

## 300-101 Dumps

### Implementing Cisco IP Routing

<https://www.certleader.com/300-101-dumps.html>



**NEW QUESTION 1**

Which key chain is being used for authentication of EIGRP adjacency between R4 and R2?

- A. CISCO
- B. EGRP
- C. KEY
- D. MDS

**Answer:** A

**NEW QUESTION 2**

How route tags can be set?(choose two)

- A. ONLY within route tags
- B. within tag lists
- C. can be set with ONLY route-maps
- D. can be set DIRECTLY within route maps.
- E. only used on link state RPs

**Answer:** BD

**NEW QUESTION 3**

What does stateful NAT64 do that stateless NAT64 does not do?

- A. Stateful NAT64 maintains bindings of IPv4 to IPv6 link-local addresses.
- B. Stateful NAT64 translates IPv4 to IPv6.
- C. Stateful NAT64 translates IPv6 to IPv4.
- D. Stateful NAT64 maintains bindings or session state while performing translation.

**Answer:** D

**NEW QUESTION 4**

What is the default authentication in RIPv2 when authentication is enabled?

- A. enable password authentication
- B. MD5 authentication
- C. SHA1 authentication
- D. plaintext authentication

**Answer:** D

**NEW QUESTION 5**

Refer to the following configuration command. Which statement about the command is true? `router(config)#ip nat inside source static tcp 172.16.10.8 8080 172.16.10.8 80`

- A. Any packet that is received in the inside interface with a source IP port address 172.16.10.8:8080 is translated to 172.16.10.8:80
- B. Any packet that is received in the inside interface with a source IP port address of 172.16. 10.8: 80 is translated to 172.16.10.8.8080
- C. The router accepts only a TCP connection from port 8080 and port 80 on IP address 172.16
- D. Any packet that is received in the inside interface with a source IP address of 172.16.10.8 is redirected to port 8080 or port 80

**Answer:** A

**NEW QUESTION 6**

Which task must you perform to enable a point-to-point Frame Relay connection?

- A. Enable inverse ARP.
- B. Configure the encapsulation type.
- C. Configure static address mapping.
- D. Disable inverse ARP.

**Answer:** C

**NEW QUESTION 7**

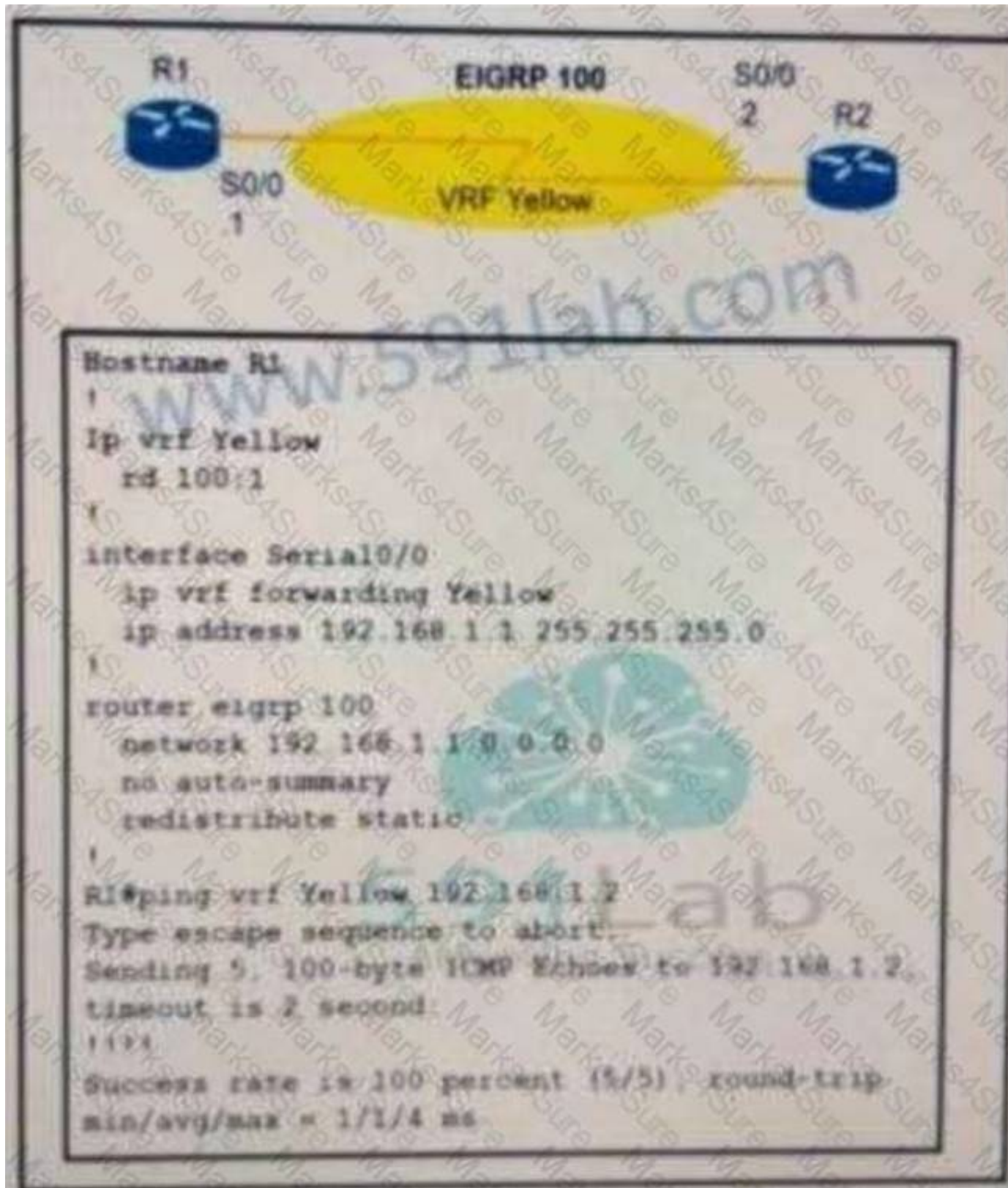
Which condition prevents the establishment of a DMVPN tunnel between two spokes?

- A. The two spokes have different tunnel keepalive settings
- B. HSRP is enabled on the spoke devices
- C. IPsec is enabled on the spoke devices
- D. The two spokes are behind different PAT devices

**Answer:** A

**NEW QUESTION 8**

Refer to the exhibit.



R1 is configured with VRF-Lite and can ping R2. R2 is fully configured, but it has no active EIGRP neighbors in vrf Yellow. If the configuration of R2 is complete, then which issue prevents the EIGRP 100 neighbor relationship in vrf Yellow from forming?

- A. The no auto-summary command is preventing the EIGRP neighbor relationship from forming
- B. There is a Layer 1 issue that prevents the EIGRP neighbor relationship from forming
- C. The interface IP addresses are not in the same subnet
- D. EIGRP 100 network 192 168 1 0/24 is configured in the global routing table on R1

**Answer:** D

#### NEW QUESTION 9

Where can NetFlow export data for long term storage and analysis?

- A. another network device
- B. syslog
- C. flat file
- D. collector

**Answer:** D

#### NEW QUESTION 10

What is the default maximum segment size for TCP traffic

- A. 536
- B. 1492
- C. 1500
- D. 1508
- E. 3340
- F. 4096

**Answer:** A



**NEW QUESTION 10**

Drag and drop the statements from the left onto the correct uRPF modes on the right  
Select and Place:

It can drop legitimate traffic.

It requires the source address to be routable.

It supports using the default route as a route reference.

It permits only packets that are received on the same interface as the exit interface for the destination address.

nneettwwookkinnngg

Loose Mode

Loose Mode

**Answer:**

**Explanation:**

nneettwwookkinnngg

Loose Mode

It supports using the default route as a route reference.

It requires the source address to be routable.

Loose Mode

It can drop legitimate traffic.

It permits only packets that are received on the same interface as the exit interface for the destination address.

**NEW QUESTION 13**

Which two statements are true of the OSPF link-state routing protocol? (Choose two.)

- A. Using the Bellman-Ford algorithm, each OSPF router independently calculates its best paths to all destinations in the network.
- B. Using the DUAL algorithm, each OSPF router independently calculates its best paths to all destinations in the network.
- C. OSPF sends summaries of individual link-state entries every 30 minutes to ensure LSDB synchronization.
- D. OSPF sends triggered updates when a network change occurs
- E. OSPF sends updates every 10 seconds
- F. When a link changes state, the router that detected the change creates a link-state advertisement (LSA) and propagates it to all OSPF devices using the 224.0.0.6 multicast address.

**Answer:** CD

**NEW QUESTION 14**

which phase of dmpvn spoke to spoke communications?

- A. phase2
- B. phase4C
- C. phase5
- D. phase6
- E. phase1

**Answer:** A

**NEW QUESTION 17**

Which are new LSA types in OSPF for IPv6 (OSPFv3)? (Choose two)

- A. LSA Type 8
- B. LSA Type 9
- C. LSA Type 10
- D. LSA Type 12

**Answer:** AB

**NEW QUESTION 20**

Drag and drop the statements about NAT64 from the left onto the correct NAT64 types on the right.

ALG is not supported.	Stateful
It supports FTP64 for ALG.	
It supports PAT and overload.	
It supports one-to-one mappings only.	Stateless
It allows IPv6 systems to use any type of IPv6 address.	
It requires IPv6 systems to use RFC6052 IPv4-translatable addresses.	

**Answer:**

**Explanation:**

ALG is not supported.	Stateful
It supports FTP64 for ALG.	
It supports PAT and overload.	
It supports one-to-one mappings only.	Stateless
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It requires IPv6 systems to use RFC6052 IPv4-translatable addresses.	

**NEW QUESTION 24**

What is the hop count that is advertised for an unreachable network by a RIP routes that uses poison reverse?

- A. 15
- B. 16
- C. 255

**Answer:** C

**NEW QUESTION 25**

In which scenario can asymmetric routing occur?

- A. active/standby firewall setup
- B. active/active firewall setup
- C. redundant routers running VRRP
- D. single path in and out of the network

**Answer:** B

**NEW QUESTION 26**

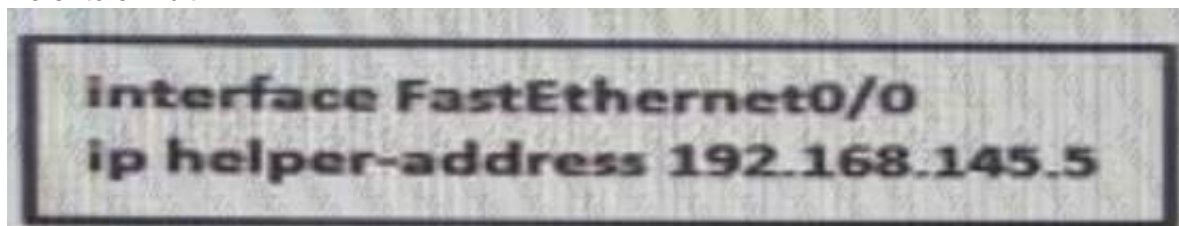
Which routing protocol routes traffic through the best path and second best path at the same time?

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

**Answer:** B

**NEW QUESTION 27**

Refer to exhibit.



A packet capture indicates that router is not forwarding the DHCP packets that it receives on interface FastEthernet command must be entered in global configuration mode to resolve this issue?

- A. ip forward-protocol
- B. ip DHCP relay
- C. ip helper
- D. service DHCP

**Answer:** A

**NEW QUESTION 31**

Which two statements about ICMP unreachable messages are true?(Choose two)

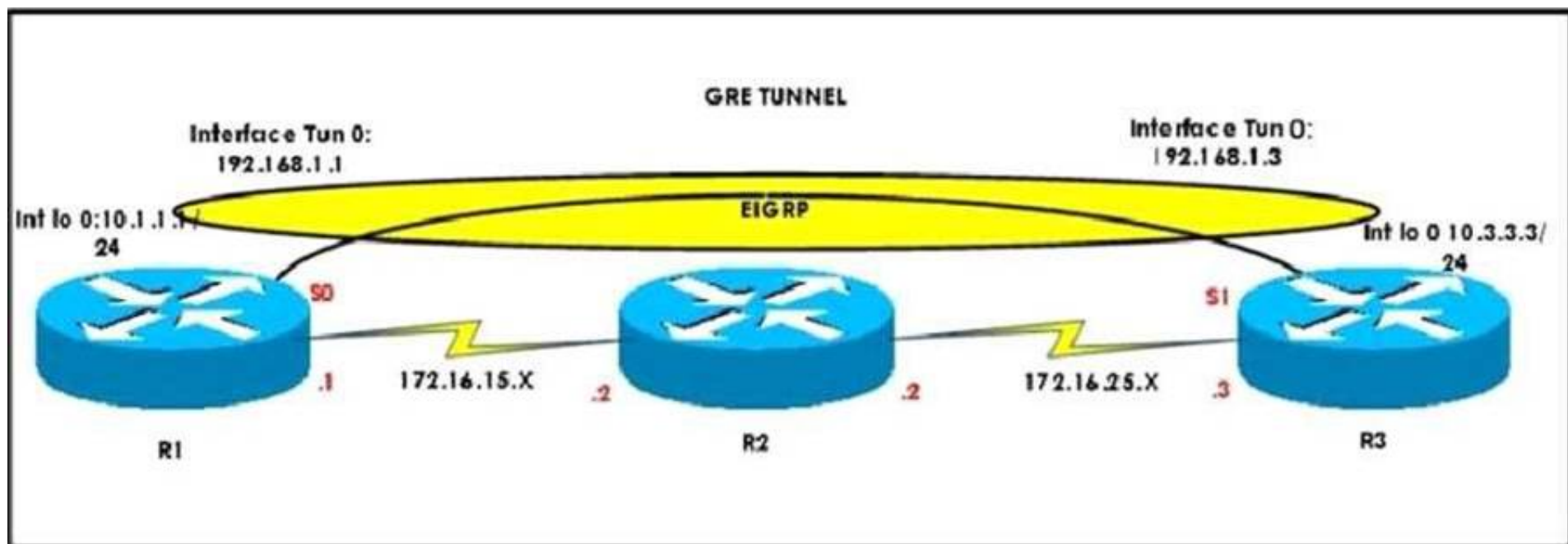
- A. They are sent when a route to the destination is missing from the routing table
- B. They can be enabled and disabled on a device only on a global level
- C. They are sent when a destination address responds to an ARP request
- D. They include the entire packet so that the source can identify the process that generated the message
- E. They include a portion of the original data so that the source can identify the process that generated the message

**Answer:** AC

**NEW QUESTION 36**

Refer to the exhibit.





After configuring GRE between two routers running EIGRP that are connected to each other via a WAN link, a network engineer notices that the two routers cannot establish the GRE tunnel to begin the exchange of routing updates. What is the reason for this?

- A. Either a firewall between the two routers or an ACL on the router is blocking TCP 47.
- B. Either a firewall between the two routers or an ACL on the router is blocking IP protocol
- C. Either a firewall between the two routers or an ACL on the router is blocking UDP 57
- D. Either a firewall between the two routers or an ACL on the router is blocking IP protocol number 47

**Answer: B**

#### NEW QUESTION 40

Which criterion does BGP evaluate first when determining the best path?

- A. MED value
- B. neighbor address
- C. local preference value
- D. weight

**Answer: D**

**Explanation:** <https://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/13753-25.html>

C:\Users\wk\Desktop\mudassar\Untitled.jpg

### How the Best Path Algorithm Works

BGP assigns the first valid path as the current best path. BGP then compares the best path with the next path in the list, until BGP reaches the end of the list of valid paths. This list provides the rules that are used to determine the best path:

1. Prefer the path with the highest WEIGHT.

Note: WEIGHT is a Cisco-specific parameter. It is local to the router on which it is configured.

2. Prefer the path with the highest LOCAL\_PREF.

Note: A path without LOCAL\_PREF is considered to have had the value set with the `bgp default local-preference` command, or to have a value of 100 by default.

#### NEW QUESTION 43

A network engineer is unable to make VRF lite EIGRP adjacency work. There is nothing wrong with communication between R1 and R2. What command will eliminate the issue when executed on both routers?

- A. (config-router-af)# autonomous-system 100
- B. (config)# ip-multicast-routing
- C. (config-vrf)# route-target both 100:1
- D. (config-router-af)# network 209.165.202.128 0.0.0.31

**Answer: A**

#### NEW QUESTION 44

Which two BGP neighbor states are valid? (Choose two)

- A. DROTHER
- B. established
- C. stuck in active
- D. unknown
- E. 2-WAY
- F. active

**Answer:** BF

**NEW QUESTION 47**

How is authentication handled with OSPFv3?

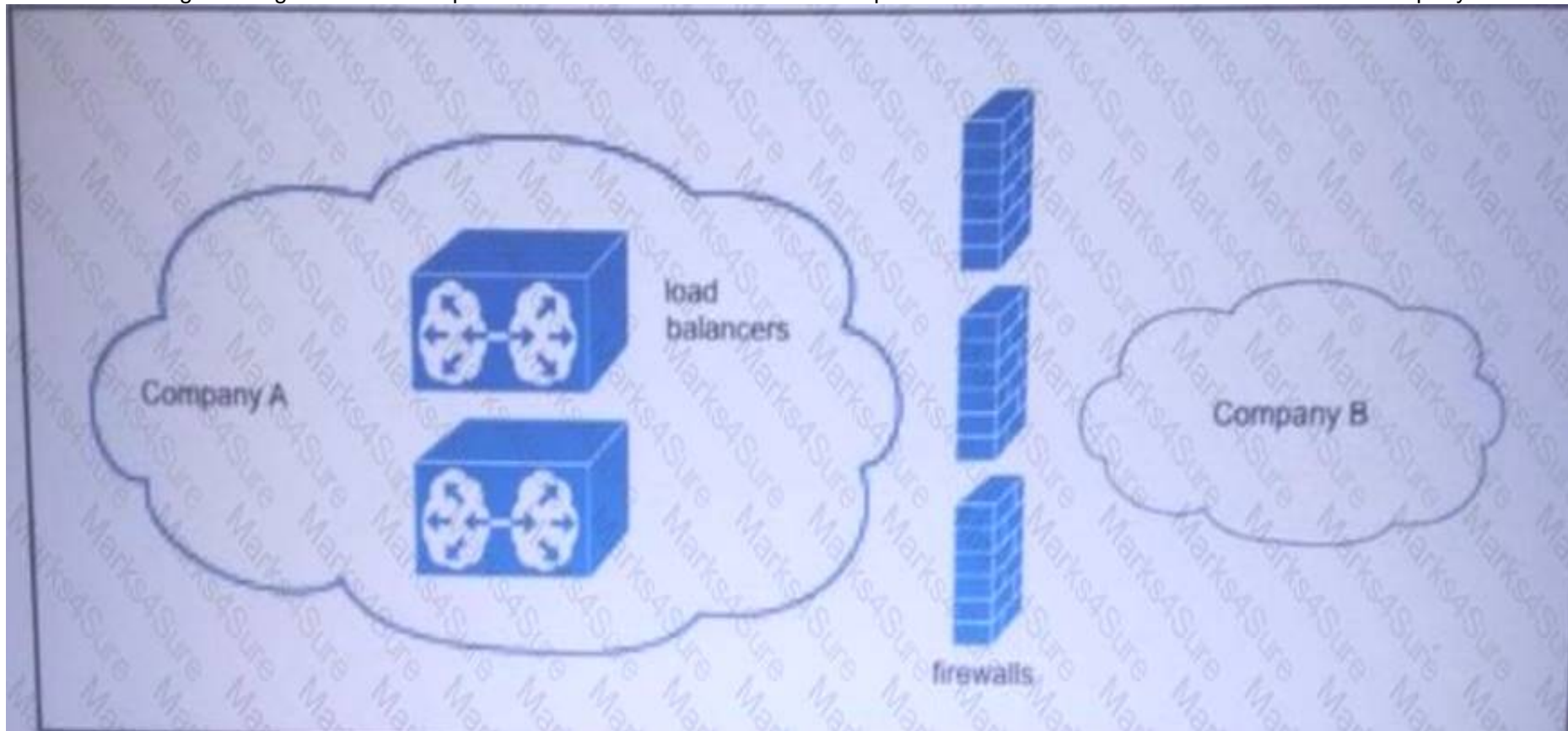
- A. OSPFv3 for IPv6 authentication is supported by SHA-1 authentication.
- B. OSPFv3 for IPv6 authentication is supported by MD5 authentication
- C. OSPFv3 for IPv6 authentication is supported by IPv6 IPsec
- D. OSPFv3 for IPv6 authentication is supported by IPv4 IPsec

**Answer:** C

**NEW QUESTION 52**

Refer to the exhibit.

Which networking challenge is the most important issue due to address to enable optimal communication between the networks at company A and company B?



- A. unicast flooding
- B. IPv4 MTU
- C. asymmetric
- D. routing IPv4 fragmentation
- E. UDP latency

**Answer:** C

**NEW QUESTION 56**

Refer to the exhibit. Which command is used to control the type of routes that are processed in incoming route updates?

- A. passive-interface
- B. distribute-list 1 out
- C. distribute-list 1 in
- D. ip vrf forwarding

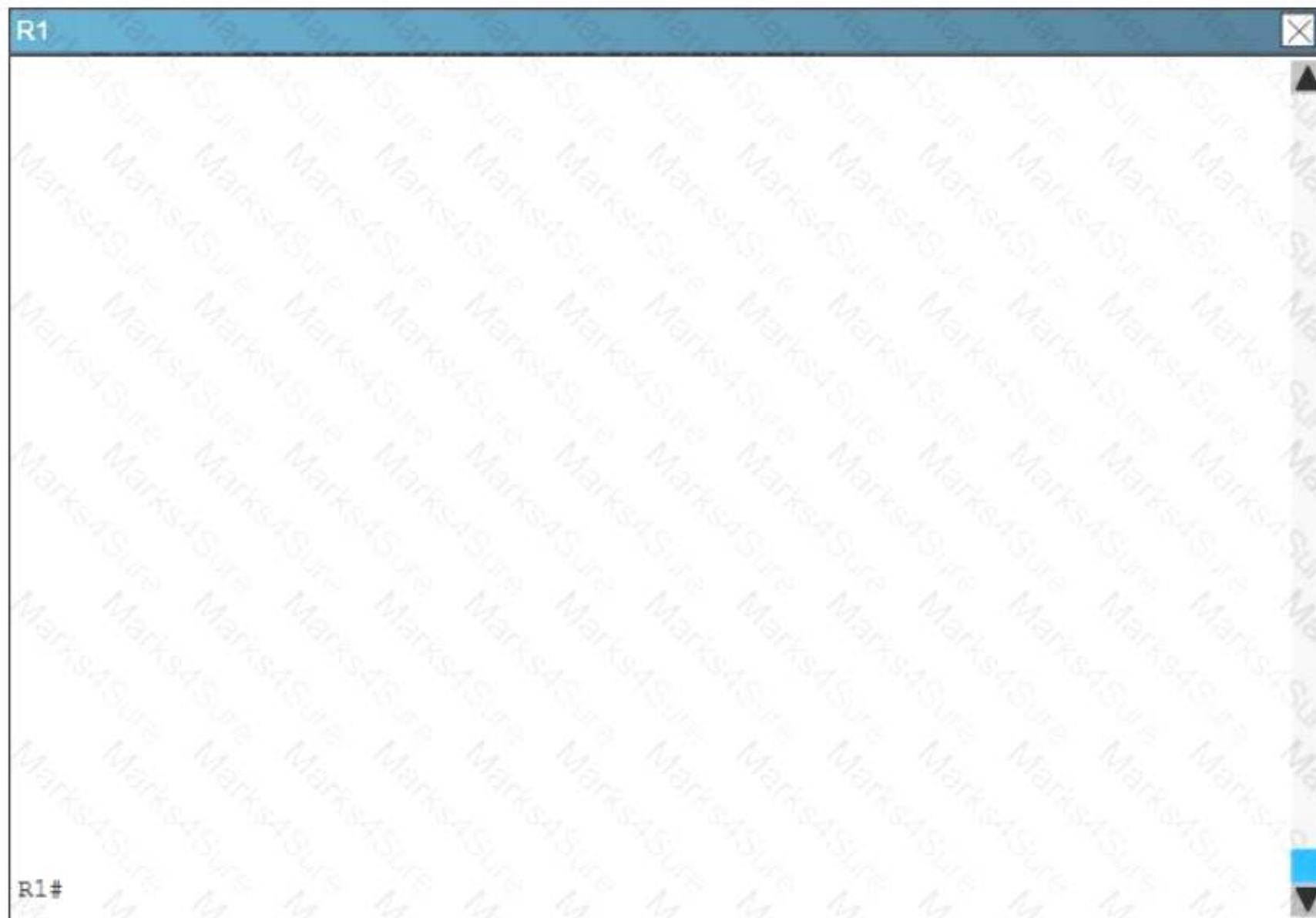
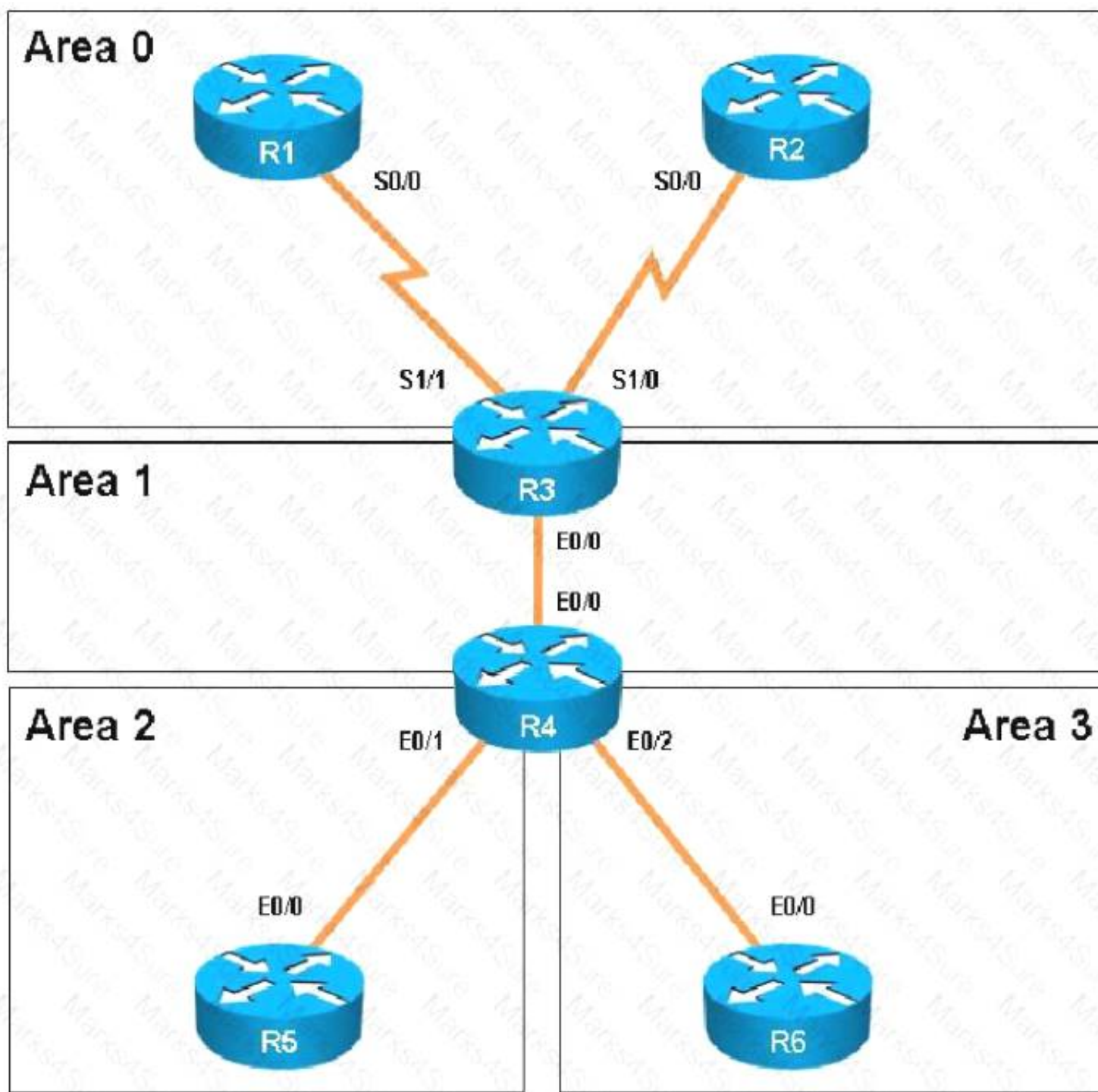
**Answer:** C

**NEW QUESTION 59**

Scenario:

You have been asked to evaluate an OSPF network setup in a test lab and to answer questions a customer has about its operation. The customer has disabled your access to the show running-config command.





R2

R2#

R3

R3#

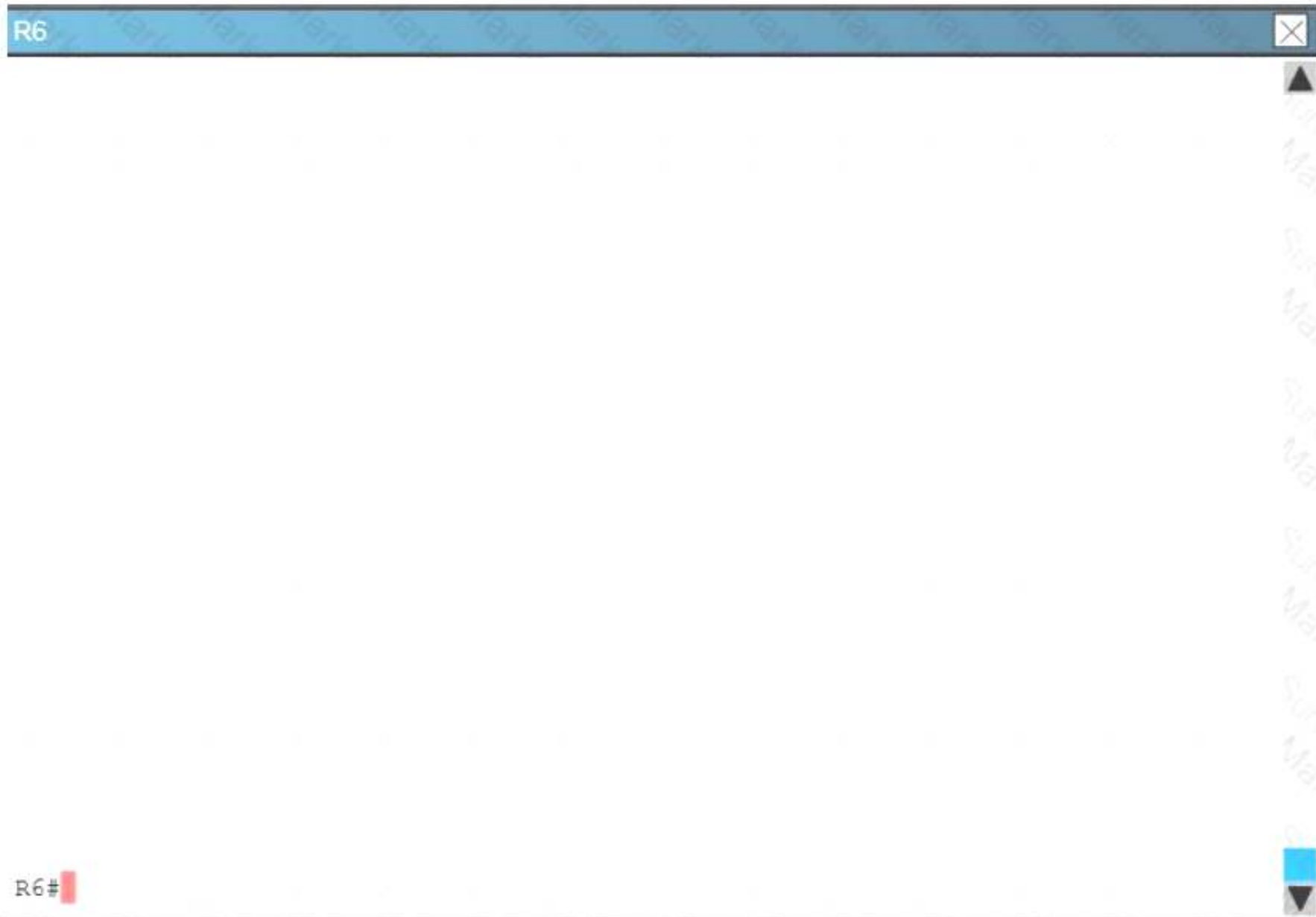
R4

R4#

R5

R5#





Areas of Router 5 and 6 are not normal areas, inspect their routing tables and determine which statement is true?

- A. R5's Loopback and R6's Loopback are both present in R5's Routing table
- B. R5's Loopback and R6's Loopback are both present in R6's Routing table
- C. Only R5's loopback is present in R5's Routing table
- D. Only R6's loopback is present in R5's Routing table
- E. Only R5's loopback is present in R6's Routing table

**Answer:** A

#### NEW QUESTION 63

Drag and drop the statement about device security from the left on the correct features on the right.

It designates the permitted management interfaces on the device.

It is enabled only when an interface is configured.

It protects the device against DoS attacks.

It requires only a single command to configure.

It supports packet forwarding by reducing the load on the device.

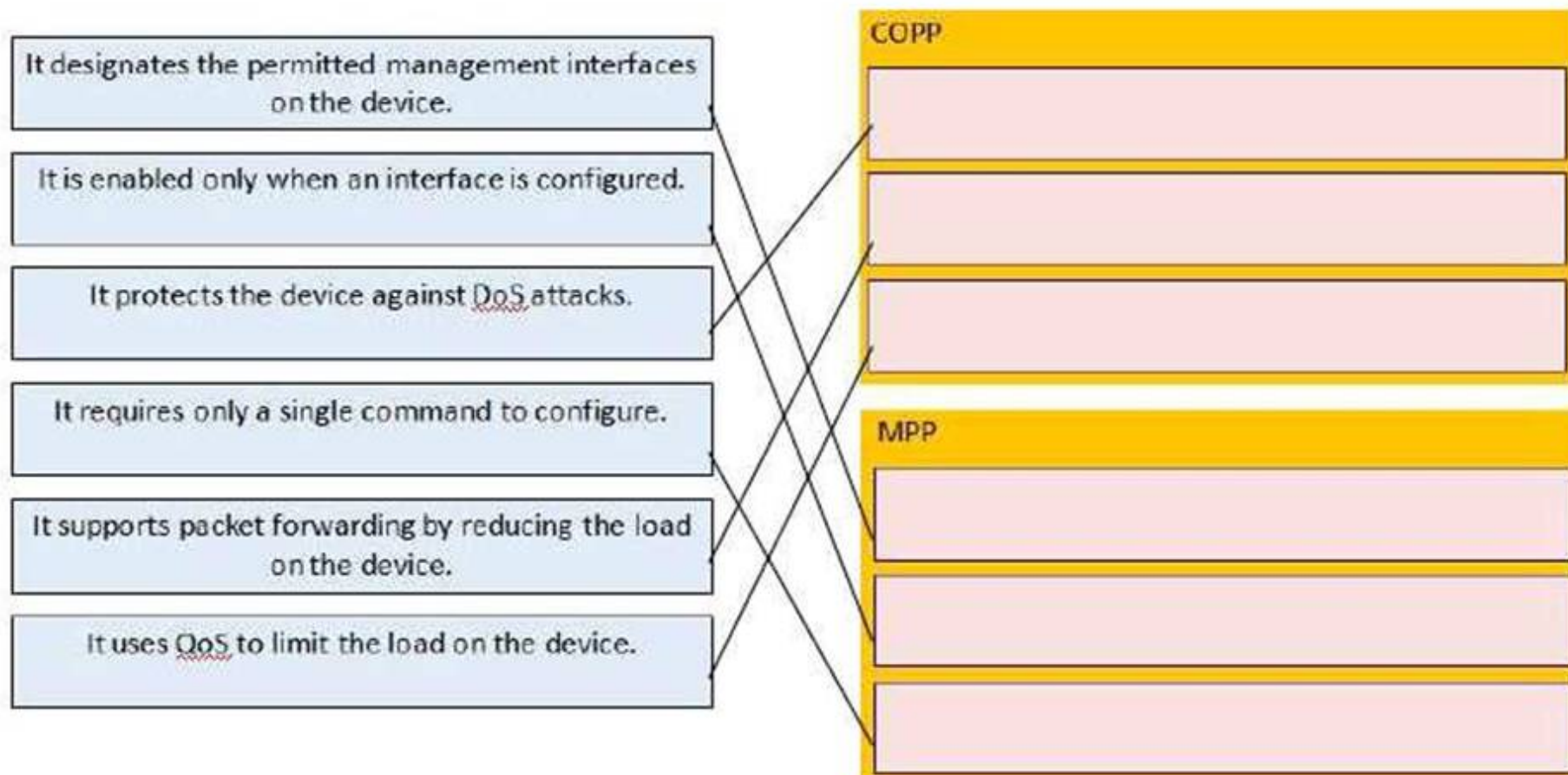
It uses QoS to limit the load on the device.

