Exam Questions 200-301

Cisco Certified Network Associate

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NEW QUESTION 1
- (Topic 3)
Refer to the exhibit.

```
Switch#show ip dhcp snooping
Switch DHCP snooping is enabled
Switch DHCP gleaning is disabled
DHCP snooping is configured on following VLANs:
1
DHCP snooping is operational on following VLANs:
1
DHCP snooping is configured on the following L3 Interfaces:
Insertion of option 82 is disabled
circuit-id default format: vlan-mod-port
remote-id: aabb.cc00.6500 (MAC)
Option 82 on untrusted port is not allowed
Verification of hwaddr field is enabled
Verification of giaddr field is enabled
DHCP snooping trust/rate is configured on the following Interfaces:
Interface Trusted Allow option Rate limit (pps)
```

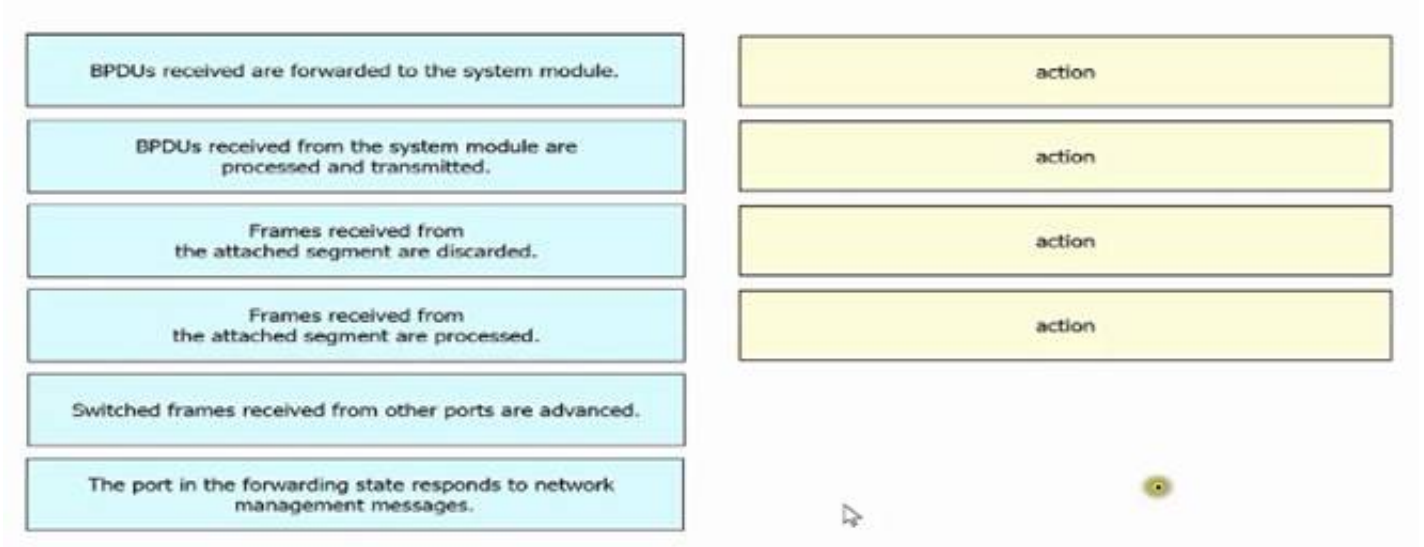
```
Switch#show ip dhcp snooping statistics detail
Packets Processed by DHCP Snooping = 34
Packets Dropped Because
IDB not known = 0
Queue full = 0
Interface is in errdisabled = 0
Rate limit exceeded = 0
Received on untrusted ports = 32
Nonzero giaddr = 0
Source mac not equal to chaddr = 0
No binding entry = 0
Insertion of opt82 fail = 0
Unknown packet = 0
Interface Down = 0
Unknown output interface = 0
Misdirected Packets = 0
Packets with Invalid Size = 0
Packets with Invalid Option = 0
```

The DHCP server and clients are connected to the same switch. What is the next step to complete the DHCP configuration to allow clients on VLAN 1 to receive addresses from the DHCP server?

A. Configure the ip dhcp snooping trust command on the interlace that is connected to the DHCP client.
B. Configure the ip dhcp relay information option command on the interface that is connected to the DHCP client.
C. Configure the ip dhcp snooping trust command on the interface that is connected to the DHCP server.
D. Configure the Ip dhcp relay information option command on the interface that is connected to the DHCP server.

Answer: C

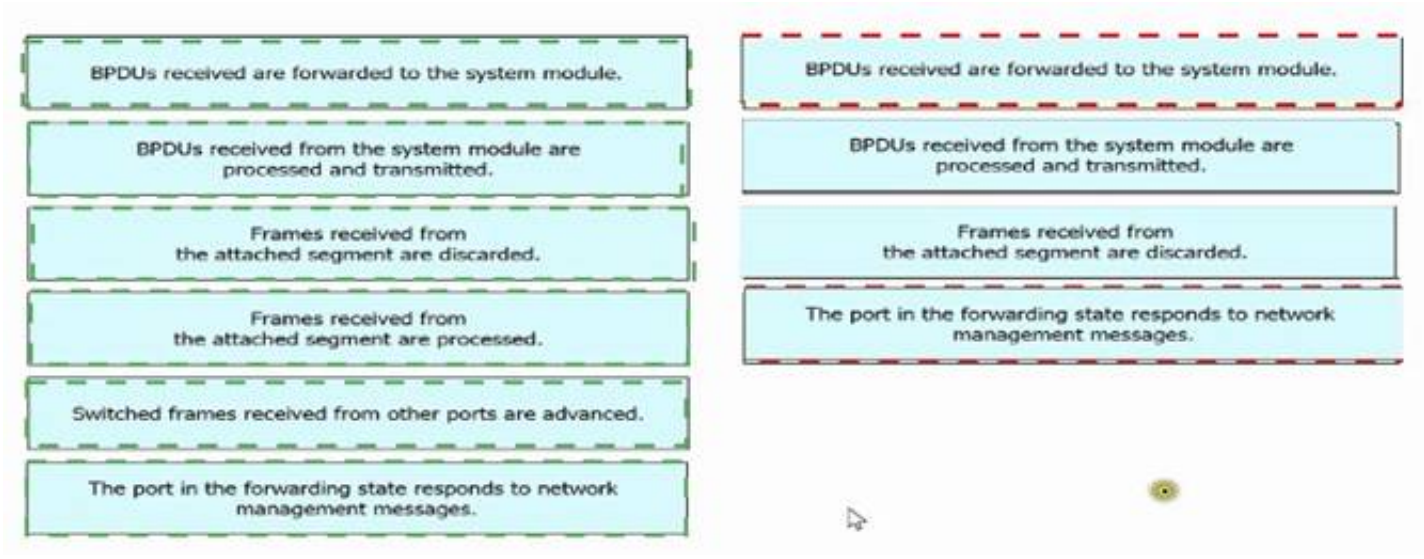
NEW QUESTION 2
DRAG DROP - (Topic 3)
Drag and drop the Rapid PVST+ forwarding slate actions from the loft to the right. Not all actions are used.



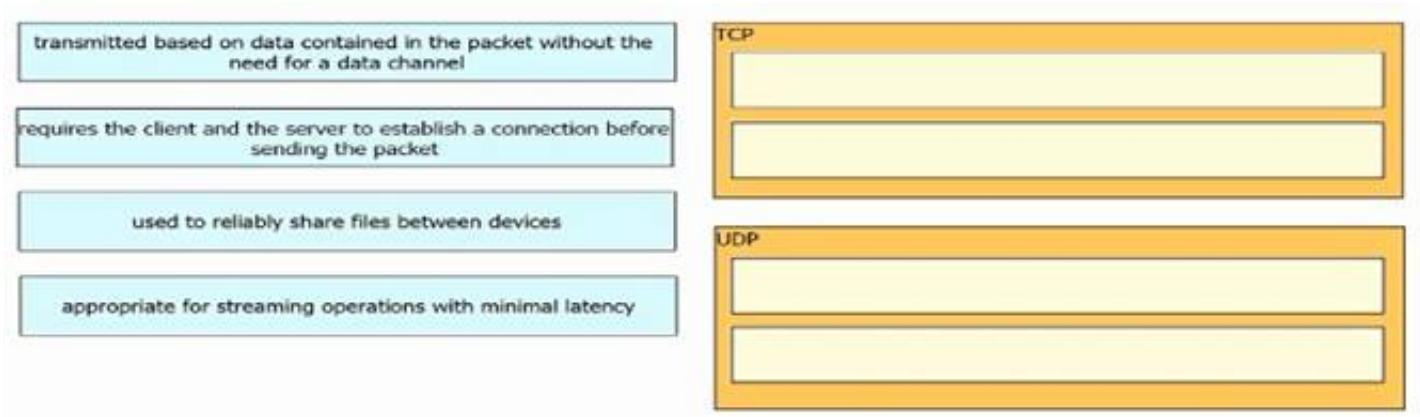
A. Mastered
B. Not Mastered

Answer: A

Explanation:



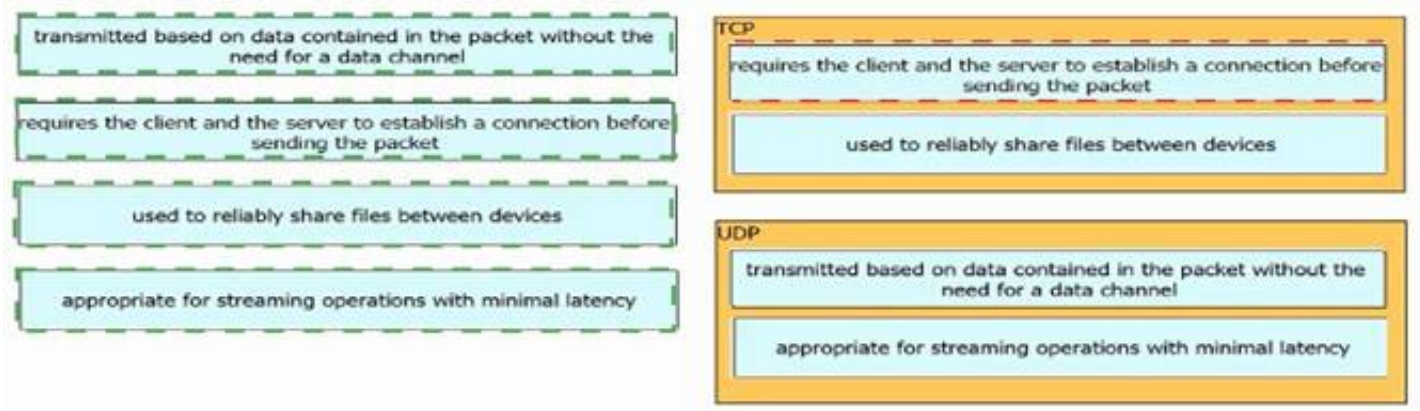
NEW QUESTION 3
DRAG DROP - (Topic 3)
Drag and drop the TCP or UDP details from the left onto their corresponding protocols on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

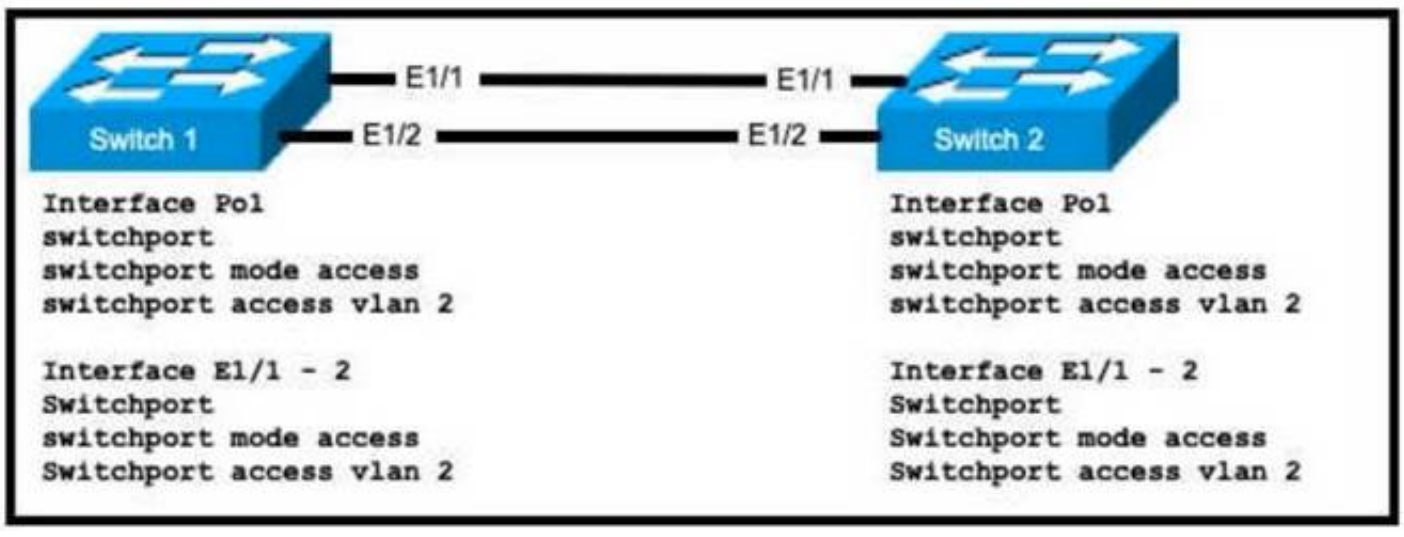


NEW QUESTION 4
- (Topic 3)
Which Layer 2 switch function encapsulates packets for different VLANs so that the packets traverse the same port and maintain traffic separation between the VLANs?

A. VLAN numbering
B. VLAN DSCP
C. VLAN tagging
D. VLAN marking

Answer: C

NEW QUESTION 5
- (Topic 3)
Refer to the exhibit.



An engineer is configuring an EtherChannel using LACP between Switches 1 and 2 Which configuration must be applied so that only Switch 1 sends LACP initiation packets?

A. Switch 1 (config-if)#channel-group 1 mode on Swrtch2(config-if)#channel-group 1 mode passive
B. Switch1(config-if)#channel-group 1 mode passive Switch2(config-if)#channel-group 1 mode active
C. Switch1{config-if)£channel-group 1 mode active Switch2(config-if)#channel-group 1 mode passive
D. Switch1(config-if)#channel-group 1 mode on Switch2(config-if)#channel-group 1 mode active

Answer: C

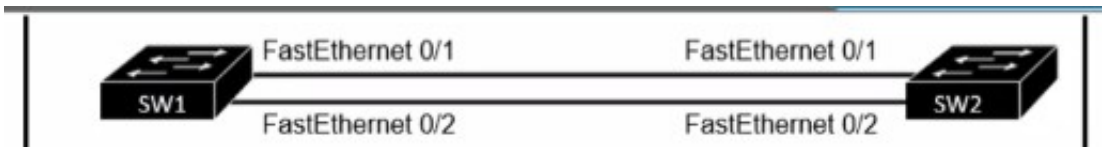
NEW QUESTION 6
- (Topic 3)
Which interface mode must be configured to connect the lightweight APs in a centralized architecture?

A. WLAN dynamic

B. management
C. trunk
D. access

Answer: D

NEW QUESTION 7
- (Topic 3)
Refer to the exhibit.




```
SW1#show run interface fastEthernet 0/1
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode on

SW1#show run interface fastEthernet 0/2
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode on

SW2#show run interface fastEthernet 0/1
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode active

SW2#show run interface fastEthernet 0/2
switchport trunk encapsulation dot1q
switchport mode trunk
switchport trunk allowed vlan 100,200,300
channel-group 1 mode active
```

An engineer built a new L2 LACP EtherChannel between SW1 and SW2 and executed these show commands to verify the work. Which additional task allows the two switches to establish an LACP port channel?

A. Change the channel-group mode on SW2 to auto
B. Change the channel-group mode on SW1 to desirable.
C. Configure the interface port-channel 1 command on both switches.
D. Change the channel-group mode on SW1 to active or passive.

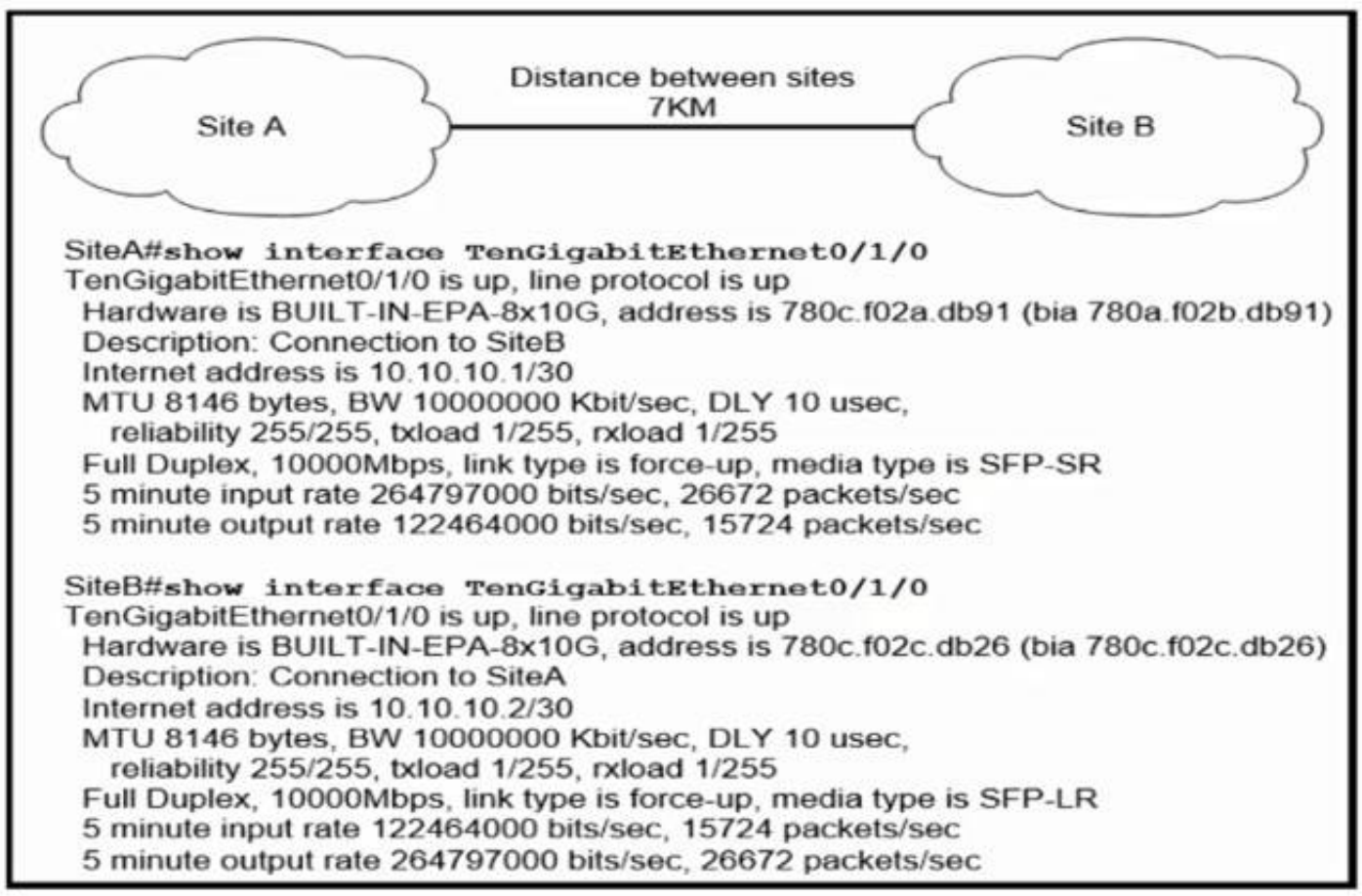
Answer: D

NEW QUESTION 8
- (Topic 3)
Which protocol is used for secure remote CLI access?

A. HTTPS
B. HTTP
C. Telnet
D. SSH

Answer: D

NEW QUESTION 9
- (Topic 3)
Refer to the exhibit.

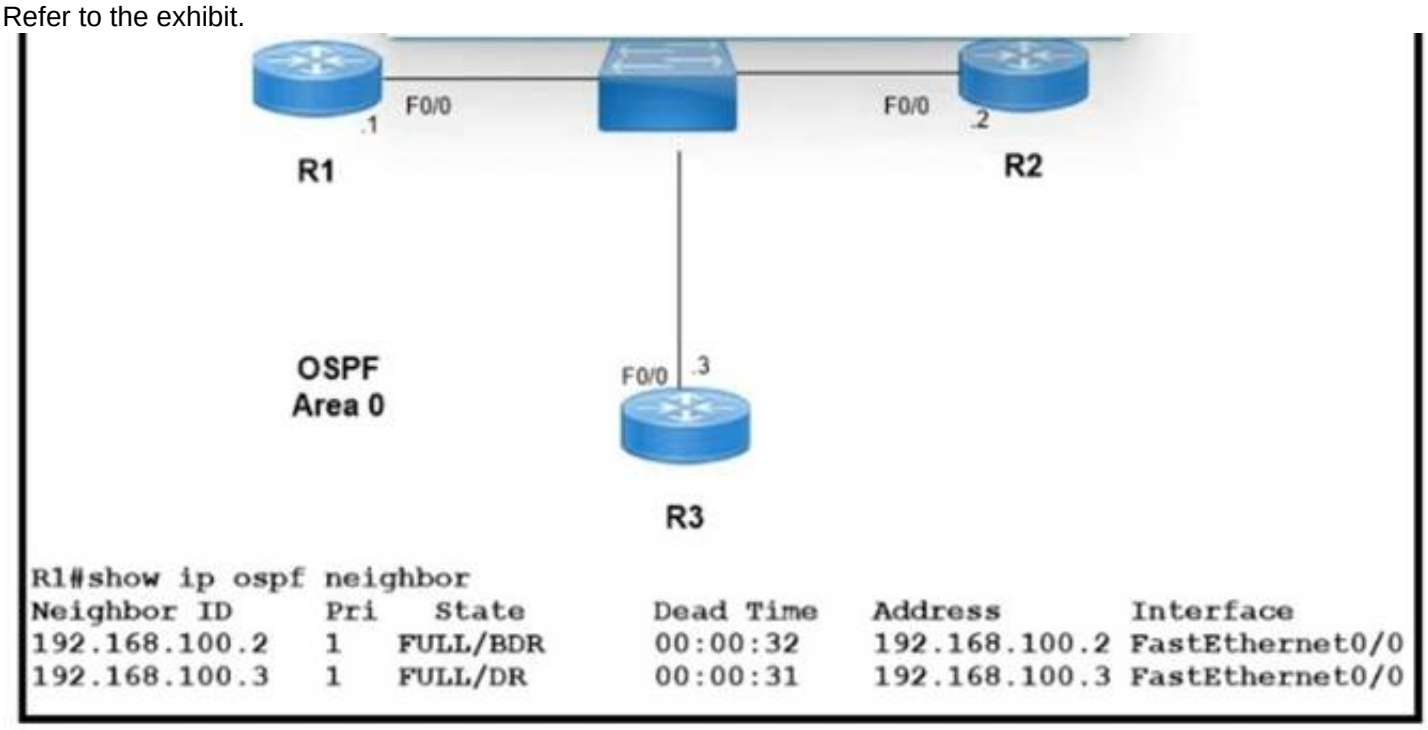


Site A was recently connected to site B over a new single-mode fiber path. Users at site A report Intermittent connectivity Issues with applications hosted at site B. What is the reason for the problem?

A. Heavy usage is causing high latency.
B. An incorrect type of transceiver has been inserted into a device on the link.
C. physical network errors are being transmitted between the two sites.
D. The wrong cable type was used to make the connection.

Answer: B

NEW QUESTION 10
- (Topic 3)
Refer to the exhibit.



Which two configurations must the engineer apply on this network so that R1 becomes the DR? (Choose two.)
A)

```
R1(config)#router ospf 1
R1(config-router)#router-id 192.168.100.1
```

B)

```
R1(config)#interface fastethernet 0/0
R1(config-if)#ip ospf priority 200
```

C)

```
R3(config)#interface fastethernet 0/0
R3(config-if)#ip ospf priority 0
```

D)

```
R1(config)#interface fastethernet 0/0
R1(config-if)#ip ospf priority 0
```

E)

```
R3(config)#interface fastethernet 0/0
R3(config-if)#ip ospf priority 200
```

A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

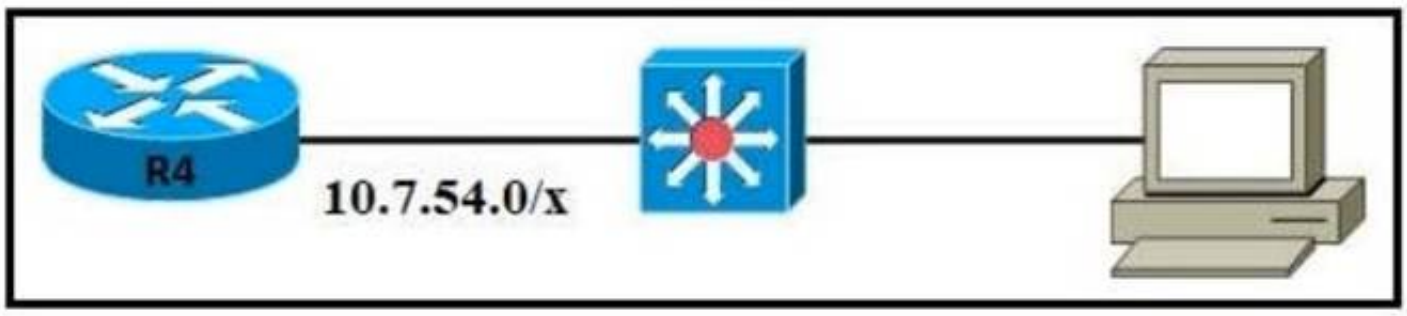
Answer: BC

NEW QUESTION 10
- (Topic 3)
A network engineer is installing an IPv6-only capable device. The client has requested that the device IP address be reachable only from the internal network. Which type of IPv6 address must the engineer assign?

A. unique local address
B. link-local address
C. aggregatable global address
D. IPv4-compatible IPv6 address

Answer: B

NEW QUESTION 15
- (Topic 3)
Refer to the exhibit.



The router has been configured with a supernet to accommodate the requirement for 380 users on a subnet The requirement already considers 30% future growth. Which configuration verifies the IP subnet on router R4?
A)

```
Subnet: 10.7.54.0
Subnet mask: 255.255.254.0
Broadcast address: 10.7.54.255
Usable IP address range: 10.7.54.1 - 10.7.55.254
```

B)

```
Subnet: 10.7.54.0
Subnet mask: 255.255.254.0
Broadcast address: 10.7.55.255
Usable IP address range: 10.7.54.1 - 10.7.55.254
```

C)

```
Subnet: 10.7.54.0
Subnet mask: 255.255.128.0
Broadcast address: 10.7.55.255
Usable IP address range: 10.7.54.1 - 10.7.55.254
```

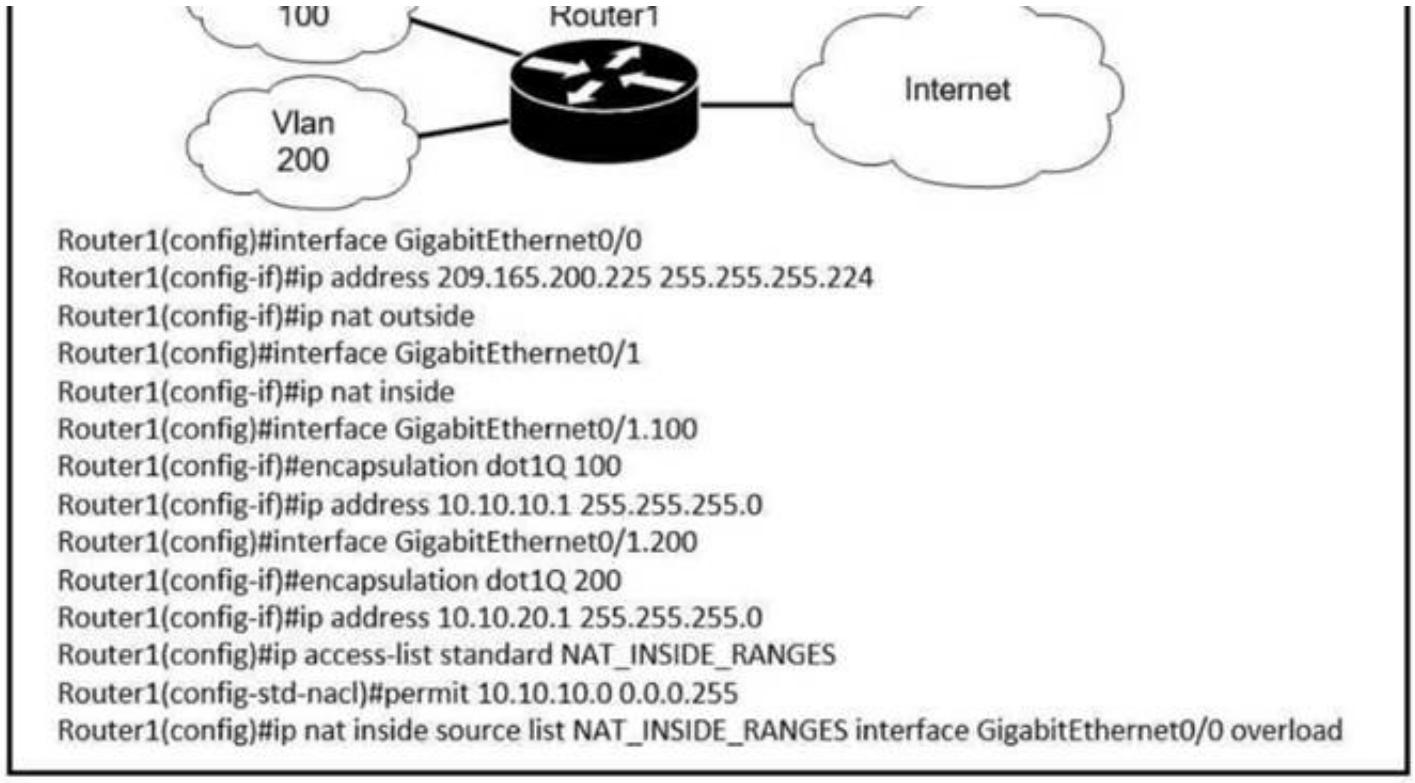
D)

```
Subnet: 10.7.54.0
Subnet mask: 255.255.255.0
Broadcast address: 10.7.54.255
Usable IP address range: 10.7.54.1 - 10.7.55.254
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

NEW QUESTION 19
- (Topic 3)
Refer to the exhibit.



Users on existing VLAN 100 can reach sites on the Internet. Which action must the administrator take to establish connectivity to the Internet for users in VLAN 200?

A. Define a NAT pool on the router.
B. Configure static NAT translations for VLAN 200.
C. Configure the ip nat outside command on another interface for VLAN 200.
D. Update the NAT INSIDF RANGFS ACL

Answer: B

NEW QUESTION 22
- (Topic 3)
Refer to the exhibit.

```
Switch#show etherchannel summary
[output omitted]

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------
10     Po10(SU)         LACP      Gi0/0(P)    Gi0/1(P)
20     Po20(SU)         LACP      Gi0/2(P)    Gi0/3(P)
```

Which two commands when used together create port channel 10? (Choose two.)

A. int range g0/0-1channel-group 10 mode active
B. int range g0/0-1 chanm.l-group 10 mode desirable
C. int range g0/0-1channel-group 10 mode passive
D. int range g0/0-1 channel-group 10 mode auto
E. int range g0/0-1 channel-group 10 mode on

Answer: AC

NEW QUESTION 27
- (Topic 3)
Which two components comprise part of a PKI? (Choose two.)

A. preshared key that authenticates connections
B. RSA token
C. CA that grants certificates
D. clear-text password that authenticates connections
E. one or more CRLs

Answer: BC

NEW QUESTION 31
- (Topic 3)
Refer to the exhibit.

```
Hardware is ISR4331-3x1GE, address is 5486.bc25.1f70 (bia 5486.bc25.1f70)
Description: << WAN Link >>
Internet address is 192.0.2.2/30
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
   reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 1000Mbps, link type is auto, media type is RJ45
output flow-control is off, input flow-control is off
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:00, output 00:00:11, output hang never
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 7000 bits/sec, 4 packets/sec
5 minute output rate 4000 bits/sec, 4 packets/sec
   22579370 packets input, 8825545968 bytes, 0 no buffer
   Received 67 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   3612699 input errors, 3612699 CRC, 0 frame, 0 overrun, 0 ignored
   0 watchdog, 10747057 multicast, 0 pause input
   12072167 packets output, 1697953637 bytes, 0 underruns
   0 output errors, 0 collisions, 1 interface resets
   6 unknown protocol drops
   0 babbles, 0 late collision, 0 deferred
   5 lost carrier, 0 no carrier, 0 pause output
   0 output buffer failures, 0 output buffers swapped out
```

What is a reason for poor performance on the network interface?

A. The interface is receiving excessive broadcast traffic.
B. The cable connection between the two devices is faulty.
C. The interface is operating at a different speed than the connected device.
D. The bandwidth setting of the interface is misconfigured

Answer: A

NEW QUESTION 34
- (Topic 3)
Refer to the exhibit.

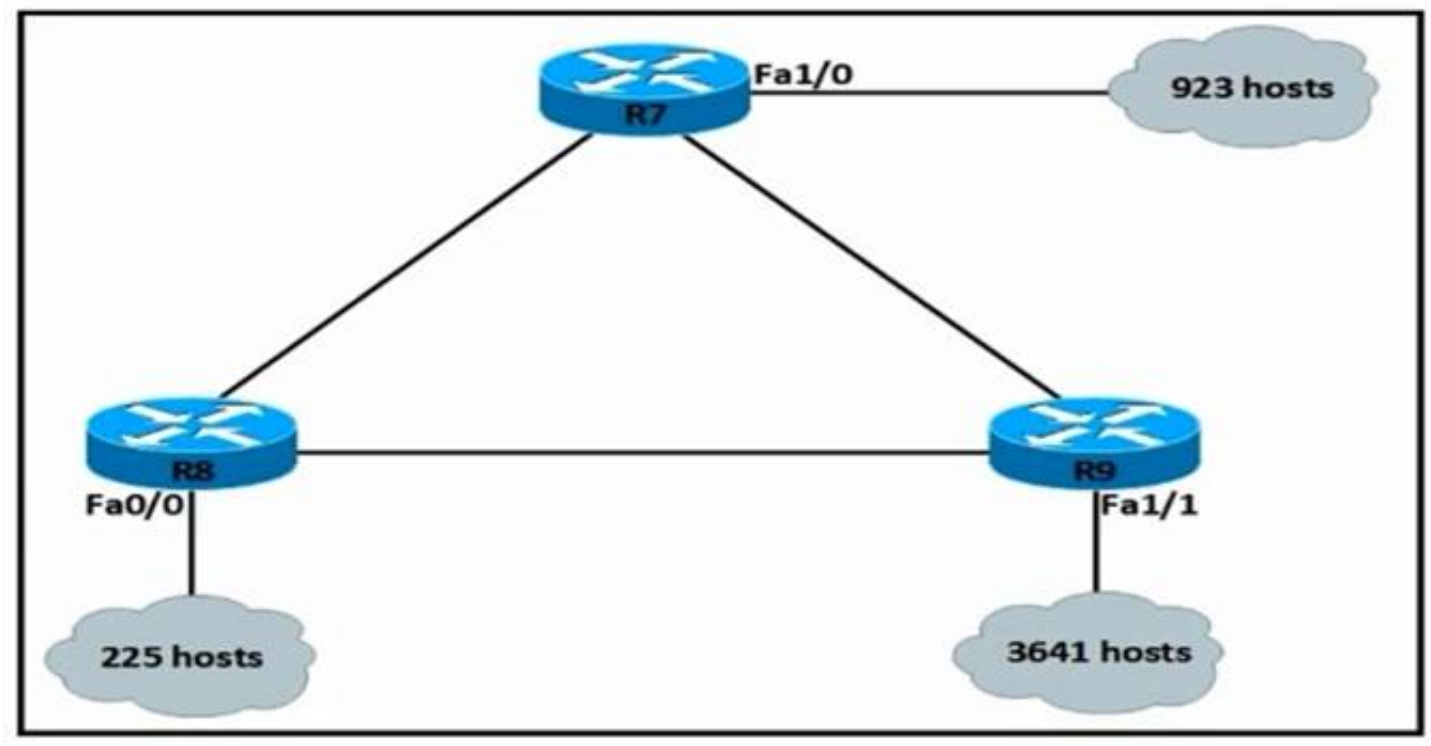
```
EIGRP   10.10.10.0/24[90/1441]    via   F0/10
EIGRP   10.10.10.0/24[90/144]     via   F0/11
EIGRP   10.10.10.0/24[90/1441]    via   F0/12
OSPF    10.10.10.0/24[110/20]     via   F0/13
OSPF    10.10.10.0/24[110/30]     via   F0/14
```

Packets received by the router from BGP enter via a serial interface at 209.165.201.10. Each route is present within the routing table. Which interface is used to forward traffic with a destination IP of 10.10.10.24?

A. F0/10
B. F0/11
C. F0/12
D. F0/13

Answer: B

NEW QUESTION 38
- (Topic 3)
Refer to the exhibit.



An IP subnet must be configured on each router that provides enough addresses for the number of assigned hosts and anticipates no more than 10% growth for now hosts. Which configuration script must be used?

A)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.252.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.255.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.240.0
no shutdown
```

B)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.248.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.254.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.248.0
no shutdown
```

C)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.240.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.224.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.192.0
no shutdown
```

D)

```
R7#
configure terminal
interface Fa1/0
ip address 10.1.56.1 255.255.192.0
no shutdown

R8#
configure terminal
interface Fa0/0
ip address 10.9.32.1 255.255.224.0
no shutdown

R9#
configure terminal
interface Fa1/1
ip address 10.23.96.1 255.255.128.0
no shutdown
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

NEW QUESTION 43
- (Topic 3)
Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.254 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.254, Serial0/0/1
                   is directly connected, Serial0/0/1
     172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
C    172.16.1.0/24 is directly connected, FastEthernet0/0
L    172.16.1.1/32 is directly connected, FastEthernet0/0
R    172.16.2.0/24 [120/2] via 207.165.200.250, 00:00:25, Serial0/0/0
O    192.168.1.0/24 [110/4437] via 207.165.200.254, 00:00:17, Serial0/0/1
D    192.168.2.0/24 [90/84437] via 207.165.200.254, 00:00:15, Serial0/0/1
     207.165.200.0/24 is variably subnetted, 5 subnets, 2 masks
S    207.165.200.244/30 [1/1] via 207.165.200.254, Serial0/0/1
C    207.165.200.248/30 is directly connected, Serial0/0/0
L    207.165.200.249/32 is directly connected, Serial0/0/0
C    207.165.200.252/30 is directly connected, Serial0/0/1
L    207.165.200.253/32 is directly connected, Serial0/0/1
```

Which network prefix was learned via EIGRP?

A. 172.16.0.0/16
B. 192.168.2.0/24
C. 207.165.200.0/24
D. 192.168.1.0/24

Answer: B

NEW QUESTION 47
- (Topic 3)
Which two network actions occur within the data plane? (Choose two.)

A. Add or remove an 802.1Q trunking header.
B. Make a configuration change from an incoming NETCONF RPC.
C. Run routing protocols.
D. Match the destination MAC address to the MAC address table.
E. Reply to an incoming ICMP echo request.

Answer: BD

NEW QUESTION 51
- (Topic 3)
What is an expected outcome when network management automation is deployed?

A. A distributed management plane must be used.
B. Software upgrades are performed from a central controller
C. Complexity increases when new device configurations are added
D. Custom applications are needed to configure network devices

Answer: B

NEW QUESTION 55
- (Topic 3)
What is a requirement for nonoverlapping Wi-Fi channels?

A. different security settings
B. discontinuous frequency ranges
C. different transmission speeds
D. unique SSIDs

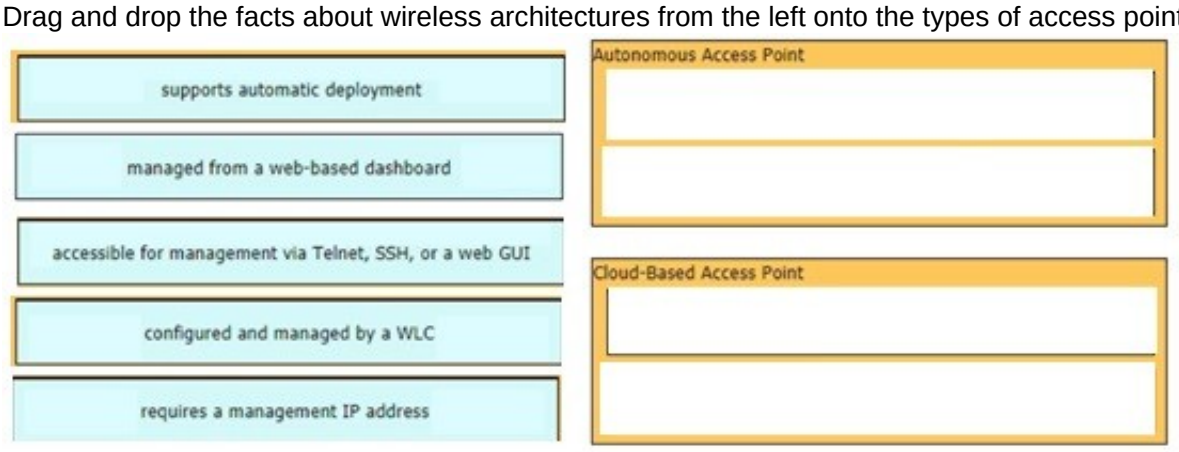
Answer: B

NEW QUESTION 60
- (Topic 3)
What is a function of a Next-Generation IPS?

A. makes forwarding decisions based on learned MAC addresses
B. serves as a controller within a controller-based network
C. integrates with a RADIUS server to enforce Layer 2 device authentication rules
D. correlates user activity with network events

Answer: D

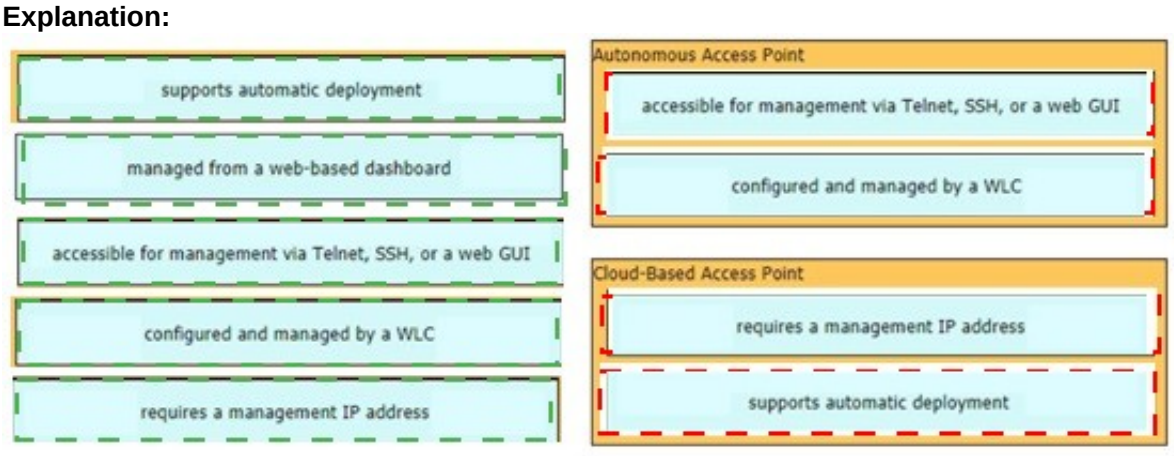
NEW QUESTION 62
DRAG DROP - (Topic 3)
Drag and drop the facts about wireless architectures from the left onto the types of access point on the right. Not all options are used.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 65
- (Topic 3)
Which type of IPv6 address is similar to a unicast address but is assigned to multiple devices on the same network at the same time?

