

➤ **Vendor:** Cisco

➤ **Exam Code:** 300-510

➤ **Exam Name:** Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

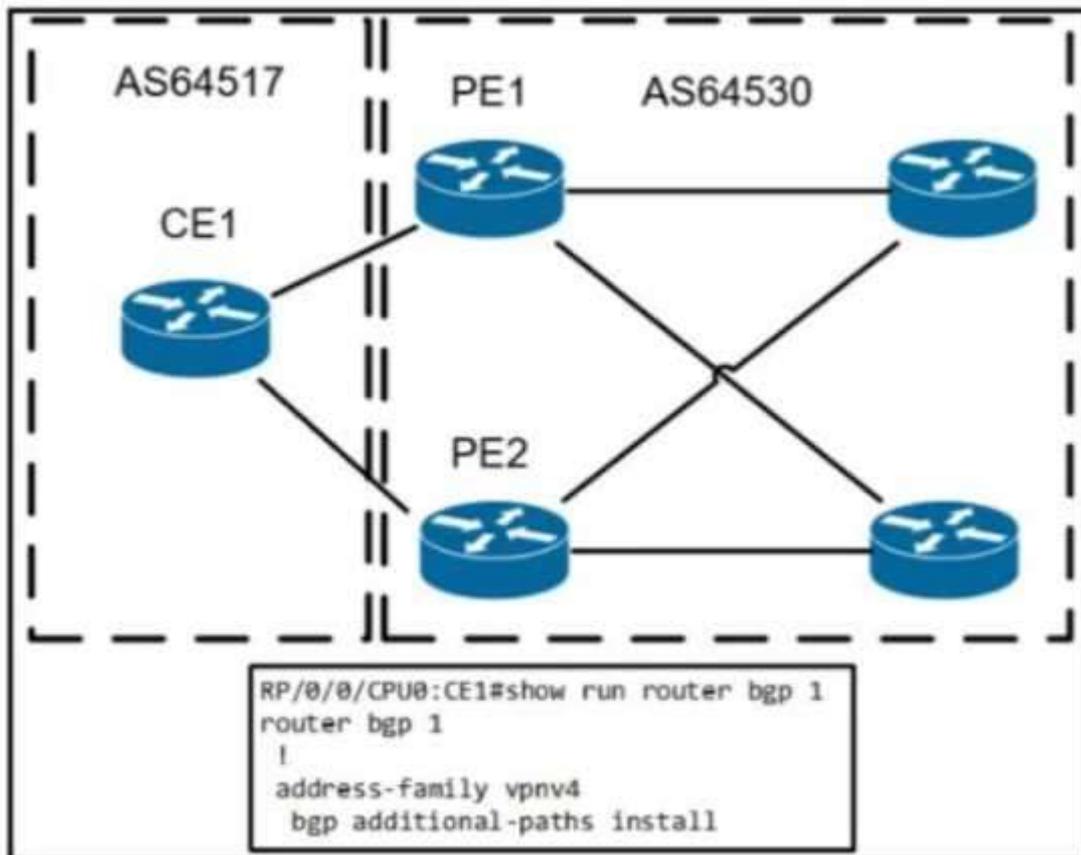
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QUESTION 99

Refer to the exhibit. A network operators configuring BGP PIC on CE1 on already established neighborships with PE1 and PE2 inside the fully converged MPLS network.

Which element needs to be implemented to make this feature function effectively?



- A. Bidirectional Forwarding Detection must be applied to the upstream facing BGP interfaces.
- B. The operator must ensure that all prefixes have the same next-hop from PE1 and PE2 for BGP PICA reserved BGP
- C. community of 1 10 must be used to denote the PIC feature set to the routing protocol
- D. BGP import export policies must be applied on all devices for the routes needing BGP for PIC

