Cisco

Exam Questions 640-878

Building Cisco Service Provider Next-Generation Networks, Part 2

NEW QUESTION 1
On the Cisco ME 3400 switch, spanning tree is enabled by default on which type of switch port?

A. UNI
B. ENI
C. NNI
D. ENI and NNI
E. UNI, ENI, and NNI

Answer: C

Explanation:
http://www.cisco.com/en/US/docs/switches/metro/me3400/software/release/12.2_25_seg_seg1/co nfiguration/guide/swstpopt.html#wp1002608

NEW QUESTION 2
Refer to the two show output examples below. The switch with the e8ba.70b5.7180 MAC address is the root bridge for which VLAN or VLANs?

```
S78#show spanning-tree

MST0
  Spanning tree enabled protocol mstp
  Root ID    Priority    32768
             Address     e8ba.70b5.6c00
             Cost        0
             Port        23 (FastEthernet0/21)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
  Bridge ID  Priority    32768  (priority 32768 sys-id-ext 0)
             Address     e8ba.70e1.d980
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/1            Desg FWD 200000    128.3    P2p
Fa0/2            Desg FWD 200000    128.4    P2p
Fa0/21           Root FWD 200000    128.23   P2p
Fa0/23           Altn BLK 200000    128.25   P2p
MST1
  Spanning tree enabled protocol mstp
  Root ID    Priority    24577
             Address     e8ba.70b5.6c00
             Cost        200000
             Port        23 (FastEthernet0/21)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
  Bridge ID  Priority    32769  (priority 32768 sys-id-ext 1)
             Address     e8ba.70e1.d980
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/1            Desg FWD 200000    128.3    P2p
Fa0/21           Root FWD 200000    128.23   P2p
Fa0/23           Altn BLK 200000    128.25   P2p

MST2
  Spanning tree enabled protocol mstp
  Root ID    Priority    24578
             Address     e8ba.70b5.7180
             Cost        200000
             Port        25 (FastEthernet0/23)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
  Bridge ID  Priority    32770  (priority 32768 sys-id-ext 2)
             Address     e8ba.70e1.d980
```

```
Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/2            Desg FWD 200000    128.4    P2p
Fa0/21           Altn BLK 200000    128.23   P2p
Fa0/23           Root FWD 200000    128.25   P2p

S78# show spanning-tree mst

##### MST0    vlans mapped:   1-69,71-79,81-4094
Bridge        address e8ba.70e1.d980  priority      32768 (32768 sysid 0)
Root          address e8ba.70b5.6c00  priority      32768 (32768 sysid 0)
              port    Fa0/21          path cost     0
Regional Root address e8ba.70b5.6c00  priority      32768 (32768 sysid 0)
                                      internal cost 200000    rem hops 19
Operational   hello time 2, forward delay 15, max age 20, txholdcount 6
Configured    hello time 2, forward delay 15, max age 20, max hops    20

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/1            Desg FWD 200000    128.3    P2p
Fa0/2            Desg FWD 200000    128.4    P2p
Fa0/21           Root FWD 200000    128.23   P2p
Fa0/23           Altn BLK 200000    128.25   P2p

##### MST1    vlans mapped:   70
Bridge        address e8ba.70e1.d980  priority      32769 (32768 sysid 1)
Root          address e8ba.70b5.6c00  priority      24577 (24576 sysid 1)
              port    Fa0/21          cost          200000    rem hops 19
Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/1            Desg FWD 200000    128.3    P2p
Fa0/21           Root FWD 200000    128.23   P2p
Fa0/23           Altn BLK 200000    128.25   P2p

##### MST2    vlans mapped:   80
Bridge        address e8ba.70e1.d980  priority      32770 (32768 sysid 2)
Root          address e8ba.70b5.7180  priority      24578 (24576 sysid 2)
              port    Fa0/23          cost          200000    rem hops 19
Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Fa0/2            Desg FWD 200000    128.4    P2p
Fa0/21           Altn BLK 200000    128.23   P2p
Fa0/23           Root FWD 200000    128.25   P2p
```

A. VLAN 1
B. VLAN 70
C. VLAN 80
D. VLANs 1, 70, and 80
E. VLANs 1 and 70
F. VLANs 1 and 80
G. VLANs 70 and 80

Answer: C

NEW QUESTION 3
ISPs use which protocol to establish peering sessions in an Internet exchange point environment?

A. LDP
B. IS-IS
C. BGP

D. OSPF

Answer: C

NEW QUESTION 4
You are enabling OSPF on a router and notice that all the Fast Ethernet and the Gigabit Ethernet interfaces have the same OSPF cost of 1. Which single configuration change can you make in router ospf configuration mode so that the Fast Ethernet interfaces have a higher OSPF cost than the Gigabit Ethernet interfaces?

A. Change the OSPF interface cost globally.
B. Change the OSPF default metric.
C. Change the OSPF auto-cost reference bandwidth.
D. Change the OSPF administrative distance.
E. Change the OSPF metric type from E2 to E1.

Answer: C

Explanation:
http://ccietobe.blogspot.com/2008/06/ospf-auto-cost-reference-bandwidth_02.html

NEW QUESTION 5
On Cisco IOS XR software, which set of commands enables OSPF area 0 on the Gi0/0/0/0 interface that has an IPv4 IP address of 192.168.1.1/24?

A. router ospf 1network 192.168.1.1 0.0.0.0 area 0
B. router ospf 1network 192.168.1.1 255.255.255.255 area 0
C. router ospf 1 area 0interface gi0/0/0/0
D. router ospfv3 1network 192.168.1.1 0.0.0.0 area 0
E. router ospfv3 1network 192.168.1.1 255.255.255.255 area 0
F. router ospfv3 1 area 0network 192.168.1.0
G. router ospfv3 1 area 0interface gi0/0/0/0

Answer: C

NEW QUESTION 6
A VLAN is a logical grouping of switch ports that belong to which two of these? (Choose two.)

A. the same virtual switch cluster
B. the same IP subnet
C. the same collision domain
D. the same broadcast domain
E. the same virtual routing and forwarding instance

Answer: BD

NEW QUESTION 7
Refer to the exhibit.

```
SwitchX#configure terminal
SwitchX(config)#interface fa0/11
SwitchX(config-if)#switchport mode trunk
SwitchX(config-if)#end
```

Which statement is true?

A. VLAN 1 traffic is sent untagged on the fa0/11 trunk port.
B. All VLANs traffic, including the native VLAN traffic, is tagged with a VLAN ID when it is sent over the fa0/11 trunk port.
C. The switchport trunk allowed vlan command is not configured; therefore, no VLANs are allowed on the trunk.
D. The encapsulation type that is used is 802.1ad.
E. The switchport trunk native vlan command is not configured; therefore, the trunk is not operational.

Answer: A

NEW QUESTION 8
Refer to the partial configurations exhibit.

```
! ME3400
!
ip routing
!
vlan 10
vlan 20
interface Fa0/1
switchport access vlan 10
interface Fa0/2
switchport access vlan 20
!
```

What additional configurations are required to enable inter-VLAN routing for VLANs 10 and 20 on the Cisco ME 3400 switch using the metro IP access image?

A. interface Fa0/1ip address 192.168.10.1 255.255.255.0!interface Fa0/2ip address 192.168.20.1 255.255.255.0!
B. interface Fa0/1ip address 192.168.10.1 255.255.255.0!interface Fa0/2ip address 192.168.20.1 255.255.255.0!router eigrp 1network 192.168.10.0network 192.168.20.0!
C. interface vlan 10ip address 192.168.10.1 255.255.255.0!interface vlan 20ip address 192.168.20.1 255.255.255.0!
D. interface Fa0/1 encapsulation dot1q 10ip address 192.168.10.1 255.255.255.0!interface Fa0/2 encapsulation dot1q 20ip address 192.168.20.1 255.255.255.0!

Answer: C

NEW QUESTION 9
Which IPv6 address block is reserved for 6to4 tunneling?

A. 2000::/16
B. 2001::/16
C. 2002::/16
D. 3ffe::/16
E. fe80::/16

Answer: C

Explanation: http://www.cisco.com/en/US/docs/ios/ipv6/configuration/guide/ip6-tunnel.html#wp1055738
Prerequisites
With 6to4 tunnels, the tunnel destination is determined by the border router IPv4 address, which is concatenated to the prefix 2002::/16 in the format 2002:border-router-IPv4-address::/48. The border router at each end of a 6to4 tunnel must support both the IPv4 and IPv6 protocol stacks.
Restrictions
The configuration of only one IPv4-compatible tunnel and one 6to4 IPv6 tunnel is supported on a router. If you choose to configure both of those tunnel types on the same router, we strongly recommend that they do not share the same tunnel source. The reason that a 6to4 tunnel and an IPv4-compatible tunnel cannot share an interface is that both of them are NBMA "point-to-multipoint" access links and only the tunnel source can be used to reorder the packets from a multiplexed packet stream into a single packet stream for an incoming interface. So when a packet with an IPv4 protocol type of 41 arrives on an interface, that packet is mapped to an IPv6 tunnel interface based on the IPv4 address. However, if both the 6to4 tunnel and the IPv4-compatible tunnel share the same source interface, the router is not able to determine the IPv6 tunnel interface to which it should assign the incoming packet. IPv6 manually configured tunnels can share the same source interface because a manual tunnel is a "point-topoint" link, and both the IPv4 source and IPv4 destination of the tunnel are defined.

NEW QUESTION 10
When upgrading a Cisco ASR 1001 Router, when is the request platform software package expand file bootflash:image-name command required?

A. to copy the consolidated Cisco IOS XE image to the bootflash:
B. to perform Cisco IOS ISSU on the standby route processor
C. to run the router using a consolidated package
D. to run the router using individual subpackages

Answer: D

Explanation: http://www.cisco.com/en/US/docs/routers/asr1000/configuration/guide/chassis/asrswcfg.pdf

File Systems on the Cisco ASR 1000 Series Router

Table 3 provides a list of file systems that can be seen on the Cisco ASR 1000 Series Routers.

Table 3 File Systems

File System	Description
bootflash:	The boot flash memory file system on the active RP.
cns:	The Cisco Networking Services file directory.
harddisk:	The hard disk file system on the active RP. The harddisk: file system is not available on the Cisco ASR 1002 Routers.
nvram:	Router NVRAM. You can copy the startup configuration to NVRAM or from NVRAM.
obfl:	The file system for Onboard Failure Logging files.
stby-bootflash:	The boot flash memory file system on the standby RP.
stby-harddisk:	The hard disk file system on the standby RP. The harddisk: file system is not available on the Cisco ASR 1002 Routers.
stby-usb[0-1]:	The Universal Serial Bus (USB) flash drive file systems on the standby RP. The stby-usb: file system is not available on the Cisco ASR 1002 Routers.
system:	The system memory file system, which includes the running configuration.
tar:	The archive file system.
tmpsys:	The temporary system files file system.
usb[0-1]:	The Universal Serial Bus (USB) flash drive file systems on the active RP. Only usb0: is available on the Cisco ASR 1002 Router.

NEW QUESTION 10
Which Cisco router platform supports running either the Cisco IOS or IOS XR operating system?

A. Cisco CRS
B. Cisco ASR9k
C. Cisco ASR1K
D. Cisco ISR-G2
E. Cisco 12000 GSR

Answer: E

Explanation:
The CRS-1 platform natively runs the IOS XR operating system. The c12000 platform, originally being an IOS router, can be upgraded to run IOS XR. However, c12000 hardware, including line cards (LC) as well as route processors (RP), must be checked for XR compliance.
TURBOBOOT refers to a fresh boot of the router from ROMMON. TURBOBOOT is required if an IOS router is being converted to IOS XR or as a last resort disaster recovery in the case of CRS-1. If the router is already running an IOS XR image, there is no need to TURBOBOOT the router for an upgrade or downgrade. Later sections in this chapter address the upgrade scenario. This section deals with a fresh boot of the router from ROMMON. A new c12000 platform can be ordered prebaked as an IOS XR router; however, there will always be cases where an IOS running c12000 needs to install IOS XR.

NEW QUESTION 13
You want to configure HSRP between a Cisco IOS and a Cisco IOS XR router for the 192.0.2.0/24 subnet. Half of the PCs on the 192.0.2.0/24 subnet are configured to use 192.0.2.1 as the default gateway, and the other half of the PCs are configured to use 192.0.2.254 as the default gateway. The intent is to load balance the traffic across both routers.
Which two IOS and IOS XR configurations are needed? (Choose two.)

A. ! IOS-XRinterface GigabitEthernet 0/0/0/0ip address 192.0.2.3 255.255.255.0router hsrpinterface GigabitEthernet 0/0/0/0 hsrp 1 ipv4 192.0.2.1hsrp 1 priority 95hsrp 1 preempthsrp 2 ipv4 192.0.2.254hsrp 2 priority 105hsrp 2 preempt
B. ! IOS-XRinterface GigabitEthernet 0/0/0/0ip address 192.0.2.1 255.255.255.0router hsrpinterface GigabitEthernet 0/0/0/0 hsrp 1 ipv4 192.0.2.1hsrp 1 priority 99hsrp 1 preempthsrp 2 ipv4 192.0.2.254hsrp 2 priority 101hsrp 2 preempt
C. ! IOS-XRinterface GigabitEthernet 0/0/0/0ip address 192.0.2.3 255.255.255.0router hsrpinterface GigabitEthernet 0/0/0/0 hsrp 1 ipv4 192.0.2.1hsrp 1 priority 1hsrp 1 preempthsrp 2 ipv4 192.0.2.254hsrp 2 priority 1hsrp 2 preempt
D. ! IOSinterface GigabitEthernet 0/0ip address 192.0.2.2 255.255.255.0standby 1 ip 192.0.2.1standby 1 priority 105standby 1 preemptstandby 2 ip 192.0.2.254standby 2 priority 95standby 2 preempt
E. ! IOSinterface GigabitEthernet 0/0ip address 192.0.2.254 255.255.255.0standby 1 ip 192.0.2.1standby 1 preemptstandby 2 ip 192.0.2.254standby 2 preempt
F. ! IOSinterface GigabitEthernet 0/0ip address 192.0.2.2 255.255.255.0standby 1 ip 192.0.2.1standby 1 preemptstandby 1 priority 2standby 2 ip 192.0.2.254standby 2 preemptstandby 2 priority 2

Answer: AD

NEW QUESTION 18
On Cisco IOS XR software, which two of the address-family command options in IS-IS configuration mode are valid? (Choose two)

A. address-family clns
B. address-family ipv4 unicast
C. address-family ipv6 unicast
D. address-family vpnv4
E. address-family vpnv6

Answer: BC

Explanation:
http://www.cisco.com/en/US/docs/ios_xr_sw/iosxr_r3.8/routing/command/reference/rr38isis.pdf To enter address family configuration mode for configuring Intermediate System-to-Intermediate System (IS-IS) routing that use standard IP Version 4 (IPv4) and IP Version 6 (IPv6) address prefixes, use the address-family command in router configuration or interface configuration mode. To disable support for an address family, use the no form of this command. Address family {ipv4 | ipv6} {unicast | mulitcast} no address-family {ipv4 | ipv6} {unicast | multicast}

NEW QUESTION 19
On Cisco routers, the address-family configuration command in BGP configuration mode is used to enable which BGP feature?

A. BGP route policy
B. multiprotocol BGP
C. BGP policy accounting
D. BGP communities

Answer: B

NEW QUESTION 24
Your switch network has been configured to support multiple VLANs. In order for the users on one VLAN to communicate with users on another VLAN, which additional configuration is required?

A. Enable a routing protocol like EIGRP on a router or on a Layer 3 capable switch
B. Enable inter-VLAN routing on a router or on a Layer 3 capable switch
C. Enable a switch virtual interface on the router, using the interface vlan global configuration command
D. Enable a switch virtual interface on the switch, using the encapsulation dot1q
E. subinterface configuration command
F. Enable IP routing on a Layer 2 switch

Answer: B

NEW QUESTION 27
Within an MPLS domain, which table is used by the label switch routers to make forwarding decisions when a labeled packet is received?

A. FIB
B. RIB
C. LFIB
D. LIB
E. CEF

Answer: C

Explanation:
http://www.cisco.com/en/US/docs/ios-xml/ios/mp_ldp/configuration/12-4m/mp-ldp-12-4m-book.pdf

NEW QUESTION 29
On Cisco IOS XR software, what is the default commit option?

A. best-effort
B. psuedo-atomic
C. replace
D. force

Answer: B

Explanation:

commit

To commit the target configuration to the active (running) configuration, use the **commit** command in any configuration mode.

commit [best-effort] [**comment** *line*] [**confirmed** [*seconds* | **minutes** *minutes*]] **[force]** [**label** *line*] **[replace]** [**save-running filename** *file_path*]

Syntax Description

best-effort	(Optional) Merges the target configuration with the running configuration and commits only valid changes (best effort). Some configuration changes might fail due to semantic errors.
comment *line*	(Optional) Assigns a comment to a commit. This text comment is displayed in the commit entry displayed in the output for the **show configuration commit list** command with the optional **detail** keyword.
confirmed [*seconds* | **minutes** *minutes*]	(Optional) Commits the configuration on a trial basis for the time specified in seconds or minutes. **Note** The **confirmed** option is not available in administration configuration mode.
force	(Optional) Forces a commit operation in low-memory conditions.
label *line*	(Optional) Assigns a meaningful label. This label is displayed (instead of the autogenerated commit ID) in the output for the **show configuration commit list** .
replace	(Optional) Replaces the entire running configuration with the contents of the target configuration.
save-running filename *file_path*	(Optional) Saves the running configuration to a specified file.

Command Default
The default behavior is *pseudo-atomic*, meaning that all changes must succeed for the entire commit operation to succeed. If any errors are found, none of the configuration ch
take effect.

