

Cisco

Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)



NEW QUESTION 1

```
RP/0/0/CPU0:XR1#show run

route-policy AGGRO
  if destination in (10.0.0.0/8 ge 8 le 25) then
    set community (10:825)
  endif
  if destination in (10.2.0.0/24) then
    drop
  endif
  if destination in (10.1.0.0/24) then
    suppress-route
  endif
end-policy
!
!
router bgp 1
  bgp router-id 192.168.0.7
  address-family ipv4 unicast
    aggregate-address 10.0.0.0/8 route-policy AGGRO

RP/0/0/CPU0:XR1#
```

Refer to the exhibit. A network operator is working to filter routes from being advertised that are covered under an aggregate announcement. The receiving router of the aggregate announcement block is still getting some of the more specific routes plus the aggregate. Which configuration change ensures that only the aggregate is announced now and in the future if other networks are to be added?

- A. Configure the summary-only keyword on the aggregate command
- B. Set each specific route in the AGGRO policy to drop instead of suppress-route
- C. Filter the routes on the receiving router
- D. Set each specific route in the AGGRO policy to remove instead of suppress-route

Answer: A

NEW QUESTION 2

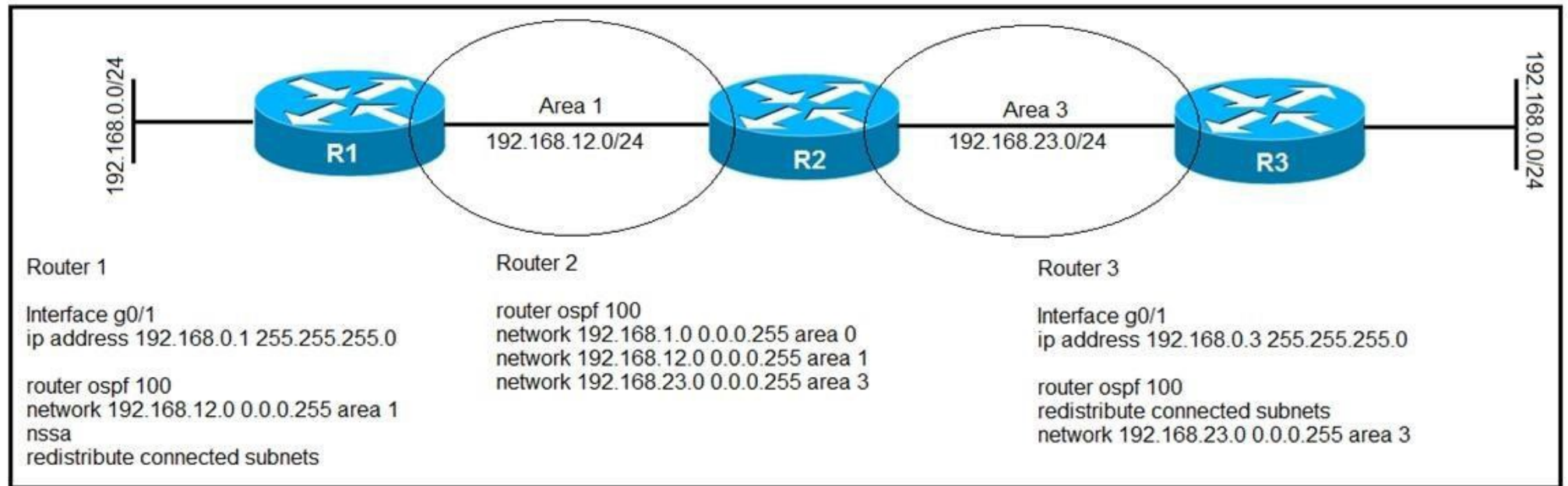
```
RP/0/0/CPU0:XR3#show bgp 10.11.11.0
Thu Jun 20 20:44:15.749 UTC
BGP routing table entry for 10.11.11.0/24
Versions:
  Process          bRIB/RIB      SendTblVer
  Speaker          9             9
Paths: (2 available, best #2)
  Advertised to update-groups (with more than one peer):
    0.1
  Path #1: Received by speaker 0
  Not advertised to any peer
  1
    10.0.0.9 from 10.0.0.9 (192.168.0.1)
      Origin IGP, metric 0, localpref 100, valid, external
      Received Path ID 0, Local Path ID 0, version 0
      Origin-AS validity: not-found
  Path #2: Received by speaker 0
  Advertised to update-groups (with more than one peer):
    0.1
  1
    10.0.0.13 from 10.0.0.13 (192.168.0.2)
      Origin IGP, metric 0, localpref 100, weight 651, valid, external, best, group-best
      Received Path ID 0, Local Path ID 0, version 9
```

