



**Cisco**

## **Exam Questions 300-510**

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

#### NEW QUESTION 1

Refer to the exhibit. Which effect of this configuration is true?

- A. It sets the keepalive timer to 30 seconds and the hold timer to 240 seconds.
- B. It sets the keepalive timer to 30 milliseconds and the hold timer to 240 milliseconds
- C. It sets the hold timer to 30 milliseconds and the keepalive timer to 240 milliseconds
- D. It sets the hold timer to 30 seconds and the keepalive timer to 240 seconds

**Answer:** A

#### NEW QUESTION 2

For which reason can two devices fail to establish an OSPF neighbor relationship?

- A. The two devices have different process IDs
- B. The two devices have different network types
- C. The two devices have different router IDs
- D. The two devices have the same area ID

**Answer:** B

#### NEW QUESTION 3

Refer to the exhibit. Which LSA type is indicated by this router output?

```
OSPF Router with ID (192.168.1.1) (Process ID 1)
Router Link States (Area 1234)
LS age: 691
Options: (No TOS-capability, DC)
LS Type: Router Links
Link State ID: 192.168.1.1
```

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

**Answer:** C

#### NEW QUESTION 4

Which statement about enabling segment routing for IGPs is true?

- A. Segment routing must first be enabled under then routing process and then globally
- B. Segment routing must first be enabled globally and then under the routing process
- C. Segment routing can be enabled only under the routing process
- D. Segment routing can be enabled only globally

