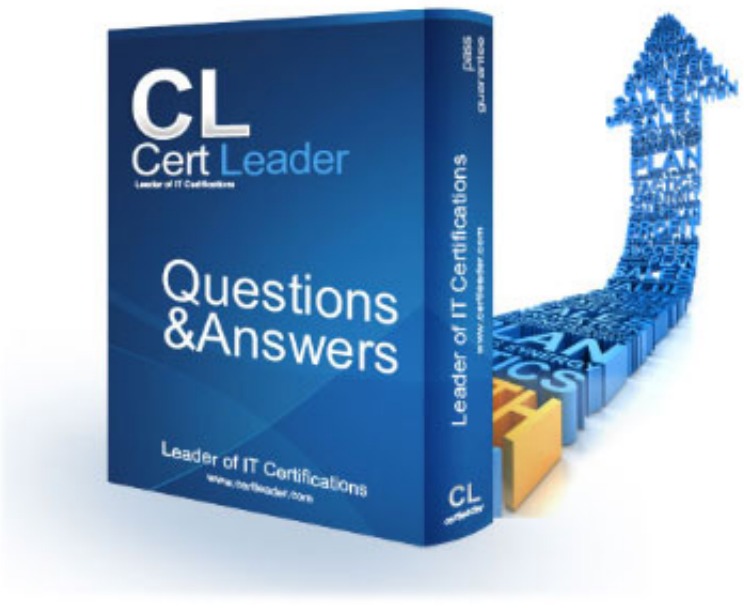
200-125 Dumps

CCNA Cisco Certified Network Associate CCNA (v3.0)

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

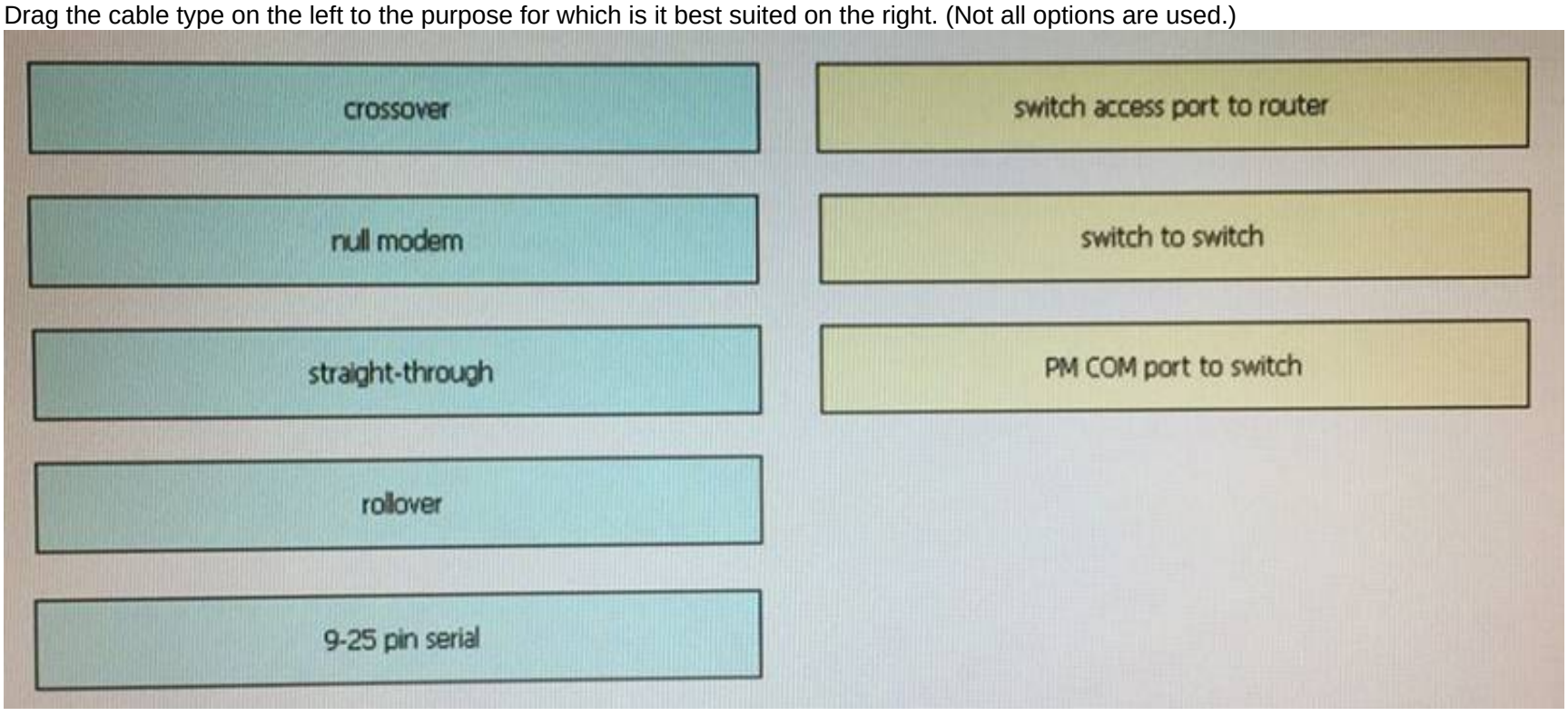


NEW QUESTION 1
Which Type of ipv6 unicast ip address is reachable across the internet ?

A. Unique Local
B. Compatible
C. Link Local
D. Global

Answer: D

NEW QUESTION 2
Drag the cable type on the left to the purpose for which is it best suited on the right. (Not all options are used.)



Answer:

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

NEW QUESTION 3
Which protocol is a Cisco proprietary implementation of STP?

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

Answer: D

NEW QUESTION 4
Which feature is configured by setting a variance that is at least two times the metric?

A. equal cost load balancing
B. unequal cost load balancing
C. Path selection
D. path count

Answer: B

NEW QUESTION 5
In which byte of an IP packet can traffic be marked ?

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

Answer: A

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

NEW QUESTION 6
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 7
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 8
which functionality does split horizon provide ?

A. it Prevents routing loops in distance vector protocols
B. it Prevents switching loops in distance vector protocols
C. it Prevents switching loops in link-state protocols
D. it Prevents routing loops in link-state protocols

Answer: A

NEW QUESTION 9
which port security mode can assist with troubleshooting by keeping count of violations?

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

Answer: C

NEW QUESTION 10
Which port security mode can assist with troubleshooting by keeping count of violations?

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

Answer: C

NEW QUESTION 10
which two options are the best reasons to use an ipv4 private ip space ?

A. to manage routing overhead
B. to implement nat
C. to connect applications
D. to enable intra-enterprise communication
E. to conserve global address space

Answer: AE

NEW QUESTION 13
On which type of port can switches interconnect for multi-VLAN communication?

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

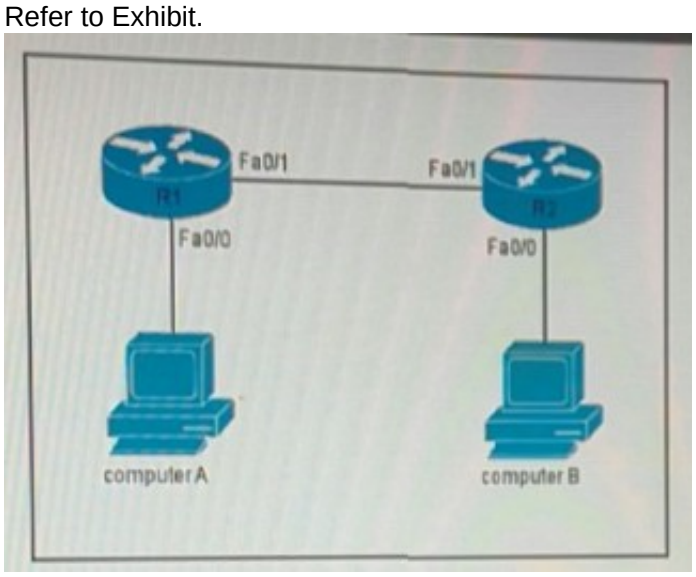
Answer: D

NEW QUESTION 15
Which two statements about unique local IPv6 addresses are true?

A. They are identical to IPv4 private addresses.
B. They are defined by RFC 1884.
C. They use the prefix FEC0::/10
D. They use the prefix FC00::/7
E. They can be routed on the IPv6 global internet.

Answer: AD

NEW QUESTION 17
Refer to Exhibit.



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

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

Answer: C

NEW QUESTION 22
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 24
Which two command can you enter to display the current time sources statistics on devices ? (Choose TWO)

A. Show ntp associations.
B. Show clock details.
C. Show clock.
D. Show time.
E. Show ntp status.

Answer: AE

NEW QUESTION 28
To enable router on a stick on a router subinterface, which two steps must you perform ? choose two

A. configure full duplex and speed
B. configure a default to route traffic between subinterfaces
C. configure the subinterface with an ip address
D. configure encapsulation dot1q
E. configure an ip route to the vlan destination network

Answer: CD

NEW QUESTION 31
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 summarrization

Answer: AB

NEW QUESTION 33
Which configuration command can you apply to a router so that its local interface becomes active if all other routers in the group fail?

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

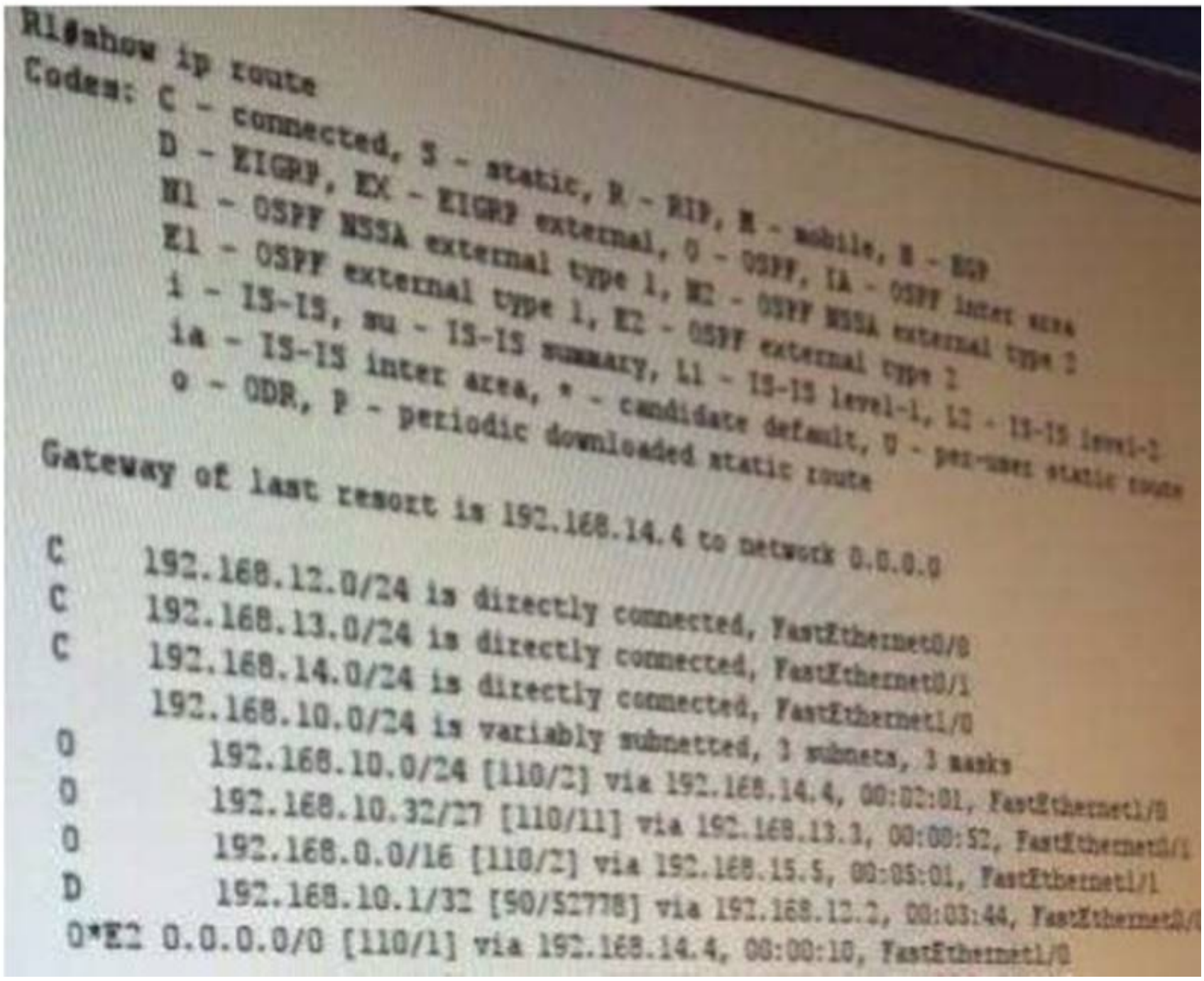
Answer: A

NEW QUESTION 38
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 43
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 48

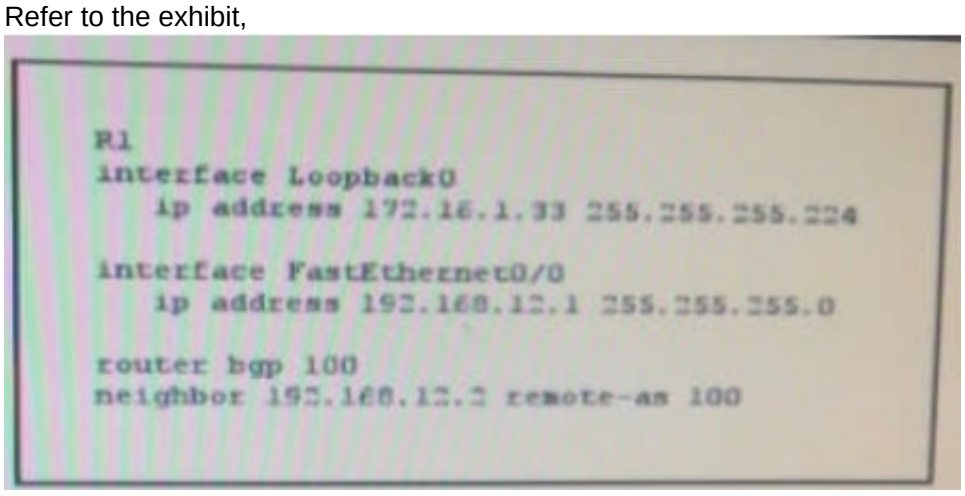
What type of MAC address is aged automatically by the switch?

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

Answer: A

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

NEW QUESTION 50
Refer to the exhibit,



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

A. network 172.16.1.32 mask 255.255.255.224
B. network 172.16.1.0 0.0.0.255
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 54
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

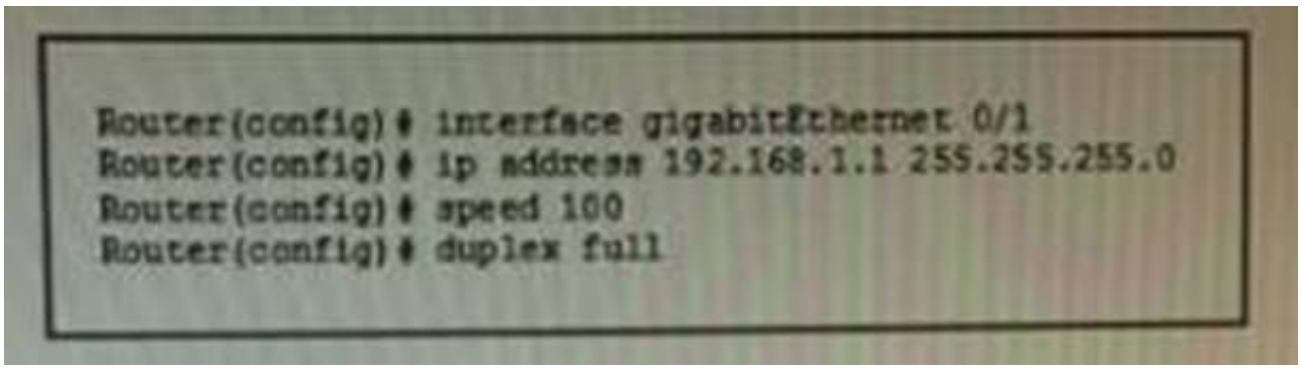
NEW QUESTION 57
which add prefix does OSPFv3 use when multiple IPv6 address are configured on a single interface ?

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

Answer: A

Explanation:
Reference:
http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/15-sy/iro-15-sy-book/ip6-routeospfv3.html#GUID-05F3F09C-FE3E-41D6-9845-111FB17AD030
“In IPv6, you can configure many address prefixes on an interface. In OSPFv3, all address prefixes on an interface are included by default. You cannot select some address prefixes to be imported into OSPFv3; either all address prefixes on an interface are imported, or no address prefixes on an interface are imported.”

NEW QUESTION 62
Refer to exhibit.



Which command can you enter to verify link speed and duplex setting on the interface?

A. router#show ip protocols
B. router#show startup-config
C. router#show line
D. router#show interface gig 0/1

Answer: D

NEW QUESTION 65
Which value is used to determine the active router in an HSRP default configuration ?

A. router tracking number
B. router IP address
C. router priority
D. router loopback address

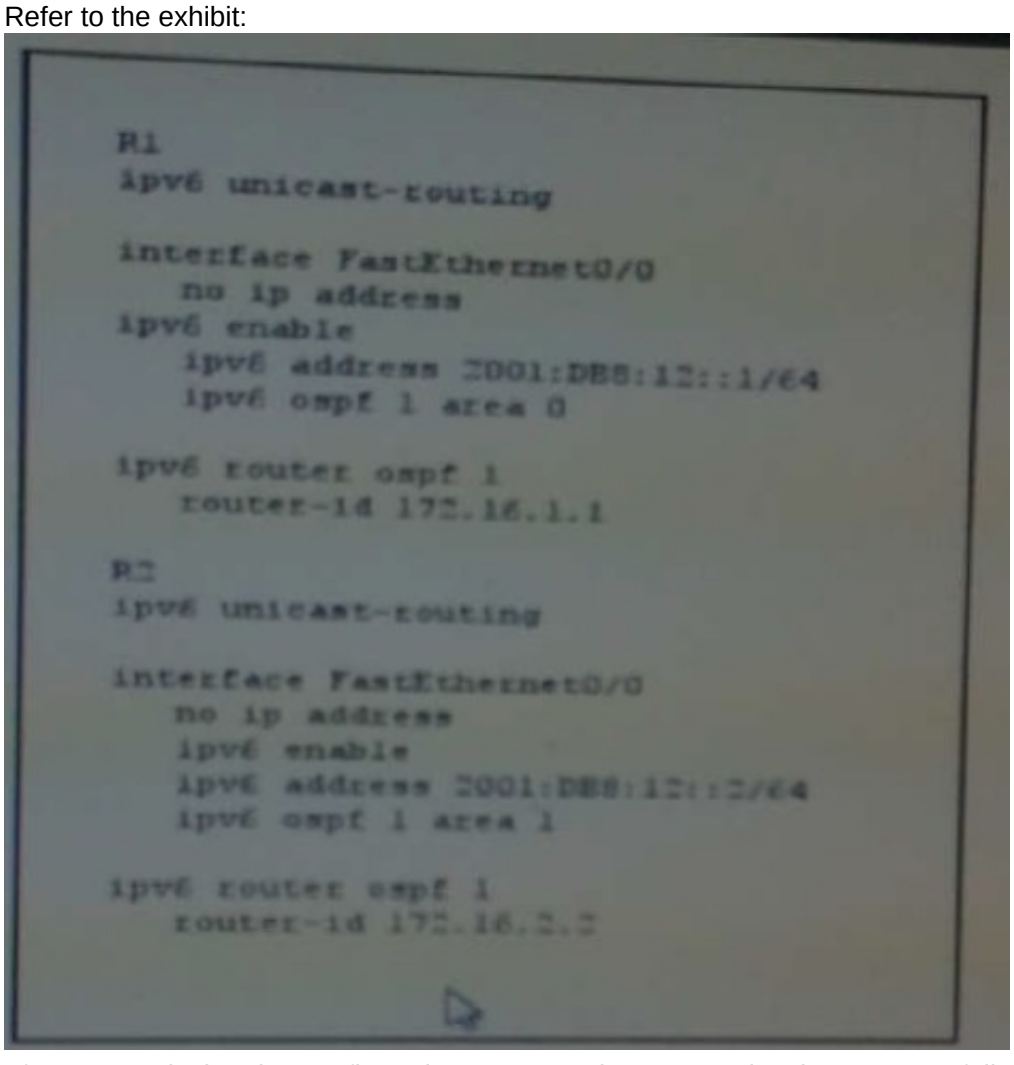
Answer: C

NEW QUESTION 69
which command can you enter to create a NAT Pool of 6 addresses ?

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

Answer: B

NEW QUESTION 72
Refer to the exhibit:



after you apply the give configurations to R1 and R2 you notice that OSPFv3 fails to start
Which reason for the problem is most likely true ?

A. The area numbers on R1 and R2 are mismatched
B. The IPv6 network addresses on R1 and R2 are mismatched
C. The autonomous system numbers on R1 and R2 are mismatched
D. The router ids on R1 and R2 are mismatched

Answer: A

NEW QUESTION 76
Under normal operations, cisco recommends that you configure switch ports on which vlan ?

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

Answer: D

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

NEW QUESTION 79
which two statements about vtp are true ?

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

Answer: AD

NEW QUESTION 80
Which major component of the network virtualization architecture isolates users according to policy?

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

Answer: A

NEW QUESTION 81
Which header field is new in IPv6?

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

Answer: A

NEW QUESTION 83
Which definition of default route is true?

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

Answer: C

NEW QUESTION 88
Which two statements about firewalls are true ?

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

Answer: AB

NEW QUESTION 89
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 93
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 96
Which two statements about TACACS+ are true? (Choose two.)

A. It can run on a UNIX server.
B. It authenticates against the user database on the local device.
C. It is more secure than AAA authentication.
D. It is enabled on Cisco routers by default.
E. It uses a managed database.

Answer: AE

NEW QUESTION 100
Which two protocols can detect native vlan mismatch errors?

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

Answer: BC

NEW QUESTION 103
Which HSRP feature was new in HSRPv2?

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

Answer: A

NEW QUESTION 104
which value must you configure on a device beforee EIGRP For IPV6 Can start Running ?

A. Process ID
B. Router ID
C. Public IP Address
D. Loopback interface

Answer: B

NEW QUESTION 109
How can you manually configure a switch so that it is selected as the root Switch?

A. increase the priority number
B. lower the port priority number
C. lower the priority number
D. increase the port priority number

Answer: C

NEW QUESTION 114
Which mode is compatible with Trunk, Access, and desirable ports?

A. Trunk Ports
B. Access Ports

C. Dynamic Auto
D. Dynamic Desirable

Answer: C

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

NEW QUESTION 115
Which two steps must you perform on each device that is configured for ipv4 routing before you implement OSPFv3? (chooose two)

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

Answer: CE

NEW QUESTION 116
Which function allows EIGRP peers to receive notice of implementing topology changes?

A. successors
B. advertised changes
C. goodbye messages
D. expiration of the hold timer

Answer: C

NEW QUESTION 119
Which type of routing protocol operates by exchanging the entire routing information ?

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

Answer: A

NEW QUESTION 120
Which statement about upgrading a cisco ios device with TFTP is True ?

A. The Cisco IOS device must be on the same lan as the TFTP server
B. The operation is performed in passive mode
C. The operation is performed in an unencrypted format
D. The operation is performed in active mode

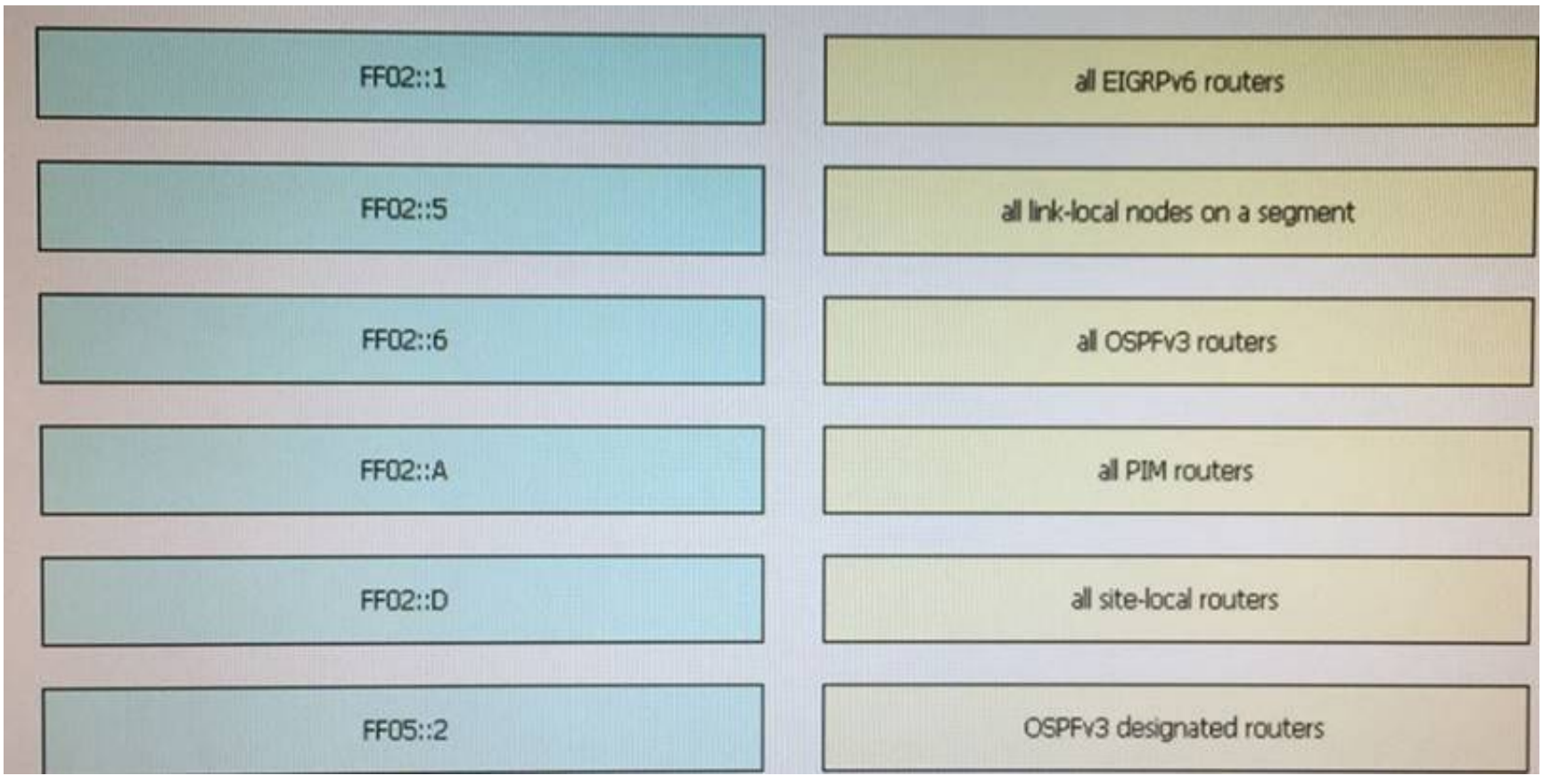
Answer: A

NEW QUESTION 122
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 127
Drag each IPv6 prefix on the left to its use on the right.



Answer:

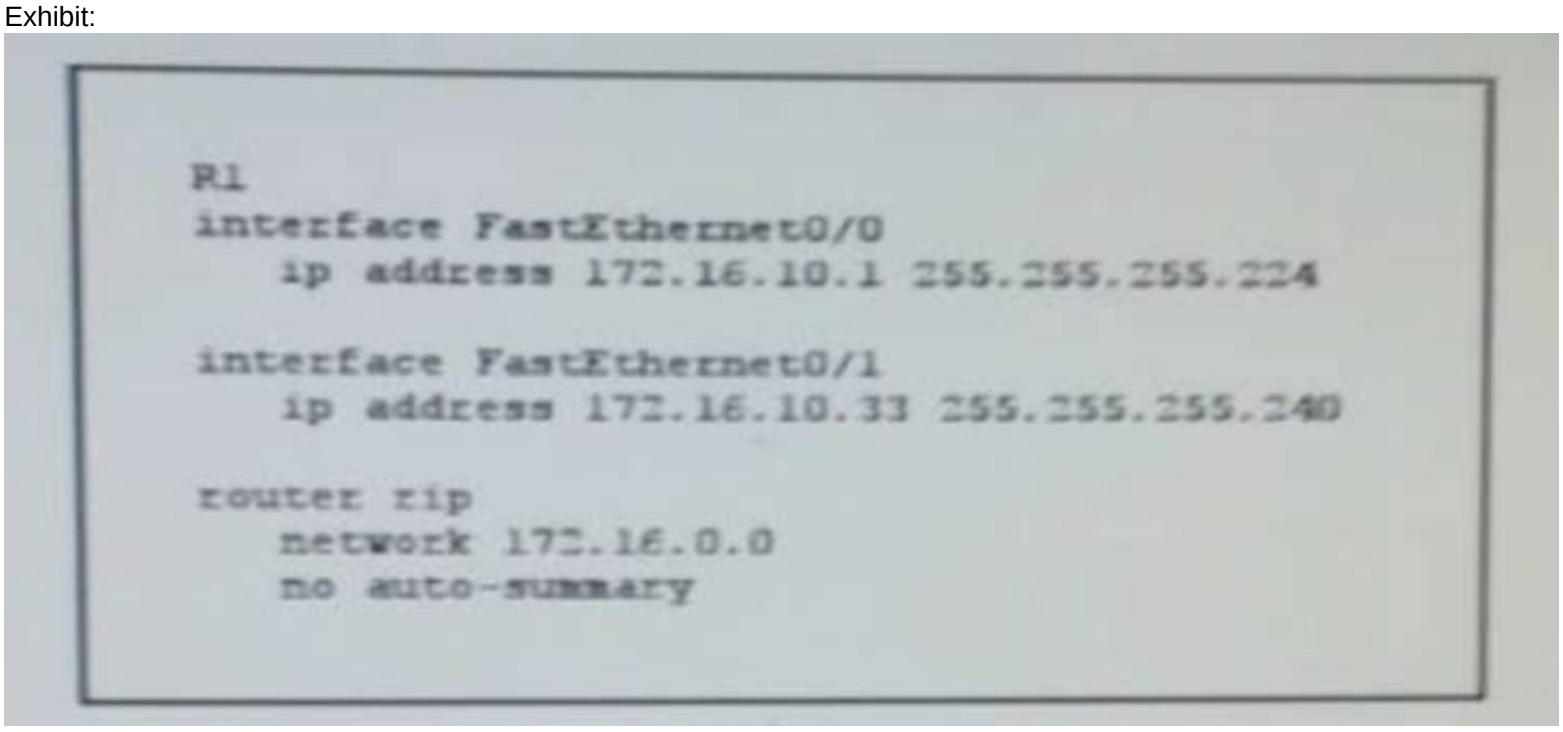
Explanation: FF02::1 = All link-local nodes on a segment FF02::5 = all OSPFv3 routers
FF02::6 = OSPFv3 designated routers FF02::A = all EIGRPv6 routers FF02::D = All PIM routers
FF05::2 = all site local routers

NEW QUESTION 128
Where does the configuration reside when a helper address is configured to support DHCP ?

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

Answer: B

NEW QUESTION 132
Exhibit:



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

A. enable passive interface
B. enable manual summarization
C. enable autosummarization
D. enable RIPV2

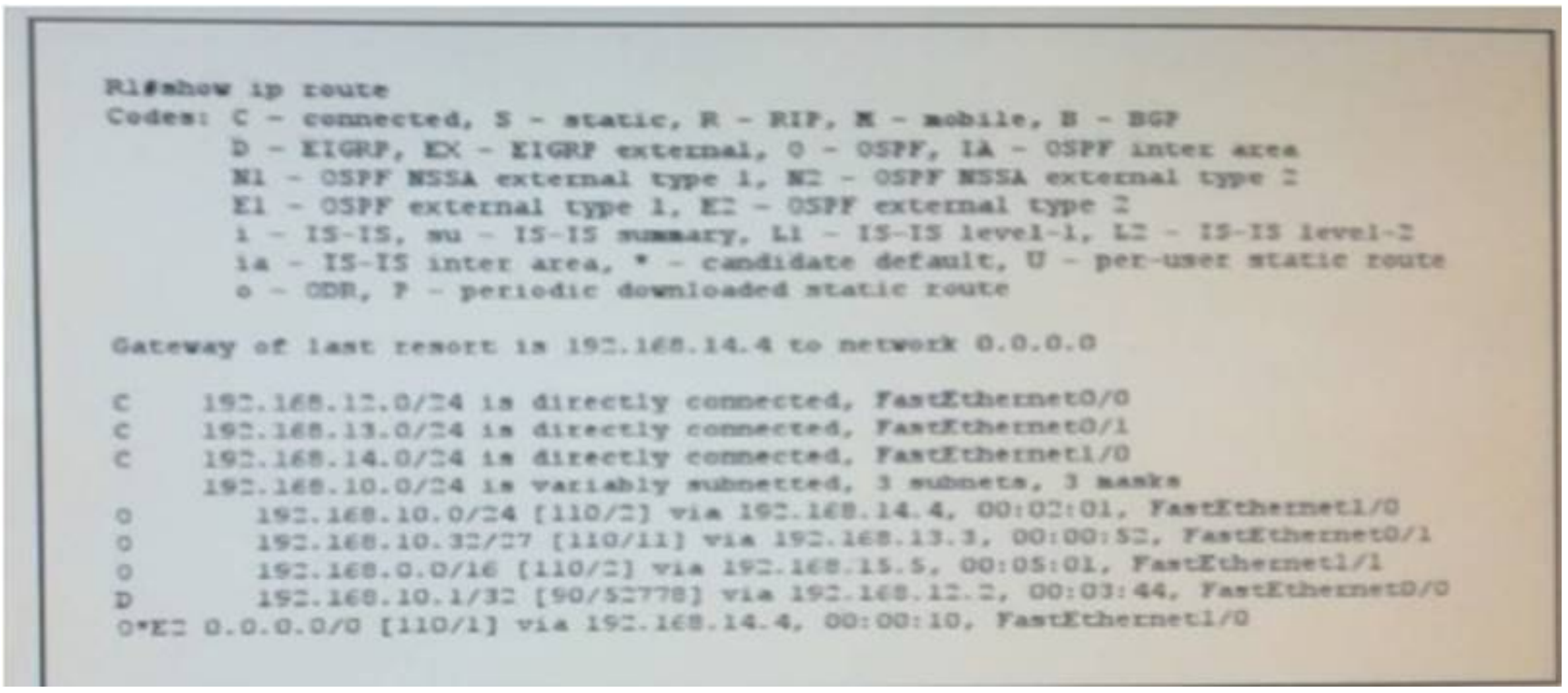
Answer: D

NEW QUESTION 137
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 140
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 144
When troubleshooting ethernet connectivity issues how can you verify that an ip address is known to a router?

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

Answer: D

NEW QUESTION 146
Which type of secure MAC address must be configured manually?

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

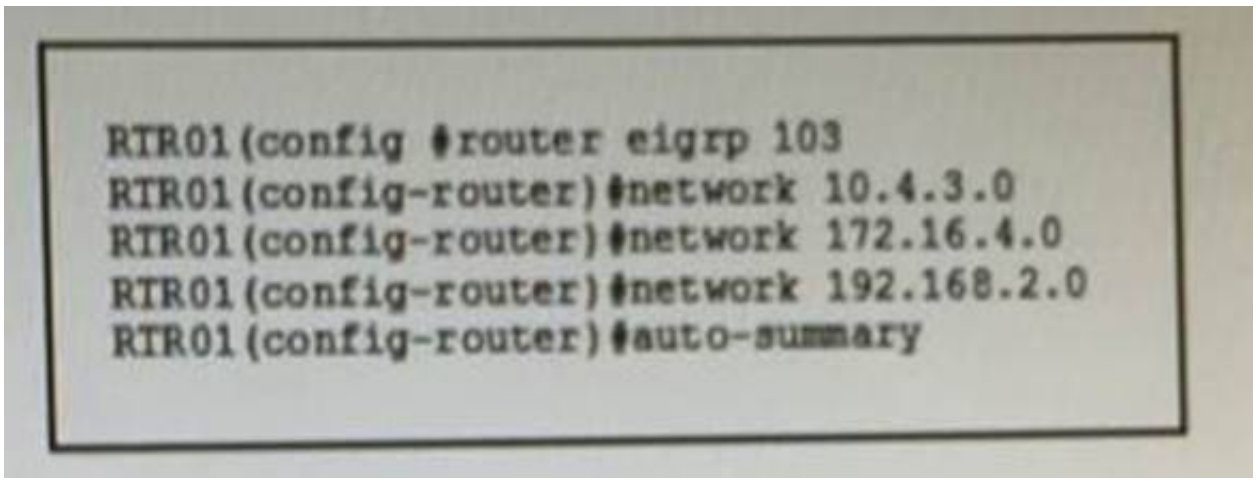
Answer: A

NEW QUESTION 147
Which RPVST+ port state is excluded from all STP operations?

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

Answer: D

NEW QUESTION 149
Refer to the exhibit.



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 153
Which three options are the major components of a network virtualization architecture? (Choose three.)

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

Answer: ACE

NEW QUESTION 156
when you troubleshoot an IPv4 connectivity issue on a router, which three router configuration checks you must perform?

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

Answer: ABF

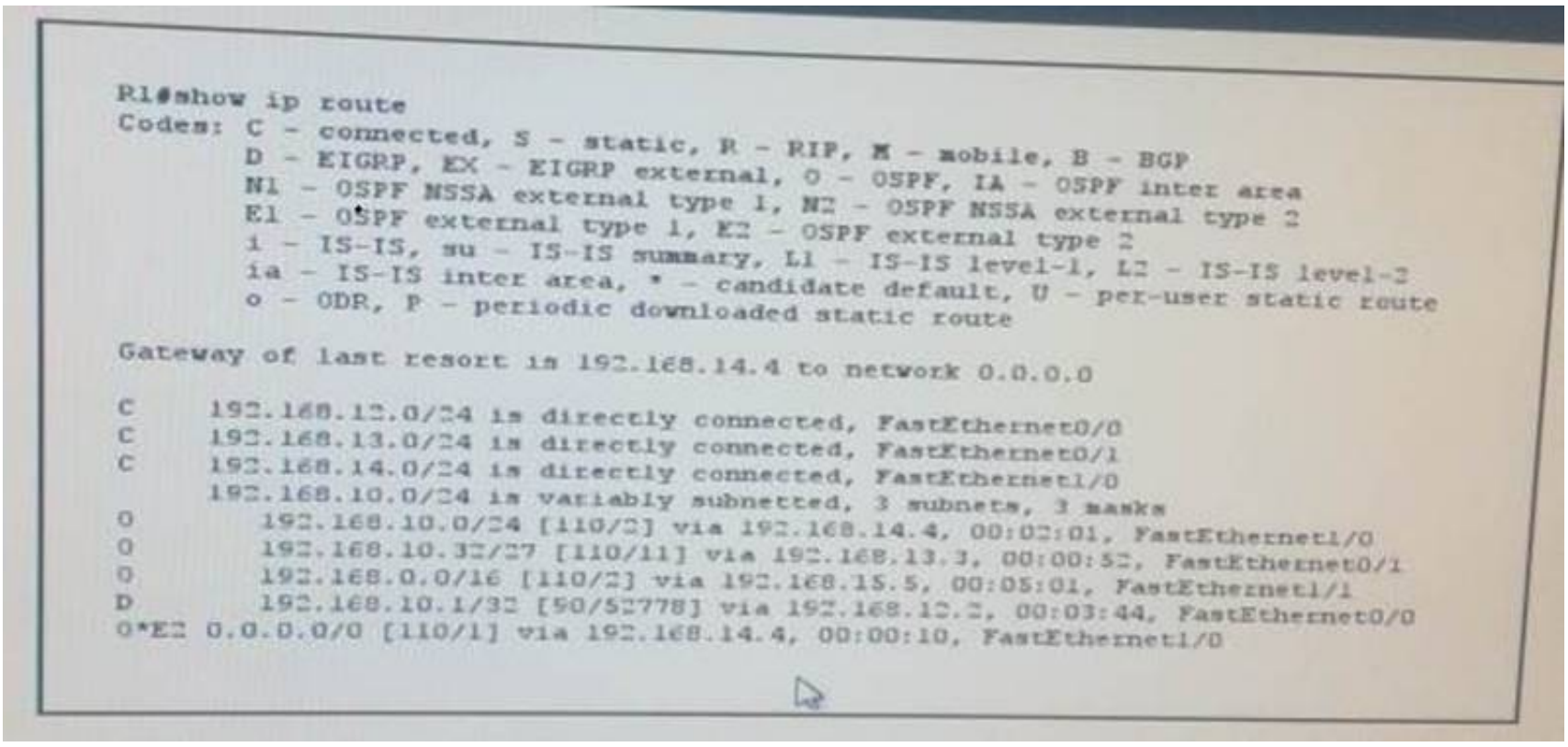
NEW QUESTION 160
How many bits represent network id in a IPv6 address?

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 163
Refer to the exhibit.



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

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

Answer: C

NEW QUESTION 164
Which statement about IPv6 link-local addresses is true ?

A. they must be configured on all IPv6 interface
B. They must be globally unique
C. They must be manually configured
D. They are advertised globally on the network

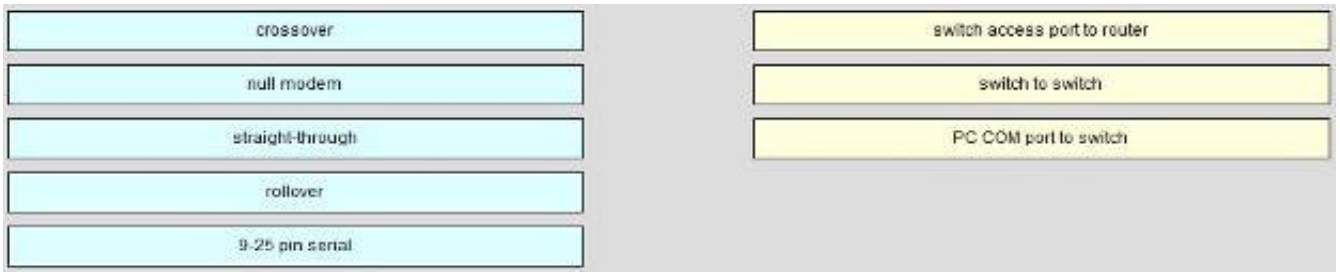
Answer: B

NEW QUESTION 167
Which two statements about IPv6 address 2002:ab10:beef::/48 are true?(choose two)

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

Answer: AE

NEW QUESTION 172
DRAG DROP



Answer:

Explanation:

Topic 2, New Pool Exam B

NEW QUESTION 177
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 181
In which two circumstances are private IPv4 addresses appropriate? (Choose two)

A. on internal hosts that stream data solely to external resources
B. on hosts that communicates only with other internal hosts
C. on the public-facing interface of a firewall
D. on hosts that require minimal access to external resources
E. to allow hosts inside an enterprise to communicate in both directions with hosts outside the enterprise

Answer: AB

NEW QUESTION 182
You have configured the host computers on a campus LAN to receive their DHCP addresses from the local router to be able to browse their corporate site. Which statement about the network environment is true?

A. It supports a DNS server for use by DHCP clients.
B. Two host computers may be assigned the same IP address.
C. The DNS server mustbe configured manually on each host.
D. The domain name must be configured locally on each host computer.

Answer: A

NEW QUESTION 186
Which WAN technology uses labels to make decisions about data forwarding?

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

Answer: C

NEW QUESTION 189
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 192
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 197
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 199
What is the default encapsulation type for Cisco WAN serial interfaces?

A. Frame Relay
B. HDLC
C. PPP
D. SDLC

Answer: B

NEW QUESTION 200
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 203
Which three checks must you perform when troubleshooting EIGRPv6 adjacencies? (Choose three.)

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

Answer: ADF

NEW QUESTION 208
Which network configuration can you use to segregate broadcast traffic for two different departments in your organization?

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

Answer: D

NEW QUESTION 212
Which of the port is not part of STP protocol.?

A. Listening
B. Learning
C. Forwarding
D. Discarding

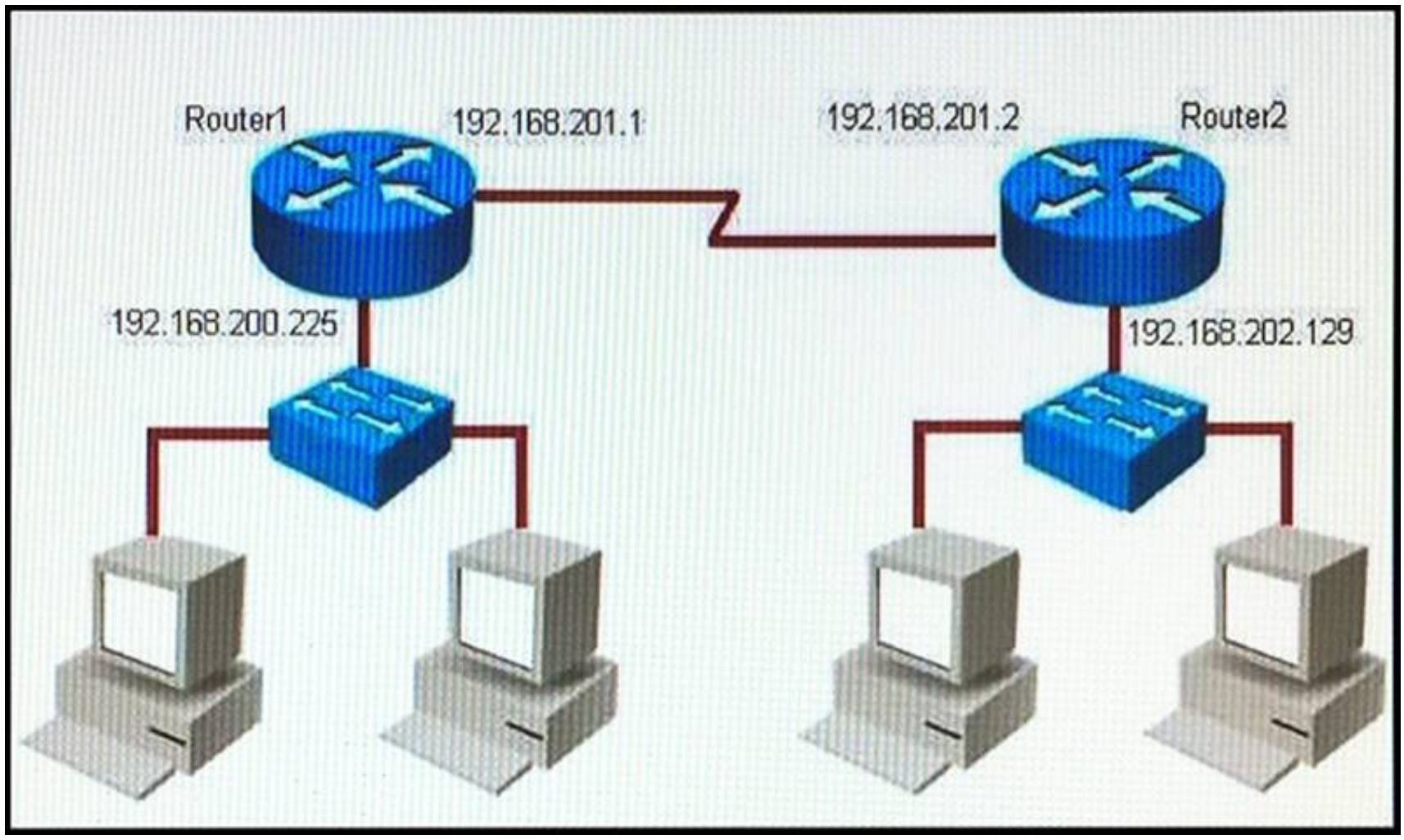
Answer: D

NEW QUESTION 216
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 218



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 223
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 routebetween the networks is undefined.
D. The IP MTU is incorrect.
E. The distance configuration is missing.

