

## 300-515<sup>Q&As</sup>

Implementing Cisco Service Provider VPN Services (SVPI)

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## QUESTION 1

In a typical service provider environment, which two tools are used to help scale PE router connectivity requirements? (Choose two.)

- A. route reflectors
- B. VPNv4 address family
- C. originator ID
- D. cluster ID
- E. confederations

Correct Answer: AE

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## QUESTION 2

While troubleshooting EoMPLS configuration problems, which three parameters should an engineer match between the two ends of the pseudowire configurations? (Choose three.)

- A. VLAN name
- B. Xconnect group name
- C. EFP subinterface number
- D. pseudowire ID
- E. MTU size
- F. control word usage

Correct Answer: DEF

Reference: <https://www.cisco.com/c/en/us/support/docs/multiprotocol-label-switching-mpls/mpls/213238-mpls-l2vpn-pseudowire.html>

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## QUESTION 3

Refer to the exhibit.

```
PE1#show mpls forwarding
```

Local Label	Outgoing Label	Prefix or ID	Outgoing Interface	Next Hop	Bytes Switched
22095	Pop	192.168.10.1/32	Hu0/0/0/2	192.168.1.2	100000
22096	22286	192.168.20.1/32	Hu0/0/0/2	192.168.1.2	1000
22098	22288	192.168.30.1/32	Hu0/0/0/2	192.168.1.2	250000

```
<output omitted>
```

What is shown in this output?

- A. local and outgoing labels are updated in hardware
- B. BGP is used between neighbors that are exchanging MPLS labels
- C. LDP neighbor statuses
- D. the labels received and advertised on PE1

Correct Answer: D

#### QUESTION 4

An engineer needs to improve MPLS network management by implementing a set of tools to support the NOC engineers in troubleshooting network failures. Which feature should the engineer implement to check the connectivity of the MPLS LSP between the ingress and egress PE routers?

- A. MPLS OAM
- B. MPLS-TP
- C. LDP autodiscovery
- D. extended ping

Correct Answer: A

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k\\_r5-3/mpls/configuration/guide/b-mpls-cg53x-asr9k/b-mpls-cg53x-asr9k\\_chapter\\_01000.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k_r5-3/mpls/configuration/guide/b-mpls-cg53x-asr9k/b-mpls-cg53x-asr9k_chapter_01000.html)

#### QUESTION 5

```
RP/0/0/CPU0:PE1#show run
evpn
no evi 100
no advertise-mac
!
!
vrf EVPN
address-family ipv4 unicast
import route-target
133:100
export route-target
133:100
!
!
interface BVI651
vrf EVPN
ipv4 address 192.168.100.1 255.255.255.0
mac-address 1337.1337.1337
```

Refer to the exhibit. A network operator is implementing EVPN IRB on PE1. Which two command placements enable the advertisement of Type 2 routes and what information do Type 2 routes contain? (Choose two.)

- A. The operator adds in "host-routing" under the VRF EVPN.
- B. Type 2 routes contain MAC/IP information.
- C. Type 2 routes contain Ethernet Auto-Discovery information.
- D. The operator adds in "host-routing" under the BVI651 interface.
- E. Type 2 routes contain inclusive source-specific multicast route information.

Correct Answer: BD

Reference: [https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/vpn/61x/b-ncs5500-l2vpn-configuration-guide-61x/b-ncs5500-l2vpn-configuration-guide-61x\\_chapter\\_01010.html](https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/vpn/61x/b-ncs5500-l2vpn-configuration-guide-61x/b-ncs5500-l2vpn-configuration-guide-61x_chapter_01010.html)

## QUESTION 6

You try to configure MPLS VPN VRF Selection based on a source IP address on an interface that has VRF configured, but you receive an error. Which action must you take to correct the problem?

- A. Change the source IP address.
- B. Add the IP address to the VRF table.
- C. Remove the VRF from the interface.

D. Configure static routes for the VRF.

Correct Answer: C

Reference: [https://www.cisco.com/c/en/us/td/docs/ios/12\\_0s/feature/guide/vrfselec.html](https://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/vrfselec.html)

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## QUESTION 7

How do PE routers exchange CE routes between remote sites?

- A. by converting CE routes into VPNv4 routes and exchanging them using MP-BGP
- B. by establishing BGP neighbor relationships between all connected CEs to exchange routing information
- C. by learning IPv4 routes from connected CEs and redistributing them into the global IGP
- D. by converting CE routes into VPNv4 routes and exchanging them using the global IGP

Correct Answer: A

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## QUESTION 8

Which two BGP attributes prevent loops in a route reflector environment? (Choose two.)

