Vendor: Cisco

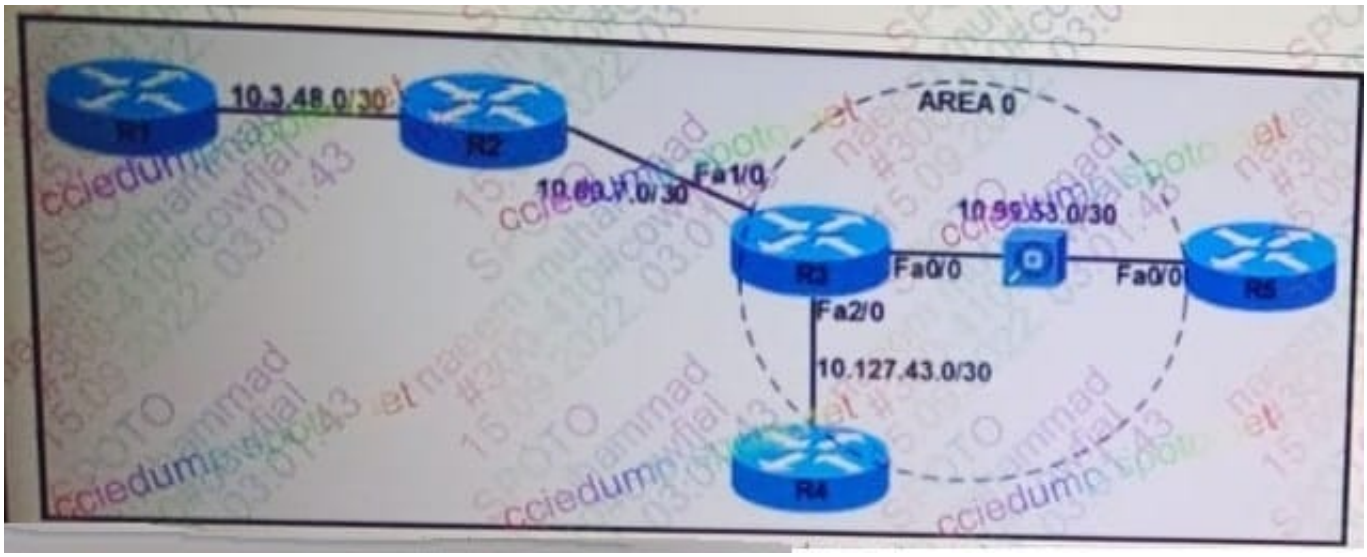
Exam Code:300-410

Exam Name: Implementing Cisco Enterprise Advanced Routing and Services (ENARSI) (Include 2023 Newest Simulation Labs)

Version: Demo

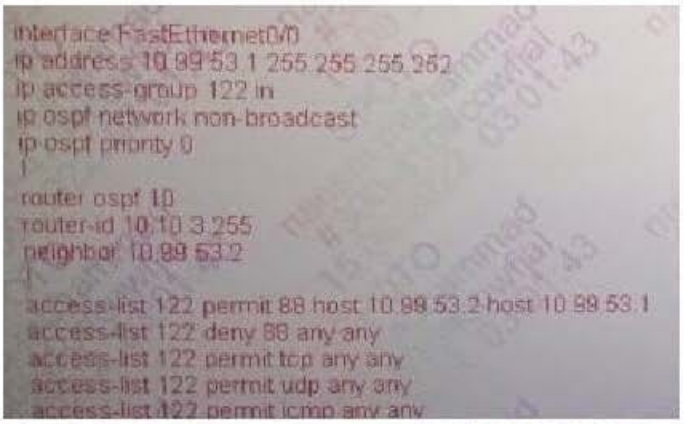
QUESTION 1

Refer to the exhibit.



The security department recently installed a monitoring device between routers R3 and R5, which a loss of network connectivity for users connected to R5. Troubleshooting revealed that the monitoring device cannot forward multicast packets. The team already updated R5 with the correct configuration. Which configuration must be implemented on R3 to resolve the problem by ensuring R3 as the DR for the R3-R5 segment?

