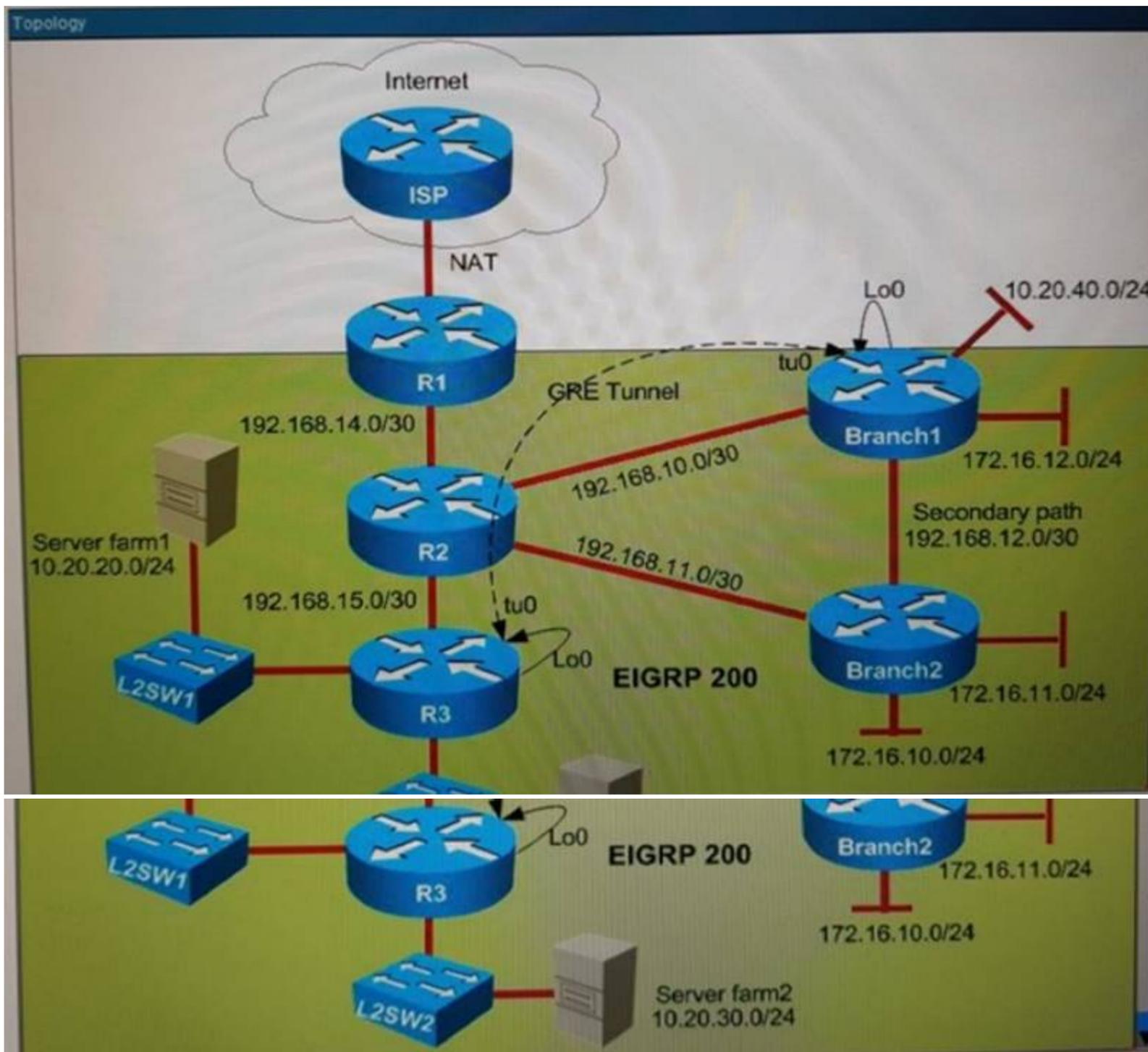
- Router R1 connects the main office to the Internet and routers R2 and R3 are internal routers
- Routers Branch 1 and Branch2 connect to router R2 in the main office.
- Users from the Branch1 LAN network 10.20.40.0/24 are expected to perform testing of the application that is hosted on the servers in 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 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

```

You are verifying the EIGRP configurations in the topology. Which statement is true?

- A. Branch2 LAN network 172.16.11.0/24 is not advertised into the EIGRP network.
- B. Branch2 LAN network 172.16.10.0/24 is not advertised into the EIGRP network.
- C. R3 server farm2 network 10.20.30.0/24 is not advertised into the EIGRP network.
- D. Branch1 LAN network 172.16.12.0/24 is not advertised into the EIGRP network.

**Answer:** B

**NEW QUESTION 402**

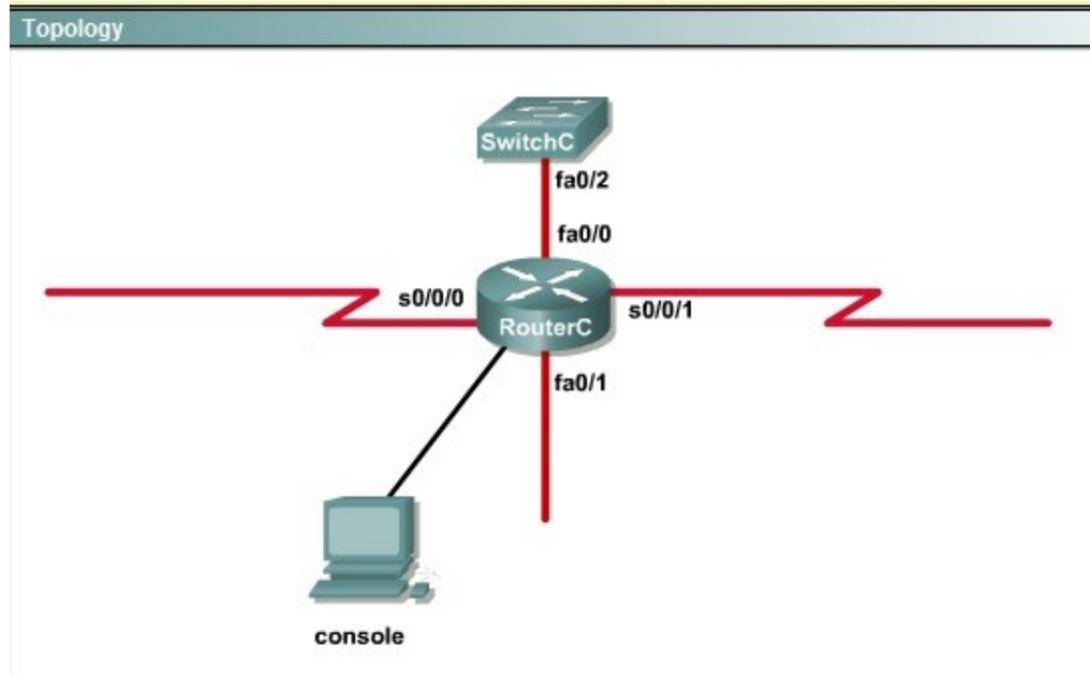
An administrator is trying to ping and telnet from SwitchC to RouterC with the results shown below.

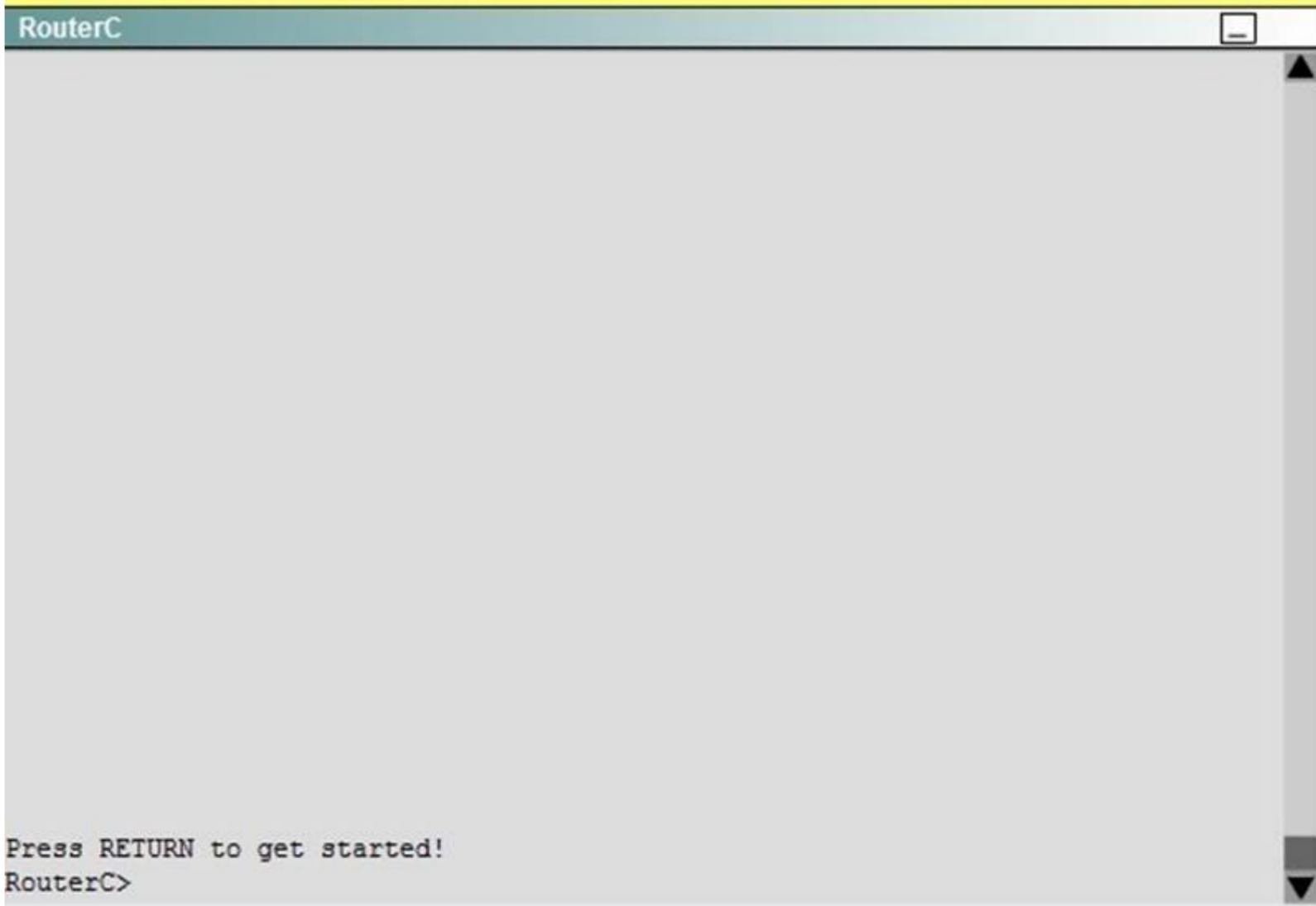
```

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.





<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>
```

What would be the effect of issuing the command ip access-group 115 in on the s0/0/1 interface?

- A. No host could connect to RouterC through s0/0/1.
- B. Telnet and ping would work but routing updates would fail.
- C. FTP, FTP-DATA, echo, and www would work but telnet would fail.
- D. Only traffic from the 10.4.4.0 network would pass through the interface.

**Answer:** D

**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 406**

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 409**

What value is primarily used to determine which port becomes the root port on each nonroot switch in a spanning-tree topology?

- A. path cost
- B. lowest port MAC address
- C. VTP revision number
- D. highest port priority number
- E. port priority number and MAC address

**Answer:** A

**Explanation:** The path cost to the root bridge is the most important value to determine which port will become the root port on each non-root switch. In particular, the port with lowest cost to the root bridge will become root port (on non-root switch).

**NEW QUESTION 413**

Which three circumstances can cause a GRE tunnel to be in an up/down state for site id:28254851? (Choose three.)

- A. The tunnel interface IP address is misconfigured.
- B. The tunnel source interface is down.
- C. A valid route to the destination address is missing from the routing table.
- D. The tunnel address is routed through the tunnel itself.
- E. The ISP is blocking the traffic.
- F. An ACL is blocking the outbound traffic.

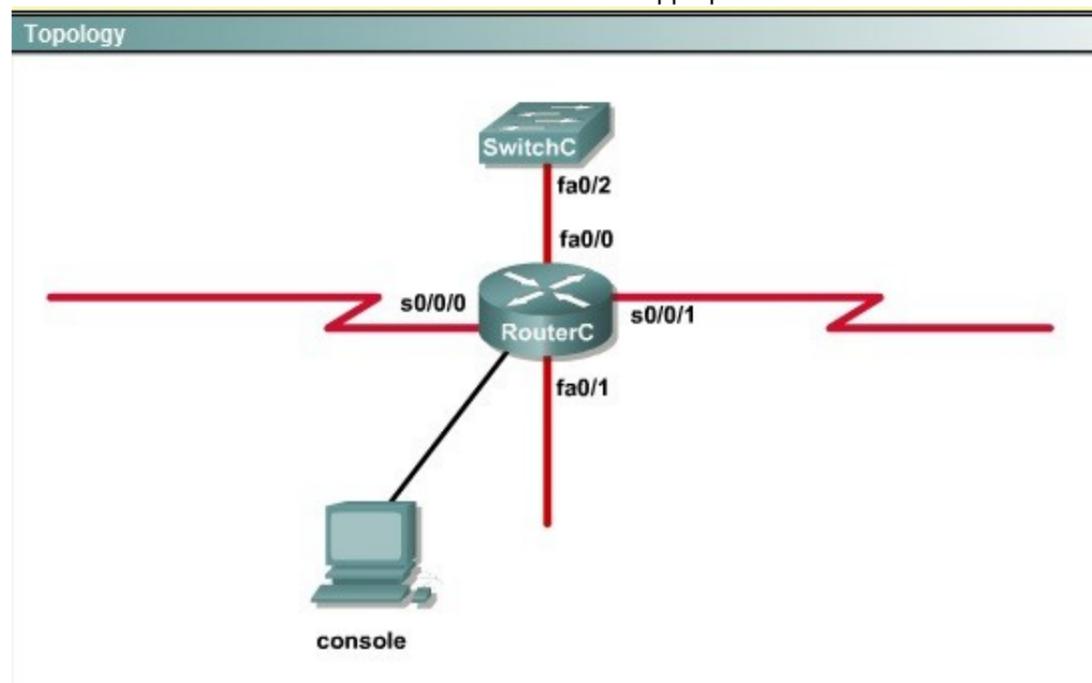
**Answer:** BCD

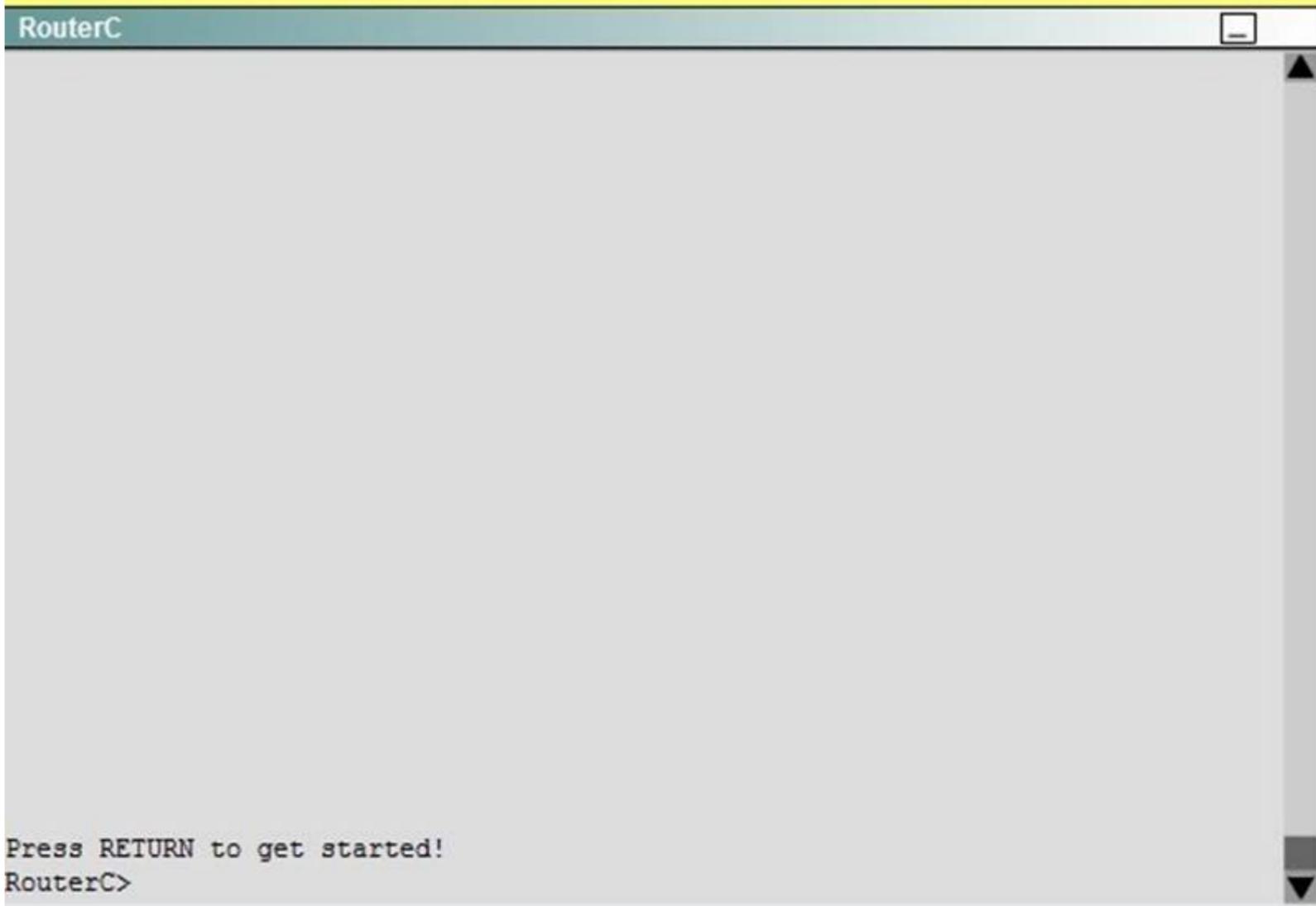
**NEW QUESTION 416**

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.





<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 Serail0/0/1
 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>

```

What would be the effect of issuing the command ip access-group 115 in on the s0/0/1 interface?

- A. No host could connect to RouterC through s0/0/1.
- B. Telnet and ping would work but routing updates would fail.
- C. FTP, FTP-DATA, echo, and www would work but telnet would fail.
- D. Only traffic from the 10.4.4.0 network would pass through the interface.

**Answer:** A

**Explanation:** First let's see what was configured on interface S0/0/1:

```

interface Serial0/0/1
 bandwidth 64
 ip address 10.45.45.1 255.255.255.0
 ip access-group 102 in

```

**NEW QUESTION 418**

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 419**

Which configuration register value can you set on a cisco device so that it ignores the nvram when it boots ?

- A. 0x2120
- B. 0x2124
- C. 0x2102
- D. 0x2142

**Answer:** D

**NEW QUESTION 423**

Which command would you configure globally on a Cisco router that would allow you to view directly connected Cisco devices?

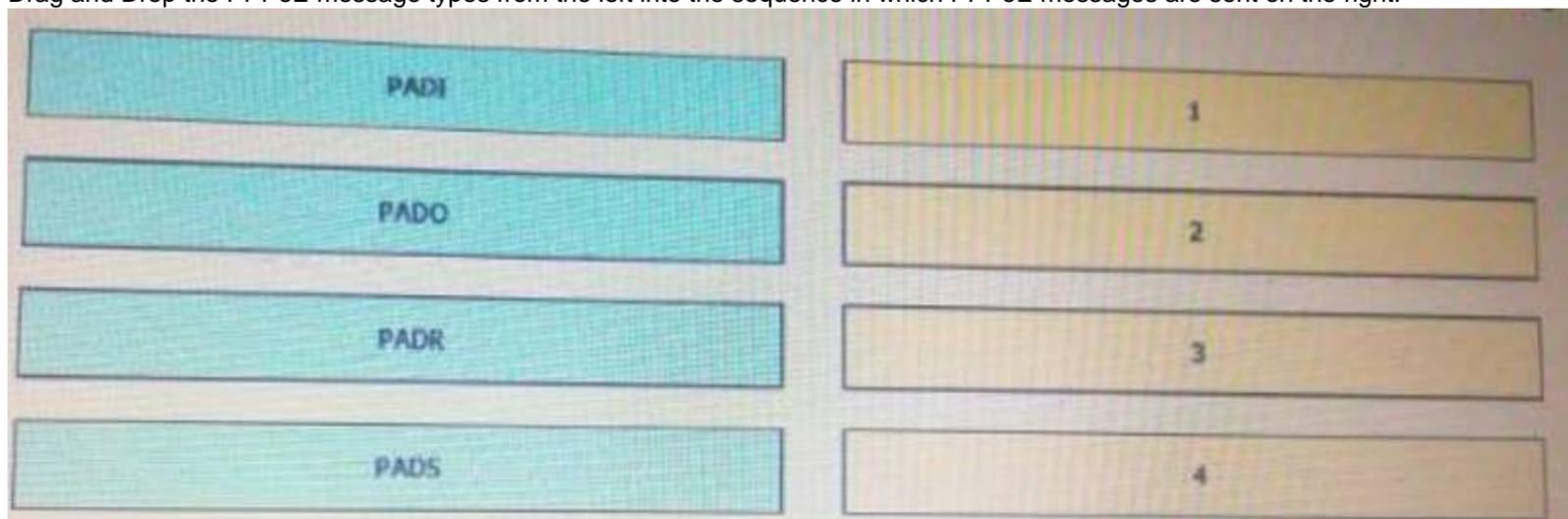
- A. enable cdp
- B. cdp enable
- C. cdp run
- D. run cdp

**Answer:** C

**Explanation:** CDP is enabled on Cisco routers by default. If you prefer not to use the CDP capability, disable it with the no cdp run command. In order to reenale CDP, use the cdp run command in global configuration mode. The “cdp enable” command is an interface command, not global.

**NEW QUESTION 428**

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



**Answer:**

**Explanation:** PADI PADO PADR PADS

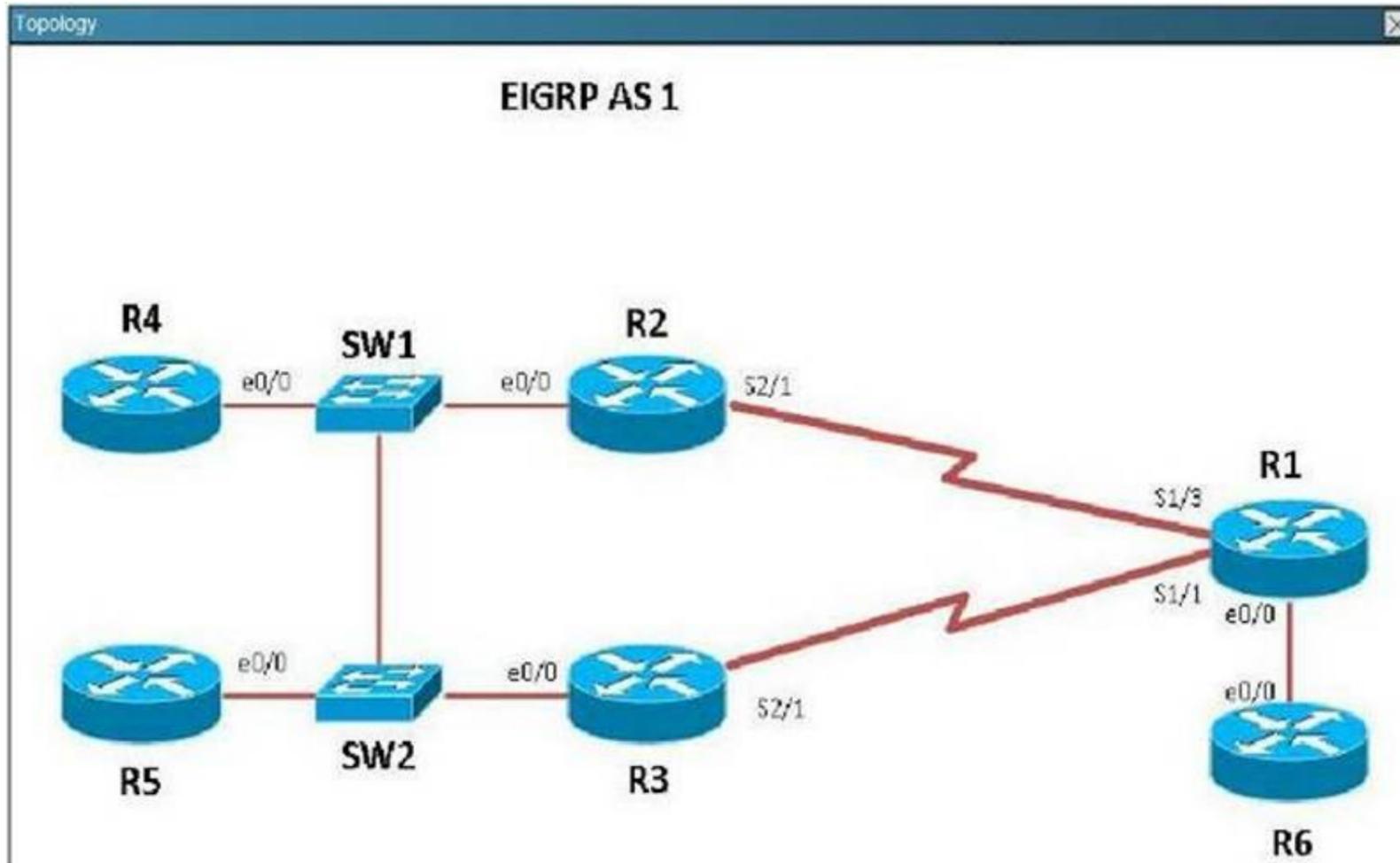
**NEW QUESTION 430**

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.

