



Cisco

Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

NEW QUESTION 1

PE-A	PE-B
vrf definition Customer-A	vrf definition Customer-A
rd 65000:1111	rd 65000:1111
route-target export 65000:1111	route-target export 65000:1111
route-target import 65000:1111	route-target import 65000:1111
!	!
address-family ipv4	address-family ipv4
mdt default 233.0.0.1	mdt default 233.0.0.1
mdt data 233.0.0.2 0.0.0.0 threshold 100	mdt data 233.0.0.3 0.0.0.0 threshold 100
exit-address-family	exit-address-family

Refer to the exhibit. Which tree does multicast traffic follow?

- A. shared tree
- B. MDT default
- C. source tree
- D. MDT voice

Answer: B

NEW QUESTION 2

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 3

What is used by SR-TE to steer traffic through the network?

- A. shortest path calculated by IGP
- B. dynamic rules
- C. path policy
- D. explicit maps

Answer: C

NEW QUESTION 4

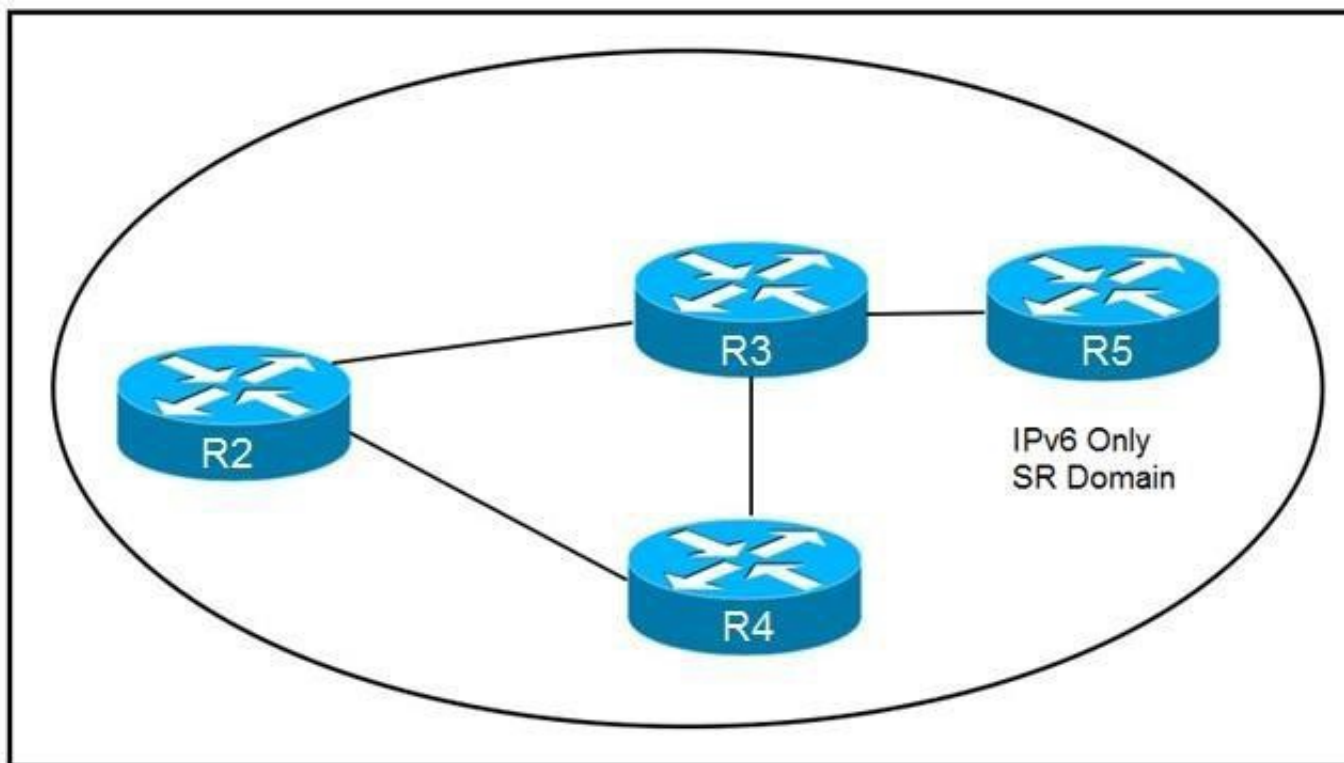
Which feature is used in multicast routing to prevent loops?

