300-515 Q&As

Implementing Cisco Service Provider VPN Services (SVPI)

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QUESTION 1

Router# show mpls forwarding-table

Local label	Outgoing label or VC	Prefix or Tunnel Id	Bytes label switched	Outgoing interface	Next Hop
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

Refer to the exhibit. 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.

Correct Answer: B

QUESTION 2

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

Correct Answer: D

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

QUESTION 3

PE1	CE1
ip vrf ce1vpn rd 111:1 route-target export 111:1 route-target import 222:2 interface FastEthernet0/0/0 ip vrf forwarding ce1vpn ip address 192.168.0.1 255.255.255.0 router ospf 1 vrf ce1vpn network 192.168.0.0 0.0.0.255 area 1	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

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 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.

Correct Answer: C

QUESTION 5

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

Correct Answer: B

Reference: http://blog.initialdraft.com/archives/1537/

QUESTION 6

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.

Correct Answer: D

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

QUESTION 7

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	

Refer to the exhibit. 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.

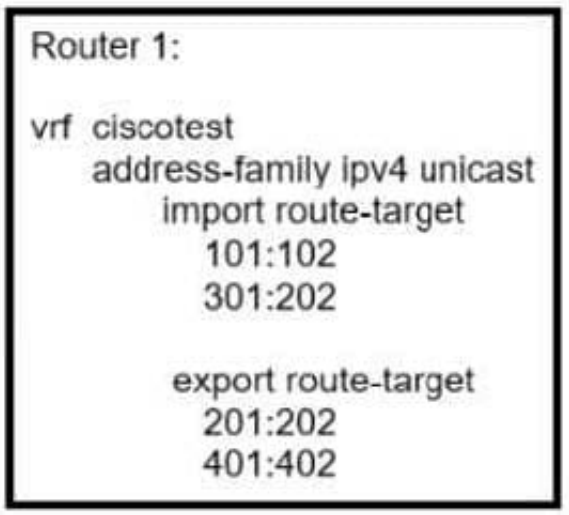
D. The CE1 and CE2 VRFs can access the default route provided by the Internet VRF.

E. Only the CE2 VRF can access the default route provided by the Internet VRF.

Correct Answer: AC

QUESTION 8

Refer to the exhibit.



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

Correct Answer: B

QUESTION 9

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

Correct Answer: D

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6_basic/configuration/xe-3s/ip6b-xe-3s-book/ip6-icmp-rate-lmt-xe.html

QUESTION 10

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

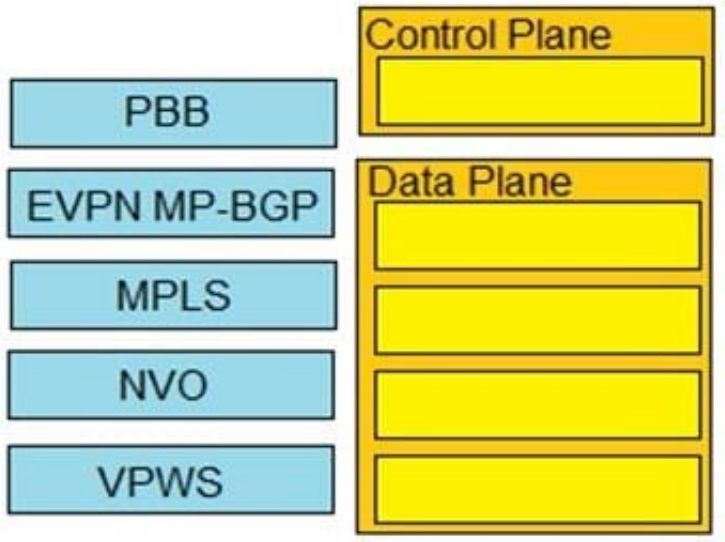
Correct Answer: D

QUESTION 11

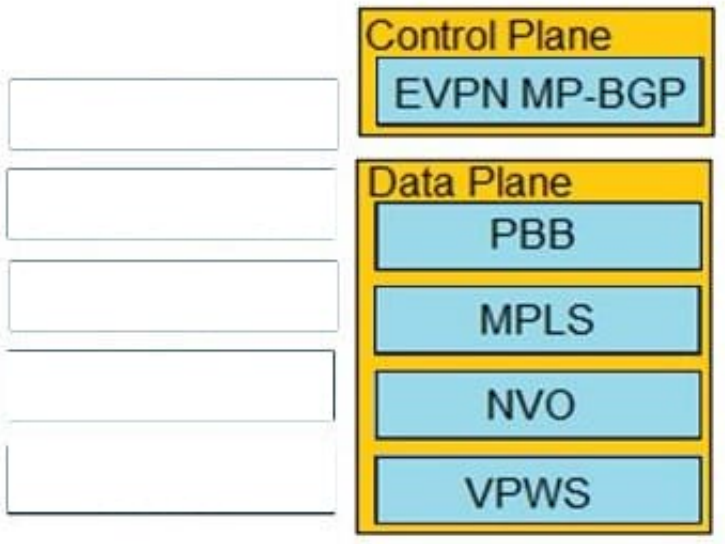
DRAG DROP

Drag and drop the EVPN components from the left onto the correct planes on the right.