Answer: D

NEW QUESTION 224

```
R1# show access-lists
Extended IP access list 175
10 deny tcp any any time-range nonworkhours (active)
20 permit tcp any any time-range workhours (inactive)
```

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

A. Thepermit allACL entry on R1 is inactive.
B. The ACL of R1 is misconfigured.
C. Adeny allACL entry is currently active on R1.
D. Animplicitdenyis causing R1 to block network traffic.

Answer: D

NEW QUESTION 226
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

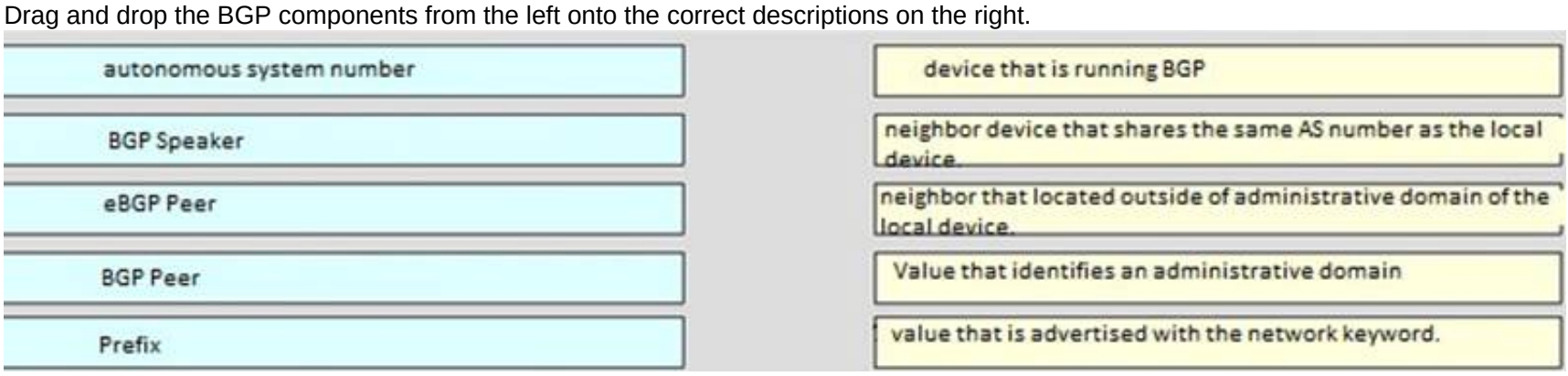
Answer: D

NEW QUESTION 227
Under which two circumstances is network traffic most likely to use an Exterior Gateway Routing Protocol? (Choose two)

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

Answer: AD

NEW QUESTION 229
Drag and drop the BGP components from the left onto the correct descriptions on the right.



Answer:

Explanation: BGP speaker: device that is running BGP
+ Prefix = Value that is advertised with the network keyword.
eBGP Peer = neighbor that located outside of administrative domain of the local device. BGP Peer = neighbor device that shares the same AS number as the local device. Autonomous system number = Value that identifies an administrative domain

NEW QUESTION 231
Which benefit of implementing a dual-homed WAN connection instead of a single homed connection is true?

A. Only dual-homed connections support recursive routing
B. Only dual-homed connections support split horizon with EIGRP
C. Only dual-homed connections enable an individual router to tolerate the loss of a network link
D. Only dual-homed connections support OSPF in conjunction with BGP

Answer: C

NEW QUESTION 234
Which tunneling mechanism embeds an IPv4 address within an IPv6 address?

A. Teredo
B. 6to4
C. 4to6
D. GRE
E. ISATAP

Answer: B

Explanation: ref :https://tools.ietf.org/html/rfc6052#section-2

NEW QUESTION 237
Which protocol does ipv6 use to discover other ipv6 nodes on the same segment?

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

Answer: D

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

NEW QUESTION 239
Which two statements about the spanning-tree bridge ID are true? (Choose two.)

A. It is composed of a 4-bit bridge priority and a 12-bit system ID extension.
B. The bridge ID is transmitted in the IP header to elect the root bridge.
C. Thesystem ID extension is a value between 1 and 4095.
D. It is composed of an 8-bit bridge priority and a 16-bit system ID extension.
E. The bridge priority must be incremented in blocks of 4096.

Answer: AE

NEW QUESTION 243
Which VLAN bridge priority value will make a switch as root for a given VLAN from the below options by the spanning-tree vlan vlan-id root command?

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

Answer: B

NEW QUESTION 244
Which VLAN bridge priority value is assigned by the set spantree root command?

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

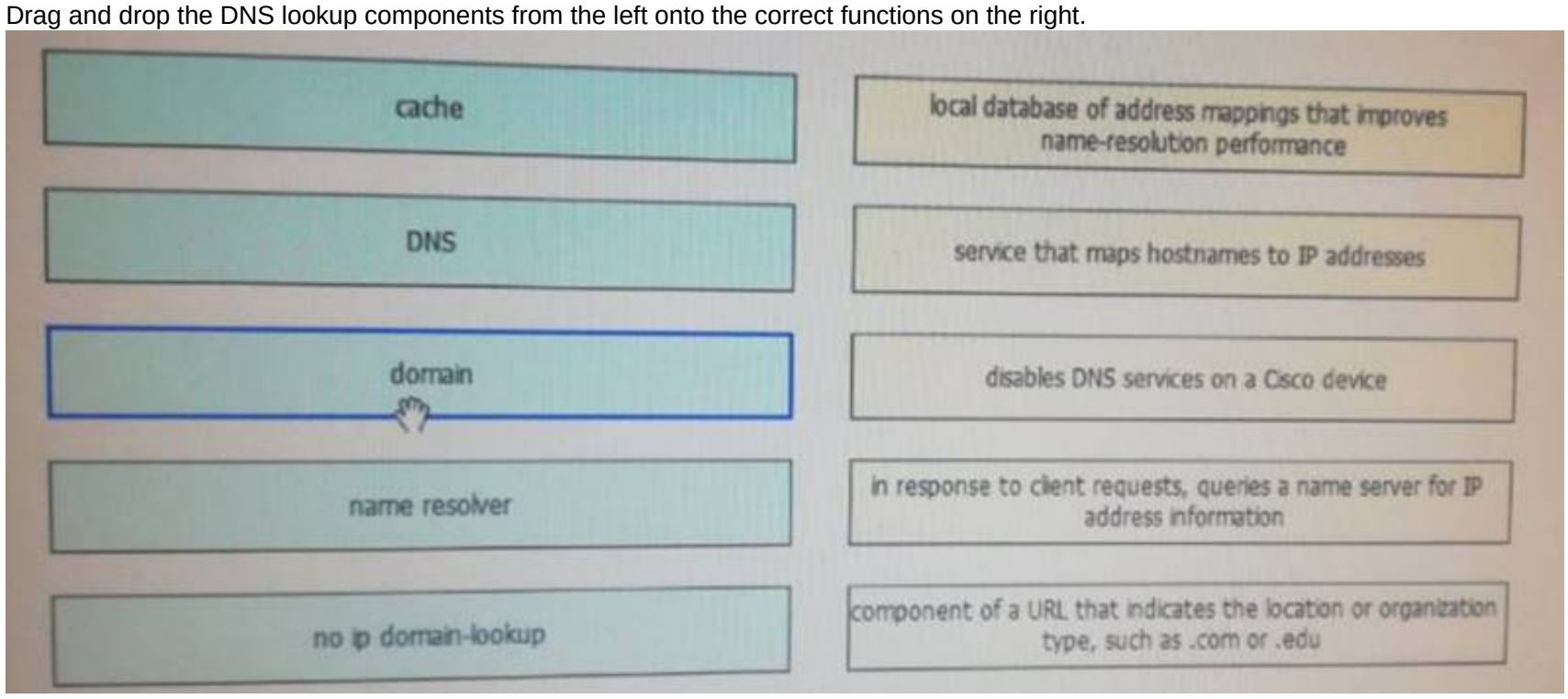
Answer: A

NEW QUESTION 246
Which command can you enter in a network switch configuration so that learned mac addresses are saved in configuration as they connect ?

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

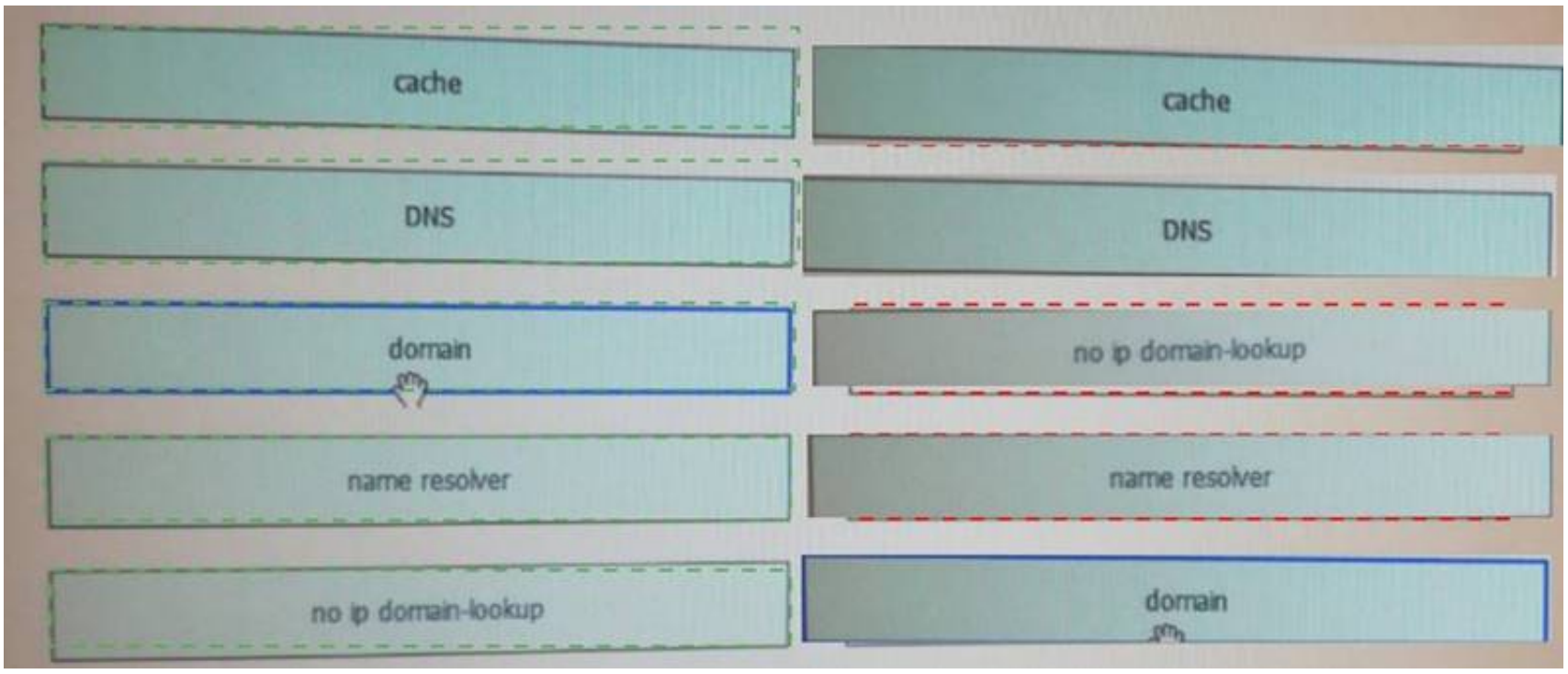
Answer: B

NEW QUESTION 248
Drag and drop the DNS lookup components from the left onto the correct functions on the right.



Answer:

Explanation:



NEW QUESTION 251
Which table displays the MAC addresses that are learned on a switch?

A. FIB
B. ARP
C. TCAM
D. CAM

Answer: D

NEW QUESTION 255
Which three statements are true about the operation of a full-duplex Ethernet network? (Choose three.)

A. The host network card and the switch port must be capable of operating in full-duplex mode.
B. Ethernet hub ports are preconfigured for full-duplex mode.
C. A dedicated switch port is required for each full-duplex node.
D. There are no collisions in full-duplex mode.
E. In a full-duplex environment, the host network card must check for the availability of the network media before transmitting.

Answer: ACD

NEW QUESTION 257
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 258
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

NEW QUESTION 263
Which statement describes the effect of the overload keyword in the ip nat inside source list 90 interface ethernet 0/0 overload command?

A. Addresses that match access listinsideare translated to the IP address of the Ethernet 0/0 interface.
B. Hosts that match access listinsideare translated to an address in the Ethernet 0/0 network.
C. Hosts on the Ethernet 0/0 LAN are translated to the address pool in access list90.
D. Addressesthat match access list90are translated through PAT to the IP address of the Ethernet 0/0 interface.

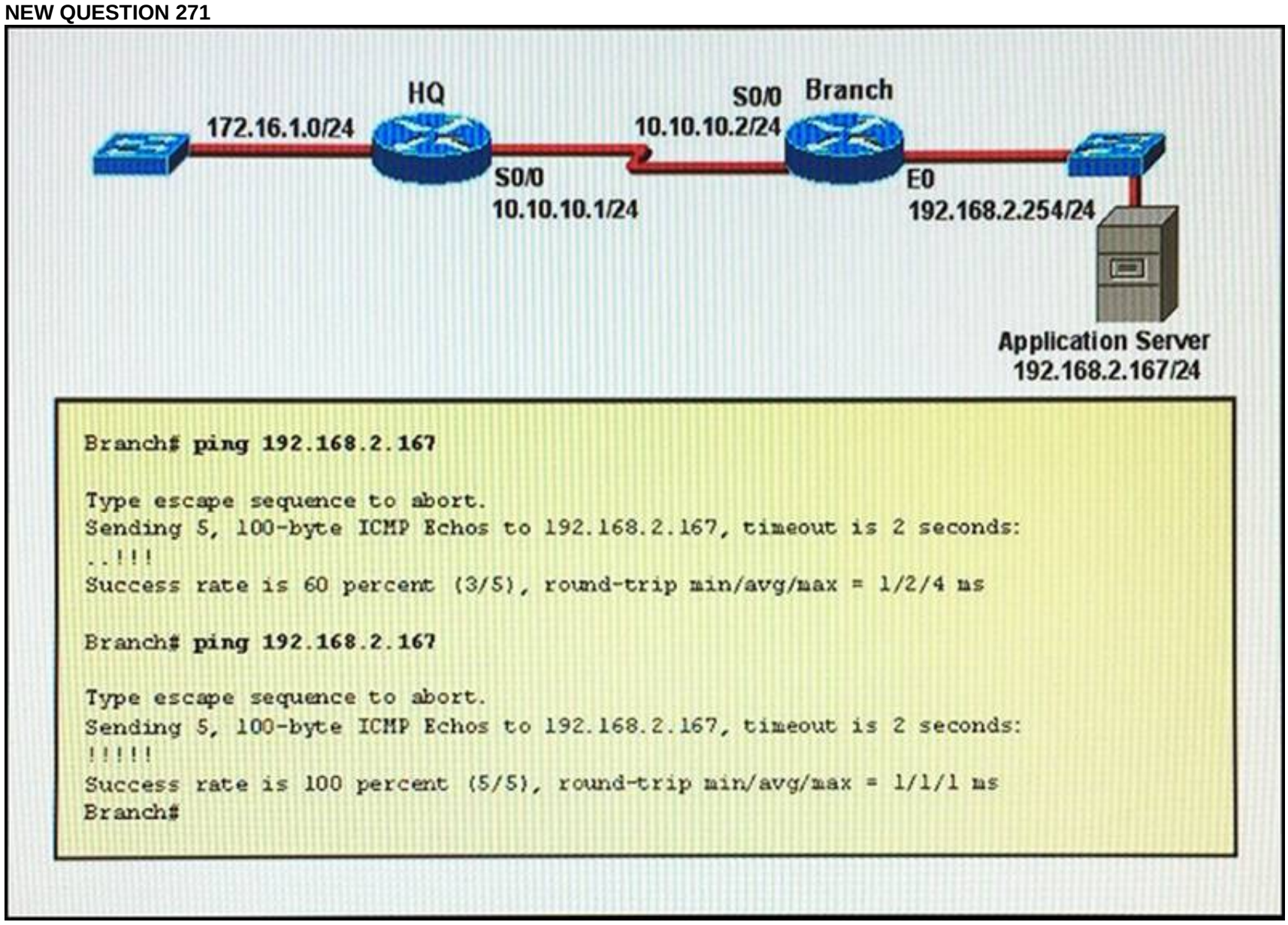
Answer: D

NEW QUESTION 267
Which option must occur before a workstation can exchange HTTP packets with a web server?

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

Answer: F

NEW QUESTION 271



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 274
Which three statements about DWDM are true? (Choose three)

A. It allows a single strand of fiber to support bidirectional communications
B. It is used for long-distance and submarine cable systems
C. It can multiplex up to 256 channels on a single fiber
D. It supports both the SDH and SONET standards
E. Each channel can carry up to a 1-Gbps signal
F. It supports simplex communications over multiple strands of fiber

Answer: CDE

Explanation: ref: https://www.cisco.com/en/US/products/hw/optical/ps2011/products_data_sheet09186a008012a900.html

NEW QUESTION 276
If two OSPF neighbors have formed complete adjacency and are exchanging link-state advertisements, which state have they reached?

A. Exstart

B. 2-Way
C. FULL
D. Exchange

Answer: C

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

NEW QUESTION 279
Which command do you enter to view EIGRPv6 adjacencies?

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

Answer: C

NEW QUESTION 284
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 285
Which command do use we to see SNMP version

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

Answer: A

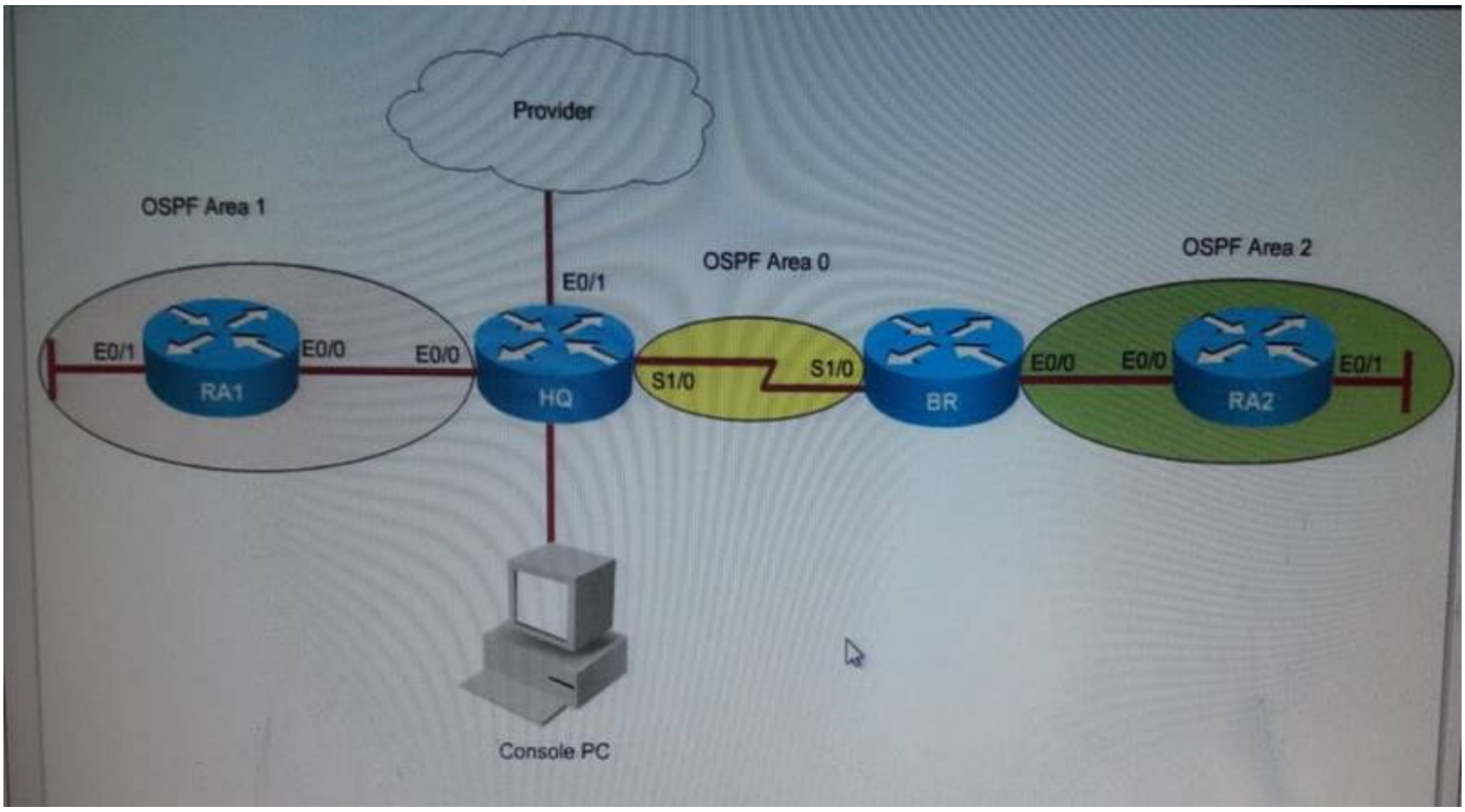
Explanation: ref: https://www.cisco.com/c/en/us/td/docs/ios/12_2/configfun/command/reference/ffun_r/frf014.html#wp1053304

NEW QUESTION 286
Which NAT term is defined as a group of addresses available for NAT use?

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

Answer: A

NEW QUESTION 287
You work as a network engineer for SASCOM Network Ltd company. On router HQ, a provider link has been enabled and you must configure an IPv6 default route on HQ and make sure that this route is advertised in IPv6 OSPF process. Also, you must troubleshoot another issue. The router HQ is not forming an IPv6 OSPF neighbor relationship with router BR.
Topology Details
Two routers HQ and BR are connected via serial links.
Router HQ has interface Ethernet0/1 connected to the provider cloud and interface Ethernet 0/0 connected to RA1
Router BR has interface Ethernet 0/0 connected to another router RA2.
IPv6 Routing Details
Ail routers are running IPv6 OSPF routing with process ID number 100 Refer to the topology diagram for information about the OSPF areas The Loopback 0 IPv4 address is the OSPF router ID on each router
Configuration requirements
• Configure IPv6 default route on router HQ with default gateway as 2001:DB8:B:B1B2::1.
• Verify by pinging provider test IPv6 address 2001 :DB8:0:1111:1 after configuring default route on HQ.
• Make sure that the default route is advertised in IPv6 OSPF on router HQ This default route should be advertised only when HQ has a default route in its routing table.
• Router HQ is not forming IPv6 OSPF neighbor with BR. You must troubleshoot and resolve this issue Special Note: To gain the maximum number of points, you must complete the necessary configurations and fix
IPv6 OSPF neighbor issue with router BR IPv6 OSPFv3 must be configured without using address families.
Do not change the IPv6 OSPF process ID.



Answer:

Explanation: 1- configure default route on router HQ : ipv6 unicast-routing ipv6 route ::/0 2001:DB8:B:B1B2::1
2- advertise this route under ospfv3
Ipv6 router ospf 100
Default-information originate
3- fix adjacency problem if a area mismatches We need to enter in s1/0
Ipv6 ospf 100 area 0

NEW QUESTION 292
Which feature can validate address requests and filter out invalid messages?

A. IP Source Guard
B. port security
C. DHCP snooping
D. dynamic ARP inspection

Answer: C

NEW QUESTION 296
Which purpose of the network command in OSPF configuration mode is true?

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

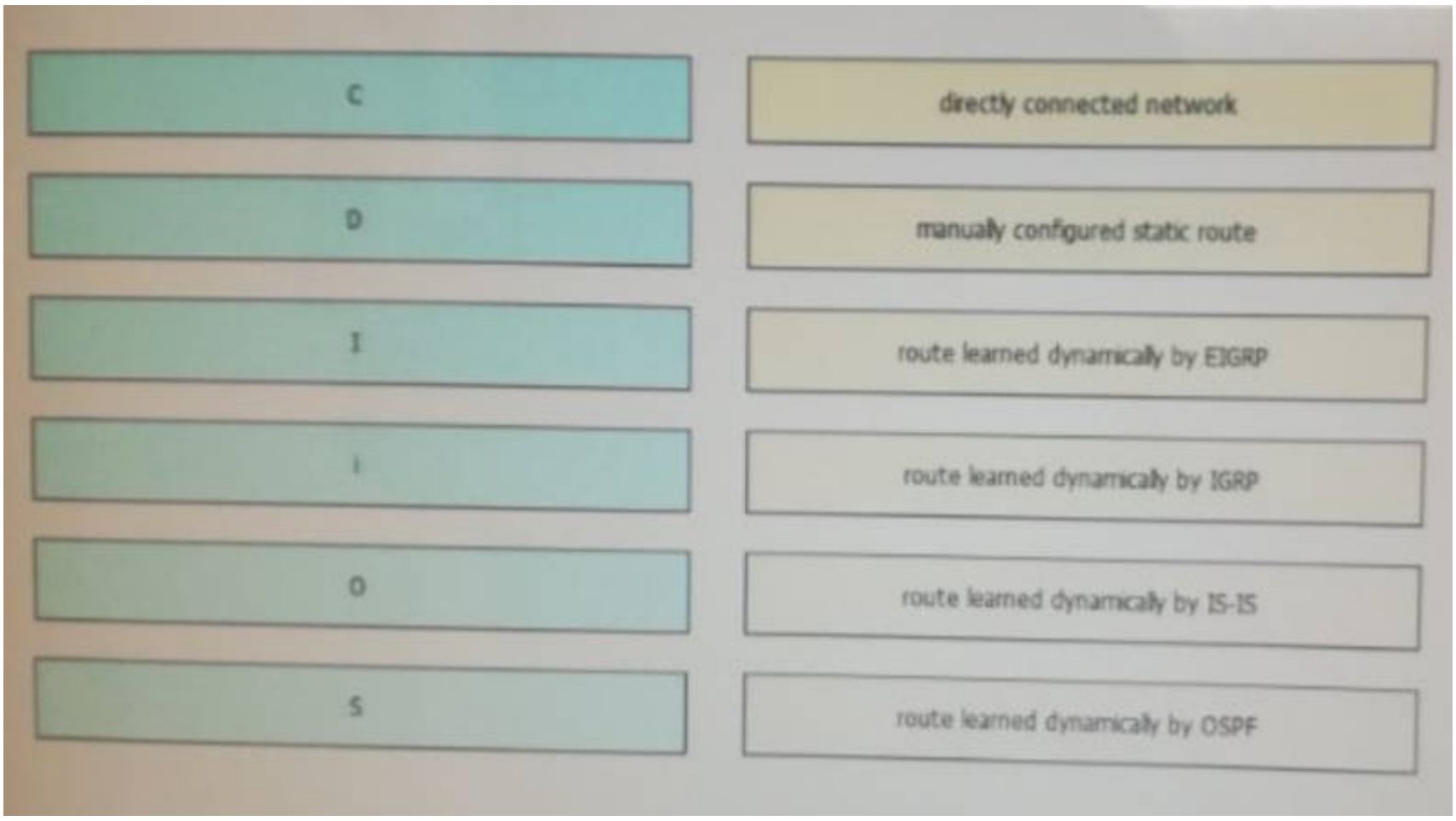
Answer: A

NEW QUESTION 300
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

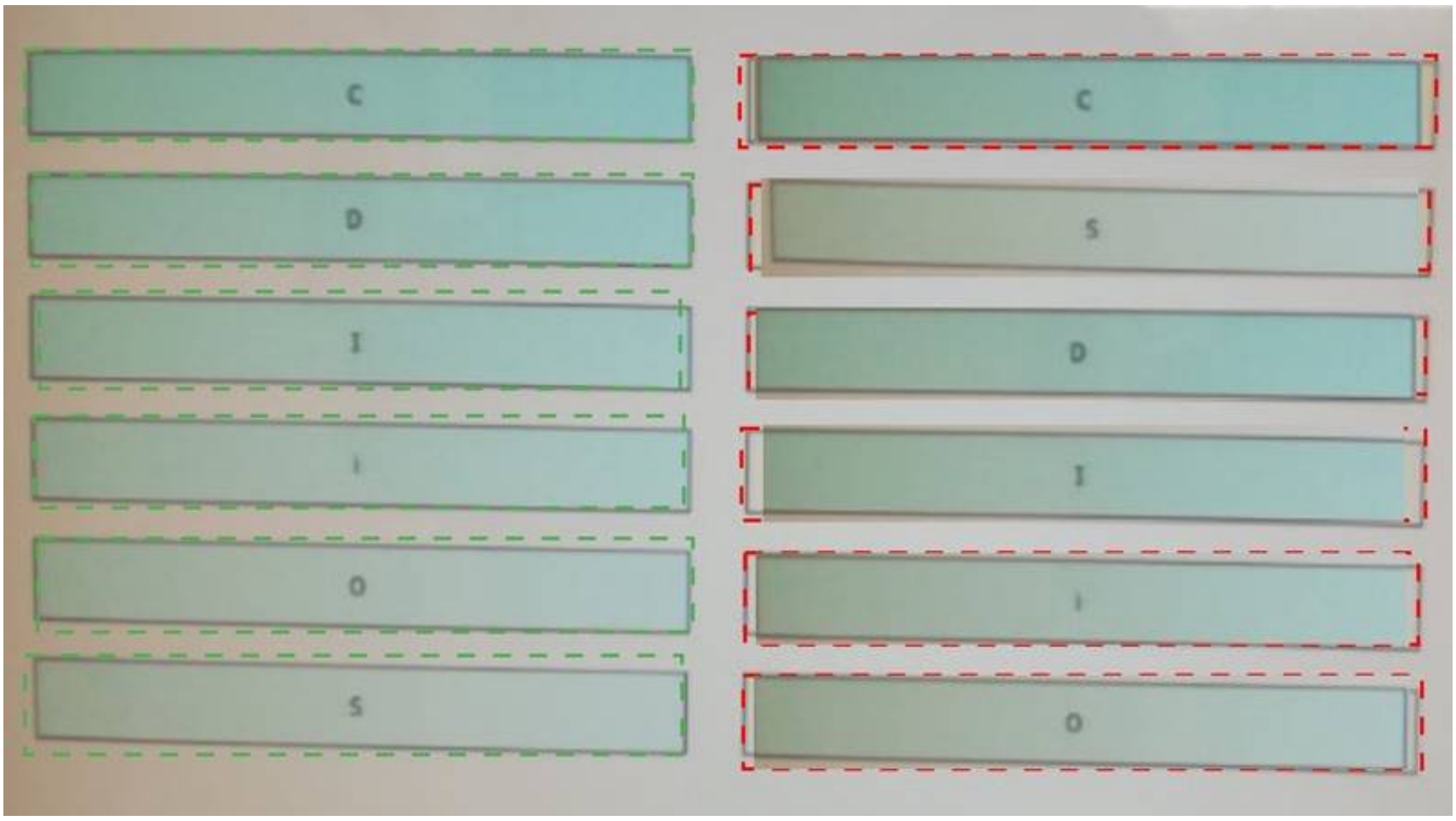
Answer: C

NEW QUESTION 302
Drag and Drop the route source codes in a routing table from the left onto the correct meanings on the right.

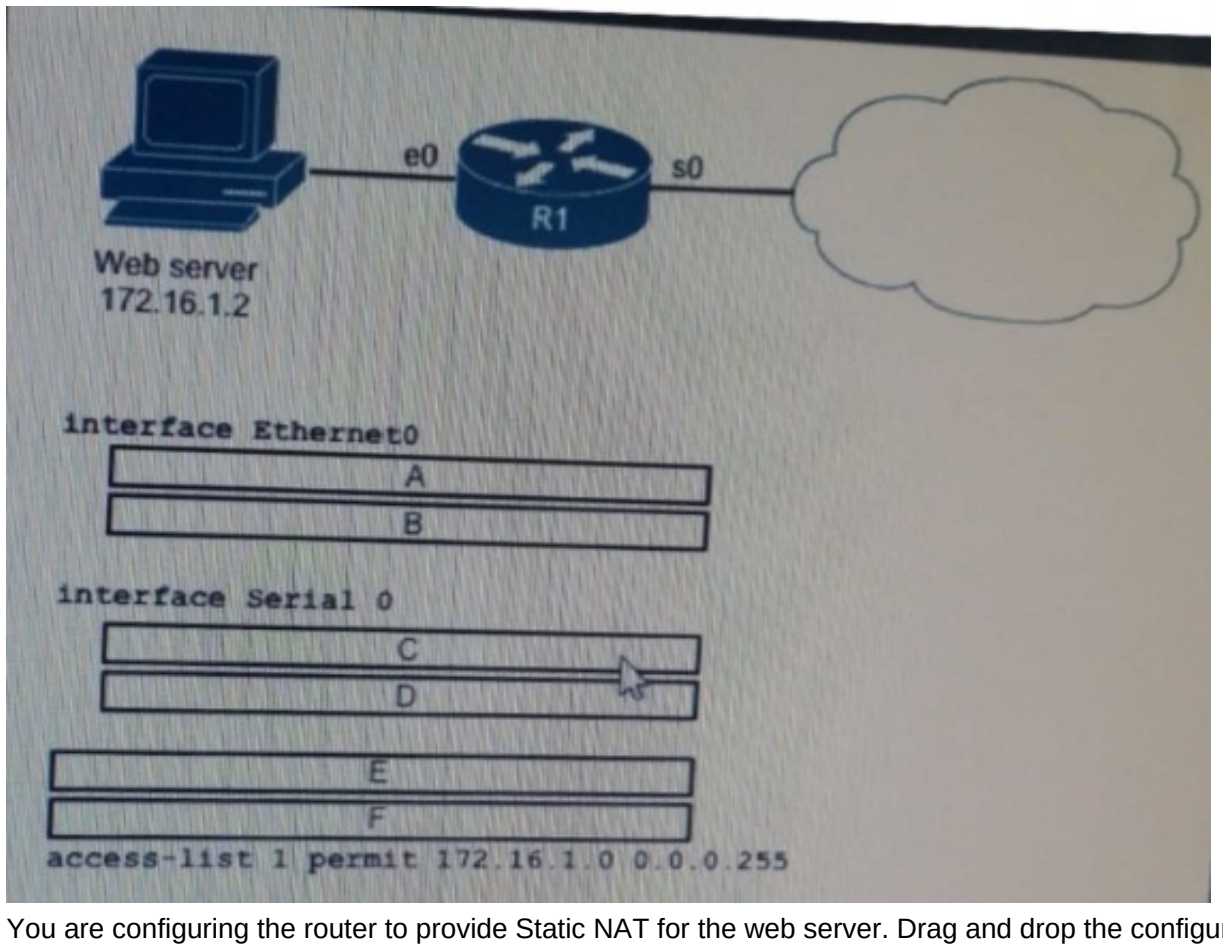


Answer:

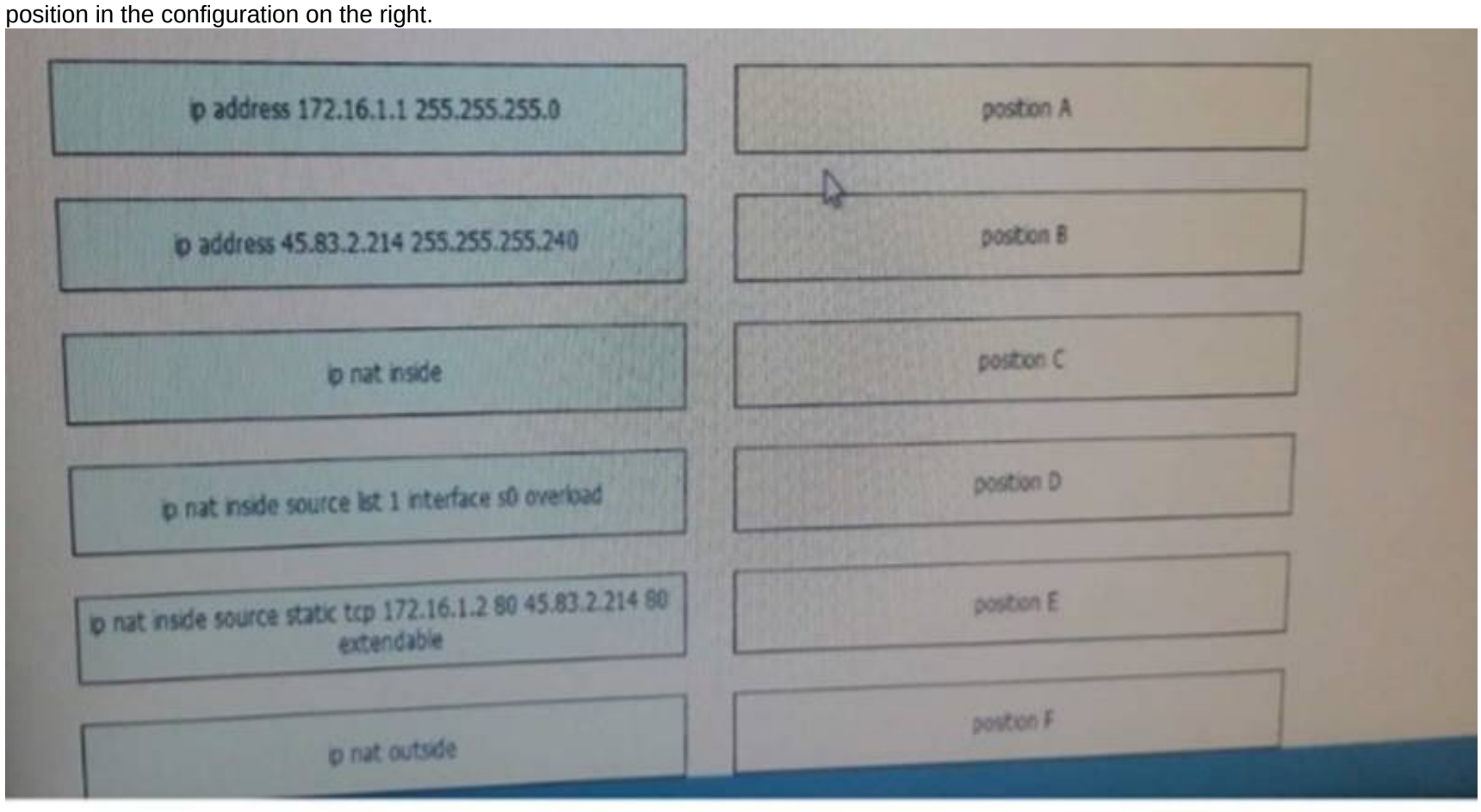
Explanation:



NEW QUESTION 305
Refer to the exhibit.

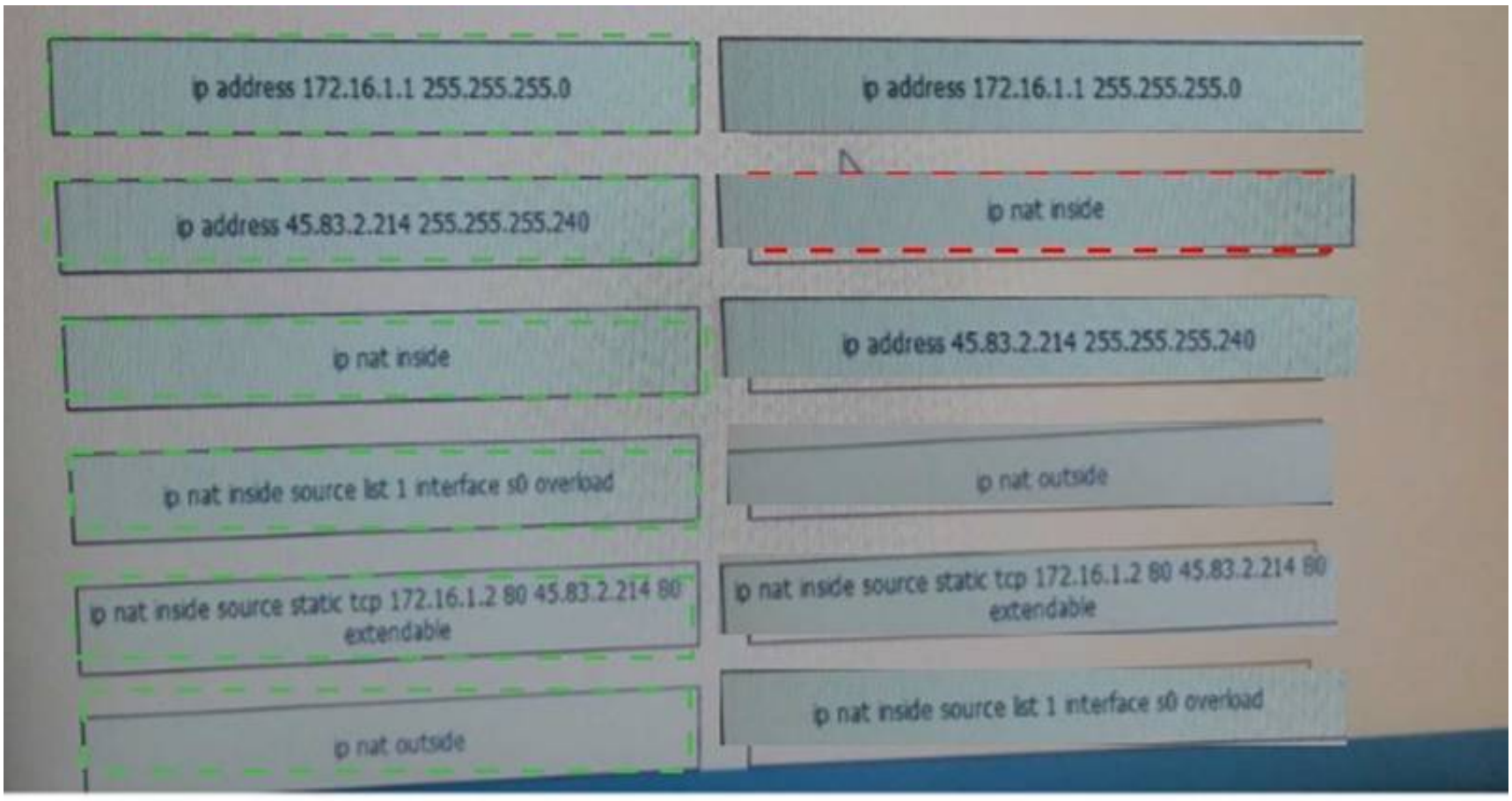


You are configuring the router to provide Static NAT for the web server. Drag and drop the configuration commands from left onto the letters that correspond to its position in the configuration on the right.



Answer:

Explanation:



NEW QUESTION 309
Which subnet address is for the IP address 172.19.20.23/28?

A. 172.19.20.20
B. 172.19.20.0
C. 172.19.20.32
D. 172.19.20.15
E. 172.19.20.16

Answer: E

NEW QUESTION 313

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

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

Frame received by SwitchA:

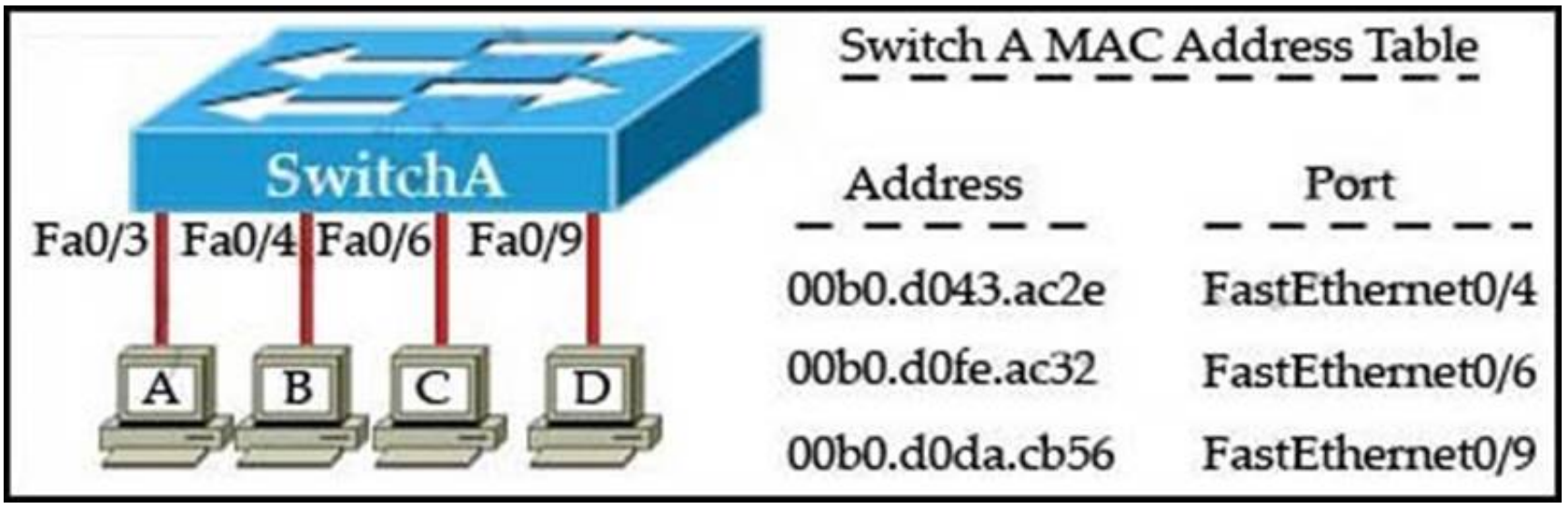
Source MAC	Destination MAC	Source IP	Destination IP
00b0.d056.fe4d	00b0.d0da.cb56	192.168.40.5	192.168.40.6

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

A. It will flood the frame out of all the ports except Fa0/3.
B. It will drop the frame.
C. It will flood the frame out all ports.
D. It will forward the frame out of portFa0/3 only.
E. It will forward the frame out of port Fa0/6 only.