NEW QUESTION 30
Refer to the partial Cisco IOS router configuration exhibit.

```
interface FastEthernet0/0
 no ip address
 no shut
!
interface FastEthernet0/0.1
 ip address 192.168.1.1 255.255.255.0
!
interface FastEthernet0/0.2
 ip address 192.168.2.1 255.255.255.0
!
interface FastEthernet0/0.3
 ip address 192.168.3.1 255.255.255.0
!
```

Which statement is true?

A. To support the subinterface configuration, the Fa0/0 main interface configuration is missing the encapsulation dot1Q command.
B. The Fa0/0 interface/subinterfaces are configured correctly to operate as a trunk port to provide inter-VLAN routing for three VLANs (VLANs 1, 2, and 3).

C. To provide inter-VLAN routing, the Fa0/0.1, Fa0/0.2 and Fa0/0.3 subinterface configuration is missing the encapsulation dot1Q vlan-id subinterface configuration command.
D. To provide inter-VLAN routing, the router is missing the vlan 1, vlan 2, and vlan 3 global configuration commands.

Answer: C

NEW QUESTION 35
Refer to the partial Cisco IOS XR BGP configuration exhibit.

```
router bgp 64500
 address-family ipv4 unicast
  network 10.1.1.1/32
 !
 address-family ipv6 unicast
  network 2001:db8:10:1:1::1/128
 !
 neighbor 10.2.1.1
  remote-as 64500
  update-source Loopback0
  address-family ipv4 unicast
  !
 !
 neighbor 192.168.101.11
  remote-as 64501
  password encrypted 13061E010803
  address-family ipv4 unicast
   route-policy Test1 in
   route-policy Test1 out
  !
 !
 neighbor 2001:db8:10:2:1::1
  remote-as 64500
  address-family ipv6 unicast
  !
 !
 neighbor 2001:db8:192:168:101::11
  remote-as 64501
  address-family ipv6 unicast
   route-policy Test1 in
   route-policy Test1 out
  !
 !
!
end
```

Which two statements are true? (Choose two)

A. This router uses its Loopback 0 interface IP address when establishing BGP peering with the 10.2.1.1 router.
B. This router uses its Loopback 0 interface IP address when establishing BGP peering with the 192.168.101.11 router.
C. Test1 refers to a route policy that is defined using the RPL.
D. Both the IBGP and EBGP sessions will be authenticated.
E. The IBGP session is missing the mandatory route-policy configuration.

Answer: AC

NEW QUESTION 37
When is a route-policy configuration needed on a Cisco IOS XR router using RPL?

A. when enabling an IGP routing protocol configuration
B. when enabling an EBGP peering configuration
C. when enabling an IBGP peering configuration
D. when enabling route redistribution
E. when enabling an LDP peering configuration

Answer: B

Explanation: http://www.cisco.com/en/US/docs/ios_xr_sw/iosxr_r3.7/routing/configuration/guide/rc37rpl.pdf

NEW QUESTION 40
Which segment protocol provides fast and predictable convergence (typically within 50 ms) in Layer 2 Ethernet ring topologies?

A. Spanning Tree Protocol
B. Flex Links
C. Resilient Ethernet Protocol
D. Spatial Reuse Protocol
E. Resilient Packet Ring

Answer: C

Explanation: http://www.cisco.com/en/US/docs/switches/metro/me3400/software/release/12.2_40_se/configurat ion/guide/swrep.html
Resilient Ethernet Protocol (REP) on the Cisco ME 3400E Ethernet Access switch. REP is a Cisco proprietary protocol that provides an alternative to Spanning Tree Protocol (STP) to control network loops, handle link failures, and improve convergence time. REP controls a group of ports connected in a segment, ensures that the segment does not create any bridging loops, and responds to link failures within the segment. REP provides a basis for constructing more complex networks and supports VLAN load balancing.

NEW QUESTION 41
Within an MPLS domain, which table is used by the ingress edge LSR to make forwarding decisions when an unlabeled IP packet is received?

A. FIB
B. LFIB
C. LIB
D. MP-BGP
E. VRF

Answer: A

Explanation:

Table 19-2. MPLS LSR Terminology Reference

LSR Type	Actions Performed by This LSR Type
Label Switch Router (LSR)	Any router that pushes labels onto packets, pops labels from packets, or simply forwards labeled packets.
Edge LSR (E-LSR)	An LSR at the edge of the MPLS network, meaning that this router processes both labeled and unlabeled packets.
Ingress E-LSR	For a particular packet, the router that receives an unlabeled packet and then inserts a label stack in front of the IP header.
Egress E-LSR	For a particular packet, the router that receives a labeled packet and then removes all MPLS labels, forwarding an unlabeled packet.
ATM-LSR	An LSR that runs MPLS protocols in the control plane to set up ATM virtual circuits. Forwards labeled packets as ATM cells.
ATM E-LSR	An E-edge LSR that also performs the ATM Segmentation and Reassembly (SAR) function.

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MPLS Forwarding Using the FIB and LFIB

To forward packets as shown in Figure 19-2, LSRs use both the CEF FIB and the MPLS LFIB when forwarding packets. Both the FIB and LFIB hold any necessary label information, as well as the outgoing interface and next-hop information.

The FIB and LFIB differ in that routers use one table to forward incoming unlabeled packets, and the other to forward incoming labeled packets, as follows:

- **FIB**—Used for incoming unlabeled packets. Cisco IOS matches the packet's destination IP address to the best prefix in the FIB and forwards the packet based on that entry.
- **LFIB**—Used for incoming labeled packets. Cisco IOS compares the label in the incoming packet to the LFIB's list of labels and forwards the packet based on that LFIB entry.

Figure 19-3 shows how the three LSRs in Figure 19-2 use their respective FIBs and LFIB. Note that Figure 19-3 just shows the FIB on the LSR that forwards the packet using the FIB and the LFIB on the two LSRs that use the LFIB, although all LSRs have both a FIB and an LFIB.

Figure 19-3 Usage of the CEF FIB and MPLS LFIB for Forwarding Packets

The figure shows the use of the FIB and LFIB, as follows:

- **PE1**—When the unlabeled packet arrives at PE1, PE1 uses the FIB. PE1 finds the FIB entry that matches the packet's destination address of 10.3.3.1—namely, the entry for 10.3.3.0/24 in this case. Among other things, the FIB entry includes the instructions to push the correct MPLS label in front of the packet.
- **P1**—Because P1 receives a labeled packet, P1 uses its LFIB, finding the label value of 22 in the LFIB, with that entry stating that P1 should swap the label value

NEW QUESTION 43
Which three statements about access control lists on a Cisco IOS router are true? (Choose three)

A. The more specific ACL entries should be placed at the top of the ACL.
B. The generic ACL entries should be placed at the top of the ACL, to filter general traffic and reduce noise on the network.
C. ACLs always search for the most specific entry before taking any filtering action.
D. Router-generated packets cannot be filtered by the interface ACLs on the router.
E. Extended ACLs should be placed as close to the destination as possible.
F. There must be at least one permit statement in an ACL, or all traffic is denied.

Answer: ADF

NEW QUESTION 48
Which Cisco IOS access list permits HTTP traffic that is sourced from host 10.1.129.100 port 3030 and that is destined to host 192.168.1.10?

A. access-list 101 permit tcp any eq 3030
B. access-list 101 permit tcp 10.1.128.0 0.0.1.255 eq 3030 192.168.1.0 0.0.0.15 eq www
C. access-list 101 permit tcp 10.1.129.0 0.0.0.255 eq www 192.168.1.10 0.0.0.0 eq www
D. access-list 101 permit tcp host 192.168.1.10 eq 80 10.1.0.0 0.0.255.255 eq 3030
E. access-list 101 permit tcp 192.168.1.10 0.0.0.0 eq 80 10.1.0.0 0.0.255.255
F. access-list 101 permit ip host 10.1.129.100 eq 3030 host 192.168.1.100 eq 80

Answer: B

NEW QUESTION 50
What is dual IOS mode on the Cisco ASR 1001 Router?

A. redundant IOS processes that are running on the active RP and standby RP
B. active and standby IOS processes that are running on a single RP
C. separate Cisco IOS XE and IOS XR processes that are running on a single RP
D. separate Cisco IOS XE and IOS XR processes that are running on two different RPs
E. checkpointed redundant IOS processes that are running on two different RPs in active/active mode

Answer: B

Explanation:

Redundancy Requirements				
Chassis	Inbox Redundancy Type	Default Memory	Minimum Memory For Redundancy	Redundancy Feature License
ASR1001	SW No ISSU*	4G	8G	FLSASR1-IOSRED(=) or L -FLSASR1-IOSRED=
ASR1002	SW No ISSU*	4G	4G	FLASR1-IOSRED-RTU(=)
ASR1002-X	SW No ISSU*	4G	8G	FLSASR1-IOSRED(=) or L -FLSASR1-IOSRED=
ASR1004	SW No ISSU*	RP1/RP1-N 4G, RP1-N, RP2 8G	RP1/RP1-N 4G, RP2 16G	FLASR1-IOSRED-RTU(=)
ASR1006	HW ISSU**	RP1/RP1-N 4G, RP1-N, RP2 8G	RP1/RP1-N 4G, RP2 16G	N/A
ASR1013	HW ISSU**	RP2 8G	RP2 16G	N/A

* Supports dual Cisco IOS Software redundancy.
** Supports hardware route processor and ESP redundancies, but does not support software redundancy.

NEW QUESTION 53
Which Cisco platform runs the Cisco IOS XE operating system?

A. Cisco ASR9K
B. Cisco CRS
C. Cisco 12000 GSR
D. Cisco ASR1K
E. Cisco ME 3400
F. Cisco ISR-G2

Answer: D

Explanation: http://www.cisco.com/en/US/prod/collateral/routers/ps9343/product_bulletin_c25-448387.html

NEW QUESTION 56
Which three statements about service provider network requirements are true? (Choose three.)

A. Service provider networks are becoming more specialized, with providers offering only one service.
B. Service providers connect customers to the Internet.
C. Jitter and packet loss are no longer an issue.
D. Multiple access technologies are supported.
E. Customers can connect directly using copper, wireless, or fiber-optic links.

Answer: BDE

NEW QUESTION 57
Which three are common ISP access network technologies? (Choose three.)

A. DSL
B. Cable modem
C. DWDM
D. MPLS
E. PON
F. MP-BGP

Answer: ABE

Explanation: http://blog.ioshints.info/2010/02/passive-optical-networks.html- PON

NEW QUESTION 58
Which three Cisco platforms are classified as core routers? (Choose three.)

A. Cisco XR 12000
B. Cisco ME 3400

C. Cisco ASR 1006
D. Cisco CRS-3
E. Cisco ASR 9010
F. Cisco 3900

Answer: ADE

Explanation:
Both the ASR 9010 and ASR 9006 routers are designed with key capabilities to help deliver the services of tomorrow. Providing increased bandwidth capabilities for network devices at economically viable prices is one of the primary criteria for true carrier- transport platforms.While traditional service prices continue to decline, the Cisco ASR 9000 Series helps establish a new financial reality by facilitating reliable and scalable video, nextgeneration mobile aggregation, and advanced Carrier Ethernet service offerings.
The Cisco® XR 12000 Series and Cisco 12000 Series routers compose a portfolio of intelligent routing solutions that scale from 2.5- to n x10 Gbps capacity per slot, enabling carrier-class IP/Multiprotocol Label Switching (MPLS) networks and accelerating the evolution to IP Next- Generation Networks. Built upon a foundation of investment protection, this portfolio delivers up to 1.28-terabits-per-second switching capacity with wire-speed feature performance, scalability, and graceful hardware and software upgrade paths.

NEW QUESTION 63
Refer to the configuration example exhibit.

```
S1(config)# interface f0/1
S1(config-if)# switchport access vlan 118
S1(config-if)# switchport mode dot1q-tunnel
S1(config-if)# interface f0/3
S1(config-if)#switchport access vlan 209
S1(config-if)# switchport mode dot1q-tunnel
```

Which statement is true?

A. A trunk port has been created and VLAN has been allowed.
B. An access port has been created on a UNI.
C. A customer VLAN of 209 is configured.
D. A QinQ VLAN of 118 is configured.

Answer: D

Explanation: http://www.cisco.com/en/US/docs/switches/lan/catalyst4500/12.2/54sg/configuration/guide/tunnel.html#wp1026594

NEW QUESTION 66
Which two statements about the link state routing process are true? (Choose two.)

A. It uses the DUAL algorithm.
B. It uses metrics such as AS path.
C. All routers in the area have link state databases.
D. The administrative distance is 1 by default.
E. Each router in the area floods LSPs to all neighbors.

Answer: CE

NEW QUESTION 70
A network administrator is troubleshooting an issue whereupon they able to ping the web server, but unable to web browse to the same web server. When the administrator telnets to the webserver on port 80, the administrator gets a connection refused message. At which three layers of the OSI model does the problem exist? (Choose three.)

A. Layer 1
B. Layer 2
C. Layer 3
D. Layer 4
E. Layer 5
F. Layer 6
G. Layer 7

Answer: DEG

NEW QUESTION 74
A network engineer is trying to determine the mac address of a server attached to a switchport on a Cisco Catalyst 6500 Switch. The interface is connected, but no MAC address is present. The server has an IP address of 169.x.x.x. At which layer of the OSI Model does the problem exist?

A. Layer 1
B. Layer 2
C. Layer 3
D. Layer 4
E. Layer 5
F. Layer 6
G. Layer 7

Answer: A

NEW QUESTION 78
A company begins offering SIP and PRI trunks to customers. Which type of Service Provider is this?

A. Managed Service Provider
B. Internet Service Provider
C. Telecommunications Service Provider
D. Distributed Networking Service Provider

Answer: C

NEW QUESTION 82
What layer of the IP NGN Model does the Customer Element and the Carrier Ethernet exist?

A. Service Layer
B. Network Layer
C. Application Layer
D. Operational Layer

Answer: B

NEW QUESTION 83
Which number range is allocated to private Autonomous Systems by the Internet Assigned Numbers Authority?

A. 65535 to 65545
B. 64535 to 64536
C. 64512 to 65535
D. 65535 to 66001
E. 63512 to 64535

Answer: C

NEW QUESTION 85
Which of the following commands would be used to prevent a switchport from processing Bridge Protocol Data Units?

A. switch(config)#bpdu filter enable
B. switch(config)#no bpdu enable
C. switch(config-if)#spanning-tree bpdufilter enable
D. switch(config-if)#no spanning-tree bpdu filter enable
E. switch(config-if)#spanning-tree bpdu guard

Answer: C

NEW QUESTION 86
Which commands will configure the spanning tree operating mode that can group multiple VLANs in a single domain?

A. switch(config)#spanning-tree mode pvst
B. switch(config)#spanning-tree mode rstp
C. switch(config)#spanning-tree mode rapid-pvst
D. switch(config)#spanning-tree mode mst
E. switch(config)#spanning-tree mode mst-plus

Answer: D

NEW QUESTION 89
A customer has created a new VLAN for the subnet that was allocated to them. Computers on the subnets can ping their default gateway, but they cannot ping devices in the other subnet. What is most likely the problem?

A. Firewall on the Provider Edge is blocking access
B. InterVLAN routing is not configured
C. BGP has not been configured with the Provider Edge router
D. VLAN Switched Virtual Interface is in a down state

Answer: B

NEW QUESTION 90
Which two commands are required to configure an access port for both voice VLAN 20 and data VLAN 30? (Choose two.)

A. switchport mode access 30
B. switchport data vlan 30
C. switchport access data 20
D. switchport access data 30
E. switchport access vlan 30
F. switchport mode voice 20
G. switchport voice vlan 20

Answer:

EG

NEW QUESTION 95
A customer has been allocated a new VLAN on a new Layer 3 switch. After configuring the Switched Virtual Interface, what additional two configurations are required to ensure the switch can route packets to the Internet through a gateway with IP address of 209.165.200.250? (Choose two.)

A. IP default-gateway 209.165.200.250
B. IP routing
C. IP route 0.0.0.0 0.0.0.0 209.165.200.250
D. IP routing 0.0.0.0 0.0.0.0 209.165.200.250
E. IP networking

Answer: BC

NEW QUESTION 96
What does the command 'rep admin vlan 100' accomplish?

A. confines flooding of REP messages to VLAN 100
B. reserves REP admin VLAN to 100 so that no REP messages are sent on VLAN 100
C. forces VLAN 100 into a REP block state
D. this is an invalid command

Answer: A

NEW QUESTION 98
Refer to the exhibit.

```
! ME3400
!
ip routing
!
vlan 10
vlan 20
interface Fa0/1
switchport access vlan 10
interface Fa0/2
switchport access vlan 20
!
```

What additional configuration is required to enable inter-VLAN routing for VLANs 10 and 20 on the Cisco ME 3400 switch using the Metro IP Access image?

A. interface Fa0/1ip address 192.168.10.1 255.255.255.0!interface Fa0/2ip address 192.168.20.1 255.255.255.0!
B. interface Fa0/1ip address 192.168.10.1 255.255.255.0!interface Fa0/2ip address 192.168.20.1 255.255.255.0!router eigrp 1network 192.168.10.0network 192.168.20.0!
C. interface vlan 10ip address 192.168.10.1 255.255.255.0!interface vlan 20ip address 192.168.20.1 255.255.255.0!
D. interface Fa0/1 encapsulation dot1q 10ip address 192.168.10.1 255.255.255.0!interface Fa0/2 encapsulation dot1q 20ip address 192.168.20.1 255.255.255.0!

Answer: C

NEW QUESTION 99
What three statements about REP configurations on a Cisco ME 3400 switch port are true? (Choose three.)