A. global unicast address
B. anycast address
C. multicast address
D. link-local address

Answer: B

NEW QUESTION 68
- (Topic 3)
What is a function of an endpoint on a network?

A. forwards traffic between VLANs on a network
B. connects server and client devices to a network
C. allows users to record data and transmit to a tile server
D. provides wireless services to users in a building

Answer: C

Explanation:
An endpoint is a host that acts as the source or destination of data traffic flowing through a network.
When you are at your PC, editing your CV and uploading it to a file server, you are sitting at an endpoint.

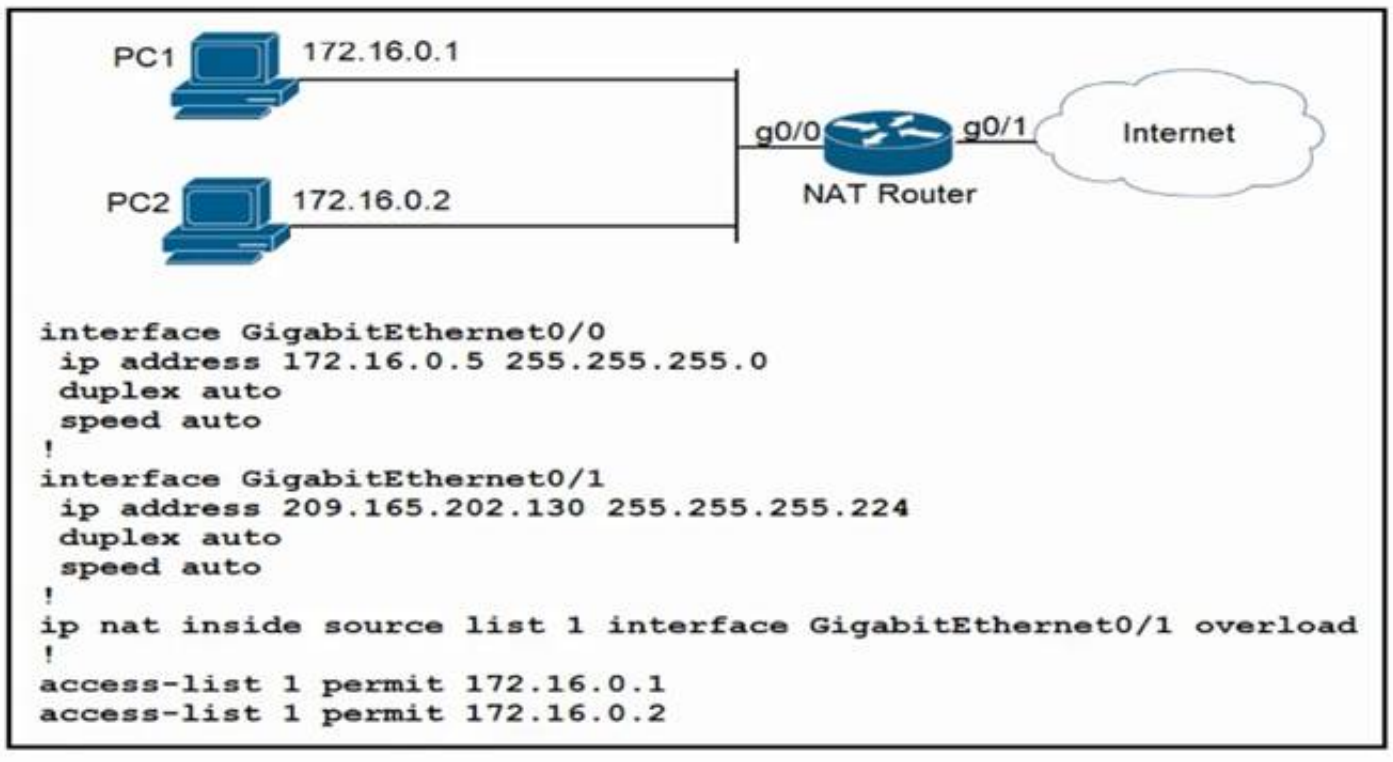
NEW QUESTION 70
FILL IN THE BLANK - (Topic 3)
Drag and drop the functions of SNMP fault-management from the left onto the definitions on the right.

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Table Description automatically generated

NEW QUESTION 74
- (Topic 3)
Refer to the exhibit.



How should the configuration be updated to allow PC1 and PC2 access to the Internet?

A. Modify the configured number of the second access list.
B. Add either the ip nat {inside|outside} command under both interfaces.
C. Remove the overload keyword from the ip nat inside source command.
D. Change the ip nat inside source command to use interface GigabitEthernet0/0.

Answer: B

NEW QUESTION 75
- (Topic 3)
Which PoE mode enables powered-device detection and guarantees power when the device is detected?

A. dynamic
B. static

C. active
D. auto

Answer: B

NEW QUESTION 76
- (Topic 3)
Refer to the exhibit.

```
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname R4
!
boot-start-marker
boot-end-marker
!
ip cef
!
interface FastEthernet0/0
description WAN_INTERFACE
ip address 10.0.1.2 255.255.255.252
ip access-group 100 in
!
interface FastEthernet0/1
description LAN_INTERFACE
ip address 10.148.2.1 255.255.255.0
duplex auto
speed auto
!
ip forward-protocol nd
!
access-list 100 permit eigrp any any
access-list 100 permit icmp any any
access-list 100 permit tcp 10.149.3.0 0.0.0.255 host 10.0.1.2 eq 22
access-list 100 permit tcp any any eq 80
access-list 100 permit tcp any any eq 443
access-list 100 deny ip any any log
```

Which configuration enables DHCP addressing for hosts connected to interface FastEthernetO/1 on router R4?

A. interface FastEthernet0/0 ip helper-address 10.0.1.1iaccess-list 100 permit udp host 10.0.1.1 eq bootps host 10.148.2.1
B. interface FastEthernot0/1 ip helper-address 10.0.1.1!access-list 100 permit tcp host 10.0.1.1 eq 67 host 10.148.2.1
C. interface FastEthernetO/0 ip helper-address 10.0.1.1Iaccess-list 100 permit host 10.0.1.1 host 10.148.2.1 eq bootps
D. interface FastEthernet0/1 ip helper-address 10.0.1.1!access-list 100 permit udp host 10.0.1.1 eq bootps host 10.148.2.1

Answer: B

NEW QUESTION 79
- (Topic 2)
What role does a hypervisor provide for each virtual machine in server virtualization?

A. infrastructure-as-a-service.
B. Software-as-a-service
C. control and distribution of physical resources
D. services as a hardware controller.

Answer: C

Explanation:
The hypervisor creates and manages virtual machines on a host computer and allocates physical system resources to them.

NEW QUESTION 81
- (Topic 2)
What is the primary different between AAA authentication and authorization?

A. Authentication verifies a username and password, and authorization handles the communication between the authentication agent and the user database.
B. Authentication identifies a user who is attempting to access a system, and authorization validates the users password
C. Authentication identifies and verifies a user who is attempting to access a system, and authorization controls the tasks the user can perform.
D. Authentication controls the system processes a user can access and authorization logs the activities the user initiates

Answer: C

Explanation:
AAA stands for Authentication, Authorization and Accounting.+ Authentication: Specify who you are (usually via login username & password)+ Authorization: Specify what actions you can do, what resource you can access+ Accounting: Monitor what you do, how long you do it (can be used for billing and auditing)An example of AAA is shown below:+ Authentication: “I am a normal user. My username/password is user_tom/learnforever”+ Authorization: “user_tom can access LearnCCNA server via HTTP and FTP”+ Accounting: “user_tom accessed LearnCCNA server for 2 hours”. This user only uses “show” commands.

NEW QUESTION 83
- (Topic 2)
Refer to the exhibit.

```
SW1#show run int gig 0/1
interface GigabitEthernet0/1
 switchport access vlan 11
 switchport trunk allowed vlan 1-10
 switchport trunk encapsulation dot1q
 switchport trunk native vlan 5
 switchport mode trunk
 speed 1000
 duplex full
```

Which action is expected from SW1 when the untagged frame is received on the GigabitEthernet0/1 interface?

A. The frame is processed in VLAN 5.
B. The frame is processed in VLAN 11
C. The frame is processed in VLAN 1
D. The frame is dropped

Answer: A

NEW QUESTION 85
- (Topic 2)
What are two differences between optical-fiber cabling and copper cabling? (Choose two)

A. Light is transmitted through the core of the fiber
B. A BNC connector is used for fiber connections
C. The glass core component is encased in a cladding
D. Fiber connects to physical interfaces using Rj-45 connections
E. The data can pass through the cladding

Answer: AC

NEW QUESTION 86
- (Topic 2)
Which protocol does an access point use to draw power from a connected switch?

A. Internet Group Management Protocol
B. Adaptive Wireless Path Protocol
C. Cisco Discovery Protocol
D. Neighbor Discovery Protocol

Answer: C

NEW QUESTION 88
- (Topic 2)
Using direct sequence spread spectrum, which three 2.4-GHz channels are used to limit collisions?

A. 1,6,11
B. 1,5,10
C. 1,2,3
D. 5,6,7

Answer: A

NEW QUESTION 90
- (Topic 2)
What is a similarly between 1000BASE-LX and 1000BASE-T standards?

A. Both use the same data-link header and trailer formats
B. Both cable types support LP connectors
C. Both cable types support Rj-45 connectors

D. Both support up to 550 meters between nodes

Answer: A

Explanation:
"In computer networking, Gigabit Ethernet (GbE or 1 GigE) is the term applied to transmitting Ethernet frames at a rate of a gigabit per second." Both standards use Ethernet framing (same headers and trailers)

NEW QUESTION 91
- (Topic 2)
What is a characteristic of spine-and-leaf architecture?

A. Each device is separated by the same number of hops
B. It provides variable latency
C. It provides greater predictability on STP blocked ports.
D. Each link between leaf switches allows for higher bandwidth.

Answer: A

NEW QUESTION 93
- (Topic 2)
Refer to the exhibit.

```
SW1#sh lacp neighbor
Flags:  S - Device is requesting Slow LACPDUs
        F - Device is requesting Fast LACPDUs
        A - Device is in Active mode       P - Device is in Passive mode

Channel group 35 neighbors

Partner's information:

                  LACP port                        Admin  Oper   Port    Port
Port      Flags   Priority  Dev ID          Age    key    Key    Number  State
Et1/0     SP      32768     aabb.cc80.7000   8s    0x0    0x23   0x101   0x3C
Et1/1     SP      32768     aabb.cc80.7000   8s    0x0    0x23   0x102   0x3C
```

Based on the LACP neighbor status, in which mode is the SW1 port channel configured?

A. passive
B. mode on
C. auto
D. active

Answer: D

Explanation:
From the neighbor status, we notice the "Flags" are SP. "P" here means the neighbor is in Passive mode.In order to create an Etherchannel interface, the (local) SW1 ports should be in Active mode.Moreover, the "Port State" in the exhibit is "0x3c" (which equals to "00111100 in binary format).Bit 3 is "1" which means the ports are synchronizing -
> the ports are working so the local ports should be in Active mode.

NEW QUESTION 98
- (Topic 2)
Which action does the router take as rt forwards a packet through the network?

A. The router replaces the source and desinaoon labels wth the sending router uterface label as a source and the next hop router label as a desbnabon
B. The router encapsulates the source and destination IP addresses with the sending router P address as the source and the neighbor IP address as the destination
C. The router replaces the original source and destination MAC addresses with the sending router MAC address as the source and neighbor MAC address as the destination
D. The router encapsulates the original packet and then includes a tag that identifies the source router MAC address and transmit transparently to the destination

Answer: C

NEW QUESTION 99
- (Topic 2)
A corporate office uses four floors in a building
• Floor 1 has 24 users
• Floor 2 has 29 users
• Floor 3 has 28 users
•Floor 4 has 22 users
Which subnet summarizes and gives the most efficient distribution of IP addresses for the router configuration?

A. 192.168.0.0/26 as summary and 192.168.0.0/29 for each floor
B. 192.168.0.0.24 as summary and 192.168.0.0/28 for each floor
C. 192.168.0.0/23 as summary and 192.168.0.0/25 for each floor

D. l92.168.0.0/25 as summary and 192.168.0.0/27 for each floor

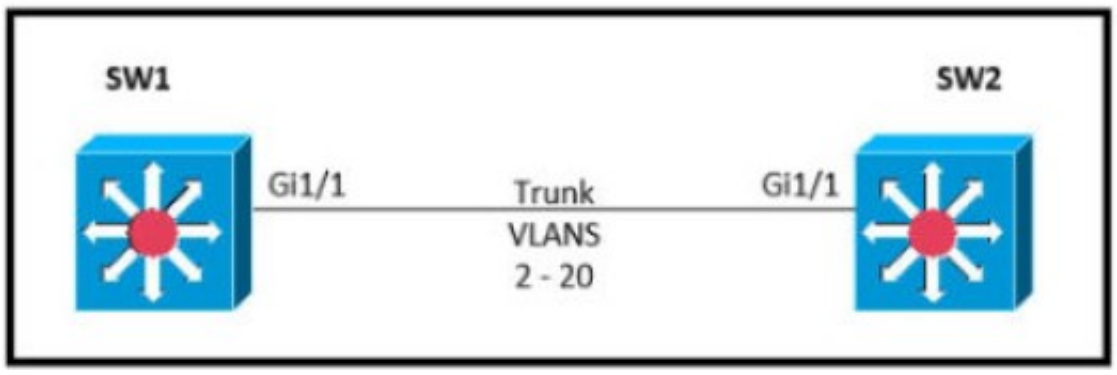
Answer: D

NEW QUESTION 104
- (Topic 2)
If a switch port receives a new frame while it is actively transmitting a previous frame, how does it process the frames?

A. The new frame is delivered first, the previous frame is dropped, and a retransmission request is sent.
B. The previous frame is delivered, the new frame is dropped, and a retransmission request is sent.
C. The new frame is placed in a queue for transmission after the previous frame.
D. The two frames are processed and delivered at the same time.

Answer: B

NEW QUESTION 108
- (Topic 2)
Refer to the exhibit.

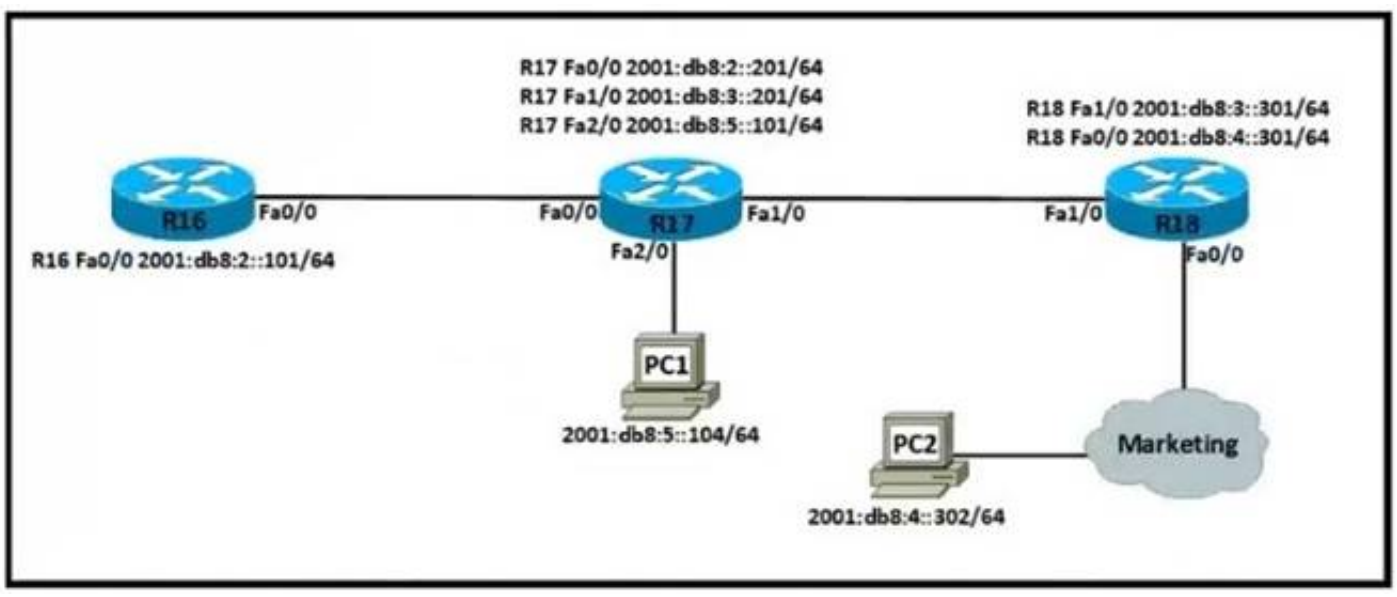


Which command must be executed for Gi1.1 on SW1 to become a trunk port if Gi1/1 on SW2 is configured in desirable or trunk mode?

A. switchport mode trunk
B. switchport mode dot1-tunnel
C. switchport mode dynamic auto
D. switchport mode dynamic desirable

Answer: C

NEW QUESTION 109
- (Topic 2)
Refer to the exhibit.



Which IPv6 configuration is required for R17 to successfully ping the WAN interface on R18?
A)

```
R17#
!
no ip domain lookup
ip cef
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64 2001:DB8:5::101
```

B)

```
R17#
!
no ip domain lookup
ip cef
ipv6 unicast-routing
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64 2001:DB8:3::301
```

C)

```
R17#
!
no ip domain lookup
ip cef
ipv6 cef
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64 2001:DB8:4::302
```

D)

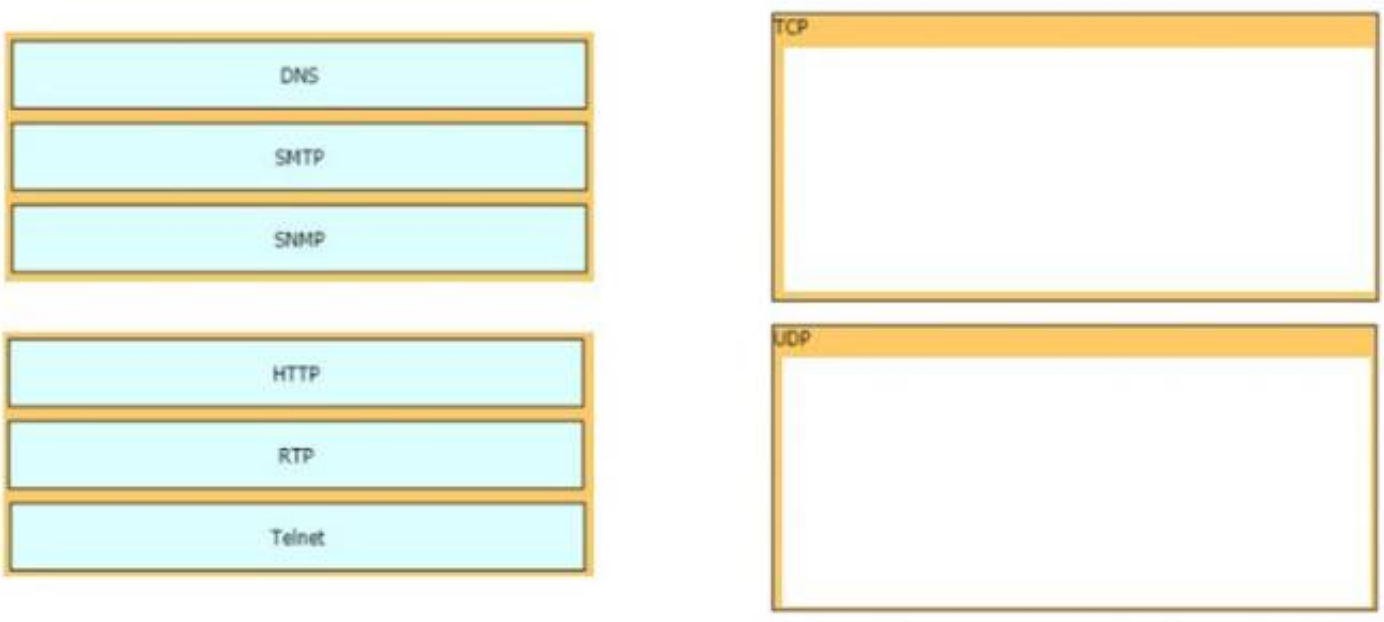
```
R17#
!
no ip domain lookup
ip cef
ipv6 unicast-routing
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64 2001:DB8:2::201
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

Explanation:
ipv6 unicast-routing statement included (IPv6 is enabled on the router).Compared to the exhibit, Fa0/0 and Fa0/1 have correct configurations.The route to subnet 2001:db8:4::/64 points to R18's Fa1/0 (correct next-hop).

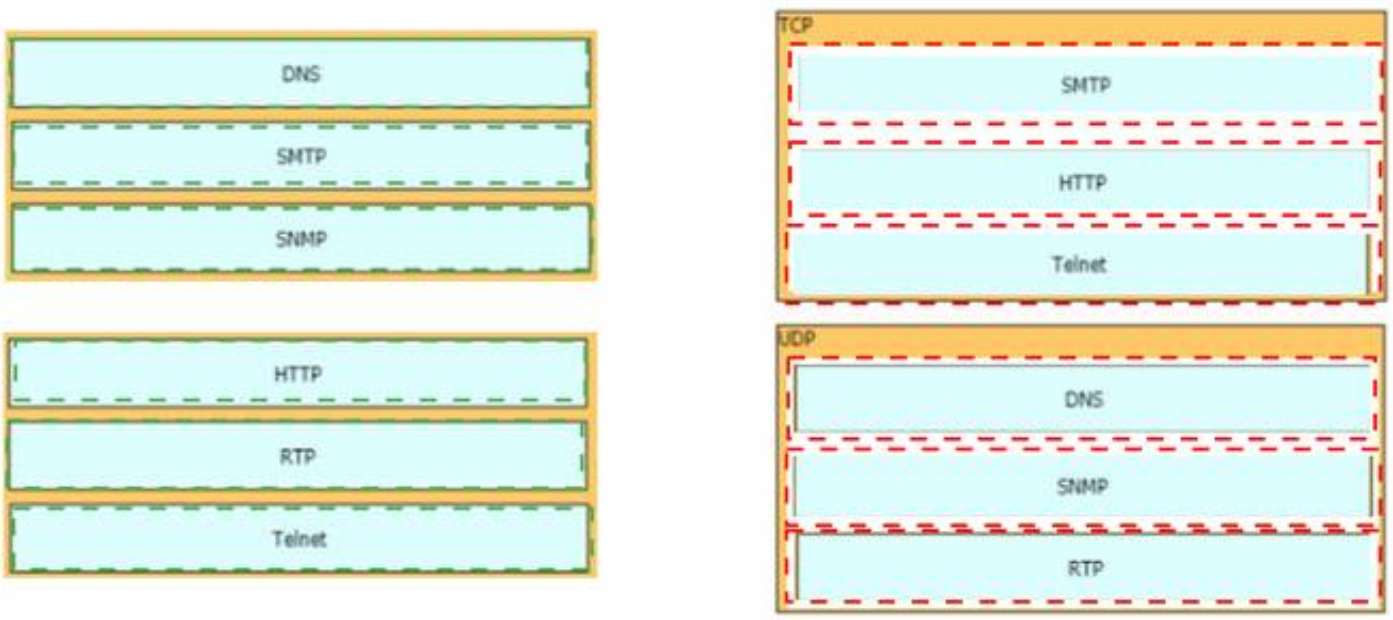
NEW QUESTION 112
DRAG DROP - (Topic 2)
Drag and drop the TCP/IP protocols from the left onto the transmission protocols on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 114
- (Topic 2)
Which function does an SNMP agent perform?

A. it sends information about MIB variables in response to requests from the NMS
B. it requests information from remote network nodes about catastrophic system events.
C. it manages routing between Layer 3 devices in a network
D. it coordinates user authentication between a network device and a TACACS+ or RADIUS server

Answer: A

NEW QUESTION 118
- (Topic 2)
Refer to the exhibit.

```
interface GigabitEthernet3/1/4
  switchport voice vlan 50
!
```

An administrator is tasked with configuring a voice VLAN. What is the expected outcome when a Cisco phone is connected to the GigabitEfriemet3/1/4 port on a switch?

A. The phone and a workstation that is connected to the phone do not have VLAN connectivity
B. The phone and a workstation that is connected to the phone send and receive data in VLAN 50.
C. The phone sends and receives data in VLAN 50, but a workstation connected to the phone has no VLAN connectivity
D. The phone sends and receives data in VLAN 50, but a workstation connected to the phone sends and receives data in VLAN 1

Answer: D

NEW QUESTION 119
- (Topic 2)
What makes Cisco DNA Center different from traditional network management applications and their management of networks?

A. It omits supports auto-discovery of network elements in a greenfield deployment.
B. It modular design allows someone to implement different versions to meet the specific needs of an organization
C. It abstracts policy from the actual device configuration
D. It does not support high availability of management functions when operating in cluster mode

Answer: C

NEW QUESTION 124
- (Topic 2)
An engineer must configure an OSPF neighbor relationship between router R1 and R3 The authentication configuration has been configured and the connecting interfaces are in the same 192.168 1.0/30 sublet. What are the next two steps to complete the configuration? (Choose two.)

A. configure the hello and dead timers to match on both sides
B. configure the same process ID for the router OSPF process
C. configure the same router ID on both routing processes
D. Configure the interfaces as OSPF active on both sides.
E. configure both interfaces with the same area ID

Answer: AE

NEW QUESTION 129
- (Topic 2)
Refer to the exhibit.

```
SW1(config-line)#line vty 0 15
SW1(config-line)#no login local
SW1(config-line)#password cisco

SW2(config)#username admin1 password abcd1234
SW2(config)#username admin2 password abcd1234
SW2(config-line)#line vty 0 15
SW2(config-line)#login local

SW3(config)#username admin1 secret abcd1234
SW3(config)#username admin2 secret abcd1234
SW3(config-line)#line vty 0 15
SW3(config-line)#login local

SW4(config)#username admin1 secret abcd1234
SW4(config)#username admin2 secret abcd1234
SW4(config-line)#line console 0
SW4(config-line)#login local
```

An administrator configures four switches for local authentication using passwords that are stored in a cryptographic hash. The four switches must also support SSH access for administrators to manage the network infrastructure. Which switch is configured correctly to meet these requirements?

A. SW1
B. SW2
C. SW3
D. SW4

Answer: C

NEW QUESTION 132
- (Topic 2)
When a site-to-site VPN is used, which protocol is responsible for the transport of user data?

A. IKEv2
B. IKEv1
C. IPsec
D. MD5

Answer: C

Explanation:
A site-to-site VPN allows offices in multiple fixed locations to establish secure connections with each other over a public network such as the Internet. A site-to-site VPN means that two sites create a VPN tunnel by encrypting and sending data between two devices. One set of rules for creating a siteto-site VPN is defined by IPsec.

NEW QUESTION 134
- (Topic 2)
Refer to the exhibit.

```
Switch(config)#hostname R1
R1(config)#interface FastEthernet0/1
R1(config-if)#no switchport
R1(config-if)#ip address 10.100.20.42 255.255.255.0
R1(config-if)#line vty 0 4
R1(config-line)#login
```

An engineer booted a new switch and applied this configuration via the console port. Which additional configuration must be applied to allow administrators to authenticate directly to enable privilege mode via Telnet using a local username and password?

R1(config)#username admin privilege 15 secret p@ss1234
R1(config-if)#line vty 0 4
R1(config-line)#login local

R1(config)#username admin secret p@ss1234
R1(config-if)#line vty 0 4
R1(config-line)#login local
R1(config)#enable secret p@ss1234

R1(config)#username admin
R1(config-if)#line vty 0 4
R1(config-line)#password p@ss1234
R1(config-line)#transport input telnet

R1(config)#username admin
R1(config-if)#line vty 0 4
R1(config-line)#password p@ss1234

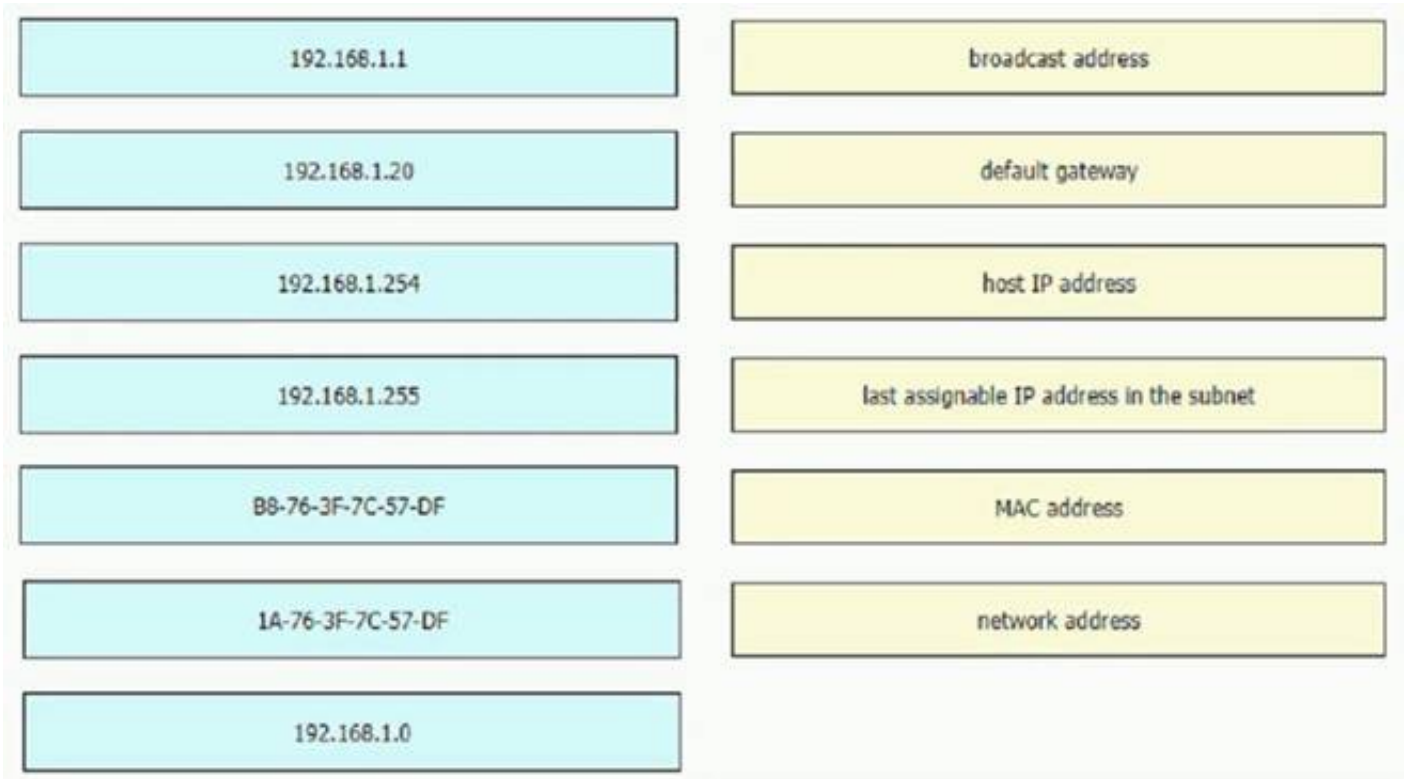
A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

NEW QUESTION 139
DRAG DROP - (Topic 2)
Refer to the exhibit.

```
C:\>ipconfig/all

Windows IP Configuration

   Host Name . . . . . . . . . . . . : Inspiron15
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Mixed
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Wireless LAN adapter Local Area Connection* 12:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
   Physical Address. . . . . . . . . : 1A-76-3F-7C-57-DF
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Dell Wireless 1703 802.11b/g/n (2.4GHz)
   Physical Address. . . . . . . . . : B8-76-3F-7C-57-DF
   DHCP Enabled. . . . . . . . . . . : No
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::e09f:9839:6e86:f755%12(Preferred)
                  . . . . . . . . . . : 192.168.1.20(Preferred)
                  . . . . . . . . . . : 255.255.255.0
                  . . . . . . . . . . : 192.168.1.1
   DHCPv6 IAID . . . . . . . . . . . : 263747135
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-18-E6-32-43-B8-76-3F-7C-57-DF

                  . . . . . . . . . . : 192.168.1.15
                                        192.168.1.16
   NetBIOS over Tcpip. . . . . . . . : Enabled
```

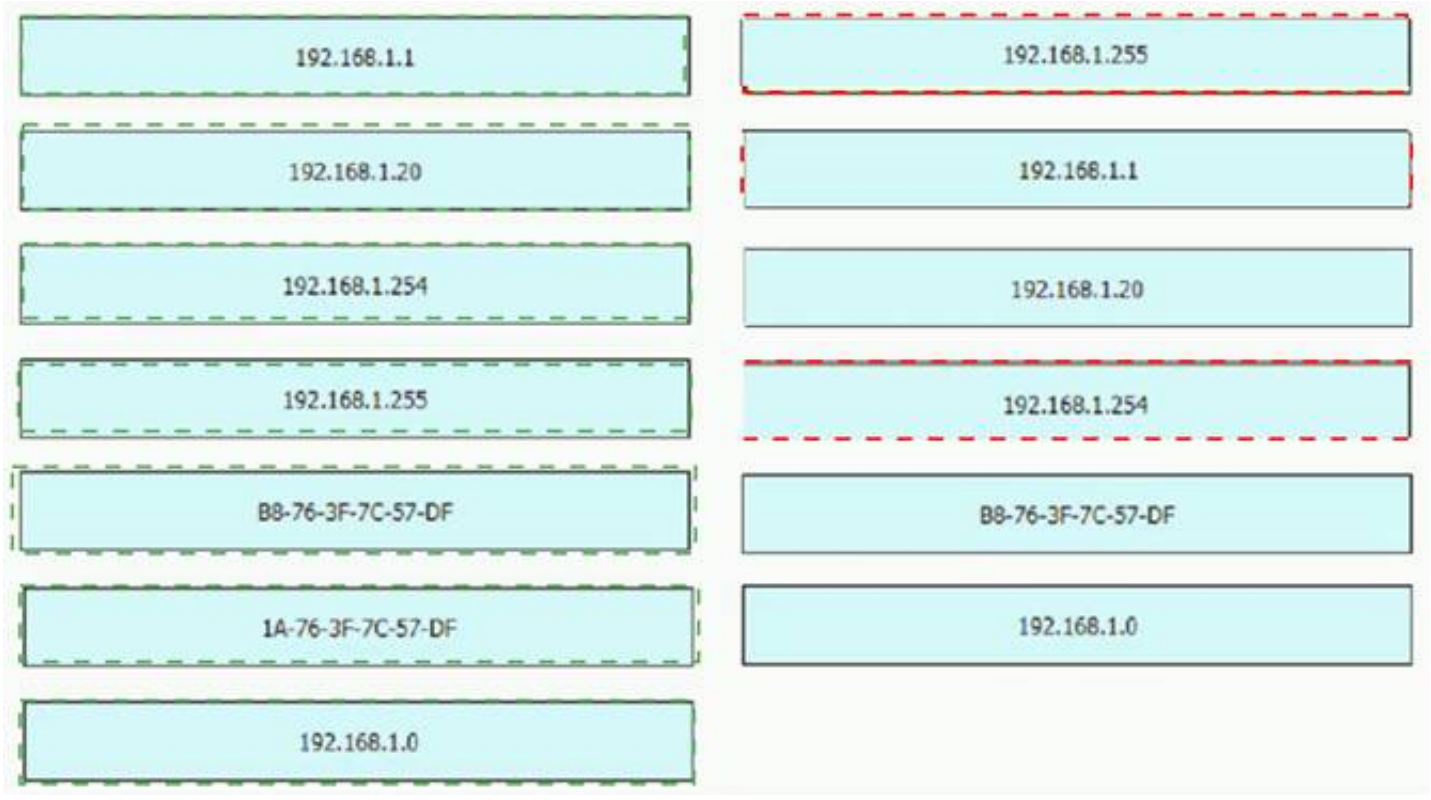
An engineer is required to verify that the network parameters are valid for the users wireless LAN connectivity on a /24 subnet. Drag and drop the values from the left onto the network parameters on the right. Not all values are used.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 141
- (Topic 2)
What is the benefit of configuring PortFast on an interface?

A. After the cable is connected, the interface uses the fastest speed setting available for that cable type
B. After the cable is connected, the interface is available faster to send and receive user data
C. The frames entering the interface are marked with higher priority and then processed faster by a switch.
D. Real-time voice and video frames entering the interface are processed faster

Answer: B

NEW QUESTION 145
- (Topic 2)
Which action is taken by a switch port enabled for PoE power classification override?

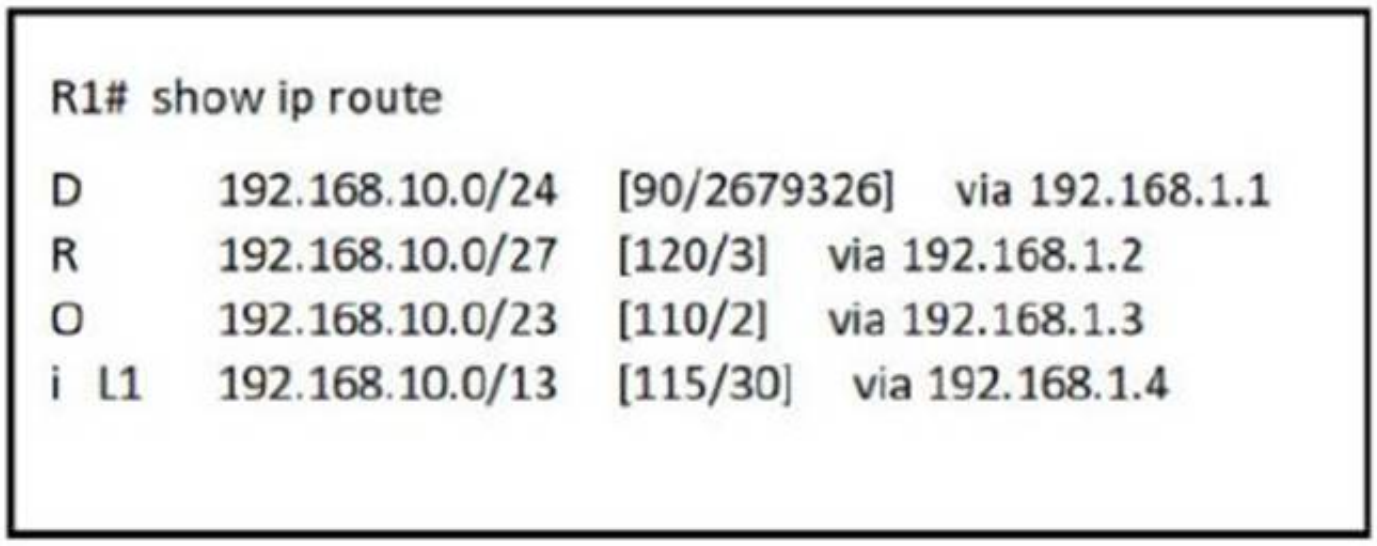
A. When a powered device begins drawing power from a PoE switch port a syslog message is generated
B. As power usage on a PoE switch port is checked data flow to the connected device is temporarily paused
C. If a switch determines that a device is using less than the minimum configured power it assumes the device has failed and disconnects
D. Should a monitored port exceeds the maximum administrative value for power, the port is shutdown and err-disabled

Answer: D

Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SX/configuration/guide/book/power_over_ethernet.pdf
PoE monitoring and policing compares the power consumption on ports with the administrative maximum value (either a configured maximum value or the port's default value). If the power consumption on a monitored port exceeds the administrative maximum value, the following actions occur:– A syslog message is

issued.– The monitored port is shut down and error-disabled.– The allocated power is freed.

NEW QUESTION 146
- (Topic 2)
Refer to the exhibit.



How does router R1 handle traffic to 192.168.10.16?

A. It selects the IS-IS route because it has the shortest prefix inclusive of the destination address.
B. It selects the EIGRP route because it has the lowest administrative distance.
C. It selects the OSPF route because it has the lowest cost.
D. It selects the RIP route because it has the longest prefix inclusive of the destination address.

Answer: D

NEW QUESTION 149
- (Topic 2)
R1 has learned route 192.168.12.0/24 via IS-IS. OSPF, RIP. and Internal EIGRP Under normal operating conditions, which routing protocol is installed in the routing table?

A. IS-IS
B. RIP
C. Internal EIGRP
D. OSPF

Answer: C

Explanation:
With the same route (prefix), the router will choose the routing protocol with lowest Administrative Distance (AD) to install into the routing table. The AD of Internal EIGRP (90) is lowest so it would be chosen. The table below lists the ADs of popular routing protocols.

Route Source	Administrative Distance
Directly Connected	0
Static	1
EIGRP	90
EIGRP Summary route	5
OSPF	110
RIP	120

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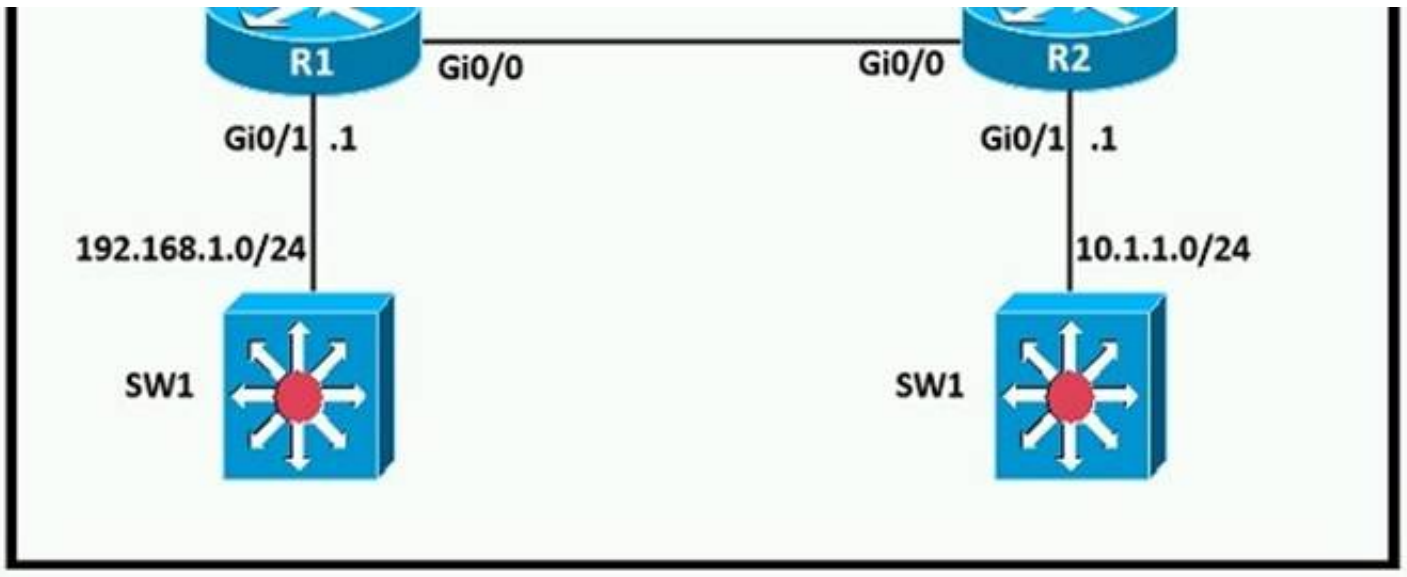
Note: The AD of IS-IS is 115. The “EIGRP” in the table above is “Internal EIGRP”. The AD of “External EIGRP” is 170. An EIGRP external route is a route that was redistributed into EIGRP.

NEW QUESTION 151
- (Topic 2)
Refer to the exhibit.



A network engineer is in the process of establishing IP connectivity between two sites. Routers R1 and R2 are partially configured with IP addressing. Both routers have the ability to access devices on their respective LANs. Which command set configures the IP connectivity between devices located on both LANs in each site?

R1
ip route 192.168.1.0 255.255.255.0 GigabitEthernet0/0
R2
ip route 10.1.1.1 255.255.255.0 GigabitEthernet0/0

R1
ip route 0.0.0.0 0.0.0.0 209.165.200.225
R2
ip route 0.0.0.0 0.0.0.0 209.165.200.226

R1
ip route 192.168.1.1 255.255.255.0 GigabitEthernet0/1
R2
ip route 10.1.1.1 255.255.255.0 GigabitEthernet0/1

R1
ip route 0.0.0.0 0.0.0.0 209.165.200.226
R2
ip route 0.0.0.0 0.0.0.0 209.165.200.225

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

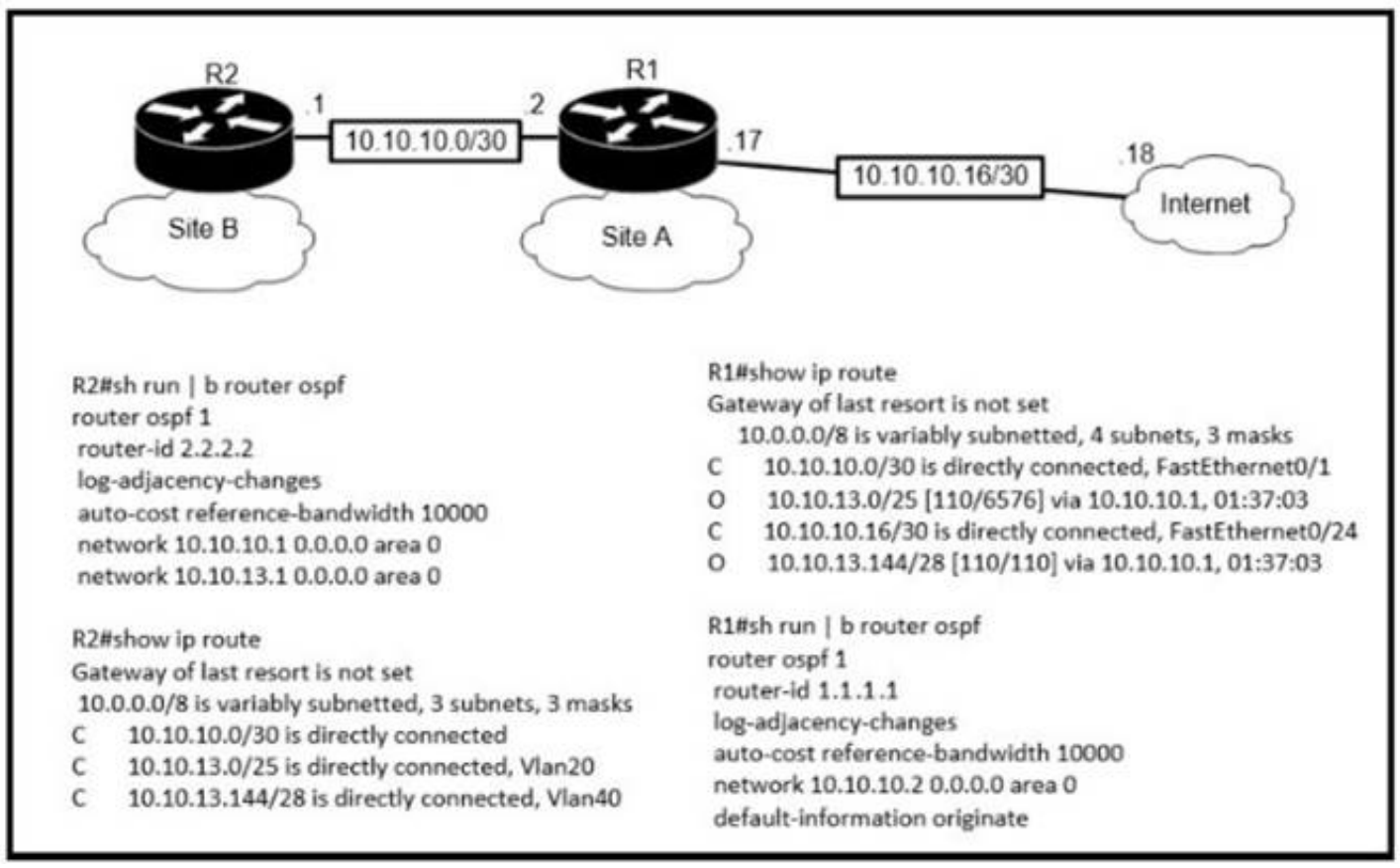
NEW QUESTION 152
- (Topic 2)
What are two characteristics of a public cloud Implementation? (Choose two.)

A. It is owned and maintained by one party, but it is shared among multiple organizations.
B. It enables an organization to fully customize how It deploys network resources.
C. It provides services that are accessed over the Internet.
D. It Is a data center on the public Internet that maintains cloud services for only one company.
E. It supports network resources from a centralized third-party provider and privately- owned virtual resources

Answer: CE

Explanation:
Private cloud is cloud infrastructure operated solely for a single organization, whether managed internally or by a third party, and hosted either internally or externally. Most public-cloud providers offer direct-connection services that allow customers to securely link their legacy data centers to their cloud-resident applications.

NEW QUESTION 153
- (Topic 2)
Refer to the exhibit.



The default-information originate command is configured under the R1 OSPF configuration After testing workstations on VLAN 20 at Site B cannot reach a DNS server on the Internet Which action corrects the configuration issue?

A. Add the default-information originate command onR2
B. Configure the ip route 0.0.0.0 0.0.0.0 10.10.10.18 command on R1
C. Configure the ip route 0.0.0.0 0.0.0.0 10.10.10.2 command on R2
D. Add the always keyword to the default-information originate command on R1

Answer: B

NEW QUESTION 156
- (Topic 2)
A user configured OSPF and advertised the Gigabit Ethernet interface in OSPF By default, which type of OSPF network does this interface belong to?

A. point-to-multipoint
B. point-to-point
C. broadcast
D. nonbroadcast

Answer: C

Explanation:
https://www.oreilly.com/library/view/cisco-ios- cookbook/0596527225/ch08s15.html
The Broadcast network type is the default for an OSPF enabled ethernet interface (while Point-toPoint is the default OSPF network type for Serial interface with HDLC and PPP encapsulation).

NEW QUESTION 159
- (Topic 2)
Refer to the exhibit.