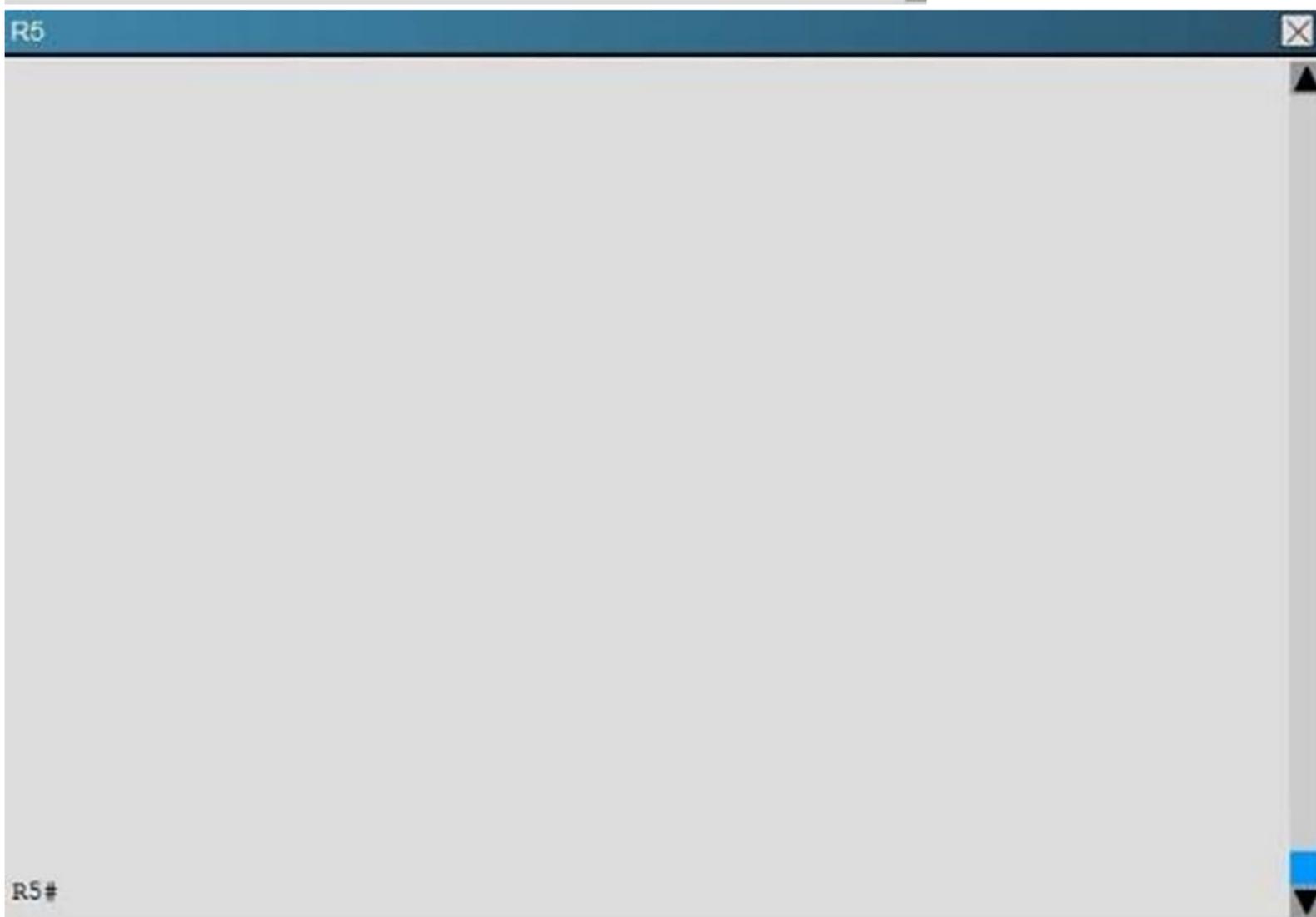
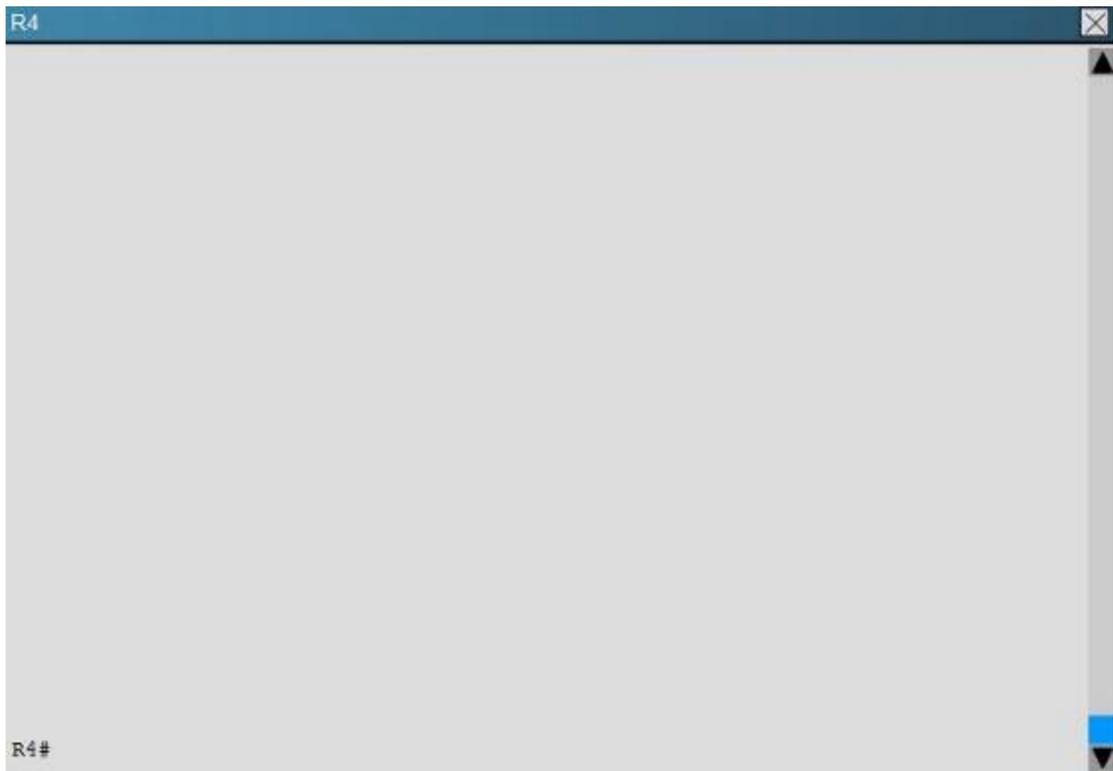


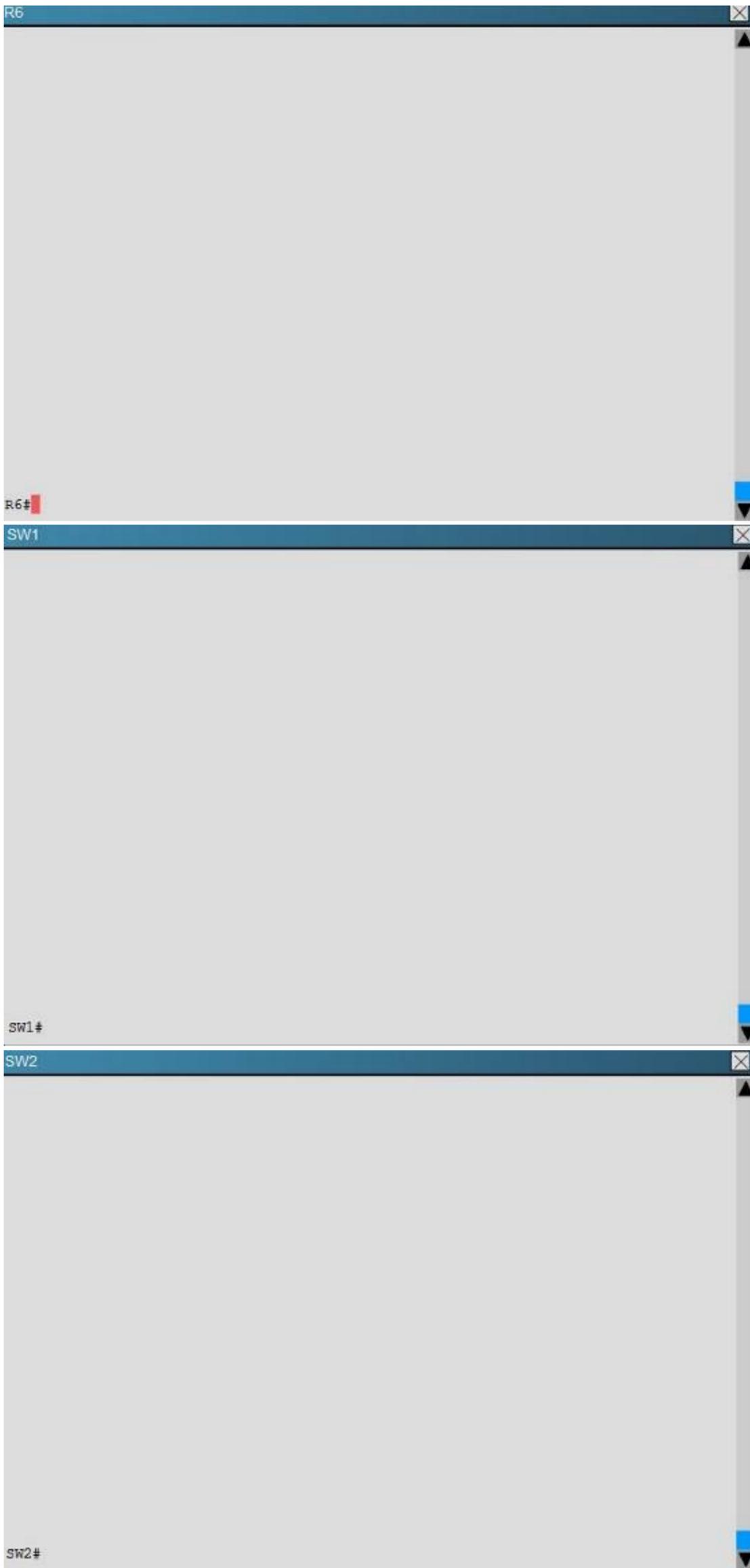
R1

```
R1#
```

R2

```
R2#
```





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



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 441**

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

bound	first
initializing	second
rebinding	third
renewing	fourth
requesting	fifth
selecting	sixth

**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 446**

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 448**

**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.

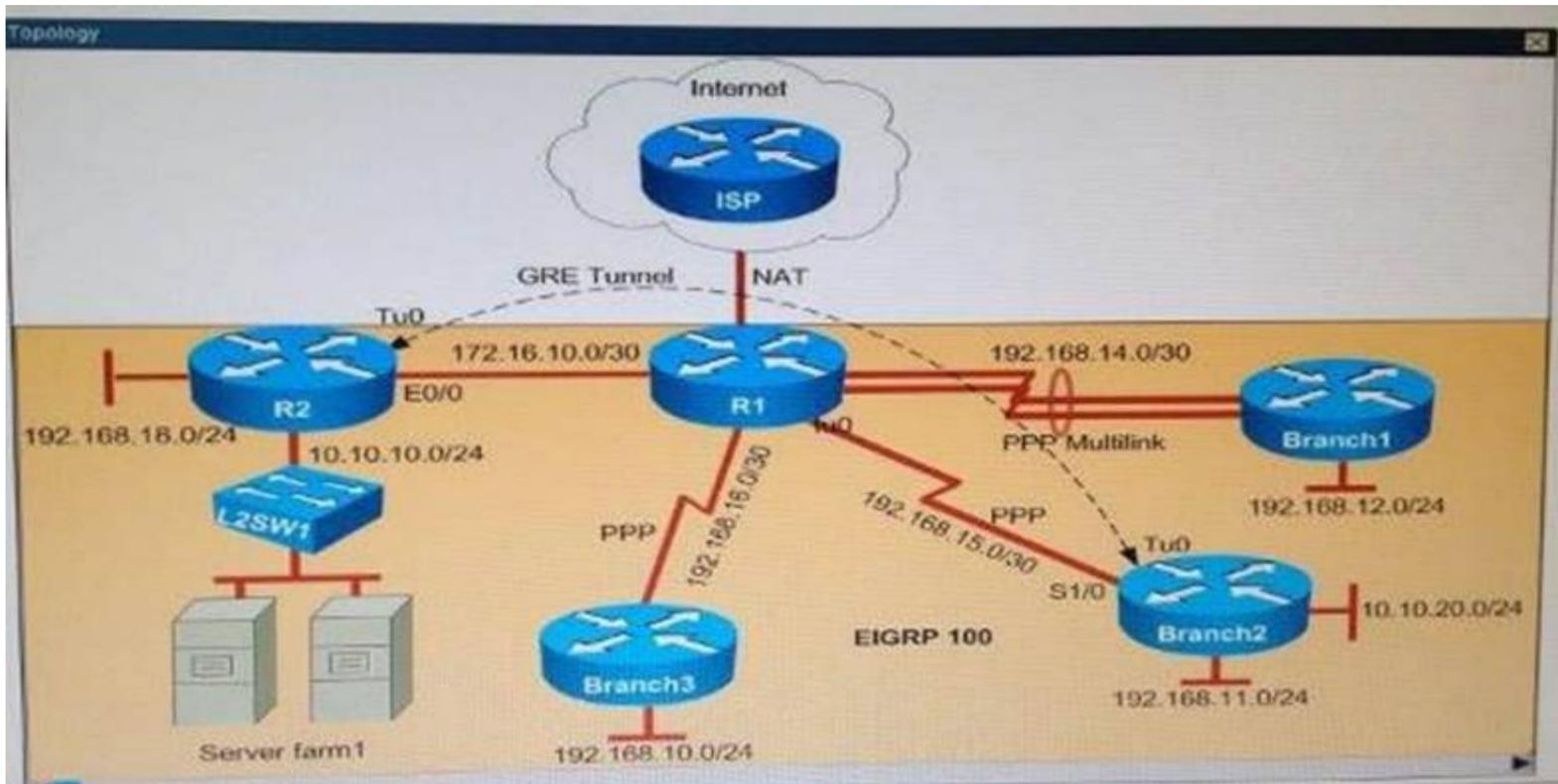
**Scenario**

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).

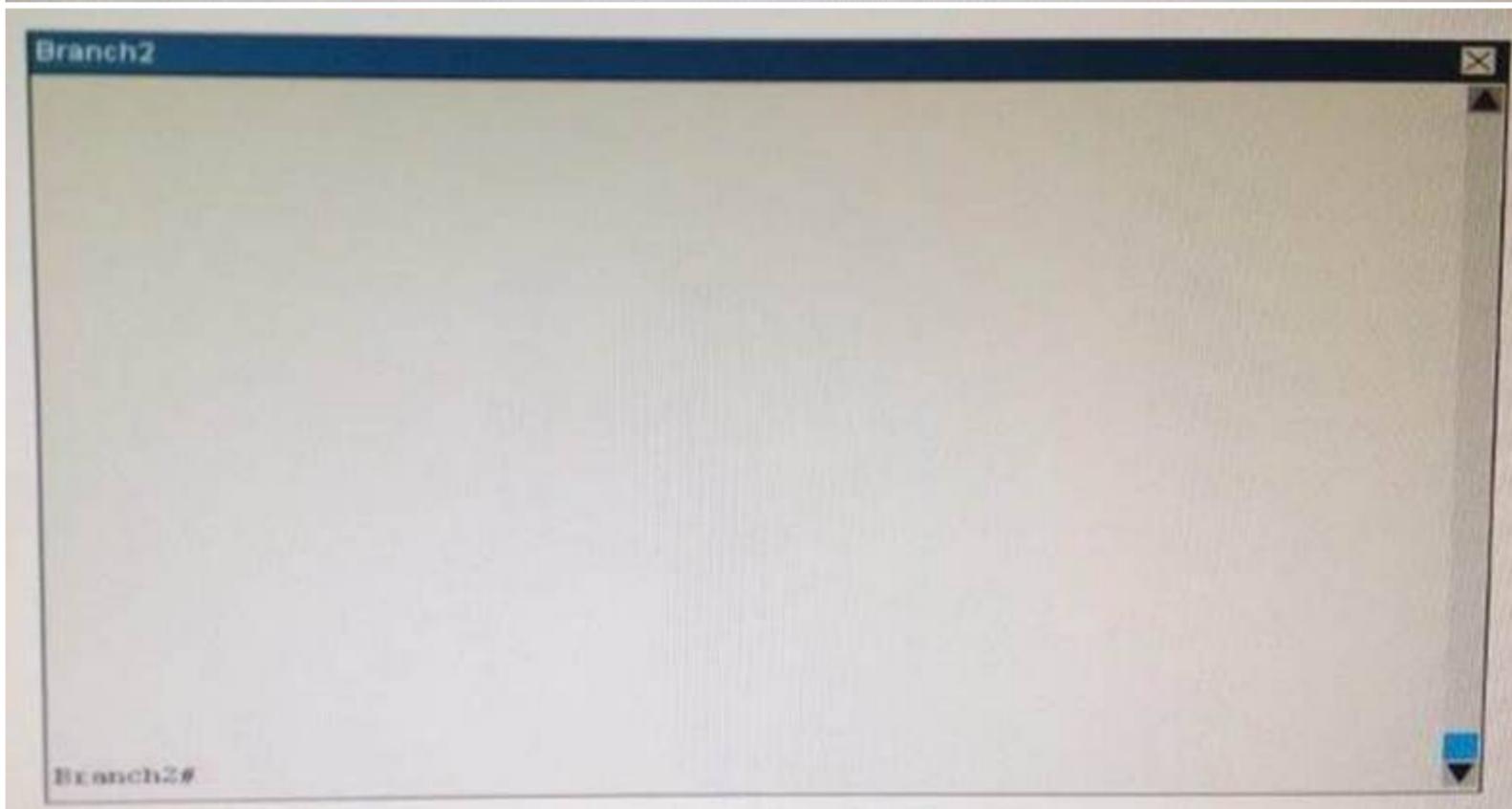
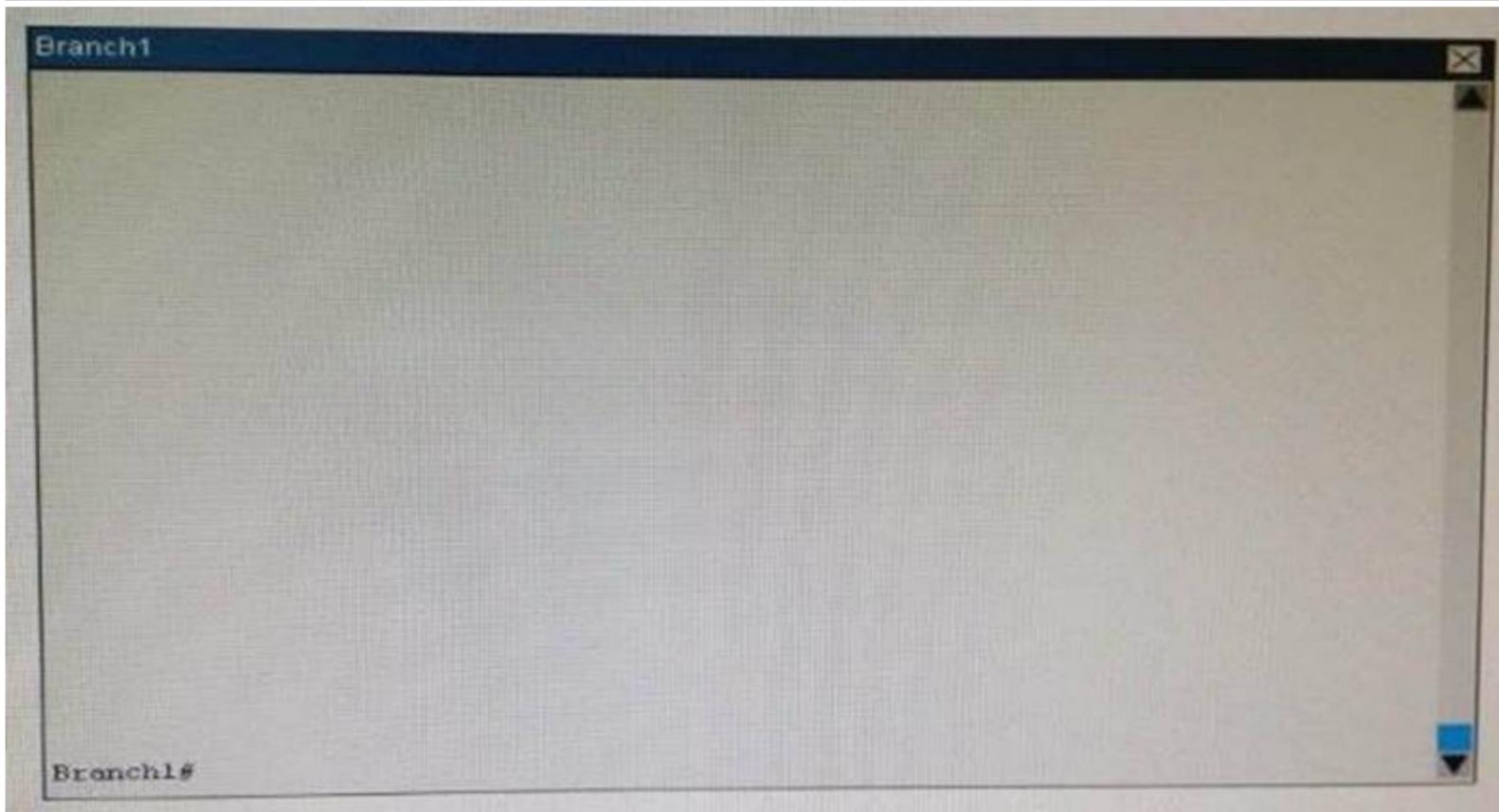
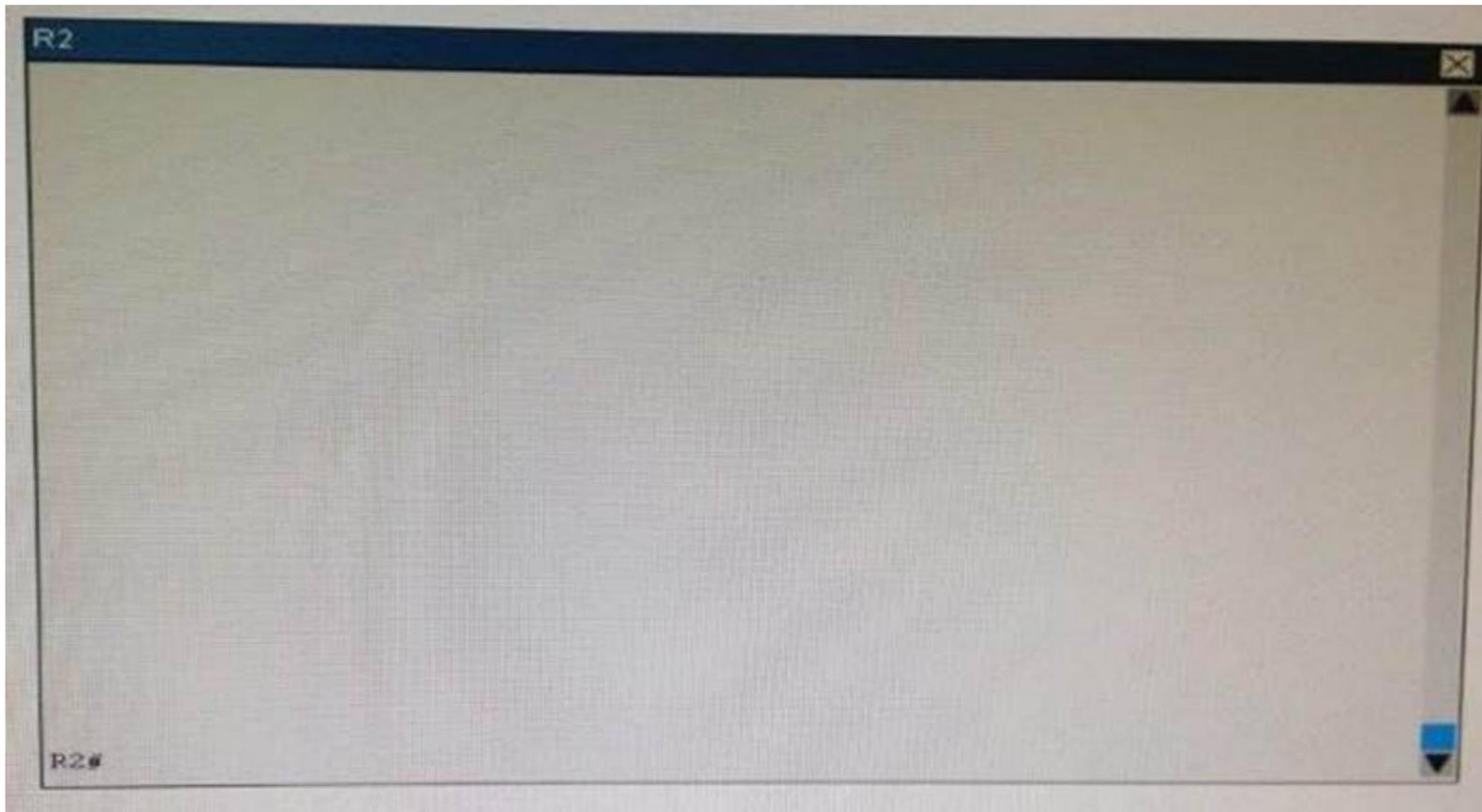
You have console access on R1, R2, Branch1, Branch2, and Branch3 devices. Use only show commands to troubleshoot the issues.