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

Answer: C

NEW QUESTION 5

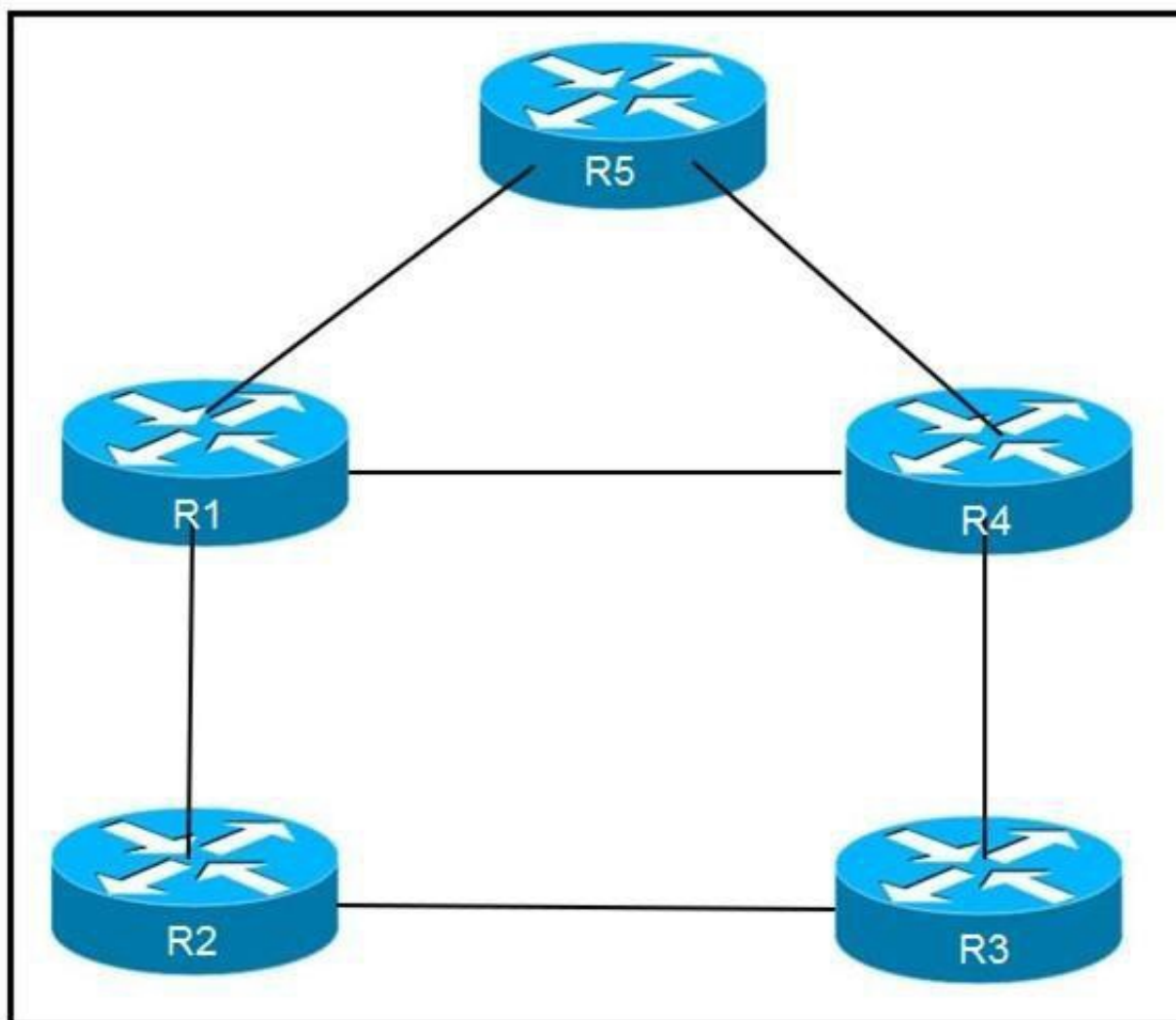
Refer to the exhibit. How are packets directed through the data plane when SRv6 is implemented?



- A. An ordered list of segments is encoded in a routing extension header
- B. The MPLS data plane is used to push labels onto IGP routes
- C. A stack of labels represents an ordered list of segments
- D. The packet is encapsulated with a header and trailer encoding the ordered list of segments

Answer: A

NEW QUESTION 6



Refer to the exhibit. An engineer is addressing an IS-IS design issue which is running within the topology. All links are running on FastEthernet, except the link between R5 and R4, which is Gigabit Ethernet. Which statement about the design is true?

- A. R4 prefer to reach R5 using R1 as the next hop
- B. All links have equal cost if the default metric is used
- C. R5 prefers to use R4 as the next hop for all routes
- D. R1 prefer to use R5 as the next hop to reach R4

Answer: B

NEW QUESTION 7

After you change the IP address on an IOS XR router, you cannot ping the new address. Which step did you forget to complete?

- A. commit the configuration
- B. roll back the configuration
- C. merge the configuration
- D. save the running configuration

Answer: A

NEW QUESTION 8

Which two statements about route reflectors are true? (Choose two.)

