

Cisco 642-691

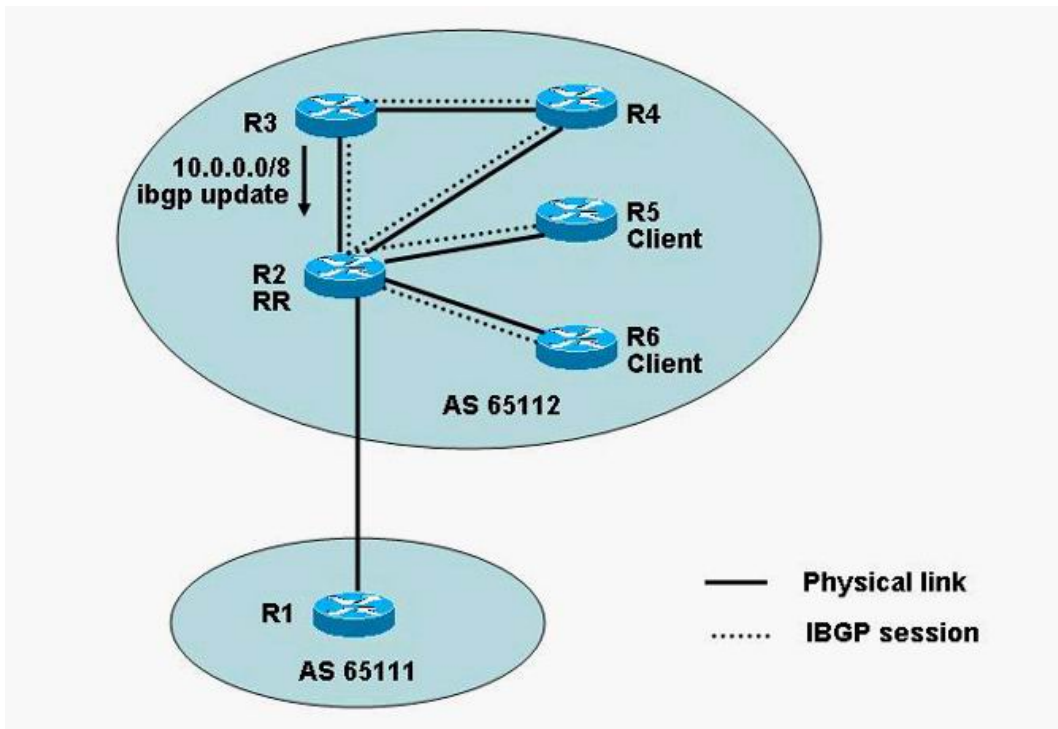
CCIP BGP + MPLS Exam (BGP + MPLS)

Version: 5.0

Topic 1, Volume A

QUESTION NO: 1

Based on the network diagram shown in the exhibit, both R5 and R6 are clients of the R2 RR. When the 10.0.0.0/8 iBGP update from R3 is received by the R2 RR, which router(s) will R2 reflect the update to?



- A. R1 only
- B. R5 and R6
- C. R5, R6 and R1
- D. R4, R5 and R6
- E. R4, R5, R6 and R1
- F. to no other router

Answer: C

Explanation:

QUESTION NO: 2

Based on this configuration, which two peering router neighbor statements are correct? (Choose two.)

router bgp 50001

neighbor 192.168.1.1 remote-as 50001

neighbor 10.1.1.1 remote-as 50002

neighbor 10.1.1.1 local-as 50003

!

output omitted

- A. EBGP - neighbor 10.1.1.2 remote-as 50003
- B. EBGP - neighbor 10.1.1.2 remote-as 50001
- C. EBGP - neighbor 10.1.1.2 remote-as 50001 and neighbor 10.1.1.2 local-as 50003
- D. IBGP - neighbor 192.168.1.2 remote-as 50001
- E. IBGP - neighbor 192.168.1.2 remote-as 50003
- F. IBGP - neighbor 192.168.1.2 remote-as 50003 and neighbor 192.168.1.2 local-as 50001

Answer: C,D

Explanation:

QUESTION NO: 3

Which two statements about a transit AS are correct? (Choose two.)