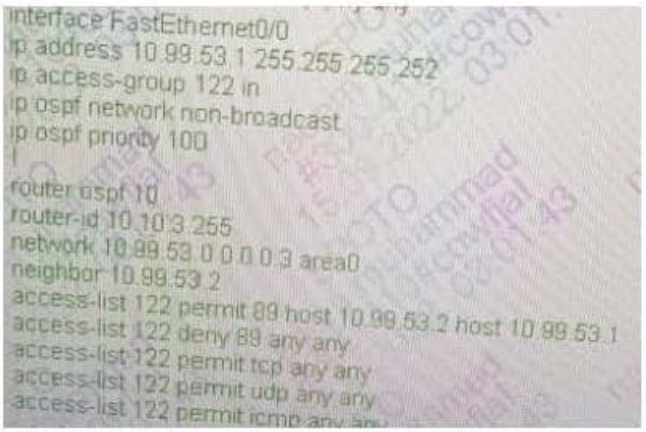
A.


interface FastEthernet0/0
ip address 10.99.53.1 255.255.255.252
ip access-group 122 in
ip ospf network non-broadcast
ip ospf priority 0
!
router ospf 10
router-id 10.10.3.255
neighbor 10.99.53.2
!
access-list 122 permit 89 host 10.99.53.2 host 10.99.53.1
access-list 122 deny 89 any any
access-list 122 permit tcp any any
access-list 122 permit udp any any
access-list 122 permit icmp any any

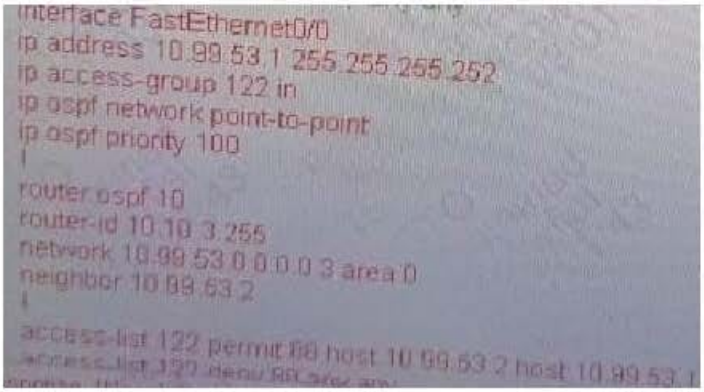
B.


interface FastEthernet0/0
ip address 10.99.53.1 255.255.255.252
ip access-group 122 in
ip ospf network non-broadcast
ip ospf priority 0
!
router ospf 10
router-id 10.10.3.255
network 10.99.53.0 0.0.0.3 area 0
neighbor 10.99.53.2
!
access-list 122 permit 89 host 10.99.53.2 host 10.99.53.1
access-list 122 deny 89 any any
access-list 122 permit tcp any any
access-list 122 permit udp any any
access-list 122 permit icmp any any

C.


interface FastEthernet0/0
ip address 10.99.53.1 255.255.255.252
ip access-group 122 in
ip ospf network non-broadcast
ip ospf priority 100
!
router ospf 10
router-id 10.10.3.255
network 10.99.53.0 0.0.0.3 area0
neighbor 10.99.53.2
access-list 122 permit 89 host 10.99.53.2 host 10.99.53.1
access-list 122 deny 89 any any
access-list 122 permit tcp any any
access-list 122 permit udp any any
access-list 122 permit icmp any any

D.


interface FastEthernet0/0
ip address 10.99.53.1 255.255.255.252
ip access-group 122 in
ip ospf network point-to-point
ip ospf priority 100
!
router ospf 10
router-id 10.10.3.255
network 10.99.53.0 0.0.0.3 area 0
neighbor 10.99.63.2
!
access-list 122 permit 89 host 10.99.53.2 host 10.99.53.1

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: C

QUESTION 2

Refer to the exhibit.

```
R1#show ip bgp 10.0.0.0/8
BGP routing table entry for 10.0.0.0/8, version 0
Paths: (1 available, no best path)
Not advertised to any peer
Refresh Epoch 1
100
192.168.10.20 (inaccessible) from 192.168.20.20 (192.168.20.20)
Origin incomplete, metric 0, localpref 100, valid, internal rx
pathid: 0, tx pathid: 0
```

An engineer is troubleshooting a prefix advertisement issue from R3, which is not directly connected to R1.

Which configuration resolves the issue?

A. R2(config)#router bgp 64512 R2(config-router)#neighbor 192.168.20.10 next-hop-self

B. R1(config)#router bgp 64512 R1(config-router)#neighbor 192.168.10.20 next-hop-self

C. R1(config)#router bgp 64512 R1(config-router)#neighbor 192.168.20.20 next-hop-self

D. R2(config)#router bgp 64512 R2(config-router)#neighbor 192.168.10.20 next-hop-self

Correct Answer: A

QUESTION 3

When configuring a DMVPN solution, which of the following technologies makes it possible for the spoke routers to use dynamic IP addressing?

A. IPsec

B. mGRE

C. NHRP

D. Dynamic routing protocols

Correct Answer: C

Next Hop Resolution Protocol (NHRP) allows the spoke routers to register their IP addresses with the NHRP server, which is the hub router. It also allows the spoke routers to then learn the physical IP addresses of the other spoke routers

from the hub router, allowing for GRE links to be built dynamically as needed between the spokes. This eliminates the need for the traffic to go through the hub router.