**Answer:** B

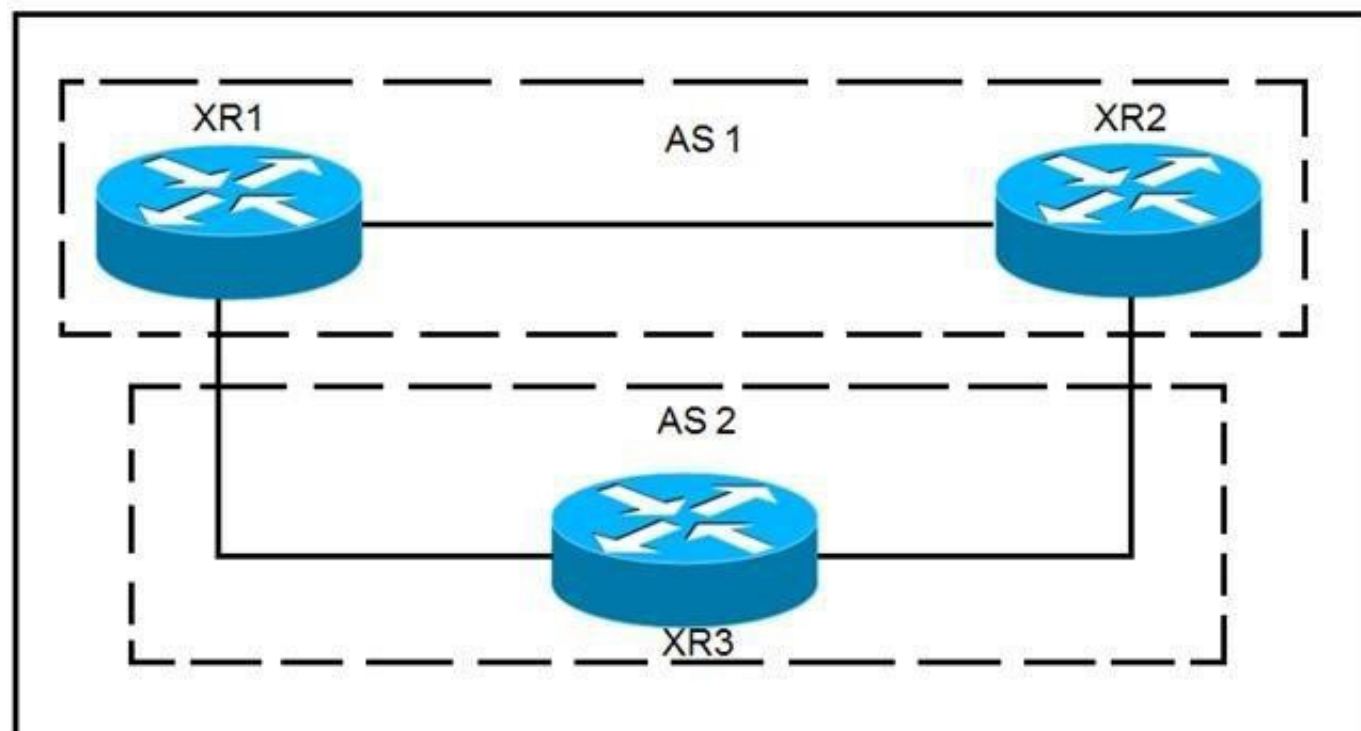
#### NEW QUESTION 5

Which task is performed when troubleshooting LDP?

- A. Execute the ping utility to generate information about the MAC addresses used along the path
- B. Verify that MPLS is disabled globally and enabled on the necessary interfaces in a per-interface basis
- C. Execute the traceroute utility to generate information about the labels used along the path
- D. Verify that Cisco Express Forwarding has been disabled on the network

**Answer:** C

#### NEW QUESTION 6



Refer to the exhibit. XR1 and XR2 are sending the prefix 10.11.11.0/24 to XR3. A configured policy on XR1 is incorrectly prepending AS path 11 11 12 12 onto this prefix. A network operator wants to add a policy onto XR3 that will not allow the falsely prepending prefix from being installed. Which policy configuration applied to the XR3 neighbor configuration for XR1 can accomplish this requirement without impact to other or future received routes?

- A. `route-policy NO_PREPEND`  
`if as-path passes-through '11' then`  
`pass`  
`else`  
`drop`  
`endif`  
`end-policy`
- B. `route-policy NO_PREPEND`  
`if as-path prepends`  
`drop`  
`else`  
`pass`  
`endif`  
`end-policy`
- C. `route-policy NO_PREPEND`  
`if as-path passes-through '1' then`  
`pass`  
`else`  
`drop`  
`endif`  
`end-policy`
- D. `route-policy NO_PREPEND`  
`if as-path passes-through '11' then`  
`drop`  
`else`  
`pass`  
`endif`  
`end-policy`

Answer: D

#### NEW QUESTION 7

Refer to the exhibit. Router 1 is a core ABR in a Cisco Unified MPLS environment. All of the router 1 BGP peers are established, but traffic between customers is failing. Which BGP configuration must be added to the configuration?

- A. It must be configured for graceful restart  
 B. It must be configured with a route reflector  
 C. It must be configured with send labels  
 D. It must be configured with PIC edge

Answer: C

#### NEW QUESTION 8

```

R1#sh ip int bri
Interface          IP-Address      OK? Method Status  Protocol
FastEthernet0/0    10.1.12.1       YES manual up      up
FastEthernet0/1    10.1.13.1       YES manual up      up

R1#sh run | s router bgp
!
router bgp 123
bgp log-neighbor-changes
neighbor TEST peer-group
neighbor TEST remote-as 2 alternate-as 3
neighbor 10.1.12.2 peer-group TEST
neighbor 10.1.13.3 peer-group TEST

R2#sh ip int bri
Interface          IP-Address      OK? Method Status  Protocol
FastEthernet0/0    10.1.12.2       YES manual up      up

R2#sh run | s router bgp
!
router bgp 2
bgp log-neighbor-changes
neighbor 10.1.12.1 remote-as 123

R3#sh ip int bri
Interface          IP-Address      OK? Method Status  Protocol
FastEthernet0/1    10.1.13.3       YES manual up      up

R3#sh run | s router bgp
router bgp 3
bgp log-neighbor-changes
neighbor 10.1.13.1 remote-as 123

```

Refer to the exhibit. R1 is directly connected to R2 and R3. R1 is in BGP AS 123, R2 is in BGP AS 2, and R3 is in BGP AS 3. Assume that there is no connectivity issue between R1, R2 and R1, R3. Which result between BGP peers R1, R2 and R1, R3 is true?

- A. The BGP session does not come up between R1 and R2 and between R1 and R3.
- B. The BGP session comes up between R1 and R2 and between R1 and R3.
- C. The BGP session comes up between R1 and R3, but not between R1 and R2.
- D. The BGP session comes up between R1 and R2, but not between R1 and R3.