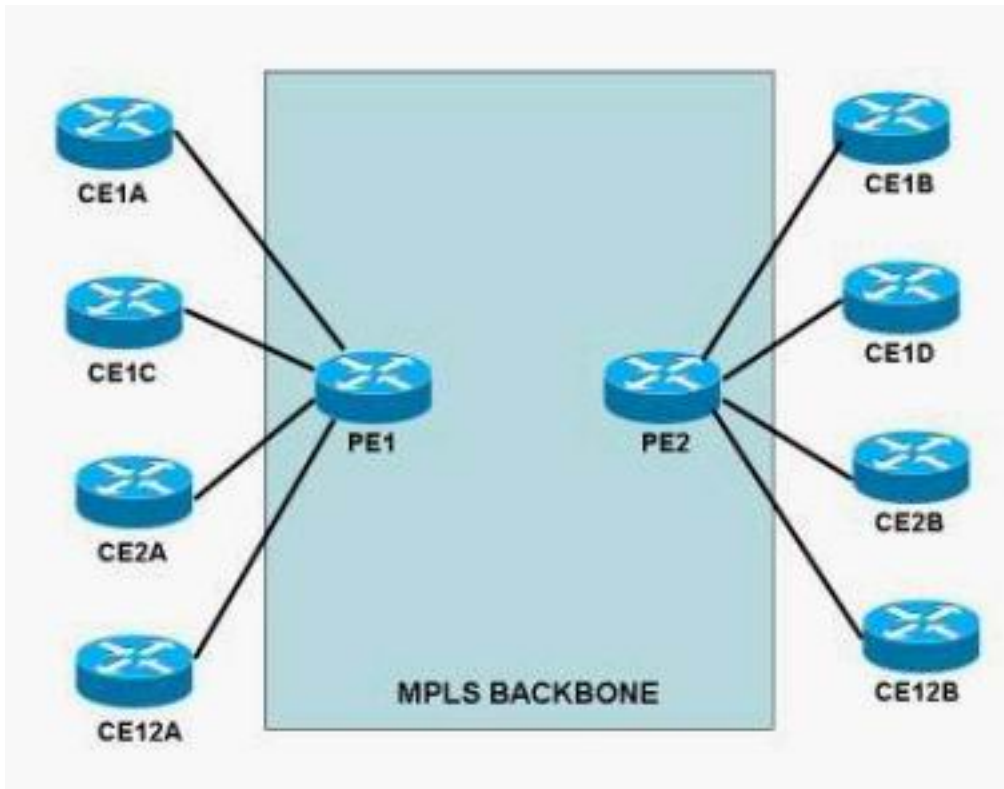
- A. A transit AS has eBGP connection(s) to only one external AS.
- B. Routes between ASs are always exchanged via eBGP.
- C. A transit AS uses an IGP like OSPF or ISIS to propagate the external networks within the transit AS.
- D. Core routers within a transit AS normally use default routing to reach the external networks.
- E. iBGP sessions can be established between non directly connected routers.

Answer: B,E

Explanation:

QUESTION NO: 4

Refer to the exhibit and the following connectivity requirements. How many different VRFs are required?



Sites CE1A, CE1B, CE1C, and CE1D require connectivity among them.

Sites CE2A and CE2B require connectivity between them.

Site CE12A requires connectivity to sites CE1A, CE1B, CE1C, CE1D, and CE12B.

Site CE12B requires connectivity to sites CE2A, CE2B, and CE12A.

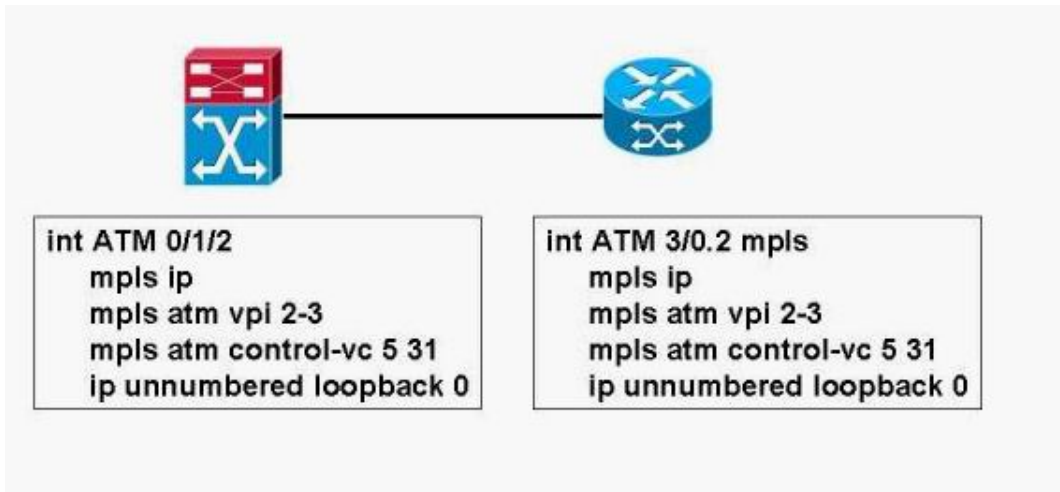
- A. 2 VRFs
- B. 3 VRFs
- C. 4 VRFs
- D. 6 VRFs
- E. 8 VRFs
- F. 10 VRFs