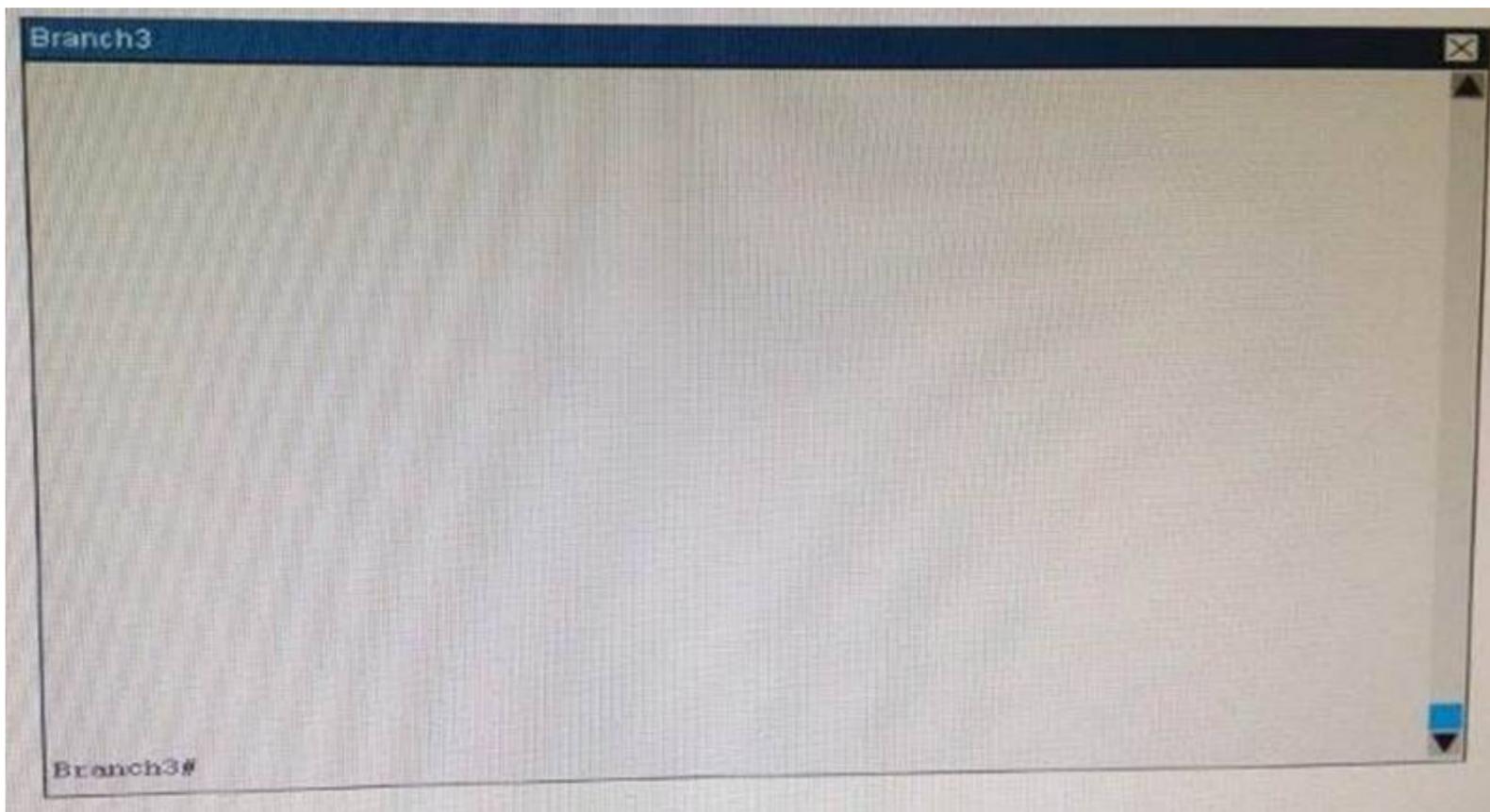


**R1**

```

R1#
    
```





Why has the Branch3 router lost connectivity with R1?

Use only show commands to troubleshoot because usage of the debug command is restricted on the Branch3 and R1 routers.

- A. A PPP chap hostname mismatch is noticed between Branch3 and R1.
- B. A PPP chap password mismatch is noticed between Branch3 and R1.
- C. PPP encapsulation is not configured on Branch3.
- D. The PPP chap hostname and PPP chap password commands are missing on the Branch3 router.

**Answer:** A

**Explanation:** First we should check Branch3 (and R1) with the "show ip interface brief" command to find any Layer1/Layer 2 issue.

```
Branch3# show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0/0	192.168.10.1	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	192.168.16.2	YES	manual	up	down
Serial1/1	unassigned	YES	unset	administratively down	down
Serial1/2	unassigned	YES	unset	administratively down	down
Serial1/3	unassigned	YES	unset	administratively down	down

We see the interfaces connecting between them are in "up/down" states which indicates an Layer 2 issue so we should check the configuration of these interfaces carefully with the "show running-config" command and pay attention to these interfaces.

```
R1#show running-config
```

```
<output omitted>
```

```
interface Serial1/2
```

```
ip address 192.168.16.1 255.255.255.252
```

```
ip nat inside
```

```
ip virtual-reassembly in
```

```
encapsulation ppp
```

```
ppp authentication chap
```

```
serial restart-delay 0
```

and on Branch3:

```
Branch3# show running-config
<output omitted>
interface Serial1/0
 ip address 192.168.16.2 255.255.255.252
 encapsulation ppp
 ppp chap hostname Branch_3
 ppp chap password 0 Branch3_Secret!
 serial restart-delay 0
```

We learn from above config is R1 is using CHAP to authenticate Branch3 router (via the "ppp authentication chap" command on R1). Branch3 router is sending CHAP hostname "Branch\_3" and CHAP password "Branch3\_Secret!" to R1 to be authenticated. Therefore we should check if R1 has already been configured with such username and password or not with the "show running-config" command on R1:

```
R1#show running-config
<output omitted>
username Branch2 password 0 Branch2_Secret!
username Branch3 password 0 Branch3_Secret!
```

R1\_show\_run\_username.jpg

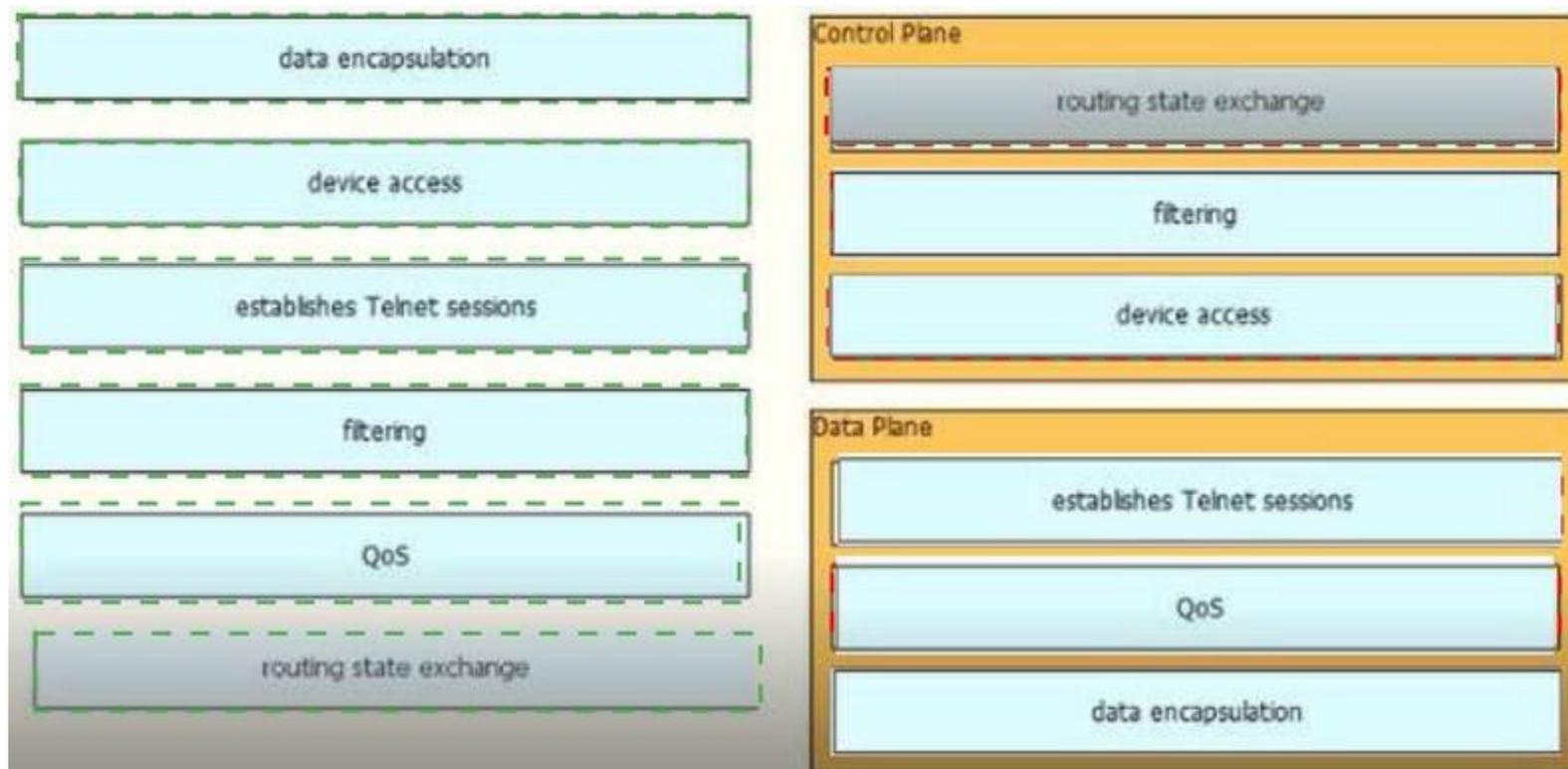
On R1 we see the configured username is "Branch3", not "Branch\_3" so the usernames here are mismatched and this is the problem -> Answer A is correct.

**NEW QUESTION 450**

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 452**

Which two are features of IPv6? (Choose two.)

- A. anycast
- B. broadcast
- C. multicast
- D. podcast
- E. allcast

**Answer:** AC

**Explanation:** IPv6 addresses are classified by the primary addressing and routing methodologies common in networking: unicast addressing, anycast addressing, and multicast addressing.

A unicast address identifies a single network interface. The Internet Protocol delivers packets sent to a unicast address to that specific interface.

An anycast address is assigned to a group of interfaces, usually belonging to different nodes. A packet sent to an anycast address is delivered to just one of the member interfaces, typically the nearest host, according to the routing protocol's definition of distance. Anycast addresses cannot be identified easily, they have the same format as unicast addresses, and differ only by their presence in the network at multiple points. Almost any unicast address can be employed as an anycast address.

A multicast address is also used by multiple hosts, which acquire the multicast address destination by participating in the multicast distribution protocol among the network routers. A packet that is sent to a multicast address is delivered to all interfaces that have joined the corresponding multicast group.

**NEW QUESTION 457**

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.

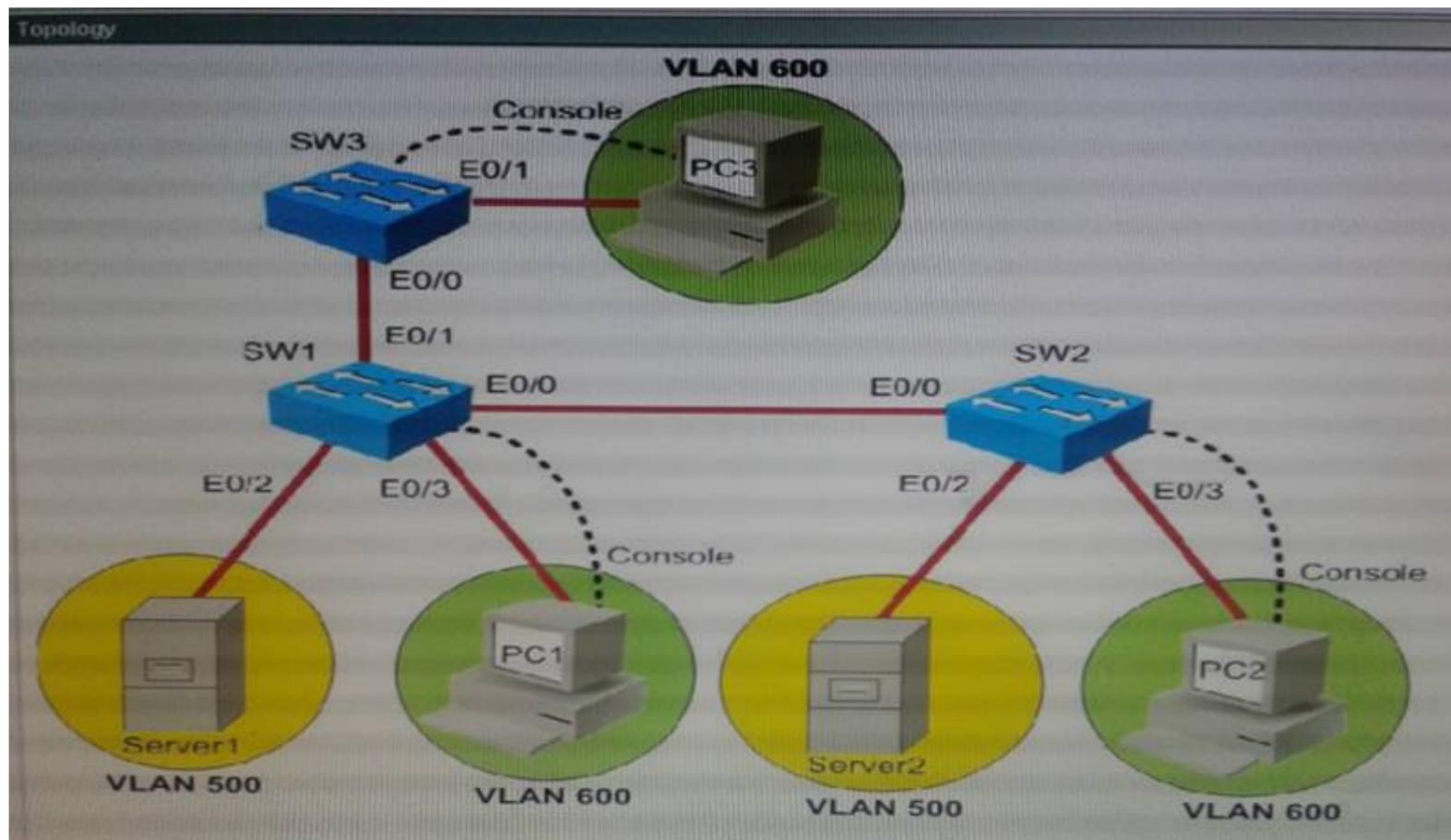
Topology Details

- 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 ENABLED SO 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 458**

Scenario:

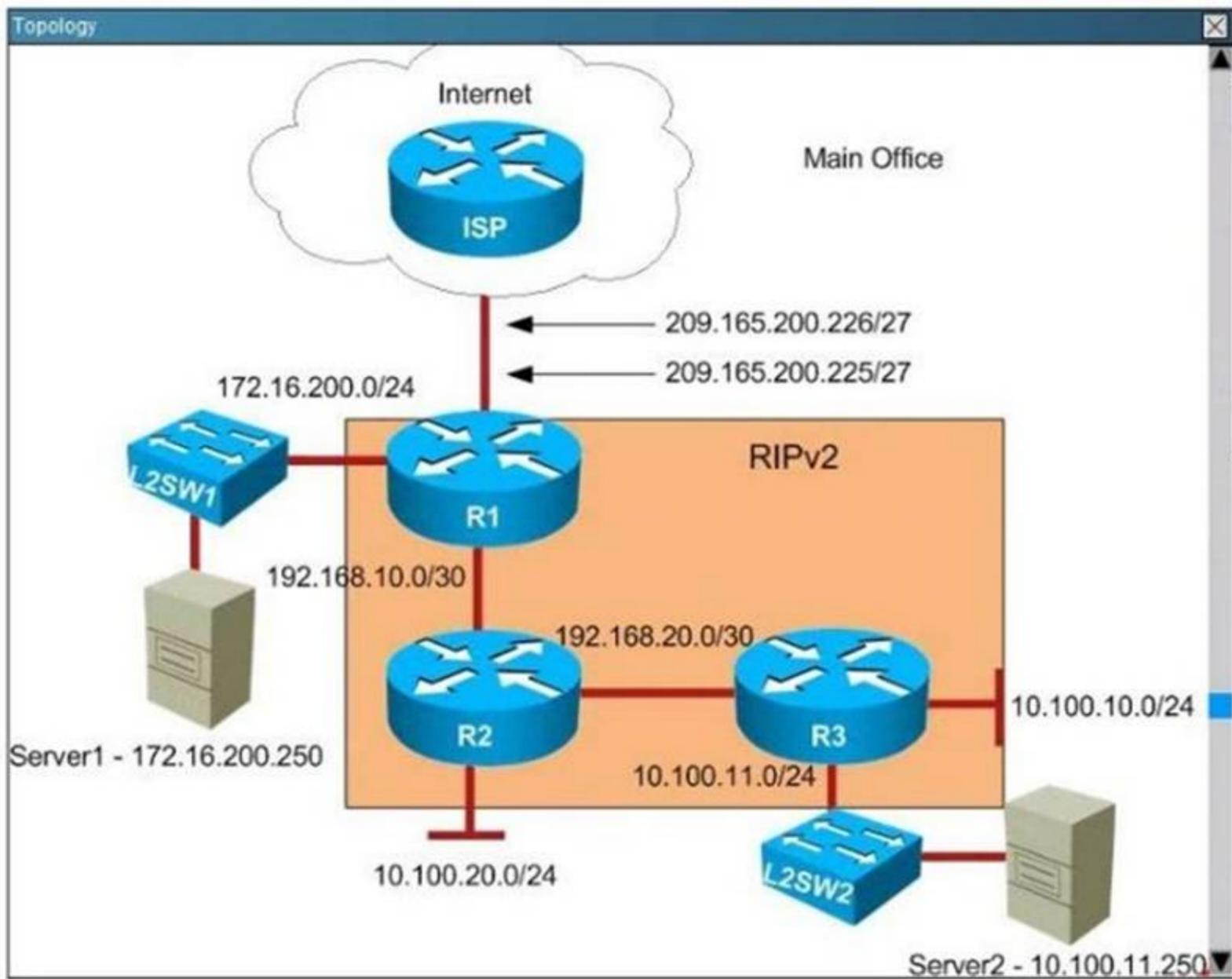
You are a junior network engineer for a financial company, and the main office network is experiencing network issues. Troubleshoot the network issues.

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) ---
    
```









```

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#

```

Why applications that are installed on PC's in R2 LAN network 10.100.20.0/24 are unable to communicate with server1?

- A. A standard ACL statement that is configured on R1 is blocking the traffic sourced from Server1 network.
- B. A standard ACL statement that is configured on R2 is blocking the traffic sourced from Setver1 network.
- C. A standard ACL statement that is configured on R2 is blocking the traffic sourced from R2 LAN network.
- D. A standard ACL statement that is configured on R1 is blocking the traffic sourced from R2 LAM network

**Answer:** B

**Explanation:** Check the below now:

<pre> R2 ! ip access-list standard SERVER1BLOCK deny 172.16.200.0 0.0.0.255 permit any ! ! </pre>	<pre> R2 ! ! ! ! interface Loopback0  ip address 192.168.250.2 255.255.255.255 ! interface Ethernet0/0  description ***Link to R3***  ip address 192.168.20.1 255.255.255.255 ! interface Ethernet0/1  no ip address ! interface Ethernet0/2  description ***Link to R1***  ip address 192.168.10.2 255.255.255.252  ip access-group SERVER1BLOCK in ! ! </pre>
---	---

**NEW QUESTION 461**

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.

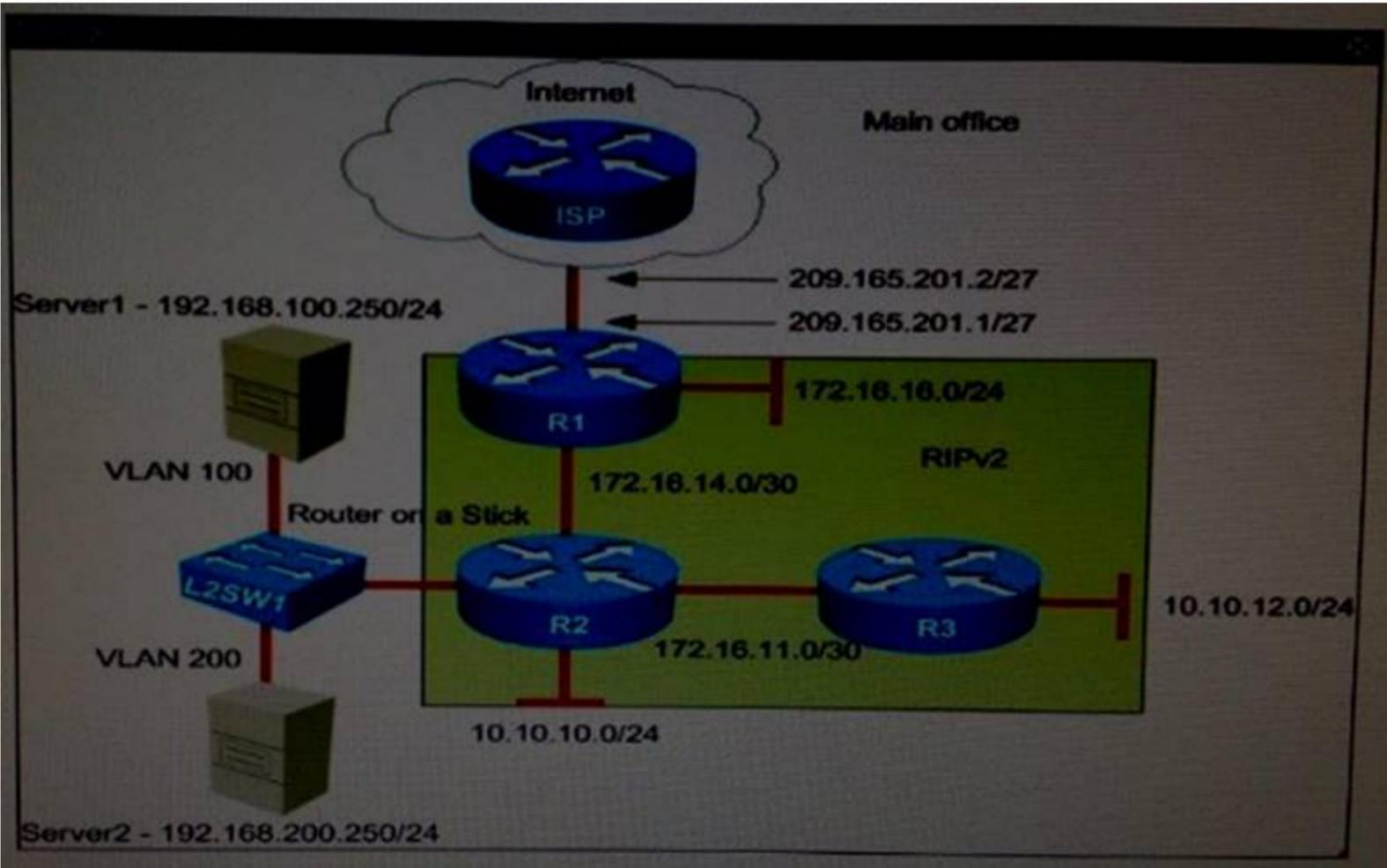
R1 sends default route into RIPv2 for internal routers to forward internet traffic to R1.

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.



```

# Configuration for R1
#
# Configuration: 1436 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

```





```

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 runts, 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
NVI0 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
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
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 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 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
  
```

```

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 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 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 runts, 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 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
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
nmi polling-interval 60
no nmi auto-configure

```





```

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, I - 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
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#
```

Answer:

Explanation: Pending  
Suggest your Answer for this question.

**NEW QUESTION 463**

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

- A. They can filter 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 464**

Which definition of a host route is true?

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

**Answer:** A

**NEW QUESTION 468**

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 471**

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.

