

Cisco

Exam Questions 300-515

Implementing Cisco Service Provider VPN Services (SVPI)



NEW QUESTION 1

- (Exam Topic 1)

You are troubleshooting ARP connectivity issues for an Ethernet interface on an IOS XR network that runs IS- IS. You verify that the IGP protocol is running, but an ARP entry has not yet been created.

Which action should you take?

- A. debug ping packets
- B. debug ARP
- C. ping the connected neighbor
- D. verify the RIB table routes

Answer: C

NEW QUESTION 2

- (Exam Topic 1)

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.

Answer: BD

NEW QUESTION 3

- (Exam Topic 1)

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.

Answer: A

NEW QUESTION 4

- (Exam Topic 1)

While configuring the VRF Selection feature, you get an error message after typing the below statement: Router(config)#no vrf selection source 172.16.0.0 255.255.0.0 vrf VRF1

Which action caused this message?

- A. the entry of an inconsistent IP address and mask for VRF Selection
- B. an attempt to configure a VRF instance on an interface that already has VRF Selection configured
- C. an attempt to remove a VRF Selection entry that does not exist
- D. an attempt to configure a VRF Selection table that does not exist

Answer: C

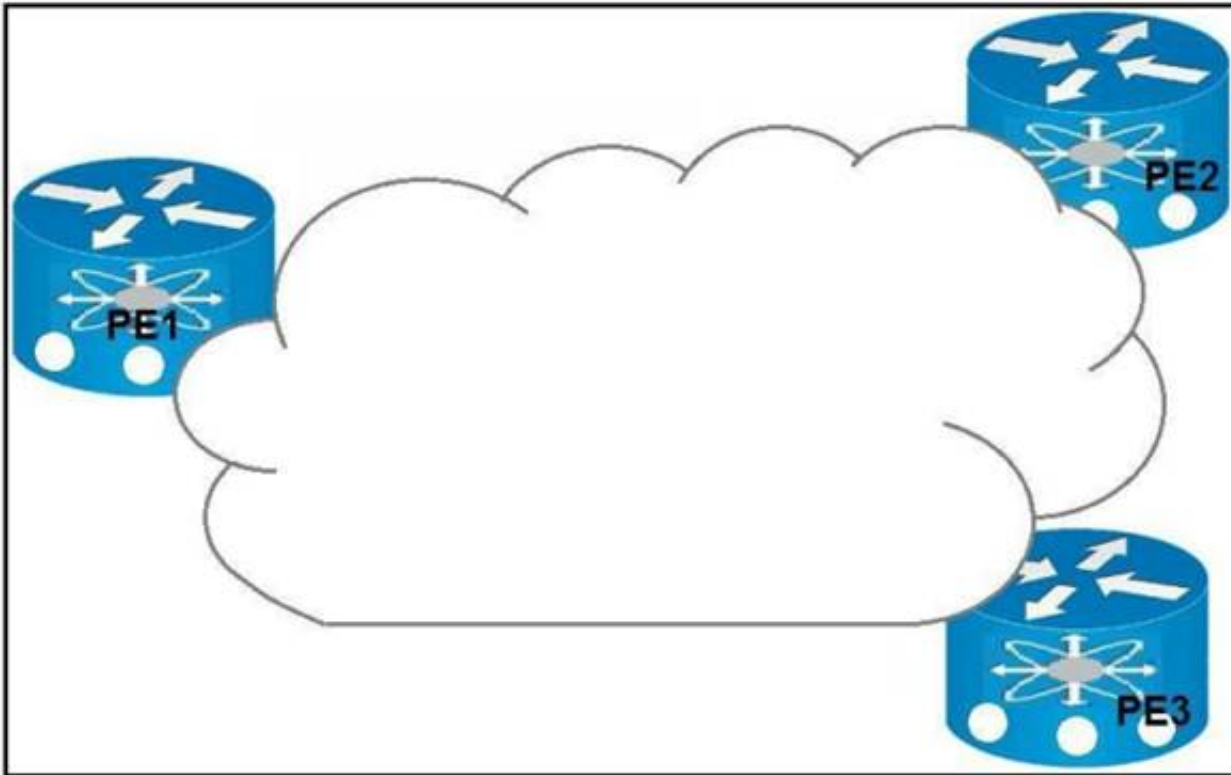
Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_2/12_2sz/feature/guide/122szvrf.html

NEW QUESTION 5

- (Exam Topic 2)

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.

Answer: B

Explanation:

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

NEW QUESTION 6

- (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 7

- (Exam Topic 2)

Which mechanism reduces the network flooding caused by host ARP learning behavior?

- A. ARP suppression
- B. storm control
- C. root guard
- D. BPDU guard

Answer: A

Explanation:

Reference: <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series-switches/white-paper-c11-735015.html>

NEW QUESTION 8

- (Exam Topic 3)

Refer to the exhibit.

```
ip vrf mvpn-intranet
 rd 12:1
 vpn id 12:1
 route-target import 12:2
 route-target export 12:1
 mdt default mpls mldp 192.168.1.2
 exit
 ip multicast-routing vrf mvpn-intranet
```

Which statement about this configuration is true?

- A. Router 1 will accept multicast routes with a route-target of 12:1.
- B. 192.168.1.2 must be reachable by all routers participating in the mvpn-intranet MVRF.
- C. Router 1 has statically defined thresholds for data MDT.
- D. The MVRF must be configured on each router on the customer and service provider networks.

Answer: A

NEW QUESTION 9

- (Exam Topic 3)

In Layer 3 MPLS VPN implementations, if some of the VPNv4 routes on one PE router do not appear on another PE router, what could be the problem?

