

Cisco

Exam Questions 200-301

Cisco Certified Network Associate



NEW QUESTION 1

- (Topic 3)

An engineer is configuring remote access to a router from IP subnet 10.139.58.0/28. The domain name, crypto keys, and SSH have been configured. Which configuration enables the traffic on the destination router?

A)

```
interface FastEthernet0/0
  ip address 10.122.49.1 255.255.255.240
  access-group 120 in
```

```
ip access-list extended 120
  permit tcp 10.139.58.0 255.255.255.248 any eq 22
```

B)

```
interface FastEthernet0/0
  ip address 10.122.49.1 255.255.255.252
  ip access-group 110 in
```

```
ip access-list extended 110
  permit tcp 10.139.58.0 0.0.0.15 host 10.122.49.1 eq 22
```

C)

```
interface FastEthernet0/0
  ip address 10.122.49.1 255.255.255.248
  ip access-group 10 in
```

```
ip access-list standard 10
  permit udp 10.139.58.0 0.0.0.7 host 10.122.49.1 eq 22
```

D)

```
interface FastEthernet0/0
  ip address 10.122.49.1 255.255.255.252
  ip access-group 105 in
```

```
ip access-list standard 105
  permit tcp 10.139.58.0 0.0.0.7 eq 22 host 10.122.49.1
```

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

Answer: B

NEW QUESTION 2

- (Topic 3)

Which Layer 2 switch function encapsulates packets for different VLANs so that the packets traverse the same port and maintain traffic separation between the VLANs?

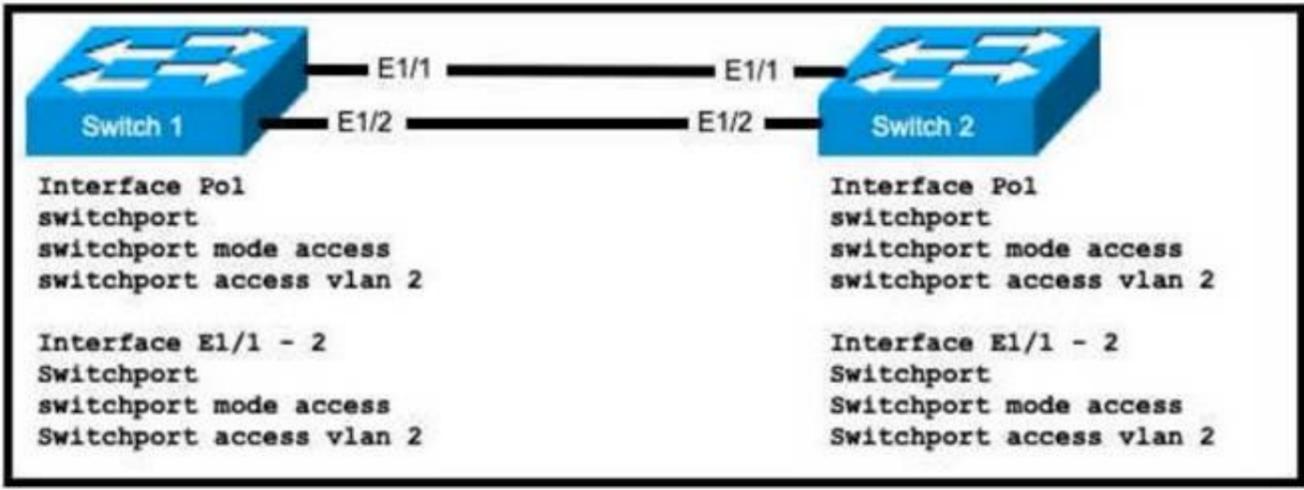
- A. VLAN numbering
- B. VLAN DSCP
- C. VLAN tagging
- D. VLAN marking

Answer: C

NEW QUESTION 3

- (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 4

- (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 5

- (Topic 3)

Which protocol uses the SSL?

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

Answer: C

NEW QUESTION 6

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.

configure the BPDU guard feature	802.1q double tagging
configure the dynamic ARP inspection feature	ARP spoofing
configure the root guard feature	unwanted superior BPDUs
configure a VLAN access control list	unwanted BPDUs on PortFast-enabled interfaces

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

configure the BPDU guard feature	configure a VLAN access control list
configure the dynamic ARP inspection feature	configure the dynamic ARP inspection feature
configure the root guard feature	configure the root guard feature
configure a VLAN access control list	configure the BPDU guard feature

NEW QUESTION 7

- (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)

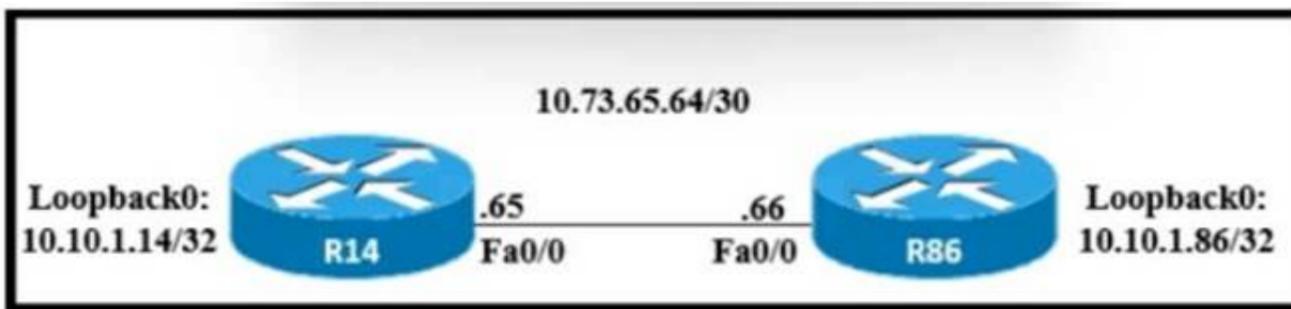
- A. interface vlan 123 ip address 10.70.159.1 255.255.254.0
- B. interface vlan 114 ip address 10.70.148.1 255.255.254.0
- C. interface vlan 472 ip address 10.70.133.17 255.255.255.192
- D. interface vlan 300 ip address 10.70.147.17 255.255.255.224
- E. interface vlan 155 ip address 10.70.155.65 255.255.255.224

Answer: BD

NEW QUESTION 8

- (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 9

DRAG DROP - (Topic 3)

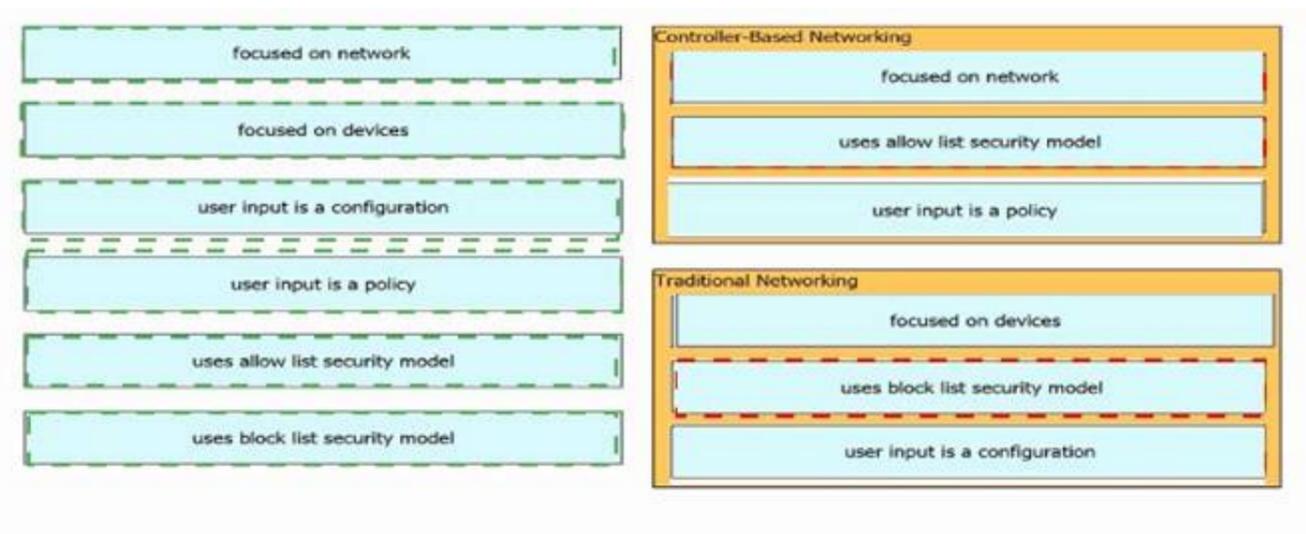
Drag and drop the characteristics of networking from the left onto the networking types on the right.