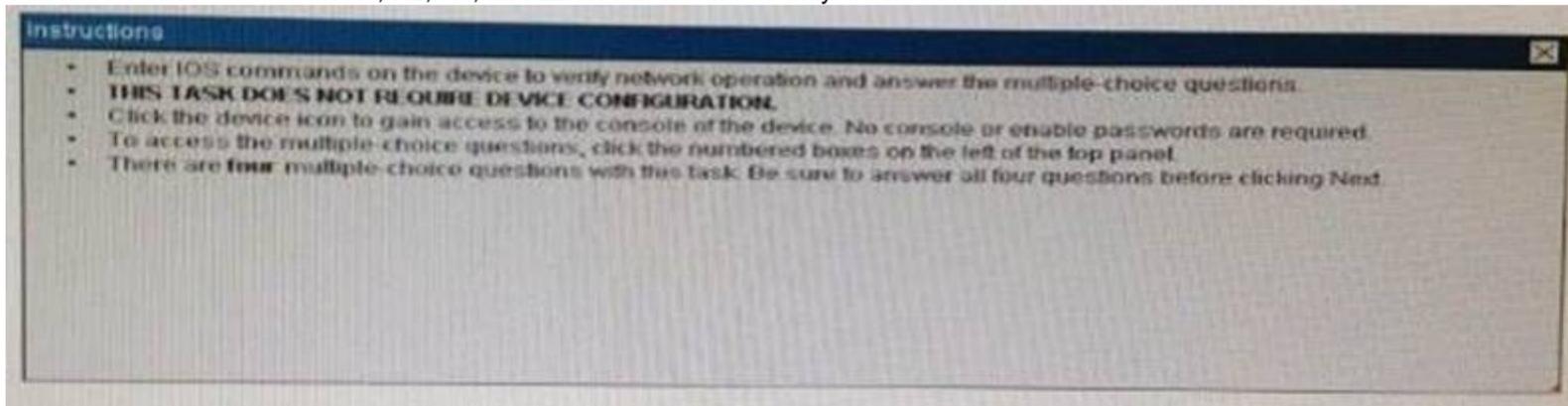
Router R1 connects the main office to internet, and routers R2 and R3 are internal routers NAT is enabled on Router R1.

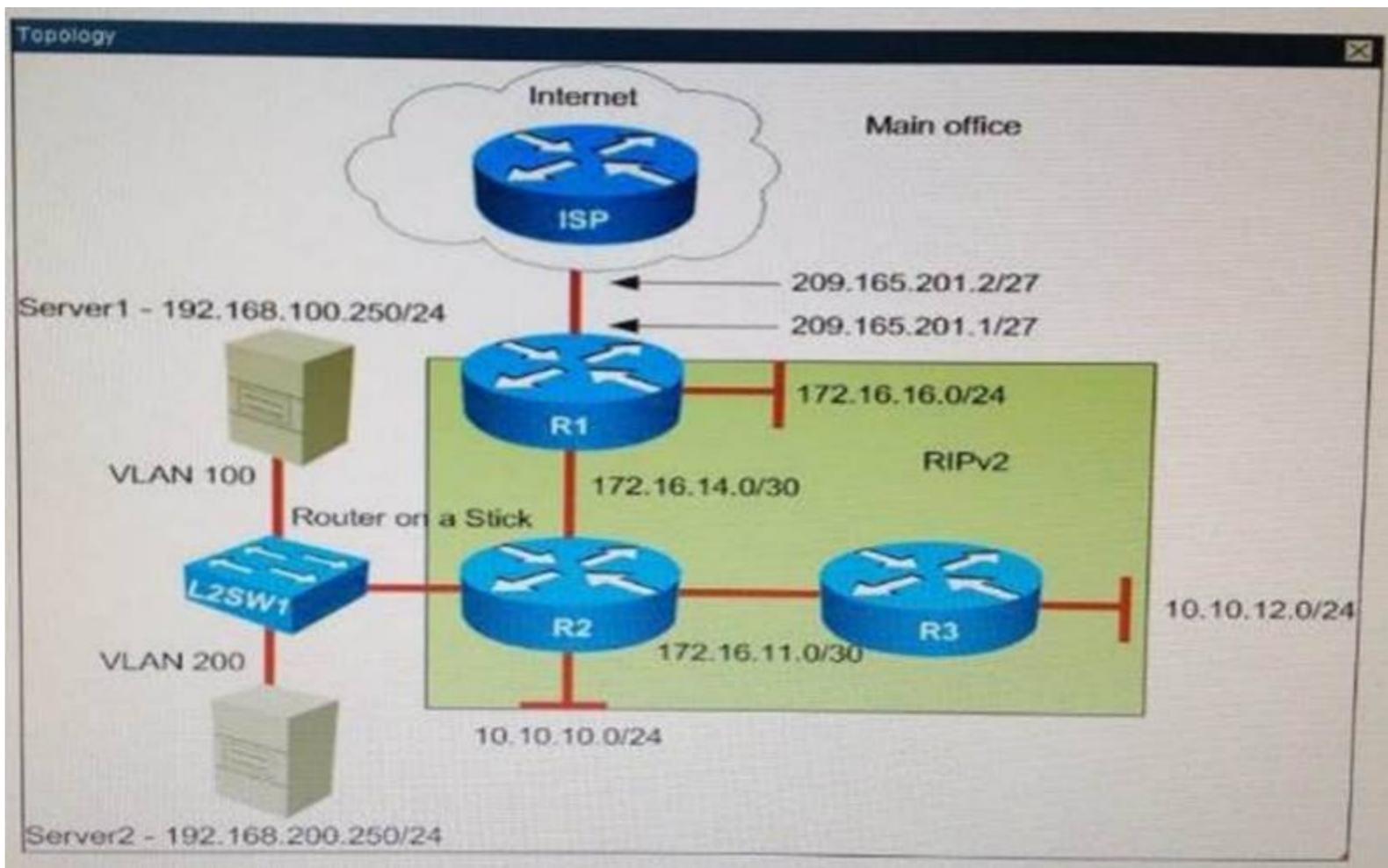
The routing protocol that is enable between routers R1, R2, and R3 is RIPv2.

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
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

```





```

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 runts, 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
NVI0 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
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  admini  down
stratively      209.165.201.1  YES unset  up      up
down
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

```

```

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, 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#

```







```

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 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
  
```

```

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 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 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 runts, 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 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
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
nmi polling-interval 60
no nmi auto-configure

```





```

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, I - 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
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 Segaent***
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#
```

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?



**NEW QUESTION 483**

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 484**

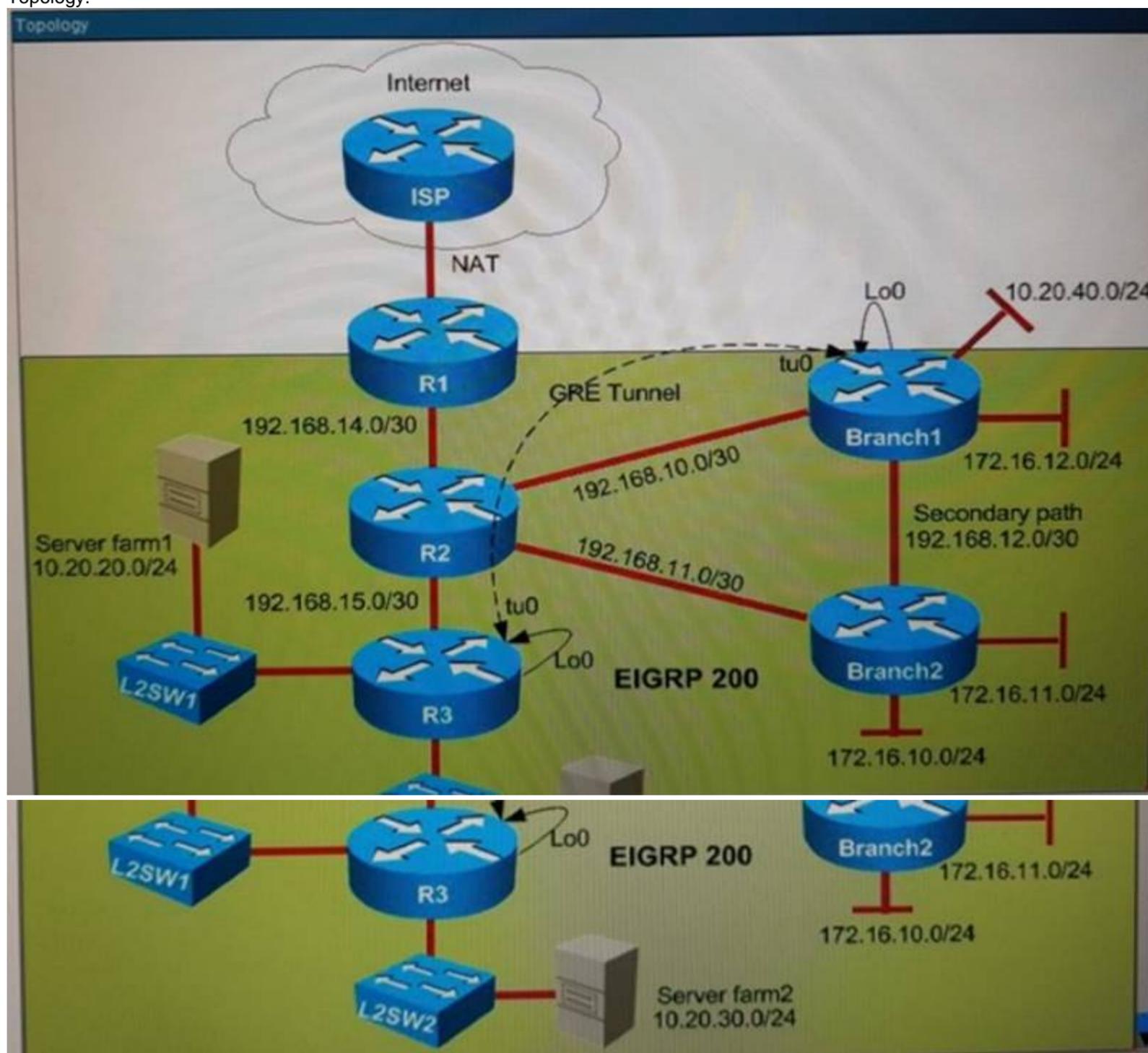
You are implementing EIGRP between the main office and branch offices. In Phase 1 you must implement and verify EIGRP configurations as mentioned in the topology in Phase 2. your colleague is expected to do NAT and ISP configurations

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 487**

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**

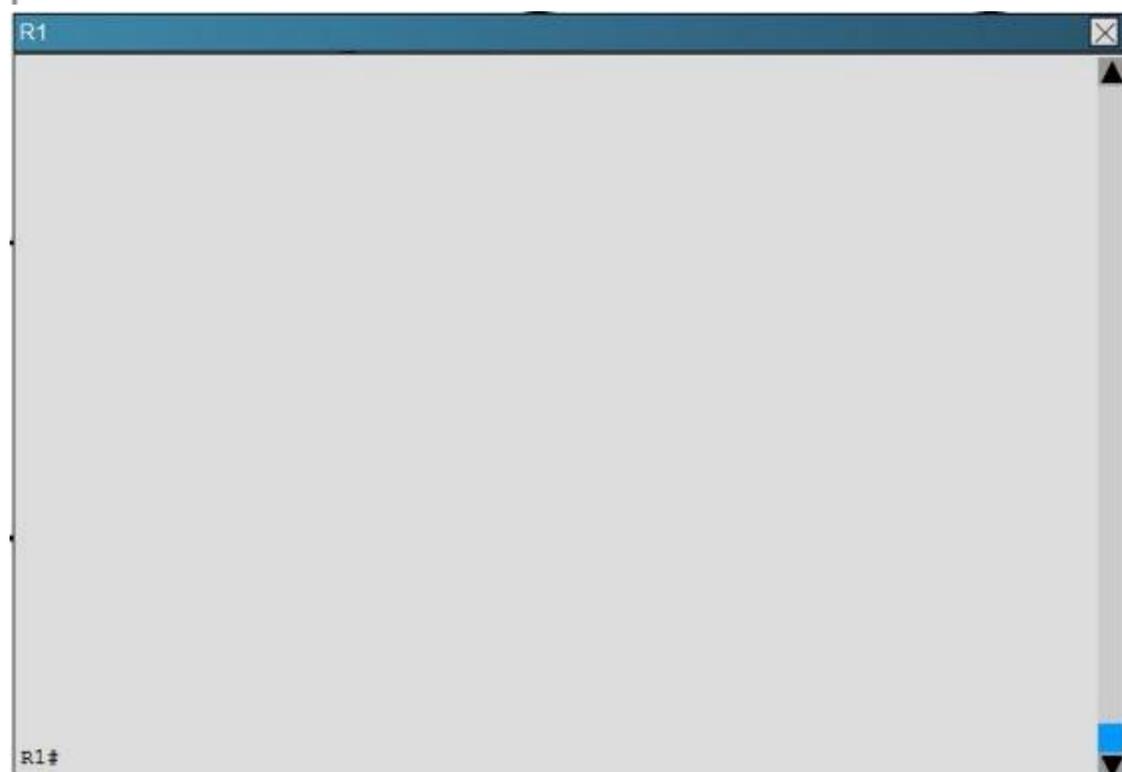
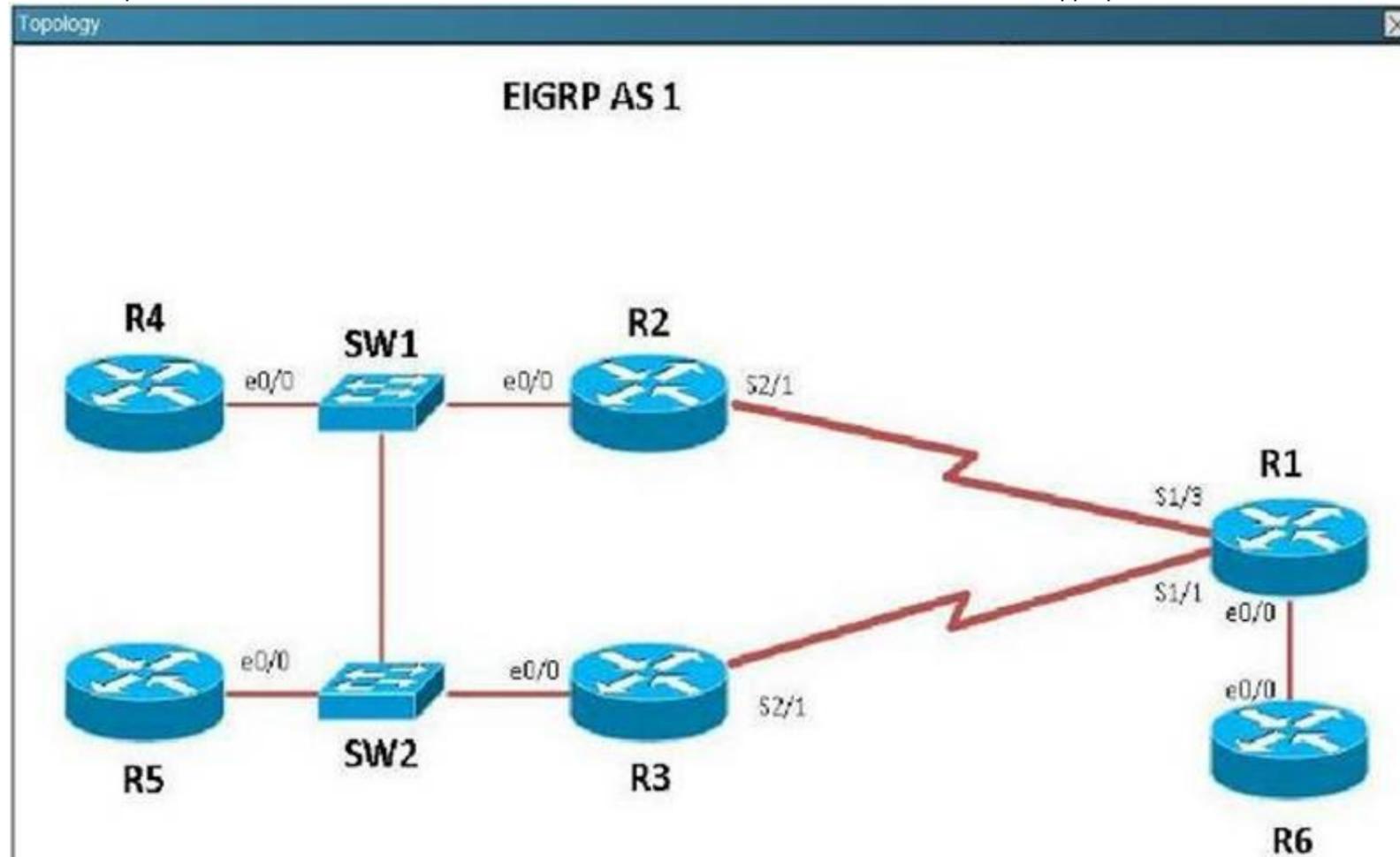
**NEW QUESTION 489**

Scenario

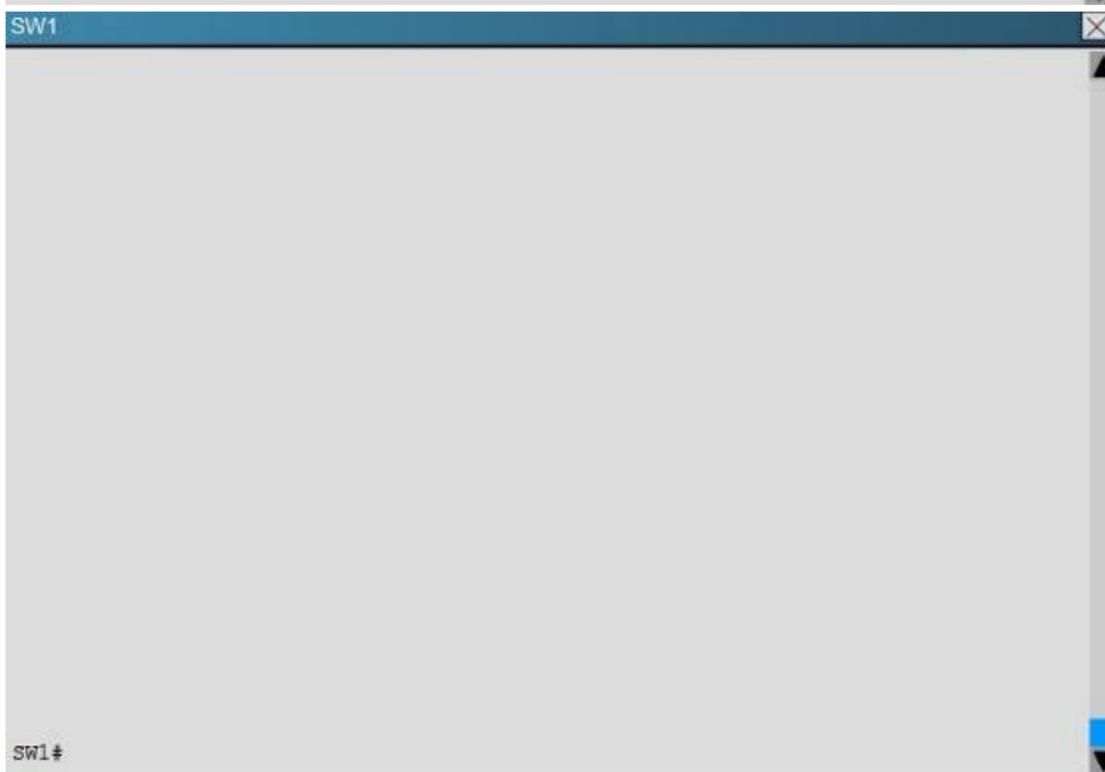
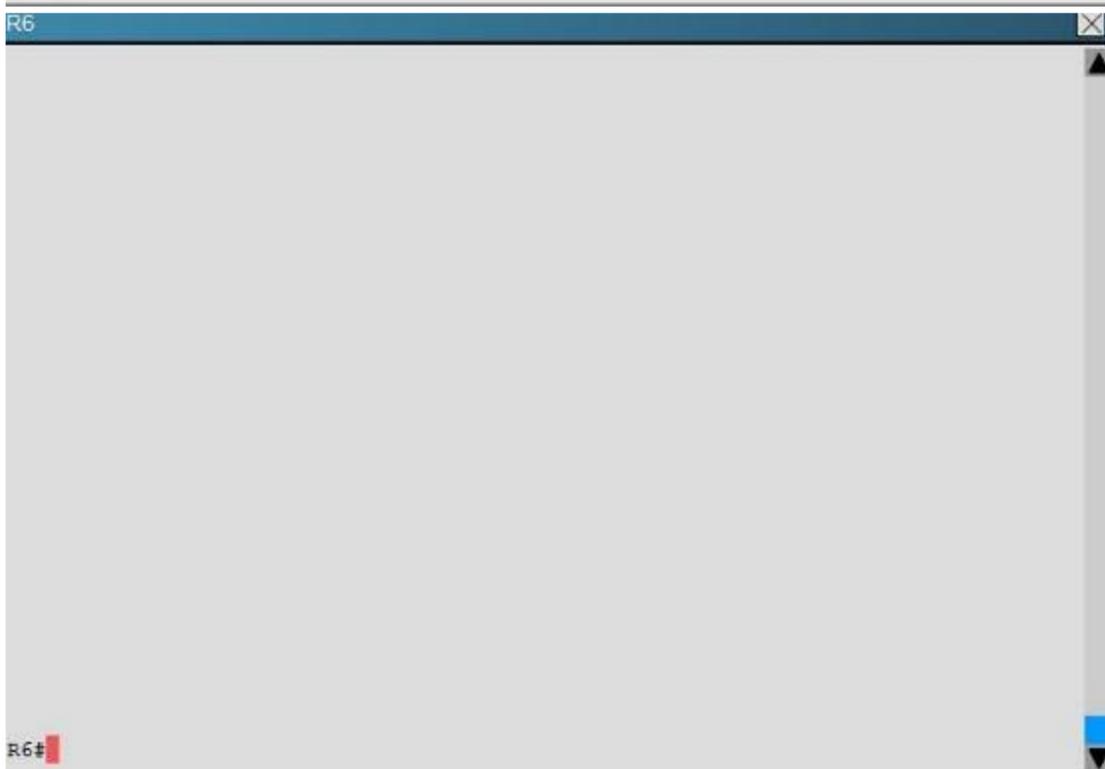
Refer to the topology. Your company has connected the routers R1, R2, and R3 with serial links. R2 and R3 are connected to the switches SW1 and SW2, respectively. SW1 and SW2 are also connected to the routers R4 and R5.

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.



The image displays three vertically stacked, empty rectangular panels, each with a dark blue title bar and a light gray content area. The top panel is labeled 'R2' in the title bar and 'R2#' in the bottom-left corner. The middle panel is labeled 'R3' in the title bar and 'R3#' in the bottom-left corner. The bottom panel is labeled 'R4' in the title bar and 'R4#' in the bottom-left corner. Each panel has a vertical scroll bar on its right side, with a blue highlight at the bottom. The panels are separated by thin white lines.





Study the following output taken on R1: R1# Ping 10.5.5.55 source 10.1.1.1 Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 10.5.5.55, timeout is 2 seconds: Packet sent with a source address of 10.1.1.1  
.....  
Success rate is 0 percent (0/5) Why are the pings failing?

- A. The network statement is missing on R5.
- B. The loopback interface is shut down on R5.
- C. The network statement is missing on R1.
- D. The IP address that is configured on the Lo1 interface on R5 is incorrect.

**Answer:** C

**Explanation:** R5 does not have a route to the 10.1.1.1 network, which is the loopback0 IP address of R1. When looking at the EIGRP configuration on R1, we see that the 10.1.1.1 network statement is missing on R1.