```
Designated Router (ID) 10.11.11.11, Interface address 10.10.10.1
Backup Designated router (ID) 10.3.3.3, Interface address 10.10.10.3
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
oob-resync timeout 40
Hello due in 00:00:08
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 1/1/1, flood queue length 0
Next 0x0(0)/0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 6
Last flood scan time is 0 msec, maximum is 1 msec
Neighbor Count is 3, Adjacent neighbor count is 3
Adjacent with neighbor 10.1.1.4
Adjacent with neighbor 10.2.2.2
Adjacent with neighbor 10.3.3.3 (Backup Designated Router)
Suppress hello for 0 neighbor(s)
```

The show ip ospf interface command has been executed on R1 How is OSPF configured?

A. The interface is not participating in OSPF
B. A point-to-point network type is configured
C. The default Hello and Dead timers are in use
D. There are six OSPF neighbors on this interface

Answer: C

Explanation:
https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first- ospf/13689-17.html

NEW QUESTION 161
- (Topic 2)
Which type of traffic is sent with pure iPsec?

A. broadcast packets from a switch that is attempting to locate a MAC address at one of several remote sites
B. multicast traffic from a server at one site to hosts at another location
C. spanning-tree updates between switches that are at two different sites
D. unicast messages from a host at a remote site to a server at headquarters

Answer: D

Explanation:
"The original poster makes a correct observation that EIGRP does not work in a pure IPSEC environment. IPSEC was designed to process unicast traffic.

NEW QUESTION 164
- (Topic 2)
What does an SDN controller use as a communication protocol to relay forwarding changes to a southbound API?

A. OpenFlow
B. Java
C. REST
D. XML

Answer: A

NEW QUESTION 166
- (Topic 2)
A network administrator must to configure SSH for remote access to router R1 The requirement is to use a public and private key pair to encrypt management traffic to and from the connecting client.
Which configuration, when applied, meets the requirements?

```
R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key generate ec keysize 2048

R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key generate rsa modulus 1024

R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key generate ec keysize 1024

R1#enable
R1#configure terminal
R1(config)#ip domain-name cisco.com
R1(config)#crypto key encrypt rsa name myKey
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

NEW QUESTION 170
- (Topic 2)
A Cisco IP phone receive untagged data traffic from an attached PC. Which action is taken by the phone?

A. It allows the traffic to pass through unchanged
B. It drops the traffic
C. It tags the traffic with the default VLAN
D. It tags the traffic with the native VLAN

Answer: A

Explanation:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960x/software/15-0_2_EX/vlan/configuration_guide/b_vlan_152ex_2960-x_cg/b_vlan_152ex_2960-x_cg_chapter_0110.pdf
Untagged traffic from the device attached to the Cisco IP Phone passes through the phone unchanged, regardless of the trust state of the access port on the phone.

NEW QUESTION 173
- (Topic 2)
An engineer must configure traffic for a VLAN that is untagged by the switch as it crosses a trunk link. Which command should be used?

A. switchport trunk allowed vlan 10
B. switchport trunk native vlan 10
C. switchport mode trunk
D. switchport trunk encapsulation dot1q

Answer: B

NEW QUESTION 178
- (Topic 2)
Which goal is achieved by the implementation of private IPv4 addressing on a network?

A. provides an added level of protection against Internet exposure
B. provides a reduction in size of the forwarding table on network routers
C. allows communication across the Internet to other private networks
D. allows servers and workstations to communicate across public network boundaries

Answer: A

NEW QUESTION 180
- (Topic 2)

A network engineer must create a diagram of a multivendor network. Which command must be configured on the Cisco devices so that the topology of the network can be mapped?

A. Device(Config)#lldp run
B. Device(Config)#cdp run
C. Device(Config-if)#cdp enable
D. Device(Config)#flow-sampler-map topology

Answer: A

NEW QUESTION 184
- (Topic 2)
When a client and server are not on the same physical network, which device is used to forward requests and replies between client and server for DHCP?

A. DHCP relay agent
B. DHCP server
C. DHCPDISCOVER
D. DHCPOFFER

Answer: A

NEW QUESTION 187
- (Topic 2)
An engineer configures interface Gi1/0 on the company PE router to connect to an ISP Neighbor discovery is disabled

```
interface Gi1/0
description HQ_DC3978-87297
duplex full
speed 100
negotiation auto
lldp transmit
lldp receive
```

Which action is necessary to complete the configuration if the ISP uses third-party network devices?

A. Enable LLDP globally
B. Disable autonegotiation
C. Disable Cisco Discovery Protocol on the interface
D. Enable LLDP-MED on the ISP device

Answer: D

NEW QUESTION 188
- (Topic 2)
Refer to Exhibit.

```
SW2
vtp domain cisco
vtp mode transparent
vtp password ciscotest
interface fastethernet0/1
   description connection to sw1
   switchport mode trunk
   switchport trunk encapsulation dot1q
```

How does SW2 interact with other switches in this VTP domain?

A. It processes VTP updates from any VTP clients on the network on its access ports.
B. It receives updates from all VTP servers and forwards all locally configured VLANs out all trunk ports
C. It forwards only the VTP advertisements that it receives on its trunk ports.
D. It transmits and processes VTP updates from any VTP Clients on the network on its trunk ports

Answer: C

Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/lan-switching/vtp/10558-21.html
The VTP mode of SW2 is transparent so it only forwards the VTP updates it receives to its trunk links without processing them.

NEW QUESTION 189

- (Topic 2)
Which network plane is centralized and manages routing decisions?

A. policy plane
B. management plane
C. control plane
D. data plane

Answer: C

NEW QUESTION 194
- (Topic 2)
Refer to the exhibit.

```
Switch#show etherchannel summary
[output omitted]

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------
10     Po10(SU)         LACP      Gi0/0(P)    Gi0/1(P)
20     Po20(SU)         LACP      Gi0/2(P)    Gi0/3(P)
```

Which two commands were used to create port channel 10? (Choose two)

A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

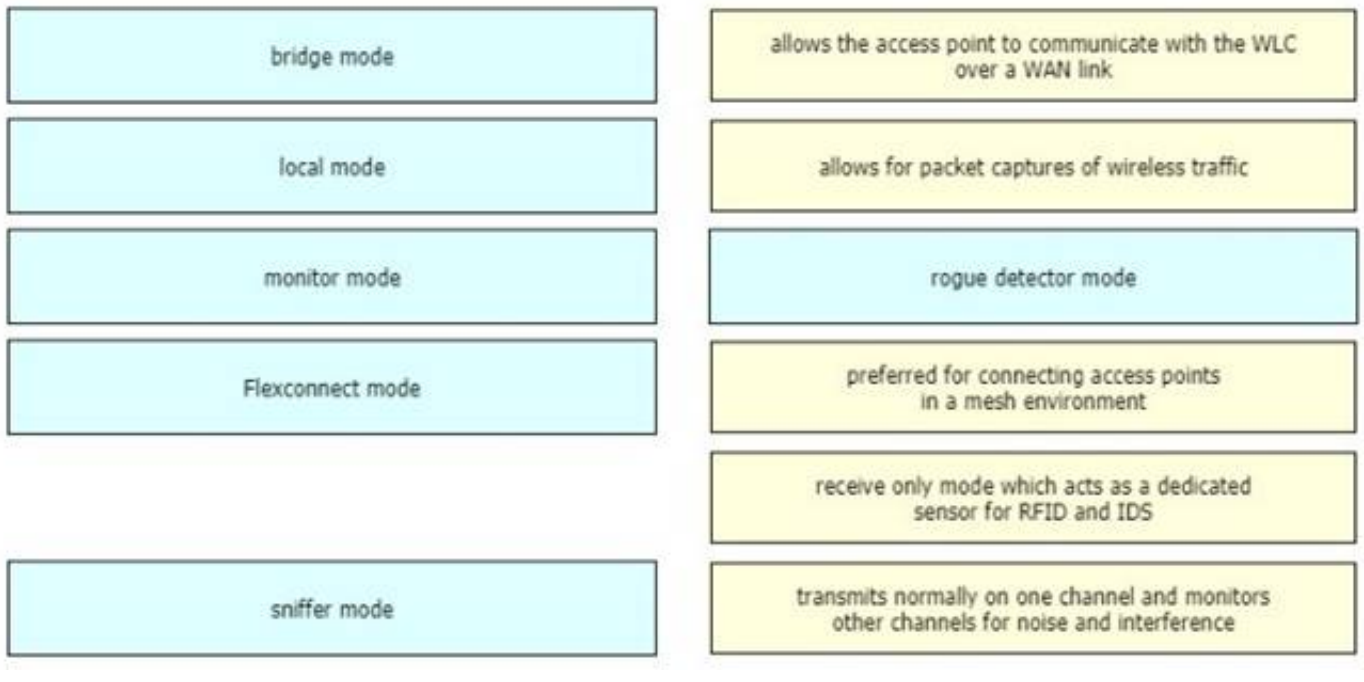
Answer: AC

NEW QUESTION 196
- (Topic 2)
Which technology must be implemented to configure network device monitoring with the highest security?

A. IP SLA
B. syslog
C. NetFlow
D. SNMPv3

Answer: C

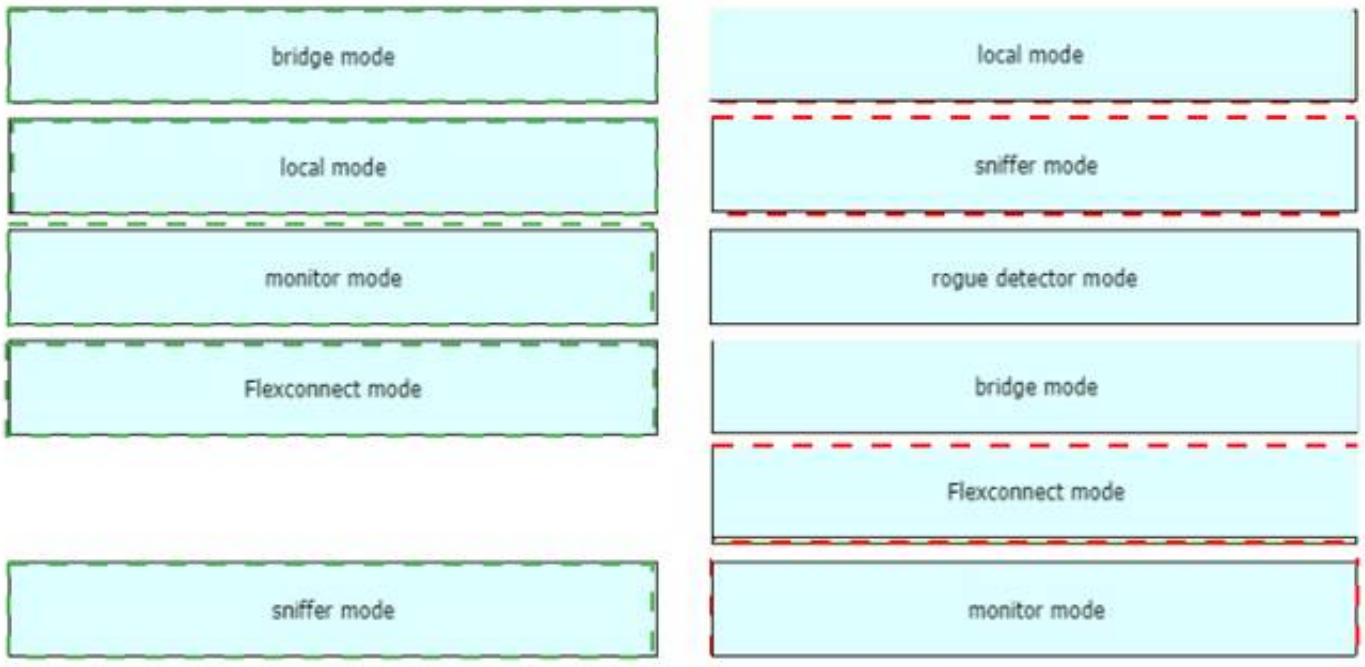
NEW QUESTION 200
DRAG DROP - (Topic 2)
Drag and drop the lightweight access point operation modes from the left onto the descriptions on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 202
- (Topic 2)
Refer to the exhibit.

```
Gateway of last resort is 10.12.0.1 to network 0.0.0.0

O*E2   0.0.0.0/0 [110/1] via 10.12.0.1, 00:00:01, GigabitEthernet0/0
       10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C      10.0.0.0/24 is directly connected, GigabitEthernet0/0
L      10.0.0.2/32 is directly connected, GigabitEthernet0/0
C      10.13.0.0/24 is directly connected, GigabitEthernet0/1
L      10.13.0.2/32 is directly connected, GigabitEthernet0/1
```

If configuring a static default route on the router with the ip route 0.0.0.0 0.0.0.0 10.13.0.1 120 command how does the router respond?

A. It ignores the new static route until the existing OSPF default route is removed
B. It immediately replaces the existing OSPF route in the routing table with the newly configured static route
C. It starts load-balancing traffic between the two default routes
D. It starts sending traffic without a specific matching entry in the routing table to GigabitEthernet0/1

Answer: A

Explanation:
Our new static default route has the Administrative Distance (AD) of 120, which is bigger than the AD of OSPF External route (O*E2) so it will not be pushed into the routing table until the current OSPF External route is removed.For your information, if you don't type the AD of 120 (using the command "ip route 0.0.0.0 0.0.0.0 10.13.0.1") then the new static default route would replace the OSPF default route as the default AD of static route is 1. You will see such line in the routing table:S* 0.0.0.0/0 [1/0] via 10.13.0.1

NEW QUESTION 203
- (Topic 2)

A device detects two stations transmitting frames at the same time. This condition occurs after the first 64 bytes of the frame is received interface counter increments?

A. collision
B. CRC
C. runt
D. late collision

Answer: D

Explanation:
https://www.cisco.com/c/en/us/support/docs/interfaces-modules/port-adapters/12768-eth-collisions.html

NEW QUESTION 206
- (Topic 2)
Where does wireless authentication happen?

A. SSID
B. radio
C. band
D. Layer 2

Answer: D

NEW QUESTION 209
- (Topic 2)
Where is the interface between the control plane and data plane within the software- defined architecture?

A. control layer and the infrastructure layer
B. application layer and the infrastructure layer
C. application layer and the management layer
D. control layer and the application layer

Answer: A

NEW QUESTION 211
- (Topic 2)
Which port type supports the spanning-tree portfast command without additional configuration?

A. access ports
B. Layer 3 main Interfaces
C. Layer 3 suninterfaces
D. trunk ports

Answer: A

NEW QUESTION 213
- (Topic 2)
What are two characteristics of a controller-based network? (Choose two)

A. The administrator can make configuration updates from the CLI
B. It uses northbound and southbound APIs to communicate between architectural layers
C. It moves the control plane to a central point.
D. It decentralizes the control plane, which allows each device to make its own forwarding decisions
E. It uses Telnet to report system issues.

Answer: BC

NEW QUESTION 215
- (Topic 2)
What is a difference between RADIUS and TACACS+?

A. RADIUS is most appropriate for dial authentication, but TACACS+ can be used for multiple types of authentication
B. TACACS+ encrypts only password information and RADIUS encrypts the entire payload
C. TACACS+ separates authentication and authorization, and RADIUS merges them
D. RADIUS logs all commands that are entered by the administrator, but TACACS+ logs only start, stop, and interim commands

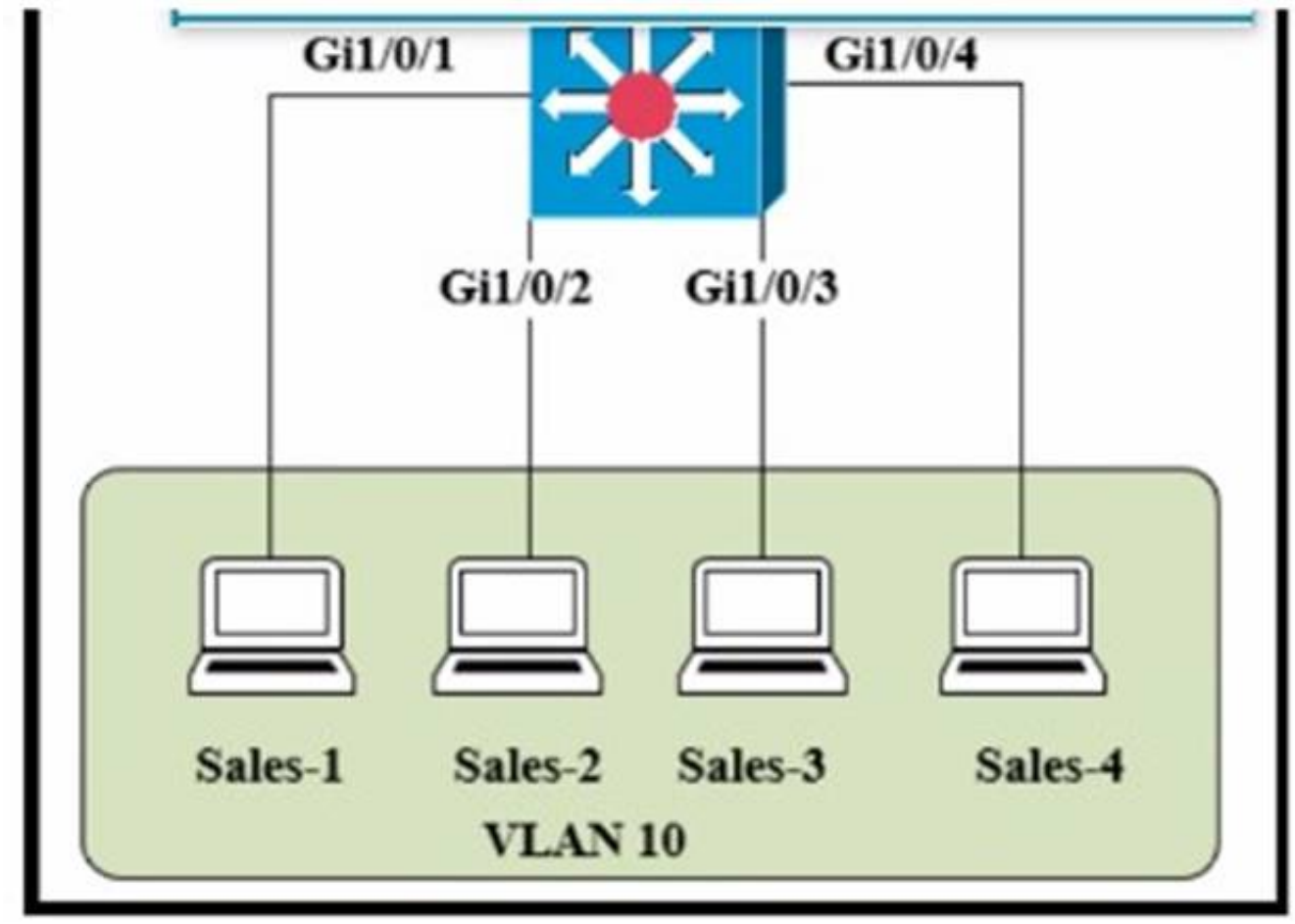
Answer: C

NEW QUESTION 220
- (Topic 2)
Which QoS tool is used to optimize voice traffic on a network that is primarily intended for data traffic?

A. FIFO
B. WFQ
C. PQ
D. WRED

Answer: C

NEW QUESTION 223
- (Topic 2)
Refer to the exhibit.



The entire contents of the MAC address table are shown. Sales-4 sends a data frame to Sales-1.

```
Sales-SW#show mac-address-table
Mac Address Table
-------------------------------------------------------------------------
VLAN    MAC Address       Type        Ports
10      000c.8590.bb7d    DYNAMIC     Gi1/0/1
10      3910.4161.9bb7    DYNAMIC     Gi1/0/2
10      00d0.d3b6.957c    DYNAMIC     Gi1/0/3
Sales-SW#
```

What does the switch do as it receives the frame from Sales-4?

A. Perform a lookup in the MAC address table and discard the frame due to a missing entry.
B. Insert the source MAC address and port into the forwarding table and forward the frame to Sales-1.
C. Map the Layer 2 MAC address to the Layer 3 IP address and forward the frame.
D. Flood the frame out of all ports except on the port where Sales-1 is connected.

Answer: B

Explanation:
https://www.ciscopress.com/articles/article.asp?p=3089352&seqNum=6

NEW QUESTION 224
- (Topic 1)
Why was the RFC 1918 address space defined?

A. conserve public IPv4 addressing
B. preserve public IPv6 address space
C. reduce instances of overlapping IP addresses
D. support the NAT protocol

Answer: A

NEW QUESTION 229
- (Topic 1)
Refer to the exhibit.

```
import ncclient


with ncclient.manager.connect(host='192.168.1.1', port=830, username='root',
                              password='teset123!', allow_agent=False) as m:
    print(m.get_config('running').data_xml)
```

After running the code in the exhibit, which step reduces the amount of data that the NETCONF server returns to the NETCONF client, to only the interface's configuration?

A. Use the lxml library to parse the data returned by the NETCONF server for the interface's configuration.
B. Create an XML filter as a string and pass it to get_config() method as an argument.
C. Create a JSON filter as a string and pass it to the get_config() method as an argument.
D. Use the JSON library to parse the data returned by the NETCONF server for the interface's configuration.

Answer: D

NEW QUESTION 233
- (Topic 1)
After installing a new Cisco ISE server, which task must the engineer perform on the Cisco WLC to connect wireless clients on a specific VLAN based on their credentials?

A. Enable the allow AAA Override
B. Enable the Even: Driven RRM.
C. Disable the LAG Mode or Next Reboot.
D. Enable the Authorized MIC APs against auth-list or AAA.

Answer: A

NEW QUESTION 235
- (Topic 1)
Which 802.11 frame type is association response?

A. management
B. protected frame
C. control
D. action

Answer: A

Explanation:
Reference: https://en.wikipedia.org/wiki/802.11_Frame_Types

NEW QUESTION 236
- (Topic 1)
Which two command sequences must you configure on switch to establish a Layer 3 EtherChannel with an open-standard protocol? (Choose two)

A. interface GigabitEthernet0/0/1 channel-group 10 mode on
B. interface GigabitEthernet0/0/1 channel-group 10 mode active
C. interface GigabitEthernet0/0/1 channel-group 10 mode auto
D. interface port-channel 10 switchportswitchport mode trunk
E. interface port-channel 10 no switchportip address 172.16.0.1.255.255.255.0

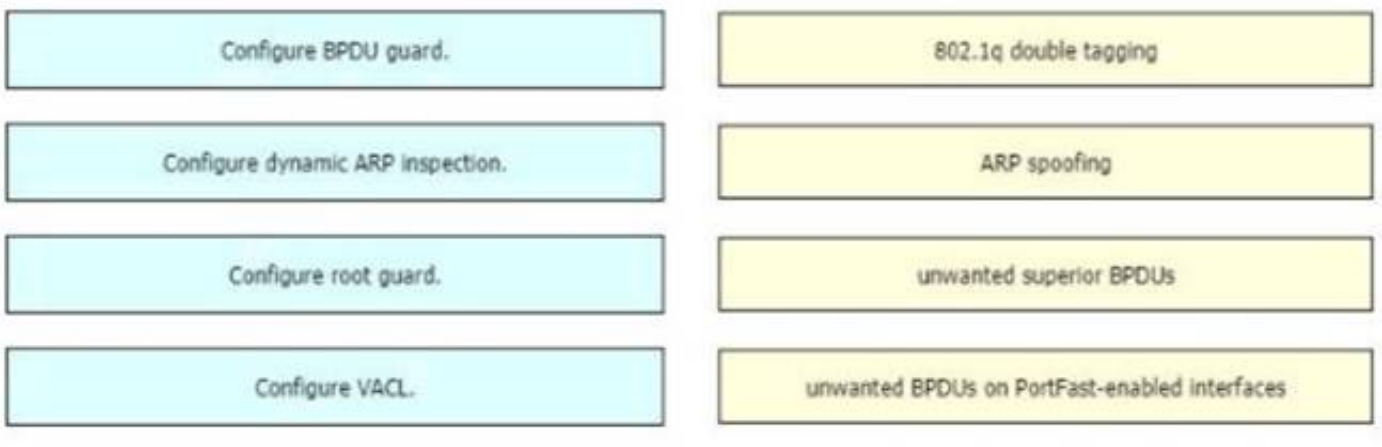
Answer: BE

NEW QUESTION 241
- (Topic 1)
Which WAN access technology is preferred for a small office / home office architecture?

A. broadband cable access
B. frame-relay packet switching
C. dedicated point-to-point leased line
D. Integrated Services Digital Network switching.

Answer: A

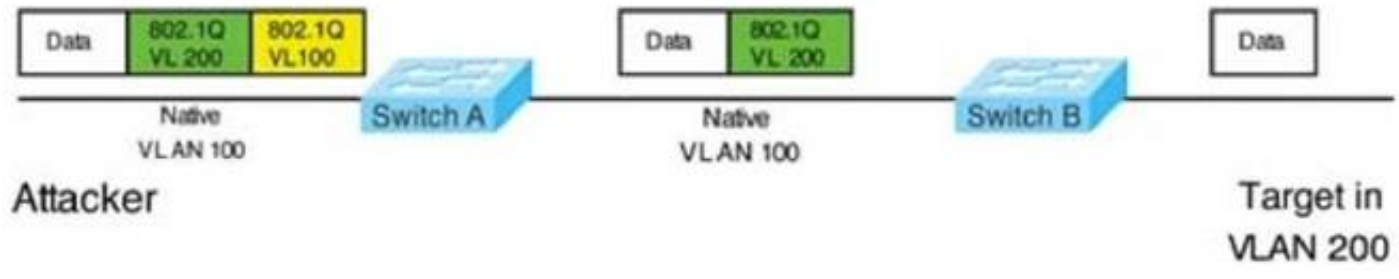
NEW QUESTION 243
DRAG DROP - (Topic 1)
Drag and drop the threat-mitigation techniques from the left onto the types of threat or attack they mitigate on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Double-Tagging attack:



In this attack, the attacking computer generates frames with two 802.1Q tags. The first tag matches the native VLAN of the trunk port (VLAN 10 in this case), and the second matches the VLAN of a host it wants to attack (VLAN 20).When the packet from the attacker reaches Switch A, Switch A only sees the first VLAN 10 and it matches with its native VLAN 10 so this VLAN tag is removed. Switch A forwards the frame out all links with the same native VLAN 10. Switch B receives the frame with an tag of VLAN 20 so it removes this tag and forwards out to the Victim computer.Note: This attack only works if the trunk (between two switches) has the same native VLAN as the attacker.To mitigate this type of attack, you can use VLAN access control lists (VACLs, which applies to all traffic within a VLAN. We can use VACL to drop attacker traffic to specific victims/servers) or implement Private VLANs.ARP attack (like ARP poisoning/spoofing) is a type of attack in which a malicious actor sends falsified ARP messages over a local area network as ARP allows a gratuitous reply from a host even if an ARP request was not received. This results in the linking of an attacker's MAC address with the IP address of a legitimate computer or server on the network. This is an attack based on ARP which is at Layer 2.Dynamic ARP inspection (DAI) is a security feature that validates ARP packets in a network which can be used to mitigate this type of attack.

NEW QUESTION 246
- (Topic 1)
In QoS, which prioritization method is appropriate for interactive voice and video?

A. expedited forwarding
B. traffic policing
C. round-robin scheduling
D. low-latency queuing

Answer: D

NEW QUESTION 247
- (Topic 1)
Which two minimum parameters must be configured on an active interface to enable OSPFv2 to operate? (Choose two)

A. OSPF area
B. OSPF MD5 authentication key
C. iPv6 address
D. OSPf process ID
E. OSPf stub flag

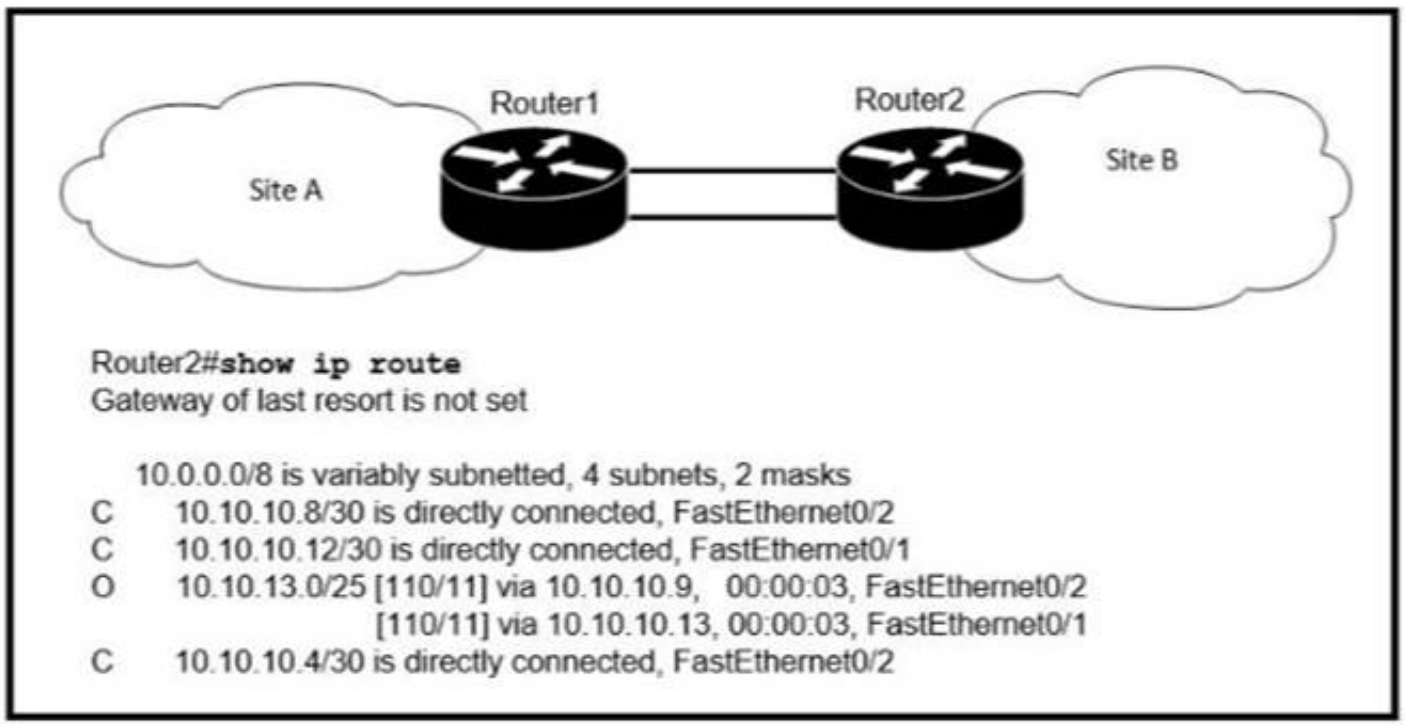
Answer: AD

NEW QUESTION 252
- (Topic 1)
How do TCP and UDP differ in the way they guarantee packet delivery?

A. TCP uses checksum, acknowledgement, and retransmissions, and UDP uses checksums only.
B. TCP uses two-dimensional parity checks, checksums, and cyclic redundancy checks and UDP uses retransmissions only.
C. TCP uses checksum, parity checks, and retransmissions, and UDP uses acknowledgements only.
D. TCP uses retransmissions, acknowledgement and parity checks and UDP uses cyclic redundancy checks only.

Answer: A

NEW QUESTION 256
- (Topic 1)
Refer to the exhibit.



If OSPF is running on this network, how does Router 2 handle traffic from Site B to 10.10.13/25 at Site A?

A. It sends packets out of interface Fa0/2 only.
B. It sends packets out of interface Fa0/1 only.
C. It cannot send packets to 10.10.13 128/25
D. It load-balances traffic out of Fa0/1 and Fa0/2

Answer: C

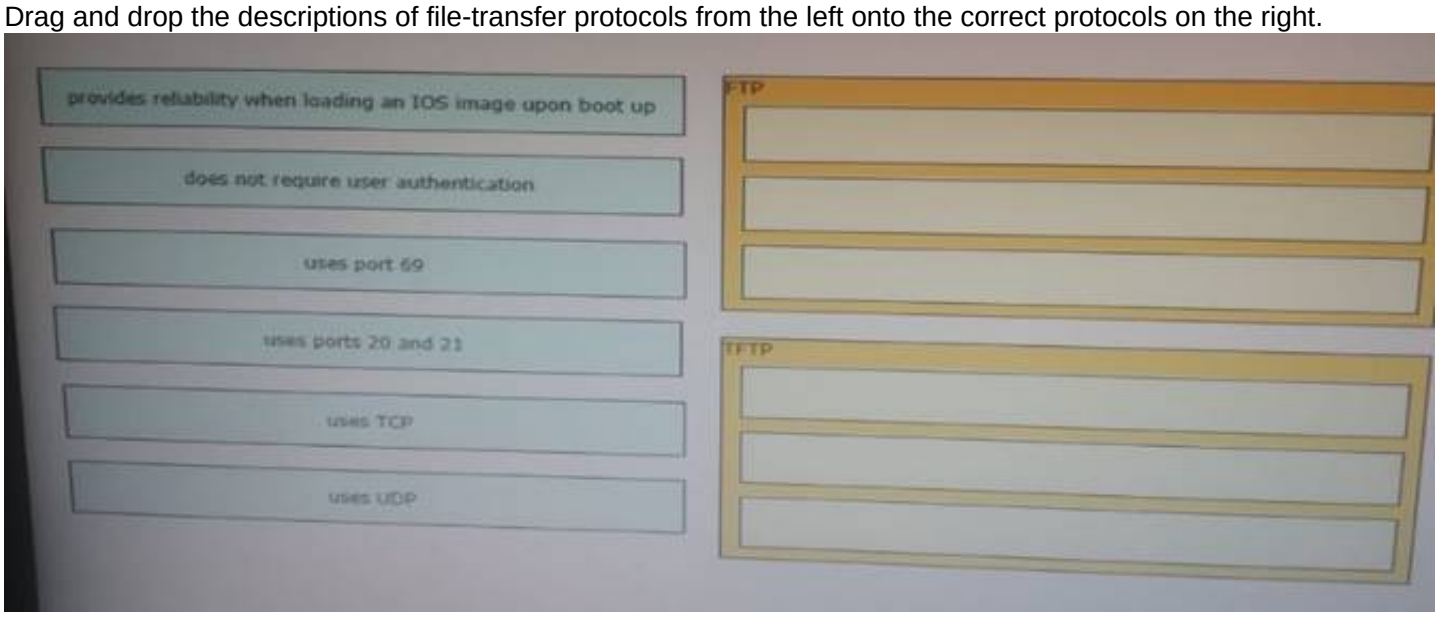
Explanation:
Router2 does not have an entry for the subnet 10.10.13.128/25. It only has an entry for 10.10.13.0/25, which ranges from 10.10.13.0 to 10.10.13.127.
https://study-ccna.com/administrative-distance-metric/

NEW QUESTION 260
- (Topic 1)
Which command on a port enters the forwarding state immediately when a PC is connected to it?