**Answer: B**

#### NEW QUESTION 9

Which two conditions must be met before separate ISPs can provide interdomain multicast routing? (Choose two.)

- A. Each ISP must configure MSDP to connect its individual multicast administrative domain to the domains at other ISPs.
- B. Each ISP must dedicate a single router to handle multicast traffic between providers.
- C. Each ISP must replace its RP assignment with a global RP.
- D. Each ISP must configure its network to use PIM-DM.
- E. Each ISP must support intradomain multicast routing.

**Answer: AE**

#### NEW QUESTION 10

An engineer is troubleshooting a connectivity issue across the MPLS network and is verifying the forwarding behavior of packets. Which table does the engineer look at to verify the forwarding behavior of an IP packet as it enters the MPLS network at the ingress LSR?

- A. LFIB
- B. LIB
- C. RIB
- D. FIB

**Answer: A**

#### NEW QUESTION 10

DRAG DROP

An engineer is troubleshooting end-to-end customer traffic across an MPLS VPN service provider network. Which tasks should the engineer use to solve the



routing issues? Drag and drop the table types from the left onto the most useful troubleshooting tasks/router types on the right. (Not all options are used.)  
Select and Place:

- A. Mastered
- B. Not Mastered

**Answer:** A

#### NEW QUESTION 12

You have configured MSDP peering between two autonomous systems that pass traffic between two sites, but the peering has failed to come up. Which task do you perform to begin troubleshooting the problem?

- A. Verify that multicast has been disabled globally
- B. Verify that PIM-DM is configured on the source interface
- C. Verify that both source interfaces are reachable from both peers
- D. Verify that the two MSDP peers allow asymmetric routing

**Answer:** C

#### NEW QUESTION 16

```
"PE#show ip msdp peer
MSDP Peer 10.10.10.10 (?), AS ?
Connection status:
  State: Listen, Resets: 0, Connection source: none configured
  Uptime (Downtime): 00:00:07, Messages sent/received: 0/0
  Output messages discarded: 0
  Connection and counters cleared 00:00:7 ago
SA Filtering:
  Input (S, G) filter: none, route-map: none
  Input RP filter: none, route-map: none
  Output (S, G) filter: none, route-map: none
  Output RP filter: none, route-map: none
SA-Requests:
  Input filter: none
Peer ttl threshold: 0
SAs learned from this peer: 0
Input queue size: 0, Output queue size: 0"
```

Refer to the exhibit. A service provider technician is working on a multicast issue for a customer. While checking the multicast table, the technician notices that no flags are present for the (1.1.1.1, 239.1.1.1) entry, yet flags are present for the (1.1.1.1, 232.1.1.1) entry.  
Which factor might explain this issue?

- A. Only the administratively scoped range is permitted
- B. Only ASM is permitted
- C. Only the default SSM range is permitted
- D. Only GLOP is permitted

**Answer:** C

#### NEW QUESTION 20

```
Router 1:
router ospf 20
 redistribute eigrp 1
 network 192.168.0.0 0.0.0.255 area 0
```

Refer to the exhibit. An engineer is troubleshooting an OSPF issue. Router 1 has a neighbor relationship with router 2. Only router 1 classful EIGRP routes can be seen on router 2. In order for all EIGRP routes to be redistributed correctly, which action should be taken?

- A. Router 1 must have the keyword subnets included in the redistribution command for all EIGRP routes to be redistributed.
- B. Router 1 must remove the AS number 1 from the redistribution command for all EIGRP routes to be redistributed.
- C. Router 1 must have the keyword ospf-metric included in the redistribution command for all EIGRP routes to be redistributed.
- D. Router 1 must have the keyword metric-type 1 included in the redistribution command for all EIGRP routes to be redistributed.

**Answer:** A

#### NEW QUESTION 23

Refer to the exhibit. A network operator must inject a Level 1 route from XR2 (10.16.16.0/24) into the ISIS topology. Which configuration allows the injection in a way that XR3 and XR1 have a valid and working route for 10.16.16.0/24?