```

R1
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
!
!
no ip http server
no ip http secure-server

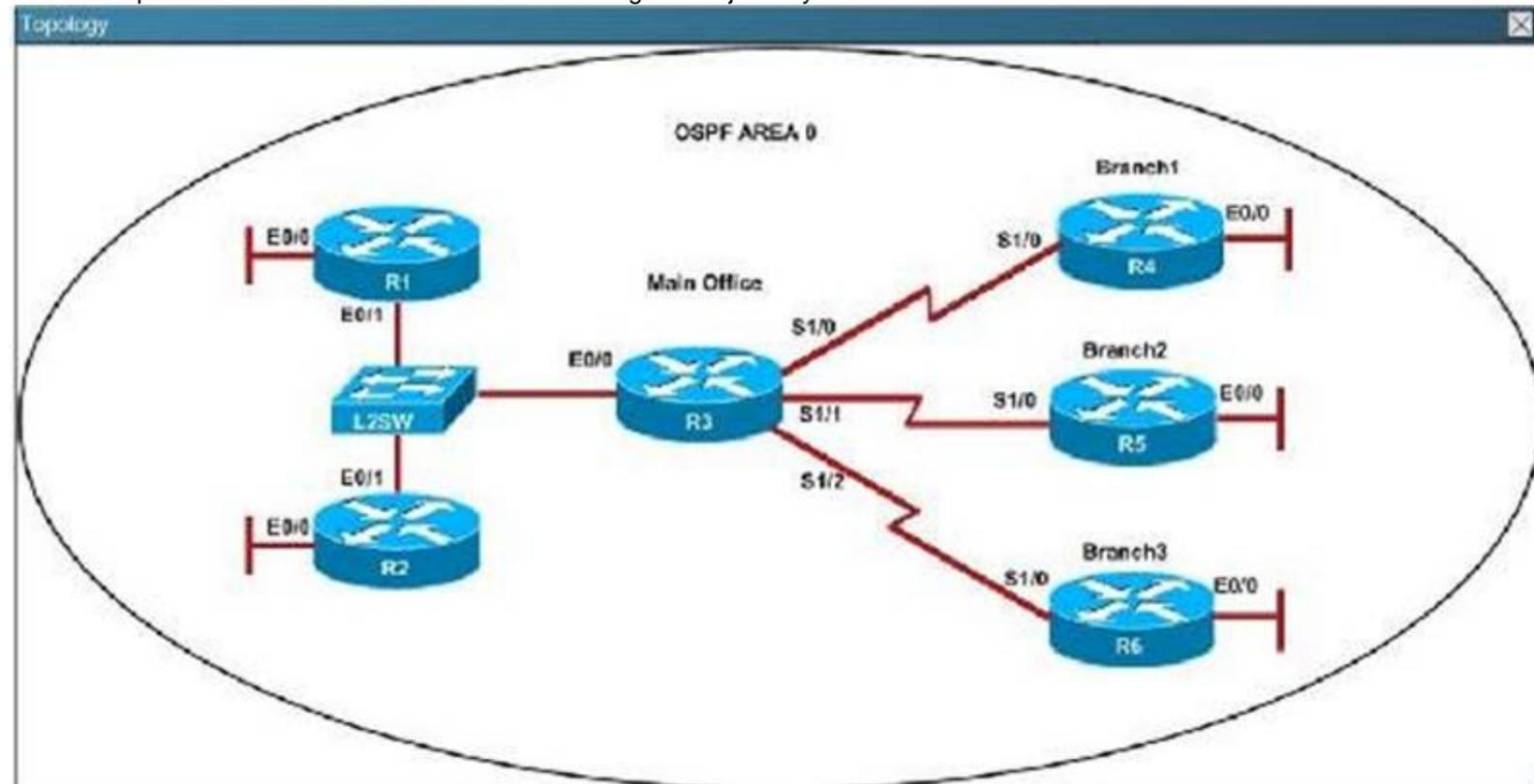
R1#
    
```

**NEW QUESTION 494**

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.



R1

```

R1#

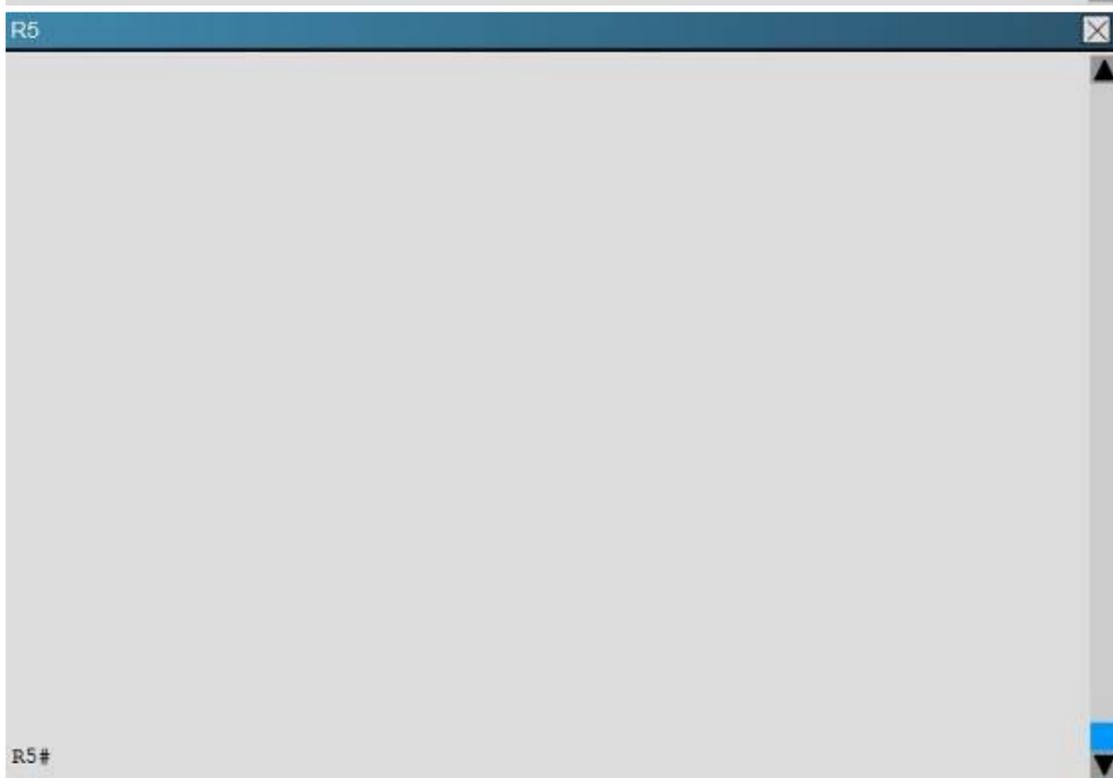
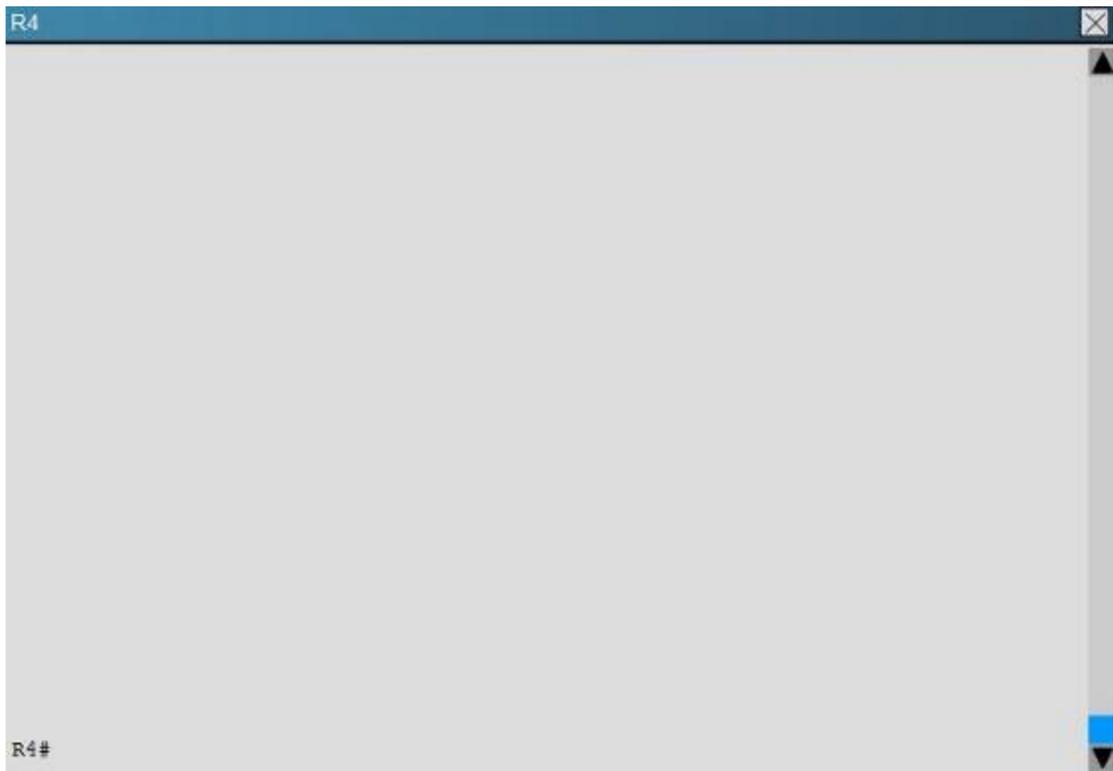
```

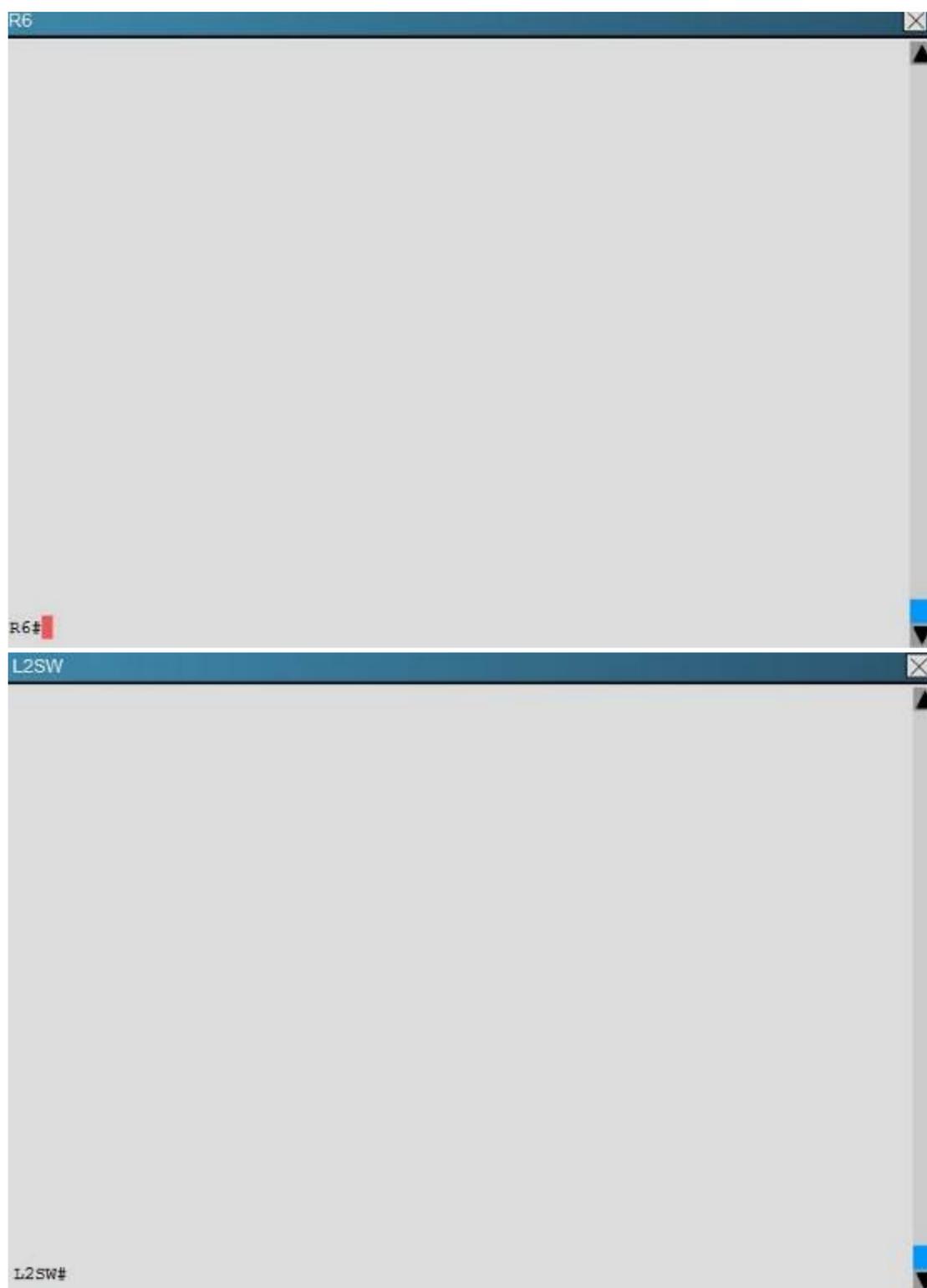
R2

```

R2#

```



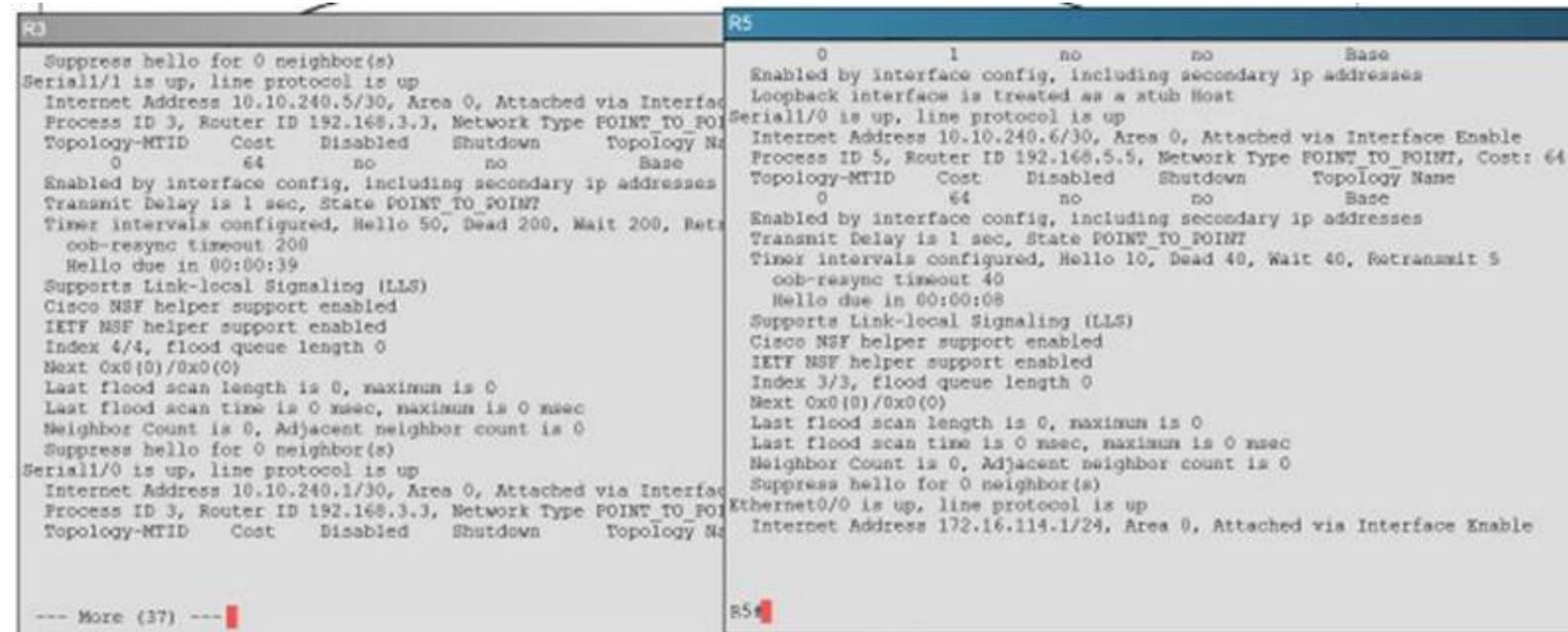


An OSPF neighbor adjacency is not formed between R3 in the main office and R5 in the Branch2 office. What is causing the problem?

- 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 497**

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 500**

Drag and drop the benefits of a cisco wireless Lan controller from the left onto the correct examples on the right

dynamic RF feature	Access points automatically adjust their signal strength.
easy deployment process	The controller image is deployed automatically to access points
easy upgrade process	The controller provides centralized management of users and VLANs.
optimized user performance	The controller uses load balancing to maximize throughput.

**Answer:**

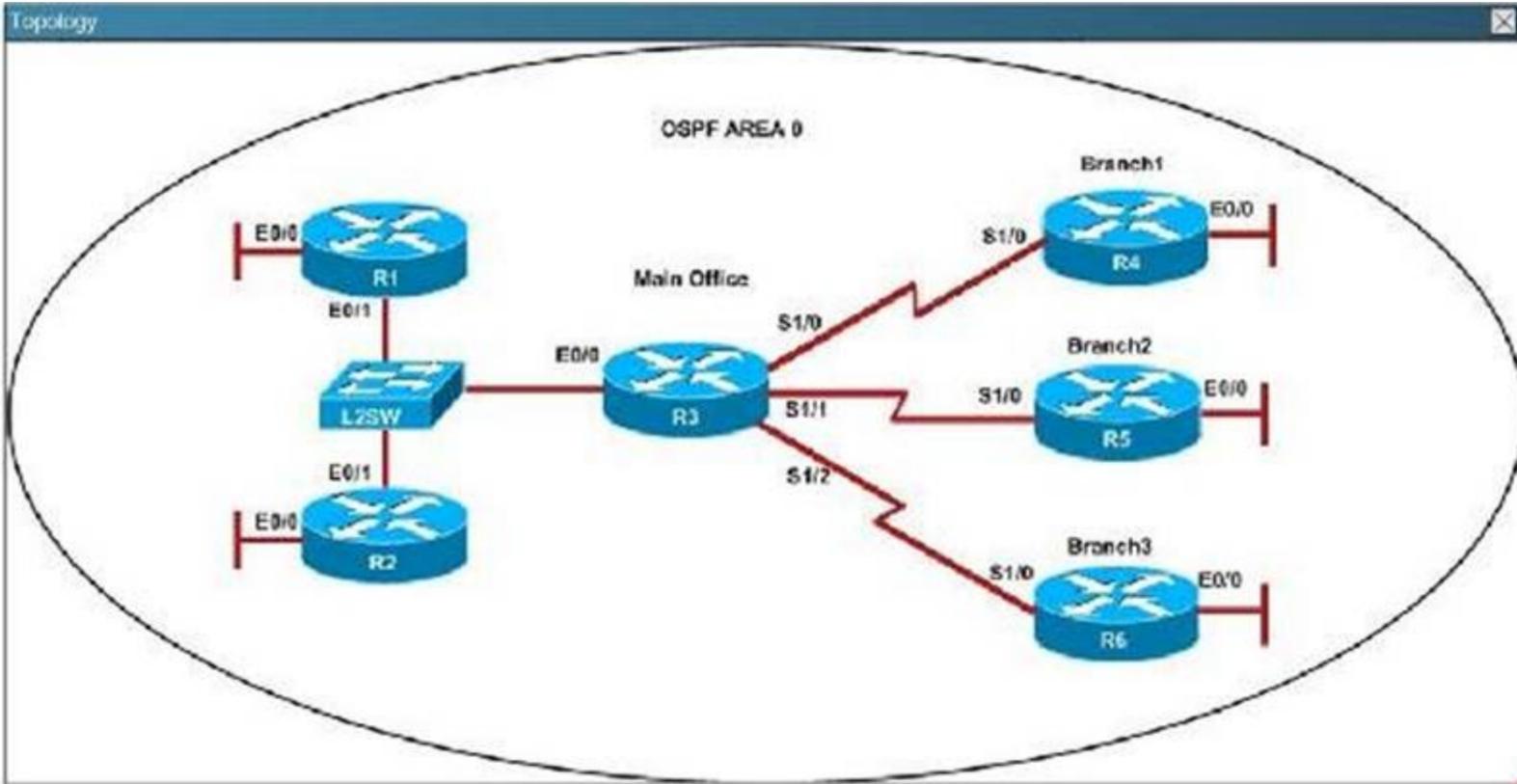
**Explanation:**

dynamic RF feature	dynamic RF feature
easy deployment process	easy upgrade process
easy upgrade process	easy deployment process
optimized user performance	optimized user performance

**NEW QUESTION 501**

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.

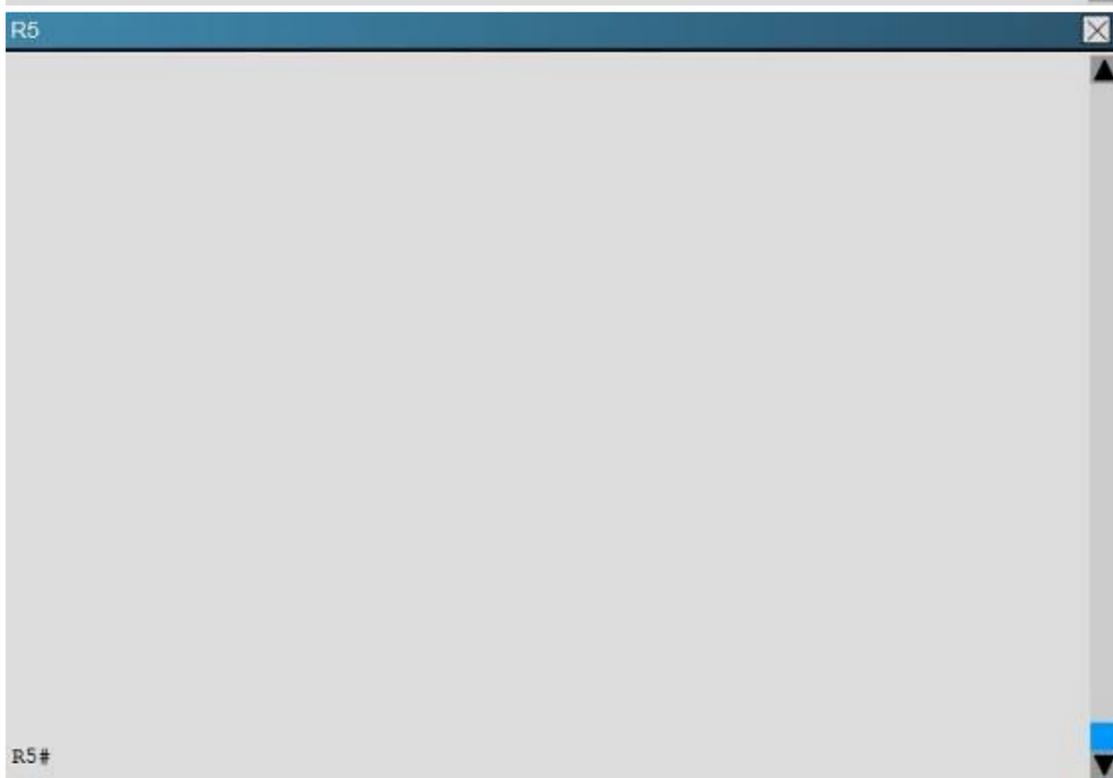
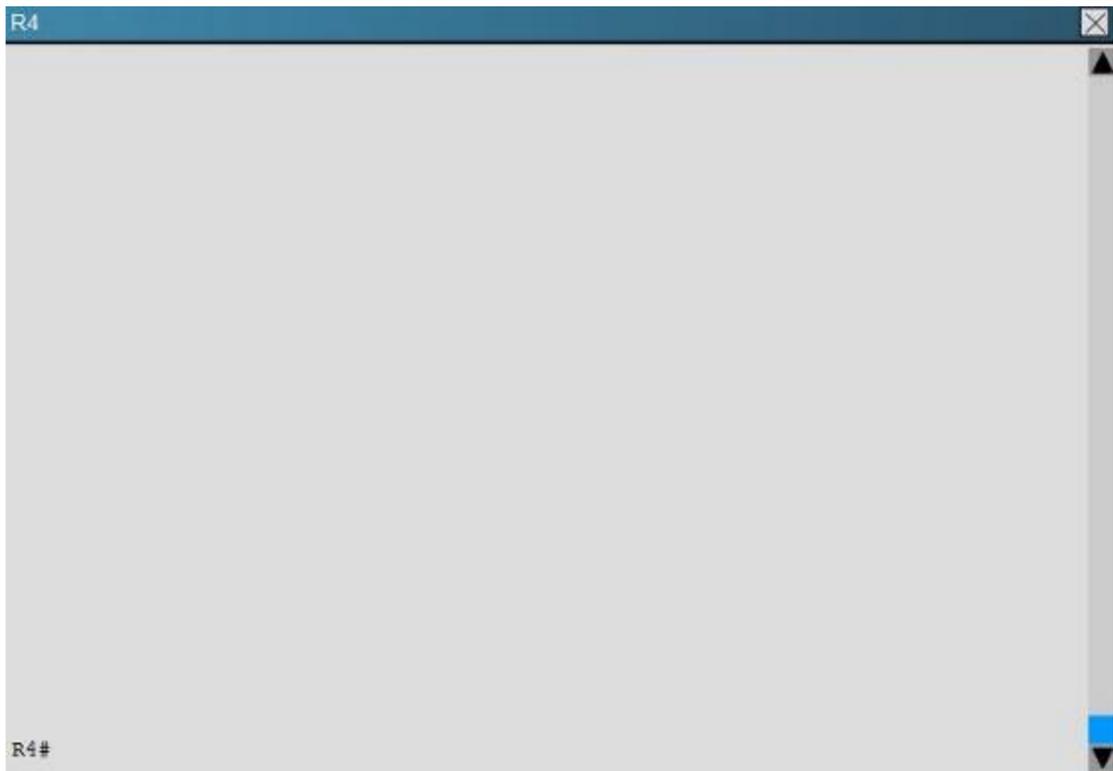


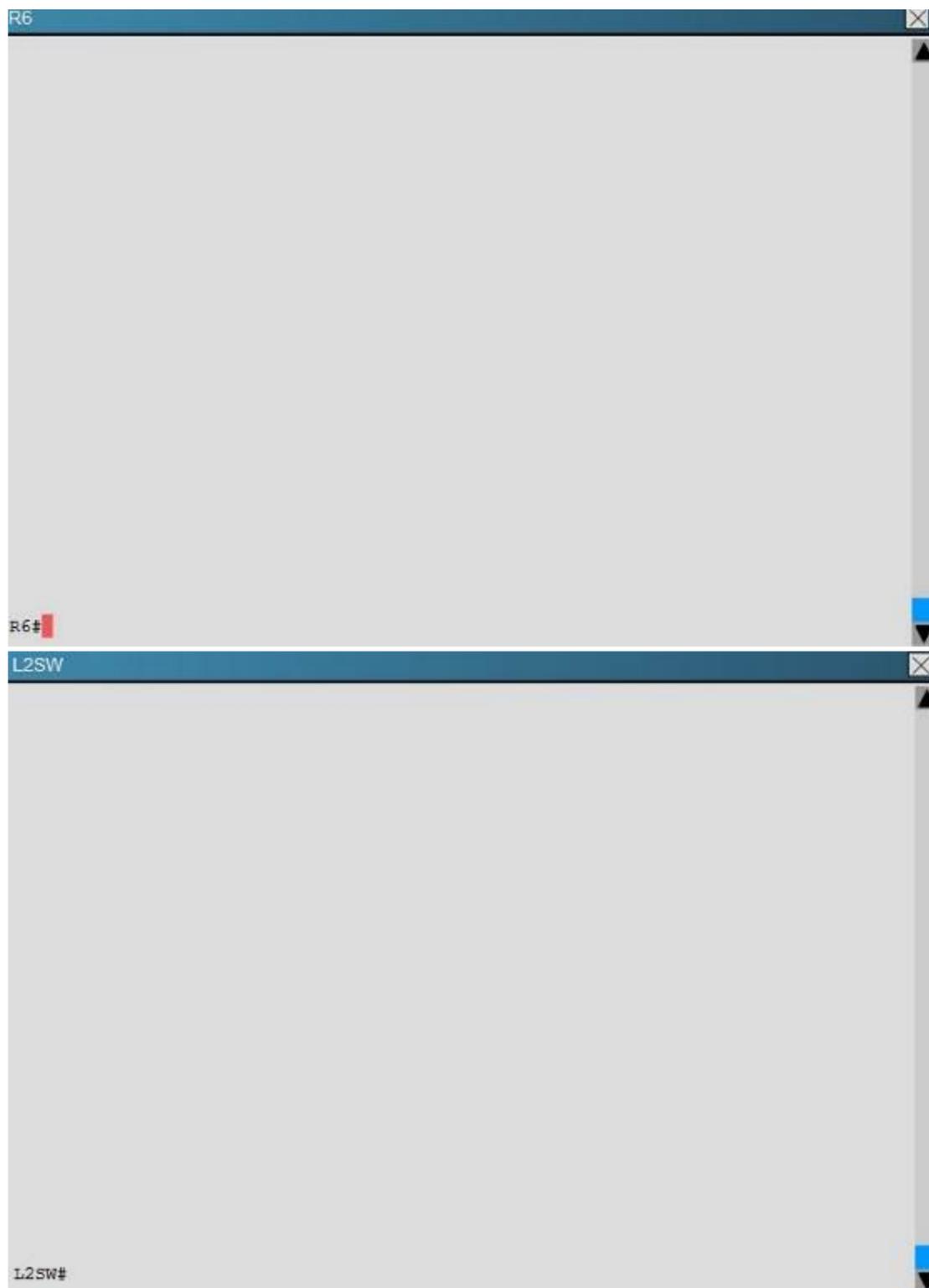
R1