focused on network	Controller-Based Networking
focused on devices	
user input is a configuration	
user input is a policy	Traditional Networking
uses allow list security model	
uses block list security model	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 10

- (Topic 3)
 Refer to the exhibit.

```

SiteA#show interface TenGigabitEthernet0/1/0
TenGigabitEthernet0/1/0 is up, line protocol is up
Hardware is BUILT-IN-EPA-8x10G, address is 780c.f02a.db91 (bia 780a.f02b.db91)
Description: Connection to SiteB
Internet address is 10.10.10.1/30
MTU 8146 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Full Duplex, 10000Mbps, link type is force-up, media type is SFP-SR
5 minute input rate 264797000 bits/sec, 26672 packets/sec
5 minute output rate 122464000 bits/sec, 15724 packets/sec

SiteB#show interface TenGigabitEthernet0/1/0
TenGigabitEthernet0/1/0 is up, line protocol is up
Hardware is BUILT-IN-EPA-8x10G, address is 780c.f02c.db26 (bia 780c.f02c.db26)
Description: Connection to SiteA
Internet address is 10.10.10.2/30
MTU 8146 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Full Duplex, 10000Mbps, link type is force-up, media type is SFP-LR
5 minute input rate 122464000 bits/sec, 15724 packets/sec
5 minute output rate 264797000 bits/sec, 26672 packets/sec
    
```

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

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

Answer: B

NEW QUESTION 10

- (Topic 3)
 Refer to the exhibit.

```

R1#show ip ospf neighbor
Neighbor ID    Pri  State           Dead Time   Address         Interface
192.168.100.2  1    FULL/BDR       00:00:32   192.168.100.2  FastEthernet0/0
192.168.100.3  1    FULL/DR        00:00:31   192.168.100.3  FastEthernet0/0
    
```

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

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

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

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

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

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

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

Answer: BC

NEW QUESTION 15

- (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?

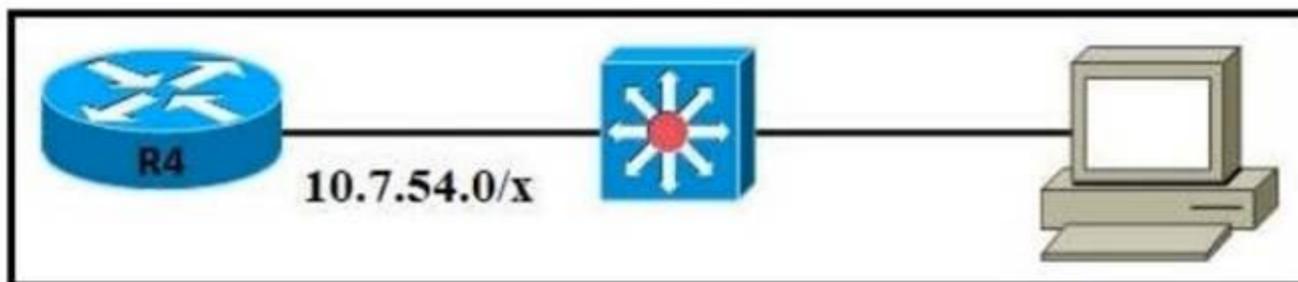
- A. unique local address
- B. link-local address
- C. aggregatable global address
- D. IPv4-compatible IPv6 address

Answer: B

NEW QUESTION 17

- (Topic 3)

Refer to the exhibit.



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

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

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

C)

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

D)

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

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

Answer: B

NEW QUESTION 18

DRAG DROP - (Topic 3)

Drag and drop the statements about networking from the left onto the corresponding networking types on the right.

This type allows better control over how networks work and how networks are configured.	Traditional Networking <div style="border: 1px solid #ccc; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid #ccc; height: 20px; margin-bottom: 5px;"></div>
This type enables networks to integrate with applications through APIs.	
New devices are configured using the physical infrastructure.	
This type provisions resources from a centralized location.	Controller-Based Networking <div style="border: 1px solid #ccc; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid #ccc; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid #ccc; height: 20px; margin-bottom: 5px;"></div>
This type requires a distributed control plane.	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

This type allows better control over how networks work and how networks are configured.	Traditional Networking <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">New devices are configured using the physical infrastructure.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">This type provisions resources from a centralized location.</div>
This type enables networks to integrate with applications through APIs.	
New devices are configured using the physical infrastructure.	
This type provisions resources from a centralized location.	Controller-Based Networking <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">This type requires a distributed control plane.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">This type enables networks to integrate with applications through APIs.</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">This type allows better control over how networks work and how networks are configured.</div>
This type requires a distributed control plane.	

NEW QUESTION 20

- (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 runs, 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 23

- (Topic 3)

Which QoS per-hop behavior changes the value of the ToS field in the IPv4 packet header?

- A. shaping
- B. classification
- C. policing
- D. marking

Answer: D

NEW QUESTION 26

FILL IN THE BLANK - (Topic 3)

Refer to the exhibit.

```

A 209.165.201.0/27 is subnetted, 1 subnets
B 209.165.201.0 [20/0] via 10.10.12.2, 02:26:33
209.165.202.0/27 is subnetted, 1 subnets
B 209.165.202.128 [20/0] via 10.10.12.2, 02:26:03
10.0.0.0/8 is variably subnetted, 8 subnets, 4 masks
C 10.10.10.0/28 is directly connected, GigabitEthernet0/0
C 10.10.11.0/30 is directly connected, FastEthernet2/0
C 10.10.12.0/30 is directly connected, GigabitEthernet0/1
O 10.10.13.0/25 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O 10.10.13.128/28 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O 10.10.13.144/28 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O 10.10.13.160/29 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
O 10.10.13.208/29 [110/2] via 10.10.10.1, 00:00:04, GigabitEthernet0/0
S* 0.0.0.0/0 [1/0] via 10.10.11.2

```

Drag and drop the prefix lengths from the left onto the corresponding prefixes on the right Not all prefixes are used