A. The port must be an NNI type and must be in trunk mode.
B. The rep segment number command is used to enable REP on the switch port.
C. A REP segment cannot be wrapped into a ring topology.
D. The port where the segment terminates is called the edge port.
E. If a failure occurs within the segment, the blocked port goes to the forwarding state
F. Ports are never blocked in a given segment

Answer: ABD

NEW QUESTION 102
Refer to the configuration output below. OSPFv2 is already configured on a customer router and the customer is requesting that OSPFv3 be added. What configuration is needed in order to add OSPFv3 to the fastethernet0/0 interface?
Configuration: ipv6 router ospf 1
router-id 209.165.200.227
area 2 nssa
interface fastethernet0/0
ip address 2001:DB8:0:7::

A. interface FastEthernet0/0 ipv4 ospf 1 area 2
B. interface FastEthernet0/0 ipv6 ospf 1 area 2
C. interface FastEthernet0/0 ipv6 1 area 2
D. interface FastEthernet0/0 area 2 ospf 1 ipv6

Answer: B

NEW QUESTION 104

What is the foundation architecture of Cisco Next Generation Networks?

A. IP/MPLS
B. IP SLA
C. TRILL
D. REP

Answer: A

NEW QUESTION 109
Which three are examples of a link-state routing protocols and static routing? (Choose three.)

A. EIGRP
B. RIP
C. OSPF
D. IS-IS
E. IP default-gateway
F. ODR
G. Proxy Arp

Answer: CDE

NEW QUESTION 112
Refer to the exhibit.

```
PE Configuration
vrf Customer10
  rd 100:301
  address-family ipv4 unicast

  !
  neighbor 209.165.201.22
   remote-as 65101
   address-family ipv4 unicast
    as-override
```

A new customer is not receiving routes from the Provider Edge router. What command needs to be added to advertise routes?

A. route-policy (route group) in
B. route-policy (route group) out
C. route-map (route group) in
D. prefix-list (prefix-list) in
E. prefix-list (prefix-list) out

Answer: B

NEW QUESTION 117
Refer to the exhibit.

```
Router# configure terminal
Router(config)# router bgp 100
Router(config-router)# network
209.165.200.224 mask 255.255.255.224
Router(config-router)# address-family ipv4
vrf vrf-cisco
Router(config-router-af)# neighbor
10.10.10.10 remote-as 10
Router(config-router-af)# neighbor
10.10.10.10 activate
Router(config-router-af)# end
Router# copy running-config startup-config
```

A network engineer configured BGP PE to CE neighbor sessions with the commands shown. What does 'address-family ipv4 vrf vrf-cisco' from the configuration allow?

A. activates the advertisement of the IPv4 address family
B. defines customer's routing context
C. specifies a network and mask to announce in VRF-Cisco
D. redistribute VRF-Cisco

Answer: B

NEW QUESTION 121

A customer has installed a second router and copied the configuration from the first router, as shown below. What change is needed to ensure that router 1 is the primary IP address?
Router 1
standby 1 priority 110
standby 1 preempt
Router 2
standby 1 priority 120
standby 1 preempt

A. decrease the priority on router 2 to 109
B. decrease the priority on router 1 to 109
C. remove standby 1 preempt from router 1
D. increase the priority on router 2 to 130
E. increase the priority on router 1 to 119

Answer: A

NEW QUESTION 123
Which configuration error within an AS can cause a Cisco IOS XR router to not announce certain prefixes to its EBGP peers?

A. Some prefixes were mistagged with the no-export BGP community.
B. Some prefixes were set with a MED of 0.
C. The outbound BGP route policy has only set actions that are defined without any pass actions that are defined.
D. The inbound BGP route policy has only set actions that are defined without any pass actions that are defined.

Answer: A

NEW QUESTION 126
Refer to the configuration snippet below. A network engineer has been tasked with implementing a security policy that prevents subnet 209.165.202.128/27 from accessing web server 209.165.200.224. All users are now unable to access the web server. What command is missing from the access list configuration?
Configuration:
switch(config)#access-list 1 deny 209.165.202.128 0.0.0.31 209.165.200.224 switch(config)#interface FastEthernet 0/0
switch(config-if)# ip access-group 1 in

A. switch(config-if)#ip access-group 1 out
B. switch(config)#ip access-list 2 permit any any
C. switch#ip access-list 2 permit any any
D. switch(config)#ip access-list 1 permit any any

Answer: D

NEW QUESTION 127
What command will install the image needed on the Cisco IOS-XR if the SSH configuration options are unavailable?

A. install activate disk0:c12k-k9sec.pie-4.1.2
B. install activate disk0:c12k-diags.pie-4.1.2
C. install commit disk0:c12k-diags.pie-4.1.2
D. install ssh activate disk0:c12k-k9sec.pie-4.1.2

Answer: A

NEW QUESTION 131
What package provides the software for the route processor in the IOS XE Software?

A. RPIOS
B. ESPBase
C. RPControl
D. RPBase
E. SIP SPA

Answer: D

NEW QUESTION 135
What is the advantage of running IOS-XE individual consolidated packages versus subpackages?

A. decreases storage requirements
B. optimizes router memory usage
C. simplified installation
D. lowers CPU utilization

Answer: B

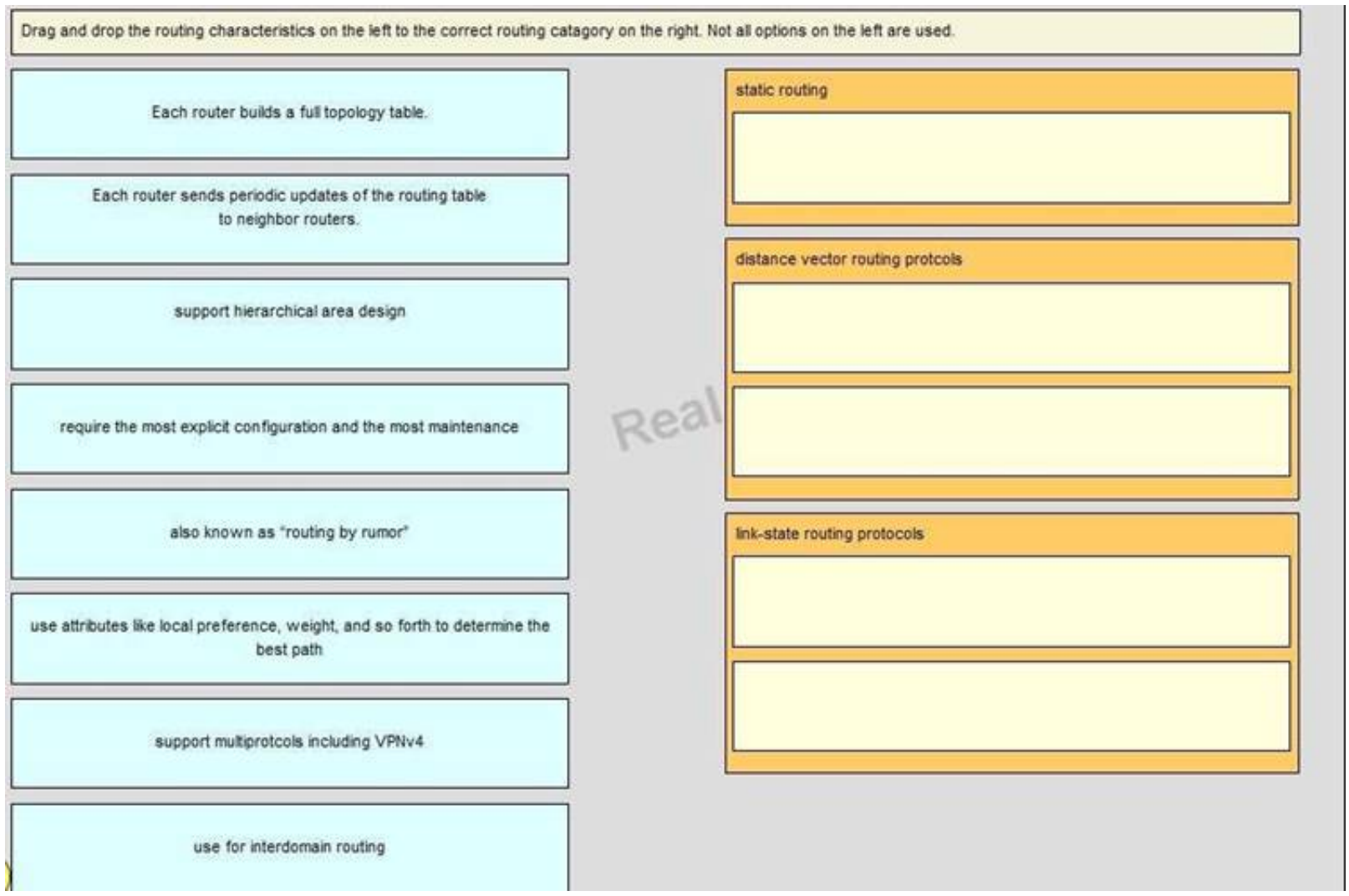
NEW QUESTION 140
What platform is best placed as the edge device within the Cisco Service Provider Next Generation Network architecture running IOS-XE?

A. ASR 9000

B. Catalyst 6509
C. 2921 Router
D. C3560G
E. Catalyst 7609

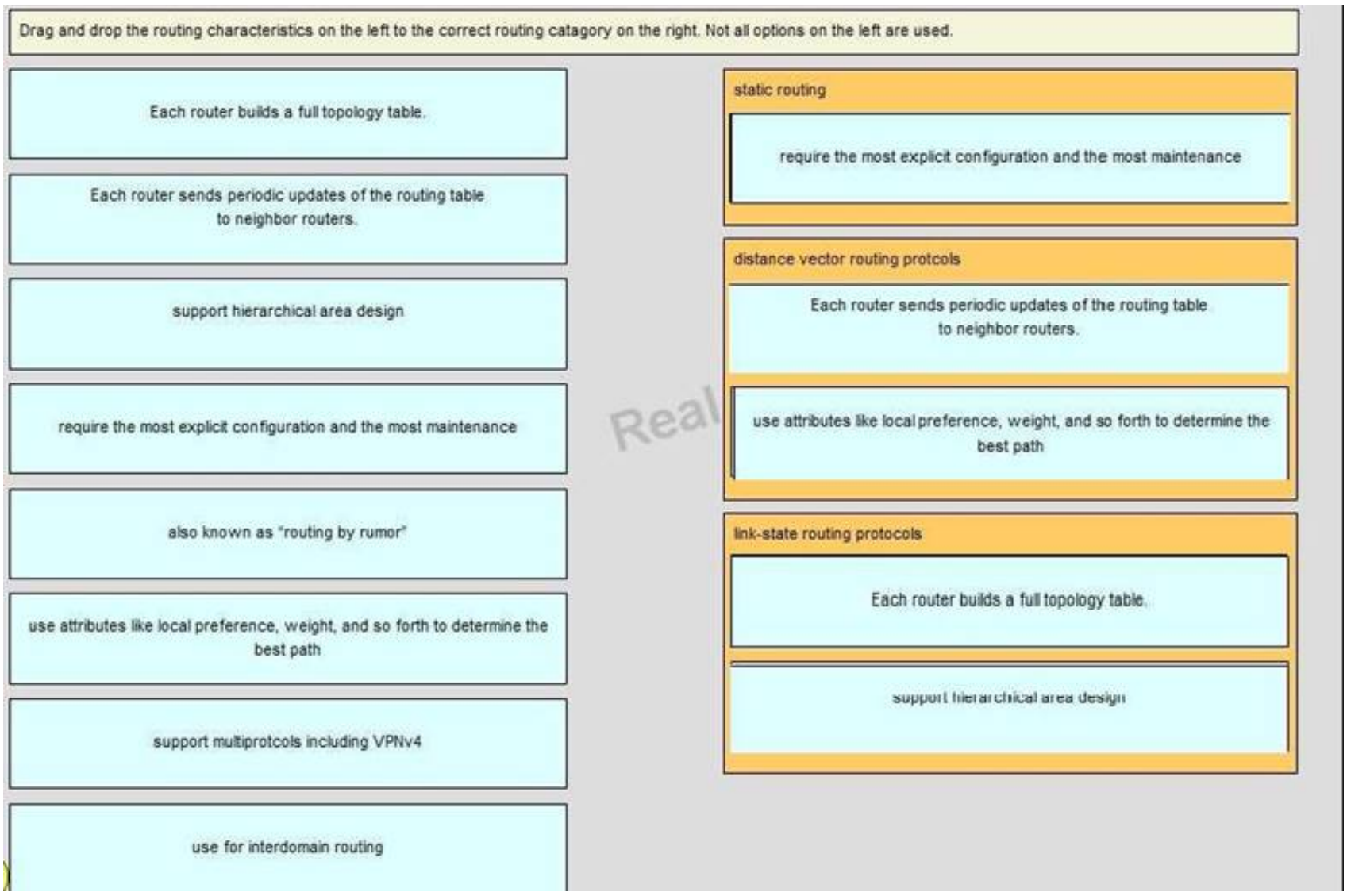
Answer: A

NEW QUESTION 141
Select and Place:

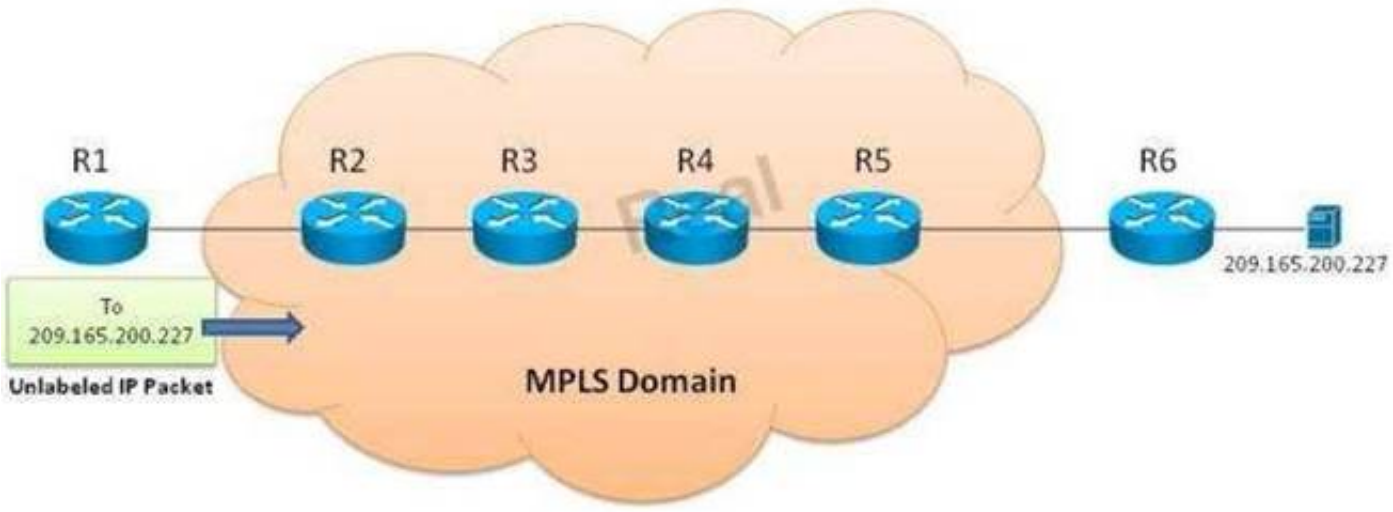


Answer:

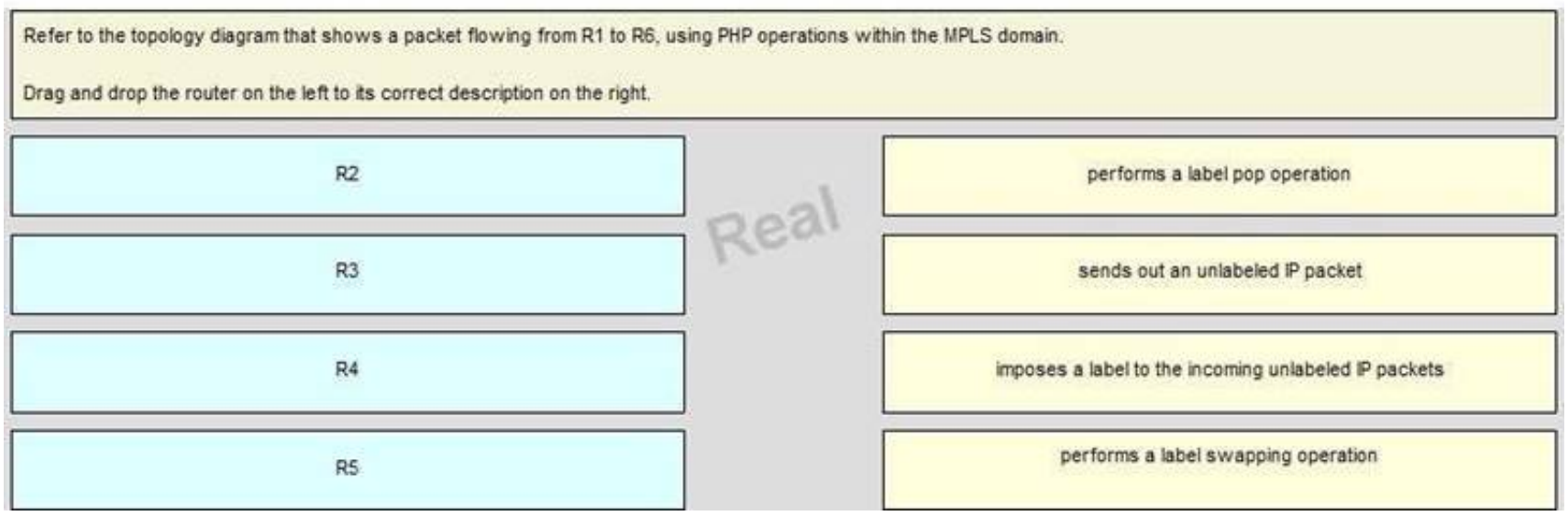
Explanation:



NEW QUESTION 143
Topology Diagram:

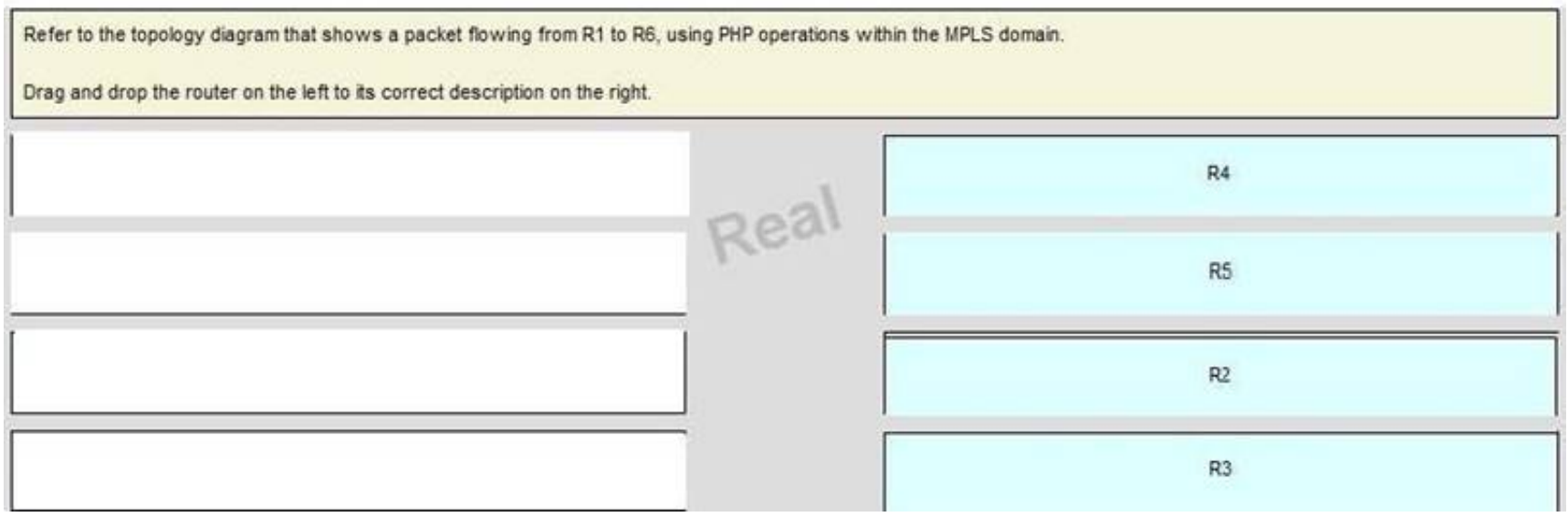


Select and Place:



Answer:

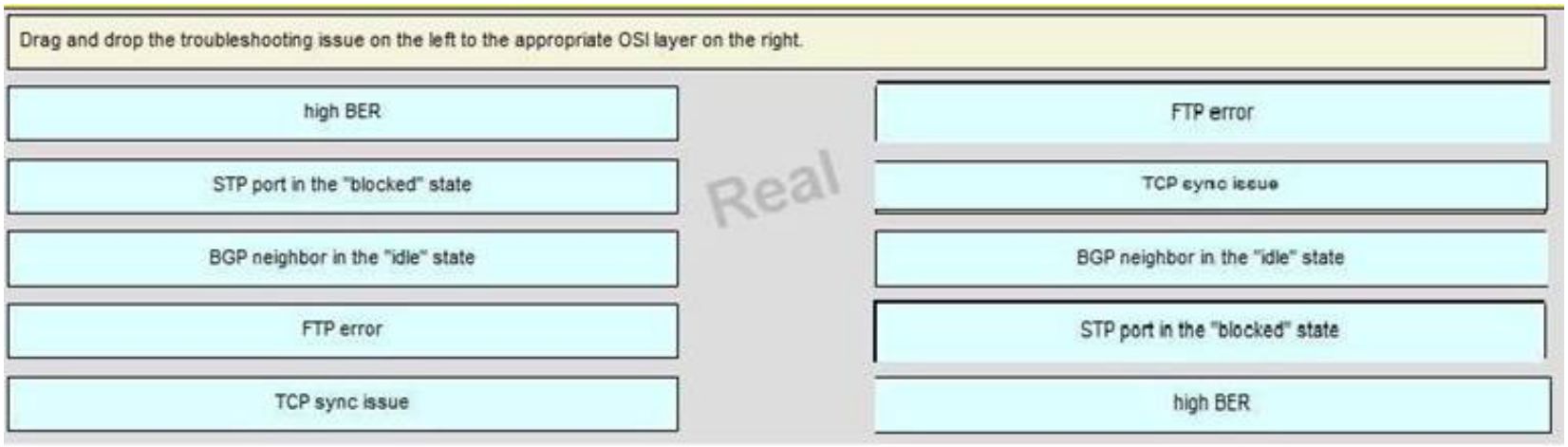
Explanation:



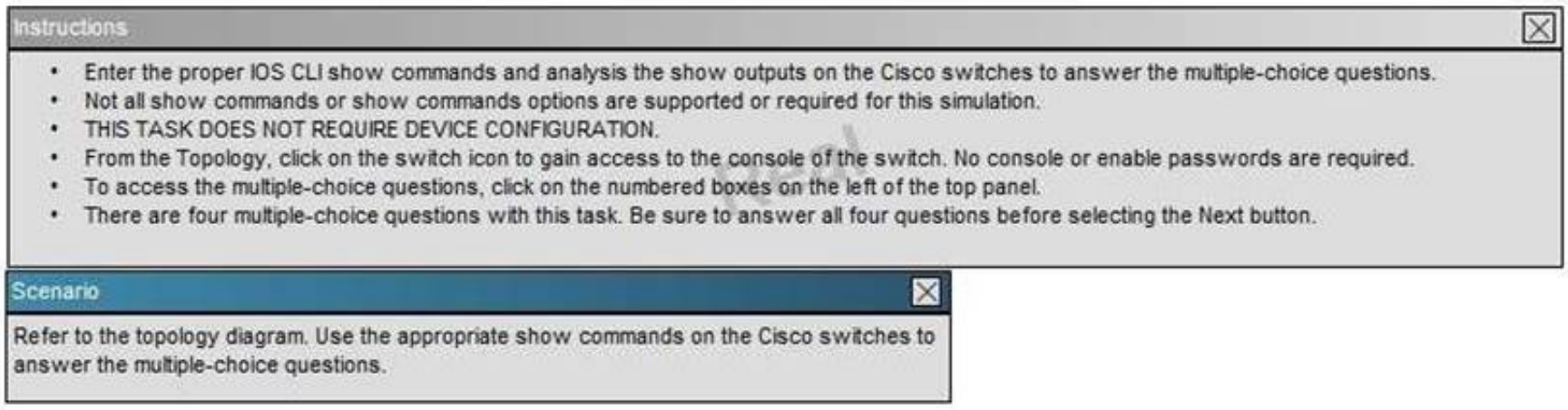
NEW QUESTION 146
Select and Place:

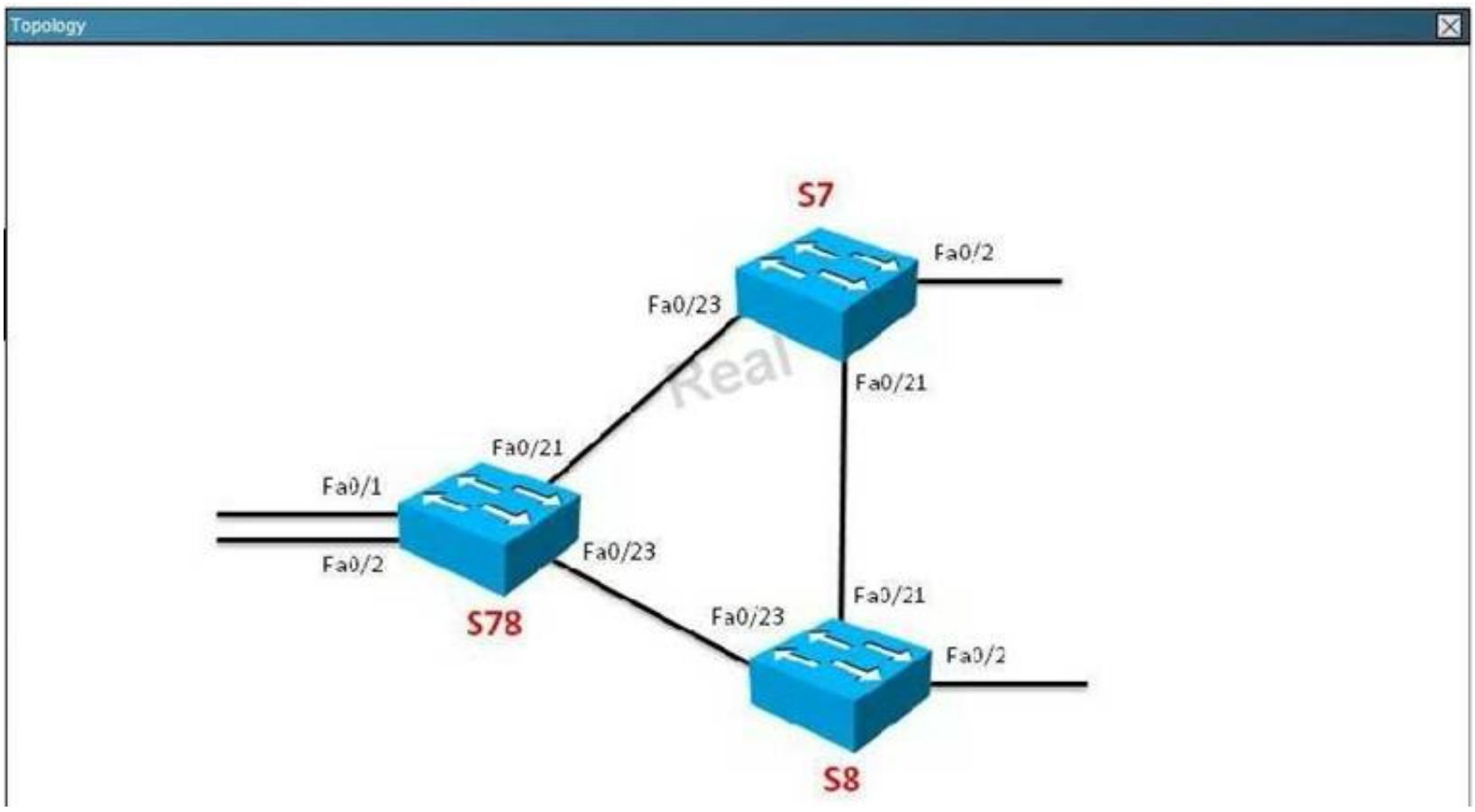
Answer:

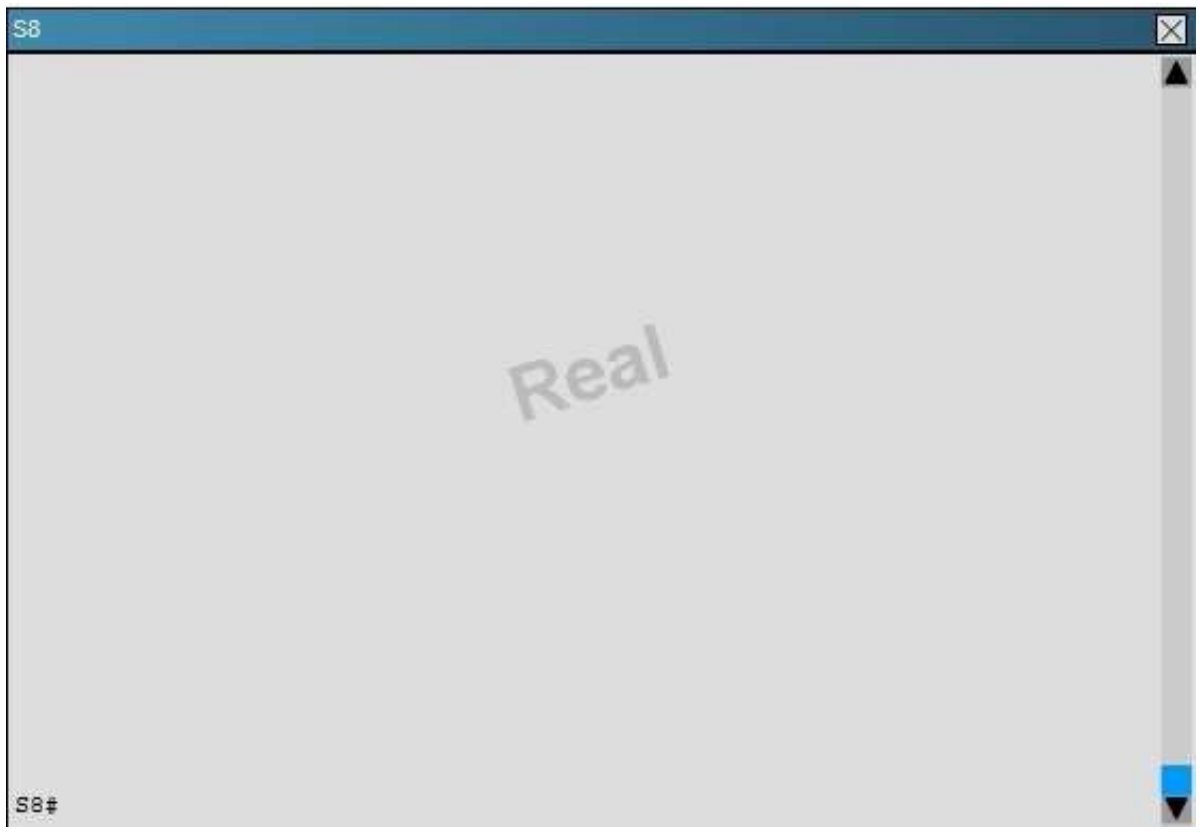
Explanation:



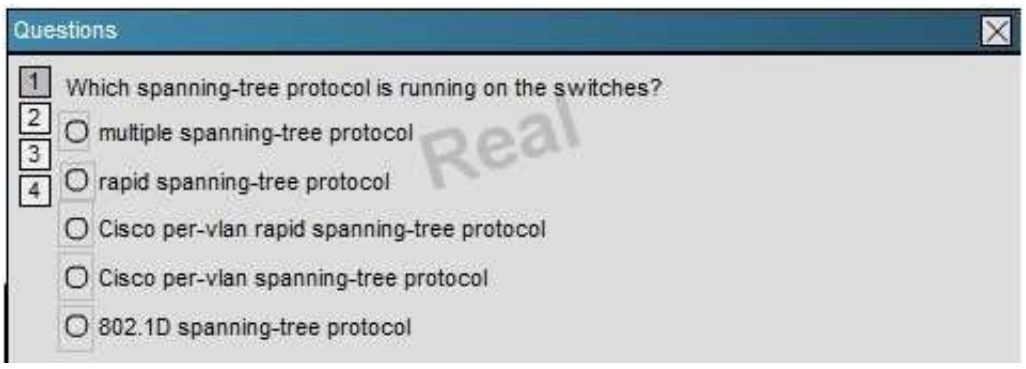
NEW QUESTION 147







Hot Area:



Answer:

Explanation:
multiple spanning-tree protocol
Use the "show spanning-tree" command to see the "Spanning tree enabled protocol mstp" output.

NEW QUESTION 149

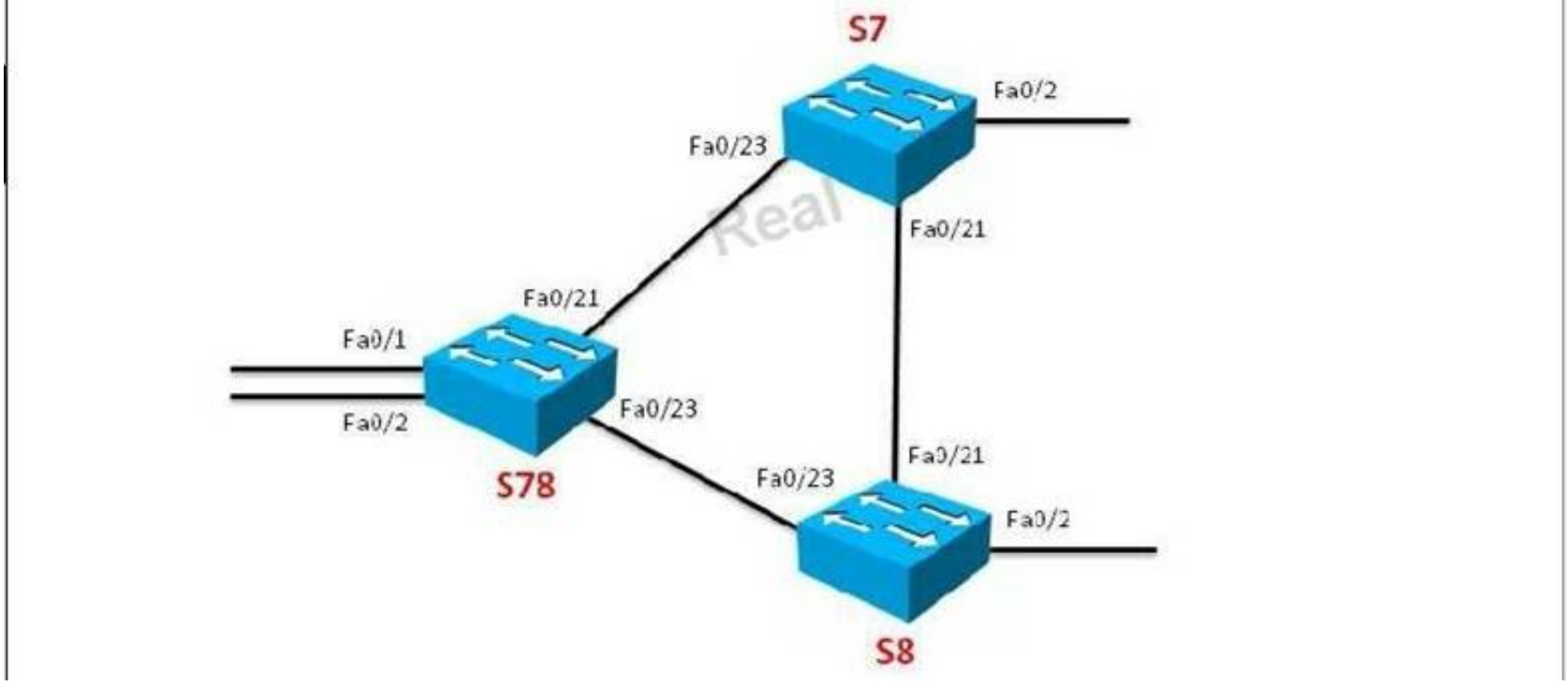
Instructions

- Enter the proper IOS CLI show commands and analysis the show outputs on the Cisco switches to answer the multiple-choice questions.
- Not all show commands or show commands options are supported or required for this simulation.
- THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION.
- From the Topology, click on the switch icon to gain access to the console of the switch. No console or enable passwords are required.
- To access the multiple-choice questions, click on the numbered boxes on the left of the top panel.
- There are four multiple-choice questions with this task. Be sure to answer all four questions before selecting the Next button.