```
R1#
```

R2

```
R2#
```





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 </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 </pre>
<pre> ppp authentication chap </pre>	<pre> --- More (37) --- </pre>

**NEW QUESTION 503**

Which two are advantages of static routing when compared to dynamic routing? (Choose two.)

- A. Configuration complexity decreases as network size increases.
- B. Security increases because only the network administrator may change the routing table.
- C. Route summarization is computed automatically by the router.
- D. Routing tables adapt automatically to topology changes.
- E. An efficient algorithm is used to build routing tables, using automatic updates.
- F. Routing updates are automatically sent to neighbors.
- G. Routing traffic load is reduced when used in stub network links.

**Answer:** BG

**Explanation:** Since static routing is a manual process, it can be argued that it is more secure (and more prone to human errors) since the network administrator will need to make changes to the routing table directly. Also, in stub networks where there is only a single uplink connection, the load is reduced as stub routers just need a single static default route, instead of many routes that all have the same next hop IP address.

**NEW QUESTION 505**

What is the danger of the permit any entry in a NAT access list?

- A. It can lead to overloaded resources on the router.
- B. It can cause too many addresses to be assigned to the same interface.
- C. It can disable the overload command.
- D. It prevents the correct translation of IP addresses on the inside network.

**Answer:** A

**NEW QUESTION 507**

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:**

administrative distance	metric
destination network	route source
metric	administrative distance
next hop	destination network
route source	next hop

**NEW QUESTION 508**

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

#### NEW QUESTION 512

In an Ethernet network, under what two scenarios can devices transmit? (Choose two.)

- A. when they receive a special token
- B. when there is a carrier
- C. when they detect no other devices are sending
- D. when the medium is idle
- E. when the server grants access

**Answer:** CD

**Explanation:** Ethernet network is a shared environment so all devices have the right to access to the medium. If more than one device transmits simultaneously, the signals collide and cannot reach the destination.

If a device detects another device is sending, it will wait for a specified amount of time before attempting to transmit.

When there is no traffic detected, a device will transmit its message. While this transmission is occurring, the device continues to listen for traffic or collisions on the LAN. After the message is sent, the device returns to its default listening mode.

#### NEW QUESTION 516

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:

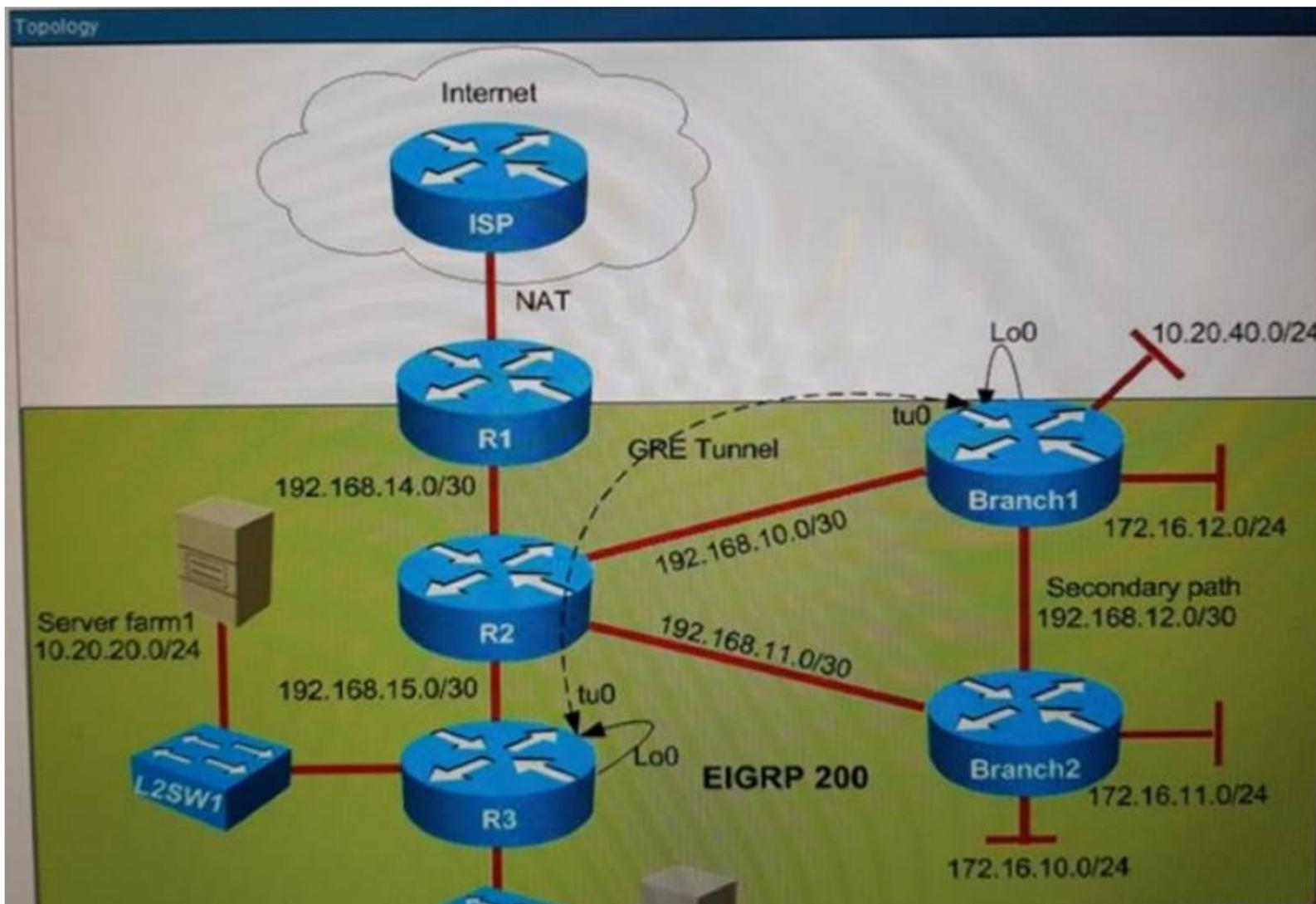
[http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2950/software/release/12-1\\_9\\_ea1/configuration/guid](http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2950/software/release/12-1_9_ea1/configuration/guid)

#### NEW QUESTION 518

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 523**

Which logging command can enable administrators to correlate syslog messages with millisecond precision?

- A. no logging console
- B. logging buffered 4
- C. no logging monitor
- D. service timestamps log datetime msec
- E. logging host 10.2.0.21

**Answer: D**

**NEW QUESTION 524**

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 528**

Based on the output below from SwitchB, Which Statement is True ?

```
SwitchB# show spanning-tree vian 40

VLAN0040
Spanning tree enabled protocol rstp
Root ID          Priority        24596
Address          0017.2935.6418
Cost             38
Port             11 (FastEthernet0/11)
Hello Time       2 sec         Max Age 20 sec   Forward Delay 15 sec
Bridge ID        Priority        28692 (priority 28652 sys-id-ext 40)
Address          0017.596d.1580
Hello Time       2 sec         Max Age 20 sec   Forward Delay 15 sec
Aging Time       300

Interface        Role  Sts  Cost      Prio Nbr  Type
-----
Fa0/11           Root FWD  19         128.11    P2p
Fa0/12           Altn BLK  19         128.11    P2p
```

- A. VLAN 40 is running the per VLAN Spanning Tree Protocol
- B. The Fa0/11 role confirms that SwitchB is the root bridge for VLAN 40
- C. SwitchB is not the root bridge, because not all of the interface roles are designated
- D. The MAC Address of the root bridge is 0017:596d.1580

Answer: C

**NEW QUESTION 529**

Drag and drop the DNS lookup commands from the left onto the correct effects on the right

ip dns server	enables DNS lookup on an individual interface
ip domain list	enables the DNS server on the device
ip domain lookup source-interface	identifies a DNS server to provide lookup services
ip domain name	specifies a sequence of domain names
ip host	specifies the default domain to append to unqualified host names
ip name-server	statically maps an IP address to a hostname

Answer:

Explanation:

ip dns server	ip domain lookup source-interface
ip domain list	ip name-server
ip domain lookup source-interface	ip dns server
ip domain name	ip domain list
ip host	ip domain name
ip name-server	ip host

**NEW QUESTION 530**

**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.

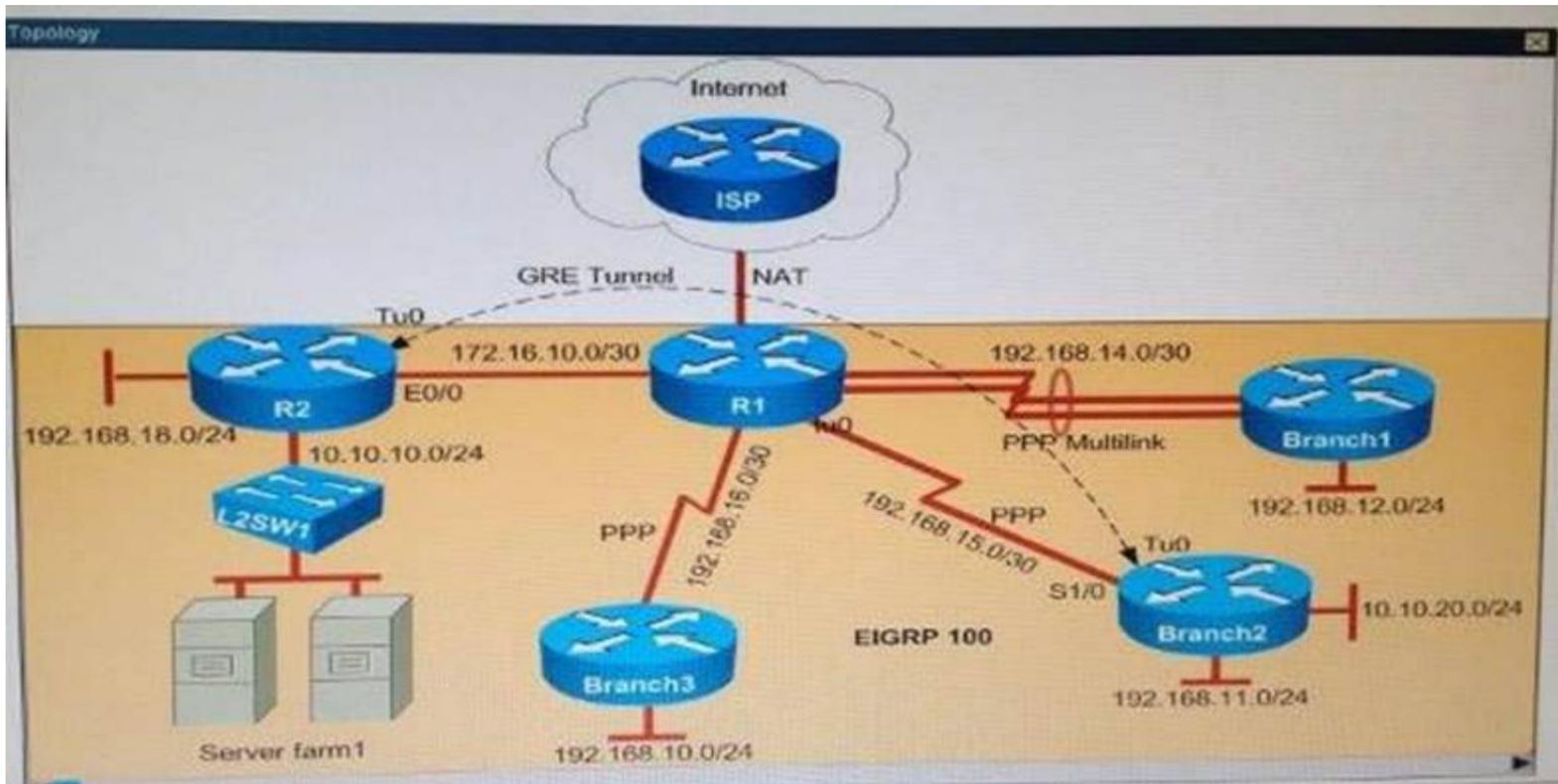
**Scenario**

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.

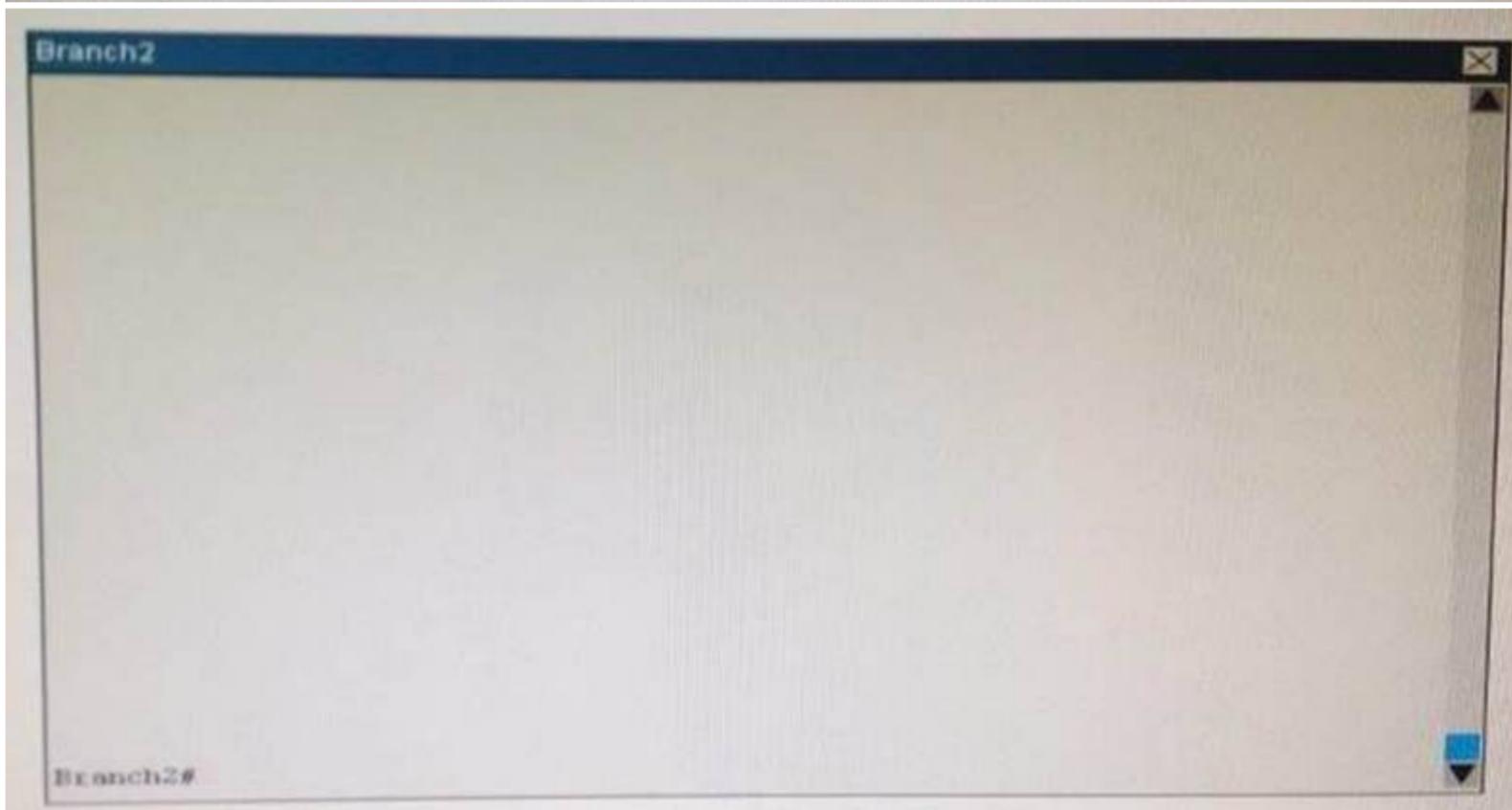
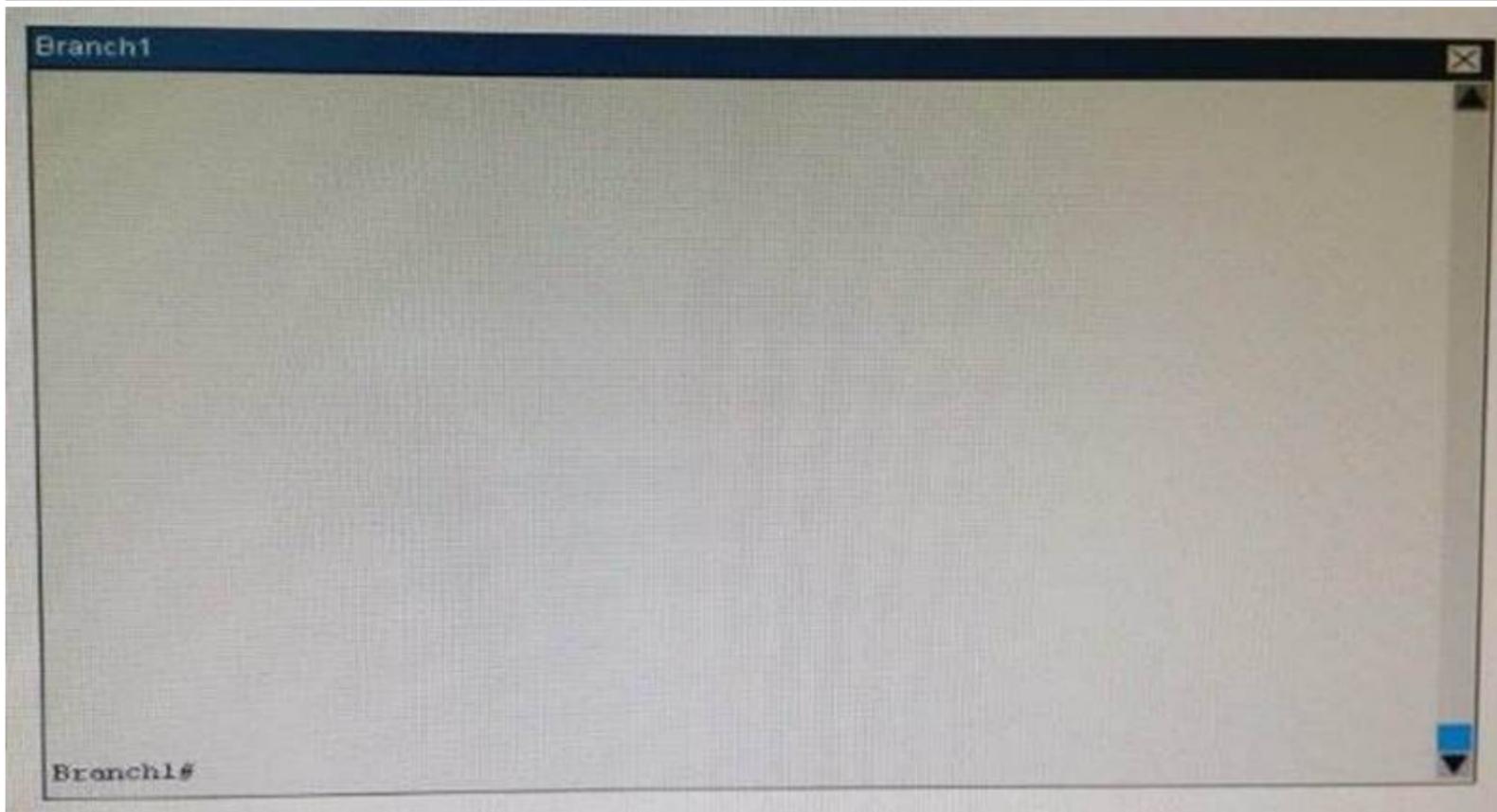
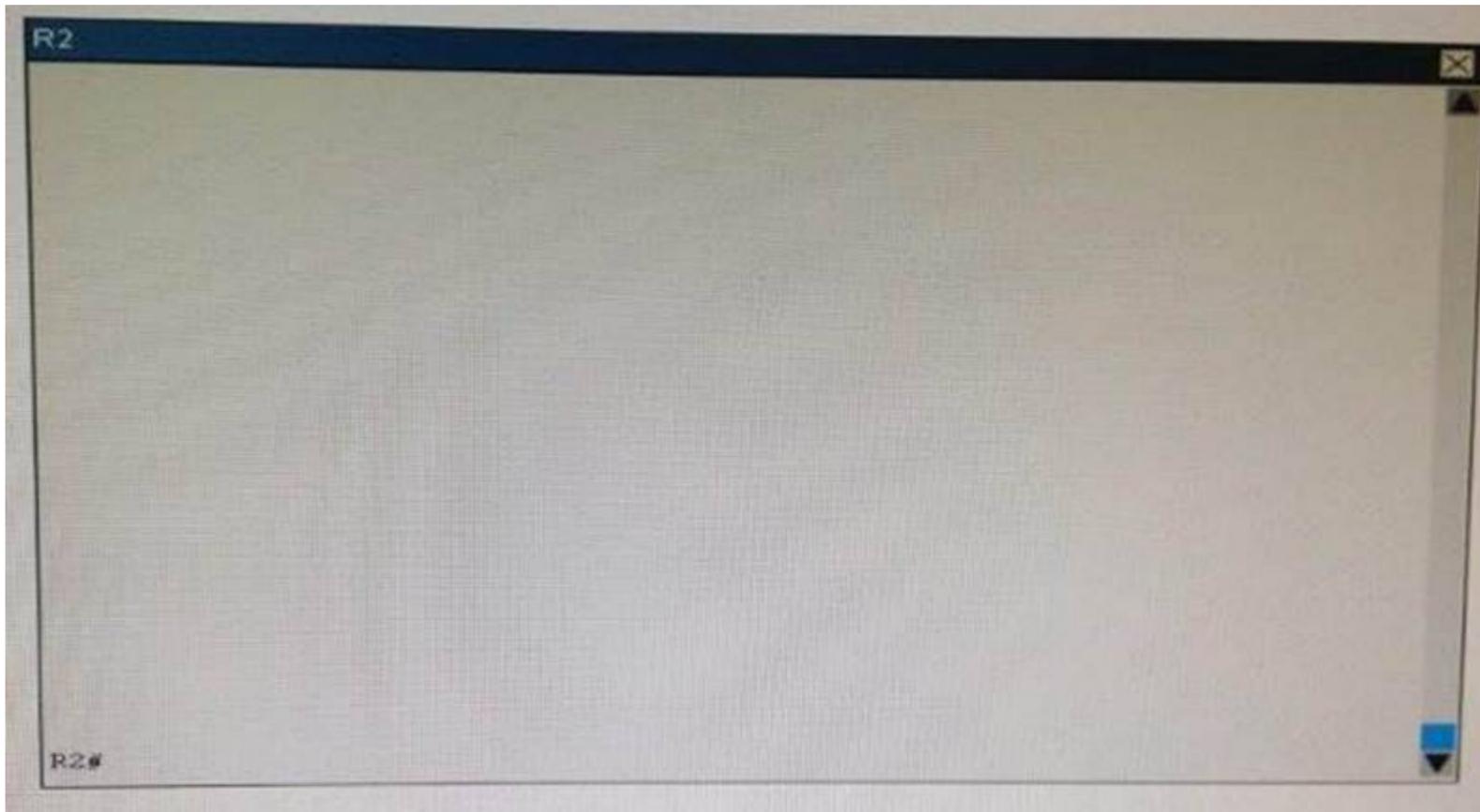


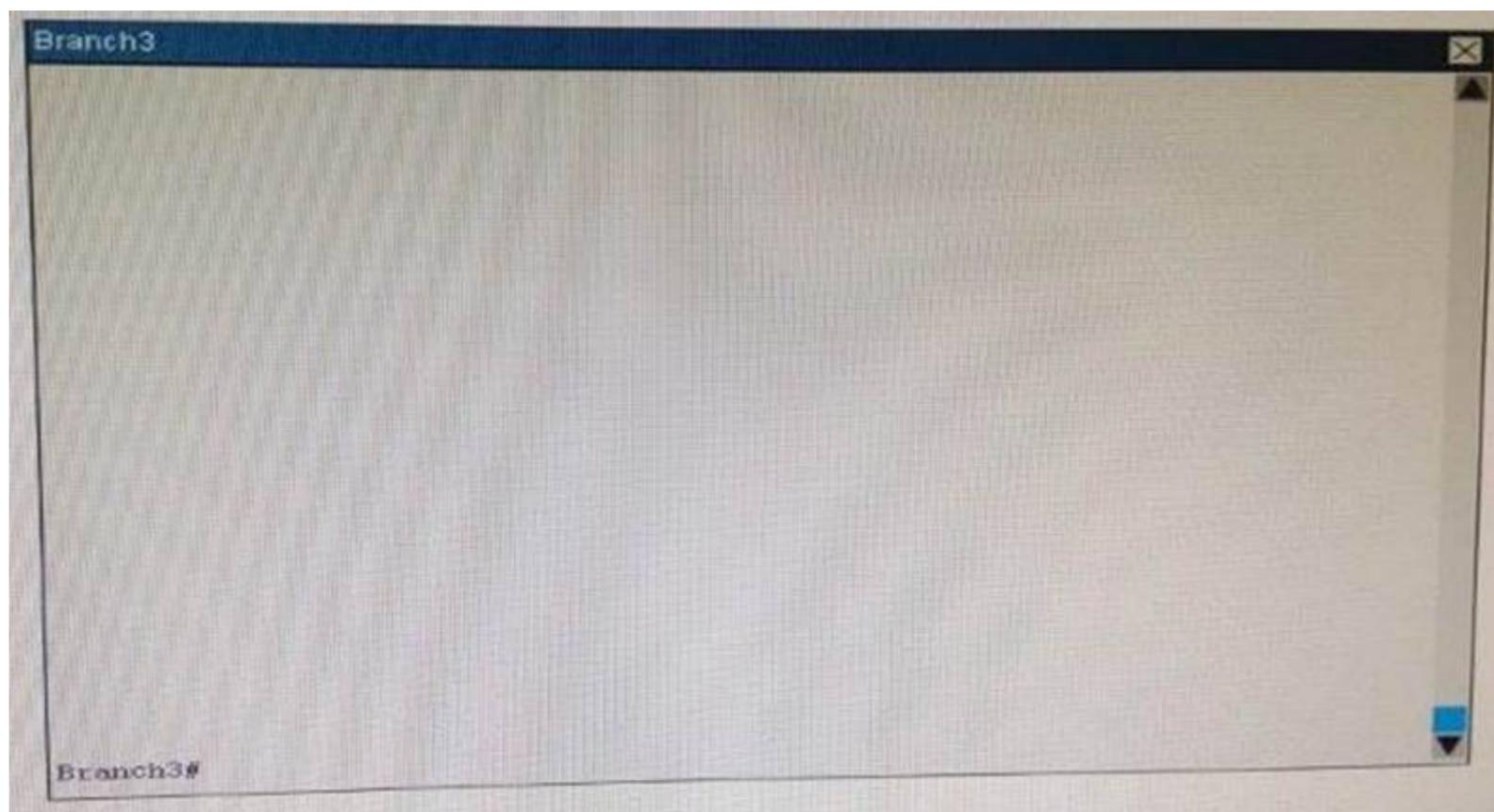
**R1**