- A. Routes received from nonclient peers are reflected to route reflector clients as well as nonclient peers.
- B. Routes received from nonclient peers are reflected to route reflector cluster as well as OSPF peers.
- C. If a router received an iBGP route with the originator-ID attribute set to its own router ID, the route is discarded.
- D. Routes received from a route reflector client is reflected to other clients and nonclient peers.
- E. If a route reflector receives a route with a cluster-list attribute containing a different cluster ID, the route is discarded.

Answer: CD

NEW QUESTION 9

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 10

Refer to the exhibit. Which task must you perform on interface g1/0/0 to complete the SSM implementation?

- A. configure OSPFv3
- B. enable CDP
- C. disable IGMP
- D. configure IGMPv3

Answer: D

NEW QUESTION 10

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

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

Answer: B

NEW QUESTION 13

```
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

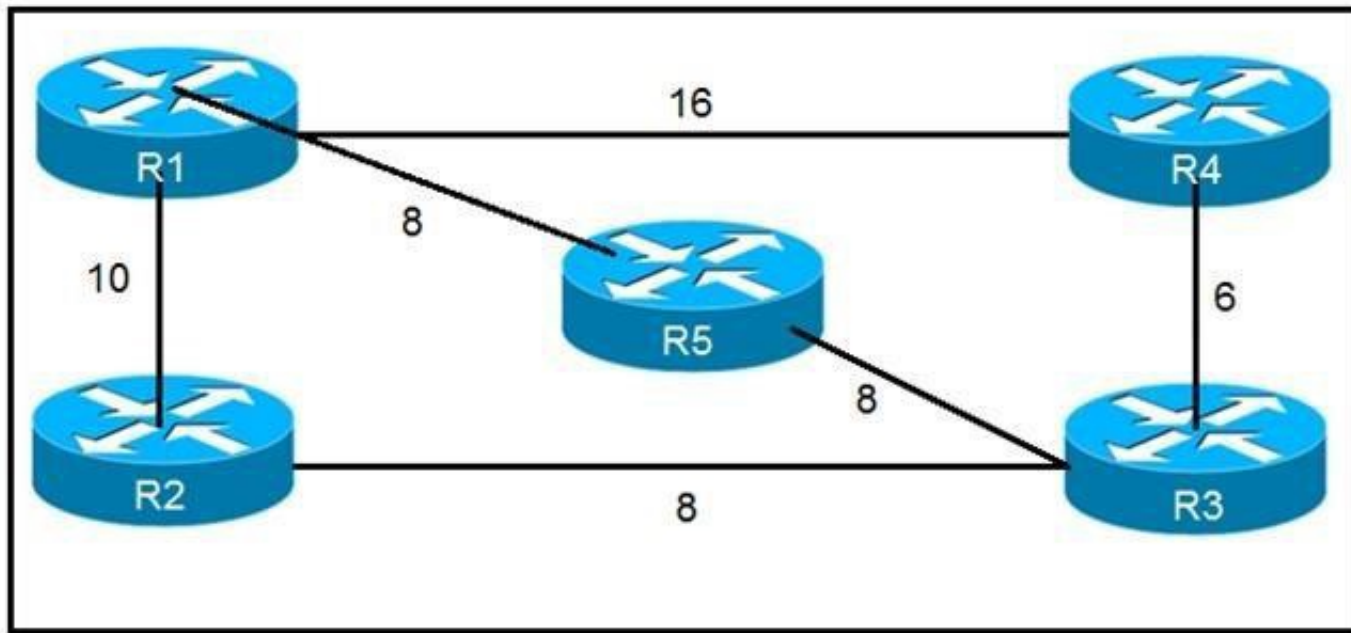
NEW QUESTION 14

Refer to the exhibit. Router 1 has attempted to establish a Cisco MPLS TE tunnel to router 2, but the tunnel has failed. Which statement about this configuration is true?

- A. Router 1 must define an explicit path to router 2
- B. Router 1 and router 2 must define the RSVP bandwidth reserved on the physical interfaces
- C. Router 2 must have a tunnel interface created with router 1 as the destination
- D. Router 1 must have Cisco MPLS TE enabled on interface gigabitethernet0/1

Answer: D

NEW QUESTION 18



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 19

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 20

Which two routing protocols have extensions capable of running SRv6? (Choose two.)

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

Answer: AB

NEW QUESTION 23

```

RP/0/0/CPU0:iosxr# show run segment-routing

segment-routing
  global-block 18000 24999
!