Dynamic Multipoint VPN (DMVPN) technology leverages the following associated technologies:

IPsec

mGRE

Dynamic routing protocols

NHRP

Cisco Express Forwarding

It makes it possible to build the hub router once, and add spokes later, making no additional changes to the hub. The spokes are able to register with the hub and dynamically build their own connections to other spokes using the IP addresses

learned from the hub using NHRP. DMVPN also allows IPsec point-to-point GRE tunnels to be built to new spokes with no IPsec peering configuration. The multipoint GRE technology (mGRE) allows a single physical interface on the hub to

be used for all spoke connections.

Finally, the routing protocols used by DMVPN allow the routers to share routing information, while Cisco Express Forwarding (CEF) is a switching technology that improves performance while reducing the load on the CPUs of the routers.

Objective:

VPN Technologies

Sub-Objective:

Describe DMVPN (single hub)

References:

Cisco > Dynamic Multipoint VPN (DMVPN) Design Guide (Version 1.1) > DMVPN Design Overview

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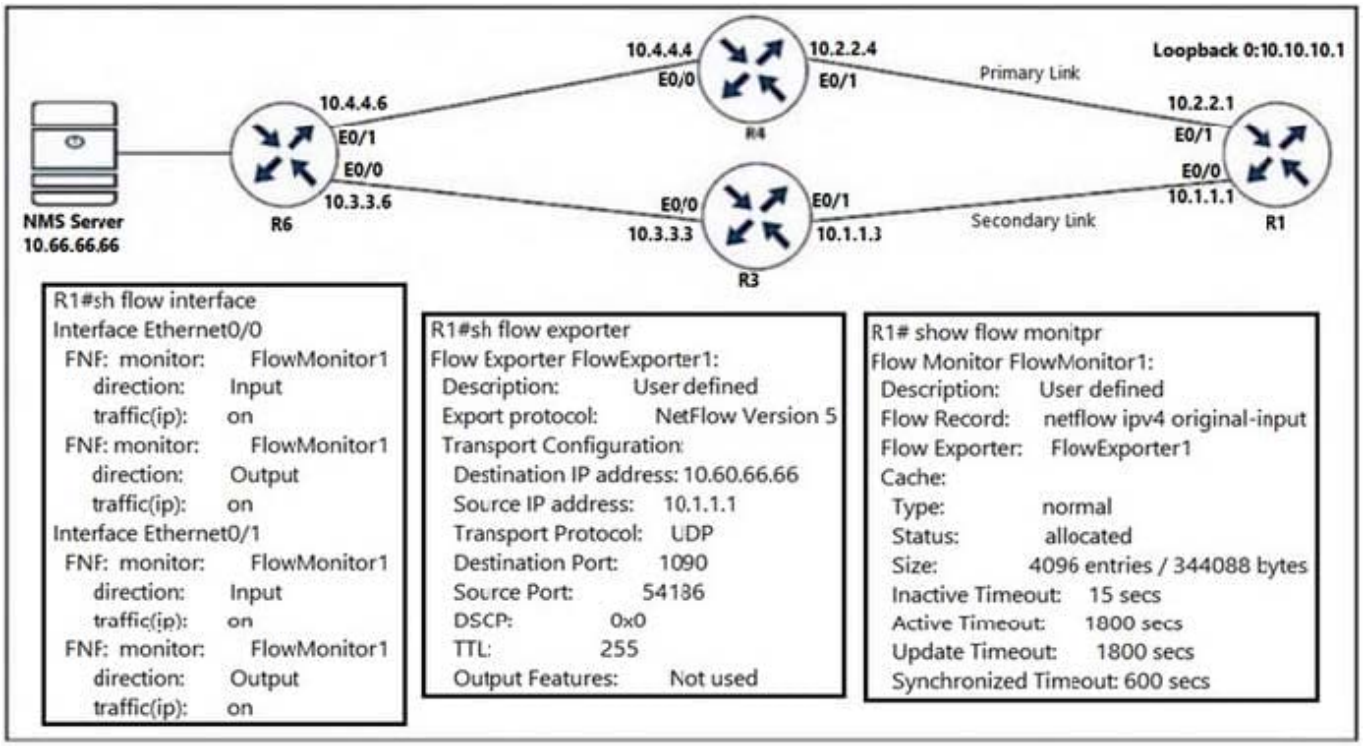
QUESTION 4

Refer to the exhibit.



An engineer configured NetFlow on R1, but the flows do not reach the NMS server from R1. Which configuration resolves this Issue?