#### COPP


#### MPP


**Answer:**

Explanation:



#### NEW QUESTION 67

Refer to the following.

```
aaa new-model
```

```
aaa authentication login default local-case enable aaa authentication login ADMIN local-case username CCNP secret Str0ngP@ssw0rd!
```

```
line 0 4
```

```
login authentication ADMIN
```

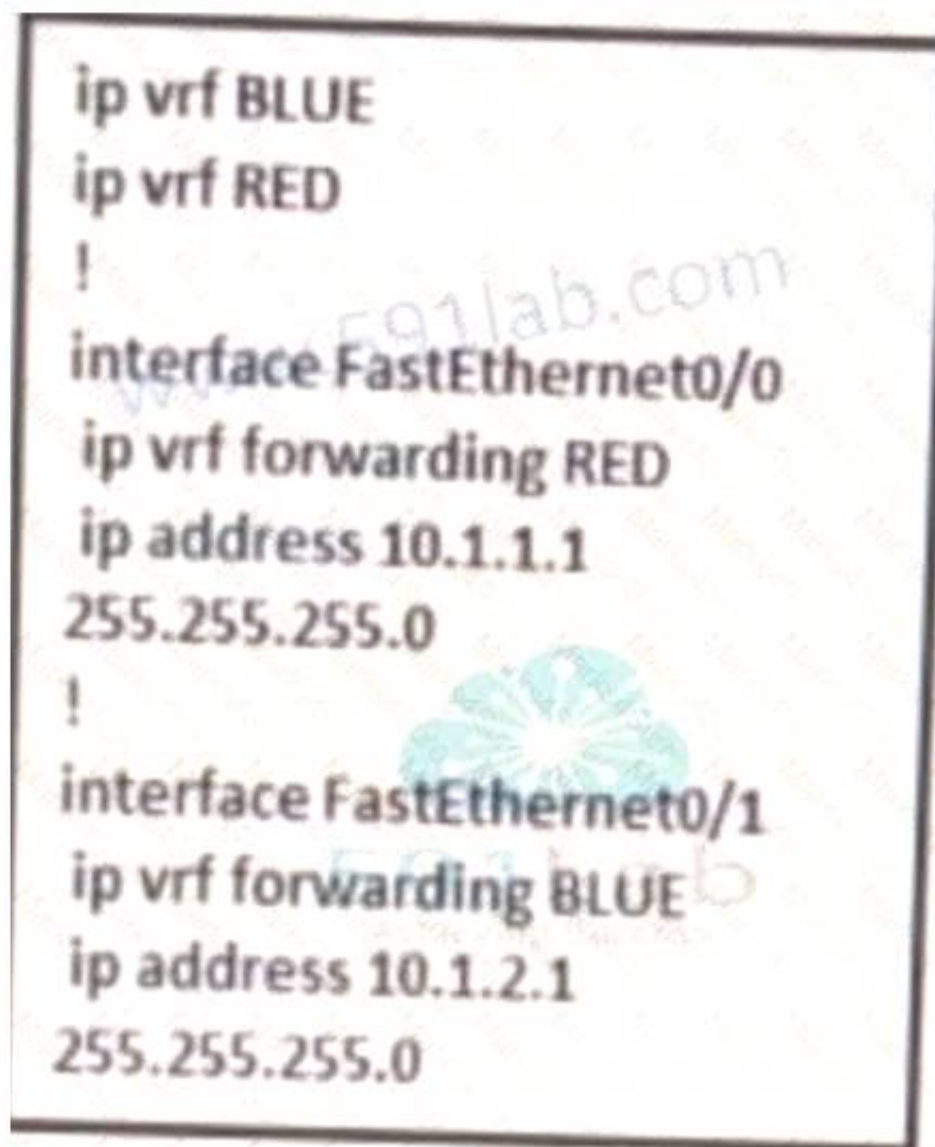
How can you change this configuration so that when user CCNP logs in, the show run command is executed and the session is terminated?

- A. Add the autocommand keyword to the aaa authentication command
- B. Assign privilege level 15 to the CCNP username
- C. Add the access-class keyword to the aaa authentication command
- D. Assign privilege level14 to the CCNP username
- E. Add the access-class keyword to the username command
- F. Add the autocommand keyword to the username command

Answer: F

#### NEW QUESTION 68

Refer to the exhibit.



Network users on the 10.1.2.0/24 subnet have a default gateway of 10.1.2.254. Which command will configure this gateway?

- A. router(config)#ip route vrf RED 0 0.0 0 0 0.0.0 10.1.2.254
- B. router(config)#ip route 0.0.0.0 0.0.0.0 10.1.2.254
- C. router(config)#ip route 0.0.0 0 0.0.0.0 fastethernet0/1
- D. router(config)#ip route vrf BLUE 0.0.0.0 0.0.0.0 10.1.2.254

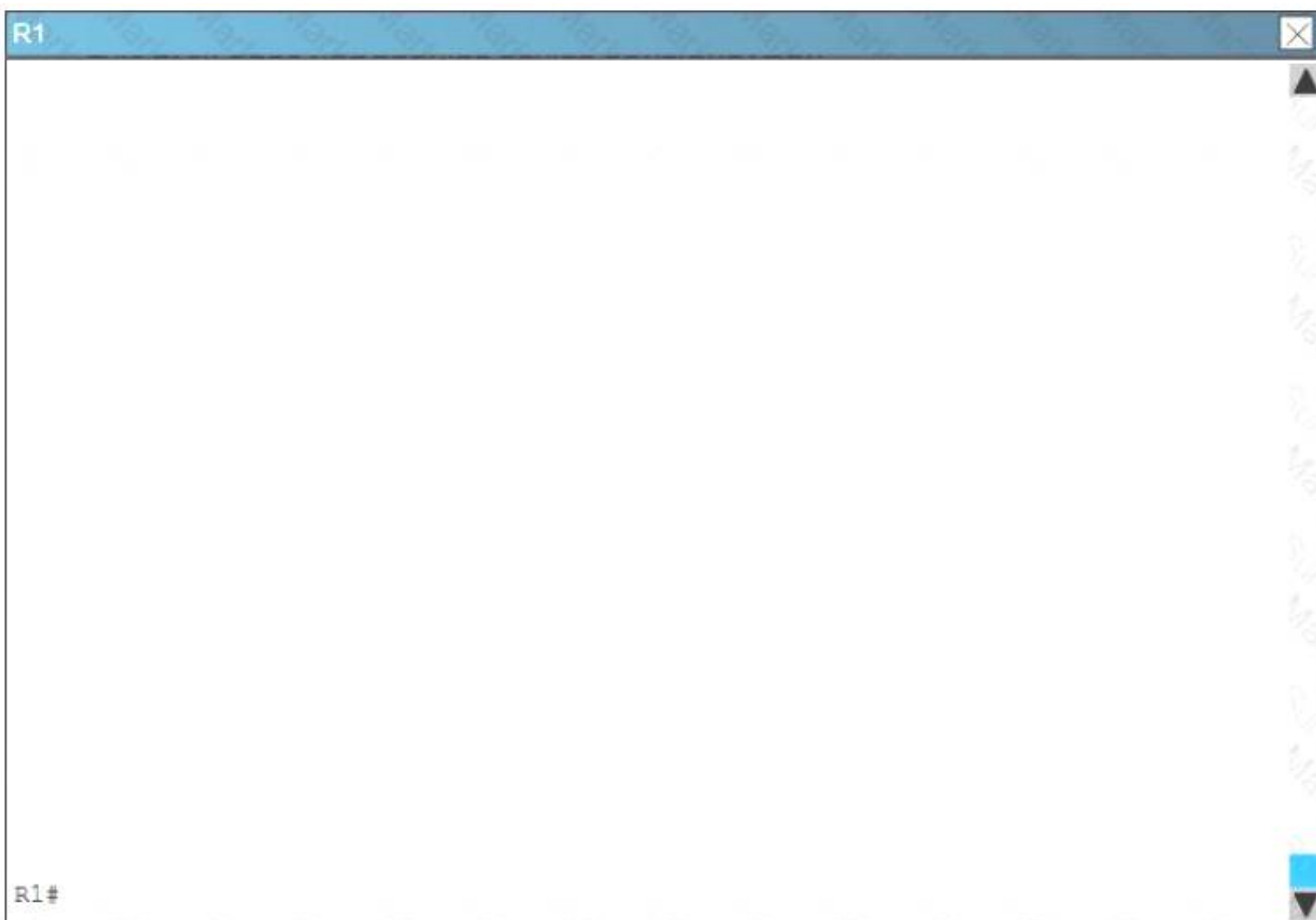
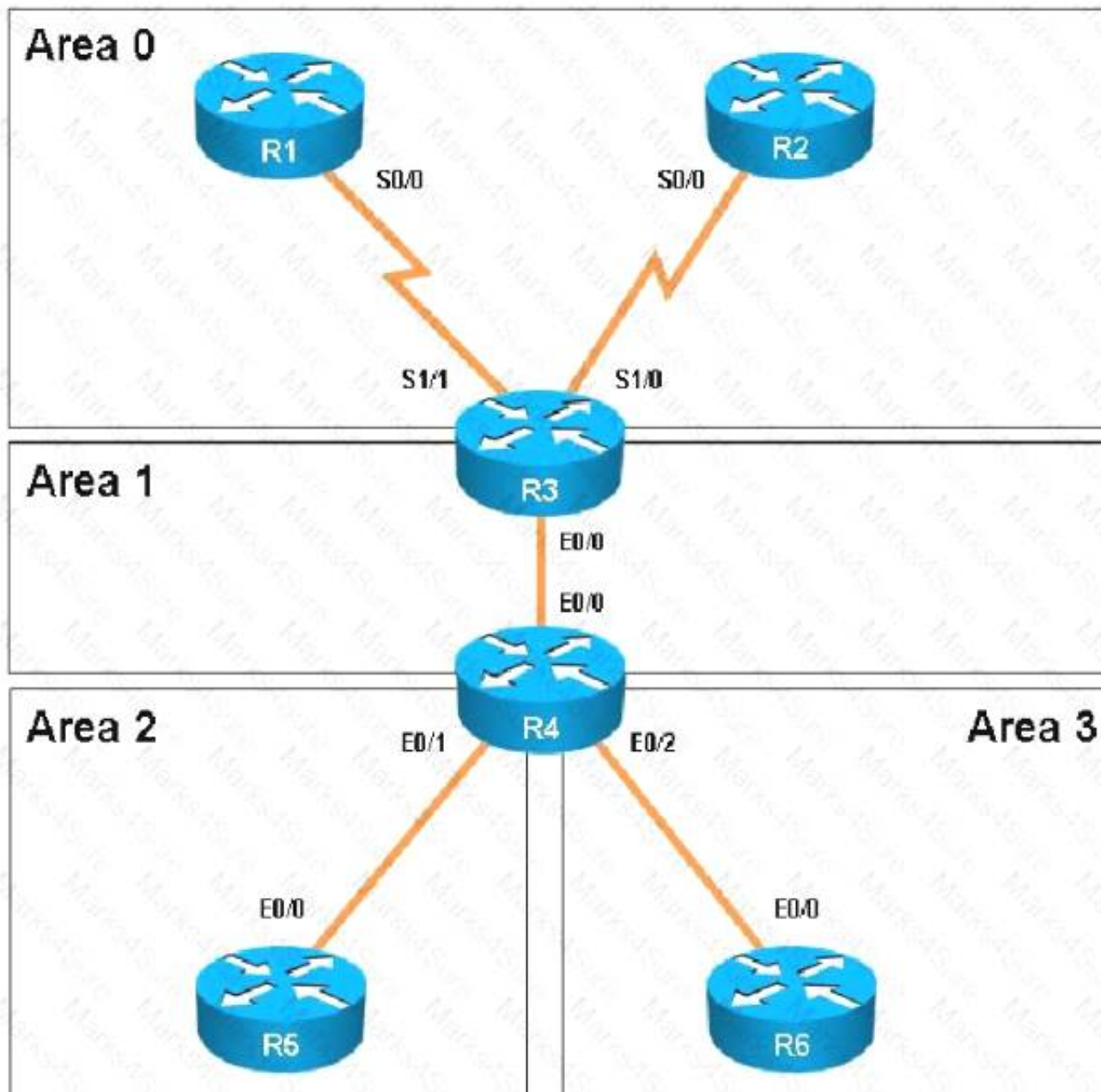
**Answer:** D

#### NEW QUESTION 72

Scenario:

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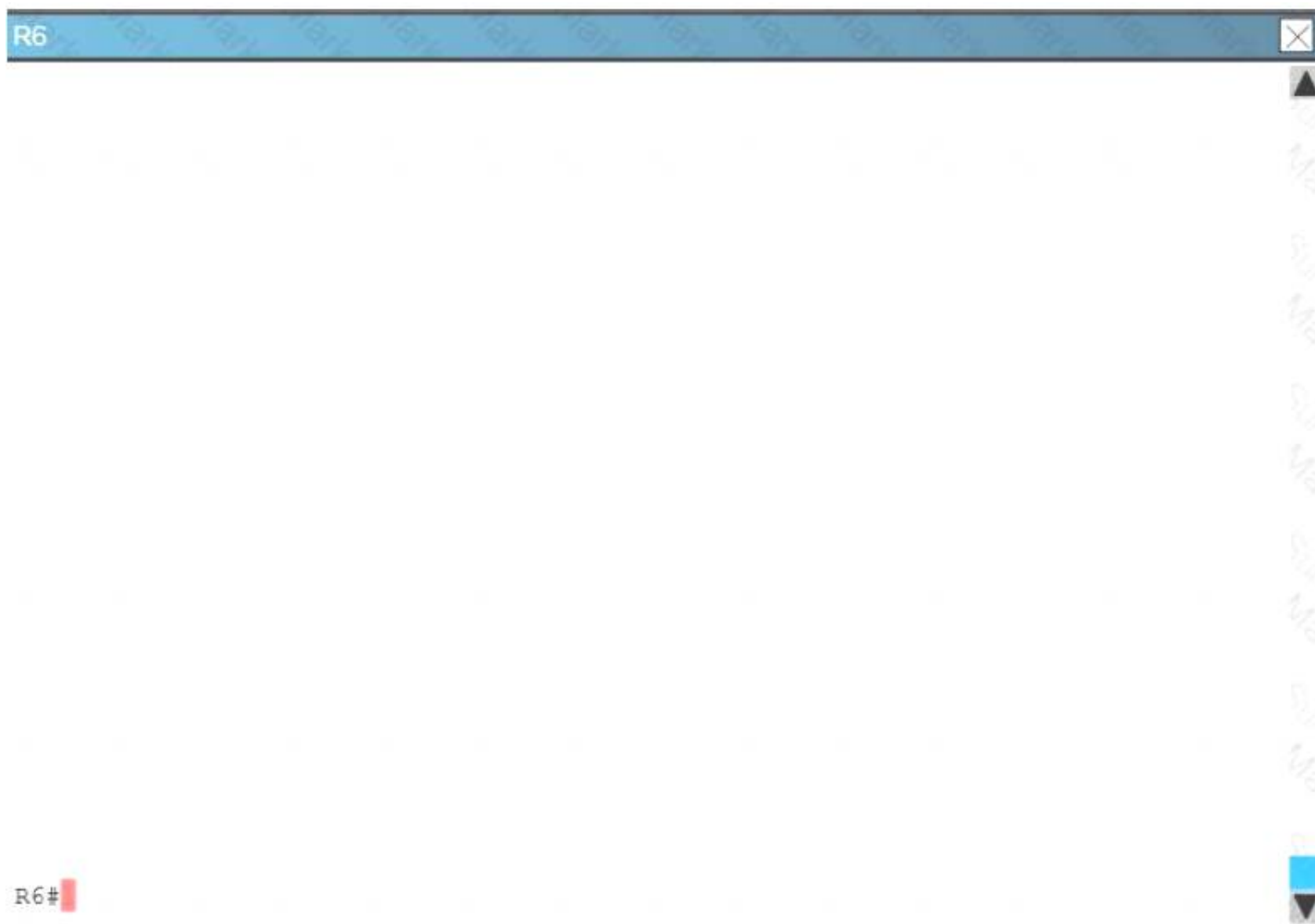






[illegible]





How old is the Type 4 LSA from Router 3 for area 1 on the router R5 based on the output you have examined?

- A. 1858
- B. 1601
- C. 600
- D. 1569

**Answer:** A

#### NEW QUESTION 77

A network engineer has configured an IOS router to synchronize its clock with a Windows server. After several minutes, the network engineer notices that the local time on the router does not match the time on the windows server. What is the reason for this?

- A. Either a firewall between the drives or an ACL on the router is blocking TCP port 958.
- B. Either a firewall between the two devices or an ACL on the router is blocking TCP port 123.
- C. Either a firewall between the two devices or an ACL on the router is blocking UDP port 123.
- D. Either a firewall between the two devices or an ACL on the router is blocking UDP port 858.

**Answer:** C

#### NEW QUESTION 82

A. remaining key lifetime

- A. path MTU
- B. invalid identity packets D inbound crypto map
- C. tagged packets
- D. untagged packets

**Answer:** ABD

#### NEW QUESTION 85

Which configuration parameter is invalid when configuration unicast reverse path forwarding?

- A. source reachable via both
- B. allow self to router
- C. allow based on ACL match
- D. allow default route

**Answer:** A

#### NEW QUESTION 87

Refer to the exhibit.

```
router eigrp 1
 redistribute bgp 1 route-map BGP_DEFAULT_ROUTE_RM
 network 2.0.0.0
 route-map BGP_DEFAULT_ROUTE_RM PERMIT 10
   match ip address prefix-list DEFAULT_ROUTE_PL
 ip prefix-list DEFAULT_ROUTE_PL seq 10 permit 0.0.0.0/0
```

For which reason is EIGRP failing to redistribute the default route?

- A. The EIGRP process is missing the default metric.
- B. The EIGRP process is missing the no auto-summary command.
- C. The EIGRP process is missing the router ID.
- D. The route-map statement is missing the match any keyword.

Answer: A

## NEW QUESTION 92

have been asked to complete the implementation to allow this ping.

ROUTE.com's corporate implementation guidelines require:

- The OSPF process ID for all routers must be 85.
- The routing protocol for each interface must be enabled under the routing process.
- The routing protocol must be enabled for each interface using the most specific wildcard mask possible.
- The serial link between Seattle and StLouis must be in OSPF area 33.
- OSPF area 33 must not receive any inter-area or external routes.

Router Details:

Name	Interface	IP Address	Mask
Seattle	S0/0	192.168.39.5	30
	S0/1	192.168.39.6	30
StLouis	S0/0	192.168.75.9	30
	S0/1	192.168.75.10	30
Atlanta	S0/0	192.168.75.11	30
	S0/1	192.168.75.12	30

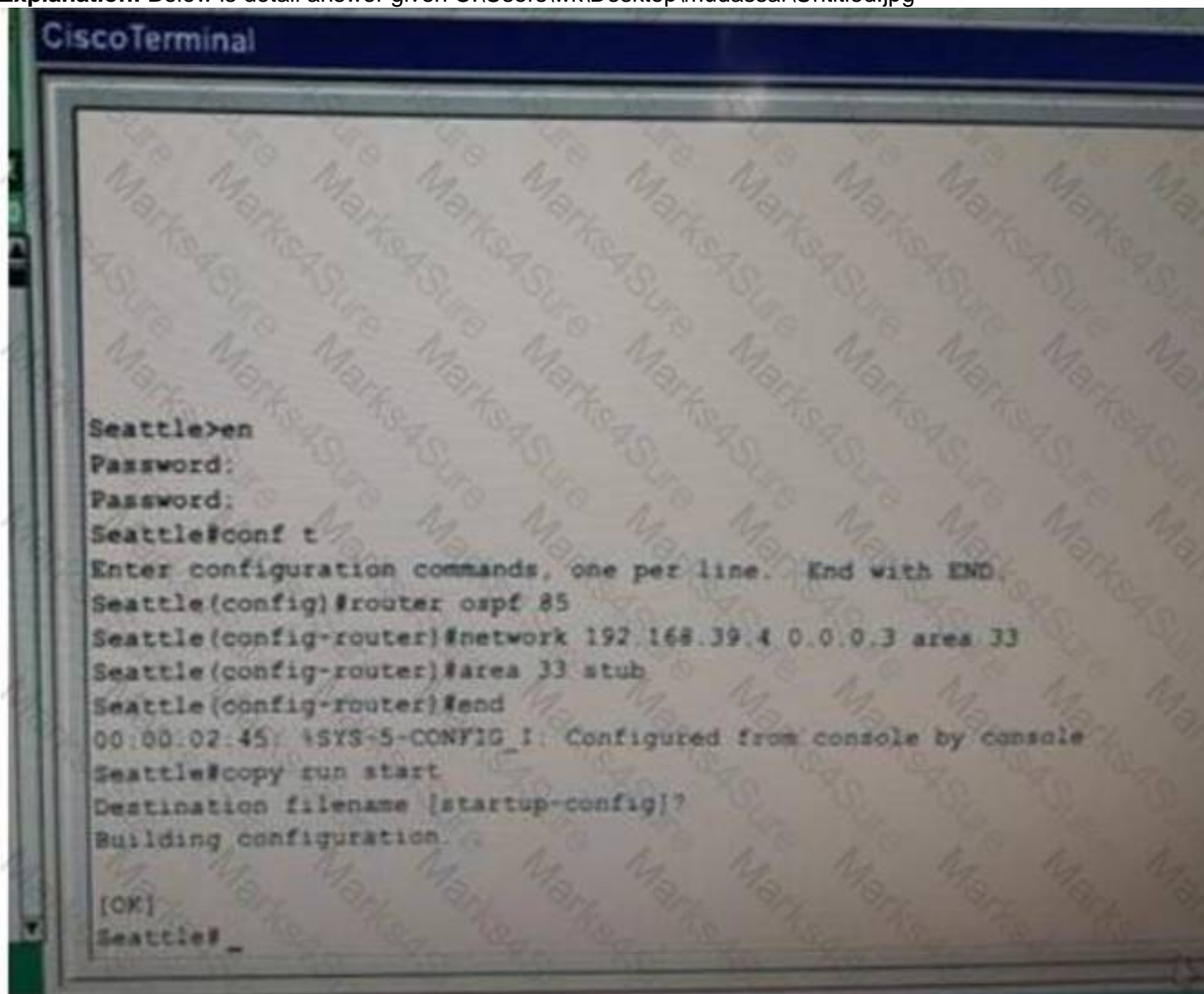
Secret Password: cisco

Additional information from the image:

- 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.

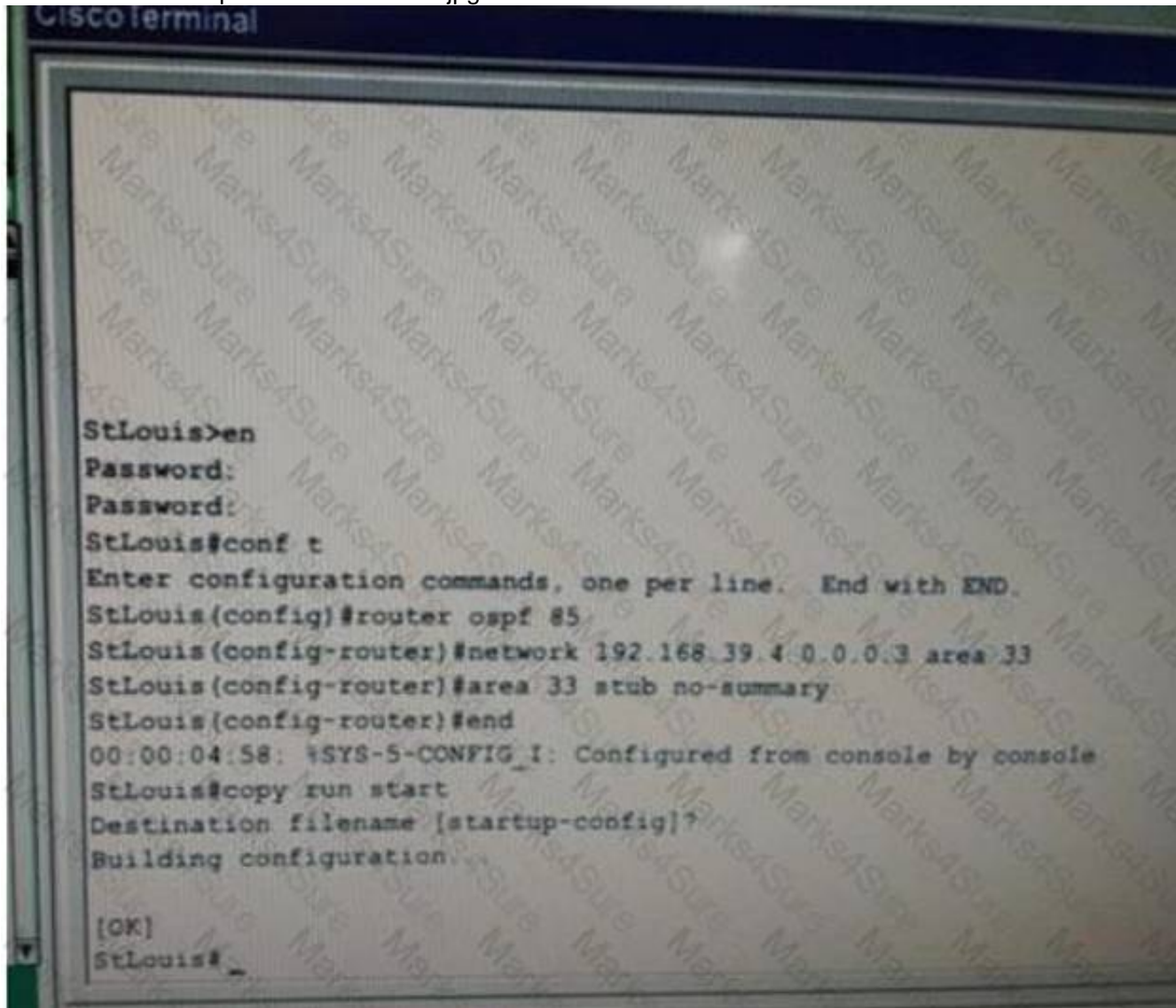
Answer:

Explanation: Below is detail answer given C:\Users\wk\Desktop\mudassar\Untitled.jpg





C:\Users\wk\Desktop\mudassar\Untitled.jpg



#### NEW QUESTION 95

A network engineer enables OSPF on a Frame Relay WAN connection to various remote sites, but no OSPF adjacencies come up. Which two actions are possible solutions for this issue? (Choose Two)

- A. Change the network type to point-to-multipoint under WAN interface.
- B. Enable virtual links.
- C. Change the network type to nonbroadcast multipoint access.
- D. Configure the neighbor command under OSPF process for each remote site.
- E. Ensure that the OSPF process number matches among all remote sites

**Answer:** AD

#### NEW QUESTION 96

Which three TCP enhancements can be used with TCP selective acknowledgments? (Choose three)

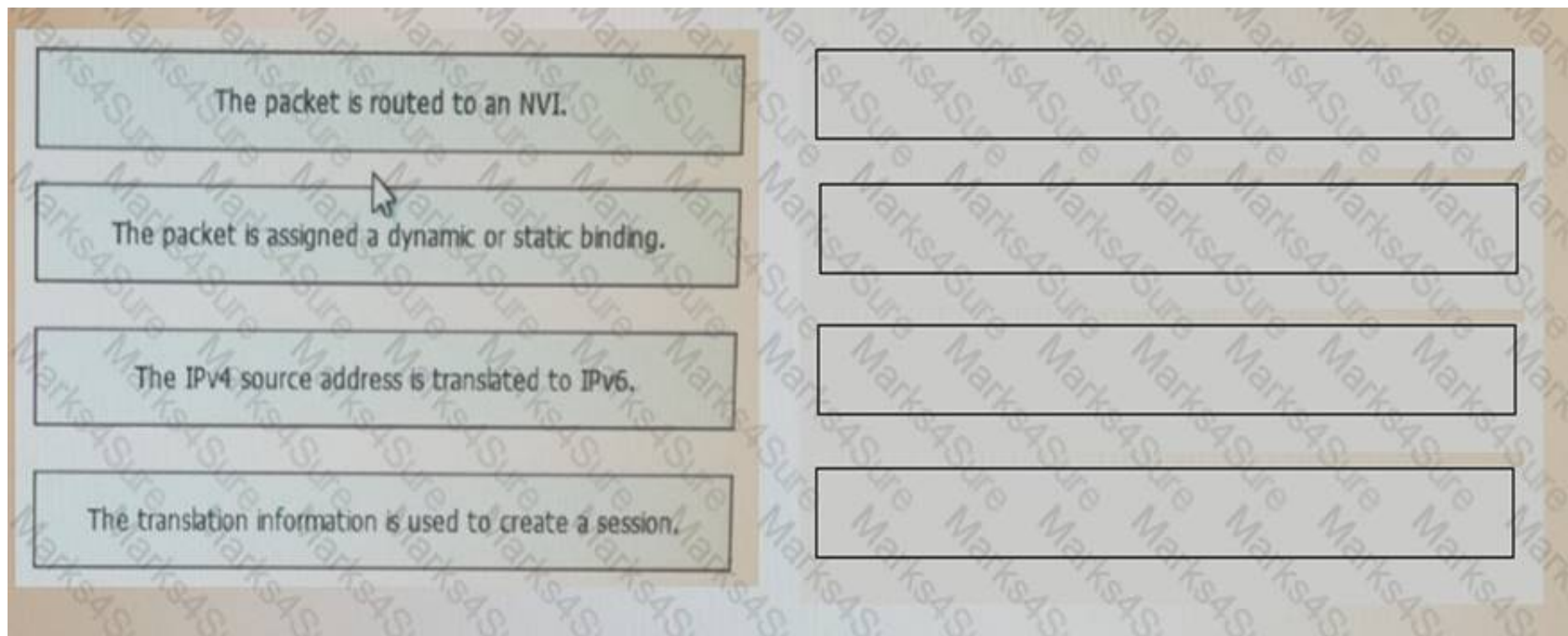
- A. header compression
- B. explicit congestion notification
- C. keepalive
- D. time stamps
- E. TCP path discovery
- F. MTU window

**Answer:** BCD

#### NEW QUESTION 98

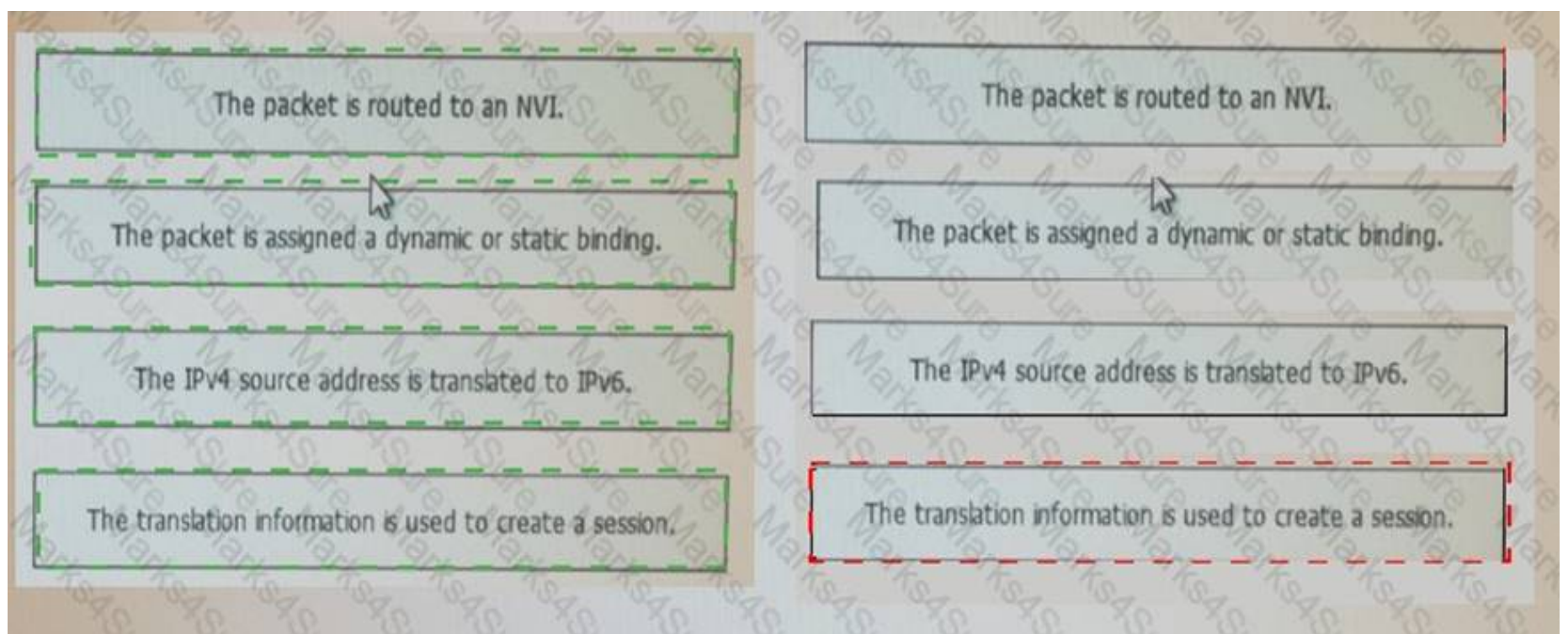
Drag and drop the steps in the NAT process for IPv4-initiated packers from the left into the correct sequence on the right.