Scenario

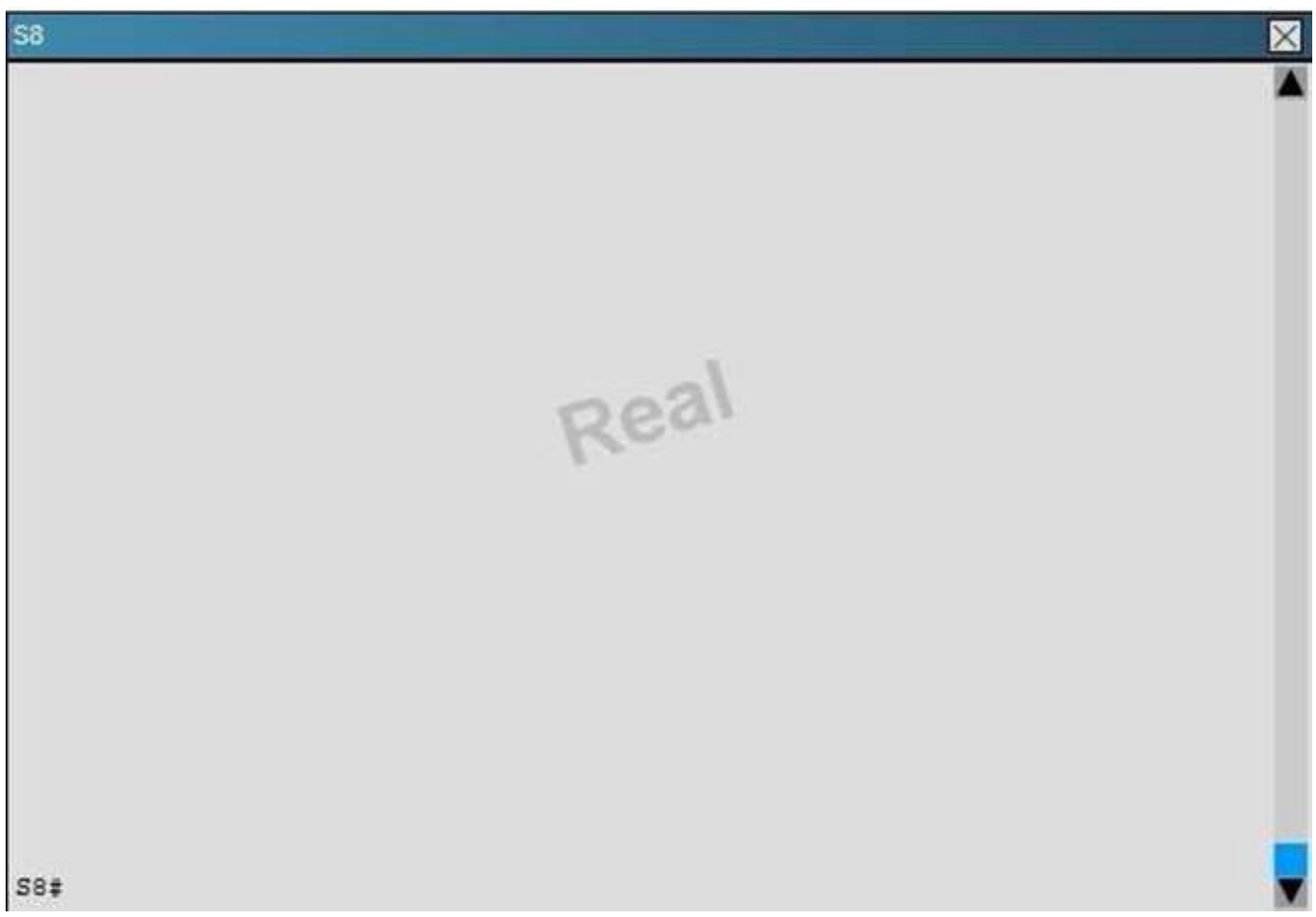
Refer to the topology diagram. Use the appropriate show commands on the Cisco switches to answer the multiple-choice questions.

Topology

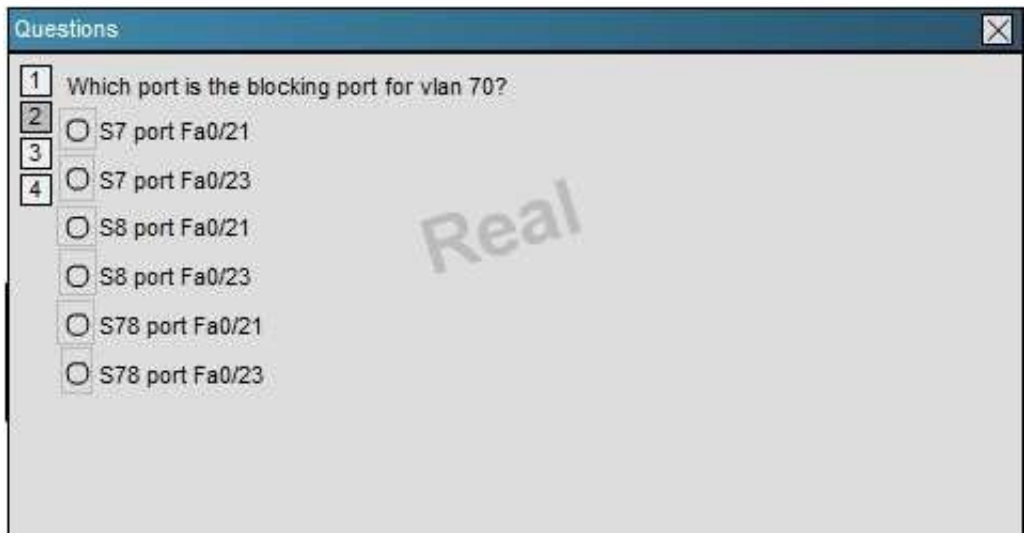


S7

S7#



Hot Area:



Answer:

Explanation:
S78 port Fa0/23
Use the "show spanning-tree mst" command on each switch to find the port status that shows BLK for VLAN 70.

NEW QUESTION 150

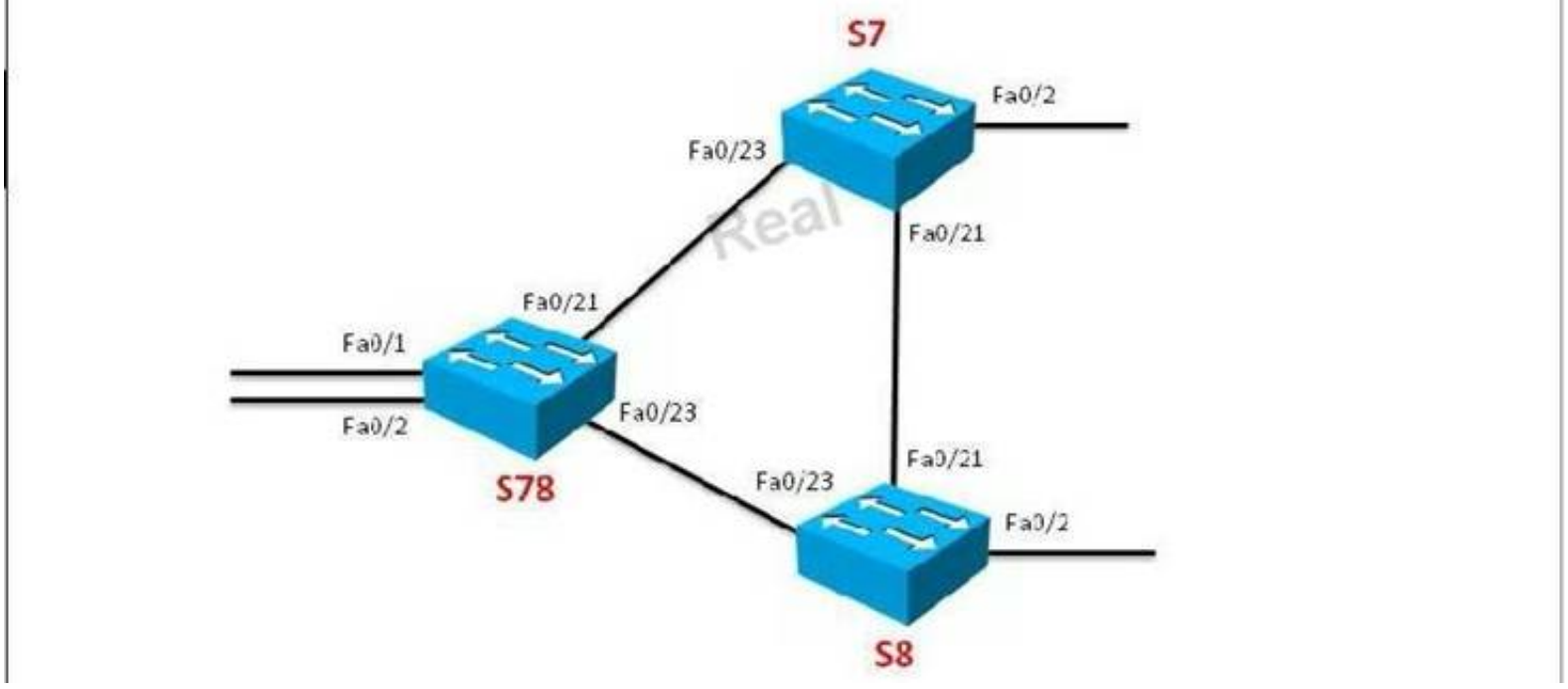
Instructions

- Enter the proper IOS CLI show commands and analysis the show outputs on the Cisco switches to answer the multiple-choice questions.
- Not all show commands or show commands options are supported or required for this simulation.
- THIS TASK DOES NOT REQUIRE DEVICE CONFIGURATION.
- From the Topology, click on the switch icon to gain access to the console of the switch. No console or enable passwords are required.
- To access the multiple-choice questions, click on the numbered boxes on the left of the top panel.
- There are four multiple-choice questions with this task. Be sure to answer all four questions before selecting the Next button.

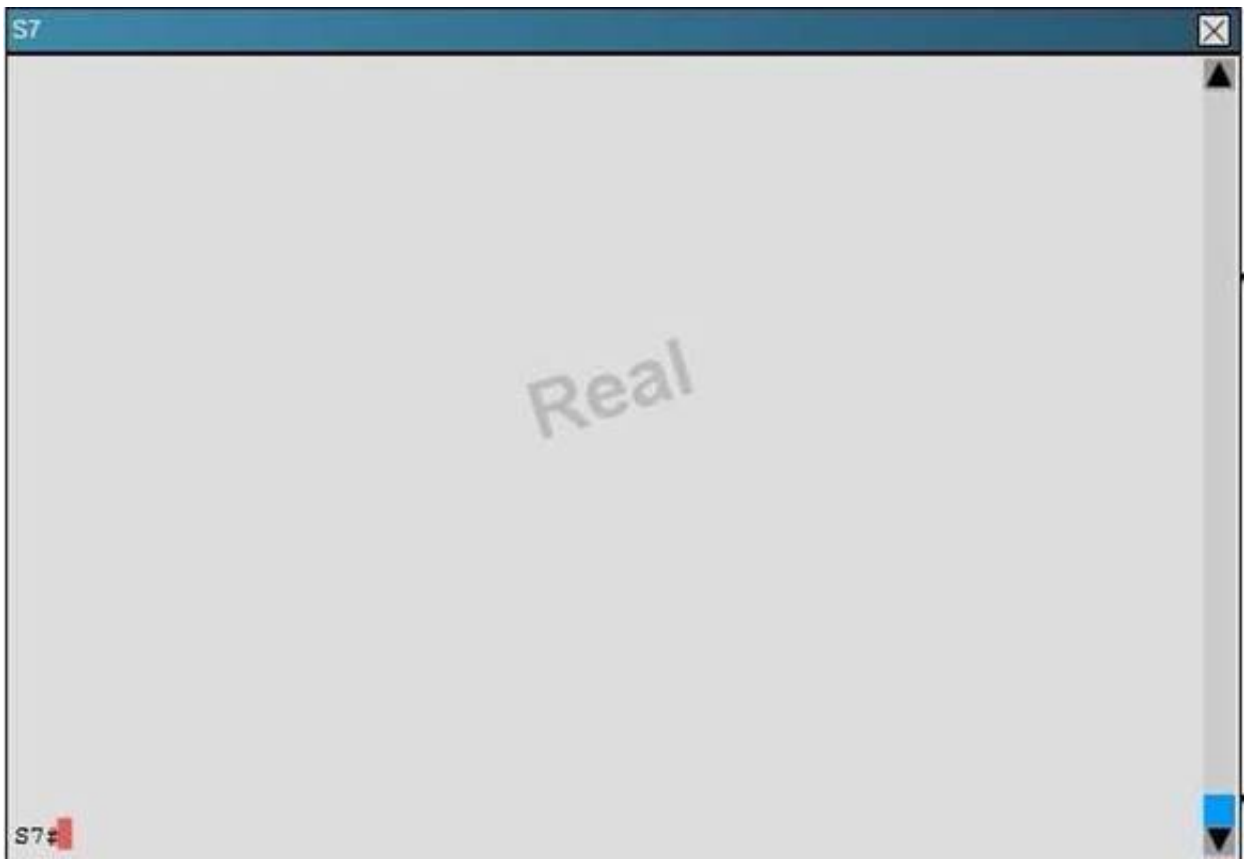
Scenario

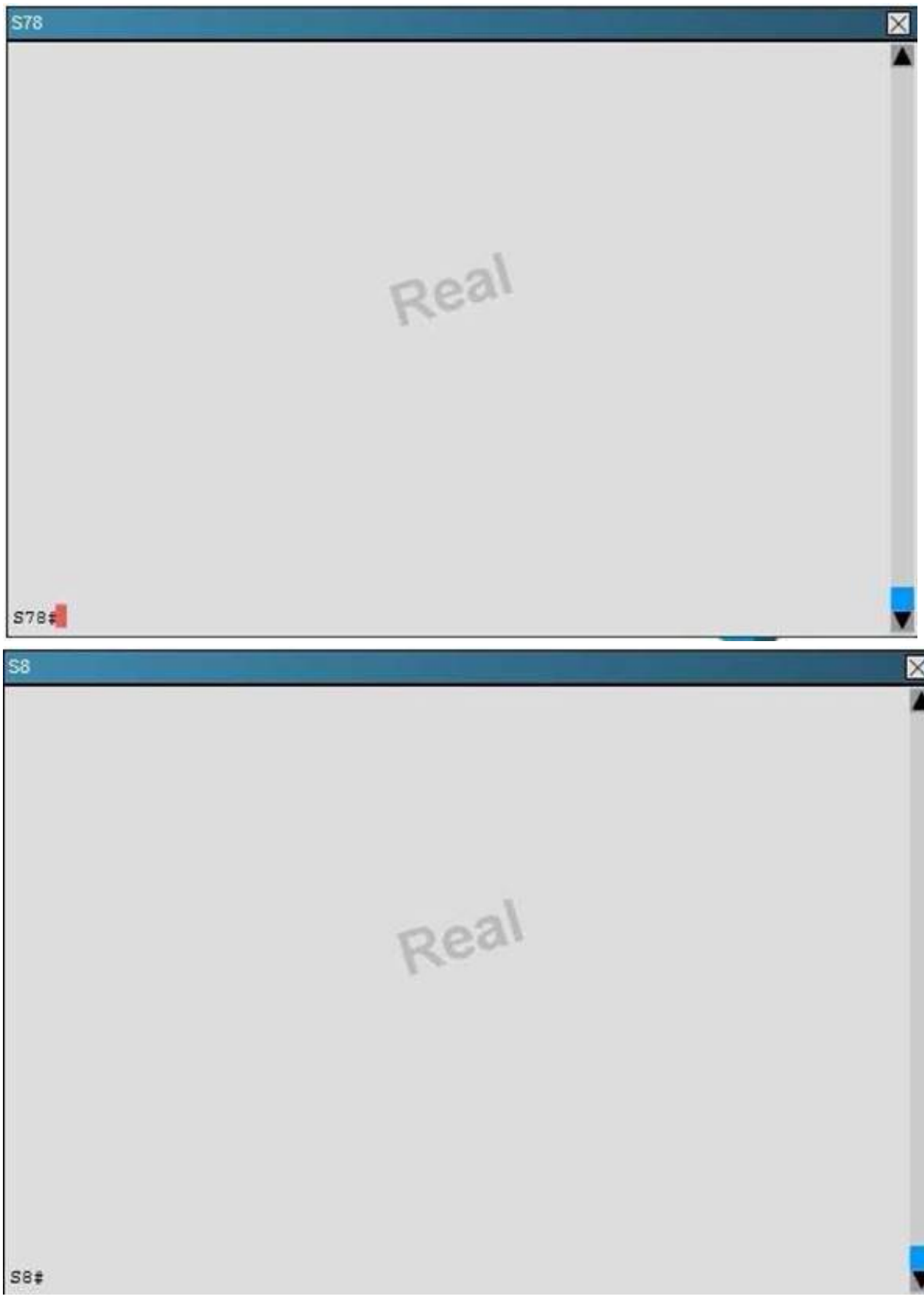
Refer to the topology diagram. Use the appropriate show commands on the Cisco switches to answer the multiple-choice questions.