- A. Mastered
- B. Not Mastered

Answer: A

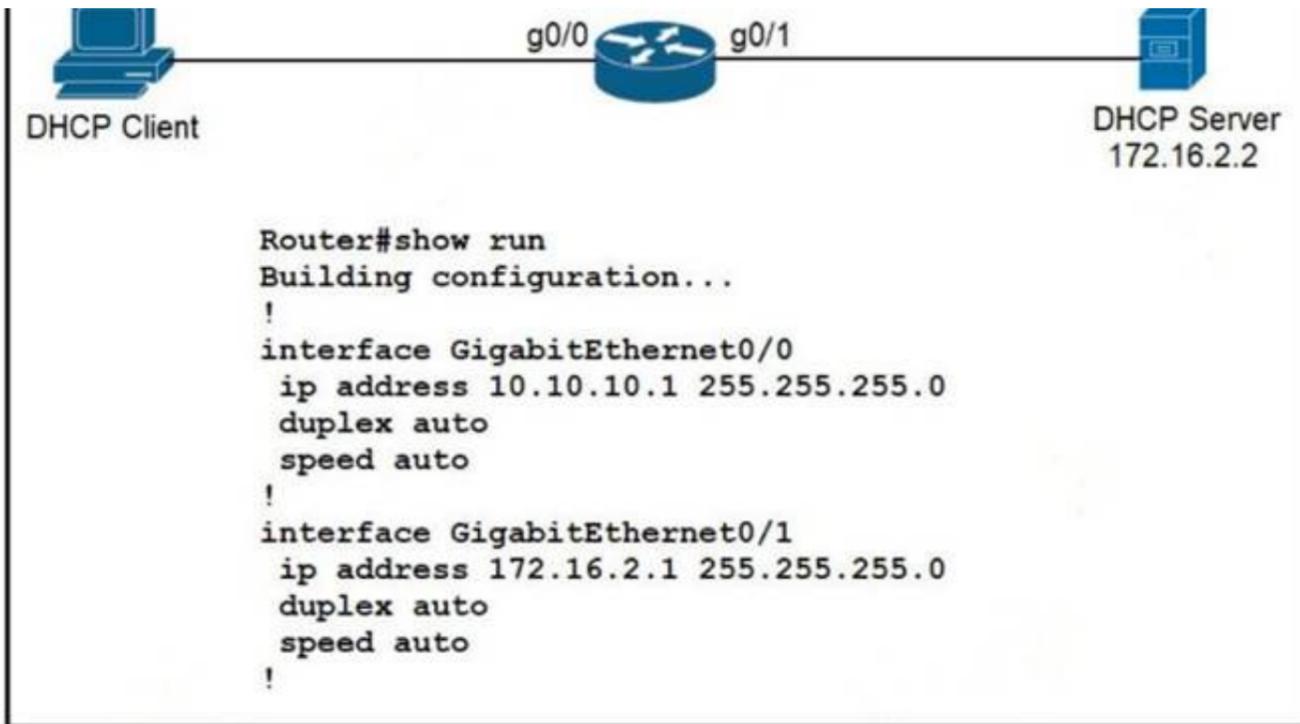
Explanation:

Diagram Description automatically generated with low confidence

NEW QUESTION 31

- (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 33

- (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?

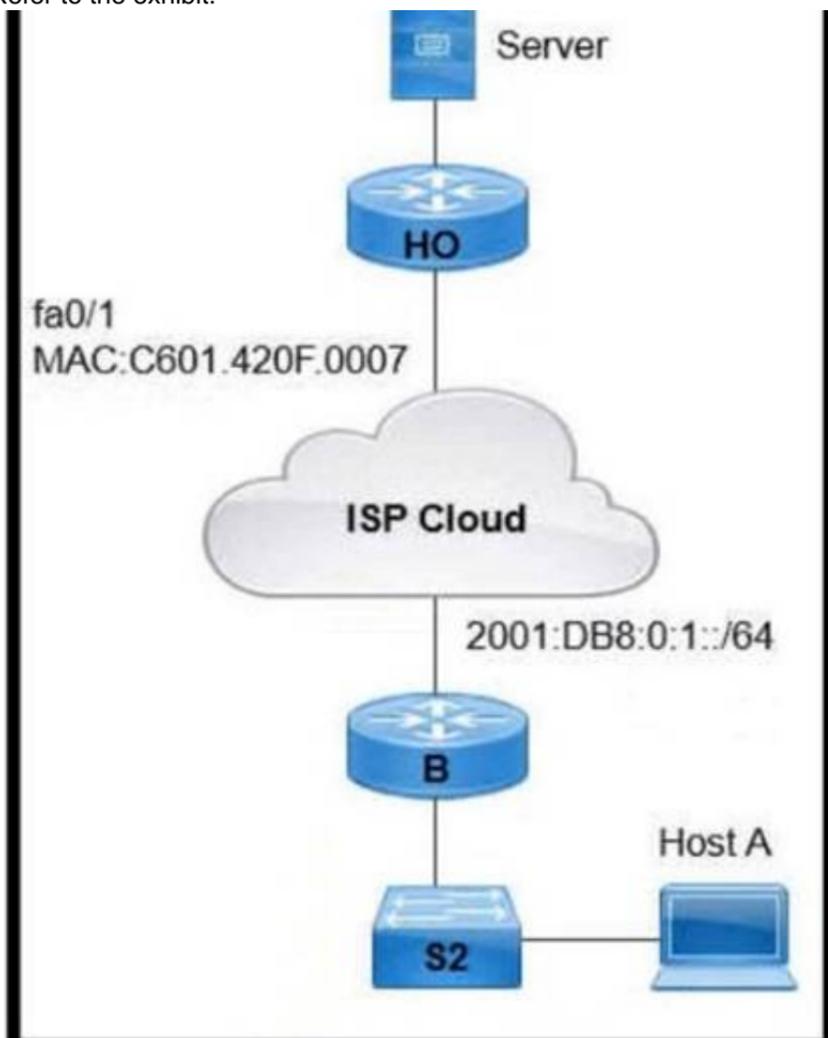
- A. interface vlan 2000ipv6 address ffc0:0000:aaaa::1234:2343/64
- B. interface vlan 2000ipv6 address fc00:0000:aaaa:a15d:1234:2343:8aca/64
- C. interface vlan 2000ipv6 address fe80:0000:aaaa::1234:2343/64
- D. interface vlan 2000ipv6 address fd00::1234:2343/64

Answer: B

NEW QUESTION 35

- (Topic 3)

Refer to the exhibit.



An engineer is configuring the HO router. Which IPv6 address configuration must be applied to the router fa0/1 interface for the router to assign a unique 64-bit

IPv6 address to itself?

- A. ipv6 address 2001:DB8:0:1:C601:42FF:FE0F:7/64
- B. ipv6 address 2001:DB8:0:1:C601:42FE:800F:7/64
- C. ipv6 address 2001 :DB8:0:1:FFFF:C601:420F:7/64
- D. iov6 address 2001 :DB8:0:1:FE80:C601:420F:7/64

Answer: A

NEW QUESTION 36

- (Topic 3)

Refer to the exhibit.

```

R1# show ip route
Codes:
C - connected, S - static, I - IGRP, 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, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default,
U - per-user static route, o - ODR
Gateway of last resort is not set
C 10.0.0.0/8 is directly connected, Loopback0
  10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
O 10.0.1.3/32 [110/100] via 10.0.1.100, 00:39:08, Serial0
C 10.0.1.0/24 is directly connected, Serial0
O 10.0.1.5/32 [110/5] via 10.0.1.50, 00:39:08, Serial0
O 10.0.10.0/24 [110/10] via 10.0.1.4, 00:39:08, Gigabit Ethernet 0/0
D 10.0.10.0/24 [90/10] via 10.0.1.5, 00:39:08, Gigabit Ethernet 0/1
    
```

Web traffic is coming in from the WAN interface. Which route takes precedence when the router is processing traffic destined for the LAN network at 10.0.10.0/24?

- A. via next-hop 10.0.1.5
- B. via next-hop 10.0.1.4
- C. via next-hop 10.0.1.50
- D. via next-hop 10.0.1.100

Answer: A

NEW QUESTION 37

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.

supports automatic deployment	Autonomous Access Point
managed from a web-based dashboard	
accessible for management via Telnet, SSH, or a web GUI	Cloud-Based Access Point
configured and managed by a WLC	
requires a management IP address	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

supports automatic deployment	Autonomous Access Point
managed from a web-based dashboard	
accessible for management via Telnet, SSH, or a web GUI	Cloud-Based Access Point
configured and managed by a WLC	
requires a management IP address	

NEW QUESTION 40

DRAG DROP - (Topic 3)

An engineer is tasked to configure a switch with port security to ensure devices that forward unicasts multicasts and broadcasts are unable to flood the port The port must be configured to permit only two random MAC addresses at a time Drag and drop the required configuration commands from the left onto the sequence

on the right Not all commands are used.