Answer: E

NEW QUESTION 316
Refer to the exhibit.



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

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

Answer: C

NEW QUESTION 320
Which task must you perform to enable an IOS device to use DNS services?

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

Answer: B

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

NEW QUESTION 321
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 323
In which two ways can you prevent recursive routing in a tunneled environment? (Choose two)

A. Configure routes through the tunnel with a lower metric than other routes.
B. Configure route filtering to prevent the tunnel endpoints from learning each other through the tunnel.
C. Enable QoS on the link.
D. Configure routes through the tunnel with a higher metric than other routes.
E. configure GRE keepalives on the tunnel interface.

Answer: BD

NEW QUESTION 327
On a live network, which two commands will verify the operational status of router interfaces? (Choose two.)

A. Router# show ip interface brief
B. Router# debug interface
C. Router# show ip protocols
D. Router# show interfaces
E. Router# show start

Answer: AD

NEW QUESTION 329
Which NTP concept indicates the distance between a device and the reliable time source?

A. clock offset
B. stratum
C. reference
D. dispersion

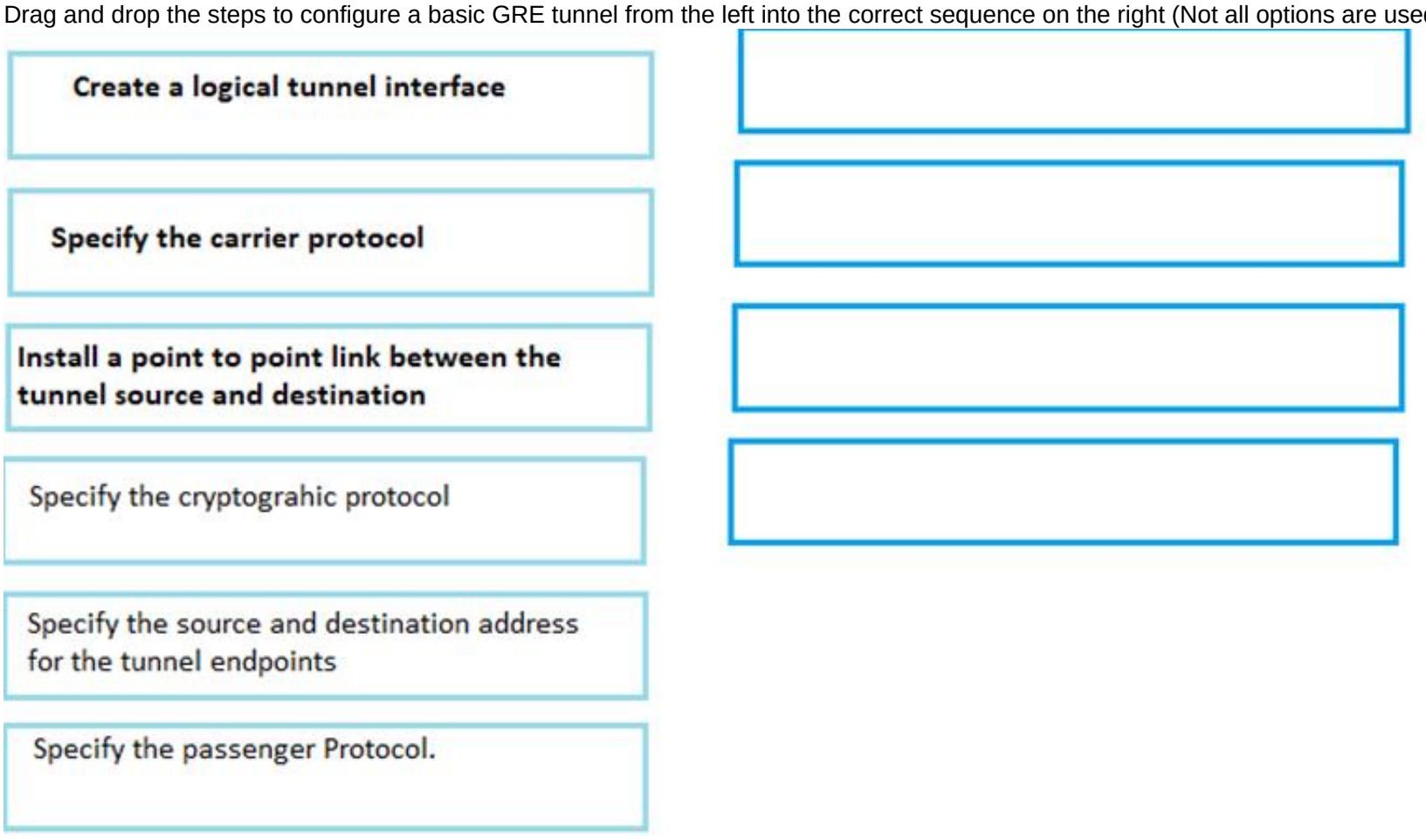
Answer: B

NEW QUESTION 332
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 334
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)



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 339
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 341
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 346

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

A. the VLAN priority
B. the hello time
C. the port priority
D. the interface number

Answer: C

NEW QUESTION 351
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 352
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 357
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 361
Which NAT command can be applied to an interface?

A. ip nat inside
B. ip nat inside test access-list-number pool pool-name
C. ip nat inside source static 10.10.10.010.10.10.50
D. ip nat pool test 10.10.10.0 10.10.10.50 255.255.255.0

Answer: A

NEW QUESTION 366
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

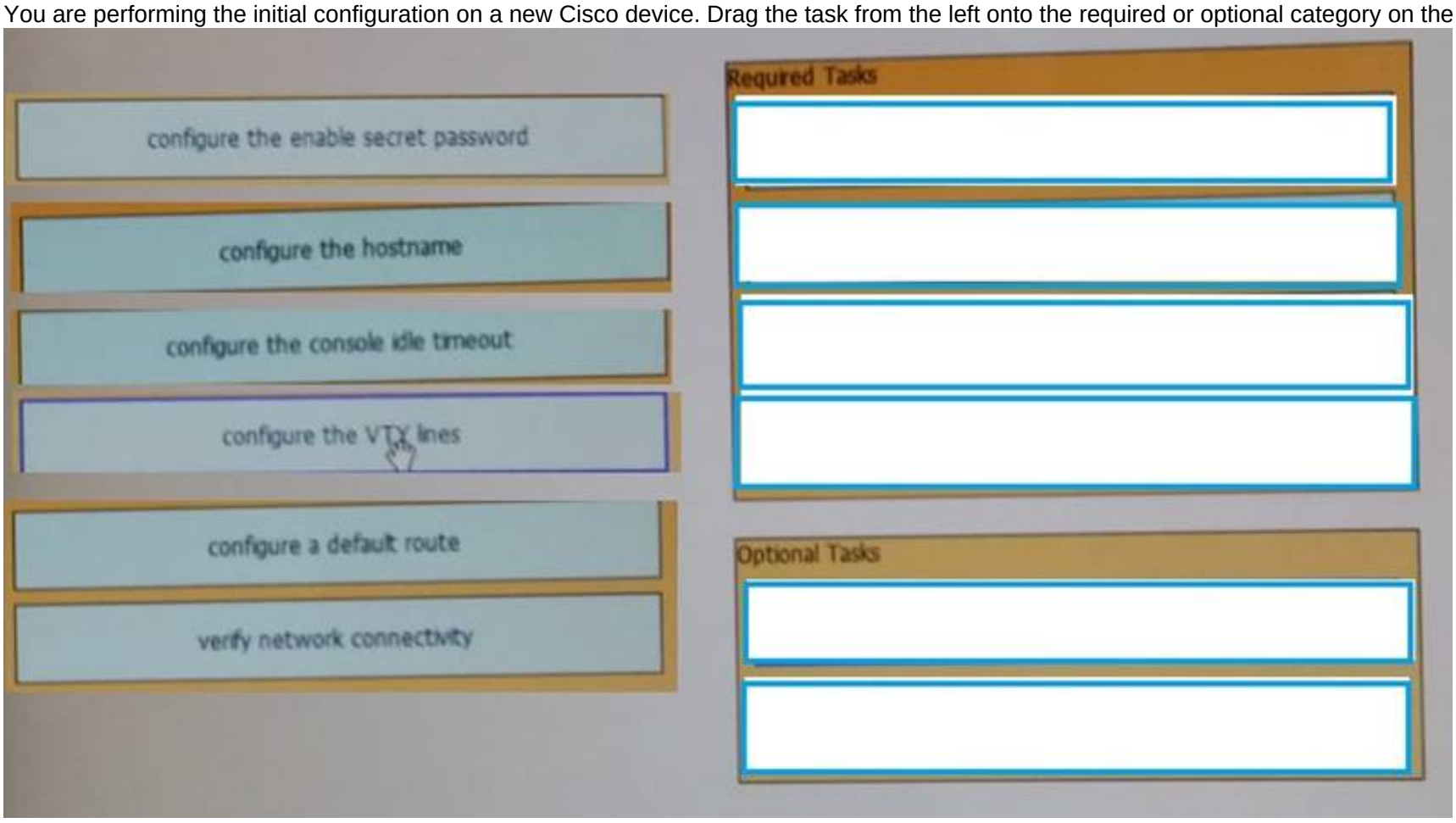
Explanation: You can configure an interface to convert the dynamic MAC addresses tosticky secure MAC addresses and to add them to the running configuration by enabling sticky learning. To enable sticky learning, enter the switchport port-security mac-address sticky interface configuration command. When 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 371
A workstation has just resolved a browser URL to the IP address of a server. Which protocol will the workstation now use to determine the destination MAC address to be placed into frames directed toward the sever?

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

Answer: A

NEW QUESTION 374
You are performing the initial configuration on a new Cisco device. Drag the task from the left onto the required or optional category on the right.



Answer:

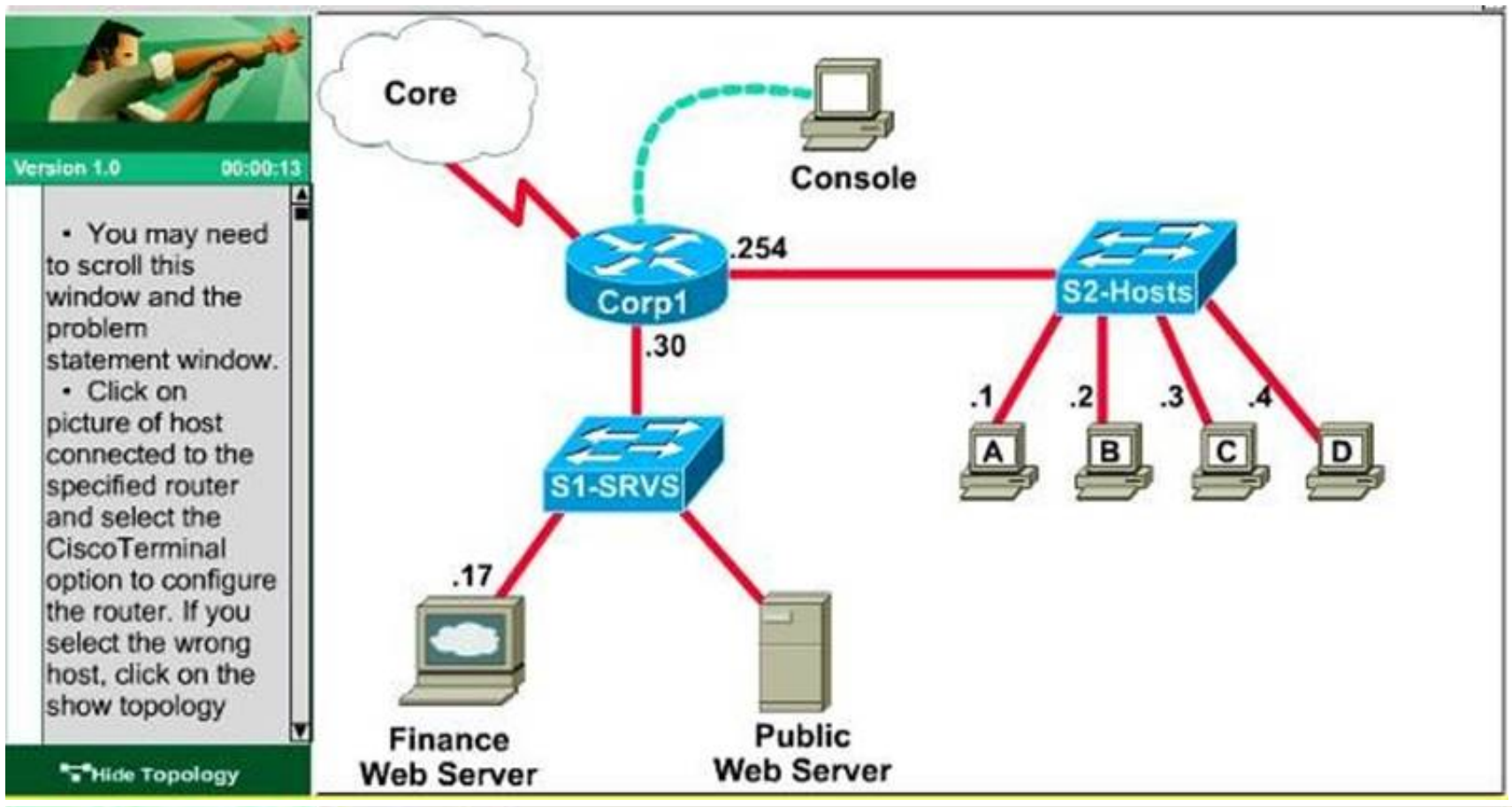
Explanation: https://www.cisco.com/c/en/us/td/docs/routers/access/1900/software/configuration/guide/Software_Configuratio

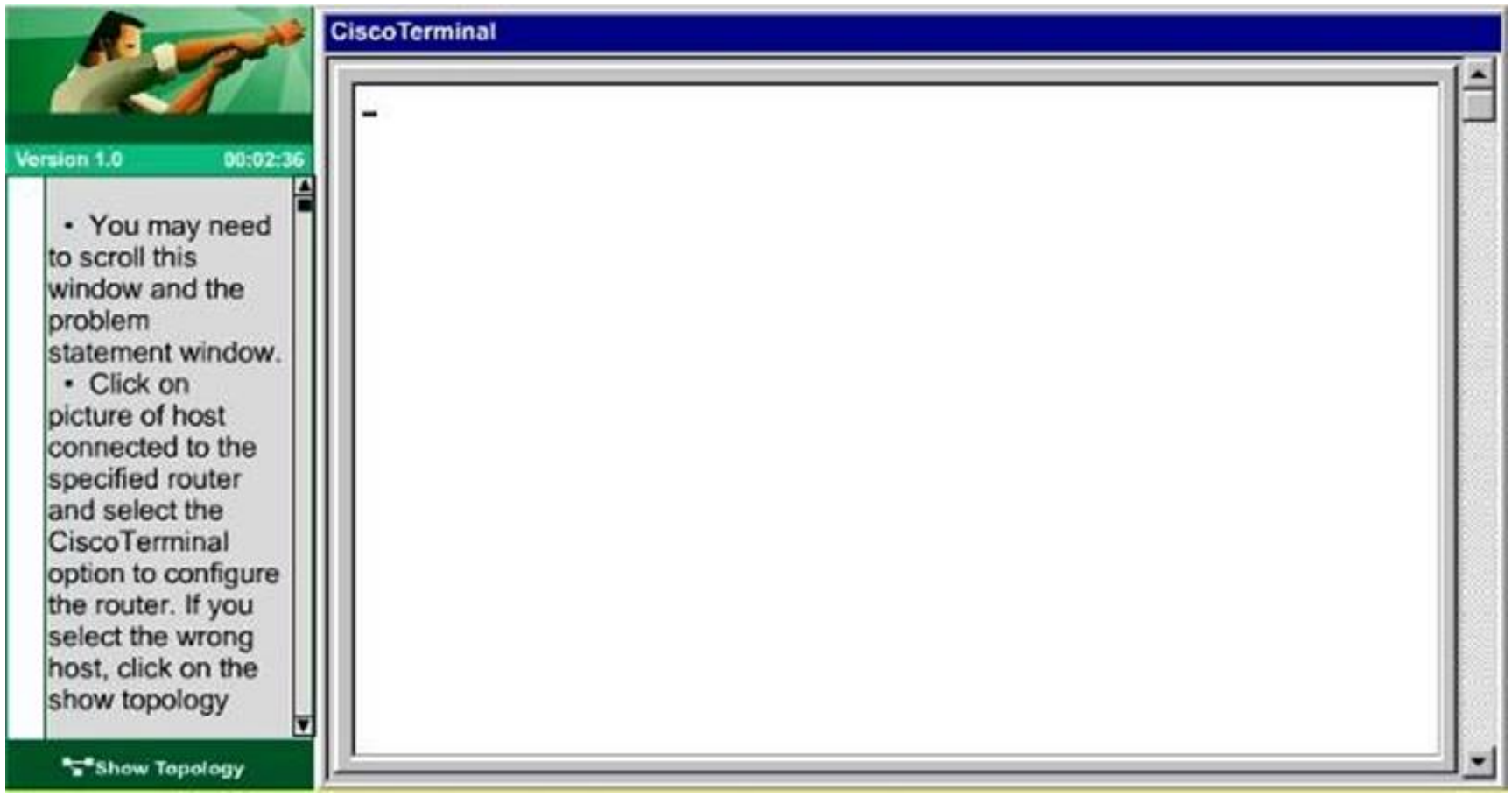
NEW QUESTION 379
Which statement about NTP is true?

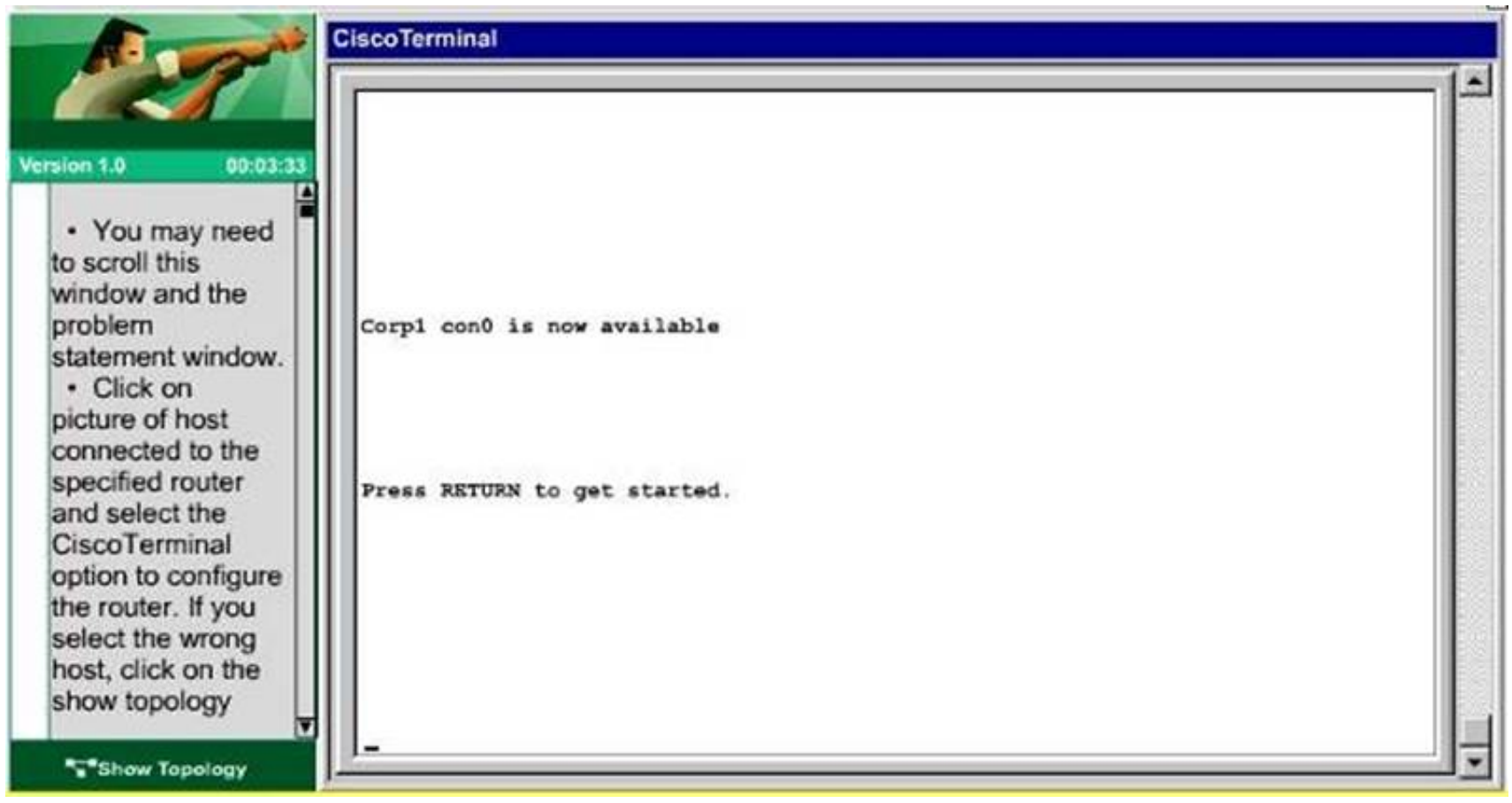
A. The default authentication key number is 1.
B. The default source address of an NTP message is the interface connected to the next-hop for the server peer address.
C. The default stratum number is 5.
D. Each device is enabled as a server by default and propagates NTP messages to all peers on its default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

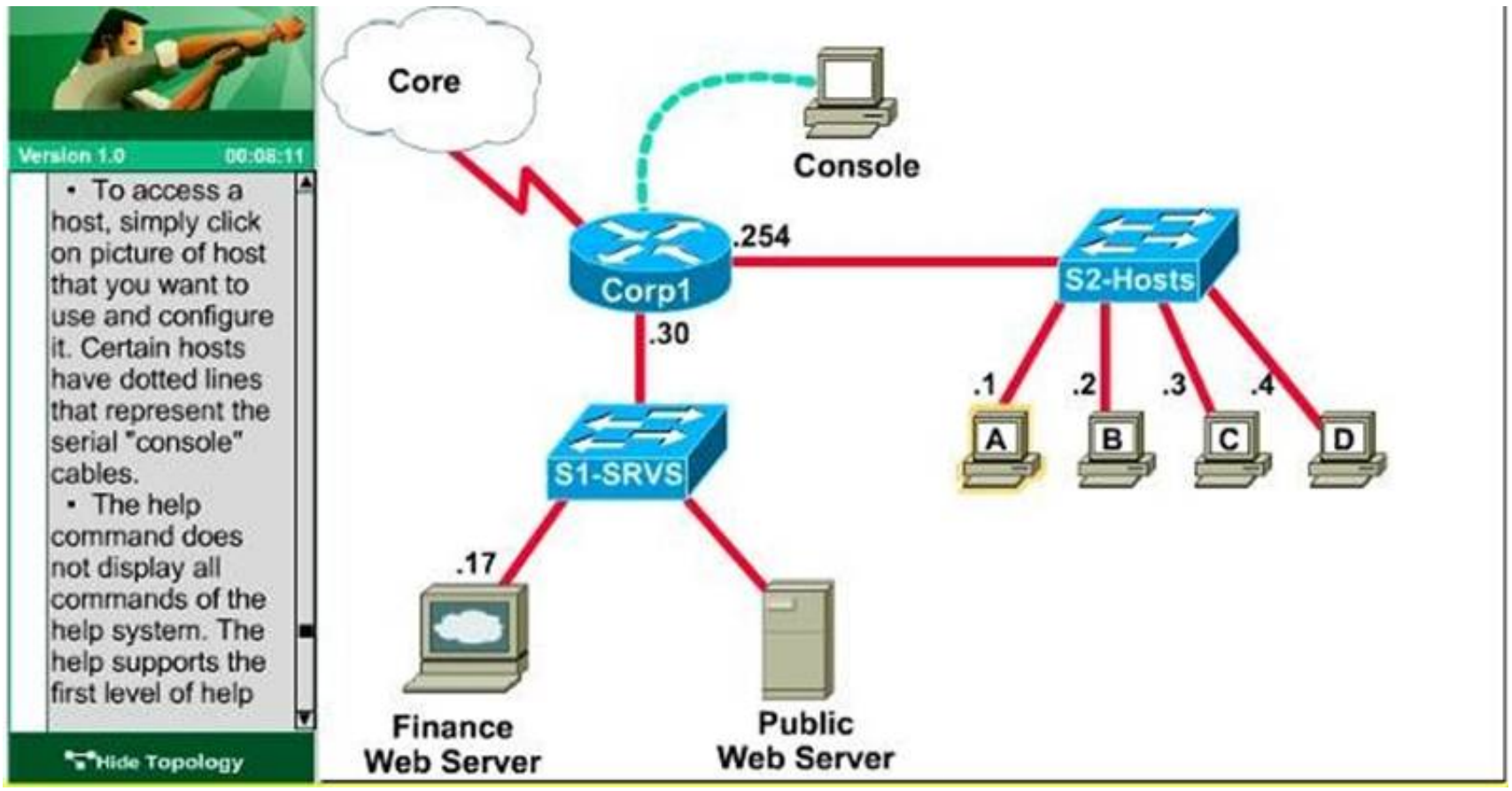
Answer: B

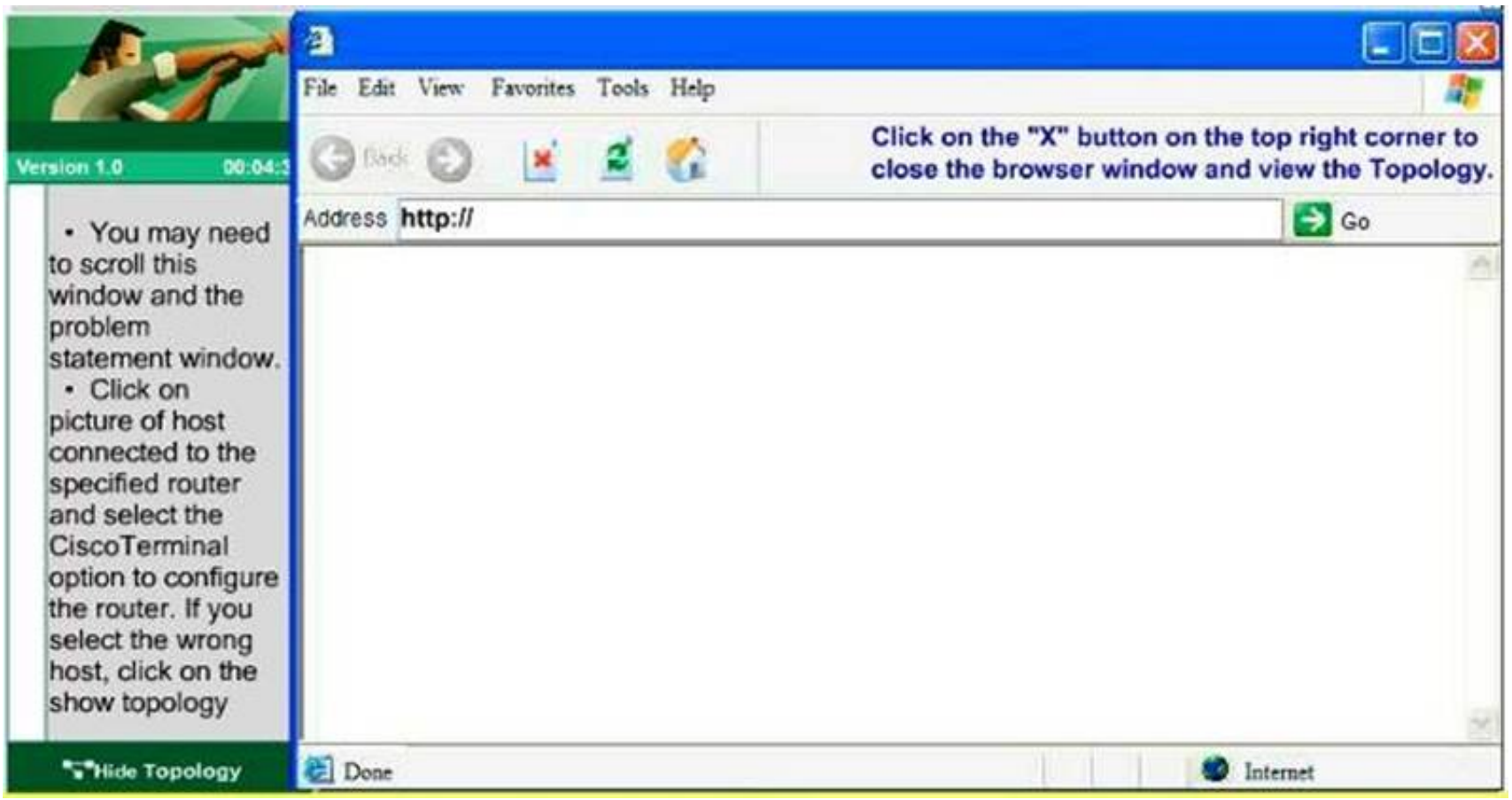
NEW QUESTION 384
A corporation wants to add security to its network. The requirements are:
Host C should be able to use a web browser (HTTP) to access the Finance Web Server.
Other types of access from host C to the Finance Web Server should be blocked.
All access from hosts in the Core or local LAN 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.

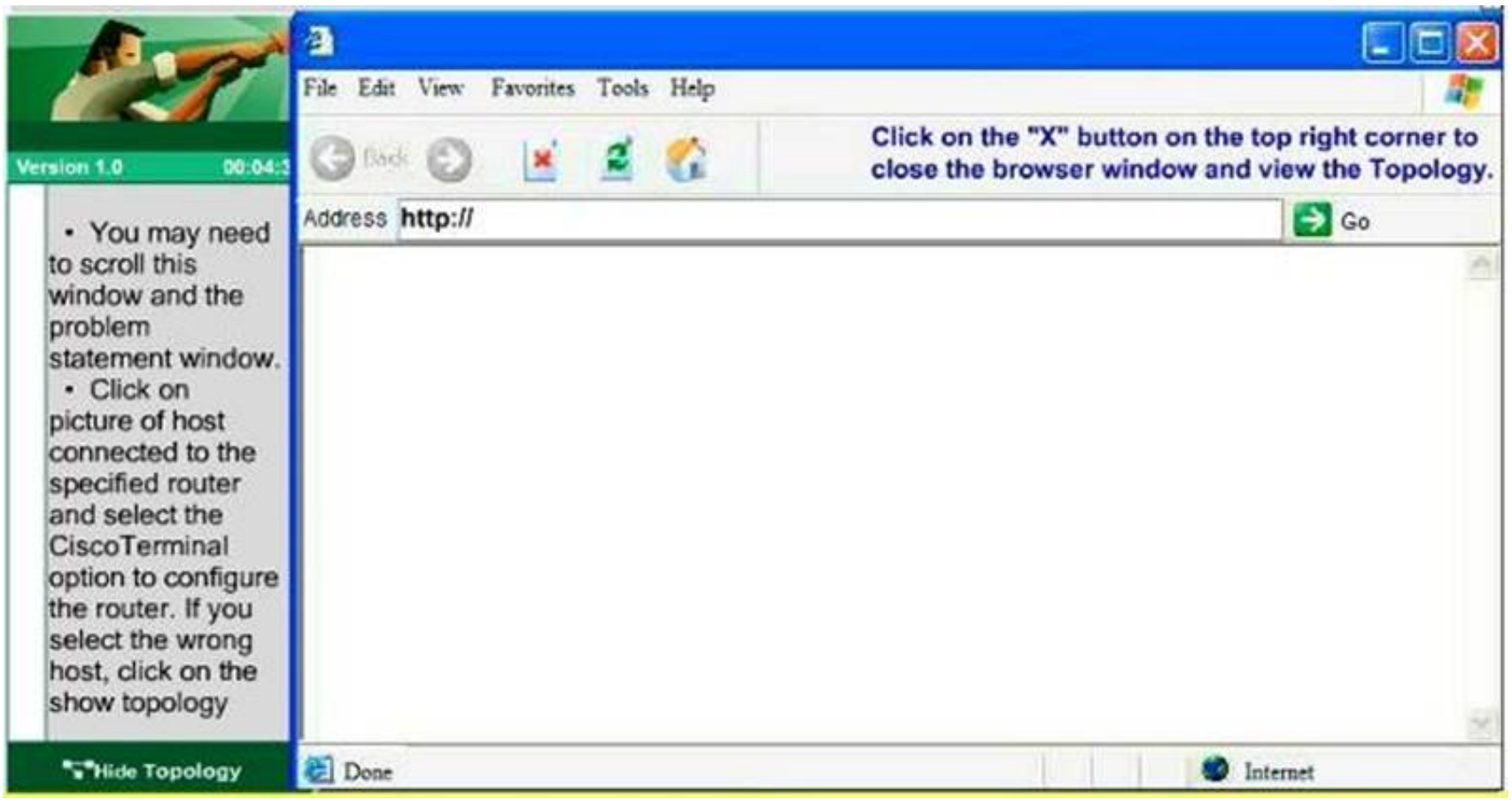

Version 1.0
00:00:13
• You may need to scroll this window and the problem statement window.
• Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology
Hide Topology
Core
Console
Corp1
.254
.30
S2-Hosts
S1-SRVS
.1
.2
.3
.4
A
B
C
D
.17
Finance Web Server
Public Web Server

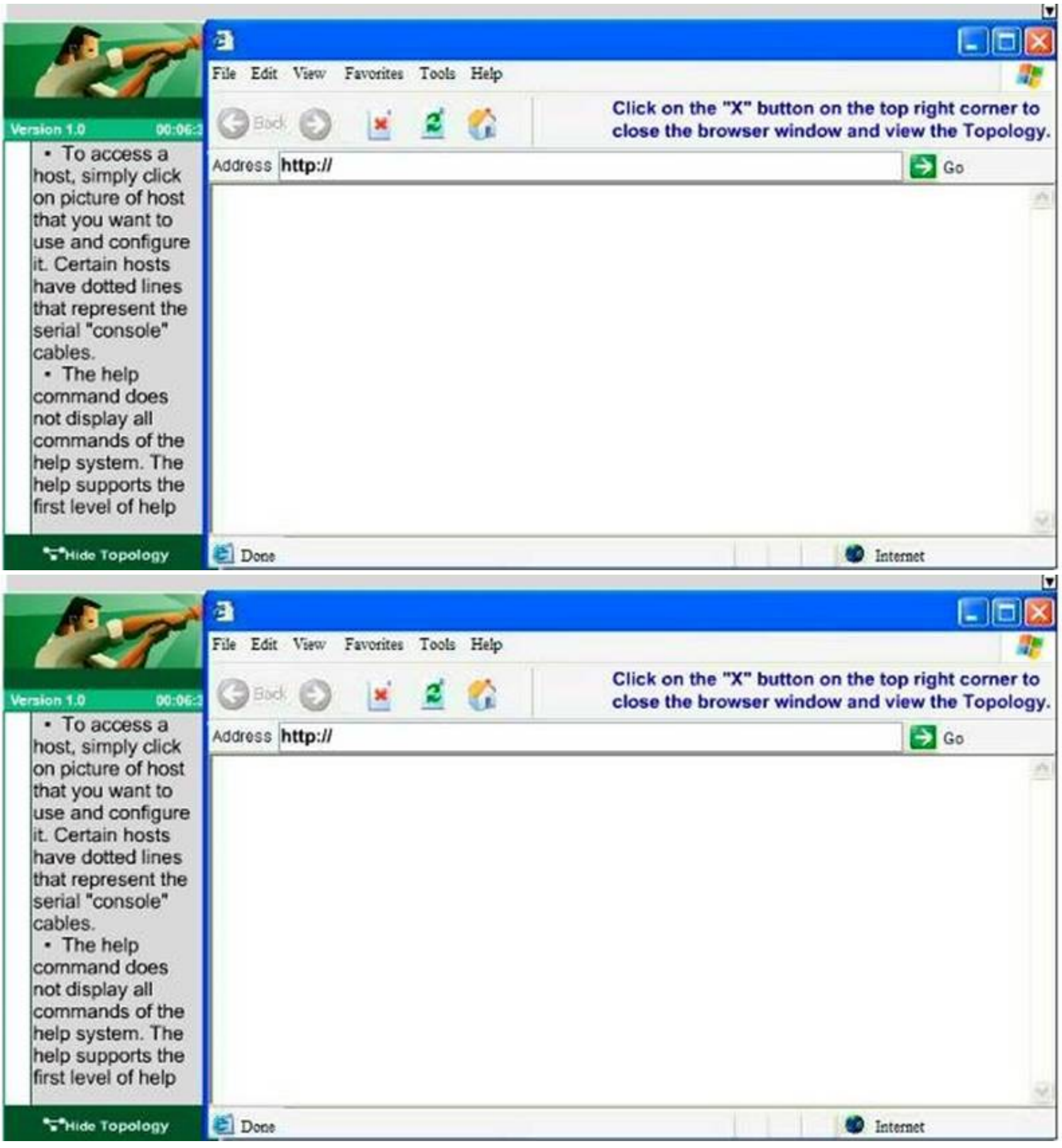

Version 1.0
00:02:36
• You may need to scroll this window and the problem statement window.
• Click on picture of host connected to the specified router and select the CiscoTerminal option to configure the router. If you select the wrong host, click on the show topology
Show Topology
CiscoTerminal


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 00:06:11
• To access a host, simply click on picture of host that you want to use and configure it. Certain hosts have dotted lines that represent the serial "console" cables.
• The help command does not display all commands of the help system. The help supports the first level of help
Hide Topology
Core
Console
Corp1
.254
.30
S2-Hosts
.1
.2
.3
.4
A
B
C
D
S1-SRVS
.17
Finance Web Server
Public Web Server


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
Back
Click on the "X" button on the top right corner to close the browser window and view the Topology.
Address http://
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
Back
Click on the "X" button on the top right corner to close the browser window and view the Topology.
Address http://
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:

```
Corp1#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
Corp1#
```

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.
Corp1#configure terminal
Our access-list needs to allow host C – 192.168125.3 to the Finance Web Server 172.22.109.17 via HTTP (port 80), so our first line is this:
Corp1(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:
Corp1(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)
Corp1(config)#access-list 100 permit ip host 172.22.109.18 any Finally, apply this access-list to Fa0/1 interface (outbound direction) Corp1(config)#interface fa0/1
Corp1(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 387
Which two options will help to solve the problem of a network that is suffering a broadcast storm? (Choose two.)

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

Answer: AE

NEW QUESTION 391
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 395
Which statement about using MPLS for WAN connectivity is true?

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

Answer: A

NEW QUESTION 400
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 403
Which two things does a router do when it forwards a packet? (Choose two.)

A. determines the next hop on the path
B. switches the packet to the appropriate outgoing interfaces
C. computes the destination host address
D. forwards ARP requests
E. updates the destination IP address

Answer: AB

NEW QUESTION 407
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 it own routes with neighbors

C. calculates feasible path
D. utilizes event-triggered updates
E. utilizes frequent periodic updates

Answer: AD

NEW QUESTION 409
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 411
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: • Layer 3 ports and some software features require internal VLANs. Internal VLANs are allocated from 1006 and up. You cannot use a VLAN that has been allocated for such use. To display the VLANs used internally, enter the **show vlan internal usage** command. • Switches running Catalyst product family software do not support configuration of VLANs 1006-1024. If you configure VLANs 1006-1024, ensure that the VLANs do not extend to any switches running Catalyst product family software. • You must enable the extended system ID to use extended range VLANs. See the "Enabling the Extended System ID" section.	No

NEW QUESTION 414
Router R1 has a static router that is configured to a destination network. A directly connected inference is configured with an ip address in the same destination network . which statement about R1 is true ?

A. R1 refuses to advertise the dynamic route to other neighbors
B. R1 sends a withdrawal signal to the neighboring router
C. R1 disables the routing protocol
D. R1 prefers the directly connected interface

Answer: D

NEW QUESTION 416
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 417
Which three commands are required to enable NTP authentication on a Cisco router? (Choose three)

A. ntp peer
B. ntp max-associations
C. ntp authenticate
D. ntp trusted-key
E. ntp authentication-key
F. ntp refclock

Answer: CDE

Explanation: http://blog.ine.com/2007/12/28/how-does-ntp-authentication-work/

NEW QUESTION 421
Which feature can you use to restrict SNMP queries to a specific OID tree?

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

Answer: C

NEW QUESTION 424
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 CiscoExpress 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 429
Which command can you enter to block HTTPS traffic from the whole class A private network range to a host?

A. R1(config)#access-list 105 deny tcp 10.1.0.0 0.0.255.255 40.0.0.2 0.0.0.0 eq 443
B. R1(config)#access-list 105 deny tcp 10.1.0.0 0.0.255.255 40.0.0.2 0.0.0.0 eq 53
C. R1(config)#access-list 105 deny tcp 10.0.0.0 0.255.255.255 40.0.0.2 0.0.0.0 eq 53
D. R1(config)#access-list 105 deny tcp 10.0.0.0 0.255.255.255 40.0.0.2 0.0.0.0 eq 443

Answer: D

NEW QUESTION 434
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

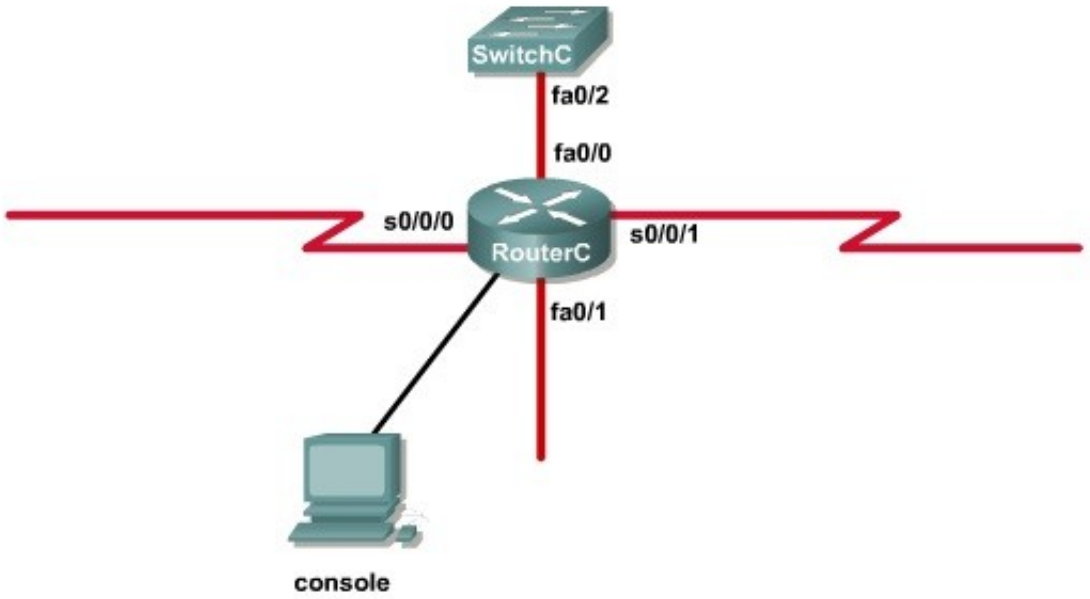
Explanation:
The transport layer segments data into smaller pieces for transport. Each segment is assigned a sequence number, so that the receiving device can reassemble the data on arrival.
The transport layer also use flow control to maximize the transfer rate while minimizing the requirements to retransmit. 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 438
An administrator is trying to ping and telnet from SwitchC to RouterC with the results shown below.

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

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

Topology



RouterC

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

```
<output omitted>

interface Loopback1
 ip address 172.16.4.1.255.255.255.0
!
interface Loopback2
 ip address 10.145.145.1  255.255.255.0
 ipv6 address 2001:410:2:3::/64 eui-64
!
interface FastEthernet0/0
 ip address 10.4.4.3.255.255.255.0
 ip access-group 106 in
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
speed auto
!
interface Serial0/0/0
 bandwidth 64
 no ip address
 ip access-group 102 out
 encapsulation frame-relay
 ip ospf authentication
 ip ospf authentication
 ip ospf authentication-key san-fran
!
interface Serial0/0/0.1 point-to-point
 ip address 10.140.3.2 255.255.255.0
 ip authentication mode eigrp 100 md5
 ip authentication key-chain eigrp 100 icndchain
 frame-relay interface-dlci 120
!
interface 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 439
What is the correct statement below after examining the R1 routing table?

A. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses static route instead RIPv2 Because the static route AD that is configured is less than the AD of RIPv2
B. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses RIPv2 instead static route Because the static route AD that is configured is higher than the AD of RIPv2
C. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses static route instead RIPv2 But the traffic is forwarded to the ISP instead of the internal network.
D. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses RIPv2 instead static route Because the static route AD that is configured is 255

Answer: B

Explanation:

Configuration are below for the answer.