- A. A.

```
#XR3
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 22) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 1 into level 2 route-policy ISIS_PROPO
```

B. #XR2

```
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 32) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 2 into level 1 route-policy ISIS_PROPO
```

C. #XR2

```
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 32) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 1 into level 2 route-policy ISIS_PROPO
```

B. #XR3

```
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 32) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 2 into level 1 route-policy ISIS_PROPO
```

Answer: C

NEW QUESTION 27

```
RP/0/0/CPU/0:P1#
!
key chain BGP
key 1
accept-lifetime 13:14:06 february 14 1993 infinitive
send-lifetime 13:14:06 february 14 1993 infinitive
key-string password cisco123
cryptographic-algorithm MD5
!
!
router bgp 1
address-family ipv4 unicast
!
neighbor 192.168.13.3
remote-as 1
keychain BGP
address-family ipv4 unicast

RP/0/0/CPU/0:PE3#
!
key chain BGP
key 1
accept-lifetime 13:14:06 february 14 1993 infinitive
send-lifetime 13:14:06 february 14 1993 infinitive
key-string password cisco123
cryptographic-algorithm MD5
!
!
router bgp 1
address-family ipv4 unicast
!
neighbor 192.168.13.1
remote-as 1
keychain BGP
address-family ipv4 unicast
```

Refer to the exhibit. P1 and PE3 Cisco IOS XR routers are directly connected and have this configuration applied. The BGP session is not coming up. Assume that there is no IP reachability problem and both routers can open tcp port 179 to each other. Which two actions fix the issue? (Choose two.)

- A. Change MD5 to HMAC-SHA1-12
- B. Change MD5 to HMAC-ESP
- C. Change MD5 to SHA-1
- D. Change MD5 to HMAC-MD5
- E. Remove the send and accept lifetime under key 1

**Answer:** AD

#### NEW QUESTION 31

Which output from the show isis interface command helps an engineer troubleshoot an IS-IS adjacency problem on a Cisco IOS-XR platform?

- A. metric
- B. priority
- C. circuit type
- D. hello interval

**Answer:** D

#### NEW QUESTION 33

A network engineer is troubleshooting OSPF multiarea. Which Cisco IOS XR feature should the engineer use in order to streamline OSPF issue?

- A. hierarchical CLI
- B. DR support for topology management
- C. routing process enabled by default on all interfaces
- D. show ip ospf topology command

**Answer:** A

#### NEW QUESTION 37

```
router bgp 65515
 neighbor 192.168.1.1 route-map ciscotest in
 neighbor 192.168.1.1 remote-as 65516

ip as-path access-list 1 permit _65517_

route-map ciscotest permit 10
 match as-path 1
 set local-preference 150
```

Refer to the exhibit. After troubleshooting BGP traffic steering issue, which action did the network operator take to achieve the correct effect of this configuration?

- A. Routes that have passed through AS 65517 have the local preference set to 150.
- B. Routes that have originated through AS 65517 have the local preference set to 150.
- C. Routes directly attached to AS 65517 have the local preference set to 150.
- D. Routes that have passed through AS 65517 have the local preference set to 150 and the traffic is denied.

**Answer:** A

#### NEW QUESTION 41

DRAG DROP

Drag and drop the attributes for the BGP route selection on the left into the correct order on the right. Not all options are used.

Select and Place:

- A. Mastered
- B. Not Mastered

**Answer:** A

#### NEW QUESTION 44

Which two characteristics unique to SSM when compared to ASM are true? (Choose two.)

- A. It uses SPT switchover
- B. It uses (\*,G) exclusively
- C. It uses IGMPv3
- D. It uses RP
- E. It uses (S,G) exclusively