**Answer:**

**Explanation:**



**NEW QUESTION 101**

Which two routers can do OSPF route summarization?. (Choose Two)

- A. ABR
- B. ASBR
- C. Summary router
- D. internal router
- E. Backbone router

**Answer:** AB

**NEW QUESTION 103**

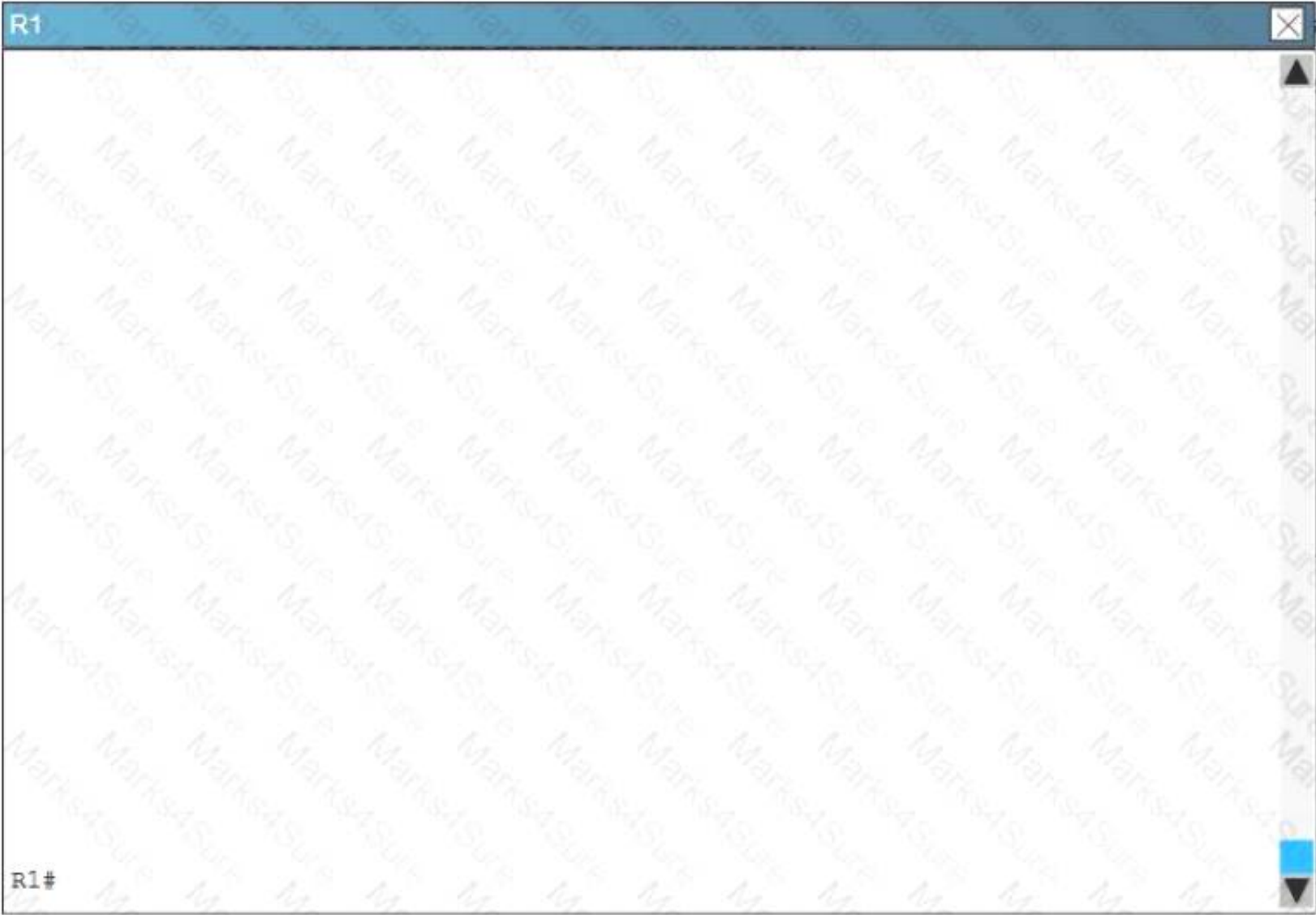
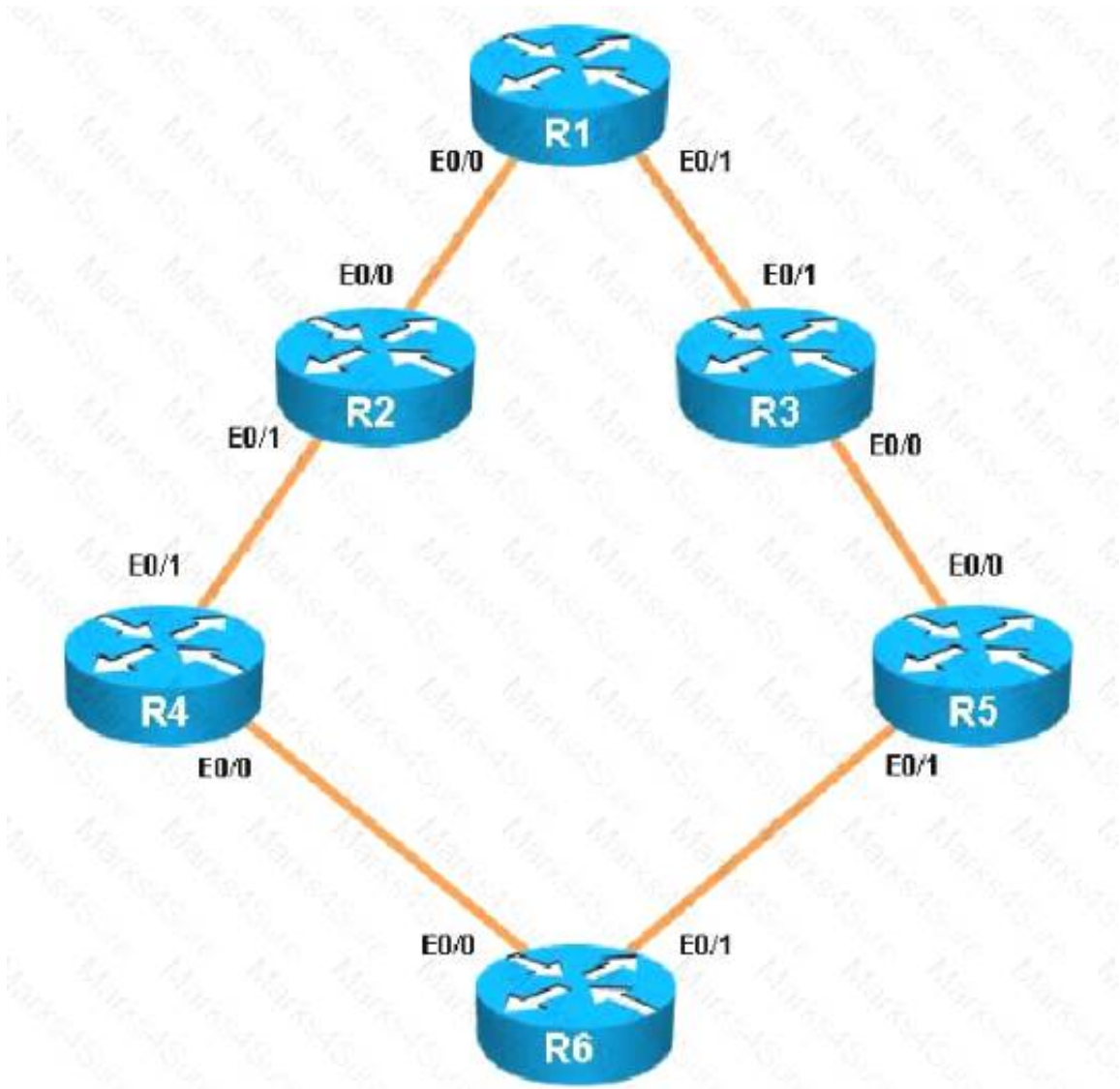
What from the following can cause an issue for URPF? (this could be single answer or multiple choice) URPF FAIL  
Reasons why urpf may fail:

- A. Asymmetric routing
- B. Cef not enabled
- C. Urpf not applied to the traffic source
- D. If it is used as ingress filtering

**Answer:** A

**NEW QUESTION 108**

You have been asked to evaluate how EIGRP is functioning in a customer network.



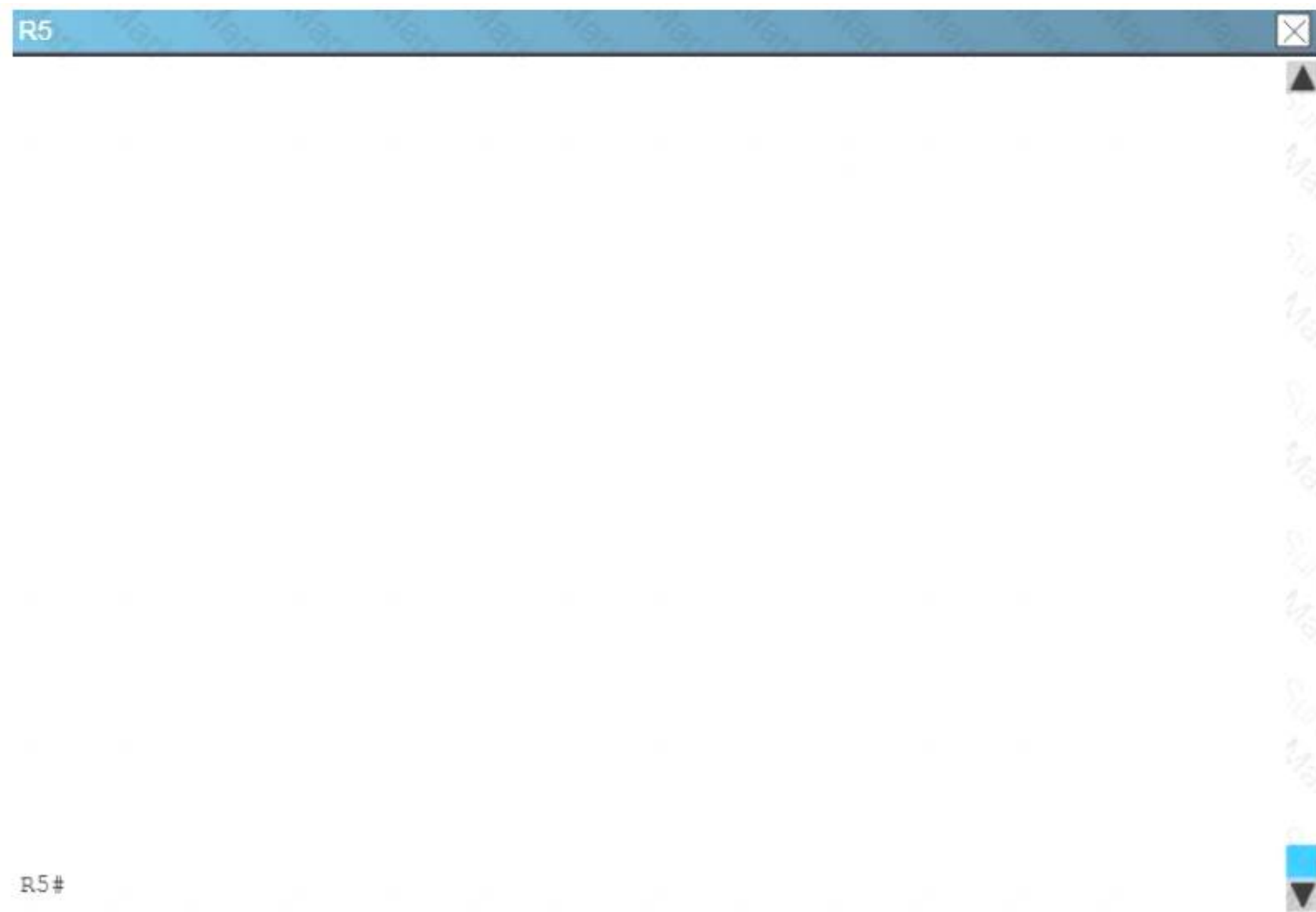
R2

R2#

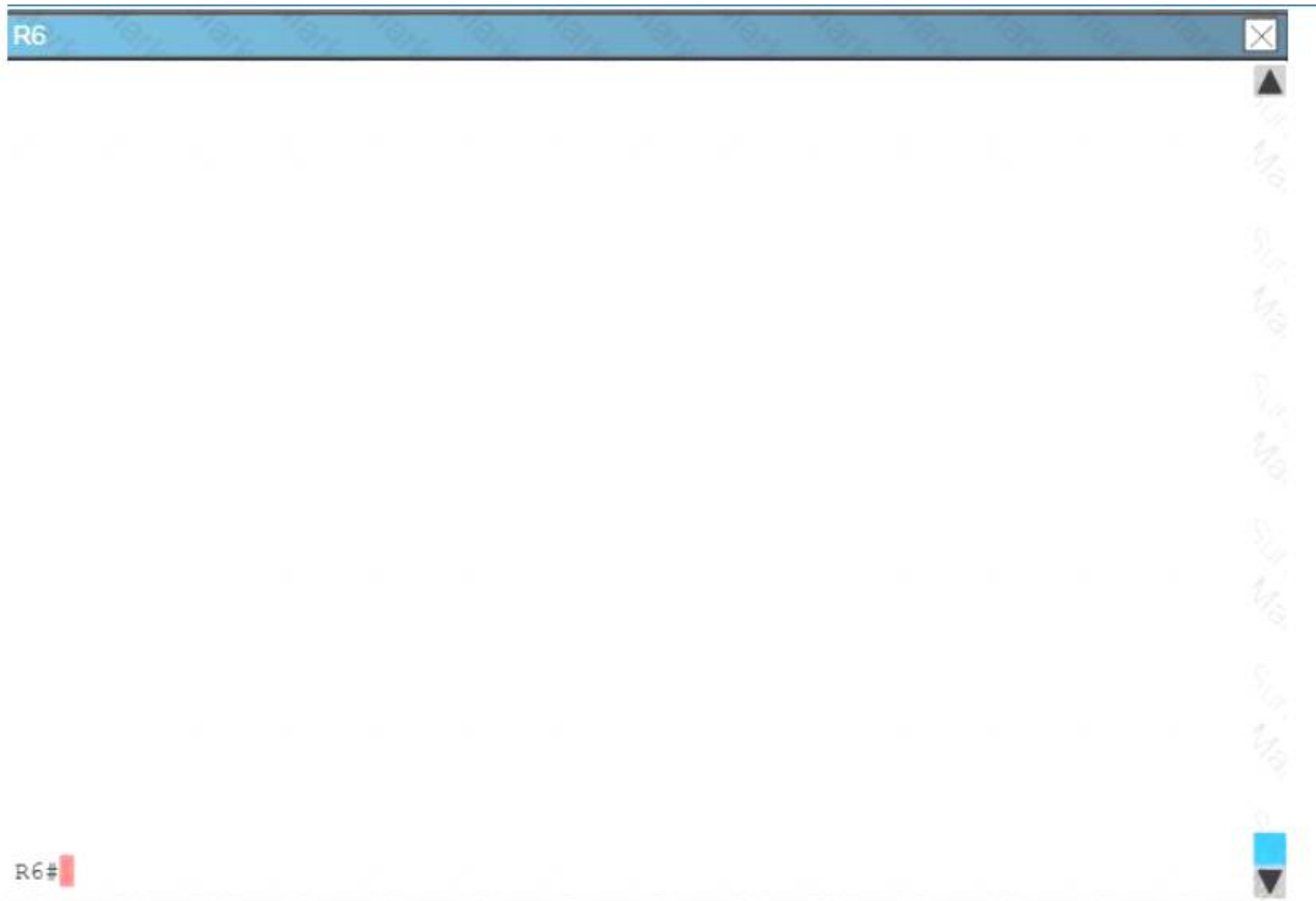
R3

R3#









Traffic from R1 to R6's Loopback address is load shared between R1-R2-R4-R6 and R1-R3-R5-R6 paths. What is the ratio of traffic over each path?

- A. 1:1
- B. 1:5
- C. 6:8
- D. 19:80

**Answer:** D

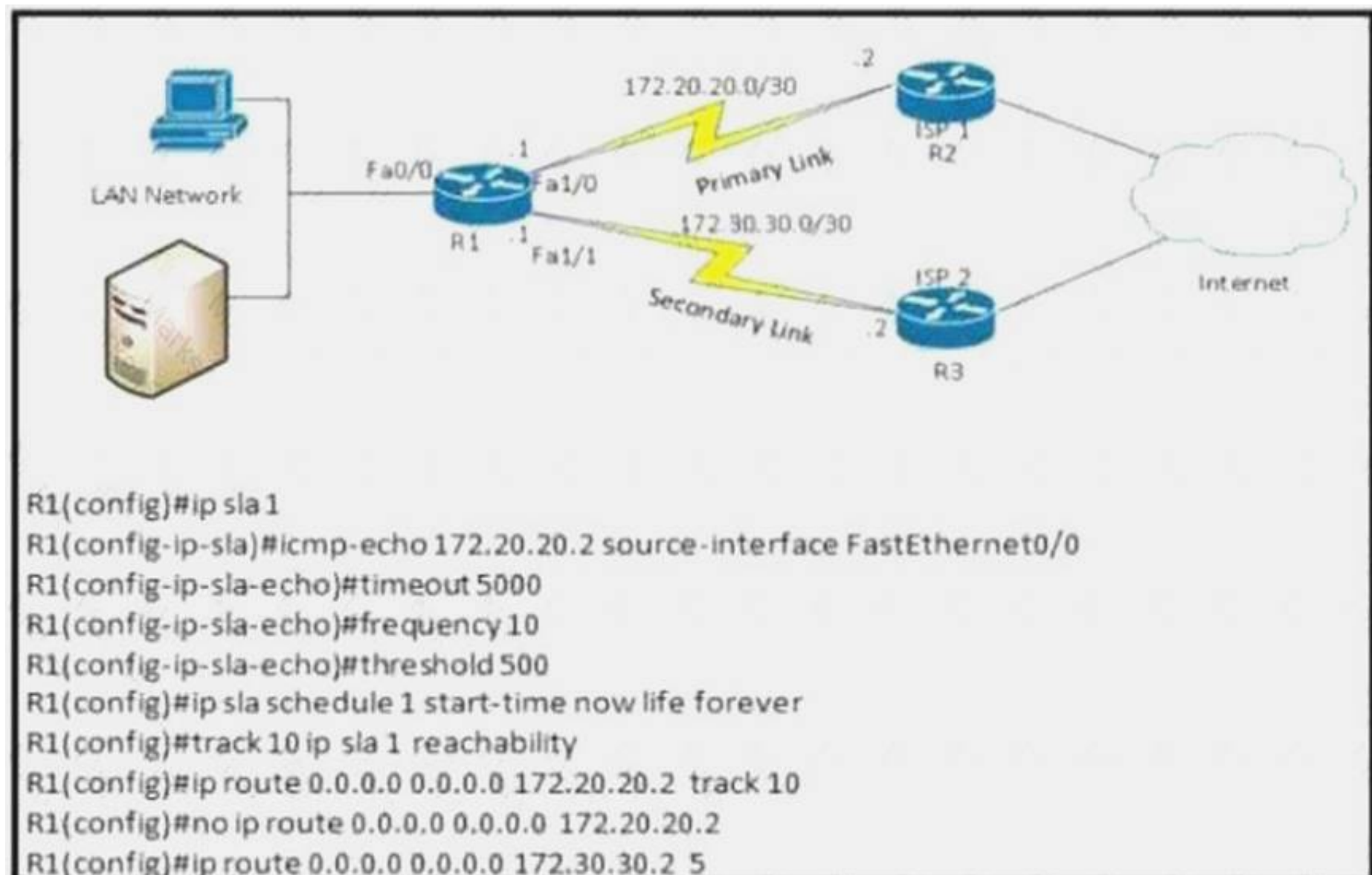
**NEW QUESTION 109**

Which statement about the metric calculation in EIGRP is true?

- A. The maximum delay along the path is used
- B. The mean value of bandwidth between the source and destination is used
- C. The minimum bandwidth between the source and destination is used
- D. The minimum delay along the path is used

**Answer:** C

**NEW QUESTION 114**



Refer to the exhibit. Which two reasons for IP SLA tracking failure are true\*? (Choose two)

- A. A route back to the R1 LAN network is missing in R2
- B. The threshold value is wrong
- C. The destination must be 172.30.30.2 for icmp-echo
- D. The default route has wrong next hop IP address
- E. The source-interface is configured incorrectly

**Answer:** AE

#### NEW QUESTION 116

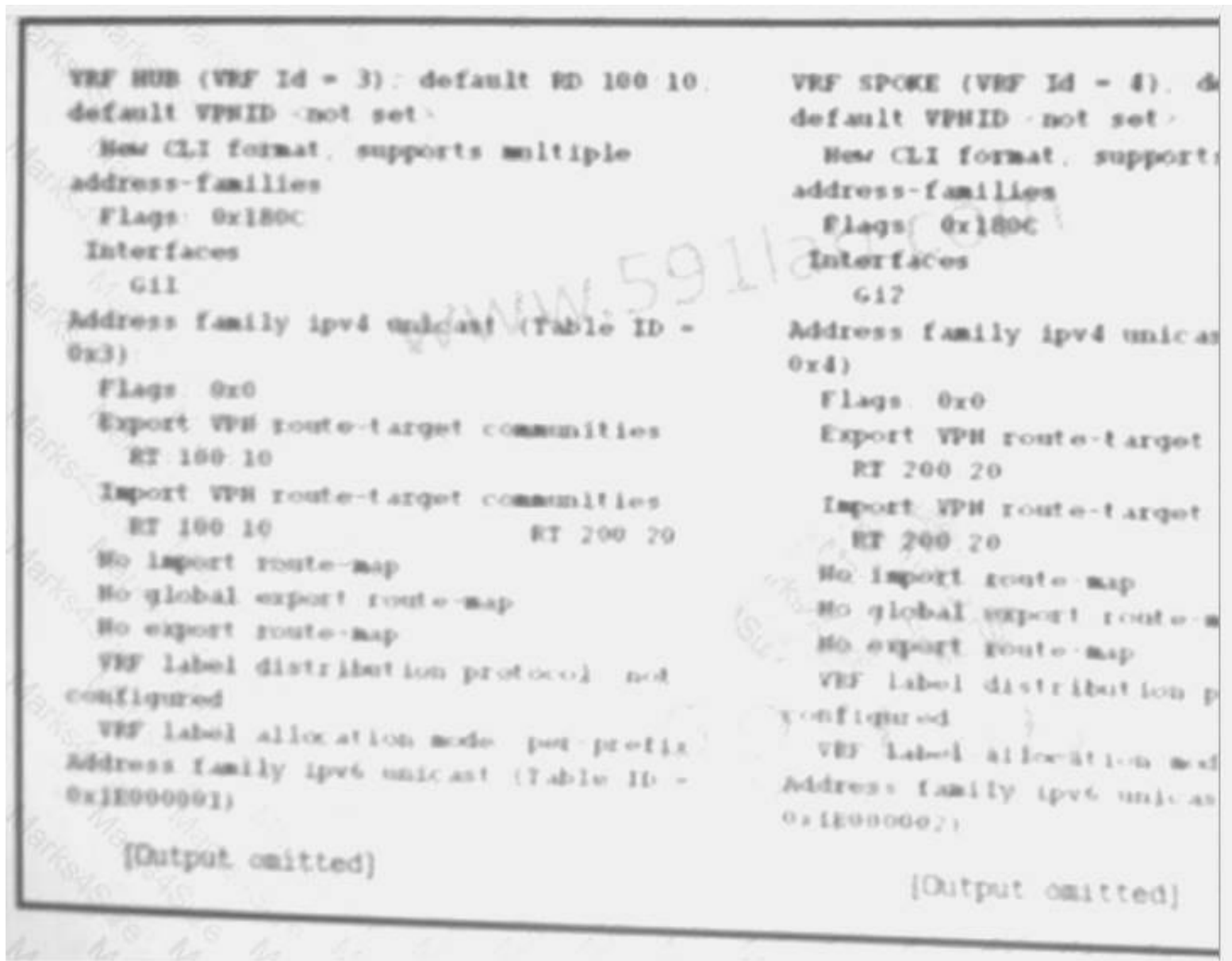
Where are EIGRP successor routes stored?

- A. In the routing table only
- B. In the neighbor table only
- C. In the topology table only
- D. In the routing table and the topology table
- E. In the routing table and the neighbor table

**Answer:** D

#### NEW QUESTION 121

Refer to the exhibit



A network engineer is modifying configurations for a customer that currently uses VPN connectivity between their sites. The customer has added a new spoke site but is does not have reachability to servers located at the hub Based on the output, which statement describes the cause?

- A. The interface of VRF HUB and VRF SPOKE do not match
- B. The HUB VRF is not exporting Route-Target 200:20
- C. The default VPNID is not set on VRF HUB or VRF SPOKE
- D. The SPOKE VRF is not importing Route-Target 100:10

**Answer:** D

#### NEW QUESTION 123

Which two addresses types are included in NAT?

- A. inside global
- B. global outside
- C. outside internet
- D. inside internet
- E. outside local

**Answer:** AE

#### NEW QUESTION 128

A network engineer configures two connected routers to run OSPF in Area 0, however, the routes fail establish adjacency. Which configuration item causes this issue?

- A. OSPF process numbers do not match on both neighbor routers
- B. The same OSPF router IDs are configured on both routers
- C. The same MTU sizes are configured on both sides
- D. Area numbers match

**Answer:** D

#### NEW QUESTION 130

Which two statements are limitations of stateful NAT64? (Choose two)

- A. It supports DNS64 only
- B. Layer 4 supports TCP only
- C. It is unable to route VRF traffic
- D. It is unable to route multicast traffic
- E. It supports FTP traffic only with an ALG

**Answer:** CD

#### NEW QUESTION 135

Which OSPF network type uses a DR?

- A. Nonbroadcast multi-access
- B. point-to-point
- C. point-to-multipoint
- D. point-to-point nonbroadcast

**Answer:** A

**Explanation:** <https://learningnetwork.cisco.com/thread/35730>

#### NEW QUESTION 139

What happens when unicast flood protection is triggered on a VLAN?

- A. The VLAN is shut down
- B. Traffic on the VLAN is load-balanced across multiple links
- C. The VLAN is removed from the VLAN database
- D. Traffic on the VLAN is passed to another VLAN with lower load

**Answer:** A

#### NEW QUESTION 143

You need the IP address of the devices with which the router has established an adjacency. Also, the retransmit interval and the queue counts for the adjacent routers need to be checked. What command will display the required information?

- A. show ip eigrp adjacency
- B. show ip eigrp topology
- C. show ip eigrp interfaces
- D. show ip eigrp neighbor

**Answer:** D

#### NEW QUESTION 147

Considering the IPv6 address independence requirements, which process do you avoid when you use NPTv6 for translation?

- A. rewriting of higher layer information
- B. checksum verification
- C. ipv6 duplication and conservation
- D. IPSEC AH header modification

**Answer:** A

#### NEW QUESTION 152

A network engineer executes the show crypto ipsec sa command which three pieces of information are displayed in the output? (Choose three)

- A. tagged packets
- B. untagged packets
- C. inbound crypto map
- D. path MTU
- E. invalid identity packets
- F. remaininig key

**Answer:** CDF

#### NEW QUESTION 155

A network engineer is enabling conditional debugging and execute two command. Debug condition interfaces serial00 and debug condition interfaces serial 0/1. Which debugging output is displayed as a result?

- A. interface cannot be used as a debug condition.
- B. Output is display for both specified interfaces.
- C. Output is display for interface serial 0/1 only.
- D. Output is display for interface 0/0 only.

**Answer:** B

#### NEW QUESTION 160

Which two statements about IP access lists are true?(Choose two)

- A. Extended access lists must include port numbers
- B. They support wildcard masks to limit the address bits to which entries are applied
- C. Entries are applied to traffic in the order in which they appear
- D. They end with an implicit permit
- E. IP access lists without at least one deny statement permit all traffic by default

**Answer:** BC



#### NEW QUESTION 161

Which statement is true about EBGp?

- A. An internal routing protocol can be used to reach an EBGp neighbor.
- B. The next hop does not change when BGP updates are exchanged between EBGp neighbors.
- C. A static route can be used to form an adjacency between neighbors.
- D. EBGp requires a full mesh.

**Answer: C**

#### NEW QUESTION 162

Which version or versions of NetFlow support MPLS?

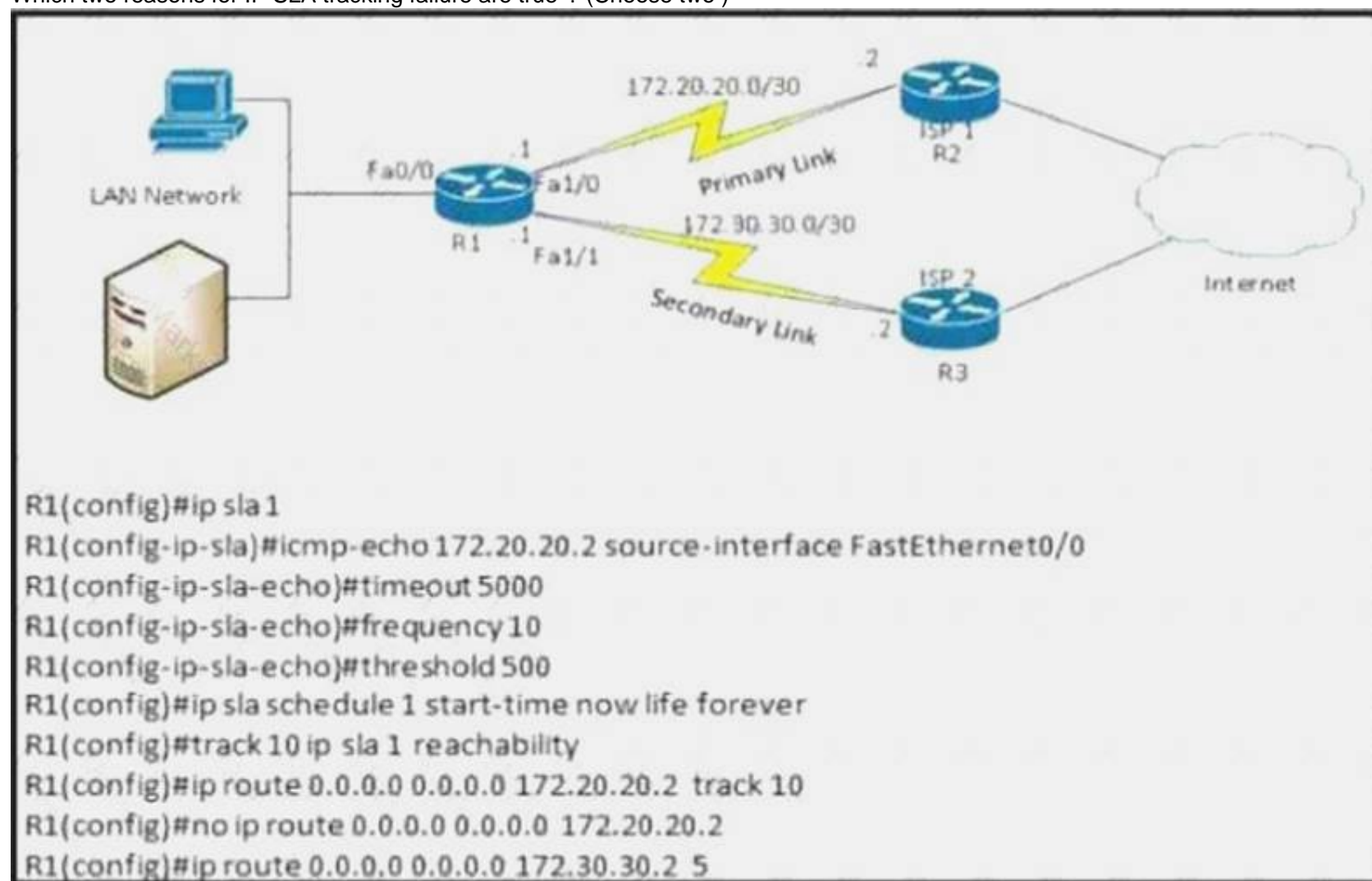
- A. all versions of NetFlow
- B. NetFlow version 9
- C. NetFlow version 8
- D. NetFlow version 5
- E. NetFlow version 8 and 9

**Answer: B**

#### NEW QUESTION 165

Refer to the exhibit.

Which two reasons for IP SLA tracking failure are true\*? (Choose two )



- A. A route back to the R1 LAN network is missing in R2
- B. The threshold value is wrong
- C. The destination must be 172 30 30 2 for icmp-echo
- D. The default route has wrong next hop IP address
- E. The source-interface is configured incorrectly

**Answer: AE**

#### NEW QUESTION 168

Which type of address does OSPFv3 uses to form neighbor adjancises and to send LSAs?

- A. unicast addresses
- B. tank-local addresses
- C. unicast IPv4 addresses
- D. unicast address FF02 5

**Answer: A**

#### NEW QUESTION 171

Refer to the exhibit.

```
configure terminal
ip flow-export destination 192.168.10.1 9991
ip flow-export version 9
```

How can you configure a second export destination for IP address 192.168.10.1?

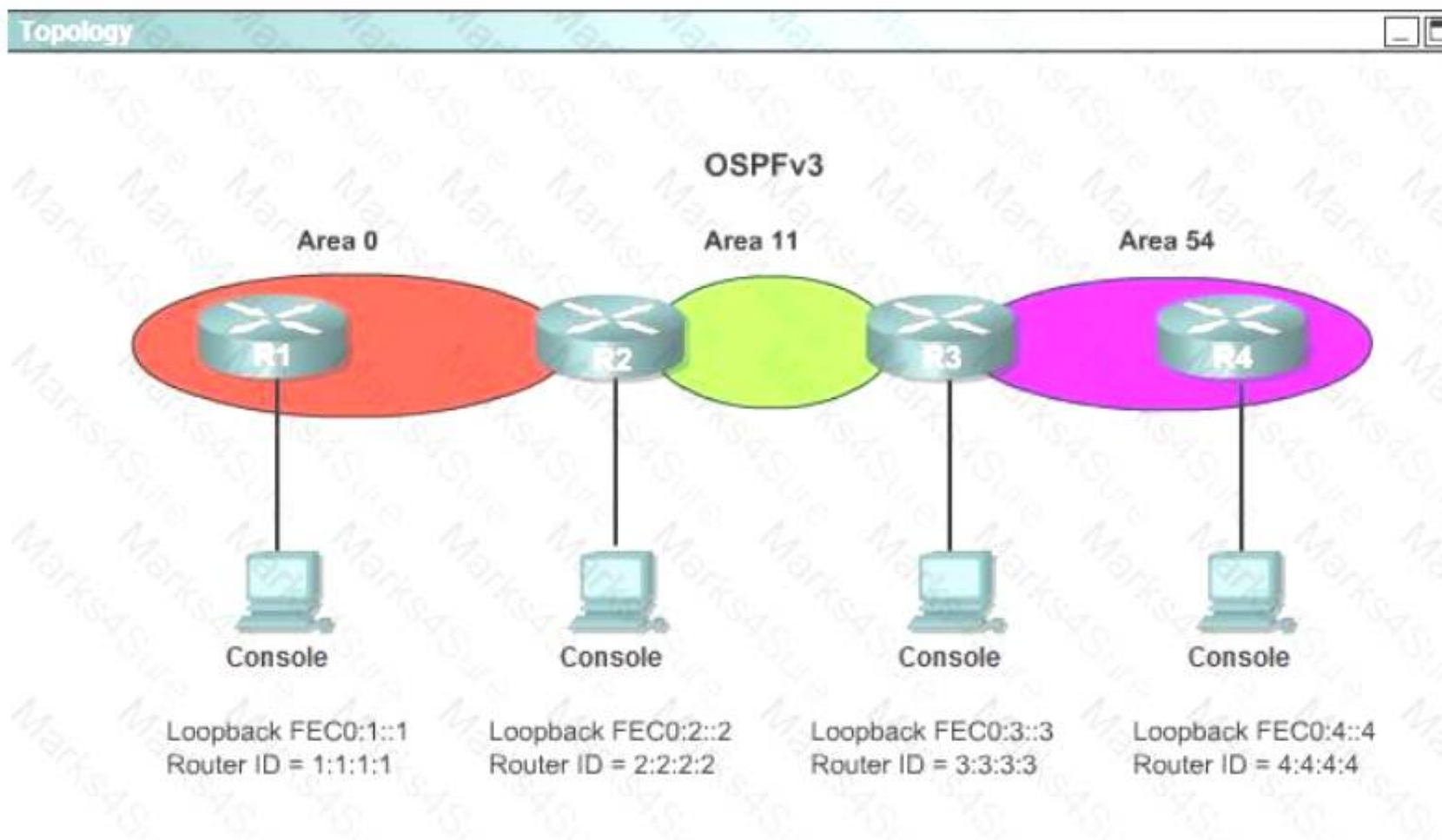
- A. Specify a different TCP port.
- B. Specify a VRF.
- C. Configure a version 5 flow-export to the destination
- D. Specify a different UDP port.
- E. Specify a different flow ID.