A. switch(config)#spanning-tree portfast default
B. switch(config)#spanning-tree portfast bpduguard default
C. switch(config-if)#spanning-tree portfast trunk
D. switch(config-if)#no spanning-tree portfast

Answer: C

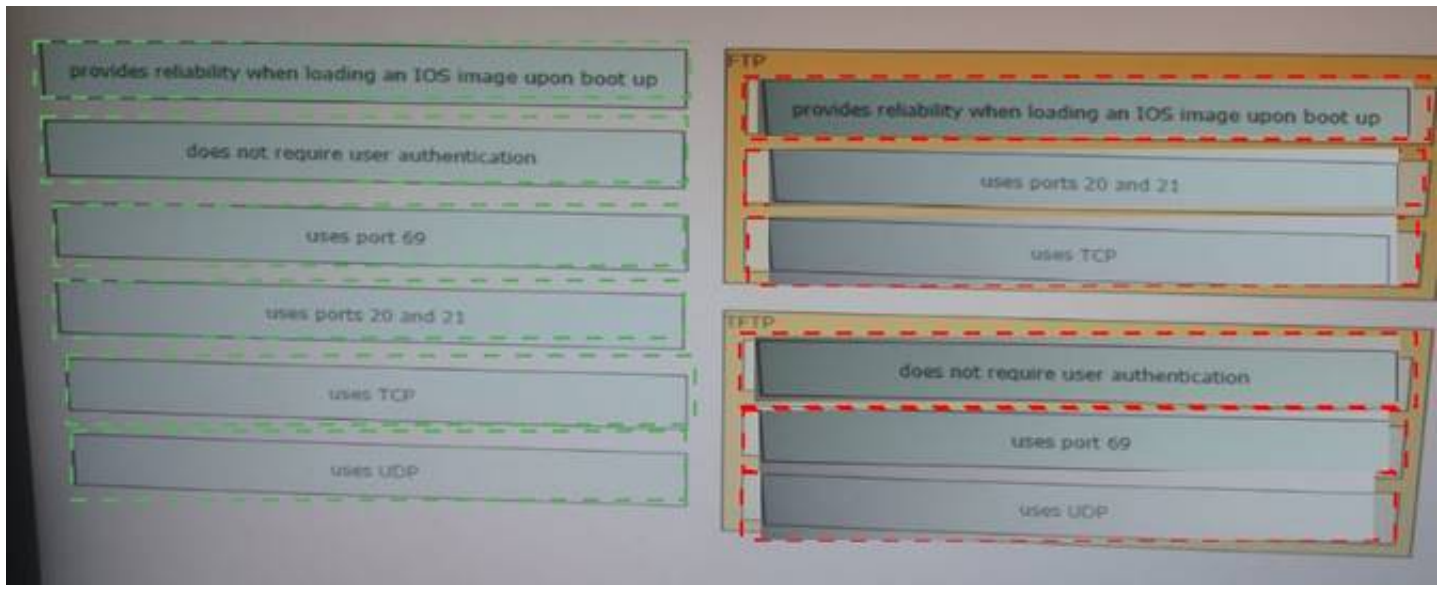
NEW QUESTION 265
DRAG DROP - (Topic 1)
Drag and drop the descriptions of file-transfer protocols from the left onto the correct protocols on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 269
- (Topic 1)
A network analyst is tasked with configured the date and time on a router using EXEC mode. The date must be set to 12:00am. Which command should be used?

A. Clock timezone
B. Clock summer-time-recurring
C. Clock summer-time date
D. Clock set

Answer: D

NEW QUESTION 271
- (Topic 1)
What is a practice that protects a network from VLAN hopping attacks?

A. Enable dynamic ARP inspection
B. Configure an ACL to prevent traffic from changing VLANs
C. Change native VLAN to an unused VLAN ID
D. Implement port security on internet-facing VLANs

Answer: C

NEW QUESTION 276
- (Topic 1)
What occurs to frames during the process of frame flooding?

A. Frames are sent to every port on the switch in the same VLAN except from the originating port
B. Frames are sent to every port on the switch that has a matching entry in the MAC address table.
C. Frames are sent to all ports, including those that are assigned to other VLANs.
D. Frames are sent to every port on the switch in the same VLAN.

Answer: A

NEW QUESTION 280
- (Topic 1)
What is the default behavior of a Layer 2 switch when a frame with an unknown destination MAC address is received?

A. The Layer 2 switch drops the received frame
B. The Layer 2 switch floods packets to all ports except the receiving port in the given VLAN.
C. The Layer 2 switch sends a copy of a packet to CPU for destination MAC address learning.
D. The Layer 2 switch forwards the packet and adds the destination MAC address to its MAC address table

Answer: B

Explanation:
If the destination MAC address is not in the CAM table (unknown destination MAC address), the switch sends the frame out all other ports that are in the same VLAN as the received frame. This is called flooding. It does not flood the frame out the same port on which the frame was received.

NEW QUESTION 285
- (Topic 1)
What criteria is used first during the root port selection process?

A. local port ID
B. lowest path cost to the root bridge
C. lowest neighbor's bridge ID
D. lowest neighbor's port ID

Answer: B

NEW QUESTION 288
- (Topic 1)
Which command prevents passwords from being stored in the configuration as plain text on a router or switch?

A. enable secret
B. service password-encryption
C. username Cisco password encrypt
D. enable password

Answer: B

NEW QUESTION 291
- (Topic 1)
Which two encoding methods are supported by REST APIs? (Choose two)

A. YAML
B. JSON
C. EBCDIC
D. SGML
E. XML

Answer: BE

Explanation:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/2-x/rest_cfg/2_1_x/b_Cisco_APIC_REST_API_Configuration_Guide/b_Cisco_APIC_REST_API_Configuration_Guide_chapter_01.html
Reference:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/5_x/rest_api_config/b_Cisco_N1KV_VMware_REST_API_Config_5x/b_Cisco_N1KV_VMware_REST_API_Config_5x_chapter_010.pdf
The Application Policy Infrastructure Controller (APIC) REST API is a programmatic interface that uses REST architecture. The API accepts and returns HTTP (not enabled by default) or HTTPS messages that contain JavaScript Object Notation (JSON) or Extensible Markup Language (XML) documents.

NEW QUESTION 296
- (Topic 1)
Which two capacities of Cisco DNA Center make it more extensible as compared to traditional campus device management? (Choose two)

A. adapters that support all families of Cisco IOS software
B. SDKs that support interaction with third-party network equipment
C. customized versions for small, medium, and large enterprises
D. REST APIs that allow for external applications to interact natively with Cisco DNA Center
E. modular design that is upgradable as needed

Answer: BD

Explanation:
Cisco DNA Center offers 360-degree extensibility through four distinct types of platform capabilities:+ Intent-based APIs leverage the controller and enable business and IT applications to deliver intent to the network and to reap network analytics and insights for IT and business innovation.+ Process adapters, built on integration APIs, allow integration with other IT and network systems to streamline IT operations and processes.+ Domain adapters, built on integration APIs, allow integration with other infrastructure domains such as data center, WAN, and security to deliver a consistent intent-based infrastructure across the entire IT environment.+ SDKs allow management to be extended to third-party vendor’s network devices to offer support for diverse environments.

NEW QUESTION 297
- (Topic 1)
Which function is performed by the collapsed core layer in a two-tier architecture?

A. enforcing routing policies
B. marking interesting traffic for data polices
C. attaching users to the edge of the network
D. applying security policies

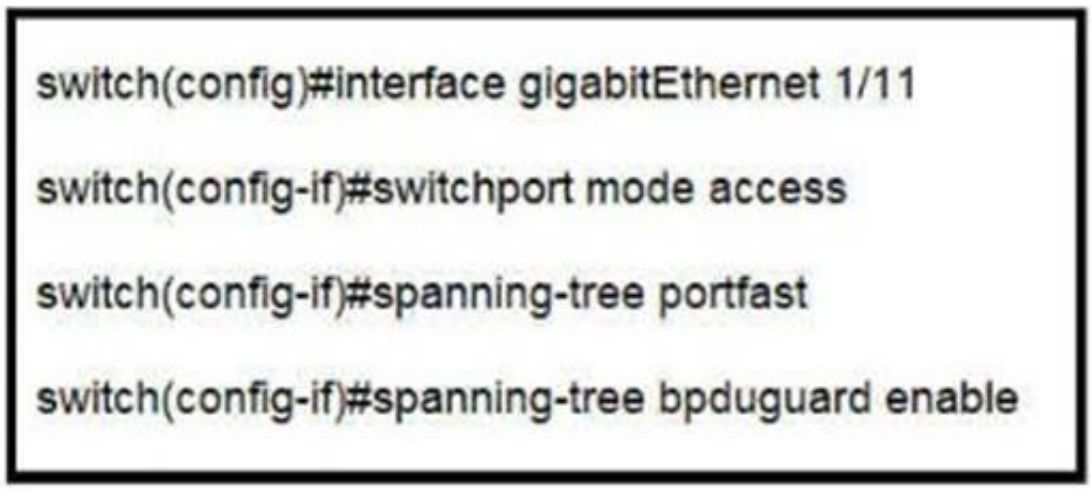
Answer: A

NEW QUESTION 302
- (Topic 1)
What is an appropriate use for private IPv4 addressing?

A. on the public-facing interface of a firewall
B. to allow hosts inside to communicate in both directions with hosts outside the organization
C. on internal hosts that stream data solely to external resources
D. on hosts that communicates only with other internal hosts

Answer: D

NEW QUESTION 306
- (Topic 1)
Refer to the exhibit.



What is the result if Gig1/11 receives an STP BPDU?

A. The port transitions to STP blocking
B. The port transitions to the root port
C. The port immediately transitions to STP forwarding.
D. The port goes into error-disable state

Answer: D

NEW QUESTION 309
- (Topic 1)
In which situation is private IPv4 addressing appropriate for a new subnet on the network of an organization?

A. There is limited unique address space, and traffic on the new subnet will stay local within the organization.
B. The network has multiple endpoint listeners, and it is desired to limit the number of broadcasts.
C. Traffic on the subnet must traverse a site-to-site VPN to an outside organization.
D. The ISP requires the new subnet to be advertised to the internet for web services.

Answer: A

NEW QUESTION 312
- (Topic 1)
How will Link Aggregation be Implemented on a Cisco Wireless LAN Controller?

A. One functional physical port is needed to pass client traffic.
B. The EthernetChannel must be configured in "mode active".
C. When enabled, the WLC bandwidth drops to 500 Mbps.
D. To pass client traffic, two or more ports must be configured.

Answer: A

Explanation:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-5/configuration-guide/b_cg75/b_cg75_chapter_0100010.html

NEW QUESTION 313
- (Topic 1)
What are two roles of Domain Name Services (DNS)? (Choose Two)

A. builds a flat structure of DNS names for more efficient IP operations
B. encrypts network Traffic as it travels across a WAN by default
C. improves security by protecting IP addresses under Fully Qualified Domain Names (FQDNs)
D. enables applications to identify resources by name instead of IP address
E. allows a single host name to be shared across more than one IP address

Answer: DE

NEW QUESTION 318
- (Topic 1)
Which level of severity must be set to get informational syslogs?

A. alert
B. critical
C. notice
D. debug

Answer: C

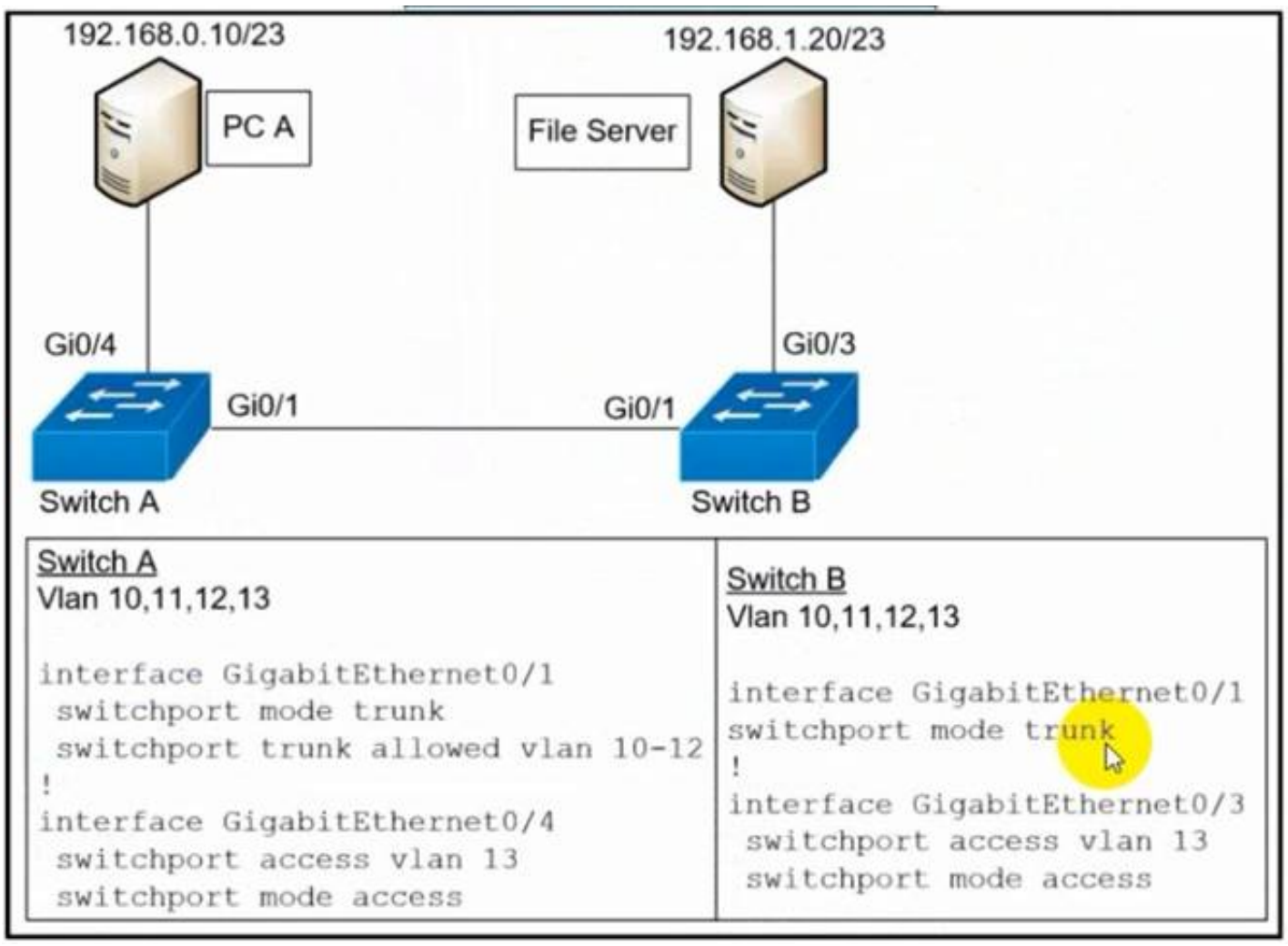
NEW QUESTION 323
- (Topic 1)
Which global command encrypt all passwords in the running configuration?

A. password-encrypt
B. enable password-encryption

C. enable secret
D. service password-encryption

Answer: B

NEW QUESTION 324
- (Topic 1)
Refer to the exhibit.

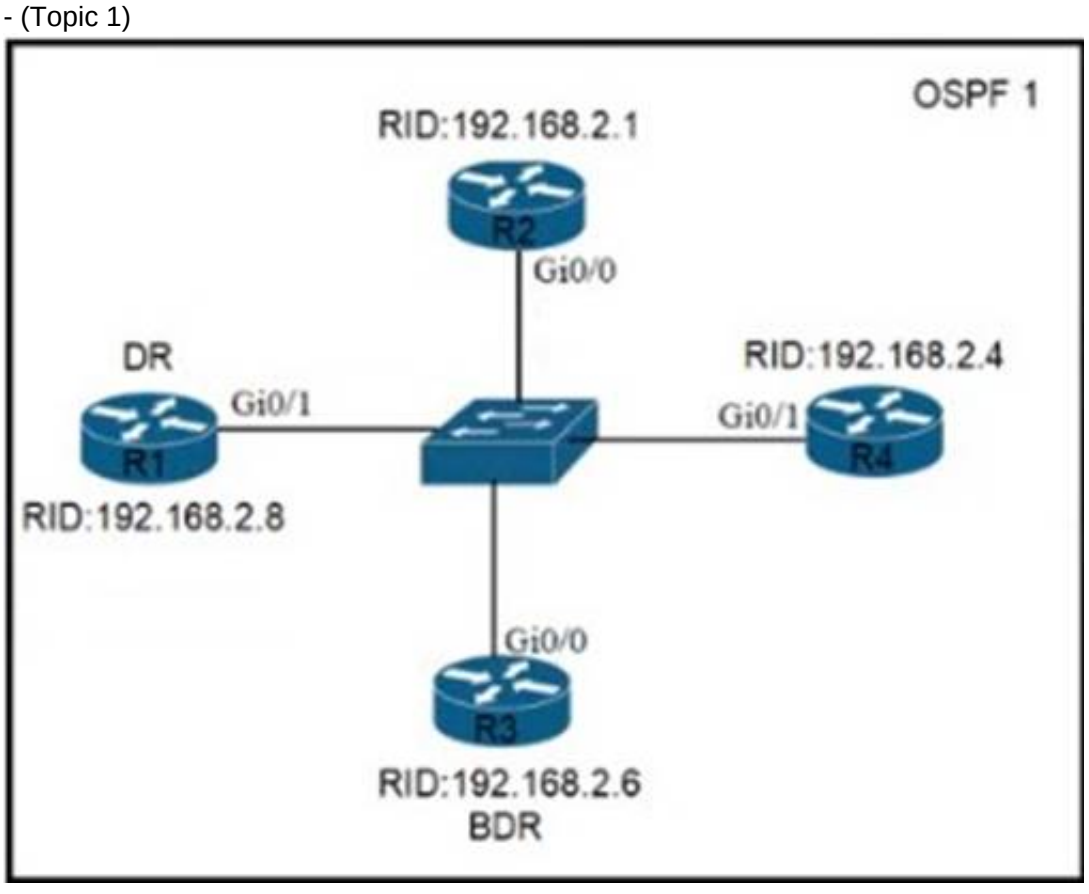


A network engineer must configured communication between PC A and the File Server. To prevent interruption for any other communications, which command must be configured?

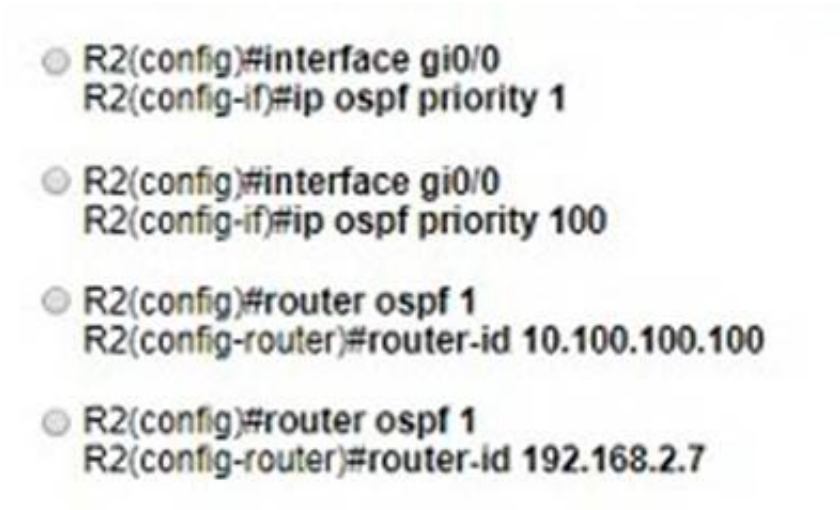
A. Switch trunk allowed vlan 12
B. Switchport trunk allowed vlan none
C. Switchport trunk allowed vlan add 13
D. Switchport trunk allowed vlan remove 10-11

Answer: C

NEW QUESTION 326
- (Topic 1)



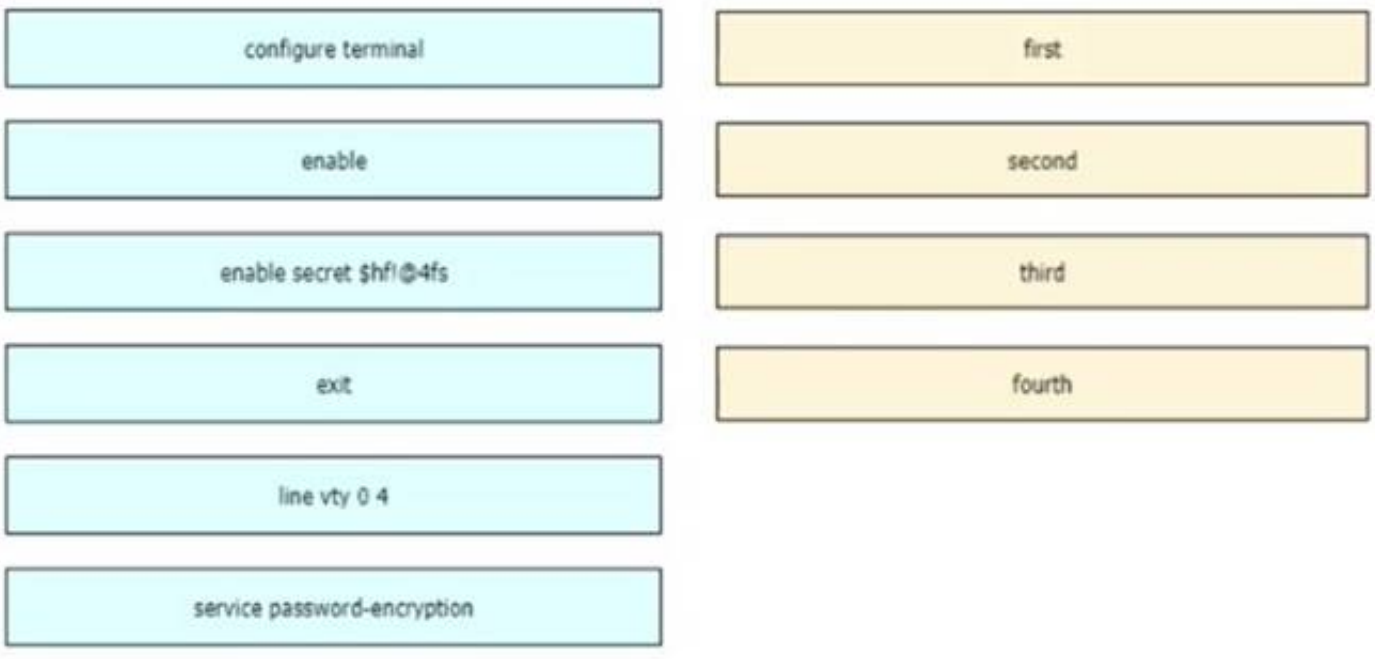
Refer to the exhibit. All routers in the network are configured R2 must be the DR. After the engineer connected the devices, R1 was elected as the DR. Which command sequence must be configure on R2 to Be elected as the DR in the network?



A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

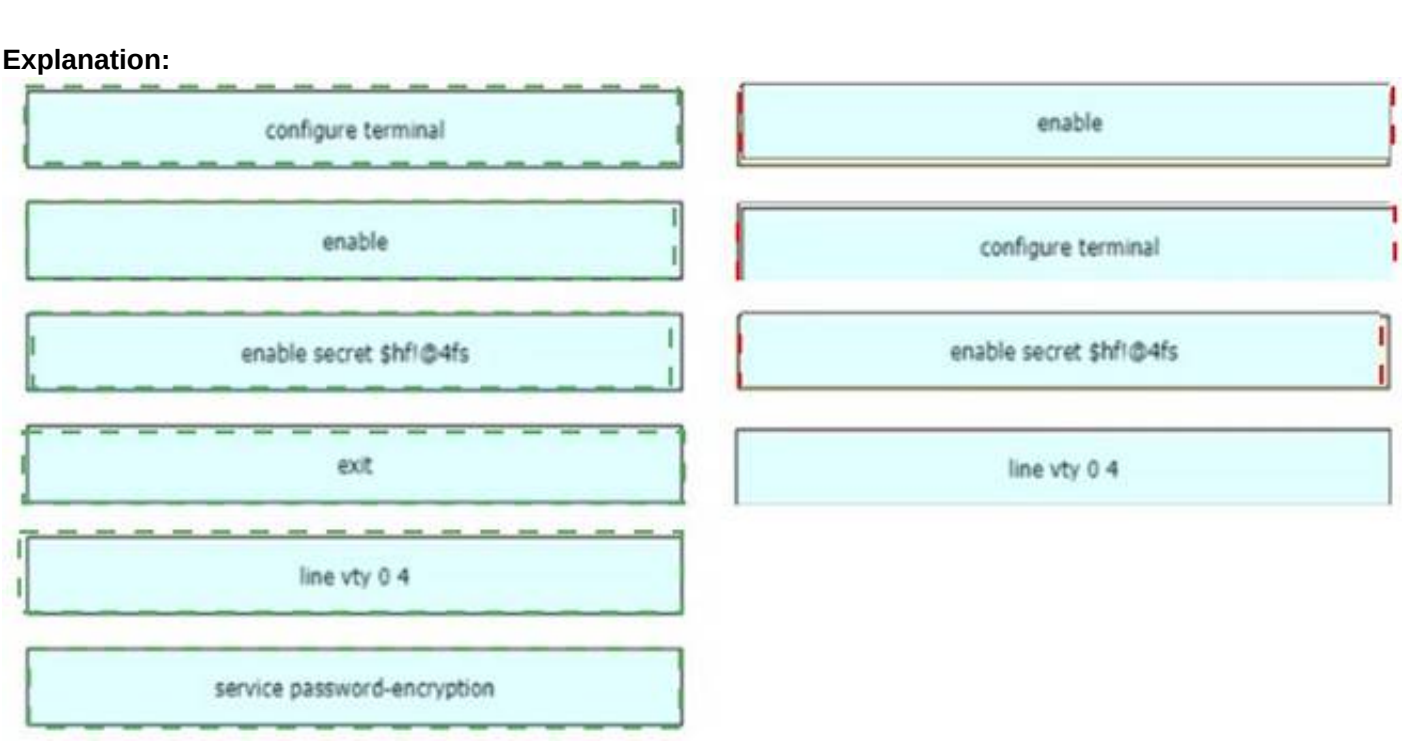
NEW QUESTION 327
DRAG DROP - (Topic 1)
An engineer is configuring an encrypted password for the enable command on a router
where the local user database has already been configured Drag and drop the configuration commands from the left into the correct sequence on the right Not all commands are used



A. Mastered
B. Not Mastered

Answer: A

Explanation:

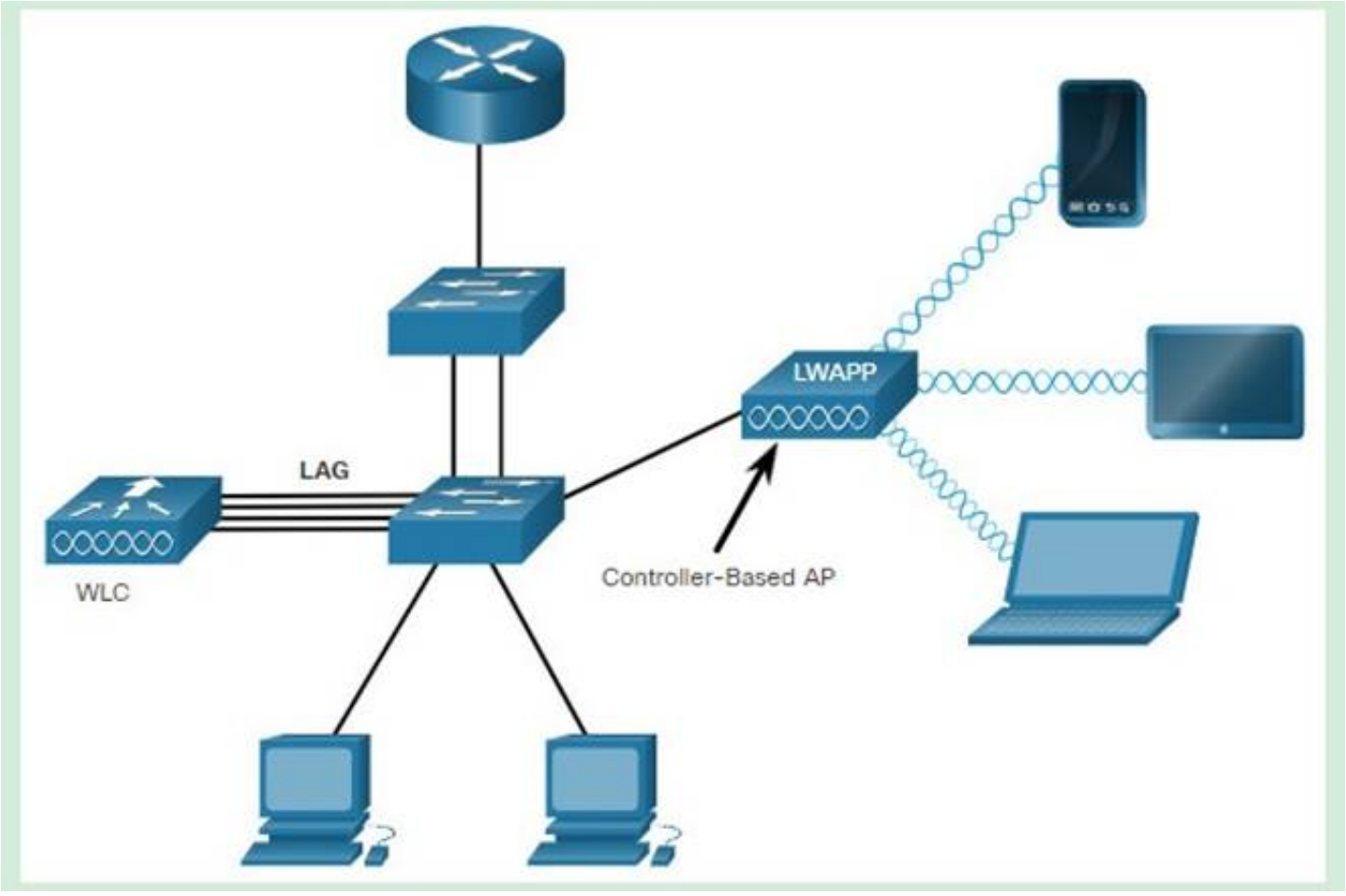


NEW QUESTION 329
- (Topic 1)
What is a function of Wireless LAN Controller?

A. register with a single access point that controls traffic between wired and wireless endpoints.
B. use SSIDs to distinguish between wireless clients.
C. send LWAPP packets to access points.
D. monitor activity on wireless and wired LANs

Answer: C

Explanation:
Lightweight APs (LAPs) is devices require no initial configuration. LAPs use the Lightweight Access Point Protocol (LWAPP) to communicate with a WLAN controller (WLC), as shown in the below figure. Controller-based APs are useful in situations where many APs are required in the network. As more APs are added, each AP is automatically configured and managed by the WLC.



NEW QUESTION 333
- (Topic 1)
When configuring IPv6 on an interface, which two IPv6 multicast groups are joined? (Choose two)

A. 2000::/3
B. 2002::5
C. FC00::/7
D. FF02::1
E. FF02::2

Answer: DE

Explanation:
Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xe-3s/ipv6-xe-36s-book/ip6-multicast.html
When an interface is configured with IPv6 address, it automatically joins the all nodes (FF02::1) and solicited-node (FF02::1:FFxx:xxxx) multicast groups. The all-node group is used to communicate with all interfaces on the local link, and the solicited-nodes multicast group is required for link-layer address resolution. Routers also join a third multicast group, the all-routers group (FF02::2).

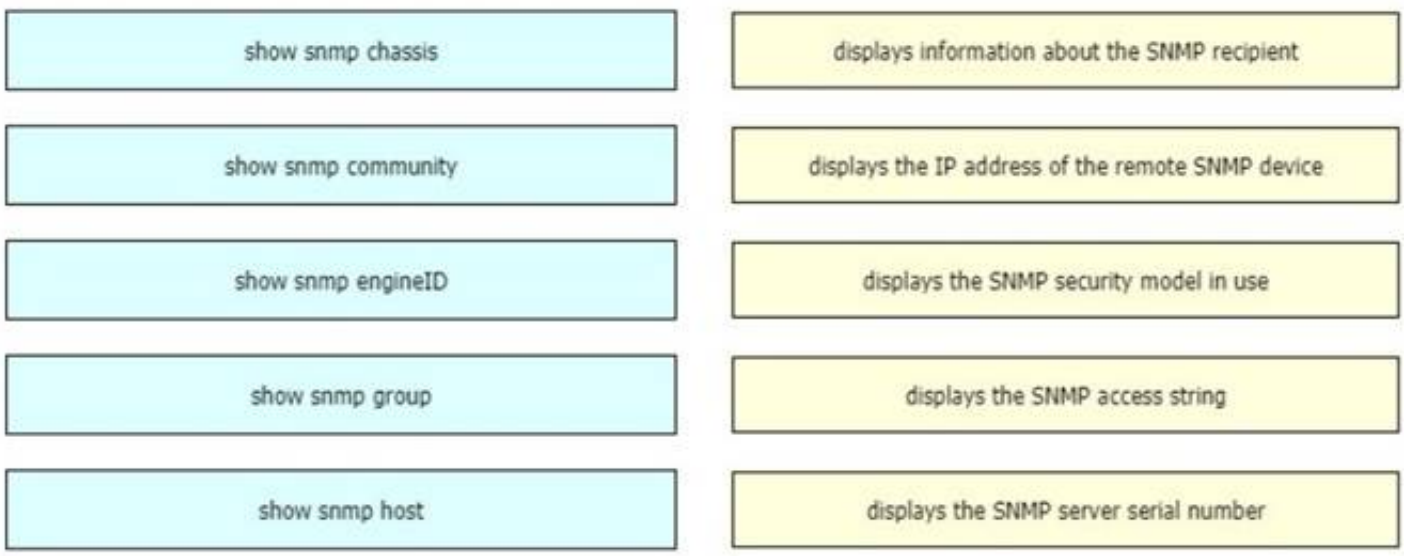
NEW QUESTION 335
- (Topic 1)
Which two protocols are supported on service-port interfaces? (Choose two.)

A. RADIUS
B. TACACS+
C. SCP
D. Telnet
E. SSH

Answer: DE

Explanation:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-5/configuration-guide/b_cg75/b_cg75_chapter_011110.html

NEW QUESTION 340
DRAG DROP - (Topic 1)
Drag and drop the SNMP manager and agent identifier commands from the left onto the functions on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:

NEW QUESTION 341
- (Topic 1)
What is a recommended approach to avoid co-channel congestion while installing access points that use the 2.4 GHz frequency?

A. different nonoverlapping channels
B. different overlapping channels
C. one overlapping channel
D. one nonoverlapping channel

Answer: A

NEW QUESTION 345
- (Topic 1)
Which technology is used to improve web traffic performance by proxy caching?

A. WSA
B. Firepower
C. ASA
D. FireSIGHT

Answer: A

NEW QUESTION 349
- (Topic 1)
In software-defined architecture, which place handles switching for traffic through a Cisco router?

A. Control
B. Management
C. Data
D. application

Answer: C

Explanation:
Data plane—Handles all the data traffic. The basic functionality of a Cisco NX-OS device is to forward packets from one interface to another. The packets that are not meant for the switch itself are called the transit packets. These packets are handled by the data plane

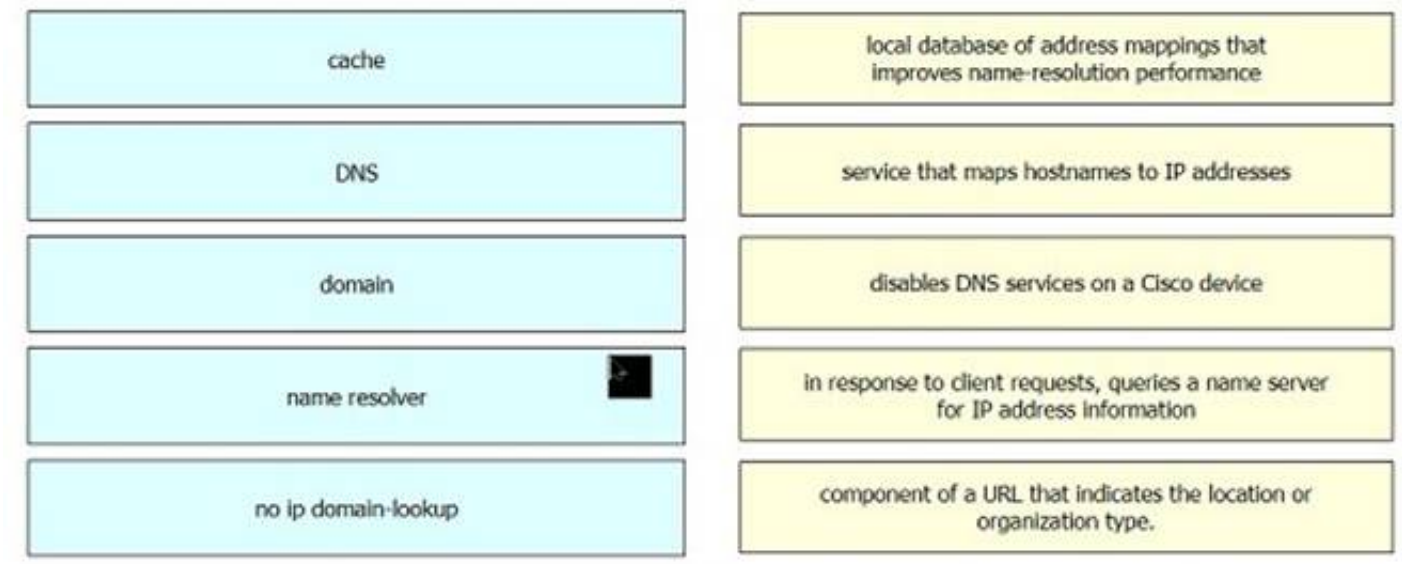
NEW QUESTION 352
- (Topic 1)
A port security violation has occurred on a switch port due to the maximum MAC address count being exceeded. Which command must be configured to increment the security- violation count and forward an SNMP trap?

A. switchport port-security violation access
B. switchport port-security violation protect
C. switchport port-security violation restrict
D. switchport port-security violation shutdown

Answer: C

Explanation:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/25ew/configuration/guide/conf/port_sec.html

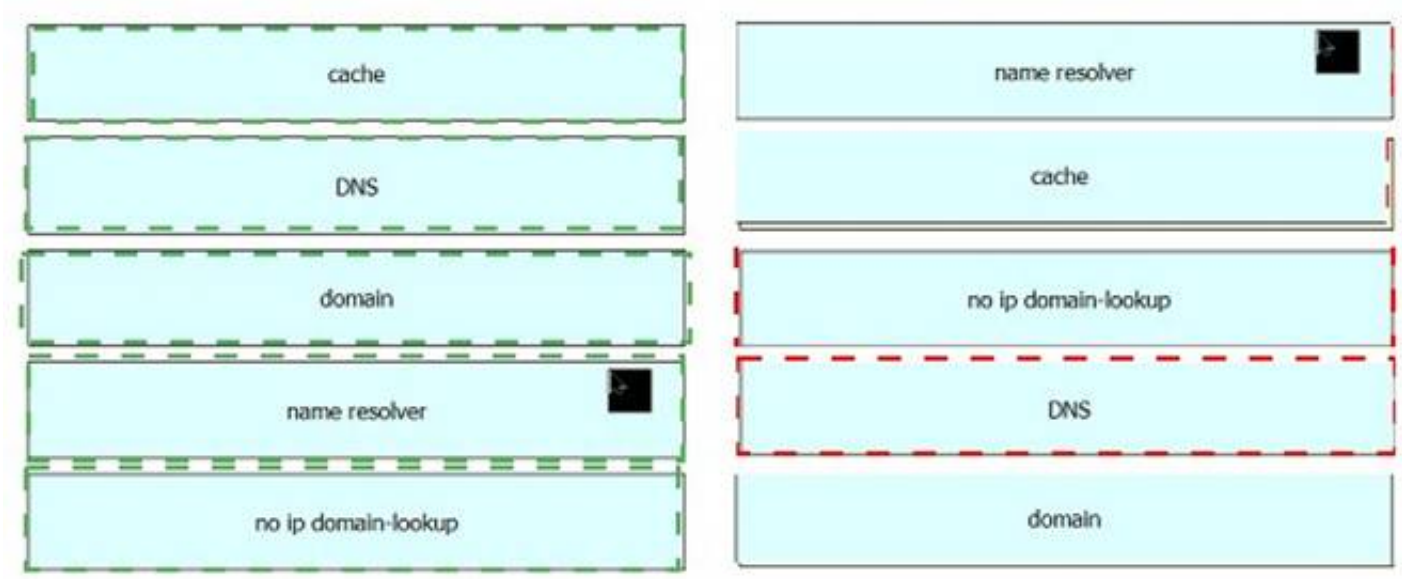
NEW QUESTION 353
DRAG DROP - (Topic 1)
Drag and drop the DNS lookup components from the left onto the functions on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 357
- (Topic 1)
How does Cisco DNA Center gather data from the network?

A. Network devices use different services like SNMP, syslog, and streaming telemetry to send data to the controller
B. Devices establish an iPsec tunnel to exchange data with the controller
C. Devices use the call-home protocol to periodically send data to the controller.
D. The Cisco CU Analyzer tool gathers data from each licensed network device and streams it to the controller.

Answer: A

NEW QUESTION 358
- (Topic 1)
In software defined architectures, which plane is distributed and responsible for traffic forwarding?

A. management plane
B. control plane
C. policy plane

D. data plane

Answer: D

NEW QUESTION 363
- (Topic 1)
Aside from discarding, which two states does the switch port transition through while using RSTP (802.1w)? (Choose two)

A. listening
B. blocking
C. forwarding
D. learning
E. speaking

Answer: CD

NEW QUESTION 364
- (Topic 1)
Which two actions are performed by the Weighted Random Early Detection mechanism? (Choose two)

A. It drops lower-priority packets before it drops higher-priority packets
B. It can identify different flows with a high level of granularity
C. It guarantees the delivery of high-priority packets
D. It can mitigate congestion by preventing the queue from filling up
E. it supports protocol discovery

Answer: AD

Explanation:
Weighted Random Early Detection (WRED) is just a congestion avoidance mechanism. WRED drops packets selectively based on IP precedence. Edge routers assign IP precedences to packets as they enter the network. When a packet arrives, the following events occur:
* 1. The average queue size is calculated.2. If the average is less than the minimum queue threshold, the arriving packet is queued.3. If the average is between the minimum queue threshold for that type of traffic and the maximum threshold for the interface, the packet is either dropped or queued, depending on the packet drop probability for that type of traffic.4. If the average queue size is greater than the maximum threshold, the packet is dropped. WRED reduces the chances of tail drop (when the queue is full, the packet is dropped) by selectively dropping packets when the output interface begins to show signs of congestion (thus it can mitigate congestion by preventing the queue from filling up). By dropping some packets early rather than waiting until the queue is full, WRED avoids dropping large numbers of packets at once and minimizes the chances of global synchronization. Thus, WRED allows the transmission line to be usedfully at all times. WRED generally drops packets selectively based on IP precedence. Packets with a higher IP precedence are less likely to be dropped than packets with a lower precedence. Thus, the higher the priority of a packet, the higher the probability that the packet will be delivered

NEW QUESTION 365
- (Topic 1)
What are two functions of a server on a network? (Choose two)

A. achieves redundancy by exclusively using virtual server clustering
B. runs applications that send and retrieve data for workstations that make requests
C. handles requests from multiple workstations at the same time
D. runs the same operating system in order to communicate with other servers
E. housed solely in a data center that is dedicated to a single client

Answer: BC

NEW QUESTION 366
- (Topic 1)
What is a characteristic of a SOHO network?