Refer to the exhibit. A network operator is getting the route for 10.11.11.0/24 from two upstream providers on #XR3. The network operator must configure #XR3 to force the 10.11.11.0/24 prefix to route via next hop of 10.0.0.9 as primary when available. Which of these can the operator use the routing policy language for, to enforce this traffic forwarding path?

- A. weight of 0 on the prefix coming from 192.168.0.2
- B. lower local preference on the prefix coming from 192.168.0.2
- C. higher local preference on the prefix coming from 192.168.0.1
- D. weight of 100 on the prefix coming from 192.168.0.1

Answer: C

NEW QUESTION 3



Refer to the exhibit. After troubleshooting an OSPF adjacency issue, routers 1, 2, and 3 have formed OSPF neighbor relationships. Which statement about the configuration is true?

- A. Router 2 receives a Type 5 LSAs from router 1 for its connected subnets
- B. Router 2 uses router 3 as the next hop for 192.168.0.0/24
- C. Router 2 uses router 1 as the next hop for 192.168.0.0/24
- D. Router 2 receives a Type 7 LSAs from router 3 for its connected subnets

Answer: A

NEW QUESTION 4

A network consultant is troubleshooting IS-IS instances to identify why a routing domains is having communication problems between the two instances. Which description of the possible cause of issues in the routing domain is true?

- A. The same interface cannot be advertised in two different IS-IS instances
- B. The IS-IS "ISP" and "ISP2" instances are unrelated and unable to intercommunicate
- C. The configured IS-IS NSEL value is not allowing the routing systems to establish a neighborhood
- D. The interface mode ip router is-is command was not included in the script

Answer: A

NEW QUESTION 5

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

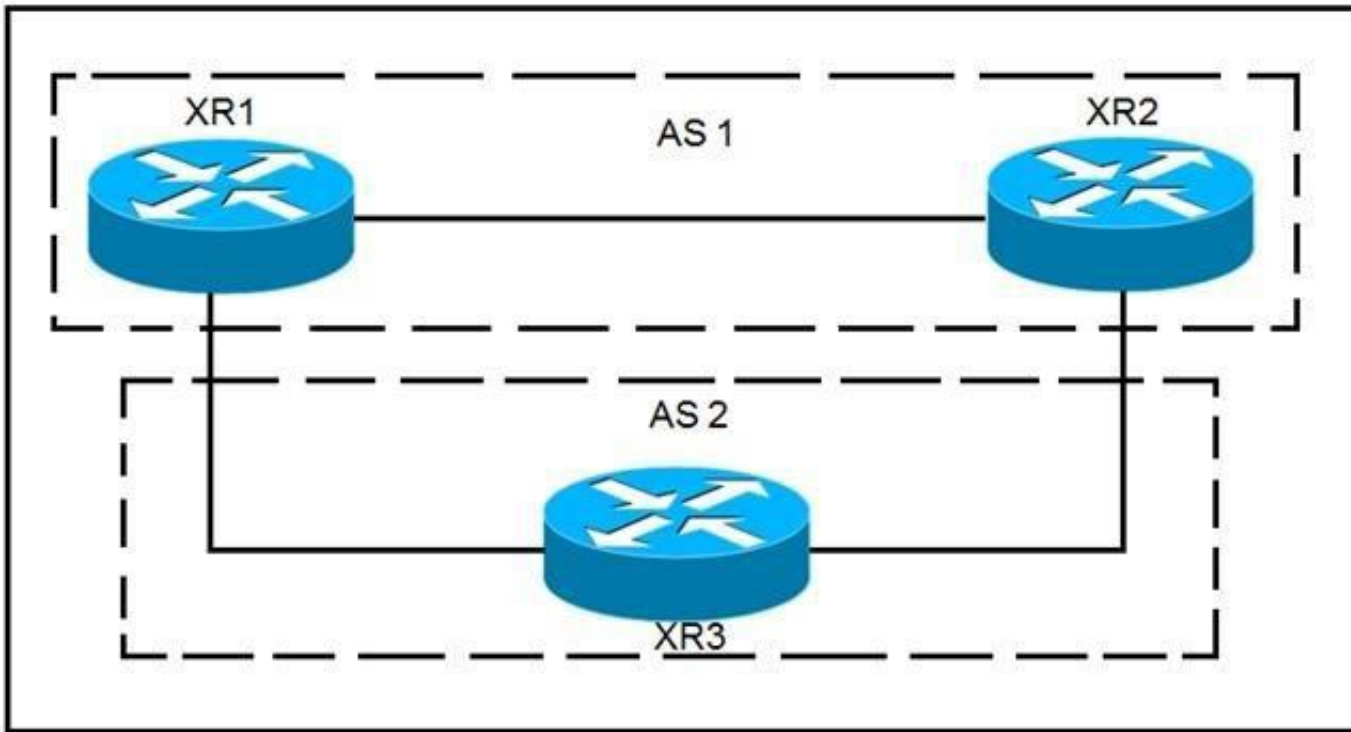
```

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

Answer: D

NEW QUESTION 7