**Answer: B**

#### NEW QUESTION 176

ROUTE.com is a small IT corporation that has an existing enterprise network that is running IPv6 OSPFv3. Currently OSPF is configured on all routers. However, R4's loopback address (FEC0:4:4) cannot be seen in R1's IPv6 routing table. You are tasked with identifying the cause of this fault and implementing the needed corrective actions that uses OPSF features and does not change the current area assignments. You will know that you have corrected the fault when R4's loopback address (FEC0:4:4) can be seen in RTs IPv6 routing table.

Special Note: To gain the maximum number of points you must remove all incorrect or unneeded configuration statements related to this issue.





```
R1
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1 from FULL to DOWN, Neighbor Down: Interface down or detached
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
Press RETURN to get started!
R1>

R2
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1 from FULL to DOWN, Neighbor Down: Interface down or detached
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
Press RETURN to get started!
R2>
```



```
R3
$ Some configuration options may have changed
*Wed Oct 15 15:22:47.367: %OSPFv3-5-ADJCHG: Process 1, Nbr 4.4.4.4 on OSPFv3_VL0
  from LOADING to FULL, Loading Done
$LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1
  from FULL to DOWN, Neighbor Down: Interface down or detached
$LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0
  from LOADING to FULL, Loading Done
$LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0
  from LOADING to FULL, Loading Done
Press RETURN to get started!
R3>

R4
$ Some configuration options may have changed
$LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1
  from FULL to DOWN, Neighbor Down: Interface down or detached
*Wed Oct 15 15:22:47.367: %OSPFv3-5-ADJCHG: Process 1, Nbr 3.3.3.3 on OSPFv3_VL0
  from LOADING to FULL, Loading Done
$LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0
  from LOADING to FULL, Loading Done
$LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0
  from LOADING to FULL, Loading Done
Press RETURN to get started!
R4>
```

**Answer:**

**Explanation:** To troubleshoot the problem, first issue the show running-config on all of 4 routers. Pay more attention to the outputs of routers R2 and R3. The output of the "show running-config" command of R2:



```
<output omitted>
!
ipv6 router ospf 1
router-id 2.2.2.2
log-adjacency-changes
!
<output omitted>
```

The output of the "show running-config" command of R3:

```
<output omitted>
!
ipv6 router ospf 1
router-id 3.3.3.3
log-adjacency-changes
area 54 virtual-link 4.4.4.4
!
<output omitted>
```

We knew that all areas in an Open Shortest Path First (OSPF) autonomous system must be physically connected to the backbone area (Area 0). In some cases, where this is not possible, we can use a virtual link to connect to the backbone through a non-backbone area. The area through which you configure the virtual link is known as a transit area. In this case, the area 11 will become the transit area. Therefore, routers R2 and R3 must be configured with the area <area id> virtual-link <neighbor router-id> command. + Configure virtual link on R2 (from the first output above, we learned that the OSPF process ID of R2 is 1):

R2>enable R2#configure terminal

R2(config)#ipv6 router ospf 1

R2(config-rtr)#area 11 virtual-link 3.3.3.3 Save the configuration:

R2(config-rtr)#end

R2#copy running-config startup-config

(Notice that we have to use neighbor router-id 3.3.3.3, not R2's router-id 2.2.2.2) + Configure virtual link on R3 (from the second output above, we learned that the OSPF process ID of R3 is 1 and we have to disable the wrong configuration of "area 54 virtual-link 4.4.4.4"):

R3>enable R3#configure terminal

R3(config)#ipv6 router ospf 1

R3(config-rtr)#no area 54 virtual-link 4.4.4.4

R3(config-rtr)#area 11 virtual-link 2.2.2.2 Save the configuration:

R3(config-rtr)#end

R3#copy running-config startup-config

You should check the configuration of R4, too. Make sure to remove the incorrect configuration statements to get the full points.

R4(config)#ipv6 router ospf 1

R4(config-router)#no area 54 virtual-link 3.3.3.3 R4(config-router)#end

After finishing the configuration doesn't forget to ping between R1 and R4 to make sure they work.

Note. If you want to check the routing information, use the show ipv6 route command, not "show ip route".

#### NEW QUESTION 178

Which set of actions does a network engineer perform to set the IPv6 address of a DHCP relay server at the VLAN interface level?

- A. Enter the global configuration mode, enable IPv6 DHCP relay from interface confi; mode, and define the IPv6 address of a DHCP relay server.
- B. Enter the global configuration mode and enable the IPv6 DHCP relay
- C. Enter the VLAN interface configuration mode, enable IPv6 DHCP relay, and define the IPv6 address of a DHCP relay server
- D. Enter the VLAN interface configuration mode and define the IPv6 address of a DHCP relay server.

**Answer: C**

#### NEW QUESTION 179

Which two statements about GRE tunnel interfaces are true? (Choose two)

- A. To establish a tunnel the source interface must be in the up/up state.
- B. To establish a tunnel the source interface must be a Loopback.
- C. A tunnel destination must be a physical interface that is in the up state.
- D. A tunnel destination must be routable but can be unreachable.
- E. A tunnel can be established when the source interface is in the up/down state.

**Answer: CD**

#### NEW QUESTION 184

Refer to the exhibit.

```
DSW1#
*Mar 22 20:51:13.647: %TCP-6-BADAUTH: Invalid MD5 digest from 5.0.0.5(29832) to 51.51.51.1(179) tableid - 0
DSW1#
*Mar 22 20:51:16.131: %TCP-6-BADAUTH: Invalid MD5 digest from 5.0.0.5(29832) to 51.51.51.1(179) tableid - 0
```

All neighbor routers are in the BGP peer group named PEER-1. All passwords are configured as Cisco. These messages are logged to the console of router DSW1, which is peering with router Core. Which two configurations allow a peering session to form between DSW1 and the Core? (Choose two.)

- A. Core(config-router)#neighbor 5.0.0.5 peer-group PEER-1 Core(config-router)#neighbor PEER-1 password cisco
- B. DSW1(config-router)#neighbor 5.0.0.5 peer-group PEER-1 DSW1(config-router)#neighbor PEER-1 password cisco
- C. DSW1(config-router)#neighbor 51.51.51.1 peer-group PEER-1 DSW1(config-router)#neighbor PEER-2 password cisco
- D. Core(config-router)#neighbor 51.51.51.1 peer-group PEER-1 Core(config-router)#neighbor PEER-1 password cisco
- E. Core(config-router)#neighbor 5.0.0.5 peer-group PEER-2 Core(config-router)#neighbor PEER-1 password cisco

**Answer:** AC

#### NEW QUESTION 187

—options were little bit modified

Which of the following are characteristics of TACACS+? (Choose two.)

- A. Uses UDP
- B. Encrypts an entire packet
- C. Offers robust accounting
- D. Cisco-proprietary

**Answer:** BD

#### NEW QUESTION 189

Which two steps must you perform to allow access to a device when the connection to a remote TACACS+ authentication server fails? (Choose two)

- A. include the local keyword in the AAA configuration
- B. Configure accounting to reference the log of previously authenticated connections
- C. Configure the device to accept Telnet and SSH connections.
- D. Remove the aaa new model command from the global configuration
- E. Configure a local username and password on the device

**Answer:** BE

#### NEW QUESTION 191

10 Device R1 has 1 Gigabit and 10 Gigabit Ethernet interfaces, which command do you enter so that it takes full advantage of OSPF costs?

- A. R1(config router) #auto-cost reference-bandwidth 10000
- B. R1(config route-map) #set metric 10000000000
- C. R1(config if) #ip ospf cost 10000
- D. R1(config router) #auto-cost reference-bandwidth 10000000000
- E. R1(config if) #ip ospf cost 10000000000
- F. R1(config route-map) #set metric 10000

**Answer:** A

#### NEW QUESTION 195

Refer to the exhibit.



You notice that traffic from R1 to the 192.168.10 0/24 network prefers the path through R3 instead of the least-cost path through R2.What is the most likely reason for this route selection?

- A. OSPF prefers external routes over interarea routes.
- B. OSPF prefers interarea routes over intra-area routes.
- C. OSPF prefers external routes over intra-area routes.
- D. OSPF prefers intra-area routes over interarea routes

**Answer:** D

#### NEW QUESTION 198

Configuration snippet that looks similar to this: ip access-list 1 permit xx xx  
ip nat inside source list 1 int fa0/0 overload What is this an example of ?

- A. static NAT
- B. NAT64
- C. PAT
- D. dynamic NAT
- E. NPTv6

**Answer:** C

#### NEW QUESTION 201

How to set up IP SLA to monitor Bandwidth between the certain limits?

- A. Timer
- B. Frequency
- C. Threshold
- D. Queue-limit

**Answer:** C

#### NEW QUESTION 202

In which network environment is AAA with RADIUS most appropriate?

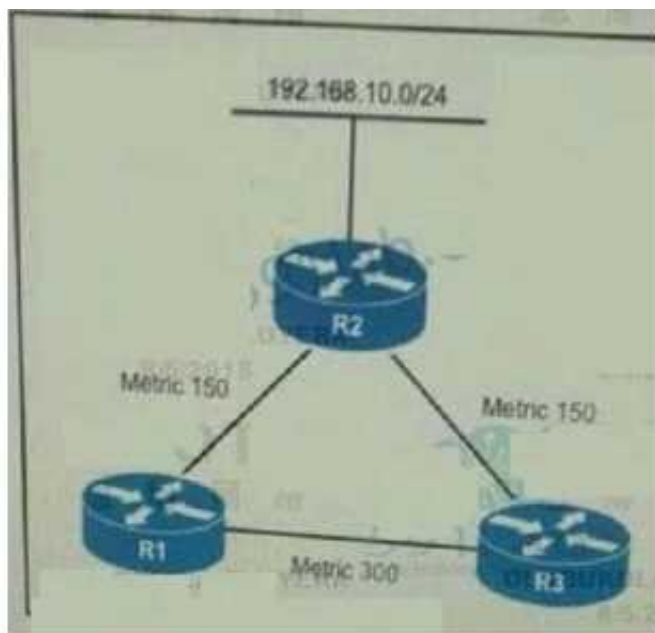
- A. when Apple Talk Remote Access Is in use
- B. when NetBIOS Frame Control Protocol is in use
- C. when users require access to only one device at a time
- D. when you need to separate all AAA services

**Answer:** C

#### NEW QUESTION 206

Refer to the exhibit.





You want router R1 to perform unequal-cost routing to the 192.168.10.0/24 network. What is the smallest EIGRP variance value that you can configure on R1 to achieve this result?

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

**Answer:** A

#### NEW QUESTION 207

Which type of Netflow information is displayed when the show ip flow export command is executed?

- A. sent status and statistics
- B. top talkers
- C. export interface configurations
- D. local status and statistics

**Answer:** D

#### NEW QUESTION 212

Refer to the exhibit.

```
router eigrp 1
 redistribute ospf 5 match external route-map OSPF-TO-EIGRP
 metric 10000 2000 255 1 1500
 route-map OSPF-TO-EIGRP
 match ip address TO-OSPF
```

Which routes from OSPF process 5 are redistributed into EIGRP?

- A. E1 and E2 subnets matching access list TO-OSPF
- B. E1 and E2 subnets matching prefix list TO-OSPF
- C. only E2 subnets matching access list TO-OSPF
- D. only E1 subnets matching prefix list TO-OS1

**Answer:** D

#### NEW QUESTION 217

Which task must you perform to implement EIGRP for IPv6 on a device?

- A. Use the ipv6 cef command to enable Cisco Express Forwarding on the device.
- B. Configure a loopback interface on the device.
- C. Manually configure the router ID
- D. Statically configure a neighbor

**Answer:** C

#### NEW QUESTION 221

A network engineer wants to implement an SNMP process for host machines using the strongest security available which command accomplishes this task?

- A. router(config)#snmp-server-host 172-16-200.225 traps v3
- B. router(config)#snmp-server-host 172-16-200.225 traps v2c auth
- C. router(config)#snmp-server-host 172-16-200.225 traps v1
- D. router(config)#snmp-server-host 172-16-200.225 traps v2c

**Answer:** A

**NEW QUESTION 225**

Which option prevents routing updates from being sent to the access layer switches?

- A. DWS1(config-router)#passive-interface default DWS2(config-router)#passive-interface default
- B. ALS1(config-router)#passive-interface gi0/1 ALS1(config-router)#passive-interface gi0/2 ALS2(config-router)#passive-interface gi0/1 ALS2(config-router)#passive-interface gi0/2
- C. ALS1 (config-router)#passive-interface defaultALS2 (config-router)#passive-interface default
- D. DWS1(config-router)#passive-interface gi1/1 DWS1(config-router)#passive-interface gi1/2DWS2(config-router)#passive-interface gi1/1DWS2(config-router)#passive-interface gi1/2

**Answer:** D

**NEW QUESTION 230**

What are two important differences between OSPFv2 and OSPFv3? (Choose two.)

- A. Only OSPFv3 provides support for IPv6.
- B. Only OSPFv3 automatically chooses a router ID for the local device.
- C. Only OSPFv3 supports multiple OSPF instances on a single link.
- D. Only OSPFv3 automatically enables interfaces when you create them in device configuration mode.
- E. Only OSPFv3 automatically detects OSPF neighbors on an NBMA interface.

**Answer:** AC

**NEW QUESTION 235**

New question regarding command the enables BGP to support multiprotocol

- A. no bgp default ipv4 unicast
- B. bgp default ipv4 multicast
- C. bgp default ipv4 unicast
- D. bgp address family ipv4 unicast

**Answer:** A

**NEW QUESTION 240**

How big is the smallest packet than will always be fragmented on a standart Ethernet network with default configuration?

- A. 1500 bytes
- B. 1800 bytes
- C. 2048 bytes
- D. 2100 bytes

**Answer:** B

**NEW QUESTION 244**

A network engineer executes the commands logging host 172.16.200.225 and logging trap 5 Which action results when these two commands are executed together?

- A. Logging messages that have any severity level are sent to the remote server 172.16 200.225
- B. Logging messages that have a severity level of "notifications"\* and above (urnericay tower) are sent to the remote server 172.16.200.225
- C. Logged information is stored locally, showing the source as 172.16.200.225
- D. Logging messages that have a debugging severity level are sent to the remote server 172.16.200.225

**Answer:** B

**NEW QUESTION 248**

What is VRF-Lite?

- A. VRF without VPN
- B. VRF without MPLS
- C. VRF without Cisco Express Forwarding swrtching
- D. VRF without independent routing tables

**Answer:** C

**NEW QUESTION 253**

During which DMVPN phase is spoke to-spoke communication enabled?

- A. Phase 4
- B. Phase 1
- C. Phase 2
- D. Phase 5

**Answer:** C

**NEW QUESTION 256**

What is the viable successor of NAT\_PT?

- A. NAT64
- B. Pv6
- C. NATv6
- D. DHCPv6

**Answer:** A

#### NEW QUESTION 257

Refer to the exhibit.

```
interface gigabitethernet 2/0/0 vnet trunk
```

```
ip address 192.168.1.1 255.255.255.0
```

```
vnet name cisco
```

Which effect of this configuration is true?

- A. It designates the interface as a GRE tunnel endpoint
- B. It configures 802.1q trunking on the interface
- C. It designates the interface as an EVN trunk
- D. It removes VTP from the interface

**Answer:** C

#### NEW QUESTION 259

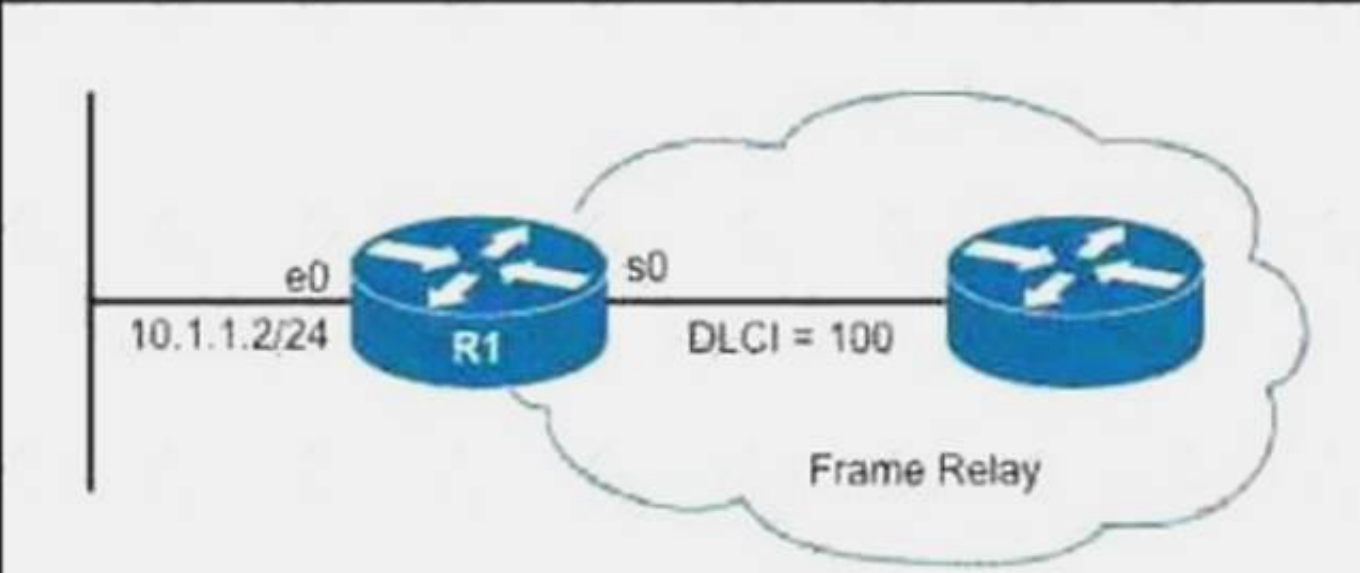
Which problem can be caused by latency on a UDP stream?

- A. The devices at each end of the stream are forced to negotiate a smaller window size.
- B. The device that receives the stream is forced to hold data in the buffer for a longer period of time.
- C. The device that sends the stream is forced to hold data in the buffer for a longer period of time.
- D. The overall throughput of the stream is decreased.

**Answer:** B

#### NEW QUESTION 262

Refer to the exhibit.



```
interface Serial0
  A
  encapsulation frame-relay
  frame-relay lmi-type ansi

! subinterface config
  B
  C

interface virtual-templatel
  ip unnumbered ethernet 0
  D
```

You are configuring the R1 Serial0 interface for a point-to-point connection. Drag and drop the required configuration statements from the left onto the correct locations from the diagram on the right. Not all commands are used.



frame-relay interface-dlci 100 ppp virtual-template1	A
interface serial0.1 point-to-point	B
interface serial0.100	C
ip unnumbered ethernet 0	D
no ip address	
ppp authentication chap	

**Answer:**

**Explanation:**

frame-relay interface-dlci 100 ppp virtual-template1	no ip address
interface serial0.1 point-to-point	interface serial0.1 point-to-point
interface serial0.100	frame-relay interface-dlci 100 ppp virtual-template1
ip unnumbered ethernet 0	ppp authentication chap
no ip address	
ppp authentication chap	

**NEW QUESTION 263**

Other than a working EIGRP configuration which component must be the same on all routers for EIGRP authentication key rollover to work correctly?

- A. time
- B. SNMP
- C. passwords
- D. SMTP

**Answer:** A

**NEW QUESTION 265**

Which two tasks does a DHCP relay agent perform?(Choose two)

- A. It forwards DHCPOFFER and DHCPCOMPLETE messages to the DHCP client.
- B. It forwards DHCPDISCOVER and DHCPREQUEST messages to the DHCP server



- C. It forwards DHCPHELLO and DHCPREQUEST messages to the DHCP server.
- D. It forwards DHCPREQUEST and DHCPACK messages to the DHCP server!
- E. It forwards DHCPOFFER and DHCPACK messages to the DHCP client.

**Answer:** BE

#### NEW QUESTION 270

What is the output of the "show ntp associations" command?

- A. Authentication mode
- B. Facility configured
- C. Shows the NTP synchronized servers configured on the device
- D. Security key config

**Answer:** C

#### NEW QUESTION 272

A network engineer wants to baseline the network to determine suitability for real-time voice applications. Which IP SLA operation is best suited for this task?

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

**Answer:** D

#### NEW QUESTION 276

Which IOS commands can you use to limit the CPU impact of log generation and transmission on an IOS router?

- A. You can use the ip access-list logging interval command in conjunction with the logging rate-limit command
- B. You can use the ip access-list logging limit command in conjunction with the logging rate-interval command
- C. You can use the ip access-list syslog-logging interval command in conjunction with the loggingrate-limit command
- D. You can use the ip access-list logged interval command in conjunction with the logging rate-limit command

**Answer:** A

#### NEW QUESTION 278

Which two statements about password-protecting device access are true? (Choose Two)

- A. The more system:running-config command displays encrypted passwords in clear text
- B. The service password-encryption command forces a remote device to encrypt the password
- C. A network administrator can recover an encrypted password
- D. The privilege level command controls the commands a specific user can execute
- E. The password can be encrypted in the running configuration

**Answer:** DE

#### NEW QUESTION 280

Which Cisco Express Forwarding component maintains the Layer 2 next-hop addresses that are used for hardware switching?

- A. FIB
- B. RIB
- C. adjacency table
- D. ARP table

**Answer:** C

#### NEW QUESTION 285

Which technology is required on an EVN trunk interface?

- A. NAT
- B. 802.1q
- C. VRF-Lite
- D. IS-IS

**Answer:** C

#### NEW QUESTION 289

A network administrator is attempting to configure IP SLA to allow one time stamp to be logged when a packet arrives on the interface and one time stamp to be logged when a packet leaves the interface. Which IP SLA accuracy tool enables this functionality?

- A. Trap
- B. RTT

- C. Responder
- D. Trigger
- E. Logging

**Answer:** B

#### NEW QUESTION 292

Which statement about split-horizon rule for distance vector routing protocols are true? A router advertises a route to an unreachable network with an infinite metric.

A router does not advertise routes to any neighboring router.

A router advertises routes back out the interface on which it learned them with an infinite metric.

- A. A router does not advertise routes back out the interface on which it learned the

**Answer:** A

#### NEW QUESTION 295

Which access list entry check for an ACK within a packet TCP header?

- A. access-list 49 permit tcp any any eq 21 established
- B. access-list 49 permit tcp any any eq 21 tcp-ack
- C. access-list 149 permit tcp any any eq 21 established
- D. access-list 49 permit ip any any eq 21 tcp-ack

**Answer:** C

#### NEW QUESTION 296

50. Which SNMP verification command shows the encryption and authentication protocols that are used in SNMPv3?

- A. show snmp v1
- B. show snmp user
- C. show snmp group
- D. show snmp

**Answer:** B

#### NEW QUESTION 301

Which two features were added in MSCHAP version 2?(choose 2)

- A. Mutual authentication between peers.
- B. Using the MD5 hash for stronger security
- C. Using three-way handshakes for authentication.
- D. Ability to change an expired password
- E. Backward-compatibility with MSCHAP version 1.

**Answer:** AD

#### NEW QUESTION 302

Your network consists of a large hub-and-spoke Frame Relay network with a CIR of 56 kb/s for each spoke. Which statement about the selection of a dynamic protocol is true?

- A. EIGRP would be appropriate if LMI type ANSI is NOT used.
- B. EIGRP would be appropriate, because the Frame Relay spokes could be segmented into their own areas
- C. EIGRP would be appropriate, because by default, queries are not propagated across the slow speed Frame Relay links.
- D. EIGRP would be appropriate, because you can manage how much bandwidth is consumed over the Frame Relay interface.

**Answer:** D

#### NEW QUESTION 304

Drag and drop the IPv6 NAT characteristic from the left onto the correct IPv6 NAT category on the right.

supports IPv6 prefix 64:ff9b::/96	network-specific stateful NAT64 prefix
IPv6 prefix assigned by an organization	NAT64
supports application layer gateway	NPTv6
translates 2001:1::/64 to 2001:2::/64	well-known stateful NAT64 prefix

**Answer:**

**Explanation:**

supports IPv6 prefix 64:ff9b::/96	translates 2001:1::/64 to 2001:2::/64
IPv6 prefix assigned by an organization	supports IPv6 prefix 64:ff9b::/96
supports application layer gateway	IPv6 prefix assigned by an organization
translates 2001:1::/64 to 2001:2::/64	supports application layer gateway

**NEW QUESTION 306**

Which technology supports overlapping IP addresses on a single interface?

- A. policy-based routing
- B. VRF-Lite
- C. On-Demand Routing
- D. QoS

**Answer:** B

**NEW QUESTION 311**

What is the minimum log level for the event generated when an ACL drops a packet?

- A. 3
- B. 4
- C. 5
- D. 6
- E. 7

**Answer:** D

**NEW QUESTION 312**

What percent of R1 interfaces bandwidth is ERIGRP allowed to use?

- A. 10
- B. 20
- C. 30
- D. 40

**Answer:** B

**NEW QUESTION 314**

Which two statements about NetFlow templates are true? (Choose two.)

- A. Only NetFlow version 9 is template based.

- B. NetFlow version 5 and version 9 are template based.
- C. Only NetFlow version 5 is template based.
- D. Template can increased bandwidth usage.
- E. They can increase overall performance.
- F. They can reduce bandwidth usage.

**Answer:** AD

#### NEW QUESTION 319

A router was configured with the EIRGP stub command. The router advertises which types of routes?

- A. static and summary
- B. connected, static, and summary
- C. connected and static
- D. connected and summary

**Answer:** D

#### NEW QUESTION 324

In which two ways can split horizon issues be overcome in a Frame Relay network environment? (Choose two)

- A. enabling split horizon
- B. configuring one physical serial interface with Frame Relay to various remot
- C. disabling split horizon
- D. configure a loopback interface with Frame Relay to various remote site
- E. configuring multiple subinterfaces on a single physical interface to

**Answer:** CE

#### NEW QUESTION 325

A Network engineer wants a NTP Client to be able to update the local system without updating or synchronizing with the remote system. Which keyboard for the ntp access-group command is needed to accomplish this?

- A. server
- B. peer
- C. query-only
- D. server-only

**Answer:** A

#### NEW QUESTION 328

A network engineer wants to implement an SNMP notification process for host machines using the strongest security available Which command accomplishes this task?

- A. router(config)#snmp-server host 172 16 200 225 traps v2c auth
- B. router(config)#snmp-server host 172 16 200 225 traps v1
- C. router(config)#snmp-server host 172 16 200.225 traps v3
- D. router(config)#snmp-server host 172 16 200 225 traps v2c

**Answer:** C

#### NEW QUESTION 333

Drag and drop the statement from the left onto the correct IPv6 router security features on the right.



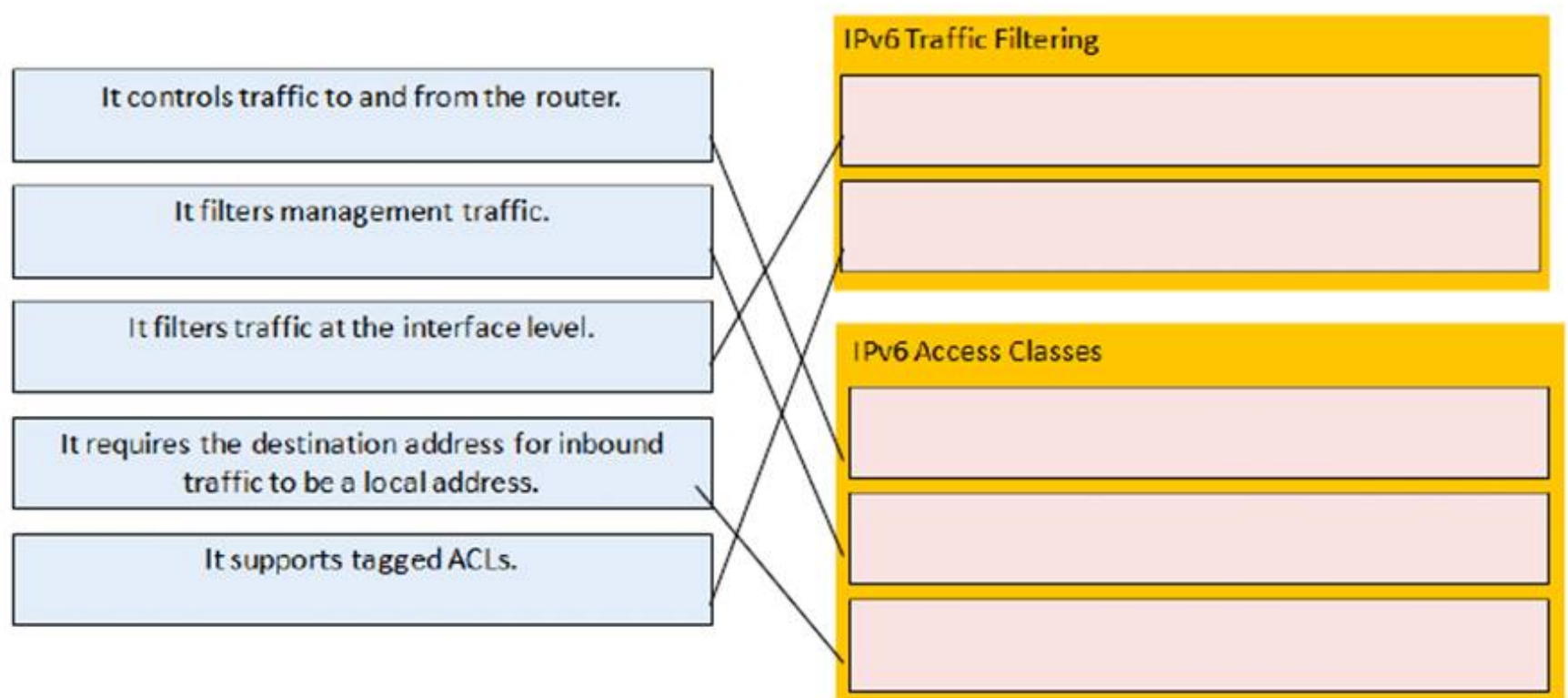
- It controls traffic to and from the router.
- It filters management traffic.
- It filters traffic at the interface level.
- It requires the destination address for inbound traffic to be a local address.
- It supports tagged ACLs.

**IPv6 Traffic Filtering**

**IPv6 Access Classes**

Answer:

Explanation:



#### NEW QUESTION 335

Refer to the exhibit.

```

R1 (config-if)#ipv6 address k:k:k:k::1/64
R1 (config-if)#ipv6 ospf 1 area 1
R1 (config-if)#tunnel mode ipv6ip

R2 (config-if)#interface Tunnel1
R2 (config-if)#tunnel source 10.0.0.2
R2 (config-if)#tunnel source 10.0.0.1
R2 (config-if)#ipv6 address k:k:k:k::2/64
R2 (config-if)#ipv6 ospf 1 area 1
R2 (config-if)#tunnel mode ipv6ip
  
```

A user calls from another branch office with a request to establish a simple VPN tunnel to test a new router's tunneling capability. Based on the configuration in the exhibit, which type of tunnel was configured?

- A. IPsec site-to -site
- B. 6to4
- C. PPTP

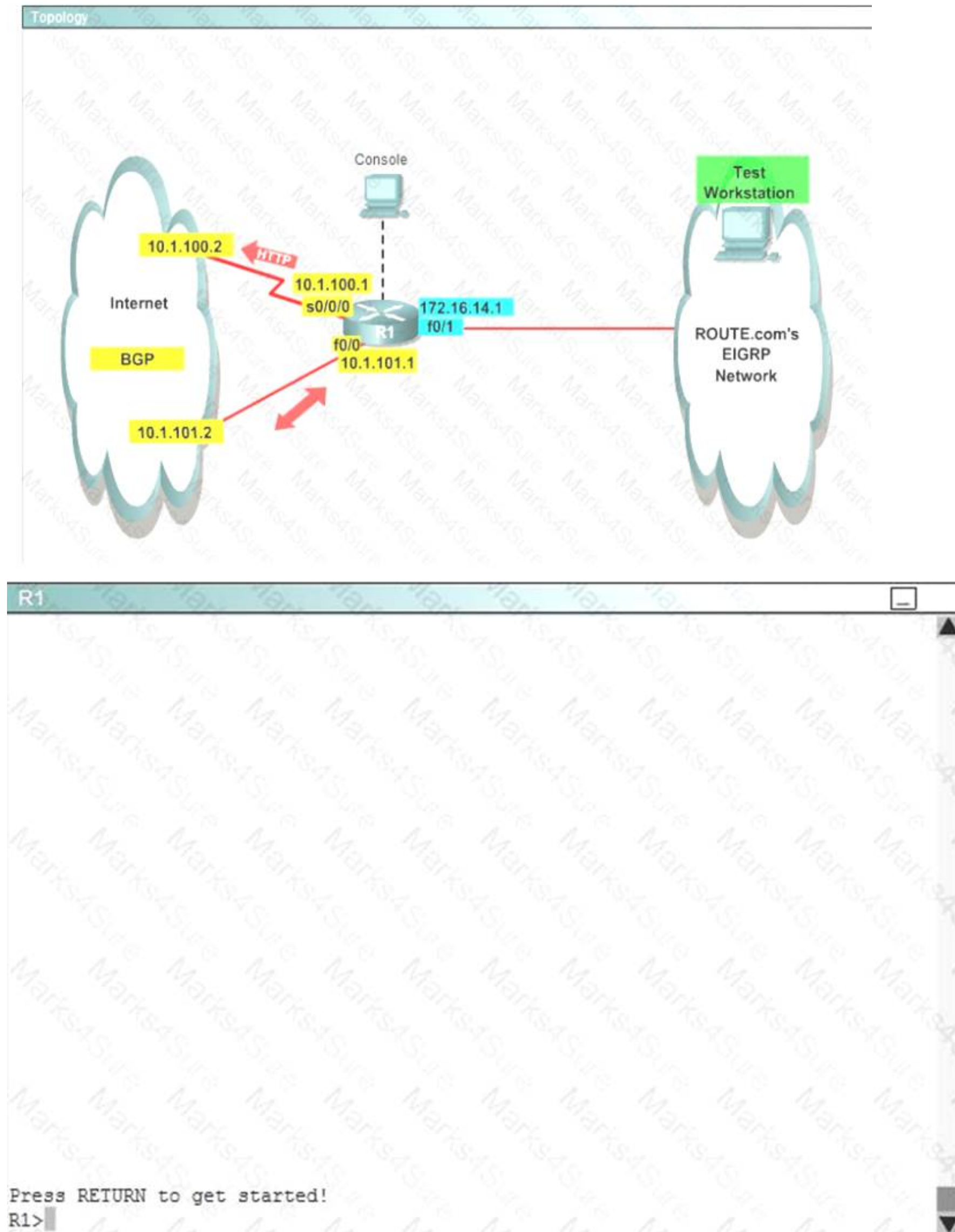
D. EZVPN

**Answer:** B

### NEW QUESTION 339

You are a network engineer with ROUTE.com, a small IT company. ROUTE.com has two connections to the Internet; one via a frame relay link and one via an EoMPLS link. IT policy requires that all outbound HTTP traffic use the frame relay link when it is available. All other traffic may use either link. No static or default routing is allowed.