A. R1(config)#flow monitor FlowMonitort1 R1(config-flow-monitor)#destination 10.66.66.66

B. R1(config)#interface Ethernet0/0 R1(config-if)#ip flow monitor Flowmonitor1 input R1(config-if)#ip flow monitor Flowmonitor1 output

C. R1(config)#interface Ethernet0/1 R1(config-if)#ip flow monitor Flowmonitor1 input R1(config-if)#ip flow monitor Flowmonitor1 output

D. R1(config)#flow exporter FlowExporter1 R1(config-flow-exporter)#destination 10.66.66.66

Correct Answer: D

QUESTION 5

An engineer creates a default static route on a router with a next hop of 10.1.1.1. On inspection, the engineer finds the router has two VRFs, Red and Blue. The next hop is valid for both VRFs and exists in each assigned VRF. Which configuration achieves connectivity?

A. ip route vrf Red 0.0.0.0 0.0.0.0 10.1.1.1 ip route vrf Blue 0.0.0.0 0.0.0.0 10.1.1.1

B. ip route vrf BLUE 0.0.0.0 255.255.255.255 10.1.1.1 ip route vrf RED 0.0.0.0 255.255.255.255 10.1.1.1

C. ip route vrf Red 0.0.0.0 255.255.255.255 10.1.1.1

D. ip route vrf Blue 0.0.0.0 255.255

Correct Answer: A

QUESTION 6

What is the downstream unsolicited distribution method in MPLS?

A. It advertises labels to peers only when the peer requests.

B. It sends a unicast hello message to a specific LSR.

C. It sends a unicast hello message to a specific LER.

D. It advertises labels to peers without peer request.

Correct Answer: D

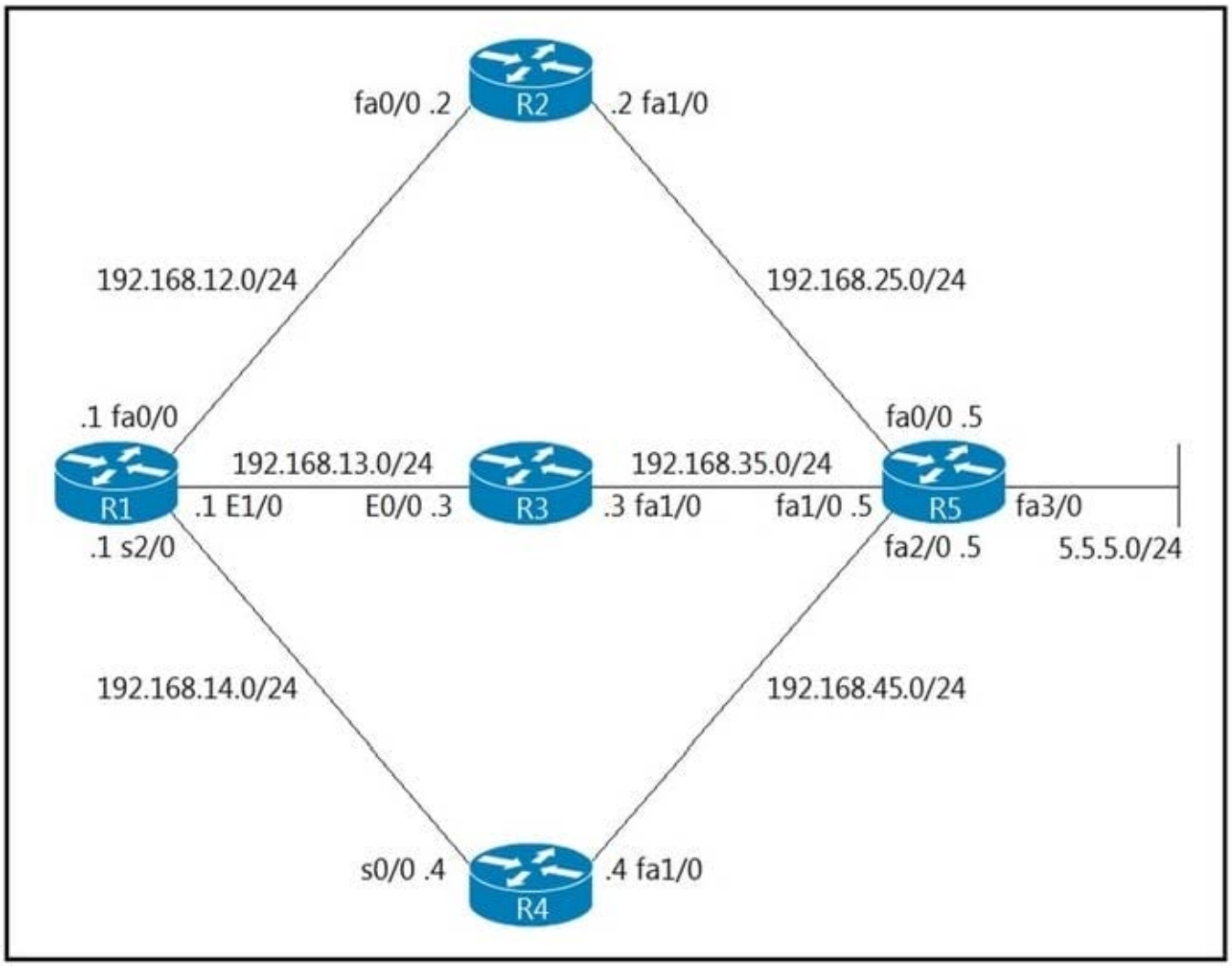
Unsolicited Downstream :