- A. cluster ID
- B. local preference
- C. origin
- D. originator ID
- E. AS\_PATH

Correct Answer: AD

Reference: <https://www.ciscopress.com/articles/article.asp?p=2756480andseqNum=10>

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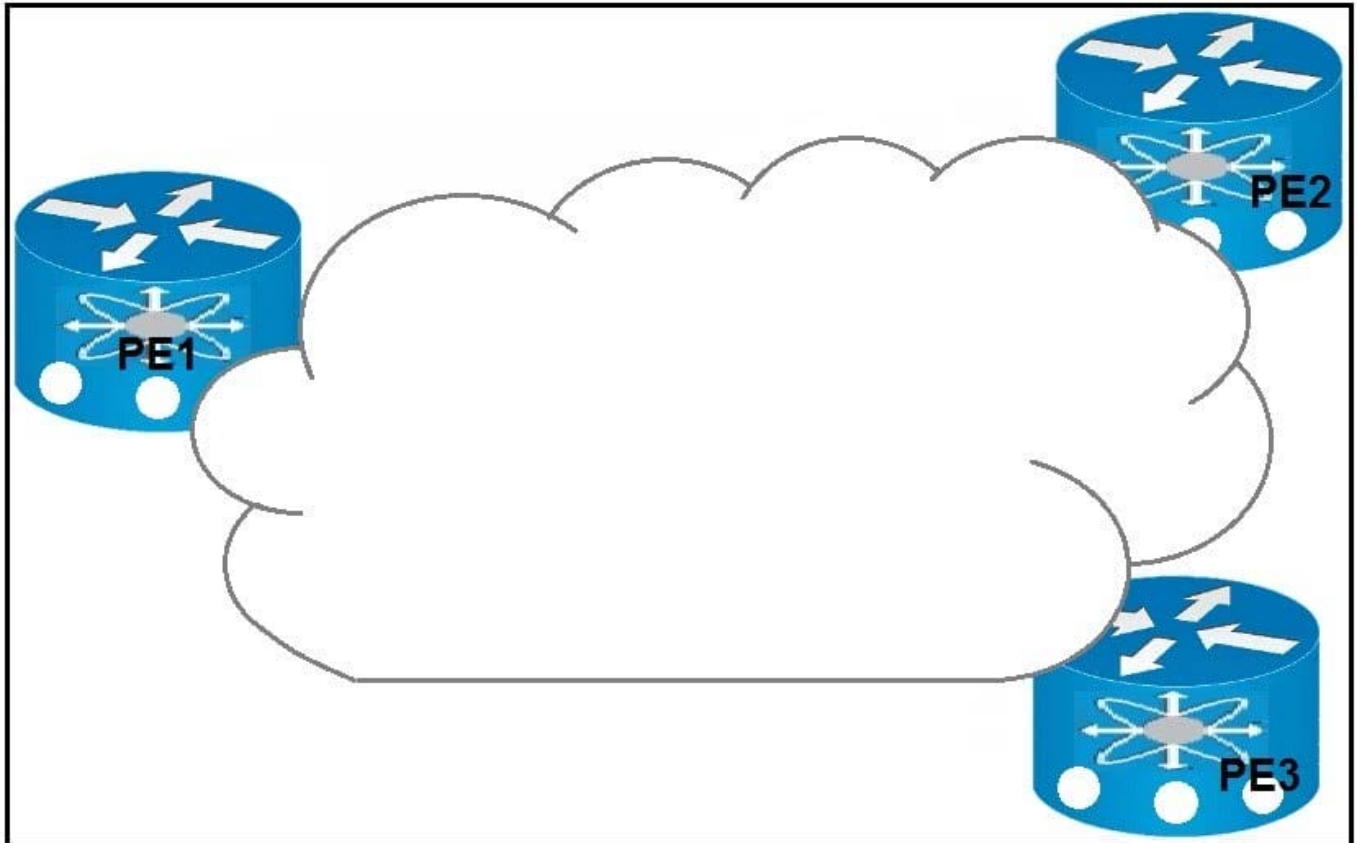
## QUESTION 9

Which two statements about MPLS L3 VPN RDs are true? (Choose two.)

- A. They enable EIGRP to use address families to separate traffic between IPv4 and VPNv4.
- B. They are represented as 32-bit values
- C. They are represented as 64-bit values.
- D. They enable OSPF to import and export routes into the global routing table of a router.
- E. They allow BGP to uniquely identify duplicate routes.

Correct Answer: CE

#### QUESTION 10



Refer to the exhibit. Which result occurs when PE1 learns a new MAC address and all three PEs are enabled with EVPN native?