- switchport mode access
- switchport port-security
- switchport port-security mac-address 0060.3EED.77AB
- switchport port-security mac-address 00D0.D3ED.622A
- switchport port-security mac-address sticky
- switchport port-security maximum 2
- switchport port-security violation shutdown

- 1
- 2
- 3
- 4

- A. Mastered
- B. Not Mastered

Answer: A

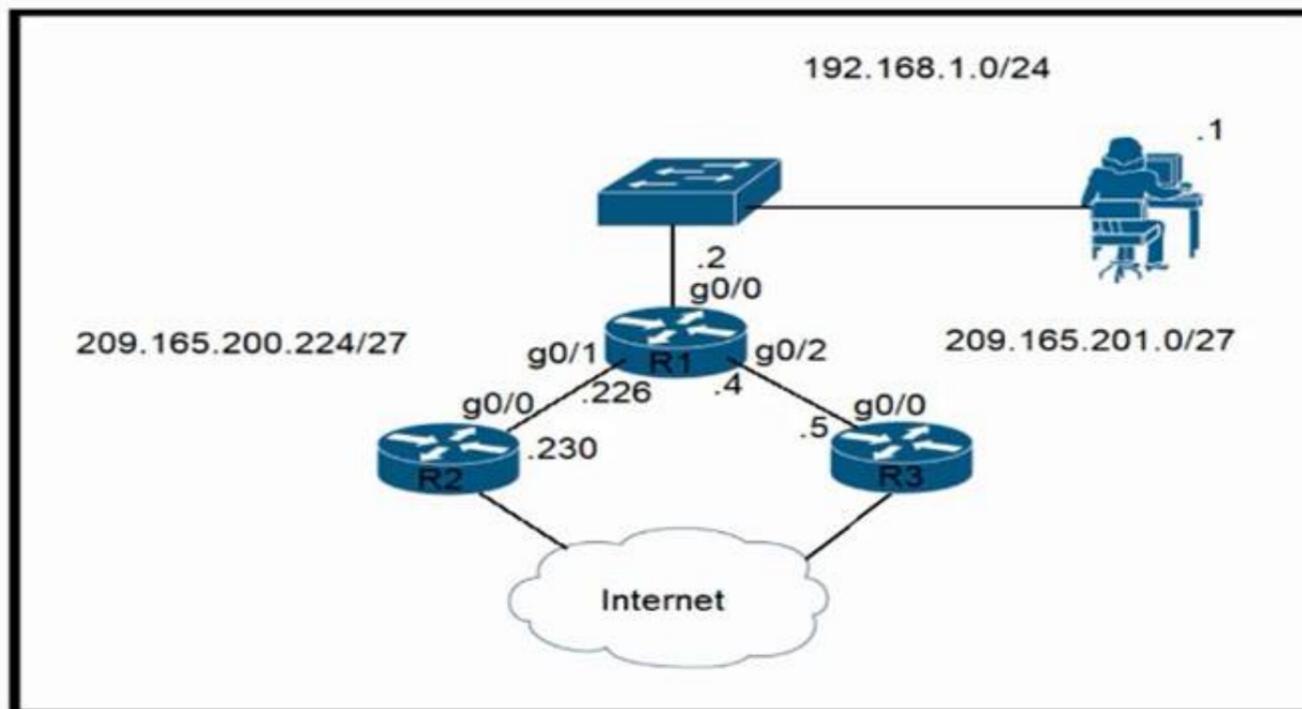
Explanation:

- switchport mode access
- switchport port-security
- switchport port-security mac-address 0060.3EED.77AB
- switchport port-security mac-address 00D0.D3ED.622A
- switchport port-security mac-address sticky
- switchport port-security maximum 2
- switchport port-security violation shutdown

- switchport port-security
- switchport port-security mac-address sticky
- switchport port-security maximum 2
- switchport port-security violation shutdown

NEW QUESTION 45

- (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 50

- (Topic 3)

Which PoE mode enables powered-device detection and guarantees power when the device is detected?

- A. dynamic
- B. static
- C. active
- D. auto

Answer: B

NEW QUESTION 55

- (Topic 2)

What are two differences between optical-fiber cabling and copper cabling? (Choose two)

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

Answer: AC

NEW QUESTION 59

- (Topic 2)

Refer to the exhibit.

```
R1#show ip route
#output suppressed

Gateway of last resort is 192.168.14.4 to network 0.0.0.0

C    172.16.1.128/25 is directly connected, GigabitEthernet1/1/0
C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
C    172.16.16.1 is directly connected, Loopback1
     192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O    192.168.10.0.24 [110/2] via 192.168.14.4, 00:02:01, FastEthernet1/0
O    192.168.10.32/27 [110/11] via 192.168.13.3, 00:00:52, FastEthernet0/1
O    192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, FastEthernet1/1
D    192.168.10.1/32 [90/52778] via 192.168.12.2, 00:03:44, FastEthernet0/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, FastEthernet1/0
```

If R1 receives a packet destined to 172.161.1, to which IP address does it send the packet?

- A. 192.168.12.2
- B. 192.168.13.3
- C. 192.168.14.4
- D. 192.168.15.5

Answer: C

NEW QUESTION 63

- (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 68

- (Topic 2)

Which WPA3 enhancement protects against hackers viewing traffic on the Wi-Fi network?

- A. TKiP encryption
- B. AES encryption
- C. scrambled encryption key
- D. SAE encryption

Answer: D

NEW QUESTION 71

DRAG DROP - (Topic 2)

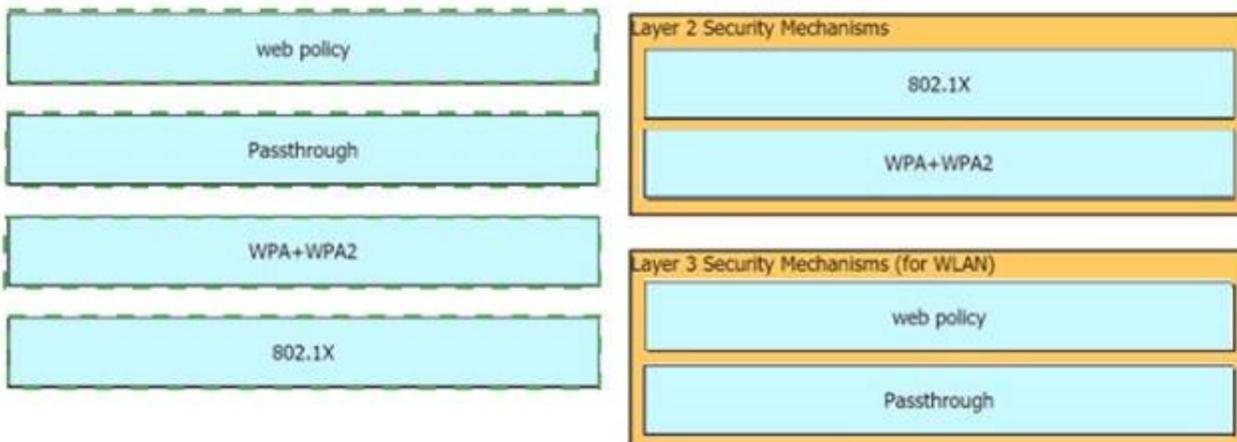
Drag and drop the Cisco Wireless LAN Controller security settings from the left onto the correct security mechanism categories on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 76

- (Topic 2)

Which plane is centralized by an SDN controller?