```

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 534**

Refer to the exhibit.

```

R1
interface Loopback0
 ip address 172.16.1.1 255.255.255.255

interface FastEthernet0/0
 ip address 192.168.12.1 255.255.255.0

interface FastEthernet0/1
 ip address 192.168.10.1 255.255.255.0

router ospf 1
 router-id 172.16.1.1
 network 172.16.1.1 0.0.0.0 area 0
 network 192.168.10.0.0.0.255 area 0
    
```

You have discovered that computers on the 192.168.10.0/24 network can ping their default gateway, but they cannot connect to any resources on a remote network. Which reason for the problem is most likely true?

- A. The 192.168.12.0/24 network is missing from OSPF
- B. The OSPF process ID is incorrect
- C. The OSPF area number is incorrect.
- D. An ARP table entry is missing for 192.168.10.0.
- E. A VLAN number is incorrect for 192.168.10.0.

**Answer:** A

**NEW QUESTION 535**

Drag and drop the BGP terms from the left onto the correct descriptions on the right.

autonomous system	block of IP addresses
external BGP	relationship between peers in different autonomous systems
internal BGP	relationship between peers in the same autonomous system
prefix	separate network operating within one administrative domain
private AS range	value between 1 and 64,511
public AS range	value between 64,512 and 65,535

**Answer:**

**Explanation:** external BGP = peers are in different autonomous systems (AS) internal BGP = peers are in the same autonomous systems  
Autonomous System = separate network operating within one administrative domain Private autonomous system (AS) = numbers which range from 64512 to 65535 Public AS = between 1 and 64511  
Prefix = block of IP addresses

**NEW QUESTION 538**

Which symptom most commonly indicates that two connecting interfaces are configured with a duplex mismatch?

- A. interface with an up/down status
- B. collisions on the interface
- C. an interface with a down/down status
- D. the spanning-tree process shutting down

Answer: B

**NEW QUESTION 539**

Refer to the Exhibit.

```

R1#show ip route | b Gateway

Gateway of last resort is 10.111.34.105 to network 0.0.0.0

B* 0.0.0.0/0 [20/0] via 10.111.34.105, 2w6d
   10.0.0.0/8 is variably subnetted, 9 subnets, 3 masks
C   10.43.76.0/25 is directly connected, GigabitEthernet0/0
L   10.43.76.125/32 is directly connected, GigabitEthernet0/0
C   10.48.151.196/30 is directly connected, FastEthernet0/2/0
L   10.48.151.197/32 is directly connected, FastEthernet0/2/0
C   10.111.34.104/30 is directly connected, Serial0/0/0
L   10.111.34.106/32 is directly connected, Serial0/0/0
D   10.111.34.108/30
    [90/2181120] via 10.48.151.198, 2w6d, FastEthernet0/2/0
C   10.111.248.26/32 is directly connected, Loopback0
D   10.111.248.27/32
    [90/156160] via 10.48.151.198, 2w6d, FastEthernet0/2/0
    
```

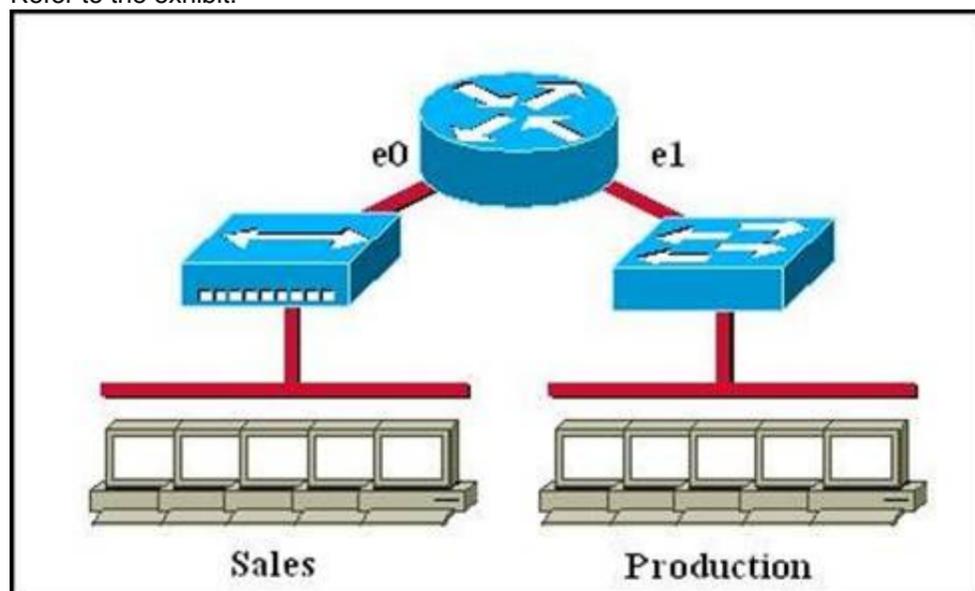
Which two facts about the routing table are true? (Choose two)

- A. Nine different networks are within the 10.0.0.0/8 range.
- B. The router uses interface GigabitEthernet0/0 to reach host address 10.111.35.106
- C. Three different networks are within the 10.0.0.0/8 range.
- D. The router uses interface Serial0/0/0 to reach network 192.168.1.0/24
- E. The router uses interface Serial 0/0/0 to reach host address 10.43.76.123

Answer: AD

**NEW QUESTION 544**

Refer to the exhibit.



Which two statements describe the network shown in the graphic? (Choose two)

- A. There are two broadcast domains in the network.
- B. There are four broadcast domains in the network.
- C. There are seven collision domains in the network.
- D. There are six broadcast domains in the network.
- E. There are five collision domains in the network.
- F. There are four collision domains in the network.

Answer: AC

**NEW QUESTION 546**

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 549**

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 551**

Which command should you enter to configure a single port to bypass the spanning-tree Forward and Delay timers?

- A. spanning-tree portfast
- B. spanning-tree portfast default
- C. spanning-tree portfast bpduguard default
- D. spanning-tree portfast bpduguard default

**Answer: A**

**NEW QUESTION 555**

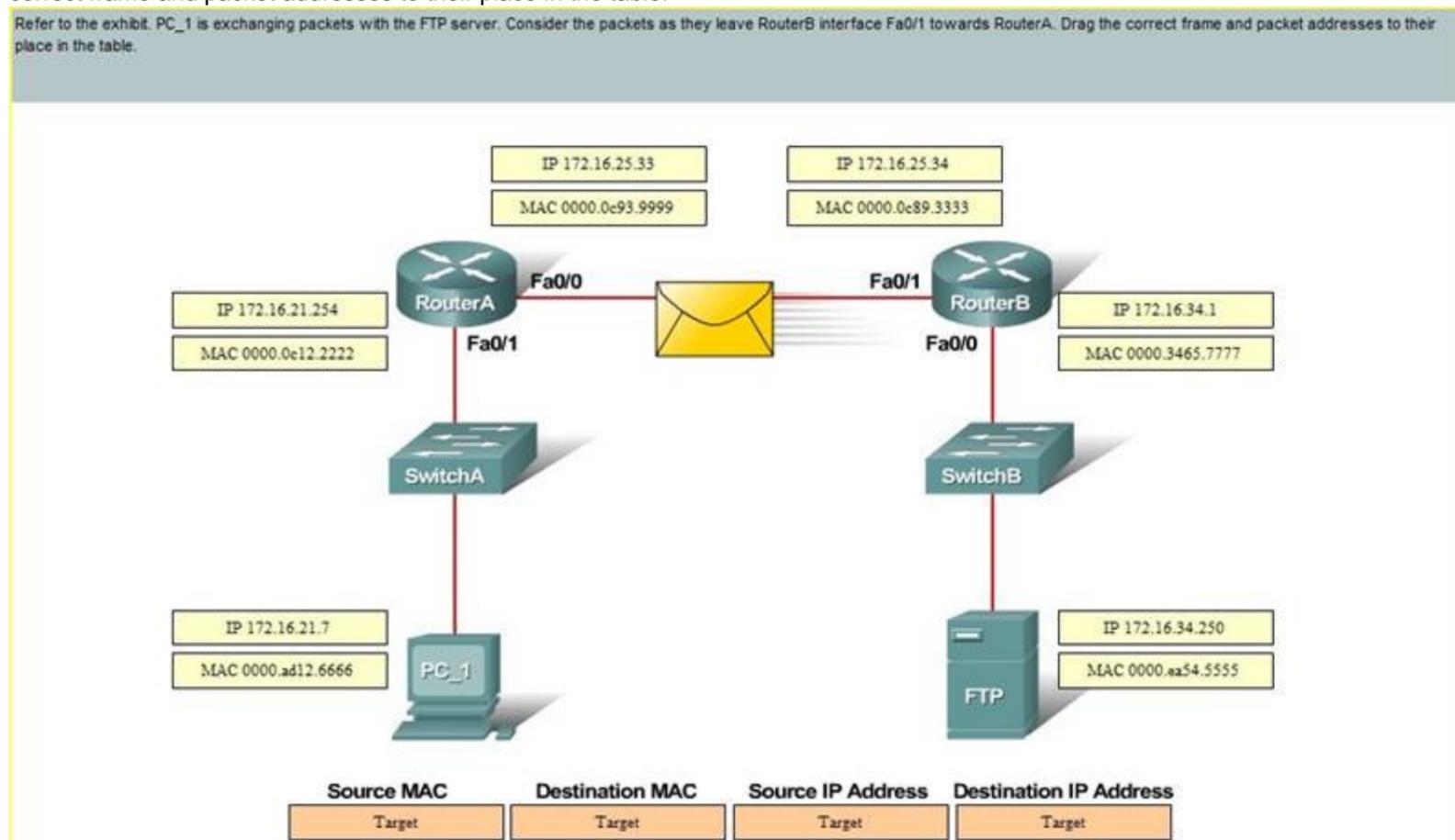
Which chassis-aggregation technology combines two physical switches into one virtual switch?

- A. LACP
- B. VRRP
- C. VSS
- D. StackWise

**Answer: C**

**NEW QUESTION 559**

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 Address Destination Mac Address Source IP address Destination MAC address MAC 0000.0c89.3333 MAC 0000.0c89.9999 IP 172.16.34.250 IP 172.16.21.7

**NEW QUESTION 564**

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 568**

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 569**

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 574**

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 579**

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 581**

Which technology provides chassis redundancy in a VSS environment?

- A. OBFD
- B. Stack Wise
- C. VRRP
- D. multichassis EtherChannels

**Answer:** D

**NEW QUESTION 585**

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 589**

For what two purposes does the Ethernet protocol use physical addresses? (Choose two)

- A. to establish a priority system to determine which device gets to transmit first
- B. to allow communication between different devices on the same network
- C. to allow communication with devices on a different network
- D. to uniquely identify devices at Layer 2
- E. to allow detection of a remote device when its physical address is unknown
- F. to differentiate a Layer 2 frame from a Layer 3 packet

**Answer:** BD

**NEW QUESTION 590**

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 593**

Which two descriptions of TACACS+ are true? (Choose two)

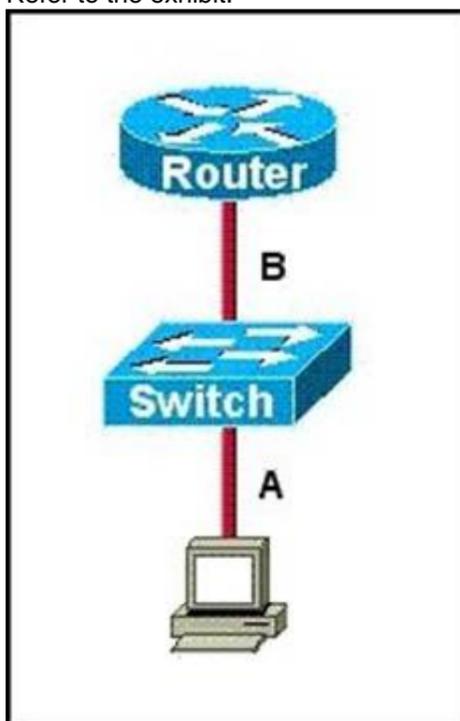
- A. It can authorize specific router commands.
- B. It encrypts only the password.
- C. It separates authentication, authorization, and accounting functions
- D. It combines authentication and authorization.
- E. It uses UDP as its transport protocol

**Answer:** AC

**Explanation:** <https://www.cisco.com/c/en/us/support/docs/security-vpn/remote-authentication-dial-user-service-radius/13838->

**NEW QUESTION 597**

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 601**

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 605**

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 607**

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 611**

Which command should you use to display detailed information about EBGP peers?

- A. show ip bgp
- B. show ip bgp neighbors
- C. show ip bgp summary
- D. show ip bgp paths

**Answer:** D

**NEW QUESTION 615**

Which two tasks should you perform to begin troubleshooting a network problem? (Choose two)

- A. Gather all the facts.
- B. Monitor and verify the resolution
- C. Define the problem as a set of symptoms and causes
- D. Analyze the results.
- E. Implement an action plan

**Answer:** AE

**NEW QUESTION 616**

Which IPv6 address is the all-router multicast group?

- A. FF02::1
- B. FF02::2
- C. FF02::3
- D. FF02::4

**Answer:** B

**Explanation:** Well-known IPv6 multicast addresses:

Address Description  
ff02::1  
All nodes on the local network segment  
ff02::2  
All routers on the local network segment

**NEW QUESTION 618**

Which two benefits of implementing a full-mesh WAN topology are true? (Choose two)

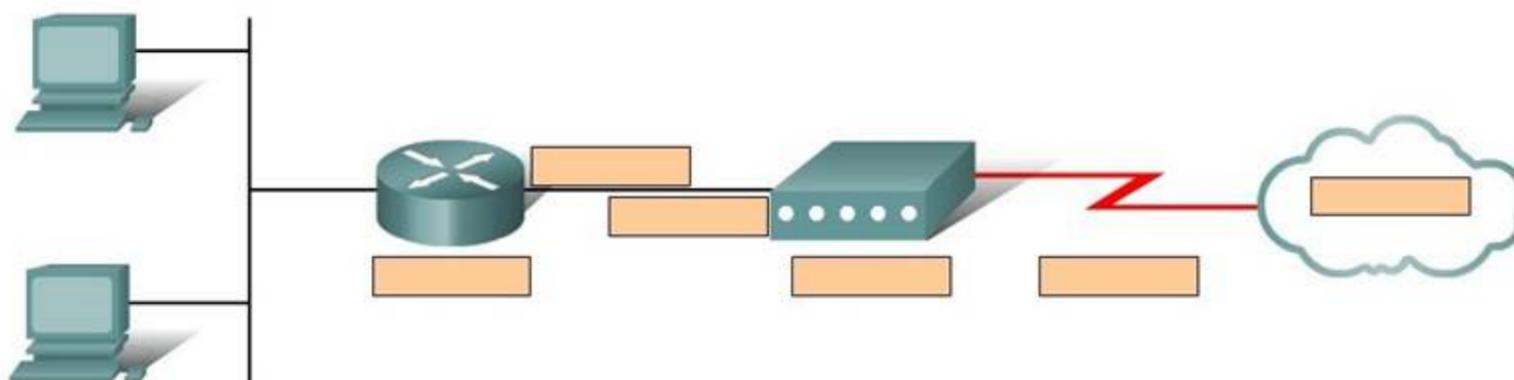
- A. increased latency
- B. redundancy
- C. reduced jitter
- D. improved scalability
- E. reliability

**Answer:** BE

**NEW QUESTION 619**

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.

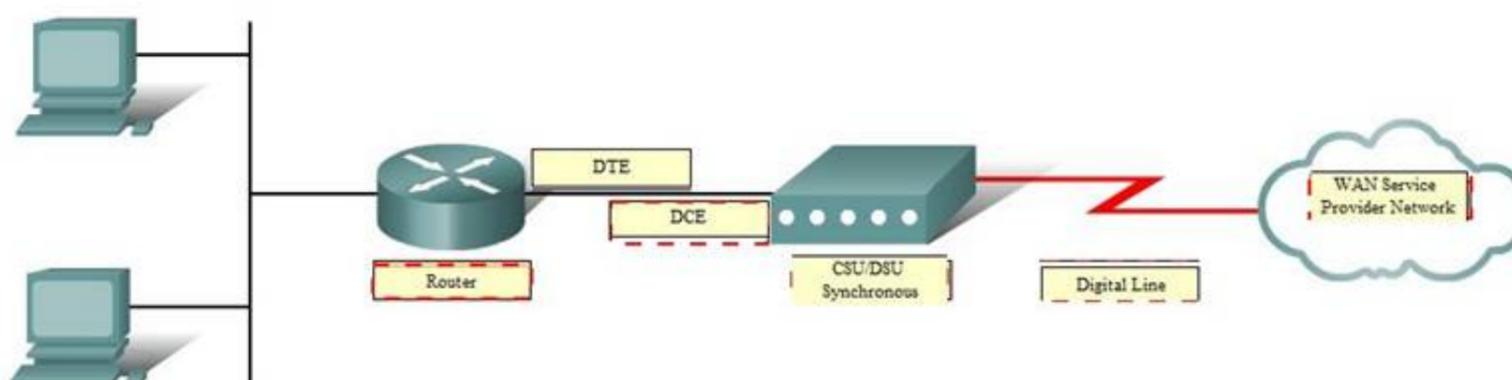
Refer to the exhibit. Complete this network diagram by dragging the correct device name or description to the correct location. Not all the names or descriptions will be used.



- Digital Line
- CSU/DSU Synchronous
- Analog Modem Asynchronous
- WAN Service Provider Network
- Router
- Switch
- DTE
- DCE

**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.



- Digital Line
- CSU/DSU Synchronous
- Analog Modem Asynchronous
- WAN Service Provider Network
- Router
- Switch
- DTE
- DCE

Topic 5, New Pool E (Latest)

**NEW QUESTION 624**

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 adventerprise9-mz-124-6T.bin
- C. Router>noot flash:c180-adventerprise9-mz-124-6t.bin
- D. Router(confi)#boot bootldr bootflash:c4500-jk9s-mz.122-23f.bin
- E. Router(config)#boot system tftp c7300-js-mz.122-33.SB8a.bin
- F. Router(Configure)#boot system rom c7301-advservicek9-mz.124-24.T4.bin

**Answer:** AF

**NEW QUESTION 627**

Which two differences between distance -vector and link-state routing protocols are true?

- A. Only distance-vector routing protocol send full routing table updates.
- B. Only distance-vector routing protocol offer faster convergence than distance-vector protocol during network changes.
- C. Distance-vector routing protocols are less susceptible to loops than link-state protocols.
- D. Only link-state routing protocols use can the Bellman-Ford algorithm.

**Answer:** C

**NEW QUESTION 630**

Which two services can be provided by a wireless controller?

- A. mitigating threats from the Internet
- B. issuing IP addresses to wired devices
- C. Layer 3 routing between wired and wireless devices
- D. Providing authentication services to users
- E. managing interface in a dense network

**Answer: BD**

**NEW QUESTION 634**

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 636**

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 639**

Refer to the Exhibit.

```
R1# show ip route
C    192.168.10.0/24 is directly connected, Vlan10
O    192.168.11.0/24 [110/2] 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 [120/2] via 192.168.250.35, 7w0d
B    172.20.20.21 [20/0] via 192.168.220.40, 7w9d
O    172.20.30.21 [110/2] via 192.168.200.45, 2d19h
```

Which two routes are using a link state protocol? (Choose two)

- A. 172.20.30.21
- B. 192.168.11.0/24
- C. 172.20.20.21
- D. 172.20.10.21
- E. 192.168.10.0/24

**Answer: BC**

**NEW QUESTION 644**

Refer to the exhibit.

```
CiscoSwitch-MDF-1#configure terminal
CiscoSwitch-MDF-1#interface VLAN 1
CiscoSwitch-MDF-1(config-if)#ip address 192.168.2.2 255.255.255.0
CiscoSwitch-MDF-1(config-if)#end
```

What is the effect of the given configuration?

- A. It configures an inactive switch virtual interface.
- B. It configures an active management interface.
- C. It configures the native VLAN.
- D. It configures the default VLAN.