- A. A system notification is sent to the network administrator that triggers the manual configuration of the new MAC address on PE2 and PE3.
- B. The new MAC address is sent by BGP to PE2 and PE3 as a Type 2 BGP route.
- C. The MAC address is entered into the CAM table and is classified for use on the native VLAN
- D. The MAC address is entered into the CAM table only if it is learned on the native VLAN.

Correct Answer: B

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-4/lxvpn/configuration/guide/b-l2vpn-cg-asr9000-64x/b-l2vpn-cg-asr9000-64x\\_chapter\\_01011.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-4/lxvpn/configuration/guide/b-l2vpn-cg-asr9000-64x/b-l2vpn-cg-asr9000-64x_chapter_01011.html)

#### QUESTION 11

```
PE(config-router-af)#neighbor 10.10.10.1 local-as 100
PE(config-router-af)#neighbor 10.10.10.1 remote-as 65000
PE(config-router-af)#neighbor 10.10.10.1 as-override

PE#show ip bgp vpnv4 vrf BLUE 10.10.10.10/32
BGP routing table entry for 111:1234:10.10.10.10/32, version 624
Paths: (1 available, best #2, table BLUE)
  Advertised to update-groups:
    38          39
 65000 65100 65222 65000
 192.168.40.1 (metric 31410) from 192.168.10.1 (192.168.10.1)
  Origin incomplete, localpref 100, valid, internal, best
  Extended Community:  RT:111:1234
  Originator: 192.168.20.1, Cluster list: 192.168.30.1
  mpls labels in/out nolabel/1146
```

Refer to the exhibit. While provisioning a new BGP session between the PE and CE router, you issue the as-override command. Which statement describes modification of the prefix before being sent to the CE router (10.10.10.1)?

- A. The fourth AS changes, but no other autonomous systems change.
- B. The first and fourth autonomous systems change.
- C. The second and third autonomous systems change.
- D. The first AS changes, but no other autonomous systems change.

Correct Answer: D

## QUESTION 12

What must match in the EVPN and L2VPN configuration mode when configuring EVPN native in a router?

- A. interface
- B. address family
- C. bridge domain
- D. EVI

Correct Answer: D

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/lxvpn/configuration/guide/b-l2vpn-cg-asr9000-62x/b-l2vpn-cg-asr9000-62x\\_chapter\\_01011.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/lxvpn/configuration/guide/b-l2vpn-cg-asr9000-62x/b-l2vpn-cg-asr9000-62x_chapter_01011.html)

## QUESTION 13

An engineer is troubleshooting an EoMPLS circuit on a Cisco IOS XR router interface that removes a VLAN from the distribution layer. Which configuration should the engineer apply in order to accomplish the task?

- A. interface GigabitEthernet 0/10.l2transport encapsulation dot1q 10 rewrite ingress tag pop 1 symmetric l2vpn xconnect group 103588 p2p 103588 interface GigabitEthernet 0/10.10 neighbor ipv4 10.10.10.2 pw-id 103588
- B. interface GigabitEthernet 0/10.10 encapsulation dot1q 10 rewrite ingress tag pop 1 symmetric l2vpn xconnect group 103588 p2p 103588 interface GigabitEthernet 0/10.10 neighbor ipv4 10.10.10.2 pw-id 103588
- C. interface GigabitEthernet 0/10.10 l2transport encapsulation dot1q 10 l2vpn xconnect group 103588 p2p 103588 interface GigabitEthernet 2/10.10 neighbor ipv4 10.10.10.2 pw-id 103588
- D. interface GigabitEthernet 0/10.10 l2transport encapsulation dot1q 10 rewrite ingress tag translate 1-to-1 dot1ad 10 symmetric l2vpn xconnect group 103588 p2p 103588 interface GigabitEthernet 0/10.10 neighbor ipv4 10.10.10.2 pw-id 103588

Correct Answer: C

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#### QUESTION 14

Which is the primary function of a MPLS L3 VPN route target?

- A. It imports and exports identified routes into selected VRFs.
- B. It uniquely identifies NLRIs that have the same numeric value.
- C. It imports the external routes it identifies into VRFs that support Internet traffic
- D. It supports QoS by classifying traffic by file type when it applies MPLS EXP bits to each packet.

Correct Answer: A

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#### QUESTION 15

Which BGP feature causes to replace the AS number of originating router with the AS number of the sending router?

- A. route reflectors
- B. route dampening
- C. confederations
- D. AS override

Correct Answer: D

Reference: <https://community.cisco.com/t5/networking-documents/understanding-bgp-as-override-feature/ta-p/3111967>