- A. management-plane
- B. control-plane
- C. data-plane
- D. services-plane

Answer: B

NEW QUESTION 81

- (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

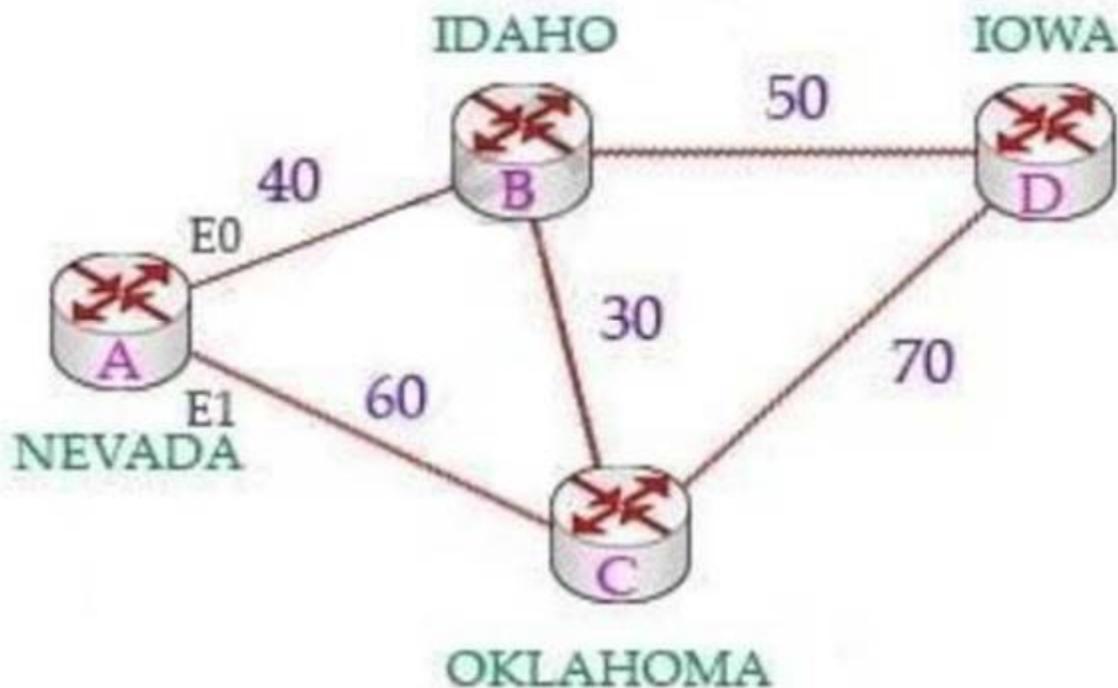
Answer: BC

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:

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

NEW QUESTION 85

- (Topic 2)

A packet is destined for 10.10.1.22. Which static route does the router choose to forward the packet?

- A. ip route 10.10.1.0 255.255.255.240 10.10.255.1
- B. ip route 10.10.1.16 255.255.255.252 10.10.255.1
- C. ip route 10.10.1.20 255.255.255.252 10.10.255.1
- D. ip route 10.10.1.20 255.255.255.254 10.10.255.1

Answer: C

NEW QUESTION 87

- (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/0D53i00000KszSICAJ/administrative-distance-vs-longest-match-rule>

NEW QUESTION 89

- (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 90

- (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 94

- (Topic 2)

Which communication interaction takes place when a southbound API is used?

- A. between the SDN controller and PCs on the network
- B. between the SON controller and switches and routers on the network
- C. between the SON controller and services and applications on the network
- D. between network applications and switches and routers on the network

Answer: B

NEW QUESTION 98

- (Topic 2)

Which action does the router take as it forwards a packet through the network?

- A. 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
- B. 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
- C. The router replaces the original source and destination MAC addresses with the sending router MAC address as the source and neighbor MAC address as the destination
- D. The router encapsulates the original packet and then includes a tag that identifies the source router MAC address and transmit transparently to the destination

Answer: C

NEW QUESTION 103

- (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 107

- (Topic 2)

Refer to the exhibit.

```
access-list 101 permit ospf any any
access-list 101 permit tcp any any eq 179
access-list 101 permit tcp any eq 179 any
access-list 101 permit gre any any
access-list 101 permit esp any any

access-list 101 deny ospf any any
access-list 101 permit tcp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255 eq telnet
access-list 101 permit udp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255 eq 500
access-list 101 permit udp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255 eq 4500
access-list 101 deny ip any any log

interface Ethernet0/0
 ip address 10.1.1.25 255.255.255.0
 ip access-group 101 in
```

A network administrator has been tasked with securing VTY access to a router. Which access-list entry accomplishes this task?

- A. access-list 101 permit tcp 10.1.10 0.0.0.255 172.16.10 0.0.0.255 eq ssh
- B. access-list 101 permit tcp 10.11.0 0.0.0.255 172.16.10 0.0.0.255 eq scp
- C. access-list 101 permit tcp 10.11.0 0.0.0.255 172.16.10 0.0.0.255 eq telnet
- D. access-list 101 permit tcp 10.1.10 0.0.0.255 172.16.10 0.0.0.255 eq https

Answer: A

NEW QUESTION 109

- (Topic 2)

Which design element is a best practice when deploying an 802.11b wireless infrastructure?

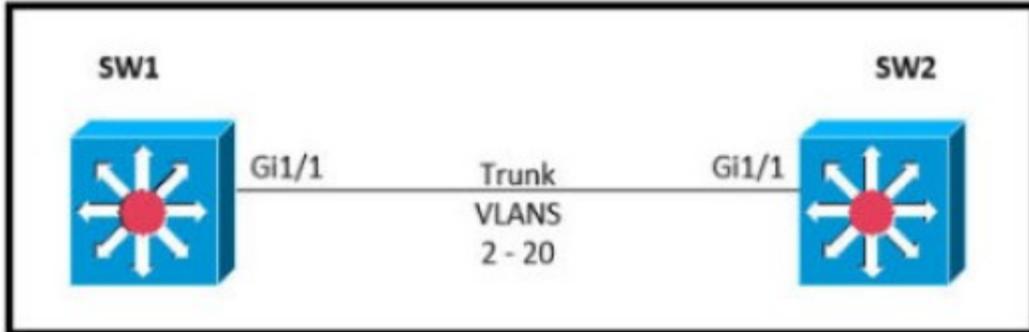
- A. disabling TPC so that access points can negotiate signal levels with their attached wireless devices.
- B. setting the maximum data rate to 54 Mbps on the Cisco Wireless LAN Controller
- C. allocating nonoverlapping channels to access points that are in close physical proximity to one another
-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

Answer: C

NEW QUESTION 114

- (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 115

- (Topic 2)

What is a role of access points in an enterprise network?

- A. connect wireless devices to a wired network
- B. support secure user logins to devices or the network
- C. integrate with SNMP in preventing DDoS attacks
- D. serve as a first line of defense in an enterprise network

Answer: A

NEW QUESTION 119

- (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 subnet. 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 123

- (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 124

- (Topic 2)

Refer to me exhibit.