```
Router 1:

interface TenGigE0/1
  point-to-point
  address-family ipv4 unicast
    fast-reroute per-prefix
    Fast-reroute per-prefix ti-lfa

R1#show isis fast-reroute 172.16.200.9/32

L2 172.16.200.9/32 [30/115]
    via 192.168.20.1, TenGigE0/1, R2, SRGB Base: 16000, Weight: 0
    FRR backup via 192.168.30.1, TenGigE0/2, R3, SRGB Base: 16000,
    Weight: 0, Metric 40
```

Refer to the exhibit. Router 1 is connected to router 2 on interface TenGigE0/1. Which interface provides the alternate path to 172.16.200.9/32 when the link between router 1 and router 2 goes down?

- A. TenGigE0/1 interface provides the alternate path
- B. A backup path must be statically installed
- C. TenGigE0/2 interface provides the alternate path
- D. A primary path must be manually installed

Answer: C

NEW QUESTION 8

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 9

```
Router 1:

interface tunnel-te12
  ipv4 unnumbered loopback0
  autoroute announce
  destination 192.168.1.2
  path-option 12 dynamic segment-routing
  path-protection
```

Refer to the exhibit. Router 1 has established an SR-TE tunnel with router 2. Which statement describes this configuration?

- A. Router 1 has a list of labels used to explicitly lay out a path to router 2.
- B. Router 1 and router 2 have a bidirectional tunnel set up with dynamic path selection.
- C. Router 1 is the head-end tunnel and has dynamically chosen a path to router 2.
- D. Router 2 is the head-end tunnel and has explicitly set a path to router 1.

Answer: C

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 15

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 20

For which reason do you deploy BGP confederations within a BGP transit backbone?

- A. to support a larger number of eBGP peer sessions
- B. to increase the number of routes that can be redistributed between the running IGP and BGP
- C. to reduce the number of eBGP routes that must be shared between autonomous systems
- D. to reduce the number of iBGP peering sessions

Answer: D

NEW QUESTION 24

Which feature is used in multicast routing to prevent loops?

- A. STP
- B. inverse ARP
- C. RPF
- D. split horizon

Answer: C

NEW QUESTION 25

Which two statements about mapping multicast IP addresses to MAC addresses are true? (Choose two.)

- A. All mapped multicast MAC addresses begin with 0x0100.5E
- B. The router performs the mapping before it hands the packet off to a switch
- C. All multicast MAC addresses end with 0x0100.5E
- D. The mapping process may generate overlapping addresses, which can cause receivers to receive unwanted packets
- E. All destination MAC addresses begin with an octet of binary 1s

Answer: AD

NEW QUESTION 29