**Answer: A**

**NEW QUESTION 648**

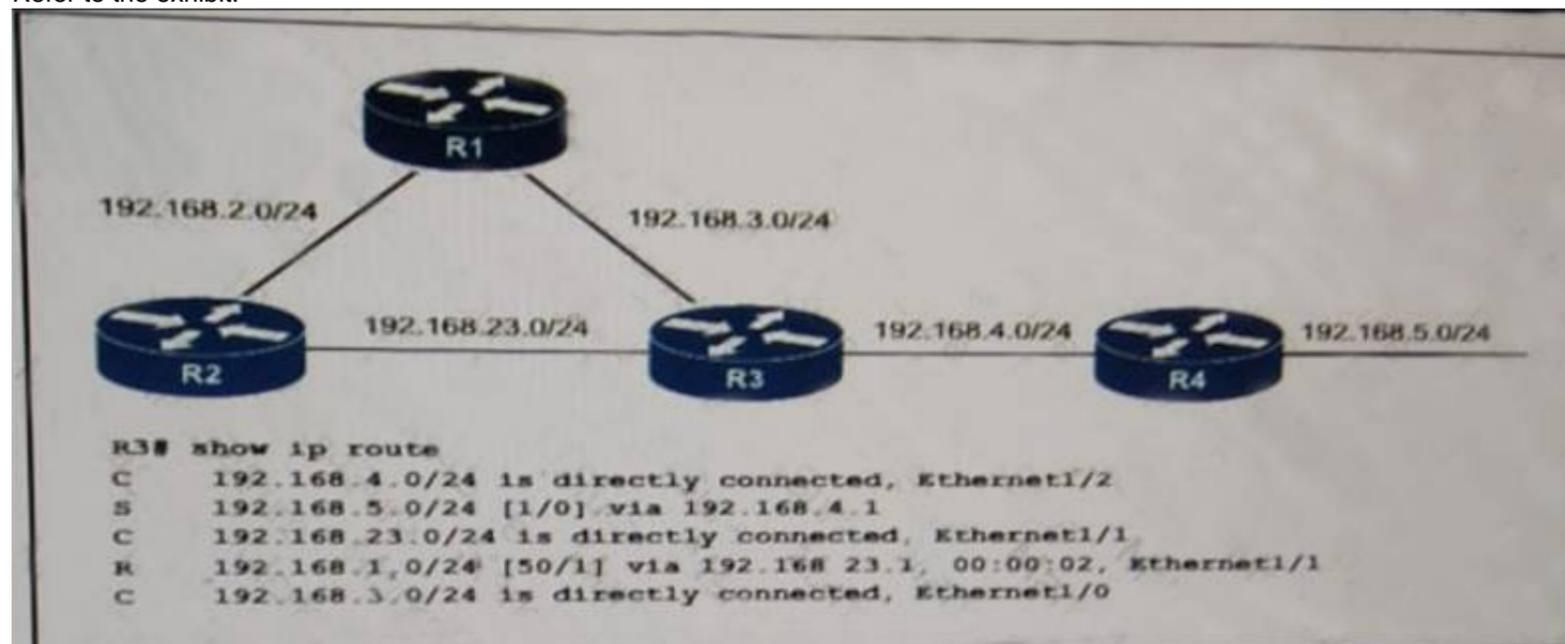
Which condition that defines a DMVPN cloud is most important?

- A. It is a Layer 2 MPLS cloud that includes devices in different physical locations.
- B. It uses point-to-point links to connect hub pairs
- C. It uses point-to-point links to connect the hub and spoke routers.
- D. It uses mGRE tunnels to interconnect the hub and spoke routers.

**Answer: D**

**NEW QUESTION 650**

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 654**

Which step must you perform first to begin a TACACS+ configuration?

- A. Configure a TACACS+ server.
- B. Associate the TACACS+ server to an AAA group
- C. Enable AAA services.
- D. Configure a local user

**Answer: C**

**NEW QUESTION 659**

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 661**

Which two statements about 1000BASE-T UTP cable are true? (Choose two)

- A. It uses four wires.
- B. It uses four wire pairs.
- C. It is most appropriate for installations up to 1000 feet in length.
- D. It is most appropriate for installations up to 1000 meters in length.
- E. Both ends of the cable can transmit and receive simultaneously.

**Answer: BE**

**NEW QUESTION 663**

Which two results occur when the ipv6 enable command is entered? (Choose two)

- A. An IPv6 EUI-64 interface ID is configured automatically on the interface.
- B. IPv6 is enabled on a single interface.
- C. An IPv6 link-local unicast address is configured automatically on the interface.
- D. The administrator is prompted to configure an IP address on the interface

E. IPv6 is enabled globally on the device.

**Answer:** BC

**NEW QUESTION 667**

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 671**

Which PPP subprotocol negotiates authentication options?

- A. LCP
- B. ISDN
- C. DLCI
- D. SLIP
- E. NCP

**Answer:** A

**NEW QUESTION 674**

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 679**

Which command can you enter to set the default route for all traffic to an IP address router interface?

- A. router(config)#ip router 0.0.0.0 255.255.255.255 GigabitEthernet0/1
- 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 682**

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 684**

Several users on your network have complained of connectivity issues to a specific host. While troubleshooting task can you perform to eliminate DNS issues as the cause?

- A. Connect to the host by its IP address
- B. Verify the DHCP settings on the host
- C. Verify that a valid route to the host is present in the routing table
- D. Connect to the host by its FQDN

**Answer:** D

**NEW QUESTION 686**

Under which two circumstances is a switch port that is configured with PortFast BPDU guard error-disabled? (Choose two.)

- A. when a single IP address is configured on the switch
- B. when the switch receives a request for an IP address from an individual PC

- C. when a connected server has more than one VLAN configured on its NIC
- D. when the switch receives a BPDU from a connected switch
- E. when a wireless access point running in bridge mode is connected to a switch

**Answer:** CE

**NEW QUESTION 688**

Which three advantages can static routing provide over dynamic routing? (Choose three)

- A. Static routing is less time-consuming to manage in large networks than dynamic routing
- B. Static routing requires fewer resources than dynamic routing
- C. Static routes are more predictable than dynamic routes.
- D. Unlike dynamic routing, static routing can operate normally without routine advertisements
- E. Unlike dynamic routing, static routing allows the router to choose the best path
- F. Unlike dynamic routing, static routing can automatically adjust the topology when traffic requires rerouting

**Answer:** BCD

**NEW QUESTION 692**

Which two descriptions of the default behavior of a router when you enter an invalid Cisco IOS CLI command are true?

- A. The router returns an error message.
- B. The router queries the default DNS server for the invalid command.
- C. The router prompts the user to enter an IP address.
- D. The router sends a broadcast message in an attempt to resolve the invalid command to an IP address.
- E. The router displays a system message prompting you to configure a DNS server.
- F. The router interprets the invalid command as a hostname

**Answer:** AF

**NEW QUESTION 694**

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 697**

Refer to the exhibit.

```

SwitchC# show interface fa0/1
FastEthernet0/1 is up, line protocol is up (connected)
  Hardware is Fast Ethernet, address is 0013.8030.5e83)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 14/255, rxload 14/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
. Text omitted
  5 minute input rate 364000 bits/sec, 344 packets/sec
  5 minute output rate 367000 bits/sec, 338 packets/sec
    16973 packets input, 2400313 bytes, 0 no buffer
    Received 1244 broadcasts (0 multicast)
    0 runts, 3 giants, 0 throttles
    741 input errors, 738 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 1243 multicast, 0 pause input
    0 input packets with dribble condition detected
    16420 packets output, 2375034 bytes, 0 underruns
. Text omitted
  
```

Given this output for SwitchC, what should the network administrator's next action be?

- A. Check the trunk encapsulation mode for SwitchC's fa0/1 port.
- B. Check the duplex mode for SwitchC's fa0/1 port.
- C. Check the duplex mode for SwitchA's fa0/2 port.
- D. Check the trunk encapsulation mode for SwitchA's fa0/2 port.

**Answer:** C

**Explanation:** Here we can see that this port is configured for full duplex, so the next step would be to check the duplex setting of the port on the other switch. A mismatched trunk encapsulation would not result in input errors and CRC errors.

**NEW QUESTION 702**

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 705**

Which two values are needed to run the APIC-EM ACL Analysis tool? (Choose two.)

- A. destination address
- B. protocol
- C. source address
- D. source port
- E. periodic refresh interval
- F. destination port

**Answer:** AD

**NEW QUESTION 707**

Which two design models can you use to deploy DMVPN? (Choose two)

- A. WAN aggregation
- B. DMVPN only
- C. Internet VPN
- D. DMVPN backup shared
- E. dual DMVPN
- F. DMVPN backup dedicated

**Answer:** BE

**NEW QUESTION 710**

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 714**

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 719**

Which two pieces of information is displayed with the show ip eigrp interfaces command? (Choose two)

- A. number of routes in the transmit queue of each EIGRP interface
- B. transmit and receive rates of each local EIGRP interface
- C. reliability of each EIGRP interface
- D. number of directly connected EIGRP neighbors on each EIGRP interface
- E. number of errors on each EIGRP interface

**Answer:** CD

**NEW QUESTION 721**

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 725**

Which two conditions must be met before two devices can establish a BGP neighbor relationship? (Choose two)

- A. Cisco Discovery Protocol must be enabled on both devices.
- B. a Local AS number must be assigned on each device.
- C. The AS number of the neighbor must be configured on each device.
- D. The two devices must be connected by a Layer 2 device.
- E. An IGP must be running between the two devices.

**Answer: BC**

**NEW QUESTION 727**

Which two statements about the tunnel mode ipv6ip command are true? (Choose two.)

- A. It specifies that the tunnel is a Teredo tunnel.
- B. It specifies IPv6 as the encapsulation protocol.
- C. It enables the transmission of IPv6 packets within the configured tunnel.
- D. It specifies IPv4 as the encapsulation protocol.
- E. It specifies IPv6 as the transport protocol.

**Answer: CD**

**NEW QUESTION 732**

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 735**

Which command is used to enter IP SLA configuration mode?

- A. icmp-echo
- B. frequency
- C. ip sla
- D. enable

**Answer: C**

**NEW QUESTION 738**

Which two statements about wireless controllers are true? (Choose two)

- A. They provide Layer 2 services only
- B. They can be configured as virtual controllers to support autonomous access points
- C. They provide the configuration for managed access points on the network
- D. They are intended to directly manage a small number of access points
- E. At least one physical controller is needed to manage the virtual controllers of a network
- F. They can facilitate load balancing between access points

**Answer: CF**

**NEW QUESTION 742**

What is the default Syslog facility level?

- A. local4
- B. local5
- C. local7
- D. local6

**Answer: C**

**NEW QUESTION 744**

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, lwl0, 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 749**

When EIGRP for IPv6 is configured, what is the effect of the distance 100 150 command?

- A. It adds 100 to the external administrative distance and adds 150 to the internal administrative distance
- B. It sets the internal EIGRP administrative distance to 100 and the external EIGRP administrative distance to 150
- C. It sets the external EIGRP administrative distance to 100 and the internal EIGRP administrative distance to 150
- D. It adds 100 to the internal administrative distance and adds 150 to the external administrative distance

Answer: B

**NEW QUESTION 751**

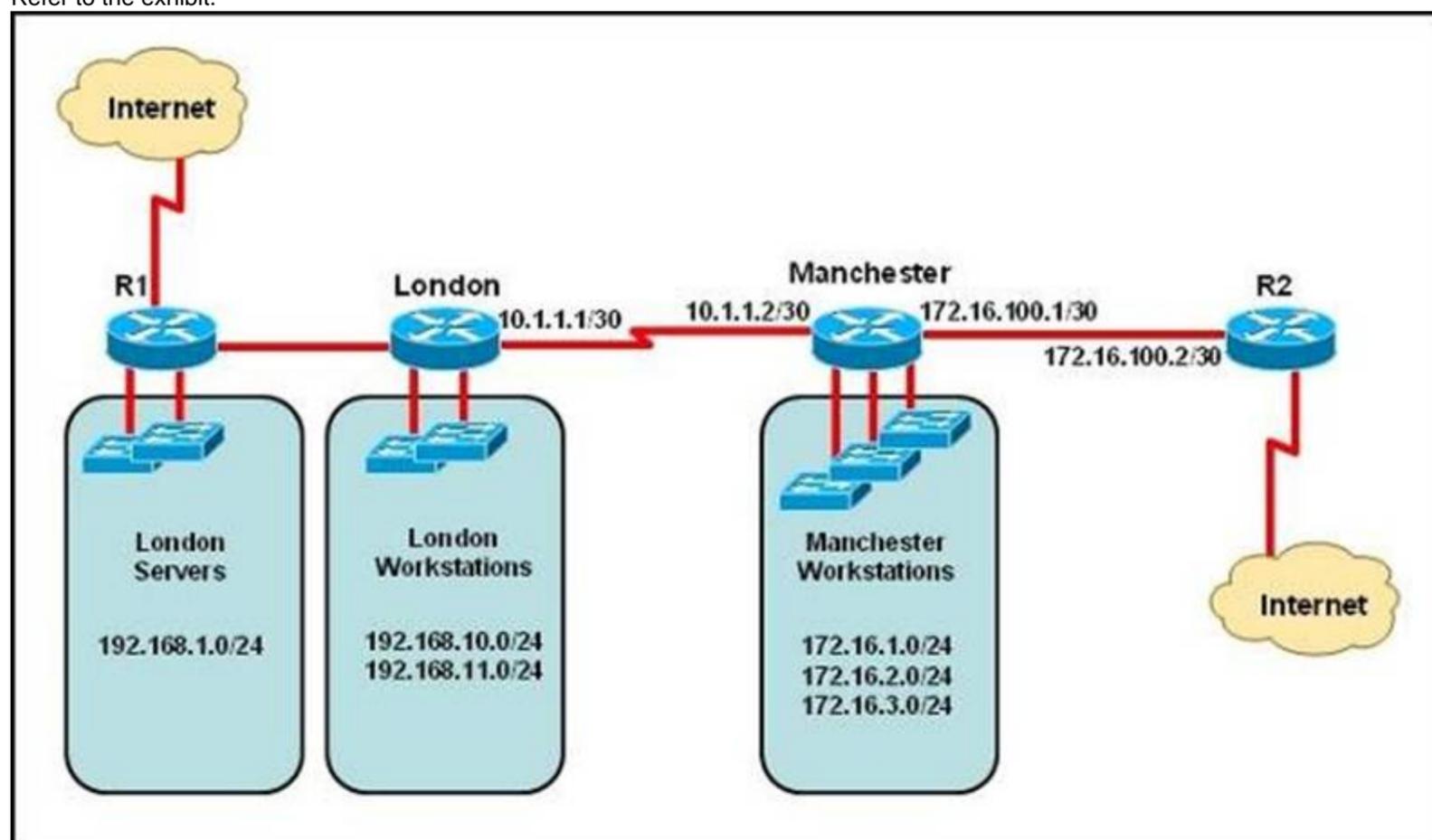
Which three values can be included in the routing table of a router? (Choose three)

- A. classful and classless destination addresses
- B. source interfaces
- C. Routgoing interfaces
- D. source IP addresses
- E. next hop IP address
- F. destination IP addresses

Answer: CDF

**NEW QUESTION 752**

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 756**

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 759**

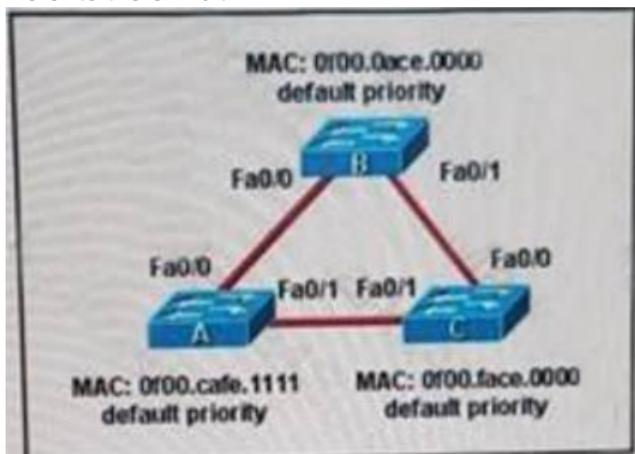
Which two statements about northbound and southbound APIs are (true? (Choose two.)

- A. Only southbound APIs allow program control of the network.
- B. Both northbound and southbound APIs allow program control of the network.
- C. Both northbound and southbound API interlaces use a Service Abstraction Layer.
- D. Only northbound APIs allow program control of the network.
- E. Only southbound API .interlaces use a Service Abstraction Layer.
- F. Only northbound API interfaces use a Service Abstraction Layer.

**Answer:** DE

**NEW QUESTION 764**

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 765**

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 769**

What authentication type is used by SNMPv2?

- A. username and password
- B. community strings
- C. HMAC-SHA

D. HMAC-MD5

**Answer: B**

**NEW QUESTION 773**

Which command should you enter to configure a single port to discard inferior BPDUs?

- A. spanning-tree portfast bpdufilter default
- B. spanning-tree guard root
- C. spanning-tree portfast bpduguard
- D. spanning-tree portfast bpdufilter

**Answer: C**

**NEW QUESTION 777**

Which protocol is typically used for communication between an NMS and an agent on a network device?

- A. syslog
- B. MIB
- C. SNMP
- D. SMTP

**Answer: C**

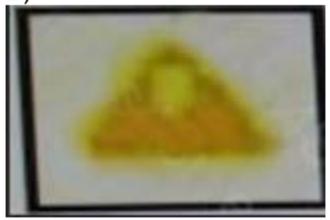
**NEW QUESTION 782**

Which symbol in the APIC-EM path Trace tool output indicates that an ACL is present and might deny packets?

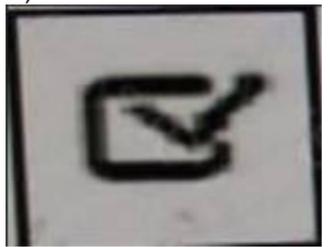
A)



B)



C)



D)



- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer: C**

**NEW QUESTION 784**

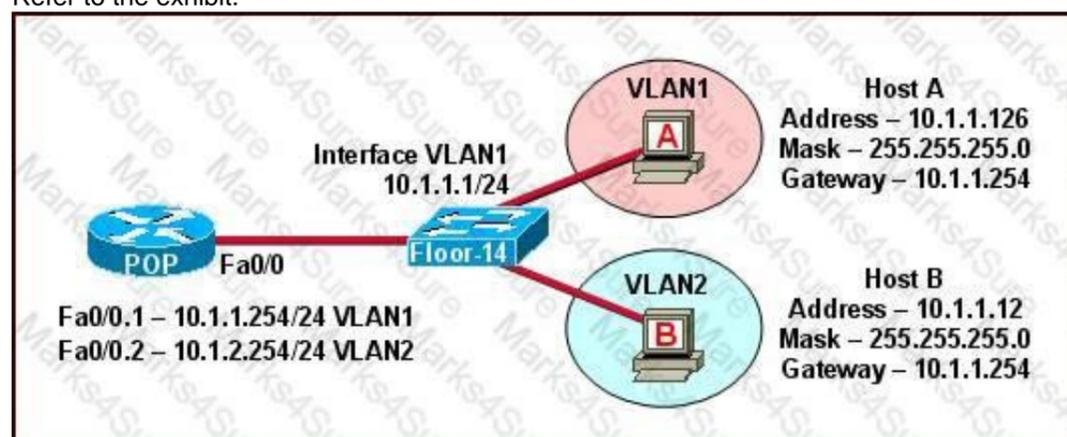
Which two statements about floating static routes are true? (Choose two)

- A. They are used when a route to the destination network is missing.
- B. They are used as backup routes when the primary route goes down.
- C. They are dynamic routes that are learned from a server.
- D. They have a higher administrative distance than the default static route administrative distance.
- E. They are routes to the exact /32 destination address.

Answer: BD

**NEW QUESTION 785**

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 787**

Which utility can you use to identify the cause of a traffic-flow blockage between two devices in a network?

- A. ACL analysis tool in APIC-EM
- B. ACL path analysis tool in APIC-EM
- C. APIC-EM automation scheduler
- D. iWan application

Answer: B

**NEW QUESTION 788**

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 791**

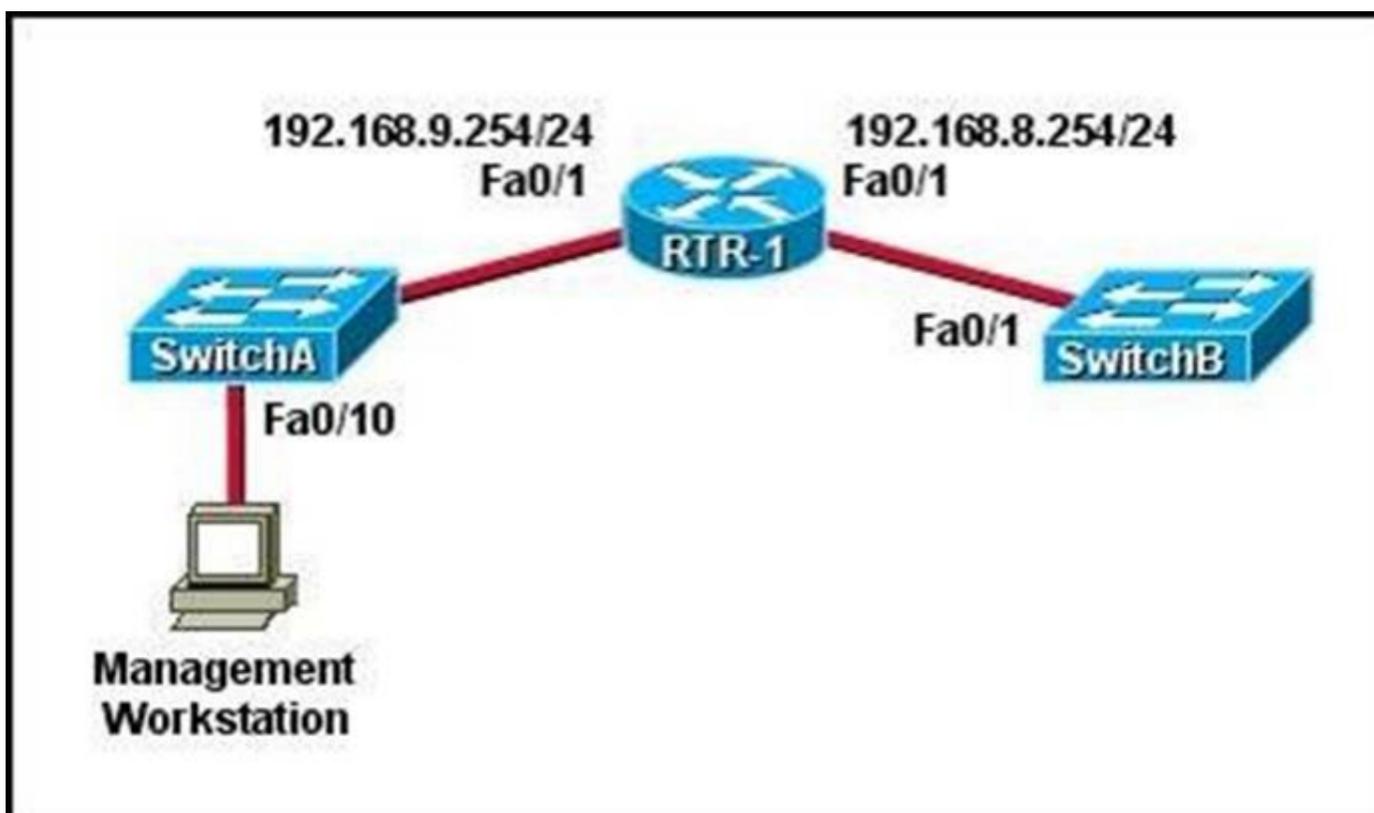
Which two advantages do dynamic routing protocols provide over static routing? (Choose two)

- A. Dynamic routing requires fewer resources than static routing.
- B. Only dynamic routing is supported on all topologies that require multiple routers.
- C. Dynamic routing protocols are easier to manage on very large networks.
- D. Dynamic routing protocols automatically adapt to reroute traffic if possible.
- E. Dynamic routing is more secure than static routing.

Answer: CD

**NEW QUESTION 792**

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 795

Which two layers can be found in the TCP/IP model and the OSI model? (Choose two)

- A. application
- B. presentation
- C. network
- D. transport
- E. physical

**Answer: BD**

#### NEW QUESTION 796

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 800

Which two technologies can combine multiple physical switches into one logical switch? (Choose two.)

- A. StackWise
- B. VSS
- C. VRRP
- D. GLBP
- E. HSRP

**Answer: AB**

**NEW QUESTION 803**

Which two pieces of information can you determine from the output of the show ntp status command? (Choose two.)

- A. whether the clock is synchronized
- B. the NTP version number of the peer
- C. the IP address of the peer to which the clock is synchronized
- D. whether the NTP peer is statically configured
- E. the configured NTP servers

**Answer:** AC

**NEW QUESTION 806**

Which two EtherChannel PAgP modes can you configure? (Choose two.)

- A. active
- B. passive
- C. desirable
- D. on
- E. auto

**Answer:** CE

**NEW QUESTION 807**

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 811**

Which two statements about the extended tracerroute 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 816**

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 821**

Which command should you enter to configure a device as an NTP sever?

- A. ntp peer
- B. ntp authenticate
- C. ntp sever
- D. ntp master

**Answer:** A

**Explanation:** [https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/system\\_management/503\\_n1\\_1/b\\_cis](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/system_management/503_n1_1/b_cis)

**NEW QUESTION 822**

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 824**

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 825**

A network engineer wants to allow a temporary entry for a remote user with a specific username and password so that the user can access the entire network over the Internet. Which ACL can be used?

- A. dynamic
- B. standard
- C. extended
- D. reflexive

**Answer:** A

**Explanation:** We can use a dynamic access list to authenticate a remote user with a specific username and password. The authentication process is done by the router or a central access server such as a TACACS+ or RADIUS server. The configuration of dynamic ACL can be read here:  
[https://www.cisco.com/en/US/tech/tk583/tk822/technologies\\_tech\\_note09186a0080094524.shtml](https://www.cisco.com/en/US/tech/tk583/tk822/technologies_tech_note09186a0080094524.shtml)

**NEW QUESTION 830**

Which feature enables a router to pass DHCPOFFER 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 832**

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