Choose and configure the appropriate path selection feature to accomplish this task. You may use the Test Workstation to generate HTTP traffic to validate your solution.



**Answer:**

**Explanation:** We need to configure policy based routing to send specific traffic along a path that is different from the best path in the routing table.

Here are the step by Step Solution for this:

1) First create the access list that catches the HTTP traffic: R1(config)#access-list 101 permit tcp any any eq www  
2) Configure the route map that sets the next hop address to be ISP1 and permits the rest of the traffic: R1(config)#route-map pbr permit 10  
R1(config-route-map)#match ip address 101 R1(config-route-map)#set ip next-hop 10.1.100.2 R1(config-route-map)#exit  
R1(config)#route-map pbr permit 20  
3) Apply the route-map on the interface to the server in the EIGRP Network: R1(config-route-map)#exit  
R1(config)#int fa0/1  
R1(config-if)#ip policy route-map pbr R1(config-if)#exit  
R1(config)#exit

First you need to configure access list to HTTP traffic and then configure that access list. After that configure the route map and then apply it on the interface to the server in EIGRP network.

#### NEW QUESTION 341

Refer to the exhibit.

```
access-list 1 permit 172.16.1.0.0.0.255
ip nat inside source list 1 interface gigabitethernet0/0 overload
```

You have correctly identified the inside and outside interfaces in the NAT configuration of this device. Which effect of the configuration is true?

- A. static NAT
- B. dynamic NAT
- C. PAT
- D. NAT64

**Answer:** C

#### NEW QUESTION 343

which the Valid range for BGP private ASNs?

- A. 64512-65535
- B. 62464-65534
- C. 64512-65024
- D. 62464-64511

**Answer:** A

#### NEW QUESTION 345

Which command instructs a PPPoE client to obtain its IP address from the PPPoE server?

- A. IP address negotiated
- B. IP address DHCP
- C. IP address dynamic
- D. IP address auto negotiate

**Answer:** A

#### NEW QUESTION 349

Which two features does RADIUS combine?(Choose two)

- A. authorization
- B. authentication
- C. ssh
- D. accounting
- E. Telnet

**Answer:** AB

#### NEW QUESTION 354

Which functions are included in the two-message rapid exchanged that a DHCPV6 can receive from a server?

- A. advertise and request
- B. solicit and reply
- C. solicit and request
- D. advertise and reply

**Answer:** B

#### NEW QUESTION 359

Which two EIGRP metrics have nonzero K values by default? (Choose two.)

- A. reliability
- B. delay
- C. cost
- D. load

E. bandwidth

**Answer:** BE

**NEW QUESTION 360**

A router with default RIPv2 settings loses connectivity to its next-hop neighbor.  
How long does the router wait before removing the route to the next hop from its route table?

- A. 30 seconds
- B. 60 seconds
- C. 180 seconds
- D. 240 seconds

**Answer:** D

**NEW QUESTION 361**

Which type of message does a device configured with the `igrp stub` command send in response to EIGRP queries?

- A. invalid request
- B. unavailable
- C. stuck in active
- D. stub-only
- E. reject
- F. inaccessible

**Answer:** F

**NEW QUESTION 363**

Which feature mitigates fragmentation issues caused by endpoint hosts?

- A. MSS HMTU
- B. ICMP
- C. ICMP DF bit
- D. TCP How Control

**Answer:** B

**NEW QUESTION 365**

Which two statements about NHRP in a DMVPN environment are true (Choose two.)

- A. It routes traffic through the tunnel.
- B. It provides address resolution to route traffic.
- C. It can authenticate VPN endpoints.
- D. It requires each endpoint to have a unique network ID.
- E. It can identify PIM-SM RPs over a tunnel.

**Answer:** BC

**NEW QUESTION 369**

Which two features are provided by EIGRP for IPv6?(choose two)

- A. Backbone areas
- B. SPF algorithm
- C. Partial updates
- D. Area border router
- E. Scaling

**Answer:** CE

**NEW QUESTION 374**

Which option is the best for protecting CPU utilization on a device?

- A. fragmentation
- B. COPP
- C. ICMP redirects
- D. ICMP unreachable messages

**Answer:** B

**NEW QUESTION 377**

What is the maximum number of hops on a route that RIPv6 advertises as reachable?

- A. 15
- B. 30
- C. 99



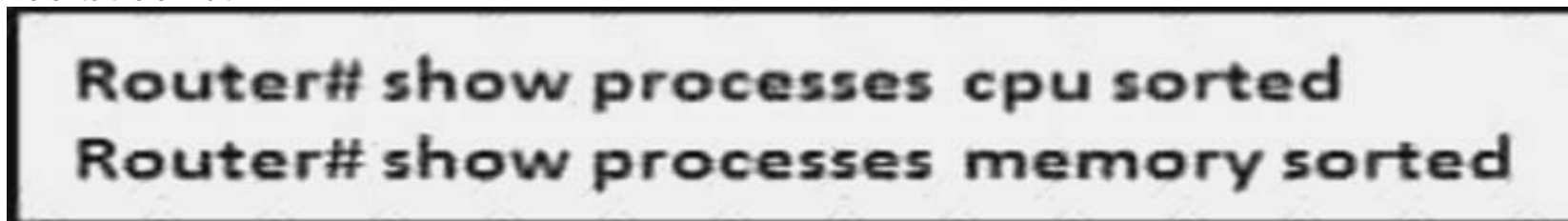
D. 255

**Answer:** A

**Explanation:** <https://quizlet.com/166800413/ccnp-ripng-flash-cards/>

#### NEW QUESTION 378

Refer to the exhibit.



Based on Cisco best practice, which statement about the output is true?

- A. The output should be analyzed by a network engineer before executing any debug commands on an IOS router in production
- B. The output should be analyzed by a network engineer before executing any configuration commands on an IOS router in production
- C. The output should be analyzed by a network engineer before allocating additional memory and CPU usage to processes on an IOS router in production
- D. The output should be analyzed by a network engineer before executing other show commands on an IOS router in production

**Answer:** A

#### NEW QUESTION 381

Which value Identifies VPNs in an EVN environment?

- A. route target
- B. VLAN ID
- C. DLCI
- D. virtual network tag

**Answer:** D

#### NEW QUESTION 382

A route with default RIPv2 settings loses connectivity to it's next-hop neighbor. How long does the router wait before removing the route to the next hop from its route table?

- A. 30 seconds
- B. 60 seconds
- C. 180 seconds
- D. 240 seconds

**Answer:** D

#### NEW QUESTION 387

Which command do you enter on router R6 so that BGP supports multiple protocols'?

- A. R6(config-router-af)#bgp additional-paths install
- B. R6(config-router-af)#no bgp default ipv4-multicast
- C. R6(config-router)#no address-family ipv4 unicast
- D. R6(config-router)#bgp default ipv4-multicast
- E. R6(config-router)#no bgp default ipv4-unicast

**Answer:** E

#### NEW QUESTION 389

When OSPF is forming an adjacency, in which state does the actual exchange of the information in the link-state database occur?

- A. loading
- B. exchange
- C. INIT
- D. exstart

**Answer:** B

#### NEW QUESTION 392

When a new PC is connected to the network, which step must it take first to receive a DHCP address?

- A. It sends a DHCPHELLO message to the DHCP server IP address.
- B. It sends a DHCPREQUEST message to the DHCP server IP address.
- C. It sends a DHCPREQUEST message to 255.255.255.255.
- D. It sends a DHCPDISCOVER message to 255.255.255.255.

**Answer:** D

**NEW QUESTION 397**

Refer in the exhibit. A packet capture indicates that the router is not forwarding the DHCP packets that it receives on interface FastEthernet0/0. Which command needs to be entered in global configuration mode to resolve this issue?

- A. ip DHCP relay
- B. ip helper
- C. ip forward-protocol
- D. service DHCP

**Answer: C**

**NEW QUESTION 402**

Which statement about IP SLA feature is true?

- A. It ensures that there are appropriate levels of service for network applications
- B. It classifies various traffic types by examining information within Layers 3 through 7
- C. It measures how the network treats traffic for specific applications by generating traffic that bears similar characteristics to application traffic.
- D. It keeps track of the number of packets and bytes that are observed in each flow by storing information in a cache flow

**Answer: A**

**NEW QUESTION 403**

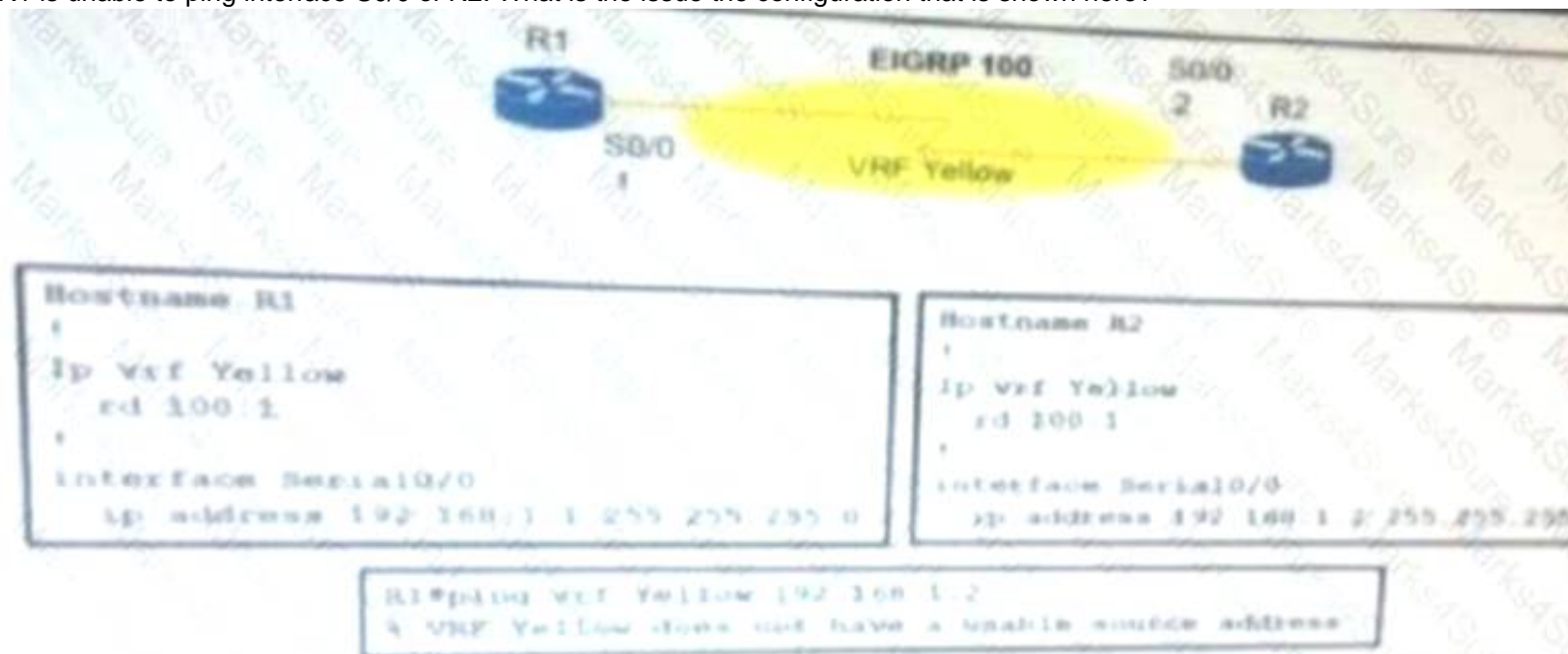
Which two types of traffic can benefit from LLQ? (Choose two)

- A. voice
- B. telnet
- C. video
- D. file transfer
- E. email

**Answer: AC**

**NEW QUESTION 407**

R1 is unable to ping interface S0/0 of R2. What is the issue the configuration that is shown here?



- A. The route-target configuration command is missing.
- B. The interface IP addresses are not in the same subnet.
- C. The syntax of the ping command is wrong.
- D. The default route configuration is missing.
- E. The serial interfaces belong to the global table instead of vrf Yellow.

**Answer: E**

**NEW QUESTION 408**

How big is the smallest packet that will always be fragmented on a standard Ethernet network with default configuration?

- A. 1500 bytes
- B. 1800 bytes
- C. 2048 bytes
- D. 2100bytes

**Answer: A**

**NEW QUESTION 410**

A network engineer wants to display the statistics of an active tunnel on a DMVPN network. Which command must the administrator execute to accomplish this task?

- A. router#show crypto ipsec so
- B. router#show crypto isakmp sa
- C. router#show crypto isakmp peers
- D. router#show crypto ipsec transform-set
- E. router#show crypto engine connections active

**Answer:** A

#### NEW QUESTION 412

Which task must you perform to enable point-to-point frame relay connection?

- A. Disable inverse ARP
- B. Configure the encapsulation type
- C. Enable inverse ARP
- D. Configure static address mapping

**Answer:** D

#### NEW QUESTION 413

Which option is one way to mitigate symmetric routing on an active/active firewall setup for TCP based connections?

- A. performing packet captures
- B. disabling asr-group commands on interfaces that are likely to receive asymetnc traffic
- C. replacing them with redundant routers and allowing load balancing
- D. disabling stateful TCP checks

**Answer:** D

#### NEW QUESTION 416

how route tags can be set (choose two)

- A. only with route-maps
- B. only with taglists
- C. can be set with route-maps
- D. can be set with taglist.
- E. only used on link state RPs.

**Answer:** CD

#### NEW QUESTION 419

OSPF chooses routes in which order, regardless of route's administrative distance and metric?

- A. Intra-Area (O) - Inter-Area (O IA) - External Type 1 (E1) - External Type 2 (E2) - NSSA Type 1 (N1) - NSSA Type 2 (N2)
- B. Intra-Area (O) - Inter-Area (O IA) - NSSA Type 1 (N1) - NSSA Type 2 (N2) - External Type 1 (E1) - External Type 2 (E2)
- C. Intra-Area (O) - Inter-Area (O IA) - NSSA Type 1 (N1) - External Type 1 (E1) - NSSA Type 2 (N2) - External Type 2 (E2)
- D. Intra-Area (O) - NSSA Type 1 (N1) - External Type 1 (E1) - Inter-Area (O IA) - NSSA Type 2 (N2) - External Type 2 (E2)
- E. Intra-Area (O) - Inter-Area (O IA) - NSSA Type 1 (N1) - External Type 1 (E1) - NSSA Type 2 (N2) - External Type 2 (E2)
- F. NSSA Type 1 (N1) - NSSA Type 2 (N2) - Intra-Area (O) - Inter-Area (O IA) - External Type 1 (E1) - External Type 2 (E2)

**Answer:** A

#### NEW QUESTION 422

When Unicast Reverse Path Forwarding is configured on an interface, which action does the interface take first when it receives a packet?

- A. It checks the ingress access lists
- B. It verifies a reverse path via the FIB to the source
- C. It checks the egress access lists
- D. It verifies that the source has a valid CEF adjacency

**Answer:** D

#### NEW QUESTION 426

Drag and Drop the Frame Relay LMI extensions from the left onto the correct descriptions on the right.



address registration	It allows neighboring Cisco devices to exchange management IP addresses.
global addressing	It enables the Frame Relay network to identify interfaces in the same manner as a LAN.
multicasting	It prevents data from being transmitted into black holes.
simple flow control	It provides the most efficient transmission of routing protocol messages and supports address resolution.
virtual circuit status messages	It supports devices that are unable to use congestion notification.

**Answer:**

**Explanation:** + Address registration – allows neighboring Cisco devices to exchange the management ip addresses  
+ Global addressing – Enables Frame Relay to identify interfaces in same manner as LAN  
+ Multicasting – Provides most efficient transmission of routing protocol messages and support address resolution  
+ Simple flow control – Supports devices that are unable to use congestion notification  
+ Virtual circuit – Prevents data from being transmitted in black hole

#### NEW QUESTION 428

Which statement about conditional debugging is true?

- A. It can support only one condition at a time
- B. You can limit the output to a specific interface
- C. It generates debug messages only for packets entering the router
- D. It is limited to Ethernet, serial, and multilink interfaces

**Answer:** B

#### NEW QUESTION 432

Which command can be entered on router R5 to configure 80 percent of the bandwidth of a link for EIGRP Autonomous System 55?

- A. R5(config-if)#ip bandwidth percent eigrp bandwidth 55 80
- B. R5(config-pmap-c)#priority percent 80 C R5(config-if)#ip
- C. R5(config-if)#ip bandwidth percent eigrp 80 55
- D. R5(config-if)#ipv6 bandwidth-percent eigrp 80 55
- E. R5(config-if)#ipv6 bandwidth-percent eigrp 55 80

**Answer:** E

#### NEW QUESTION 437

Which address is an IPv6 multicast address?

- A. 2002 0 :0: 0 :0 :0 :0: 2
- B. 00020 0 :0:0: 0:0:2
- C. FF02.0.:0 :0 :0:0 :0 :2
- D. FE02 0:0 :0 :0 :0:0:2

**Answer:** C

#### NEW QUESTION 439

Traffic from R1 to R6 loopback address is load shared between R1-R2-R4-R6 and R1-R3-R5-R6 path. What is the ratio of the traffic over each path?

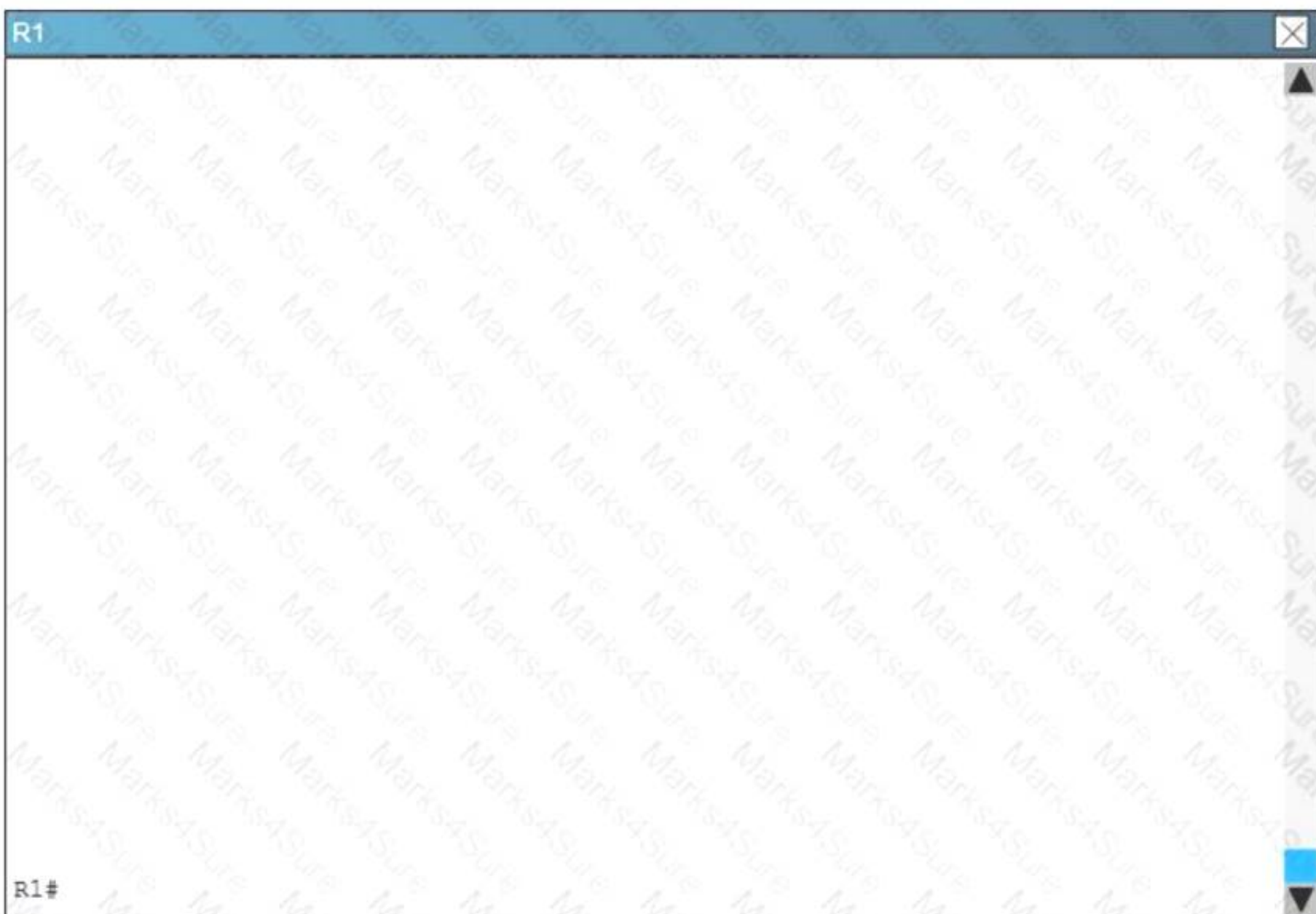
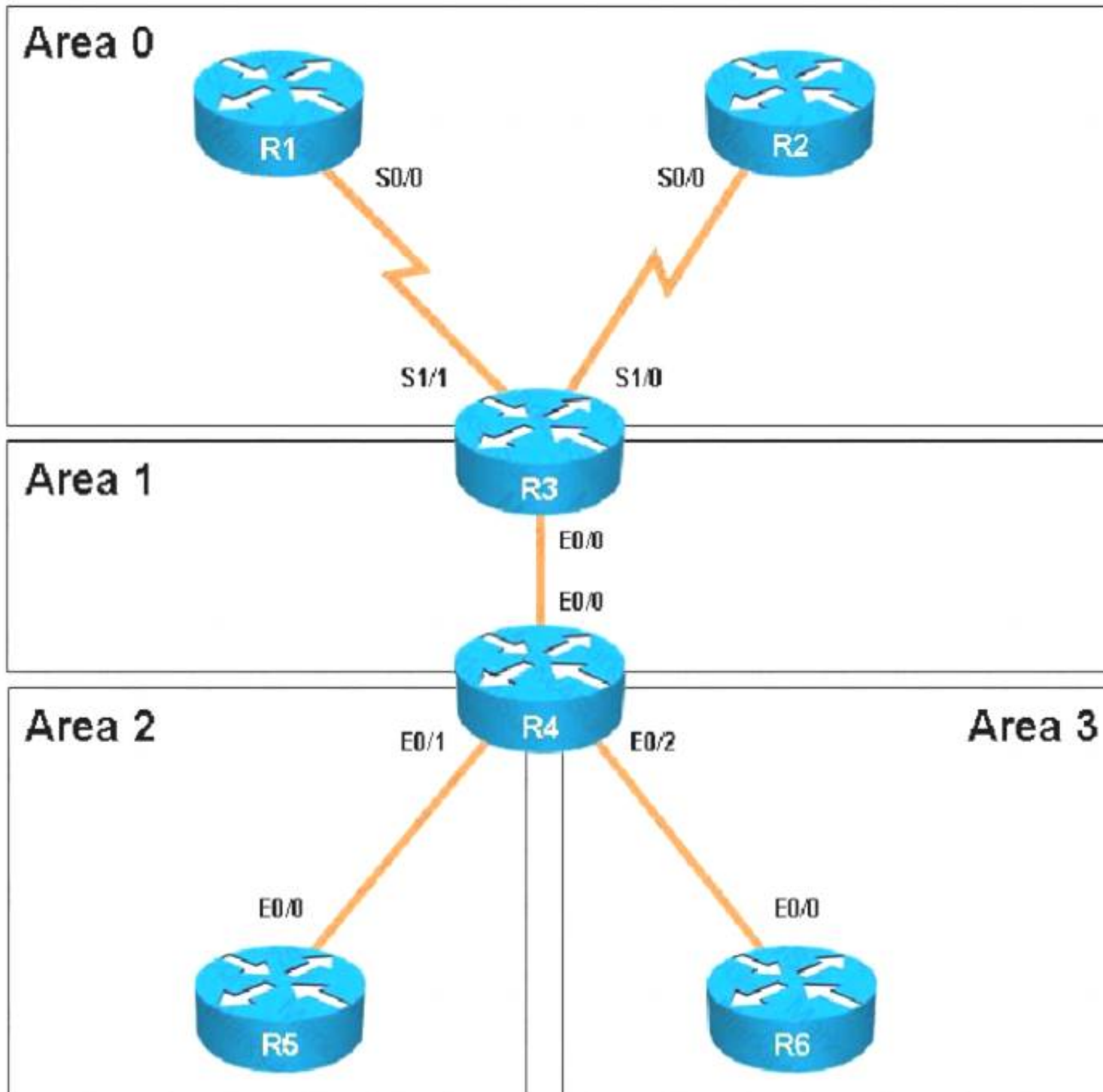
- A. 1:1
- B. 1:5
- C. 6:8
- D. 19:80

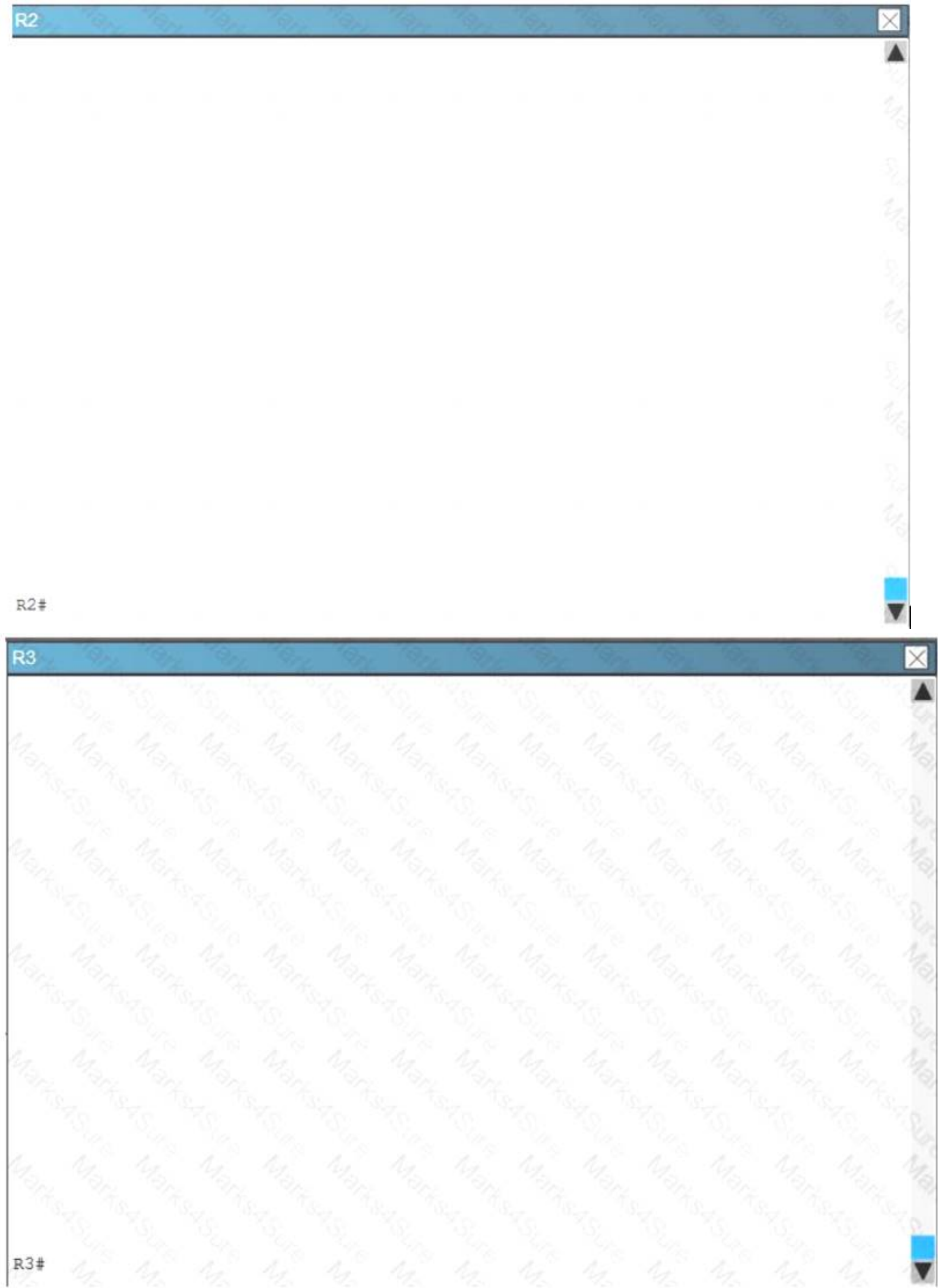
**Answer:** D

**NEW QUESTION 442**

Scenario:

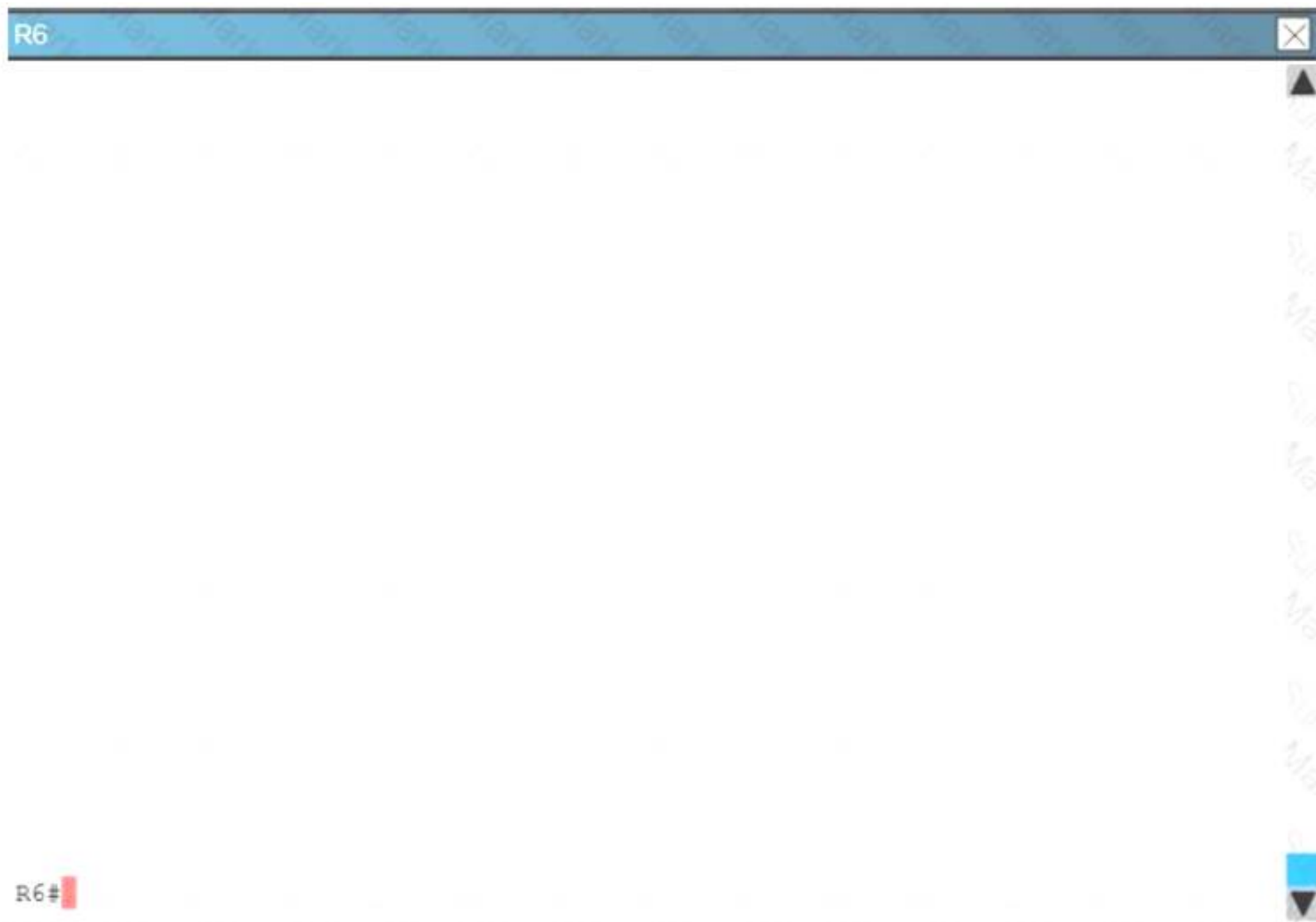
You have been asked to evaluate an OSPF network setup in a test lab and to answer questions a customer has about its operation. The customer has disabled your access to the show running-config command.







R4	
R4#	
R5	
R5#	



How many times was SPF algorithm executed on R4 for Area 1?

- A. 1
- B. 5
- C. 9
- D. 20
- E. 54
- F. 224

**Answer: C**

#### NEW QUESTION 444

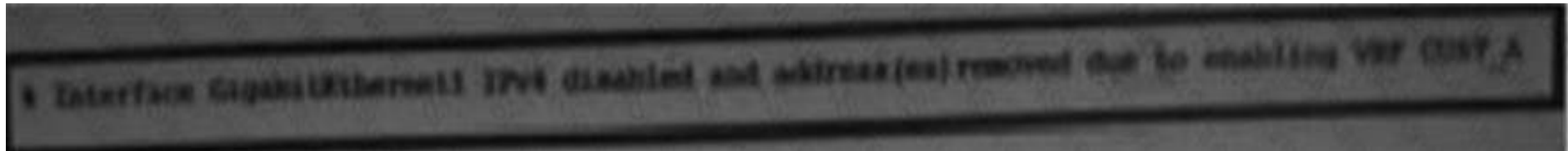
Which condition must be met before you can configure SSH on a device running Cisco IOS?

- A. The device must have an auxiliary port.
- B. The device must have a modem connection.
- C. The IOS must be a crypto in
- D. Telnet must be disabled on the device

**Answer: C**

#### NEW QUESTION 447

Refer to the exhibit.



% Interface GigabitEthernet1 IPv4 disabled and address(es) removed due to enabling VRF CUST\_A

an engineer is enabling VPN services for a customer and noticed the output when placing the customer facing interfaces into a VRF which action connects the issue?

- A. Reset interface Gigabit Ethernet 1.
- B. Disable the VRF CUST\_A
- C. Reconfigure the IP address on Gigabit Ethernet 1.
- D. Enabling IPv6 on the interface

**Answer: C**

#### NEW QUESTION 449

Which two statements about Frame Relay point-to-point connections are true?