```
Router 1:

router bgp 65530
 address-family ipv4 unicast
  bgp additional-paths select all
 neighbor 192.168.1.1 additional-paths send
 neighbor 192.168.1.1 advertise additional-paths all
```

Refer to the exhibit. Which statement about this configuration is true?

- A. Router 1 sends and receives multiple best paths from neighbor 192.168.1.1
- B. Router 1 sends up to two paths to neighbor 192.168.1.1 for all routes
- C. Router 1 receives up to two paths from neighbor 192.168.1.1 for all routes in the same AS
- D. Router 1 receives only the best path from neighbor 192.168.1.1

Answer: A

NEW QUESTION 31

Which cost is the default when redistributing routes from BGP to OSPF?

- A. 20
- B. 1
- C. infinite
- D. automatic

Answer: B

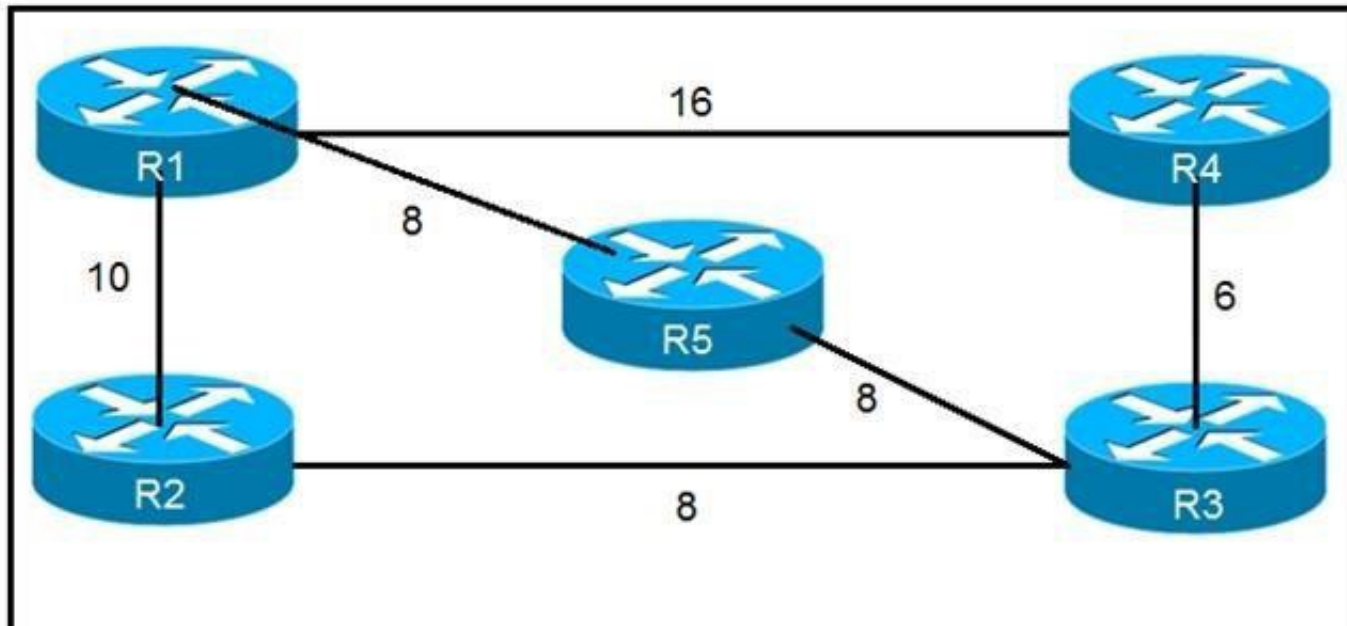
NEW QUESTION 36

Refer to the exhibit. CE1 and CE2 cannot communicate through the service provider BGP peering is established between PE1 and PE2. IS-IS is the only routing protocol running in the service provider core. What step can be done to troubleshoot the issue?

- A. Switch the IGP's running in the core from IS-IS to OSPF to support a Cisco MPLS TE tunnel from PE1 to PE2.
- B. Configure BGP between CE and PE routers.
- C. Confirm that IS-IS is running with metric-style narrow.
- D. Verify the MPLS LSPs.

Answer: C

NEW QUESTION 40



Refer to the exhibit. Which router does R1 install as an alternate next hop when trying to reach R3 if LFA is enabled?

- A. R5
- B. R3
- C. R4
- D. R2

Answer: D

NEW QUESTION 44

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 49

```

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 52

Refer to the exhibit. An engineer has successfully fixed BGP peering issue. R1 has an established eBGP peering with R2 and R3. Which mechanism should the engineer apply in order to steer the traffic correctly?