```
R1
!
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
!
```

NEW QUESTION 443
Which Layer 2 protocol encapsulation type supports synchronous and asynchronous circuits and has built-in security mechanisms?

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

Answer: B

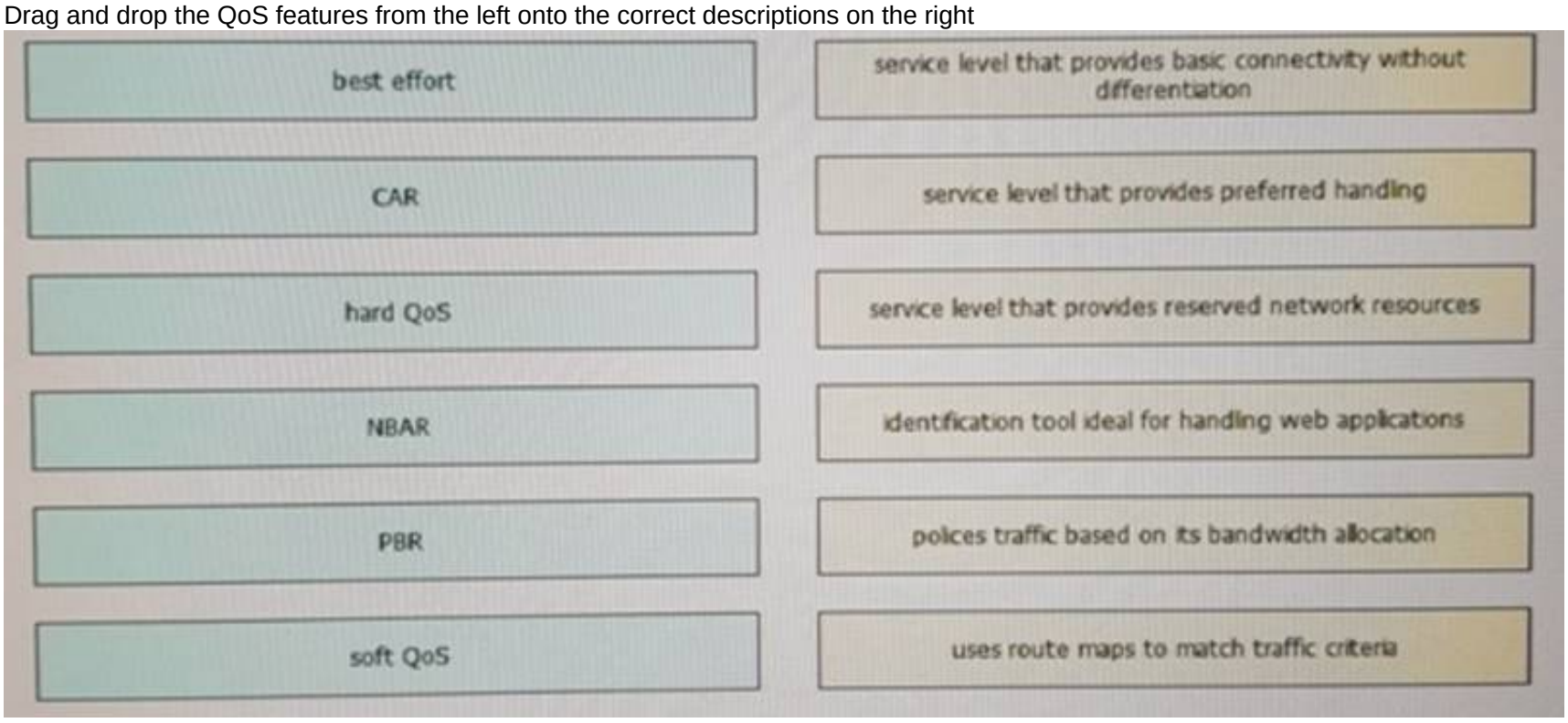
Explanation: PPP: Provides router-to-router and host-to-network connections over synchronous and asynchronous circuits. PPP was designed to work with several network layer protocols, including IP. PPP also has built-in security mechanisms, such as Password Authentication Protocol (PAP) and Challenge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

NEW QUESTION 444
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 448
Drag and drop the QoS features from the left onto the correct descriptions on the right



Answer:

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

NEW QUESTION 452
In which two formats can the IPv6 address fd15:0db8:0000:0000:0700:0003:400F:572B be written? (Choose two.)

A. fd15:0db8:0000:0000:700:3:400F:527B
B. fd15::db8::700:3:400F:527B
C. fd15:db8:0::700:3:4F:527B
D. fd15:0db8::7:3:4F:527B
E. fd15:db8::700:3:400F:572B

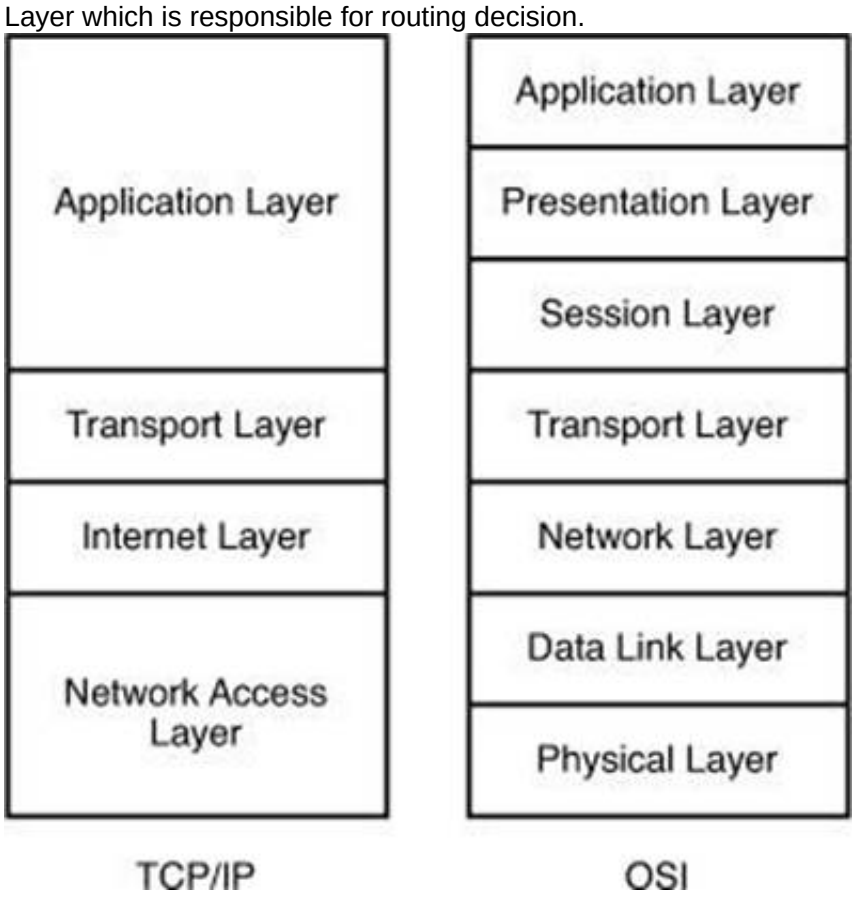
Answer: AE

NEW QUESTION 454
Where does routing occur within the DoD TCP/IP reference model?

A. application
B. internet
C. network
D. transport

Answer: B

Explanation: The picture below shows the comparison between TCP/IP model & OSI model. Notice that the Internet Layer of TCP/IP is equivalent to the Network Layer which is responsible for routing decision.



NEW QUESTION 457
What are three characteristics of the TCP protocol? (Choose three.)

A. It uses a single SYN-ACK message to establish a connection.
B. The connection is established before data is transmitted.
C. It ensures that all data is transmitted and received by the remote device.
D. It supports significantly higher transmission speeds than UDP.
E. It requires applications to determine when data packets must be retransmitted.
F. It uses separate SYN and ACK messages to establish a connection.

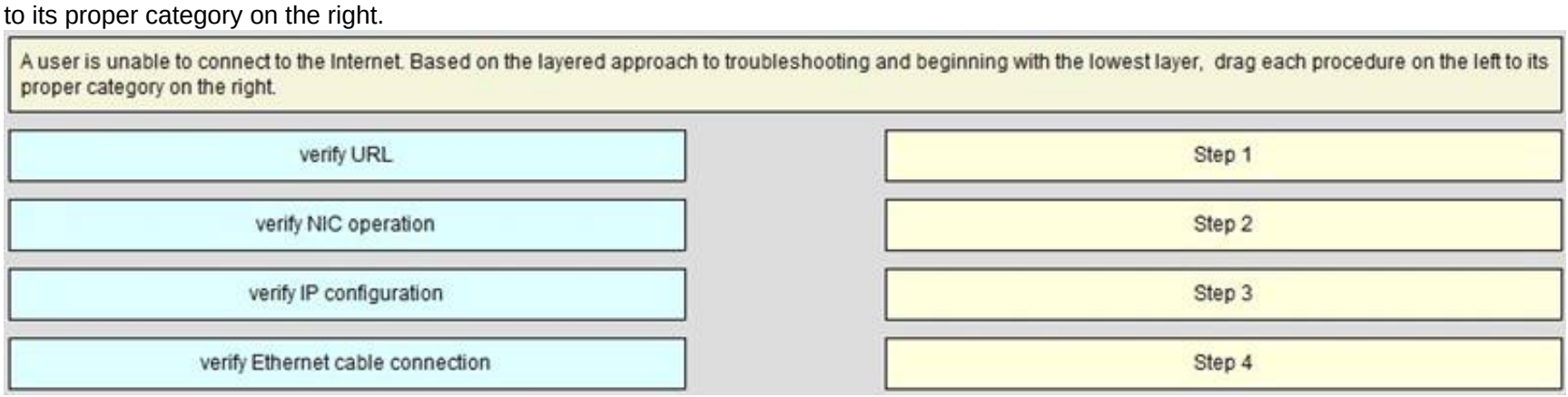
Answer: BCF

NEW QUESTION 462
Which of the following is a security best practice?

A. Use multifactor VPN authentication.
B. Use only commercially licensed software
C. Use only WiFi instead of Ethernet cabling
D. use only solid state hard drives in servers.

Answer: A

NEW QUESTION 466
A user is unable to connect to the Internet. Based on the layered approach to troubleshooting and beginning with the lowest layer, drag each procedure on the left to its proper category on the right.



Answer:

Explanation: The question asks us to “begin with the lowest layer” so we have to begin with Layer 1: verify physical connection; in this case an Ethernet cable connection. For your information, “verify Ethernet cable connection” means that we check if the type of connection (crossover, straight-through, rollover…) is correct, the RJ45 headers are plugged in, the signal on the cable is acceptable…
Next we “verify NIC operation”. We do this by simply making a ping to the loopback interface 127.0.0.1. If it works then the NIC card (layer 1, 2) and TCP/IP stack (layer 3) are working properly.
Verify IP configuration belongs to layer 3. For example, checking if the IP can be assignable for host, the PC’s IP is in the same network with the gateway…
Verifying the URL by typing in your browser some popular websites like google.com, microsoft.com to assure that the far end server is not down (it sometimes make we think we can’t access to the Internet). We are using a URL so this step belongs to layer 7 of the OSI model.

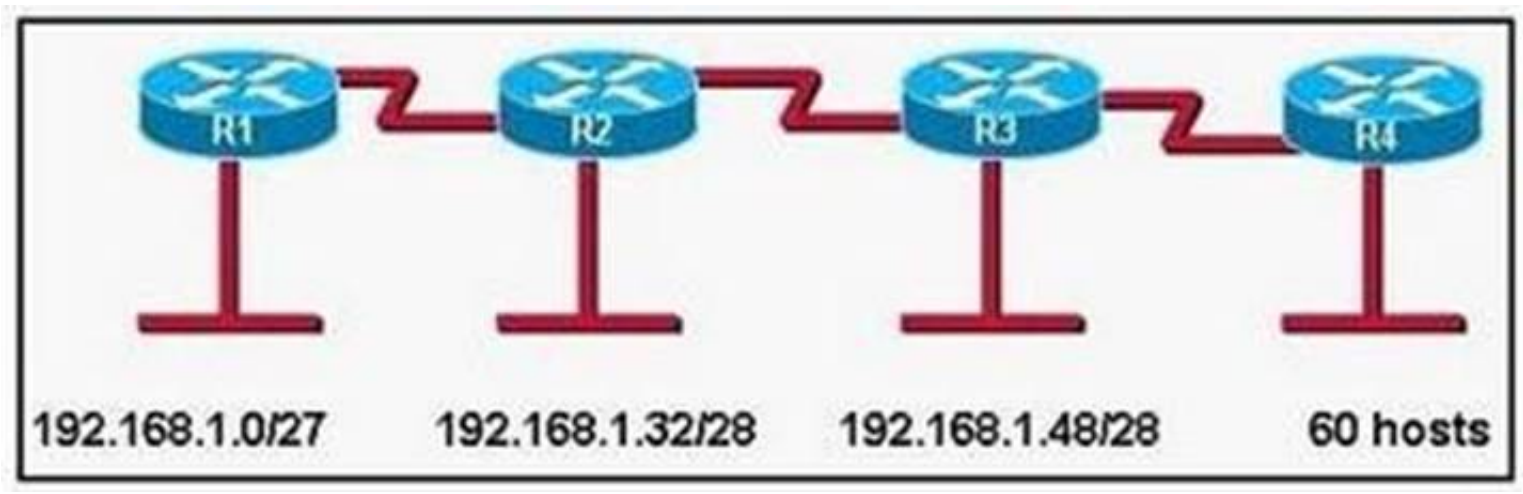
NEW QUESTION 471
Which three statements accurately describe Layer 2 Ethernet switches? (Choose three.)

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

Answer: BDE

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

NEW QUESTION 473
Refer to the exhibit.



A new subnet with 60 hosts has been added to the network. Which subnet address should this network use to provide enough usable addresses while wasting the fewest addresses?

A. 192.168.1.56/26
B. 192.168.1.56/27
C. 192.168.1.64/26
D. 192.168.1.64/27

Answer: C

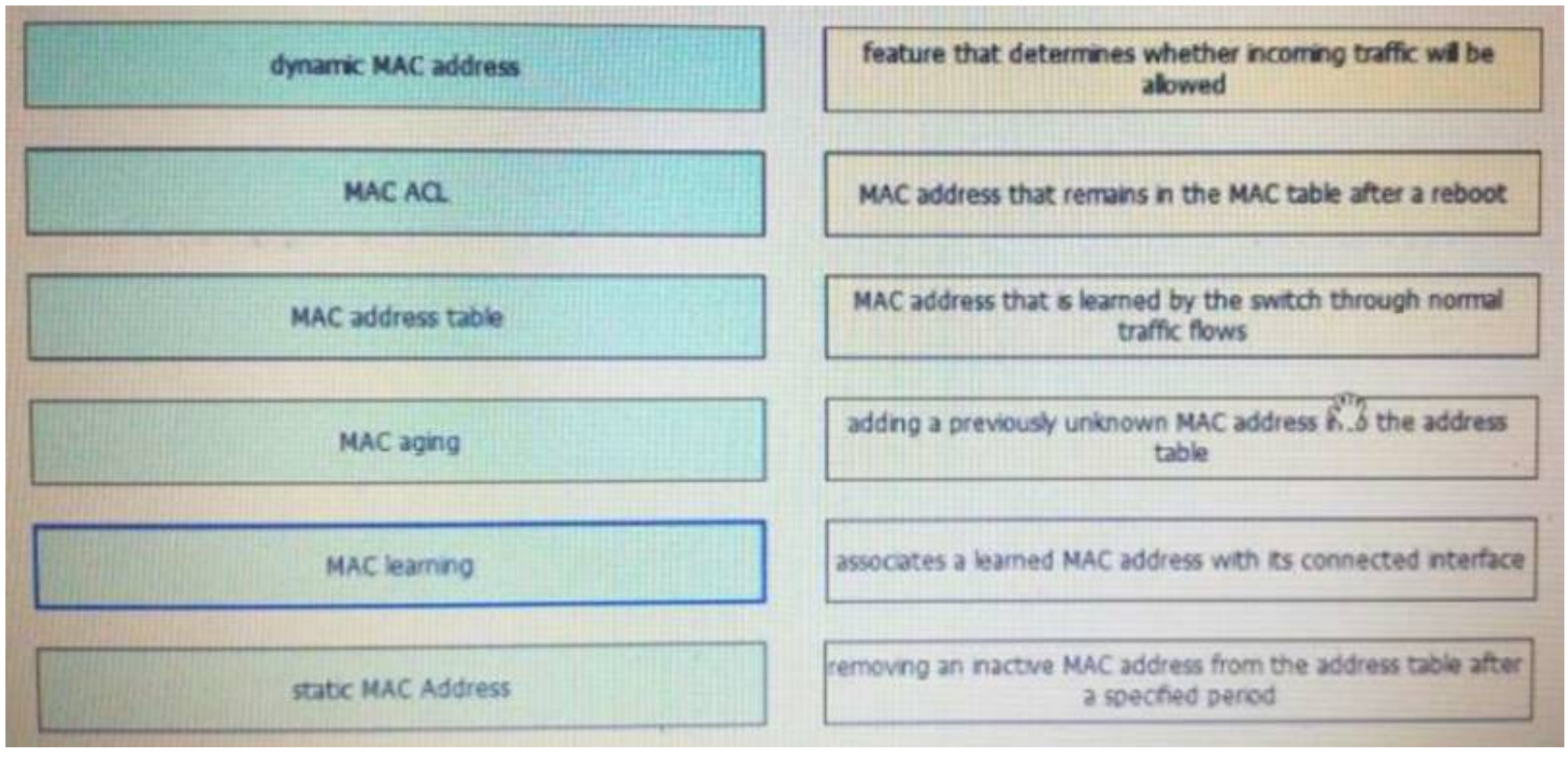
Explanation: A subnet with 60 host is 2*2*2*2*2*2 = 64 -2 == 62
6 bits needed for hosts part. Therefore subnet bits are 2 bits (8-6) in fourth octet. 8bits+ 8bits+ 8bits + 2bits = /26
/26 bits subnet is 24bits + 11000000 = 24bits + 192 256 – 192 = 64
0 -63
64 – 127

NEW QUESTION 474
Which option describes a benefit of a point-to-point leased line?

A. full-mesh capability
B. flexibility of design
C. low cost
D. simplicity of configuration

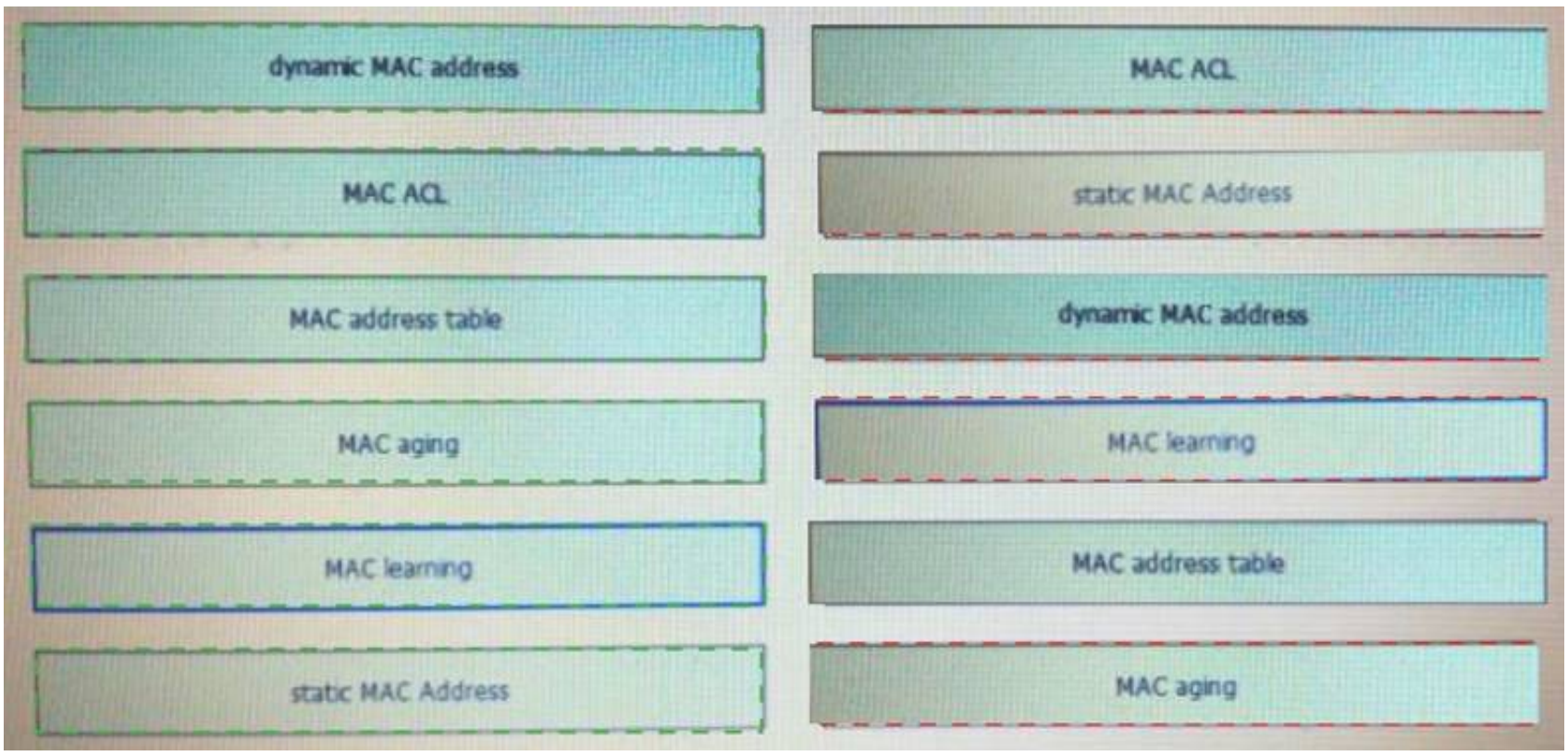
Answer: D

NEW QUESTION 476
Drag and drop the switching concepts from the left onto the correct descriptions on the right.

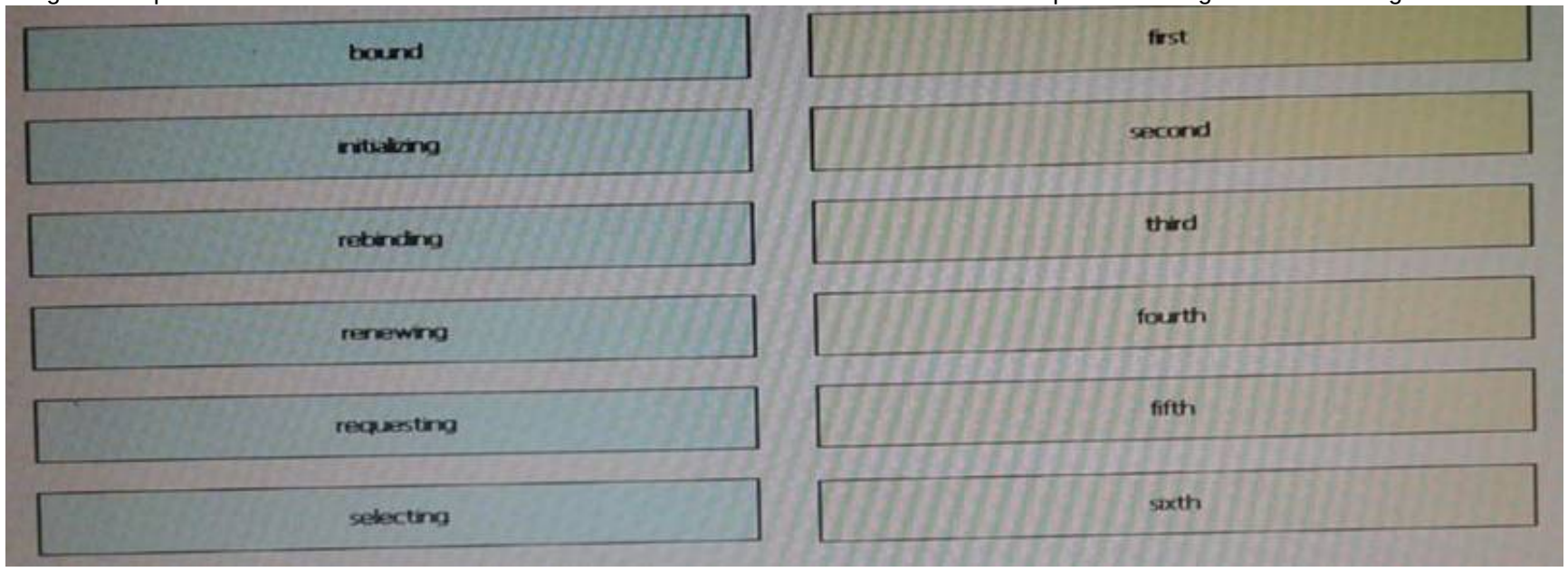


Answer:

Explanation:



NEW QUESTION 481
Drag and drop the DHCP client states from the left into the standard order in which the Client passes through them on the right.

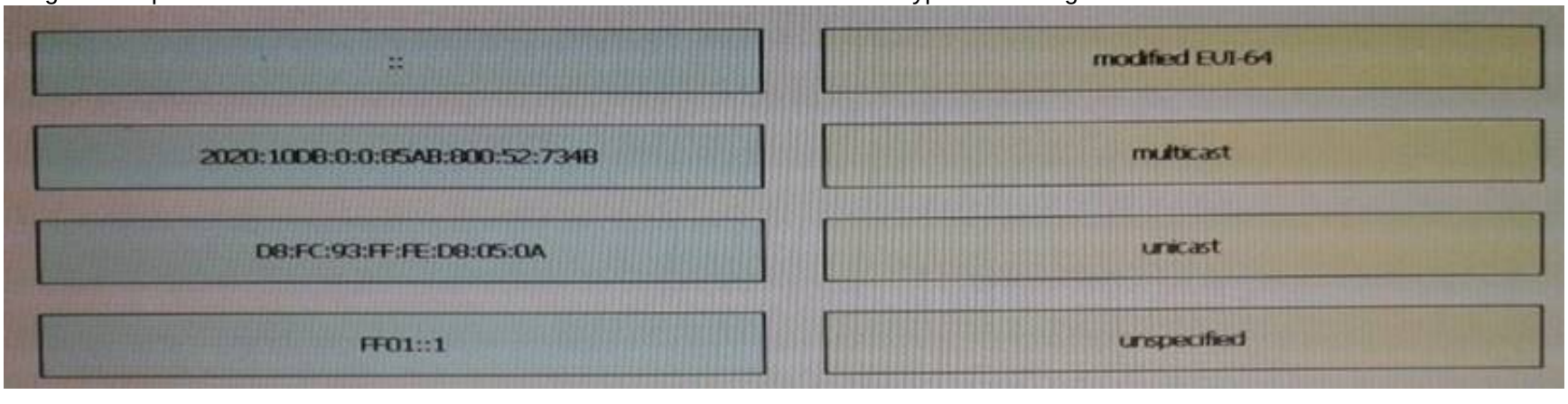


Answer:

Explanation: Initializing
Selecting
Requesting

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

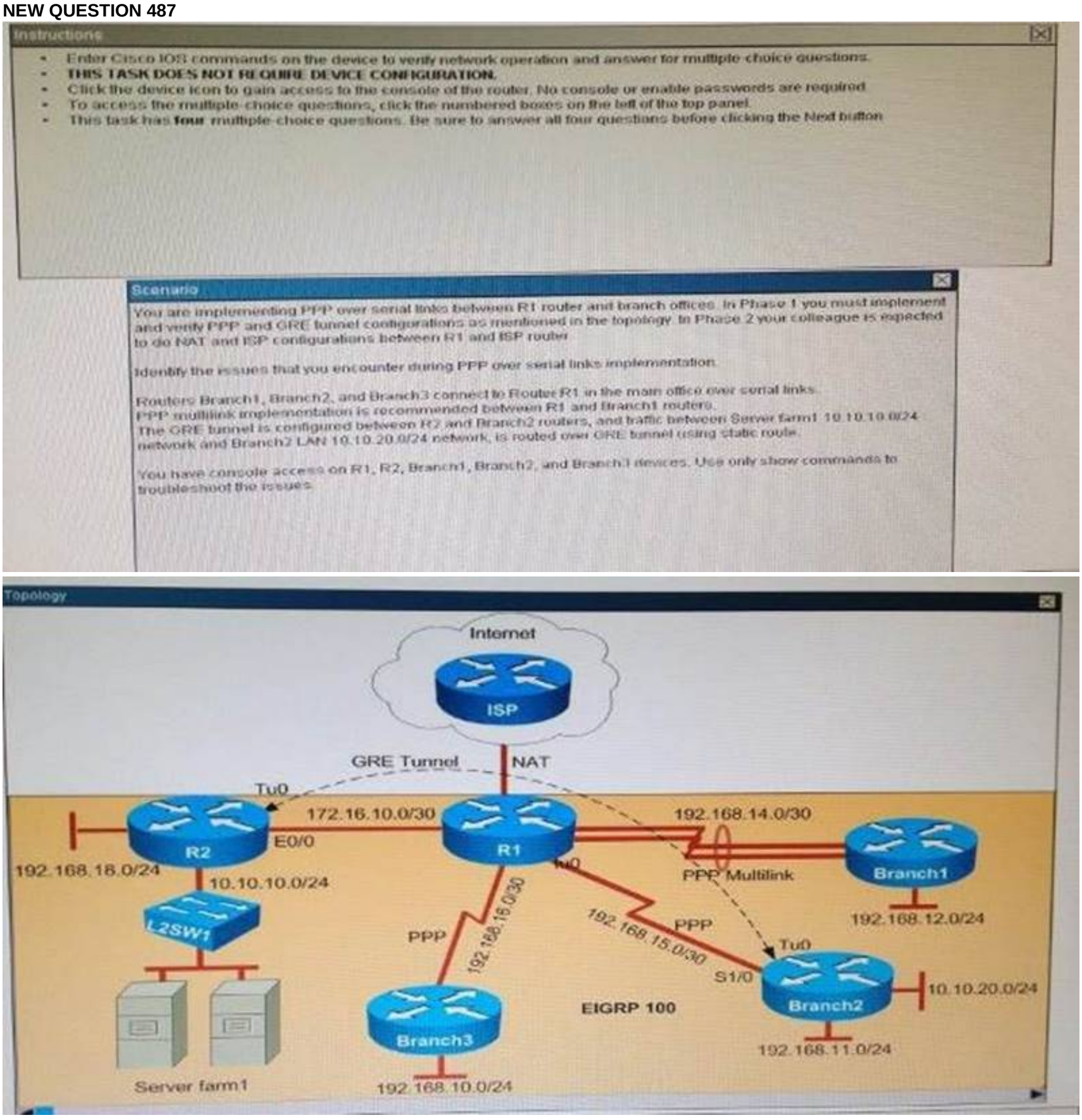
NEW QUESTION 482
Drag and drop the IPv6 IP addresses from the left onto the correct IPv6 address types on the right

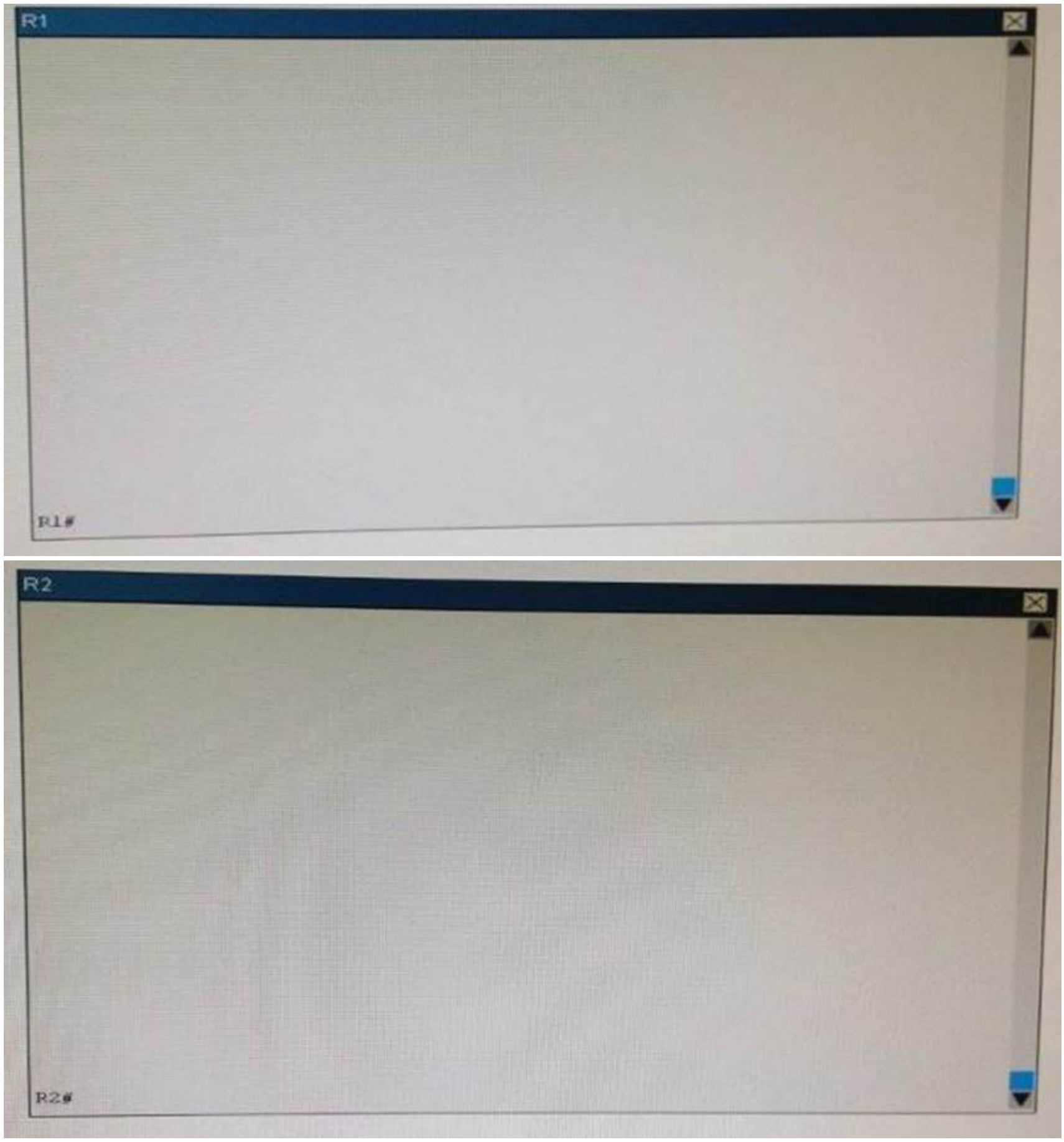


Answer:

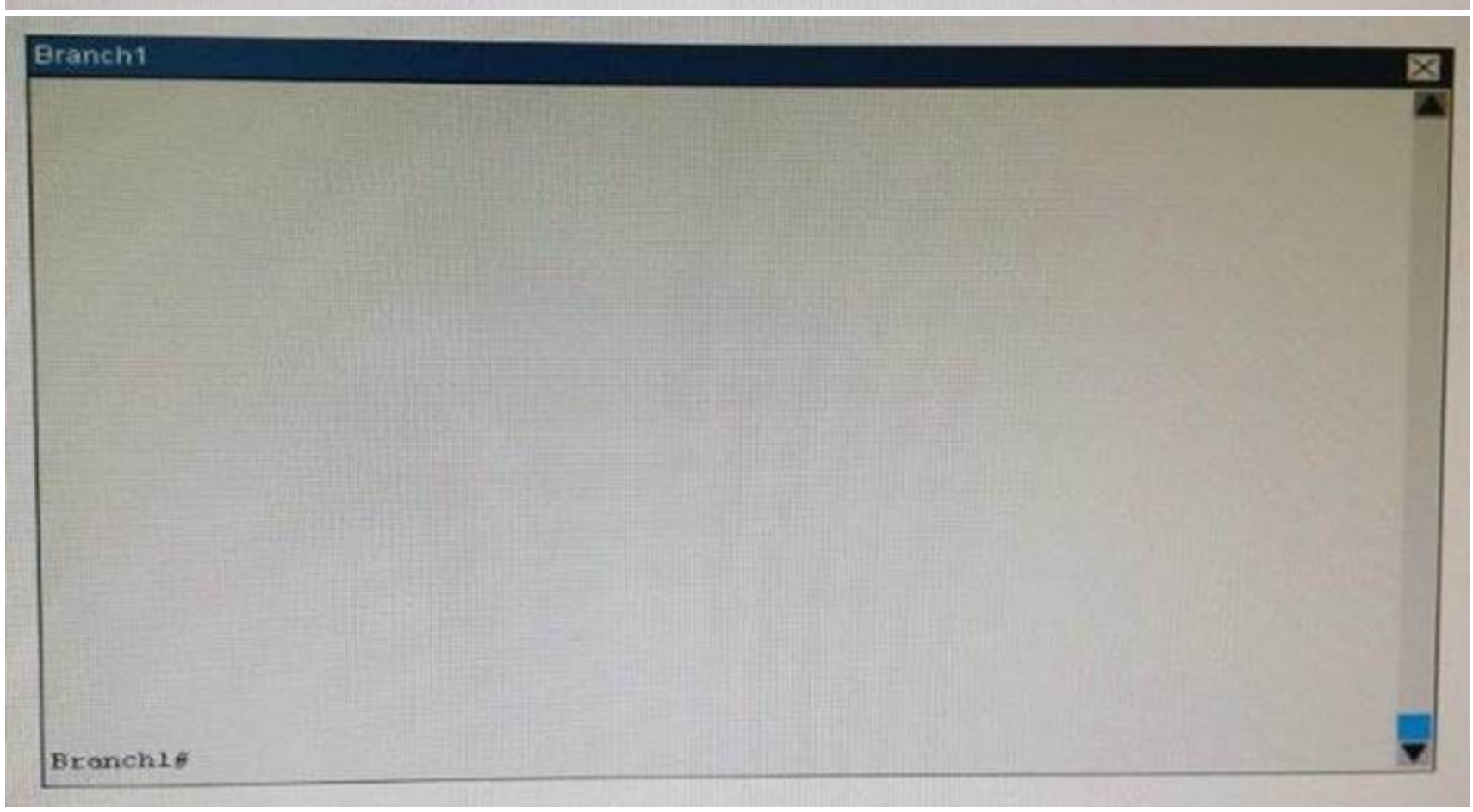
Explanation: FF01::1 = multicast
= unspecified
2020:10DB:0:0:85AB:800:52:7348 = Modified EUI-64 DB:FC:93:FF:FE:DB:05:0A = unicast

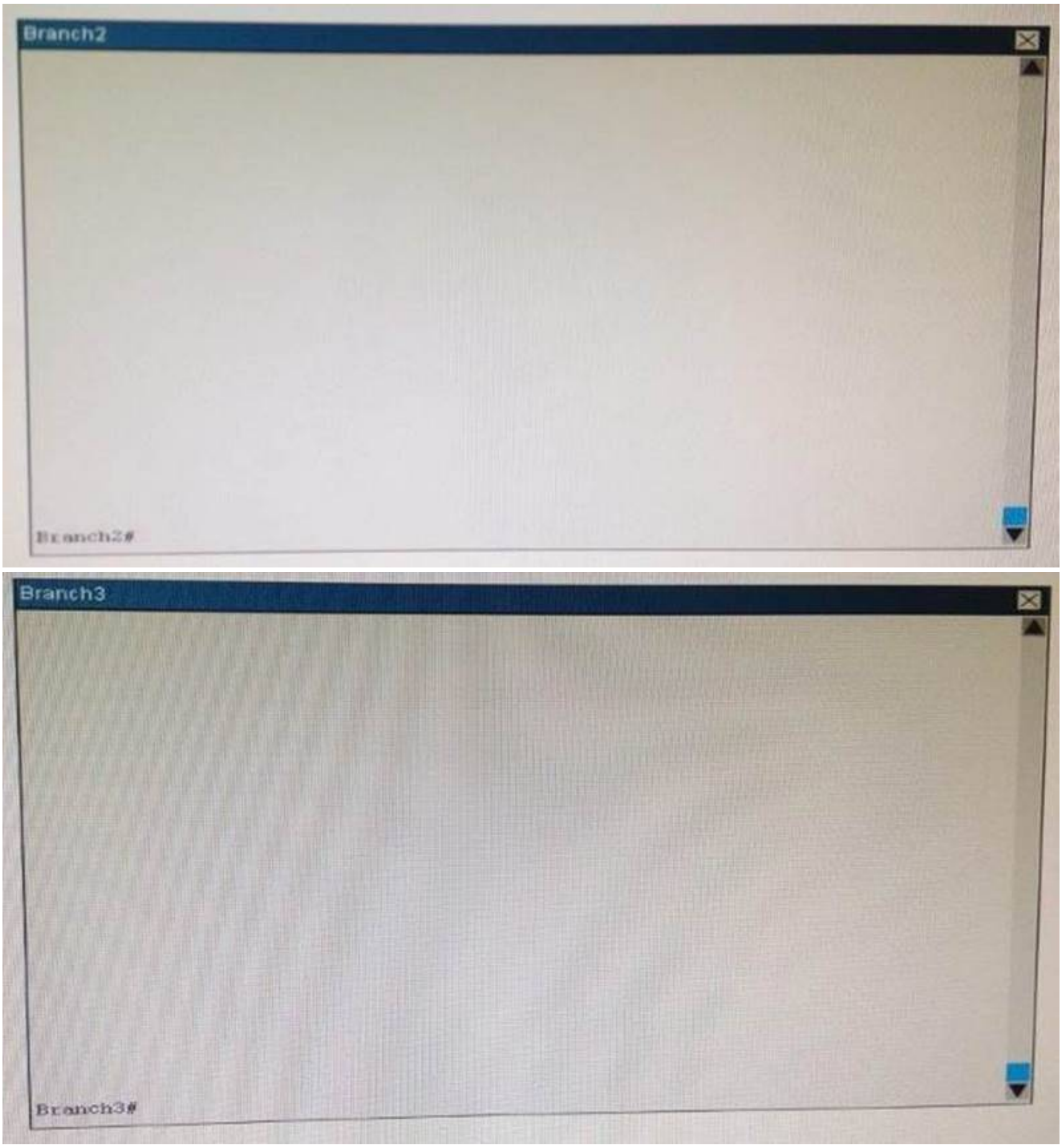
NEW QUESTION 487




R1
R1#

R2
R2#


Branch1
Branch1#



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 490
Which two are features of IPv6? (Choose two.)

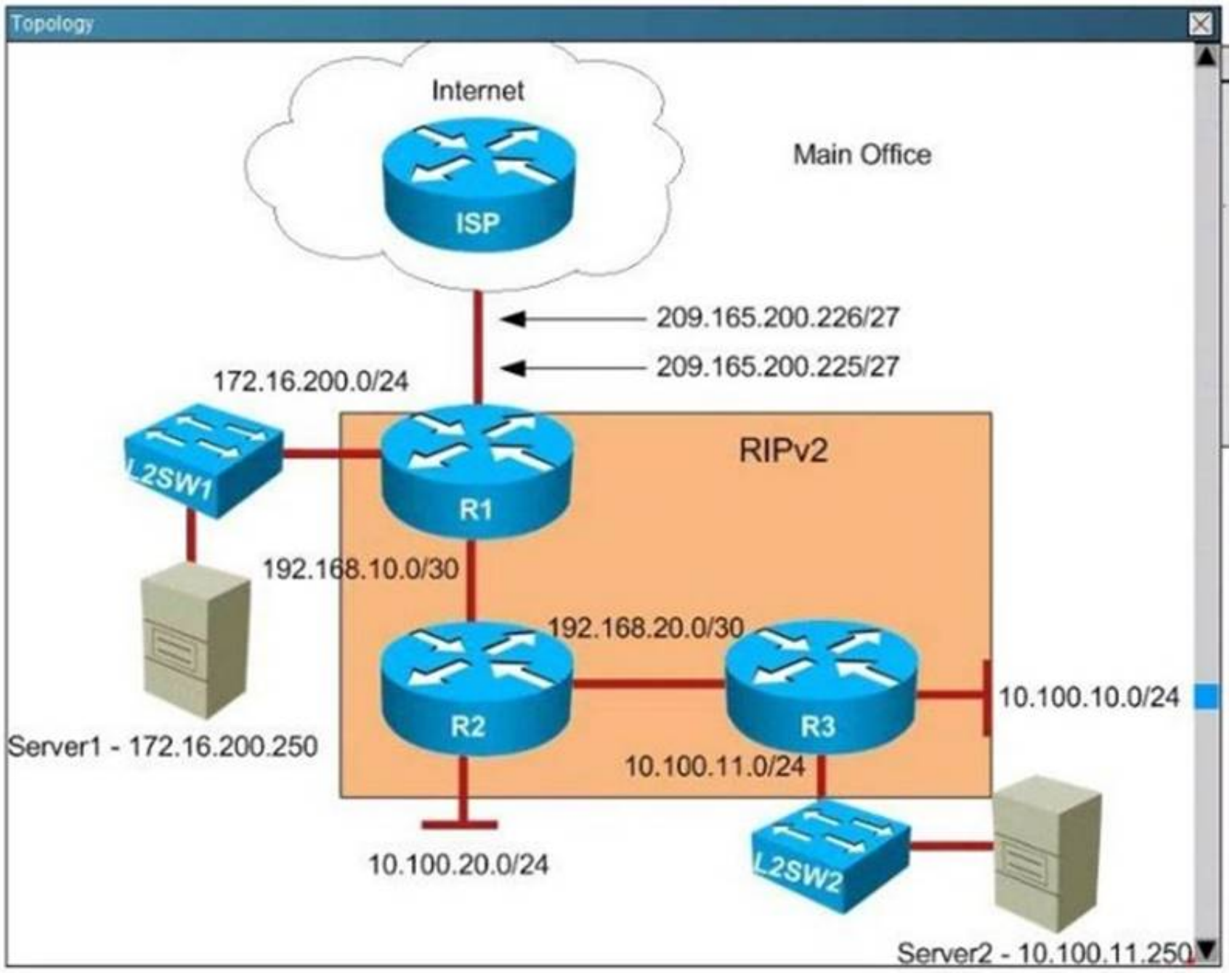
A. anycast
B. broadcast
C. multicast
D. podcast
E. allcast

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 494
Scenario:
You are a junior network engineer for a financial company, and the main office network is experiencing network issues. Troubleshoot the network issues.
Router R1 connects the main office to the internet, and routers R2 and R3 are internal routers. NAT is enabled on router R1.
The routing protocol that is enabled between routers R1, R2 and R3 is RIPv2.

R1 sends the default route into RIPv2 for the internal routers to forward internet traffic to R1.
You have console access on R1, R2 and R3 devices. Use only show commands to troubleshoot the issues.



R1

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

R1

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

R1

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

R1

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

R1

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

R2

```
Building configuration...