- A. RD mismatch between the PE routers
- B. RT export and import configuration errors
- C. VRF name mismatch between the PE routers
- D. RD export and import configuration errors

Answer: B

Explanation:

Reference:

<http://blog.initialdraft.com/archives/1537/>

NEW QUESTION 10

- (Exam Topic 3)

```
R1

router bgp 65010
no bgp default ipv4-unicast
neighbor 192.168.1.1 remote-as 65010
address-family ipv4
neighbor 192.168.1.1 activate
```

Which statement describes the result of this BGP configuration?

- A. R1 operates using IPv4 and VPNv4 address families.
- B. R1 operates on IPv6 only because the bgp default ipv4-unicast command is missing.
- C. R1 establishes a VPNv4 eBGP relationship with neighbor 192.168.1.1.
- D. R1 establishes an iBGP relationship with peer 192.168.1.1.

Answer: D

NEW QUESTION 10

- (Exam Topic 3)

Refer to the exhibit.

```
R1#sho run sec router isis
ip router isis
router isis
net 49.0002.1010.2021.00
is-type level-1
spf-interval 110

R2#sho run sec router isis
ip router isis
router isis
net 49.0001.1010.2020.00
is-type level-2-only
set-overload-bit
spf-interval 100
redistribute static ip
```

A technician is troubleshooting a connectivity issue and notices that there is no IS-IS adjacency between R1 and R2. What can the technician change to bring the IS-IS adjacency up?

- A. Change R2's net address to be in the same area as R1.
- B. Change R1's is-type to level-2-only
- C. Change R1's net address to be in the same area as R2.
- D. Change R2's configuration to no longer set the overload bit.

Answer: B

NEW QUESTION 15

- (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 nolabel/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 16

- (Exam Topic 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)#

Answer: B

Explanation:

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

NEW QUESTION 21

- (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 25

- (Exam Topic 3)
Refer to the exhibit.

PE1 ip vrf CE1 rd 111:1 route-target export 100:1 route-target import 200:2	PE2 ip vrf CE2 rd 112 :2 route-target export 200:2 route-target import 100:1 route-target import 300:3
PE3 ip vrf Internet rd 333:3 route-target export 300:3 route-target import 100:1 route-target import 200:2	

PE1 and PE2 are exchanging VPNv4 routes for CE1 and CE2, and PE3 contains the default route to the internet. If the three devices are operating normally, which two conclusions describe this configuration? (Choose two.)

- A. The CE1 and CE2 VRFs can exchange routes only between their respective VRFs on PE1 and PE2.
- B. All three routers must be running a distance-vector routing protocol.
- C. All three routers must be running MP-BGP.
- D. The CE1 and CE2 VRFs can access the default route provided by the Internet VRF.
- E. Only the CE2 VRF can access the default route provided by the Internet VRF.

Answer: AC

NEW QUESTION 26

- (Exam Topic 3)

You are writing the requirements for an MPLS L3VPN environment that uses MP-BGP between PE routers. In this environment, route targets and route distinguishers need to be advertised between the PE routers.

Which three operations meet these requirements? (Choose three.)

- A. mandatory creation of PE-to-PE BGP sessions between the outgoing interface IP addresses
- B. advertisement of standard communities, enabled on the PE-to-PE BGP neighbors
- C. creation of PE-to-PE BGP sessions between loopback IP addresses
- D. full mesh of IBGP sessions
- E. full mesh of EBGP sessions and partial mesh of IBGP sessions
- F. advertisement of extended communities, enabled on the PE-to-PE BGP neighbors

Answer: CDF

NEW QUESTION 30

- (Exam Topic 4)

What do routers on the network use to avoid routing loops when OSPF is running as the PE-CE routing protocol on a service provider network?

- A. the AS-Override feature
- B. the DN bit with type 3, 5, or 7 LSA
- C. the domain tag for type 2 LSA
- D. sham links to create a super backbone over the service provider network

Answer: B

NEW QUESTION 34

- (Exam Topic 4)

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.

Answer: C

NEW QUESTION 36

- (Exam Topic 4)

What is a requirement to share VRF reachability information to all members of a VPN when using IPv6?

- A. PE and CE routers must be running BGP as the PE-CE routing protocol
- B. PE routers must have MPLS disabled and be running MP-BGP between all P and PE routers.
- C. PE routers must be running MP-BGP and bgp default ipv4-unicast must be disabled
- D. All PEs must have the same VRFs configured.

Answer: D

NEW QUESTION 40

- (Exam Topic 4)

Refer to the exhibit.

```
Router 1:

vrf ciscotest
  address-family ipv4 unicast
    import route-target
      101:102
      301:202

    export route-target
      201:202
      401:402
```

An engineer has configured router 1 to provide shared services to clients behind router 2. To complete the implementation so that routes from router 1 are accepted, what must the engineer configure on router 2?

- A. with import route targets 101:102 and 202:201
- B. with import route targets 201:202 and 401:402
- C. with export route targets 301:202 and 101:102
- D. with export route targets 201:202 and 401:402

Answer: B

NEW QUESTION 44

- (Exam Topic 4)

How does Layer 3 VPN traffic traverse an ISP network?

- A. Devices on the network use MPLS labels to share VPN routes between P routers in the network.
- B. Devices on the network use LSAs to share routes between P routers in the network.
- C. Devices on the network use MPLS labels to move VPN traffic through the network.
- D. Devices on the network use GRE tunnels to move traffic between VRFs.

Answer: C

NEW QUESTION 45

- (Exam Topic 4)

Which optional information can be included with an IPv6 ping to support the troubleshooting process?

- A. IPv4 IP address
- B. source MAC address
- C. destination MAC address
- D. IPv6 hostname

Answer: D

Explanation:

Reference: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xr-3s/ipv6-xr-36s-book/ipv6-mng-apps.html>

NEW QUESTION 46

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