Topology

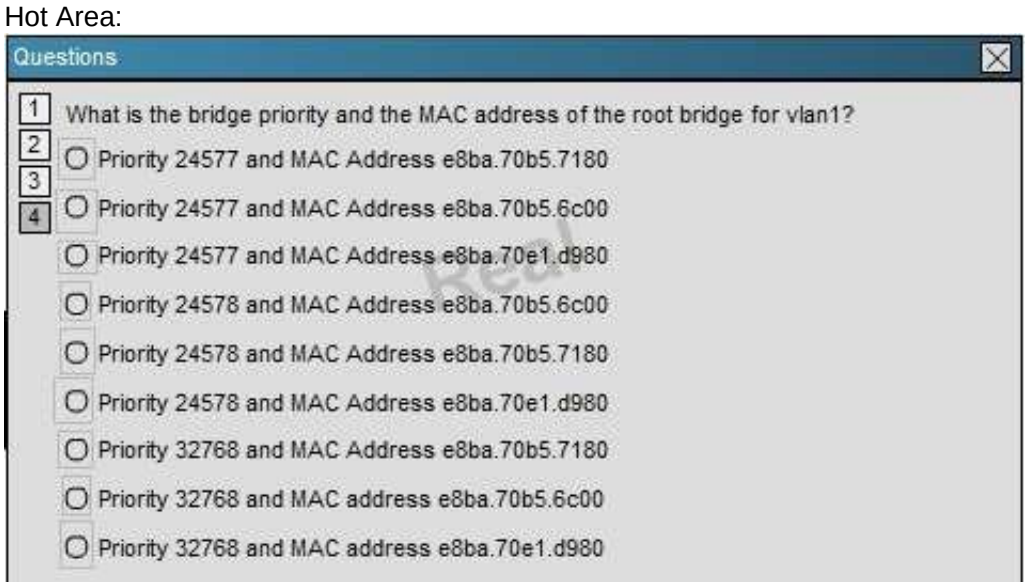


S7





Hot Area:



Answer:

Explanation:
Priority 32768 and MAC address e8ba.70b5.6c00
Use the "show spanning-tree mst" command on each switch to find the root port and the priority.

NEW QUESTION 152

Scenario

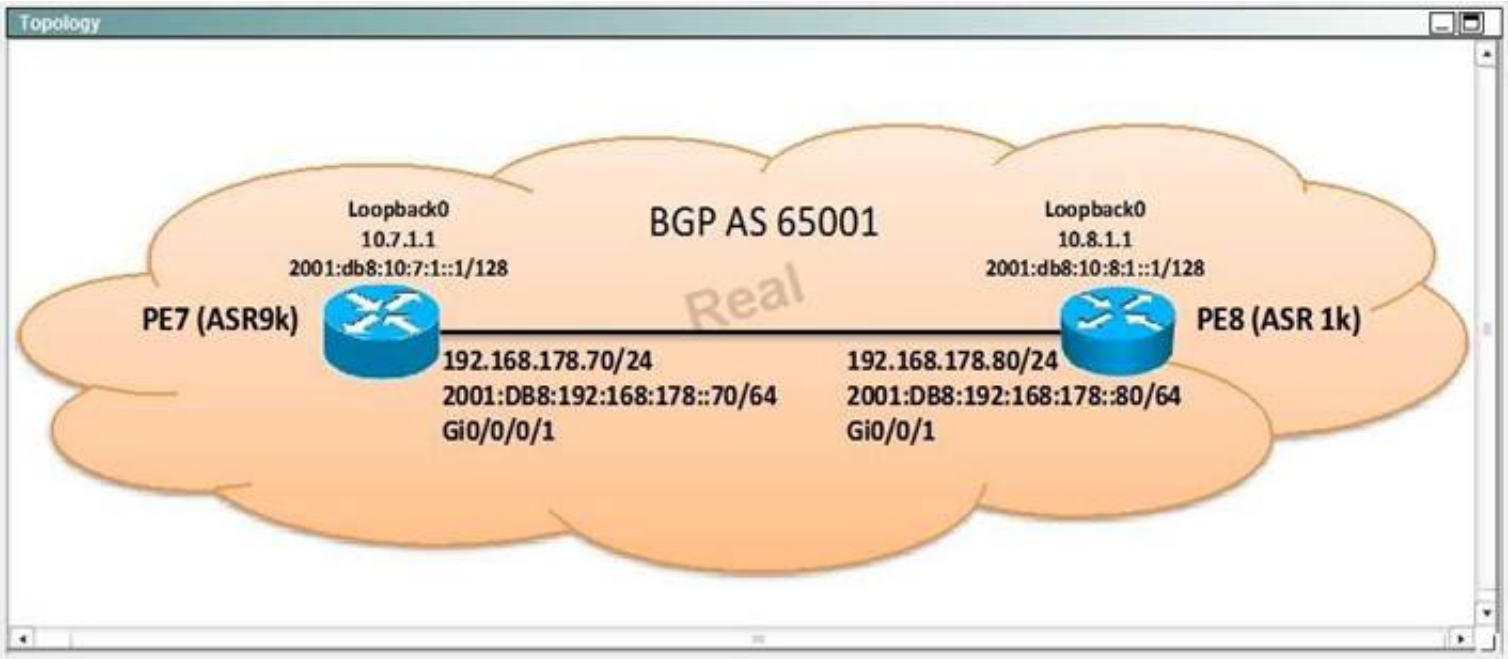
Click on the PE7 router icon to access the PE7 router's CLI .
You only have access to the PE7 router CLI
The PE8 router has been preconfigured. You only need to configure the PE7 router. PE7 and PE8 are directly connected and IPv4 and IPv6 static routes have been configured for the loopback addresses. The management interface (MgmtEth0/RSP0/CPU0/0) IPv4 address has been preconfigured and there is no need to enable routing on the management interface.

Your task is to configure the PE7 router per the following requirements:

1. Configure IPv4 and IPv6 addresses and enable the loopback0 and gi0/0/0/1 interfaces. Refer to the topology diagram for the IP addresses to use.
2. Configure iBGP using AS 65001 for both IPv4 and IPv6 routing. Establish an iBGP peering relationship between loopback0 interfaces.
3. Create two BGP peering sessions, one for IPv4 and one for IPv6.
4. After successfully completing all the above configurations, you should be able to successfully establish in iBGP peer relationship with PE8. If you successfully complete the required BGP configurations on PE7, from PE7, you should see the 10.100.100.100/32 IPv4 BGP route and the 2001:db8:10:100:100::100/128 IPv6 BGP route advertised by PE8.

Note: The ping command is not supported in this simulation. Please use the proper show commands to verify the BGP peerings and the BGP routes on the PE7 router.

Topology



Answer:

Explanation: Here is the solution.
conf t
int loopback 0 no shut
ipv4 address 10.7.1.1 255.255.255.255
ipv6 address 2001:db8:10:7:1::1/128 int Gi0/0/0/1
no shut
ipv4 address 192.168.178.70 255.255.255.0 ipv6 address 2001:DB8:192:168:178::70/64
commit
router bgp 65001
address-family ipv4 unicast redistribute connected neighbor 10.8.1.1
remote-as 65001
update-source loopback 0 commit
exit
address family ipv6 unicast redistribute connected neighbor 2001:db8:10:8:1::1 remote-as 65001
update-source loopback 0 commit

NEW QUESTION 155
Which procedure is used as the last resort disaster recovery procedure to completely replace the currently installed IOS XR software on Cisco IOS XR routers?

A. netboot
B. turboboot
C. install recovery
D. install rollback
E. install add and install activate

Answer: B

Explanation: http://www.cisco.com/en/US/docs/routers/crs/software/crs_r4.0/migration/guide/tbupgapp.pdf

NEW QUESTION 160

Which file extension indicates a bootable installation file in Cisco IOS XR software?

A. .bin
B. .tar
C. .smu
D. .pie
E. .vm
F. .mini

Answer: E

Explanation:

Bootable .vm Software Images

Files with the .vm extension are bootable files used to reinstall the Cisco IOS-XR software from ROM monitor mode. These files cannot be used in EXEC mode. Table A-2 describes the composite packages.

Table A-2 Composite Package Names and Descriptions

Name	Filename	Description
Mini	comp-hfr-mini.vm	Contains the packages for OS, Base, Forwarding, Admin, Line Card and Routing. A copy of the "mini" bootable file is included on the disk1: archive shipped with new routers. **Note** The Manageability, Multicast, MPLS, and Security packages must be installed separately from normal EXEC mode. See "Adding and Activating Cisco IOS-XR Software Packages," for more information.

Note Only Cisco IOS-XR software installation files with the .vm extension can be installed from ROMMON.

NEW QUESTION 164
Which two statements about NAT444 are true? (Choose two.)

A. NAT444 packets are translated three times.
B. NAT packets traverse three IPv4 addressing domains.
C. NAT444 needs to work together with DNS64.
D. There are two types of NAT444 (stateful or stateless).
E. NAT is performed by the CPE and also by the service provider router.

Answer: BE

Explanation:
Carrier-grade NAT (CGN), also known as large-scale NAT (LSN), is an approach to IPv4 network design in which end sites, in particular residential networks, are configured with private network addresses that are translated to public IPv4 addresses by middlebox network address translator devices embedded in the network operator's network, permitting the sharing of small pools of public addresses among many end sites. This shifts the NAT function and configuration thereof from the customer premises to the Internet service provider network. Carrier-grade NAT has been proposed as an approach for mitigating IPv4 address exhaustion.[1]
Critics of carrier-grade NAT argue the following aspects:
Like any form of NAT, it breaks the end-to-end principle.[2] It has significant security, scalability, and reliability problems, by virtue of being stateful. It makes record keeping for law-enforcement operations more difficult.
It makes it impossible to host services on well known ports. It does not solve the IPv4 address exhaustion problem when a routable IP address is needed, such as in web hosting.
One use scenario of CGN can be described as NAT444,[3] because some customer's connections to public servers would pass through three different IPv4 addressing domains: the customer's own private network, the carrier's private network, and the public Internet. Another CGN scenario is Dual-Stack Lite, in which the carrier's network uses IPv6 and thus only two IPv4 addressing domains are needed.

NEW QUESTION 169
Which two statements about NAT64 are true? (Choose two.)

A. NAT64 packets traverse two IPv4 addressing domains.
B. NAT64 packets are translated two times.
C. There are two types of NAT64 (stateful or stateless).
D. NAT is performed by the CPE and also by the service provider edge router.
E. The DNS64 server embeds the IPv4 address from the DNS A record with a preconfigured IPv6 translation prefix.

Answer: CE

Explanation: http://www.cisco.com/en/US/prod/collateral/iosswrel/ps6537/ps6553/white_paper_c11- 676278.html
All viable translation scenarios are supported by NAT64, and therefore NAT64 is becoming the most sought translation technology. AFT using NAT64 technology can be achieved by either stateless or stateful means:
· Stateless NAT64, defined in RFC 6145, is a translation mechanism for algorithmically mapping IPv6 addresses to IPv4 addresses, and IPv4 addresses to IPv6 addresses. Like NAT44, it does not maintain any bindings or session state while performing translation, and it supports both IPv6- initiated and IPv4-initiated communications.
· Stateful NAT64, defined in RFC 6146, is a stateful translation mechanism for translating IPv6 addresses to IPv4 addresses, and IPv4 addresses to IPv6 addresses. Like NAT44, it is called stateful because it creates or modifies bindings or session state while performing translation. It supports both IPv6-initiated and IPv4-initiated communications using static or manual mappings. DNS64, an optional component defined in RFC 6147, when used in conjunction with NAT64,

would trick the IPv6 hosts into thinking that the IPv4 destination as an IPv6 address, by synthesizing AAAA (quad A) resource records from A resource records.

NEW QUESTION 172
What do both Carrier Grade NAT and NAT64 have in common?

A. both are only used in carrier networks
B. both are used for tunneling IPv6 in an IPv4 network
C. both require the use IPv6
D. both are methods for avoiding IPv4 address exhaustion

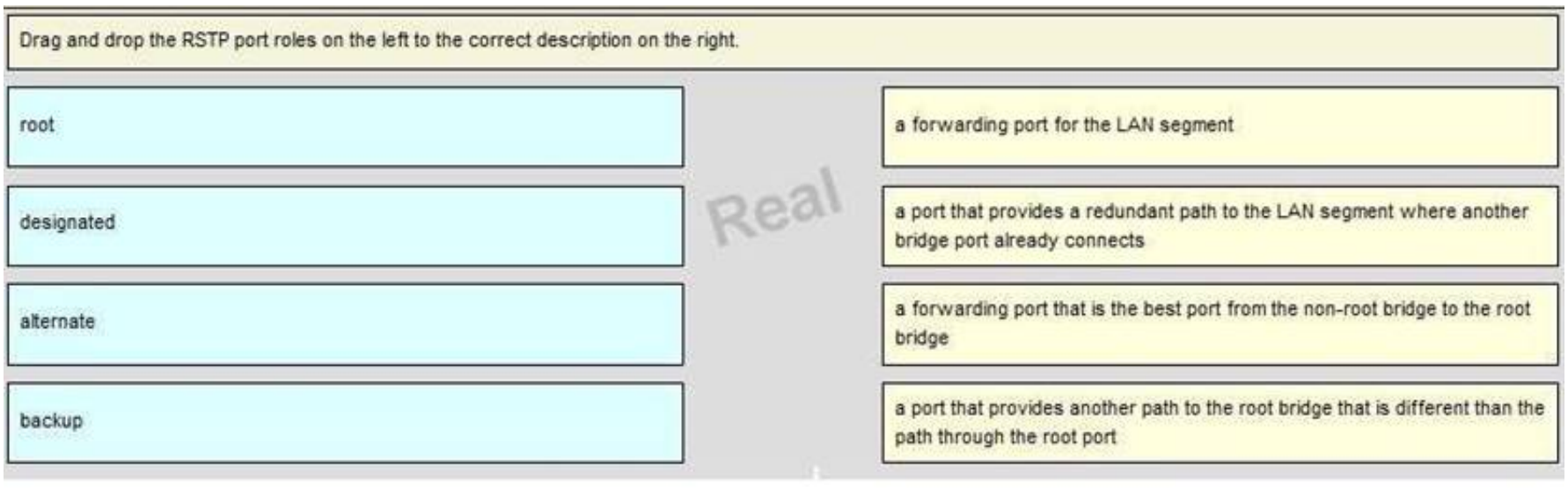
Answer: D

NEW QUESTION 174
On Cisco IOS XR software, which set of commands enables OSPF area 0 on the Gi0/0/0/0 interface that has an IPv4 IP address of 192.168.1.1/24?