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

R2

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


!
```

R2

```
!
!



!
ip dhcp excluded-address 192.168.20.1
!
ip dhcp pool DHCPASSIGNR3
 network 10.10.10.0 255.255.255.252
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
R2#
```

R3

```
Current configuration : 1115 bytes
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R3
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
!
```

R3

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

R3

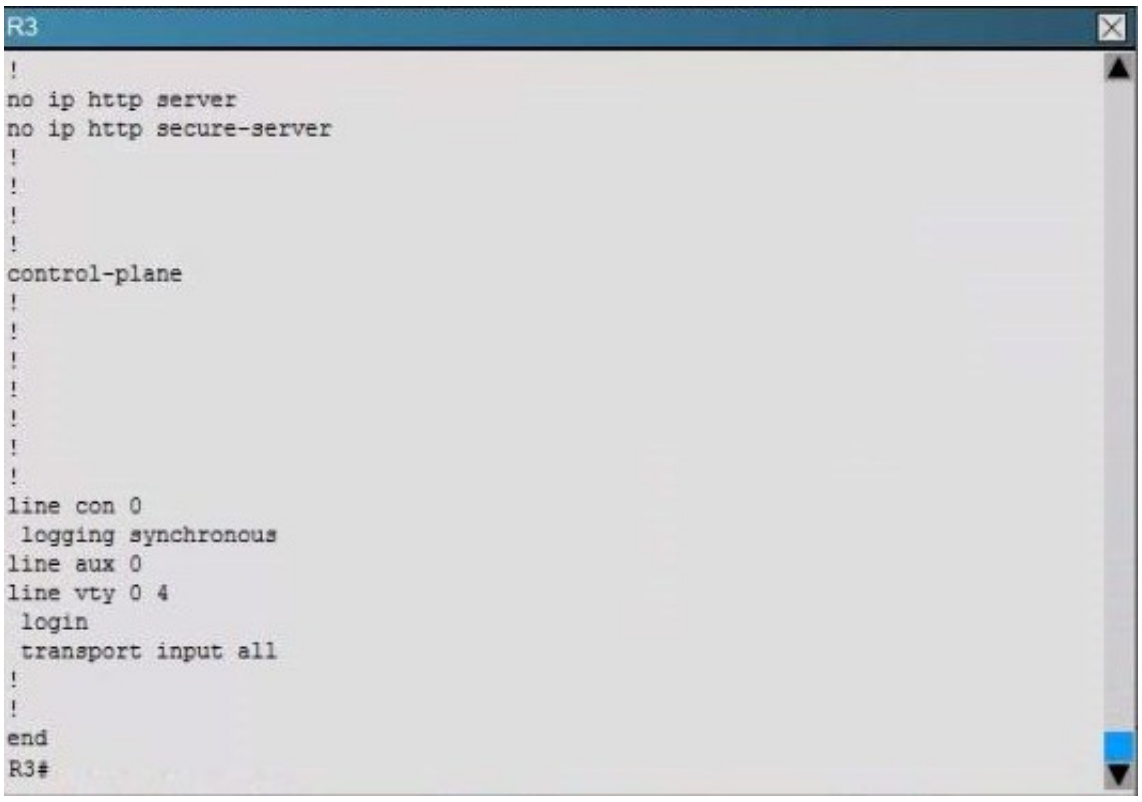
```
!
!
interface Loopback0
 ip address 192.168.250.3 255.255.255.255
!
interface Ethernet0/0
 description ***Link to LAN***
 ip address 10.100.10.1 255.255.255.0
!
interface Ethernet0/1
 description ***Link to R2***
 ip address dhcp
!
interface Ethernet0/2
 description ***Link to Server2 Segment***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

R3

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

R3

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

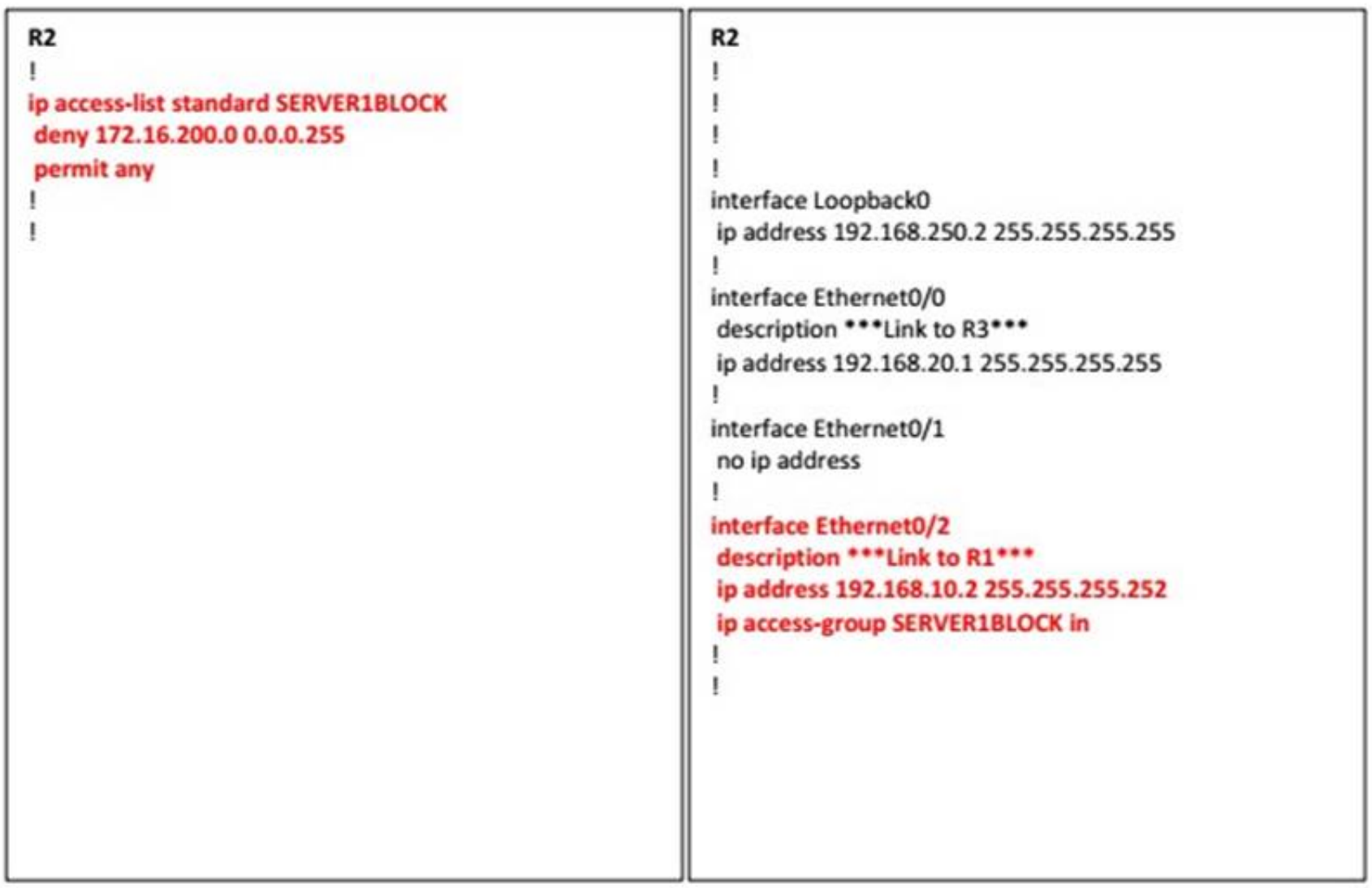


Why applications that are installed on PC's in R2 LAN network 10.100.20.0/24 are unable to communicate with server1?

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:



NEW QUESTION 499
A network administrator enters the following command on a router: logging trap 3. What are three message types that will be sent to the Syslog server? (Choose three.)

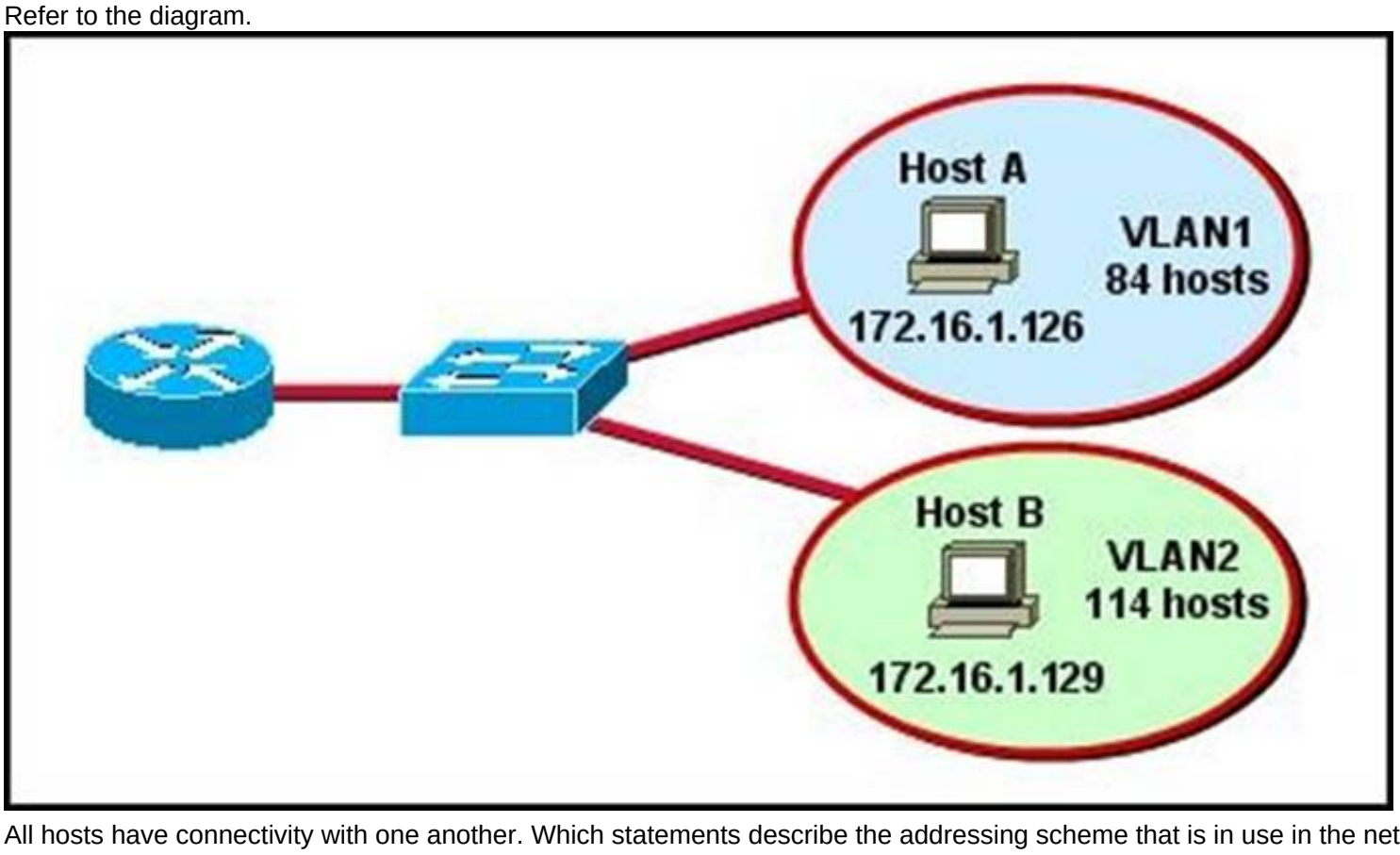
A. informational
B. emergency
C. warning
D. critical
E. debug
F. error

Answer: BDF

Explanation: The Message Logging is divided into 8 levels as listed below:
Level Keyword

Description
0
emergencies System is unusable 1
alerts
Immediate action is needed 2
critical
Critical conditions exist 3
errors
Error conditions exist 4
warnings
Warning conditions exist 5
notification
Normal, but significant, conditions exist 6
informational Informational messages 7
debugging Debugging messages
If you specify a level with the “logging trap level” command, that level and all the higher levels will be
logged. For example, by using the “logging trap 3 command, all the logging of emergencies, alerts, critical, and errors, will be logged.

NEW QUESTION 500
Refer to the diagram.



All hosts have connectivity with one another. Which statements describe the addressing scheme that is in use in the network? (Choose three.)

A. The subnet mask in use is 255.255.255.192.
B. The subnet mask in use is 255.255.255.128.
C. The IP address 172.16.1.25 can be assigned to hosts in VLAN1
D. The IP address 172.16.1.205 can be assigned to hosts in VLAN1
E. The LAN interface of the router is configured with one IP address.
F. The LAN interface of the router is configured with multiple IP addresses.

Answer: BCF

Explanation: The subnet mask in use is 255.255.255.128: This is subnet mask will support up to 126 hosts, which is needed. The IP address 172.16.1.25 can be assigned to hosts in VLAN1: The usable host range in this subnet is
172.16.1.1-172.16.1.126
The LAN interface of the router is configured with multiple IP addresses: The router will need 2 subinterfaces for the single physical interface, one with an IP address that belongs in each VLAN.

NEW QUESTION 501
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.

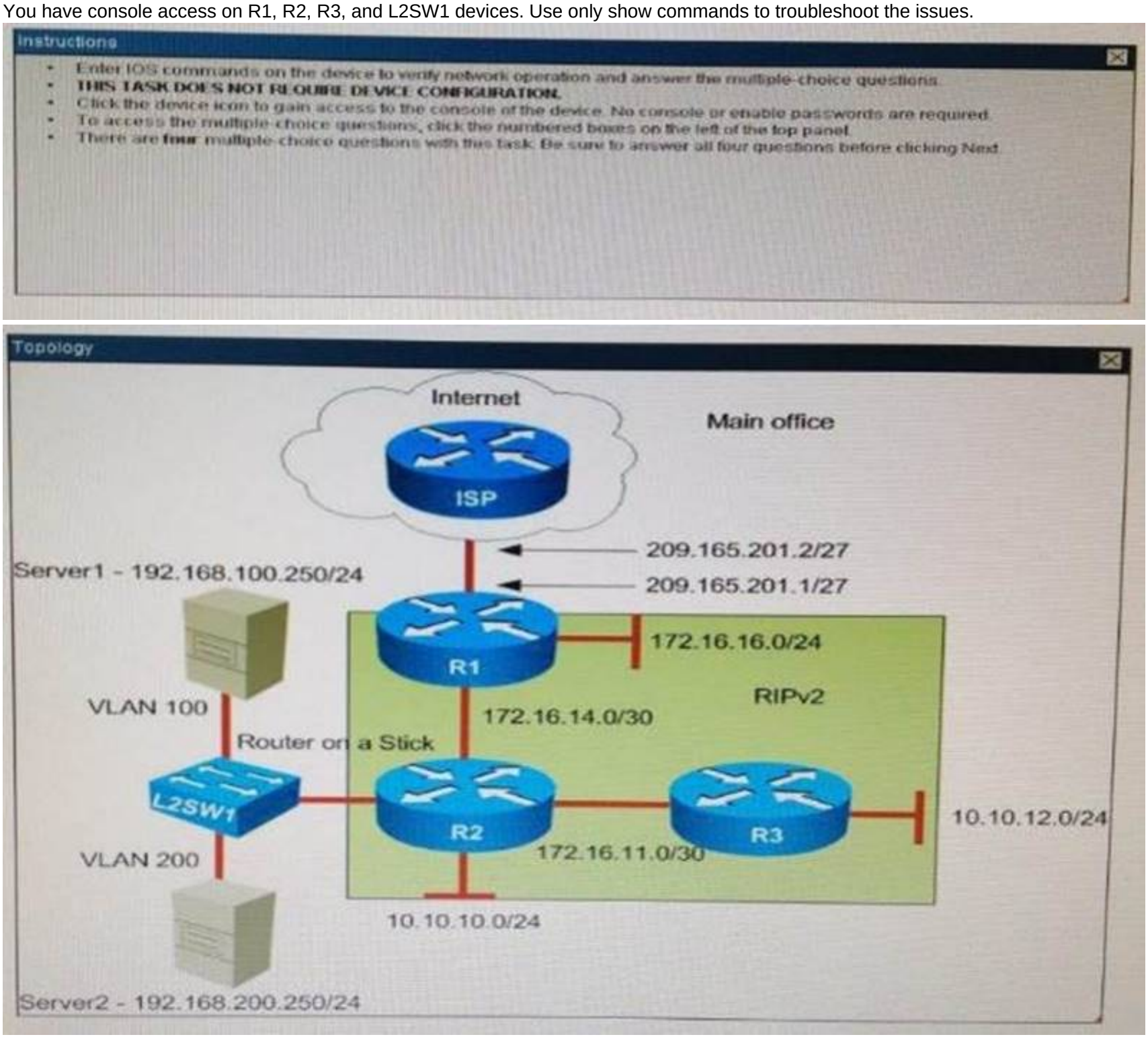
NEW QUESTION 503
For which two reasons might you choose chassis aggregation instead of stacking switches? (Choose two)

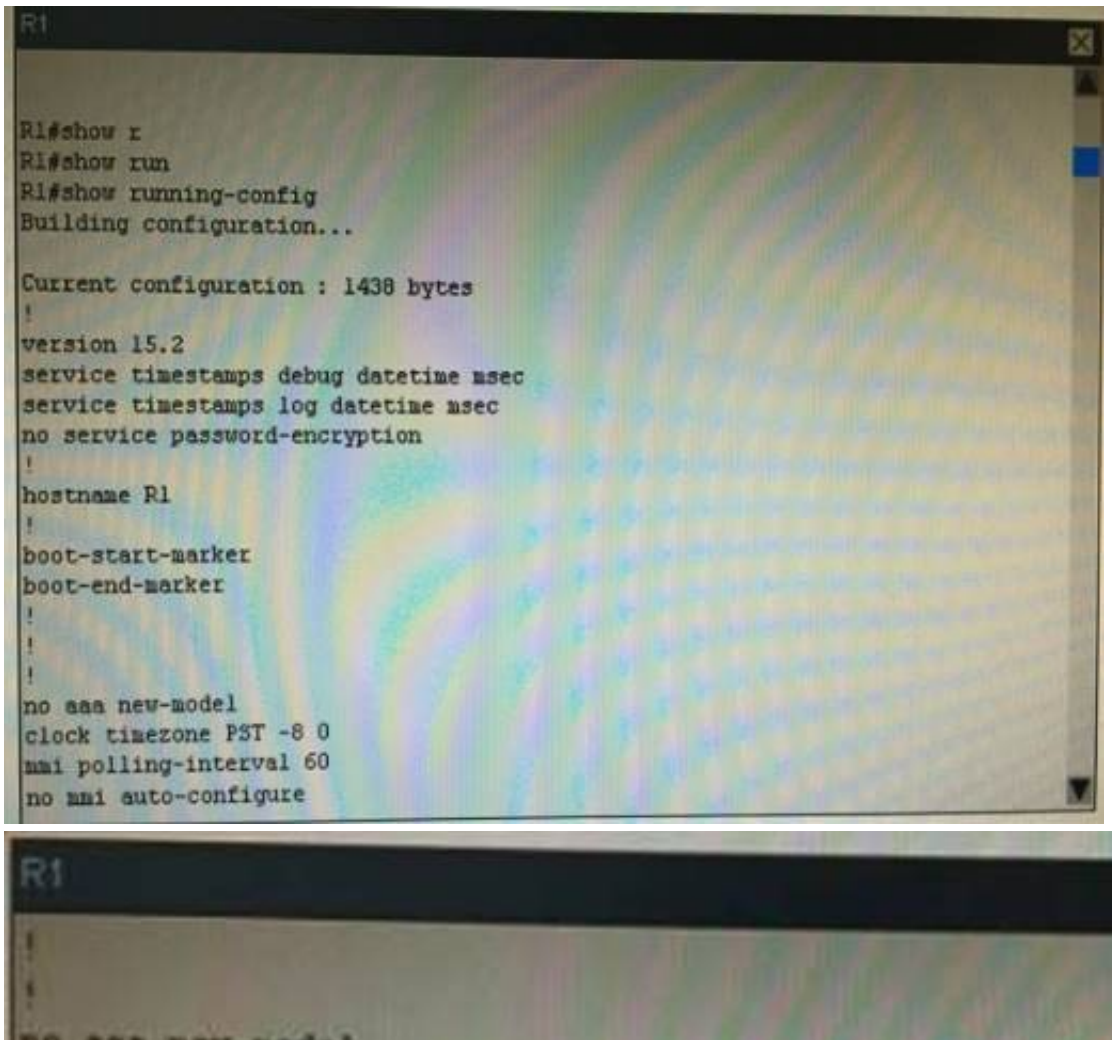
A. to avoid the use of a centralized configuration manager

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

Answer: BC

NEW QUESTION 506
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
mmi polling-interval 60
no mmi auto-configure
R1
!
!
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!

R1

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

R1

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

R1

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

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 AmdP2, address is aabb.cc00.4110 (bia aabb.cc00.4110)
  Description: ***Link to LAN***
  Internet address is 172.16.16.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
```

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 AmdP2, 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 AmdP2, 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

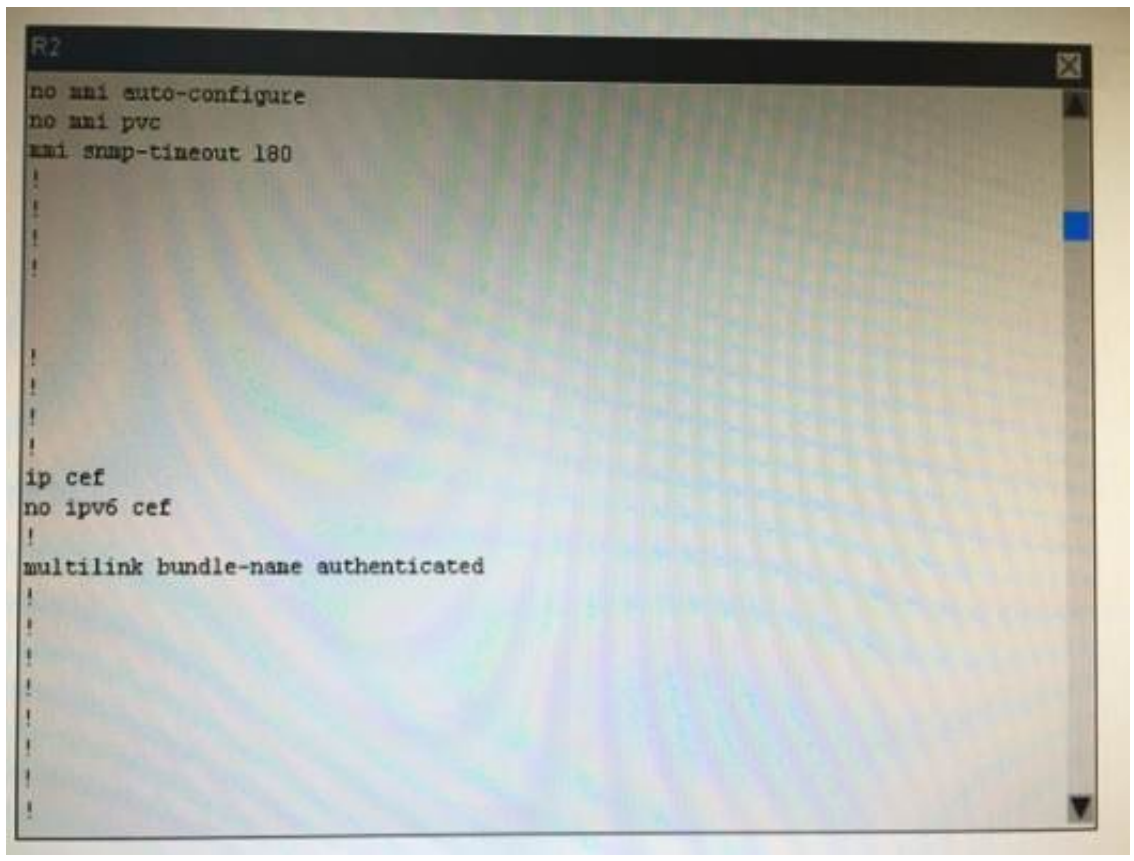
```
R1#
R1#show ip interface brief
Interface                  IP-Address      OK? Method Status                Prot
ocol
Ethernet0/0                209.165.201.1   YES NVRAM  up                    up
Ethernet0/1                172.16.16.1     YES NVRAM  up                    up
Ethernet0/2                172.16.14.1     YES NVRAM  up                    up
Ethernet0/3                unassigned      YES NVRAM  administratively down down
NVI0                       209.165.201.1   YES unset  up                    up
R1#
R1#
R1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

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

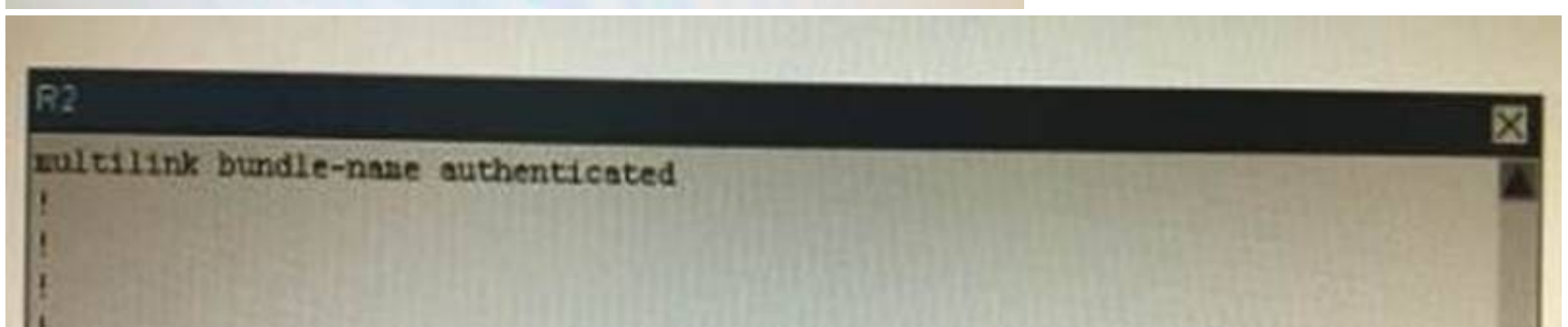
R1

```
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2
        i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
        ia - IS-IS inter area, * - candidate default, U - per-user static route
        o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
        + - replicated route, % - next hop override

Gateway of last resort is not set

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

R2

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

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


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


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

R2

```
!
interface Ethernet0/0
 description ***Link to R3***
 ip address 172.16.11.1 255.255.255.252
!
interface Ethernet0/1
 no ip address
!
interface Ethernet0/1.1
 description ***Link to Mangement Segment***
 encapsulation dot1Q 1 native
 ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/1.100
 description ***Link to Server1 Segment***
 encapsulation dot1Q 200
 ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
 description ***Link to Server2 Segment***
 encapsulation dot1Q 100
 ip address 192.168.200.1 255.255.255.0
!
interface Ethernet0/2
 description ***Link to R1***
```

R2

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

R2

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

R2

```
R2#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
  Description: ***Link to R3***
  Internet address is 172.16.11.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  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 AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:08, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 1000 bits/sec, 2 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     4632 packets input, 308536 bytes, 0 no buffer
     Received 4421 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 input packets with dribble condition detected
     512 packets output, 73148 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
```

R2

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

R2

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

R2

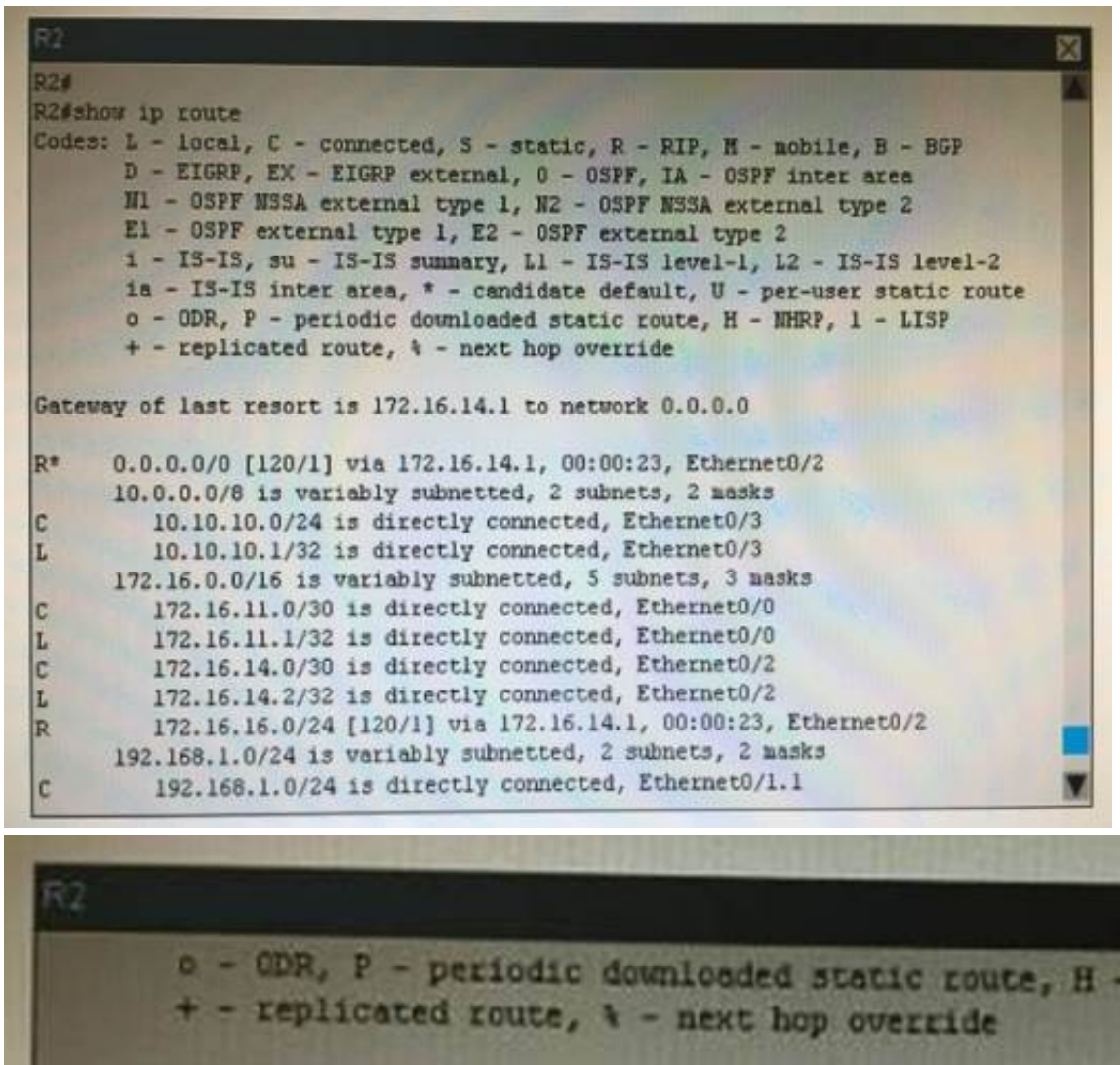
```
  Description: ***Link to R1***
  Internet address is 172.16.14.2/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:08, 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
```

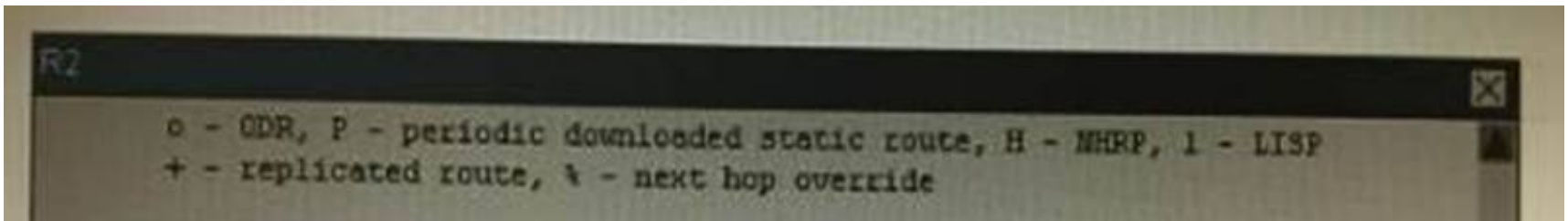
R2

```
     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 - 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
L 192.168.1.1/32 is directly connected, Ethernet0/1.1
192.168.100.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.100.0/24 is directly connected, Ethernet0/1.100
L 192.168.100.1/32 is directly connected, Ethernet0/1.100
192.168.200.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.200.0/24 is directly connected, Ethernet0/1.200
L 192.168.200.1/32 is directly connected, Ethernet0/1.200
R2#

R3

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

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

R3

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

R3

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

R3

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

R3

```
!
control-plane
!
!
!
!
!
!
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input all
!
!
end
R3#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4300 (bia aabb.cc00.4300)
  Description: ***Link to LAN***
  Internet address is 10.10.12.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
```

R3

```
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts (0 IP multicasts)
     0 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 AmdP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
  Description: ***Link to R2***
```

R3

```
Hardware is AmdP2, 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 AmdP2, address is aabb.cc00.4320 (bia aabb.cc00.4320)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 input packets with dribble condition detected
     0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 unknown protocol drops
```

R3

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

R3

```
     0 input packets with dribble condition detected
     0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out
R3#
R3#
R3#show ip interface brief
Interface                  IP-Address      OK? Method Status                Prot
ocol
Ethernet0/0                10.10.12.1      YES NVRAM  up                    up
Ethernet0/1                172.16.11.2     YES NVRAM  up                    up
Ethernet0/2                unassigned      YES NVRAM  administratively down down
Ethernet0/3                unassigned      YES NVRAM  administratively down down
R3#
R3#
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
```

R3

```
Ethernet0/2                unassigned      YES NVRAM  administratively down down
Ethernet0/3                unassigned      YES NVRAM  administratively down down
R3#
R3#
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

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

L2SW1

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

L2SW1

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

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

L2SW1

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

L2SW1

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

L2SW1

```
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
  Hardware is AmdP2, 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 AmdP2, 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 AmdP2, address is aabb.cc00.4520 (bia aabb.cc00.4520)
  Description: ***Link to Server2 Segment***
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is unknown
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:07, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
```

L2SW1

```
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     758 packets input, 81010 bytes, 0 no buffer
     Received 125 broadcasts (0 multicasts)
     0 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 AmdP2, 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

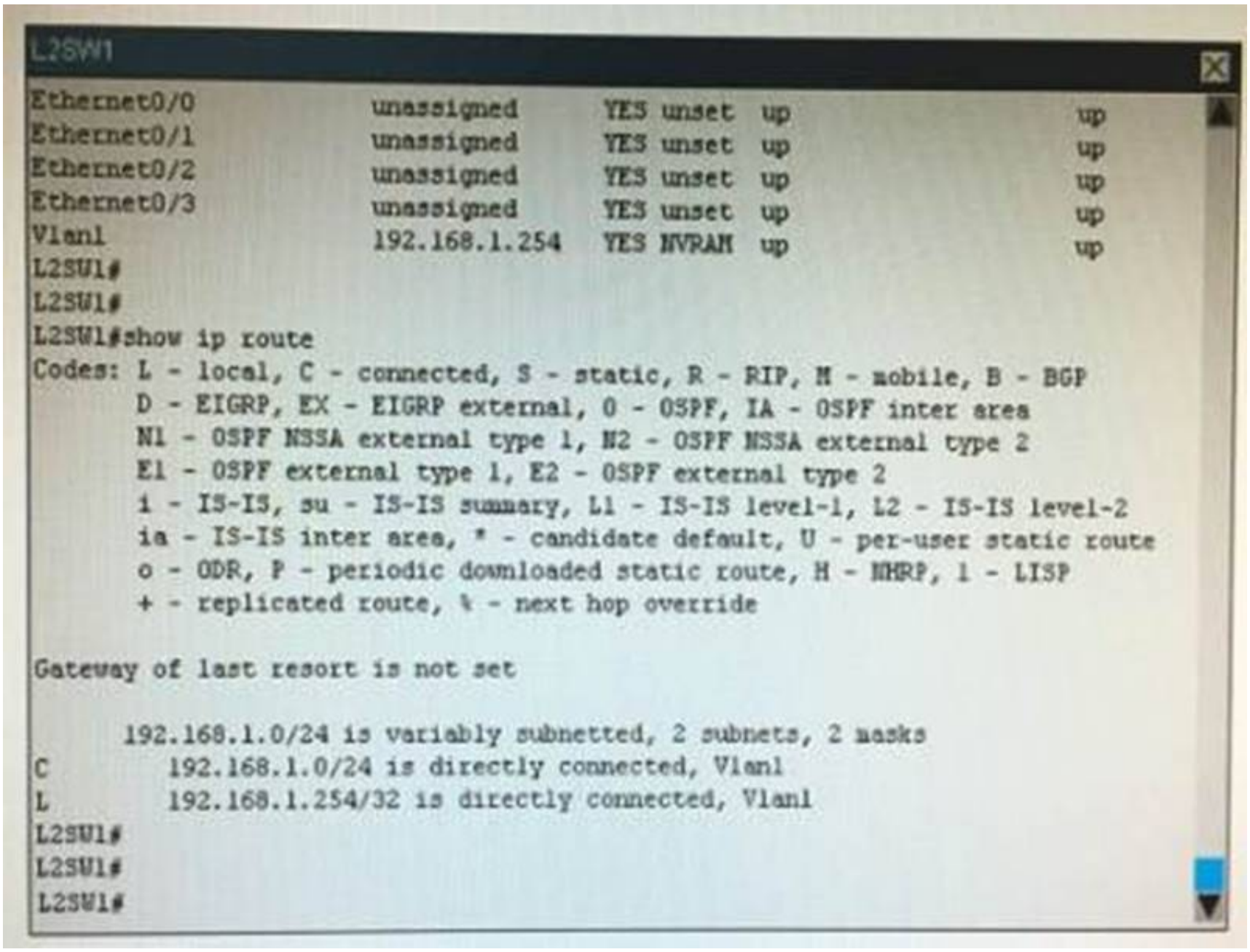
```
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output 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

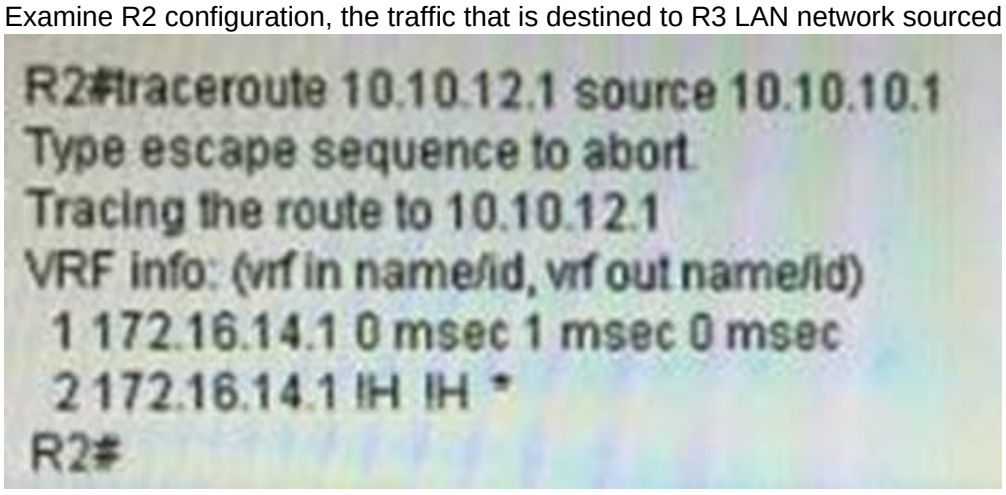
```
  Keepalive not supported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:12, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  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, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

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



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?



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

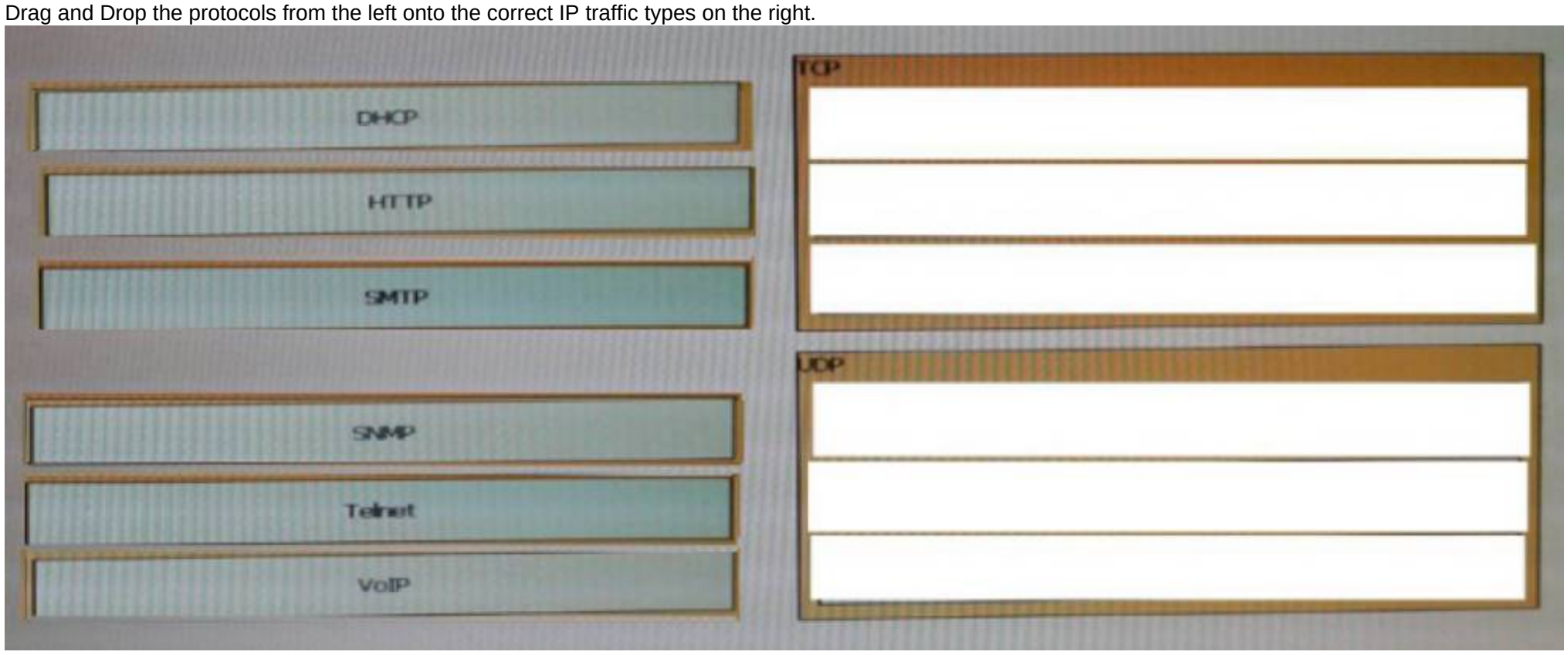
Answer: D

Explanation: As per R3

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

NO RIPv2 CONFIG!

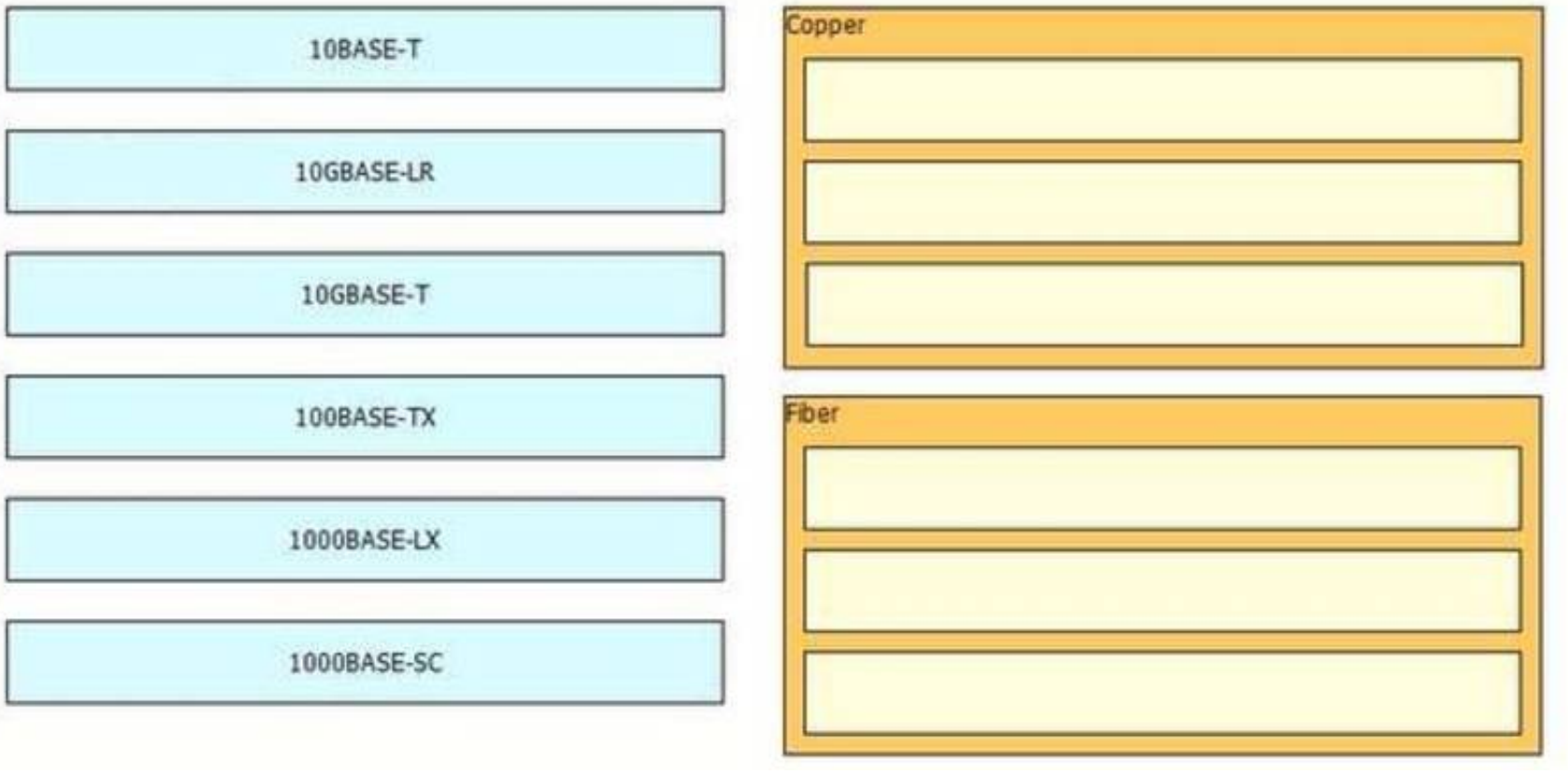
NEW QUESTION 510
Drag and Drop the protocols from the left onto the correct IP traffic types on the right.