Answer: C

Explanation:

QUESTION NO: 5

Refer to the exhibit. A diagram of a router connected to an MPLS-enabled ATM switch via an LC-ATM MPLS interface, and a partial configuration for the MPLS-enabled ATM switch and router are shown. Which statement describes what is incorrect about the configuration shown?



- A. CEF has not been enabled on the router.
- B. The VPI range of 2-3 is invalid.
- C. The control VPI/VCI has not been set to 0/32 on the router.
- D. VC-merge has not been enabled on the ATM switch interface.
- E. The router has not been configured to specifically use LDP.

Answer: A

Explanation:

QUESTION NO: 6

When using MPLS unicast IP forwarding, what will happen if an LSR receives an incoming labeled packet but the LSR can't find that incoming label in its LFIB?

- A. The packet will be forwarded using the FIB.
- B. The packet will be forwarded using the LIB.
- C. The packet will be process switched by performing a route lookup in the routing table.
- D. The packet will be forwarded using the LFIB with an imp-null outgoing label.
- E. The packet will be dropped even if the IP destination exists in the FIB.

Answer: E

Explanation:

QUESTION NO: 7

Refer to the exhibit. Based on the show outputs, which condition could be preventing the P1 router from establishing TDP adjacency with its neighbor over the s0/0.211 and s0/0.212 subinterfaces?

```
P1#sh mpls ldp neighbor

P1#sh mpls interfaces
Interface          IP          Tunnel    Operational
Serial0/0.211      Yes (tdp)   No        Yes
Serial0/0.212      Yes (tdp)   No        Yes
```

- A. The s0/0.211 and s0/0.212 subinterfaces line protocol are in the down state.
- B. The P1 router cannot establish a TCP session with its neighbors.
- C. The P1 router is missing the mpls label protocol LDP command.
- D. The show mpls tdp neighbor command needs to be used to view the TDP neighbor status.

Answer: B

Explanation:

A is not correct as both of the serial interfaces are up (operational). If the “Operational” state is “yes”, labeled packets can be sent over this interface. It means that an MPLS protocol is configured on the interface and the required Layer 2 negotiations have occurred.

C is not correct as P1 router uses TDP (a label distribution protocol), not LDP.

D is not correct because the “show mpls tdp neighbor” command can be used to view the status of both TDP and LDP neighbor status.

Some information about neighbor establishment between two LDP/TDP routers:

LDP periodically sends hello messages (every 5 seconds). If the label switch router (LSR) is adjacent or one hop from its neighbor, the LSR sends out LDP link hello messages to all the routers on the subnet as User Datagram Protocol (UDP) packets with a multicast destination address of 224.0.0.2 (“all routers on a subnet”) and destination port number of 646 (TDP uses destination port 711) .

After discovering any LDP neighbor using multicast UDP hello messages, a TCP session must be established for LDP to exchange labels over a reliable connection. If the TCP session cannot be established between two routers (for example there is an access-list that denies TCP sessions on the well-known port number 711 TDP), they cannot become neighbors. And you will see an empty output when using the “show mpls ldp neighbor” command.

(Reference: MPLS Student Guide)

QUESTION NO: 8

What is the correct command to set the BGP scanner interval to two minutes?

- A. bgp scan-time 2
- B. bgp scan-time 120
- C. bgp scan-time 2 60
- D. The maximum scanning interval cannot exceed one minute.

Answer: D

Explanation:

QUESTION NO: 9

Given the AS-path of (51002 51003) 51001 i from the show ip bgp output, what is the origin?