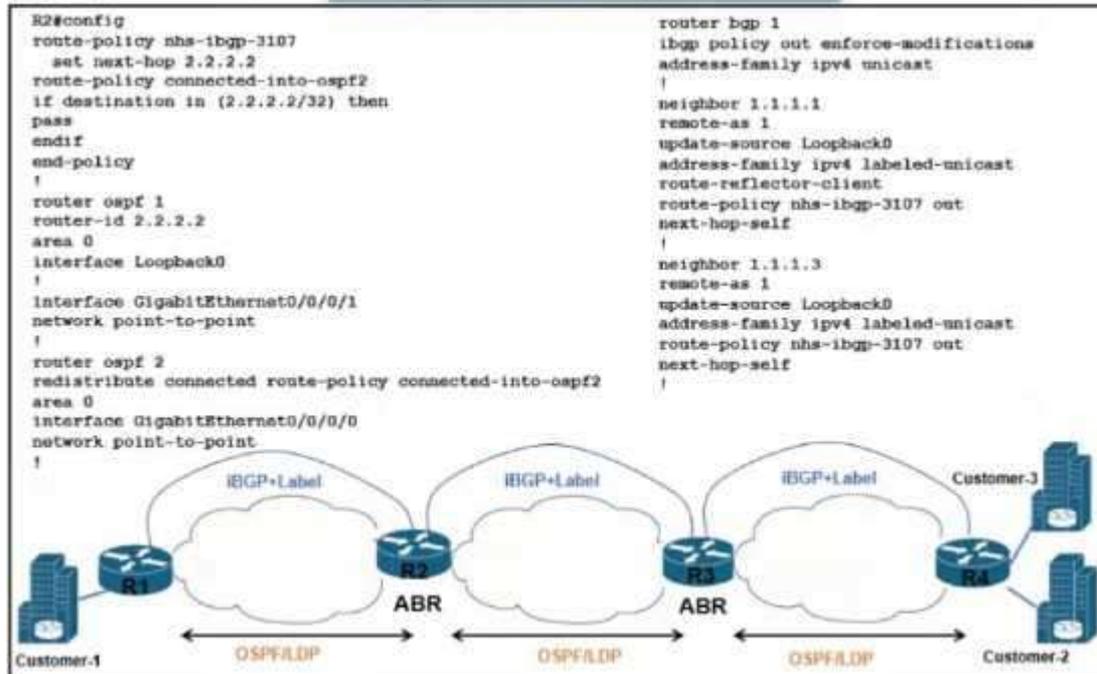
Answer: A

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QUESTION 100

Refer to the exhibit. There is a connectivity issue between Customer-1 and Customer-2 File servers between the customers cannot send critical data R3 routes are missing from the routing table on the Customer-1 router All interlaces on Customer-1 are up. Which configuration must be applied to router R2 to correct the problem?



- router bgp 1
address-family vpnv4 unicast
allocate-label all
- router bgp 1
vrf one
rd 1:1
address-family ipv4 unicast
allocate-label all
- router bgp 1
neighbor
remote-as 1
update-source Loopback0
address-family ipv4 labeled-unicast
allocate-label all
- router bgp 1
address-family ipv4 unicast
allocate-label all

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

Answer: D

QUESTION 101

Which two differences should be considered when deciding whether to implement to implement routing policies or route maps? (Choose two.)

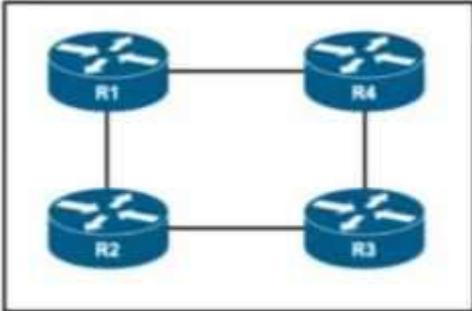
- A. Sequences are added after implementing a route map, but routing policies must be reconfigured when change is needed.
- B. Route maps are implemented using hierarchical policies, but routing policies must be implemented sequentially.

- C. Route maps require an explicit deny at the end of the sequence, but routing policies have an implicit deny at the end of the program.
- D. Route policies require sequence numbers, but route maps are implemented without sequencing.
- E. Route maps are supported in Cisco 10S Software and routing policies are supported in Cisco IOS XR Software.

Answer: AE

QUESTION 102

Refer to the exhibit. All routers on this network have been configured with P1M-SM and R1 is the rendezvous point. However, when asymmetric routing is implemented to modify link usage the network begins to drop certain multicast traffic. Which action corrects the problem?



- A. Place the routes affected by asymmetric routing in a VRF.
- B. Remove the asymmetric routing and use spanning tree to manage link usage.
- C. Add a static Mroute for routes that are failing.
- D. Configure the routers to use PIM-DM instead of PIM-SM.