Answer:

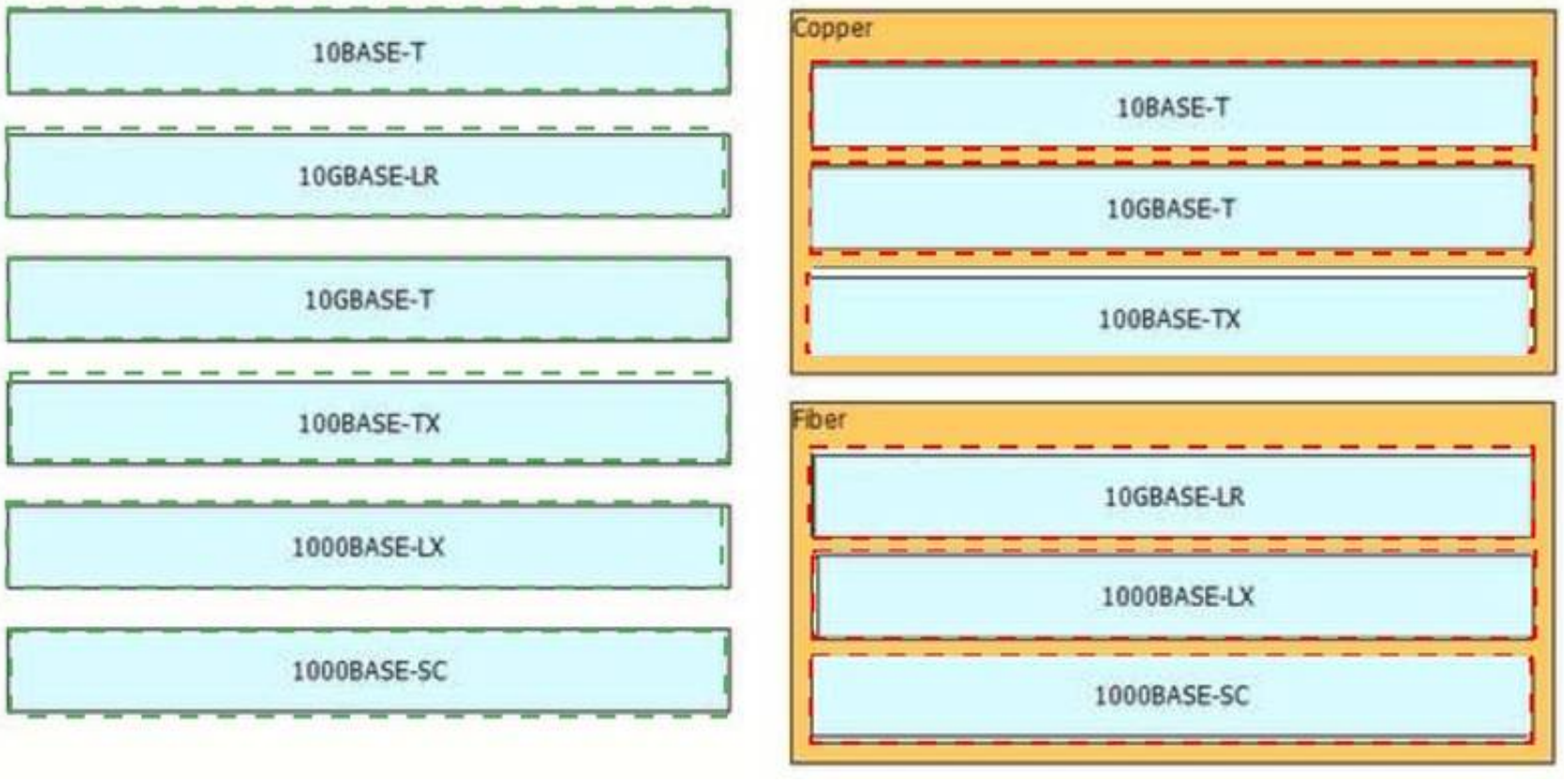
Explanation: TCP HTTP SMTP
Telnet UDP DHCP SNMP VOIP

NEW QUESTION 511
Drag and drop the IEEE standard Cable names from the left onto the correct cable types on the right?



Answer:

Explanation:

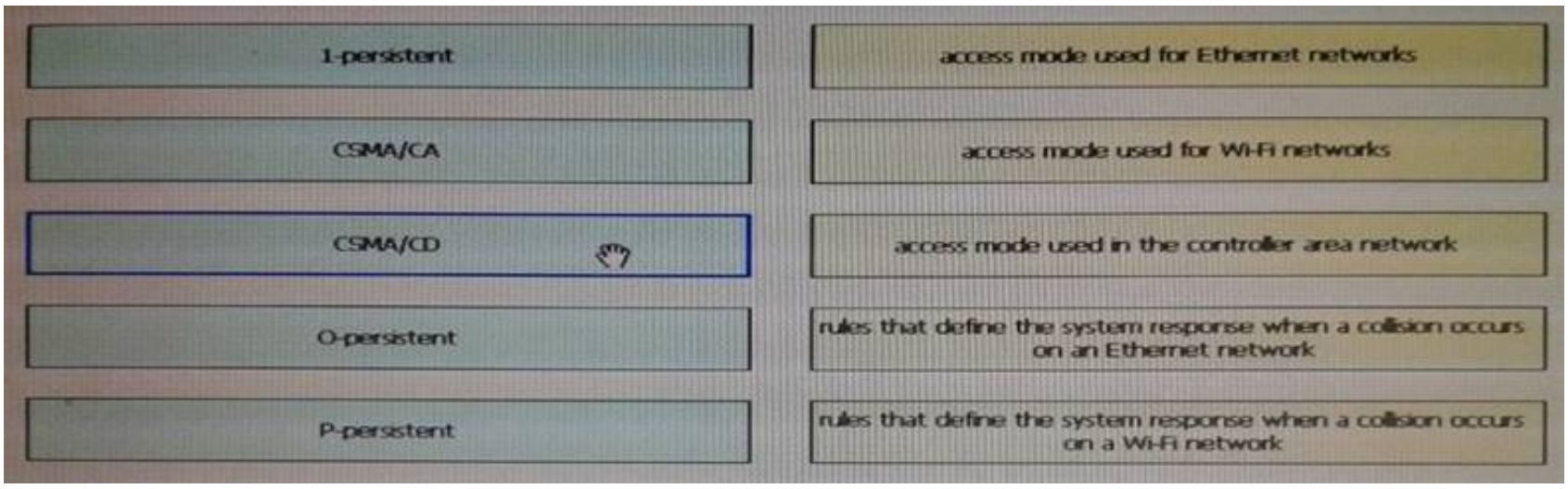


NEW QUESTION 516
Which two statements about LLDP are True? (Choose Two)

A. it enables systems to learn about one another over the data-link layer
B. it uses mandatory TLVs to discover the neighboring devices
C. it is implemented in accordance with the 802.11a specification
D. if functions at layer 2 and layer 3
E. it is a cisco-proprietary technology

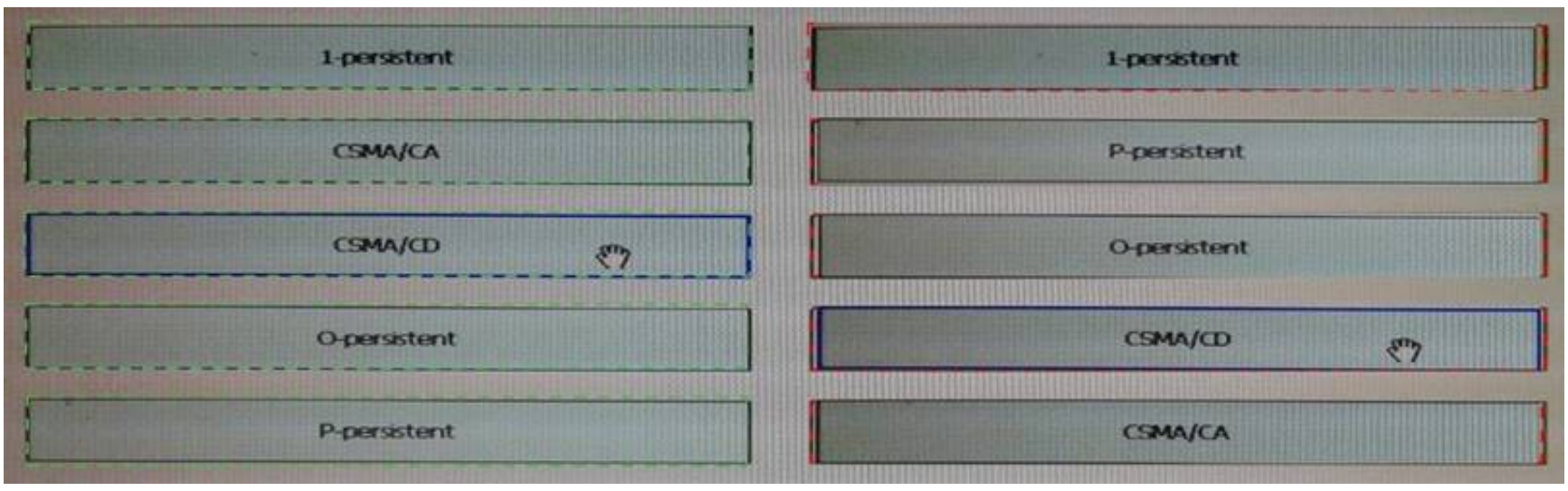
Answer: AC

NEW QUESTION 518
Drag and Drop the CSMAComponents from the left onto the correct description on the right



Answer:

Explanation:

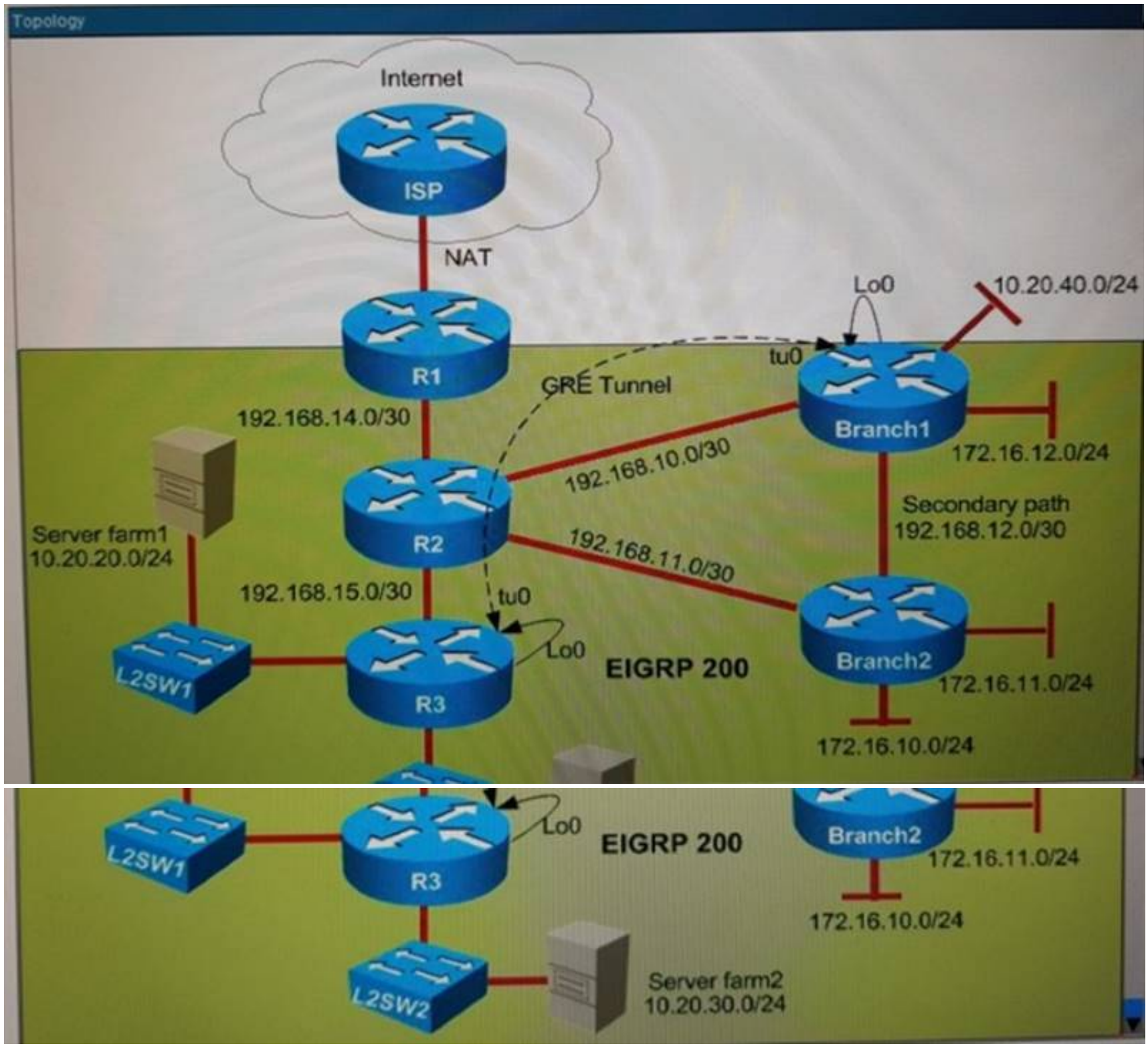


NEW QUESTION 523
When troubleshooting client DNS issues, which two tasks must you perform? (Choose two.)

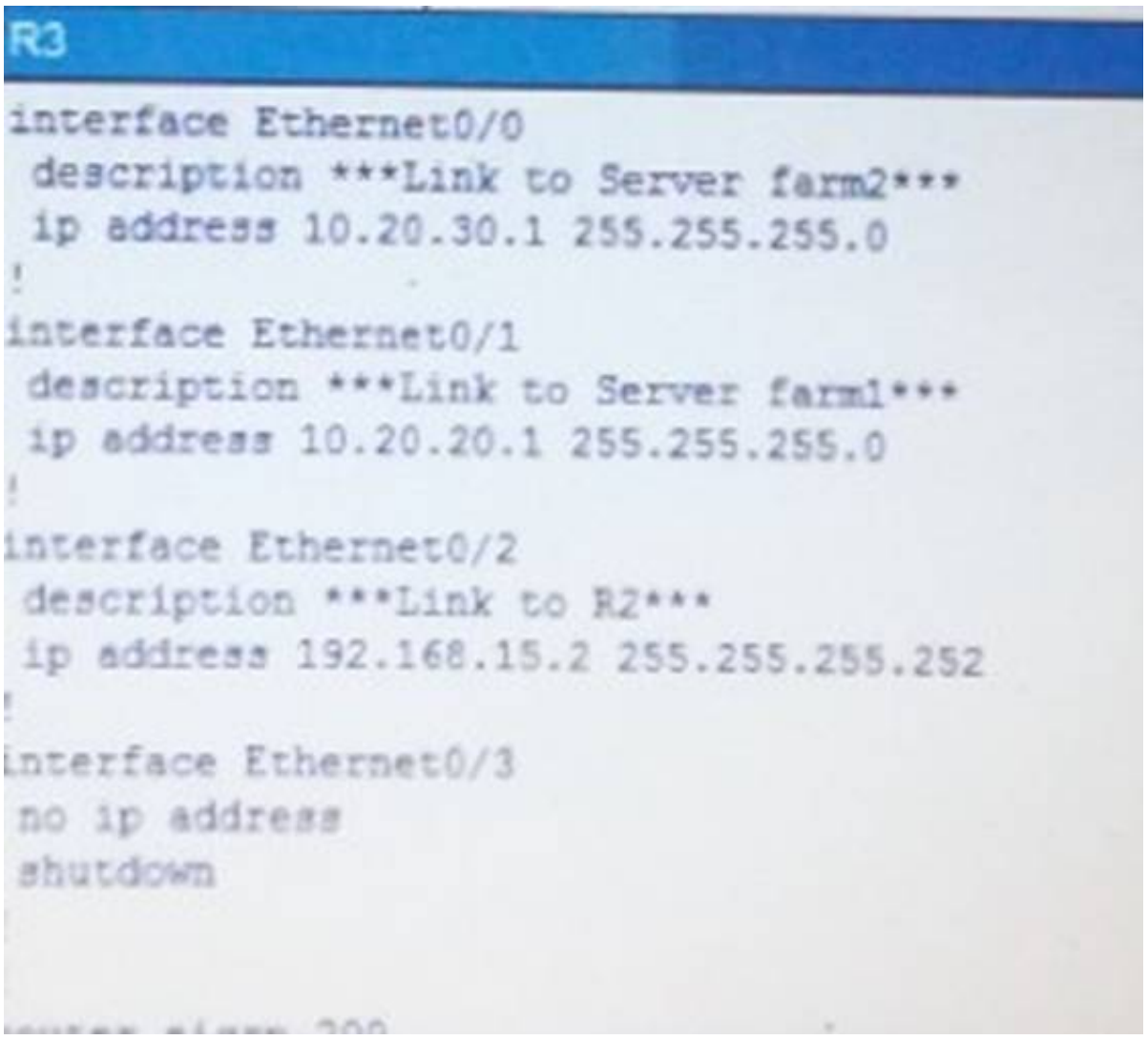
A. Ping a public website IP address.
B. Determine whether a DHCP address has been assigned.
C. Determine whether the hardware address is correct.
D. Ping the DNS server.
E. Determine whether the name servers have been configured.

Answer: CD

NEW QUESTION 528
You are implementing ElGRP 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 Tunn
!
!
```



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 Brancfi2.
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.

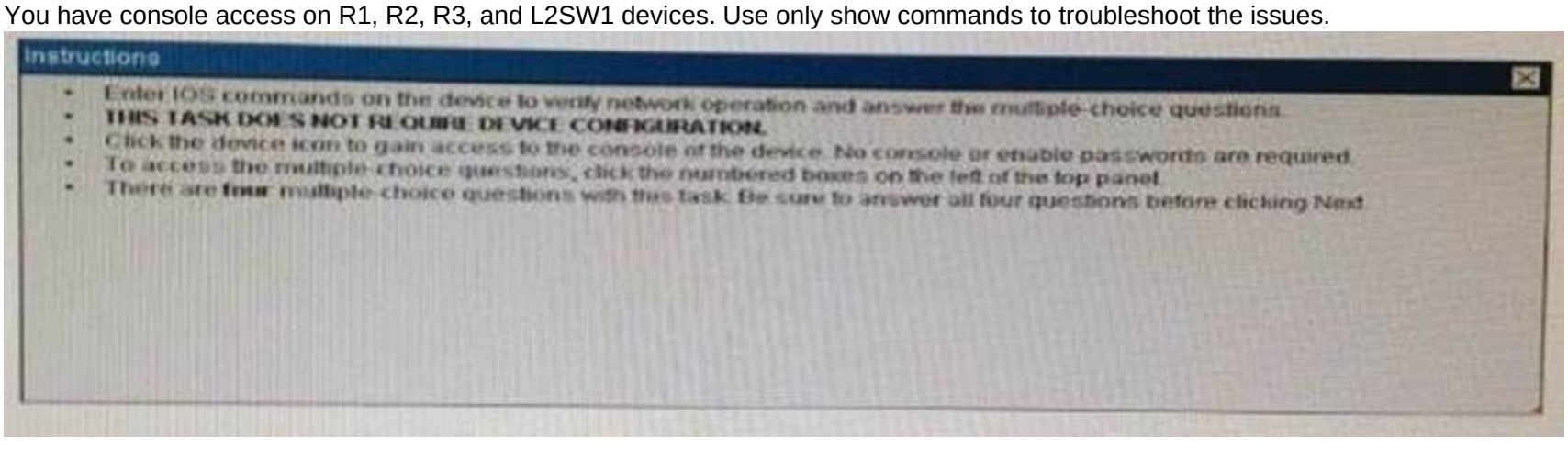
Answer: B

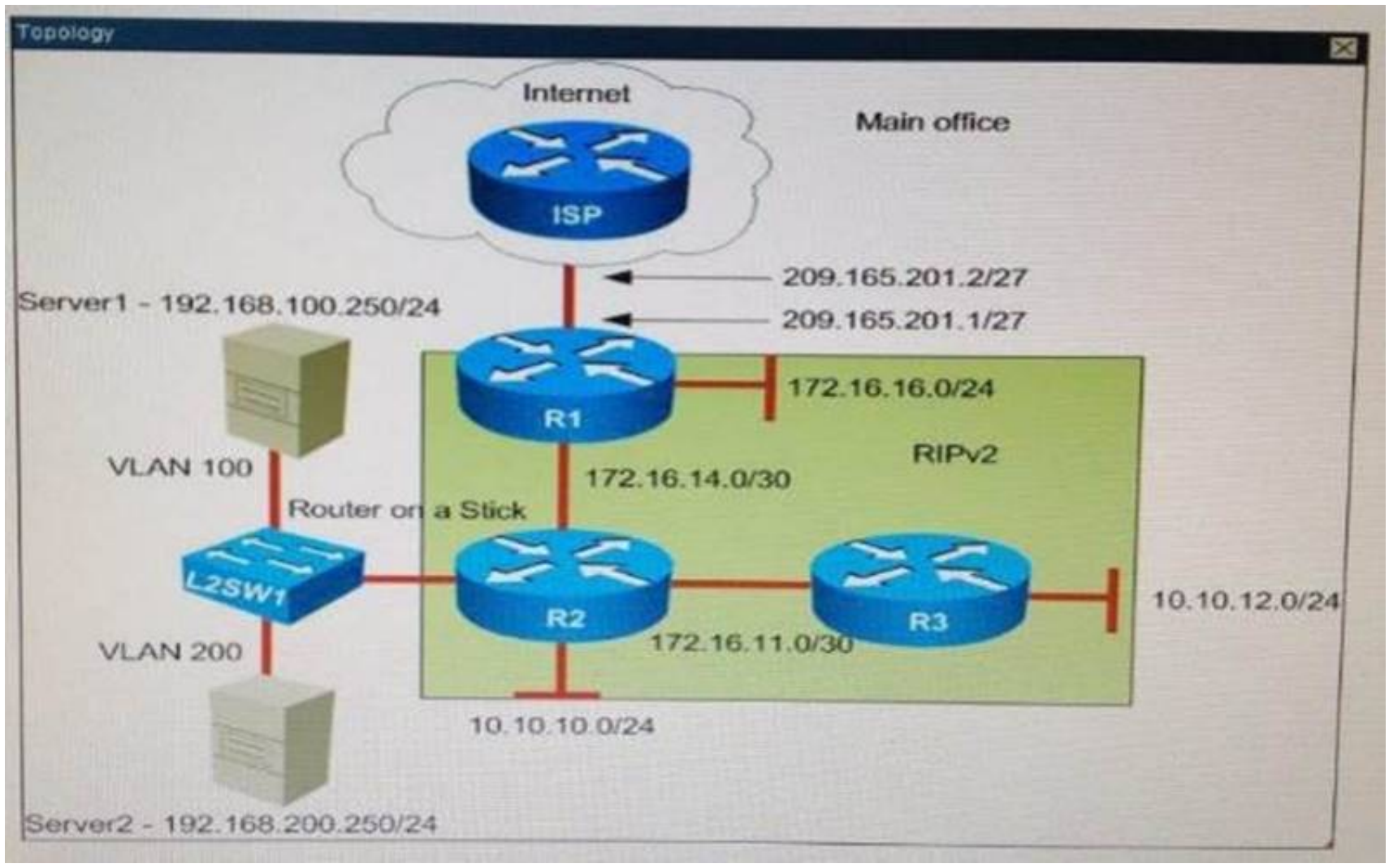
NEW QUESTION 532
Which two criteria must be met to support the ICMP echo IP SLA? (Choose two)

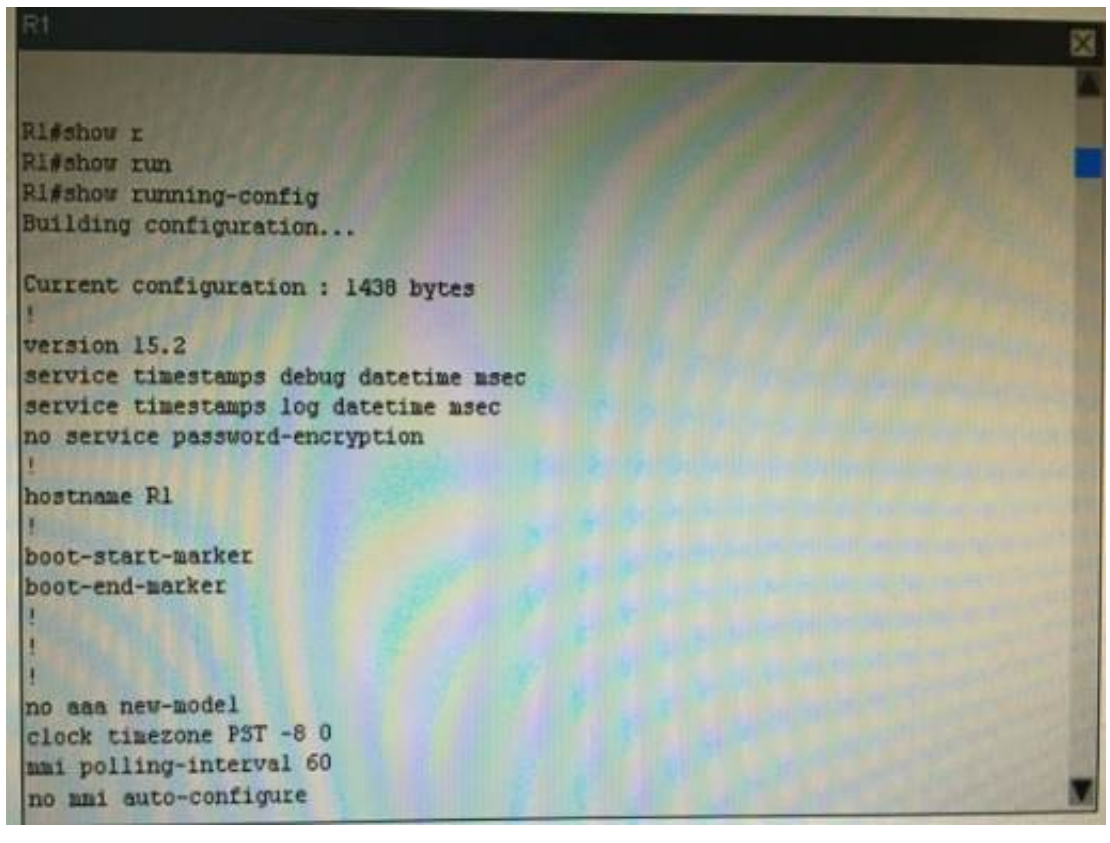
A. The source and destination devices must be Cisco devices
B. The source device must be a Cisco device, but the destination device can be from any vendor
C. The source device must be runing Layer 2 services
D. A default gateway must be configured for the source and destination devices
E. The destination device must support the echo protocol.

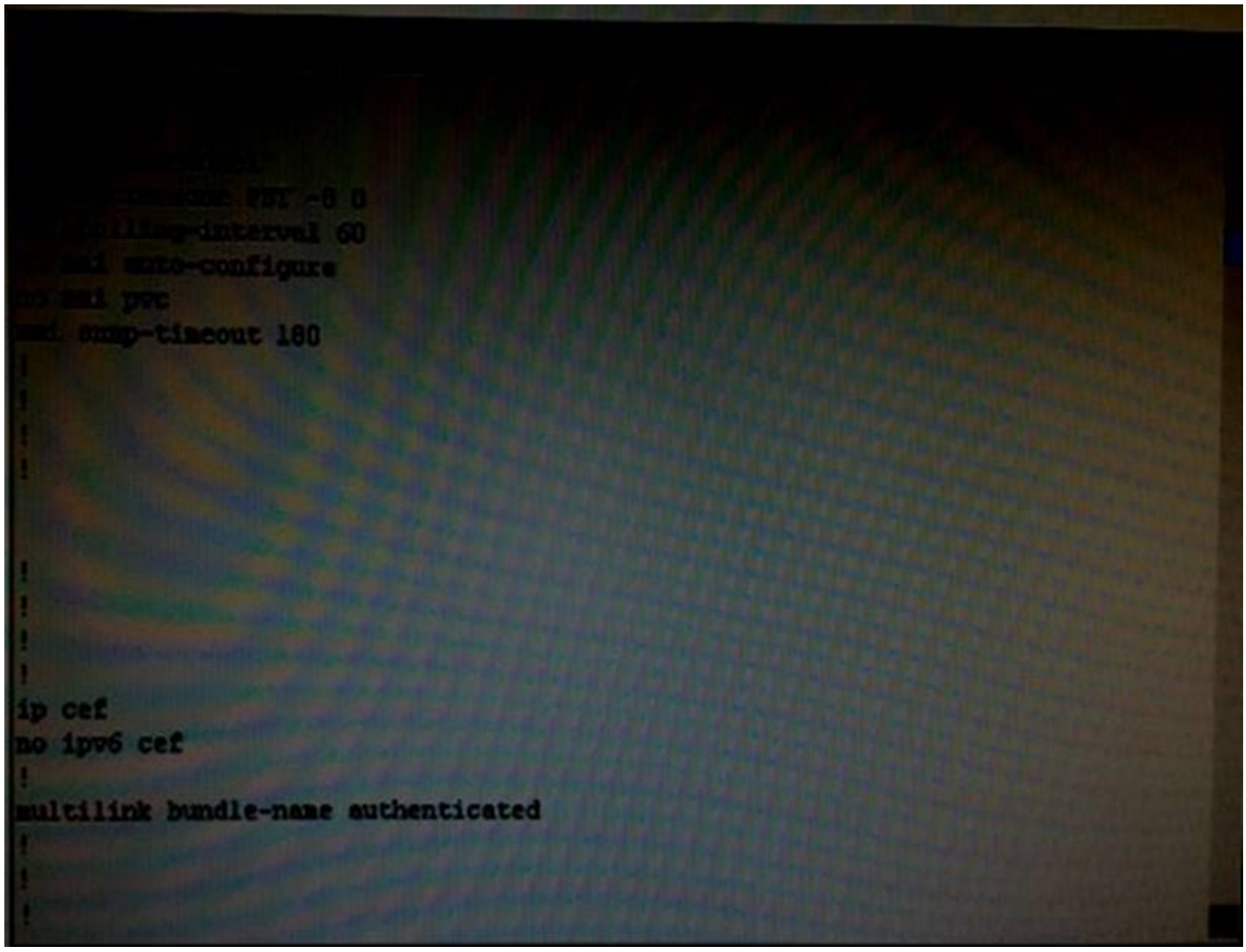
Answer: AE

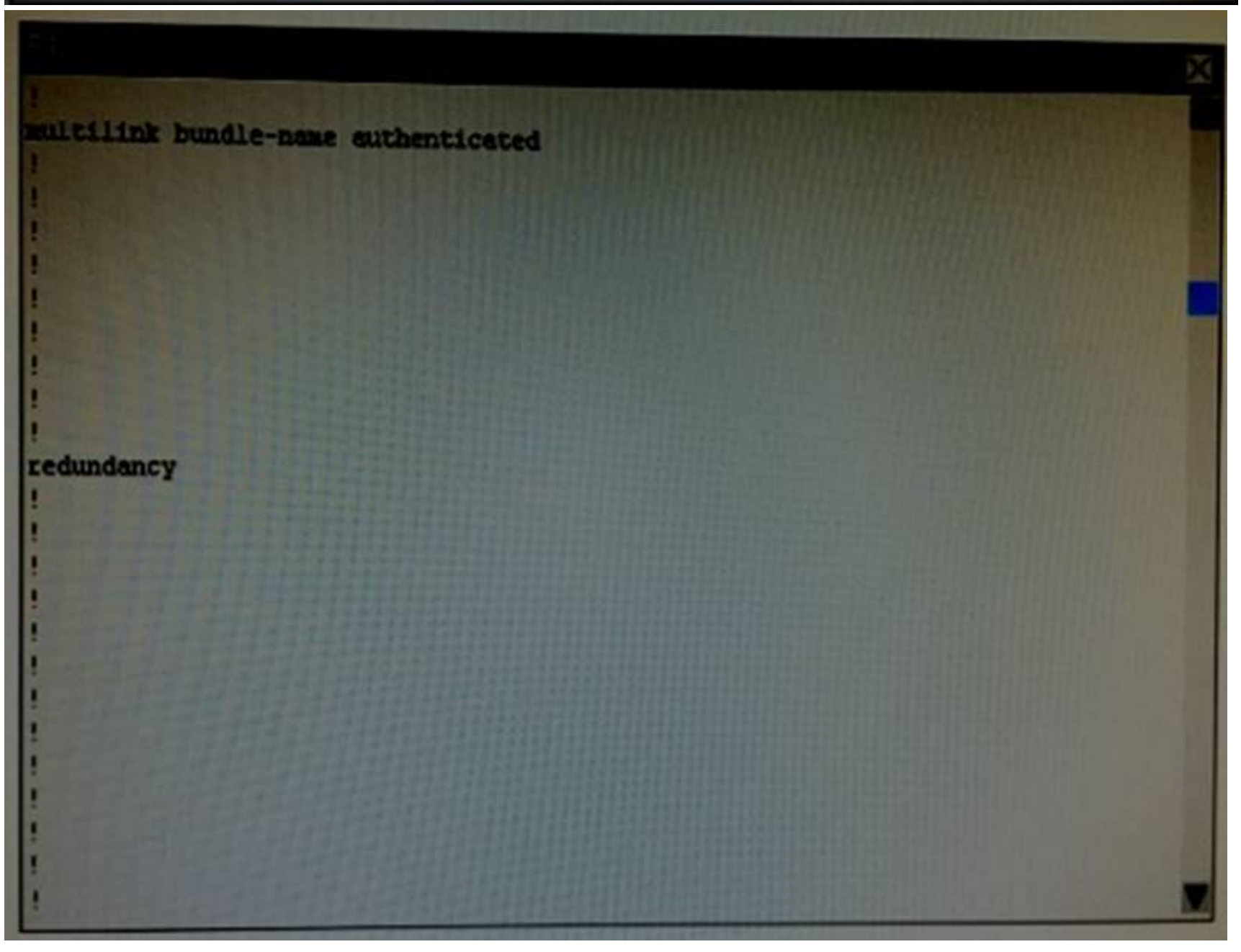
NEW QUESTION 534
Scenario:
You work for a company that provides managed network services, and of your real estate clients running a small office is experiencing network issues,
Troubleshoot the network issues.
Router R1 connects the main office to internet, and routers R2 and R3 are internal routers 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.




Topology
Internet
Main office
ISP
209.165.201.2/27
209.165.201.1/27
Server1 - 192.168.100.250/24
R1
172.16.16.0/24
RIPv2
VLAN 100
172.16.14.0/30
Router on a Stick
L2SW1
R2
R3
10.10.12.0/24
VLAN 200
172.16.11.0/30
10.10.10.0/24
Server2 - 192.168.200.250/24


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
mmi polling-interval 60
no mmi auto-configure


snmp-interval 60
snmp-timeout 180
ip cef
no ipv6 cef
multilink bundle-name authenticated


multilink bundle-name authenticated
redundancy

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

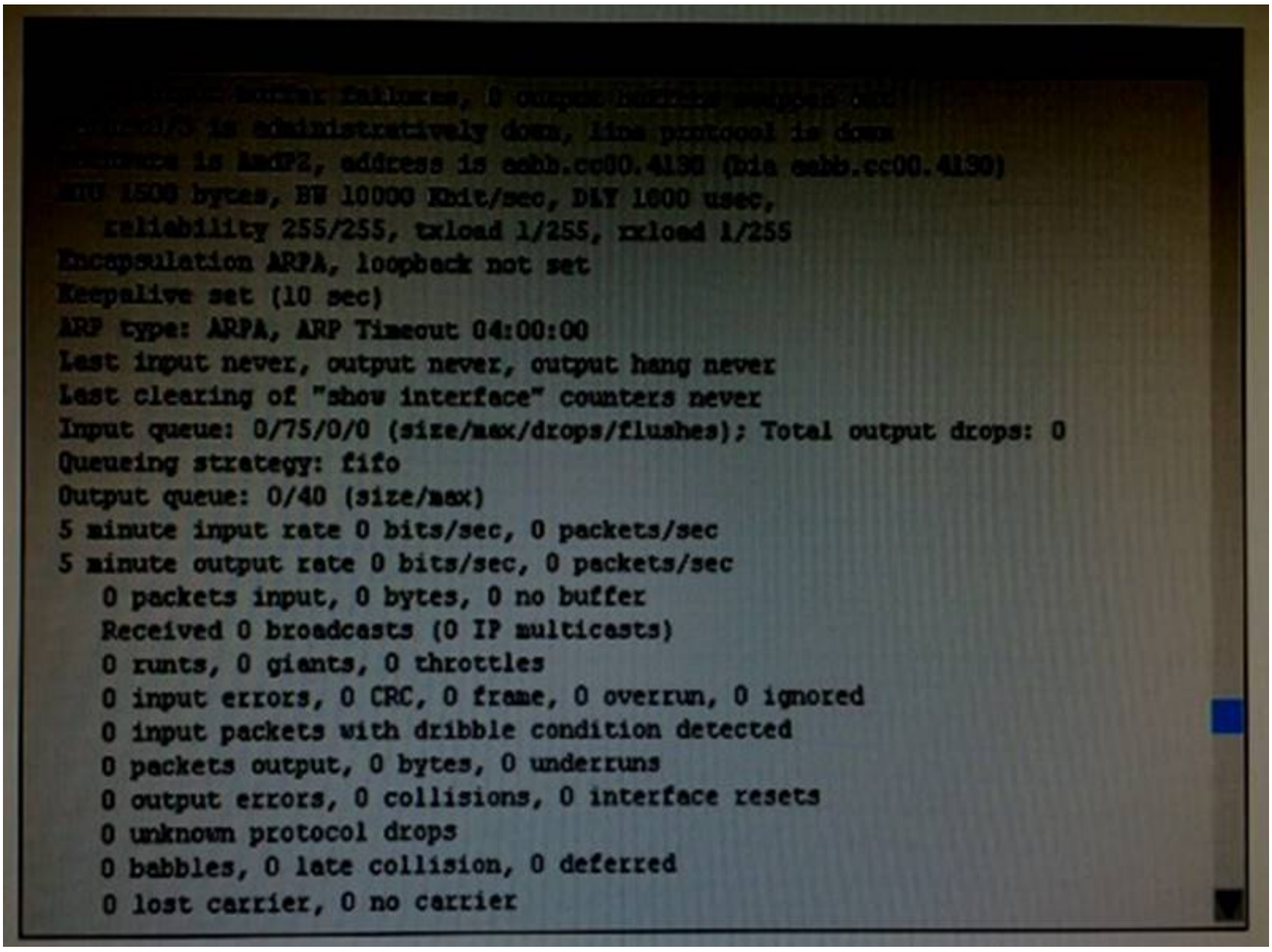
```
router rip
 version 2
 network 172.16.0.0
 default-information originate
 no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
!
ip access-list standard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

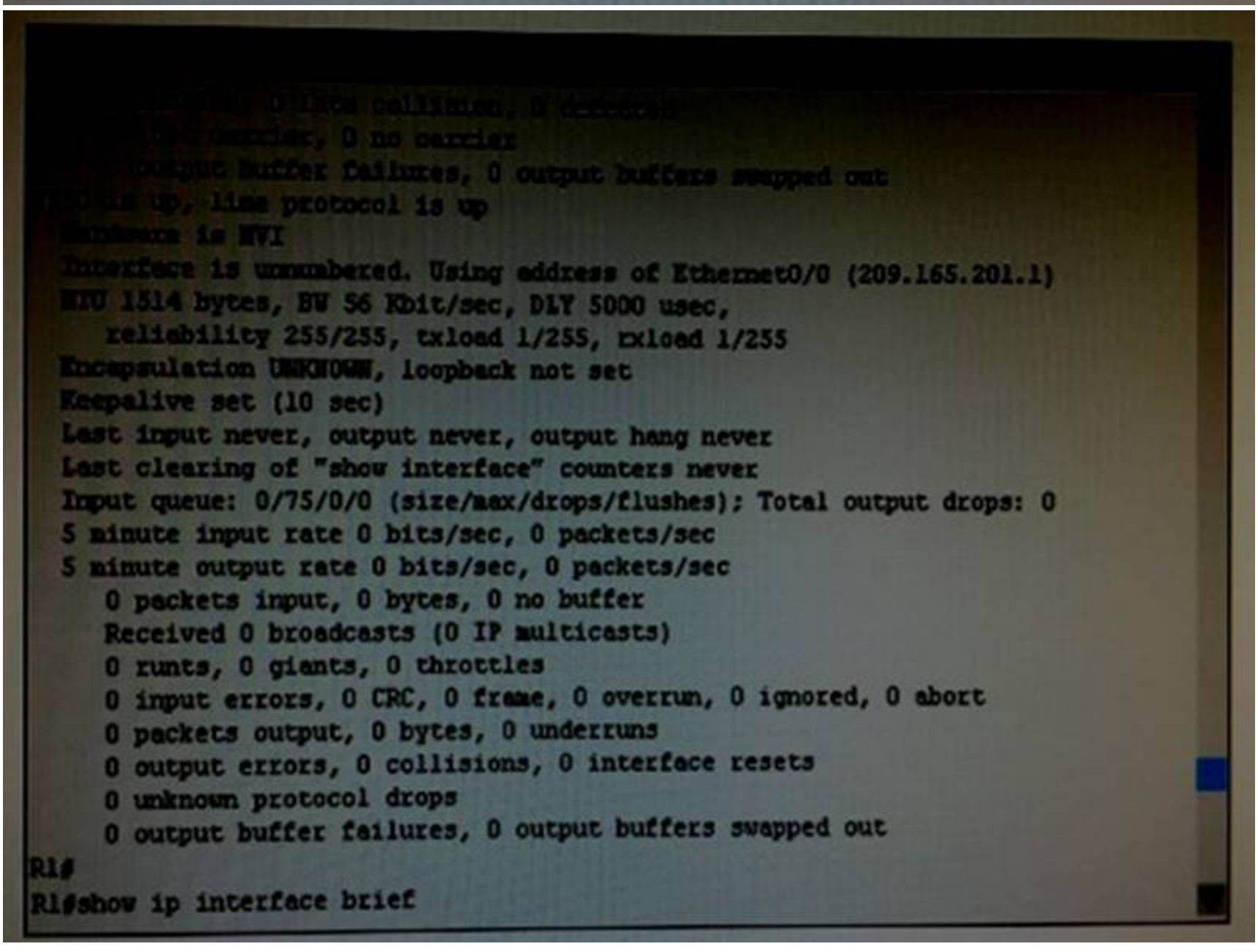
```
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input all
!
!
end
R1#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4100 (bia aabb.cc00.4100)
  Description: ***Link to ISP***
  Internet address is 209.165.201.1/27
  MTU 1500 bytes,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

```
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     40 packets input, 11786 bytes, 0 no buffer
     Received 39 broadcasts (0 IP multicasts)
     0 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 AmdP2, address is aabb.cc00.4110 (bia aabb.cc00.4110)
  Description: ***Link to LAN***
  Internet address is 172.16.16.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
```

```
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
   0 packets input, 0 bytes, 0 no buffer
   Received 0 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
   0 input packets with dribble condition detected
   245 packets output, 30725 bytes, 0 underruns
   0 output errors, 0 collisions, 4 interface resets
   0 unknown protocol drops
   0 babbles, 0 late collision, 0 deferred
   0 lost carrier, 0 no carrier
   0 output buffer failures, 0 output buffers swapped out
Ethernet0/2 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4120 (bia aabb.cc00.4120)
  Description: ***Link to R2***
  Internet address is 172.16.14.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
```

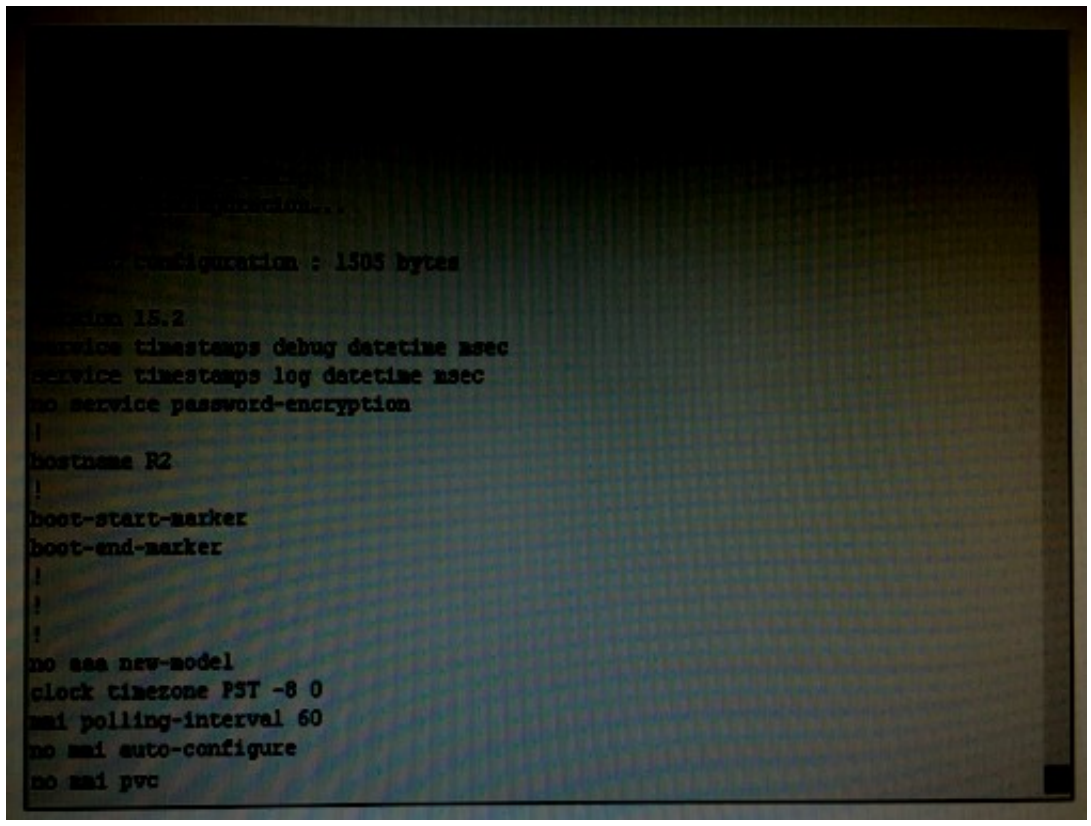
```
  Internet address is 172.16.14.1/30
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:16, output 00:00:07, output hang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

