

# Cisco

## Exam Questions 300-515

Implementing Cisco Service Provider VPN Services (SVPI)



### NEW QUESTION 1

- (Exam Topic 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

**Answer:** AE

### NEW QUESTION 2

- (Exam Topic 1)

An engineer is investigating an EVPN traffic flow issue. Which type of traffic should the engineer allow in an EVPN Tree Service in order to fix this issue?

- A. known unicast from a leaf to another leaf
- B. unknown unicast from a leaf to another leaf
- C. multicast from a leaf to another leaf
- D. known unicast from a root to another root

**Answer:** D

#### Explanation:

Reference: <https://tools.ietf.org/html/draft-ietf-bess-evpn-etree-14>

### NEW QUESTION 3

- (Exam Topic 1)

Refer to the exhibit.

<pre>PE1 ip vrf celvpn   rd 111:1   route-target export 111:1   route-target import 222:2  interface FastEthernet0/0/0  ip vrf forwarding celvpn  ip address 192.168.0.1 255.255.255.0  router ospf 1 vrf celvpn  network 192.168.0.0 0.0.0.255 area 1</pre>	<pre>CE1 interface FastEthernet0/0/0  ip address 192.168.0.2 255.255.255.0  interface FastEthernet0/0/1  ip address 192.168.1.2  255.255.255.252  router ospf 100  network 192.168.0.0 0.0.0.255 area1  router bgp 65600  neighbor 192.168.1.1 remote-as 65600</pre>
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If the two devices are operating normally, which two conclusions can you draw from this configuration? (Choose two.)

- A. CE1 must use OSPF to establish a neighbor relationship with PE1.
- B. PE1 labels the routes it learns from CE1 with the route-target 222:2 and shares them with its VPNv4 peers.
- C. PE1 labels the routes it learns from CE1 with the route-target 111:1 and shares them with its VPNv4 peers.
- D. The PE-CE routes between the devices are being exchanged by OSPF
- E. CE1 is supporting CSC.

**Answer:** AD

### NEW QUESTION 4

- (Exam Topic 1)

An engineer is troubleshooting an ongoing network outage. Which command should he use that can display the live log files for a process or service running on a network device?

- A. traceroute
- B. show run
- C. ping
- D. debug

**Answer:** D

### NEW QUESTION 5

- (Exam Topic 2)

Refer to the exhibit.

```
interface GigabitEthernet0/1
switchport trunk allowed vlan none
switchport mode trunk
service instance 2 ethernet
encapsulation dot1q 10
xconnect 192.168.2.2 22 encapsulation mpls
```

Drag and drop the EVC configuration items from the left onto the correct descriptions on the right.

switchport mode trunk	It denies globally defined VLANs from egressing and ingressing the port.
service instance 2 ethernet	It allows the port to operate as an 802.1q trunk.
switchport trunk allowed vlan none	It classifies traffic under a defined process.
xconnect 192.168.2.2 22 encapsulation mpls	It allows the port to process VLAN 10 traffic in Service Instance 2.
encapsulation dot1q 10	It defines the pseudowire parameters.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

switchport mode trunk	switchport trunk allowed vlan none
service instance 2 ethernet	switchport mode trunk
switchport trunk allowed vlan none	service instance 2 ethernet
xconnect 192.168.2.2 22 encapsulation mpls	encapsulation dot1q 10
encapsulation dot1q 10	xconnect 192.168.2.2 22 encapsulation mpls

NEW QUESTION 6

- (Exam Topic 2)

While troubleshooting an AToM L2VPN service, a network consultant notices that the AC Layer 2 encapsulations are different. Which action should the consultant take in order to make the MPLS L2VPN work?

- A. tag-rewrite on the ingress and egress PE router
- B. interworking IP configuration on the last PE router before label disposition
- C. nonrouted interworking setup to properly translate only the Layer 2 information from the AC
- D. interworking IP configuration on both the AC terminations on the PEs

Answer: D

Explanation:

Reference:  
[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp\\_l2\\_vpns/configuration/xr-16-11/mp-l2-vpns-xr-16-11-book/l2vpn-interworking.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_l2_vpns/configuration/xr-16-11/mp-l2-vpns-xr-16-11-book/l2vpn-interworking.html)

NEW QUESTION 7

- (Exam Topic 2)



An engineer is troubleshooting an EoMPLS circuit on a Cisco IOS XR router interface that removes a VLAN

