

Cisco

Exam Questions 300-515

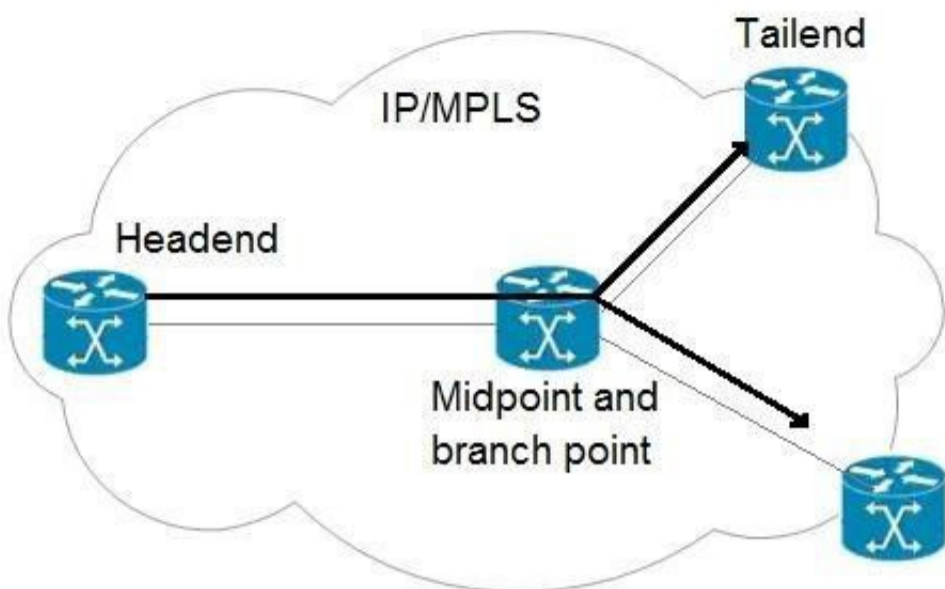
Implementing Cisco Service Provider VPN Services (SVPI)



NEW QUESTION 1

- (Exam Topic 1)

Refer to the exhibit.



An engineer is implementing an MPLS P2MP TE solution. Which type of router can serve as the midpoint router and the tailend router in this P2MP TE network implementation?

- A. headend
- B. source
- C. transit
- D. bud

Answer: D

Explanation:

https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/mpls/mp-te-path-setup-xe-3s-asr920-book/mp-te-path-setup-xe-3s-asr920-book_chapter_01.html

NEW QUESTION 2

- (Exam Topic 1)

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

Answer: AD

Explanation:

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

NEW QUESTION 3

- (Exam Topic 1)

An ISP provides a major client MPLS VPN for managed services. The MPLS engineering team needs to use the advanced VPN feature of selective VRF import so that only specific prefixes are present in the required VPNs.

Which aspect of this feature must the team consider?

- A. A route must pass the import route map first and then the route target import filter.
- B. The routers that are imported in the VRF can be BGP and IGP routes, so other match conditions in the route map, besides communities, can be used.
- C. The import-map command is applied under the PE interface that connects to the CE router.
- D. A route is imported into the VRF only when at least one RT that is attached to the route matches one RT that is configured in the VRF and the route is permitted by the import route map.

Answer: D

Explanation:

Reference: <https://www.ccexpert.us/mpls/configuring-selective-vrf-import.html>

NEW QUESTION 4

- (Exam Topic 1)

An engineer is investigating an MPLS LDP issue. Which command should an engineer use on a Cisco IOS XE device to display the contents of the LFIB?

- A. show mpls forwarding-table
- B. show mpls ldp neighbors
- C. show mpls ldp labels
- D. show mpls ldp bindings

Answer: A

Explanation:

Reference: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mps/command/mp-cr-book/mp-s2.html>

NEW QUESTION 5

- (Exam Topic 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.

Answer: CE

Explanation:

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/>

NEW QUESTION 6

- (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 7

- (Exam Topic 1)

Which utility can you use to validate an LSP in an MPLS environment?

- A. uRPF
- B. MPLS LSP ping
- C. logging
- D. RSVP

Answer: B

NEW QUESTION 8

- (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 9

- (Exam Topic 1)

Which two frames can be configured on an Ethernet flow point? (Choose two.)