A. connects each switch to every other switch in the network
B. enables multiple users to share a single broadband connection
C. provides high throughput access for 1000 or more users
D. includes at least three tiers of devices to provide load balancing and redundancy

Answer: B

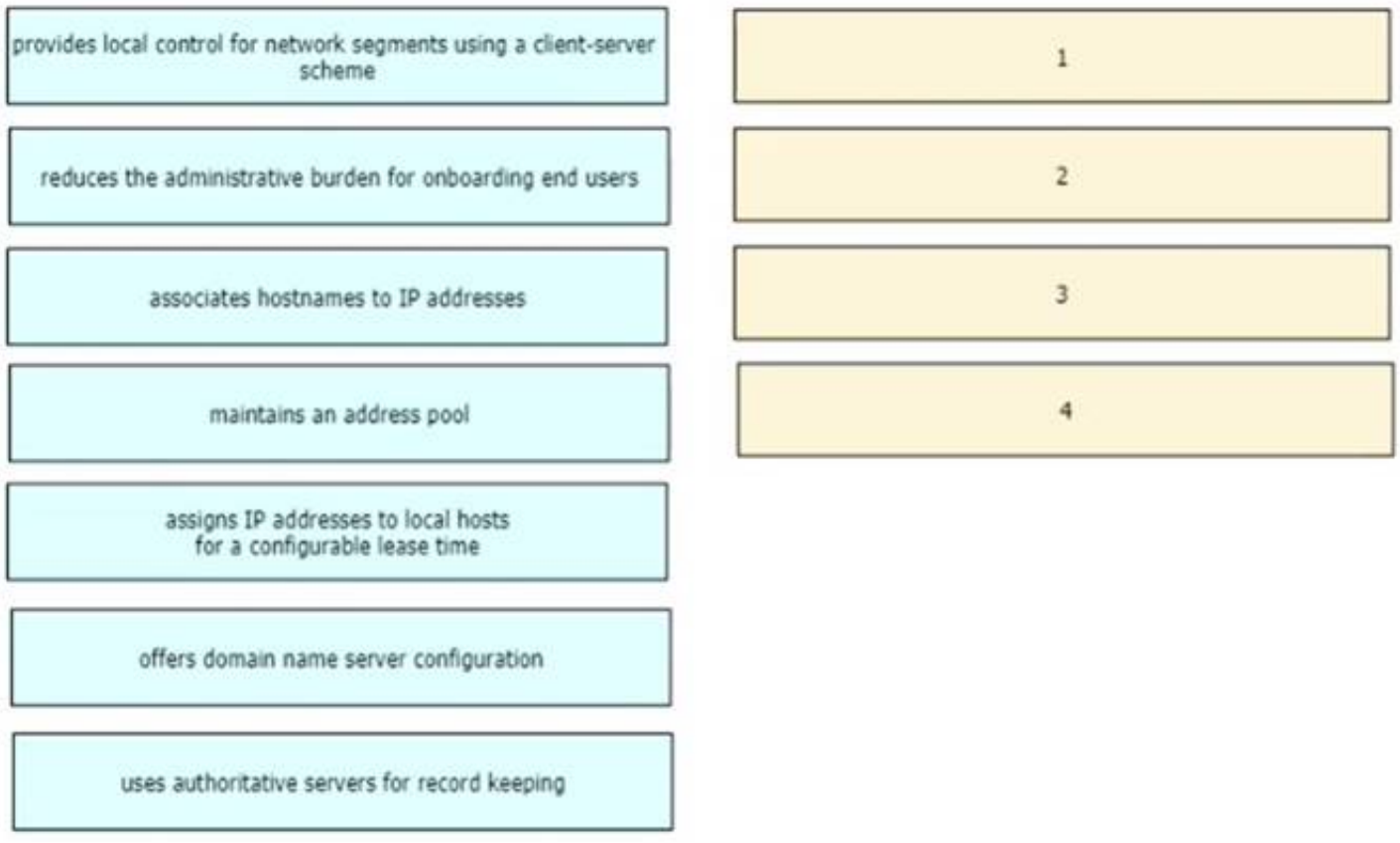
NEW QUESTION 370
- (Topic 1)
A manager asks a network engineer to advise which cloud service models are used so employees do not have to waste their time installing, managing, and updating software which is only used occasionally Which cloud service model does the engineer recommend?

A. infrastructure-as-a-service
B. platform-as-a-service
C. business process as service to support different types of service
D. software-as-a-service

Answer: D

NEW QUESTION 374
DRAG DROP - (Topic 1)

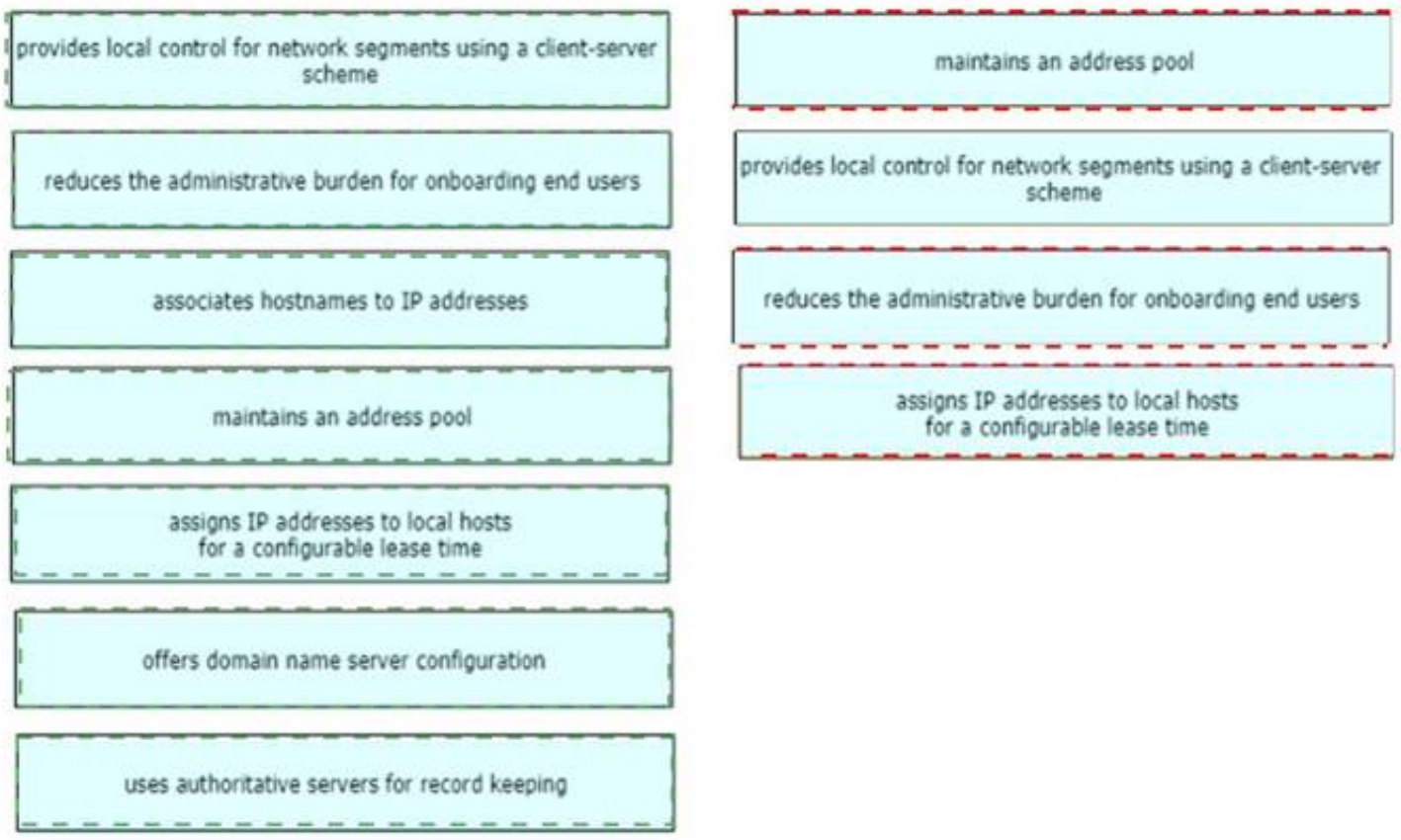
Drag and drop the functions of DHCP from the left onto any of the positions on the right Not all functions are used



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 378
- (Topic 1)
Which spanning-tree enhancement avoids the learning and listening states and immediately places ports in the forwarding state?

A. BPDUfilter
B. PortFast
C. Backbonefast
D. BPDUguard

Answer: B

Explanation:
PortFast
Spanning Tree Portfast causes layer 2 switch interfaces to enter forwarding state immediately, bypassing the listening and learning states. It should be used on ports connected directly to end hosts like servers or workstations. Note: If portfast isn't enabled, DHCP timeouts can occur while STP converges, causing more problems.
https://skminhaj.wordpress.com/2015/03/04/spanning-tree-stp-rstp-mst-enhancements/

NEW QUESTION 380

- (Topic 1)
Which type of security program is violated when a group of employees enters a building using the ID badge of only one person?

A. intrusion detection
B. user awareness
C. physical access control
D. network authorization

Answer: C

NEW QUESTION 383
- (Topic 1)
When implementing a router as a DHCP server, which two features must be configured'? (Choose two)

A. relay agent information
B. database agent
C. address pool
D. smart-relay
E. manual bindings

Answer: CE

NEW QUESTION 386
- (Topic 1)
How are VLAN hopping attacks mitigated?

A. enable dynamic ARP inspection
B. manually implement trunk ports and disable DTP
C. activate all ports and place in the default VLAN
D. configure extended VLANs

Answer: B

NEW QUESTION 390
- (Topic 1)
Which technology is appropriate for communication between an SDN controller and applications running over the network?

A. OpenFlow
B. REST API
C. NETCONF
D. Southbound API

Answer: B

NEW QUESTION 395
- (Topic 1)
On workstations running Microsoft Windows, which protocol provides the default gateway for the device?

A. DHCP
B. STP
C. SNMP
D. DNS

Answer: A

NEW QUESTION 398
- (Topic 1)
Which state does the switch port move to when PortFast is enabled?

A. learning
B. forwarding
C. blocking
D. listening

Answer: B

NEW QUESTION 402
- (Topic 1)
Which QoS Profile is selected in the GUI when configuring a voice over WLAN deployment?

A. Bronze
B. Platinum
C. Silver
D. Gold

Answer: B

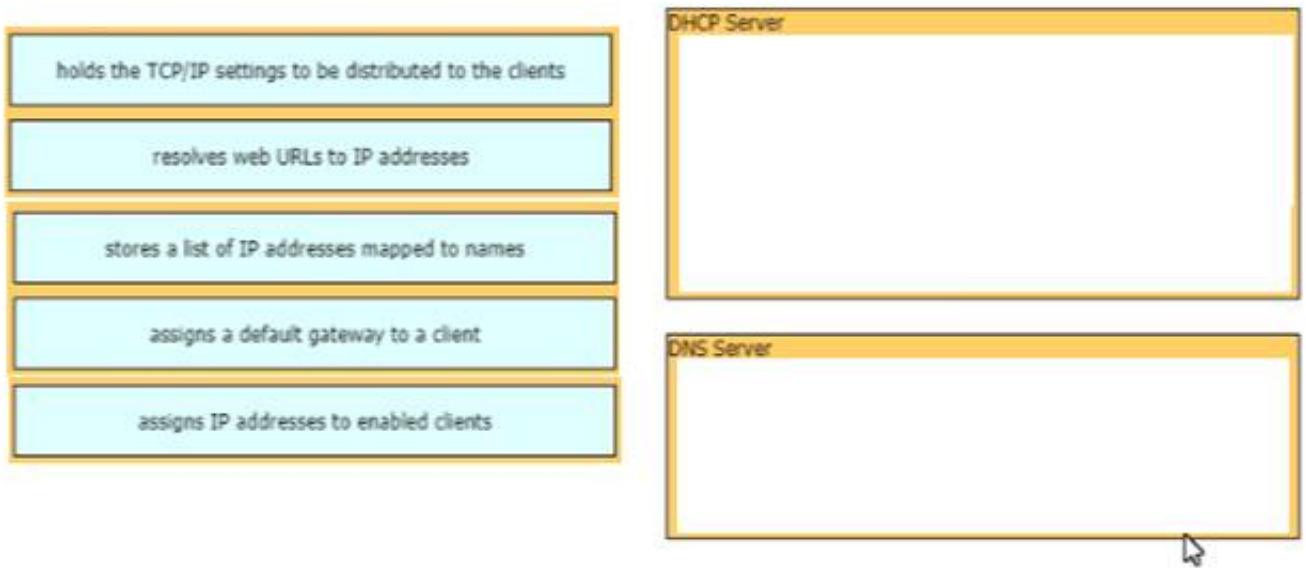
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/81831-qos-wlc-lap.html
Cisco Unified Wireless Network solution WLANs support four levels of QoS: Platinum/Voice, Gold/Video, Silver/Best Effort (default), and Bronze/Background.

NEW QUESTION 403
- (Topic 1)
When a switch receives a frame for a known destination MAC address, how is the frame handed?

A. sent to the port identified for the known MAC address
B. broadcast to all ports
C. forwarded to the first available port
D. flooded to all ports except the one from which it originated

Answer: A

NEW QUESTION 407
DRAG DROP - (Topic 1)
Drag and drop the functions from the left onto the correct network components on the right



A. Mastered
B. Not Mastered

Answer: A

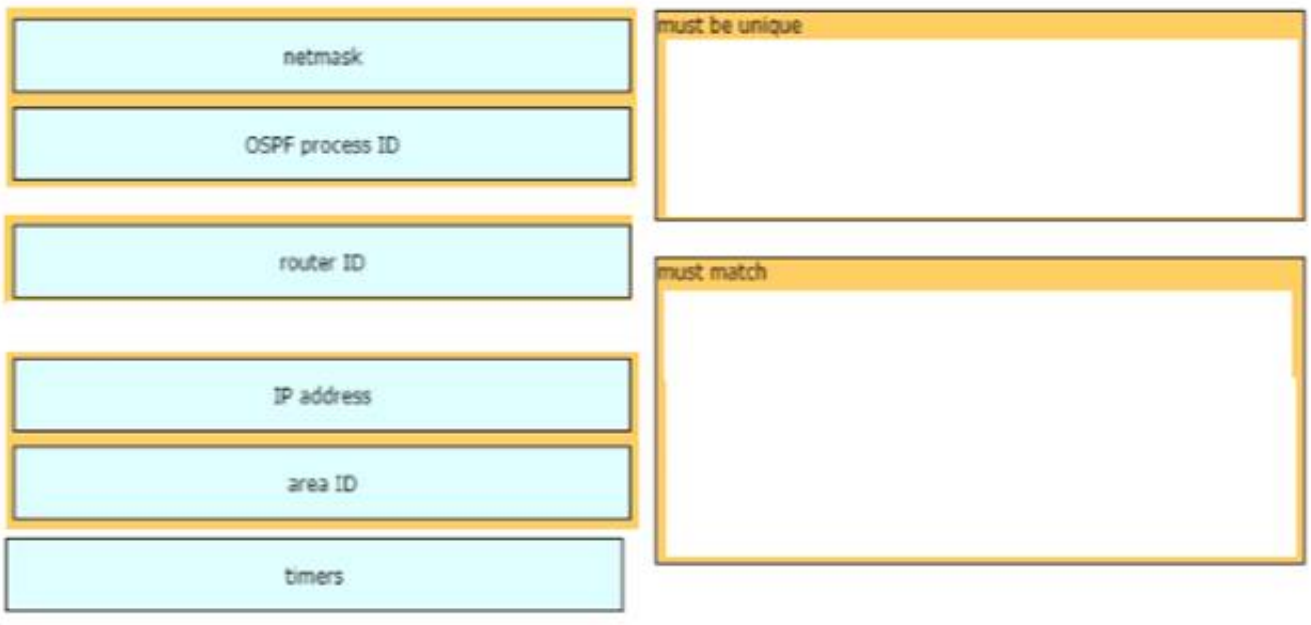
Explanation:

NEW QUESTION 410
- (Topic 1)
What is a benefit of VRRP?

A. It provides traffic load balancing to destinations that are more than two hops from the source.
B. It provides the default gateway redundancy on a LAN using two or more routers.
C. It allows neighbors to share routing table information between each other.
D. It prevents loops in a Layer 2 LAN by forwarding all traffic to a root bridge, which then makes the final forwarding decision.

Answer: B

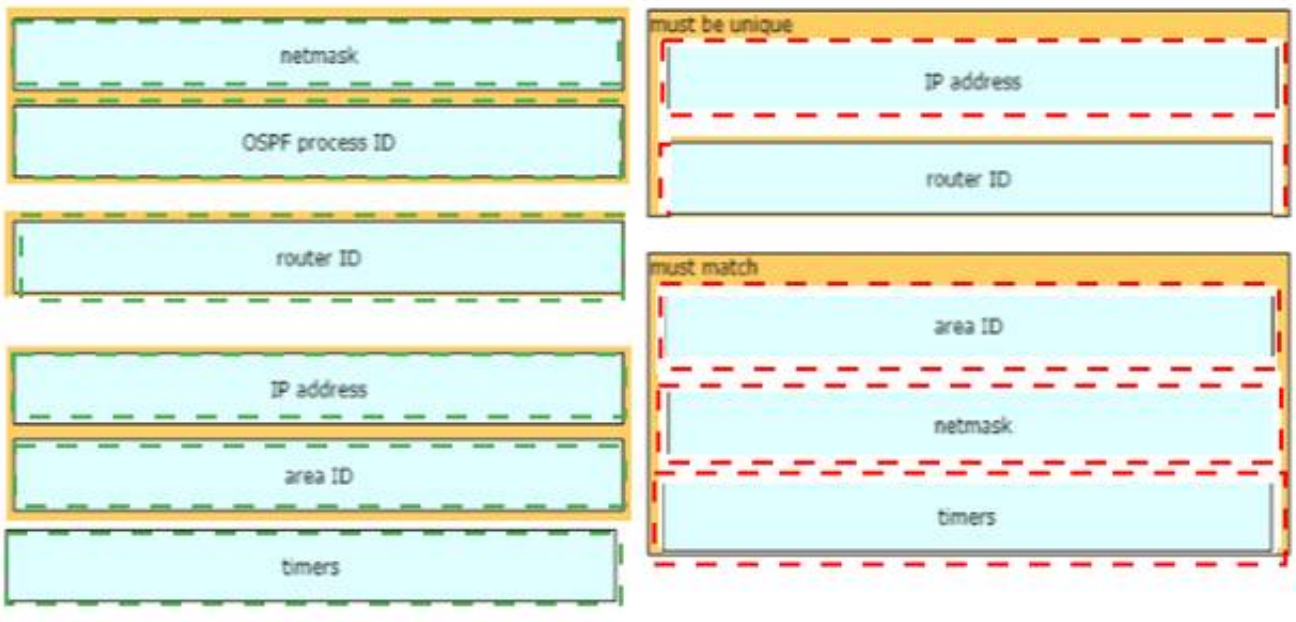
NEW QUESTION 413
DRAG DROP - (Topic 1)
A network engineer is configuring an OSPFv2 neighbor adjacency Drag and drop the parameters from the left onto their required categories on the right. Not all parameters are used



A. Mastered
B. Not Mastered

Answer: A

Explanation:



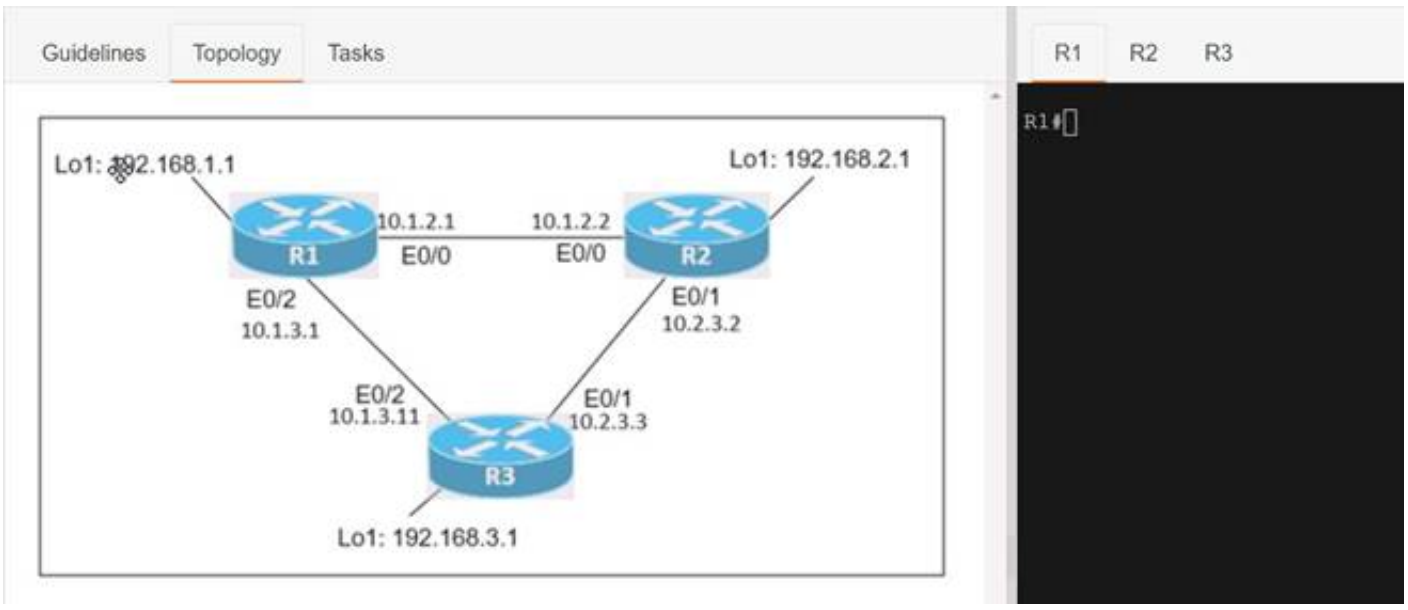
NEW QUESTION 417
- (Topic 1)
Which IPv6 address block sends packets to a group address rather than a single address?

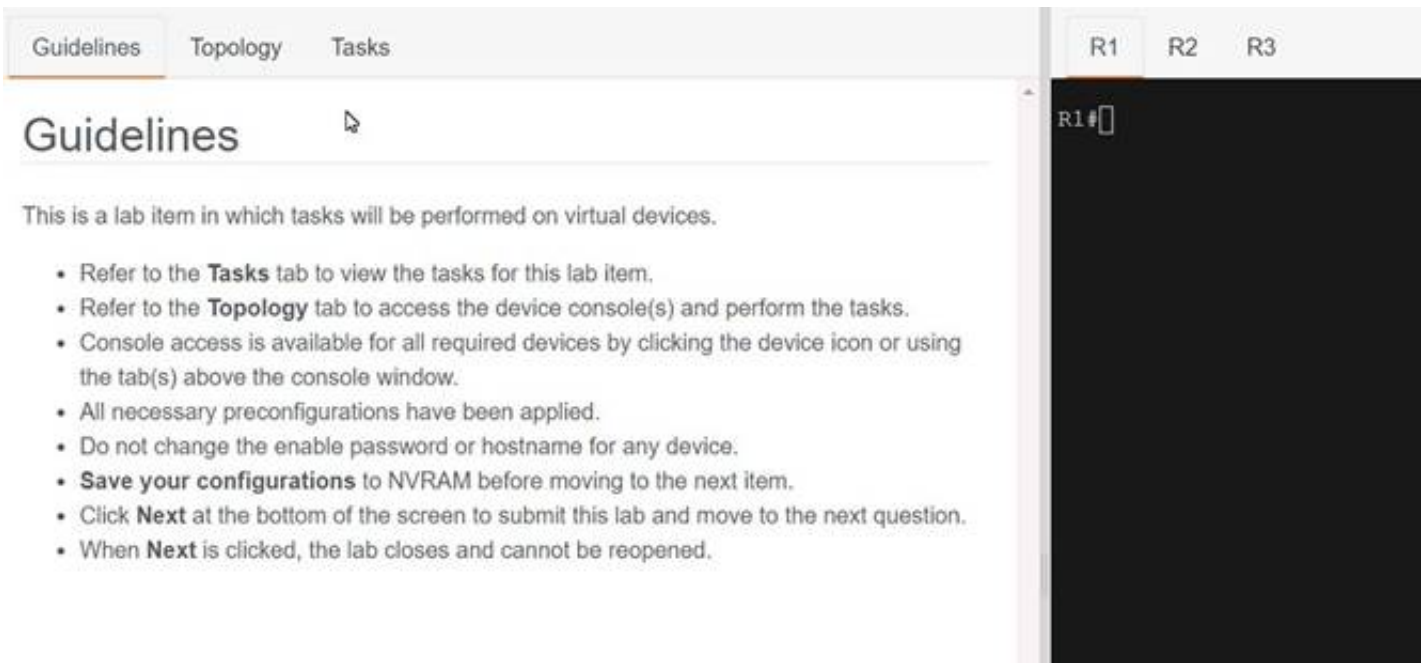
A. 2000::/3
B. FC00::/7
C. FE80::/10
D. FF00::/8

Answer: D

Explanation:
FF00::/8 is used for IPv6 multicast and this is the IPv6 type of address the question wants to ask.FE80::/10 range is used for link-local addresses. Link-local addresses only used for communications within the local subnetwork (automatic address configuration, neighbor discovery, router discovery, and by many routing protocols). It is only valid on the current subnet.It is usually created dynamically using a link-local prefix of FE80::/10 and a 64-bit interface identifier (based on 48-bit MAC address).

NEW QUESTION 422
SIMULATION - (Topic 5)





Connectivity between three routers has been established, and IP services must be configured jn the order presented to complete the implementation Tasks assigned include configuration of NAT, NTP, DHCP, and SSH services.
* 1. All traffic sent from R3 to the R1 Loopback address must be configured for NAT on R2. All source addresses must be translated from R3 to the IP address of Ethernet0/0 on R2, while using only a standard access list named NAT To verify, a ping must be successful to the R1 Loopback address sourced from R3. Do not use NVI NAT configuration.
* 2. Configure R1 as an NTP server and R2 as a client, not as a peer, using the IP address of the R1 Ethernet0/2 interface. Set the clock on the NTP server for midnight on January 1, 2019.
* 3. Configure R1 as a DHCP server for the network 10.1.3.0/24 in a pool named TEST. Using a single command, exclude addresses 1-10 from the range. Interface Ethernet0/2 on R3 must be issued the IP address of 10.1.3.11 via DHCP.
* 4. Configure SSH connectivity from R1 to R3, while excluding access via other remote connection protocols. Access for user root and password Cisco must be set on router R3 using RSA and 1024 bits. Verify connectivity using an SSH session from router R1 using a destination address of 10.1.3.11. Do NOT modify console access or line numbers to accomplish this task.

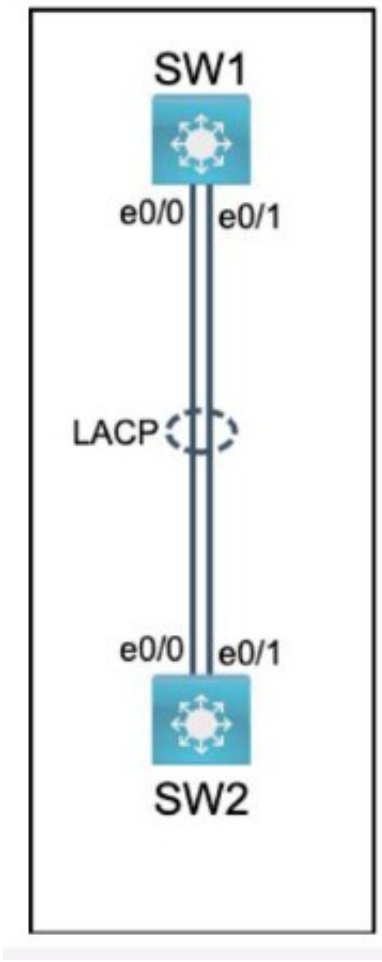
A. Mastered
B. Not Mastered

Answer: A

Explanation:
Answer as below configuration:
conf t
R1(config)#ntp master 1
R2(config)#ntp server 10.1.2.1
Exit
Router#clock set 00:00:00 jan 1 2019 ip dhcp pool TEST
network 10.1.3.0 255.255.255.0
ip dhcp exluded-address 10.1.3.1 10.1.3.10 R3(config)#int e0/3
R3(config)#int e0/2 ip address dhcp no shut
crypto key generate RSA 1024
Copy run start

NEW QUESTION 423
SIMULATION - (Topic 5)
Physical connectivity is implemented between the two Layer 2 switches, and the network connectivity between them must be configured.
* I . Configure an LACP EtherChanneI and number it as 44; configure it between switches SWI and SW2 using interfaces EthernetO/O and Ethernet0/1 on both sides. The LACP mode must match on both ends.
* 2. Configure the EtherChanneI as a trunk link.
* 3. Configure the trunk link with 802. Iq tags.
* 4. Configure VLAN 'MONITORING' as the untagged VLAN of the EtherChannel.
==========
Guidelines
This is a lab item in which tasks will be performed on virtual devices.
• Refer to the Tasks tab to view the tasks for this lab item.
• Refer to the Topology tab to access the device console(s) and perform the tasks.
• Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.

• All necessary preconfigurations have been applied.
• Do not change the enable password or hostname for any device.
• Save your configurations to NVRAM before moving to the next item.
• Click Next at the bottom of the screen to submit this lab and move to the next question.
• When Next is clicked, the lab closes and cannot be reopened.

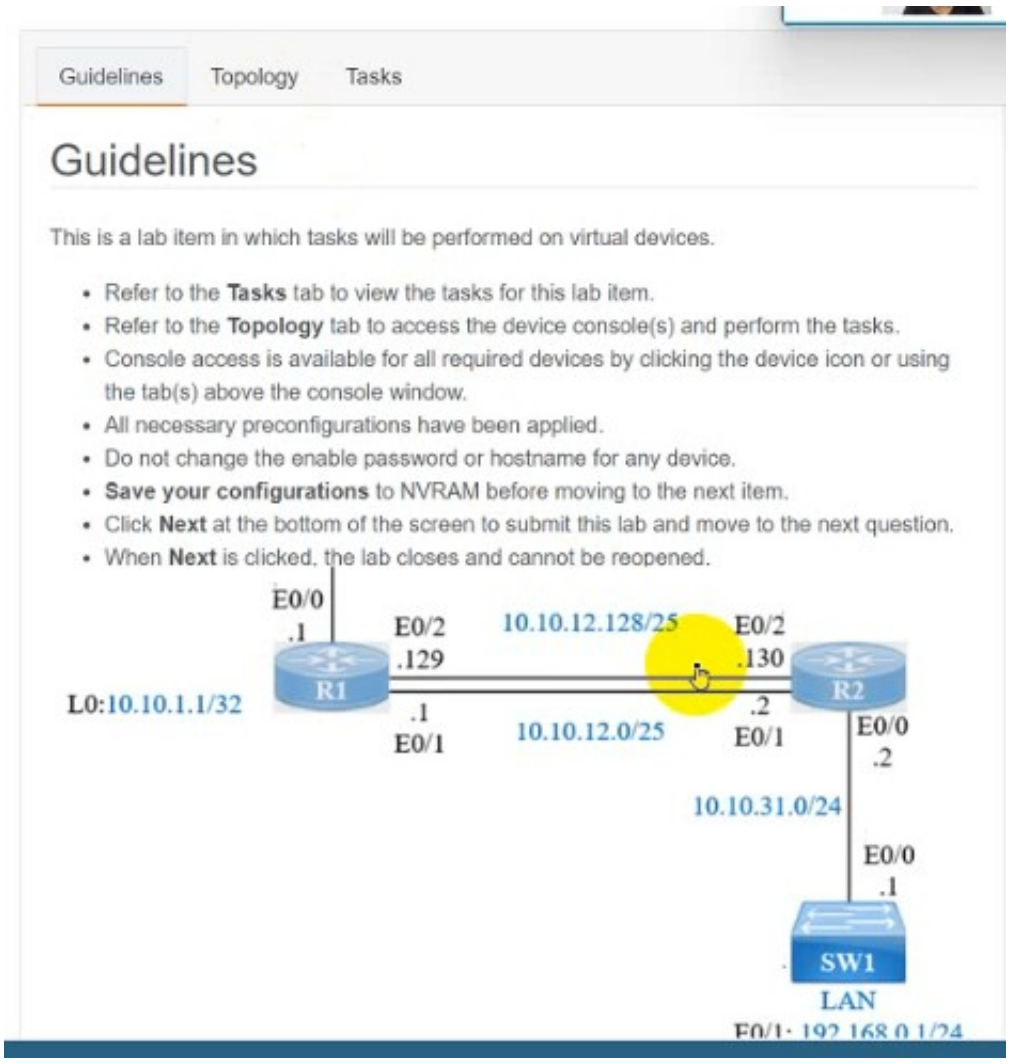


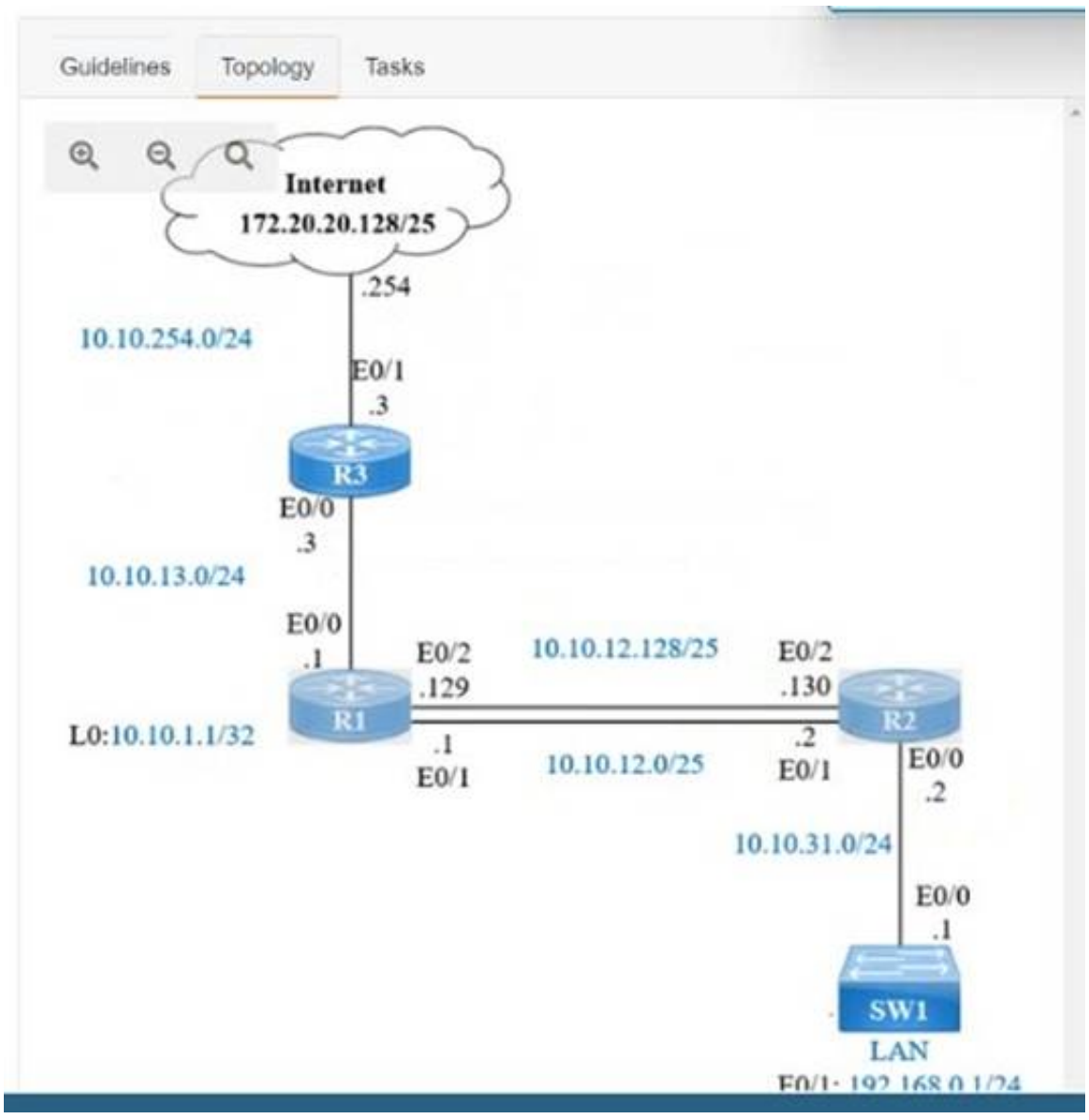
A. Mastered
B. Not Mastered

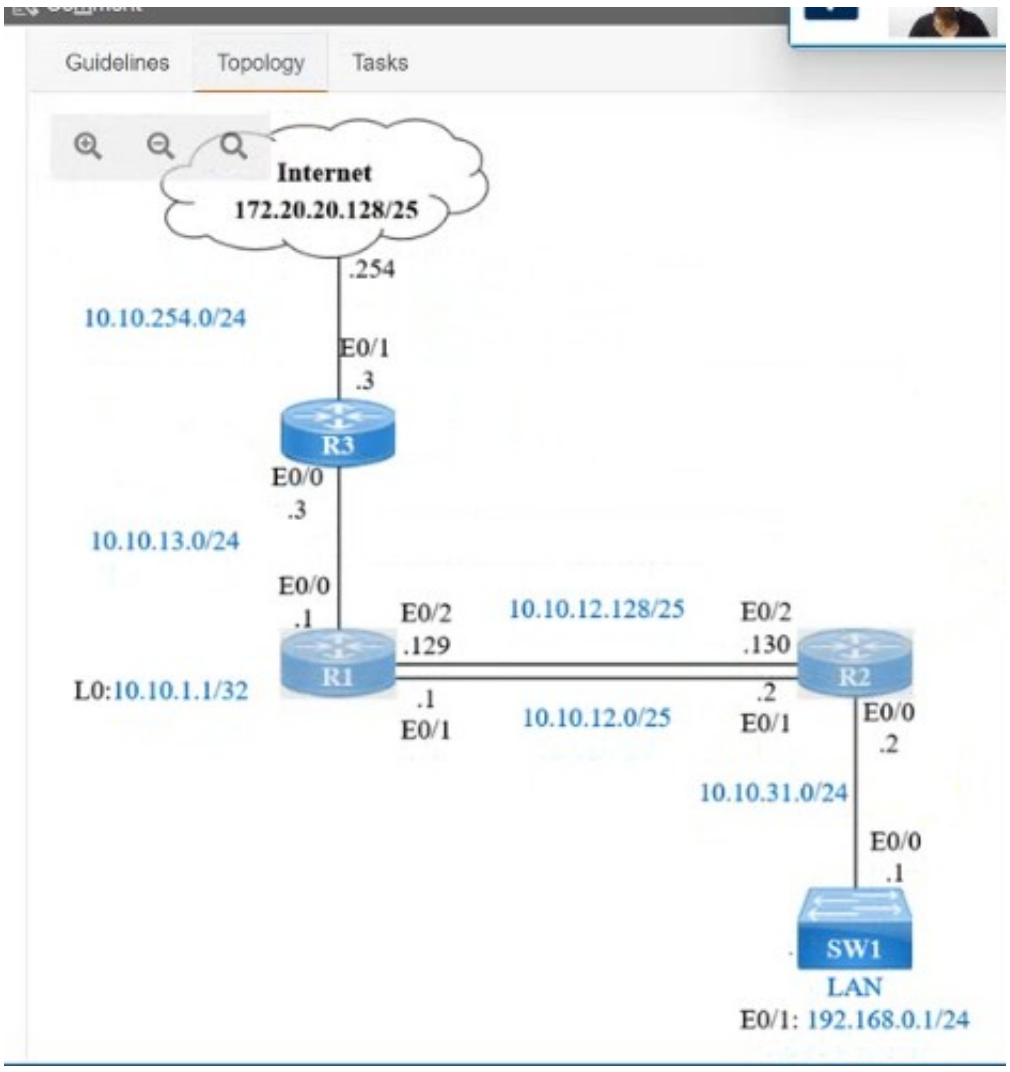
Answer: A

Explanation:
To configure an LACP EtherChannel and number it as 44, configure it between switches SW1 and SW2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides, configure the EtherChannel as a trunk link, configure the trunk link with 802.1q tags, and configure VLAN 'MONITORING' as the untagged VLAN of the EtherChannel, you need to follow these steps:
? On both SW1 and SW2, enter the global configuration mode by using the
configure terminal command.
? On both SW1 and SW2, select the two interfaces that will form the EtherChannel by using the interface range ethernet 0/0 - 1 command. This will enter the interface range configuration mode.
? On both SW1 and SW2, set the protocol to LACP by using the channel-protocol
lacp command.
? On both SW1 and SW2, assign the interfaces to an EtherChannel group number 44 by using the channel-group 44 mode active command. This will create a logical interface named Port-channel44 and set the LACP mode to active on both ends. The LACP mode must match on both ends for the EtherChannel to form.
? On both SW1 and SW2, exit the interface range configuration mode by using the exit command.
? On both SW1 and SW2, enter the Port-channel interface configuration mode by using the interface port-channel 44 command.
? On both SW1 and SW2, configure the Port-channel interface as a trunk link by using the switchport mode trunk command.
? On both SW1 and SW2, configure the Port-channel interface to use 802.1q tags for VLAN identification by using the switchport trunk encapsulation dot1q command.
? On both SW1 and SW2, configure VLAN 'MONITORING' as the untagged VLAN of the Port-channel interface by using the switchport trunk native vlan MONITORING command.
? On both SW1 and SW2, exit the Port-channel interface configuration mode by using the exit command.
? On both SW1 and SW2, save the configuration to NVRAM by using the copy running-config startup-config command.