- A. They can operate normally without a DLCI map.
- B. The device can establish a point-to-point connection to the cloud without a DLCI.
- C. They use two DLCIs to communicate with multiple endpoints over the Frame Relay cloud.
- D. Changing a point-to-point subinterface to a different type requires the device to be reloaded.
- E. Each physical interface that extends to the Frame Relay cloud can support a SVC.

**Answer:** CD

**NEW QUESTION 453**

Which two features does RADIUS combine?(Choose two)

- A. authorization
- B. authenticate
- C. ssh
- D. accounting
- E. Telnet

**Answer:** AB

**NEW QUESTION 458**

A route map was configured and it was distributing OSPF external routes

- A. Distributing E1 only
- B. Distributing E1 and E2 using prefix list
- C. Distributing E1 and E2 using access list
- D. Distributing E2 routes

**Answer:** B

**NEW QUESTION 460**

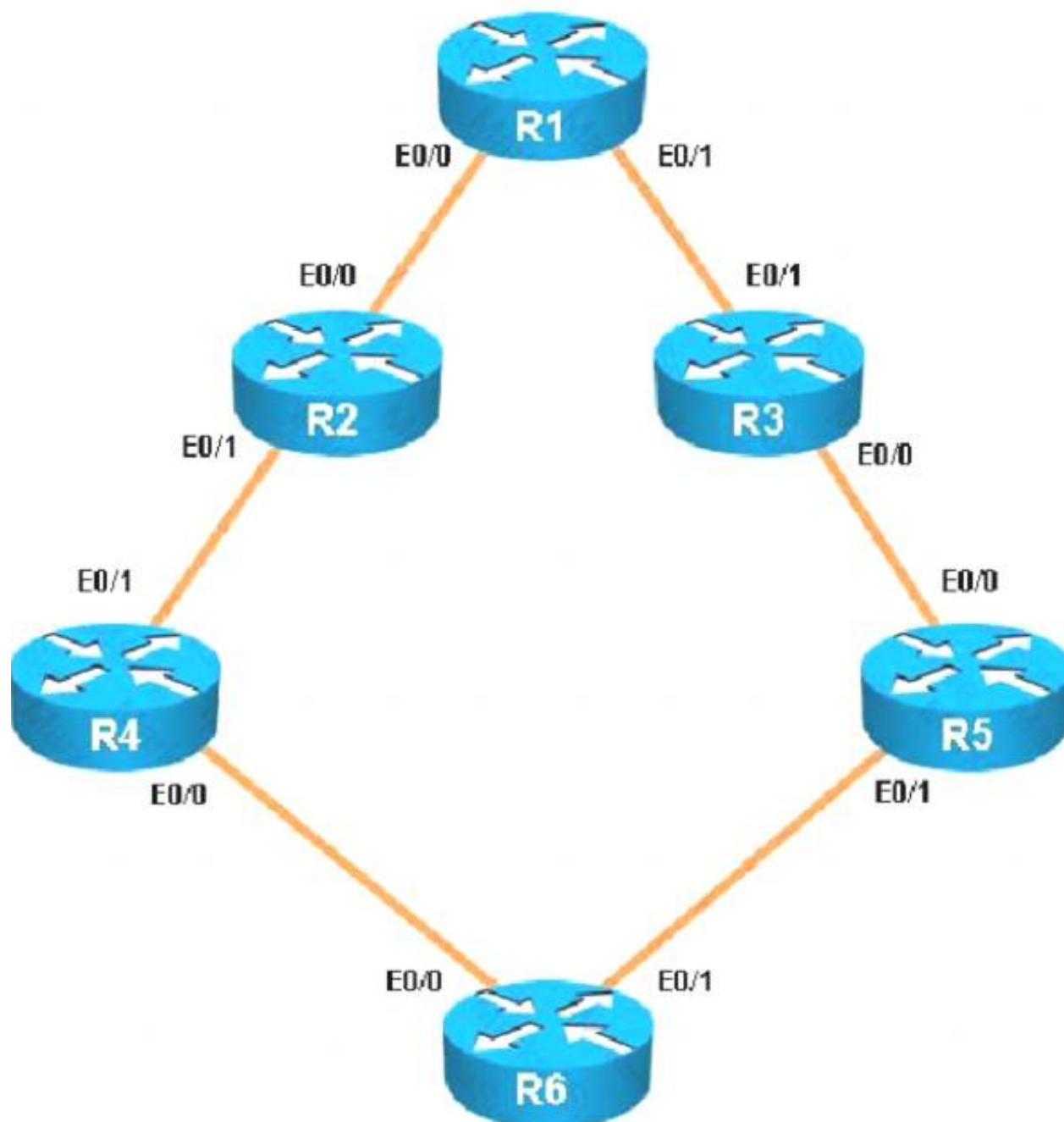
Which value determines the amount of traffic that a network path can hold in transit?

- A. route cache setting
- B. maximum window size
- C. bandwidth delay product
- D. MSS

**Answer:** D

**NEW QUESTION 462**

You have been asked to evaluate how EIGRP is functioning in a customer network.



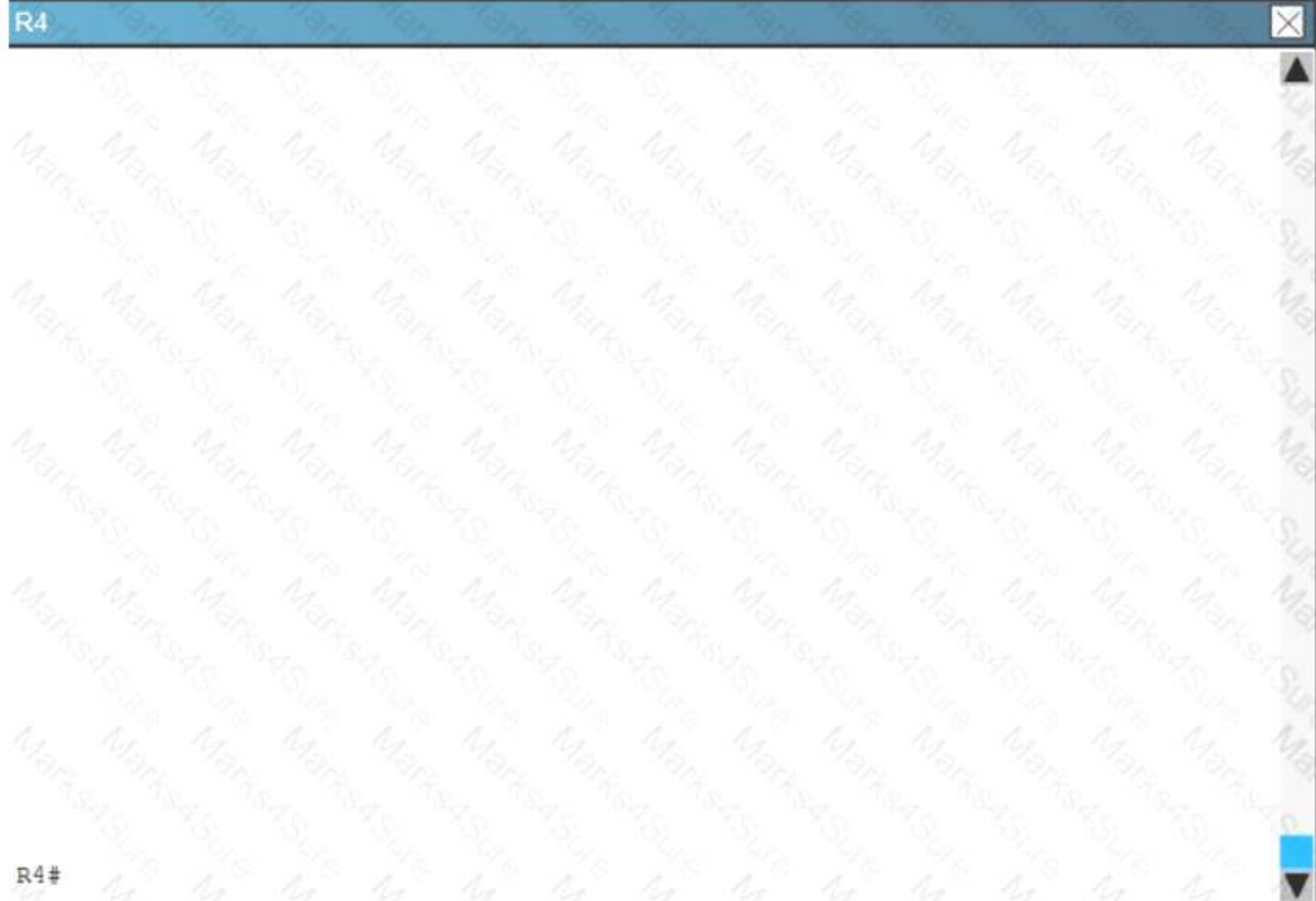


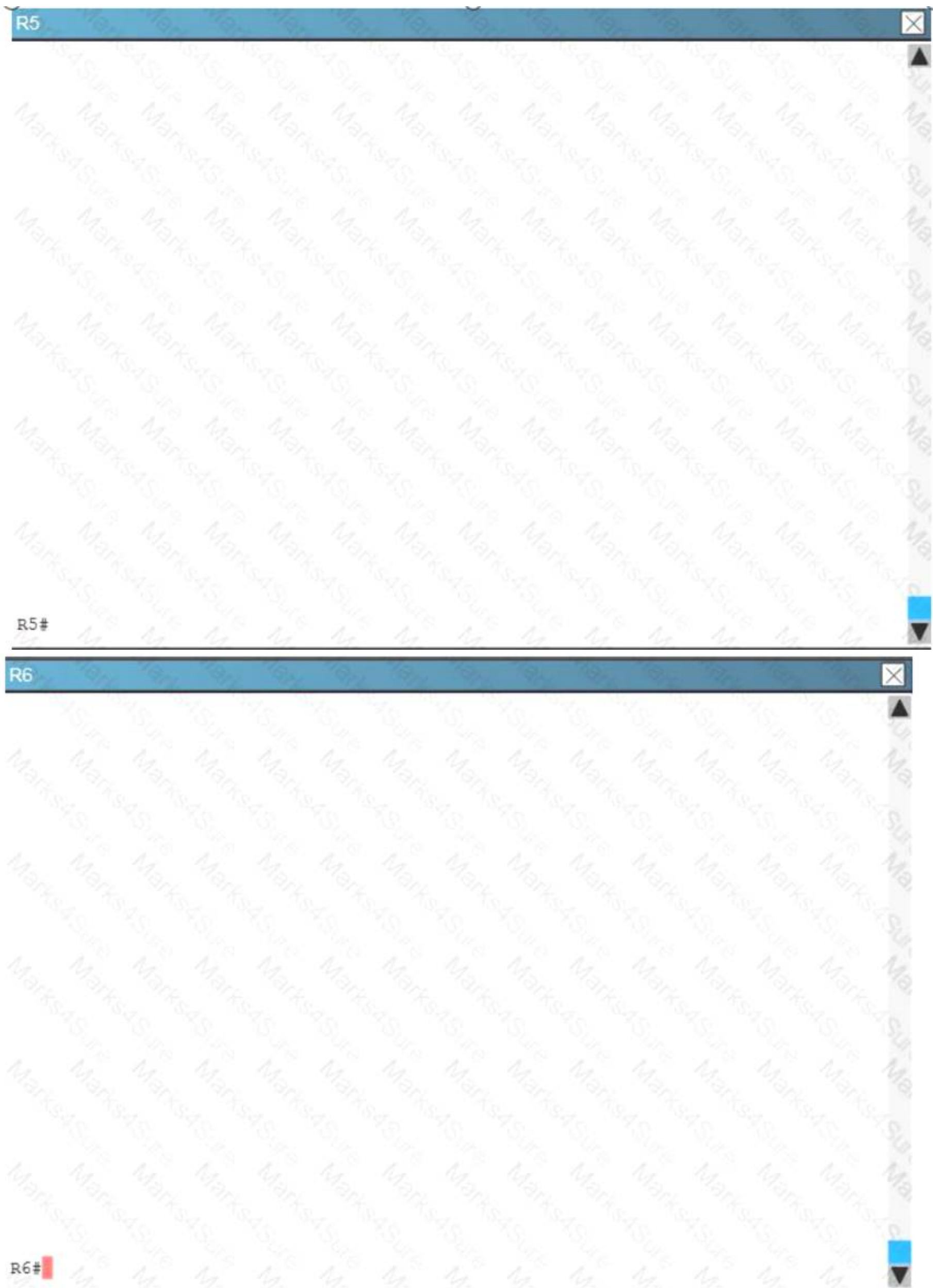
R1

R1#

R2

R2#





Which key chain is being used for authentication of EIGRP adjacency between R4 and R2?

- A. CISCO
- B. EIGRP
- C. key
- D. MD5

**Answer:** A

**Explanation:** R4 and R2 configs are as shown below:



R4	R2
<pre>! no ip domain-lookup no ipv6 cef ipv6 multicast rpf use-bgp ! key chain CISCO   key 1     key-string firstkey ! ! ! ! ! ! ! ! ! ! interface Loopback0   ip address 150.1.4.4 255.255.255.255 ! interface Ethernet0/0   description Link to R6  ip address 192.168.46.4 255.255.255.0</pre>	<pre>! no aaa new-model clock timezone PST -8 0 ! ip cef ! ! no ipv6 cef ipv6 multicast rpf use-bgp ! key chain CISCO   key 1     key-string firstkey key chain FIRSTKEY   key 1     key-string CISCO key chain R3   key 1     key-string R3   key 2     key-string R1 ! ! !</pre> <p style="text-align: center;">--- More (164) ---</p>

Clearly we see the actual key chain is named CISCO.

**NEW QUESTION 465**

A network engineer executes the show ip flow interface command. Which type of information is displayed on the interface?

- A. route cache information
- B. IP Cisco Express Forwarding statistics
- C. error statistics
- D. NetFlow configuration

**Answer: D**

**NEW QUESTION 467**

Which feature can automatically assign IP addresses IP addresses in a PPPoE environment?

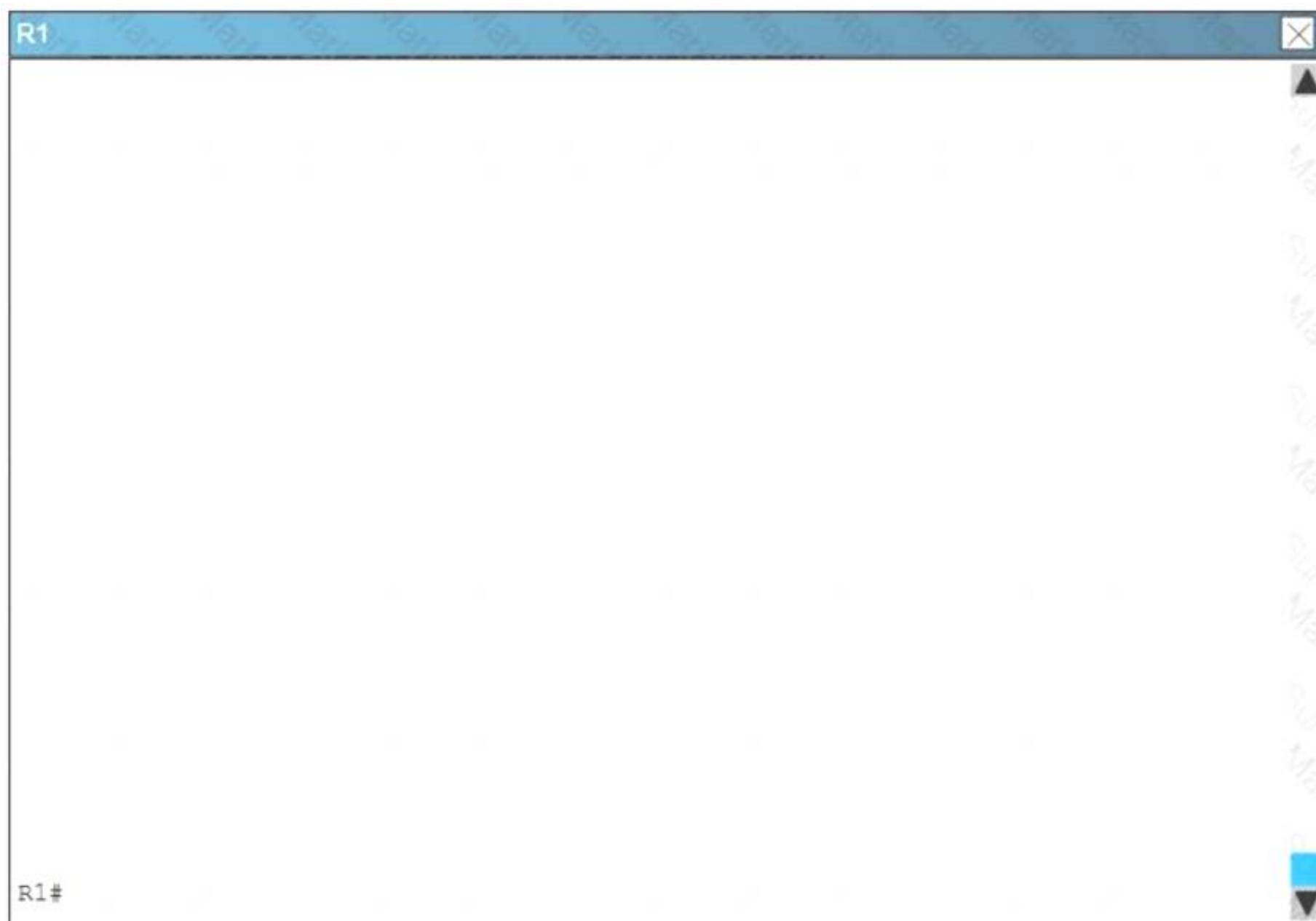
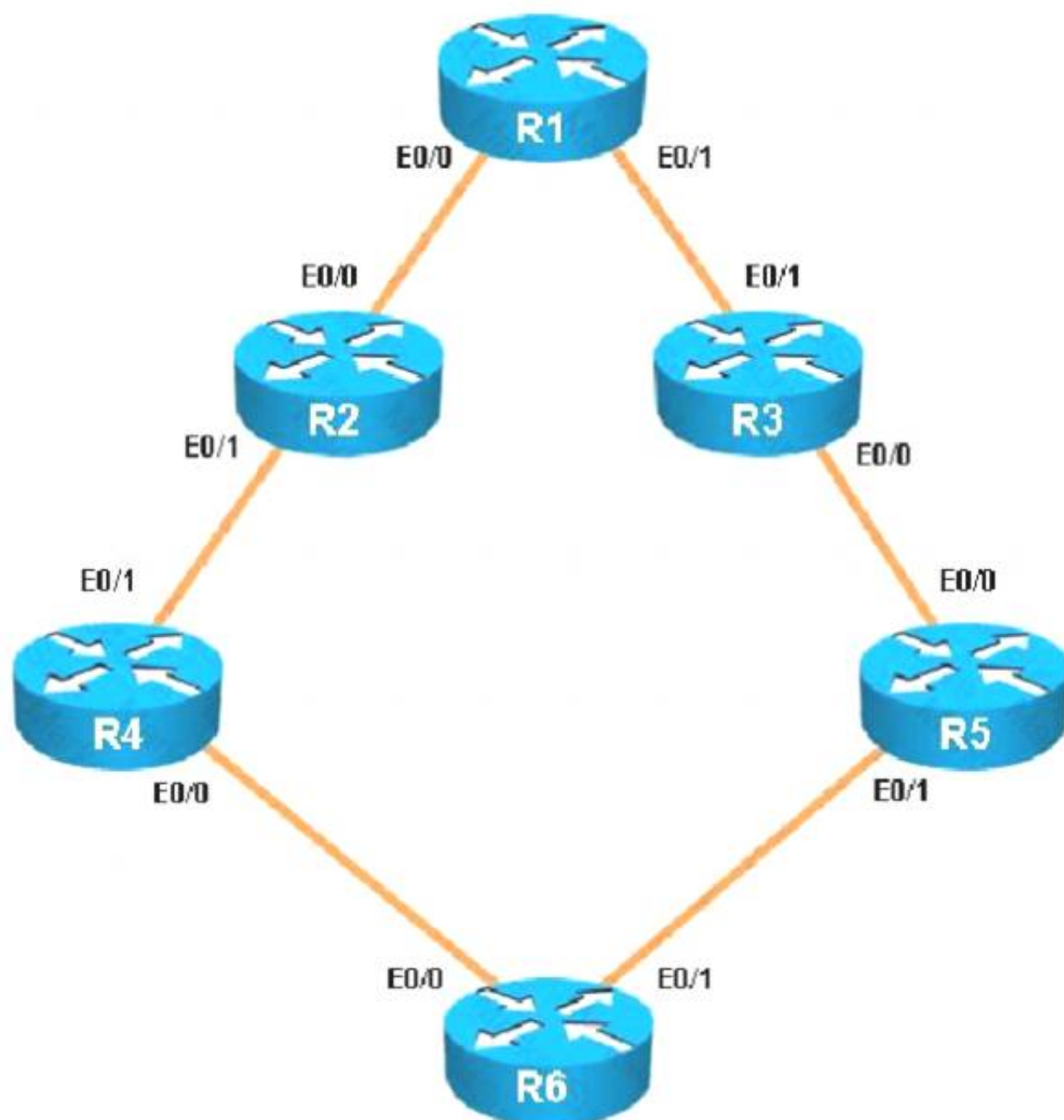
- A. DHCP  
B. BOOTP  
C. PPP  
D. APPA

**Answer: C**

**NEW QUESTION 468**

**NEW QUESTION 400**

You have been asked to evaluate how EIGRP is functioning in a customer network.



R2

R2#

R3

R3#



R4

R4#

R5

R5#



What is the advertised distance for the 192.168.46.0 network on R1?

- A. 333056
- B. 1938688
- C. 1810944
- D. 307456

**Answer:** A

**NEW QUESTION 473**

Which of the following situations results in a routing loop

- A. when you implement noncontiguous IP routing blocks
- B. when you have a single point of redistribution
- C. when you have multiple points of redistribution
- D. when you use NAT translation on the edge of your network
- E. when you implement contiguous IP routing blocks

**Answer:** C

**NEW QUESTION 476**

Which interfaces type does a PPPoE client use to establish a session?

- A. dialer
- B. virtual-template
- C. physical
- D. loopback

**Answer:** A

**NEW QUESTION 478**

Which condition must be met before two EVN devices can connect?

- A. An EtherChannel must be configured with at least two interfaces connected between the devices.
- B. A fiber connection must be established between the devices.
- C. One VLAN interface must be configured between the devices.
- D. A trunk interface must be configured between the devices.

**Answer:** D

**NEW QUESTION 479**

Which feature eliminates the need for Cisco Express forwarding to maintain a route cache?

- A. MAC address table
- B. adjacency table
- C. FIB
- D. RIB

**Answer:** C

**Explanation:** <https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/XE3-6-0E/15-22E/configuration/guide/xe-360-config/cef.pdf>  
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## Forwarding Information Base

The Forwarding Information Base (FIB) is a table that contains a copy of the forwarding information in the IP routing table. When routing or topology changes occur in the network, the route processor updates the IP routing table and CEF updates the FIB. Because there is a one-to-one correlation between FIB entries and routing table entries, the FIB contains all known routes and eliminates the need for route cache maintenance that is associated with switching paths, such as fast switching and optimum switching. CEF uses the FIB to make IP destination-based switching decisions and maintain next-hop address information based on the information in the IP routing table.

On the Catalyst 4500 series switches, CEF loads the FIB in to the integrated switching engine hardware to increase the performance of forwarding. The integrated switching engine has a finite number of forwarding slots for storing routing information. If this limit is exceeded, CEF is automatically disabled and all packets are forwarded in software. In this situation, you should reduce the number of routes on the switch and then reenable hardware switching with the `ip cef` command.

### NEW QUESTION 481

Which two statements are examples of the difference between IPV4 and IPV6 EIGRP? (Choose two)

- A. Network command is not used in IPV6
- B. DUAL is used for route calculations
- C. IPv6 keyword is used in many EIGRP commands
- D. DUAL is not used for route calculations
- E. Network command is used in IPV6

**Answer:** AC

### NEW QUESTION 483

Users were moved from the local DHCP server to the remote corporate DHCP server. After the move, none of the users were able to use the network. Which two issues will prevent this setup from working properly? (Choose two)

- A. The broadcast domain is too large for proper DHCP propagation
- B. The DHCP server IP address configuration is missing locally
- C. The route to the new DHCP server is missing
- D. Auto-QoS is blocking DHCP traffic.
- E. 802.tX is blocking DHCP traffic

**Answer:** BC

### NEW QUESTION 486

What is the administrative distance of an EIGRP summary route?

- A. 90
- B. 5
- C. 1
- D. 170

**Answer:** B

### NEW QUESTION 487

What type of route filtering is occurring on R6?

- A. Distribute-list using an ACL
- B. Distribute-list using a prefix-list
- C. Distribute-list using a route-map
- D. An ACL using a distance or 255

**Answer:** A

**NEW QUESTION 488**

Which two statements about route targets that are configured with VRF-Lite are true? (Choose two)

- A. Route targets uniquely identify the customer routing table
- B. Route targets control the import and export of routes into a customer routing table
- C. Route targets are supported only when BGP is configured
- D. When IS-IS is configured, route targets identify the circuit level in which the customer resides
- E. When BGP is configured, route targets are transmitted as BGP standard communities
- F. Route targets allow customers to be assigned overlapping addresses

**Answer:** BC

**NEW QUESTION 493**

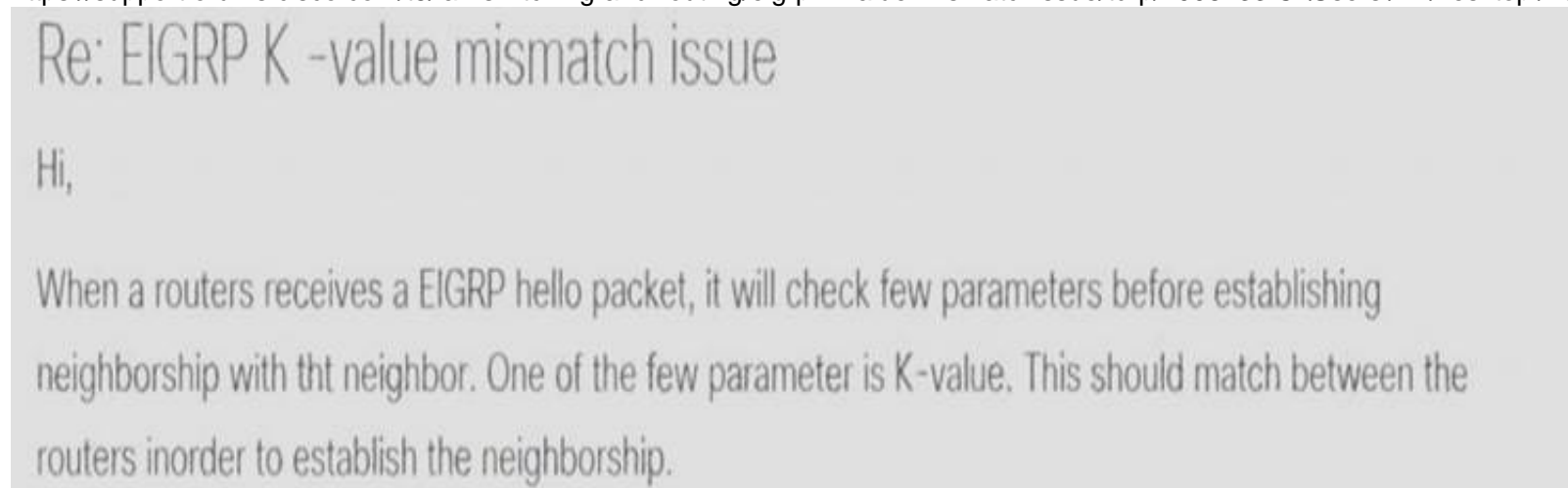
What happens when two EIGRP peers have mismatched K values?

- A. The two devices are unable to correctly perform equal-cost routing
- B. The two devices fail to perform EIGRP graceful shutdown when one device goes down
- C. The two devices fail to form an adjacency
- D. The two devices are unable to correctly perform unequal-cost load balancing

**Answer:** C

**Explanation:** <http://www.ciscopress.com/articles/article.asp?p=27839>

<https://supportforums.cisco.com/t5/lan-switching-and-routing/eigrp-k-value-mismatch-issue/td-p/1008233> C:\Users\wk\Desktop\mudassar\Untitled.jpg

**NEW QUESTION 496**

What show command is used here?



- A. show tcp brief
- B. show tcp brief all
- C. show tcp brief numeric
- D. show tcp brief ip

**Answer:** C

**NEW QUESTION 498**

Which criterion does the BGP maximum paths feature use for load balancing?

- A. MED
- B. local preference
- C. weight
- D. router ID

**Answer:** C

**Explanation:** Also MED and local preference should be considered.

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute\\_bgp/configuration/xr-16/irgxe-16-book/ibgp-multipath.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_bgp/configuration/xr-16/irgxe-16-book/ibgp-multipath.html) <https://learningnetwork.cisco.com/docs/DOC-11233>

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As you may know, BGP selects only one best path for each prefix it receives then installs in the IP routing table. So whenever we need load-balancing across different paths, we have to enable BGP multipath, by the "maximum-paths" command.

We can select iBGP and eBGP paths altogether as the best, that is called eiBGP multipath. It means, for example, CE1 is multihomed to PE1 and PE2 via BGP. PE1 has a best path to CE1, PE1 can still use PE2 to CE1 as a parallel path to reach CE1, so one path is eBGP (to CE1) and another path is iBGP (to PE1 to CE1) this is called eiBGP multipath.

There's a criteria and several conditions that BGP checks before selecting additional paths in parallel with the best one. The following attributes of parallel paths have to match with the best path:

- Weight
- Local Pref
- Origin
- AS-Path Length
- MED
- Neighbor AS or Sub-AS match for (eBGP multipath)
- AS-PATH match (for eiBGP multipath)
- IGP metric to BGP next hop

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For multiple paths to the same destination to be considered as multipaths, the following criteria must be met:

- All attributes must be the same. The attributes include weight, local preference, autonomous system path (entire attribute and not just length), origin code, Multi Exit Discriminator (MED), and Interior Gateway Protocol (IGP) distance.
- The next hop router for each multipath must be different.

Even if the criteria are met and multiple paths are considered multipaths, the BGP speaking router will still designate one of the multipaths as the best path and advertise this best path to its neighbors.

**NEW QUESTION 501**

Which two debug commands can you use to view issues with CHAP and PAP authentication? (Choose two.)

- A. DebugTACACS
- B. Debug radius
- C. Debug AAA authentication
- D. Debug PPP negotiation
- E. Debug PPPauthentication

**Answer:** DE

**NEW QUESTION 505**

Which location is traffic from IP SLAs?

- A. core edge
- B. access edge
- C. WAN edge
- D. Distribution edge
- E. User edge

**Answer:** C

**NEW QUESTION 509**

A network engineer executes the show IP Cache flow command, Which two types of information are displayed in the report that is generated? (Choose two.)

- A. flow export statistics
- B. SMLS flow traffic
- C. flow samples for specific protocols
- D. top talkers
- E. IP packet distribution

**Answer:** AC

**NEW QUESTION 510**

What are two BGP neighbourship states?(choose two)

- A. Full
- B. Open Sent
- C. 2WAY
- D. Connect
- E. DROTHER
- F. Stuck in active

**Answer:** BD

**NEW QUESTION 511**

You have implemented mutual route redistribution between OSPF and EIGRP on a border router.

When checking the routing table on one of the OSPF routers within the OSPF routing domain, you are seeing some, but not all of the expected routes. Which two things should you verify to troubleshoot this problem? (Choose two.)

???????????

- A. The border router is using a proper seed metric for OSPF.
- B. The border router is using a proper seed metric for EIGRP.
- C. The administrative distance is set for OSPF and EIGRP
- D. The missing EIGRP routes are present in the routing table of the border router
- E. The subnet keyword on the border router in the redistribute EIGRP command

**Answer:** DE

**NEW QUESTION 515**

What to configure on routes if TACACS+ authentication fails? (Choose two)

- A. Configure local username and password
- B. Include 'local' keyword in AAA config

**Answer:** AB

**NEW QUESTION 516**

Which two actions are common methods for migrating a network from one network protocol to another? (choose two)

- A. Channing the relative administrative distance of the two routing protocols.
- B. Channing the network Ip address and bringing up the addresses using the new routing protocol
- C. removing the currency protocol and implementing the new routing protocol
- D. redistributing from the current routing protocol to the new routing protocol
- E. disabling IP routing globally and implement the new routing protocol

**Answer:** BD

**NEW QUESTION 520**

Which two statements about PPPOE packet types are true? (Choose two)

- A. PADI is an initialization packet sent as a broadcast message
- B. PADO is a unicast reply packet sent to the client.
- C. PADR is a broadcast packet sent from the client to request a new server.
- D. PADR is a broadcast reply packet sent to the client.
- E. PADR is a unicast confirmation packet sent to the client.

**Answer:** AC

**NEW QUESTION 523**

Which types of LSAs are present in the stub area?

- A. LSA type 1 and 2
- B. LSA type 1. 2. 3, 4. and 5
- C. LSA type 1 2, and 3
- D. LSA type 3 and 5

**Answer:** C

**NEW QUESTION 527**

A network engineer applies the command `ip tcp adjust-mss <bytes>` under interface configuration mode. What is the result?

- A. The probability of SYN packet truncation is increased
- B. The optimum MTU value for the interface is set
- C. The UDP session is inversely affected
- D. The probability of dropped or segmented TCP packets is decreased

**Answer:** B

**NEW QUESTION 528**

What is the maximum number of hops on a router that RIPvng advertises as reachable?

- A. 15
- B. 30
- C. 99
- D. 255

**Answer:** A

**NEW QUESTION 532**

Which two options are components of a dual stack? (Choose two.)

- A. IPv6 traffic
- B. IPv4 traffic
- C. Layer 3 switch
- D. EIGRP
- E. Layer 2 switch
- F. OSPF

**Answer:** AB

**NEW QUESTION 537**

Which two packet type can an EIGRP router send when a route goes into the Active state?(choose two)

- A. reply
- B. request
- C. hello
- D. update
- E. query

**Answer:** AE

**Explanation:** <https://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol/eigrp/13669-1.html#p>  
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this case, it is unicast back to the successor that originated the query. Replies are always sent in response to queries to indicate to the originator that it does not need to go into Active state because it has feasible successors. Replies are unicast to the originator of the query. Both queries and replies are transmitted reliably.

- The subnet or network of the source IP address is on the same subnet or network of the next-hop IP address of the routed packet.
- The datagram is not source-routed.
- The kernel is configured to send redirects. (By default, Cisco routers send ICMP redirects. The interface subcommand `no ip redirects` can be used to disable ICMP redirects.)

**NEW QUESTION 538**

Regarding a diagram with 3 routers (H1(with IPv6 IP and Loopback 1.1.1.1) +R1 (with IP IPv6 and Loopback 2.2.2.2) +R2 (with IP IPv6 and Loopback 3.3.3.3) running with EIGRP 100 on both routers and what command you will implement so that you will see the loopback IP of R2 to be advertised at H1

- A. H1(config t)#router eigrp 100 H1(config t)#no stub only
- B. R2(config t)#router eigrp 100 R2(config t)#no stub receive only
- C. H1(config t)#ipv6 router eigrp 100 H1(config t)#no stub only
- D. R2(config t)#ipv6 router eigrp 100 R2(config t)#no stub only

**Answer:** A

**NEW QUESTION 541**

Which LSA type in OSPFv3 is used for link-local u



- A. Link LSA type 5
- B. Link LSA type 8
- C. Link LSA type 6
- D. Link LSA type 4

**Answer:** B

#### NEW QUESTION 544

What is the optimal location from which to execute a debug command that produces an excessive amount of information?

