Cisco

Exam Questions 200-301

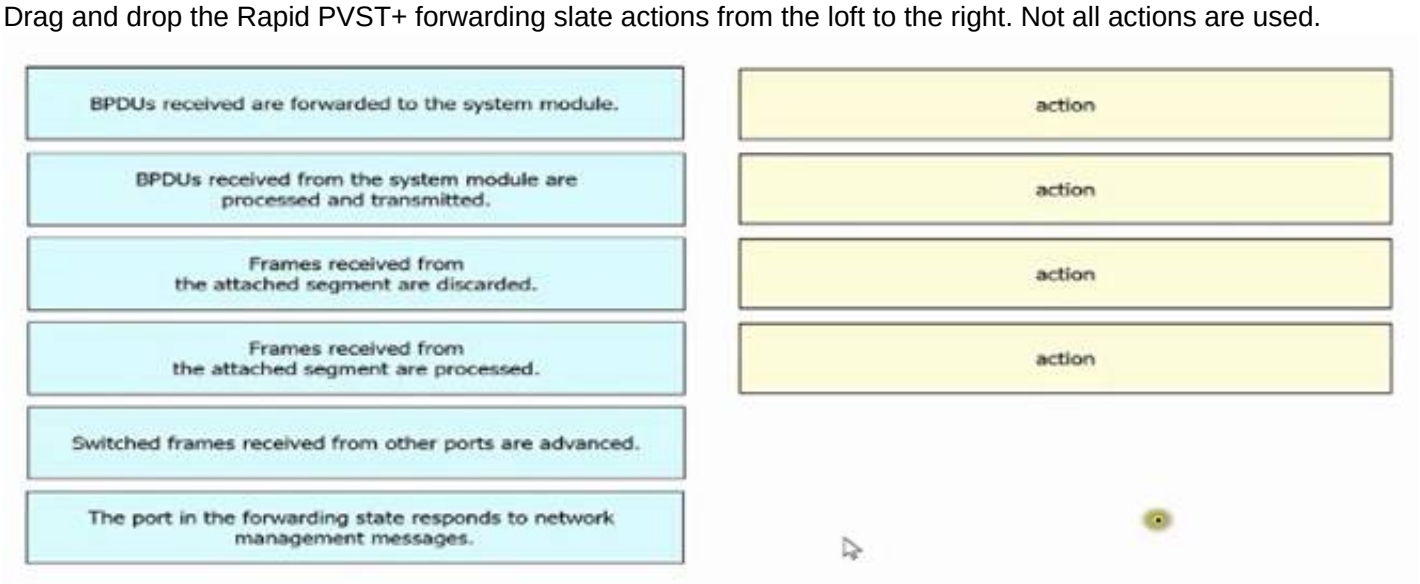
Cisco Certified Network Associate

NEW QUESTION 1
- (Topic 3)
What is a requirement when configuring or removing LAG on a WLC?

A. The Incoming and outgoing ports for traffic flow must be specified If LAG Is enabled.
B. The controller must be rebooted after enabling or reconfiguring LAG.
C. The management interface must be reassigned if LAG disabled.
D. Multiple untagged interfaces on the same port must be supported.

Answer: C

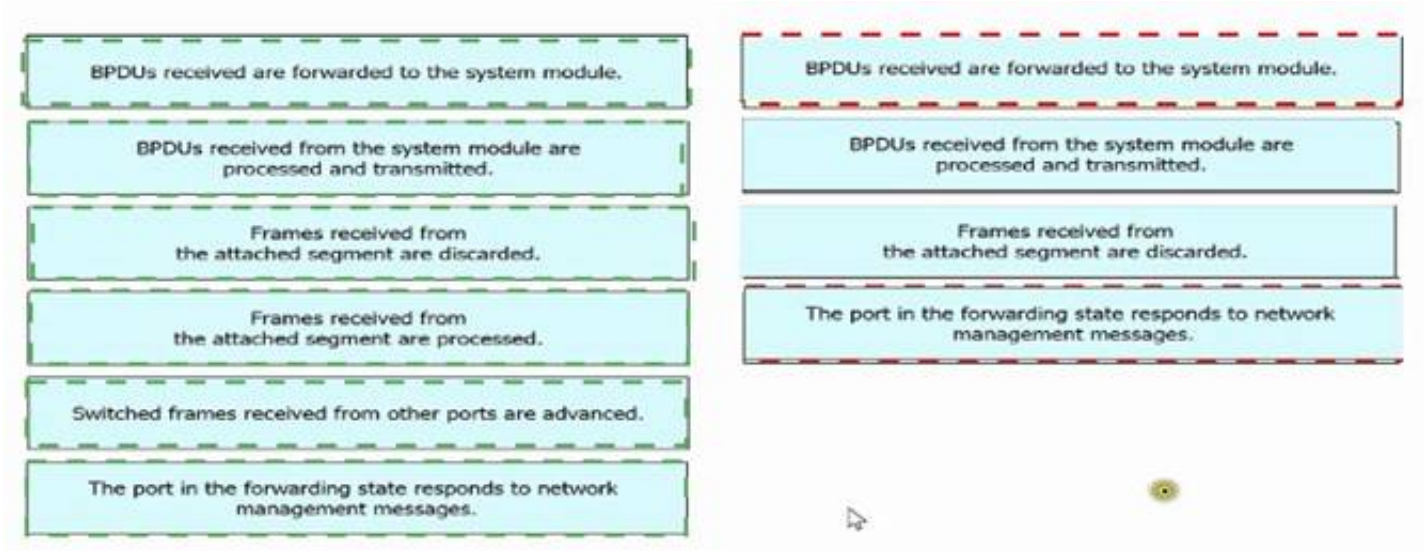
NEW QUESTION 2
DRAG DROP - (Topic 3)
Drag and drop the Rapid PVST+ forwarding slate actions from the loft to the right. Not all actions are used.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



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

```
Switch2# show lldp
Global LLDP Information
    Status: ACTIVE
    LLDP advertisements are sent every 30 seconds
    LLDP hold time advertised is 120 seconds
    LLDP interface reinitialization delay is 2 seconds
```

A network engineer must update the configuration on Switch2 so that it sends LLDP packets every minute and the information sent via LLDP is refreshed every 3 minutes Which configuration must the engineer apply?
A)

```
Switch2(config)#lldp timer 60
Switch2(config)#lldp holdtime 180
```

B)

```
Switch2(config)#lldp timer 60
Switch2(config)#lldp tlv-select 180
```

C)

```
Switch2(config)#lldp timer 1
Switch2(config)#lldp holdtime 3
```

D)

```
Switch2(config)#lldp timer 1
Switch2(config)#lldp tlv-select 3
```

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

Answer: A

NEW QUESTION 4
- (Topic 3)
What are two benefits of FHRPs? (Choose two.)

A. They enable automatic failover of the default gateway.
B. They allow multiple devices to serve as a single virtual gateway for clients in the network.
C. They are able to bundle multiple ports to increase bandwidth.
D. They prevent loops in the Layer 2 network.
E. They allow encrypted traffic.

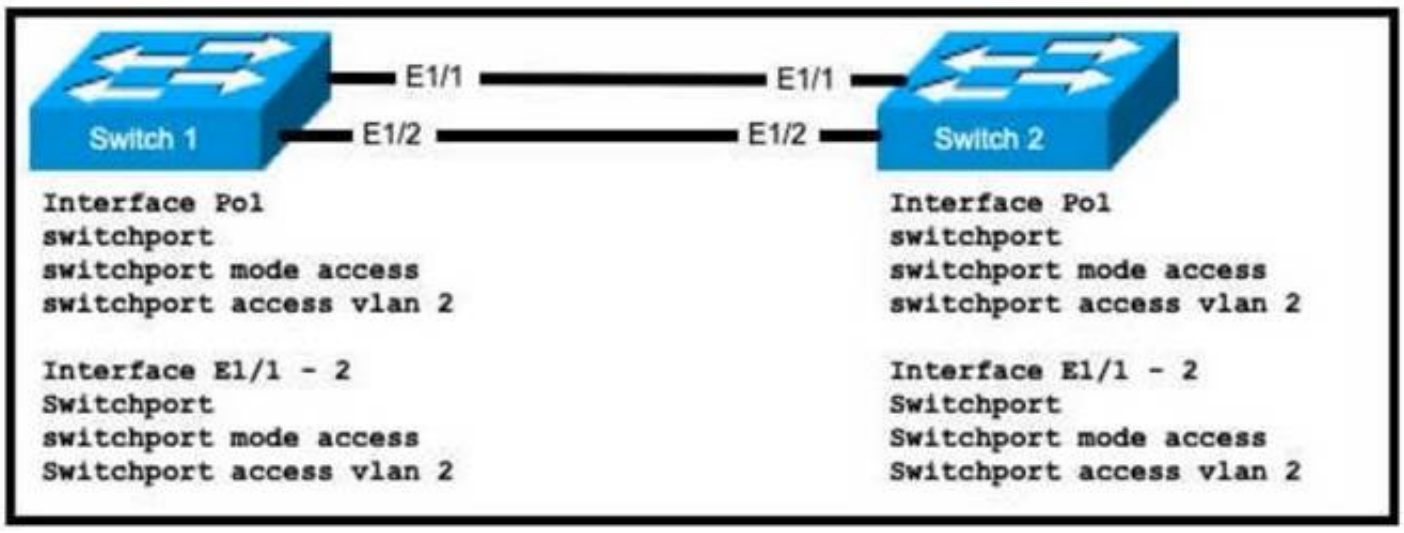
Answer: AB

NEW QUESTION 5
- (Topic 3)
What is a function of Opportunistic Wireless Encryption in an environment?

A. offer compression
B. increase security by using a WEP connection
C. provide authentication
D. protect traffic on open networks

Answer: D

NEW QUESTION 6
- (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 7
- (Topic 3)
R1 as an NTP server must have:
• NTP authentication enabled
• NTP packets sourced from Interface loopback 0
• NTP stratum 2
• NTP packets only permitted to client IP 209.165 200 225
How should R1 be configured?
A)

```
ntp authenticate
ntp authentication-key 2 md5 CISCO123
ntp source Loopback0
nntp access-group server-only 10
ntp master 2
!
access-list 10 permit 209.165.200.225
```

B)

```
ntp authenticate
ntp authentication-key 2 md5 CISCO123
ntp source Loopback0
ntp access-group server-only 10
ntp stratum 2
!
access-list 10 permit udp host 209.165.200.225 any eq 123
```

C)

```
ntp authenticate
ntp authentication-key 2 sha1 CISCO123
ntp source Loopback0
ntp access-group server-only 10
ntp master 2
!
access-list 10 permit udp host 209.165.200.225 any eq 123
```

D)

```
ntp authenticate
ntp authentication-key 2 md5 CISCO123
ntp interface Loopback0
ntp access-group server-only 10
```

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

Answer: B

NEW QUESTION 8
- (Topic 3)
Which type of network attack overwhelms the target server by sending multiple packets to a port until the half-open TCP resources of the target are exhausted?

A. SYIM flood
B. reflection
C. teardrop
D. amplification

Answer: A

NEW QUESTION 9
- (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 10
- (Topic 3)
Which protocol uses the SSL?

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

Answer: C

NEW QUESTION 10
- (Topic 3)
Which protocol is used for secure remote CLI access?

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

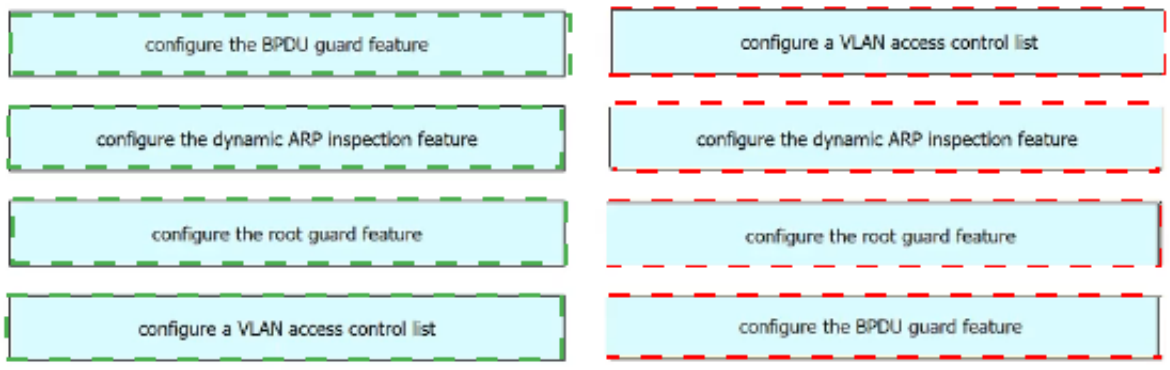
Answer: D

NEW QUESTION 15
DRAG DROP - (Topic 3)
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:

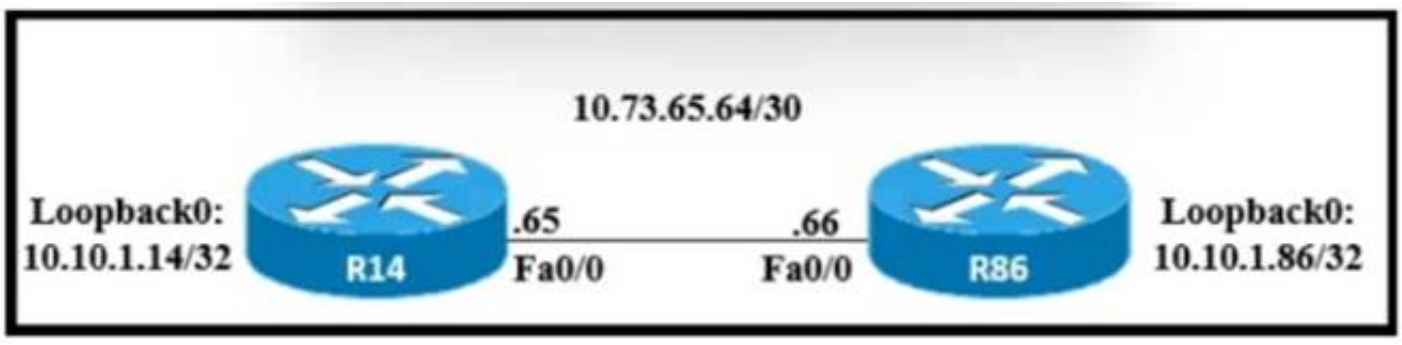


NEW QUESTION 19
- (Topic 3)
A network engineer must configure two new subnets using the address block 10 70 128 0/19 to meet these requirements:
• The first subnet must support 24 hosts
• The second subnet must support 472 hosts
• Both subnets must use the longest subnet mask possible from the address block Which two configurations must be used to configure the new subnets and meet a
requirement to use the first available address in each subnet for the router interfaces? (Choose two)

A. interface vlan 1234ip address 10.70.159.1 255.255.254.0
B. interface vlan 1148ip address 10.70.148.1 255.255.254.0
C. interface vlan 4722ip address 10.70.133.17 255.255.255.192
D. interface vlan 3002ip address 10.70.147.17 255.255.255.224
E. interface vlan 155ip address 10.70.155.65 255.255.255.224

Answer: BD

NEW QUESTION 21
- (Topic 3)
Refer to the exhibit.

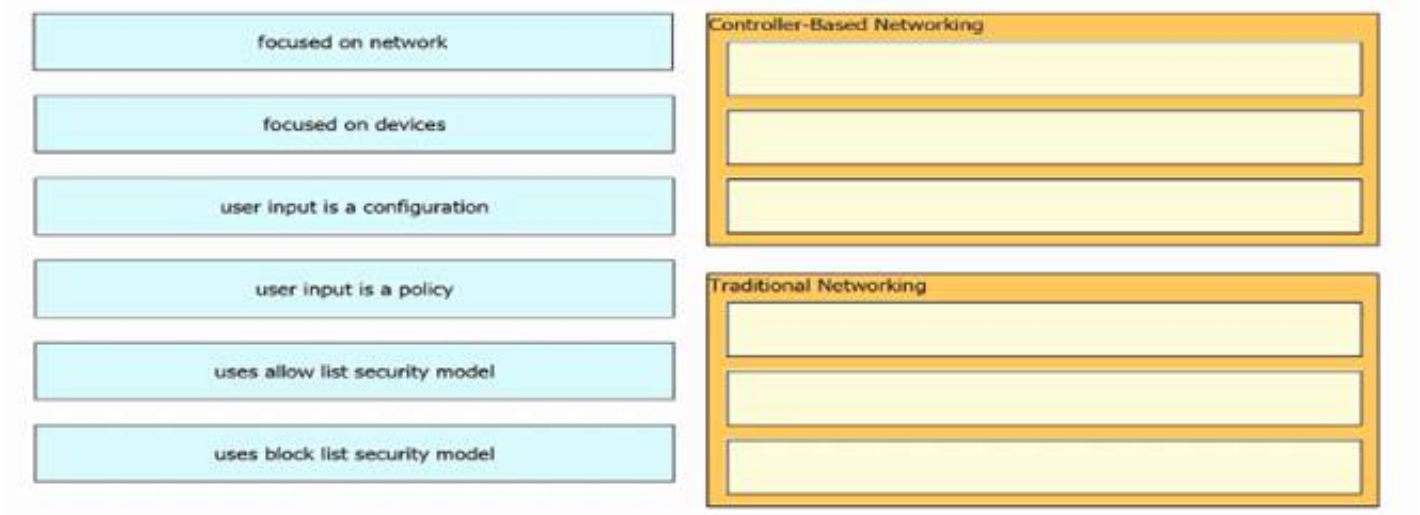


A static route must be configured on R14 to forward traffic for the 172 21 34 0/25 network that resides on R86 Which command must be used to fulfill the request?

A. ip route 172.21.34.0 255.255.255.192 10.73.65.65
B. ip route 172.21.34.0 255.255.255.0 10.73.65.65
C. ip route 172.21.34.0 255.255.128.0 10.73.65.64
D. ip route 172.21.34.0 255.255.255.128 10.73.65.66

Answer: D

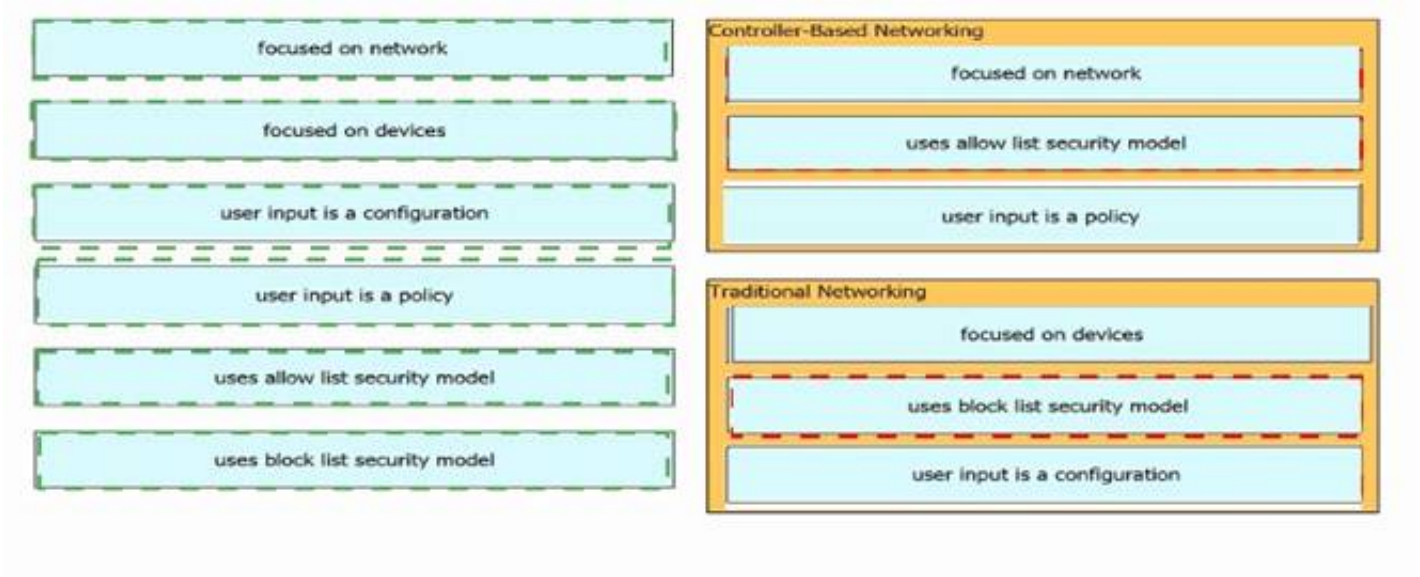
NEW QUESTION 22
DRAG DROP - (Topic 3)
Drag and drop the characteristics of networking from the left onto the networking types on the right.



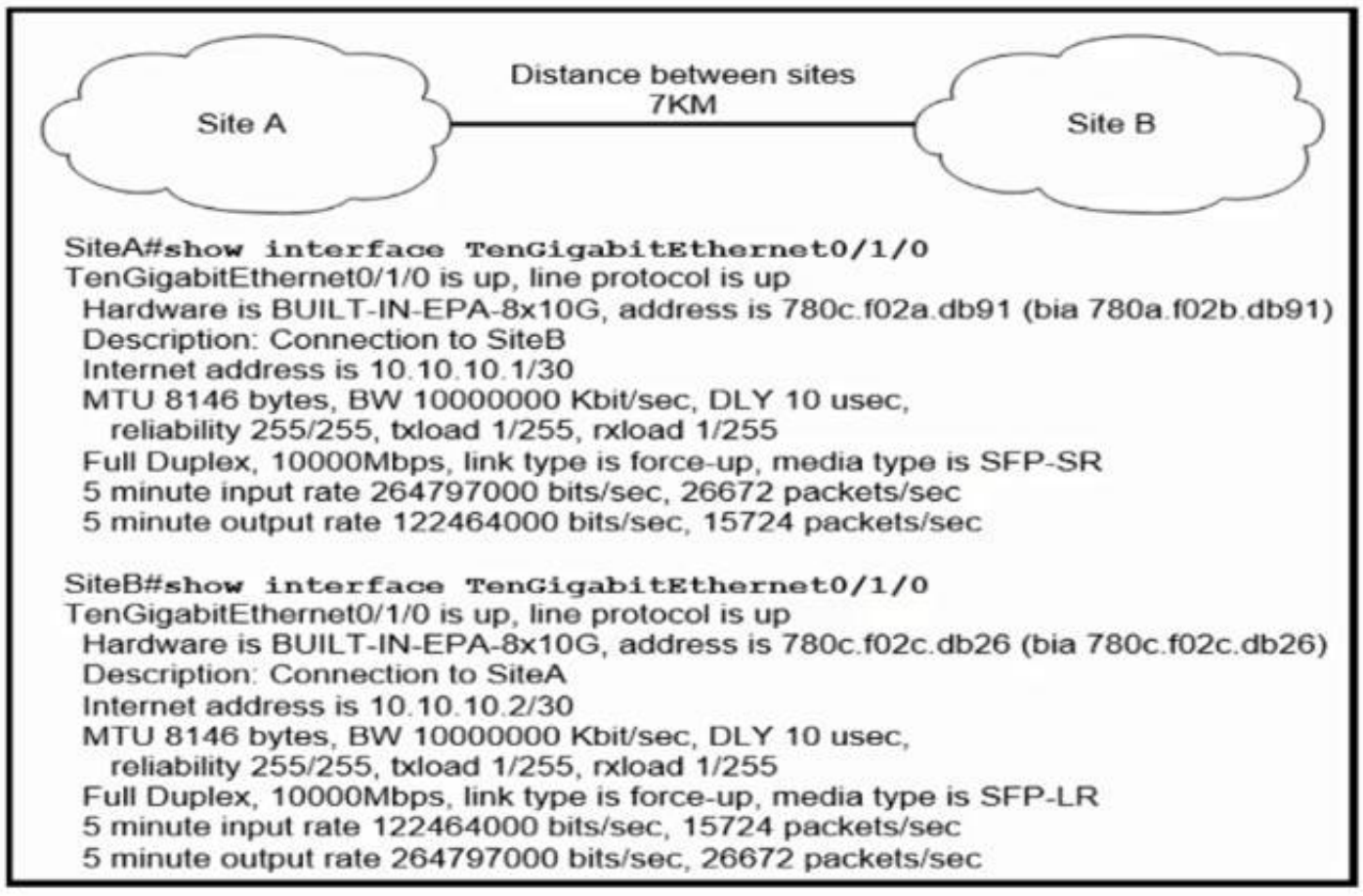
A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 25
- (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 29
- (Topic 3)
A Cisco engineer is configuring a factory-default router with these three passwords:
• The user EXEC password for console access is p4ssw0rd1
• The user EXEC password for Telnet access is s3cr3t2
• The password for privileged EXEC mode is pnv4t3p4ss
Which command sequence must the engineer configured
A)

```
enable secret priv4t3p4ss
!
line con 0
password login p4ssw0rd1
!
line vty 0 15
password login s3cr3t2
login
```

B)

```
enable secret privilege 15 priv4t3p4ss
!
line con 0
password p4ssw0rd1
login
!
line vty 0 15
password s3cr3t2
login
```

C)

```
enable secret priv4t3p4ss
!
line con 0
password p4ssw0rd1
login
!
line vty 0 15
password s3cr3t2
login
```

D)

```
enable secret priv4t3p4ss
!
line con 0
```

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

Answer: B

NEW QUESTION 30
- (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

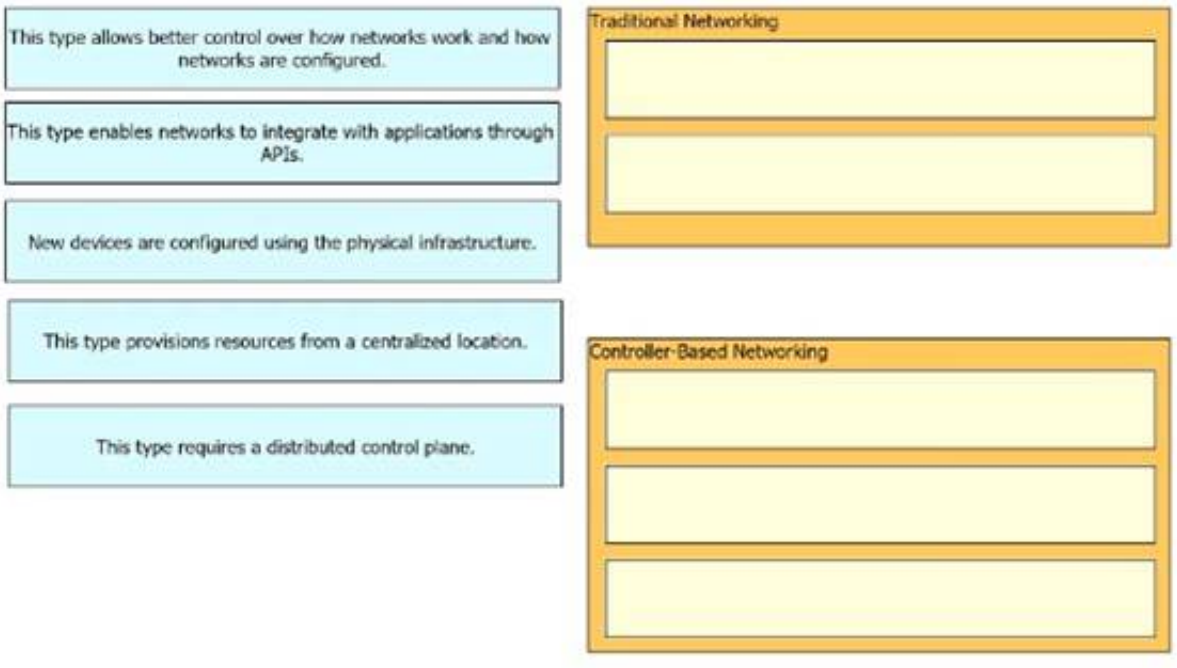
Answer: B

NEW QUESTION 33
- (Topic 3)
How does Rapid PVST+ create a fast loop-free network topology?

A. lt requires multiple links between core switches
B. lt generates one spanning-tree instance for each VLAN
C. It maps multiple VLANs into the same spanning-tree instance
D. It uses multiple active paths between end stations.

Answer: A

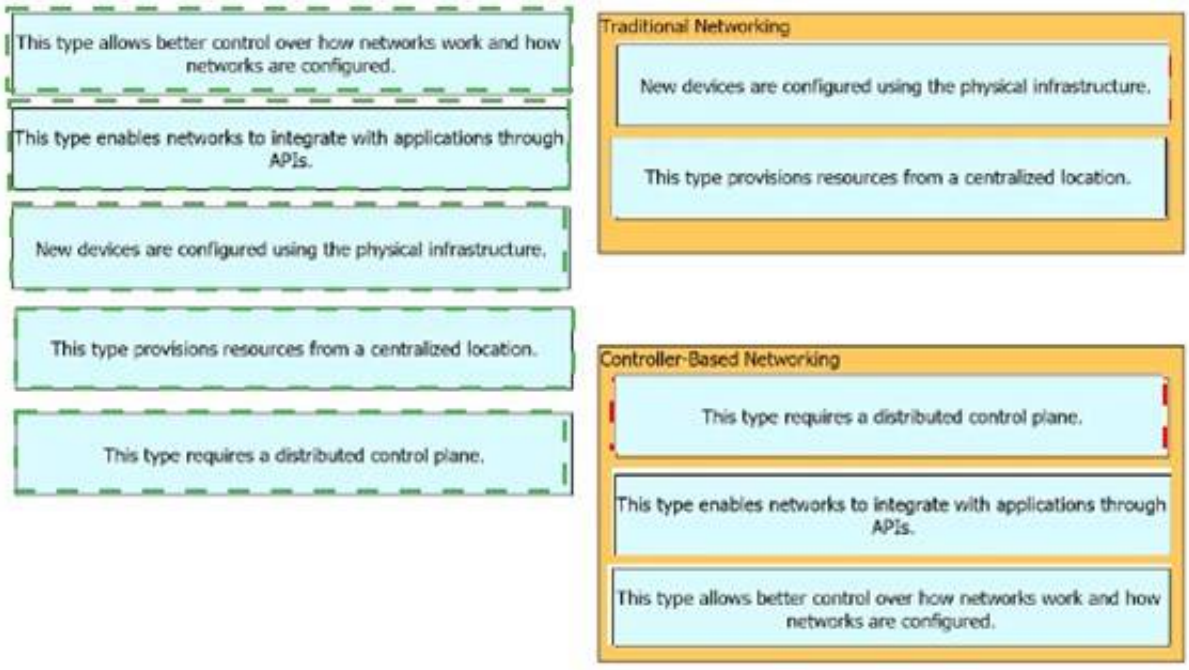
NEW QUESTION 37
DRAG DROP - (Topic 3)
Drag and drop the statements about networking from the left onto the corresponding networking types on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 38
- (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 43
- (Topic 3)
Refer to the exhibit.

```
TenGigabitEthernet0/0/0 is up, line protocol is up
  Hardware is BUILT-IN-2T+6X1GE, address is 74a0.2f7a.0123 (bia 74a0.2f7a.0123)
  Description: Uplink
  Internet address is 10.1.1.1/24
  MTU 1500 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  Full Duplex, 10000Mbps, link type is force-up, media type is unknown media type
  output flow-control is on, input flow-control is on
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:05:40, 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 6160000 bits/sec, 1113 packets/sec
  5 minute output rate 11213000 bits/sec, 1553 packets/sec
     12662416065 packets input, 12607032232894 bytes, 0 no buffer
     Received 14117163 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 26271385 multicast, 0 pause input
     7907779058 packets output, 5073750426832 bytes, 0 underruns
     0 output errors, 8662416065 collisions, 1 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
     1 carrier transitions
```

Traffic that is flowing over interface TenGigabitEthernet0/0 experiences slow transfer speeds. What is the reason for the issue?

A. heavy traffic congestion
B. a duplex incompatibility
C. a speed conflict
D. queuing drops

Answer: C

NEW QUESTION 45
- (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

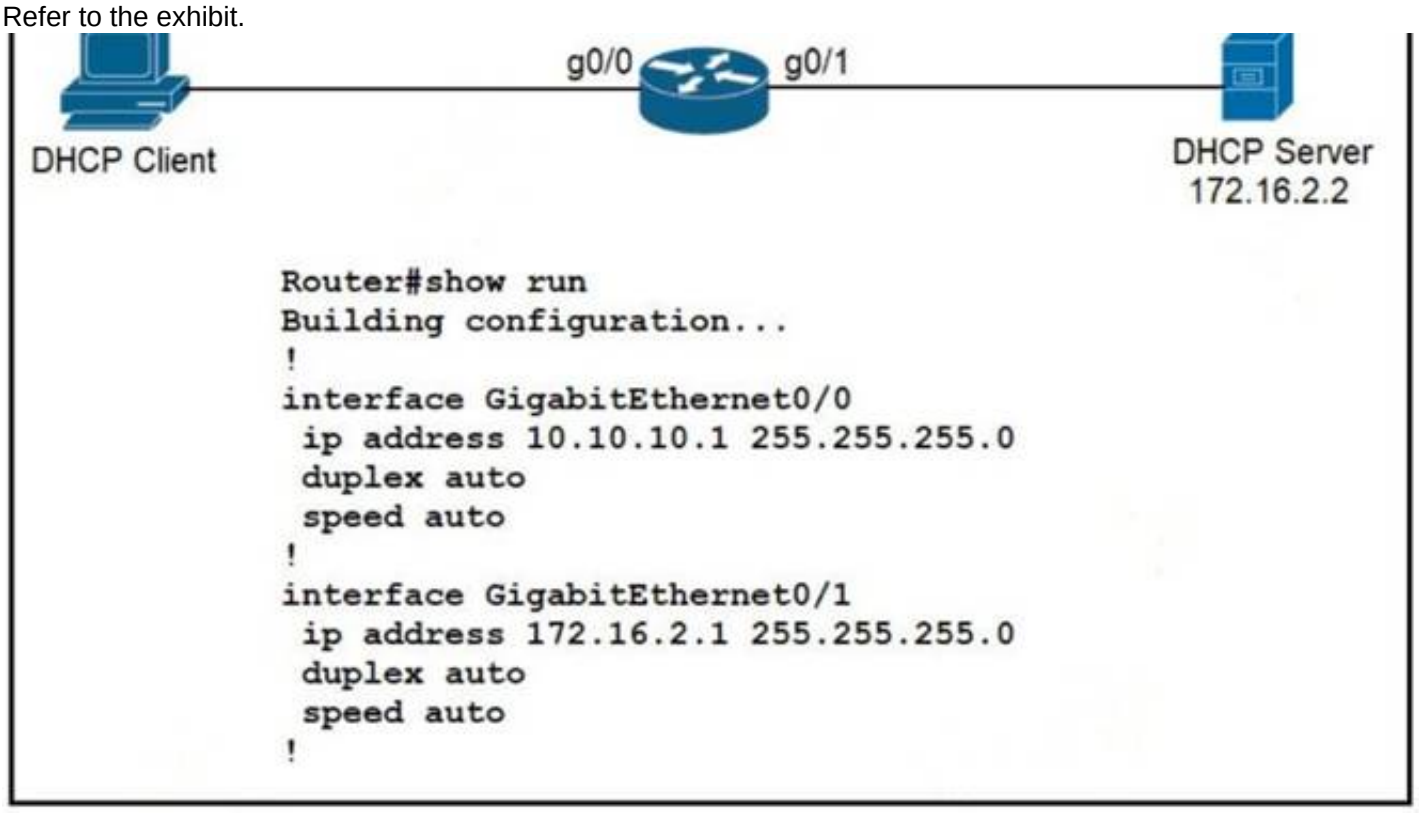
Answer: A

NEW QUESTION 49
- (Topic 3)
Which characteristic differentiates the concept of authentication from authorization and accounting?

