



300-515^{Q&As}

Implementing Cisco Service Provider VPN Services (SVPI)

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QUESTION 1

Which two are characteristics of using a non-MPLS peer-to-peer model over a traditional overlay model? (Choose two.)

- A. The model is suited for nonredundant configurations.
- B. The configuration on a newly added site PE is updated automatically.
- C. Provider routers know the customer network topology.
- D. The customer specifies the exact site-to-site traffic profile.
- E. Routing information is exchanged between the customer router and one or a few PEs.

Correct Answer: CE

Reference: <http://etutorials.org/Networking/MPLS+VPN+Architectures/Part+2+MPLS-based+Virtual+Private+Networks/Chapter+7.+Virtual+Private+Network+VPN+Implementation+Options/Overlay+and+Peer-to-peer+VPN+Model/>

QUESTION 2

Which two statements describe primary differences between MPLS Layer 2 and Layer 3 VPNs? (Choose two.)

- A. Layer 2 VPNs use IPsec tunneling, but Layer 3 VPNs use L2TPv3 tunneling.
- B. Layer 2 VPNs use ATOM, but Layer 3 VPNs use MPLS/BGP.
- C. Layer 2 VPNs use BGP, but Layer 3 VPNs use VPLS.
- D. Layer 2 VPNs use L2TPv3 tunneling, but Layer 3 VPNs use GRE tunneling.
- E. Layer 2 VPNs use IPsec tunneling, but Layer 3 VPNs use pseudowires to provide tunneling.

Correct Answer: BD

QUESTION 3

With Layer 3 MPLS VPN implementations on Cisco IOS XR PE routers, an interface is assigned to a VRF using the vrf command in which configuration mode?

- A. RP/0/RP0/CPU0:PE(config-bgp)#
- B. RP/0/RP0/CPU0:PE(config-if)#
- C. RP/0/RP0/CPU0:PE(config-bgp-af)#
- D. RP/0/RP0/CPU0:PE(config-vrf)#

Correct Answer: B

Reference: https://www.cisco.com/c/en/us/td/docs/ios_xr_sw/iosxr_r3-7/mpls/configuration/guide/gc37v3.html



QUESTION 4

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 5

How do Ethernet virtual circuits provide a way for service providers to maximize the use of VLAN tags\'-1

- A. They add an additional tag to VLANs that allows up to two switch ports to use the same globally configured VLAN ID.
- B. They redefine the VLAN tag to include classification, forwarding, and QoS using MPLS labels and EXP bits
- C. They separate the classification and forwarding concepts for VLAN tagging which allows multiple switch ports to use the same VLAN ID without it being configured globally.
- D. They assign VLAN IDs to VTP domains so that the same VLAN ID are used more than once globally.

Correct Answer: C

QUESTION 6

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

Correct Answer: B

QUESTION 7

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 NLRI 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

QUESTION 8

<pre>PE1 ip vrf CE1 rd 101:1 route-target export 100:1 route-target import 200:2</pre>	<pre>PE2 ip vrf CE2 rd 202:2 route-target export 200:2 route-target import 100:1</pre>
<pre>PE3 ip vrf CE3 rd 303:3 route-target export 300:3 route-target import 400:4</pre>	<pre>PE4 ip vrf CE4 rd 404:4 route-target export 400:4 route-target import 300:3</pre>



Refer to the exhibit. A network engineer has been called to configure the four PE devices in order to enable full communication among the four CE devices connected to them. While starting to configure, he experienced a connectivity issue. Which two tasks should the engineer perform in order to begin the process correctly? (Choose two.)

- A. Configure PE3 to export route-targets 100:1 and 200:2.
- B. Configure PE3 to import route-targets 100:1 and 200:2.
- C. Configure PE4 to import route-targets 101:1 and 202:2.
- D. Configure PE2 to export route-targets 300:3 and 400:4.
- E. Configure PE1 to import route-targets 300:3 and 400:4.

Correct Answer: AB

QUESTION 9

What is the primary function of a VRF on a router?

- A. It enables the router to support multiple separate routing tables, which allows the device to handle overlapping IP addresses.
- B. It enables a router to run BGP and a distance vector routing protocol at the same time, which allows it to serve as a VPN endpoint between remote sites.
- C. It enables a router to configure VLANs locally, which provides segregation between networks.
- D. It enables the router to provide faster switching through the network by using labels to identify the input and output interfaces for neighbor routers.

Correct Answer: A

QUESTION 10

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

QUESTION 11

A network architect is troubleshooting the L2TPv3 tunneling security due to the untrusted nature of the underlying network. Which two L2TPv3 features does the architect deploy to address the ongoing issues? (Choose two.)

- A. TCP MD5 authentication
- B. control message hashing
- C. CHAP authentication
- D. control message rate limiting
- E. asymmetric mutual authentication with PSK

Correct Answer: BC

QUESTION 12

Which tool identifies the point of failure in a P2MP LSP from the ingress LSR?

- A. Jitter TLV
- B. SPAN
- C. P2MP traceroute
- D. P2MP ping

Correct Answer: C

Reference: https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k_r5-3/mps/configuration/guide/b-mpls-cg53x-asr9k/b-mpls-cg53x-asr9k_chapter_01000.html

QUESTION 13



```
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
```

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 14

<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 area 1 router bgp 65600 neighbor 192.168.1.1 remote-as 65600</pre>
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Refer to the exhibit. 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.

Correct Answer: AD

QUESTION 15

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

Correct Answer: B

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