The MPLS architecture also allows an LSR to distribute bindings to LSRs that have not explicitly requested them. This is known as "unsolicited downstream" label distribution. This method is used in LDP and BGP-LU(RFC 3107)

QUESTION 7

Refer to the exhibits.

```
R1#show ip route 5.5.5.0
Routing entry for 5.5.5.0/24
  Known via "eigrp 1", distance 90, metric 158720, type internal
  Redistributing via eigrp 1
  Last update from 192.168.13.3 on Ethernet1/0, 00:00:40 ago
  Routing Descriptor Blocks:
  * 192.168.13.3, from 192.168.13.3, 00:00:40 ago, via Ehernet1/0
      Route metric is 412160, traffic share count is 23
      Total delay is 6100 microseconds, minimum bandwidth is 10000 Kbit
      Reliability 255/255, minimum MTU 1500 bytes
      Loading 1/255, Hops 2
    192.168.12.2, from 192.168.12.2, 00:00:40 ago, via FastEthernet0/0
      Route metric is 158720, traffic share count is 60
      Total delay is 5200 microseconds, minimum bandwidth is 100000 Kbit
      Reliability 255/255, minimum MTU 1500 bytes
      Loading 1/255, Hops 2
```



An engineer investigates a routing issue on R1 and finds that traffic destined to 5.5.5.0/24 does not take all of the paths.

An engineer investigates a routing issue on R1 and finds that traffic destined to 5.5.5.0/24 does not take all of the paths.

Which action resolves the issue?

A. Increase the variance value in EIGRP.

B. Decrease the variance value in EIGRP.

C. Remove the adjacency of R3 from EIGRP.

D. Stop advertising 192.168.13.0/24 in EIGRP.

Correct Answer: A

Reference: https://community.cisco.com/t5/networking-documents/troubleshooting-eigrp-variance-command/ta-p/3129662#:~:text=EIGRP%20provides%20a%20mechanism%20to,means%20equal%2Dcost%20load%20balancing