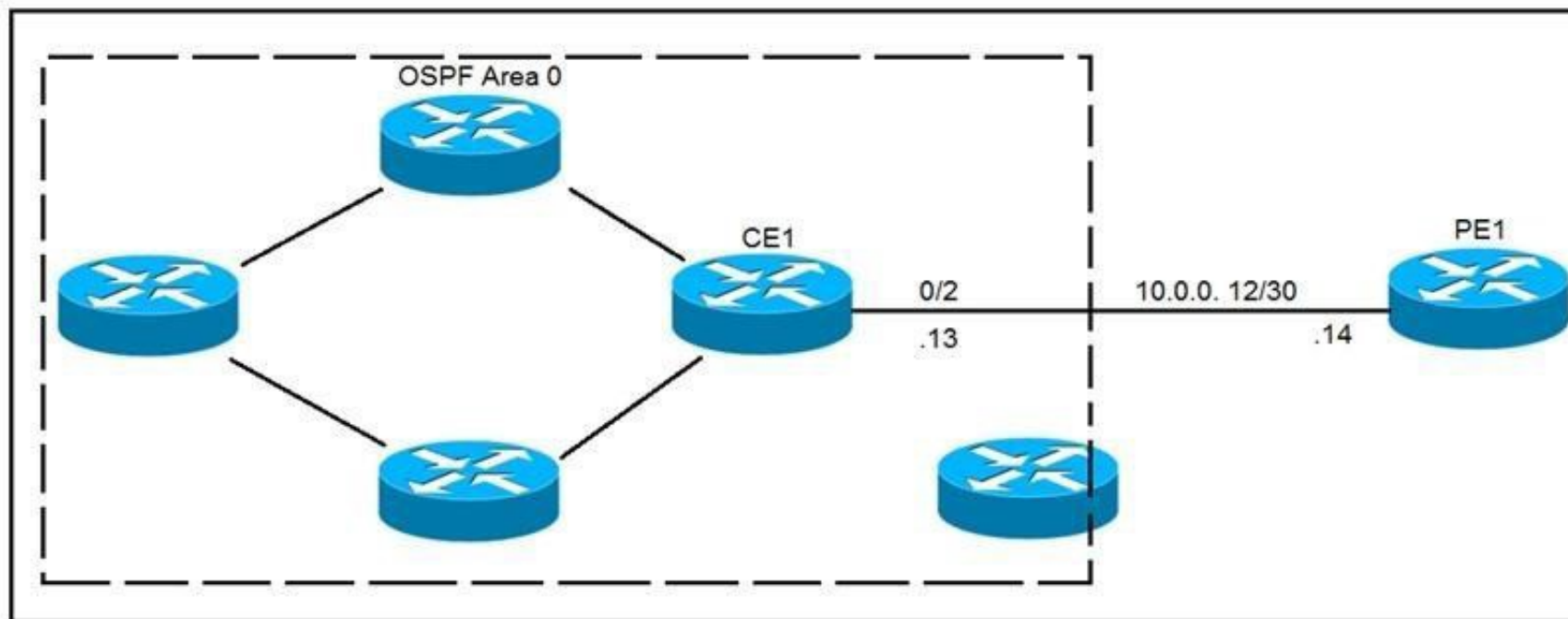
RP/0/0/CPU0:iosxr#
  
```

Refer to the exhibit. A network engineer implemented this segment routing configuration. Which statement about the output is true?

- A. This range conflicts with the segment routing local block range.
- B. The device must be reloaded for these ranges to be allocated and used.
- C. The default segment routing global block range is being used on this device.
- D. A nondefault segment routing global block range is being used on this device.

Answer: D

NEW QUESTION 27



Refer to the exhibit. CE1 is the gateway router into the provider network via PE1. A network operator must inject a default route into OSPF area 0. All devices inside area 0 must be able to reach PE1. Which configuration achieves this goal?

- A. #CE1
 router ospf 1
 default-information originate always
- B. #CE1
 ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/2 10.0.0.14
 !
 router ospf 1
 default-information originate

Answer: B

NEW QUESTION 32

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 37

<pre> RP/0/0/CPU/0:P1# ! key chain BGP key 1 key-string password cisco123 cryptographic-algorithm HMAC-MD5 ! router bgp 1 address-family ipv4 unicast ! neighbor 192.168.13.3 remote-as 1 keychain BGP address-family ipv4 unicast </pre>	<pre> RP/0/0/CPU/0:PE3# ! key chain BGP key 1 key-string password cisco123 cryptographic-algorithm HMAC-MD5 ! router bgp 1 address-family ipv4 unicast ! neighbor 192.168.13.1 remote-as 1 keychain BGP address-family ipv4 unicast </pre>
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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 action fixes the issue?

- A. Change HMAC-MD5 to HMAC-SHA1-20
- B. Configure the send and accept lifetime under key 1
- C. Change HMAC-MD5 to MD5
- D. Change HMAC-MD5 to HMAC-SHA1-12

Answer: B

NEW QUESTION 38

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 41

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