

Exam Questions 300-515

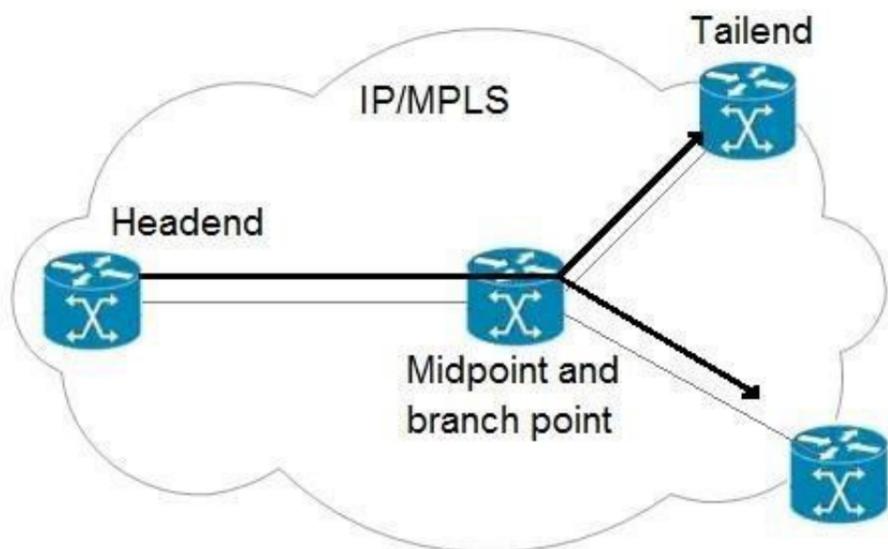
Implementing Cisco Service Provider VPN Services (SVPI)

<https://www.2passeasy.com/dumps/300-515/>



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 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

Answer: C

Explanation:

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

NEW QUESTION 3

- (Exam Topic 1)
 Refer to the exhibit.

```
Router# show mpls forwarding-table
```

Local	Outgoing	Prefix	Bytes label	Outgoing	Next Hop
label	label or VC	or Tunnel Id	switched	interface	
29	Pop tag	10.22.22.22/32	0	Gi1/1/0	172.32.0.1
32	0	10.24.24.24/32	0	Gi1/0/0	192.168.1.2
33	0	172.24.24.24/32	0	Gi1/0/0	192.168.1.2
34	0	192.168.0.0/8	0	Gi1/0/0	192.168.1.2
35	0	10.25.25.25/32	0	Gi1/0/0	192.168.1.2
36	0	172.16.0.0/8	0	Gi1/0/0	192.168.1.2
37	25	10.26.26.26/32	0	Gi1/0/0	192.168.1.22
38	0	10.34.34.34/32	0	Gi1/0/0	192.168.1.2

Which statement about this output is true?

- A. The router IP 192.168.1.2 sent an implicit null, and the output is from the penultimate LSR.
- B. The adjacent router is the egress LSR and has mpls ldp explicit-null configured.
- C. The adjacent LSR router configured mpls label range 0.
- D. The zero in the second column is the normal behavior of an egress router LSR.

Answer: B

NEW QUESTION 4

- (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 5

- (Exam Topic 1)

Refer to the exhibit.

```
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
```

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.

Answer: BD

Explanation:

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

NEW QUESTION 6

- (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 7

- (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 8

- (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 9

- (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 area 1 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 10

- (Exam Topic 1)

Refer to the exhibit.

<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>

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.

Answer: AB

NEW QUESTION 10

- (Exam Topic 2)

```
configure
router bgp 64520
  address-family 12vpn evpn
    neighbor 192.168.1.1

configure
12vpn
  xconnect group evpn-test
  p2p evpn12
  interface TenGigE0/1/0/1
  neighbor evpn evi 12 target 10 source 11
```

Which effect of this configuration is true?

- A. It configures VPWS multihomed.
- B. It configures VPWS single homed.
- C. It configures an IPv4 peering with 192.168.1.1
- D. It configures MPLS traffic engineering.