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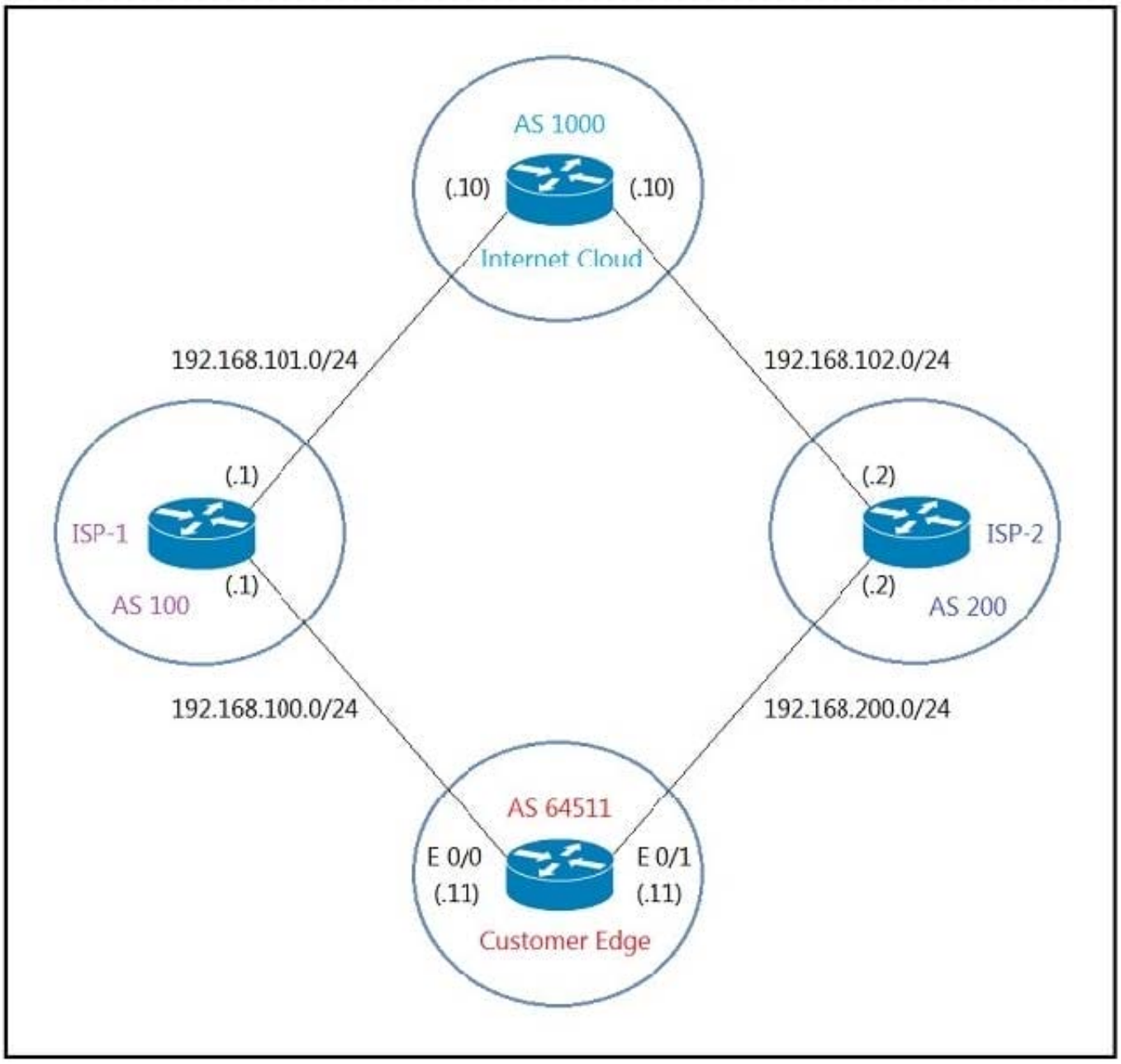
QUESTION 8

Refer to the exhibit.



The network administrator has configured the Customer Edge router (AS 64511) to send only summarized routes toward ISP-1 (AS 100) and ISP-2 (AS 200).

```
router bgp 64511
 network 172.16.20.0 mask 255.255.255.0
 network 172.16.21.0 mask 255.255.255.0
 network 172.16.22.0 mask 255.255.255.0
 network 172.16.23.0 mask 255.255.255.0
 aggregate-address 172.16.20.0 255.255.252.0
```

After this configuration, ISP-1 and ISP-2 continue to receive the specific routes and the summary route.

Which configuration resolves the issue?

A. router bgp 64511 aggregate-address 172.16.20.0 255.255.252.0 summary-only

B. router bgp 64511 neighbor 192.168.100.1 summary-only neighbor 192.168.200.2 summary-only

C. interface E 0/0 ip bgp suppress-map BLOCK_SPECIFIC ! interface E 0/1 ip bgp suppress-map BLOCK_SPECIFIC ! ip prefix-list PL_BLOCK_SPECIFIC permit 172.16.20.0/22 ge 24 ! route-map BLOCK_SPECIFIC permit 10 match ip address prefix-list PL_BLOCK_SPECIFIC

D. ip prefix-list PL_BLOCK_SPECIFIC deny 172.16.20.0/22 ge 22 ip prefix-list PL BLOCK SPECIFIC permit 172.16.20.0/22 ! route-map BLOCK_SPECIFIC permit 10 match ip address prefix-list PL_BLOCK_SPECIFIC ! router bgp 64511 aggregate-address 172.16.20.0 255 255.252.0 suppress-map BLOCKSPECIFIC

Correct Answer: A

When the aggregate-address command is used within BGP routing, the aggregated address is advertised, along with the more specific routes. The exception to this rule is through the use of the summary-only command. The "summary-only" keyword suppresses the more specific routes and announces only the summarized route.

QUESTION 9

Which commands will display the other routers with which the local router has established an adjacency with, including hold time and uptime parameters?

A. show ip eigrp neighbors

B. show ip route

C. show adjacencies

D. show eigrp neighbors

Correct Answer: A

The show ip eigrp neighbors command will display the neighboring EIGRP routers with which the local router has established an adjacency. It will also display hold time and uptime statistics. In this case, the uptime statistic refers to how long the adjacency has been established. A sample output of the show ip eigrp neighbors command is below.