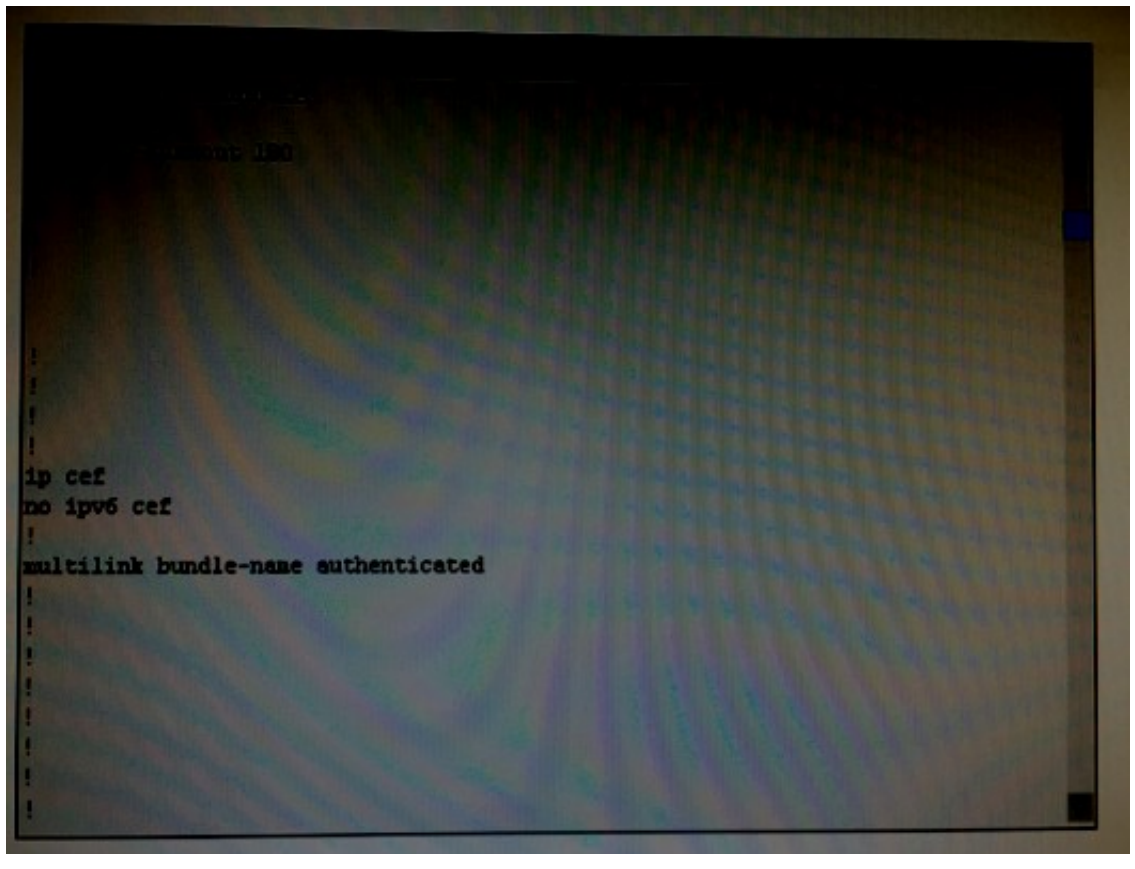

is administratively down, line protocol is down
is 4andP2, address is eabb.cc00.4130 (bia eabb.cc00.4130)
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier

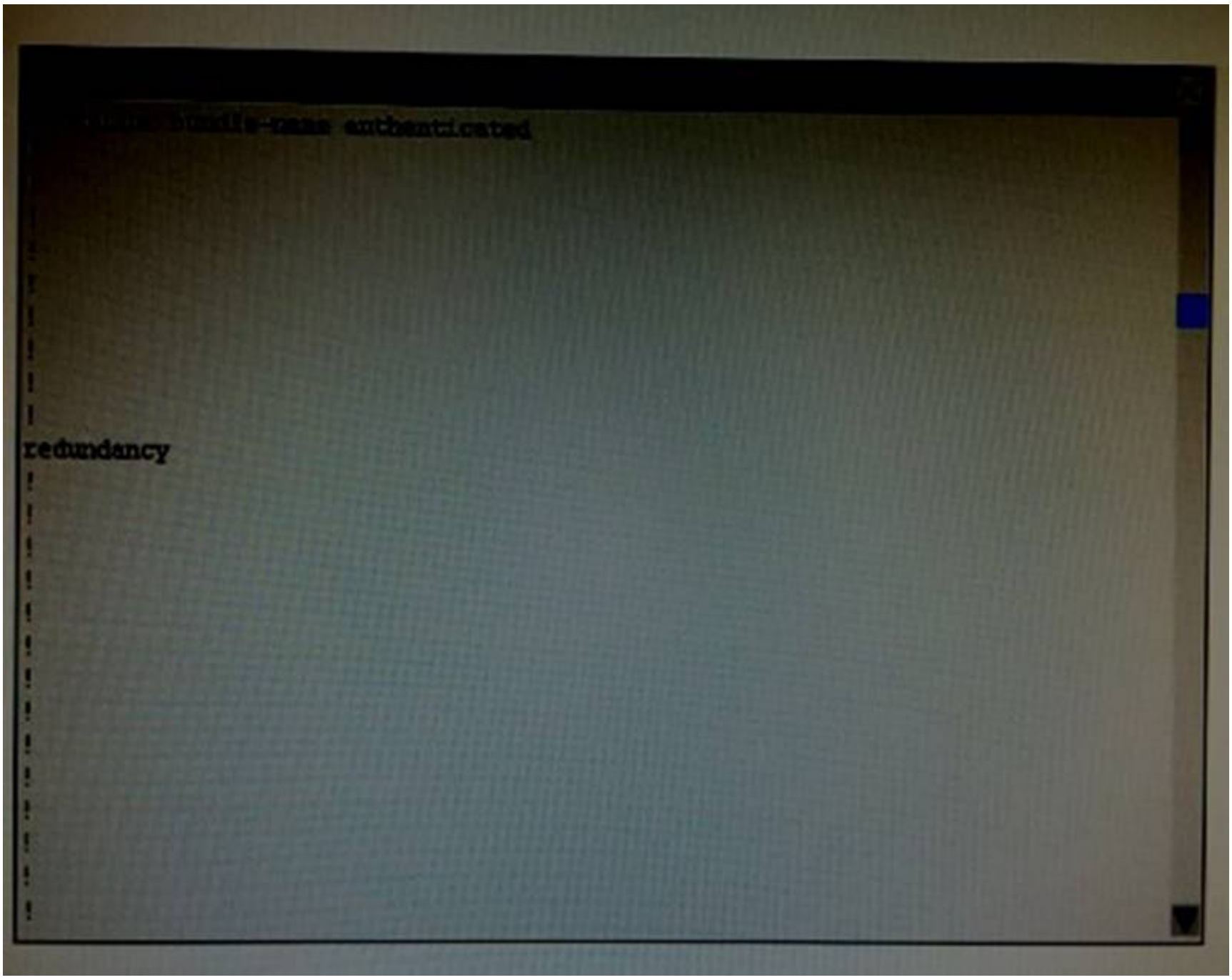

0 no carrier
output buffer failures, 0 output buffers swapped out
up, line protocol is up
is NVI
Interface is unnumbered. Using address of Ethernet0/0 (209.165.201.1)
MTU 1514 bytes, BW 56 Kbit/sec, DLY 5000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation UNKNOWN, loopback not set
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

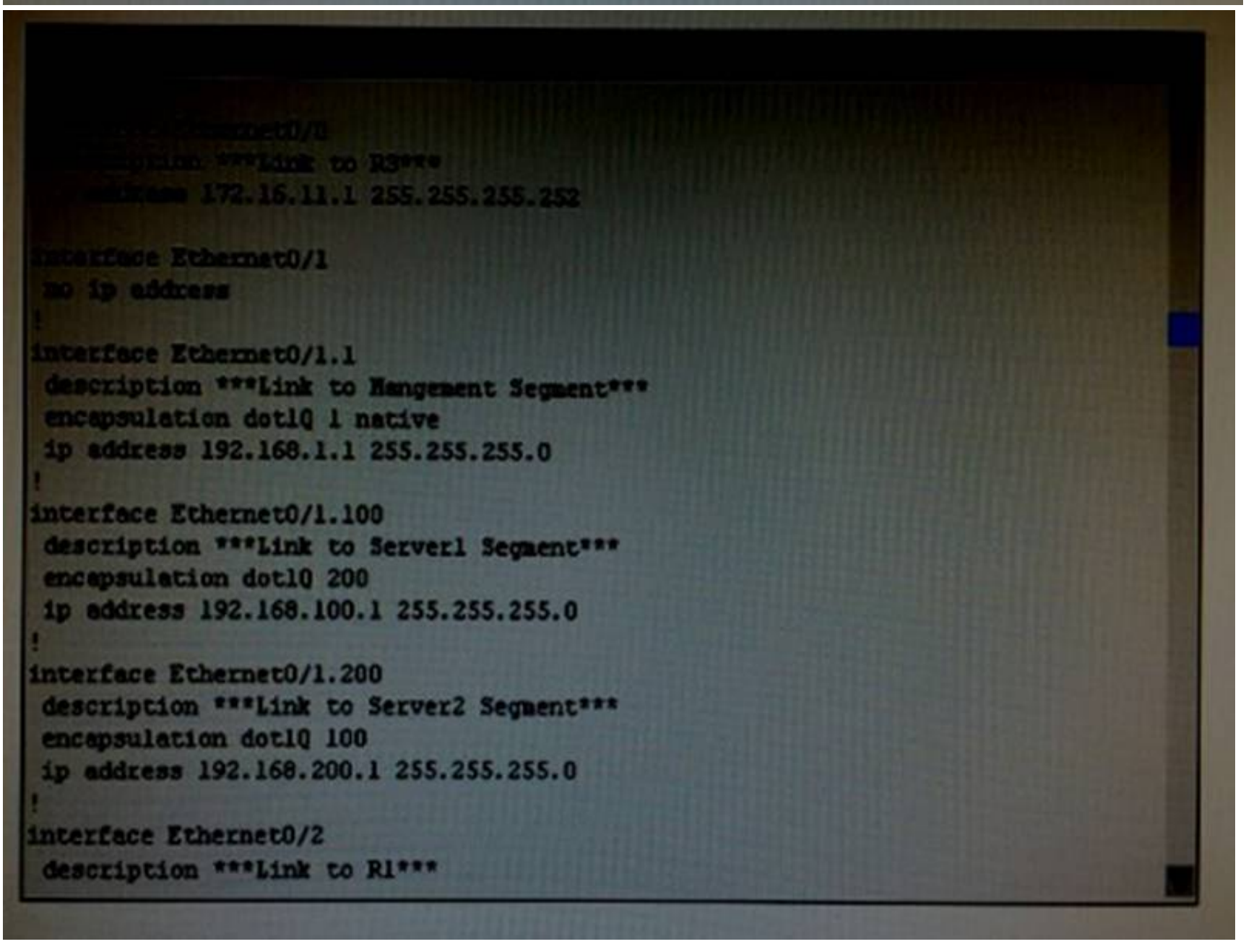
```
                    IP-Address      OK? Method Status                Prot
Ethernet0/0         209.165.201.1   YES NVRAM  up                    up
Ethernet0/1         172.16.16.1     YES NVRAM  up                    up
Ethernet0/2         172.16.14.1     YES NVRAM  up                    up
Ethernet0/3         unassigned      YES NVRAM  administratively down down
NVI0                209.165.201.1   YES unset  up                    up
R1#
R1#
R1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, 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
```

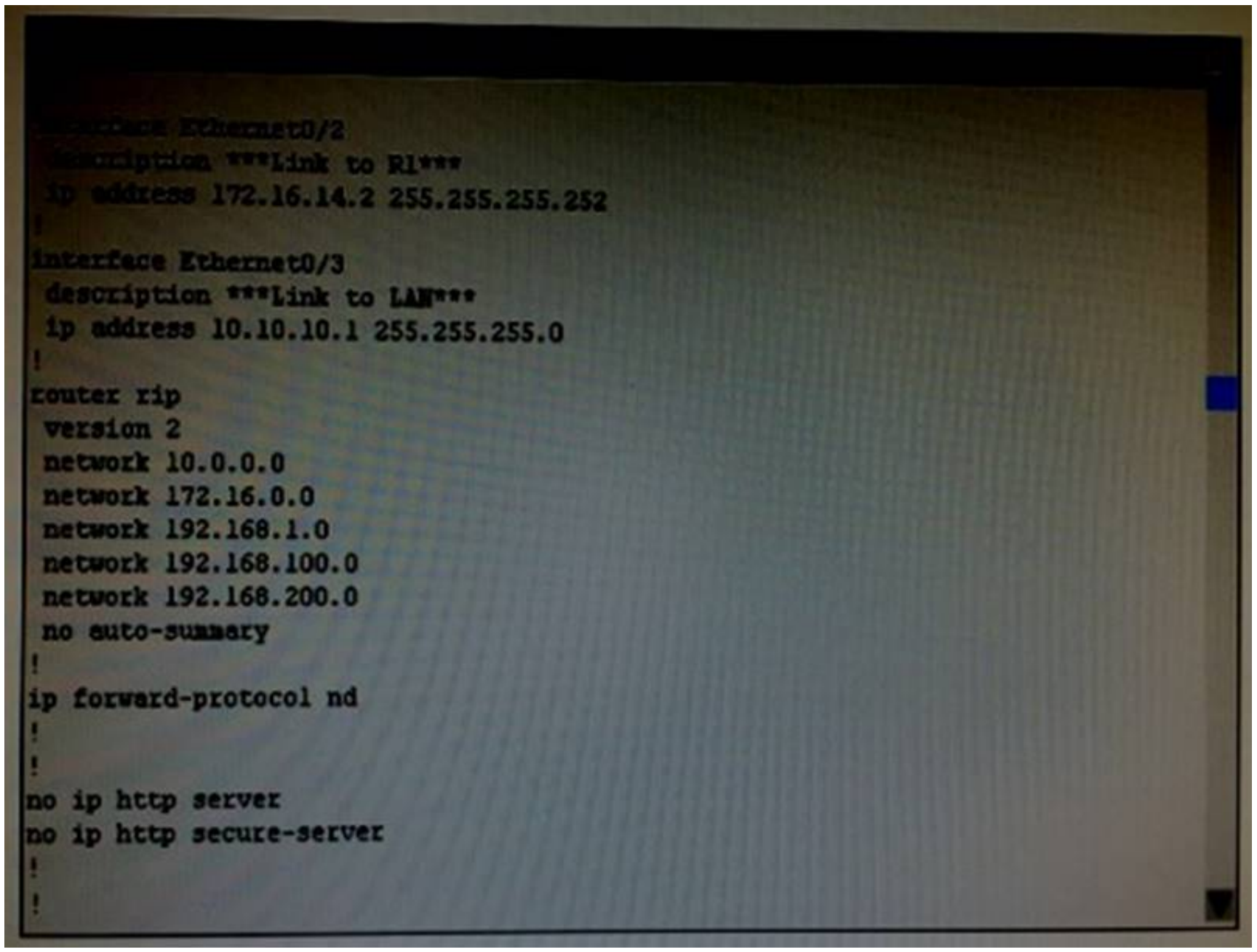
```
      10.0.0.0/24 is subnetted, 1 subnets
R        10.10.10.0 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
      172.16.0.0/16 is variably subnetted, 5 subnets, 3 masks
R        172.16.11.0/30 [120/1] via 172.16.14.2, 00:00:20, Ethernet0/2
C        172.16.14.0/30 is directly connected, Ethernet0/2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

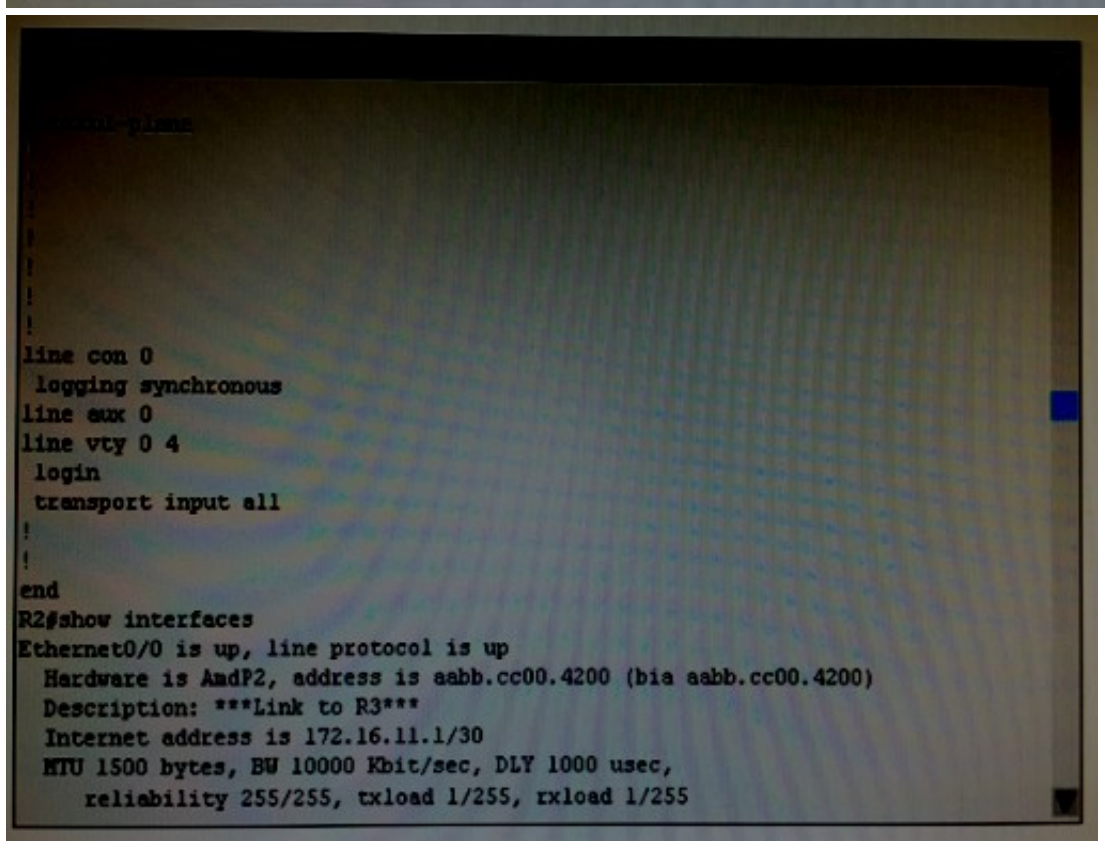

configuration : 1505 bytes
15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
hostname R2
boot-start-marker
boot-end-marker
no aaa new-model
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc


ip cef
no ipv6 cef
multilink bundle-name authenticated


redundancy


interface Ethernet0/1
no ip address
!
interface Ethernet0/1.1
description ***Link to Mangement Segment***
encapsulation dot1Q 1 native
ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/1.100
description ***Link to Server1 Segment***
encapsulation dot1Q 200
ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
description ***Link to Server2 Segment***
encapsulation dot1Q 100
ip address 192.168.200.1 255.255.255.0
!
interface Ethernet0/2
description ***Link to R1***


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

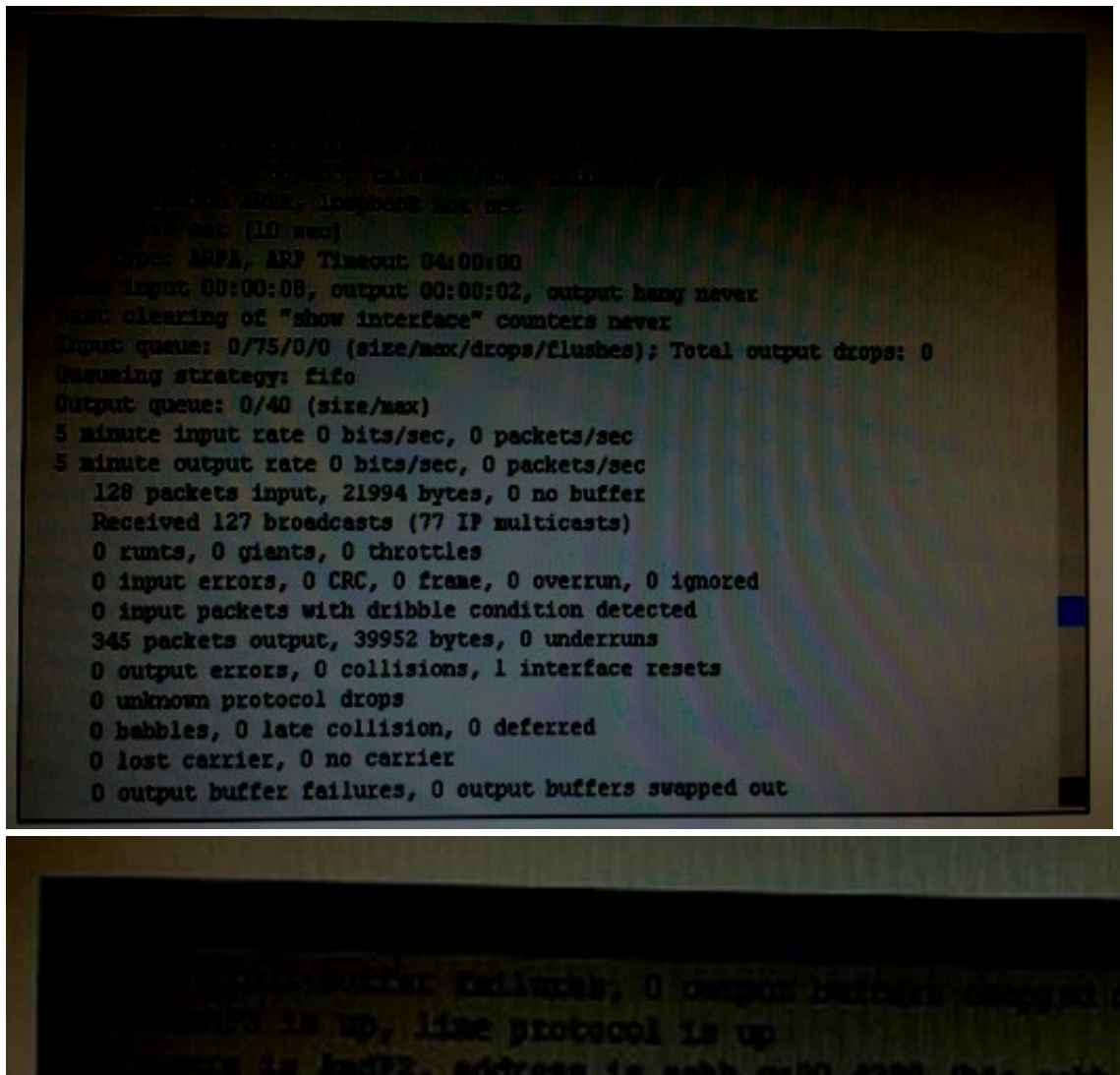

!
!
!
!
line con 0
logging synchronous
line aux 0
line vty 0 4
login
transport input all
!
!
end
R2#show interfaces
Ethernet0/0 is up, line protocol is up
Hardware is AmdP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
Description: ***Link to R3***
Internet address is 172.16.11.1/30
MTU 1500 bytes,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

```
[redacted] is up, line protocol is up
Hardware is AmdP2, address is aabb.cc00.4200 (bia aabb.cc00.4200)
Description: ***Link to R3***
Internet address is 172.16.11.1/30
MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
   reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:32, output 00:00:08, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
   50 packets input, 15683 bytes, 0 no buffer
   Received 50 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
   0 input packets with dribble condition detected
   343 packets output, 42566 bytes, 0 underruns
   0 output errors, 0 collisions, 1 interface resets
   2 unknown protocol drops
```

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

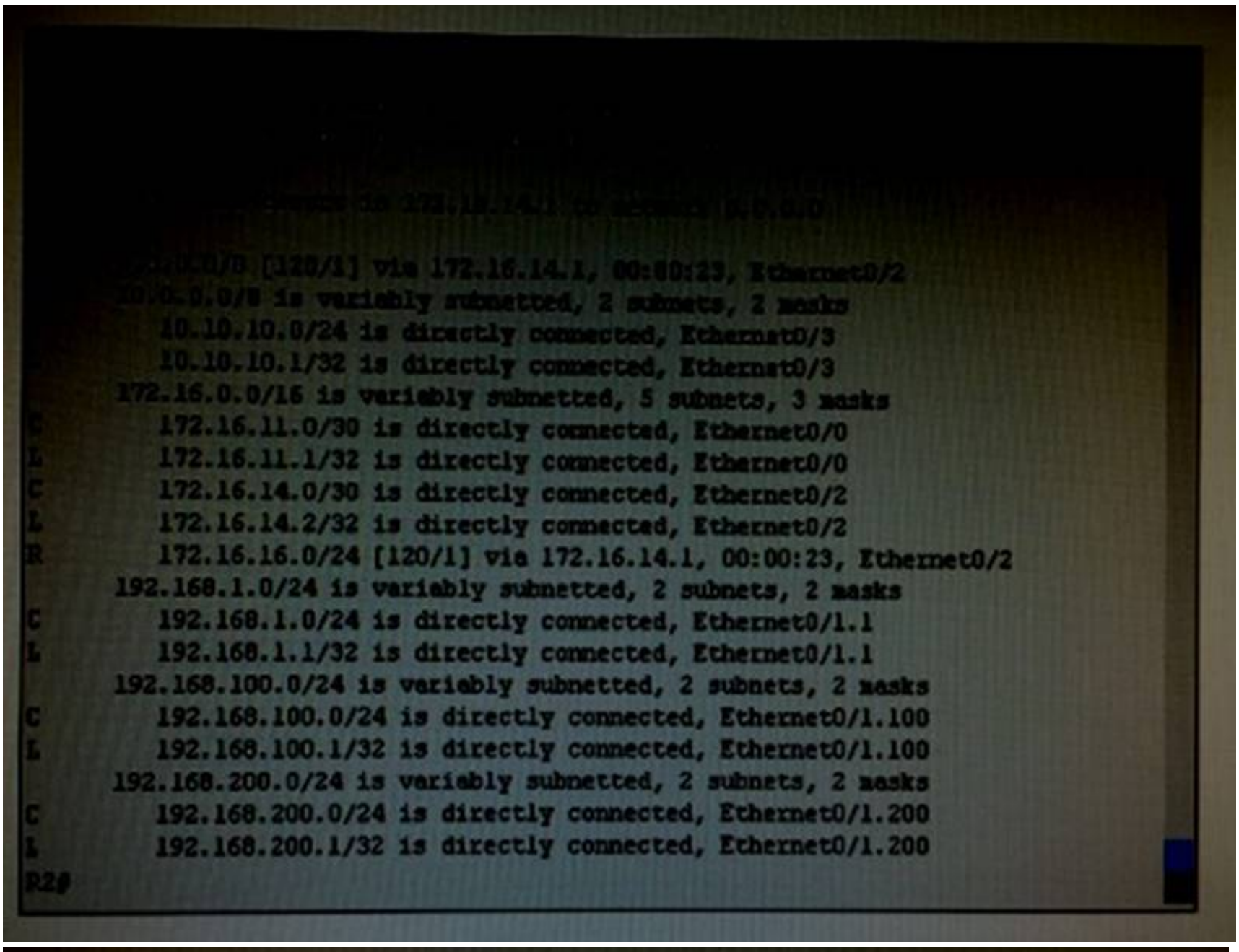
```
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out
Ethernet0/1.1 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link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

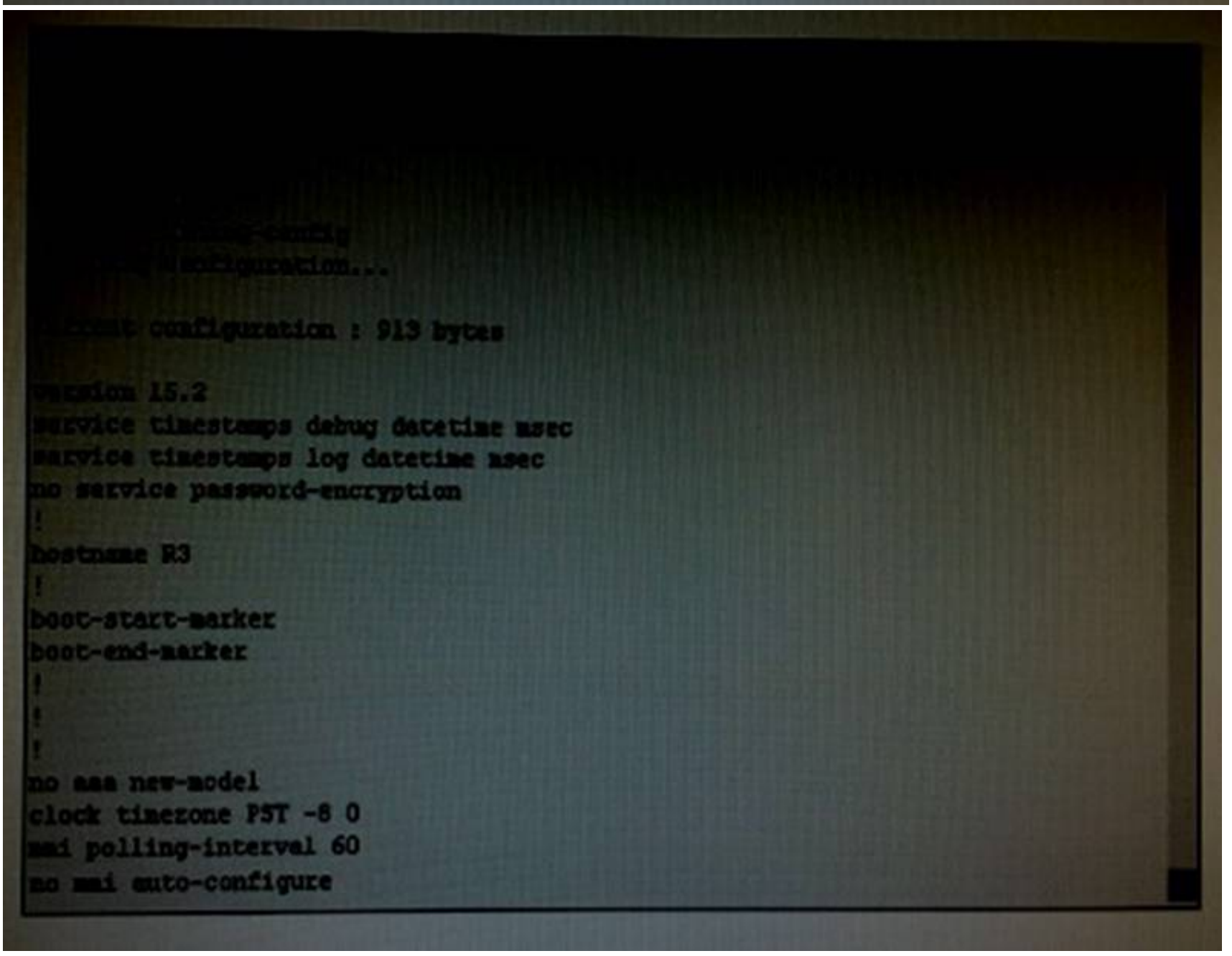
```
  Keepalive set (10 sec)
  Last clearing of "show interface" counters never
Ethernet0/1.100 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4210 (bia aabb.cc00.4210)
  Description: ***Link to Server1 Segment***
  Internet address is 192.168.100.1/24
  MTU 1500 bytes, BW 10000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

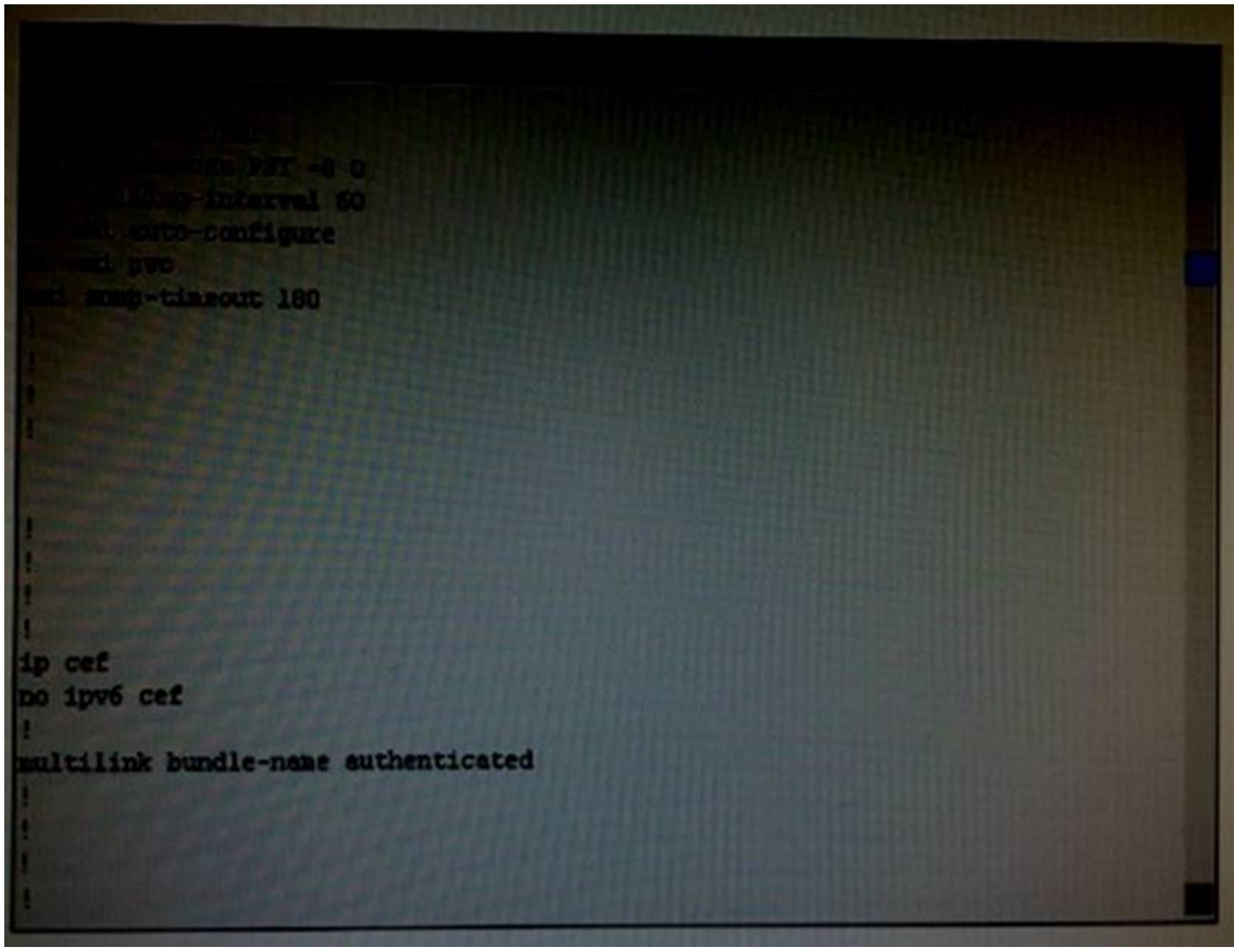

ARPA, ARP Timeout 04:00:00
input 00:00:08, output 00:00:02, output hang never
clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute 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
is up, line protocol is up
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

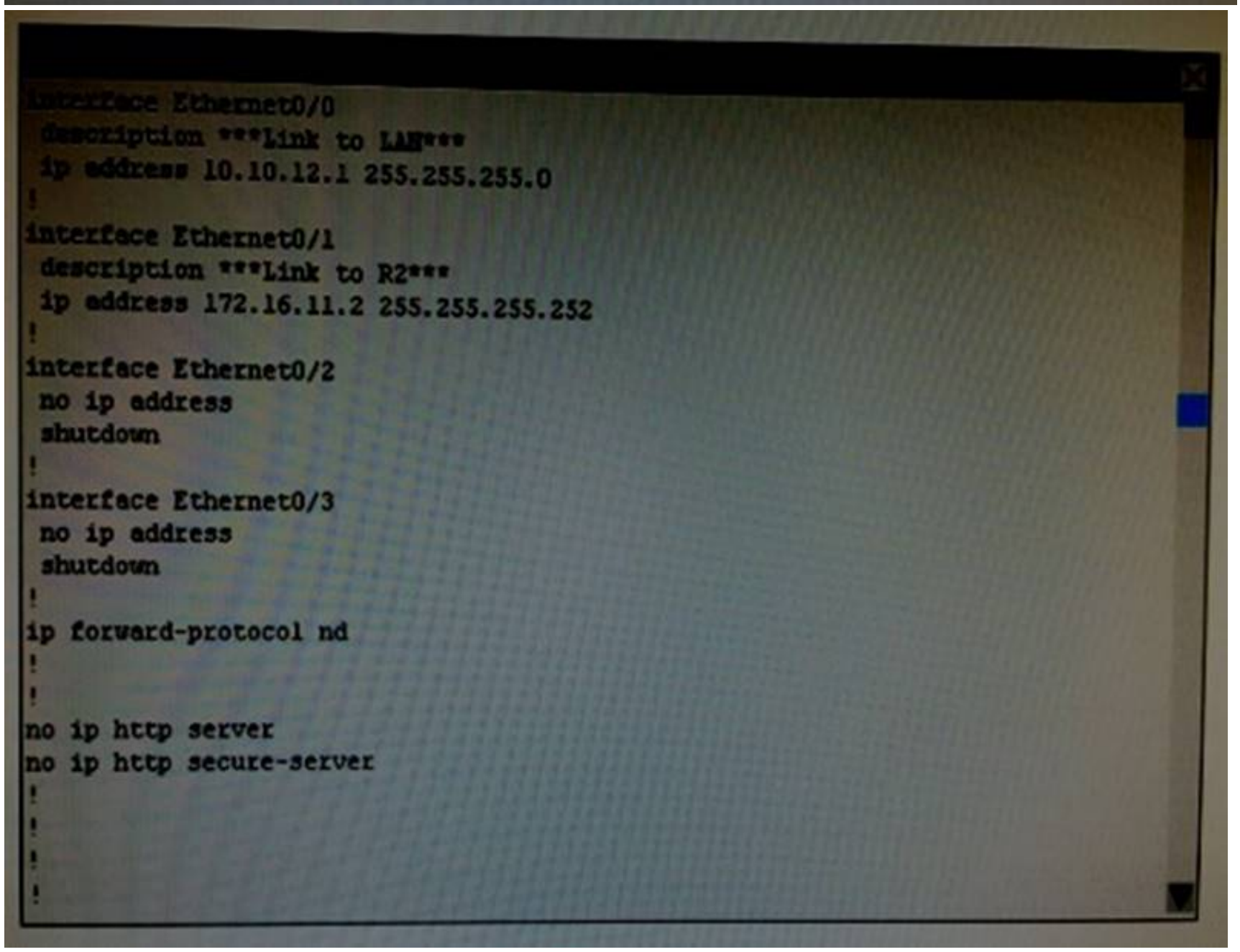
```
     0 output buffer failures, 0 output buffers swapped out
R2#
R2#
R2#show ip interface brief
Interface                  IP-Address      OK? Method Status                Prot
ocol
Ethernet0/0                172.16.11.1     YES NVRAM  up                    up
Ethernet0/1                unassigned      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
```

```
       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
```


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


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


PST -8 0
-interval 60
auto-configure
pvc
snmp-timeout 180
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!


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

```
!
!
!
!
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input all
!
!
end
R3#show interfaces
Ethernet0/0 is up, line protocol is up
  Hardware is AmdP2, address is aabb.cc00.4300 (bia aabb.cc00.4300)
  Description: ***Link to LAN***
  Internet address is 10.10.12.1/24
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
```

R3

```
   reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
   0 packets input, 0 bytes, 0 no buffer
   Received 0 broadcasts (0 IP multicasts)
   0 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 AmdP2, address is aabb.cc00.4310 (bia aabb.cc00.4310)
  Description: ***Link to R2***
```

R3

```
Hardware is AmdP2, 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 AmdP2, address is aabb.cc00.4320 (bia aabb.cc00.4320)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 input packets with dribble condition detected
     0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 unknown protocol drops
```

R3

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

R3

```
     0 input packets with dribble condition detected
     0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out
R3#
R3#
R3#show ip interface brief
Interface                  IP-Address      OK? Method Status                Prot
ocol
Ethernet0/0                10.10.12.1      YES NVRAM  up                    up
Ethernet0/1                172.16.11.2     YES NVRAM  up                    up
Ethernet0/2                unassigned      YES NVRAM  administratively down down
Ethernet0/3                unassigned      YES NVRAM  administratively down down
R3#
R3#
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
```

R3

```
Ethernet0/2                unassigned      YES NVRAM  administratively down down
Ethernet0/3                unassigned      YES NVRAM  administratively down down
R3#
R3#
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

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

L2SW1

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

L2SW1

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

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

L2SW1

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

L2SW1

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

L2SW1

```
L2SW1#show interfaces
Ethernet0/0 is up, line protocol is up (connected)
  Hardware is AmdP2, 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 AmdP2, 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 AmdP2, address is aabb.cc00.4520 (bia aabb.cc00.4520)
  Description: ***Link to Server2 Segment***
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is unknown
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:07, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 5/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
```

L2SW1

```
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     758 packets input, 81010 bytes, 0 no buffer
     Received 125 broadcasts (0 multicasts)
     0 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 AmdP2, 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

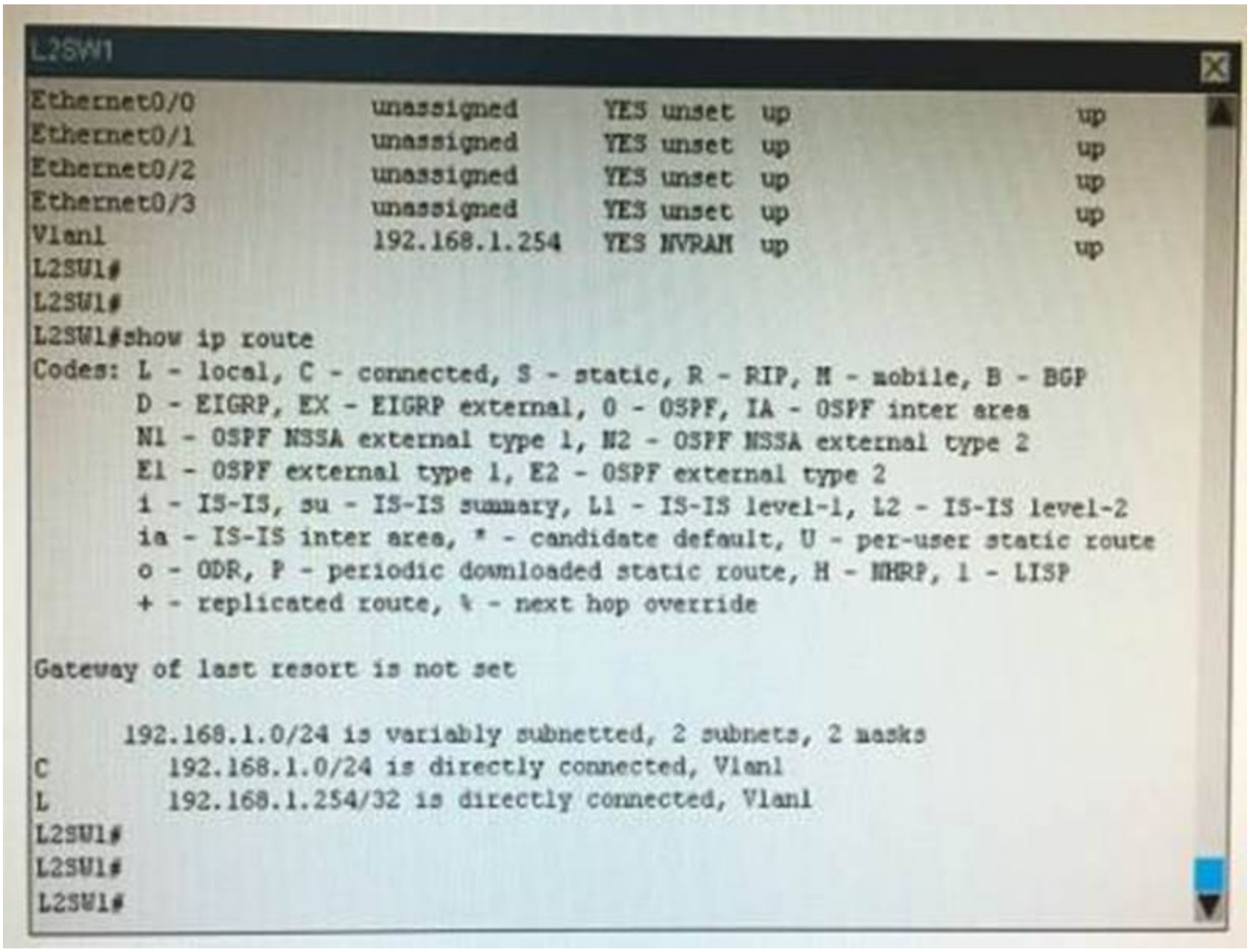
```
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/0 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output 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, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

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

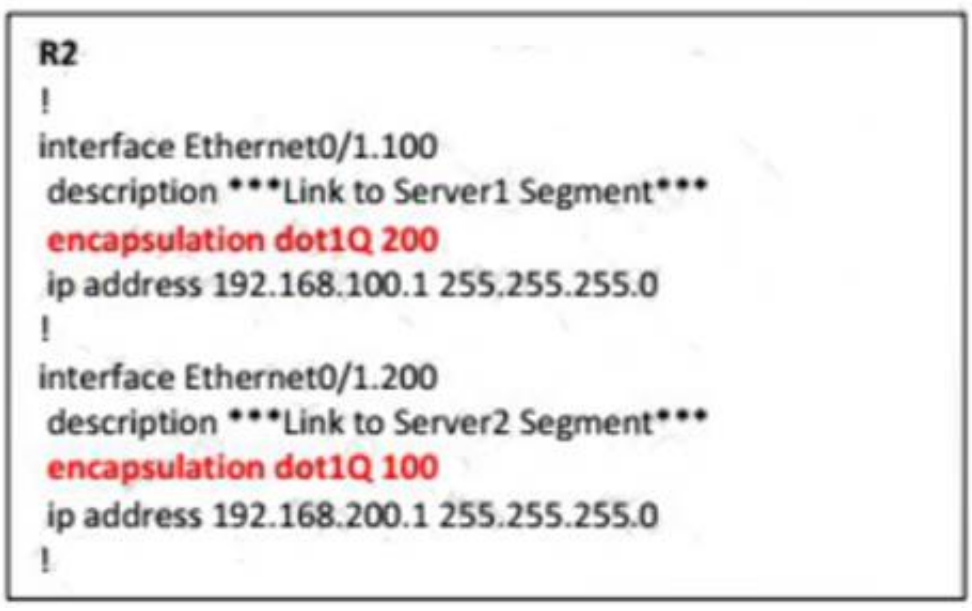


Server1 and Server2 are unable to communicate with the rest of the network. Your initial check with system administrators shows that IP address settings are correctly configured on the server side. What could be an issue?