- A. vty lines
- B. SNMP commands
- C. A console port
- D. An AUX port

**Answer:** A

#### NEW QUESTION 546

Which two tasks must you perform to configure a BGP peer group?(Choose two)

- A. Configure the soft-update value
- B. Activate the default route
- C. Set the advertisement Interva
- D. Activate each neighbor
- E. Assign neighbors to the peer group

**Answer:** DE

#### NEW QUESTION 551

A network engineer is troubleshooting connectivity issues with a directly connected RIPng neighbor. Which command should directly connected RIPng neighbor adjacencies only?

- A. router# show ipv6 rip next-hops
- B. router# show ip rip neighbors
- C. router# show ipv6 routers
- D. router# show ipv6 rip database

**Answer:** A

#### NEW QUESTION 554

What does the following access list, which is applied on the external interface FastEthernet 1/0 of the perimeter router, accomplish?

```
router (config)#access-list 101 deny ip 10.0.0.0 0.255.255.255 any log
router (config)#access-list 101 deny ip 192.168.0.0 0.0.255.255 any log
router (config)#access-list 101 deny ip 172.16.0.0 0.15.255.255 any log
router (config)#access-list 101 permit ip any any
router (config)#interface fastEthernet 1/0
router (config-if)#ip access-group 101 in
```

- A. It prevents private internal addresses to be accessed directly from outside
- B. It filters incoming traffic from private address ranges 10 0 0 0-10 0 0 255, 172 16.0 0-172.31.255 255.192 168 0 0-192 168 255 255 and logs any intrusion attempts
- C. It prevents the internal network from being used in spoofed denial of service attacks and logs any exit to the Internet
- D. It filters incoming traffic from private addresses in order to prevent spoofing and logs any intrusion attempts

**Answer:** B

#### NEW QUESTION 559

Which adverse event can occur as a consequence of asymmetric routing on the network?

- A. vulnerability to a man-in the - middle attack
- B. inadvertent HSRP active router preemption
- C. errdisabled port
- D. unicast flooding

**Answer:** D

#### NEW QUESTION 561

Which STP feature can reduce TCNs on ports that are connected to end devices?



- A. BPDU guard
- B. Root guard
- C. PortFast
- D. BackboneFast

**Answer:** C

**NEW QUESTION 564**

Which two different configurations can you apply to a device to block incoming SSH access? (Choose two.)

- A. 

```
ipv6 access-list VTY-ACCESS-IN
sequence 10 deny tcp any any eq 22
sequence 20 permit ipv6 any any
interface Ethernet0/0
ip traffic-filter VTY-ACCESS-IN out
```
- B. 

```
ipv6 access-list VTY-ACCESS-IN
sequence 10 deny tcp any any eq 22
sequence 20 permit ipv6 any any
interface Ethernet0/0
ip traffic-filter VTY-ACCESS-IN in
```
- C. 

```
ipv6 access-list VTY-ACCESS-IN
sequence 10 deny tcp any any eq 22
sequence 20 permit ipv6 any any
line vty 0 15
ip access-class VTY-ACCESS-IN in
```
- D. 

```
ipv6 access-list VTY-ACCESS-IN
sequence 10 deny tcp any any eq 22
sequence 20 permit ipv6 any any
line vty 0 15
ip access-list VTY-ACCESS-IN out
```
- E. 

```
ipv6 access-list VTY-ACCESS-IN
sequence 10 deny tcp any any eq 22
sequence 20 permit ipv6 any any
interface Ethernet0/0
ip traffic-filter VTY-ACCESS-IN out
```

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

**Answer:** BC

**NEW QUESTION 565**

Engineer has to enable RIP on a link. Where he will issue the command?

- A. Ipv6
- B. Global
- C. Router sub command
- D. Interface sub command

**Answer:** C

**NEW QUESTION 570**

Drag and drop the statement about device security from the left on the correct features on the right.

- It designates the permitted management interfaces on the device.
- It is enabled only when an interface is configured.
- It protects the device against DoS attacks.
- It requires only a single command to configure.
- It supports packet forwarding by reducing the load on the device.
- It uses QoS to limit the load on the device.

**COPP**

**MPP**

**Answer:**

**Explanation:**

- It designates the permitted management interfaces on the device.
- It is enabled only when an interface is configured.
- It protects the device against DoS attacks.
- It requires only a single command to configure.
- It supports packet forwarding by reducing the load on the device.
- It uses QoS to limit the load on the device.

**COPP**

**MPP**

**NEW QUESTION 571**

Which two LSA types were introduced to support OSPF for IPV6?

- A. type 9
- B. type 7
- C. type 8
- D. type 10
- E. type 5

**Answer:** AC

**NEW QUESTION 573**

Which protocol does VRF-Lite support?

- A. IS-IS



- B. ODR
- C. EIGRP
- D. IGRP

**Answer: C**

#### NEW QUESTION 575

Which two statements about the enable secret and enable password commands are true?( Choose two)

- A. If both commands are missing from the global configuration, vty lines use the console password
- B. The enable secret command overrides enable password
- C. The enable password command has a stronger encryption algorithm than enable secret
- D. The enable secret command is backwards-compatible with more versions of IOS
- E. The enable secret and enable password commands must be used together

**Answer: AB**

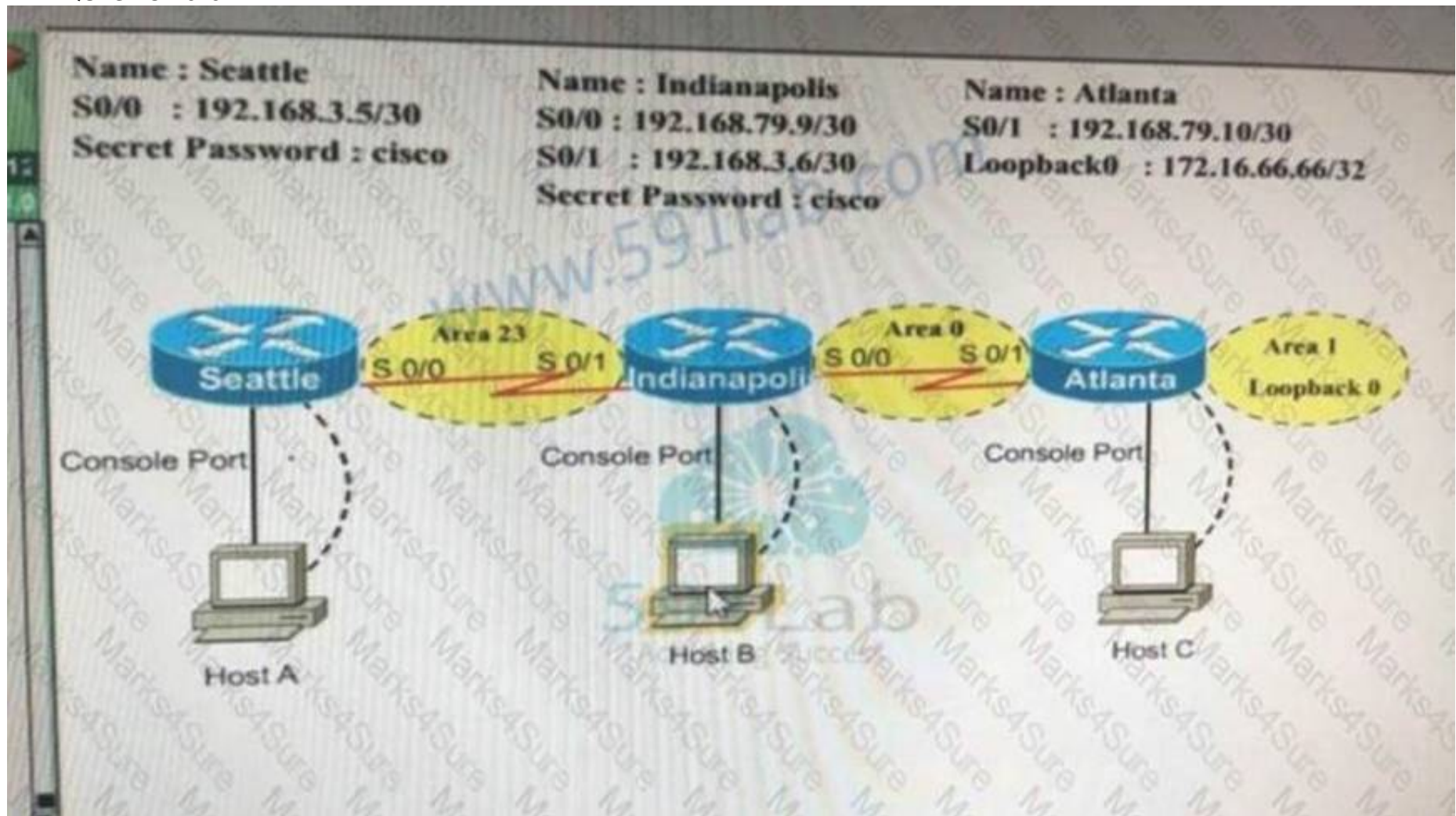
#### NEW QUESTION 577

Which password takes precedence if you configure multiple passwords for Telnet connections to a Cisco IOS device?

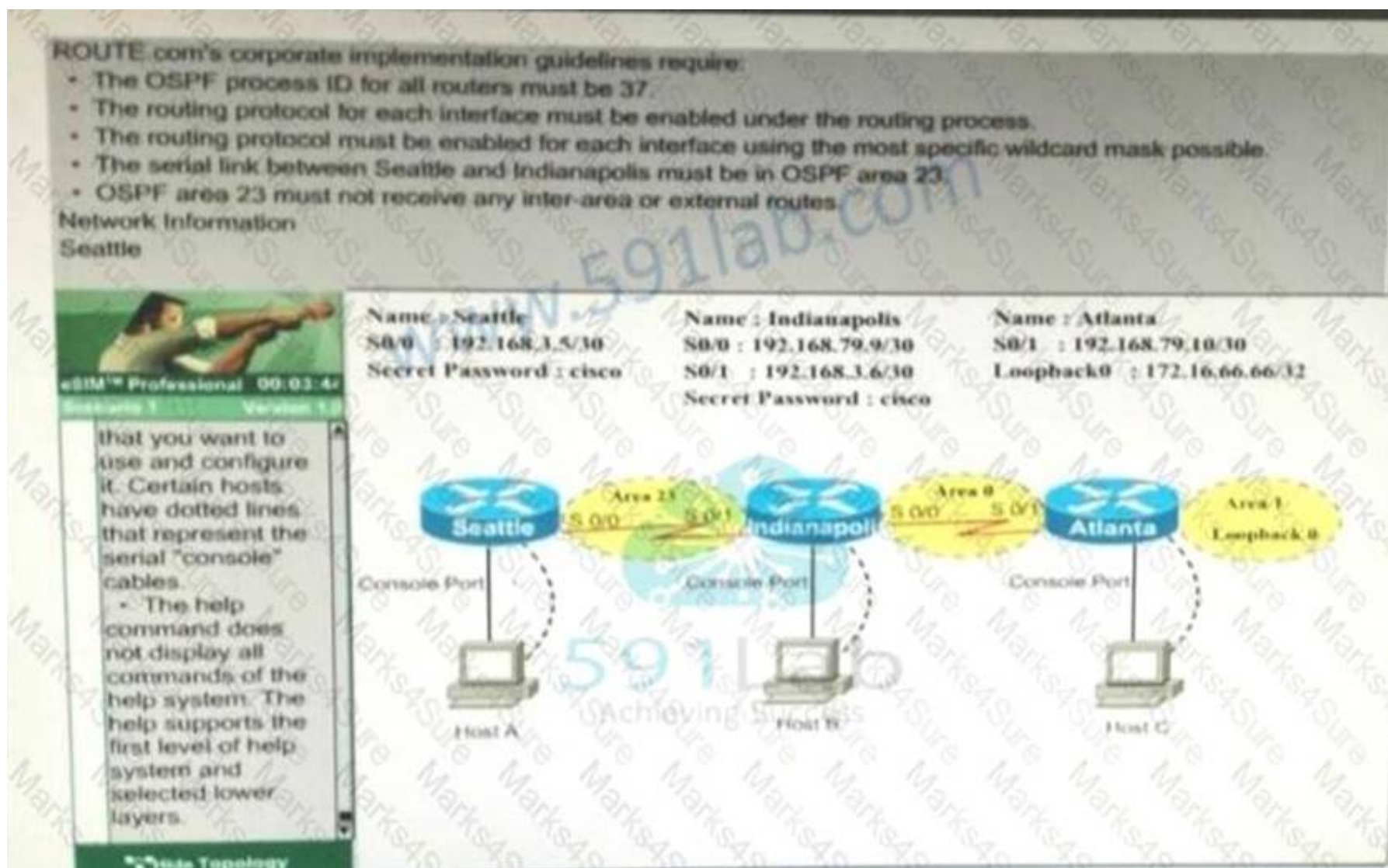
- A. console line password
- B. enable secret password
- C. enable password
- D. aux line
- E. password

**Answer: B**

#### NEW QUESTION 578







**Answer:**

**Explanation:** Always remember the Process id and area , in this question process id is 37 and OSPF area is 23 Process id 37 area 23 Indianapolis

at first go to HOST A and write this configuration Seattle(config)#router ospf 37

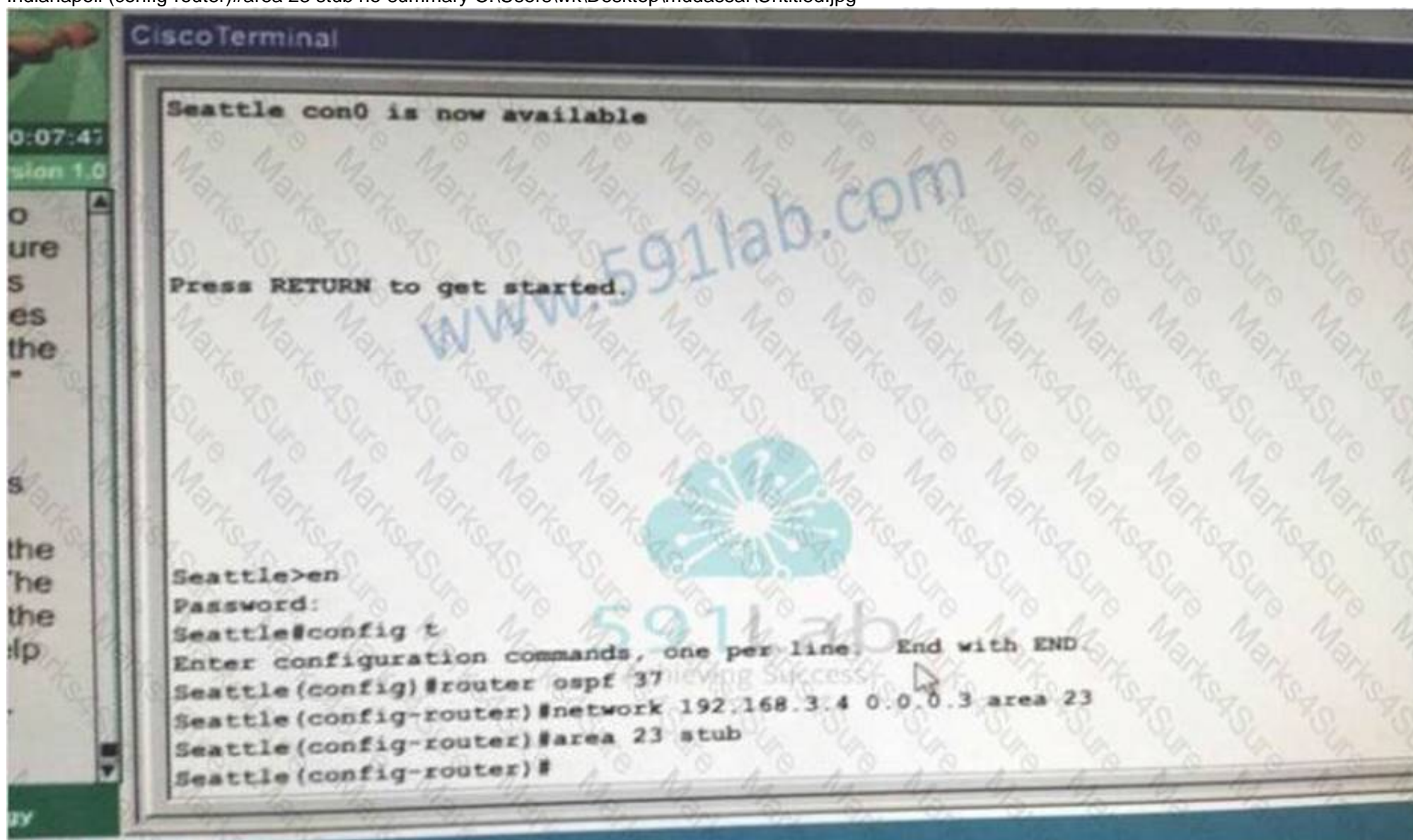
Seattle (config-router)#network 192.168.3.4 0.0.0.3 area 23 Seattle (config-router)#area 23 stub

For Host B

Indianapolis #configure terminal Indianapolis (config)#router ospf 37

Indianapolis (config-router)#network 192.168.3.4 0.0.0.3 area 23

Indianapolis (config-router)#area 23 stub no-summary C:\Users\wk\Desktop\mudassar\Untitled.jpg



Show ip route in host A

To verify the lab O\* this one should be there. C:\Users\wk\Desktop\mudassar\Untitled.jpg



```

CiscoTerminal

Seattle(config)#router ospf 37
Seattle(config-router)#network 192.168.3.4 0.0.0.3 area 23
Seattle(config-router)#area 23 stub
Seattle(config-router)#end
00:00:09:45: %SYS-5-CONFIG_I: Configured from console by console
Seattle#copy run start
Destination filename [startup-config]?
Building configuration...

[OK]
Seattle#show ip route
Codes: C - connected, S - static, I - IGRP, 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, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default
       U - per-user static route, o - ODR

Gateway of last resort is 192.168.3.6 to network 0.0.0.0

192.168.3.0/30 is subnetted, 1 subnets
C      192.168.3.4 is directly connected, Serial0/0
O* IA   0.0.0.0/0 [110/563] via 192.168.3.6, 00:00:17, Serial0/0
Seattle#
  
```

**NEW QUESTION 579**

Refer to the exhibit.

**center#show ip cef 45.0.0.0**  
 45.0.0.0/8, version 184, 0 packets, 0 bytes  
 via 1.1.1.1, Tunnel0, 0 dependencies  
 next hop 1.1.1.1, Tunnel0  
**valid punt adjacency**

**CEF Packets passes on to next switching layer**

Slot	No_adj	No_encap	Unsupported	Redirect	Receive	Bad_ttl	Options
RP	0	0	0	0	5700	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0

What is indicated by the show ip cef command for an address?

- A. CEF cannot switch packet for this route and drops it
- B. CEF is unable to get routing information for this route
- C. CEF cannot switch packet for this route and passes it to the next best switching method
- D. A valid entry and is punted to hardware-based forwarding

**Answer: C**

**NEW QUESTION 583**

Which statement is true about an edge interface in relation to the Cisco Easy Virtual Network?

- A. An edge interface is used to differentiate VRF instances.
- B. An edge interface connects to end devices such as hosts and servers that are VRF-aware.

- C. An edge interface connects a user device to the EVN while defining the EVN boundaries.
- D. An edge interface is configured using the vnet trunk command under the switched virtual interface.

**Answer:** C

#### NEW QUESTION 588

A network engineer is configuring two dedicated internet connection within the internet nodule.

One connection is primary connection to all wired business communication. While the other is the primary connection for all customer wireless traffic. If one of the links goes down, the affected traffic needs to be redirected to the redundant link. Which current technology should be deployed to monitor the scenario?

- A. PBR
- B. IP QoS
- C. MMC
- D. IP SLAs
- E. IP SAA

**Answer:** A

#### NEW QUESTION 592

Which feature can be used to reduce the number of ICMP unreachable messages egressing a router?

- A. ICMP rate-limiting
- B. asymmetric routing
- C. URPF
- D. ip unreachable command

**Answer:** A

#### NEW QUESTION 596

Which two options are benefits of BGP peer groups?( Choose two)

- A. They can optimize backdoor routes
- B. They support groups of paths
- C. A configuration change can be applied simultaneously to all peers in the peer group
- D. Each neighbor in a peer group can have different inbound BGP policies
- E. They can be updated via multicast
- F. They use soft updates to minimize bandwidth consumption

**Answer:** CD

#### NEW QUESTION 600

What is the hop count is advertised for an unreachable network by a RIP router that uses poison reverse?

- A. 16
- B. 255
- C. 15

**Answer:** A

#### NEW QUESTION 604

Which three NTP operating modes must the ntp trusted-key command be configured on for authentication to operate properly?(Choose three)

- A. client
- B. interface
- C. stratum
- D. server
- E. peer
- F. broadcast

**Answer:** ADF

#### NEW QUESTION 607

Which two statements about GRE tunnel keys are true? (Choose two.)

- A. The key ID must be the same on each device.
- B. They prevent the injection of unwanted frames.
- C. They prevent the injection of unwanted packets.
- D. They must be stored to a keychain.
- E. They provide the highest level of security that is available.

**Answer:** AC

#### NEW QUESTION 611

Refer to the exhibit.

Which statements describes the effect of this configuration on a Cisoc router?

```
ip sla 100
icmp echo 10.0.0.1 source-ip 10.0.0.2
frequency 30
ip sla schedule 100 life forever start-time now
!
track 1 ip sla 100 reachability
!
ip route 0.0.0.0 0.0.0.0 10.0.0.1 track 1
ip route 0.0.0.0 0.0.0.0 192.168.0.1 2
```

- A. The default router through 10.0.1 is never used.
- B. The default router through 192.168.0.1 is used only when 10.0.0 is unreachable.
- C. The default router through 10.0.0.1 only when 192.168.0.1 is unreachable.
- D. The default router through 192.168.0.1 is never used.

**Answer: B**

#### NEW QUESTION 613

Which command prevents routes from sending routing updates through a router interface?

- A. distribute-list in
- B. passive-interface
- C. default-metric
- D. distribute-list out

**Answer: B**

#### NEW QUESTION 616

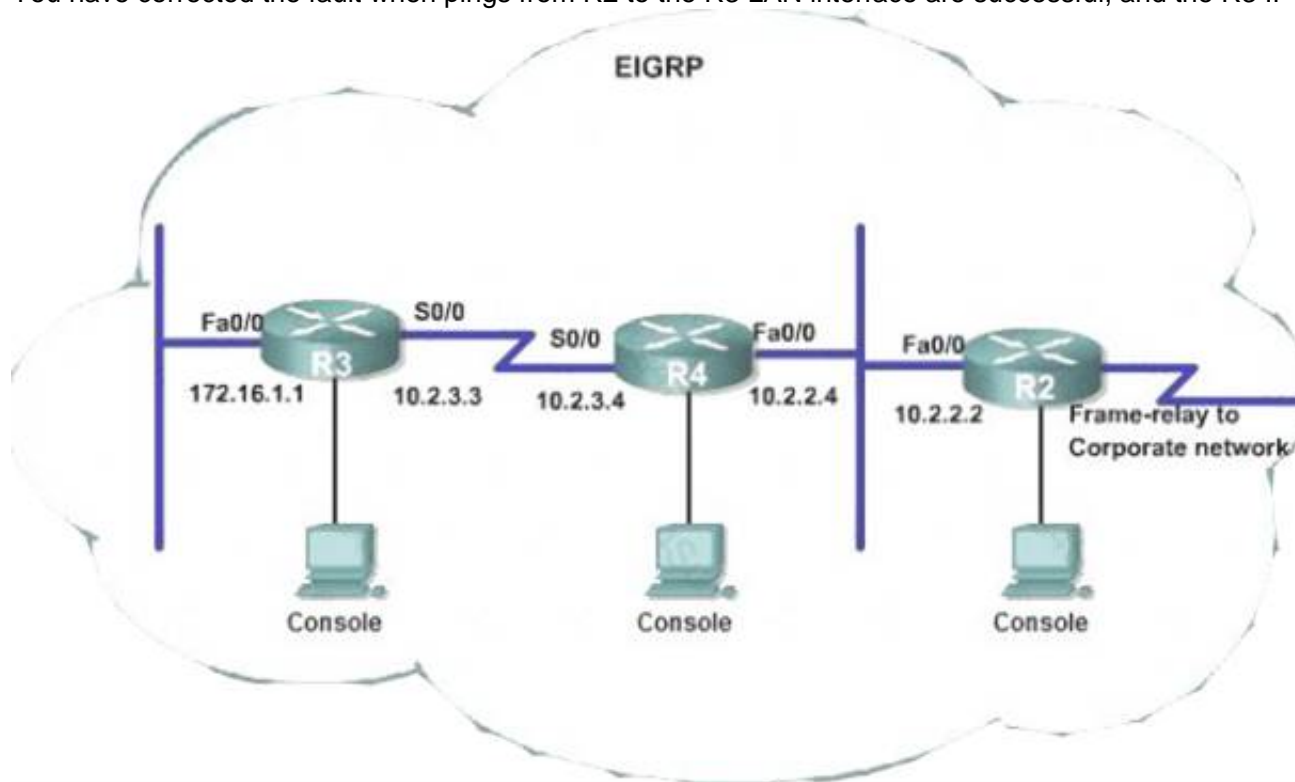
Which three algorithms can you configure with the ip cef load-sharing algorithm command?(choose three)

- A. per-packed
- B. Tunnel
- C. per-destination
- D. Universal
- E. Per-source
- F. Include-port

**Answer: BDF**

#### NEW QUESTION 617

JS Industries has expanded their business with the addition of their first remote office. The remote office router (R3) was previously configured and all Corporate subnets were reachable from R3. JS Industries is interested in using route summarization along with the EIGRP Stub Routing feature to increase network stability while reducing the memory usage and bandwidth utilization to R3. Another network professional was tasked with implementing this solution. However, in the process of configuring EIGRP stub routing connectivity with the remote network devices off of R3 has been lost. Currently EIGRP is configured on all routers R2, R3, and R4 in the network. Your task is to identify and resolve the cause of connectivity failure with the remote office router R3. Once the issue has been resolved you should complete the task by configuring route summarization only to the remote office router R3. You have corrected the fault when pings from R2 to the R3 LAN interface are successful, and the R3 IP routing table only contains 2 10.0.0.0 subnets.





```
R3
```

```
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
Press RETURN to get started!
R3>
```

```
.R4
```

```
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
Press RETURN to get started!
R4>
```



```

R2

% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
%LINK-3-UPDOWN: Interface Serial0/0, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0.1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0.1, changed state to up
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Press RETURN to get started!
R2>

```

**Answer:**

**Explanation:** First we have to figure out why R3 and R4 can not communicate with each other. Use the show running-config command on router R3.

```

R3#show run

<output omitted>
!
!
router eigrp 123
 network 10.0.0.0
 network 172.16.0.0
 no auto-summary
 eigrp stub receive-only
!
!
<output omitted>

```

Notice that R3 is configured as a stub receive-only router. The receive-only keyword will restrict the router from sharing any of its routes with any other router in that EIGRP autonomous system. This keyword will also prevent any type of route from being sent. Therefore we will remove this command and replace it with the eigrp stub command:

R3# configure terminal R3(config)# router eigrp 123 R3(config-router)# no eigrp stub receive-only R3(config-router)# eigrp stub R3(config-router)# end

Now R3 will send updates containing its connected and summary routes to other routers. Notice that the eigrp stub command equals to the eigrp stub connected summary because the connected and summary options are enabled by default.

Next we will configure router R3 so that it has only 2 subnets of 10.0.0.0 network. Use the show ip route command on R3 to view its routing table:

[ee1%255B5%255D.jpg]

```
R3#show ip route
Codes: C - connected, S - static, I - IGRP, 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, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

Gateway of last resort is not set

```

      10.0.0.0/8 is variably subnetted, 9 subnets, 2 masks
D      10.2.2.0/24 [90/30720] via 10.2.3.4, 00:00:06, Serial0/0
C      10.2.3.0/24 is directly connected, Serial0/1
D      10.2.4.0/24 [90/161280] via 10.2.3.4, 00:00:03, Serial0/0
D      10.2.5.0/24 [90/161280] via 10.2.3.4, 00:00:03, Serial0/0
D      10.2.6.0/24 [90/161280] via 10.2.3.4, 00:00:03, Serial0/0
D      10.2.7.0/24 [90/161280] via 10.2.3.4, 00:00:03, Serial0/0
D      10.2.8.0/24 [90/161280] via 10.2.3.4, 00:00:03, Serial0/0
D      10.2.9.0/24 [90/161280] via 10.2.3.4, 00:00:03, Serial0/0
      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
D      172.16.0.0/16 is a summary, 02:04:06, Null0
C      172.16.1.0/24 is directly connected, FastEthernet0/0
```

Because we want the routing table of R3 only have 2 subnets so we have to summary sub-networks at the interface which is connected with R3, the s0/0 interface of R4.

There is one interesting thing about the output of the show ip route shown above: the 10.2.3.0/24, which is a directly connected network of R3. We can't get rid of it in the routing table no matter what technique we use to summary the networks. Therefore, to make the routing table of R3 has only 2 subnets we have to summary other subnets into one subnet.

In the output if we don't see the summary line (like 10.0.0.0/8 is a summary...) then we should use the command ip summary-address eigrp 123 10.2.0.0 255.255.0.0 so that all the ping can work well.

In conclusion, we will use the ip summary-address eigrp 123 10.2.0.0 255.255.0.0 at the interface s0/0 of R4 to summary.

R4> enable R4# conf t

R4(config)# interface s0/0 R4(config-if)# ip summary-address eigrp 123 10.2.0.0 255.255.0.0

Now we jump back to R3 and use the show ip route command to verify the effect, the output is shown below: [ee2%255B5%255D.jpg]

```
R3#show ip route
Codes: C - connected, S - static, I - IGRP, 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, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

Gateway of last resort is not set

```

      10.0.0.0/8 is variably subnetted, 3 subnets, 3 masks
D      10.0.0.0/8 is a summary, 00:18:43, Null0
D      10.2.0.0/16 [90/161280] via 10.2.3.4, 00:00:11, Serial0/0
C      10.2.3.0/24 is directly connected, Serial0/1
      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
D      172.16.0.0/16 is a summary, 02:04:06, Null0
C      172.16.1.0/24 is directly connected, FastEthernet0/0
```

Note: Please notice that the IP addresses and the subnet masks in your real exam might be different so you might use different ones to solve this question.

Just for your information, notice that if you use another network than 10.0.0.0/8 to summary, for example, if you use the command ip summary-address eigrp 123 10.2.0.0 255.255.0.0 you will leave a /16 network in the output of the show ip route command.