- A. AS 51001
- B. AS 51002
- C. AS 51003
- D. (51002 51003)
- E. IGP
- F. IBGP

Answer: E

Explanation:

QUESTION NO: 10

What best describes the following configuration example of allowas-in? router bgp 100 address-family ipv4 vrf CustomerAneighbor 195.12.4.5 remote-as 123 neighbor 195.12.4.5 activateneighbor 195.12.4.5 allowas-in 2

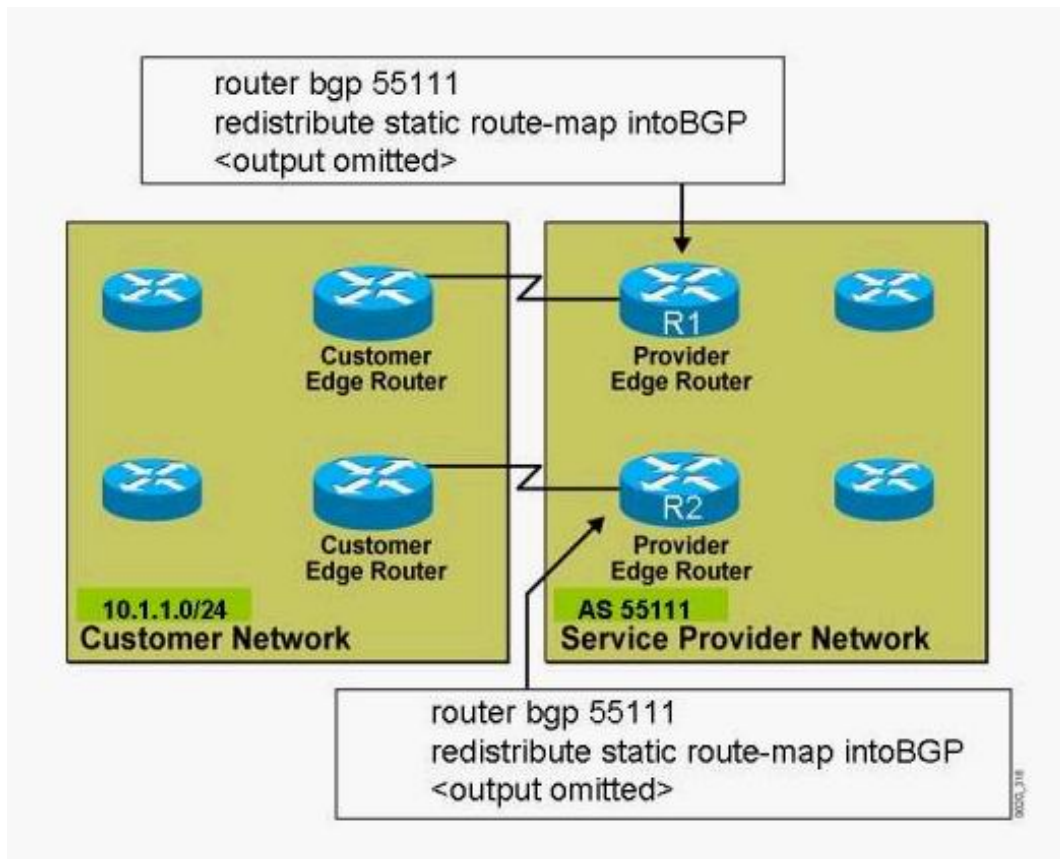
- A. permits incoming BGP updates defined by access-list 2
- B. permits incoming BGP updates defined by class-map 2
- C. permit incoming BGP updates defined by route-map 2
- D. permits incoming BGP updates with no more than two occurrences of AS 100 in the AS path
- E. permits incoming BGP updates with no more than two occurrences of AS 123 in the AS path

Answer: D

Explanation:

QUESTION NO: 11

In the diagram, the customer is using static routing to connect to the ISP. Which configuration on the ISP edge routers will enable load balancing and backup of the traffic to the customer?



- A. ! R1 ip route 10.1.1.0 255.255.255.128 serial 0 ! R2 ip route 10.1.1.128 255.255.255.128 serial 0
- B. ! R1 ip route 10.1.1.0 255.255.255.0 serial 0 ! R2 ip route 10.1.1.128 255.255.255.0 serial 0
- C. ! R1 ip route 10.1.1.0 255.255.255.128 serial 0 ip route 10.1.1.128 255.255.255.128 serial 0 ! R2 ip route 10.1.1.128 255.255.255.128 serial 0 ip route 10.1.1.0 255.255.255.128 serial 0
- D. ! R1 ip route 10.1.1.0 255.255.255.128 serial 0 ip route 10.1.1.0 255.255.255.0 serial 0 ! R2 ip route 10.1.1.128 255.255.255.128 serial 0 ip route 10.1.1.0 255.255.255.0 serial 0

Answer: D

Explanation:

QUESTION NO: 12

When using the redistribute ospf {process-id} command, which types of OSPF routes will be redistributed into BGP?