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

Answer: A

Explanation:



NEW QUESTION 536
Which interface counter can you use to diagnose a duplex mismatch problem?

A. no earner
B. late collisions
C. giants
D. CRC errors
E. deferred
F. runts

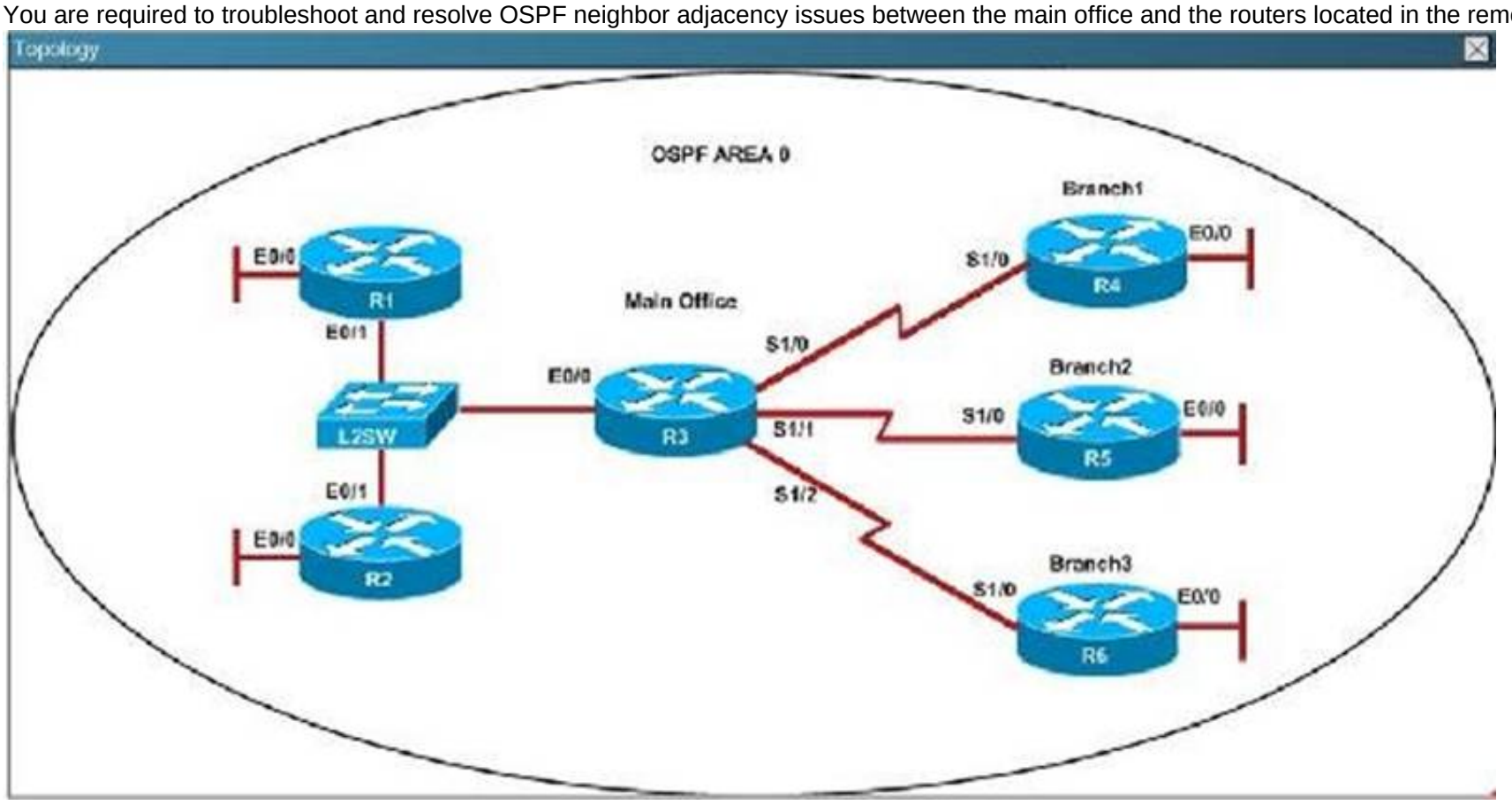
Answer: B

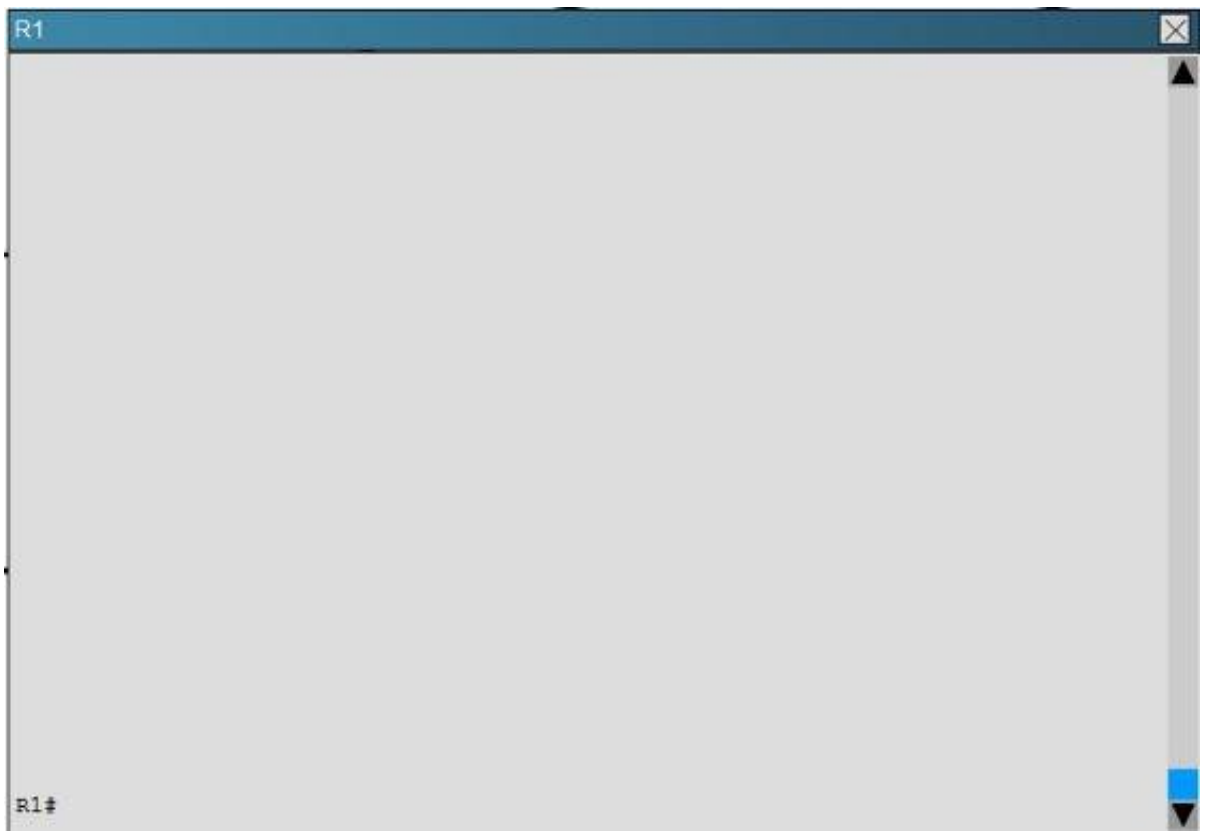
NEW QUESTION 539
Which two statements about configuring an EtherChannel on a Cisco switch are true? (Choose two.)

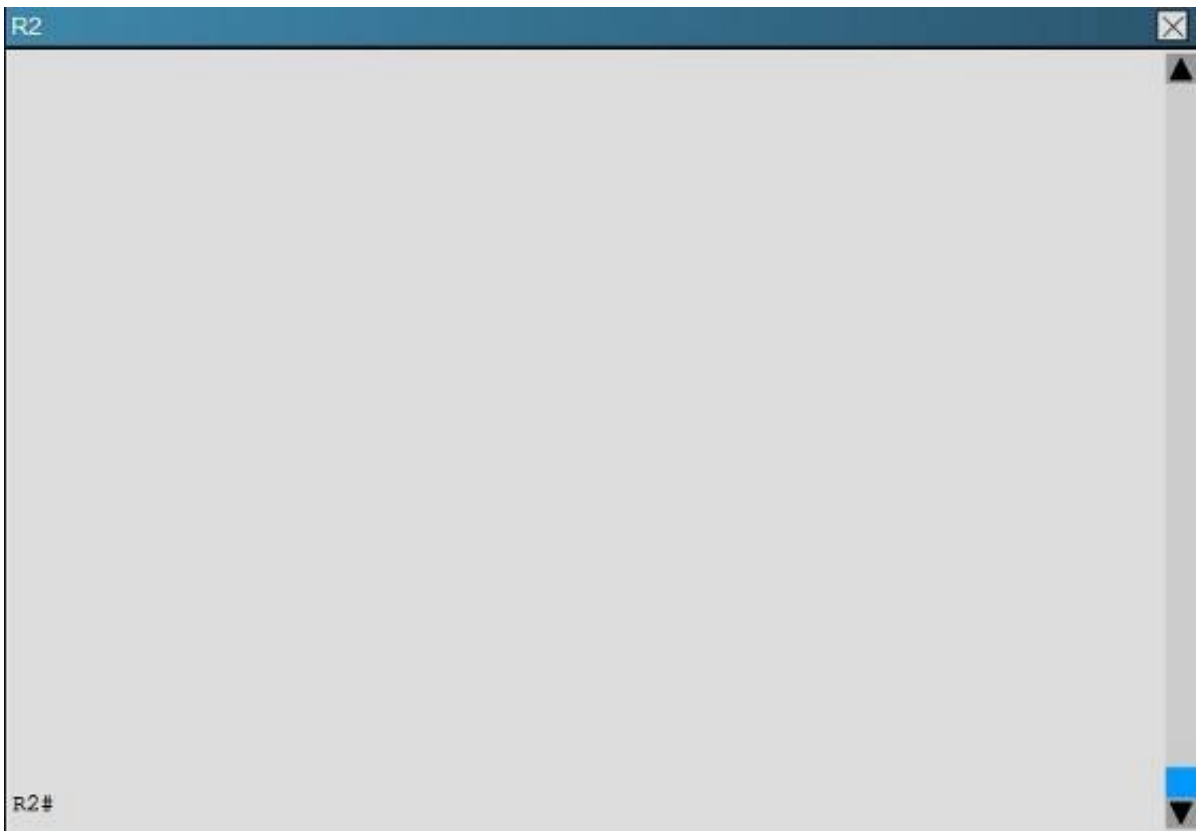
A. The interfaces configured in the EtherChannel must be on the same physical switch.
B. The interfaces configured in the EtherChannel must operate at the same speed and duplex mode
C. An EtherChannel can operate in Layer 2 mode only.
D. The interfaces configured in the EtherChannel must be part of the same VLAN or trunk.
E. The interfaces configured in the EtherChannel must have the same STP port path cost

Answer: BD

NEW QUESTION 541
Scenario
Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links.
You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.

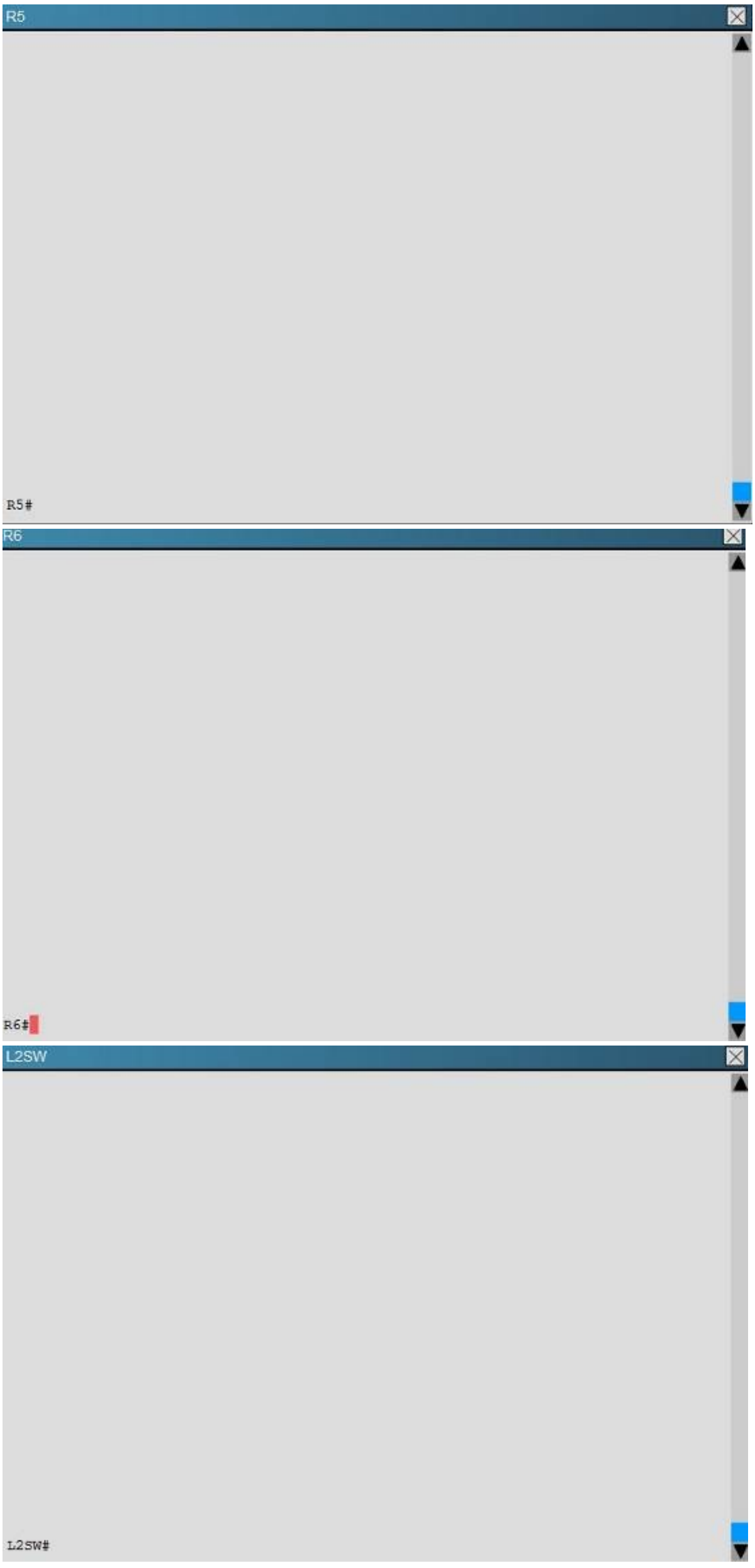





R2
R2#

R3
R3#

R4
R4#

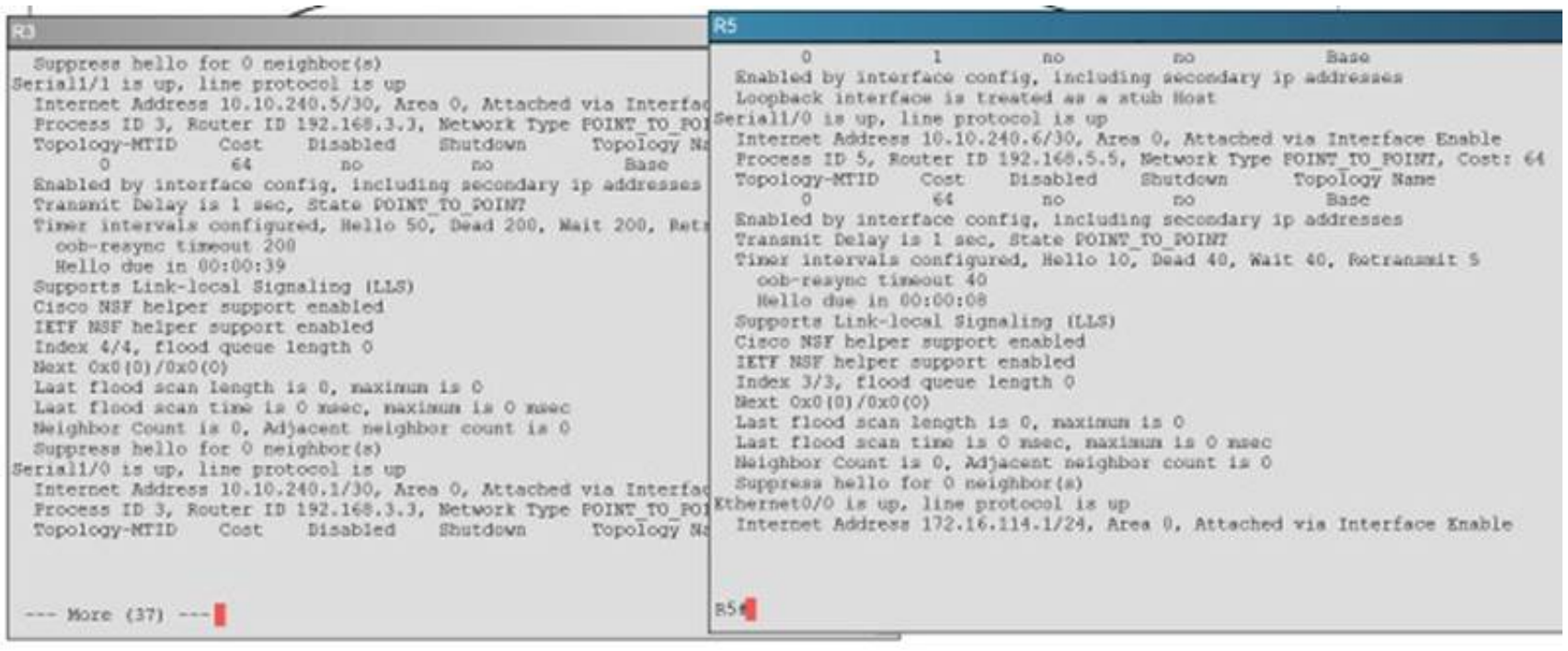


An OSPF neighbor adjacency is not formed between R3 in the main office and R5 in the Branch2 office. What is causing the problem?

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 544
Which two statements about late collisions are true? (Choose two.)

A. They may indicate a duplex mismatch.
B. By definition, they occur after the 512th bit of the frame has been transmitted.
C. They indicate received frames that did not pass the FCS match.
D. They are frames that exceed 1518 bytes.
E. They occur when CRC errors and interference occur on the cable.

Answer: AB

NEW QUESTION 547
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 552
What is a valid HSRP virtual MAC address?

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

Answer: C

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

NEW QUESTION 553
Which three statements about the features of SNMPv2 and SNMPv3 are true? (Choose three.)

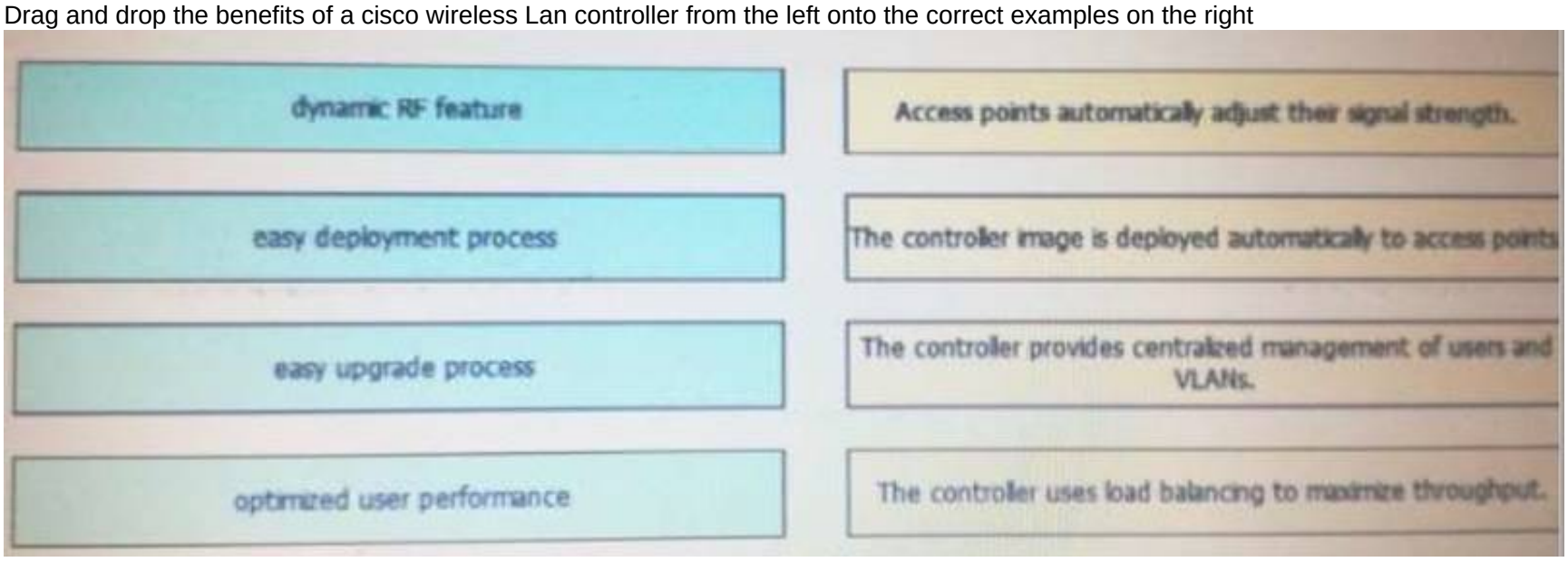
A. SNMPv3 enhanced SNMPv2 security features.
B. SNMPv3 added the Inform protocol message to SNMP.
C. SNMPv2 added the Inform protocol message to SNMP.
D. SNMPv3 added the GetBulk protocol messages to SNMP.
E. SNMPv2 added the GetBulk protocol message to SNMP.
F. SNMPv2 added the GetNext protocol message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

Answer: ACE

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

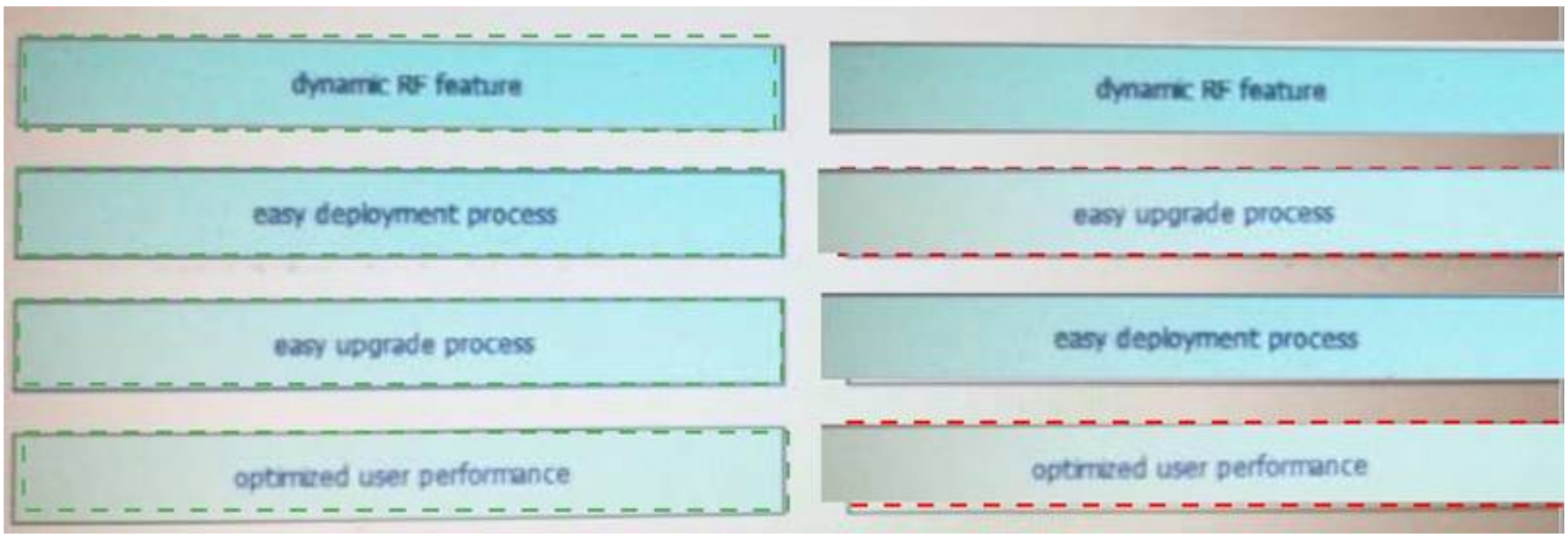
The two additional messages are added in SNMP2 (compared to SNMPv1)
GetBulkRequest The GetBulkRequest message enables an SNMP manager to access large chunks of data. GetBulkRequest allows an agent to respond with as much information as will fit in the response PDU. Agents that cannot provide values for all variables in a list will send partial information. -> E is correct.
InformRequest The InformRequest message allows NMS stations to share trap information. (Traps are issued by SNMP agents when a device change occurs.) InformRequest messages are generally used between NMS stations, not between NMS stations and agents. -> C is correct.
Note: These two messages are carried over SNMPv3.

NEW QUESTION 555
Drag and drop the benefits of a cisco wireless Lan controller from the left onto the correct examples on the right



Answer:

Explanation:



NEW QUESTION 558
Which two statements about Ethernet standards are true? (Choose two)

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

Answer: BD

NEW QUESTION 563
Which three statements about Syslog utilization are true? (Choose three.)

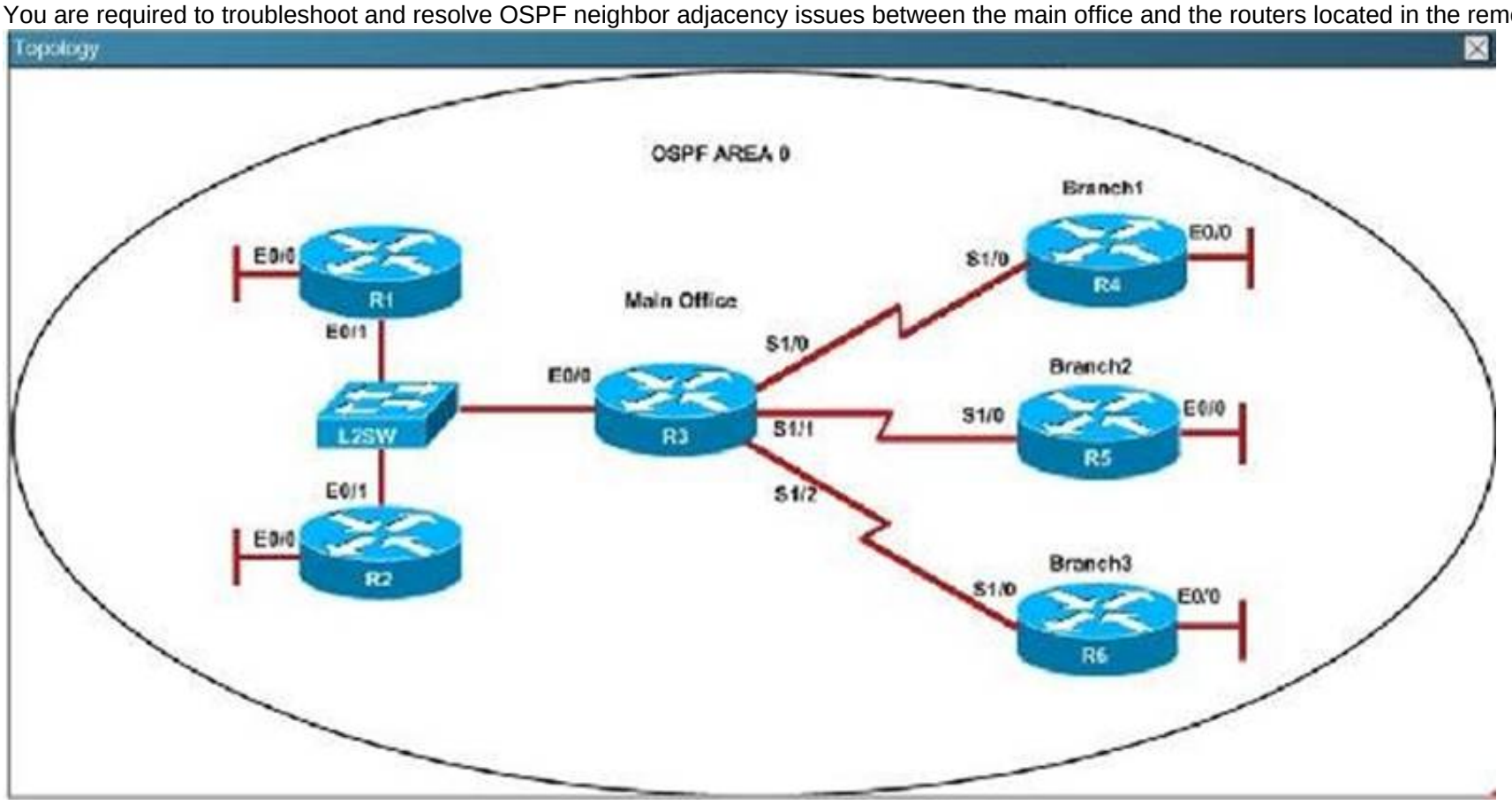
A. Utilizing Syslog improves network performance.
B. The Syslog server automatically notifies the network administrator of network problems.
C. A Syslog server provides the storage space necessary to store log files without using router disk space.
D. There are more Syslog messages available within Cisco IOS than there are comparable SNMP trap messages.
E. Enabling Syslog on a router automatically enables NTP for accurate time stamping.
F. A Syslog server helps in aggregation of logs and alerts.

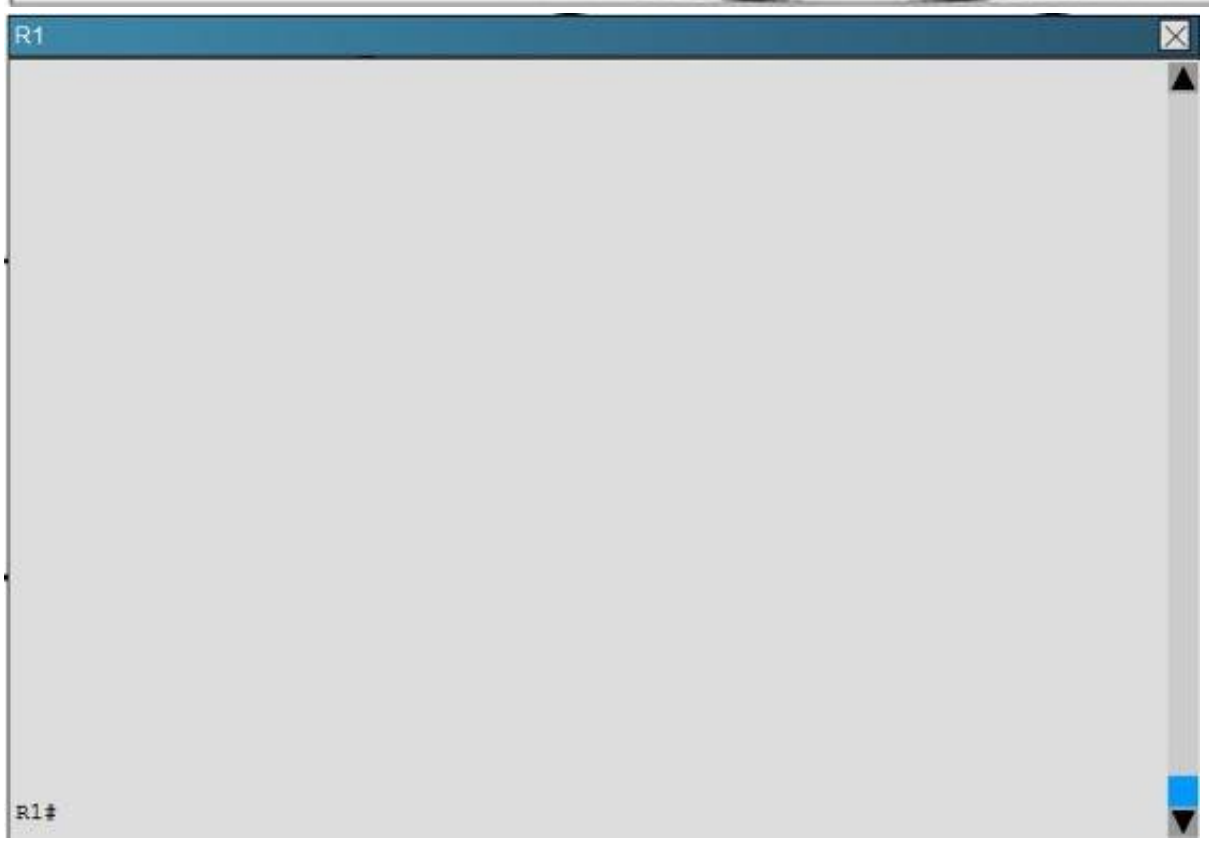
Answer: CDF

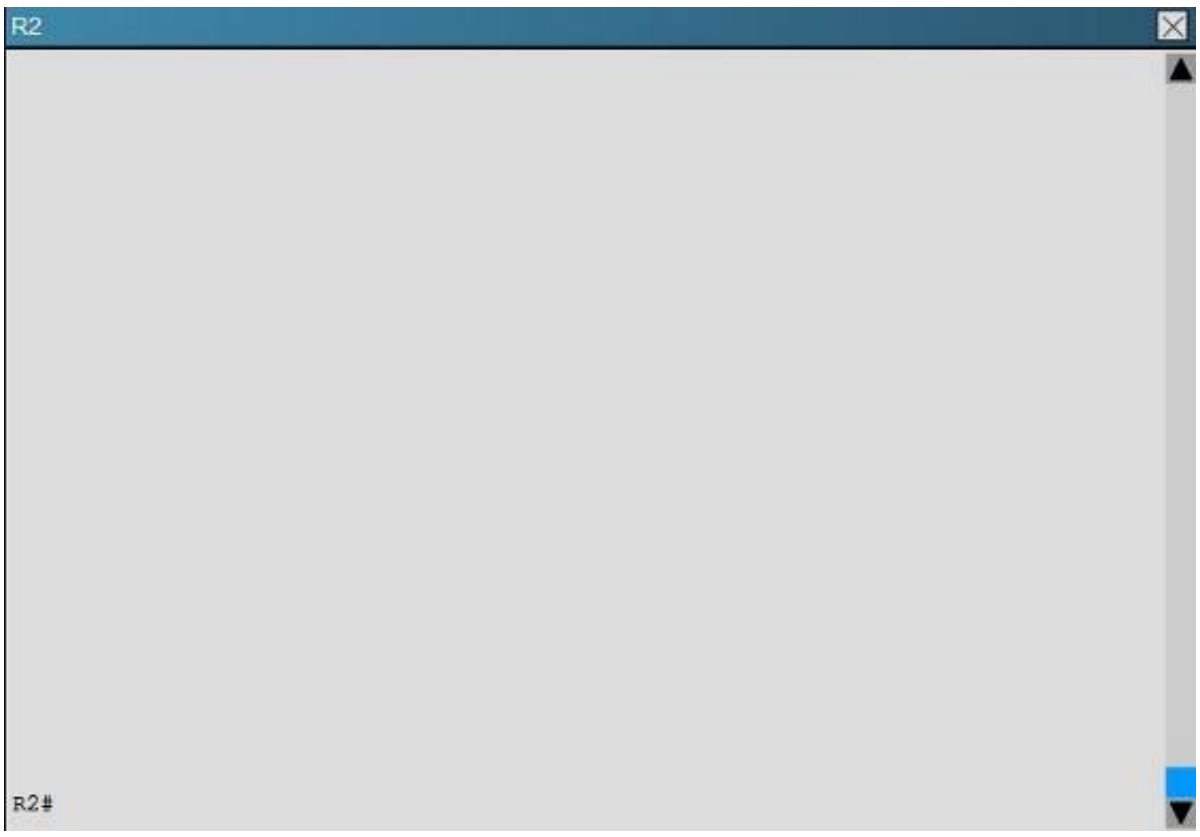
Explanation: The Syslog sender sends a small (less than 1KB) text message to the Syslog receiver. The Syslog receiver is commonly called "syslogd," "Syslog daemon," or "Syslog server." Syslog messages can be sent via UDP (port 514) and/or TCP (typically, port 5000). While there are some exceptions, such as SSL wrappers, this data is typically sent in clear text over the network. A Syslog server provides the storage space necessary to store log files without using router disk space.
In general, there are significantly more Syslog messages available within IOS as compared to SNMP Trap messages. For example, a Cisco Catalyst 6500 switch

running Cisco IOS Software Release 12.2(18)SXF contains about 90 SNMP trap notification messages, but has more than 6000 Syslog event messages.
System logging is a method of collecting messages from devices to a server running a syslog daemon. Logging to a central syslog server helps in aggregation of logs and alerts. Cisco devices can send their log messages to a UNIX-style syslog service. A syslog service accepts messages and stores them in files, or prints them according to a simple configuration file.
Reference: http://www.cisco.com/c/en/us/products/collateral/services/high-availability/white_paper_c11-557812.html

NEW QUESTION 566
Scenario:
Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links.
You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.

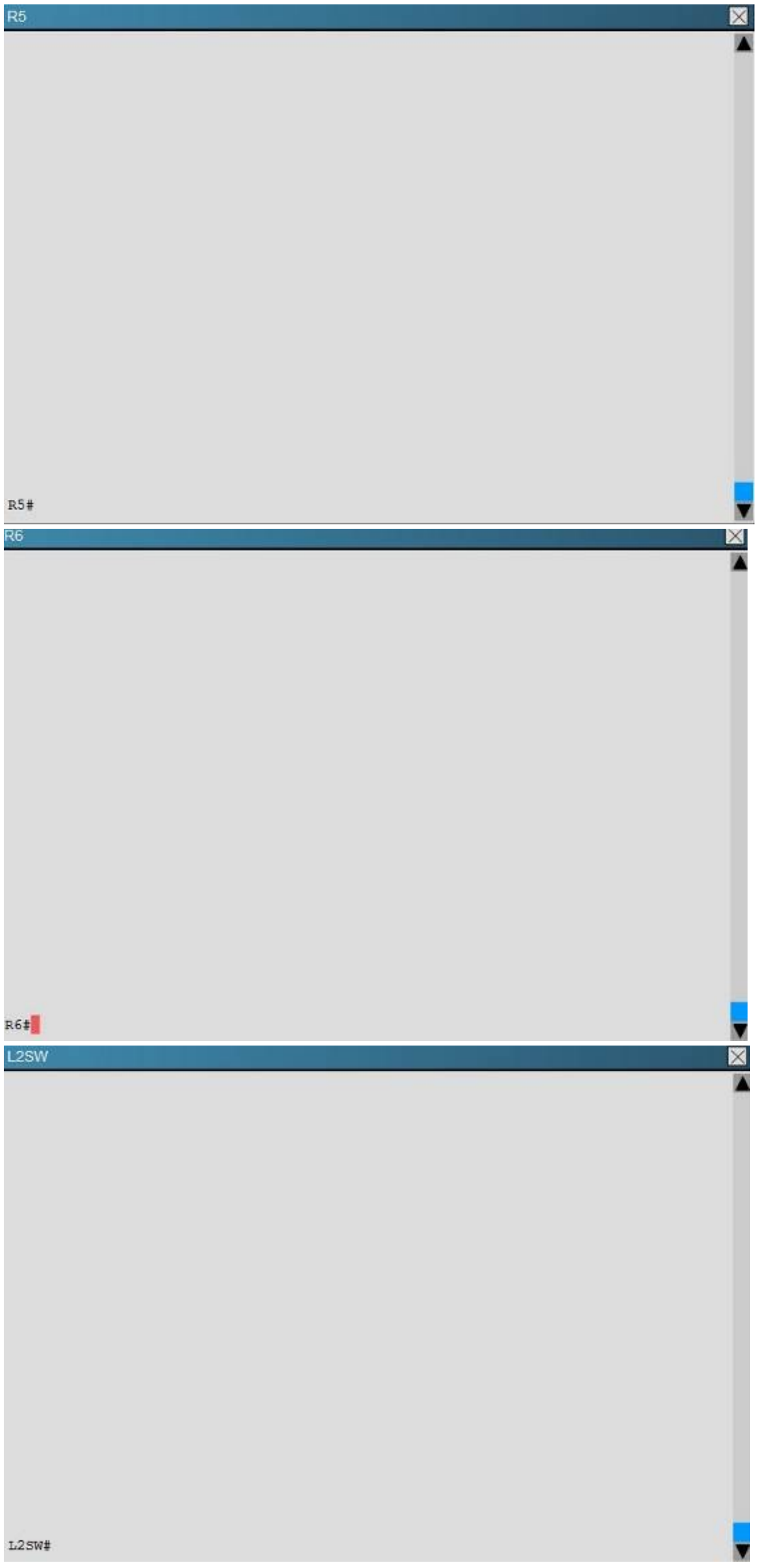





R2
R2#

R3
R3#

R4
R4#



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

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

Answer: A

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

R3

```
 no ip address
 shutdown
!
interface Ethernet0/2
 no ip address
 shutdown
!
interface Ethernet0/3
 no ip address
 shutdown
!
interface Serial1/0
 description ***Connected to R4-Branch1 office***
 ip address 10.10.240.1 255.255.255.252
 encapsulation ppp
 ip ospf 3 area 0
 serial restart-delay 0
!
interface Serial1/1
 description ***Connected to R5-Branch2 office***
 ip address 10.10.240.5 255.255.255.252
 encapsulation ppp
 ip ospf hello-interval 50
 ip ospf 3 area 0


 ppp authentication chap
```

R4

```
!
interface Ethernet0/2
 no ip address
 shutdown
!
interface Ethernet0/3
 no ip address
 shutdown
!
interface Serial1/0
 description ***Connected to R3-Main Branch office***
 ip address 10.10.240.2 255.255.255.252
 encapsulation ppp
 ip ospf 4 area 2
 serial restart-delay 0
!
interface Serial1/1
 no ip address
 shutdown
 serial restart-delay 0
!
interface Serial1/2
 no ip address
 shutdown


 --- More (37) ---
```

NEW QUESTION 568
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 571
Refer to the exhibit.

```
Switch# show spanning-tree interface fastethernet0/10
Vlan             Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------
VLAN0001         Root FWD 19        128.1    P2p
VLAN0002         Altn BLK 19        128.2    P2p
VLAN0003         Root FWD 19        128.2    P2p
```

Given the output shown from this Cisco Catalyst 2950, what is the reason that interface FastEthernet 0/10 is not the root port for VLAN 2?

A. This switch has more than one interface connected to the root network segment in VLAN 2.
B. This switch is running RSTP while the elected designated switch is running 802.1d Spanning Tree.
C. This switch interface has a higher path cost to the root bridge than another in the topology.
D. This switch has a lower bridge ID for VLAN 2 than the elected designated switch.

Answer: C

Explanation: Since the port is in the blocked status, we must assume that there is a shorter path to the root bridge elsewhere.

NEW QUESTION 573
Which two features can you enable on a switch to capture and analyze frames that transit an interface? (Choose two)

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

Answer: BC

NEW QUESTION 578
Which two features can you enable on a switch to capture and analyze frames that transit an interface ? (choose two)

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

Answer: CD

NEW QUESTION 581
Which two states are the port states when RSTP has converged? (Choose two.)

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

Answer: AD

Explanation: There are only three port states left in RSTP that correspond to the three possible operational states. The 802.1D disabled, blocking, and listening states are merged into a unique 802.1w discarding state.
STP (802.1D) Port State RSTP (802.1w) Port State
Is Port Included in Active Topology? Is Port Learning MAC Addresses? Disabled
Discarding No
No Blocking Discarding No
No Listening Discarding Yes
No Learning Learning
Yes Yes
Forwarding Forwarding Yes
Yes Reference:
http://www.cisco.com/en/US/tech/tk389/tk621/technologies_white_paper09186a0080094cfa.shtml#states

NEW QUESTION 585
.....

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