A. user-activity logging
B. service limitations
C. consumption-based billing
D. identity verification

Answer: D

NEW QUESTION 50
- (Topic 3)
Refer to the exhibit.



An engineer is configuring a new router on the network and applied this configuration. Which additional configuration allows the PC to obtain its IP address from a DHCP server?

A. Configure the ip dhcp relay information command under interface Gi0/1.
B. Configure the ip dhcp smart-relay command globally on the router
C. Configure the ip helper-address 172.16.2.2 command under interface Gi0/0
D. Configure the ip address dhcp command under interface Gi0/0

Answer: C

NEW QUESTION 52
- (Topic 3)
A network engineer must implement an IPv6 configuration on the vlan 2000 interface to create a routable locally-unique unicast address that is blocked from being advertised to the internet. Which configuration must the engineer apply?

A. interface vlan 2000ipv6 address ffc0:0000:aaaa::1234:2343/64
B. interface vlan 2000Ipv6 address fc00:0000:aaaa:a15d:1234:2343:8aca/64
C. interface vlan 2000ipv6 address fe80;0000:aaaa::1234:2343/64
D. interface vlan 2000ipv6 address fd00::1234:2343/64

Answer: B

NEW QUESTION 57
- (Topic 3)
An engineer must configure R1 for a new user account. The account must meet these requirements:
* It must be configured in the local database.
* The username is engineer.
* It must use the strongest password configurable. Which command must the engineer configure on the router?

A. R1 (config)# username engineer2 algorithm-type scrypt secret test2021
B. R1(config)# username engineer2 secret 5 .password S1$b1Ju$kZbBS1Pyh4QzwXyZ
C. R1(config)# username engineer2 privilege 1 password 7 test2021
D. R1(config)# username englneer2 secret 4 S1Sb1Ju$kZbBS1Pyh4QzwXyZ

Answer: B

NEW QUESTION 62
- (Topic 3)
Which QoS traffic handling technique retains excess packets in a queue and reschedules these packets for later transmission when the configured maximum bandwidth has been surpassed?

A. weighted random early detection
B. traffic policing
C. traffic shaping
D. traffic prioritization

Answer: C

NEW QUESTION 65
- (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

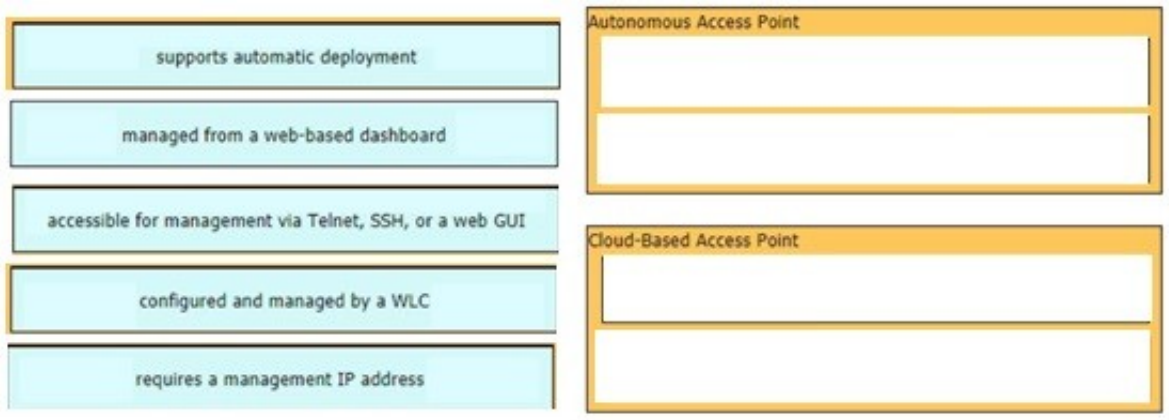
Answer: B

NEW QUESTION 70
- (Topic 3)
What is one reason to implement LAG on a Cisco WLC?

A. to increase security and encrypt management frames
B. to provide link redundancy and load balancing
C. to allow for stateful and link-state failover
D. to enable connected switch ports to failover and use different VLANs

Answer: B

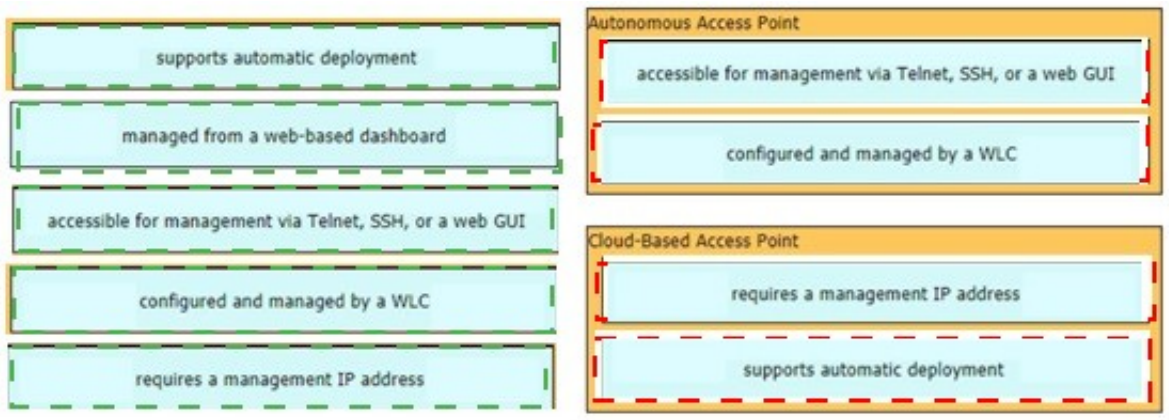
NEW QUESTION 71
DRAG DROP - (Topic 3)
Drag and drop the facts about wireless architectures from the left onto the types of access point on the right. Not all options are used.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 76
- (Topic 3)
Which two spanning-tree states are bypassed on an interface running PortFast? (Choose two.)

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

Answer: BD

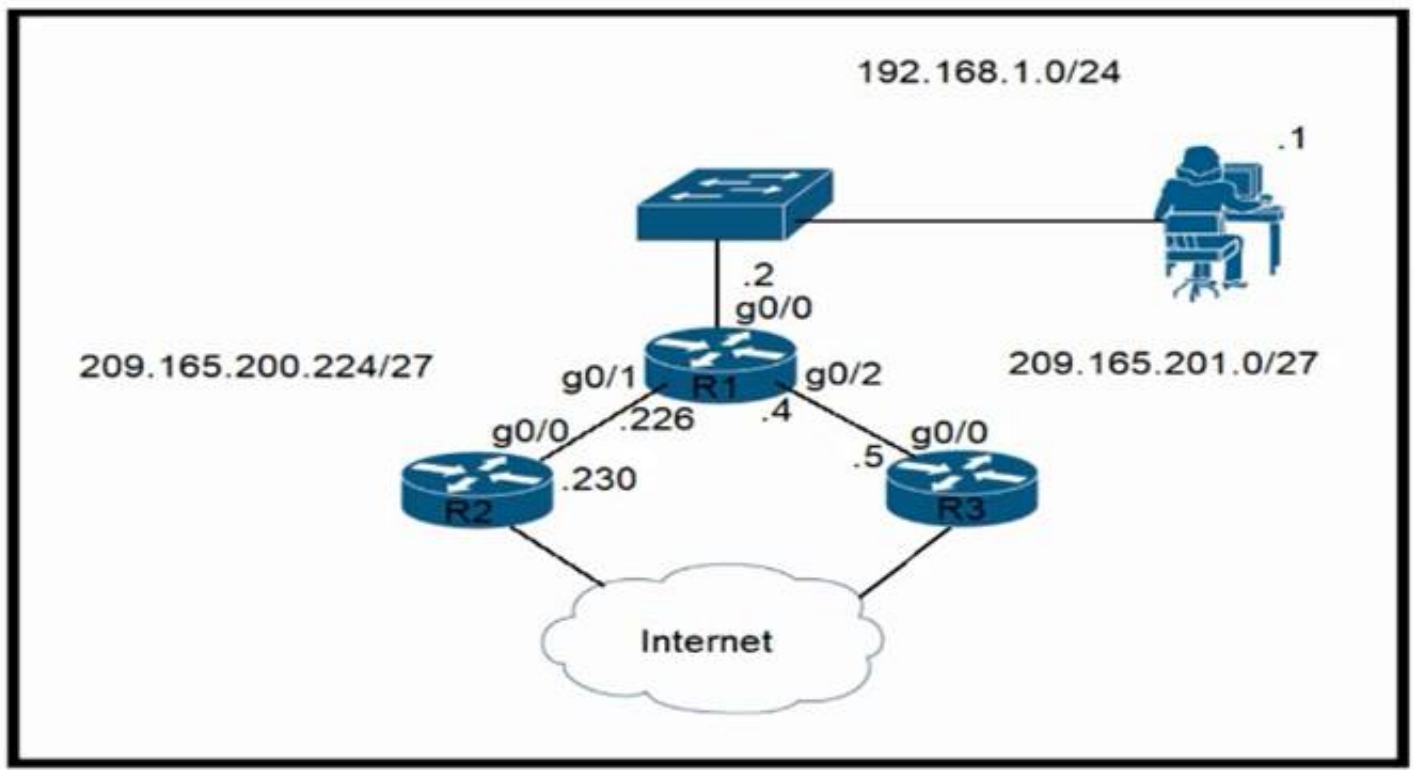
NEW QUESTION 79
- (Topic 3)
What is a function of an endpoint on a network?

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 84
- (Topic 3)
Refer to the exhibit.

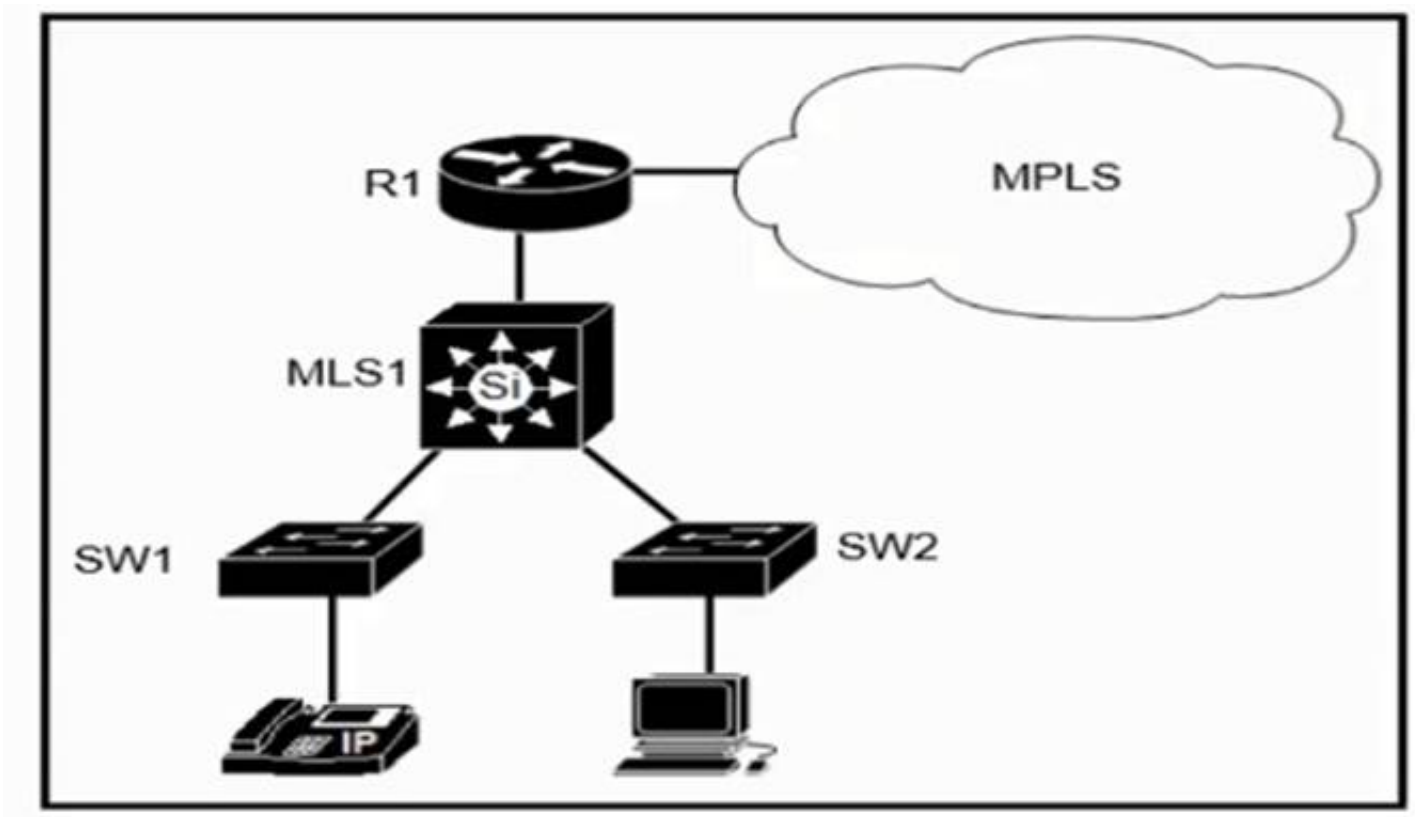


Router R1 currently is configured to use R3 as the primary route to the Internet, and the route uses the default administrative distance settings. A network engineer must configure R1 so that it uses R2 as a backup, but only if R3 goes down. Which command must the engineer configure on R1 so that it correctly uses R2 as a backup route, without changing the administrative distance configuration on the link to R3?

A. ip route 0.0.0.0 0.0.0.0 g0/1 1
B. ip route 0.0.0.0 0.0.0.0 209.165.201.5 10
C. ip route 0.0.0.0 0.0.0.0 209.165.200.226 1
D. ip route 0,0.0.0 0.0.0.0 g0/1 6

Answer: C

NEW QUESTION 88
- (Topic 3)
Refer to the exhibit.

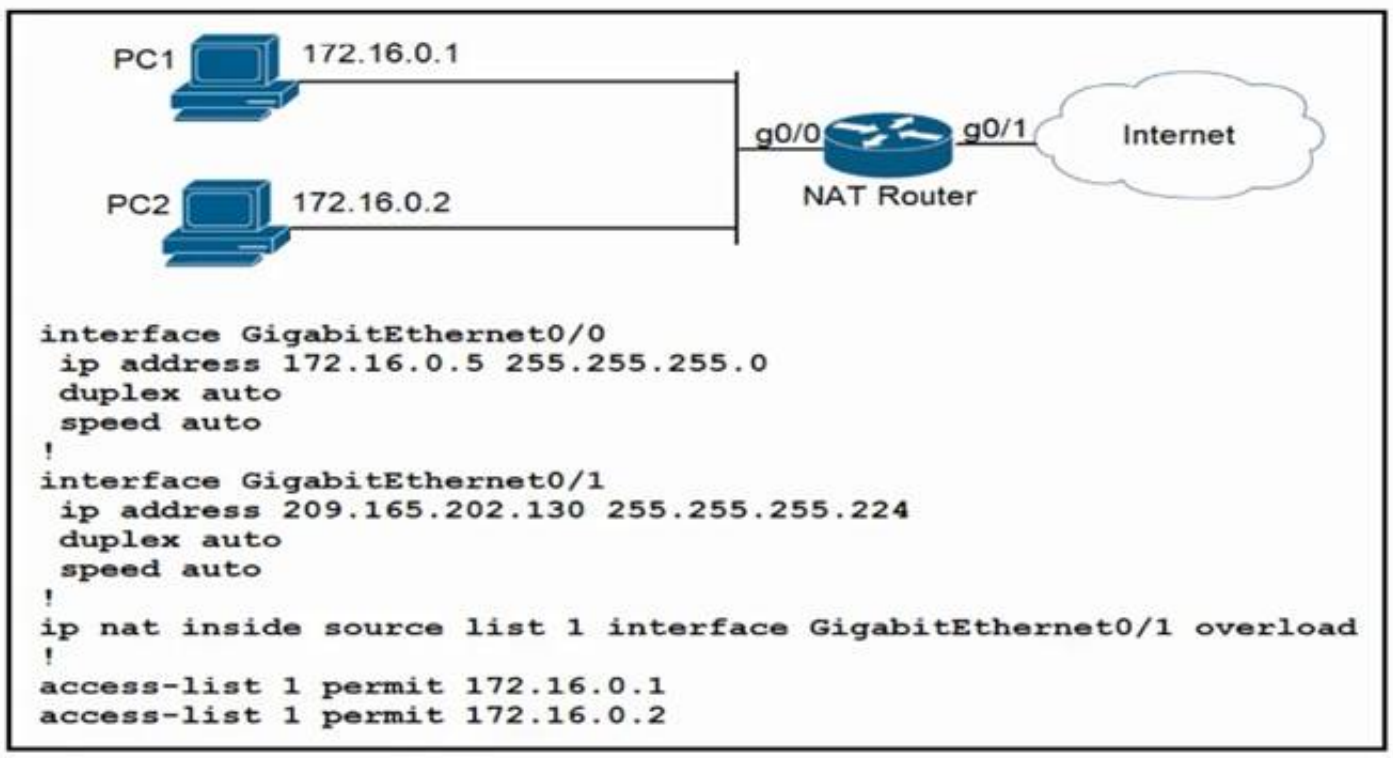


Which plan must be Implemented to ensure optimal QoS marking practices on this network?

A. As traffic traverses MLS1 remark the traffic, but trust all markings at the access layer.
B. Trust the IP phone markings on SW1 and mark traffic entering SW2 at SW2.
C. Remark traffic as it traverses R1 and trust all markings at the access layer.
D. As traffic enters from the access layer on SW1 and SW2. trust all traffic markings.

Answer: C

NEW QUESTION 89
- (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 92
- (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 96
- (Topic 2)
Which networking function occurs on the data plane?

A. forwarding remote client/server traffic
B. facilitates spanning-tree elections
C. processing inbound SSH management traffic
D. sending and receiving OSPF Hello packets

Answer: A

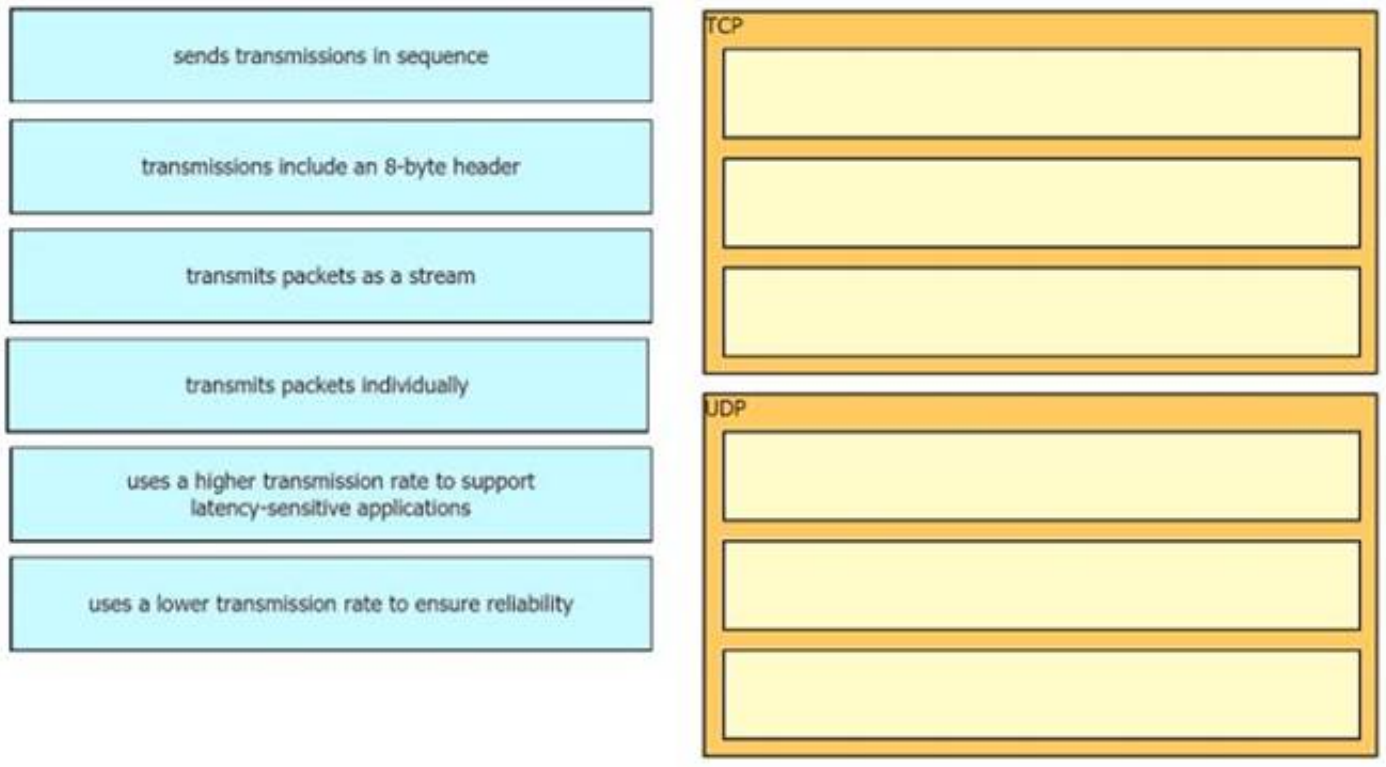
NEW QUESTION 100
- (Topic 2)
What is a capability of FTP in network management operations?

A. encrypts data before sending between data resources
B. devices are directly connected and use UDP to pass file information
C. uses separate control and data connections to move files between server and client
D. offers proprietary support at the session layer when transferring data

Answer: C

Explanation:
The File Transfer Protocol (FTP) is a standard communication protocol used for the transfer of computer files from a server to a client on a computer network. FTP is built on a client–server model architecture using separate control and data connections between the client and the server.

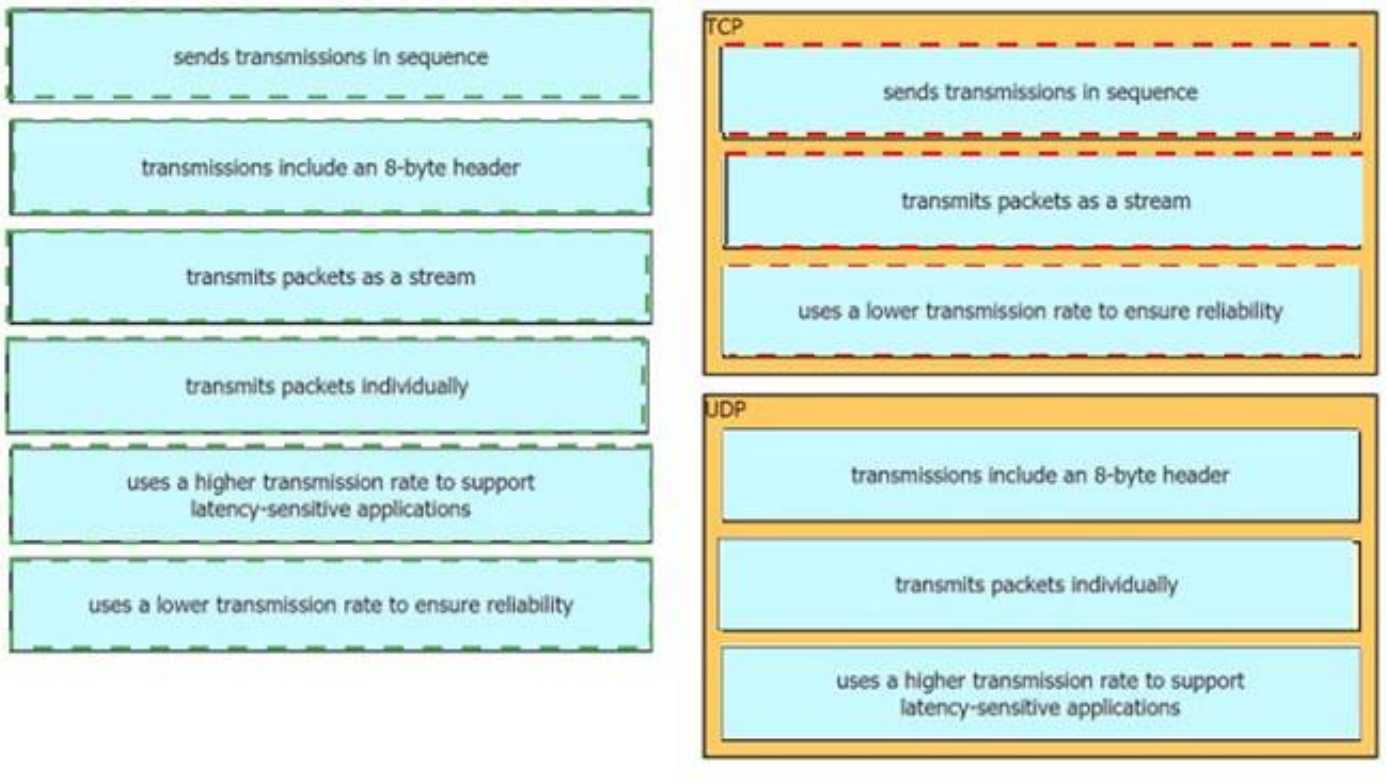
NEW QUESTION 101
DRAG DROP - (Topic 2)
Drag the descriptions of IP protocol transmissions from the left onto the IP traffic types on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

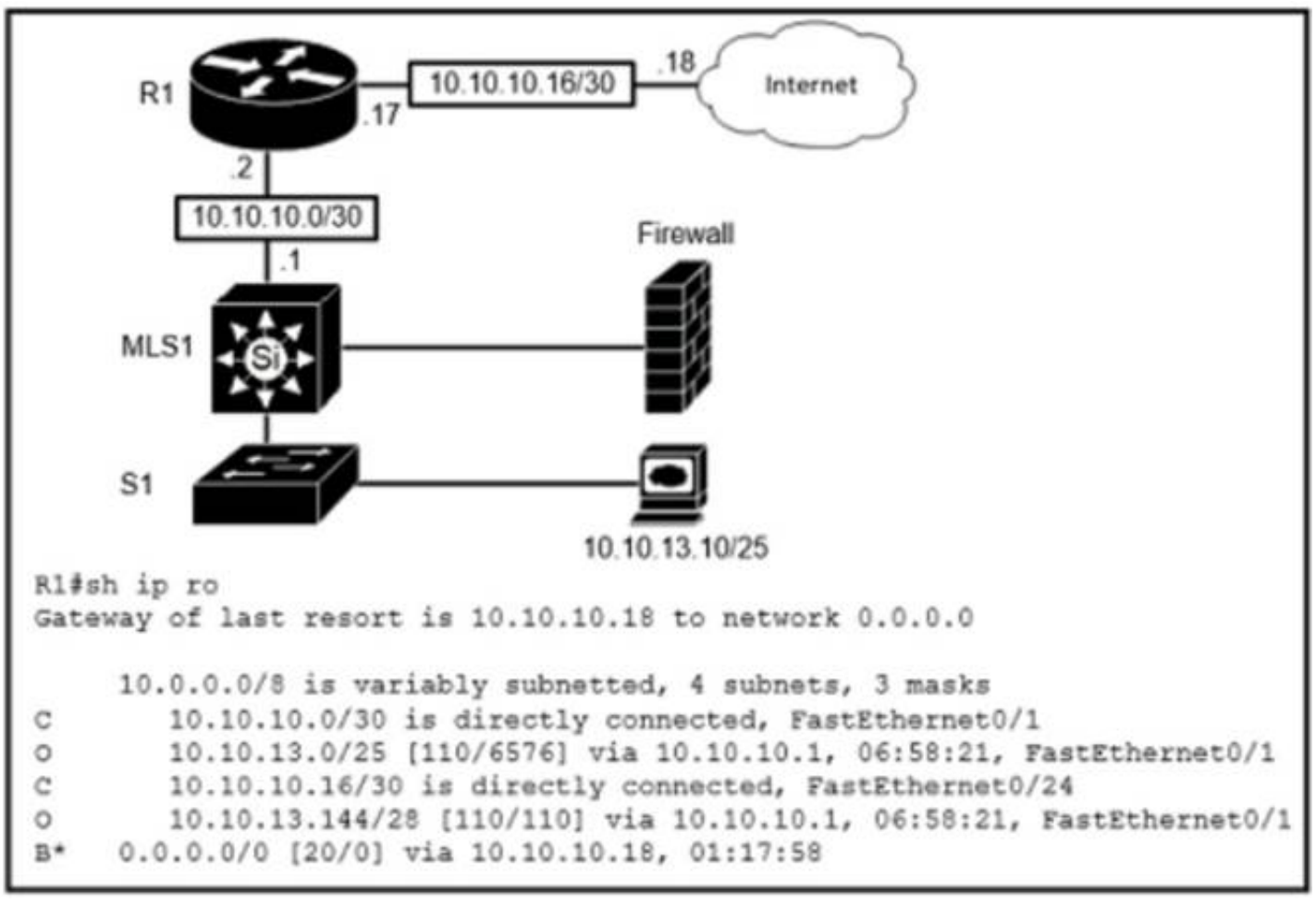


NEW QUESTION 102
- (Topic 2)
An engineer observes high usage on the 2.4GHz channels and lower usage on the 5GHz channels. What must be configured to allow clients to preferentially use 5GH2 access points?

A. Re- Anchor Roamed Clients
B. 11ac MU-MIMO
C. OEAP Split Tunnel
D. Client Band Select

Answer: D

NEW QUESTION 106
- (Topic 2)
Refer to the exhibit.



Which route type is configured to reach the internet?

A. host route
B. default route
C. floating static route
D. network route

Answer: B

NEW QUESTION 111
- (Topic 2)
An engineer is configuring NAT to translate the source subnet of 10.10.0.0/24 to any of three addresses 192.168.30.1, 192.168.3.2, 192.168.3.3 Which

configuration should be used?

enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
route-map permit 10.10.0.0 255.255.255.0
ip nat outside destination list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside

enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
access-list 1 permit 10.10.0.0 0.0.0.255
ip nat inside source list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside

enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
access-list 1 permit 10.10.0.0 0.0.0.255
ip nat outside destination list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside

enable
configure terminal
ip nat pool mypool 192.168.3.1 192.168.3.3 prefix-length 30
access-list 1 permit 10.10.0.0 0.0.0.254
ip nat inside source list 1 pool mypool
interface g1/1
ip nat inside
interface g1/2
ip nat outside

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

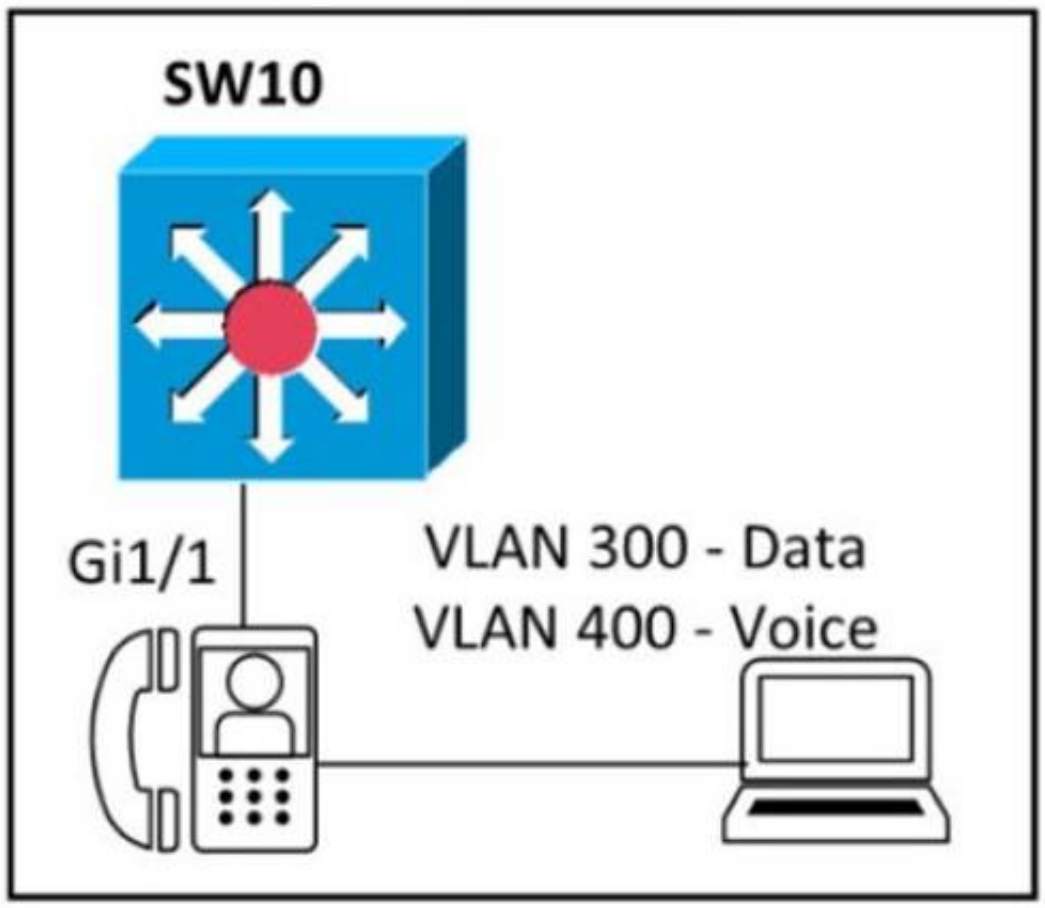
Answer: C

NEW QUESTION 112
- (Topic 2)
What is the same for both copper and fiber interfaces when using SFP modules?

A. They support an inline optical attenuator to enhance signal strength
B. They provide minimal interruption to services by being hot-swappable
C. They offer reliable bandwidth up to 100 Mbps in half duplex mode
D. They accommodate single-mode and multi-mode in a single module

Answer: B

NEW QUESTION 113
- (Topic 2)
Refer to the exhibit.



An engineer must configure GigabitEthernet1/1 to accommodate voice and data traffic Which configuration accomplishes this task?

```
interface gigabitethernet1/1
switchport mode access
switchport access vlan 300
switchport voice vlan 400
```

```
interface gigabitethernet1/1
switchport mode trunk
switchport trunk vlan 300
switchport voice vlan 400
```

```
interface gigabitethernet1/1
switchport mode trunk
switchport trunk vlan 300
switchport trunk vlan 400
```

```
interface gigabitethernet1/1
switchport mode access
switchport voice vlan 300
switchport access vlan 400
```

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

Answer: A

NEW QUESTION 116
- (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

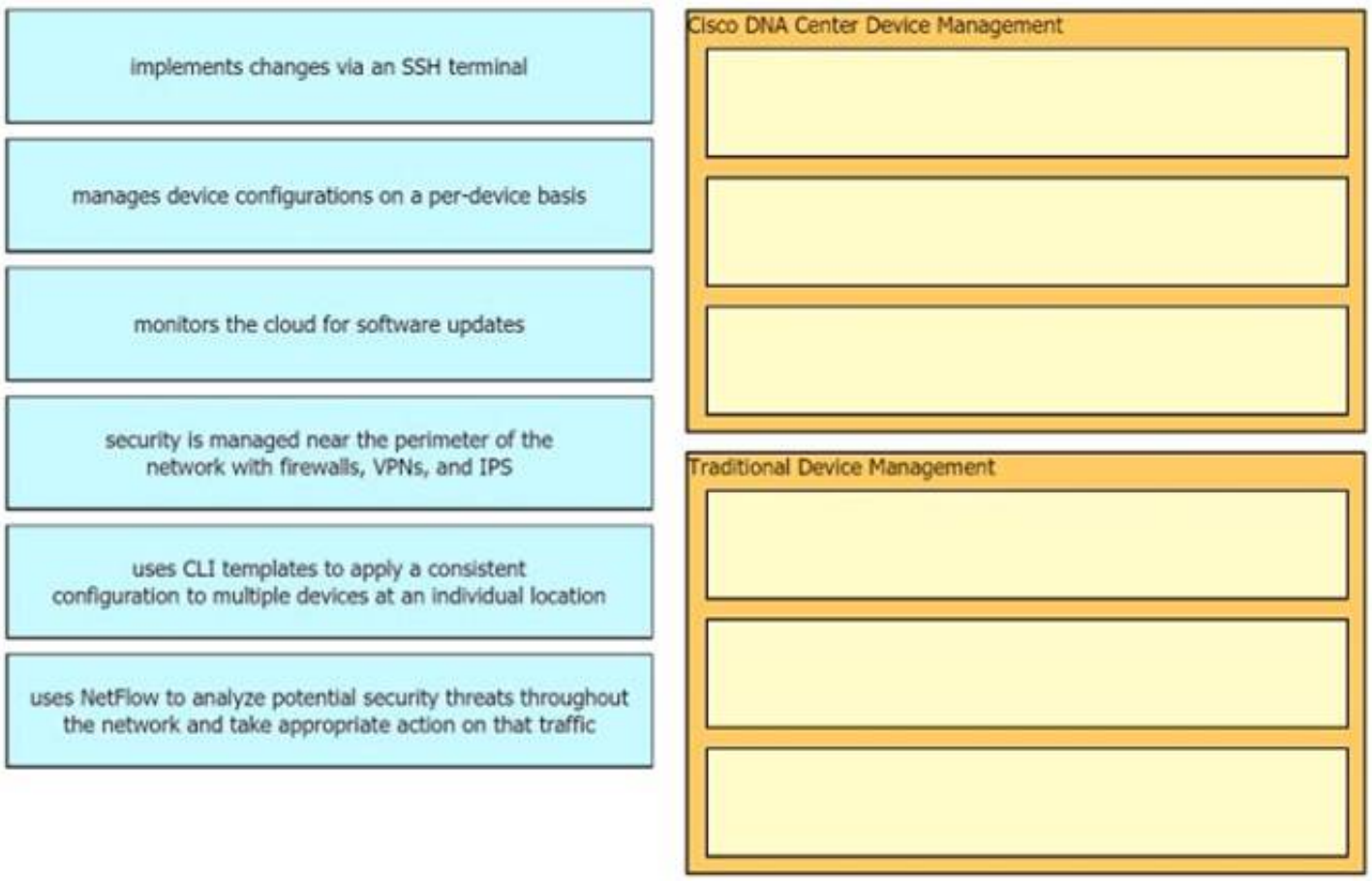
Explanation:
"In computer networking, Gigabit Ethernet (GbE or 1 GigE) is the term applied to transmitting Ethernet frames at a rate of a gigabit per second." Both standards use Ethernet framing (same headers and trailers)

NEW QUESTION 120
- (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

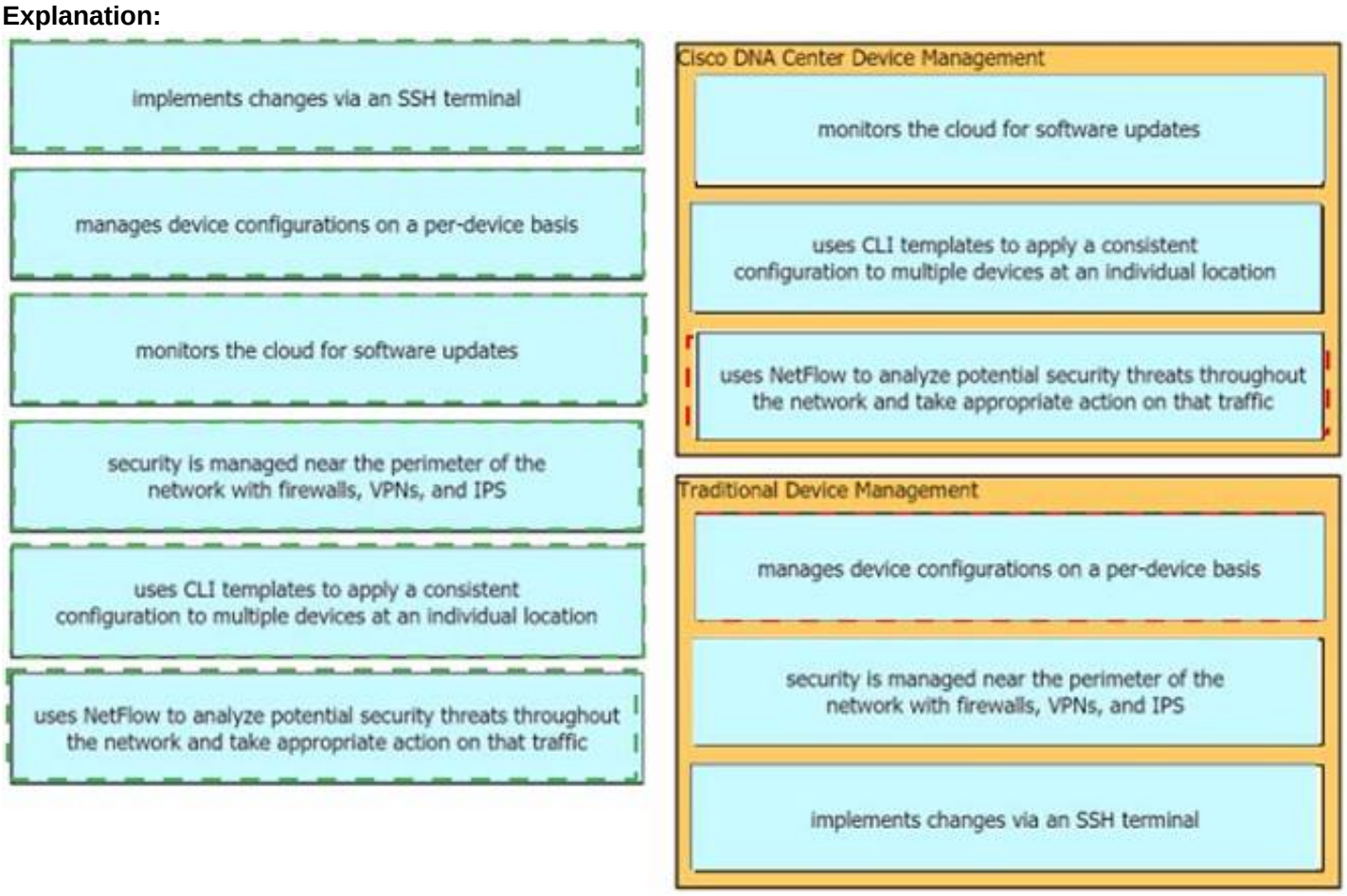
NEW QUESTION 122
DRAG DROP - (Topic 2)
Drag the descriptions of device management from the left onto the types of device management on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:

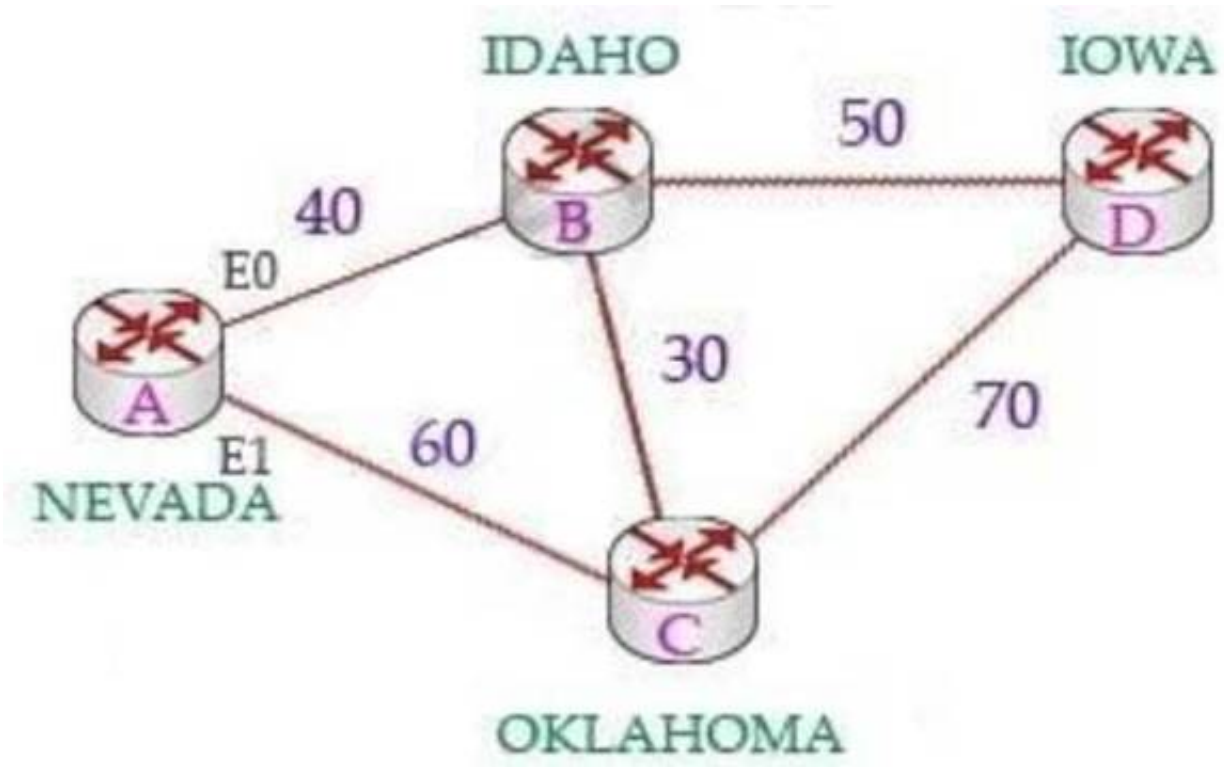


NEW QUESTION 123
- (Topic 2)
Which two actions influence the EIGRP route selection process? (Choose two)

A. The router calculates the reported distance by multiplying the delay on the exiting Interface by 256.
B. The router calculates the best backup path to the destination route and assigns it as the feasible successor.
C. The router calculates the feasible distance of all paths to the destination route
D. The advertised distance is calculated by a downstream neighbor to inform the local router of the bandwidth on the link
E. The router must use the advertised distance as the metric for any given route

Answer: BC

Explanation:
The reported distance (or advertised distance) is the cost from the neighbor to the destination. It is calculated from the router advertising the route to the network. For example in the topology below, suppose router A & B are exchanging their routing tables for the first time. Router B says “Hey, the best metric (cost) from me to IOWA is 50 and the metric from you to IOWA is 90” and advertises it to router A.
Router A considers the first metric (50) as the Advertised distance. The second metric (90), which is from NEVADA to IOWA (through IDAHO), is called the Feasible distance.



The reported distance is calculated in the same way of calculating the metric. By default (K1 = 1, K2 = 0, K3 = 1, K4 = 0, K5 = 0), the metric is calculated as follows:

$$metric = \left[\frac{10{,}000{,}000}{\text{slowest bandwidth[in kbps]}} + \frac{\text{sum of delay[in µsec]}}{10}\right] * 256$$

NEW QUESTION 127
- (Topic 2)
Refer to the exhibit.

```
R1# show ip route
....
D        172.16.32.0/27 [90/2888597172]  via 20.1.1.1
O        172.16.32.0/19  [110/292094]   via 20.1.1.10
R        172.16.32.0/24  [120/2]  via 20.1.1.3
```

Router R1 is running three different routing protocols. Which route characteristic is used by the router to forward the packet that it receives for destination IP 172.16.32.1?

A. longest prefix
B. metric
C. cost
D. administrative distance

Answer: A

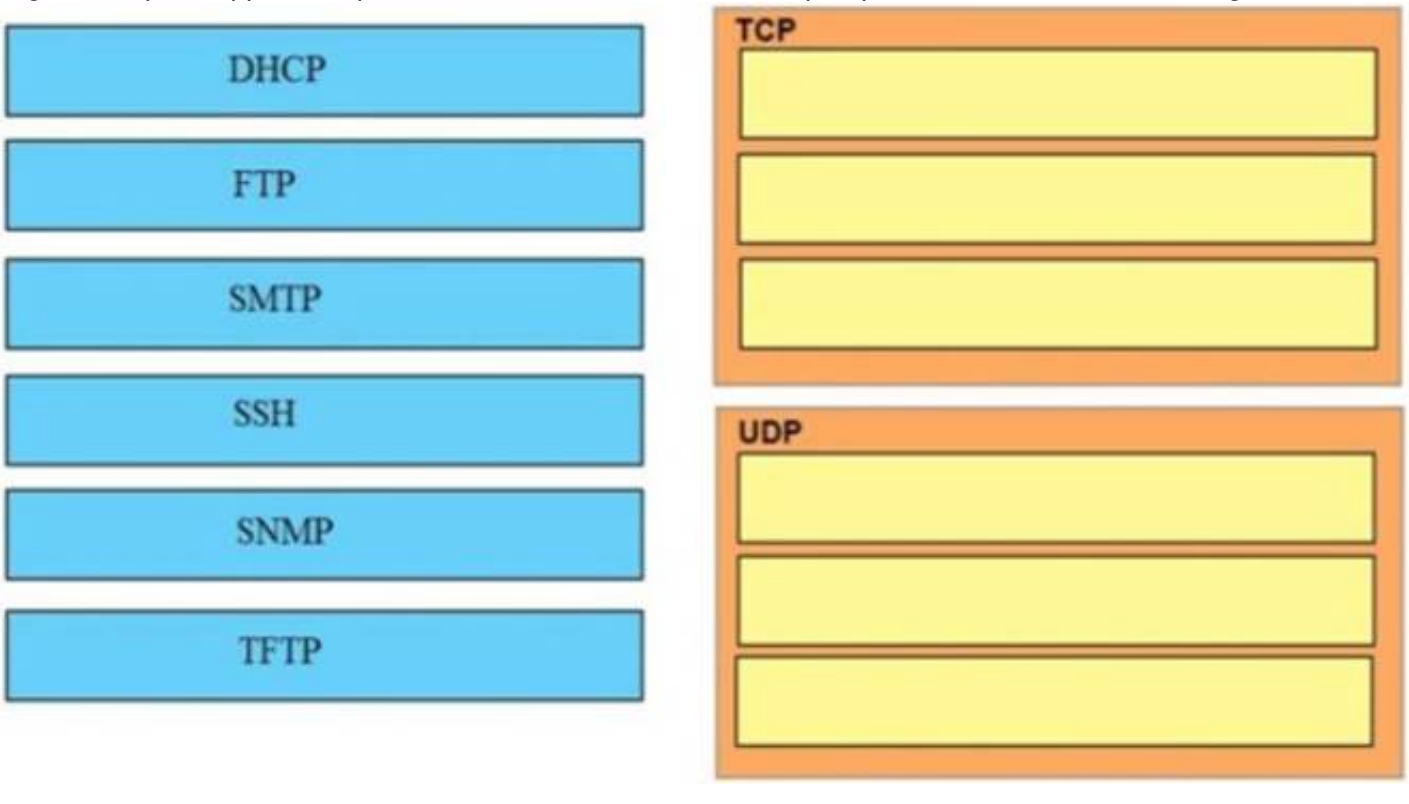
Explanation:
https://learningnetwork.cisco.com/s/question/0D53i00000KszSlCAJ/administrative- distance-vs-longest-match-rule

NEW QUESTION 129
- (Topic 2)
An engineer requires a scratch interface to actively attempt to establish a trunk link with a neighbor switch. What command must be configured?

A. switchport mode trunk
B. switchport mode dynamic desirable
C. switchport mode dynamic auto
D. switchport nonegotiate

Answer: C

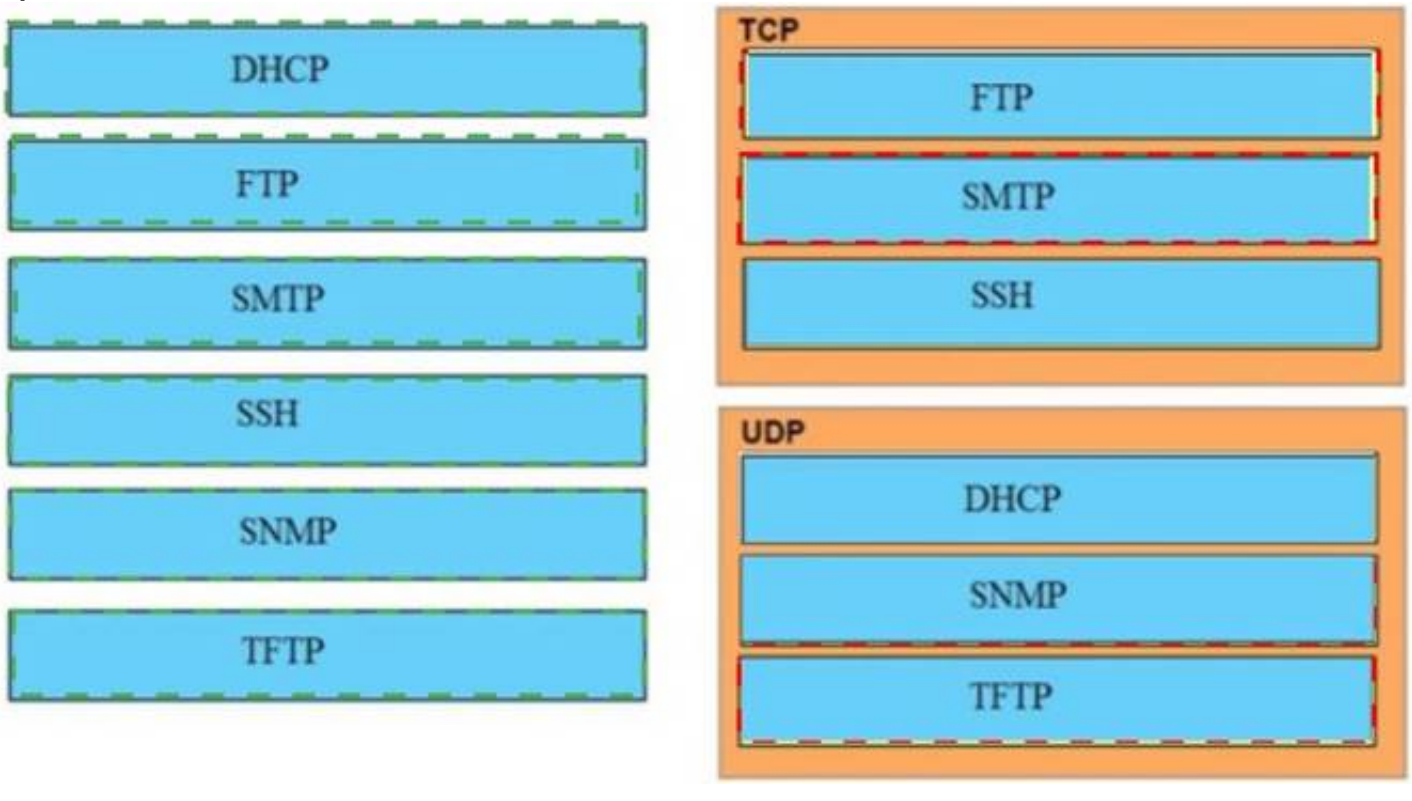
NEW QUESTION 131
DRAG DROP - (Topic 2)
Drag and drop the application protocols from the left onto the transport protocols that it uses on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 133
- (Topic 2)
When the active router in an HSRP group fails, what router assumes the role and forwards packets?

A. backup
B. standby
C. listening
D. forwarding

Answer: B

NEW QUESTION 135
- (Topic 2)
Which command must be entered to configure a DHCP relay?

A. ip helper-address
B. ip address dhcp
C. ip dhcp pool
D. ip dhcp relay

Answer: A

NEW QUESTION 138
- (Topic 2)
An engineer configured an OSPF neighbor as a designated router. Which state verifies the designated router is in the proper mode?

A. Exchange
B. 2-way
C. Full
D. Init

Answer: C

NEW QUESTION 141
- (Topic 2)
Which two tasks must be performed to configure NTP to a trusted server in client mode on a single network device? (Choose two)

A. Enable NTP authentication.
B. Verify the time zone.
C. Disable NTP broadcasts
D. Specify the IP address of the NTP server
E. Set the NTP server private key

Answer: AD

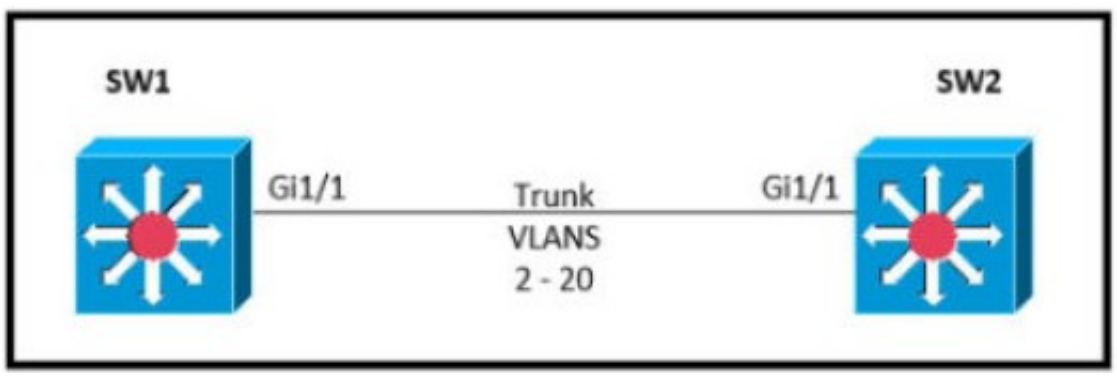
Explanation:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4000/8-2glx/configuration/guide/ntp.html
To configure authentication, perform this task in privileged mode:Step 1: Configure an authentication key pair for NTP and specify whether the key will be trusted or untrusted.Step 2: Set the IP address of the NTP server and the public key.Step 3: Enable NTP client mode.Step 4: Enable NTP authentication.Step 5: Verify the NTP configuration.

NEW QUESTION 146
- (Topic 2)
Which design element is a best practice when deploying an 802.11b wireless infrastructure?

A. disabling TPC so that access points can negotiate signal levels with their attached wireless devices.
B. setting the maximum data rate to 54 Mbps on the Cisco Wireless LAN Controller
C. allocating nonoverlapping channels to access points that are in close physical proximity to one another
D. configuring access points to provide clients with a maximum of 5 Mbps

Answer: C

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

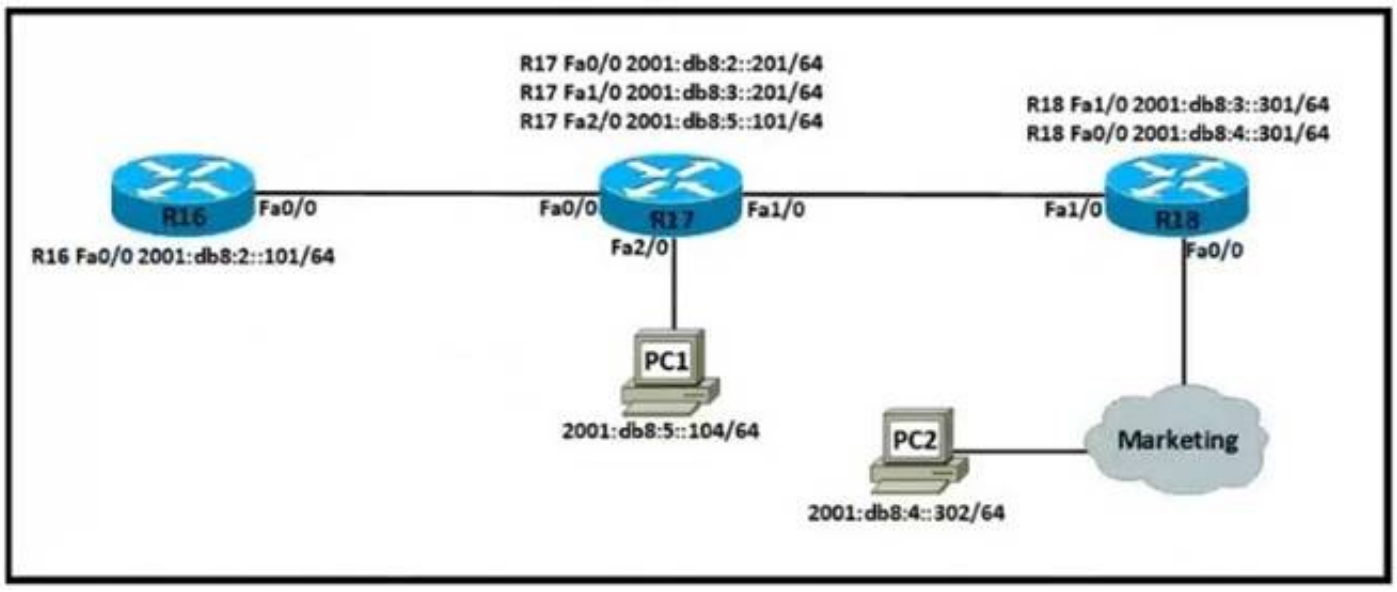


Which command must be executed for Gi1.1 on SW1 to become a trunk port if Gi1/1 on SW2 is configured in desirable or trunk mode?

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

Answer: C

NEW QUESTION 154
- (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)

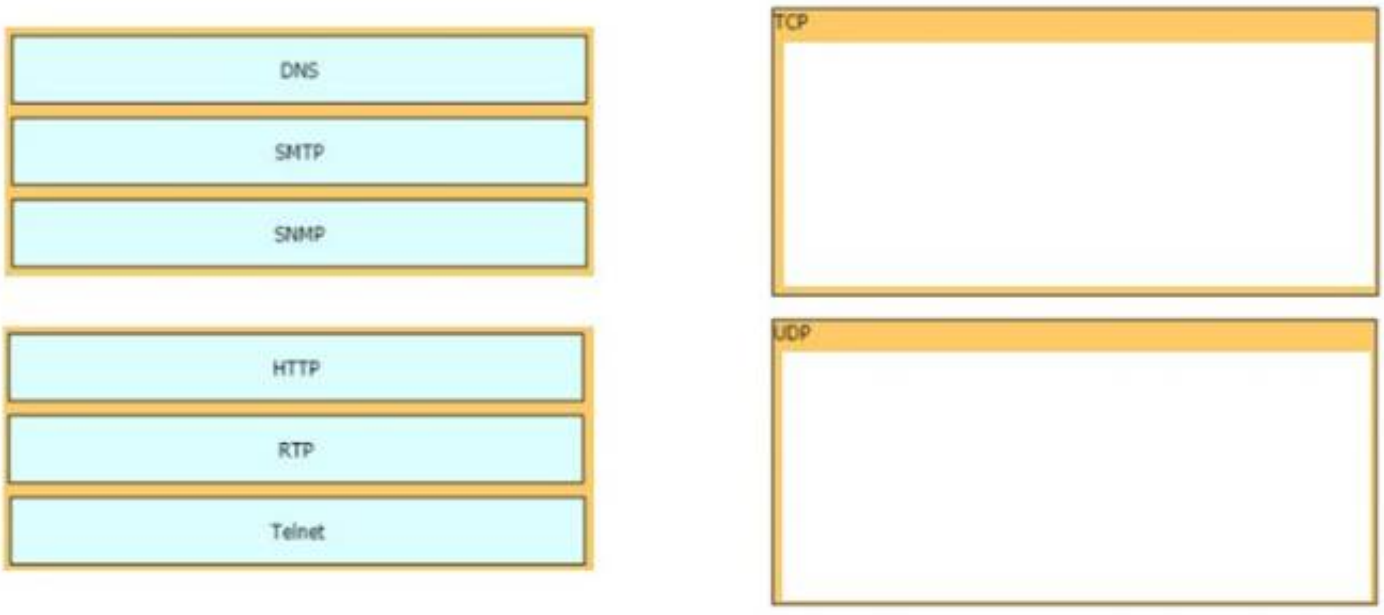
```
R17#
!
no ip domain lookup
ip cef
ipv6 unicast-routing
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:2::201/64
!
interface FastEthernet1/0
no ip address
duplex auto
speed auto
ipv6 address 2001:DB8:3::201/64
!
no cdp log mismatch duplex
ipv6 route 2001:DB8:4::/64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

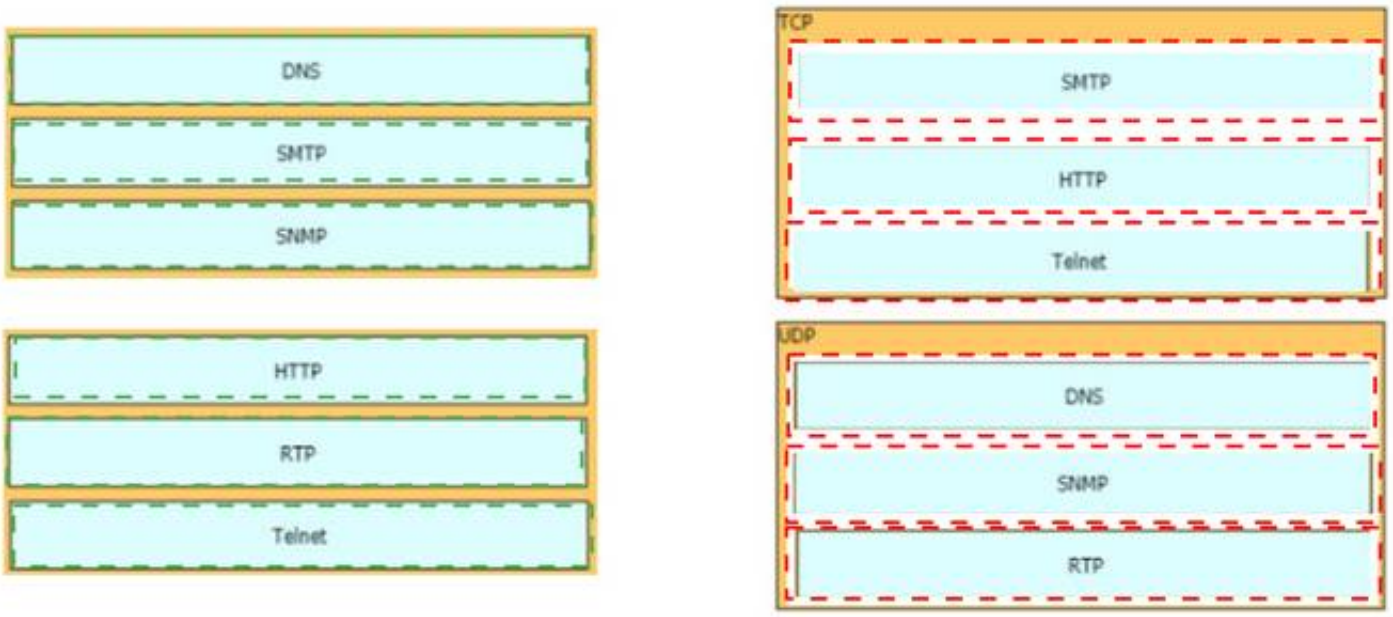
NEW QUESTION 156
DRAG DROP - (Topic 2)
Drag and drop the TCP/IP protocols from the left onto the transmission protocols on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:



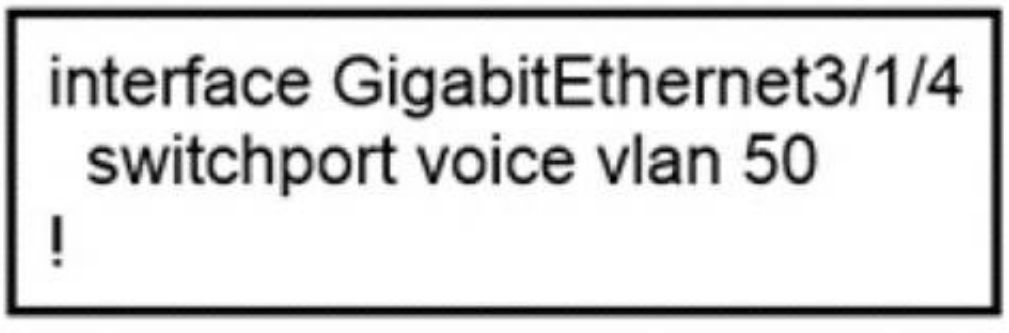
NEW QUESTION 159
- (Topic 2)
A user configured OSPF in a single area between two routers A serial interface connecting R1 and R2 is running encapsulation PPP By default which OSPF network type is seen on this interface when the user types show ip ospf interface on R1 or R2?

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

Answer: C

Explanation:
The default OSPF network type for HDLC and PPP on Serial link is point-to- point (while the default OSPF network type for Ethernet link is Broadcast).

NEW QUESTION 163
- (Topic 2)
Refer to the exhibit.



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 164
- (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 165
- (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 167
- (Topic 2)
What are two reasons for an engineer to configure a floating state route? (Choose two)

A. to automatically route traffic on a secondary path when the primary path goes down
B. to route traffic differently based on the source IP of the packet
C. to enable fallback static routing when the dynamic routing protocol fails
D. to support load balancing via static routing
E. to control the return path of traffic that is sent from the router

Answer: AC

NEW QUESTION 169
- (Topic 2)
How does WPA3 improve security?

A. It uses SAE for authentication.
B. It uses a 4-way handshake for authentication.
C. It uses RC4 for encryption.
D. It uses TKIP for encryption.

Answer: A

NEW QUESTION 173
- (Topic 2)
When OSPF learns multiple paths to a network, how does it select a route?

A. It multiple the active K value by 256 to calculate the route with the lowest metric.
B. For each existing interface, it adds the metric from the source router to the destination to calculate the route with the lowest bandwidth.
C. It divides a reference bandwidth of 100 Mbps by the actual bandwidth of the existing interface to calculate the router with the lowest cost.
D. It count the number of hops between the source router and the destination to determine the router with the lowest metric

Answer: C

NEW QUESTION 178
- (Topic 2)
Which statement correctly compares traditional networks and controller-based networks?

A. Only traditional networks offer a centralized control plane
B. Only traditional networks natively support centralized management
C. Traditional and controller-based networks abstract policies from device configurations
D. Only controller-based networks decouple the control plane and the data plane

Answer: D

Explanation:
Most traditional devices use a distributed architecture, in which each control plane is resided in a networking device. Therefore they need to communicate with

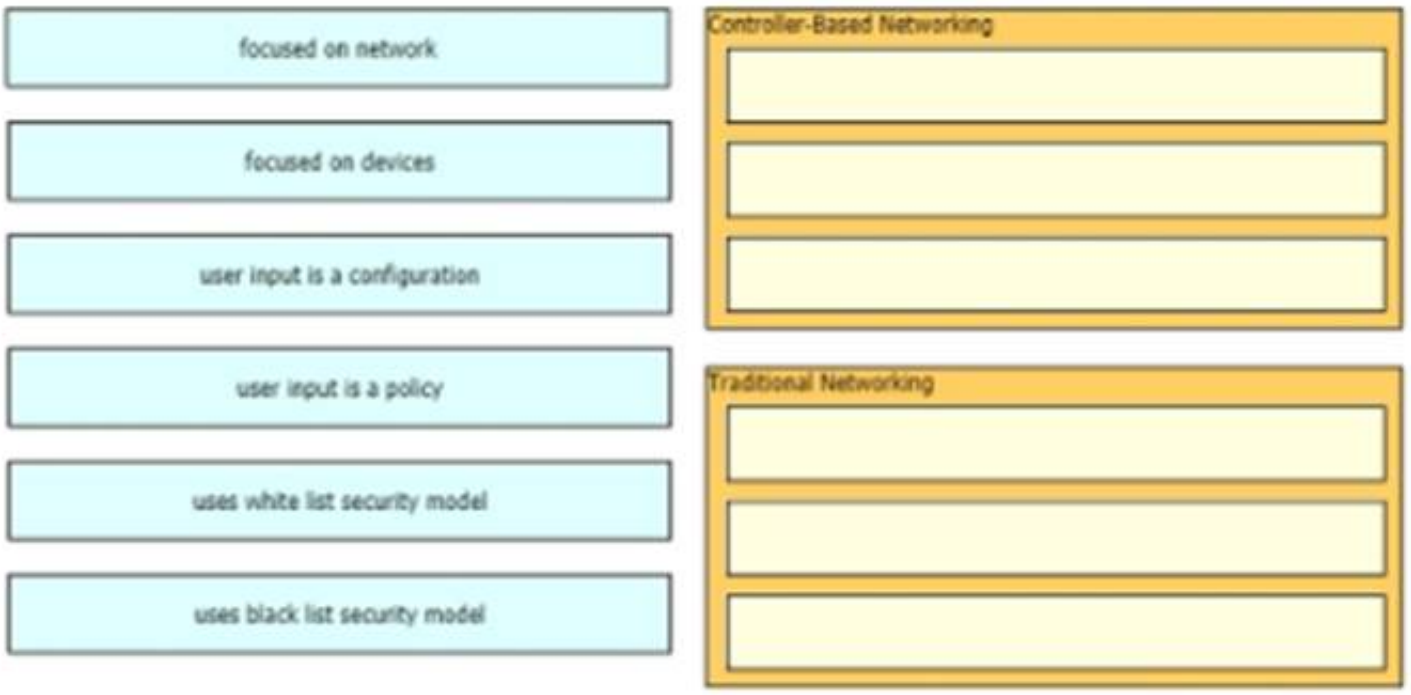
each other via messages to work correctly.In contrast to distributed architecture, centralized (or controller-based) architectures centralizes the control of networking devices into one device, called SDN controller

NEW QUESTION 183
- (Topic 2)
What is the primary function of a Layer 3 device?

A. to analyze traffic and drop unauthorized traffic from the Internet
B. to transmit wireless traffic between hosts
C. to pass traffic between different networks
D. forward traffic within the same broadcast domain

Answer: C

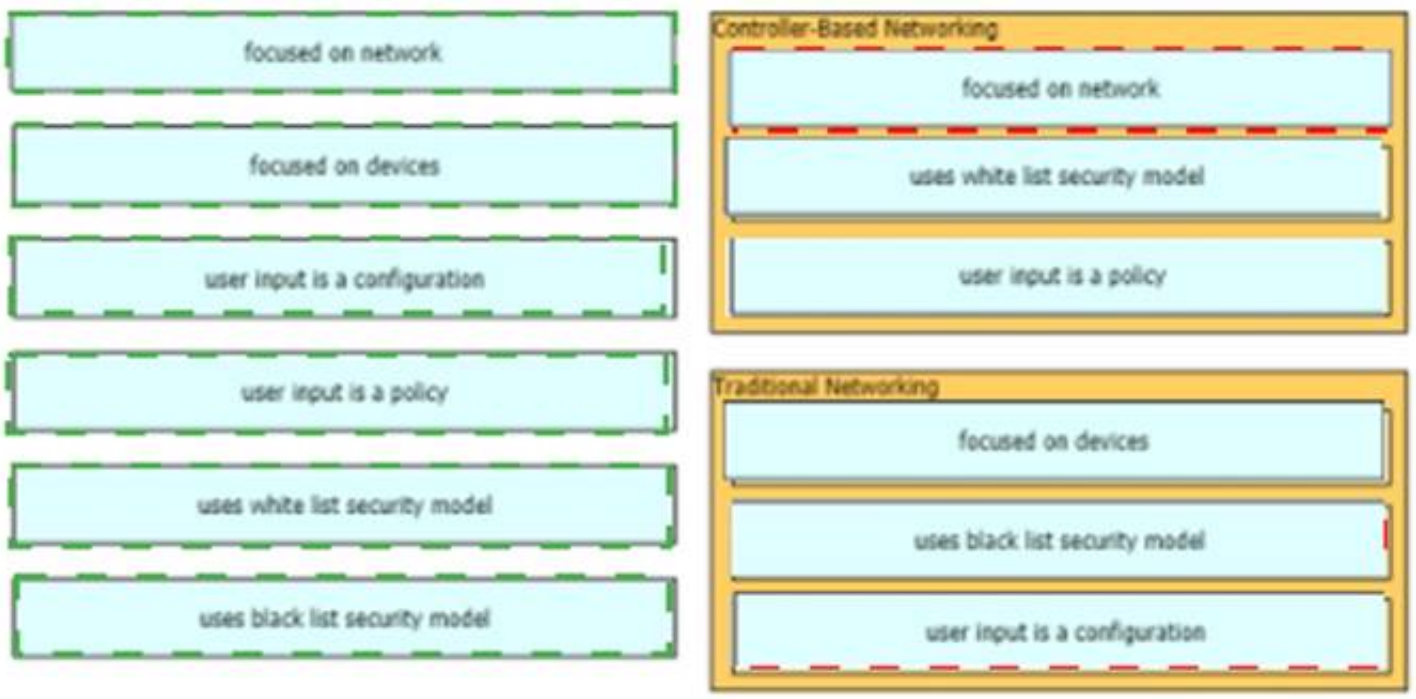
NEW QUESTION 184
DRAG DROP - (Topic 2)
Drag and drop to the characteristics of networking from the left onto the correct networking types on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 185
- (Topic 2)
Which two values or settings must be entered when configuring a new WLAN in the Cisco Wireless LAN Controller GUI? (Choose two)

A. management interface settings
B. QoS settings
C. Ip address of one or more access points
D. SSID
E. Profile name

Answer: DE

NEW QUESTION 190
- (Topic 2)
What is a function of TFTP in network operations?

A. transfers a backup configuration file from a server to a switch using a username and password
B. transfers files between file systems on a router
C. transfers a configuration files from a server to a router on a congested link
D. transfers IOS images from a server to a router for firmware upgrades

Answer: D

Explanation:
TFTP is mostly used (Firmware upgrade) whereby the admin have the IOS image on one device and uses TFTP to load the image to all other devices quickly.

NEW QUESTION 192
- (Topic 2)
An engineer must establish a trunk link between two switches. The neighboring switch is set to trunk or desirable mode. What action should be taken?

A. configure switchport nonegotiate
B. configure switchport mode dynamic desirable
C. configure switchport mode dynamic auto
D. configure switchport trunk dynamic desirable

Answer: C

NEW QUESTION 196
- (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 200
- (Topic 2)
An office has 8 floors with approximately 30-40 users per floor What command must be configured on the router Switched Virtual Interface to use address space efficiently?

A. ip address 192.168.0.0 255.255.0.0
B. ip address 192.168.0.0 255.255.254.0
C. ip address 192.168.0.0 255.255.255.128
D. ip address 192.168.0.0 255.255.255.224

Answer: B

NEW QUESTION 202
- (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

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 204
- (Topic 2)
What prevents a workstation from receiving a DHCP address?

A. DTP
B. STP
C. VTP
D. 802.10

Answer: B

NEW QUESTION 205
- (Topic 2)
What are two benefits of network automation? (Choose two)

A. reduced operational costs
B. reduced hardware footprint
C. faster changes with more reliable results
D. fewer network failures
E. increased network security

Answer: AC

NEW QUESTION 209
- (Topic 2)
Refer to the exhibit.

```
ip arp inspection vlan 5-10
interface fastethernet 0/1
   switchport mode access
   switchport access vlan 5
```

What is the effect of this configuration?

A. All ARP packets are dropped by the switch
B. Egress traffic is passed only if the destination is a DHCP server.
C. All ingress and egress traffic is dropped because the interface is untrusted
D. The switch discard all ingress ARP traffic with invalid MAC-to-IP address bindings.

Answer: D

NEW QUESTION 210
- (Topic 2)
What is a characteristic of private IPv4 addressing?

A. traverse the Internet when an outbound ACL is applied
B. issued by IANA in conjunction with an autonomous system number
C. composed of up to 65.536 available addresses
D. used without tracking or registration

Answer: D

NEW QUESTION 212
- (Topic 2)
What are two characteristics of a public cloud Implementation? (Choose two.)

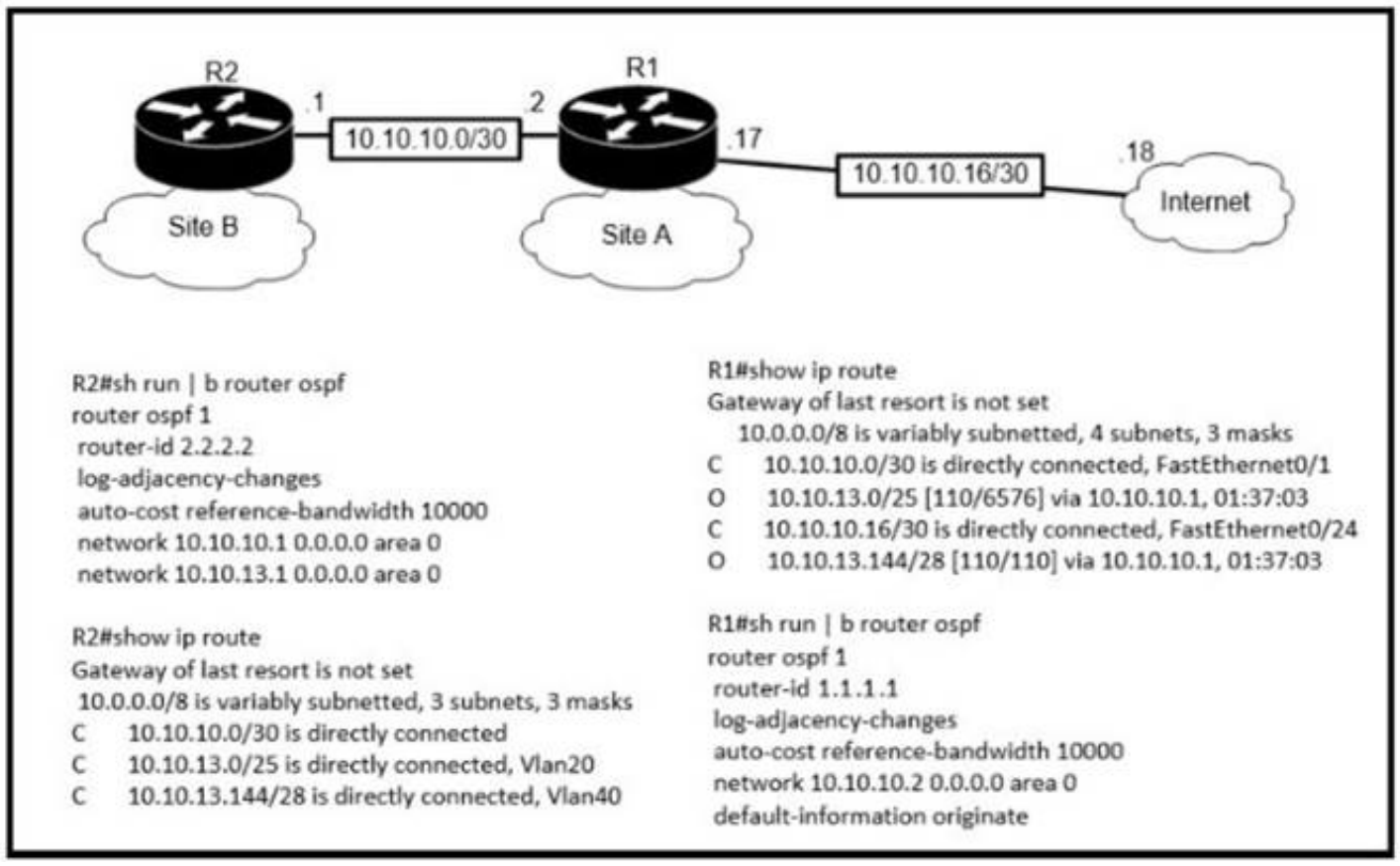
A. It is owned and maintained by one party, but it is shared among multiple organizations.
B. It enables an organization to fully customize how It deploys network resources.
C. It provides services that are accessed over the Internet.
D. It Is a data center on the public Internet that maintains cloud 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 214

- (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

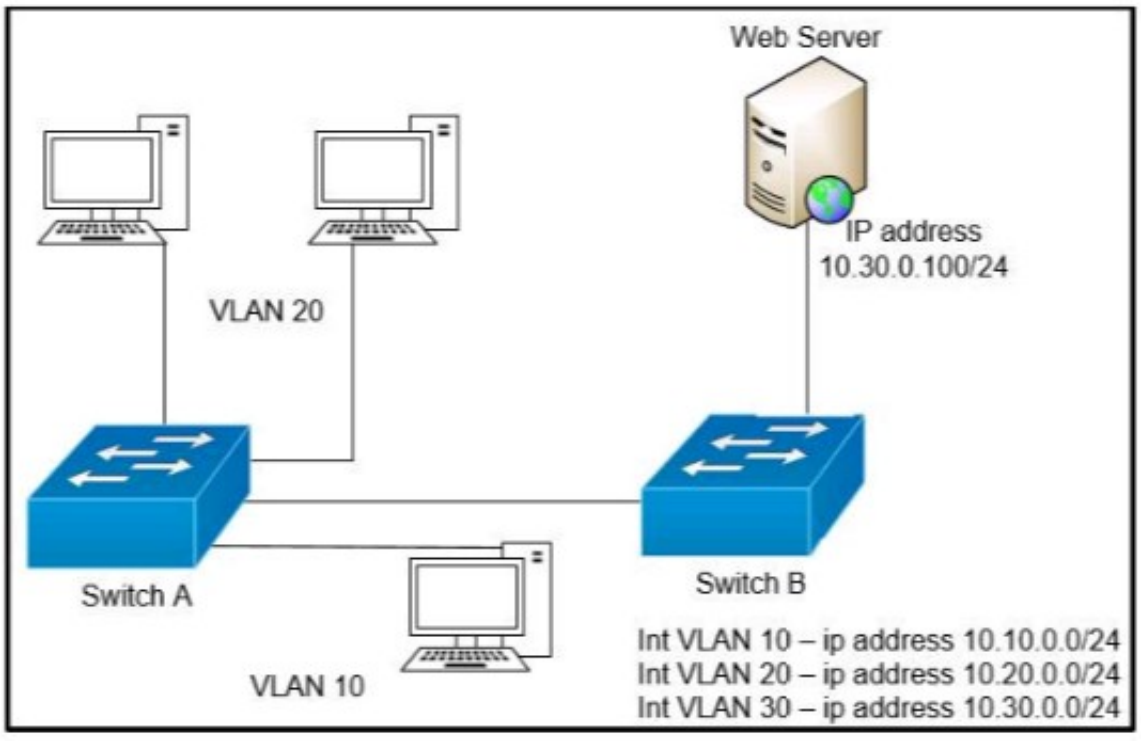
Answer: B

NEW QUESTION 218
- (Topic 2)
Which configuration management mechanism uses TCP port 22 by default when communicating with managed nodes?

A. Ansible
B. Python
C. Puppet
D. Chef

Answer: A

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



A network engineer must block access for all computers on VLAN 20 to the web server via HTTP All other computers must be able to access the web server Which configuration when applied to switch A accomplishes this task?

```
config t
ip access-list extended wwwblock
deny tcp any host 10.30.0.100 eq 80
int vlan 10
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
deny tcp any host 10.30.0.100 eq 80
permit ip any any
int vlan 20
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
permit ip any any
deny tcp any host 10.30.0.100 eq 80
int vlan 30
ip access-group wwwblock in
```

```
config t
ip access-list extended wwwblock
permit ip any any
deny tcp any host 10.30.0.100 eq 80
int vlan 20
ip access-group wwwblock in
```

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

Answer: B

NEW QUESTION 225
- (Topic 2)
What is the effect when loopback interfaces and the configured router ID are absent during the OSPF Process configuration?

A. No router ID is set, and the OSPF protocol does not run.
B. The highest up/up physical interface IP address is selected as the router ID.
C. The lowest IP address is incremented by 1 and selected as the router ID.
D. The router ID 0.0.0.0 is selected and placed in the OSPF process.

Answer: B

NEW QUESTION 229
- (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 234
- (Topic 2)
Which set of action satisfy the requirement for multifactor authentication?

A. The user swipes a key fob, then clicks through an email link
B. The user enters a user name and password, and then clicks a notification in an authentication app on a mobile device
C. The user enters a PIN into an RSA token, and then enters the displayed RSA key on a login screen
D. The user enters a user name and password and then re-enters the credentials on a second screen

Answer: B

Explanation:
This is an example of how two-factor authentication (2FA) works:1. The user logs in to the website or service with their username and password.2. The password is validated by an authentication server and, if correct, the user becomes eligible for the second factor.3. The authentication server sends a unique code to the user's second-factor method (such as a smartphone app).4. The user confirms their identity by providing the additional authentication for their second-factor method.

NEW QUESTION 238
- (Topic 2)
Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
     is directly connected, Serial0/1/0
     172.16.0.0/16 is variably subnetted, 3 subnets, 3 masks
S    172.16.0.0/24 [1/0] via 207.165.200.250, Serial0/0/0
O    172.16.0.128/25 [110/38443] via 207.165.200.254, 00:00:23, Serial0/0/1
D    172.16.0.192/29 [90/3184439] via 207.165.200.254, 00:00:25, Serial0/0/1
     209.165.200.0/24 is variably subnetted, 4 subnets, 2 masks
C    209.165.200.248/30 is directly connected, Serial0/0/0
L    209.165.200.249/32 is directly connected, Serial0/0/0
C    209.165.200.252/30 is directly connected, Serial0/0/1
L    209.165.200.253/32 is directly connected, Serial0/0/1
```

With which metric was the route to host 172.16.0.202 learned?

A. 110
B. 38443
C. 3184439

Answer: C

Explanation:
Both the line “O 172.16.0.128/25” and “S 172.16.0.0/24” cover the host 172.16.0.202 but with the “longest (prefix) match” rule the router will choose the first route.

NEW QUESTION 242
- (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 245
- (Topic 2)
Which condition must be met before an NMS handles an SNMP trap from an agent?

A. The NMS software must be loaded with the MIB associated with the trap.
B. The NMS must be configured on the same router as the SNMP agent
C. The NMS must receive a trap and an inform message from the SNMP agent within a configured interval
D. The NMS must receive the same trap from two different SNMP agents to verify that it is reliable.

Answer: A

NEW QUESTION 247
- (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

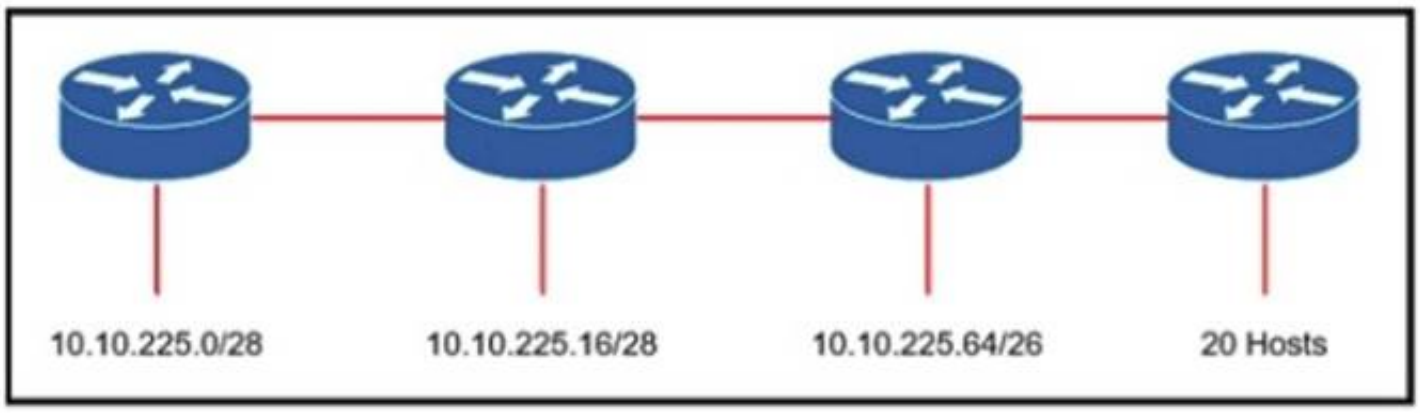
NEW QUESTION 248

- (Topic 2)
Which mode must be set for APs to communicate to a Wireless LAN Controller using the Control and Provisioning of Wireless Access Points (CAPWAP) protocol?

A. bridge
B. route
C. autonomous
D. lightweight

Answer: D

NEW QUESTION 253
- (Topic 2)



Refer to the exhibit. An engineer must add a subnet for a new office that will add 20 users to the network. Which IPv4 network and subnet mask combination does the engineer assign to minimize wasting addresses?

A. 10.10.225.48 255.255.255.240
B. 10.10.225.32 255.255.255.240
C. 10.10.225.48 255.255.255.224
D. 10.10.225.32 255.255.255.224

Answer: D

NEW QUESTION 256
- (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 257
- (Topic 2)
What are two characteristics of an SSID? (Choose Two)

A. It can be hidden or broadcast in a WLAN
B. It uniquely identifies an access point in a WLAN
C. It uniquely identifies a client in a WLAN
D. It is at most 32 characters long.
E. IT provides secured access to a WLAN

Answer: BE

NEW QUESTION 259
- (Topic 2)
How does the dynamically-learned MAC address feature function?

A. The CAM table is empty until ingress traffic arrives at each port
B. Switches dynamically learn MAC addresses of each connecting CAM table.
C. The ports are restricted and learn up to a maximum of 10 dynamically-learned addresses
D. It requires a minimum number of secure MAC addresses to be filled dynamically

Answer: A

NEW QUESTION 260
- (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

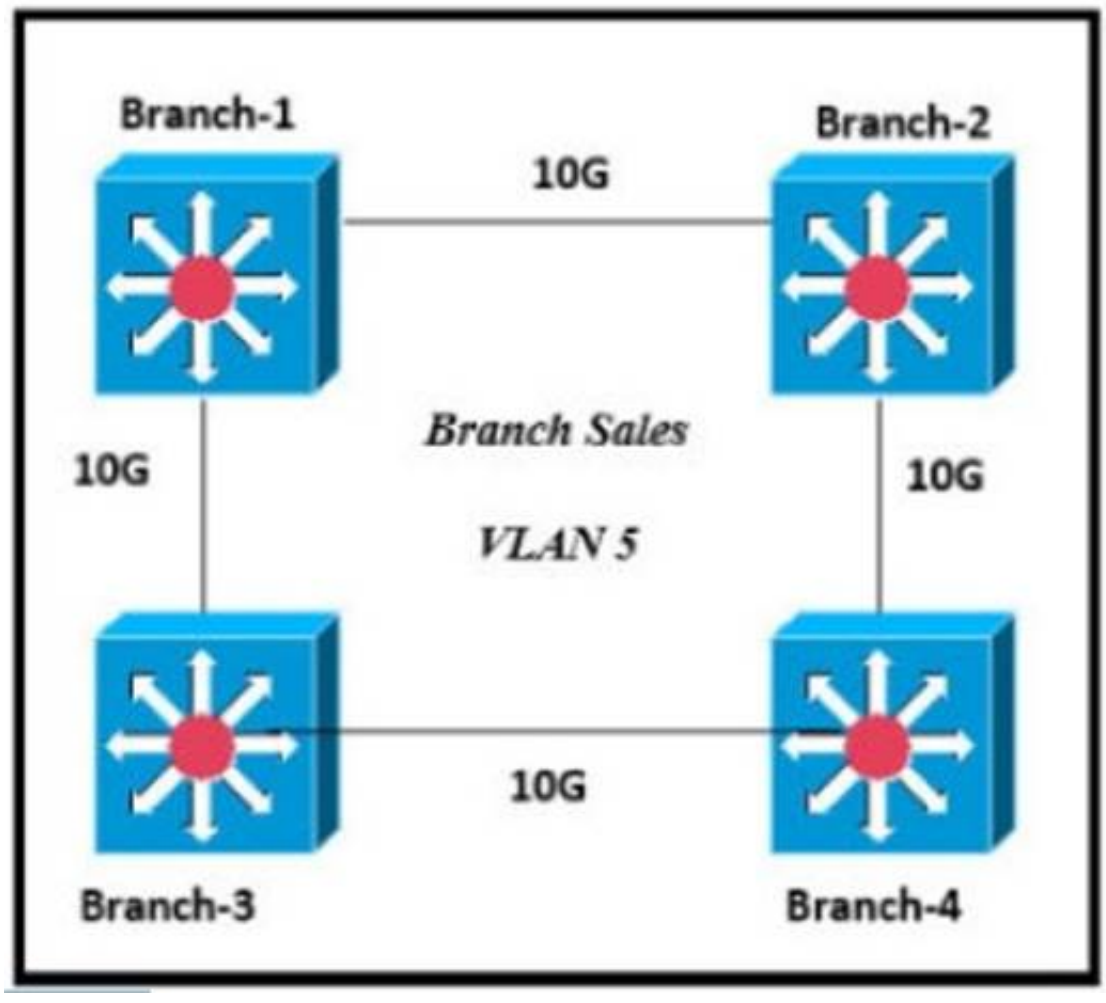
Answer: A

NEW QUESTION 261
- (Topic 2)
An administrator must secure the WLC from receiving spoofed association requests. Which steps must be taken to configure the WLC to restrict the requests and force the user to wait 10 ms to retry an association request?

A. Enable Security Association Teardown Protection and set the SA Query timeout to 10
B. Enable MAC filtering and set the SA Query timeout to 10
C. Enable 802.1x Layer 2 security and set me Comeback timer to 10
D. Enable the Protected Management Frame service and set the Comeback timer to 10

Answer: C

NEW QUESTION 265
- (Topic 2)
Refer to the exhibit.



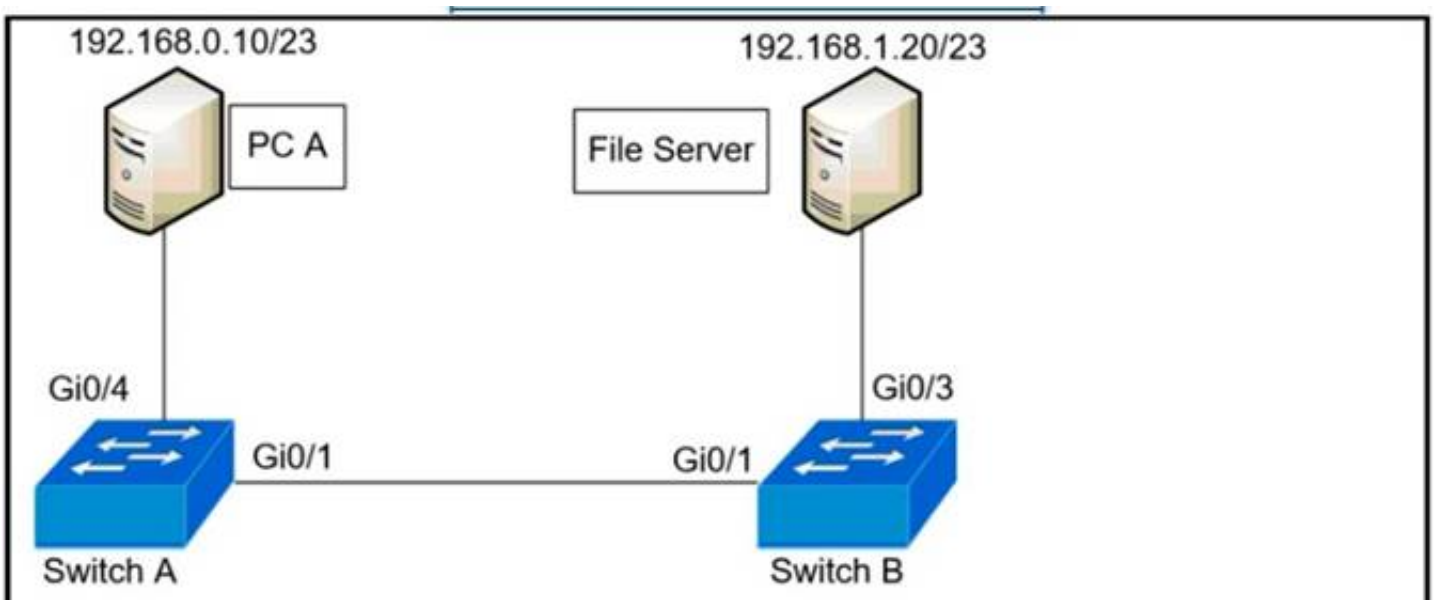
Only four switches are participating in the VLAN spanning-tree process.
Branch-1 priority 614440
Branch-2: priority 39082416
Branch-3: priority 0 Branch-4: root primary
Which switch becomes the permanent root bridge for VLAN 5?

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

Answer: C

Explanation:
Dynamic ARP inspection is an ingress security feature; it does not perform any egress checking.

NEW QUESTION 270
- (Topic 2)
Refer to the exhibit.



Switch A	Switch B
Vlan 10,11,12,13 interface GigabitEthernet0/1 switchport mode trunk switchport trunk allowed vlan 10-12 ! interface GigabitEthernet0/4 switchport access vlan 13 switchport mode access	Vlan 10,11,12,13 interface GigabitEthernet0/1 switchport mode trunk ! interface GigabitEthernet0/3 switchport access vlan 13 switchport mode access

A network administrator assumes a task to complete the connectivity between PC A and the File Server. Switch A and Switch B have been partially configured with VLAN 10, 11, 12, and 13. What is the next step in the configuration?

A. Add PC A to VLAN 10 and the File Server to VLAN 11 fa VLAN segmentation
B. Add VLAN 13 to the trunk links on Switch A and Switch B for VLAN propagation
C. Add a router on a stick between Switch A and Switch B allowing for Inter-VLAN routing.
D. Add PC A to the same subnet as the Fie Server allowing for intra-VLAN communication.

Answer: B

NEW QUESTION 273
- (Topic 2)
Refer to the exhibit.

```
R1# sh ip ospf int gig0/0
Gig0/0 is up, line protocol is up
  Internet Address 10.201.24.8/28, Area 1, Attached via Network Statement
  Process ID 100, Router ID 192.168.1.1, Network Type BROADCAST, Cost: 1
  Topology-MTID    Cost    Disabled    Shutdown      Topology Name
        0           1         no          no            Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 192.168.1.1, Interface address 10.201.24.8
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:07

R2#sh ip ospf int gig0/0
gig0/0 is up, line protocol is up
  Internet Address 10.201.24.1/28, Area 1
  Process ID 100, Router ID 172.16.1.1, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 172.16.1.1, Interface address 10.201.24.1
  No backup designated router on this network
  Timer intervals configured, Hello 20, Dead 80, Wait 80, Retransmit 5
```

What action establishes the OSPF neighbor relationship without forming an adjacency?

A. modify hello interval
B. modify process ID
C. modify priority
D. modify network type

Answer: A

NEW QUESTION 278
- (Topic 2)
Which 802.11 frame type is indicated by a probe response after a client sends a probe request?

A. action
B. management
C. control
D. data

Answer: B

NEW QUESTION 280
- (Topic 2)
What benefit does controller-based networking provide versus traditional networking?

A. moves from a two-tier to a three-tier network architecture to provide maximum redundancy
B. provides an added layer of security to protect from DDoS attacks
C. allows configuration and monitoring of the network from one centralized port
D. combines control and data plane functionality on a single device to minimize latency

Answer: C

NEW QUESTION 285
- (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 287
- (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 288
- (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)
```

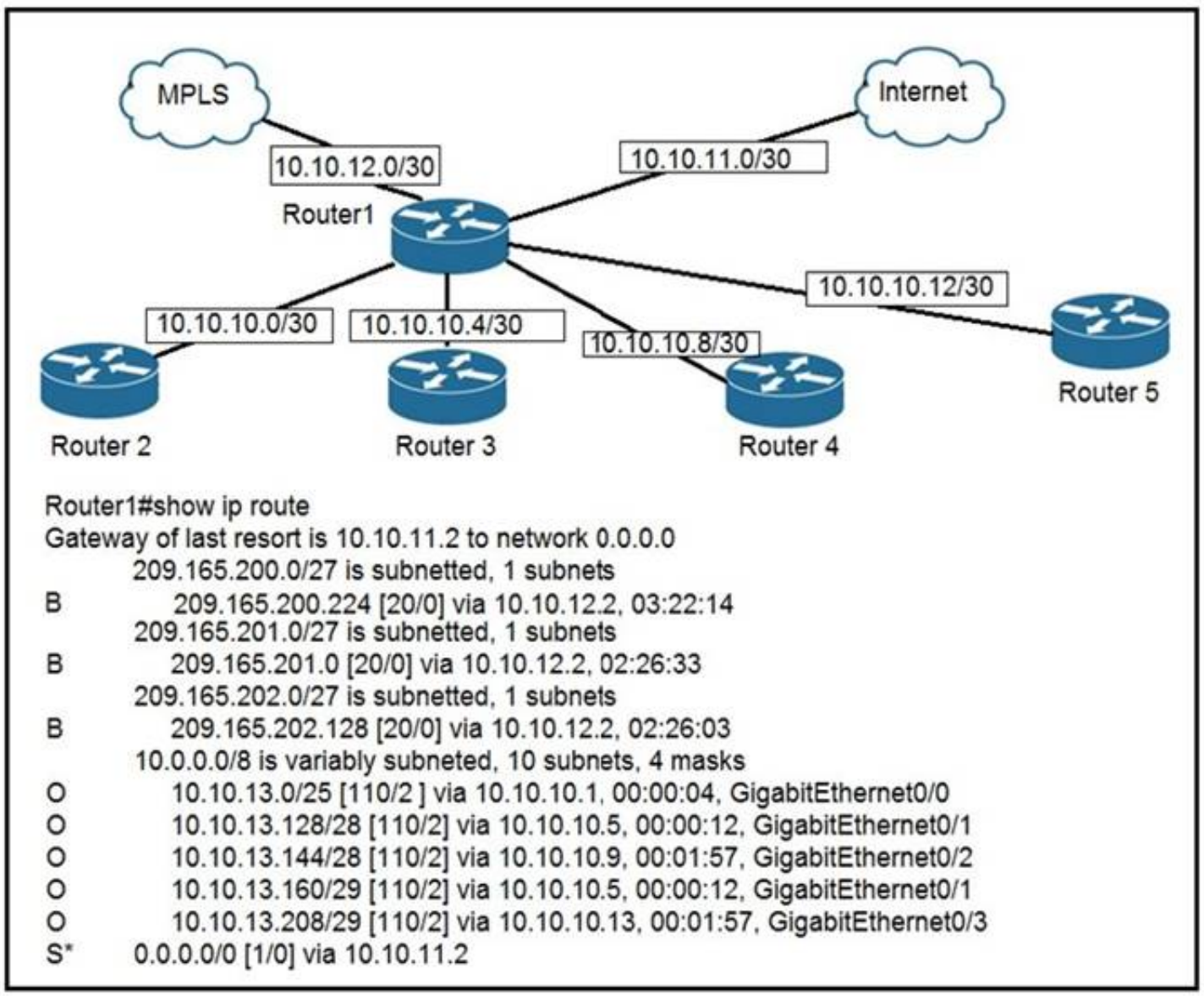
Which two commands were used to create port channel 10? (Choose two)

- int range g0/0-1
  channel-group 10 mode active
- int range g0/0-1
  channel-group 10 mode desirable
- int range g0/0-1
  channel-group 10 mode passive
- int range g0/0-1
  channel-group 10 mode auto
- int range g0/0-1
  channel-group 10 mode on

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

Answer: AC

NEW QUESTION 289
- (Topic 2)
Refer to the exhibit.



To which device does Router1 send packets that are destined to host 10.10.13.165?

A. Router2
B. Router3
C. Router4
D. Router5

Answer: B

NEW QUESTION 292

- (Topic 2)
What Is the path for traffic sent from one user workstation to another workstation on a separate switch In a Ihree-Iter architecture model?

A. access - core - distribution - access
B. access - distribution - distribution - access
C. access - core - access
D. access -distribution - core - distribution - access

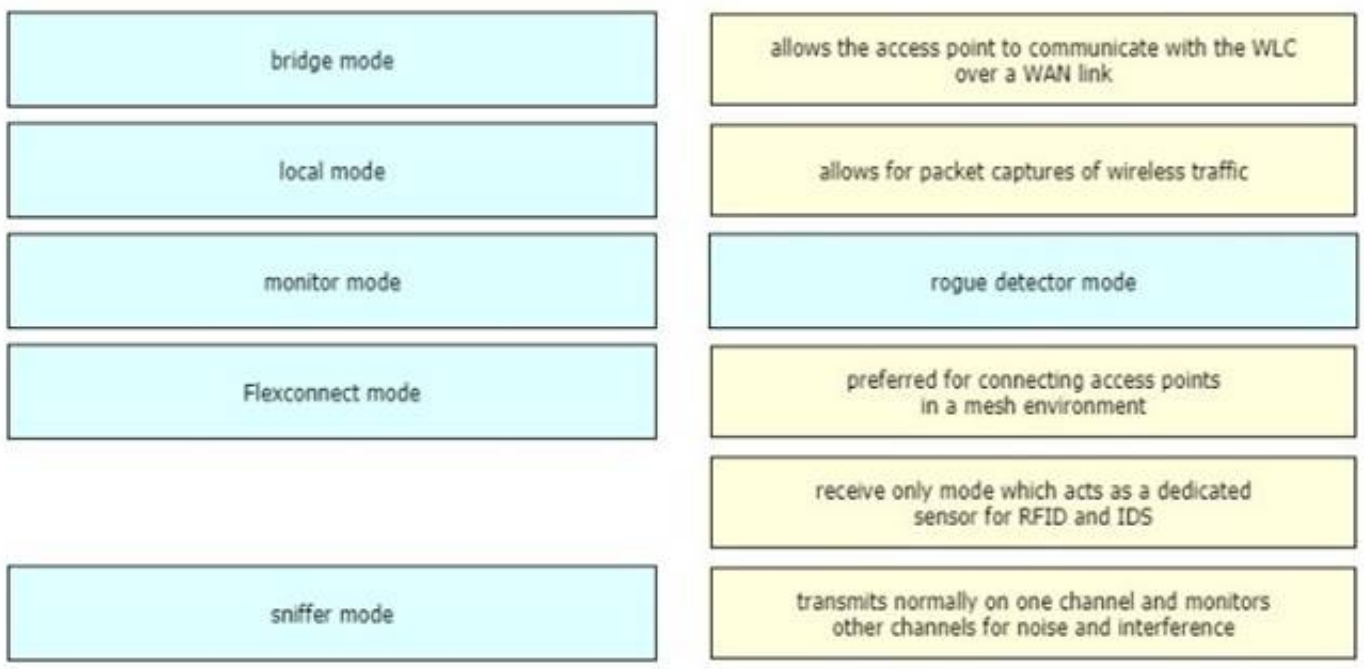
Answer: D

NEW QUESTION 297
- (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

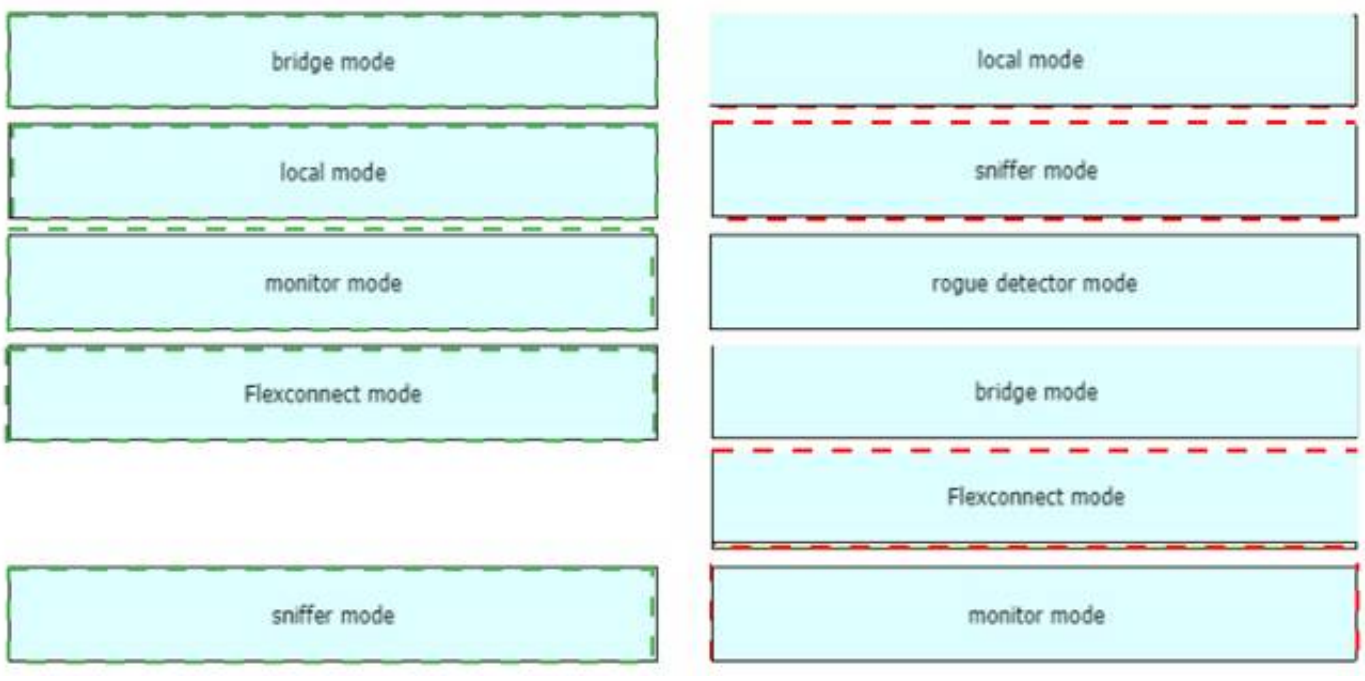
NEW QUESTION 301
DRAG DROP - (Topic 2)
Drag and drop the lightweight access point operation modes from the left onto the descriptions on the right



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 303
- (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 308
- (Topic 2)
Refer to the exhibit.

```
R1# show ip route | begin gateway
Gateway of last resort is 209.165.200.246 to network 0.0.0.0
S* 0.0.0.0/0 [1/0] via 209.165.200.246, Serial0/1/0
     is directly connected, Serial0/1/0
     172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
S    172.16.3.0/24 [1/0] via 207.165.200.250, Serial0/0/0
O    172.16.3.0/28 [110/84437] via 207.165.200.254, 00:00:28, Serial0/0/1
     207.165.200.0/24 is variably subnetted, 6 subnets, 2 masks
C    207.165.200.244/30 is directly connected, Serial0/1/0
L    207.165.200.245/32 is directly connected, Serial0/1/0
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
```

A packet is being sent across router R1 to host 172.163.3.14. To which destination does the router send the packet?

A. 207.165.200.246 via Serial0/1/0
B. 207.165.200.254 via Serial0/0/1
C. 207.165.200.254 via Serial0/0/0
D. 207.165.200.250 via Serial/0/0/0

Answer: B

NEW QUESTION 311
- (Topic 2)
Which JSON data type is an unordered set of attribute- value pairs?

A. array
B. string
C. object
D. Boolean

Answer: C

NEW QUESTION 312
- (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 313
- (Topic 2)
Refer to the exhibit.

```
R1#show ip interface brief
Interface                  IP-Address      OK? Method Status                Protocol
FastEthernet0/0            unassigned      YES NVRAM  administratively down down
GigabitEthernet1/0         192.168.0.1     YES NVRAM  up                    up
GigabitEthernet2/0         10.10.1.10      YES manual up                    up
GigabitEthernet3/0         10.10.10.20     YES manual up                    up
GigabitEthernet4/0         unassigned      YES NVRAM  administratively down down
Loopback0                  172.16.15.10    YES manual
```

What does router R1 use as its OSPF router-ID?

A. 10.10.1.10
B. 10.10.10.20
C. 172.16.15.10
D. 192.168.0.1

Answer: C

Explanation:
OSPF uses the following criteria to select the router ID:1. Manual configuration of the router ID (via the “router-id x.x.x.x” command under OSPF router configuration mode).2. Highest IP address on a loopback interface.3. Highest IP address on a non-loopback and active (no shutdown) interface.

NEW QUESTION 318
- (Topic 2)
How do traditional campus device management and Cisco DNA Center device management differ in regards to deployment?

A. Cisco DNA Center device management can deploy a network more quickly thantraditional campus device management
B. Traditional campus device management allows a network to scale more quickly than with Cisco DNA Center device management
C. Cisco DNA Center device management can be implemented at a lower cost than most traditional campus device management options
D. Traditional campus device management schemes can typically deploy patches and updates more quickly than Cisco DNA Center device management

Answer: A

NEW QUESTION 322
- (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 324
- (Topic 2)
An organization secures its network with multi-factor authentication using an authenticator app on employee smartphone. How is the application secured in the case of a user’s smartphone being lost or stolen?

A. The application requires an administrator password to reactivate after a configured Interval.
B. The application requires the user to enter a PIN before it provides the second factor.
C. The application challenges a user by requiring an administrator password to reactivate when the smartphone is rebooted.
D. The application verifies that the user is in a specific location before it provides the second factor.

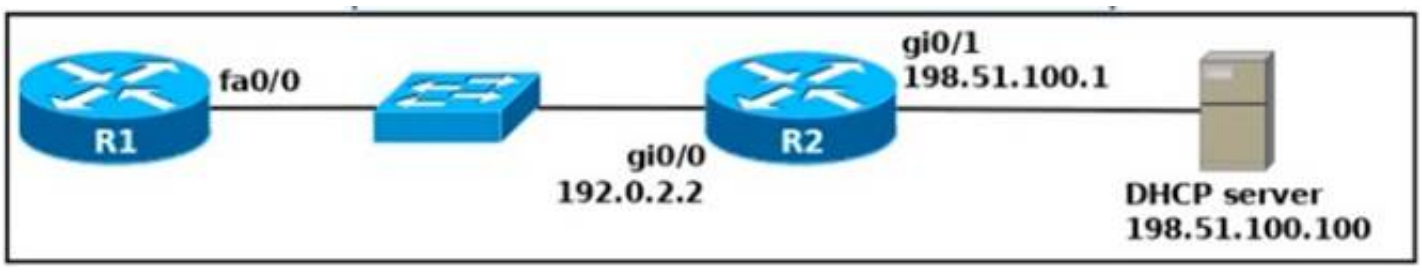
Answer: B

NEW QUESTION 328
- (Topic 2)
Which IPv6 address type provides communication between subnets and is unable to route on the Internet?

A. global unicast
B. unique local
C. link-local
D. multicast

Answer: B

NEW QUESTION 329
- (Topic 2)
Refer to the exhibit.

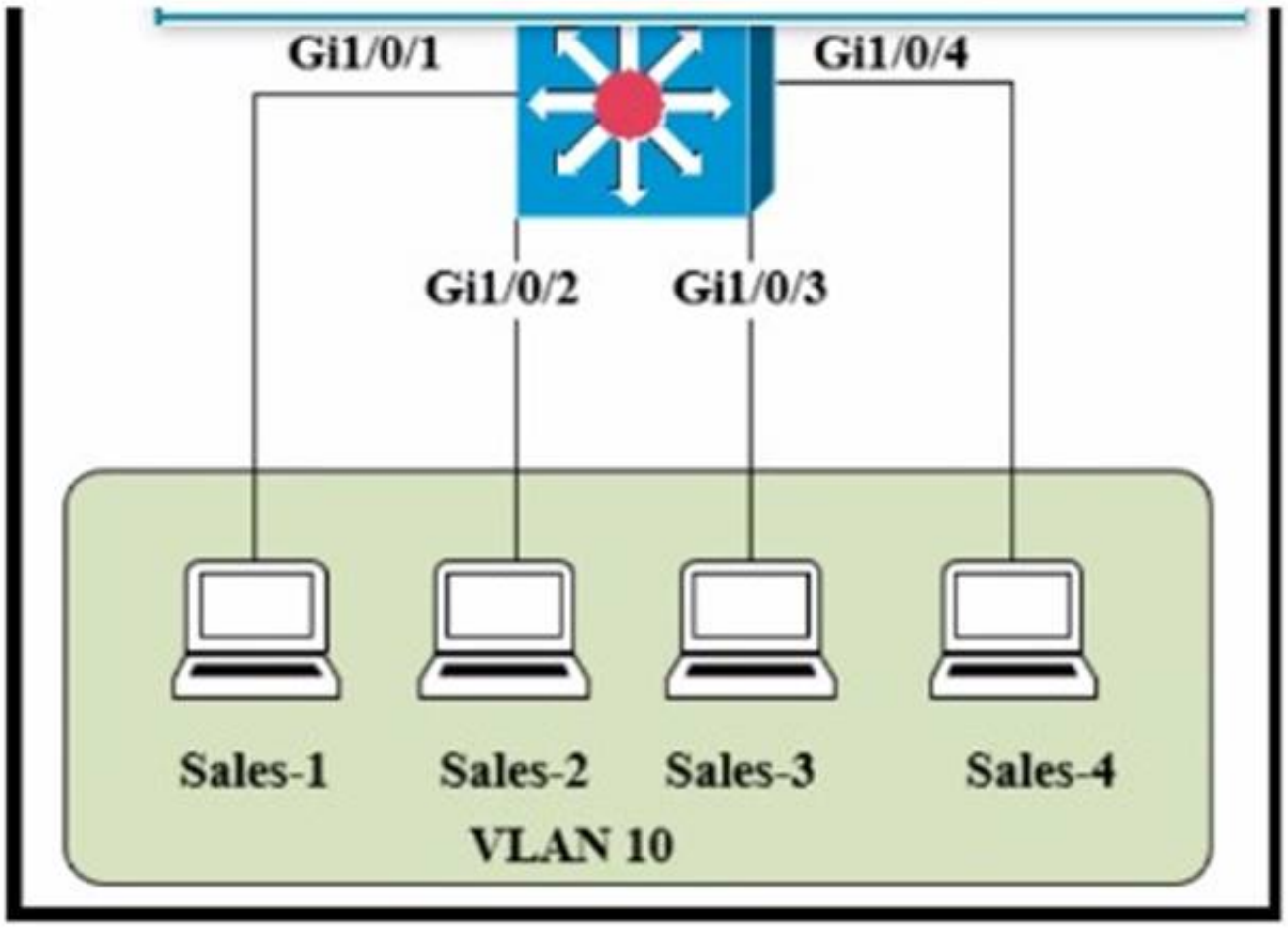


An engineer deploys a topology in which R1 obtains its IP configuration from DHCP. If the switch and DHCP server configurations are complete and correct. Which two sets of
commands must be configured on R1 and R2 to complete the task? (Choose two)

A. R1(config)# interface fa0/0R1(config-if)# ip helper-address 198.51.100.100
B. R2(config)# interface gi0/0R2(config-if)# ip helper-address 198.51.100.100
C. R1(config)# interface fa0/0 R1(config-if)# ip address dhcp R1(config-if)# no shutdown
D. R2(config)# interface gi0/0 R2(config-if)# ip address dhcp
E. R1(config)# interface fa0/0R1(config-if)# ip helper-address 192.0.2.2

Answer: BC

NEW QUESTION 334
- (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#
```

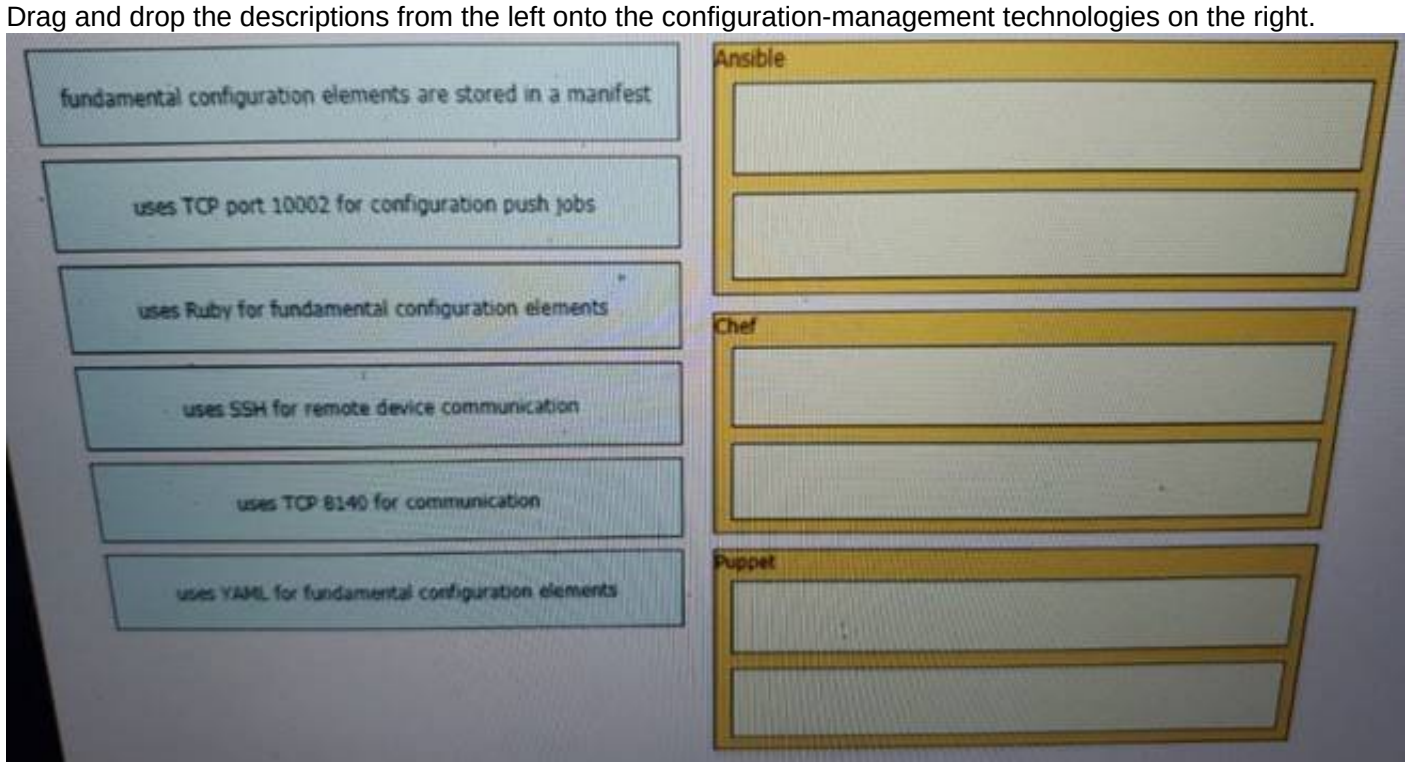
What does the switch do as it receives the frame from Sales-4?

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 335
DRAG DROP - (Topic 2)
Drag and drop the descriptions from the left onto the configuration-management technologies on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Ansible:– uses SSH for remote device communication– uses YAML for fundamental configuration elements
Chef:– uses TCP port 10002 for configuration push jobs– uses Ruby for fundamental configuration elements
Puppet:– fundamental configuration elements are stored in a manifest– uses TCP 8140 for communication
The focus of Ansible is to be streamlined and fast, and to require no node agent installation.Thus, Ansible performs all functions over SSH. Ansible is built on Python, in contrast to the Ruby foundation of Puppet and Chef.TCP port 10002 is the command port. It may be configured in the Chef Push Jobs configuration file .This port allows Chef Push Jobs clients to communicate with the Chef Push Jobs server.Puppet is an open-source configuration management solution, which is built with Ruby and offers custom Domain Specific Language (DSL) and Embedded Ruby (ERB) templates to create custom Puppet language files, offering a declarative-paradigm programming approach.A Puppet piece of code is called a manifest, and is a file with .pp extension.

NEW QUESTION 339
- (Topic 1)
When using Rapid PVST+, which command guarantees the switch is always the root bridge for VLAN 200?

A. spanning -tree vlan 200 priority 614440
B. spanning -tree vlan 200 priority 38572422
C. spanning -tree vlan 200 priority 0
D. spanning -tree vlan 200 root primary

Answer: C

NEW QUESTION 341
- (Topic 1)
Which type of information resides on a DHCP server?

A. a list of the available IP addresses in a pool
B. a list of public IP addresses and their corresponding names
C. usernames and passwords for the end users in a domain
D. a list of statically assigned MAC addresses

Answer: A

NEW QUESTION 344
- (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 345
- (Topic 1)
Which switch technology establishes a network connection immediately when it is plugged in?

A. PortFast
B. BPDU guard
C. UplinkFast
D. BackboneFast

Answer: A

Explanation:
PortFast is useful to connect hosts and switches to a switch. Access layer switches are more frequently “plugged in” and “plugged out” than distribution or core layer switches. Also, this feature’s target is just to minimize STP convergence time.

NEW QUESTION 348
- (Topic 1)
What is a role of wireless controllers in an enterprise network?

A. centralize the management of access points in an enterprise network
B. support standalone or controller-based architectures
C. serve as the first line of defense in an enterprise network
D. provide secure user logins to devices on the network.

Answer: A

NEW QUESTION 353
- (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 356
- (Topic 1)
Two switches are connected and using Cisco Dynamic Trunking Protocol SW1 is set to Dynamic Desirable
What is the result of this configuration?

A. The link is in a down state.
B. The link is in an error disables state
C. The link is becomes an access port.
D. The link becomes a trunk port.

Answer: D

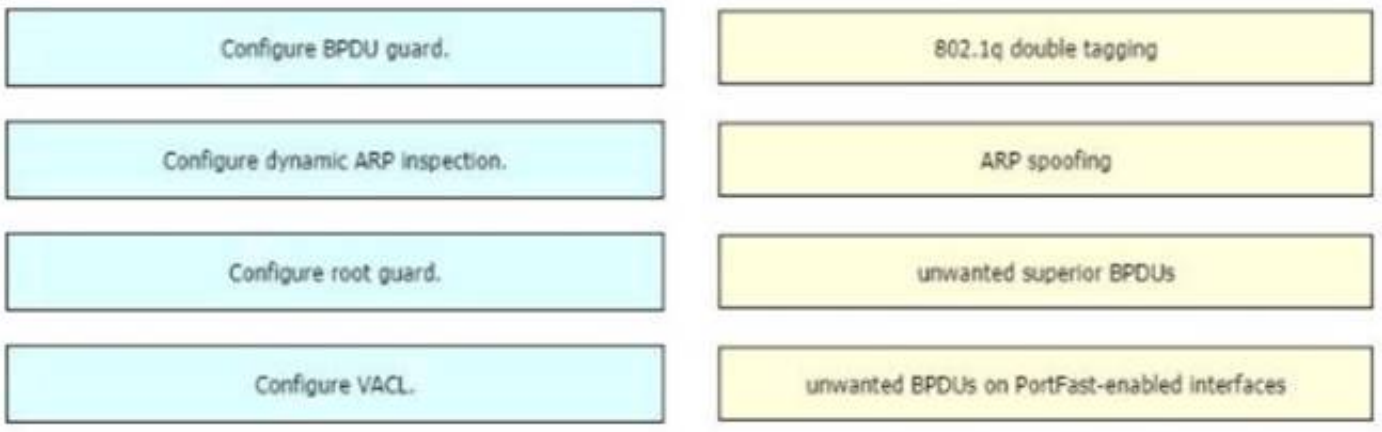
NEW QUESTION 361
- (Topic 1)
Which command automatically generates an IPv6 address from a specified IPv6 prefix and MAC address of an interface?

A. ipv6 address dhcp
B. ipv6 address 2001:DB8:5:112::/64 eui-64
C. ipv6 address autoconfig
D. ipv6 address 2001:DB8:5:112::2/64 link-local

Answer: C

Explanation:
The “ipv6 address autoconfig” command causes the device to perform IPv6 stateless address autoconfiguration to discover prefixes on the link and then to add the EUI-64 based addresses to theinterface.Addresses are configured depending on the prefixes received in Router Advertisement (RA)messages.The device will listen for RA messages which are transmitted periodically from the router (DHCPServer).This RA message allows a host to create a global IPv6 address from:+ Its interface identifier (EUI- 64 address)+ Link Prefix (obtained via RA)Note: Global address is the combination of Link Prefix and EUI-64 address

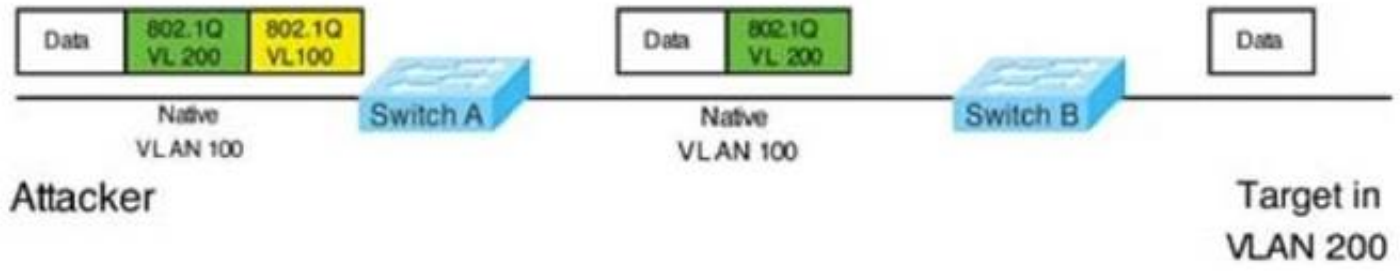
NEW QUESTION 364
DRAG DROP - (Topic 1)
Drag and drop the threat-mitigation techniques from the left onto the types of threat or attack they mitigate on the right.



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 369
- (Topic 1)
What are network endpoints?

A. act as routers to connect a user to the service prowler network
B. a threat to the network if they are compromised
C. support inter-VLAN connectivity
D. enforce policies for campus-wide traffic going to the internet

Answer: B

NEW QUESTION 372
- (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 377
- (Topic 1)
How do TCP and UDP differ in the way they provide reliability for delivery of packets?

A. TCP is a connectionless protocol that does not provide reliable delivery of data, UDP is a connection-oriented protocol that uses sequencing to provide reliable delivery.
B. TCP does not guarantee delivery or error checking to ensure that there is no corruption of data UDP provides message acknowledgement and retransmits data if lost.
C. TCP provides flow control to avoid overwhelming a receiver by sending too many packets at once, UDP sends packets to the receiver in a continuous stream without checking for sequencing
D. TCP uses windowing to deliver packets reliably; UDP provides reliable message transfer between hosts by establishing a three-way handshake

Answer: C

NEW QUESTION 380
- (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 383
- (Topic 1)
Refer to the exhibit.

```
Atlanta#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Atlanta(config)#aaa new-model
Atlanta(config)#aaa authentication login default local
Atlanta(config)#line vty 0 4
Atlanta(config-line)#login authentication default
Atlanta(config-line)#exit
Atlanta(config)#username ciscoadmin password adminadmin123
Atlanta(config)#username ciscoadmin privilege 15
Atlanta(config)#enable password cisco123
Atlanta(config)#enable secret testing1234
Atlanta(config)#end
```

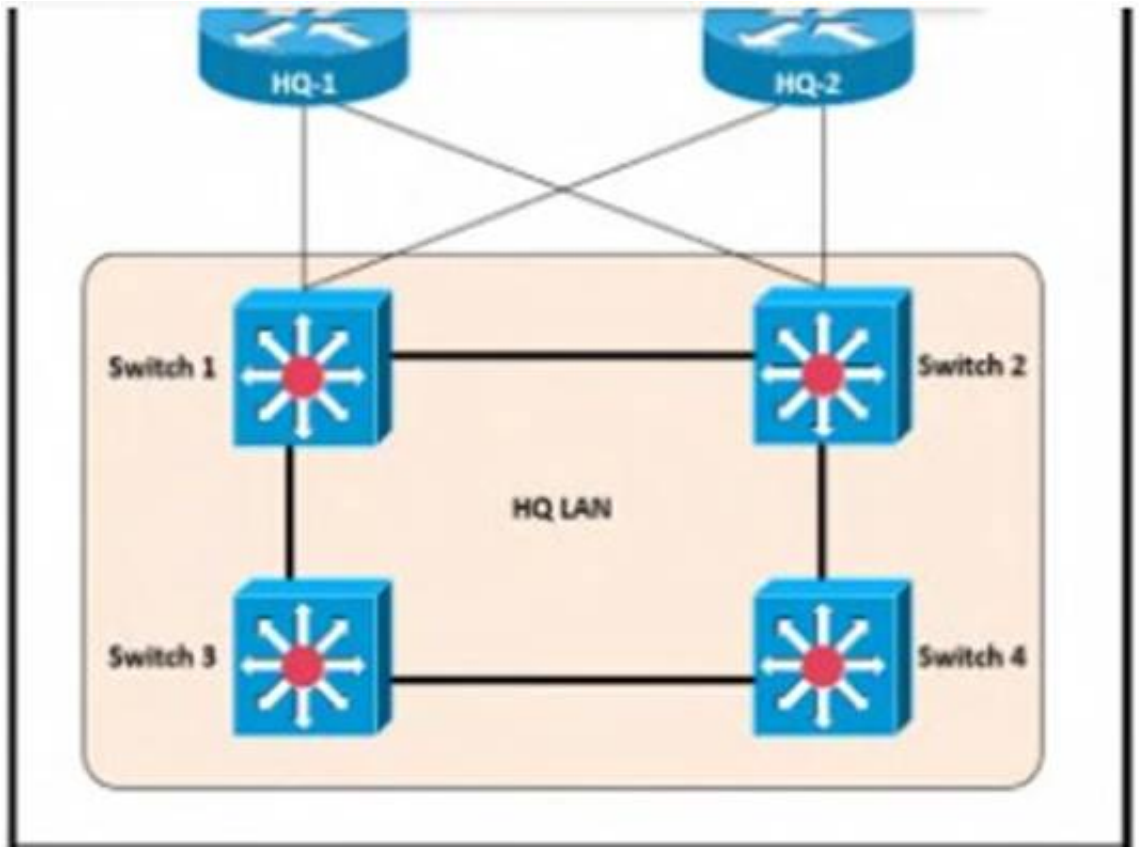
Which password must an engineer use to enter the enable mode?

A. adminadmin123
B. default
C. testing 1234
D. cisco123

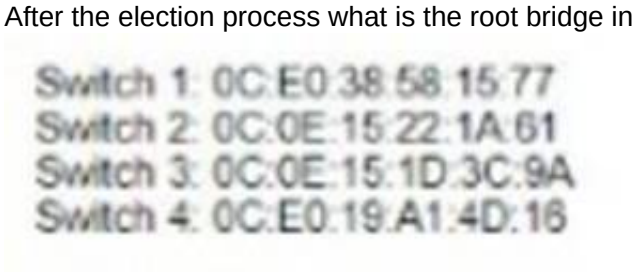
Answer: C

Explanation:
If neither the enable password command nor the enable secret command is configured, and if there is a line password configured for the console, the console line password serves as the enable password for all VTY sessions -> The “enable secret” will be used first if available, then “enable password” and line password.

NEW QUESTION 385
- (Topic 1)
Refer to the exhibit.



After the election process what is the root bridge in the HQ LAN?



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

Answer: C

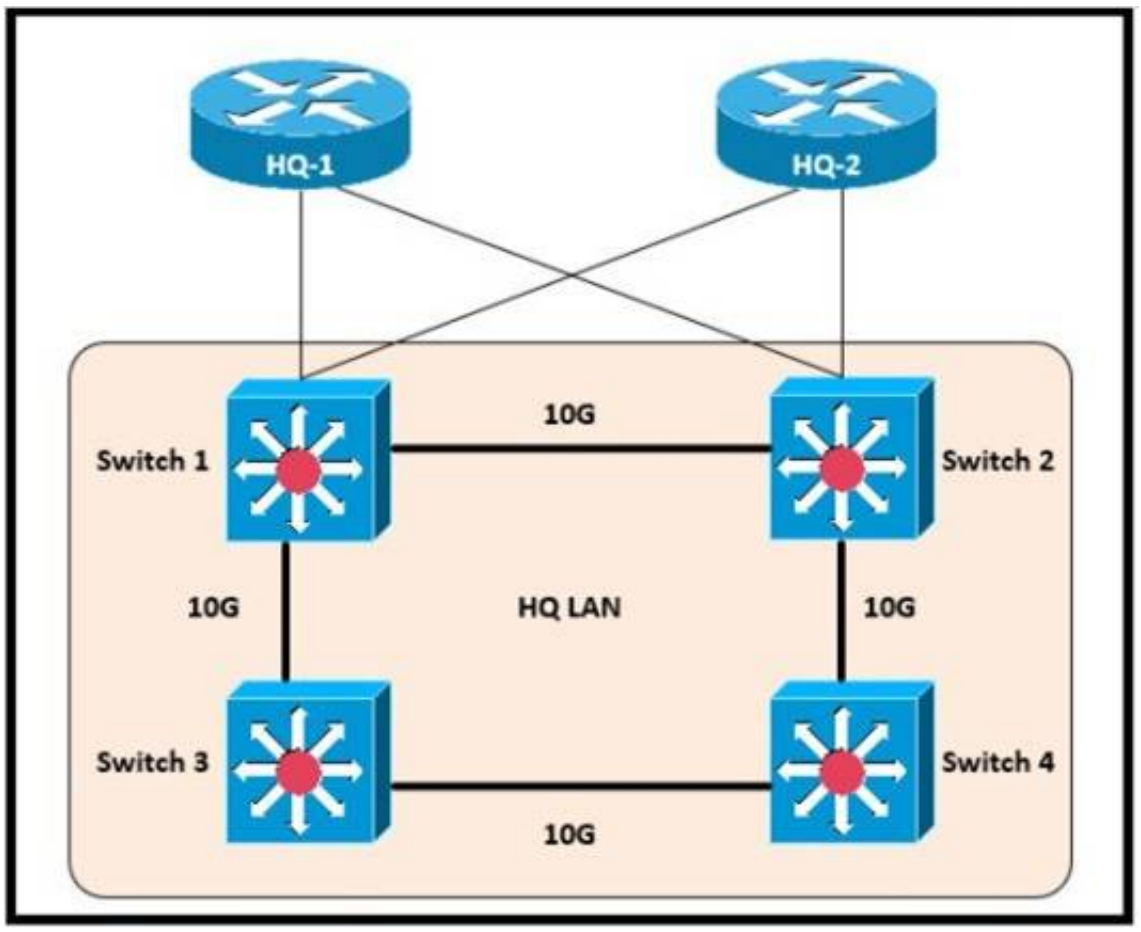
Explanation:
The root bridge is determined by the lowest bridge ID, which consists of the priority value and the MAC address. Because the priority values of all of the switches are not avalable, the MAC address is used to determine the root bridge. Because S3 has the lowest MAC address, S3 becomes the root bridge.

NEW QUESTION 388
- (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 392
- (Topic 1)
Refer to the exhibit.



Which switch becomes the root of the spanning tree for VLAN 110?

```
Switch 1
VLAN 110 - 32778 0018.184e.3c00
Switch 2
VLAN 110 - 24586 001a.e3ff.a680
Switch 3
VLAN 110 - 28682 0022.55cf.cc00
Switch 4
VLAN 110 - 64000 0e38.7363.657f
```

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

Answer: B

NEW QUESTION 394
- (Topic 1)
What uses HTTP messages to transfer data to applications residing on different hosts?

A. OpenFlow
B. OpenStack
C. OpFlex
D. REST

Answer: D

NEW QUESTION 397
- (Topic 1)
What occurs when overlapping Wi-Fi channels are implemented?

A. The wireless network becomes vulnerable to unauthorized access.
B. Wireless devices are unable to distinguish between different SSIDs
C. Users experience poor wireless network performance.
D. Network communications are open to eavesdropping.

Answer: C

NEW QUESTION 402
- (Topic 1)
Which virtual MAC address is used by VRRP group 1?

A. 0050.0c05.ad81
B. 0007.c061.bc01
C. 0000.5E00.0101

D. 0500.3976.6401

Answer: C

Explanation:
The virtual router MAC address associated with a virtual router is an IEEE 802 MAC Address in the following format:
00-00-5E-00-01-{VRID} (in hex in internet standard bit-order)

NEW QUESTION 404
- (Topic 1)
What are two functions of a Layer 2 switch? (Choose two)

A. acts as a central point for association and authentication servers
B. selects the best route between networks on a WAN
C. moves packets within a VLAN
D. moves packets between different VLANs
E. makes forwarding decisions based on the MAC address of a packet

Answer: AE

NEW QUESTION 406
- (Topic 1)
How does HSRP provide first hop redundancy?

A. It load-balances traffic by assigning the same metric value to more than one route to the same destination m the IP routing table.
B. It load-balances Layer 2 traffic along the path by flooding traffic out all interfaces configured with the same VLAN.
C. It forwards multiple packets to the same destination over different routed links n the data path
D. It uses a shared virtual MAC and a virtual IP address to a group of routers that serve as the default gateway for hosts on a LAN

Answer: D

Explanation:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp_fhrp/configuration/xe-16/fhp-xe-16-book/fhp-hsrp-mgo.html

NEW QUESTION 407
- (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 408
- (Topic 1)
What is a characteristic of cloud-based network topology?

A. wireless connections provide the sole access method to services
B. onsite network services are provided with physical Layer 2 and Layer 3 components
C. services are provided by a public, private, or hybrid deployment
D. physical workstations are configured to share resources

Answer: A

NEW QUESTION 412
- (Topic 1)
Which CRUD operation corresponds to the HTTP GET method?

A. read
B. update
C. create
D. delete

Answer: A

Explanation:
GET: This method retrieves the information identified by the request URI. In the context of the RESTful web services, this method is used to retrieve resources. This is the method used for read operations (the R in CRUD).
https://hub.packtpub.com/crud-operations-rest/

NEW QUESTION 413
- (Topic 1)
How are the switches in a spine-and-leaf topology interconnected?

A. Each leaf switch is connected to one of the spine switches.
B. Each leaf switch is connected to two spine switches, making a loop.
C. Each leaf switch is connected to each spine switch.
D. Each leaf switch is connected to a central leaf switch, then uplinked to a core spine switch.

Answer: B

NEW QUESTION 418
- (Topic 1)
which purpose does a northbound API serve in a controller-based networking architecture?

A. communicates between the controller and the physical network hardware
B. reports device errors to a controller
C. generates statistics for network hardware and traffic
D. facilitates communication between the controller and the applications

Answer: D

NEW QUESTION 423
- (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 427
- (Topic 1)
What must be considered when using 802:11 ta?

A. It is compatible with 802 lib- and 802 11-compliant wireless devices
B. It is used in place of 802 11b/g when many nonoverlapping channels are required
C. It is susceptible to interference from 2 4 GHz devices such as microwave ovens.
D. It is chosen over 802 11b/g when a lower-cost solution is necessary

Answer: A

NEW QUESTION 428
- (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

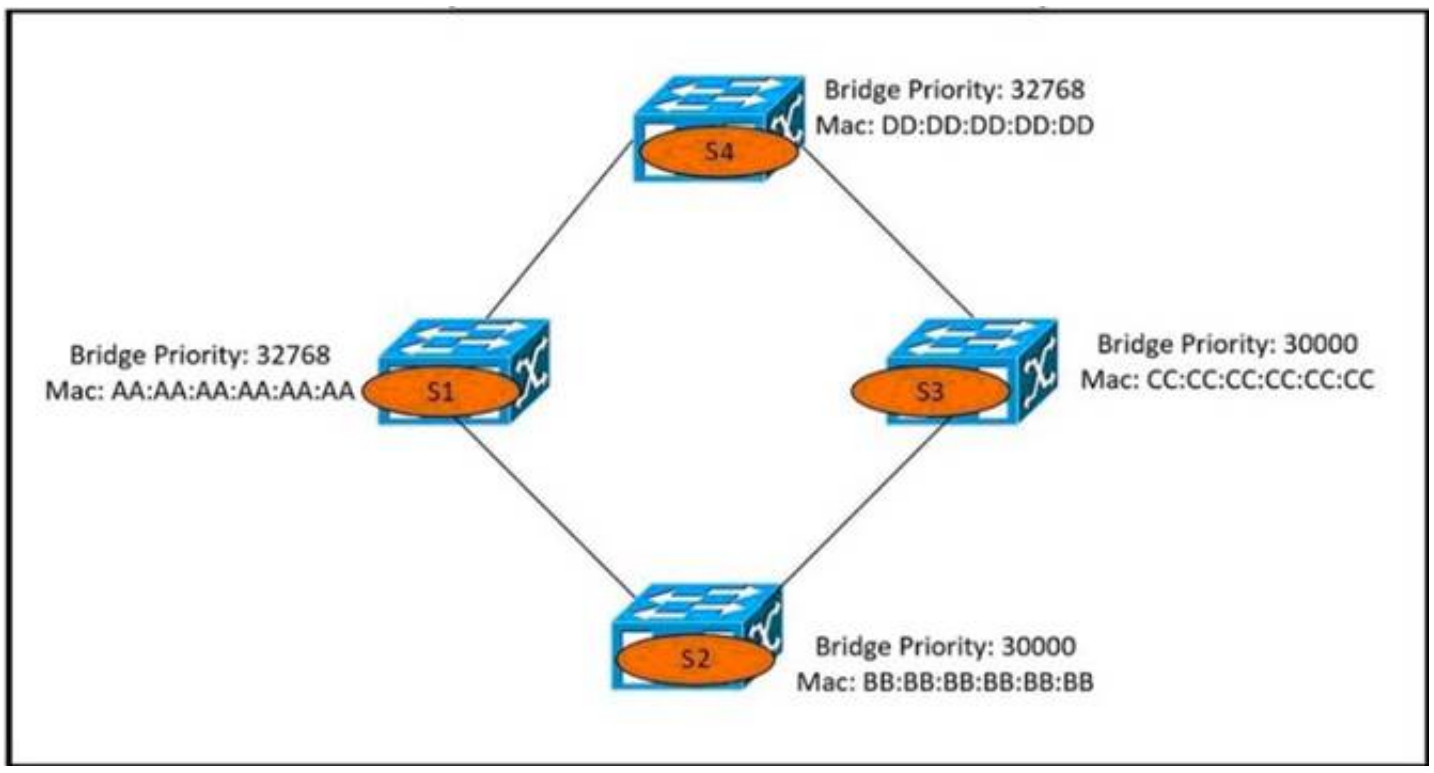
Answer: B

NEW QUESTION 433
- (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 437
- (Topic 1)
Refer to the exhibit.



Which switch becomes the root bridge?

A. S1
B. S2
C. S3
D. S4

Answer: B

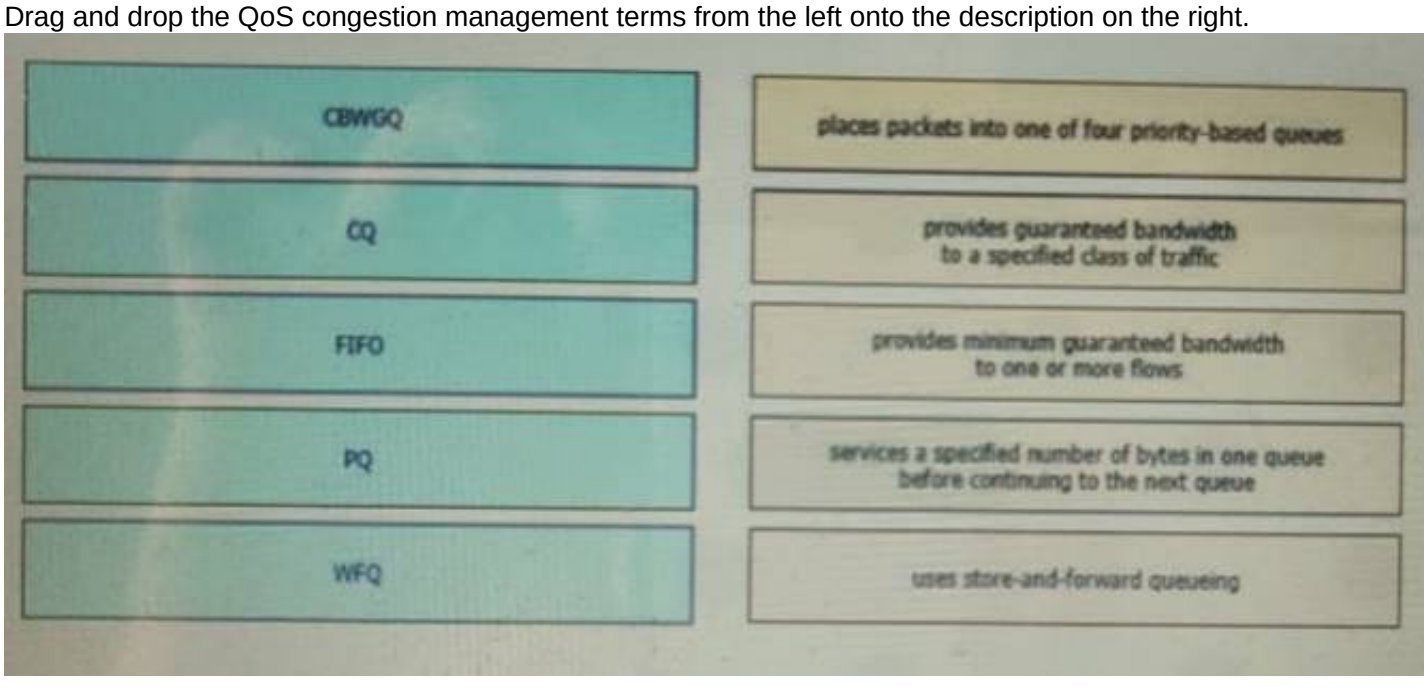
NEW QUESTION 440
- (Topic 1)
Which two encoding methods are supported by REST APIs? (Choose two)

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_co nfig/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.

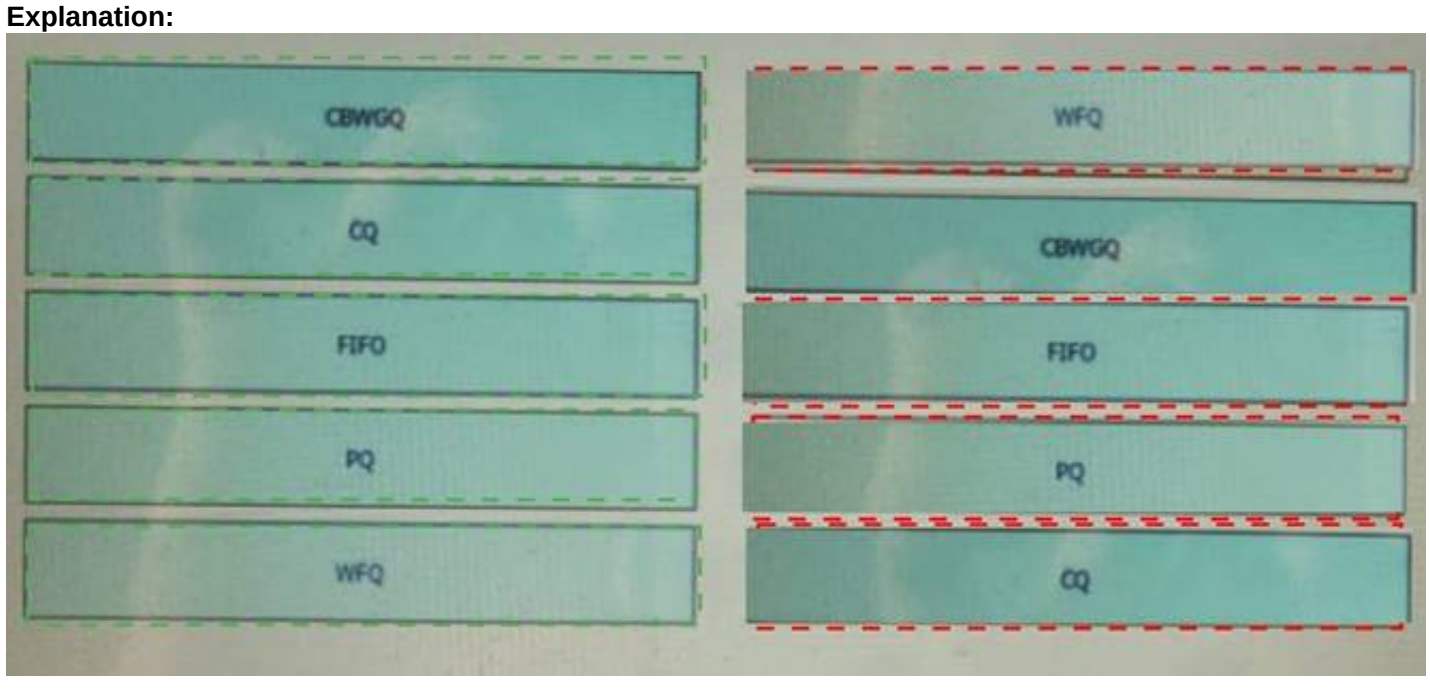
NEW QUESTION 444
DRAG DROP - (Topic 1)
Drag and drop the QoS congestion management terms from the left onto the description on the right.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 447
- (Topic 1)
What are two southbound APIs? (Choose two)

A. OpenFlow
B. NETCONF
C. Thrift
D. CORBA
E. DSC

Answer: AB

Explanation:
OpenFlow is a well-known southbound API. OpenFlow defines the way the SDN Controller should interact with the forwarding plane to make adjustments to the network, so it can better adapt to changing business requirements.
The Network Configuration Protocol (NetConf) uses Extensible Markup Language (XML) to install, manipulate and delete configuration to network devices.

NEW QUESTION 450
- (Topic 1)
How does a switch process a frame received on Fa0/1 with the destination MAC address of 0e38.7363.657b when the table is missing the address?

A. lt drops the frame immediately.
B. It forwards the frame back out of interface Fa0/1.
C. It floods the frame to all interfaces except Fa0/1.
D. It holds the frame until the MAC address timer expires and then drops the frame.

Answer: C

NEW QUESTION 451
- (Topic 1)
What is the function of a hub-and-spoke WAN topology?

A. allows access restrictions to be implemented between subscriber sites.
B. provides direct connections between subscribers
C. supports Layer 2 VPNs
D. supports application optimization

Answer: B

NEW QUESTION 454
- (Topic 1)
Which action does the router take as it forwards a packet through the network?

A. 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
B. The router encapsulates the original packet and then includes a tag that identifies the source router MAC address and transmits it transparently to the destination
C. The router encapsulates the source and destination IP addresses with the sending router IP address as the source and the neighbor IP address as the destination
D. The router replaces the source and destination labels with the sending router interface label as a source and the next hop router label as a destination

Answer: A

NEW QUESTION 458
- (Topic 1)
An engineer needs to add an old switch back into a network. To prevent the switch from corrupting the VLAN database which action must be taken?

A. Add the switch in the VTP domain with a lower revision number
B. Add the switch with DTP set to dynamic desirable
C. Add the switch in the VTP domain with a higher revision number
D. Add the switch with DTP set to desirable

Answer: A

NEW QUESTION 460
- (Topic 1)
Which security program element involves installing badge readers on data-center doors to allow workers to enter and exit based on their job roles?

A. role-based access control
B. biometrics
C. multifactor authentication
D. physical access control

Answer: D

NEW QUESTION 462
- (Topic 1)
What is the function of a controller in controller-based networking?

A. It serves as the centralized management point of an SDN architecture.
B. It centralizes the data plane for the network.
C. It is the card on a core router that maintains all routing decisions for a campus.
D. It is a pair of core routers that maintain all routing decisions for a campus

Answer: A

NEW QUESTION 463
- (Topic 1)
Refer to exhibit.

```
Router(config)#interface GigabitEthernet 1/0/1
Router(config-if)#ip address 192.168.16.143 255.255.255.240
Bad mask /28 for address 192.168.16.143
```

Which statement explains the configuration error message that is received?

A. It is a broadcast IP address
B. The router does not support /28 mask.
C. It belongs to a private IP address range.
D. IT is a network IP address.

Answer: A

NEW QUESTION 466
- (Topic 1)
Refer to the exhibit.

```
switch(config)#interface gigabitEthernet 1/11
switch(config-if)#switchport mode access
switch(config-if)#spanning-tree portfast
switch(config-if)#spanning-tree bpduguard enable
```

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 467
- (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 471
- (Topic 1)
Which device controls the forwarding of authentication requests for users when connecting to the network using a lightweight access point?

A. TACACS server
B. wireless access point
C. RADIUS server
D. wireless LAN controller

Answer: B

NEW QUESTION 474
- (Topic 1)
Which MAC address is recognized as a VRRP virtual address?

A. 0000.5E00.010a
B. 0005.3711.0975
C. 0000.0C07.AC99
D. 0007.C070/AB01

Answer: A

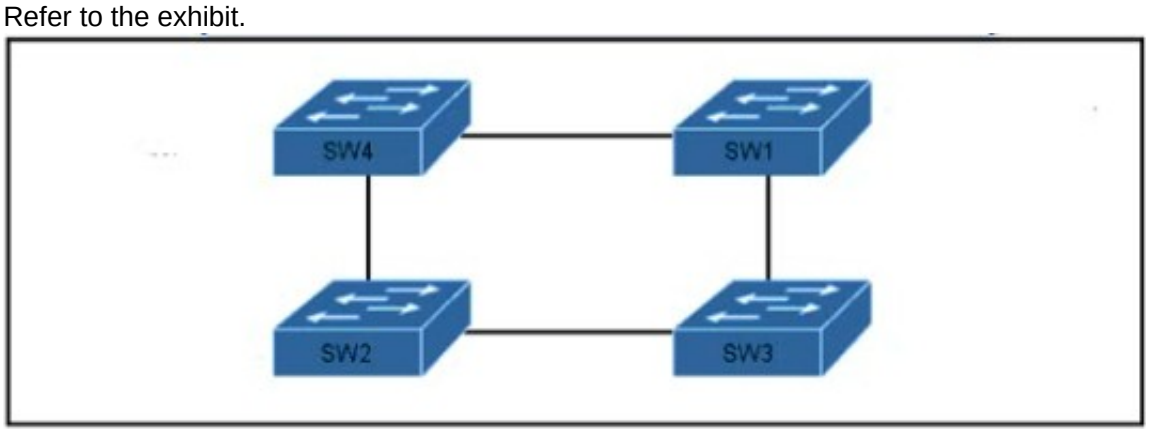
Explanation:
With VRRP, the virtual router's MAC address is 0000.5E00.01xx , in which xx is the VRRP group.

NEW QUESTION 477
- (Topic 1)
What does a switch use to build its MAC address table?

A. VTP
B. DTP
C. egress traffic
D. ingress traffic

Answer: D

NEW QUESTION 479
- (Topic 1)
Refer to the exhibit.



Which switch in this configuration will be elected as the root bridge?

SW1: 0C:E0:38:00:94:04
SW2: 0C:0E:15:22:05:97
SW3: 0C:0E:15:1A:3C:9D
SW4: 0C:E0:18:A1:B3:19

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

Answer: C

NEW QUESTION 482
- (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 487
- (Topic 1)
Several new coverage cells are required to improve the Wi-Fi network of an organization. Which two standard designs are recommended? (choose two.)

A. 5GHz provides increased network capacity with up to 23 nonoveriapping channels.
B. For maximum throughput, the WLC is configured to dynamically set adjacent access points to the same channel.
C. 5GHz channel selection requires an autonomous access point.
D. Adjacent cells with overlapping channels use a repeater access point.
E. Cells that overlap one another are configured to use nonoveriapping channels.

Answer: BE

NEW QUESTION 488
- (Topic 1)
What are two characteristics of the distribution layer in a three-tier network architecture? (Choose two.)

A. serves as the network aggregation point
B. provides a boundary between Layer 2 and Layer 3 communications
C. designed to meet continuous, redundant uptime requirements
D. is the backbone for the network topology
E. physical connection point for a LAN printer

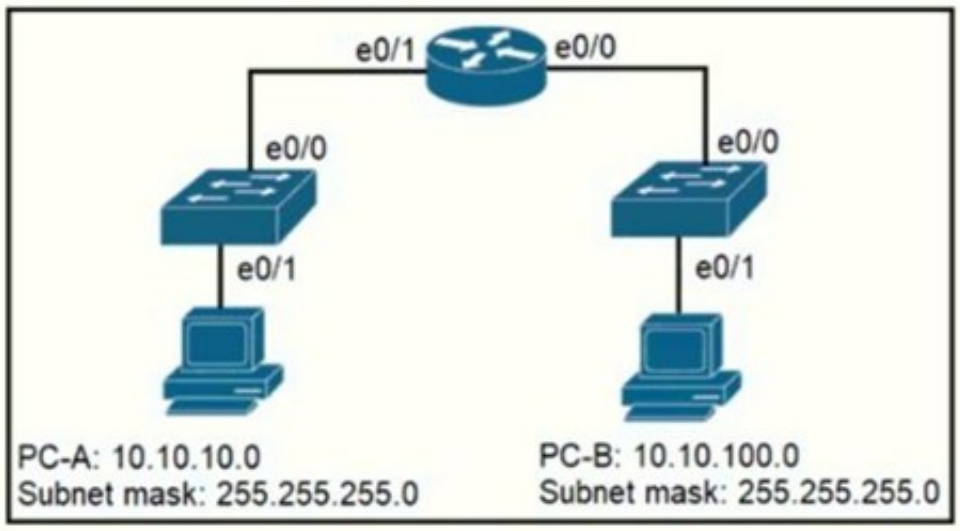
Answer: BC

NEW QUESTION 491
- (Topic 1)
Which two events occur automatically when a device is added to Cisco DNA Center?
(Choose two.)

A. The device Is assigned to the Global site.
B. The device Is placed into the Unmanaged state.
C. The device is placed into the Provisioned state.
D. The device is placed into the Managed state.
E. The device is assigned to the Local site.

Answer: AB

NEW QUESTION 492
- (Topic 1)
Refer to the exhibit.



When PC-A sends traffic to PC-B, which network component is in charge of receiving the packet from PC-A verifying the IP addresses, and forwarding the packet to PC-B?

A. Layer 2 switch
B. Router
C. Load balancer
D. firewall

Answer: B

Explanation:
PC--A and PC-B are not in the same network. Switches send traffic in layer 2 and within the same VLA while routers route traffic to different subnet and at layer 3.

NEW QUESTION 496
- (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 499
- (Topic 1)
How do TCP and UDP differ in the way that they establish a connection between two endpoints?

A. TCP uses synchronization packets, and UDP uses acknowledgment packets.
B. UDP uses SYN, SYN ACK and FIN bits in the frame header while TCP uses SYN, SYN ACK and ACK bits
C. UDP provides reliable message transfer and TCP is a connectionless protocol
D. TCP uses the three-way handshake and UDP does not guarantee message delivery

Answer: D

NEW QUESTION 501
- (Topic 1)
What is a DHCP client?

A. a workstation that requests a domain name associated with its IP address
B. a host that is configured to request an IP address automatically
C. a server that dynamically assigns IP addresses to hosts.
D. a router that statically assigns IP addresses to hosts.

Answer: B

NEW QUESTION 503
- (Topic 1)
What is the maximum bandwidth of a T1 point-to-point connection?

A. 1.544 Mbps
B. 2.048 Mbps
C. 34.368 Mbps
D. 43.7 Mbps

Answer: A

Explanation:
https://www.bsimplify.com/what-is-point-to-point-t1/#:~:text=A%20Point%20to%20Point%20T1,data%20speeds%20(1.54Mbps).
Point to Point T1
A Point to Point T1 service is a private data connection securely connecting two or more locations with T1 data speeds (1.54Mbps).

NEW QUESTION 505
- (Topic 1)
How is the native VLAN secured in a network?

A. separate from other VLANs within the administrative domain
B. give it a value in the private VLAN range
C. assign it as VLAN 1
D. configure it as a different VLAN ID on each end of the link

Answer: A

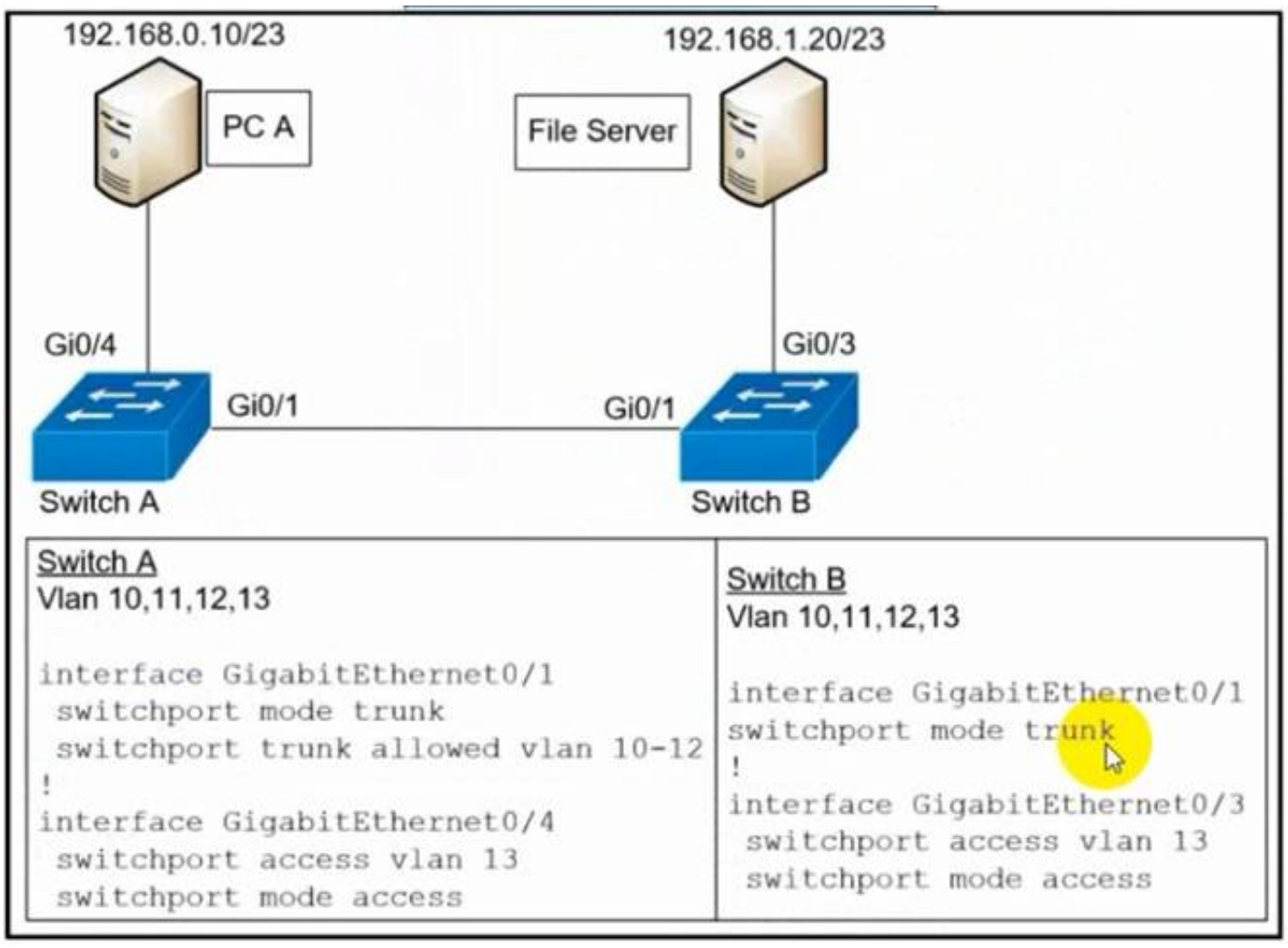
NEW QUESTION 506
- (Topic 1)
Which command enables a router to become a DHCP client?

A. ip address dhcp
B. ip helper-address
C. ip dhcp pool
D. ip dhcp client

Answer: A

Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipaddr_dhcp/configuration/12-4/dhcp-12-4-book/config-dhcp-client.html
If we want to get an IP address from the DHCP server on a Cisco device, we can use the command “ip address dhcp”.
Note: The command “ip helper-address” enables a router to become a DHCP Relay Agent.

NEW QUESTION 511
- (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 514
- (Topic 1)
Which two components are needed to create an Ansible script that configures a VLAN on a switch? (Choose two.)

A. cookbook
B. task
C. playbook
D. model
E. recipe

Answer: CD

NEW QUESTION 515
- (Topic 1)
Which attribute does a router use to select the best path when two or more different routes to the same destination exist from two different routing protocols.

A. dual algorithm
B. metric
C. administrative distance
D. hop count

Answer: C

Explanation:
Administrative distance is the feature used by routers to select the best path when there are two or more different routes to the same destination from different routing protocols. Administrative distance defines the reliability of a routing protocol.

NEW QUESTION 516
- (Topic 1)
What software defined architecture plane assists network devices with making packet- forwarding decisions by providing Layer 2 reachability and Layer 3 routing information?

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

Answer: B

NEW QUESTION 517
- (Topic 1)
Which output displays a JSON data representation?

A.
```
{
  "response": {
  "taskId": {};
  "url": "string"
  };
  "version": "string"
}
```

B.
```
{
  "response"- {
  "taskId"- {},
  "url"- "string"
  },
  "version"- "string"
}
```

C.
```
{
  "response": {
  "taskId": {},
  "url": "string"
  },
  "version": "string"
}
```

D.
```
{
  "response". {
  "taskId". {};
  "url". "string"
  };
  "version". "string"
}
```

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

Answer: C

Explanation:
JSON data is written as name/value pairs.A name/value pair consists of a field name (in double quotes), followed by a colon, followed by a value:“name”:”Mark”JSON can use arrays. Array values must be of type string, number, object, array, boolean or null.For example:{“name”:”John”,“age”:30,“cars”:[“Ford”, “BMW”, “Fiat”]}JSON can have empty object like “taskId”:{}

NEW QUESTION 518
- (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 519
- (Topic 1)
What is the purpose of traffic shaping?

A. to mitigate delays over slow links
B. to provide fair queuing for buffered flows
C. to limit the bandwidth that a flow can use to
D. be a marking mechanism that identifies different flows

Answer: B

Explanation:
Traffic shaping retains excess packets in a queue and then schedules the excess for later transmission over increments of time.

NEW QUESTION 524
- (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 527
- (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 530

- (Topic 1)
What event has occurred if a router sends a notice level message to a syslog server?

A. A TCP connection has been torn down
B. An ICMP connection has been built
C. An interface line has changed status
D. A certificate has expired.

Answer: C

NEW QUESTION 531
- (Topic 1)
Refer to the exhibit.

```
cisco_ospf_vrf {"R1 default":
    ensure => 'present',
    auto_cost => '100',
}
```

Which type of configuration is represented in the output?

A. Ansible
B. JSON
C. Chef
D. Puppet

Answer: D

NEW QUESTION 533
- (Topic 1)
Which function does the range of private IPv4 addresses perform?

A. allows multiple companies to each use the same addresses without conflicts
B. provides a direct connection for hosts from outside of the enterprise network
C. ensures that NAT is not required to reach the internet with private range addressing
D. enables secure communications to the internet for all external hosts

Answer: A

NEW QUESTION 534
- (Topic 1)
Which HTTP status code is returned after a successful REST API request?

A. 200
B. 301
C. 404
D. 500

Answer: A

NEW QUESTION 537
- (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

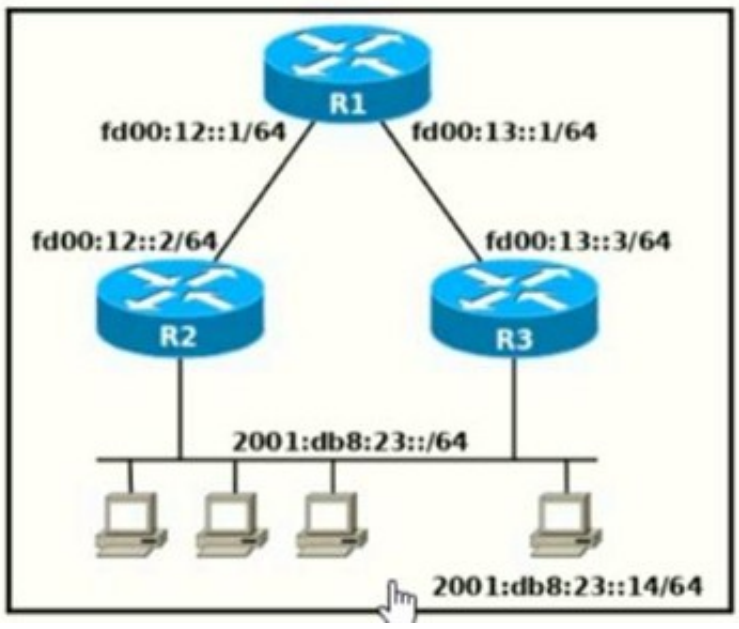
Explanation:
Data plane—Handles all the data traffic. The basic functionality of a Cisco NX-OS device is to forward packets from one interface to another. The packets that are not meant for the switch itself are called the transit packets. These packets are handled by the data plane

NEW QUESTION 542
- (Topic 1)
What does physical access control regulate?

A. access to spec fie networks based on business function
B. access to servers to prevent malicious activity
C. access :o computer networks and file systems
D. access to networking equipment and facilities

Answer: D

NEW QUESTION 547
- (Topic 1)
Refer to the exhibit.



Which two commands, when configured on router R1, fulfill these requirements? (Choose two.)
Packets towards the entire network 2001:db8:2::/64 must be forwarded through router R2. Packets toward host 2001:db8:23::14 preferably must be forwarded through R3.

A. Ipv6 route 2001:db8:23::/128 fd00:12::2
B. Ipv6 route 2001:db8:23::14/128 fd00:13::3
C. Ipv6 route 2001:db8:23::14/64 fd00:12::2
D. Ipv6 route 2001:db8:23::/64 fd00:12::2
E. Ipv6 route 2001:db8:23::14/64 fd00:12::2 200

Answer: DE

NEW QUESTION 549
- (Topic 1)
When DHCP is configured on a router, which command must be entered so the default gateway is automatically distributed?

A. default-router
B. default-gateway
C. ip helper-address
D. dns-server

Answer: A

NEW QUESTION 550
- (Topic 1)
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. control layer and the application layer
D. application layer and the management layer

Answer: A

NEW QUESTION 553
- (Topic 1)
Refer to the exhibit.

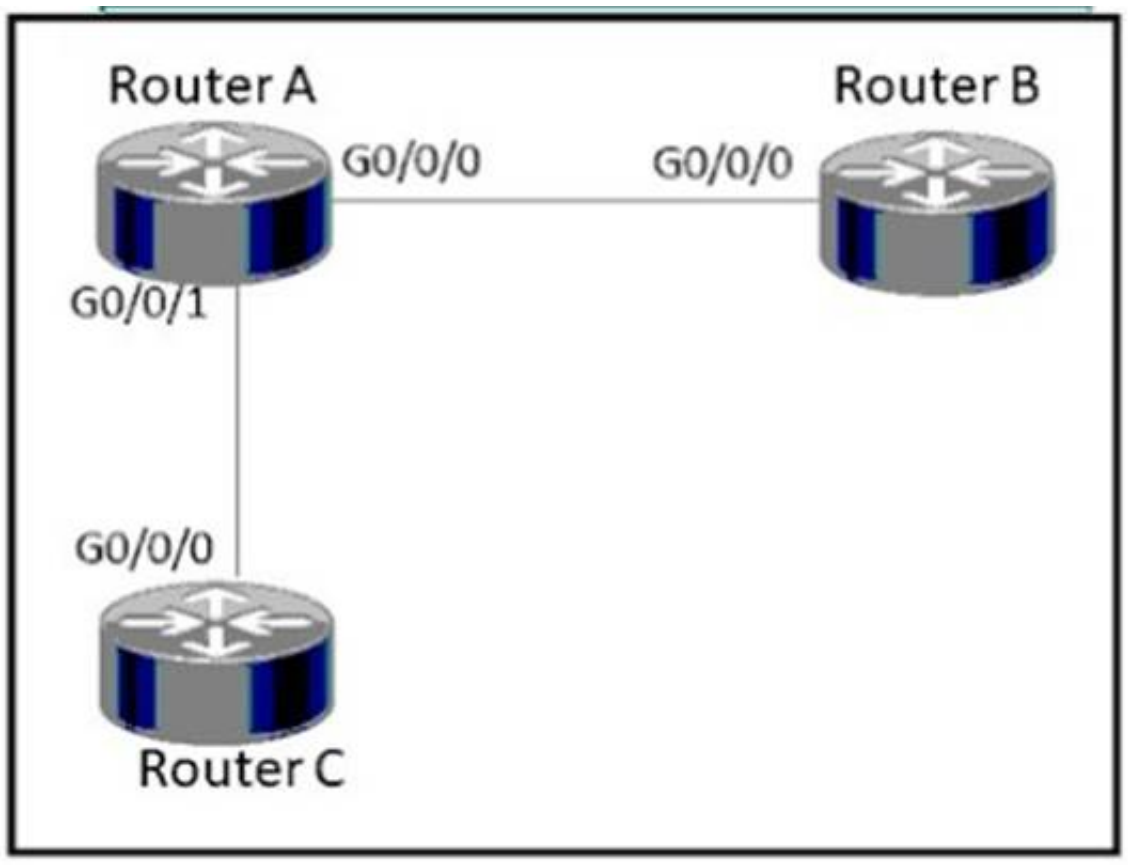
```
R1#show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route
Gateway of last resort is 192.168.30.10 to network 0.0.0.0
     192.168.30.0/29 is subnetted, 2 subnets
C       192.168.30.0 is directly connected, FastEthernet0/0
C       192.168.30.8 is directly connected, Serial0/0.1
     192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
O IA    192.168.10.32/28 [110/193] via 192.168.30.10, 00:18:49, Serial0/0.1
O IA    192.168.10.0/27 [110/192] via 192.168.30.10, 00:18:49, Serial0/0.1
     192.168.20.0/30 is subnetted, 1 subnets
O IA    192.168.20.0 [110/128] via 192.168.30.10, 00:18:49, Serial0/0.1
     192.168.50.0/32 is subnetted, 1 subnets
C       192.168.50.1 is directly connected, Loopback0
O*IA 0.0.0.0/0 [110/84] via 192.168.30.10, 00:10:36, Serial0/0.1
```

What is the metric of the route to the 192.168.10.33/28 subnet?

A. 84
B. 110
C. 128
D. 192
E. 193

Answer: E

NEW QUESTION 556
- (Topic 1)
Refer to the exhibit.



How must router A be configured so that it only sends Cisco Discovery Protocol Information to router C?

#config t
Router A (config)#**cdp run**
Router A (config)#**interface gi0/0/0**
Router A (config-if)#**no cdp enable**

#config t
Router A (config)#**cdp run**
Router A (config)#**interface gi0/0/0**
Router A (config-if)#**cdp enable**

#config t
Router A (config)#**cdp run**
Router A (config)#**interface gi0/0/1**
Router A (config-if)#**cdp enable**

#config t
Router A (config)#**no cdp run**
Router A (config)#**interface gi0/0/1**
Router A (config-if)#**cdp enable**

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

Answer: D

NEW QUESTION 561
- (Topic 1)
Which mode allows access points to be managed by Cisco Wireless LAN Controllers?

A. autonomous
B. lightweight
C. bridge
D. mobility express

Answer: B

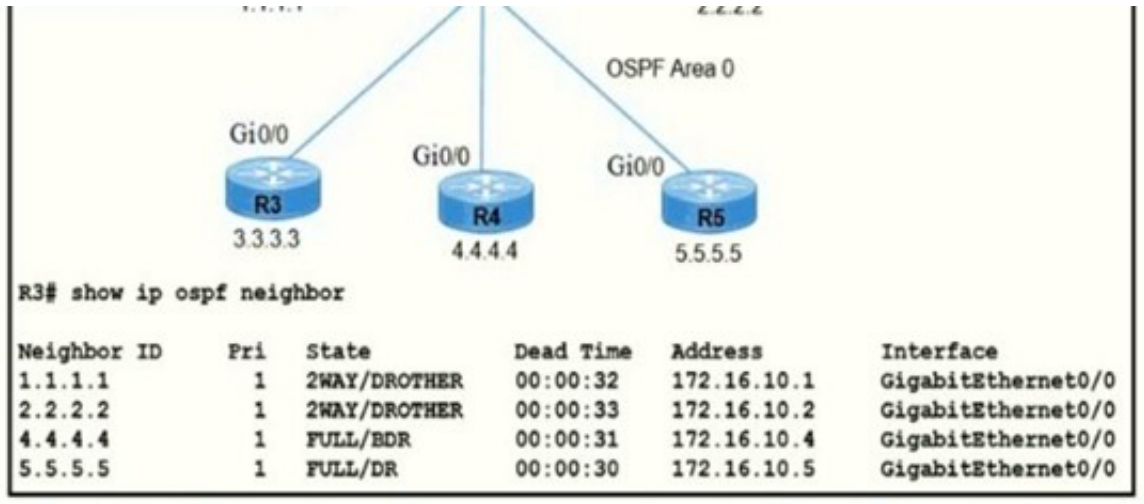
Explanation:
https://www.cisco.com/c/en/us/support/docs/wireless/aironet-1200- series/70278-lap-faq.html
A Lightweight Access Point (LAP) is an AP that is designed to be connected to a wireless LAN (WLAN) controller (WLC). APs are “lightweight,” which means that they cannot act independently of a wireless LAN controller (WLC). The WLC manages the AP configurations and firmware. The APs are “zero touch” deployed, and individual configuration of APs is not necessary.

NEW QUESTION 564
- (Topic 1)
How does QoS optimize voice traffic?

A. reducing bandwidth usage
B. by reducing packet loss
C. by differentiating voice and video traffic
D. by increasing jitter

Answer: C

NEW QUESTION 567
- (Topic 1)
Refer to the exhibit.



R5 is the current DR on the network, and R4 is the BDR. Their interfaces are flapping, so a network engineer wants the OSPF network to elect a different DR and BDR. Which set of configurations must the engineer implement?

A)

```
R4(config)#interface gi0/0
R4(config-if)#ip ospf priority 20

R5(config)#interface gi0/0
R5(config-if)#ip ospf priority 10
```

B)

```
R2(config)#interface gi0/0
R2(config-if)#ip ospf priority 259

R3(config)#interface gi0/0
R3(config-if)#ip ospf priority 256
```

C)

```
R5(config)#interface gi0/0
R5(config-if)#ip ospf priority 120

R4(config)#interface gi0/0
R4(config-if)#ip ospf priority 110
```

D)

```
R3(config)#interface gi0/0
R3(config-if)#ip ospf priority 255

R2(config)#interface gi0/0
R2(config-if)#ip ospf priority 240
```

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

Answer: D

NEW QUESTION 569
- (Topic 1)
Which two outcomes are predictable behaviors for HSRP? (Choose two.)

A. The two routers synchronize configurations to provide consistent packet forwarding
B. The two routers negotiate one router as the active router and the other as the standby router
C. Each router has a different IP address, both routers act as the default gateway on the LAN, and traffic is load-balanced between them
D. The two routers share a virtual IP address that is used as the default gateway for devices on the LAN
E. The two routers share the same interface IP address and default gateway traffic is load- balanced between them

Answer: BD

NEW QUESTION 573
- (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 576

- (Topic 1)
What are two functions of an SDN controller? (Choose two)

A. Layer 2 forwarding
B. coordinating VTNs
C. tracking hosts
D. managing the topology
E. protecting against DDoS attacks

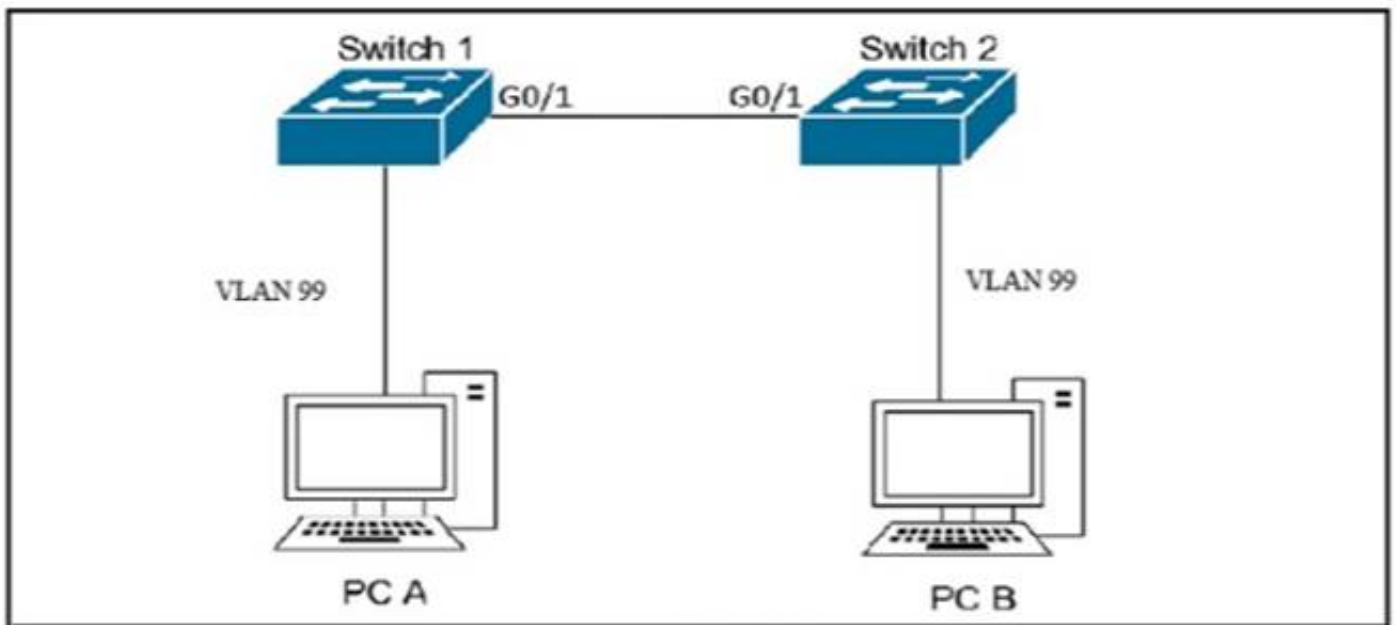
Answer: BD

NEW QUESTION 578
- (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 579
- (Topic 1)
Refer to the Exhibit.



Switch 1:
```
Name: Gi0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
[output omitted]
Trunking VLANs Enabled: 50-100
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
```

Switch 2:
```
Name: Gi0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 99 (VLAN0099)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
[output omitted]
Trunking VLANs Enabled: 50-100
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
```

After the switch configuration the ping test fails between PC A and PC B Based on the output for switch 1. which error must be corrected?

A. There is a native VLAN mismatch
B. Access mode is configured on the switch ports.
C. The PCs are m the incorrect VLAN
D. All VLANs are not enabled on the trunk

Answer: A

Explanation:
From the output we see the native VLAN of Switch1 on Gi0/1 interface is VLAN 1 while that of Switch2 is VLAN 99 so there would be a native VLAN mismatch.

NEW QUESTION 580
- (Topic 1)
Which type of address is the public IP address of a NAT device?

A. outside global
B. outsdwde local
C. inside global
D. insride local
E. outside public

F. inside public

Answer: C

Explanation:
NAT use four types of addresses:* Inside local address – The IP address assigned to a host on the inside network. The address is usually not an IP address assigned by the Internet Network Information Center (InterNIC) or service provider.This address is likely to be an RFC 1918 private address.* Inside global address – A legitimate IP address assigned by the InterNIC or service provider that represents one or more inside local IP addresses to the outside world.* Outside local address – The IP address of an outside host as it is known to the hosts on the inside network.* Outside global address – The IP address assigned to a host on the outside network. The owner of the host assigns
this address.

NEW QUESTION 583
- (Topic 1)
What facilitates a Telnet connection between devices by entering the device name?

A. SNMP
B. DNS lookup
C. syslog
D. NTP

Answer: B

NEW QUESTION 588
- (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

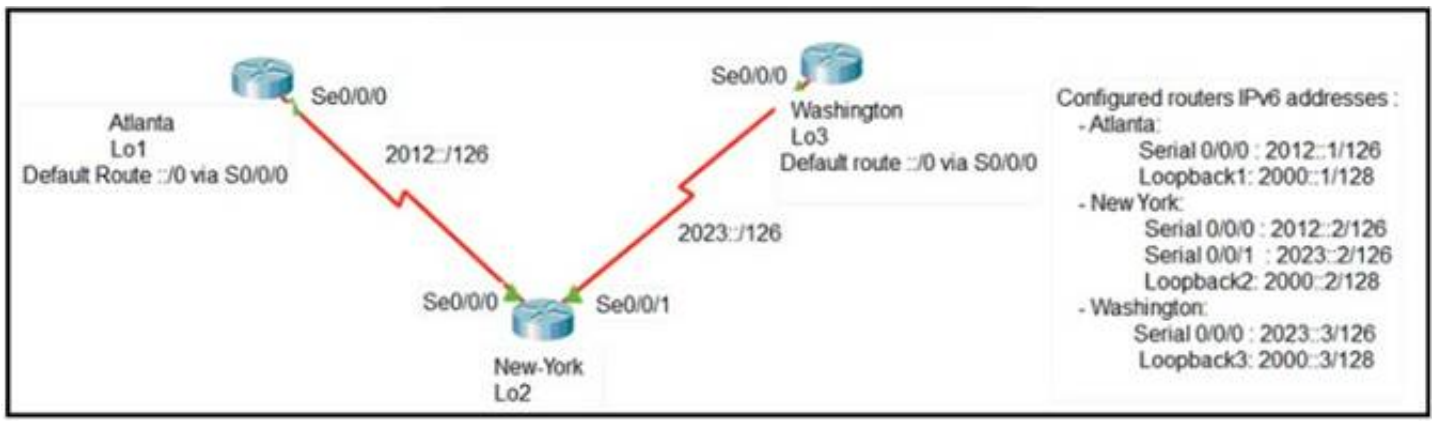
Answer: C

NEW QUESTION 590
- (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 594
- (Topic 1)
Refer to Exhibit.

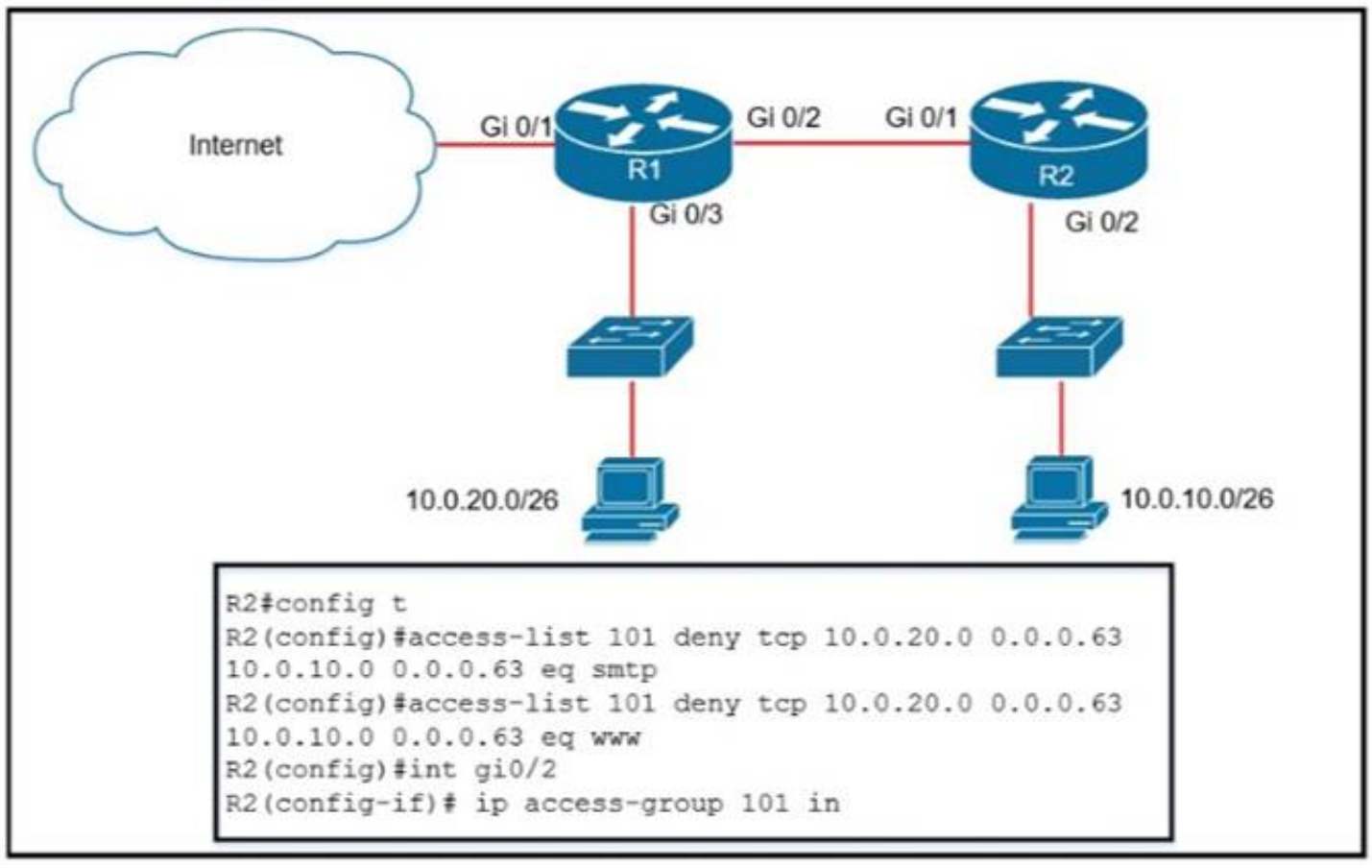


The loopback1 interface of the Atlanta router must reach the loopback3 interface of the Washington router. Which two static host routes must be configured on the NEW York router? (Choose two)

A. ipv6 route 2000::1/128 2012::1
B. ipv6 route 2000::3/128 2023::3
C. ipv6 route 2000::3/128 s0/0/0
D. ipv6 route 2000::1/128 2012::2
E. ipv6 route 2000::1/128 s0/0/1

Answer: AB

NEW QUESTION 596
- (Topic 1)
Refer to the exhibit.



An extended ACL has been configured and applied to router R2 The configuration failed to work as intended Which two changes stop outbound traffic on TCP ports 25 and 80 to 10.0.20 0 26 from the 10.0.10 0/26 subnet while still allowing all other traffic? (Choose two)

A. Add a "permit ip any any" statement to the begining of ACL 101 for allowed traffic.
B. Add a "permit ip any any" statement at the end of ACL 101 for allowed traffic
C. The source and destination IPs must be swapped in ACL 101
D. The ACL must be configured the Gi0/2 interface inbound on R1
E. The ACL must be moved to the Gi0/1 interface outbound on R2

Answer: BC

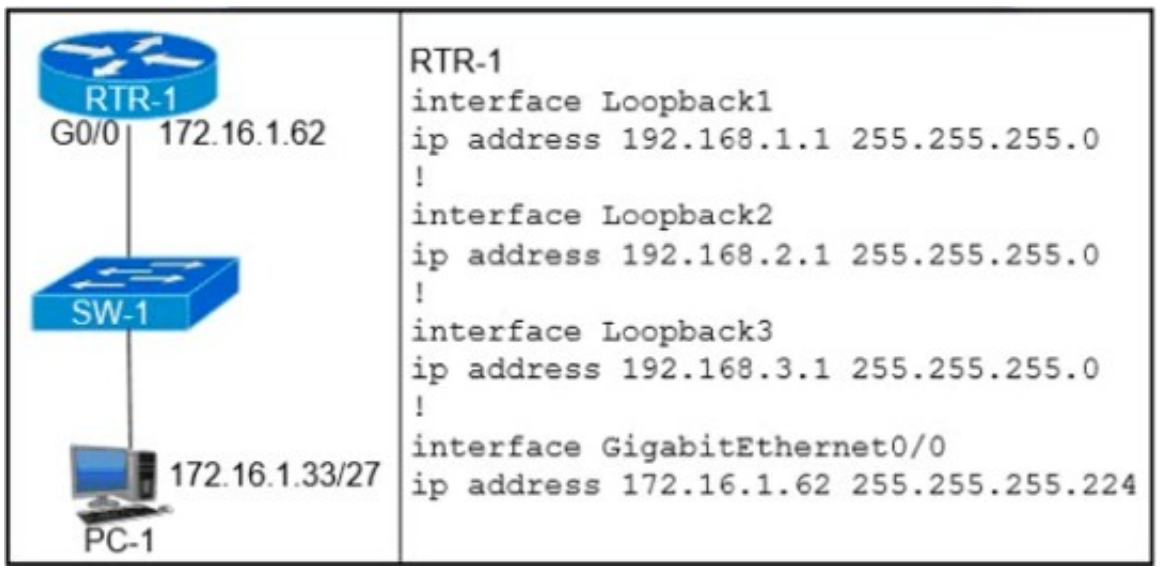
NEW QUESTION 601
- (Topic 1)
If a notice-level messaging is sent to a syslog server, which event has occurred?

A. A network device has restarted
B. An ARP inspection has failed
C. A routing instance has flapped
D. A debug operation is running

Answer: C

Explanation:
Usually no action is required when a route flaps so it generates the notification syslog level message (level 5).

NEW QUESTION 603
- (Topic 1)
Refer to the exhibit.



Which configuration on RTR-1 denies SSH access from PC-1 to any RTR-1 interface and allows all other traffic?

A. access-list 100 deny tcp host 172.16.1.33 any eq 22 access-list 100 permit ip any any interface GigabitEthernet0/0 ip access-group 100 in
B. access-list 100 deny tcp host 172.16.1.33 any eq 22 access-list 100 permit ip any any line vty 0 15 ip access-group 100 in
C. access-list 100 deny tcp host 172.16.1.33 any eq 23 access-list 100 permit ip any any interface GigabitEthernet0/0 ip access-group 100 in
D. access-list 100 deny tcp host 172.16.1.33 any eq 23 access-list 100 permit ip any any line vty 0 15 ip access-group 100 in

Answer: B

NEW QUESTION 604
- (Topic 1)
Which command entered on a switch configured with Rapid PVST* listens and learns for a specific time period?

A. switch(config)#spanning-tree vlan 1 max-age 6
B. switch(config)#spanning-tree vlan 1 hello-time 10
C. switch(config)#spanning-tree vlan 1 priority 4096
D. switch(config)#spanning-tree vlan 1 forward-time 20

Answer: D

Explanation:
Forward time : Determines how long each of the listening and learning states last before the port begins forwarding.
Switch(config)# [no] spanning-tree vlan vlan_ID forward-time forward_timeConfigures the forward time of a VLAN. The forward_time value can be from 4 to 30 seconds. https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/15-02SG/configuration/guide/config/spantree.html#56177

NEW QUESTION 605
- (Topic 1)
Which two functions are performed by the core layer in a three-tier architecture? (Choose two)

A. Provide uninterrupted forwarding service.
B. Police traffic that is sent to the edge of the network.
C. Provide direct connectivity for end user devices.
D. Ensure timely data transfer between layers.
E. Inspect packets for malicious activity.

Answer: AD

Explanation:
Cisco is very clear about the purpose of this layer. Its only role is to forward traffic, the fastest it can. Here you don’t apply any policy, as you must try to reduce the load of the core so it can focus on routing. https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Campus/campover.html#wp708 831

NEW QUESTION 608
- (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 611
- (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 612
- (Topic 1)
An organization has decided to start using cloud-provided services. Which cloud service allows the organization to install its own operating system on a virtual machine?

A. platform-as-a-service
B. software-as-a-service
C. network-as-a-service
D. infrastructure-as-a-service

Answer: B

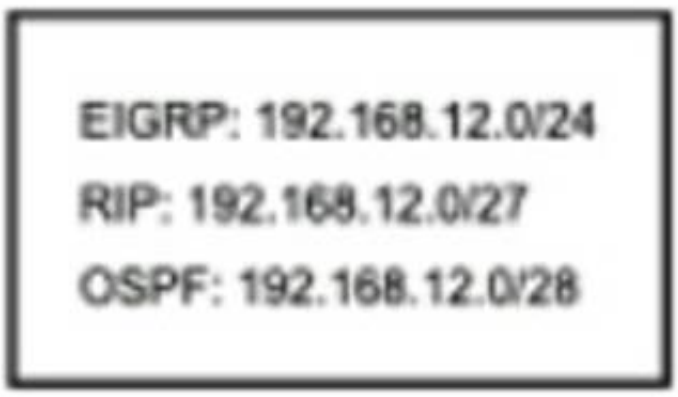
Explanation:
Below are the 3 cloud supporting services cloud providers provide to customer:
+ SaaS (Software as a Service): SaaS uses the web to deliver applications that are managed by a thirdparty vendor and whose interface is accessed on the clients’ side. Most SaaS applications can be run directly from a web browser without any downloads or installations required, although some require plugins.
+ PaaS (Platform as a Service): are used for applications, and other development, while providing cloud components to software. What developers gain with PaaS is a framework they can build upon to develop or customize applications. PaaS makes the development, testing, and deployment of applications quick, simple, and cost-effective. With this technology, enterprise operations, or a thirdparty provider, can manage OSes, virtualization, servers, storage, networking, and the PaaS software itself. Developers, however, manage the applications.
+ IaaS (Infrastructure as a Service): self-service models for accessing, monitoring, and managing remote datacenter infrastructures, such as compute (virtualized or bare metal), storage, networking, and networking services (e.g. firewalls). Instead of having to purchase hardware outright, users can purchase IaaS based on consumption, similar to electricity or other utility billing.
In general, IaaS provides hardware so that an organization can install their own operating system.

NEW QUESTION 616
- (Topic 1)
Which technology allows for multiple operating systems to be run on a single host computer?

A. virtual routing and forwarding
B. network port ID visualization
C. virtual device contexts
D. server visualization

Answer: D

NEW QUESTION 620
- (Topic 1)
Refer to the exhibit.



How does the router manage traffic to 192.168.12.16?

A. It selects the RIP route because it has the longest prefix inclusive of the destination address.
B. It chooses the OSPF route because it has the longest prefix inclusive of the destination address.
C. it load-balances traffic between all three routes
D. It chooses the EIGRP route because it has the lowest administrative distance

Answer: A

NEW QUESTION 622
- (Topic 1)
A network administrator must enable DHCP services between two sites. What must be configured for the router to pass DHCPDISCOVER messages on to the server?

A. a DHCP Relay Agent
B. DHCP Binding
C. a DHCP Pool
D. DHCP Snooping

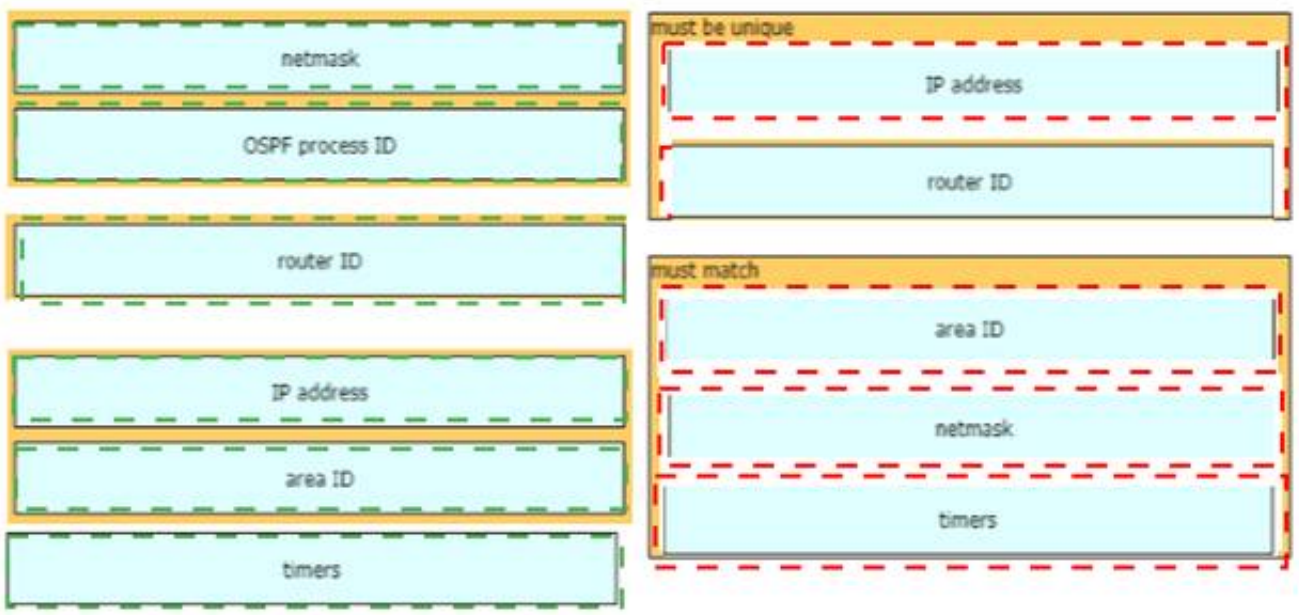
Answer: A

NEW QUESTION 625
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 628
- (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 632
- (Topic 1)
What is the role of a firewall in an enterprise network?

A. Forwards packets based on stateless packet inspection
B. Processes unauthorized packets and allows passage to less secure segments of the network
C. determines which packets are allowed to cross from unsecured to secured networks
D. explicitly denies all packets from entering an administrative domain

Answer: C

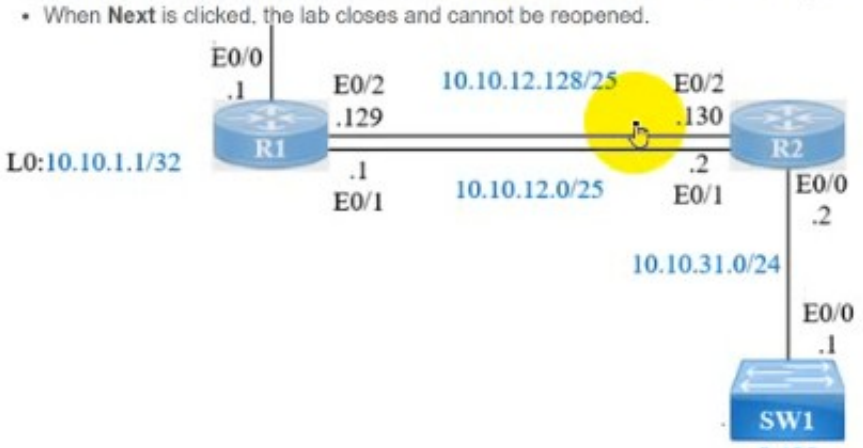
NEW QUESTION 635
SIMULATION - (Topic 5)

Guidelines Topology Tasks

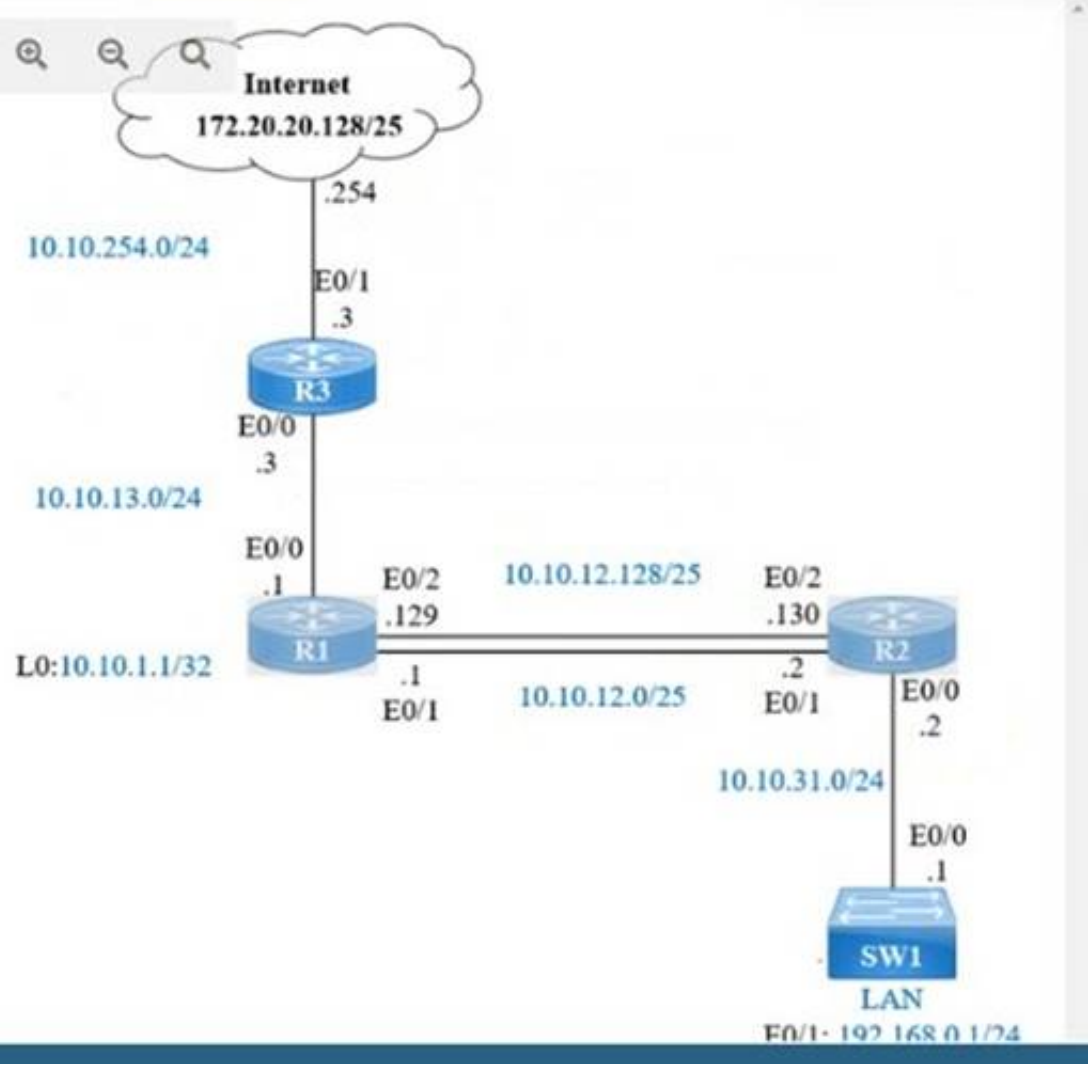
Guidelines

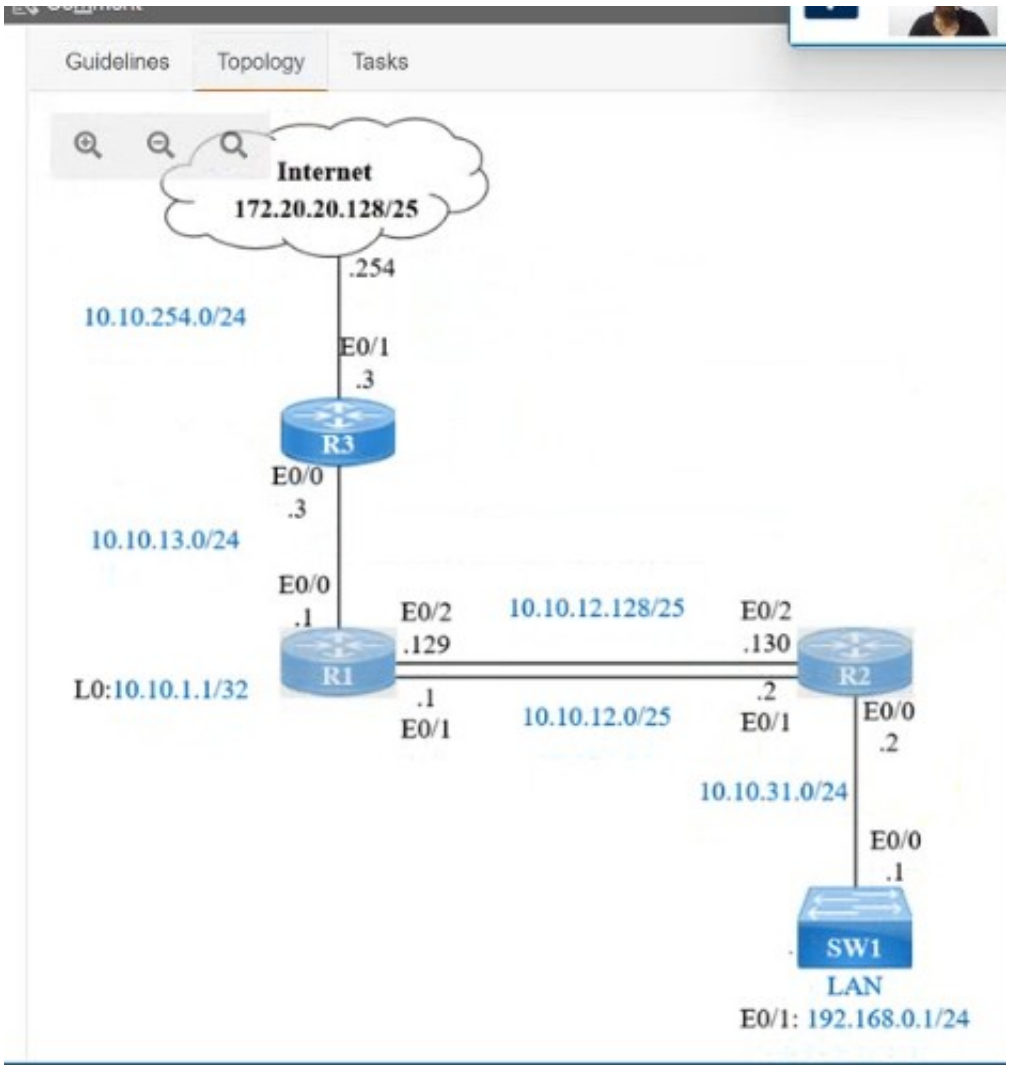
This is a lab item in which tasks will be performed on virtual devices.

- 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.



Guidelines Topology Tasks





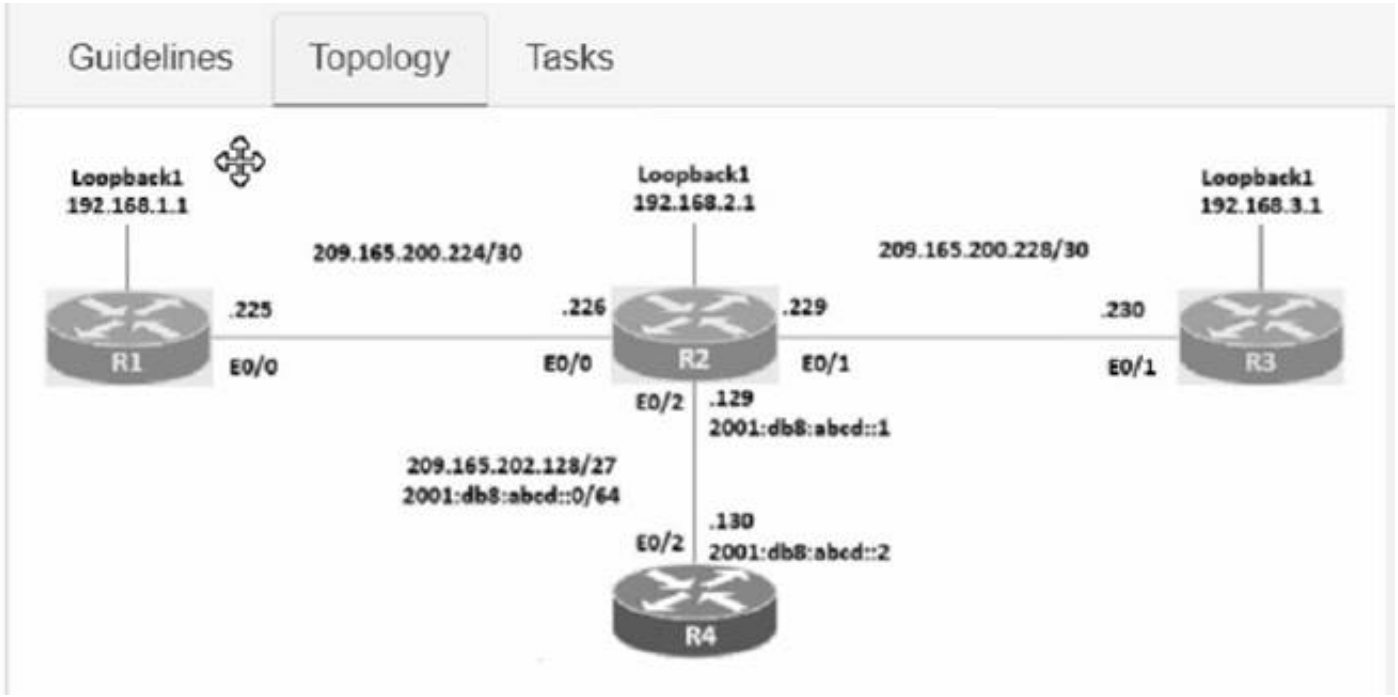
IP connectivity and OSPF are preconfigured on all devices where necessary. Do not make any changes to the IP addressing or OSPF. The company policy uses connected interfaces and next hops when configuring static routes except for load balancing or redundancy without floating static. Connectivity must 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.

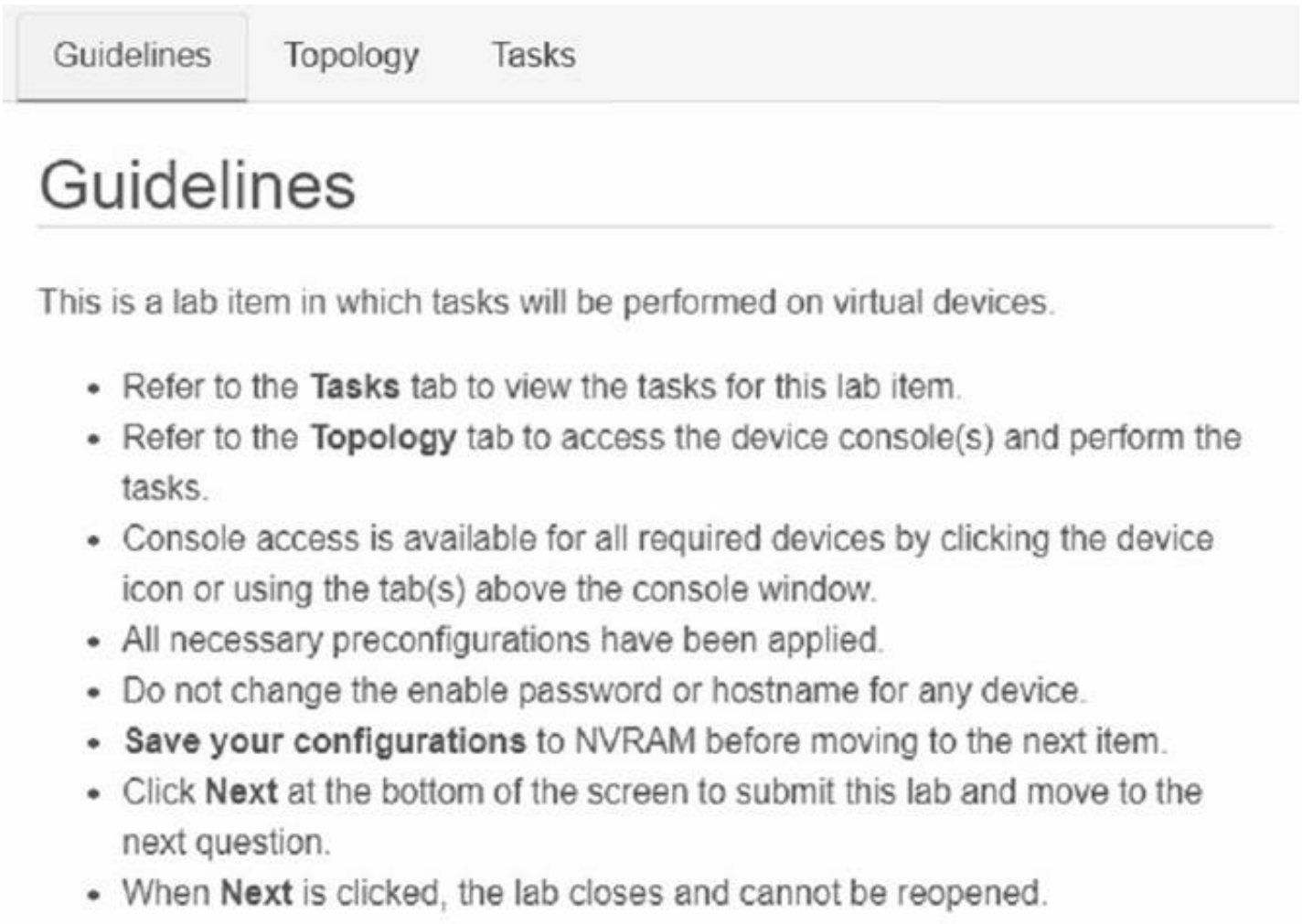
A. Mastered
B. Not Mastered

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 637
SIMULATION - (Topic 5)
Connectivity between four routers has been established. IP connectivity must be configured in the order presented to complete the implementation. No dynamic routing protocols are included.
* 1. Configure static routing using host routes to establish connectivity from router R3 to the router R1 Loopback address using the source IP of 209.165.200.230.
* 2. Configure an IPv4 default route on router R2 destined for router R4.
* 3. Configure an IPv6 default router on router R2 destined for router R4.



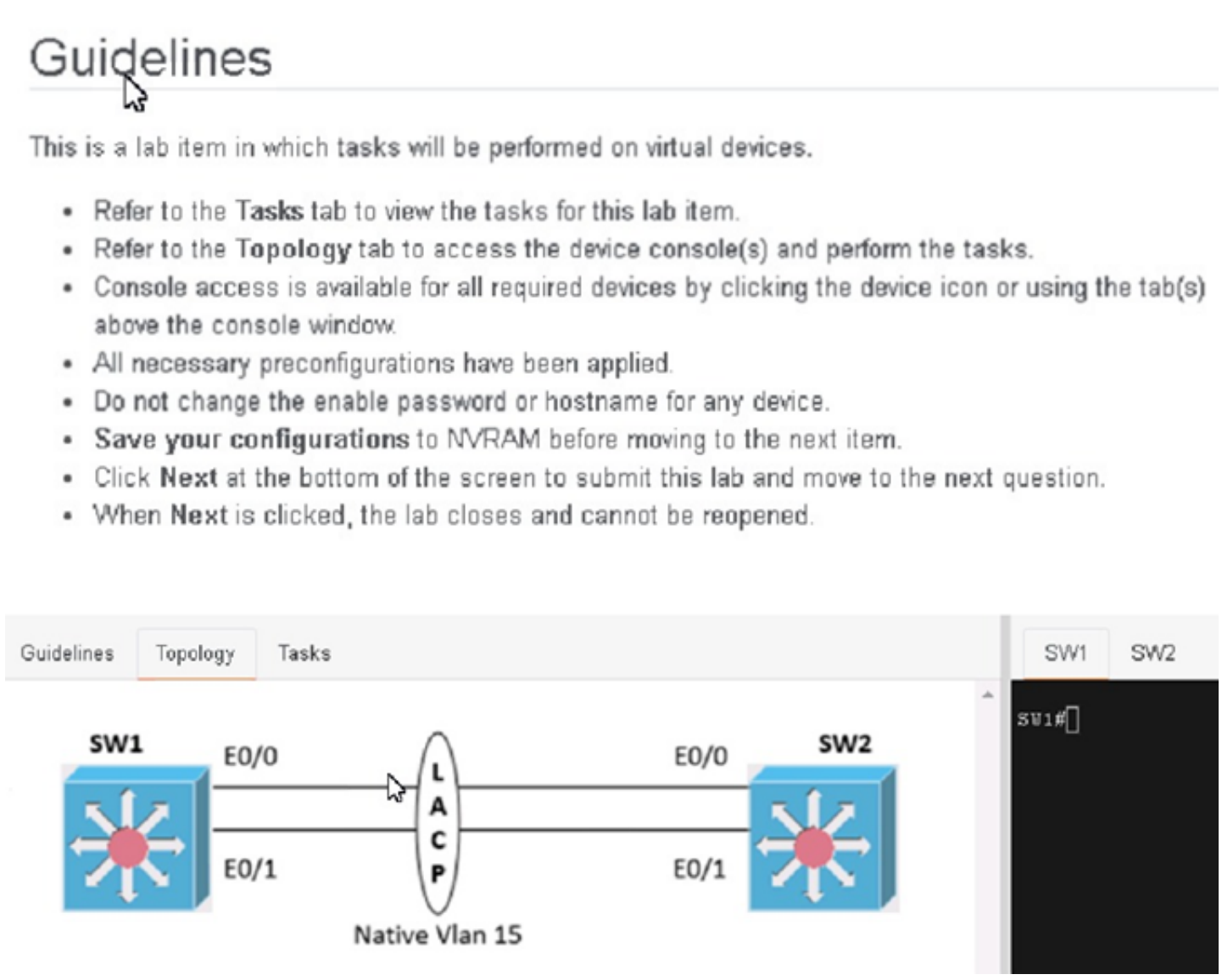


A. Mastered
B. Not Mastered

Answer: A

Explanation:
Answer as below configuration:
* 1.- on R3
config terminal
ip route 192.168.1.1 255.255.255.255 209.165.200.229
end
copy running start
* 2.- on R2
config terminal
ip route 0.0.0.0 0.0.0.0 209.165.202.130
end
copy running start
* 3.- on R2
config terminal
ipv6 route ::/0 2001:db8:abcd::2 end
copy running start

NEW QUESTION 639
SIMULATION - (Topic 5)
Physical connectivity is implemented between the two Layer 2 switches, and the network connectivity between them must be configured
* 1. Configure an LACP EtherChannel and number it as 1; configure it between switches SW1 and SVV2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides. The LACP mode must match on both ends
* 2 Configure the EtherChannel as a trunk link.
* 3. Configure the trunk link with 802.1 q tags.
* 4. Configure the native VLAN of the EtherChannel as VLAN 15.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Answer as below configuration:
On SW1:
conf terminal vlan 15
exit
interface range eth0/0 - 1 channel-group 1 mode active exit
interface port-channel 1
switchport trunk encapsulation dot1q switchport mode trunk
switchport trunk native vlan 15 end
copy run start
on SW2:
conf terminal
vlan 15 exit
interface range eth0/0 - 1 channel-group 1 mode active exit
interface port-channel 1
switchport trunk encapsulation dot1q switchport mode trunk
switchport trunk native vlan 15 end
copy run start

NEW QUESTION 641
SIMULATION - (Topic 5)
All physical cabling is in place. A company plans to deploy 32 new sites. The sites will utilize both IPv4 and IPv6 networks.
* 1 . Subnet 172.25.0.0/16 to meet the subnet requirements and maximize the number of hosts
Using the second subnet
• Assign the first usable IP address to e0/0 on Sw1O1
• Assign the last usable IP address to e0/0 on Sw102
* 2. Subnet to meet the subnet requirements and maximize the number of hosts
c Using the second subnet
• Assign an IPv6 GUA using a unique 64-Bit interface identifier on e0/0 on Sw101
• Assign an IPv6 GUA using a unique 64-Bit interface identifier on eO/O on swi02
Guidelines
This is a lab item in which tasks will be performed on virtual devices.
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• 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.
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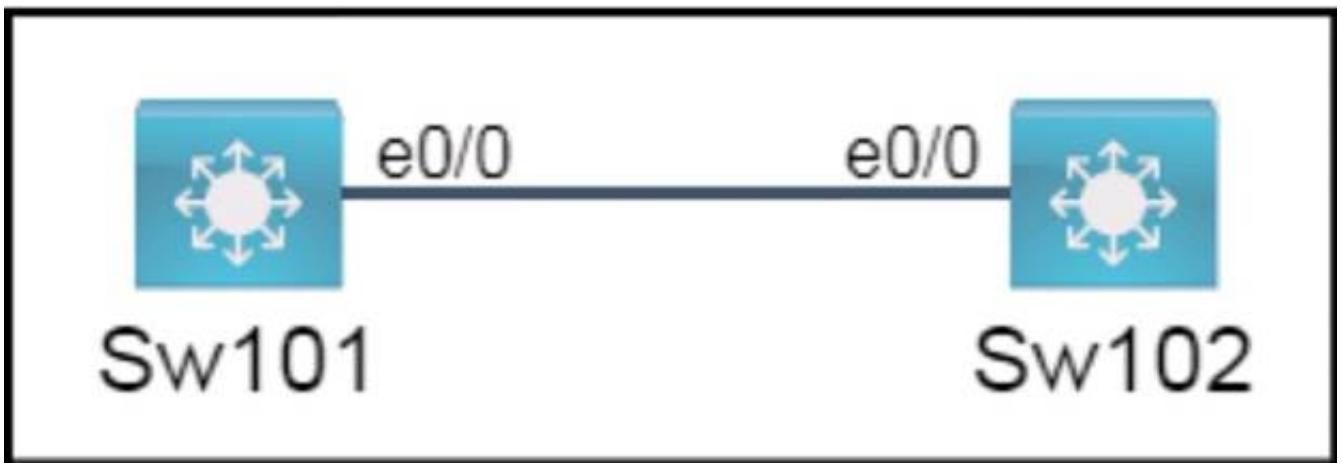

A. Mastered
B. Not Mastered

Answer: A

Explanation:
? To subnet 172.25.0.0/16 to meet the subnet requirements and maximize the number of hosts, you need to determine how many bits you need to borrow from the host portion of the address to create enough subnets for 32 sites. Since 32 is 2^5, you need to borrow 5 bits, which means your new subnet mask will be /21 or 255.255.248.0. To find the second subnet, you need to add the value of the fifth bit
(32) to the third octet of the network address (0), which gives you 172.25.32.0/21 as the second subnet. The first usable IP address in this subnet is 172.25.32.1, and the last usable IP address is 172.25.39.254.
? To assign the first usable IP address to e0/0 on Sw101, you need to enter the
following commands on the device console:
Sw101#configure terminal Sw101(config)#interface e0/0 Sw101(config-if)#ip address 172.25.32.1 255.255.248.0 Sw101(config-if)#no shutdown Sw101(config-if)#end
? To assign the last usable IP address to e0/0 on Sw102, you need to enter the
following commands on the device console:
Sw102#configure terminal Sw102(config)#interface e0/0 Sw102(config-if)#ip address 172.25.39.254 255.255.248.0 Sw102(config-if)#no shutdown Sw102(config-if)#end
? To subnet an IPv6 GUA to meet the subnet requirements and maximize the
number of hosts, you need to determine how many bits you need to borrow from the interface identifier portion of the address to create enough subnets for 32 sites. Since 32 is 2^5, you need to borrow 5 bits, which means your new prefix length will be /69 or ffff:ffff:ffff:fff8::/69 (assuming that your IPv6 GUA has a /64 prefix by default). To find the second subnet, you need to add the value of the fifth bit (32) to the fourth hextet of the network address (0000), which gives you xxxx:xxxx:xxxx:0020::/69 as the second subnet (where xxxx:xxxx:xxxx is your IPv6 GUA prefix). The first and last IPv6 addresses in this subnet are xxxx:xxxx:xxxx:0020::1 and xxxx:xxxx:xxxx:0027:ffff:ffff:ffff:fffe respectively.
? To assign an IPv6 GUA using a unique 64-bit interface identifier on e0/0 on
Sw101, you need to enter the following commands on the device console (assuming that your IPv6 GUA prefix is 2001:db8::/64):
Sw101#configure terminal Sw101(config)#interface e0/0 Sw101(config-if)#ipv6 address 2001:db8::20::1/69 Sw101(config-if)#no shutdown Sw101(config-if)#end
? To assign an IPv6 GUA using a unique 64-bit interface identifier on e0/0 on
Sw102, you need to enter the following commands on the device console (assuming that your IPv6 GUA prefix is 2001:db8::/64):
Sw102#configure terminal Sw102(config)#interface e0/0 Sw102(config-if)#ipv6 address 2001:db8::27::fffe/69 Sw102(config-if)#no shutdown Sw102(config-if)#end

NEW QUESTION 645
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