- A. The MED attribute can be applied on R2 to influence R1 to use it as the primary path.
- B. The local preference attribute can be applied on R3 to influence AS 65513 to use AS 65515 as the secondary path.
- C. The weight attribute can be applied on R2 to influence AS 65513 to use AS 65515 as the primary path.
- D. The IGP metric can be manipulated on R1 to allow traffic to be load balanced between R2 and R3.

Answer: D

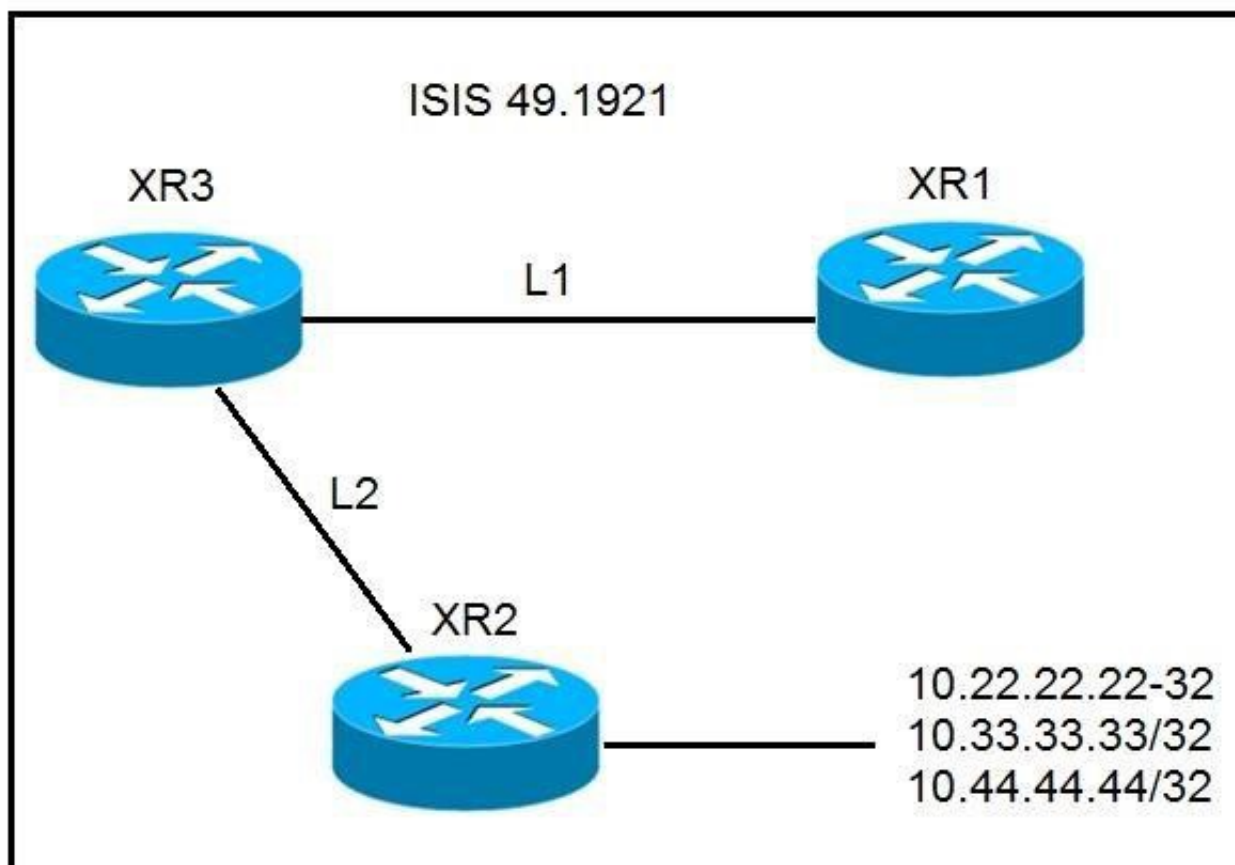
NEW QUESTION 55

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 56



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 57

.....

Thank You for Trying Our Product

We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questions and Answers in PDF Format

300-510 Practice Exam Features:

- * 300-510 Questions and Answers Updated Frequently
- * 300-510 Practice Questions Verified by Expert Senior Certified Staff
- * 300-510 Most Realistic Questions that Guarantee you a Pass on Your First Try
- * 300-510 Practice Test Questions in Multiple Choice Formats and Updates for 1 Year

100% Actual & Verified — Instant Download, Please Click
[Order The 300-510 Practice Test Here](#)