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

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

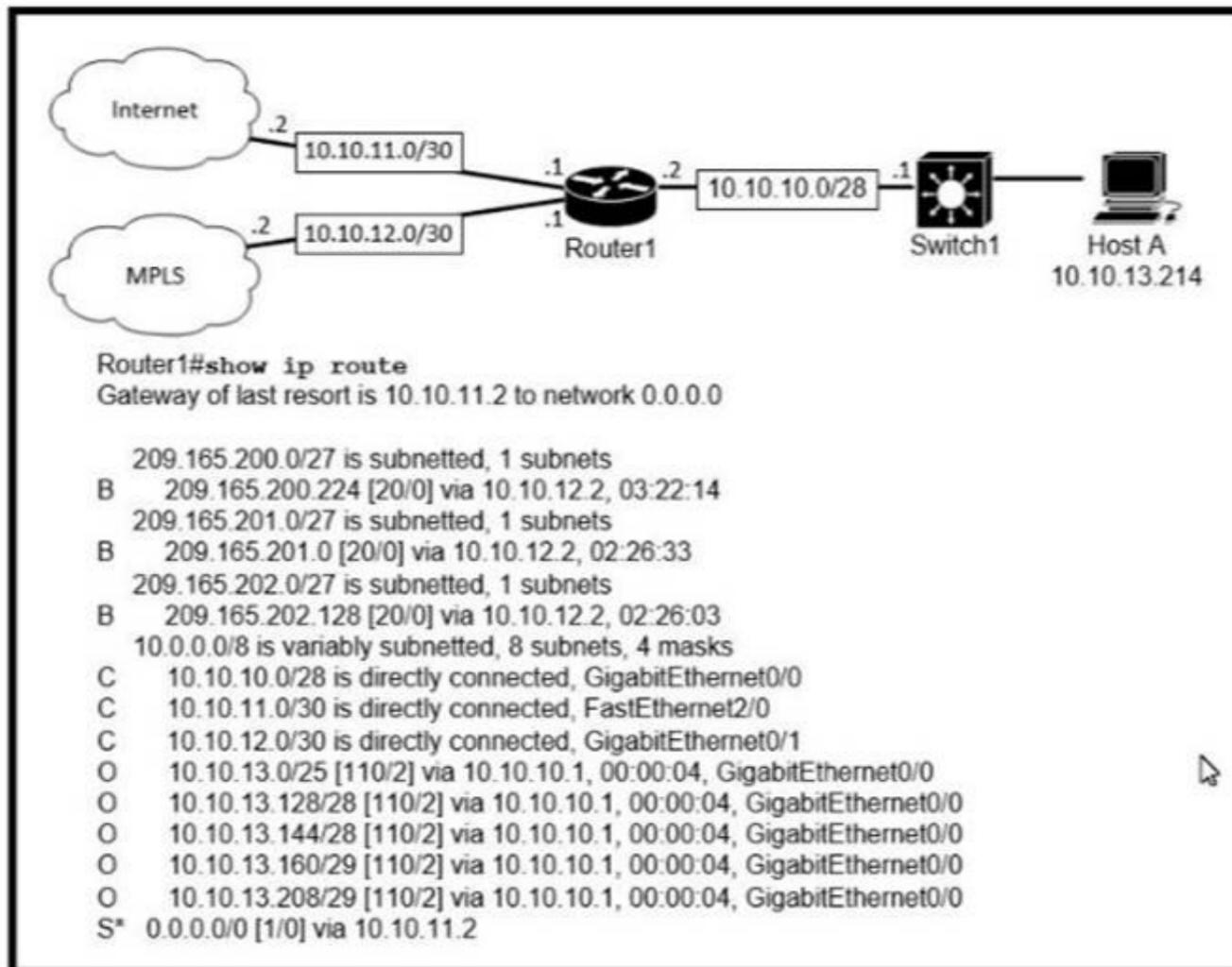
- A. It uses a route that is similar to the destination address
- B. It discards the packets.
- C. It floods packets to all learned next hops.
- D. It Queues the packets waiting for the route to be learned.

Answer: A

NEW QUESTION 127

- (Topic 2)

Refer to the exhibit.



Which prefix does Router 1 use for traffic to Host A?

- A. 10.10.10.0/28
- B. 10.10.13.0/25
- C. 10.10.13.144/28
- D. 10.10.13.208/29

Answer: D

Explanation:

Host A address fall within the address range. However, if more than one route to the same subnet exist (router will use the longest stick match, which match more specific route to the subnet). If there are route 10.10.13.192/26 and 10.10.13.208/29, the router will forward the packet to /29 rather than /28.

NEW QUESTION 128

- (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 131

- (Topic 2)

When a site-to-site VPN is used, which protocol is responsible for the transport of user data?

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

Answer: C

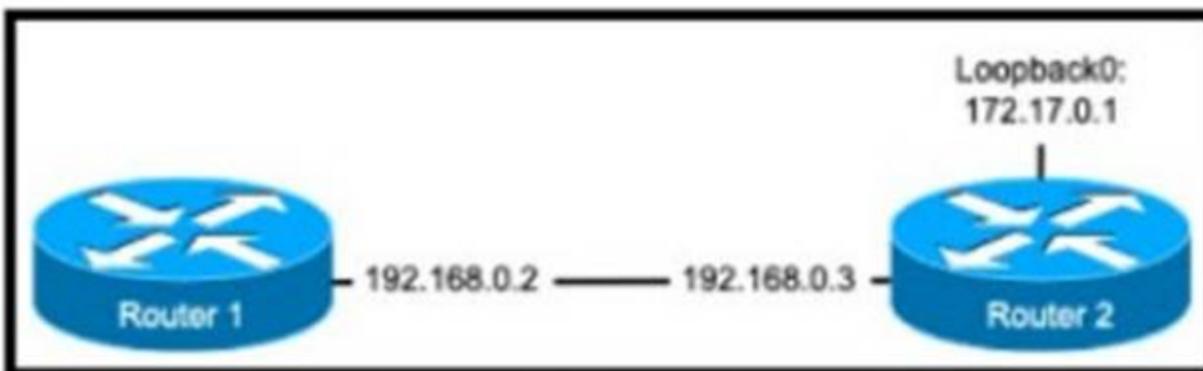
Explanation:

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

NEW QUESTION 134

- (Topic 2)

Refer to the exhibit.



The ntp server 192.168.0.3 command has been configured on router 1 to make it an NTP client of router 2. Which command must be configured on router 2 so that it operates in server-only mode and relies only on its internal clock?

- A. Router2(config)#ntp passive
- B. Router2(config)#ntp server 172.17.0.1
- C. Router2(config)#ntp master 4
- D. Router2(config)#ntp server 192.168.0.2

Answer: B

Explanation:

- To use internal clock of this router, use any configured IP address in any interface of this router.

NEW QUESTION 139

- (Topic 2)

Refer to the exhibit.

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

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

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

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

Answer: A

NEW QUESTION 140

- (Topic 2)
Refer to the exhibit.

```
R1# show ip route
D    192.168.10.0/24 [90/2679326] via 192.168.1.1
R    192.168.10.0/27 [120/3] via 192.168.1.2
O    192.168.10.0/23 [110/2] via 192.168.1.3
i L1 192.168.10.0/13 [115/30] via 192.168.1.4
```

How does router R1 handle traffic to 192.168.10.16?

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

Answer: D

NEW QUESTION 143

- (Topic 2)
Refer to the exhibit.

```
R1# show ip route
D    192.168.16.0/26 [90/2679326] via 192.168.1.1
R    192.168.16.0/24 [120/3] via 192.168.1.2
O    192.168.16.0/21 [110/2] via 192.168.1.3
i L1 192.168.16.0/27 [115/30] via 192.168.1.4
```

Which route does R1 select for traffic that is destined to 192.168.16.2?

- A. 192.168.16.0/21
- B. 192.168.16.0/24
- C. 192.168.26.0/26
- D. 192.168.16.0/27

Answer: D

Explanation:

The destination IP addresses match all four entries in the routing table but the 192.168.16.0/27 has the longest prefix so it will be chosen. This is called the "longest prefix match" rule.

NEW QUESTION 144

- (Topic 2)

What prevents a workstation from receiving a DHCP address?

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

Answer: B

NEW QUESTION 148

- (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 150

- (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 151

- (Topic 2)

Which configuration is needed to generate an RSA key for SSH on a router?

- A. Configure the version of SSH
- B. Configure VTY access.
- C. Create a user with a password.
- D. Assign a DNS domain name

Answer: D

NEW QUESTION 153

- (Topic 2)

What is the effect when loopback interfaces and the configured router ID are absent during the OSPF Process configuration?

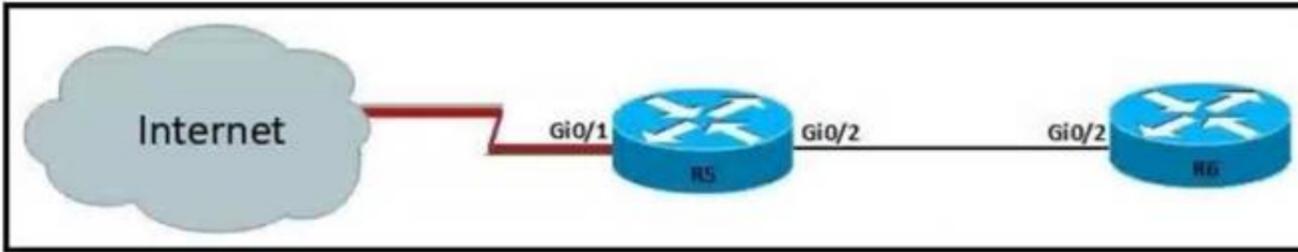
- A. No router ID is set, and the OSPF protocol does not run.
- B. The highest up/up physical interface IP address is selected as the router ID.
- C. The lowest IP address is incremented by 1 and selected as the router ID.
- D. The router ID 0.0.0.0 is selected and placed in the OSPF process.

Answer: B

NEW QUESTION 158

- (Topic 2)

Refer to the exhibit.



For security reasons, automatic neighbor discovery must be disabled on the R5 Gi0/1 interface. These tasks must be completed:

- Disable all neighbor discovery methods on R5 interface Gi0/1.
- Permit neighbor discovery on R5 interface Gi0/2.
- Verify there are no dynamically learned neighbors on R5 interface Gi0/1.
- Display the IP address of R6's interface Gi0/2. Which configuration must be used?

- R5(config)#int Gi0/1
R5(config-if)#no cdp run
R5(config-if)#exit
R5(config)#lldp run
R5(config)#cdp enable
R5#sh cdp neighbor
R5#sh lldp neighbor
- R5(config)#int Gi0/1
R5(config-if)#no cdp enable
R5(config-if)#exit
R5(config)#no lldp run
R5(config)#cdp run
R5#sh cdp neighbor
R5#sh lldp neighbor
- R5(config)#int Gi0/1
R5(config-if)#no cdp enable
R5(config-if)#exit
R5(config)#no lldp run
R5(config)#cdp run
R5#sh cdp neighbor detail
R5#sh lldp neighbor
- R5(config)#int Gi0/1
R5(config-if)#no cdp enable
R5(config-if)#exit
R5(config)#lldp run
R5(config)#no cdp run
R5#sh cdp neighbor detail
R5#sh lldp neighbor

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

Answer: C

NEW QUESTION 160

- (Topic 2)

What are two descriptions of three-tier network topologies? (Choose two)

- A. The core and distribution layers perform the same functions
- B. The access layer manages routing between devices in different domains
- C. The network core is designed to maintain continuous connectivity when devices fail.
- D. The core layer maintains wired connections for each host
- E. The distribution layer runs Layer 2 and Layer 3 technologies

Answer: CE

NEW QUESTION 164

- (Topic 2)

A wireless administrator has configured a WLAN; however, the clients need access to a less congested 5-GHz network for their voice quality. What action must be taken to meet the requirement?

- A. enable AAA override
- B. enable RX-SOP
- C. enable DTIM
- D. enable Band Select

Answer: D

NEW QUESTION 167

- (Topic 2)
 When deploying syslog, which severity level logs informational message?

- A. 2
- B. 4
- C. 6

Answer: D

Explanation:
<https://en.wikipedia.org/wiki/Syslog>

NEW QUESTION 170

- (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 173

- (Topic 2)
 What are two reasons that cause late collisions to increment on an Ethernet interface? (Choose two)

- A. when the sending device waits 15 seconds before sending the frame again
- B. when the cable length limits are exceeded
- C. when one side of the connection is configured for half-duplex
- D. when Carrier Sense Multiple Access/Collision Detection is used
- E. when a collision occurs after the 32nd byte of a frame has been transmitted

Answer: BC

Explanation:
 The usual possible causes are full-duplex/half-duplex mismatch, exceeded Ethernet cable length limits, or defective hardware such as incorrect cabling, non-compliant number of hubs in the network, or a bad NIC.

NEW QUESTION 175

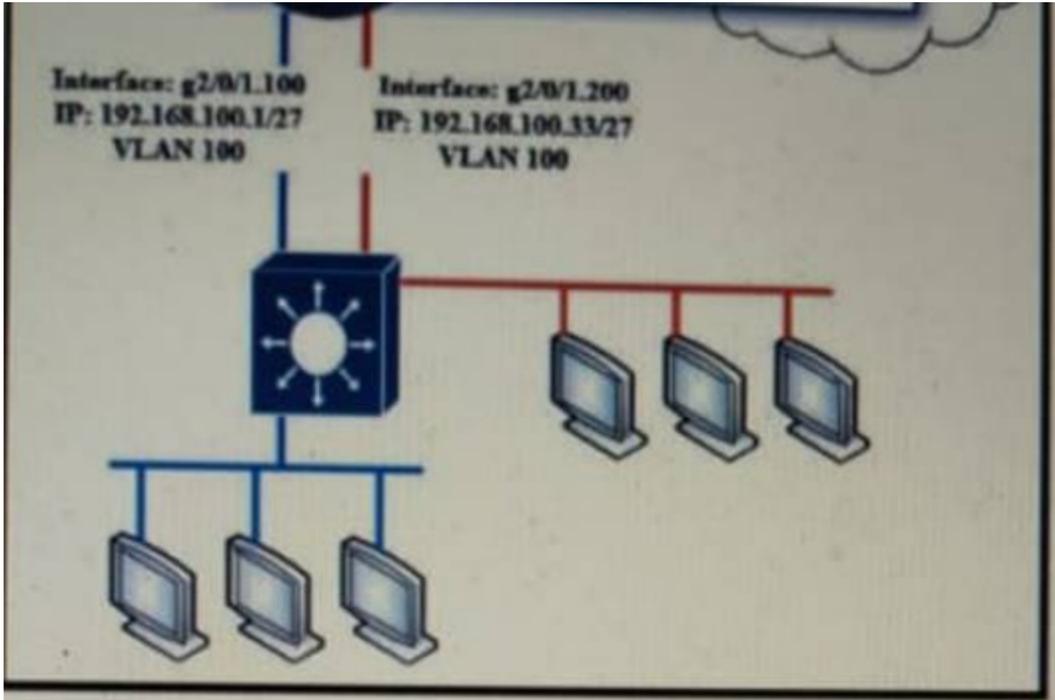
- (Topic 2)
 An implementer is preparing hardware for virtualization to create virtual machines on a host. What is needed to provide communication between hardware and virtual machines?

- A. hypervisor
- B. router
- C. straight cable
- D. switch

Answer: A

NEW QUESTION 177

- (Topic 2)
 Refer to Exhibit.



Which configuration must be applied to the router that configures PAT to translate all addresses in VLAN 200 while allowing devices on VLAN 100 to use their own IP addresses?

```

A. Router1(config)#access-list 99 permit 209.165.201.2 0.0.0.0
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config-if)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config-if)#ip nat outside

B. Router1(config)#access-list 99 permit 209.165.201.2 255.255.255.255
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config-if)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config-if)#ip nat outside

C. Router1(config)#access-list 99 permit 192.168.100.0 0.0.0.255
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config-if)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config-if)#ip nat outside

D. Router1(config)#access-list 99 permit 192.168.100.32 0.0.0.31
Router1(config)#ip nat inside source list 99 interface gi1/0/0 overload
Router1(config)#interface gi2/0/1.200
Router1(config-if)#ip nat inside
Router1(config)#interface gi1/0/0
Router1(config-if)#ip nat outside
    
```

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

Answer: D

NEW QUESTION 180

- (Topic 2)

An engineer must configure a WLAN using the strongest encryption type for WPA2- PSK. Which cipher fulfills the configuration requirement?