- A. of a specific VLAN
- B. with different type of service values
- C. with identical type of service value
- D. with different class of service values
- E. with no tags

Answer: AE

Explanation:

Reference: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/cether/configuration/xe-3s/asr903/16-5-1/b-ce-xe-16-5-asr900/trunk-efp-support.html>

NEW QUESTION 10

- (Exam Topic 1)

In an Ethernet Virtual Circuit environment, which restriction do bridge domains have when STP is running?

- A. The STP mode must be RSTP or PVST+
- B. Bridge domains must be mapped to a different VLAN.
- C. The STP mode must be MSTP
- D. Bridge domains must belong to different MST instances.

Answer: C

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/ce/b_ce_xe-313s-asr920-book/b_ce_xe-313s-asr920-book_chapter_01.html#reference_770349446ED24E83821EF701DDC46BFD

NEW QUESTION 10

- (Exam Topic 1)

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.

Answer: C

Explanation:

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

NEW QUESTION 15

- (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 16

- (Exam Topic 1)

The CTO of a company requires the support of a network consultant to deliver an MPLS solution without resigning to a certain degree of redundancy and scalability. Which solution effectively scales to hundreds or thousands of sites?

- A. L2VPN with the broadcast traffic processed at the ingress PE.
- B. L3VPN with direct LSP connectivity between all PEs.
- C. L2VPN by encapsulating multiple frame formats with interworking.
- D. L3VPN using a hierarchical topology of N-PEs and U-PEs.

Answer: D

NEW QUESTION 21

- (Exam Topic 2)

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

Answer: BC

NEW QUESTION 26

- (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 31

- (Exam Topic 3)

Which condition must be met before an environment can support CSC?

- A. The CSC-PE and CSC-CE must each be able to ping an interface in its respective global routing table.
- B. The CSC-PE and the CSC-CE must support IPv6.
- C. The CSC-PE and CSC-CE devices must be able to send labels to one another using BGP.
- D. The CSC-CE must support OSPFv3.

Answer: C

NEW QUESTION 34

- (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 35

- (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 37

- (Exam Topic 3)

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

Answer: D

Explanation:

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

NEW QUESTION 41

- (Exam Topic 3)

A network engineer is implementing Layer 3 MPLS VPNs on Cisco IOS/IOS XE PE routers. Which PE-to-CE routing protocol requires a separate routing process to be created for each VRF?

- A. RIPv2
- B. OSPF
- C. BGP
- D. EIGRP

Answer: B

NEW QUESTION 45

- (Exam Topic 3)

```
ip vrf mvpn-extranet
 rd 12:1
 vpn id 12:1
 route-target import 12:2
 route-target export 12:3
 mdt default mpls mldp 192.168.1.2
 exit
 ip multicast-routing vrf mvpn-extranet
```

What is the effect of this configuration?

- A. The mroute table is cleared.
- B. Router 1 accepts multicast routes with a tag of 12:1
- C. A Cisco MPLS TE tunnel is generated with 192.168.1.2 as the source IP address of router 1.
- D. An LSP virtual interface tunnel is created.

Answer: B

NEW QUESTION 48

- (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 49

- (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 50

- (Exam Topic 3)

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. E.They allow BGP to uniquely identify duplicate routes.

Answer: CE

NEW QUESTION 55

- (Exam Topic 3)

Which statement describes the no bgp default route-target filter command?

- A. Prefixes that are received with route targets and distinguisher are accepted.
- B. Prefixes that are received with route targets and distinguisher are not accepted.
- C. Prefixes that are received with route targets that are not imported at the PE are not accepted.
- D. Prefixes that are received with route targets that are not imported at the PE are accepted.

Answer: D

NEW QUESTION 59

- (Exam Topic 4)

Refer to the exhibit.

```
Router 1:
interface loopback0
192.168.10.1 255.255.255.0

router ospf 1
network 192.168.10.1 0.0.0.0 area 5
```

Refer to the exhibit Router 1 is a P router in the ISP MPLS core A connected P router cannot generate an MPLS label for the router 1 loopback0 interface Which action resolves this issue?

- A. The loopback0 interface must be in OSPF area 0.
- B. The network statement under the routing process must have a wildcard mask of 0 0.0 255.
- C. The OSPF network type must be changed on loopback0 to point-to-point
- D. A static route to null 0 must be added for the loopback interface and then static routes must be redistributed into OSPF

Answer: B

NEW QUESTION 64

- (Exam Topic 4)

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

Answer: A

NEW QUESTION 68

- (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 70

- (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 75

- (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/xe-3s/ipv6-xe-36s-book/ip6-mng-apps.html>

NEW QUESTION 79

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