NEW QUESTION 424
SIMULATION - (Topic 5)


Guidelines
Topology
Tasks
Guidelines
This is a lab item in which tasks will be performed on virtual devices.
Refer to the Tasks tab to view the tasks for this lab item.
Refer to the Topology tab to access the device console(s) and perform the tasks.
Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
All necessary preconfigurations have been applied.
Do not change the enable password or hostname for any device.
Save your configurations to NVRAM before moving to the next item.
Click Next at the bottom of the screen to submit this lab and move to the next question.
When Next is clicked, the lab closes and cannot be reopened.
E0/0
.1
E0/2
.129
10.10.12.128/25
E0/2
.130
R1
R2
L0:10.10.1.1/32
.1
E0/1
10.10.12.0/25
.2
E0/1
E0/0
.2
10.10.31.0/24
E0/0
.1
SW1
LAN
E0/1: 192.168.0.1/24


Guidelines
Topology
Tasks
Internet
172.20.20.128/25
.254
10.10.254.0/24
E0/1
.3
R3
E0/0
.3
10.10.13.0/24
E0/0
.1
E0/2
.129
10.10.12.128/25
E0/2
.130
R1
R2
L0:10.10.1.1/32
.1
E0/1
10.10.12.0/25
.2
E0/1
E0/0
.2
10.10.31.0/24
E0/0
.1
SW1
LAN
E0/1: 192.168.0.1/24



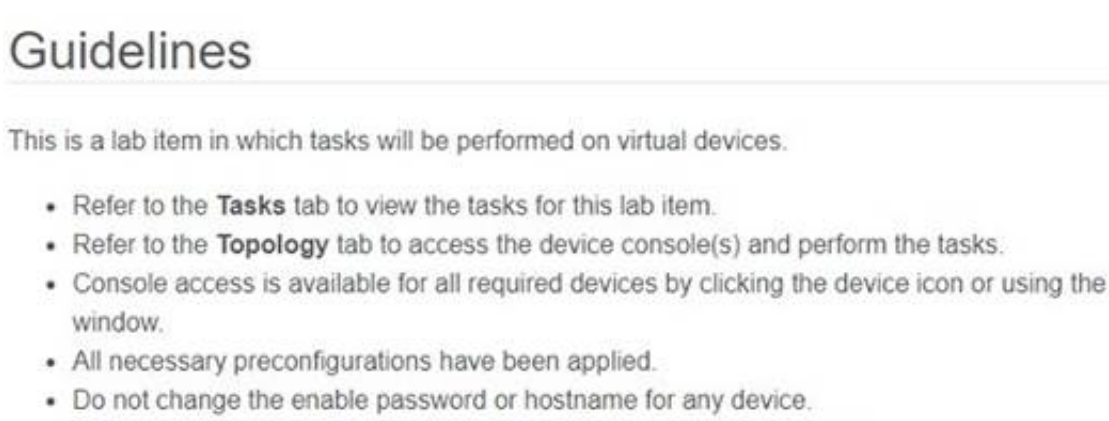
IP connectivity and OSPF are preconfigured on all devices where necessary. Do not make any changes to the IP addressing or OSPF. The company policy uses connected interfaces and next hops when configuring static routes except for load balancing or redundancy without floating static. Connectivity must be established between subnet 172.20.20.128/25 on the Internet and the LAN at 192.168.0.0/24 connected to SW1:
* 1. Configure reachability to the switch SW1 LAN subnet in router R2.
* 2. Configure default reachability to the Internet subnet in router R1.
* 3. Configure a single static route in router R2 to reach to the Internet subnet considering both redundant links between routers R1 and R2. A default route is NOT allowed in router R2.
* 4. Configure a static route in router R1 toward the switch SW1 LAN subnet where the primary link must be through Ethernet0/1. and the backup link must be through Ethernet0/2 using a floating route. Use the minimal administrative distance value when required.

A. Mastered
B. Not Mastered

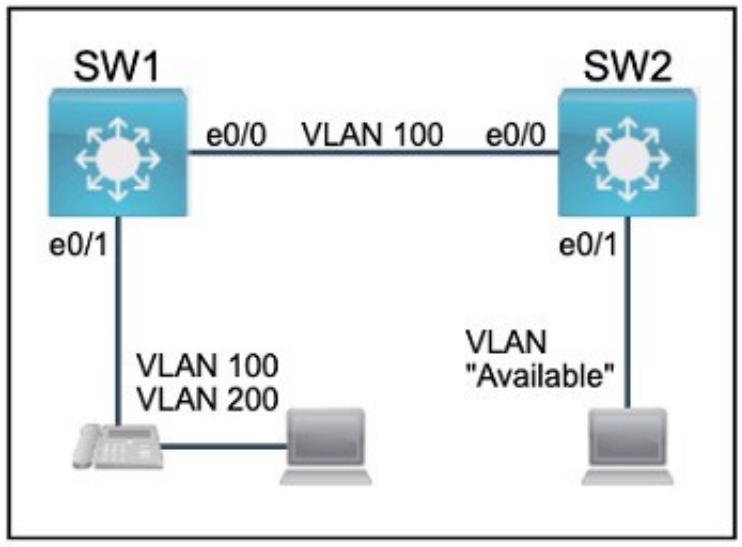
Answer: A

Explanation:
Answer as below configuration:
On R2:
Enable Conf t
Ip route 192.168.1.0 255.255.255.0 10.10.31.1
On R1:
Enable Conf t
Ip route 0.0.0.0 0.0.0.0 10.10.13.3
On R2
Ip route 172.20.20.128 255.255.255.128 e0/2
Ip route 172.20.20.128 255.255.255.128 e0/1
On R1
Ip route 192.168.0.0 255.255.255.0 e0/1
Ip route 192.168.0.0 255.255.255.0 10.10.12.2 3
Save all configurations after every router from anyone of these command Do wr
Or
Copy run start

NEW QUESTION 429
SIMULATION - (Topic 5)



All physical cabling between the two switches is installed. Configure the network connectivity between the switches using the designated VLANs and interfaces.
* 1. Configure VLAN 100 named Compute and VLAN 200 named Telephony where required for each task.
* 2. Configure Ethernet0/1 on SW2 to use the existing VLAN named Available.
* 3. Configure the connection between the switches using access ports.
* 4. Configure Ethernet0/1 on SW1 using data and voice VLANs.
* 5. Configure Ethemet0/1 on SW2 so that the Cisco proprietary neighbor discovery protocol is turned off for the designated interface only.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Answer as below configuration:
on sw1 enable conf t vlan 100
name Compute vlan 200
name Telephony int e0/1
switchport voice vlan 200 switchport access vlan 100 int e0/0
switchport mode access do wr
on sw2
Vlan 99
Name Available Int e0/1
Switchport access vlan 99 do wr

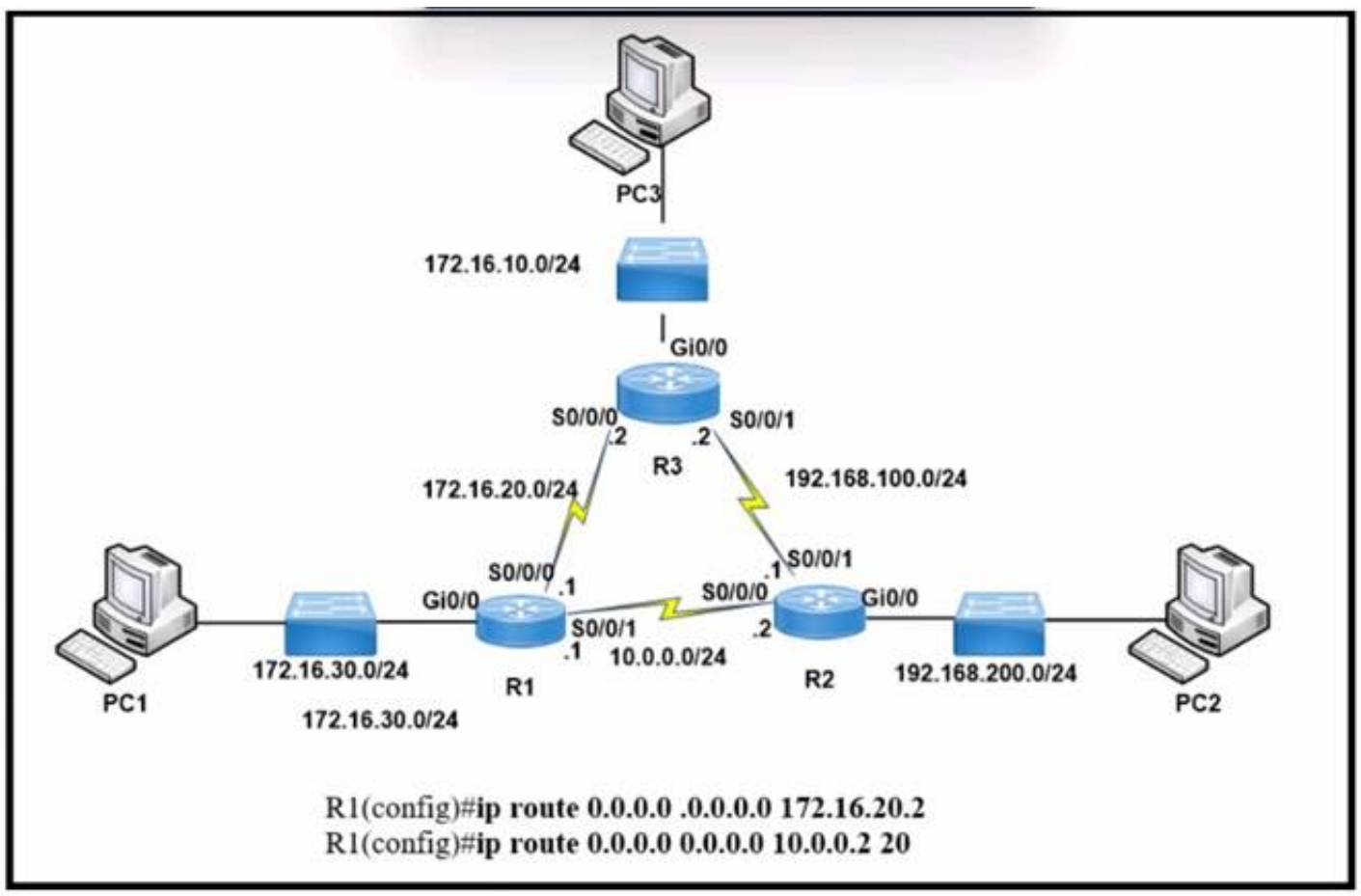
NEW QUESTION 431
- (Topic 4)
What is a reason to implement LAG on a Cisco WLC?

A. Increase the available throughput on the link.
B. Increase security by encrypting management frames
C. Allow for stateful failover between WLCs
D. Enable the connected switch ports to use different Layer 2 configurations

Answer: A

Explanation:
Link Aggregation Group (LAG) is a feature that allows you to bundle multiple physical Ethernet links into a single logical link, and is used to increase the available throughput on the link. LAG is supported on the Cisco Wireless LAN Controller (WLC) and the connected switch ports [1], and can be used to provide greater bandwidth and increased redundancy. It also enables the connected switch ports to use different Layer 2 configurations, such as Spanning Tree Protocol (STP) and Hot Standby Router Protocol (HSRP).

NEW QUESTION 433
- (Topic 4)

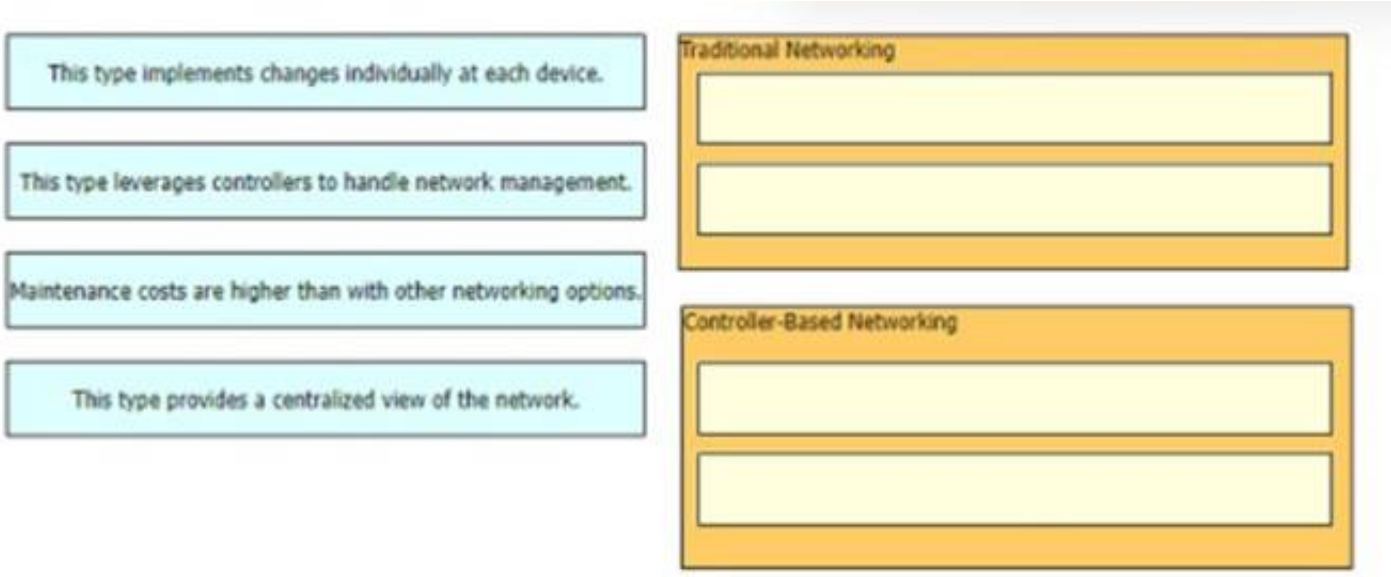


Refer to the exhibit. After applying this configuration to router R1, a network engineer is verifying the implementation. If all links are operating normally, and the engineer sends a series of packets from PC1 to PC3. how are the packets routed?

A. They are routed to 172.16.20.2.
B. They are routed to 192.168.100.2.
C. They are distributed sent round robin to interfaces SO/0/0 and SO/0/1.
D. They are routed to 10.0.0.2.

Answer: A

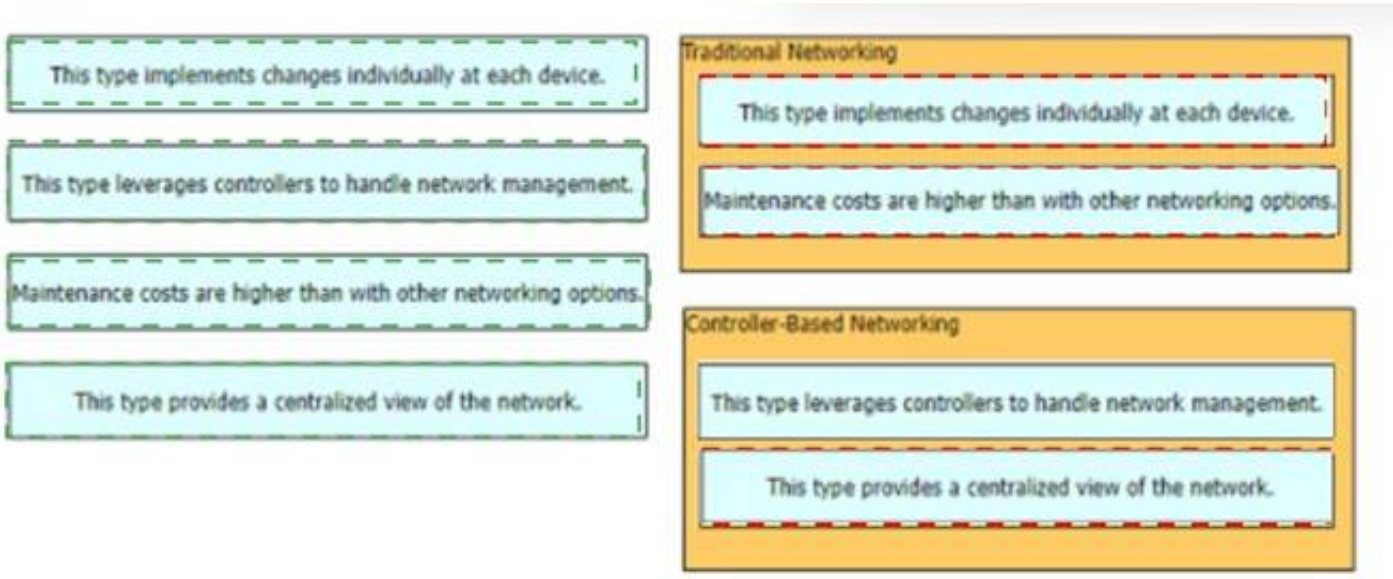
NEW QUESTION 437
DRAG DROP - (Topic 4)
Drag and drop the statements about networking from me left onto the corresponding networking types on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:

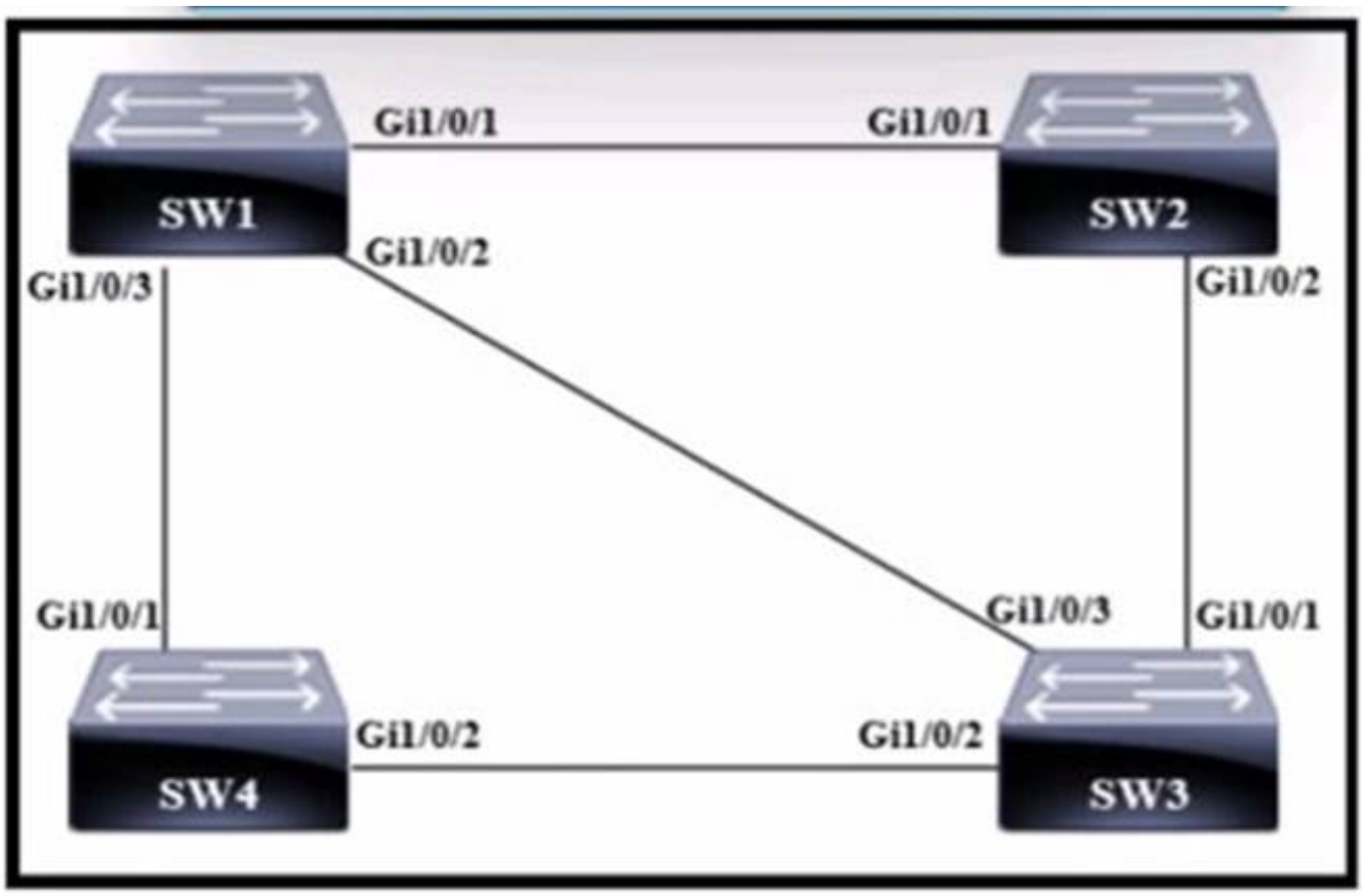


NEW QUESTION 441
- (Topic 4)
Which WLC interface provides out-of-band management in the Cisco Unified Wireless Network Architecture?

A. service port
B. virtual
C. AP-Manager
D. dynamic

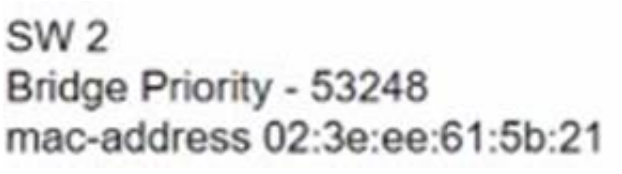
Answer: A

NEW QUESTION 446
- (Topic 4)
Refer to the exhibit.

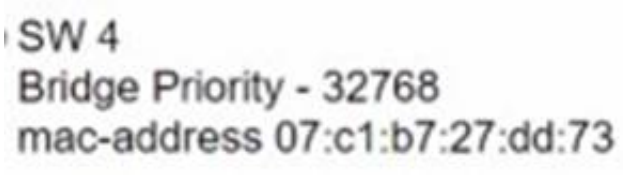


Which switch becomes the root bridge?
A)

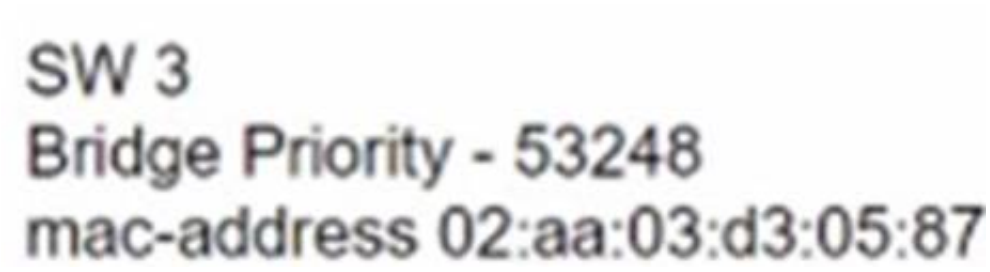
B)



C)



D)



A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

NEW QUESTION 448
- (Topic 4)
Refer to the exhibit.

```
Router1#show ip route
Gateway of last resort is not set
     209.165.200.0/27 is subnetted, 1 subnets
B       209.165.200.224 [20/0] via 10.10.12.2, 00:09:57
     10.0.0.0/8 is variably subnetted, 4 subnets, 3 masks
C       10.10.10.0/28 is directly connected, GigabitEthernet0/0
C       10.10.11.0/30 is directly connected, FastEthernet2/0
O       10.10.13.0/24 [110/2] via 10.10.10.1, 00:08:34, GigabitEthernet0/0
C       10.10.12.0/30 is directly connected, GigabitEthernet0/1
```

Which action by the router when a packet is sourced from 10.10.10.2 and destined 10.10.10.16?

A. It queues the packets waiting for the route to be learned.
B. It floods packets to all learned next hops.
C. It discards the packets.
D. It uses a route that is similar to the destination address.

Answer: D

NEW QUESTION 451
- (Topic 4)
What is used as a solution for protecting an individual network endpoint from attack?

A. Router
B. Wireless controller
C. Anti software
D. Cisco DNA Center

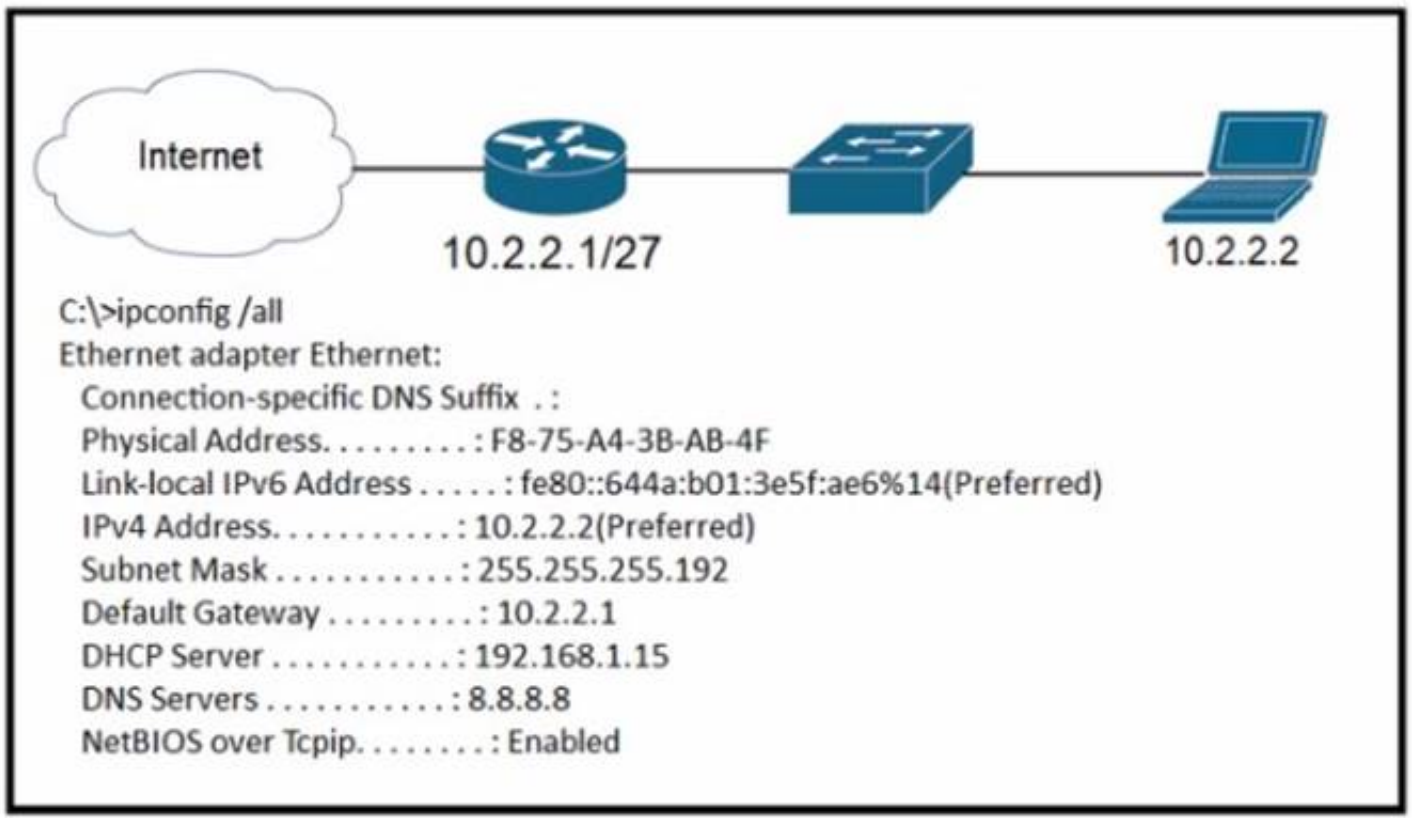
Answer: C

NEW QUESTION 453
- (Topic 4)
Which IPv6 address range is suitable for anycast addresses for distributed services such DHCP or DNS?

A. FF00:1/12
B. 2001:db8:0234:ca3e::1/128
C. 2002:db84:3f37:ca98:be05:8/64
D. FE80::1/10

Answer: A

NEW QUESTION 457
- (Topic 4)
Refer to the exhibit.

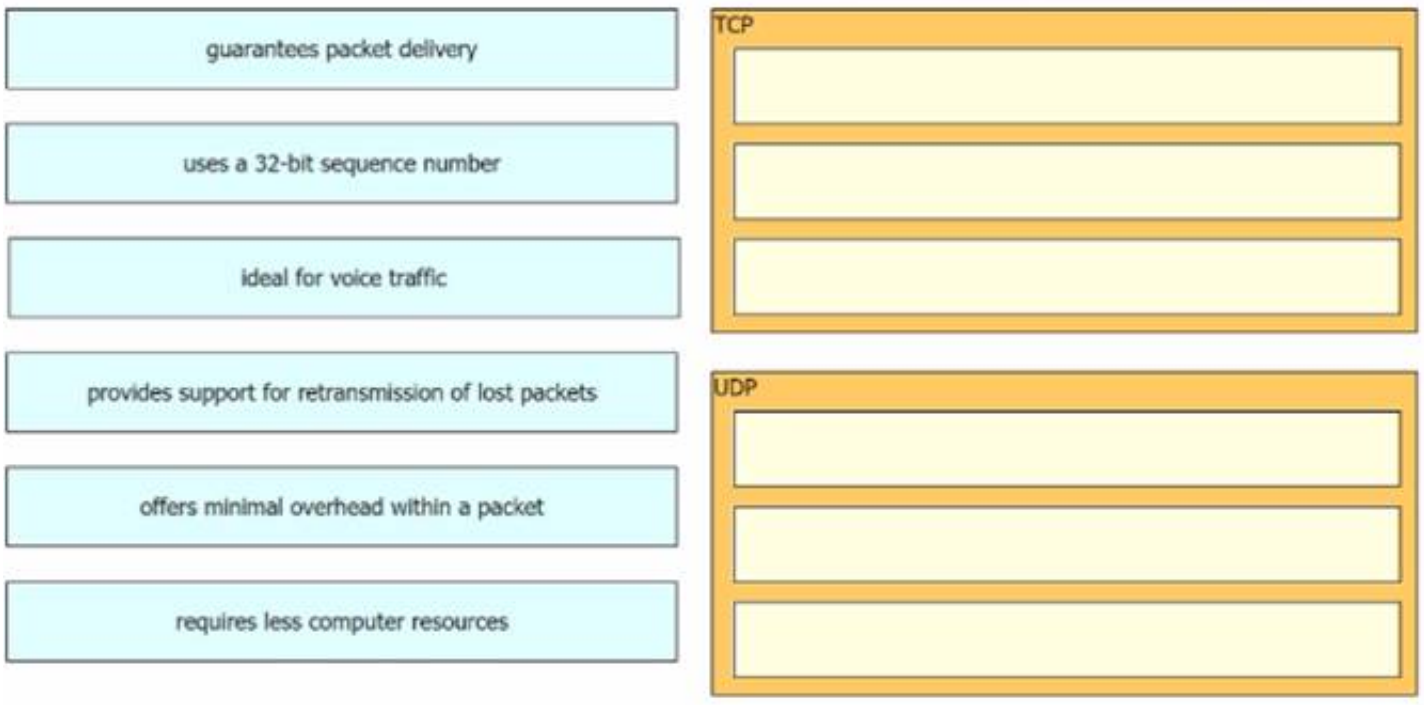


A newly configured PC fails to connect to the internet using TCP port 80 to www cisco com Which setting must be modified for the connection to work?

A. Subnet Mask
B. DNS Servers
C. Default Gateway
D. DHCP Server

Answer: B

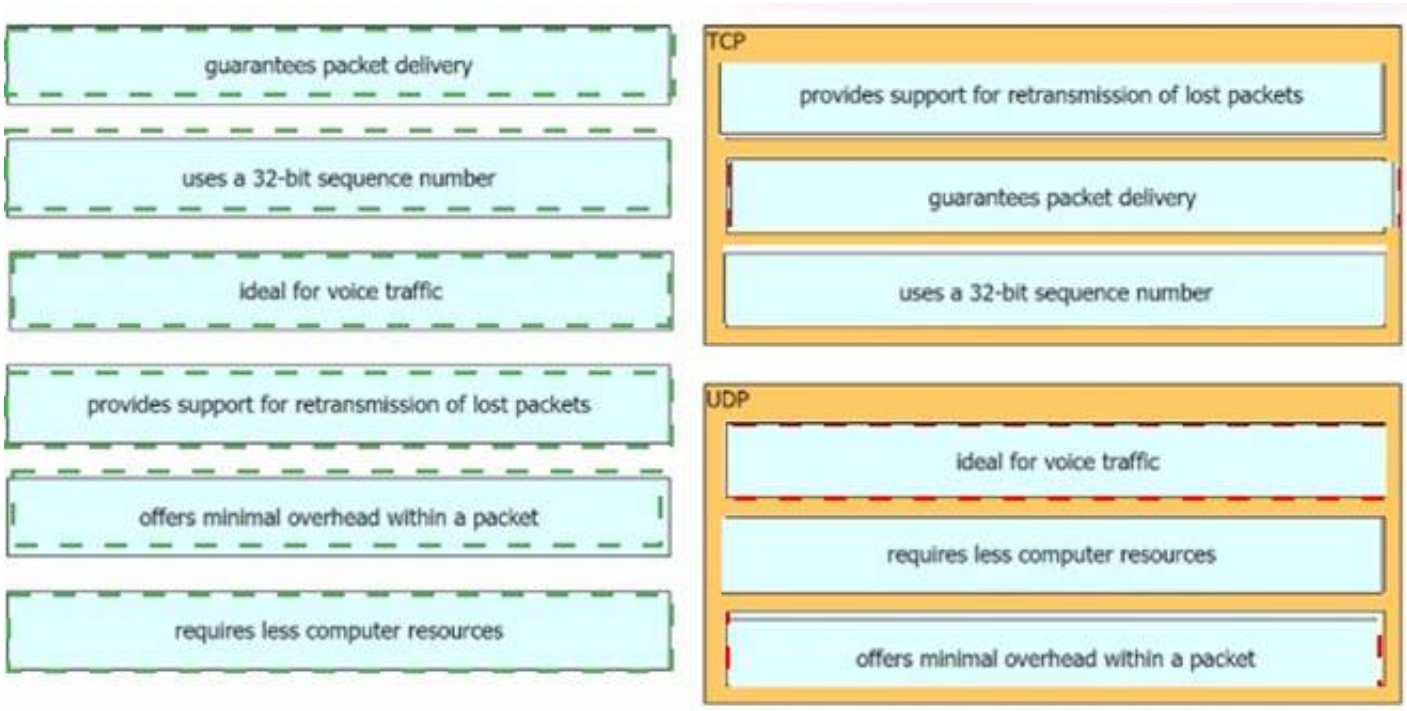
NEW QUESTION 460
DRAG DROP - (Topic 4)
Drag and drop the characteristics of transport layer protocols from the left onto the corresponding protocols on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 465
- (Topic 4)
A router has two static routes to the same destination network under the same OSPF process. How does the router forward packets to the destination if the next-hop devices are different?

A. The router chooses the route with the oldest age.
B. The router load-balances traffic over all routes to the destination.
C. The router chooses the next hop with the lowest MAC address.
D. The router chooses the next hop with the lowest IP address.

Answer: B

NEW QUESTION 469
- (Topic 4)
What is the collapsed layer in collapsed core architectures?

A. core and WAN
B. access and WAN
C. distribution and access
D. core and distribution

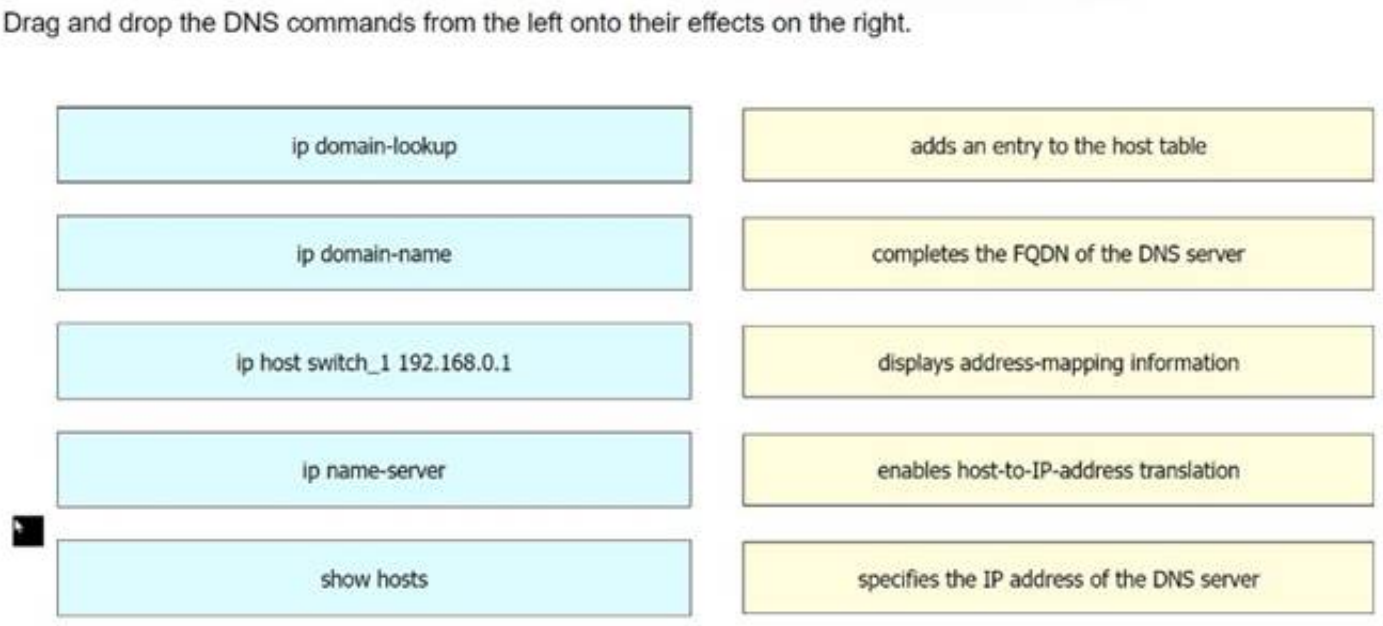
Answer: D

NEW QUESTION 474
- (Topic 4)
How do UTP and STP cables compare?

A. STP cables are cheaper to procure and easier to install and UTP cables are more expensive and harder to install.
B. UTP cables are less prone to crosstalk and interference and STP cables are more prone to crosstalk and interference.
C. UTP cables provide taster and more reliable data transfer rates and STP cables are slower and less reliable.
D. STP cables are shielded and protect against electromagnetic interference and UTP lacks the same protection against electromagnetic interference.

Answer: D

NEW QUESTION 478
DRAG DROP - (Topic 4)
Drag and drop the DNS commands from the left onto their effects on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

Drag and drop the DNS commands from the left onto their effects on the right.

NEW QUESTION 481
- (Topic 4)
Refer to the exhibit.

```
MacOs$ ifconfig

en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=400<CHANNEL_IO>
    ether f0:18:98:64:60:32
    inet6 fe80::492:c09f:57cf:8c36%en0 prefixlen 64 secured scopeid 0x6
    inet 10.8.138.14 netmask 0xfffffe000 broadcast 10.8.159.255
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect
    status: active
```

A network engineer must provide configured IP addressing details to investigate a firewall rule Issue. Which subnet and mask Identify what is configured on the en0 interface?

A. 10.8.0.0/16
B. 10.8.64.0/18
C. 10.8.128.0/19
D. 10.8.138.0/24

Answer: D

NEW QUESTION 486
- (Topic 4)
What is the purpose of using First Hop Redundancy Protocol on a specific subnet?

A. ensures a loop-free physical topology
B. filters traffic based on destination IP addressing
C. sends the default route to the hosts on a network
D. forwards multicast hello messages between routers

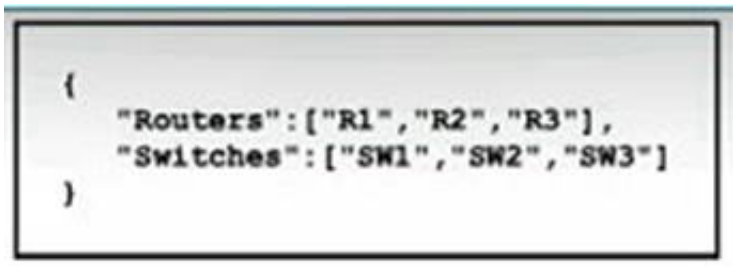
Answer: D

NEW QUESTION 491
- (Topic 4)
What is a benefit for external users who consume public cloud resources?

A. implemented over a dedicated WAN
B. located in the same data center as the users
C. all hosted on physical servers
D. accessed over the Internet

Answer: D

NEW QUESTION 496
- (Topic 4)
Refer to the exhibit.



What is represented by "R1" and "SW1" within the JSON output?

A. key
B. array
C. value
D. object

Answer: C

NEW QUESTION 498
- (Topic 4)
Which component controls and distributes physical resources for each virtual machine?

A. OS
B. hypervisor
C. CPU
D. physical enclosure

Answer: B

NEW QUESTION 502
- (Topic 4)
What is a function performed by a web server?

A. provide an application that is transmitted over HTTP
B. send and retrieve email from client devices
C. authenticate and authorize a user's identity
D. securely store flies for FTP access

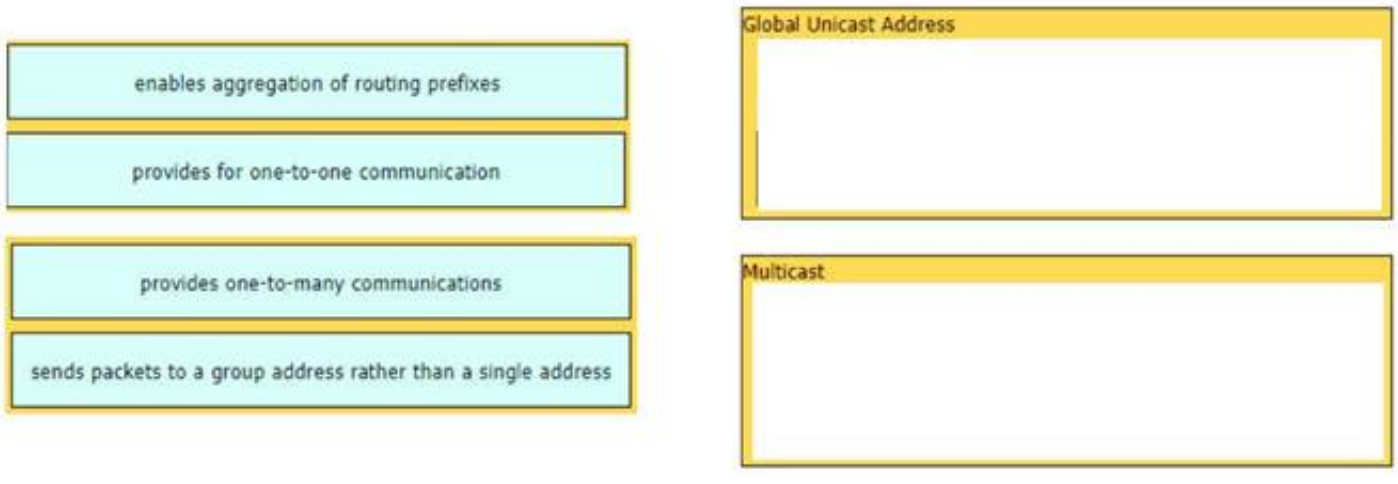
Answer: A

NEW QUESTION 504
- (Topic 4)
A network engineer must migrate a router loopback interface to the IPv6 address space. If the current IPv4 address of the interface is 10.54.73.1/32, and the engineer configures IPv6 address 0.0.0.0.0:ffff:a36:4901, which prefix length must be used?

A. /64
B. /96
C. /124
D. /128

Answer: D

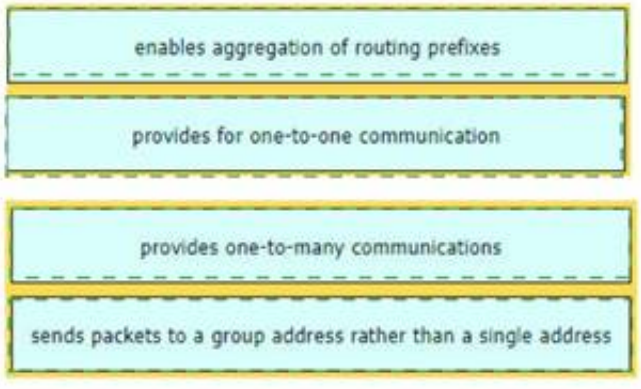
NEW QUESTION 509
DRAG DROP - (Topic 4)
Drag and drop the characteristic from the left onto the IPv6 address type on the right.