Select and Place:



Correct Answer:



Reference: https://www.cisco.com/c/dam/m/en_us/network-intelligence/service-provider/digital-transformation/knowledge-network-webinars/pdfs/0420-epn-ckn.pdf slide 8

QUESTION 12

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

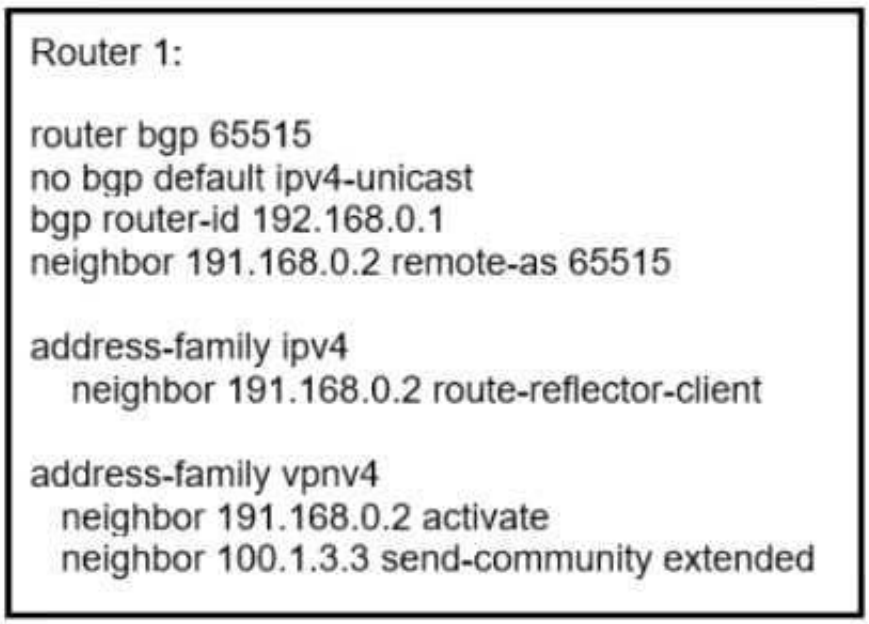
C. the domain tag for type 2 LSA

D. sham links to create a super backbone over the service provider network

Correct Answer: B

QUESTION 13

Refer to the exhibit.



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

Correct Answer: B

QUESTION 14

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

Correct Answer: AE

QUESTION 15

```
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
 ip ospf 1 area 0
!
interface GigabitEthernet0/1/0
 ip address 10.0.2.1 255.255.255.252
!
service instance 101 ethernet
   encapsulation dot1q 101
   rewrite ingress tag pop 1 symmetric

   12vpn evpn instance 100 point-to-point
   !
   vpws context vc100
   service target 2 source 1
   member GigabitEthernet0/1/0 service-instance 101
!
interface GigabitEthernet0/1/1
 ip address 10.0.1.1 255.255.255.0
 ip ospf 1 area 0
 mpls ip
!
router bgp 65500
 bgp router-id 1.1.1.1
 neighbor 2.2.2.2 remote-as 65501
 neighbor 2.2.2.2 update-source Loopback0
 !
 address-family ipv4
   neighbor 2.2.2.2 activate
 exit-address-family
!
address-family 12vpn evpn
   neighbor 2.2.2.2 activate
exit-address-family
!
12vpn evpn instance 100 point-to-point
 !
 vpws context vc100
   service target 2 source 1
   member GigabitEthernet0/0/0
!
```

Refer to the exhibit. An engineer is trying to configure an EVPN VWPS. What is the issue with this configuration?

A. The member in the VPWS context should be the PE-facing interface.

B. The 12vpn evpn command should be instance 101.

C. Interface GigabitEthernet0/1/0 should not have any IP address.

D. The service instance and the EVPN instance are different.

Correct Answer: C

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_l2_vpns/configuration/xe-3s/asr903/16-7-1/b-mpls-l2-vpns-xe-16-7-asr900/epvn_vpws_single_homed.pdf