A. router ospf 1network 192.168.1.1 0.0.0.0 area 0
B. router ospf 1network 192.168.1.1 255.255.255.255 area 0
C. router ospf 1 area 0interface gi0/0/0/0
D. router ospfv3 1network 192.168.1.1 0.0.0.0 area 0
E. router ospfv3 1network 192.168.1.1 255.255.255.255 area 0
F. router ospfv3 1 area 0network 192.168.1.0
G. router ospfv3 1 area 0interface gi0/0/0/0

Answer: C

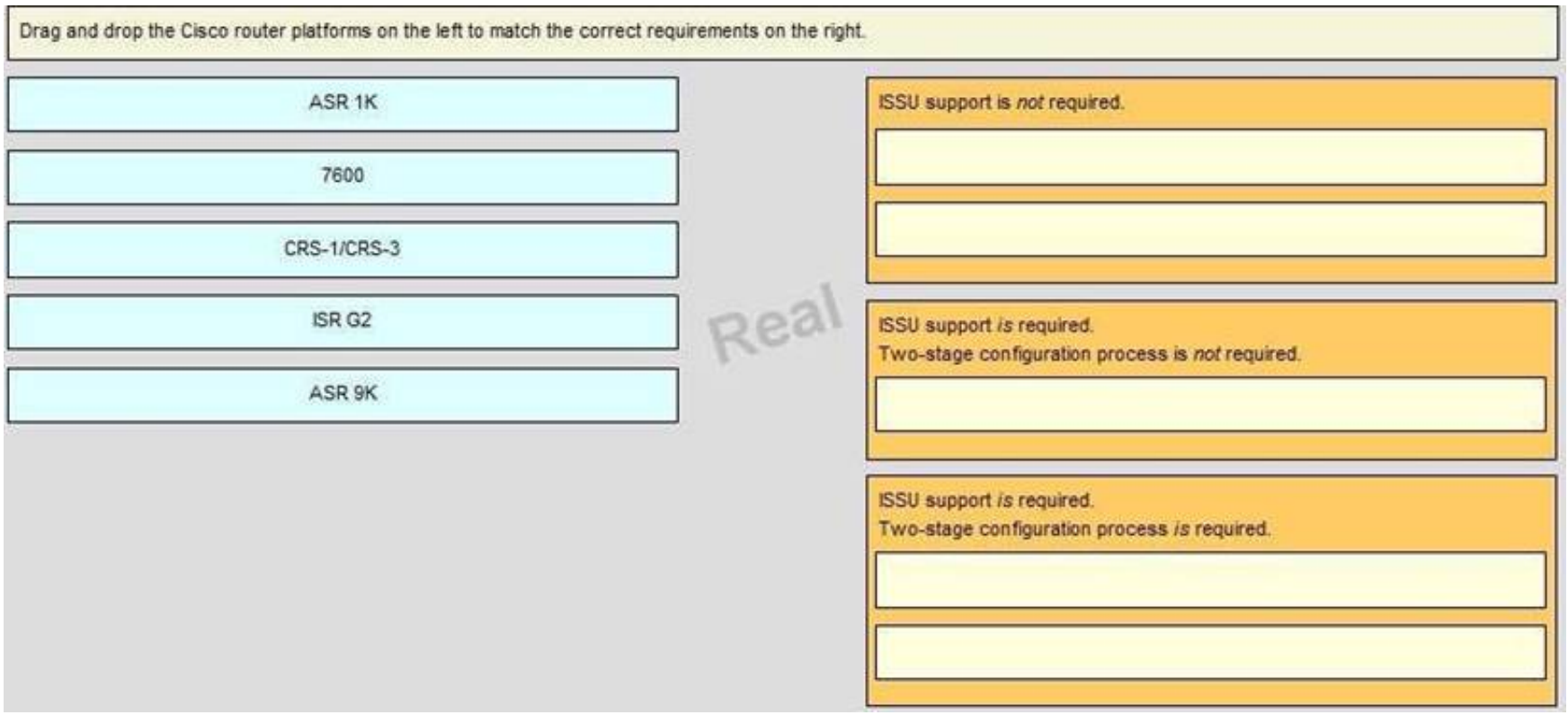
NEW QUESTION 175
Select and Place:



Answer:

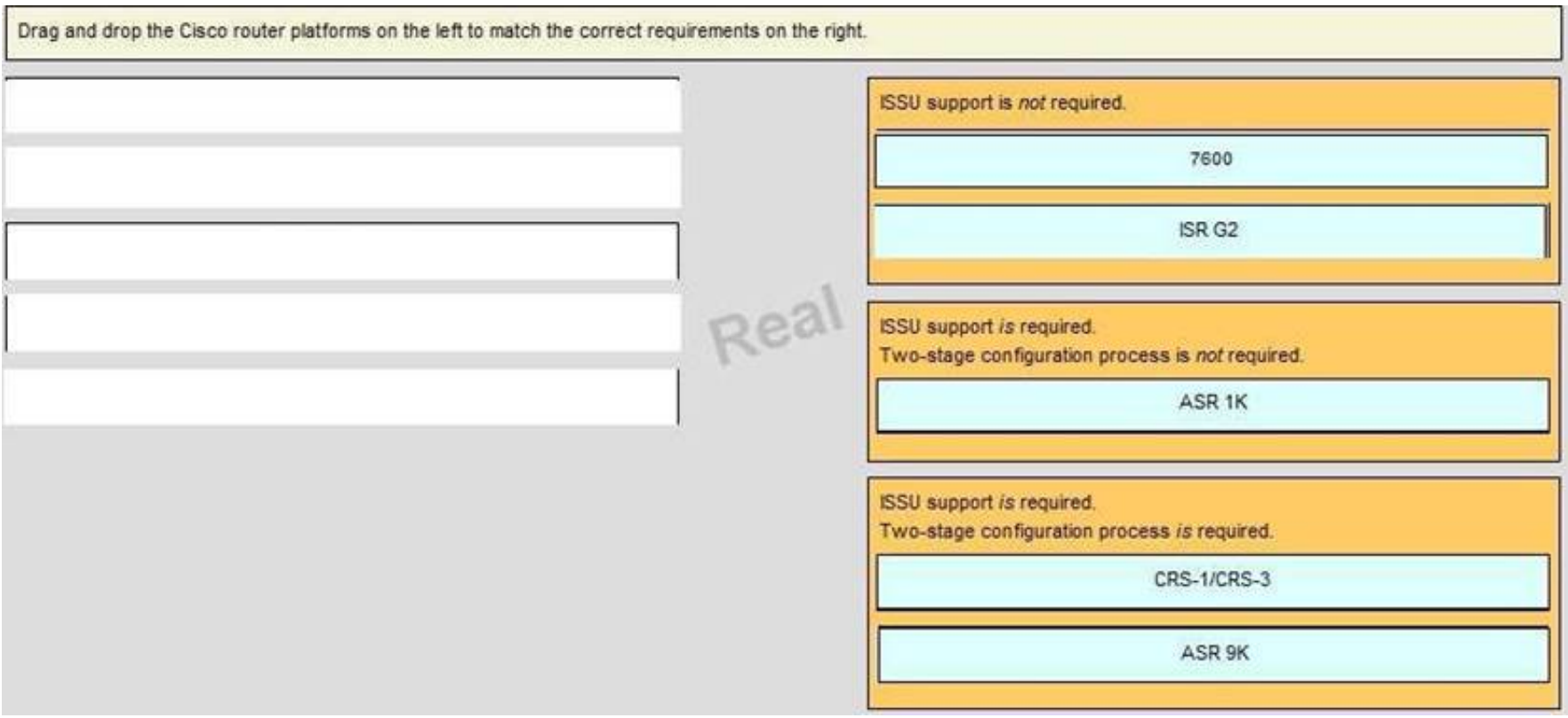
Explanation:
Place the options in order from top to bottom: designated
backup root alternate

NEW QUESTION 179
Select and Place:



Answer:

Explanation:



NEW QUESTION 180
Which BGP attribute is also used for loop prevention?

A. weight
B. local preference
C. MED
D. AS path

Answer: D

Explanation:
As RFC 4271 says, "AS loop detection is done by scanning the full AS path (as specified in the AS_PATH attribute), and checking that the autonomous system number of the local system does not appear in the AS path".

NEW QUESTION 181
On Cisco IOS XR software, how is LDP enabled on an interface?

A. LDP is automatically enabled globally on all interfaces, when ip cef is enabled globally.
B. LDP is enabled on each interface, using the mpls ip interface configuration command.
C. LDP is enabled on each interface, using the interface command under mpls ldp (MPLS LDP configuration mode).
D. LDP is enabled globally on all interfaces, using the mpls ldp global configuration command.
E. LDP is enabled globally on all interfaces, using the mpls ip global configuration command.

Answer: C

Explanation:
http://www.cisco.com/en/US/docs/ios-xml/ios/mp_ldp/configuration/12-4m/mp-ldp-12-4m-book.pdf

The following example shows how to enter mpls ldp submode:

```
RP/0/RP0/CPU0:router# config

RP/0/RP0/CPU0:router(config)# mpls ldp

RP/0/RP0/CPU0:router(config-ldp)#
```

Related Commands

Command	Description
interface (MPLS LDP)	Configures or enables MPLS LDP on an interface.

NEW QUESTION 185
Which four statements about REP configurations on a Cisco ME 3400 switch port are true? (Choose four.)

A. The port must be an NNI type and must be in trunk mode.
B. Use the rep segment number command to enable REP on the switch port.

C. A REP segment cannot be wrapped into a ring topolog
D. REP supports only a topology where each REP segment has two exit points via two edge switches.
E. The port where the segment terminates is called the edge port.
F. With REP, at least one port is always blocked in any given segment-that is, the alternate port.
G. If a failure occurs within the segment, the blocked port goes to the forwarding state after it goes through the listening state and the learning state.

Answer: ABDE

Explanation: http://www.cisco.com/en/US/docs/switches/metro/me3400/software/release/12.2_40_se/configurat ion/guide/swrep.html
Resilient Ethernet Protocol (REP) on the Cisco ME 3400E Ethernet Access switch. REP is a Cisco proprietary protocol that provides an alternative to Spanning Tree Protocol (STP) to control network loops, handle link failures, and improve convergence time. REP controls a group of ports connected in a segment, ensures that the segment does not create any bridging loops, and responds to link failures within the segment. REP provides a basis for constructing more complex networks and supports VLAN load balancing.
REP Configuration Guidelines
Follow these guidelines when configuring REP:
·We recommend that you begin by configuring one port and then configure the contiguous ports to minimize the number of segments and the number of blocked ports. ·If more than two ports in a segment fail when no external neighbors are configured, one port goes into a forwarding state for the data path to help maintain connectivity during configuration. In the show rep interface privileged EXEC command output, the Port Role for this port shows as Fail Logical Open; the Port Role for the other failed port shows as Fail No Ext Neighbor. When the external neighbors for the failed ports are configured, the ports go through the alternate port state transitions and eventually go to an open state or remain as the alternate port, based on the alternate port election mechanism.
·REP ports must be Layer 2 trunk ports.
·Be careful when configuring REP through a Telnet connection. Because REP blocks all VLANs until another
REP interface sends a message to unblock it, you might lose connectivity to the switch if you enable REP in a Telnet session that accesses the switch through the same interface. ·You cannot run REP and STP or REP and Flex Links on the same segment or interface. ·If you connect an STP network to the REP segment, be sure that the connection is at the segment edge. An STP connection that is not at the edge could cause a bridging loop because STP does not run on REP segments. All STP BPDUs are dropped at REP interfaces. ·You must configure all trunk ports in the segment with the same set of allowed VLANs, or a misconfigurations occurs.·If REP is enabled on two ports on a switch, both ports must be either regular segment ports or edge ports.
REP ports follow these rules:
If only one port on a switch is configured in a segment, the port should be an edge port. If two ports on a switch belong to the same segment, both ports must be edge ports or both ports must be regular segment ports.
If two ports on a switch belong to the same segment and one is configured as an edge port and one as a regular segment port (a misconfiguration), the edge port is treated as a regular segment port.
·REP interfaces come up in a blocked state and remains in a blocked state until notified that it is safe to unblock. You need to be aware of this to avoid sudden connection losses. ·REP sends all LSL PDUs in untagged frames on the native VLAN. The BPA message sent to the Cisco multicast address is sent on the administration VLAN, which is VLAN 1 by default. ·REP ports can not be configured as one of these port types:
SPAN destination port Private VLAN port Tunnel port
Access port
·On a Cisco ME-3400 switch, REP ports must be network node interfaces (NNI). User-network interfaces (UNIs) cannot be REP ports.
·REP is supported on EtherChannels, but not on an individual port that belongs to an EtherChannel.
·There is a maximum of 64 REP segments per switch.

NEW QUESTION 189
Which first-hop router redundancy protocol uses the active virtual gateway to assign a virtual MAC address to the active virtual forwarders?

A. HSRP
B. VRRP
C. GLBP
D. FHRP

Answer: C

Explanation: http://www.cisco.com/en/US/docs/ios/12_2t/12_2t15/feature/guide/ft_glbp.html

NEW QUESTION 190
During the BGP route selection process on Cisco routers, which BGP attribute is examined first, to determine the best path to use?

A. AS path
B. MED
C. local preference
D. weight
E. origin

Answer: D

NEW QUESTION 195
Cisco IP NGN service providers can offer multiple services to their customers by using which type of technology in their core networks?

A. ATM
B. SONET/SDH
C. Frame Relay
D. IP/MPLS
E. PBB

Answer: D

NEW QUESTION 198
You have installed a new router and configured OSPF on it. However, this new router is not able to establish an OSPF neighbor relationship with the neighbor

OSPF router. Which four conditions could cause this problem? (Choose four.)

A. mismatched OSPF hello/dead interval between the new router and the neighbor router
B. mismatched OSPF area ID between the new router and the neighbor router
C. mismatched OSPF authentication data between the new router and the neighbor router
D. mismatched OSPF router ID between the new router and the neighbor router
E. mismatched interface MTU between the new router and the neighbor router
F. mismatched interface bandwidth between the new router and the neighbor router

Answer: ABCE

NEW QUESTION 203
Which statement about the benefits of MPLS PHP is true?

A. PHP is implemented to increase the performance on the egress edge LS
B. PHP allows the egress edge LSR to perform only one lookup to route the IP packet based on destination IP address and routing table.
C. PHP is implemented to increase the performance on the egress edge LS
D. PHP enables the egress edge LSR to perform only one lookup based on the ingress label.
E. PHP is implemented to increase the performance on the egress edge LS
F. PHP enables the egress edge LSR to perform two lookups, first lookup based on the ingress label and a second route lookup based on the destination IP address.
G. PHP is implemented to increase the performance on the LSR (P routers). PHP enables the LSR (P routers) to perform only one lookup based on the ingress label.
H. PHP is implemented to increase the performance on the LSR (P routers). PHP enables the LSR (P routers) to perform only one route lookup based on the destination IP address.
I. PHP is implemented to increase the performance on the LSR (P routers). PHP enables the LSR (P routers) to perform two lookups, first lookup based on the ingress label and a second route lookup based on the destination IP address.
J. PHP is implemented to increase the performance on the ingress edge LS
K. PHP enables the ingress edge LSR to perform only one lookup based on the ingress label.
L. PHP is implemented to increase the performance on the ingress edge LS
M. PHP enables the ingress edge LSR to perform two lookups, first lookup based on the ingress label and a second route lookup based on the destination IP address.

Answer: A

Explanation:
http://packet-lab.com/main/service-provider/ccip/item/89-mpls-penultimate-hop-popping.html

NEW QUESTION 205
Refer to the exhibit.

Media

```
RP/0/RSP0/CPU0:P1# show mpls ldp forwarding

Prefix            Label   Label      Outgoing    Next Hop        GR      Stale
                  In      Out        Interface
-------------------------------------------------------------------------------
192.168.102.0/24  16003   ImpNull    Gi0/0/0/1   192.168.112.40  N       N
10.2.10.1/32      16010   22         Gi0/0/0/1   192.168.112.40  N       N
10.10.10.100/32   16006   Unlabelled None        10.10.10.1      N       N

<output omitted>
```

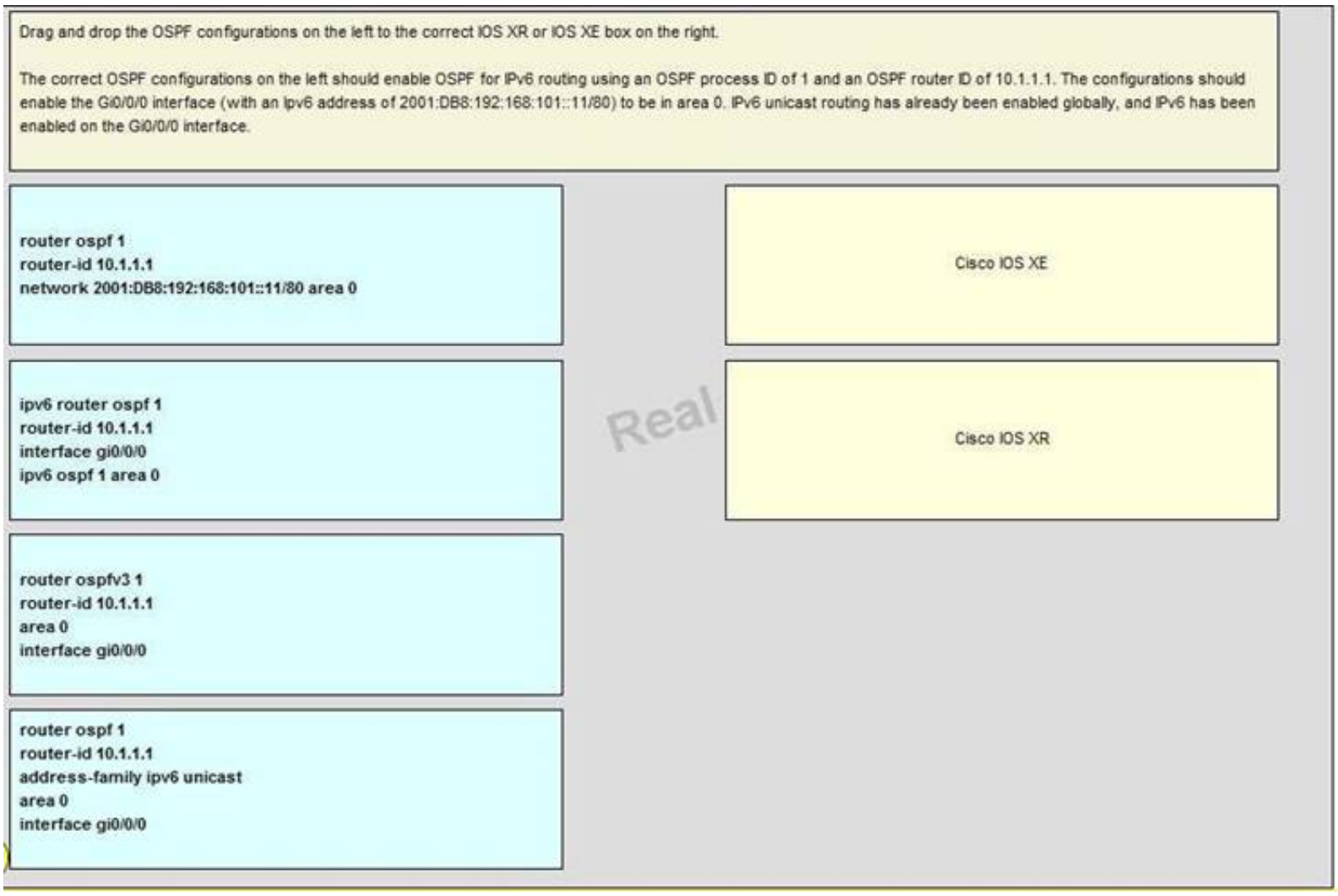
Which three statements about MPLS LDP operations are true?