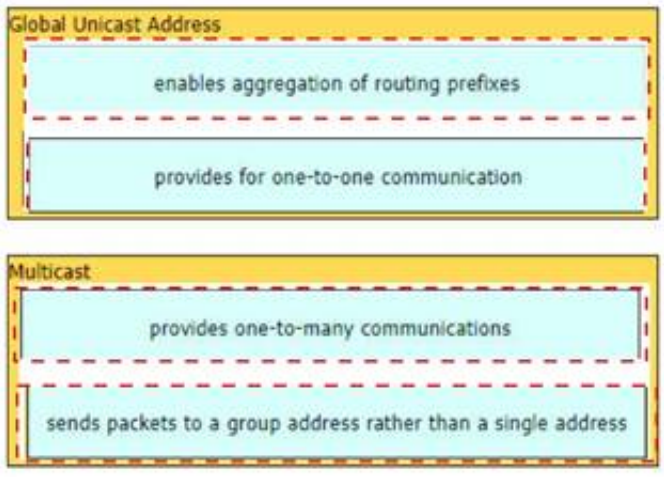


A. Mastered
B. Not Mastered

Answer: A

Explanation:





NEW QUESTION 514
- (Topic 4)
Which security method is used to prevent man-in-the-middle attack?

A. authorization
B. authentication
C. anti-replay
D. accounting

Answer: B

NEW QUESTION 516
- (Topic 4)
Refer to the exhibit. User traffic originating within site 0 is failing to reach an application hosted on IP address 192.168 0 10. Which is located within site A What is determined by the routing table?

A. The default gateway for site B is configured incorrectly
B. The lack of a default route prevents delivery of the traffic
C. The traffic is blocked by an implicit deny in an ACL on router2
D. The traffic to 192 168 010 requires a static route to be configured in router 1.

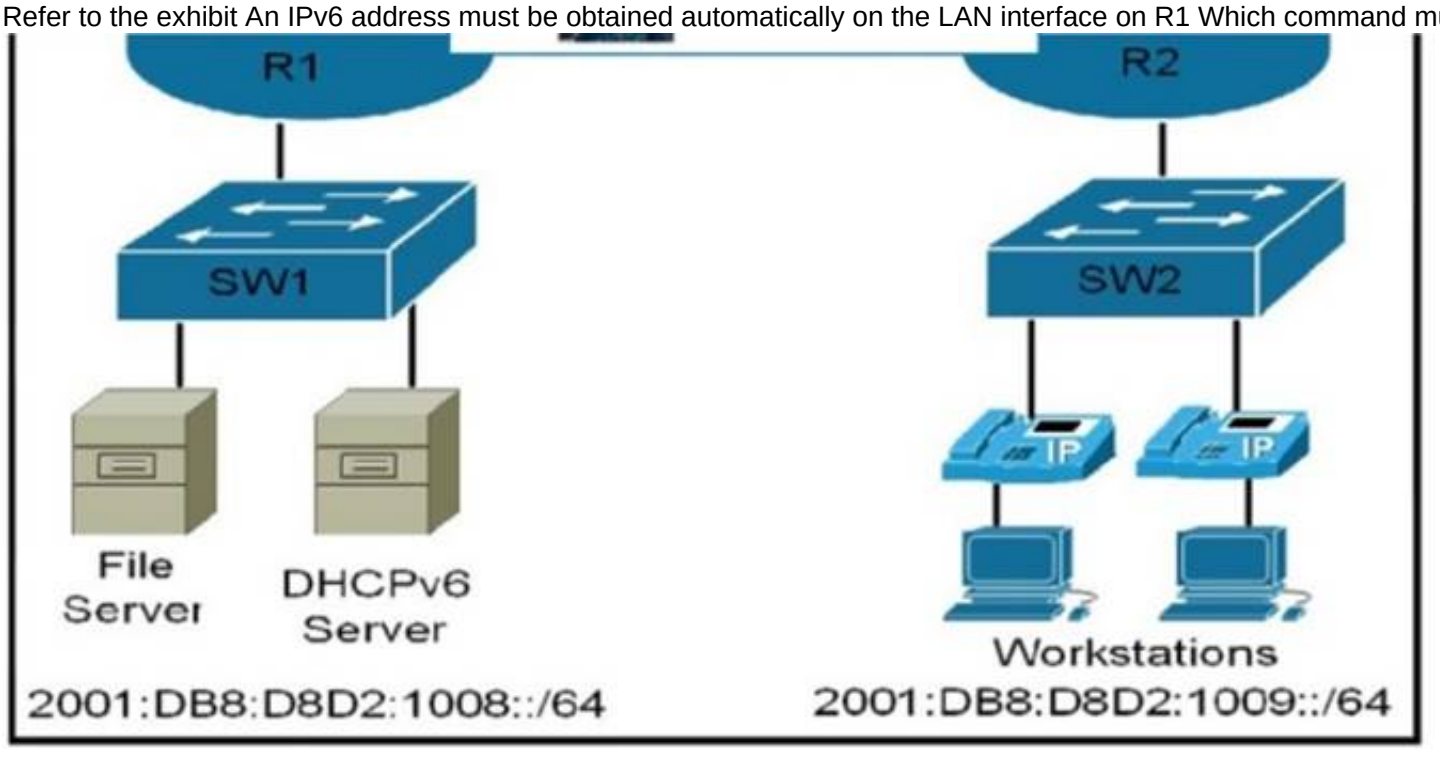
Answer: B

NEW QUESTION 518
- (Topic 4)
What is the primary purpose of a console port on a Cisco WLC?

A. In-band management via an asynchronous transport
B. out-of-band management via an IP transport
C. in-band management via an IP transport
D. out-of-band management via an asynchronous transport

Answer: D

NEW QUESTION 521
- (Topic 4)
Refer to the exhibit An IPv6 address must be obtained automatically on the LAN interface on R1 Which command must be implemented to accomplish the task?

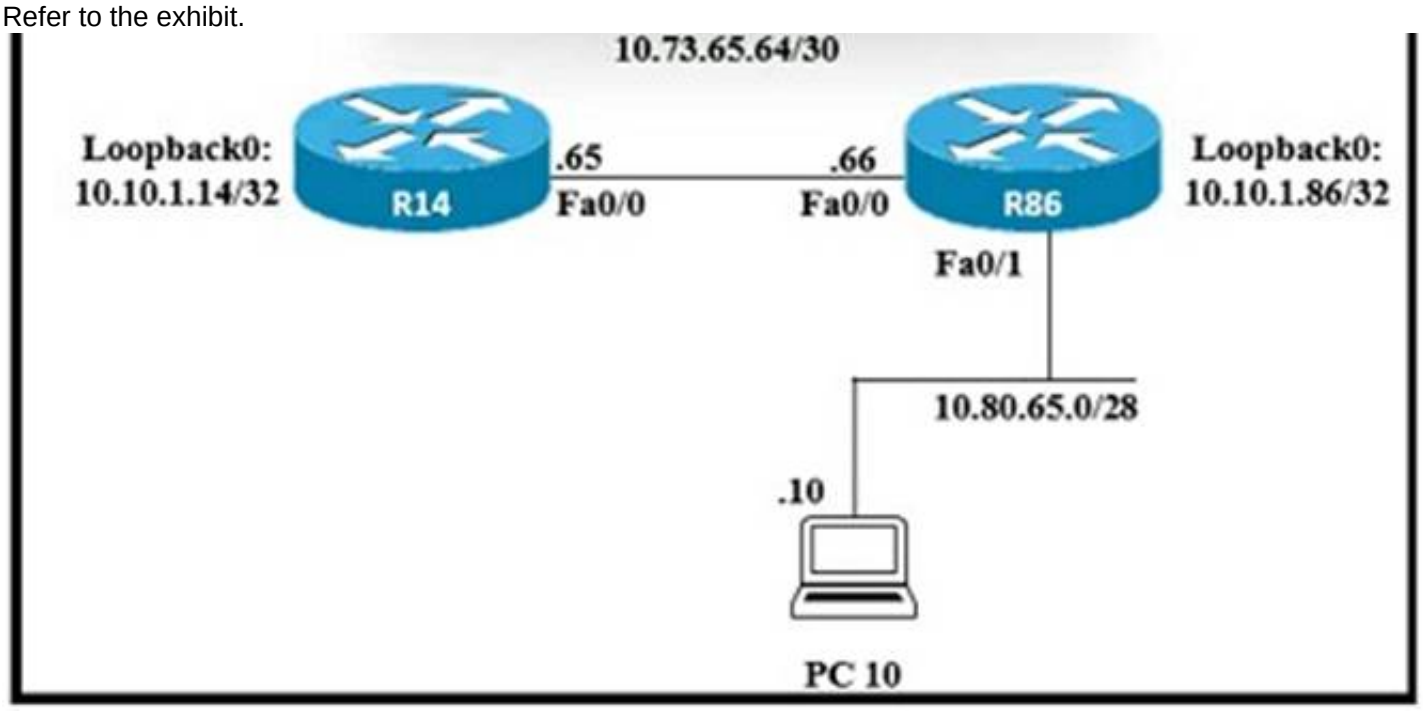


A. Ipv6 address 2001:dbB:d8d2:1008:4343:61:0010::/64
B. Ipv6 address autoconfig
C. Ipv6 address fe80::/10

D. Ipv6 address dhcp

Answer: B

NEW QUESTION 523
- (Topic 4)
Refer to the exhibit.



Router R14 is in the process of being configured. Which configuration must be used to establish a host route to PC 10?

A. ip route 10.80.65.10 255.255.255.254 10.80.65.1
B. ip route 10.8065.10 255.255.255.255 10.73.65.66
C. ip route 1073.65.65 255.0.0.0 10.80.65.10
D. ip route 10.73.65.66 0.0.0.255 10.80.65.10

Answer: B

NEW QUESTION 528
- (Topic 4)
Which QoS queuing method discards or marks packets that exceed the desired bit rate of traffic flow?

A. shaping
B. policing
C. CBWFQ
D. LLQ

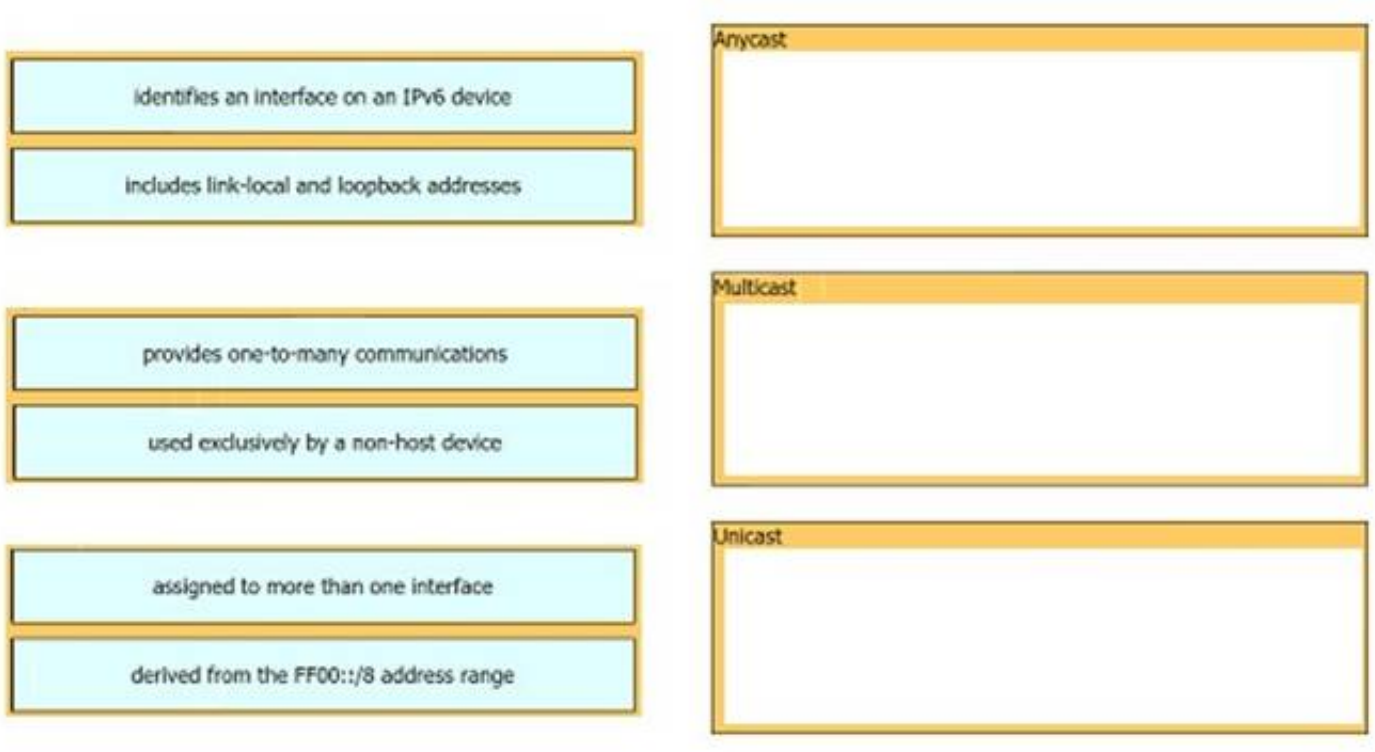
Answer: B

NEW QUESTION 532
- (Topic 4)
What is the role of disaggregation in controller-based networking?

A. It divides the control-plane and data-plane functions.
B. It summarizes the routes between the core and distribution layers of the network topology.
C. It enables a network topology to quickly adjust from a ring network to a star network
D. It streamlines traffic handling by assigning individual devices to perform either Layer 2 or Layer 3 functions.

Answer: A

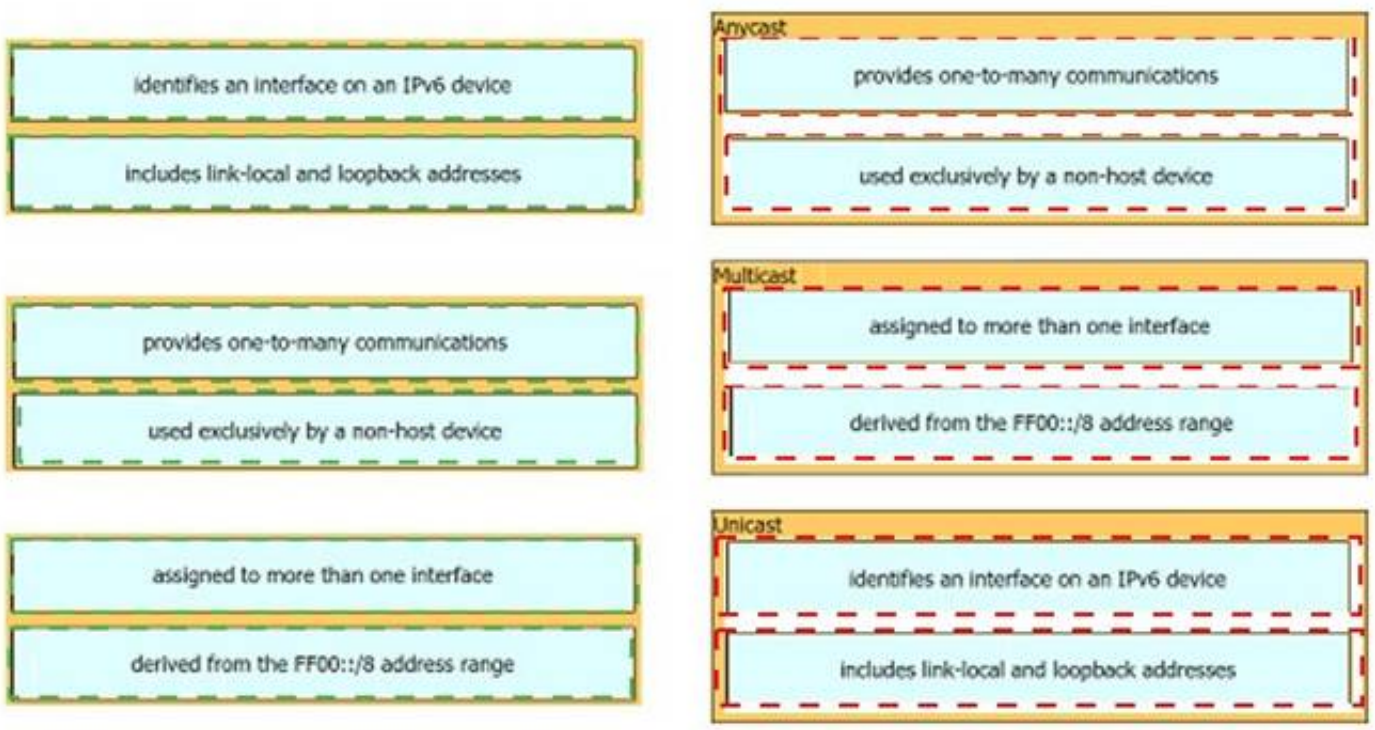
NEW QUESTION 533
DRAG DROP - (Topic 4)
Drag and drop the IPv6 address details from the left onto the corresponding types on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 534
- (Topic 4)
What is the operating mode and role of a backup port on a shared LAN segment in Rapid PVST+?

A. forwarding mode and provides the lowest-cost path to the root bridge for each VLAN
B. learning mode and provides the shortest path toward the root bridge handling traffic away from the LAN
C. blocking mode and provides an alternate path toward the designated bridge
D. listening mode and provides an alternate path toward the root bridge

Answer: C

NEW QUESTION 537
- (Topic 4)
Refer to the exhibit.

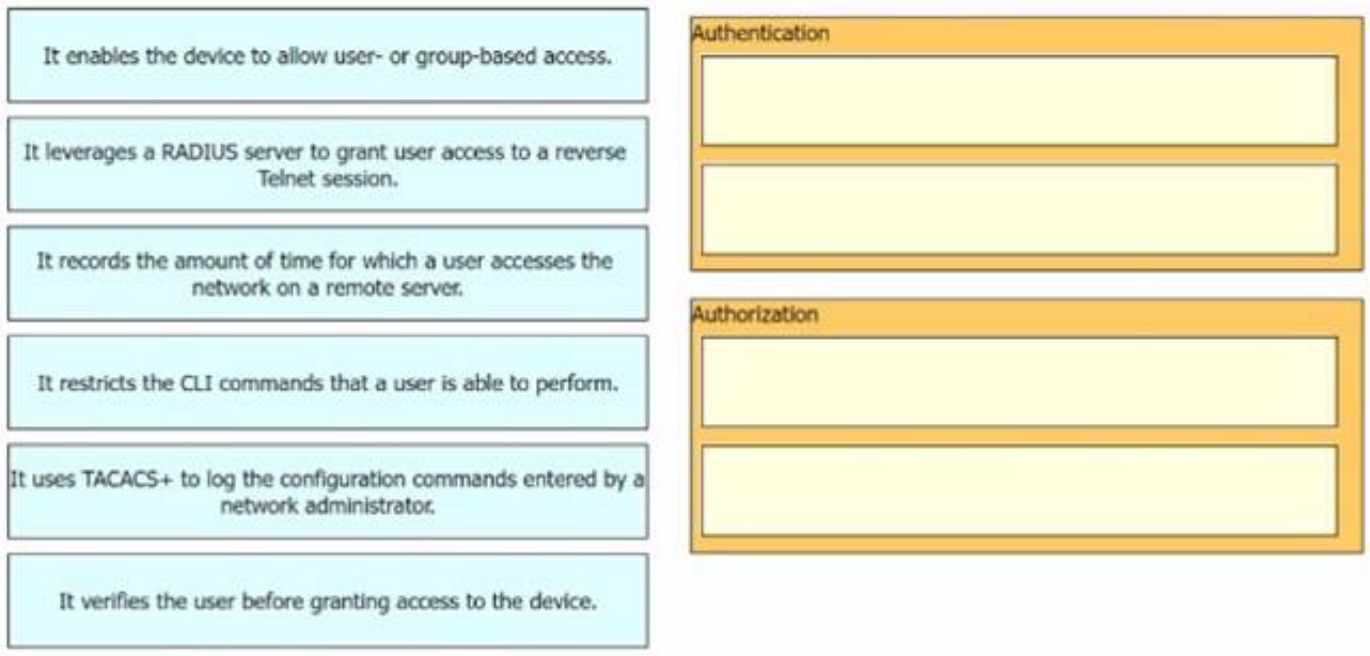
```
Gateway of last resort is 172.16.2.2 to network 0.0.0.0

     10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C      10.10.8.0/28 is directly connected, GigabitEthernet0/0/2
C      10.10.10.0/24 is directly connected, GigabitEthernet0/0/0
L      10.10.10.3.32 is directly connected, GigabitEthernet0/0/0

     172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
S      172.16.1.33/32 is directly connected, GigabitEthernet0/0/1
C      172.16.2.0/23 is directly connected, GigabitEthernet0/0/1
L      172.16.2.1/32 is directly connected, GigabitEthernet0/0/1
S*   0.0.0.0/0 [1/0] via 172.16.2.2
```

A packet sourced from 10.10.10.1 is destined for 10.10.8.14. What is the subnet mask of the destination route?

A. 255.255.254.0
B. 255.255.255.240
C. 255.255.255.248
D. 255.255.255.252

Answer: B

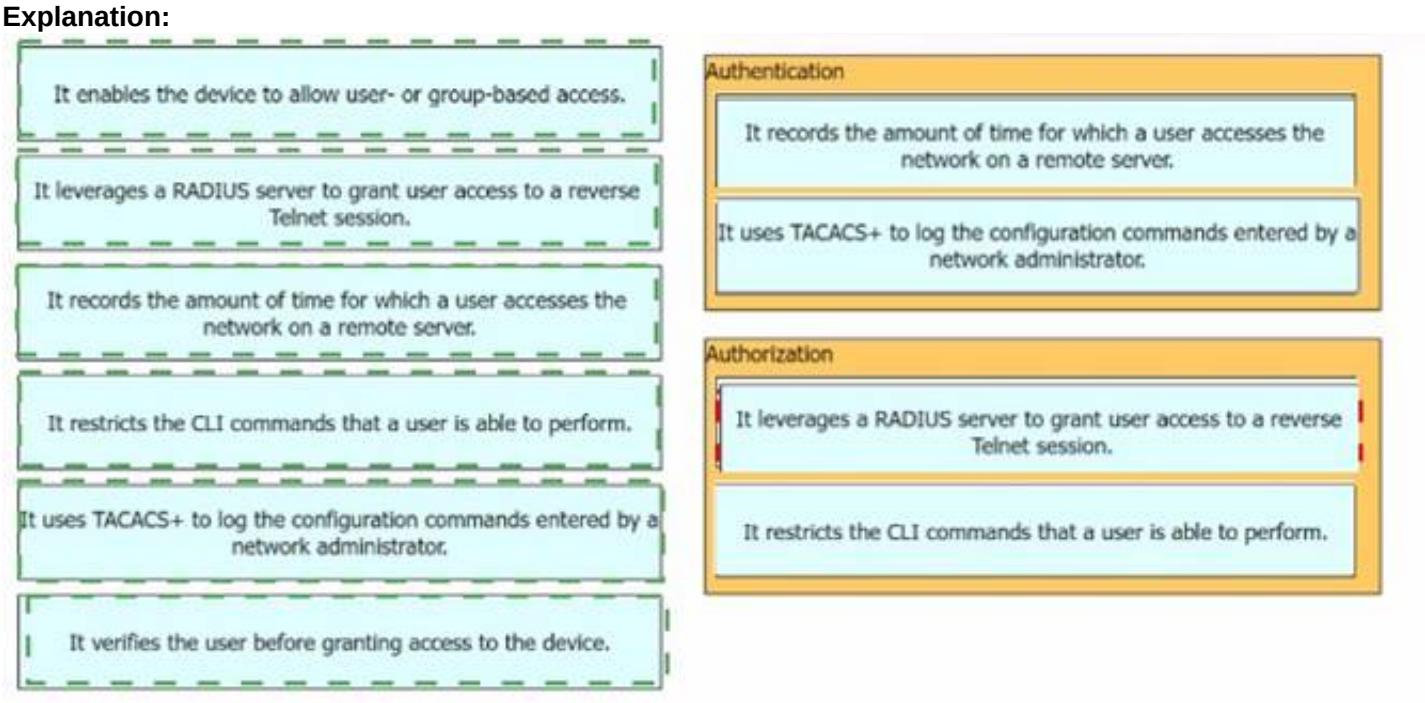
NEW QUESTION 542
DRAG DROP - (Topic 4)
Drag and drop the AAA features from the left onto the corresponding AAA security services on the right. Not all options are used.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

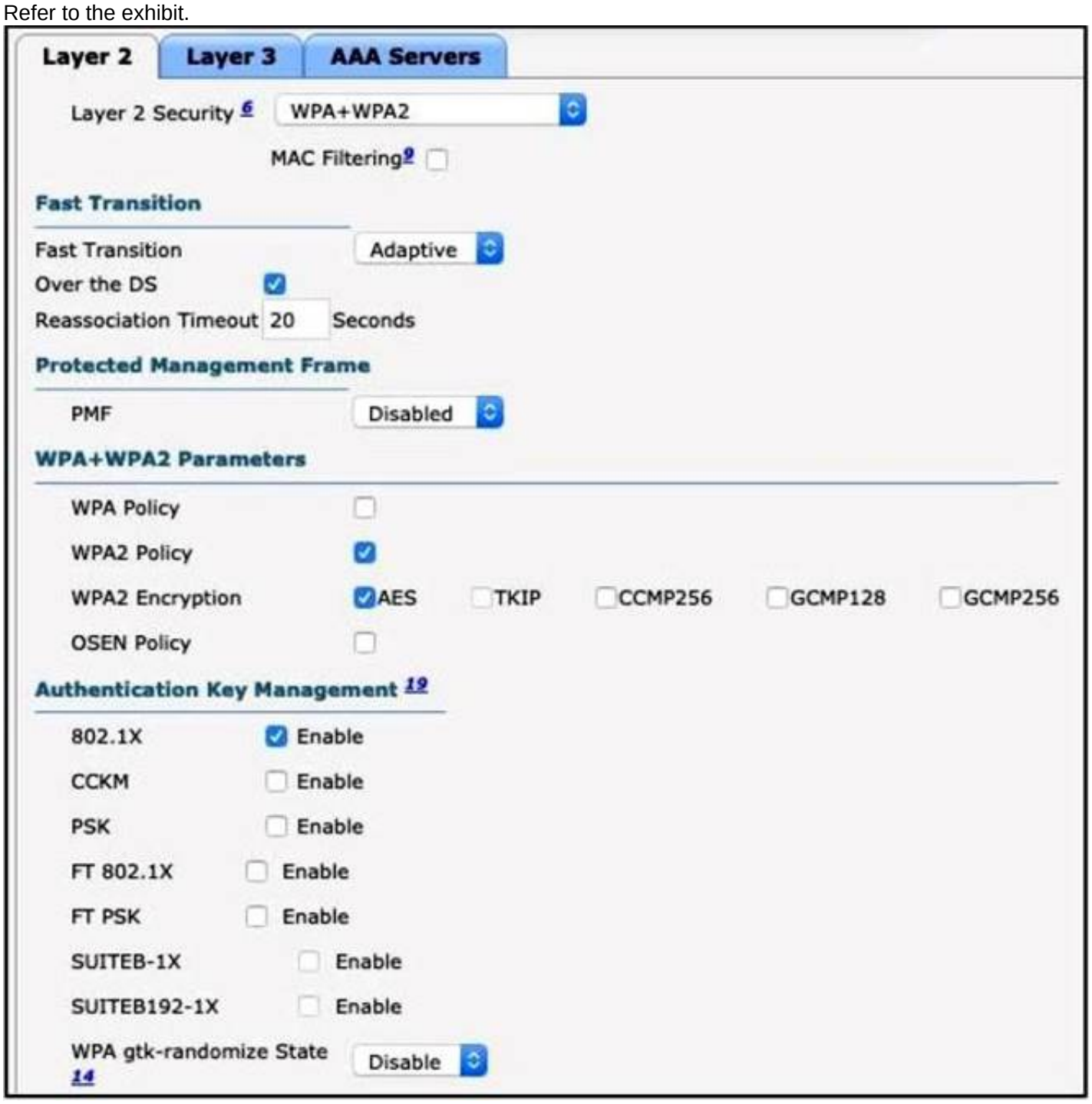


NEW QUESTION 547
- (Topic 4)
Which type of IPv4 address type helps to conserve the globally unique address classes?

A. multicast
B. private
C. loopback
D. public

Answer: B

NEW QUESTION 550
- (Topic 4)
Refer to the exhibit.



Clients on the WLAN are required to use 802.11r. What action must be taken to meet the requirement?

A. Under Protected Management Frames, set the PMF option to Required.
B. Enable CCKM under Authentication Key Management.
C. Set the Fast Transition option and the WPA gtk-randomize State to disable.
D. Set the Fast Transition option to Enable and enable FT 802.1X under Authentication Key Management.

Answer: D

NEW QUESTION 555
- (Topic 4)
What is a feature of WPA?

A. 802.1x authentication
B. preshared key
C. TKIP/MIC encryption
D. small Wi-Fi application

Answer: A

NEW QUESTION 560
- (Topic 4)
Refer to the exhibit.

```
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
       B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
       I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP
       EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination
       NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1
       OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
       la - LISP alt, lr - LISP site-registrations, ld - LISP dyn-eid
       lA - LISP away, le - LISP extranet-policy, lp - LISP publications
ND   ::/0 [2/0]
     via FE80::A8BB:CCFF:FE00:200, Ethernet0/0
NDp  2001:DB8:1234:1::/64 [2/0]
     via Ethernet0/0, directly connected
L    2001:DB8:1234:1:A8BB:CCFF:FE00:100/128 [0/0]
     via Ethernet0/0, receive
C    2001:DB8:1234:2::/64 [0/0]
     via Ethernet0/1, directly connected
L    2001:DB8:1234:2:A8BB:CCFF:FE00:110/128 [0/0]
     via Ethernet0/1, receive
L    FF00::/8 [0/0]
     via Null0, receive
```

The administrator must configure a floating sialic default route that points to 2001:db8:1234:2::1 and replaces the current default route only if it fails. Which command must the engineer configure on the CPE?

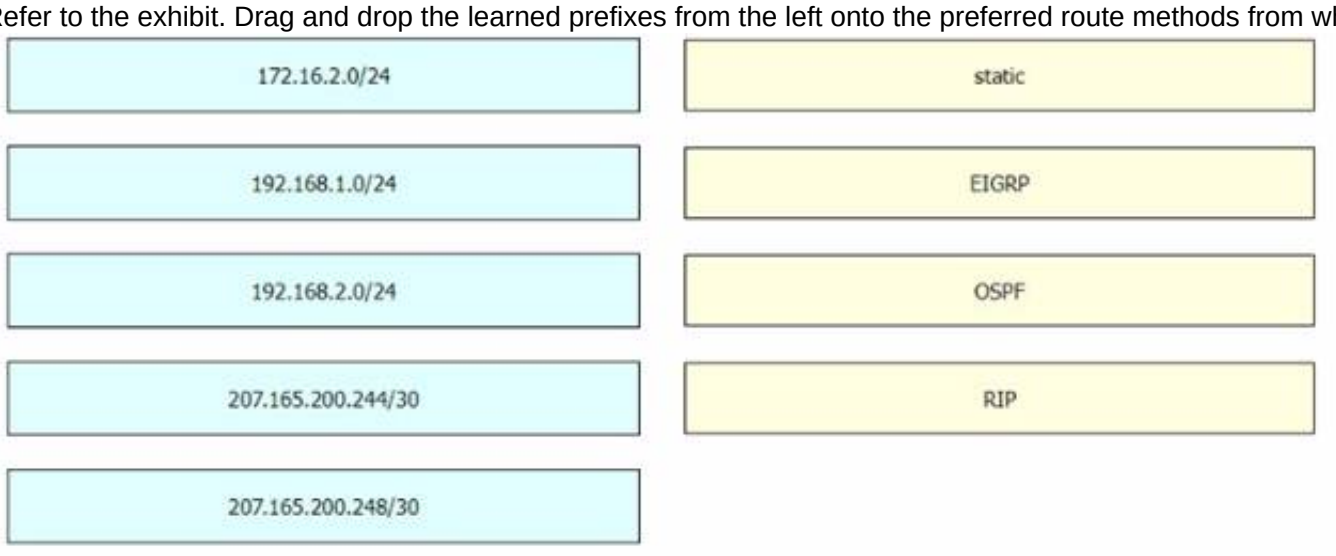
A. ipv6 route ::/0 2001:db8:1234:2::1 3
B. ipv6 route ::/128 2001 :db8:1234:2::1 3
C. ipv6 route ::/0 2001:db8:1234:2::1 1
D. ipv6 route ::/0 2001:db8:1234:2::1 2

Answer: B

NEW QUESTION 565
DRAG DROP - (Topic 4)

```
R1# show ip route | begin gateway
Gateway of last resort is not set
     172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
     172.16.1.0/24 is directly connected, FastEthernet0/0
     172.16.1.1/32 is directly connected, FastEthernet0/0
     172.16.2.0/24 [120/2] via 207.165.200.250, 00:00:25, Serial0/0/0
     192.168.1.0/24 [110/84437] via 207.165.200.254, 00:00:17, Serial0/0/1
     192.168.2.0/24 [90/3184437] via 207.165.200.254, 00:00:15, Serial0/0/1
     207.165.200.0/24 is variably subnetted, 5 subnets, 2 masks
     207.165.200.244/30 [1/1] via 207.165.200.254, Serial0/0/1
     207.165.200.248/30 is directly connected, Serial0/0/0
     207.165.200.249/32 is directly connected, Serial0/0/0
     207.165.200.252/30 is directly connected, Serial0/0/1
     207.165.200.253/32 is directly connected, Serial0/0/1
```

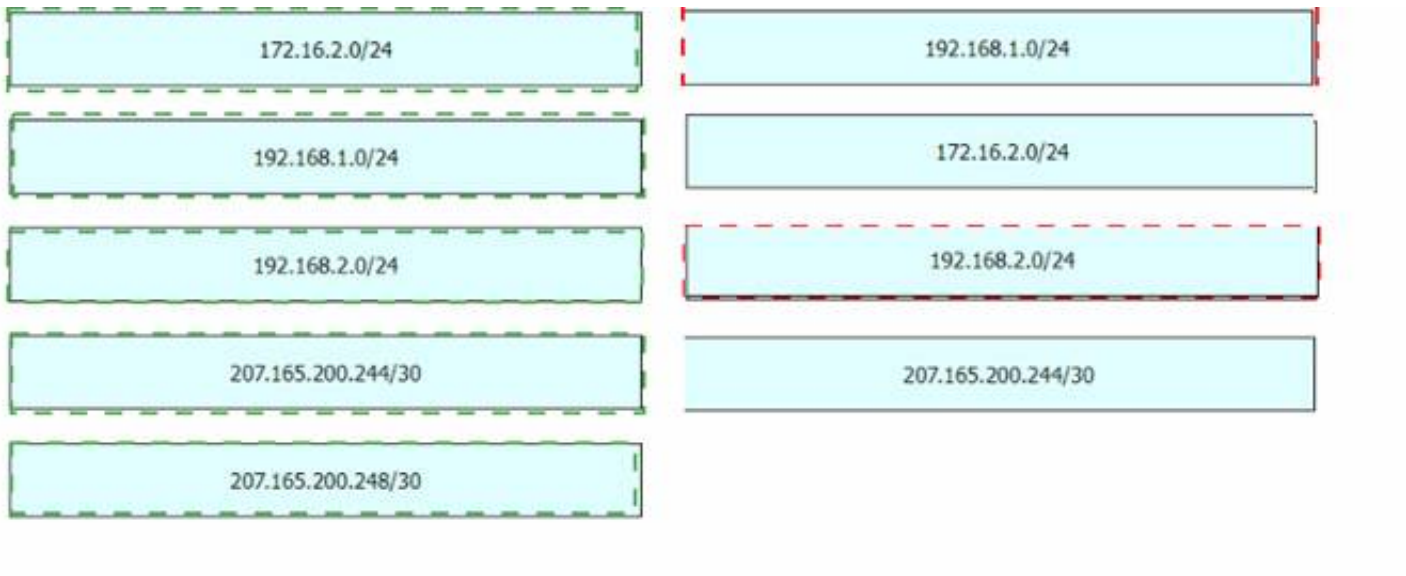
Refer to the exhibit. Drag and drop the learned prefixes from the left onto the preferred route methods from which they were learned on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 569
- (Topic 4)
Refer to the exhibit.

```
interface g2/0/0
   channel-group 1 mode active
interface g4/0/0
   channel-group 1 mode active
interface Port-channel1
   ip address 203.0.113.65 255.255.255.252

%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel1, changed state to down
```

An engineer is configuring a Layer 3 port-channel interface with LACP. The configuration on the first device is complete, and it is verified that both interfaces have registered the neighbor device in the CDP table. Which task on the neighbor device enables the new port channel to come up without negotiating the channel?

A. Change the EtherChannel mode on the neighboring interfaces to auto.
B. Configure the IP address of the neighboring device.
C. Bring up the neighboring interfaces using the no shutdown command.
D. Modify the static EtherChannel configuration of the device to passive mode.

Answer: D

NEW QUESTION 571
- (Topic 4)
What is a reason why an administrator would choose to implement an automated network management approach?

A. Reduce inconsistencies in the network configuration.
B. Enable "box by box" configuration and deployment.
C. Decipher simple password policies.
D. Increase recurrent management costs.

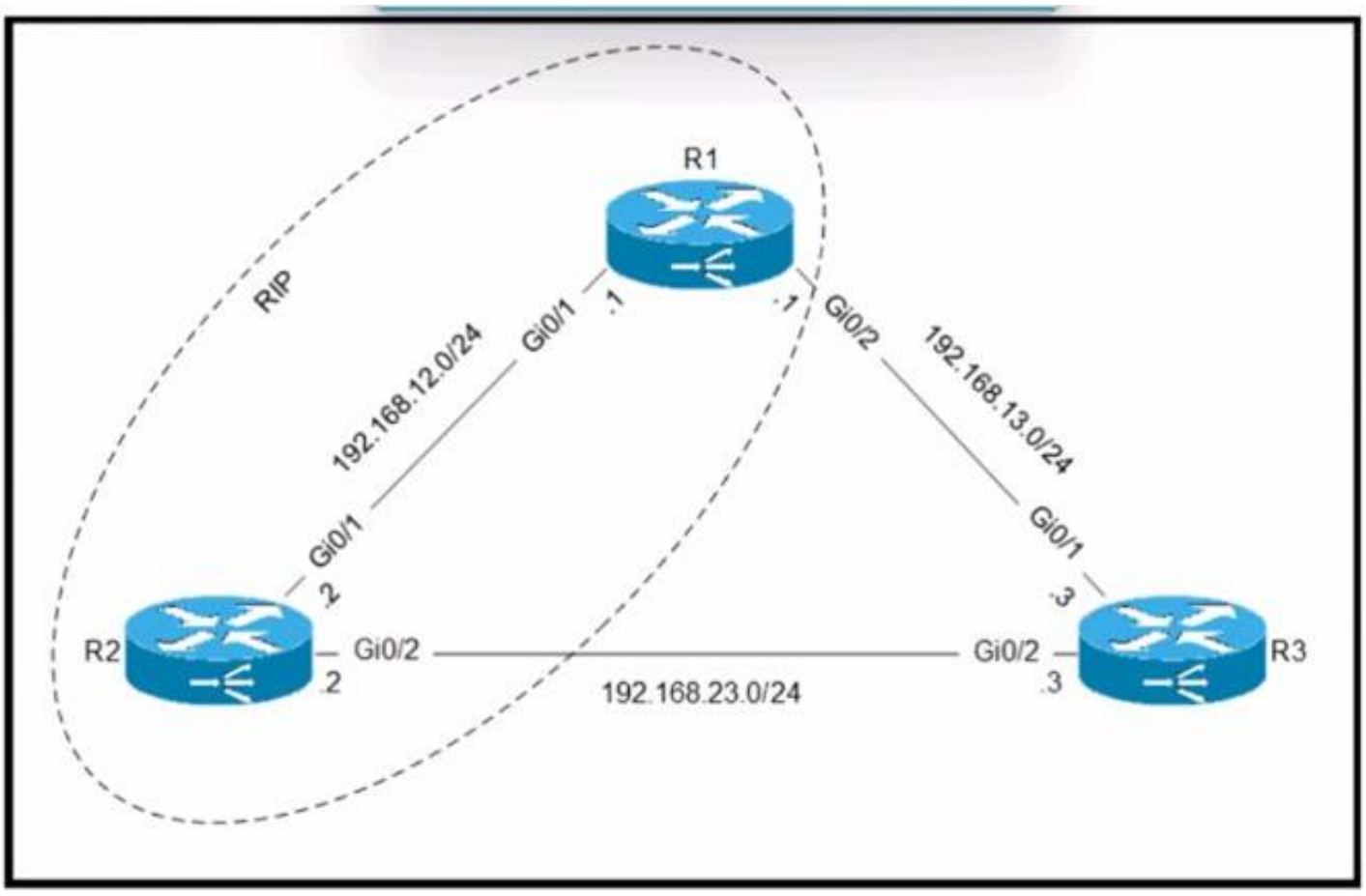
Answer: A

NEW QUESTION 573
- (Topic 4)
Which enhancement is implemented in WPA3?

A. applies 802.1x authentication
B. usesTKIP
C. employs PKI to identify access points
D. protects against brute force attacks

Answer: D

NEW QUESTION 578
- (Topic 4)
Refer to the exhibit.



Routers R1 and R2 are configured with RIP as the dynamic routing protocol. A network engineer must configure R1 with a floating static route to serve as a backup route to network 192.168.23. Which command must the engineer configure on R1?

A. ip route 192.168.23.0 255.255.255.0 192.168.13.3 100
B. ip route 192.168.23.0 255.255.255.0 192.168.13.3 121
C. ip route 192.168.23.0 255.255.255.255 192.168.13.3 121
D. ip route 192.168.23.0 255.255.255.0 192.168.13.3

Answer: B

NEW QUESTION 582
- (Topic 4)
Refer to the exhibit.