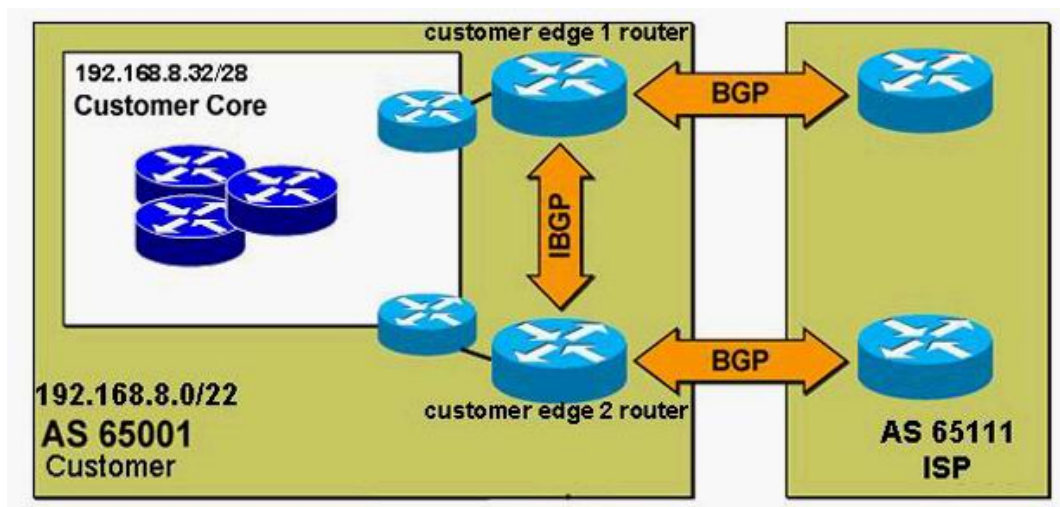
- A. all internal (interarea and intra-area) OSPF routes
- B. all external OSPF routes
- C. all external OSPF routes except type 7 LSAs
- D. both internal and external OSPF routes
- E. only classful OSPF routes without the subnet option
- F. only external OSPF routes without the match option

Answer: A

Explanation:

QUESTION NO: 13

Based on the network diagram shown in the exhibit, what is the correct configuration on the customer edge router used to conditionally announce the customer networks to the ISP?



A. router bgp 65001

```
! neighbor commands not shown
network 192.168.8.0 mask 255.255.252.0
```

!

```
ip route 192.168.8.0 255.255.252.0 192.168.8.33
```

B. router bgp 65001

```
! neighbor commands not shown
aggregate-address 192.168.8.0 255.255.252.0 summary-only
```

!

```
ip route 192.168.8.0 255.255.252.0 192.168.8.33
```

```
C. router bgp 65001
! neighbor commands not shown
network 192.168.8.0
network 192.168.9.0
network 192.168.10.0
network 192.168.11.0
!
ip route 192.168.8.0 255.255.255.0 null0
ip route 192.168.9.0 255.255.255.0 null0
ip route 192.168.10.0 255.255.255.0 null0
ip route 192.168.11.0 255.255.255.0 null0
D. router bgp 65001
! neighbor commands not shown
aggregate-address 192.168.8.0 255.255.252.0 summary-only
!
router ospf 1
network 192.168.8.0 0.0.3.255 area 0
E. router bgp 65001
! neighbor commands not shown
aggregate-address 192.168.8.0 255.255.252.0
!
ip route 192.168.8.0 255.255.252.0 null0
```

Answer: A

Explanation:

QUESTION NO: 14

When configuring Internet access using a separate MPLS VPN, which three statements are correct? (Choose three.)

- A. The Internet backbone is separate from the MPLS VPN backbone.
- B. Two dedicated physical or logical links between the PE and the CE routers are required.
- C. An Internet gateway is connected as a CE router to the MPLS VPN backbone.
- D. An Internet gateway shall insert full Internet routing into the Internet VPN to achieve optimal routing.
- E. The customer's Internet access is enabled by combining the Internet VPN with the Customer VPN using overlapping VPN topology.

Answer: A,C,E

Explanation: