300-101 Q&As

Implementing Cisco IP Routing

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QUESTION 1

How does an EVN provide end-to-end virtualization

A. It tags traffic with an 802.1q at the edge interface

B. it tags traffic with an 802.1q at the trunk interface

C. it tags traffic with a virtual network tag at the edge interface

D. it tags traffic with a virtual network tag at the trunk interface

Correct Answer: D

QUESTION 2

What are the two benefits of BGP peer groups(choose two)

A. They support groups of paths

B. A configuration change can be applied simultaneously to all peers in the peer group

C. optimize backdoor routes

D. updated via multicast

E. each neighbour in a peer group can have different inbound BGP Policies

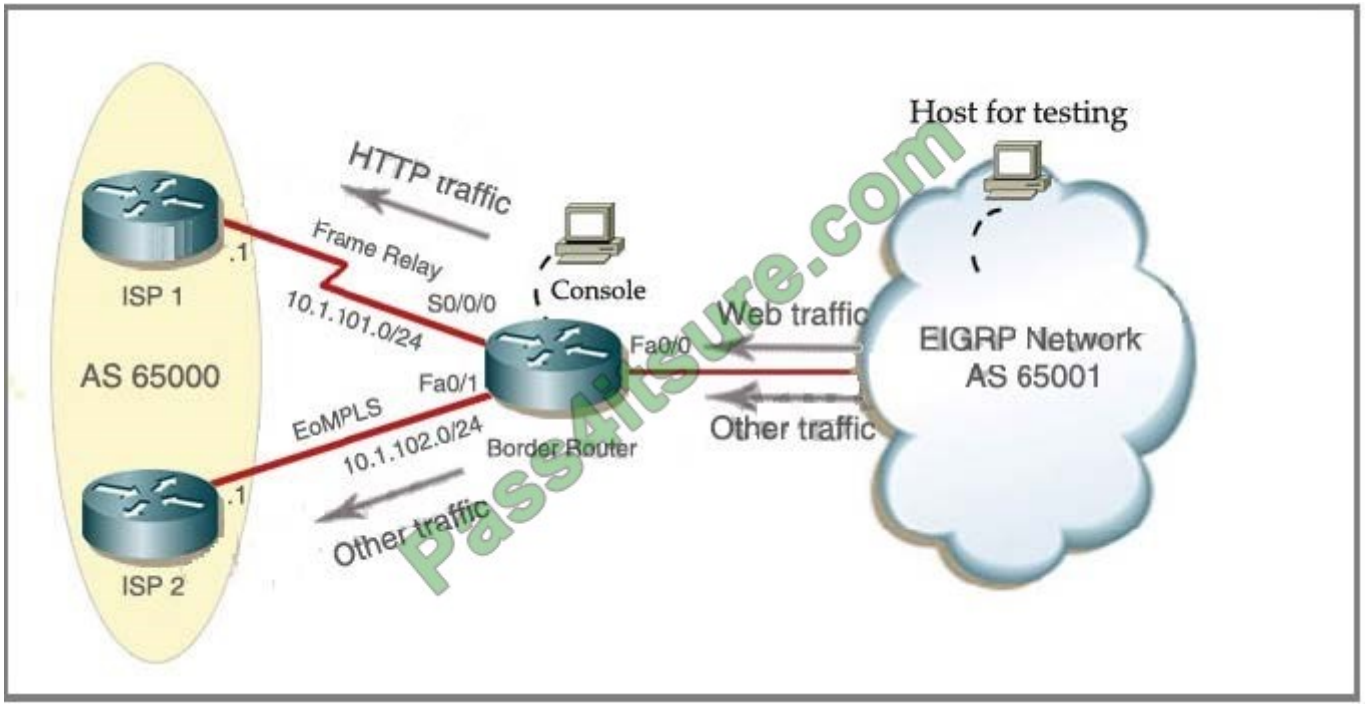
F. they use soft updates to minimize bandwidth consumption

Correct Answer: BF

QUESTION 3

SIMULATION

Policy Based Routing Sim



Company A can has two links which can take it to the Internet. The company policy demands that you use web traffic to be forwarded only to Frame Relay link if available and other traffic can go through any links. No static or default routing is allowed.

1) Access list that catches the HTTP traffic:

BorderRouter(config)#access-list 101 permit tcp any any eq www

2) Route map that sets the next hop address to be ISP1 and permits the rest of the traffic:

BorderRouter(config)#route-map pbr permit 10BorderRouter(config-route-map)#match ip address 101BorderRouter(config-route-map)#set ip next-hop 10.1.101.1BorderRouter(config-route-map)#exit

3) Apply the route-map on the interface to the server in the EIGRP Network:

BorderRouter(config-route-map)#exitBorderRouter(config)#int fa0/0BorderRouter(config-if)#ip policy route-map pbrBorderRouter(config-if)#exitBorderRouter(config)#exit

BorderRouter#show route-map

Correct Answer:

All the HTTP traffic from the EIGRP Network should go through Frame Relay link if available and all the other traffic should go through either link. The only router you are able to administrate is the Border Router, from the EIGRP Network you may only send HTTP traffic. As the other people mentioned, actually it is not a BGP lab. You are not able to execute the command “router bgp 65001?

1) Access list that catches the HTTP traffic:BorderRouter#access-list 101 permit tcp any any eq www

Note that the server was not directly connected to the Border Router. There were a lot of EIGRP routes on it. In the real exam you do not know the exact IP address of the server in the EIGRP network so we have to use the source as “any” to catch all the source addresses.

2) Route map that sets the next hop address to be ISP1 and permits the rest of the traffic:BorderRouter(config)#route-

map pbr permit 10 BorderRouter(config-route-map)#match ip address 101 BorderRouter(config-route-map)#set ip next-hop 10.1.101.1 BorderRouter(config-route-map)#exit

“If the packets do not meet any of the defined match criteria (that is, if the packets fall off the end of a route map), then those packets are routed through the normal destination-based routing process. If it is desired not to revert to normal

forwarding and to drop the packets that do not match the specified criteria, then interface Null 0 should be specified as the last interface in the list by using the set clause.”

Reference: http://www.cisco.com/en/US/products/ps6599/products_white_paper09186a00800a4409.shtml)

3) Apply the route-map on the interface to the server in the EIGRP Network:BorderRouter(config-route-map)#exit BorderRouter(config)#int fa0/0 BorderRouter(config-if)#ip policy route-map pbr BorderRouter(config-if)#exit BorderRouter(config)#exit

4) There is a “Host for Testing”, click on this host to open a box in which there is a button named “Generate HTTP traffic”. Click on this button to generate some packets for HTTP traffic. Jump back to the BorderRouter and type the

command “show route-map”.

BorderRouter#show route-map

In the output you will see the line “Policy routing matches: 9 packets…”. It means that the route-map we configured is working properly.

QUESTION 4

An engineer has configured a router to use EUI-64, and was asked to document the IPv6 address of the router. The router has the following interface parameters:

mac address 2201.420A.0004 subnet 2001:DB8:0:1::/64 Which IPv6 addresses should the engineer add to the documentation?

A. 2001:DB8:0:1:01:42AF:FE0F:4

B. 2001:DB8:0:1:FFFF:2201:420F:4

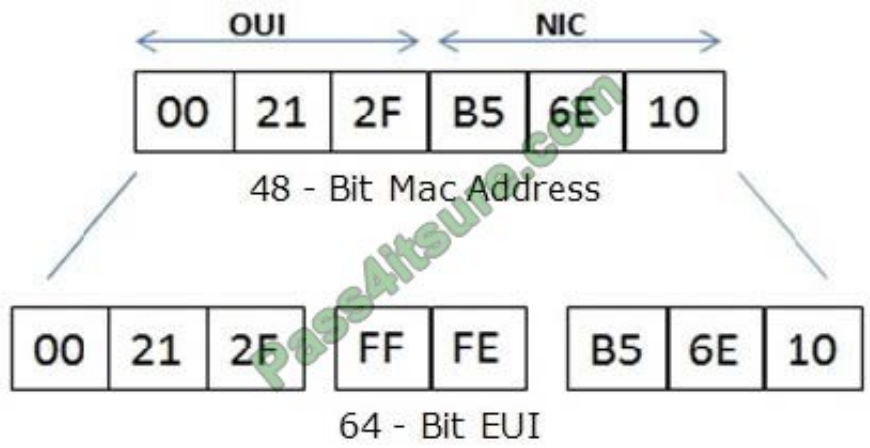
C. 2001:DB8:0:1:FE80:2201:420F:4

D. 2001:DB8:0:1:C601:42AE:800F:4

Correct Answer: A

Extended Unique Identifier (EUI), as per RFC2373, allows a host to assign iteslf a unique 64-Bit IP Version 6 interface identifier (EUI-64). This feature is a key benefit over IPv4 as it eliminates the need of manual configuration or DHCP as in the world of IPv4. The IPv6 EUI-64 format address is obtained through the 48-bit MAC address. The Mac address is first separated into two 24-bits, with one being OUI (Organizationally Unique Identifier) and the other being NIC specific. The 16-bit 0xFFFE is then inserted between these two 24-bits to for the 64-bit EUI address. IEEE has chosen FFFE as a reserved value which can only appear in EUI-64 generated from the EUI-48 MAC address.

Here is an example showing how the Mac Address is used to generate EUI.



Next, the seventh bit from the left, or the universal/local (U/L) bit, needs to be inverted. This bit identifies whether this interface identifier is universally or locally administered. If 0, the address is locally administered and if 1, the address is globally unique. It is worth noticing that in the OUI portion, the globally unique addresses assigned by the IEEE has always been set to 0 whereas the locally created addresses has 1 configured. Therefore, when the bit is inverted, it maintains its original scope (global unique address is still global unique and vice versa). The reason for inverting can be found in RFC4291 section 2.5.1.

Reference: https://supportforums.cisco.com/document/100566/understanding-ipv6-eui-64-bit-address

QUESTION 5

Which option is the minimum privilege level that the allows the user to execute all user-level commands but prohibits enable-level commands by default?

A. Level 1

B. Level 0

C. Level 14

D. Level 15

Correct Answer: A