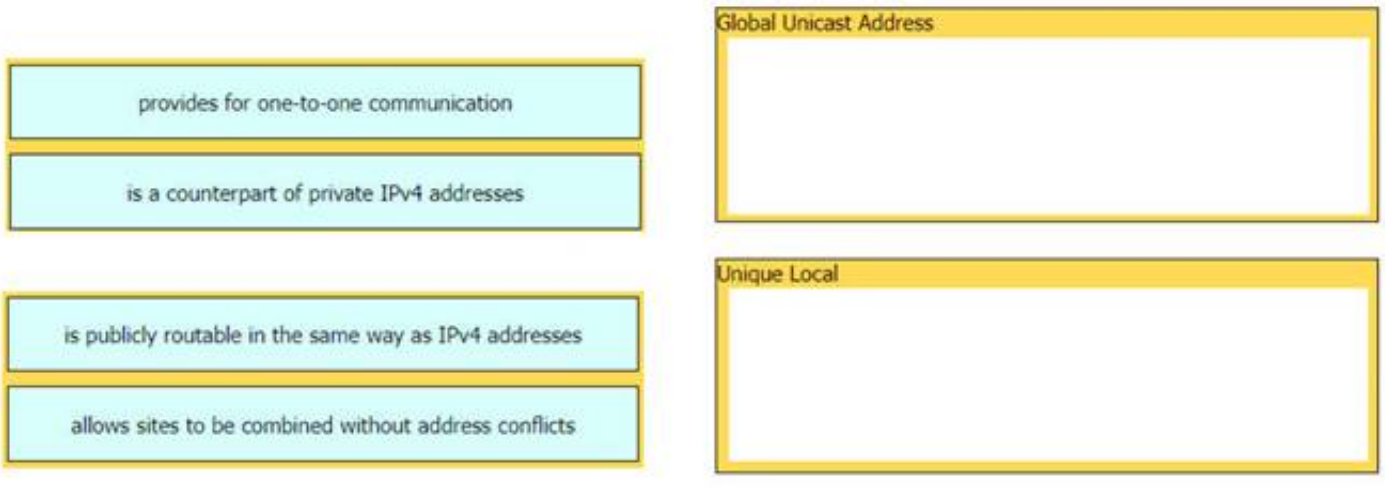
```
GigabitEthernet1 is up, line protocol is up
  Hardware is CSR vNIC, address is 5000.0004.0000 (bia 5000.0004.0000)
  Internet address is 192.168.1.1/24
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full Duplex, 1000Mbps, link type is auto, media type is RJ45
```

Which format matches the Modified EUI-64 IPv6 interface address for the network 2001:db8::/64?

A. 2001 :db8::5000:0004:5678:0090/64
B. 2001 :db8:4425:5400:77ft:fe07:/64
C. 2001 :db8::5000:00ff:fe04 0000/64
D. 2001 :db8::5200:00ff:fe04:0000/64

Answer: C

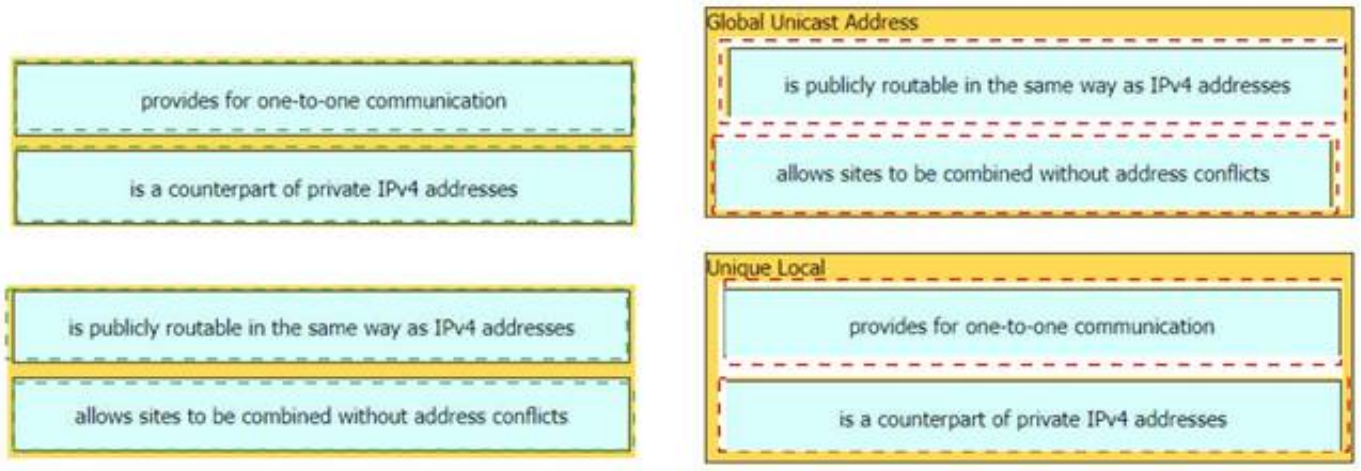
NEW QUESTION 587
DRAG DROP - (Topic 4)
Drag and drop the characteristic from the left onto the IPv6 address type on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 588
- (Topic 4)
What is the purpose of classifying network traffic in QoS?

A. services traffic according to its class
B. identifies the type of traffic that will receive a particular treatment
C. writes the class identifier of a packet to a dedicated field in the packet header
D. configures traffic-matching rules on network devices

Answer: B

NEW QUESTION 593
- (Topic 4)
What are two examples of multifactor authentication? (Choose two.)

A. single sign-on
B. unique user knowledge
C. passwords that expire
D. soft tokens
E. shared password responsibility

Answer: BD

NEW QUESTION 597
- (Topic 4)
Which type of address is shared by routers in a HSRP implementation and used by hosts on the subnet as their default gateway address?

A. multicast address
B. loopback IP address
C. virtual IP address
D. broadcast address

Answer: C

NEW QUESTION 601
- (Topic 4)
Which Cisco proprietary protocol ensures traffic recovers immediately, transparently, and automatically when edge devices or access circuits fail?

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

Answer: D

NEW QUESTION 604
- (Topic 4)
How does authentication differ from authorization?

A. Authentication verifies the identity of a person accessing a network, and authorization determines what resource a user can access.
B. Authentication is used to record what resource a user accesses, and authorization is used to determine what resources a user can access
C. Authentication is used to determine what resources a user is allowed to access, and authorization is used to track what equipment is allowed access to the network
D. Authentication is used to verify a person's identity, and authorization is used to create syslog messages for logins.

Answer: A

NEW QUESTION 605
- (Topic 4)

What does a switch search for in the CAM table when forwarding a frame?

A. source MAC address and aging time
B. destination MAC address and flush time
C. source MAC address and source port
D. destination MAC address and destination port

Answer: D

Explanation:
A switch searches for the destination MAC address and the destination port in the CAM table when forwarding a frame. The CAM table, or content addressable memory table, is a data structure that stores the MAC addresses of the devices connected to the switch ports and their associated VLANs. The switch uses the CAM table to make layer 2 forwarding decisions based on the destination MAC address of a frame. When a frame arrives at a switch port, the switch first learns the source MAC address and the source port of the frame and updates the CAM table accordingly. Then, the switch looks up the destination MAC address of the frame in the CAM table and finds the corresponding destination port. If there is a match, the switch forwards the frame out of that port only. If there is no match, the switch floods the frame out of all ports except the source port123.
References:
? 1: Why is the CAM table in a switch called CAM table and not MAC table even though it holds MAC addresses?
? 2: ARP and CAM Table
? 3: The CAM Table or MAC address Table

NEW QUESTION 606
- (Topic 4)
An engineer must configure neighbor discovery between the company router and an ISP

```
interface gigabitethernet0/0
description Circuit-ATT4203-21099
duplex full
speed 1000
media-type gbic
negotiation auto
lldp transmit
lldp receive
```

What is the next step to complete the configuration if the ISP uses a third-party router?

A. Enable LLDP globally.
B. Disable CDP on gi0/0.
C. Enable LLDP TLVs on the ISP router.
D. Disable auto-negotiation.

Answer: A

NEW QUESTION 611
- (Topic 4)
Refer to the exhibit.

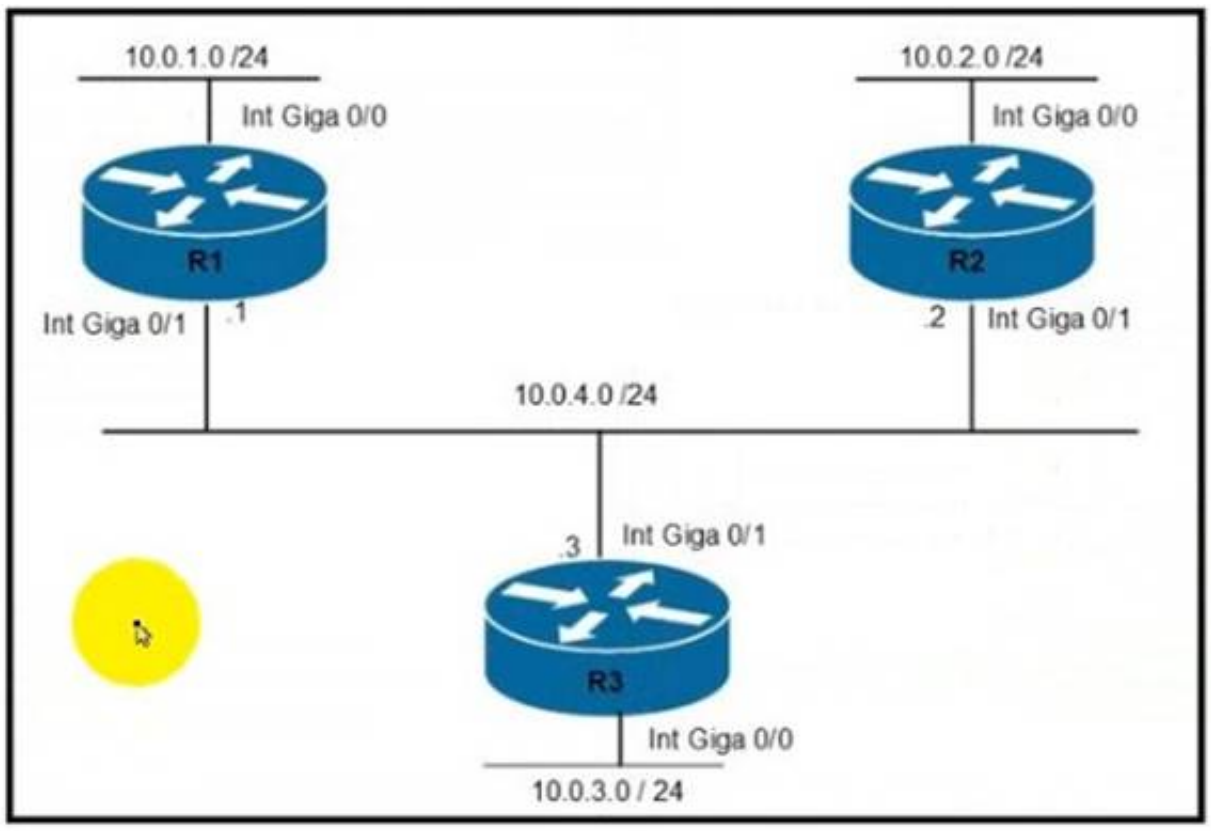
```
Output from R1

GigabitEthernet0/0/1 is up, line protocol is down
Hardware is SPA-10X1GE-V2, address is 0023.33ee.7c00 (bia 0023.33ee.7c00)
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
Half Duplex, 1000Mbps, link type is auto, media type is LX
output flow-control is off, input flow-control is off
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:02:31, output hang never

10 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 314 multicast, 0 pause input
1 packets output, 77 bytes, 0 underruns
0 output errors, 50 collisions, 6 interface resets
17 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
```

What is the issue with the interface GigabitEthernet0/0/1?

A. Port security
B. High throughput
C. Cable disconnect
D. duplex mismatch

Answer: C

NEW QUESTION 616
- (Topic 4)
Refer to the exhibit.



Router R1 must be configured to reach the 10.0.3.0/24 network from the 10.0.1.0/24 segment.
Which command must be used to configure the route?

A. ip route 10.0.3.0 0.255255.255 10.0.4.2
B. route add 10.0.3.0 mask 255.255.255.0 10.0.4.3
C. Ip route 10.0.3.0 255.255.255.0 10.0.4.3
D. route add 10.0.3.0 0.255.255.255 10.0.4.2

Answer: C

NEW QUESTION 619
- (Topic 4)
Which IPsec transport mode encrypts the IP header and the payload?

A. pipe
B. control
C. transport
D. tunnel

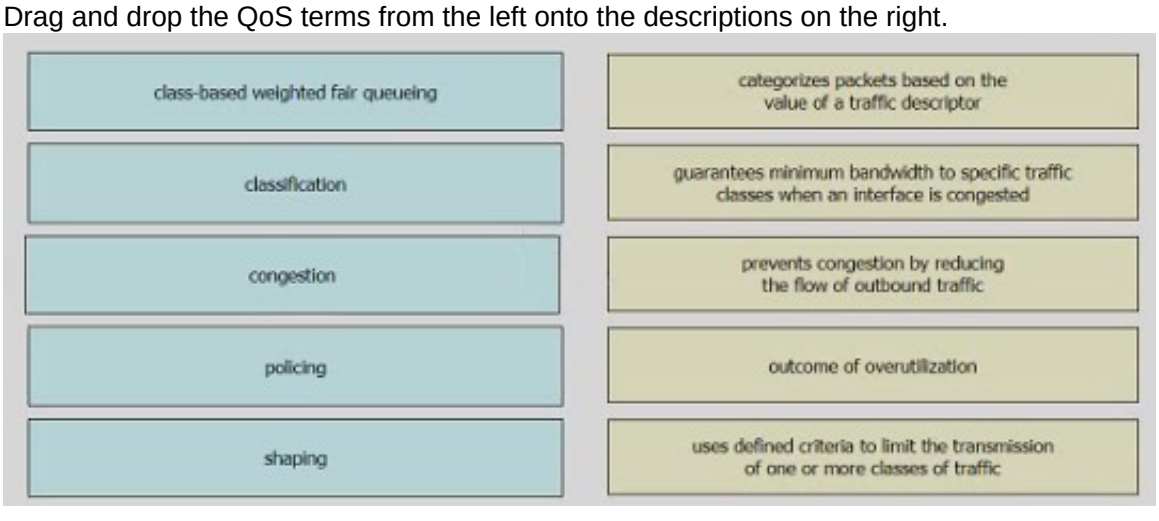
Answer: D

NEW QUESTION 620
- (Topic 4)
In which circumstance would a network architect decide to implement a global unicast subnet instead of a unique local unicast subnet?

A. when the subnet must be available only within an organization
B. when the subnet does not need to be routable
C. when the addresses on the subnet must be equivalent to private IPv4 addresses
D. when the subnet must be routable over the internet

Answer: D

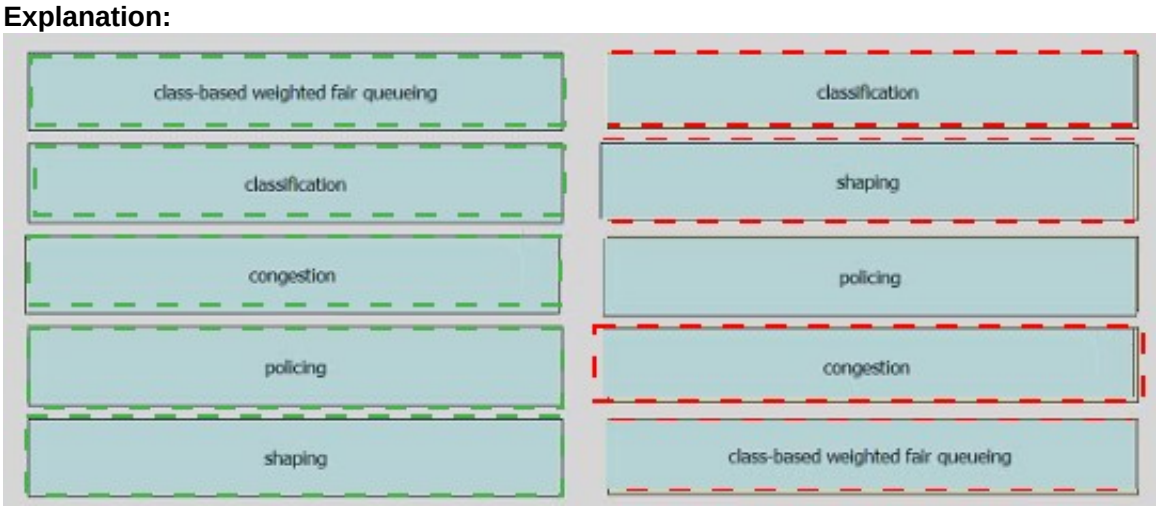
NEW QUESTION 625
DRAG DROP - (Topic 4)
Drag and drop the QoS terms from the left onto the descriptions on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

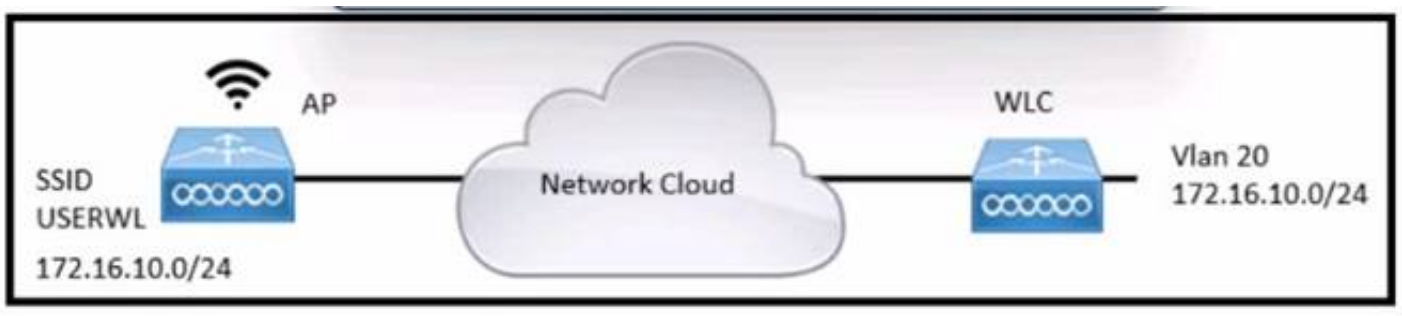


NEW QUESTION 630
- (Topic 4)
Which type of IPv4 address must be assigned to a server to protect it from external access and allow only internal users access while restricting internet access?

A. global unicast
B. public
C. private
D. multicast

Answer: C

NEW QUESTION 634
- (Topic 4)
Refer to the exhibit.



A network engineer is configuring a WLAN to connect with the 172.16.10.0/24 network on VLAN 20. The engineer wants to limit the number of devices that connect to the WLAN on the USERWL SSID to 125. Which configuration must the engineer perform on the WLC?

A. In the Management Software activation configuration, set the Clients value to 125.
B. In the Controller IPv6 configuration, set the Throttle value to 125.
C. In the WLAN configuration, set the Maximum Allowed Clients value to 125.
D. In the Advanced configuration, set the DTIM value to 125.

Answer: C

NEW QUESTION 638
- (Topic 4)
Which command configures the Cisco WLC to prevent a serial session with the WLC CLI from being automatical togged out?

A. config sessions maxsessions 0
B. config sessions timeout 0
C. config serial timeout 0
D. config serial timeout 9600

Answer: B

NEW QUESTION 642
- (Topic 4)
Which two protocols are used by an administrator for authentication and configuration on access points?

A. Kerberos
B. 802.1Q
C. 802.1x
D. TACACS+
E. RADIUS

Answer: DE

NEW QUESTION 645
- (Topic 4)
What is a function of MAC address learning?

A. It is enabled by default on all VLANs and interfaces
B. It increases the potential for MAC address flooding.
C. It is disabled by default on all interfaces connected to trunks
D. It increases security on the management VLAN

Answer: A

NEW QUESTION 650
- (Topic 4)
An engineer is configuring switch SW1 to act an NTP server when all upstream NTP server connectivity fails. Which configuration must be used?
A)

```
SW1# config t
SW1(config)#ntp peer 192.168.1.1
SW1(config)#ntp access-group peer accesslist1
```

B)

```
SW1# config t
SW1(config)#ntp master
SW1(config)#ntp server 192.168.1.1
```

C)

```
SW1# config t
SW1(config)#ntp server 192.168.1.1
SW1(config)#ntp access-group server accesslist1
```

D)

```
SW1# config t
SW1(config)#ntp backup
SW1(config)#ntp server 192.168.1.1
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

NEW QUESTION 651
- (Topic 4)
A DHCP pool has been created with the name NOCC. The pool is using 192.168.20.0/24 and must use the next to last usable IP address as the default gateway for the DHCP clients. What is the next step in the process?

A. default-router192.168.20.253
B. network 192.168.20.254 255.255.255.0 secondary
C. ip default-gateway 0.0.0.0 0.0.0.0 192.168.20.253
D. next-server 192.168.20.254

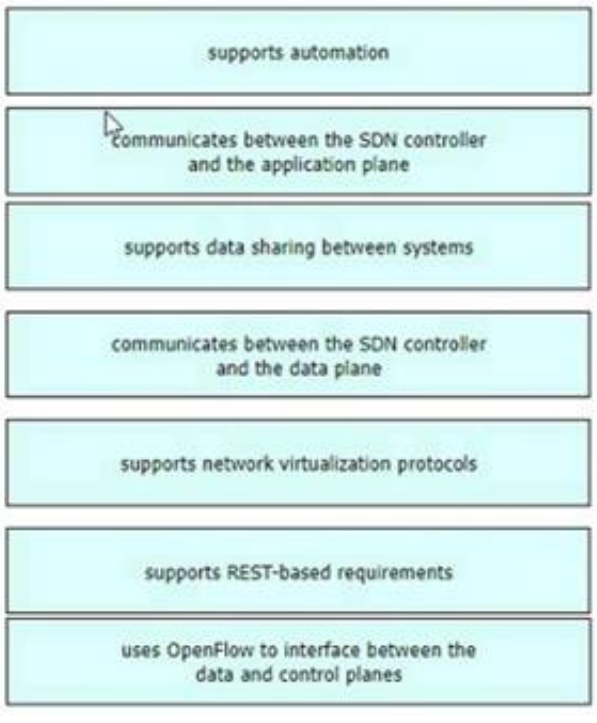
Answer: A

NEW QUESTION 655
- (Topic 4)
What are two advantages of implementing a controller-based architecture instead of a traditional network architecture? (Choose two.)

A. It allows for seamless connectivity to virtual machines.
B. It supports complex and high-scale IP addressing schemes.
C. It enables configuration task automation.
D. It provides increased scalability and management options.
E. It increases security against denial-of-service attacks.

Answer: CD

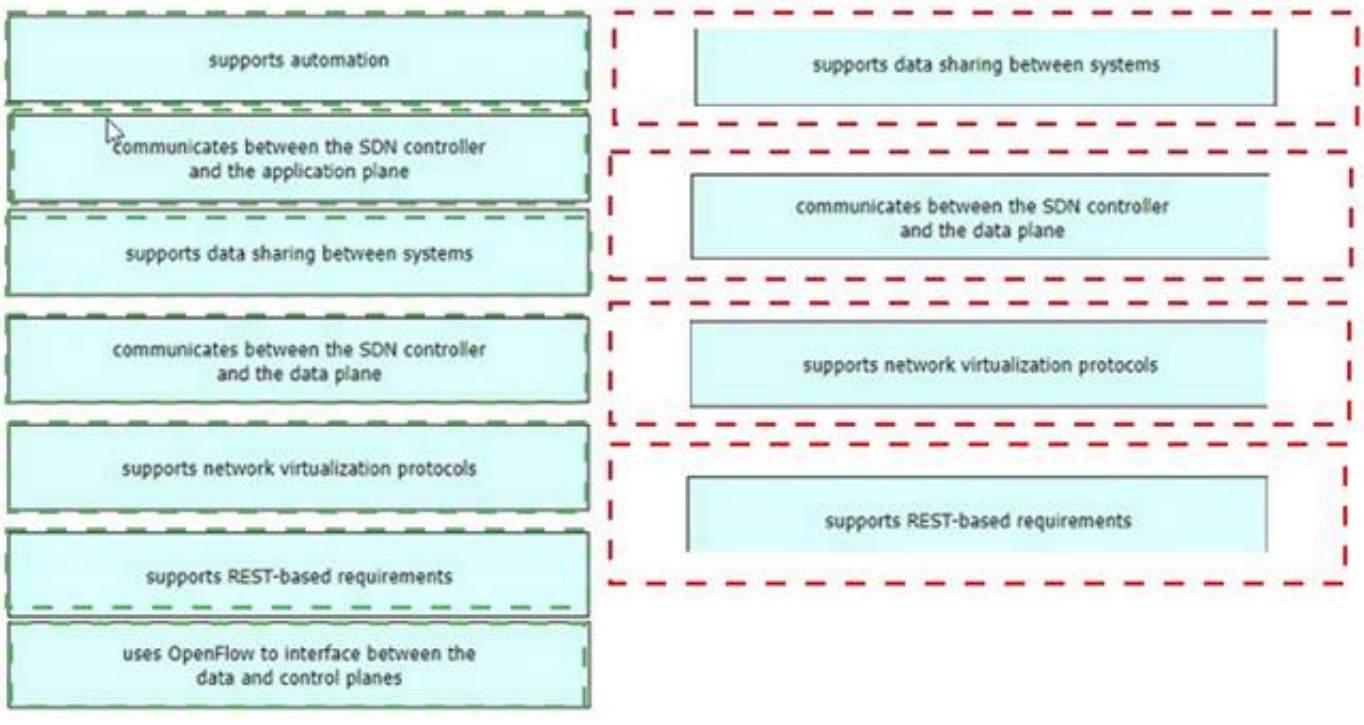
NEW QUESTION 657
DRAG DROP - (Topic 4)
Drag and drop the characteristics of northbound APIs from the left onto any position on the right. Not all characteristics are used.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

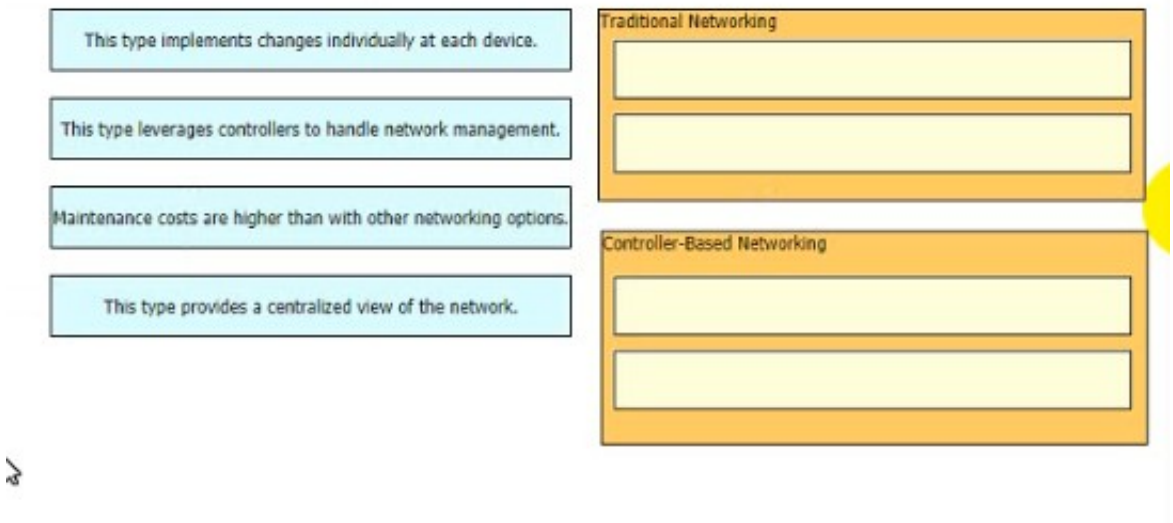


NEW QUESTION 659
- (Topic 4)
What are two functions of DHCP servers? (Choose two.)

A. prevent users from assigning their own IP addresses to hosts
B. assign dynamic IP configurations to hosts in a network
C. support centralized IP management
D. issue DHCPDISCOVER messages when added to the network
E. respond to client DHCPOFFER requests by issuing an IP address

Answer: BC

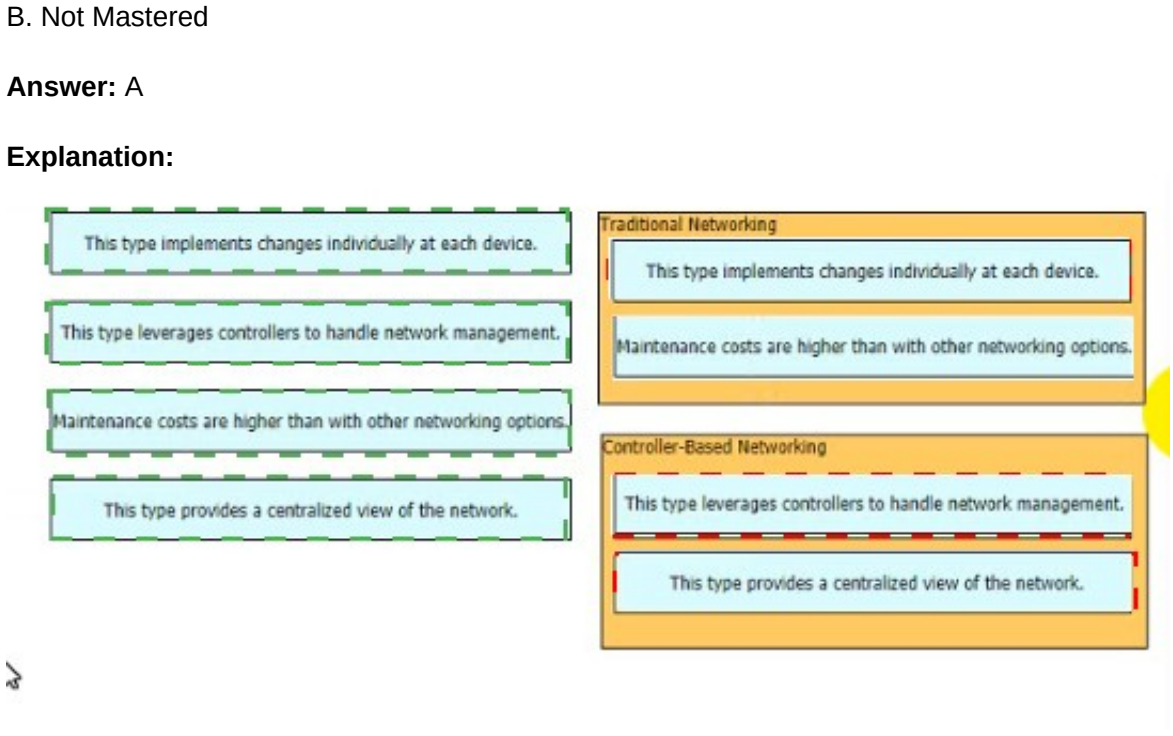
NEW QUESTION 661
DRAG DROP - (Topic 4)
Drag and drop the statements about networking from the left onto the corresponding networking types on the right



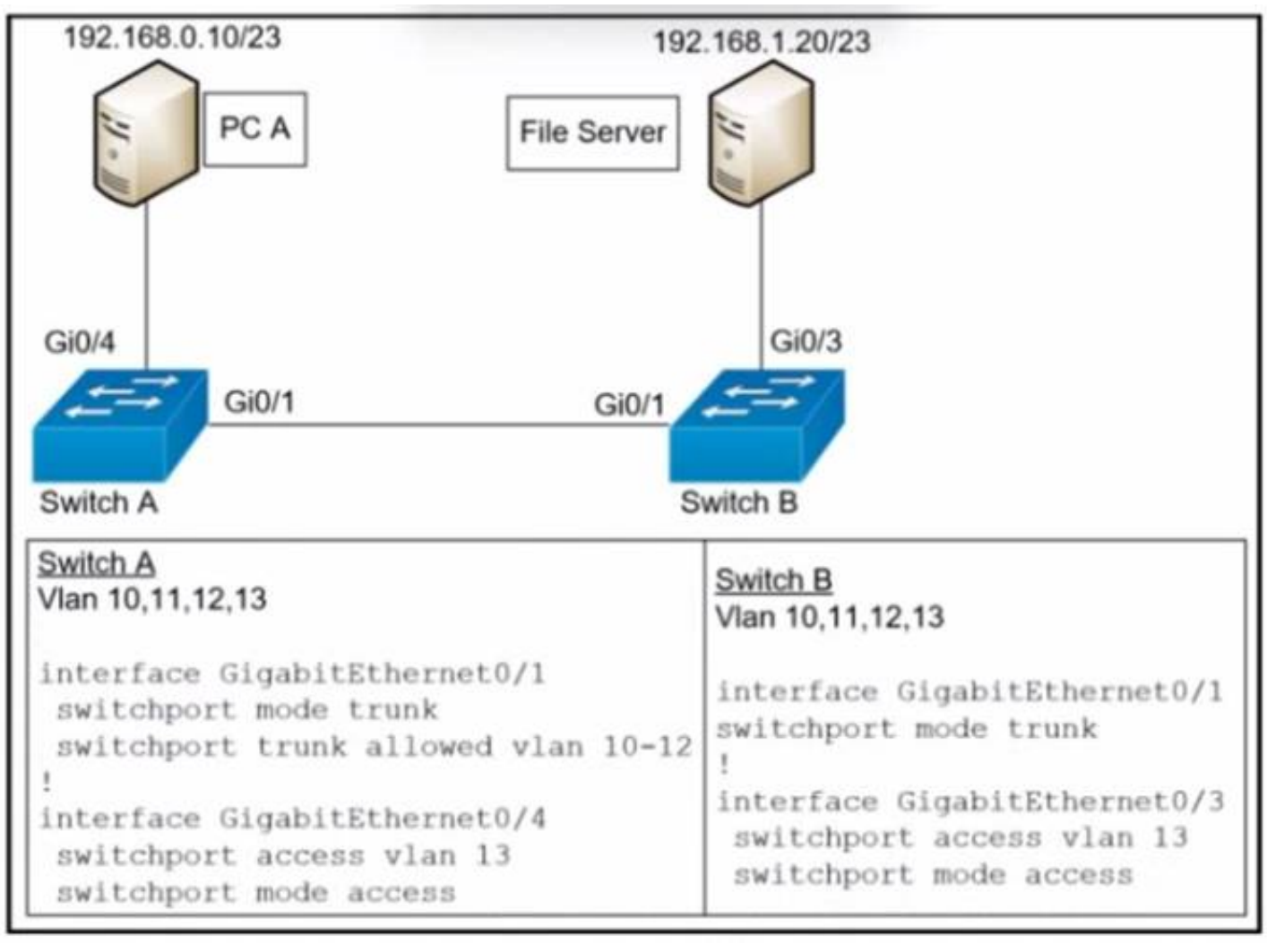
A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 664
- (Topic 4)
Refer to the exhibit.
A network engineer must configure communication between PC A and the file server. Which commend must be configured on switch A to prevent interruption of other communications?



A. switch port trunk allowed vlan 12
B. switchport trunk allowed vlan none
C. switchport trunk allowed vlan add 13

D. switch port trunk allowed vlan remove 10-11

Answer: C

NEW QUESTION 665
- (Topic 4)
Which two transport layer protocols carry syslog messages? (Choose two.)

A. TCP
B. IP
C. RTP
D. UDP
E. ARP

Answer: AD

NEW QUESTION 669
- (Topic 4)
What is a specification for SSIDS?

A. They are a Cisco proprietary security feature.
B. They must include one number and one letter.
C. They define the VLAN on a switch.
D. They are case sensitive.

Answer: B

NEW QUESTION 670
- (Topic 4)
A Cisco engineer notices thai two OSPF neighbors are connected using a crossover Ethernet cable. The neighbors are taking too long to become fully adjacent. Which command must be issued under the interface configuration on each router to reduce the time required for the adjacency to reach the FULL state?

A. ip ospf network broadcast
B. ip ospf dead-interval 40
C. ip ospf network point-to-point
D. ip ospf priority 0

Answer: C

NEW QUESTION 674
FILL IN THE BLANK - (Topic 4)
A network architect is deciding whether to implement Cisco autonomous access points or lightweight access points. Which fact about firmware updates must the architect consider?

A. Unlike lightweight access points, which require
B. Unlike lightweight access points, which require redundant WLCs to support firmware upgrades, autonomous access points require only one WLC.
C. Unlike autonomous access points, lightweight access points store a complete copy of the current firmware for backup.
D. Unlike lightweight access points, autonomous access points can recover automatically from a corrupt firmware update.
E. Unlike autonomous access points, lightweight access points require a WLC to implement remote firmware updates.

Answer: D

NEW QUESTION 679
- (Topic 4)
What are two features of the DHCP relay agent? (Choose two.)

A. assigns DNS locally and then forwards request to DHCP server
B. permits one IP helper command under an individual Layer 3 interface
C. allows only MAC-to-IP reservations to determine the local subnet of a client
D. minimizes the necessary number of DHCP servers
E. configured under the Layer 3 interface of a router on the client subnet

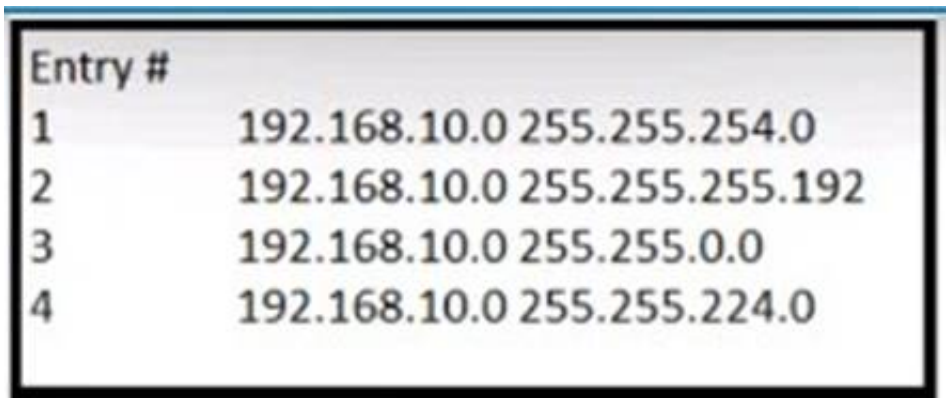
Answer: BE

NEW QUESTION 682
- (Topic 4)
A network engineer is upgrading a small data center to host several new applications, including server backups that are expected to account for up to 90% of the bandwidth during peak times. The data center connects to the MPLS network provider via a primary circuit and a secondary circuit. How does the engineer inexpensively update the data center to avoid saturation of the primary circuit by traffic associated with the backups?

A. Assign traffic from the backup servers to a dedicated switch.
B. Configure a dedicated circuit for the backup traffic.
C. Place the backup servers in a dedicated VLAN.
D. Advertise a more specific route for the backup traffic via the secondary circuit.

Answer: A

NEW QUESTION 684
- (Topic 4)
Refer to the exhibit.



Which entry is the longest prefix match for host IP address 192.168.10.5?

A. 1
B. 2
C. 3
D. 4

Answer: B

NEW QUESTION 686
- (Topic 4)
What is the put method within HTTP?

A. It is a read-only operation.
B. It is a nonldempotent operation.
C. It replaces data at the destination.
D. It displays a web site.

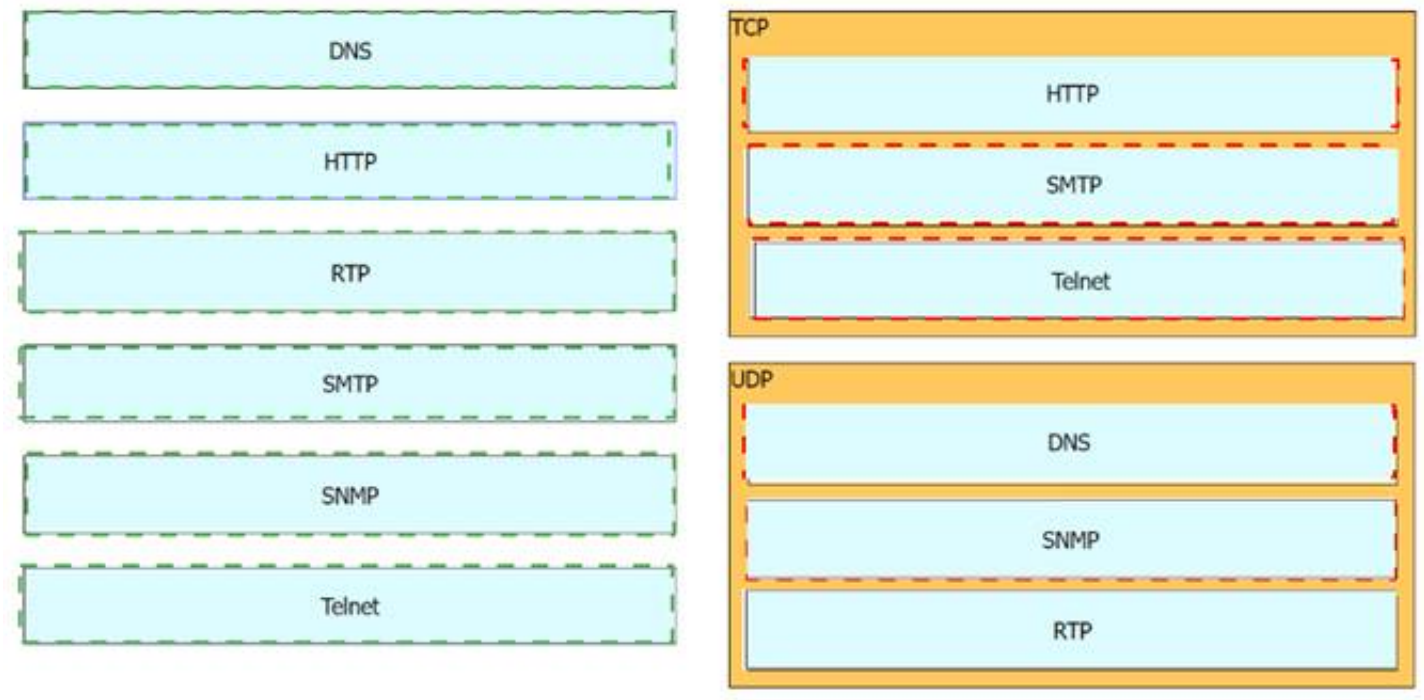
Answer: D

NEW QUESTION 690
DRAG DROP - (Topic 4)
An engineer must configure a core router with a floating static default route to the backup router at 10.200.0.2.

A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 693
- (Topic 4)
Which two VPN technologies are recommended by Cisco for multiple branch offices and large-scale deployments? (Choose two.)

A. site-to-site VPN
B. IDMVPN
C. IGETVPN
D. IPsec remote access
E. clientless VPN

Answer: BE

NEW QUESTION 694
- (Topic 4)

```
Cat9300-1# show interface g1/0/1 switchport
Name: Gi1/0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 321 (VLAN0321)
Administrative Native VLAN tagging: enabled
Trunking VLANs Enabled: 100,200,300
Pruning VLANs Enabled: 2-1001
```

Refer to the exhibit.
A network administrator configures an interface control re switch so that it connects to interface Gi1/0/1 on switch Cat9300-1. Which configuration must be applied to the new interface?
A)

```
switchport mode trunk
switchport trunk native vlan 321
switchport trunk allowed vlan 100,200,300
```

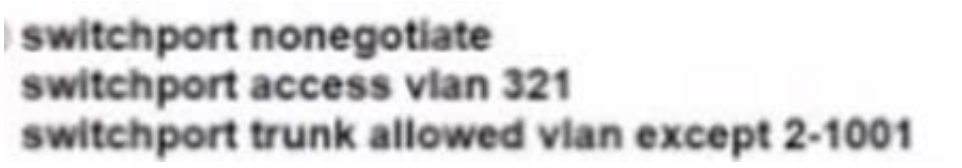
B)

```
switchport trunk encapsulation dot1q
switchport trunk native vlan 321
switchport trunk allowed vlan 100-300
```

C)

```
switchport mode dynamic desirable
switchport trunk native vlan 321
switchport trunk allowed vlan 100,200,300
```

D)



A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

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