**Answer:** CE

#### NEW QUESTION 48

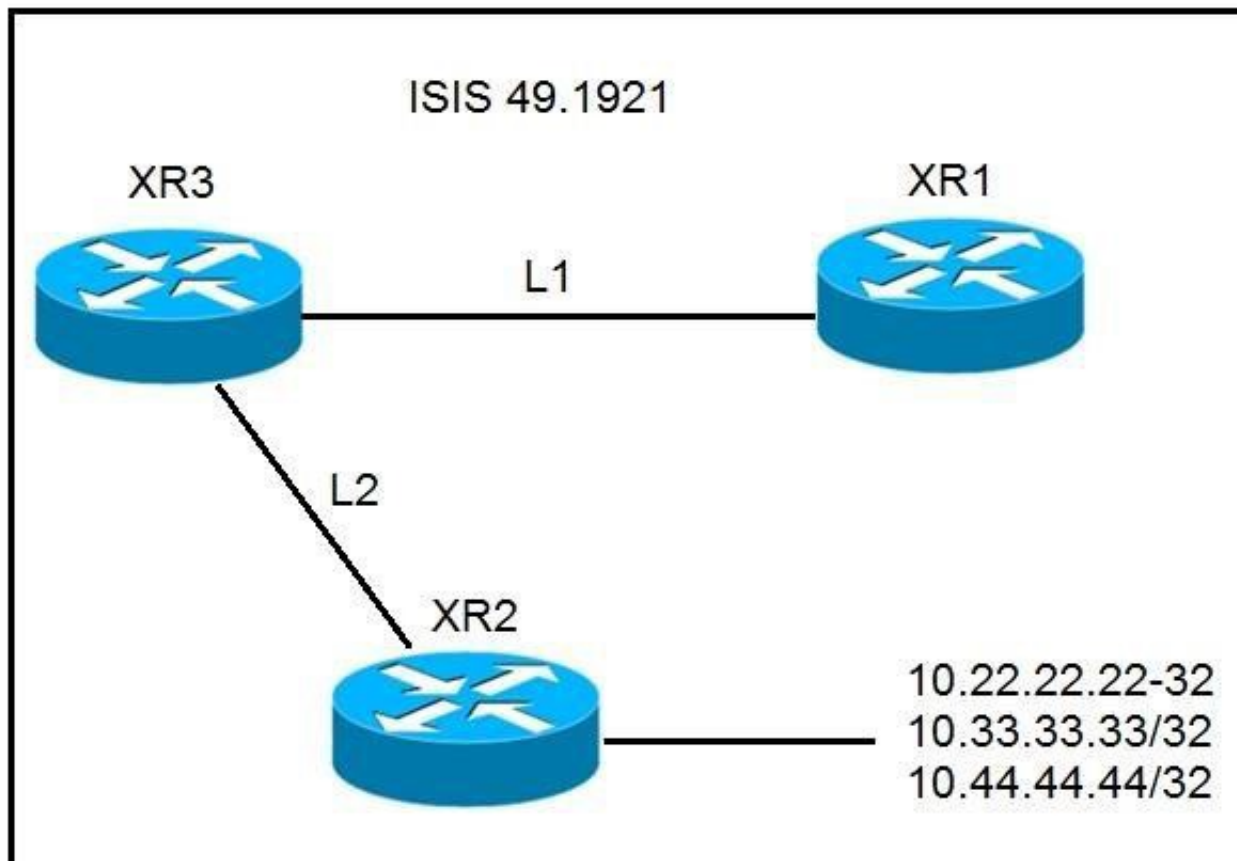
Refer to the exhibit. Which attribute can router 1 alter so that only other iBGP peers prefer to use 192.168.4.2 as the next hop for route 192.168.3.0/24?

- A. MED
- B. local preference
- C. origin
- D. weight

**Answer:** A

#### NEW QUESTION 52





Refer to the exhibit. A network operator must stop 10.33.33.33/32 from being redistributed into Level 1 router XR1. Which configuration meets this need?

- A. #XR2
- ```
prefix-set NO_33
 10.33.33.33/32
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 else
  pass
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
  propagate level 2 into level 1 route-policy ISIS_NO_33
```
- B. #XR3
- ```
prefix-set NO_33
 10.33.33.33/32
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
  propagate level 2 into level 1 route-policy ISIS_NO_33
```
- C.

```
#XR3
prefix-set NO_33
 10.33.33.33/32
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 else
  pass
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
 propagate level 2 into level 1 route-policy ISIS_NO_33
```

D. #XR3

```
prefix-set NO_33
 10.33.33.33/23
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 else
  pass
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
 propagate level 2 into level 1 route-policy ISIS_NO_33
```

Answer: C

#### NEW QUESTION 54

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