Answer: C

QUESTION 103

Refer to the exhibit. An engineer applied the configuration on R1 to prevent network 192.168.1.0/24 from being propagated outside of area 5. After the change, users have reported they are not able to access any of the application servers that were working before.

While checking the routing table of the peer router. The engineer notices R1 stopped propagating any routes outside area 5. Which action must be taken to fix the problem?

```
R1
ip prefix-list ciscotest deny 192.168.1.0/24 le 32
router ospf 1
 area 5 filter-list prefix ciscotest out
```

- A. Configure an additional filter-list on R1 for inbound traffic to allow external router into area 5.
- B. Reconfigure the filter-list statement to apply in the inbound direction
- C. Change the prefix-list action to permit and add an explicit deny statement for network 192.168.1.0/24
- D. Add a permit statement for 0.0.0.0/0 le 32 to the end of the prefix-list 10 override the implicit deny.

Answer: D

QUESTION 104

What is the role of segment routing mapping server?

- A. It advertises a local SID mapping policy to all the mapping clients.
- B. It works with IGP instances to calculate the prefix-SIDs in the absence of a mapping policy.

- C. It selects multiple mapping entries to create overlapping active mapping policies.
- D. It reads and translates remotely received SIDs from other mapping servers to create SID mapping entries.

Answer: A

QUESTION 105

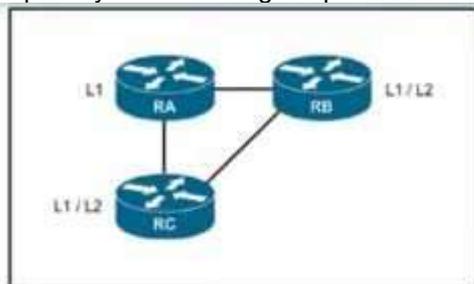
Which difference should be considered when intradomain or interdomain multicast routing is implemented?

- A. Interdomain multicast routing requires an IS-IS or OSPF neighbor relationship between the domains but intradomain multicast routing requires only BGP Questions & Answers PDF P-57
- B. Interdomain multicast routing relies on PIM-DM and intradomain multicast routing relies on PIM- SM.
- C. interdomain multicast routing uses BIDR-PIM to establish neighbor relationships between AS and interdomain multicast routing uses MSDP
- D. A network uses intradomain multicast routing without interdomain routing but networks that use interdomain multicast routing must also apply intradomain routing

Answer: D

QUESTION 106

Refer to the exhibit. Routers RA and RB are IS-IS peers configured for NSF but router RC is an IS-IS peer without NSF capability. If RA undergoes processor switchover what is the effect on the network environment?



- A. If RC is operating without the Cisco configuration option all three routers tear down their peering relationships and re-establish peering
- B. All peer relationships remain up and the link-state database is unchanged
- C. All peer relationships remain up, but the link-state database is rebuilt on each device
- D. If RC is operating without the Cisco configuration option only 2 routers tear down their peering relationships and re-establish peering

Answer: C

QUESTION 107

An engineer applied the summarization configuration on R1 for four networks (192.168.20.0/24 to 192.168.23.0/24) in area 1 and eight networks (192.168.32.0/24 to 192.168.39.0/24) in area 2 to stop the flooding of all the customer routes. While checking the routing table of R2, the engineer noticed that R1 is still sending only specific routes to R2. Which configuration should the engineer apply on R1 to summarize routes?

```
show ip route ospf
O    192.168.1.0/24 [110/11] via 172.16.14.1, 01:17:30, Ethernet0/0
O IA 192.168.2.0/24 [110/21] via 172.16.14.1, 00:49:23, Ethernet0/0
O IA 192.168.3.0/24 [110/21] via 172.16.14.1, 00:47:37, Ethernet0/0
O IA 192.168.20.0/24 [110/21] via 172.16.14.1, 00:49:08, Ethernet0/0
O IA 192.168.21.0/24 [110/21] via 172.16.14.1, 01:11:23, Ethernet0/0
O IA 192.168.22.0/24 [110/21] via 172.16.14.1, 01:11:13, Ethernet0/0
O IA 192.168.23.0/24 [110/21] via 172.16.14.1, 01:11:03, Ethernet0/0
O IA 192.168.32.0/24 [110/21] via 172.16.14.1, 00:47:50, Ethernet0/0
O IA 192.168.33.0/24 [110/21] via 172.16.14.1, 01:04:37, Ethernet0/0
O IA 192.168.34.0/24 [110/21] via 172.16.14.1, 00:02:26, Ethernet0/0
O IA 192.168.35.0/24 [110/21] via 172.16.14.1, 00:02:16, Ethernet0/0
O IA 192.168.36.0/24 [110/21] via 172.16.14.1, 00:02:06, Ethernet0/0
O IA 192.168.37.0/24 [110/21] via 172.16.14.1, 00:01:56, Ethernet0/0
O IA 192.168.38.0/24 [110/21] via 172.16.14.1, 00:01:43, Ethernet0/0
O IA 192.168.39.0/24 [110/21] via 172.16.14.1, 00:01:28, Ethernet0/0
```

- R1(config)# router ospf 1
R1(config-router)# area 1 range 192.168.20.0 255.255.252.0
R1(config-router)# area 2 range 192.168.32.0 255.255.240.0
- R1(config)# router ospf 1
R1(config-router)# area 1 range 192.168.20.0 255.255.248.0
R1(config-router)# area 2 range 192.168.32.0 255.255.240.0
- R1(config)# router ospf 1
R1(config-router)# area 1 range 192.168.20.0 255.255.252.0
R1(config-router)# area 2 range 192.168.32.0 255.255.248.0
- R1(config)# router ospf 1
R1(config-router)# area 1 range 192.168.20.0 255.255.252.0
R1(config-router)# area 2 range 192.168.32.0 255.255.253.0

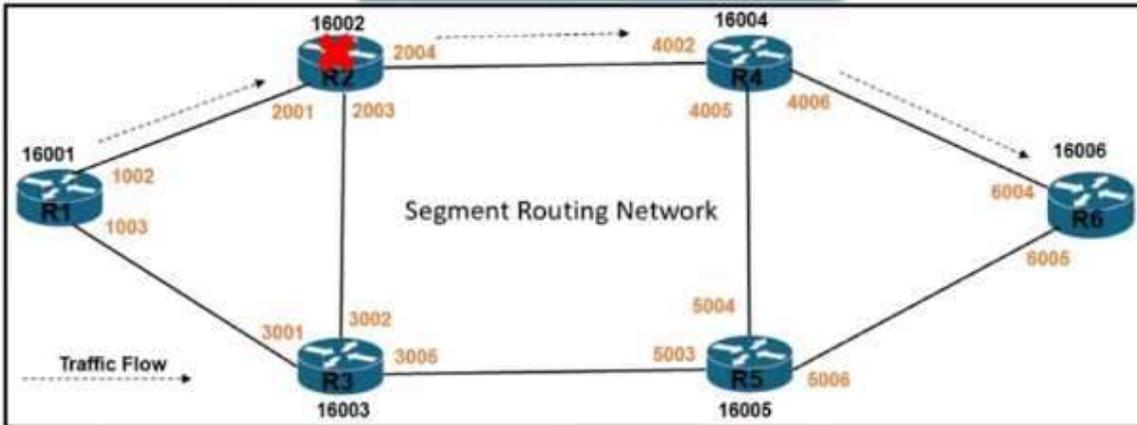
- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

QUESTION 108

Refer to the exhibit. Traffic flow from router R1 to router R6 is delay-sensitive. It must consider potential link-failure and node-failure conditions.

Which configuration must an engineer apply to router R1 to route traffic to router R6 if router R2 fails?



- router ospf 1
area 1
interface GigabitEthernet0/0/1
fast-reroute per-prefix
fast-reroute per-prefix tiebreaker node-protecting index 100
fast-reroute per-prefix tiebreaker srlg-disjoint index 200
- router ospf 1
area 1
interface GigabitEthernet0/0/1
fast-reroute per-prefix
fast-reroute per-prefix ti-lfa
fast-reroute per-prefix tiebreaker node-protecting index 100
- router ospf 1
area 1
interface GigabitEthernet0/0/1
fast-reroute per-prefix
fast-reroute per-prefix ti-lfa
- router ospf 1
area 1
interface GigabitEthernet0/0/1
fast-reroute per-prefix
fast-reroute per-prefix ti-lfa
fast-reroute per-prefix tiebreaker srlg-disjoint index 100

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

Answer: B

QUESTION 109

An engineer is troubleshooting slow performance issues on a customer's network after the last multicast configuration

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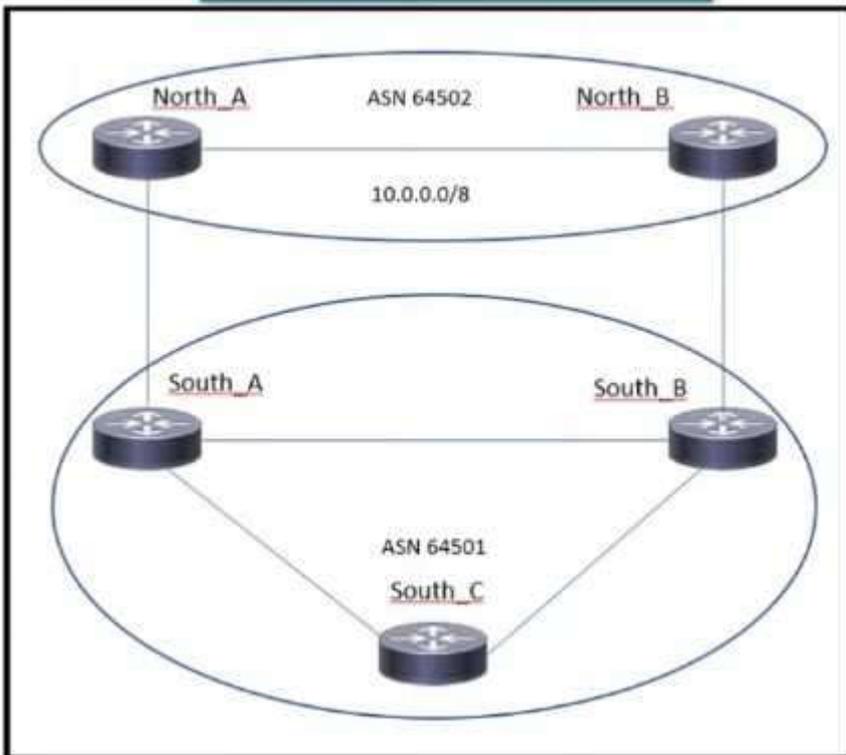
change was applied on it. While checking the running configuration on the router the engineer notices there are many ip igmp join-group commands applied on several interfaces of the router which caused the high CPU utilization usage. What action must the engineer take to solve this issue?

- A. Configure ip igmp static-group command on all interfaces
- B. Remove ip igmp join-group command on all unnecessary interfaces
- C. Configure all router interfaces to be process-switched by increasing the query interval
- D. Remove unnecessary members from the IGMP group

Answer: B

QUESTION 110

Refer to the exhibit. A network engineer sets up a multihoming eBGP topology where multiple Autonomous Systems connect to ASN 64501.



The engineer wants to block all the routers coming from ASN 64502. but allow all the others. For that purpose, the following AS Path prefix list is being used:

```
(config) # ip as-path access-list 10 deny _64502$
```

What must be fixed to achieve this result?

- A. The AS-PATH filter must be defined inside the route-map mode
- B. At the end ip as-path access-list 10 permit .* must be included
- C. The statement must be modified with ip as-path access-list 1 deny _64502_
- D. The statement must be modified with ip as path access list 1 deny A64502\$

Answer: B

QUESTION 111

Refer to the exhibit. A network engineer applied configuration on R1 to summarize all ISIS routes, but R2 is still receiving specific routes from R1. The engineer has confirmed that both routers are configured with the correct

summarization configuration, but R1 is not sending the correct summary routes. Which configuration must be applied to router R1 to summarize routes within Level 1?

```
router isis
  net 49.0012.0000.0000.0002.00
  log-adjacency-changes
  summary-address 1.0.0.0 255.0.0.0
```

- R1(config-router)#summary-address 1.0.0.0 255.0.0.0 level-1-2
- R1(config-router)#no summary-address 1.0.0.0 255.0.0.0 level-1
- R1(config-router)#summary-address 1.0.0.0 255.0.0.0 level-1
- R1(config-router)#summary-address 1.0.0.0 255.0.0.0 level-2

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

Answer: C

QUESTION 112

Refer to the exhibit. After these configurations were applied to routers R1 and R2, the two devices cannot form a neighbor relationship. What is the reason for the problem?

```
R1
interface g0/0
 ip address 192.168.1.1 255.255.255.0
 ip router isis
router isis
 net 49.0022.1111.1111.1111.00
 area-password ci5Co

R2
interface g0/1
 ip address 192.168.1.2 255.255.255.0
 ip router isis
router isis
 net 49.0022.1111.1111.1112.00
 area-password ci5co
```

- A. The two routers have the same area ID.
- B. The two routers have different iS-types
- C. The two routers have the same network ID
- D. The two routers cannot authenticate with one another

Answer: D

QUESTION 113

Refer to the exhibit. An engineer working for a private telecommunication company with an employee id 3977 74 814 implemented the configuration on Router 1. What is the effect of it?

```
Router 1:
router bgp 65515
 address-family ipv4 unicast
  bgp additional-paths receive
  bgp additional-paths select group-best
  neighbor 192.168.1.1 activate
  neighbor 192.168.1.1 additional-paths send receive
  neighbor 192.168.1.1 advertise additional-paths group-best
```

- A. Router 1 sends and receives multiple best paths from neighbor 192.168.1.1
- B. Router 1 sends up to three paths to neighbor 192.168.1.1 for all routes
- C. Router 1 sends only one best path to neighbor 192.168.1.1.
- D. Router 1 receives only one best path from neighbor 192.168.1.1

Answer: A

QUESTION 114

Refer to the exhibit. Which two commands must the engineer configure for the company's PIM-PIM network to enable Auto-RP mappings to be sent over the FastEthernet0/0 interface without affecting normal operation? (Choose two)

```
R4#show ip pim interface
```

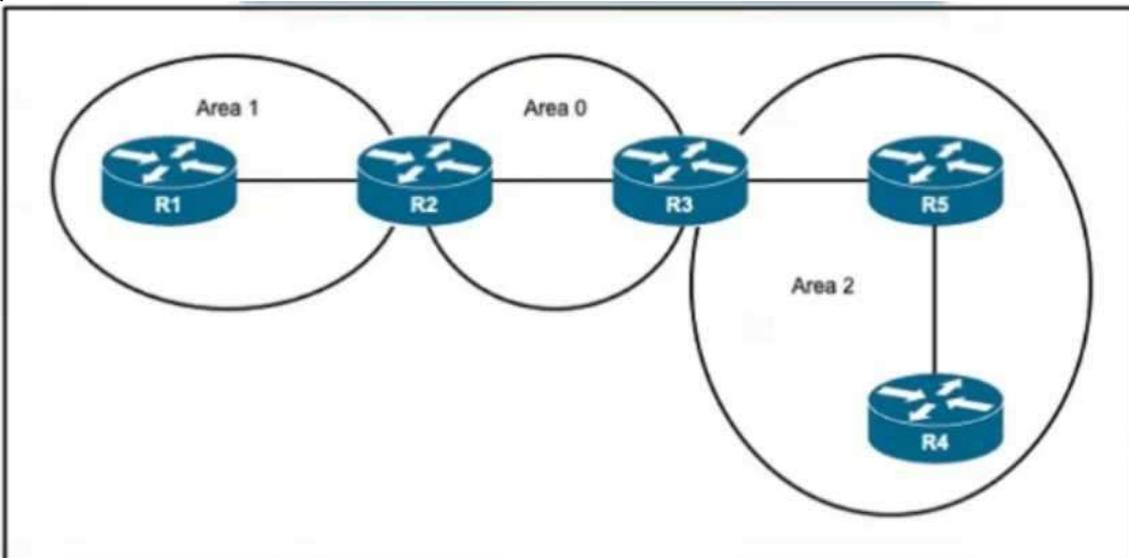
Address	Interface	Ver/ Mode	Nbr Count	Query Intvl	DR Prior	DR
10.1.1.1	FastEthernet0/0	v2/S	1	30	1	10.1.1.2

- A. enable auto-rp listener
- B. enable sparse-dense mode
- C. enable sparse-mode
- D. enable Auto-RP announcements
- E. enable dense mode

Answer: AB

QUESTION 115

Refer to the exhibit. A network engineer applied configuration on R5 to summarize all OSPF routes, but R4 is still receiving specific routes from R5. The engineer has confirmed that both R5 and R4 routers are configured with correct summarization configuration but R5 is not sending the summary routes. What action must the engineer take to fix the problem?



- A. Remove summarization configuration on R5 and configure it on R4
- B. Configure a sham link between R4 and R5 to support summarization within Area 2
- C. Move R4 and R5 in separate areas as now they maintain the same link-state database
- D. Clear link-state database on both R4 and R5 routers for summarization to work

Answer: C

QUESTION 116

Refer to the exhibit. Router 1 and Routed have shared routes in the OSPF database but the routes are missing from their routing tables. Checking the prefix-list configuration on both routers, the engineer confirmed all networks are allowed. What action should the engineer take to fix the problem?

```
router1# show ip ospf interface serial 2
Serial1/0 is up, line protocol is up
  Internet Address 192.168.2.1/24, Area 0
  Process ID 1, Router ID 192.168.2.1, Network Type BROADCAST, Cost: 64
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 192.168.2.1, Interface address 192.168.2.1
  Backup Designated router (ID) 192.168.2.2, Interface address
  192.168.2.2
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  Hello due in 00:00:07
  Neighbor Count is 1, Adjacent neighbor count is 1
  Adjacent with neighbor 192.168.2.2 (Backup Designated Router)
  Suppress hello for 0 neighbor(s)

router2# show ip ospf interface serial 1/0
Serial1/0 is up, line protocol is up
  Internet Address 192.168.2.2/24, Area 0
  Process ID 1, Router ID 192.168.2.2, Network Type POINT_TO_POINT, Cost:
  64
  Transmit Delay is 1 sec, State POINT_TO_POINT,
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  Hello due in 00:00:03
  Neighbor Count is 1, Adjacent neighbor count is 1
  Adjacent with neighbor 192.168.2.1
  Suppress hello for 0 neighbor(s)
```

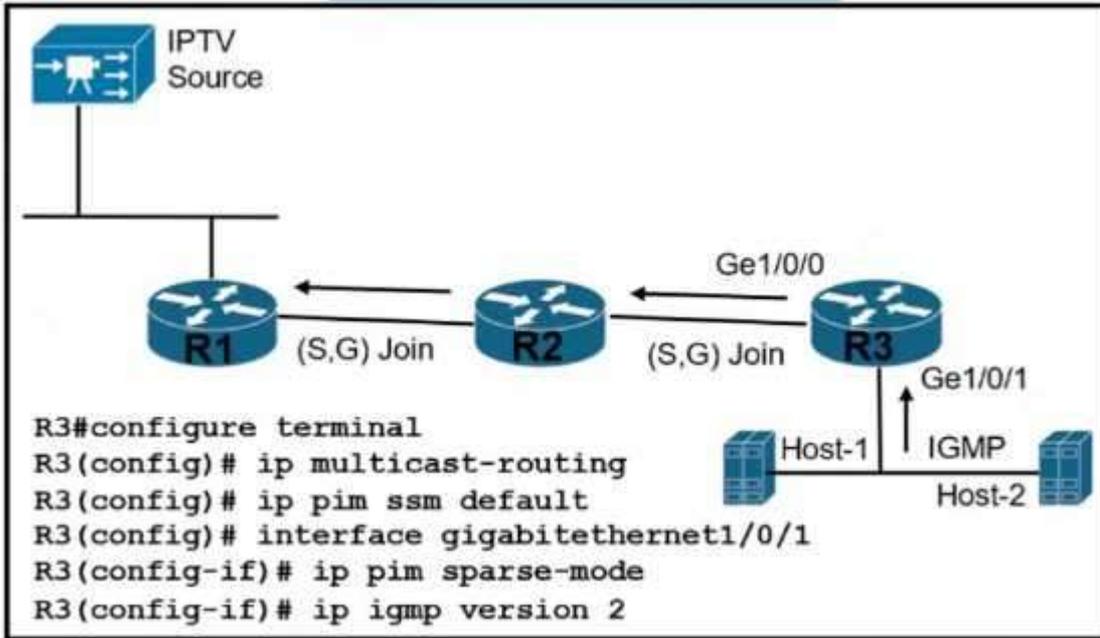
- A. Configure the two routers with different process IDs
- B. Configure the two routers with different hello and dead timer values
- C. Switch the DR and BDR roles between the two routers
- D. Configure interface Serial1/0 on Router1 as a point-to-point interface

Answer: D

QUESTION 117

Refer to the exhibit. A customer reports that Host-1 is failing to receive streaming traffic from the IPTV source. The engineer has confirmed that hosts on router R2 are receiving traffic normally and that Host-1 is correctly sending subscription messages to join the IPTV stream.

Which action must the engineer take to correct the problem?

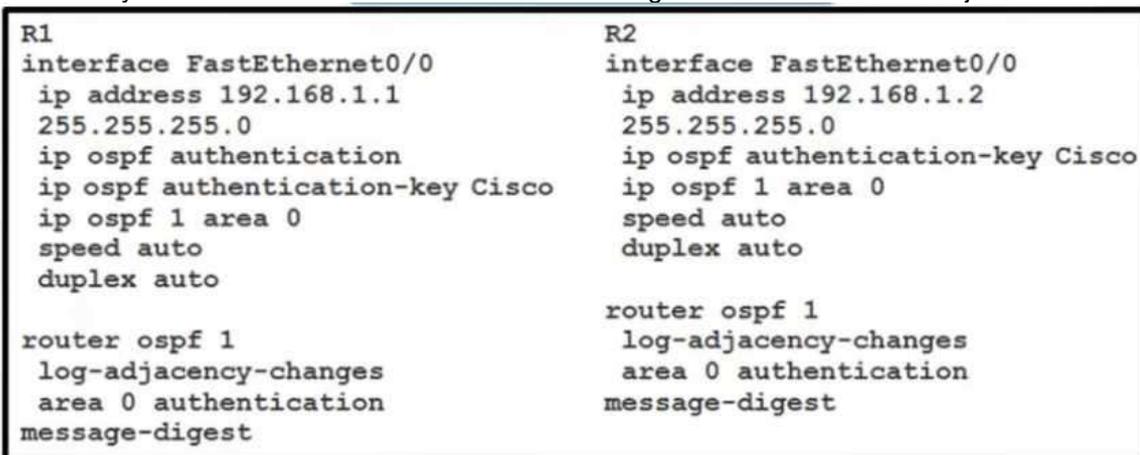


- A. Configure IP PIM SSM and IGMP version 2 under interface GigatxEthernet 1/0/1 on R3
- B. Configure IGMP version 3 under interface GigabitEthernet 1/(V1 on R3
- C. Remove IP PIM SSM and IGMP from interface GigaEthernet 1/0/1 on R3 and configure under global configuration
- D. Remove IP PIM SSM from the global configuration on R3 and configure it under the GigabitEthernet 1/0/1 interface

Answer: B

QUESTION 118

Refer to the exhibit. While applying the configurations on two routers an engineer notices that OSPF adjacency between them remains down. Through the ping test the engineer confirmed that both routers have Layer 3 reachability between them. Which action should the engineer take to make the adjacencies full?



- A. Enter the command ip ospf authentication in R2 interface
- B. Enable OSPF just inside the router OSPF process not in the interfaces of any router
- C. Delete the area 0 authentication message-digest command from the OSPF process in R1
- D. Delete the area 0 authentication message-digest command from the OSPF process in R2

Answer: A

QUESTION 119

Refer to the exhibit. An administrator is troubleshooting Internet access issues on a customer's network. After applying this ISIS configuration to R1, the administrator notices that it fails to redistribute the default route into IS-IS. After checking the connectivity between the ISIS router and the ISP router the engineer confirmed there is Layer 3 connectivity between them. Which action should be taken to correct the problem?

```
ip route 0.0.0.0 0.0.0.0 192.168.0.1
router isis
redistribute static
```

- A. Associate the default route with a VRF
- B. Add the default-information originate command to the configuration
- C. Configure the default route under any routing protocol other than IS-IS
- D. Configure R1 as a Layer 1 router

Answer: B