Router2# show ip eigrp neigh IP-EIGRP neighbors for process 100 H Address Interface Hold Uptime SRTT RTO Q Seq (sec) (ms) Cnt Num

1 10.20.0.1 Se1 11 22:37:26 28 200 0 2

0 10.10.0.1 Se0 13 22:38:09 19 200 0 4

The show ip route command simply displays the routing table and does not provide neighbor information.

The other commands are not valid IOS commands.

Objective:

Layer 3 Technologies

Sub-Objective:

Configure and verify EIGRP neighbor relationship and authentication

References:

Cisco IOS IP Routing: EIGRP Command Reference > show ip eigrp neighbors

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QUESTION 10

Refer to the exhibit. An engineer is trying to block the route to 192.168.2.2 from the routing table by using the configuration that is shown. The route is still present in the routing table as an OSPF route. Which action blocks the route?

```
Router#show access-lists
Standard IP access list 1
        10 permit 192.168.2.2 (1 match)
Router#
Router#show route-map
route-map RM-OSPF-DL, permit, sequence 10
  Match clauses:
        ip address (access-lists): 1
  Set clauses:
  Policy routing matches: 0 packets, 0 bytes
Router#
Router#show running-config | section ospf
router ospf 1
  network 192.168.1.1 0.0.0.0 area 0
  network 192.168.12.0 0.0.0.255 area 0
  distribute-list route-map RM-OSPF-DL in
Router#|
```

A. Use an extended access list instead of a standard access list.

B. Change sequence 10 in the route-map command from permit to deny.

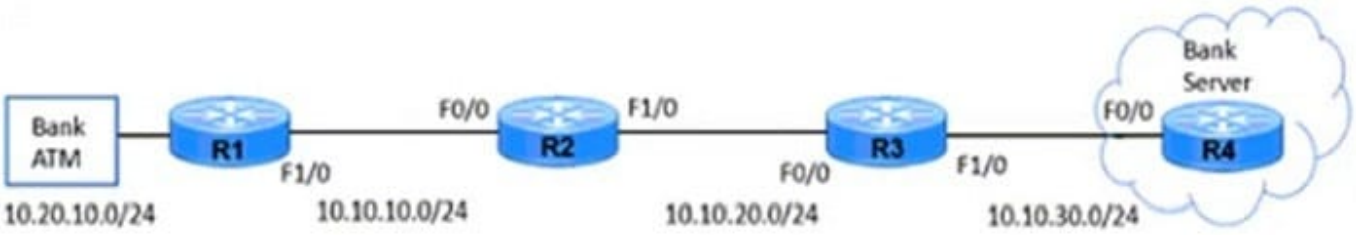
C. Use a prefix list instead of an access list in the route map.

D. Add this statement to the route map: route-map RM-OSPF-DL deny 20.

Correct Answer: D

QUESTION 11

Refer to the exhibit.




```
R4# show ip eigrp topology active
IP-EIGRP Topology Table for AS(1)/ID(10.10.30.2)

R3# show ip eigrp topology active
IP-EIGRP Topology Table for AS(1)/ID(10.10.30.1)
A 10.20.10.0/24, 1 successors, FD is Inaccessible, Qqr
1 replies, active 00:01:33, query-origin: Successor Origin, retries(1)
via 10.10.20.1 (Infinity/Infinity), Etheret0/0, serno 20
via 10.10.30.2 (Infinity/Infinity), rs, q. Ethernet1/0, serno 19, anchored

R1# show ip eigrp topology active
IP-EIGRP Topology Table for AS(1)/ID(10.20.10.1)
A 10.20.10.0/24, 1 successors, FD is Inaccessible
1 replies, active 00:01:17, query-origin: Local origin
via Connected (Infinity/Infinity), Ethernet0/0
Remaining replies:
via 10.10.10.2, r, Ethernet1/
```

A bank ATM site has difficulty connecting with the bank server. A network engineer troubleshoots the issue and finds that R4 has no active route to the bank ATM site. Which action resolves the issue?

A. EIGRP peering between R1 and R2 to be fixed.

B. Advertise 10.10.30.0/24 subnet in R3 EIGRP AS.

C. Advertise 10.10.30.0/24 subnet in R1 EIGRP AS.

D. EIGRP peering between R3 and R4 to be fixed.

Correct Answer: D

https://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol-eigrp/118974-technote-

eigrp-00.html https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2019/pdf/BRKRST-2331.pdf