[ee3%255B5%255D.jpg]



```
R3#show ip route
Codes: C - connected, S - static, I - IGRP, 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, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

Gateway of last resort is not set

```
10.0.0.0/8 is variably subnetted, 3 subnets, 3 masks
D    10.0.0.0/8 is a summary, 00:18:43, Null0
D    10.2.0.0/16 [90/161280] via 10.2.3.4, 00:00:11, Serial0/0
C    10.2.3.0/24 is directly connected, Serial0/1
172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
D    172.16.0.0/16 is a summary, 02:04:06, Null0
C    172.16.1.0/24 is directly connected, FastEthernet0/0
```

But in your real exam, if you don't see the line "10.0.0.0/8 is a summary, Null0" then you can summarize using the network 10.2.0.0/16. This summarization is better because all the pings can work well.

Finally don't forget to use the copy run start command on routers R3 and R4 to save the configurations. R3(config-if)# end

R3# copy run start R4(config-if)# end R4# copy run start

If the "copy run start" command doesn't work then use "write memory".

#### NEW QUESTION 622

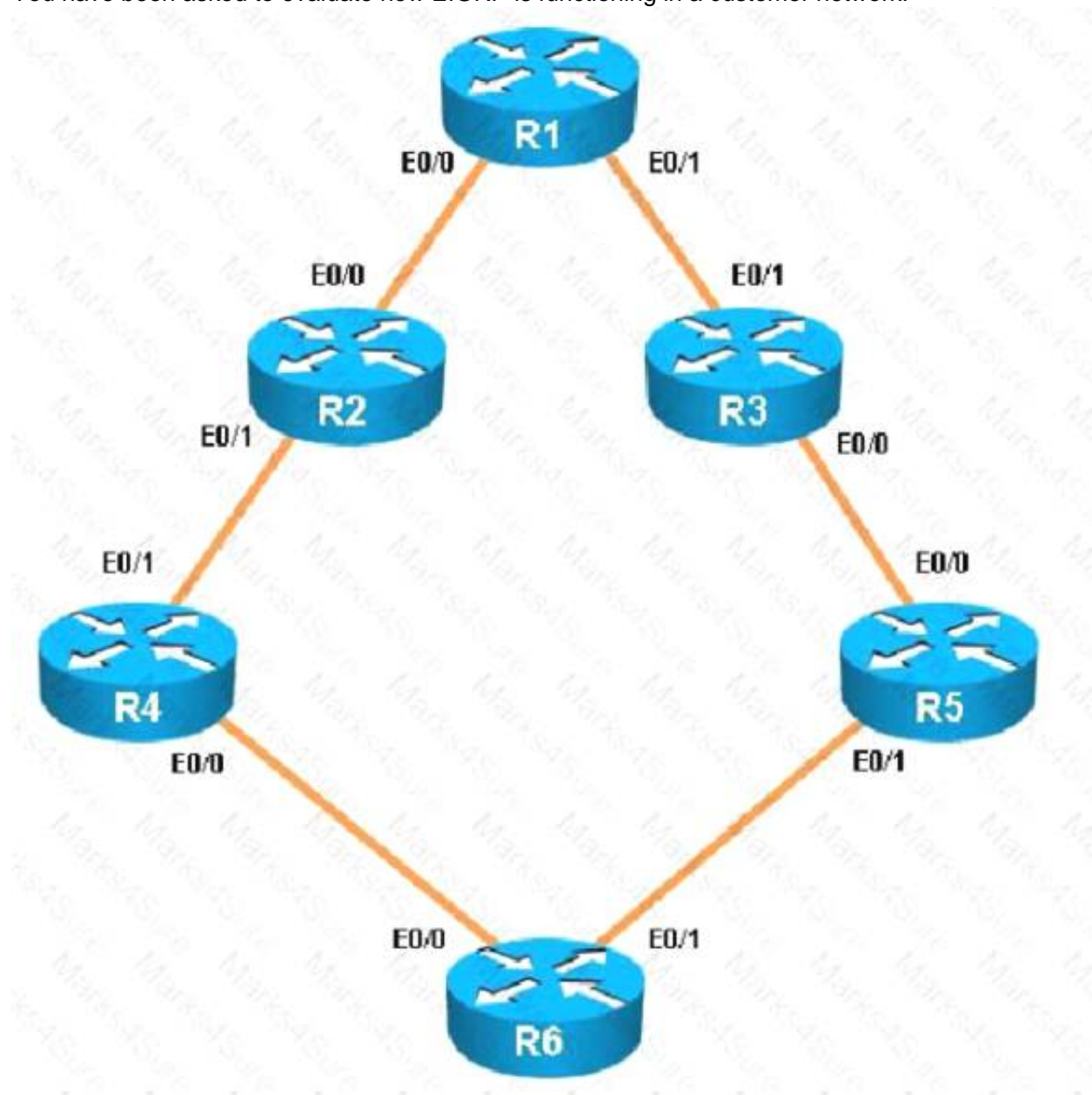
Which allowing website access between certain times?

- A. Filters using Time-Based ACLs
- B. x
- C. x
- D. x

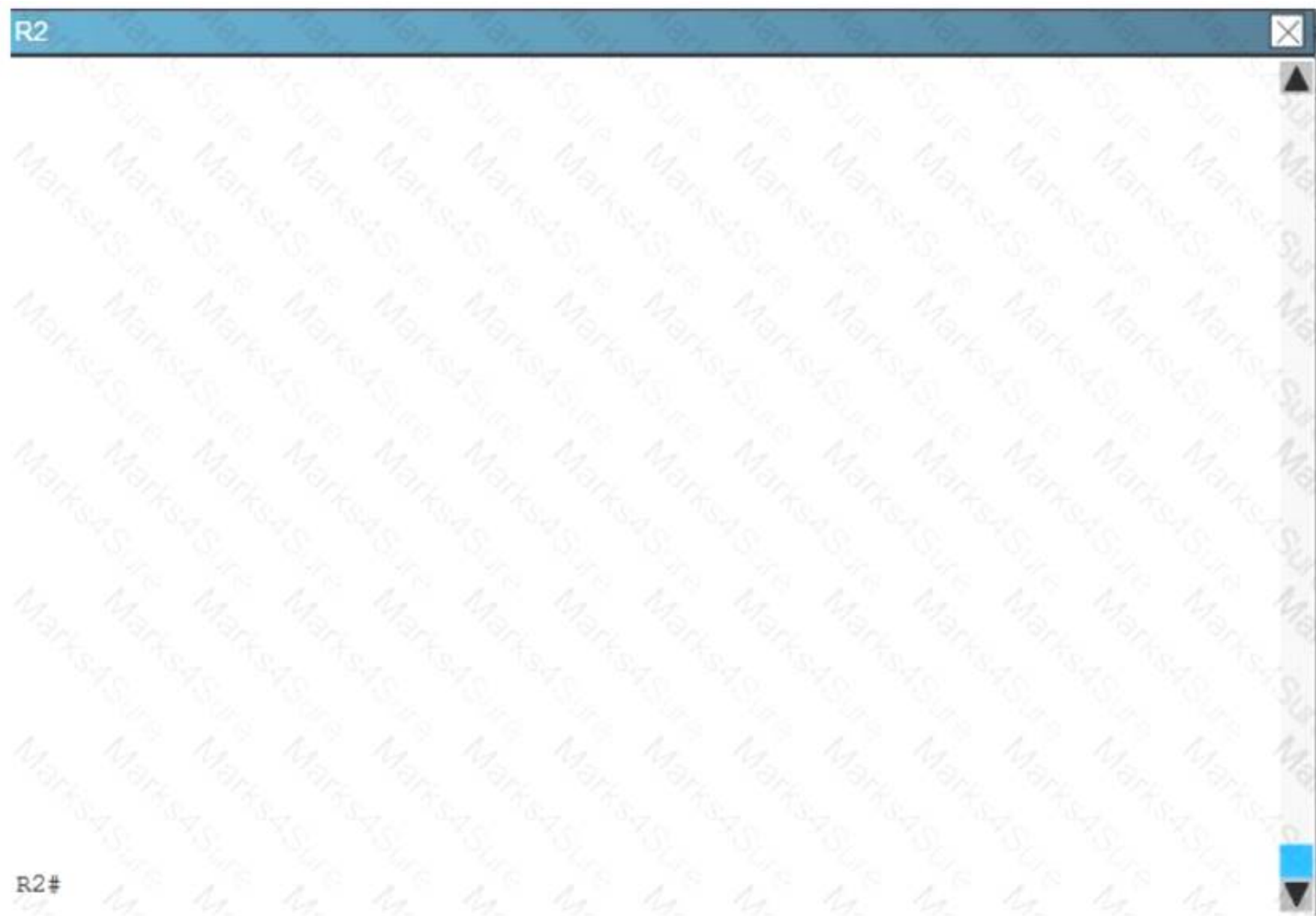
Answer: A

#### NEW QUESTION 623

You have been asked to evaluate how EIGRP is functioning in a customer network.





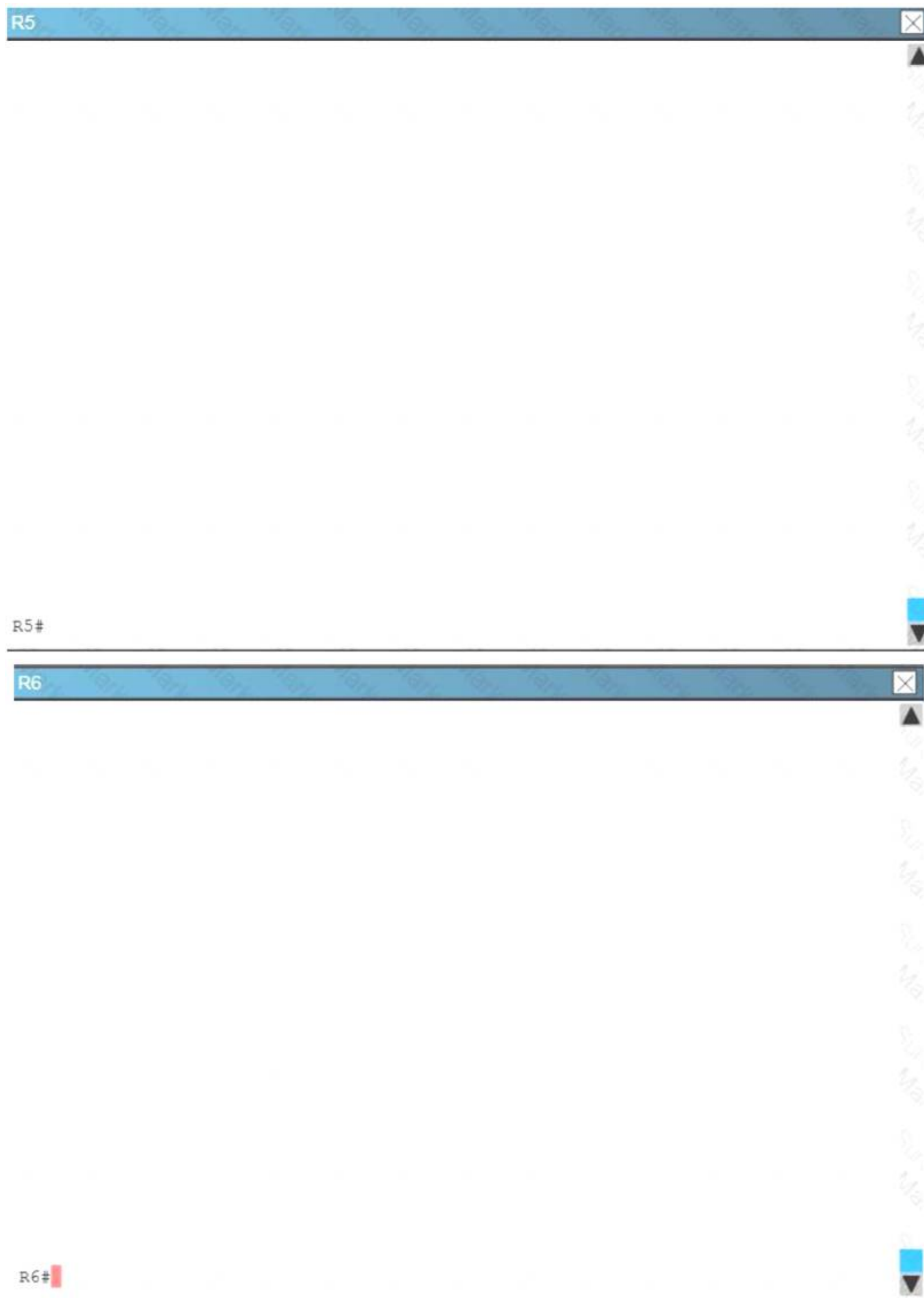


R3

R3#

R4

R4#



What percent of R1's interfaces bandwidth is EIGRP allowed to use?

- A. 10
- B. 20
- C. 30
- D. 40

**Answer: B**

**NEW QUESTION 625**

Which LSA types can exist only in an OSPF NSSA area?



- A. type 1 LSA
- B. type 3 LSA
- C. type 5 LSA
- D. type 7 LSA

Answer: D

NEW QUESTION 627

Drag and drop the statements about device security from the left onto the correct description on the right. Select and Place:

It designates the permitted management interfaces on the device.

It is enabled only when an interface is configured.

It protects the device against DoS attacks.

It requires only a single command to configure.

It supports packet forwarding by reducing the load on the device.

It uses QoS to limit the load on the device.

COPP

MPP

Answer:

Explanation:

It designates the permitted management interfaces on the device.

It is enabled only when an interface is configured.

It protects the device against DoS attacks.

It requires only a single command to configure.

It supports packet forwarding by reducing the load on the device.

It uses QoS to limit the load on the device.

COPP

It protects the device against DoS attacks.

It supports packet forwarding by reducing the load on the device.

It uses QoS to limit the load on the device.

MPP

It designates the permitted management interfaces on the device.

It is enabled only when an interface is configured.

It requires only a single command to configure.

NEW QUESTION 632

Which option must be configured on a target device to use time stamping to accurately represent response times using IP SLA ?

- A. Responder
- B. Jitter value
- C. TCP Connect
- D. ICMP Echo

Answer: A

NEW QUESTION 636

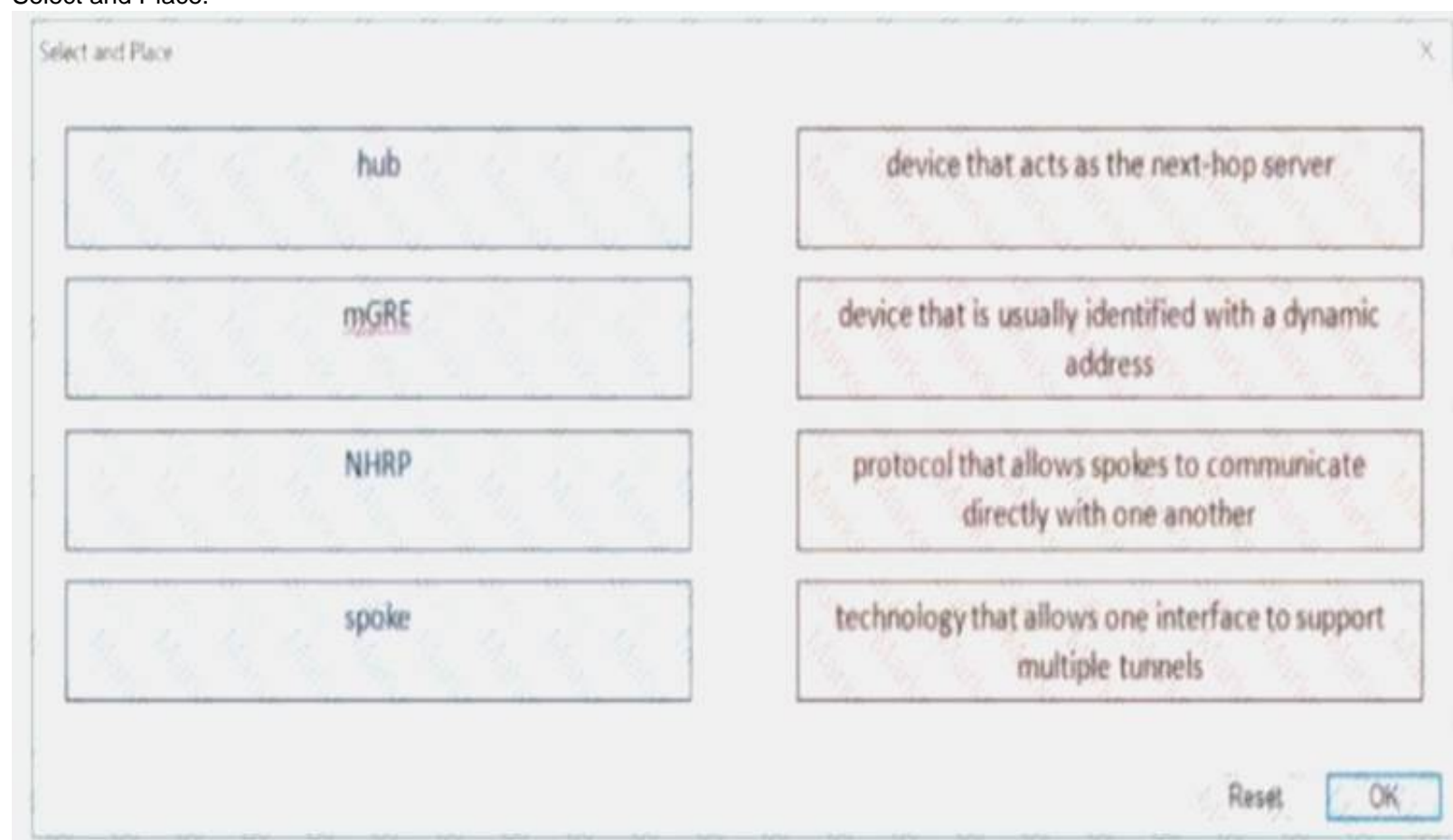
Which LSA type in OSPFv3 is used for link-local updates?

- A. Type 5
- B. Type 8
- C. Type 4
- D. Type 9

**Answer:** B

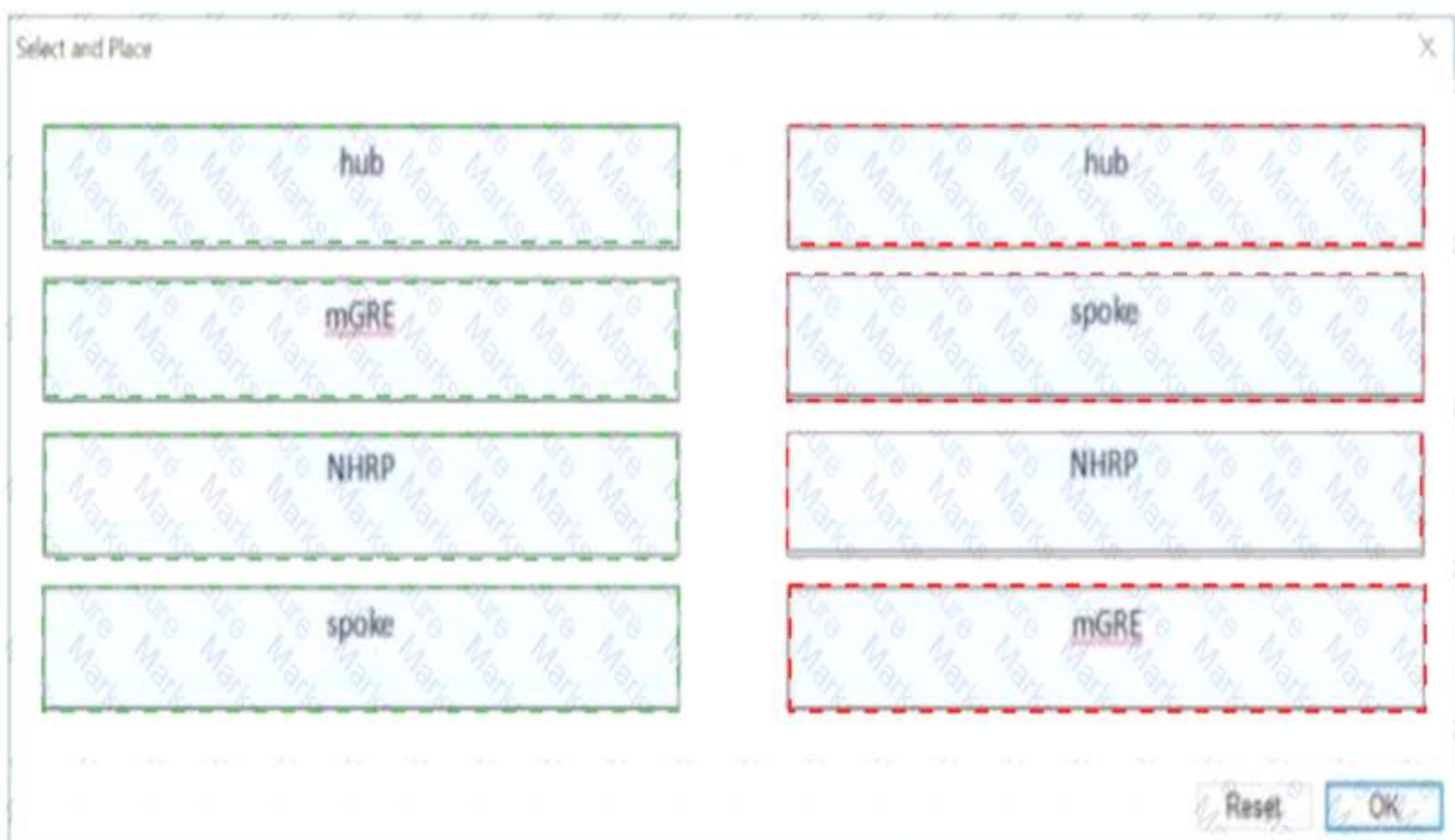
**NEW QUESTION 638**

Drag and drop the DMVPN components from the left onto the correct descriptions on the right  
Select and Place:



**Answer:**

**Explanation:**



**NEW QUESTION 642**

Which feature filters information at the interface level?

- A. prefix-list
- B. syslog
- C. conditional debugging



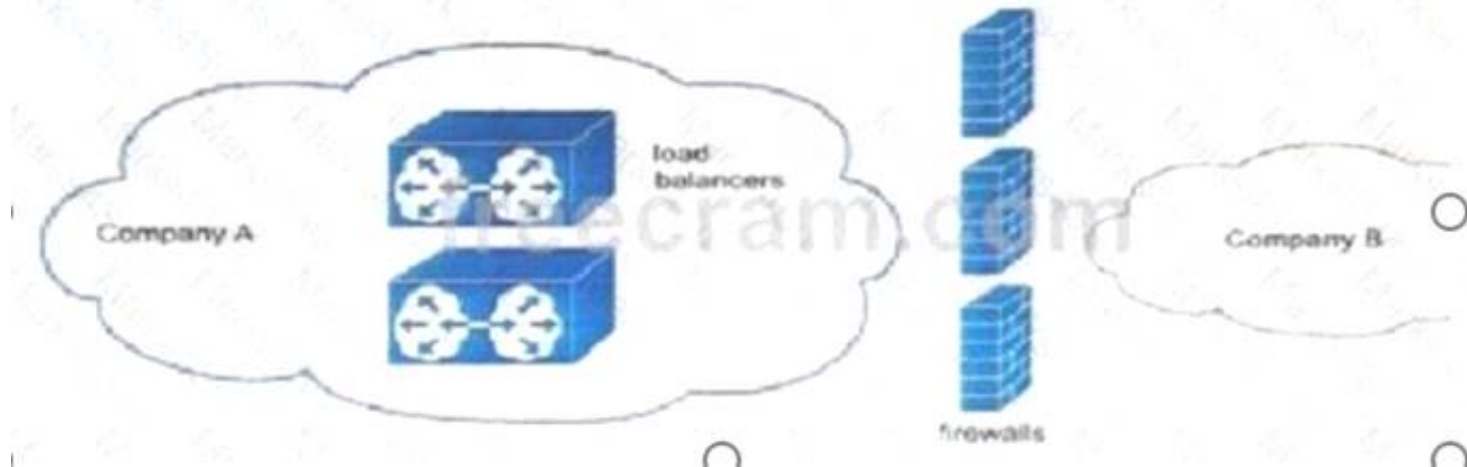
D. local logging

**Answer:** D

**NEW QUESTION 647**

Refer to the exhibit.

Which networking challenge is the most important issue to address to enable optimal communication between the networks at Company A and Company B?



- A. IPv4 MTU
- B. IPv4 fragmentation
- C. UDP latency
- D. unicast flooding
- E. asymmetric routing

**Answer:** E

**NEW QUESTION 652**

Which two protocols can cause TCP starvation? (Choose two)

- A. SMTP
- B. TFTP
- C. SNMP
- D. FTP
- E. HTTPS

**Answer:** AB

**NEW QUESTION 654**

After reviewing to EVN configuration, a network administrator notices that a predefined BVN, which is known as "vnet global" was configured. What is the purpose of this EVM?

- A. It defines the routing scope for each particular EVN edge interface.
- B. It aggregates and carries all dot1q tagged traffic.
- C. It refers to the global routing context and corresponds to the default RIB.
- D. It safeguards the virtual network that is preconfigured to avoid mismatched routing instances.

**Answer:** C

**NEW QUESTION 655**

You have a router that has some interface configured with 10Gb interface and gigabit interface. Which command do you use to optimize higher BW?

- A. (config)#router ospf 1(config-router)auto-cost reference-bandwidth 10000
- B. (config)#router ospf 1(config-router)auto-cost reference-bandwidth 1000
- C. (config)#int f0/0(config-int)auto-cost reference-bandwidth 1000
- D. (config)#int f0/0(config-int)auto-cost reference-bandwidth 10000

**Answer:** A

**NEW QUESTION 660**

Refer to the exhibit.





You notice that traffic from R1 to the 192.168.10.0/24 network prefers the path through R3 instead of the leastcost path through R2. What is the most likely reason for this router selection?

- A. OSPF prefers external routers over interarea router.
- B. OSPF prefers interarea routers over intra-area routers.
- C. OSPF prefers external routers over intra-area routers.
- D. OSPF prefers intra-area routers over interarea routers.

**Answer: D**

#### NEW QUESTION 661

Which two statements about NAT in a DMVPN environment are true?(choose two)

- A. A hub router can be behind a dynamic NAT on a device.
- B. Spoke routers can reside only on the public side of a NAT device.
- C. Two spokes can establish session among themselves using PAT behind different devices.
- D. A spoke router can be represented by a static NAT on a device.
- E. A hub router can use static NAT for its public IP address.

**Answer: DE**

#### NEW QUESTION 665

Which statement about Stateless and Stateful IPv6 autoconfiguration are true?

- A. Both Stateless and Stateful autoconfiguration require additional setup
- B. Stateless autoconfiguration requires no additional setup, whereas Stateful autoconfiguration requires additional setup
- C. Stateless autoconfiguration requires additional setup, whereas Stateful autoconfiguration requires no additional setup
- D. Both Stateless and Stateful autoconfiguration require no additional setup

**Answer: B**

#### NEW QUESTION 666

Which statement about stateless and stateful IPv6 auto configuration is true?

- A. Both stateless and stateful autoconfiguration require no additional setup
- B. Stateless autoconfiguration requires additional setup, whereas stateful autoconfiguration requires no additional setup
- C. Stateless autoconfiguration requires no additional setup, whereas stateful autoconfiguration requires additional setup
- D. Both stateless and stateful autoconfiguration require additional setup

**Answer: D**

#### NEW QUESTION 669

Which option is an invalid redistribute command option for redistributing routes from EIGRP into OSPF?

- A. route map
- B. tag
- C. access list
- D. metric

**Answer: C**

#### NEW QUESTION 671

Which two commands must be used to troubleshoot high memory usage for a process?

- A. router#show memory allocating-process table
- B. router#show memory processor statistics
- C. router#show memory events
- D. router#show memory summary

E. `router#show memory dead`

**Answer:** AD

#### NEW QUESTION 673

Which two statements about redistributing EIGRP into OSPF are true? (Choose two)

- A. The redistributed EIGRP routes appear as type 3 LSAs in the OSPF database
- B. The redistributed EIGRP routes appear as type 5 LSAs in the OSPF database
- C. The administrative distance of the redistributed routes is 170
- D. The redistributed EIGRP routes appear as OSPF external type 1
- E. The redistributed EIGRP routes as placed into an OSPF area whose area ID matches the EIGRP autonomous system number
- F. The redistributed EIGRP routes appear as OSPF external type 2 routes in the routing table

**Answer:** BF

#### NEW QUESTION 678

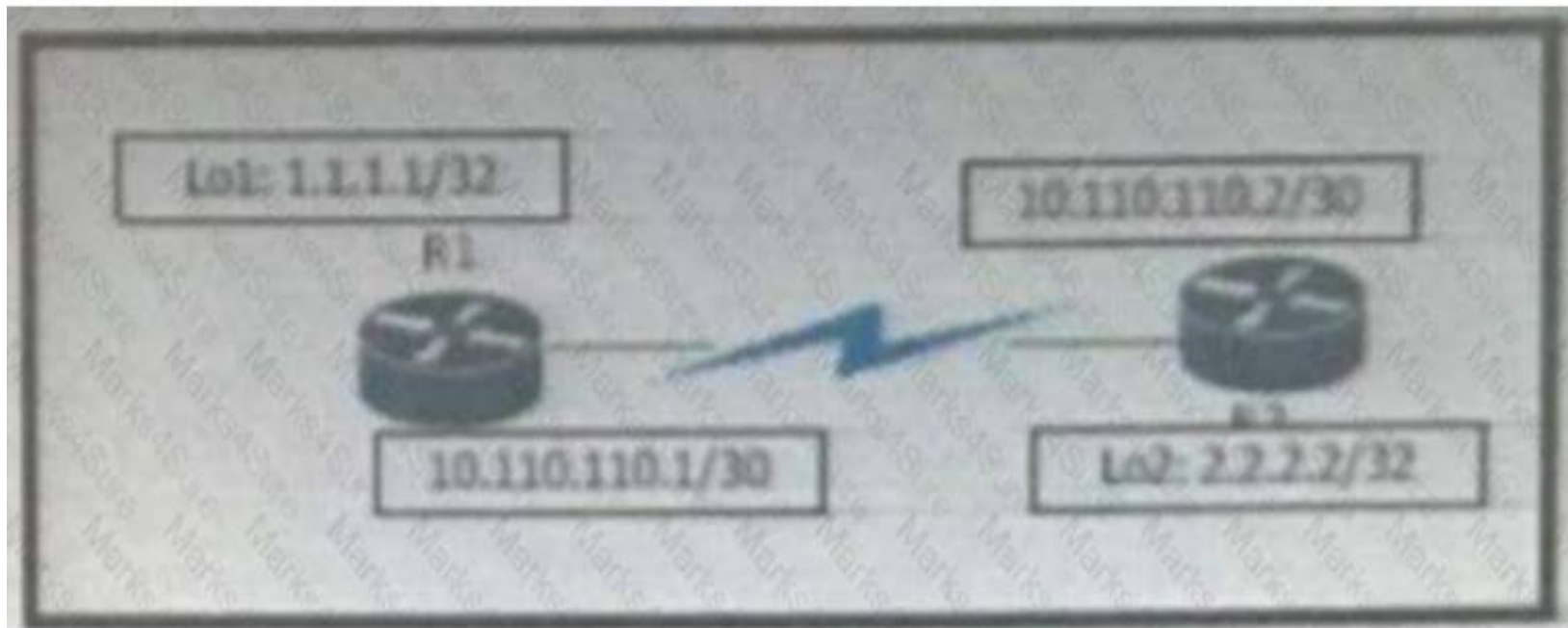
What does an Cisco router use as default username for CHAP authentication?

- A. chap
- B. Hostname
- C. cisco
- D. ppp

**Answer:** B

#### NEW QUESTION 683

Refer to the exhibit.



Router 1 cannot ping router 2 via the Frame Relay between them. Which two statements describe the problems? (Chooses two.)

- A. encapsulation is mismatched.
- B. Frame Relay map is configured.
- C. DLCI is active.
- D. DLCI is inactive or deleted.
- E. An access list is needed to allow ping.

**Answer:** AD

#### NEW QUESTION 686

If routers in a single area are configured with the same priority value, what value does a router use for the OSPF Router ID in the absence of a loopback interface?

- A. The lowest IP address of any physical interface
- B. The highest IP address of any physical interface
- C. The lowest IP address of any logical interface
- D. The highest IP address of any logical interface

**Answer:** B

#### NEW QUESTION 691

Which command will display all the EIGRP feasible successor routes known to a router?

- A. `show ip routes`
- B. `show ip eigrp summary`
- C. `show ip eigrp topology`
- D. `show ip eigrp adjacencies`

**Answer:** C

**NEW QUESTION 694**

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

- A. VRFs using MPLS require a trunk interface that uses EVN
- B. All EVNs within a trunk interface can share the same IP infrastructure
- C. Each EVN within a trunk interface must be configured separately
- D. Commands that are specified once under a trunk interface can be inherited by all EVNs
- E. VRF-Lite requires a trunk interface that uses EVN

**Answer:** BD

**NEW QUESTION 699**

You are configuring a Microsoft client to call a PPP server using CHAP. Only the client will be authenticated. But the clients password has expired and must be changed. Which ppp server configuration allows the call be completed?

- A. ppp authentication ma-chap-v2
- B. ppp authentication ms-cahp-v2 callin
- C. ppp authentication chap
- D. ppp authentication callin
- E. ppp authentication ms-chap callin

**Answer:** B

**NEW QUESTION 702**

Which two statements about DMVPN are true?

- A. Multicast traffic is not supported
- B. It requires full-mesh connectivity on the network
- C. IPsec encryption is not supported with statical addressed spokes
- D. It uses NHRP to create a mapping database of spoke addresses
- E. It supports dynamic addresses for spokes in a hub-and-spoke VPN topology

**Answer:** DE

**NEW QUESTION 706**

Refer to exhibit.

OI 2001:DB8:0:7::/64 [110/20]

via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0 OI 2001:DB8:0:8::/64 [110/100]

via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0 OI 2001:DB8:0:9::/64 [110/20]

When summarizing these routes, which route is the summarized route? via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0

- A. OI 2001:DB8::/48 [110/100] via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0
- B. OI 2001:DB8::/24 [110/100] via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0
- C. OI 2001:DB8::/32 [110/100] via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0
- D. OI 2001:DB8::/64 [110/100] via FE80::A8BB:CCFF:FE00:6F00, Ethernet0/0

**Answer:** A

**NEW QUESTION 709**

Refer to the exhibit.



```
R1
interface Loopback0
    ip address 172.16.1.1 255.255.255.255
interface FastEthernet0/0
    ip address 192.168.10.33 255.255.255.224
router eigrp 100
    eigrp router-id 172.16.1.1
    no auto-summary
    network 192.168.10.0
    network 172.16.0.0

R2
interface Loopback0
    ip address 172.16.2.2 255.255.255.255
interface FastEthernet0/0
    ip address 192.168.10.17 255.255.255.240
router eigrp 100
    eigrp router-id 172.16.2.2
    network 192.168.10.0
    network 172.16.0.0
```

R1 and R2 are unable to establish an EIGRP adjacency. Which action corrects the problem?

- A. Change the EIGRP router-id value on one of the routers so that the values on the two routers are different.
- B. Add the no auto-summary command to the R2 configuration so that it matches the R1 configuration.
- C. Change the autonomous system number on one of the routers so that each router has different values.
- D. Change the IP address and subnet mask on R2 so that it is on the same subnet as R1.

**Answer:** D

#### NEW QUESTION 711

Which two statements about NTP operation are true? (Choose two.)

- A. By default, NTP communications use UDP port 123.
- B. If multiple NTP servers are configured, the one with the lowest stratum is preferred.
- C. "Stratum" refers to the number of hops between the NTP client and the NTP server.
- D. Locally configured time overrides time received from an NTP server.
- E. If multiple NTP servers are configured, the one with the highest stratum is preferred.

**Answer:** AB

#### NEW QUESTION 712

How can you minimize unicast flooding in a network?

- A. Configure HSRP on two routers, with one subnet preferred on the first router and different subnet preferred on the second router.
- B. Set the router's ARP timeout value to be the same as the timeout value for Layer forwarding table entries.
- C. Set the router's ARP timeout value to greater than the timeout value for Layer 2 forwarding table entries.
- D. Set the router's ARP timeout value to less than the timeout value for Layer 2 forwarding table entries.

**Answer:** B

#### NEW QUESTION 714

Which command is used to check IP SLA when an interface is suspected to receive lots of traffic with options?

- A. show track
- B. show threshold
- C. show timer
- D. show delay

**Answer:** A

#### NEW QUESTION 715

Drag and Drop the AAA features from the left onto the correct description on the right Select and Place:

Accounting	challenge and response operation
Authentication	feature that logs network usage
Authorization	authentication method that uses TCP
RADIUS	authentication method that uses UDP
TACACS+	controls specific access privileges of a user

nneettwwrrookkiinngg

**Answer:**

**Explanation:**

Accounting	Authentication
Authentication	Accounting
Authorization	TACACS+
RADIUS	RADIUS
TACACS+	Authorization

nneettwwrrookkiinngg

#### NEW QUESTION 717

A network engineer execute the show ip cache flow command. Which two types of information are displayed in the report that is generated? (Choose two)

- A. MLS flow traffic
- B. flow samples for specific protocols
- C. IP packets distribution flow expert statistic
- D. top takers

**Answer:** BD

#### NEW QUESTION 722

What attribute is used to influence traffic from AS200 and AS300 so that it uses link1 to reach AS100.

- A. MED
- B. AS\_path
- C. weight
- D. local preference

**Answer:** A

#### NEW QUESTION 723

Which DHCP option provides a TFTP server that cisco phones can use to download a configuration?

- A. DHCP Option 82
- B. DHCP Option 68
- C. DHCP Option 66
- D. DHCP Option 57

**Answer:** C

#### NEW QUESTION 725

Which access list entry checks for an ACK within a packet TCP header?

- A. access-list 49 permit ip any any eq 21 tcp-ack
- B. access-list 149 permit tcp any any eq 21 established
- C. access-list 49 permit tcp anyany eq 21 tcp-ack
- D. access-list 49 permit tcp any any eq 21 established

**Answer:** B

#### NEW QUESTION 726

Which issue is important to address when integrating two networks with different routing protocols?

- A. preventing UDP starvation
- B. handing IPv4 fragmentation
- C. controlling unicast flooding
- D. mitigating UDP latency
- E. preventing asymmetric routing

**Answer:** E

**NEW QUESTION 728**

Which command must you configure globally to supportRIPng?

- A. ip routing
- B. ip cef
- C. ipv6 enable
- D. ipv6 unicast-routing

**Answer:** D

**NEW QUESTION 733**

A network engineer wants to monitor hop-by-hop response time on the network Which IP SLA operation accomplishes this task?

- A. UDP echo
- B. ICMPecho
- C. ICMP path echo
- D. ICMP path jitter

**Answer:** C

**NEW QUESTION 738**

Congestion in the network. What is the effect on UDP?

- A. Sender will have to buffer more data..
- B. Receiver will have to buffer more dat
- C. Before sending packets to higher layers
- D. There will be latency
- E. x

**Answer:** C

**NEW QUESTION 740**

Which two options are benefits of BGP peer groups?(Choose two)

- A. A configuration change can be applied simultaneously to all peers in the peer group
- B. They can optimize backdoor routes
- C. They can be updated via multicast
- D. Each neighbor in a peer group can have different inbound BGP policies
- E. They use soft updates to minimize bandwidth consumption
- F. They support groups of paths

**Answer:** AD

**NEW QUESTION 744**

Which SNMP security level is available across all versions of the protocol?

- A. AuthPriv
- B. NoAuthPriv
- C. AuthNoPriv
- D. NoAuthNoPriv

**Answer:** A

**NEW QUESTION 749**

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