A. The incoming label for 10.2.10.1/32 is 16010 (which is allocated by the local router), and theoutgoing label is 22 (as advertised by the next-hop router).
B. The 16003 and 16010 labels are learned from the 192.168.112.40 LDP neighbor.
C. The ImpNull outgoing label for the 192.168.102.0/24 network means that the outgoing label should be removed when sending packets to the 192.168.112.40 next-hop router, when the incoming label is 16003.
D. The ImpNull outgoing label for the 192.168.102.0/24 network means that the local router has not received a label for that network from its neighbor.
E. The Unlabeled outgoing label for 10.10.10.100/32 indicates that a label pop is required when sending packets to the 10.10.10.1 next-hop router.
F. The outgoing label of 22 for 10.2.10.1/32 is learned from the 192.168.112.40 LDP neighbor.

Answer: ACF

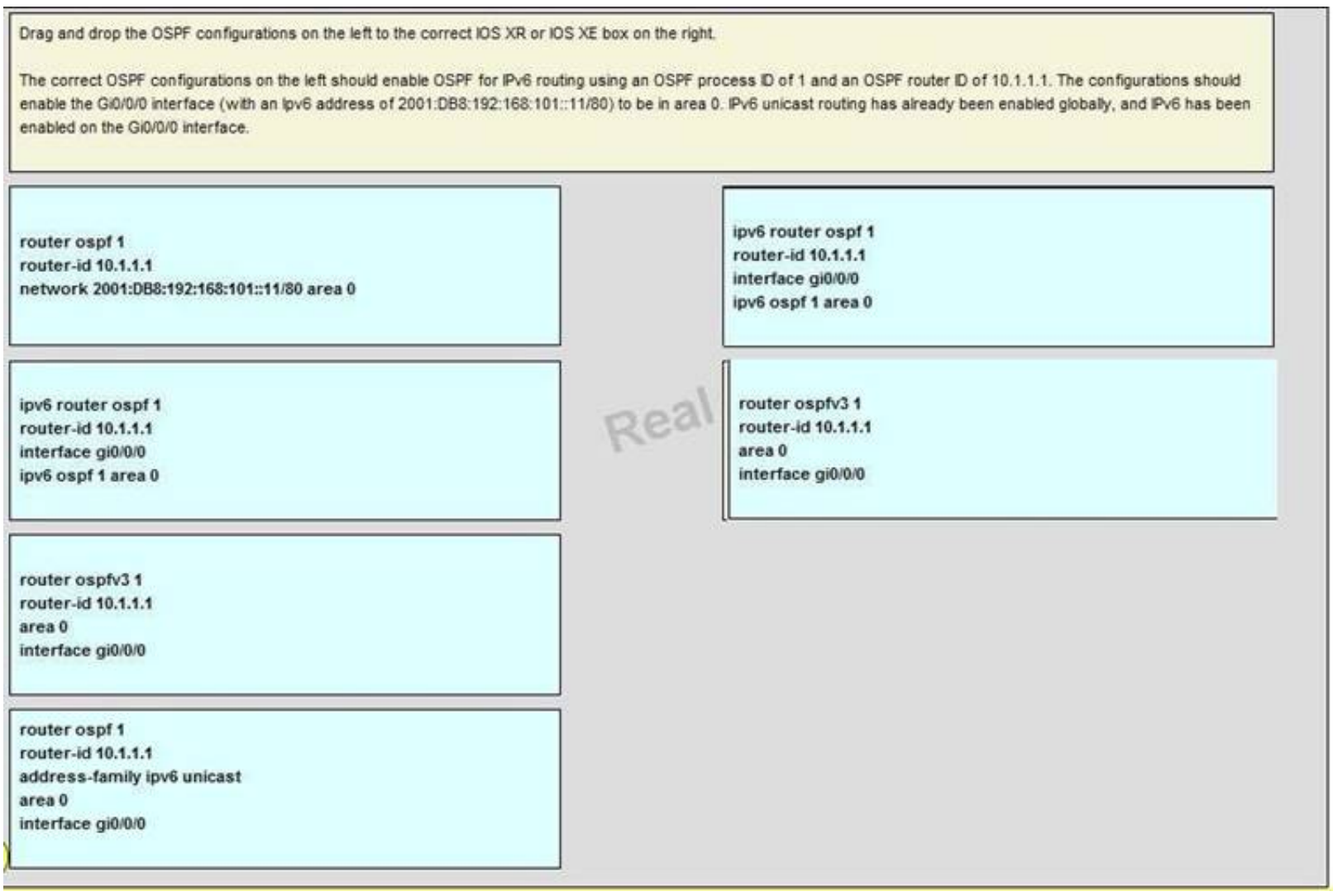
Explanation: http://www.cisco.com/en/US/docs/ios/12_2t/12_2t2/feature/guide/ldp_221t.html

NEW QUESTION 207
Select and Place:

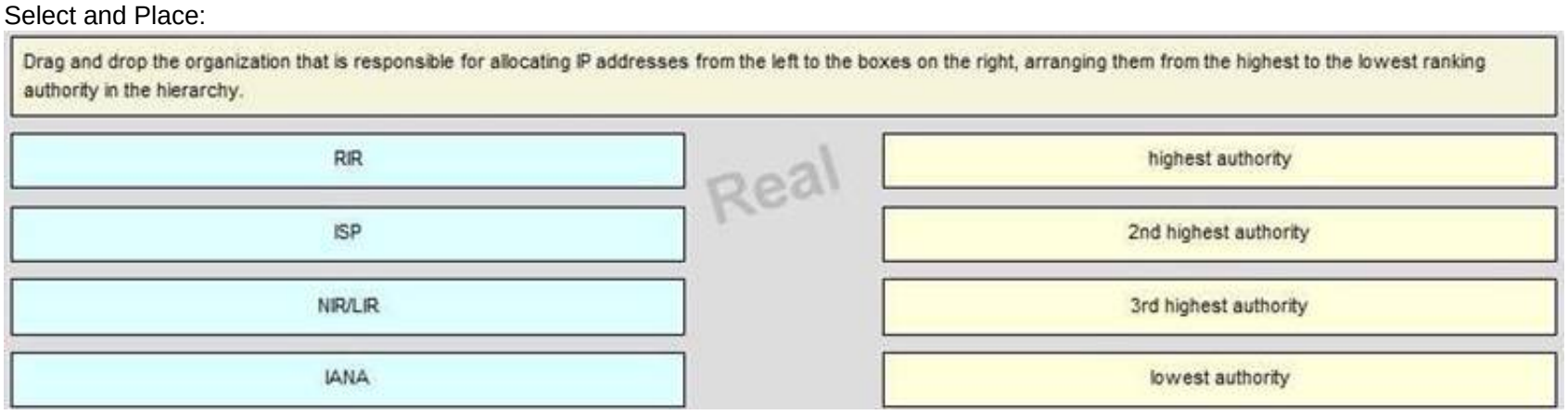


Answer:

Explanation:



NEW QUESTION 210
Select and Place:



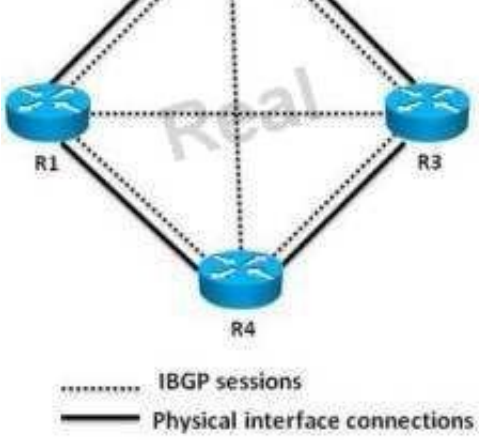
Answer:

Explanation:

Drag and drop the organization that is responsible for allocating IP addresses from the left to the boxes on the right, arranging them from the highest to the lowest ranking authority in the hierarchy.

RIR	IANA
ISP	RIR
NIR/LIR	NIR/LIR
IANA	ISP

NEW QUESTION 214
Topology:



Select and Place:

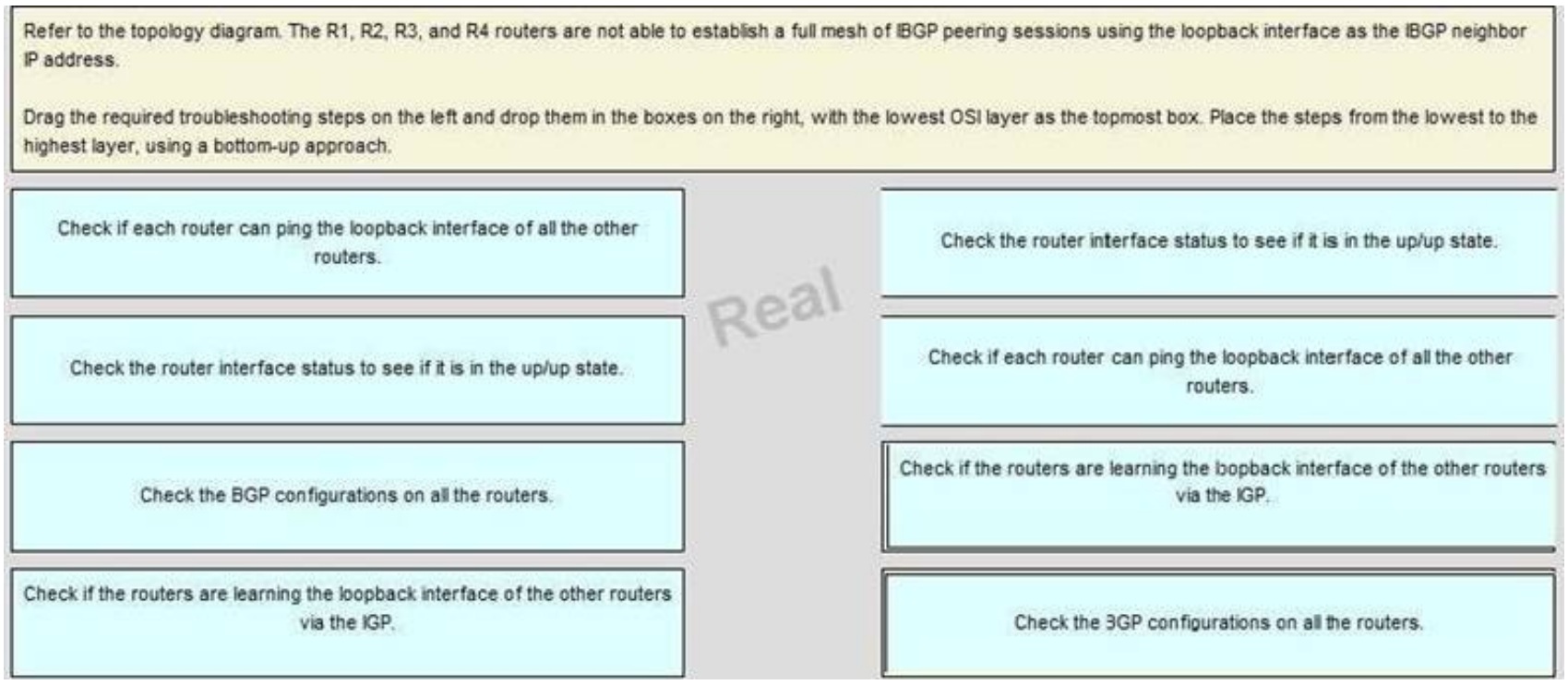
Refer to the topology diagram. The R1, R2, R3, and R4 routers are not able to establish a full mesh of IBGP peering sessions using the loopback interface as the IBGP neighbor IP address.

Drag the required troubleshooting steps on the left and drop them in the boxes on the right, with the lowest OSI layer as the topmost box. Place the steps from the lowest to the highest layer, using a bottom-up approach.

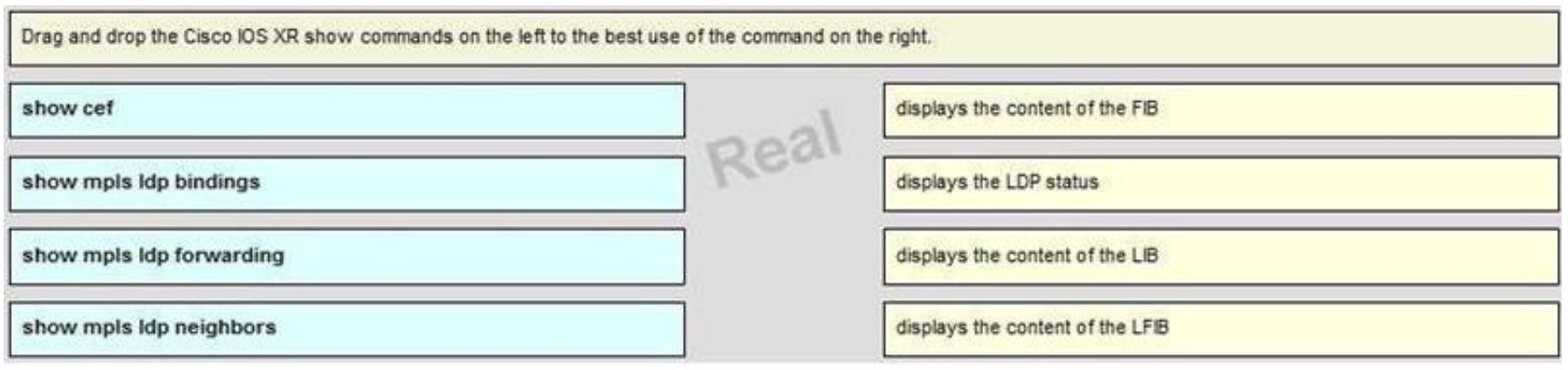
Check if each router can ping the loopback interface of all the other routers.	
Check the router interface status to see if it is in the up/up state.	
Check the BGP configurations on all the routers.	
Check if the routers are learning the loopback interface of the other routers via the IGP.	

Answer:

Explanation:

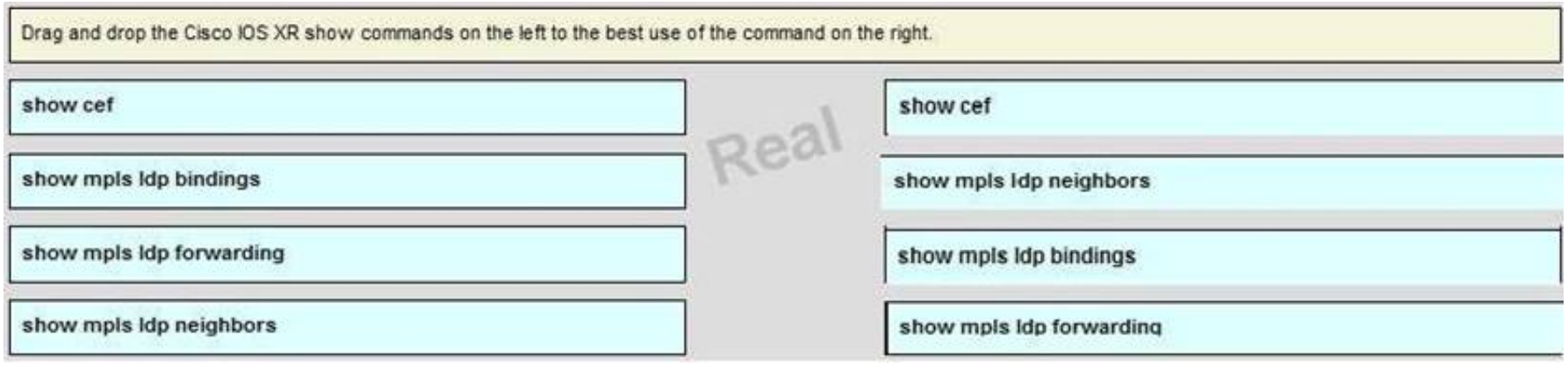


NEW QUESTION 218
Select and Place:



Answer:

Explanation:



NEW QUESTION 220
Which three statements about OSPFv2 or OSPFv3 authentication are true? (Choose three.)

A. On Cisco IOS XR platforms, OSPFv3 authentication can be configured at the OSPF routing process, area, or interface level.
B. OSPF authentication on Cisco IOS and IOS XE platforms can be configured per area or per interface.
C. On Cisco IOS and IOS XE and IOS XR platforms, the authentication key can only be configured per interface.
D. OSPFv3 uses IPsec for authentication and encryption.
E. On Cisco IOS XR platforms, the OSPF authentication that is configured for the area overrides the authentication that is configured for the interface.
F. On Cisco IOS and IOS XE platforms, the two OSPFv2 authentication methods that are supported are MD5 and SHA1.

Answer: ABD

Explanation: http://www.cisco.com/en/US/docs/ios_xr_sw/iosxr_r3.7/routing/configuration/guide/rc37ospf.html

NEW QUESTION 223
You have just enabled IS-IS on the lab testing network. You notice that IS-IS is not using the optimal path selection based on the interface bandwidth. Currently, the IS-IS routing process seems to be selecting the best path based on the hop count.
What configuration change can you make to cause IS-IS to select the optimal path based on the interface bandwidth?

A. Enable a wide-style IS-IS metric.
B. Enable a narrow-style IS-IS metric.
C. Change the default auto-cost reference bandwidth to a higher value.
D. Change the default IS-IS metric on each of the router interfaces to better correspond to the interface bandwidth.

E. Change the interface bandwidth by using the bandwidth interface configuration mode command.

Answer: D

Explanation: http://bradhedlund.com/notes/is-is/

NEW QUESTION 228
Which two statements about the BGP weight attribute on Cisco routers are true? (Choose two.)

A. It is a well-known discretionary attribute.
B. It is only locally significant.
C. Routes with higher weight are the preferred routes.
D. It is used to influence the inbound traffic from the upstream AS.
E. It is set to 100 by default.

Answer: BC

NEW QUESTION 231
.....

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