- A. interface GigabitEthernet 0/10.l2transport encapsulation dot1q 10rewrite ingress tag pop 1 symmetric l2vpnconnect group 103588p2p 103588interface GigabitEthernet 0/10.10 neighbor ipv4 10.10.10.2 pw-id 103588
- B. interface GigabitEthernet 0/10.10 encapsulation dot1q 10rewrite ingress tag pop 1 symmetric l2vpnconnect group 103588p2p 103588interface GigabitEthernet 0/10.10 neighbor ipv4 10.10.10.2 pw-id 103588
- C. interface GigabitEthernet 0/10.10 l2transport encapsulation dot1q 10l2vpnconnect group 103588p2p 103588interface GigabitEthernet 2/10.10 neighbor ipv4 10.10.10.2 pw-id 103588
- D. interface GigabitEthernet 0/10.10 l2transport encapsulation dot1q 10rewrite ingress tag translate 1-to-1 dot1ad 10 symmetricl2vpnconnect group 103588p2p 103588interface GigabitEthernet 0/10.10 neighbor ipv4 10.10.10.2 pw-id 103588

**Answer: C**

#### NEW QUESTION 8

- (Exam Topic 3)

Refer to the exhibit.

```
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 nlabel/1146
```

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.

**Answer: D**

#### NEW QUESTION 9

- (Exam Topic 3)

While implementing Layer 3 MPLS VPN, which feature should an engineer use at the PEs to transform the customer IPv4 prefixes into a unique 96-bit prefix

- A. RT
- B. VC ID
- C. RD
- D. PW ID

**Answer: C**

#### NEW QUESTION 10

- (Exam Topic 3)

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.

**Answer: A**

#### NEW QUESTION 10

- (Exam Topic 4)

Refer to the exhibit:

```
R1
interface FastEthernet0/0
ip address 10.1.12.1 255.255.255.0
duplex full
end
!
!
!
R1(config)#interface FastEthernet0/0
R1(config-if)#ospfv3 1 area 1 ipv4
% IPv6 routing not enabled
```

A network engineer is implementing an OSPF configuration. Based on the output, which statement is true?

- A. In the ospfv3 1 area 1 ipv4 command, area 0 must be configured instead of area 1.
- B. OSPFv3 does not run for IPv4 on FastEthernet0/0 until IPv6 routing is enabled on the router and IPv6 is enabled on interface FastEthernet0/0.
- C. OSPFv3 cannot be configured for IPv4; OSPFv3 works only for IPv6.
- D. "IPv6 routing not enabled" is just an informational message and OSPFv3 runs for IPv4 on interface FastEthernet0/0 anyway.

**Answer: B**

### NEW QUESTION 13

- (Exam Topic 4)

An engineer noticed that PE3 is failing to accept IPv6 traffic information from PE1. The engineer confirmed that both PE3 and PE1 routers are configured accurately with IPv6 protocol. To eliminate IPv6 traffic loss issue, which action must the engineer take to solve the problem?

- A. Disable 6PVE that provides local IPv6 reachability over MPLS.
- B. Configure 6PE that provides global IPv6 reachability over IPv4 MPLS.
- C. Allow PE routers use the MP-iBGP extensions in the IPv6 network configuration to exchange IPv6 reachability information.
- D. Configure 6PE forwarding between 6PE routers based on the IPv6 header.

**Answer: B**

### NEW QUESTION 18

- (Exam Topic 4)

Refer to the exhibit.

```
R1
vfi ciscotest manual
vpn id 101
neighbor 192.168.1.2 encapsulation mpls
neighbor 192.168.10.2 encapsulation mpls
neighbor 192.168.20.2 encapsulation mpls
```

An organization is running H-VPLS on a network comprising four routers in a hub-and-spoke topology with R1 as the hub. An engineer added a new spoke with multiple VCs to the network, and now traffic cannot flow properly. How should the engineer update the configuration on R1 to correct the problem?

- A. Disable spanning tree to allow loops to occur within the hub-and-spoke topology.
- B. Disable split horizon to allow multiple VCs per spoke.
- C. Disable Cisco Discovery Protocol to allow MPLS to share labels between the designated spokes.
- D. Disable Cisco Discovery Protocol to allow for neighbor discovery.

**Answer: B**

### NEW QUESTION 22

- (Exam Topic 4)

The network engineering group of a large ISP needs to harden the management plane of its Cisco 9000 Series ASRs. While addressing IPv6 ICMP issues, they realized they have to limit the rate at which IPv6 ICMP error messages are sent out on the network. Which command do they need to apply?

- A. icmp ipv6 rate-limit unreachable 1000
- B. ipv6 rate-limit 1000
- C. icmp ipv4 rate-limit unreachable 1000
- D. ipv6 icmp error-interval 50 20

**Answer: D**

#### Explanation:

Reference:

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6\\_basic/configuration/xr-3s/ip6b-xr-3s-book/ip6-icmp-rate-lmt-xr.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6_basic/configuration/xr-3s/ip6b-xr-3s-book/ip6-icmp-rate-lmt-xr.html)

### NEW QUESTION 25

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