Answer: B

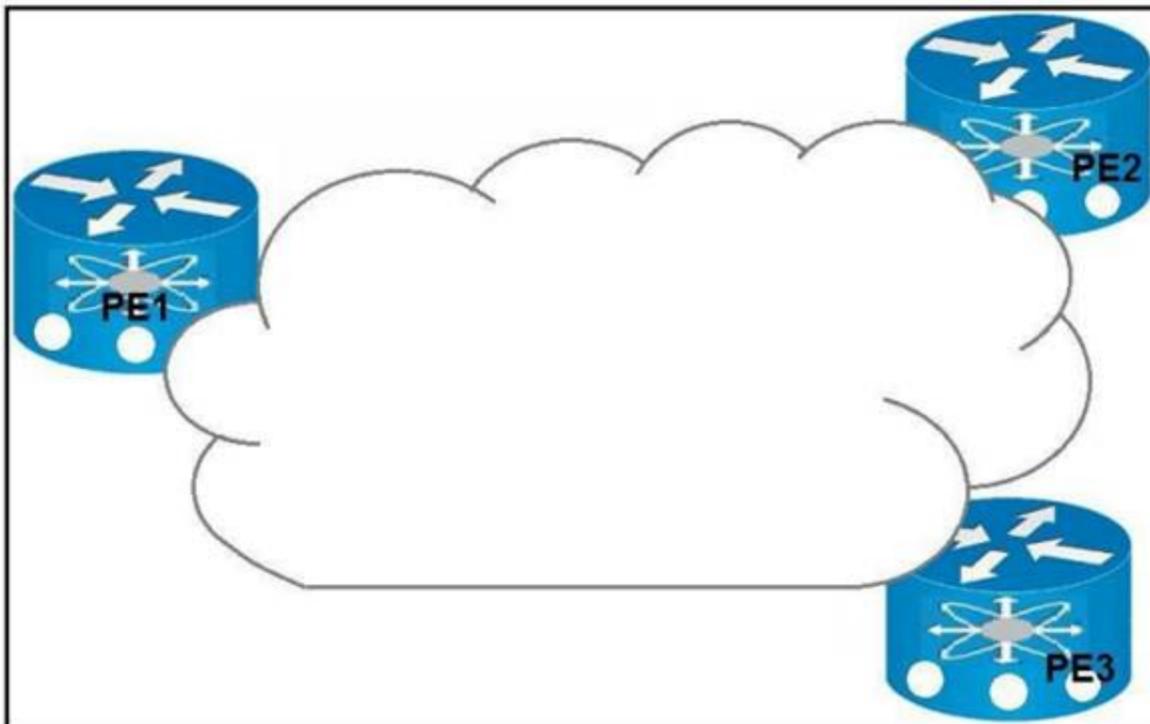
Explanation:

Reference: <https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2019/pdf/BRKSPG-2798.pdf>

NEW QUESTION 15

- (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 20

- (Exam Topic 2)

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

Answer: D

Explanation:

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

NEW QUESTION 22

- (Exam Topic 2)

What do EVPN single-active and all-active have in common?

- A. They are default gateway redundancy options.
- B. They are multihoming mechanisms used for CE devices.
- C. They are used to provide single connection from a CE device to a service provider.
- D. They are both roles that a designated router can take when MPLS is used with EVPN.

Answer: D

Explanation:

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

NEW QUESTION 23

- (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 28

- (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 33

- (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 34

- (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 38

- (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 41

- (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 43

- (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 44

- (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 49

- (Exam Topic 4)

Refer to the exhibit.

```
PE1#show mpls forwarding
Local  Outgoing  Prefix      Outgoing  Next Hop    Bytes
Label  Label      or ID      Interface  Hop         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 abels 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

Answer: D

NEW QUESTION 51

- (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 53

- (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 54

- (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/xs-3s/ip6b-xe-3s-book/ip6-icmp-rate-lmt-xe.html

NEW QUESTION 59

- (Exam Topic 4)

Refer to the exhibit.

```
Router 1:

router bgp 65515
no bgp default ipv4-unicast
bgp router-id 192.168.0.1
neighbor 191.168.0.2 remote-as 65515

address-family ipv4
neighbor 191.168.0.2 route-reflector-client

address-family vpnv4
neighbor 191.168.0.2 activate
neighbor 100.1.3.3 send-community extended
```

Router 1 is a route reflector client within a service provider core PE1 cannot see VPNv4 routes received from the ASBR PE1 only has an iBGP relationship with Router 1. Which action resolves this issue?

- A. Activate PE1 as a neighbor under the IPv4 address family.
- B. Configure Router 1 as a route reflector for PE1 under the VPNv4 address family.
- C. Configure PE1 to have an eBGP relationship with Router 1.
- D. Enable BGP default ipv4-unicast

Answer: B

NEW QUESTION 60

- (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 65

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