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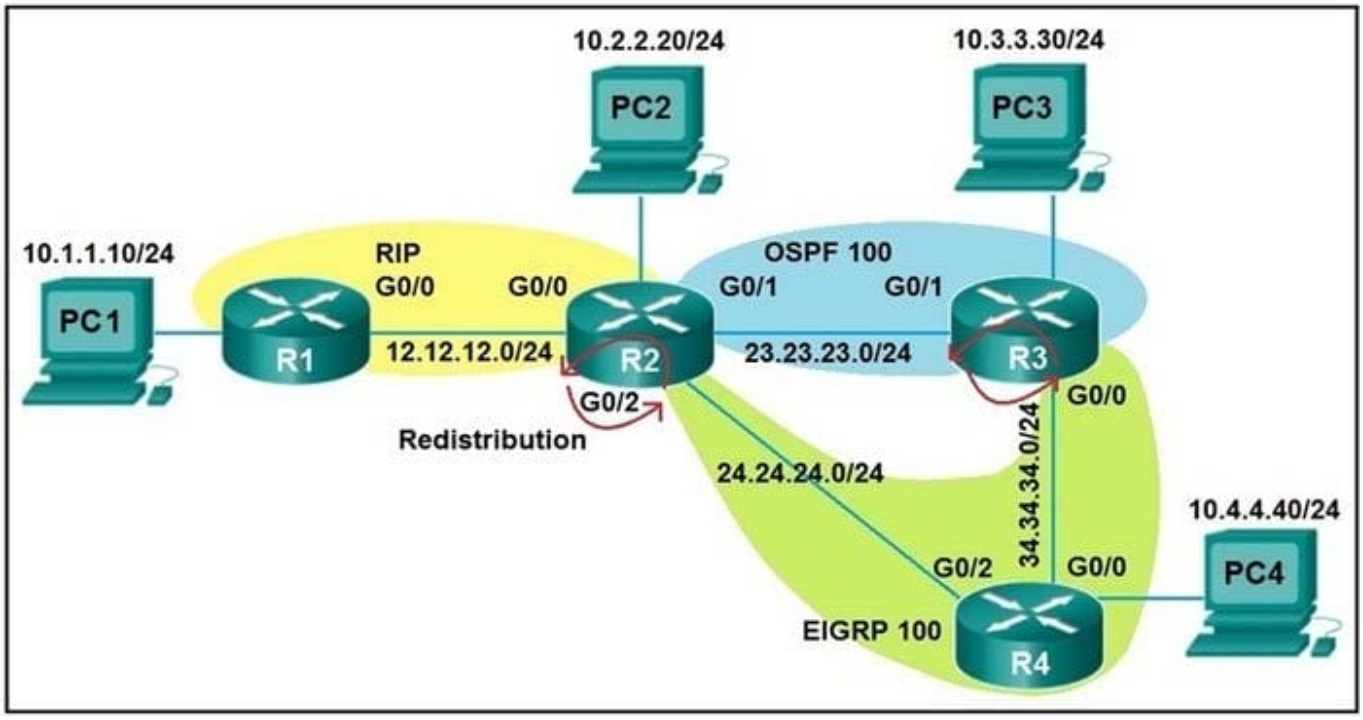
QUESTION 12

Refer to the exhibit. After redistribution is enabled between the routing protocols; PC2, PC3, and PC4 cannot reach PC1.

Which action can the engineer take to solve the issue so that all the PCs are reachable?



A. Set the administrative distance 100 under the RIP process on R2.

B. Filter the prefix 10.1.1.0/24 when redistributed from OSPF to EIGRP.

C. Filter the prefix 10.1.1.0/24 when redistributed from RIP to EIGRP.

D. Redistribute the directly connected interfaces on R2.

Correct Answer: A

This Config works: Answer A

R2#sh run | s rip redistribute rip metric 1 1 1 1 1 router rip version 2 redistribute eigrp 100 metric 1 network 10.0.0.0 network 12.0.0.0 distance 100 no auto-summary

R3#sh run | s router router eigrp 100 network 34.34.34.0 0.0.0.255 redistribute ospf 100 metric 1 1 1 1 1 router ospf 100 redistribute eigrp 100 subnets network 10.3.3.0 0.0.0.255 area 0 network 23.23.23.0 0.0.0.255 area 0

Answer B is wrong: the Correct is to filter 10.1.1.10 when redistribute from EIGRP to OSPF: Configs are

ip prefix-list DNA seq 5 deny 10.1.1.0/24 ip prefix-list DNA seq 10 permit 0.0.0.0/0 le 32 route-map DDD permit 10 match ip address prefix-list DNA ! router eigrp 100 network 34.34.34.0 0.0.0.255 redistribute ospf 100 metric 1 1 1 1 1 !

router ospf 100 redistribute eigrp 100 subnets route-map DDD network 10.3.3.0 0.0.0.255 area 0 network 23.23.23.0 0.0.0.255 area 0 !