- A. WEP
- B. RC4
- C. AES
- D. TKIP

Answer: C

Explanation:

Many routers provide WPA2-PSK (TKIP), WPA2-PSK (AES), and WPA2- PSK (TKIP/AES) as options. TKIP is actually an older encryption protocol introduced with WPA to replace the very-insecure WEP encryption at the time. TKIP is actually quite similar to WEP encryption. TKIP is no longer considered secure, and is now deprecated. In other words, you shouldn't be using it.

AES is a more secure encryption protocol introduced with WPA2 and it is currently the strongest encryption type for WPA2-PSK.

NEW QUESTION 185

- (Topic 2)

Where does a switch maintain DHCP snooping information?

- A. in the MAC address table
- B. in the CAM table
- C. in the binding database
- D. in the frame forwarding database

Answer: C

NEW QUESTION 187

- (Topic 2)

A Cisco IP phone receive untagged data traffic from an attached PC. Which action is taken by the phone?

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

Answer: A

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960x/software/15-0_2_EX/vlan/configuration_guide/b_vlan_152ex_2960-x_cg/b_vlan_152ex_2960-x_cg_chapter_0110.pdf

Untagged traffic from the device attached to the Cisco IP Phone passes through the phone unchanged, regardless of the trust state of the access port on the phone.

NEW QUESTION 189

- (Topic 2)

Refer to the exhibit.

```
ip arp inspection vlan 2
interface fastethernet 0/1
 switchport mode access
 switchport access vlan 2
```

What is the effect of this configuration?

- A. The switch port interface trust state becomes untrusted
- B. The switch port remains administratively down until the interface is connected to another switch
- C. Dynamic ARP inspection is disabled because the ARP ACL is missing
- D. The switch port remains down until it is configured to trust or untrust incoming packets

Answer: A

Explanation:

Dynamic ARP inspection (DAI) is a security feature that validates ARP packets in a network. It intercepts, logs, and discards ARP packets with invalid IP-to-MAC address bindings. This capability protects the network from certain man-in-the-middle attacks. After enabling DAI, all ports become untrusted ports.

NEW QUESTION 193

- (Topic 2)

Which type of API allows SDN controllers to dynamically make changes to the network?

- A. northbound API
- B. REST API
- C. SOAP API
- D. southbound API

Answer: D

Explanation:

Cisco overview doc for SDN here: https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/VMDC/SDN/SDN.html

NEW QUESTION 194

- (Topic 2)

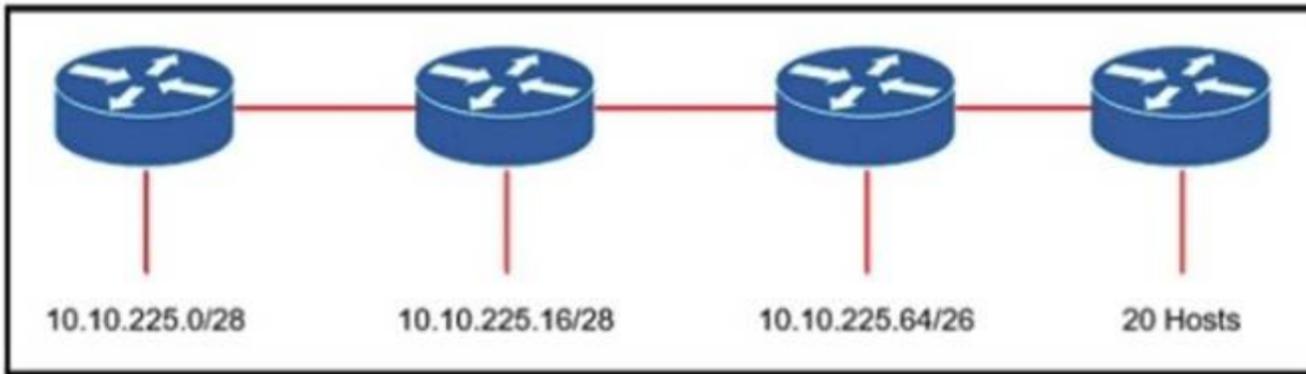
An engineer must configure traffic for a VLAN that is untagged by the switch as it crosses a trunk link. Which command should be used?

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

Answer: B

NEW QUESTION 198

- (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 203

- (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 205

- (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 210

- (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?

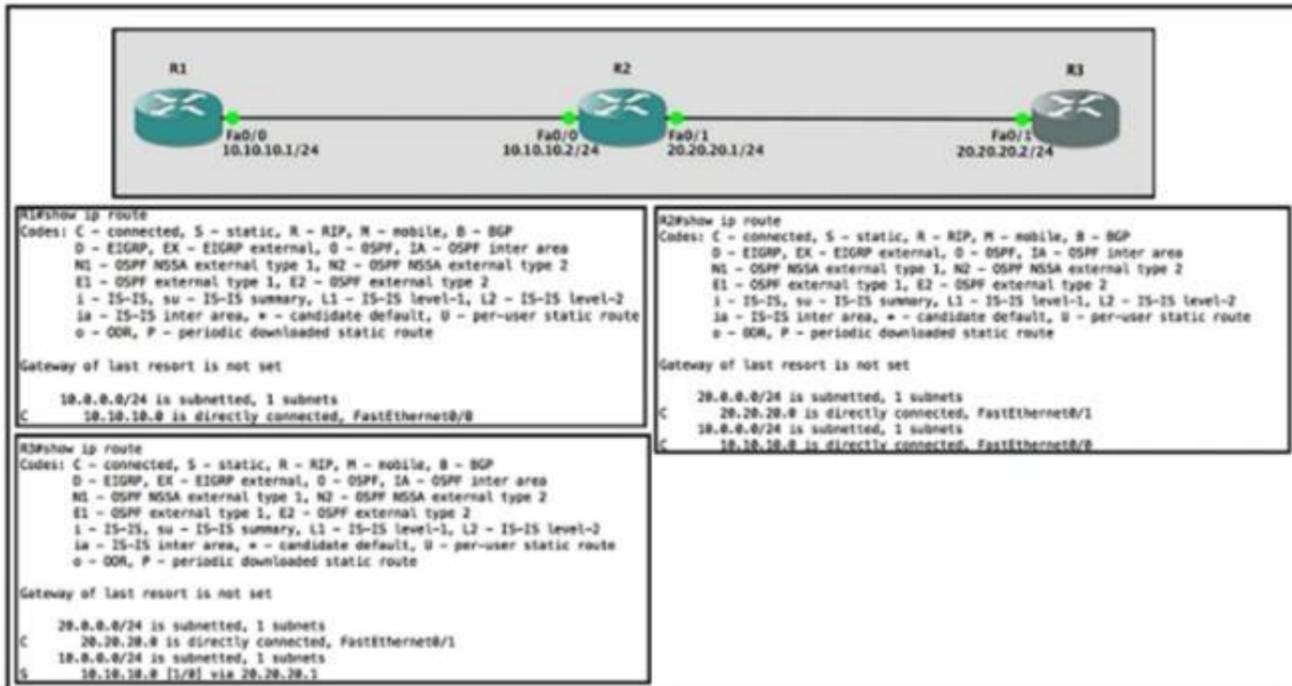
- A. DHCP relay agent
- B. DHCP server
- C. DHCPDISCOVER
- D. DHCPOFFER

Answer: A

NEW QUESTION 215

- (Topic 2)

Refer to the exhibit.



Router R1 Fa0/0 is unable ping router R3 Fa0/1.
 Which action must be taken in router R1 to help resolve the configuration issue?

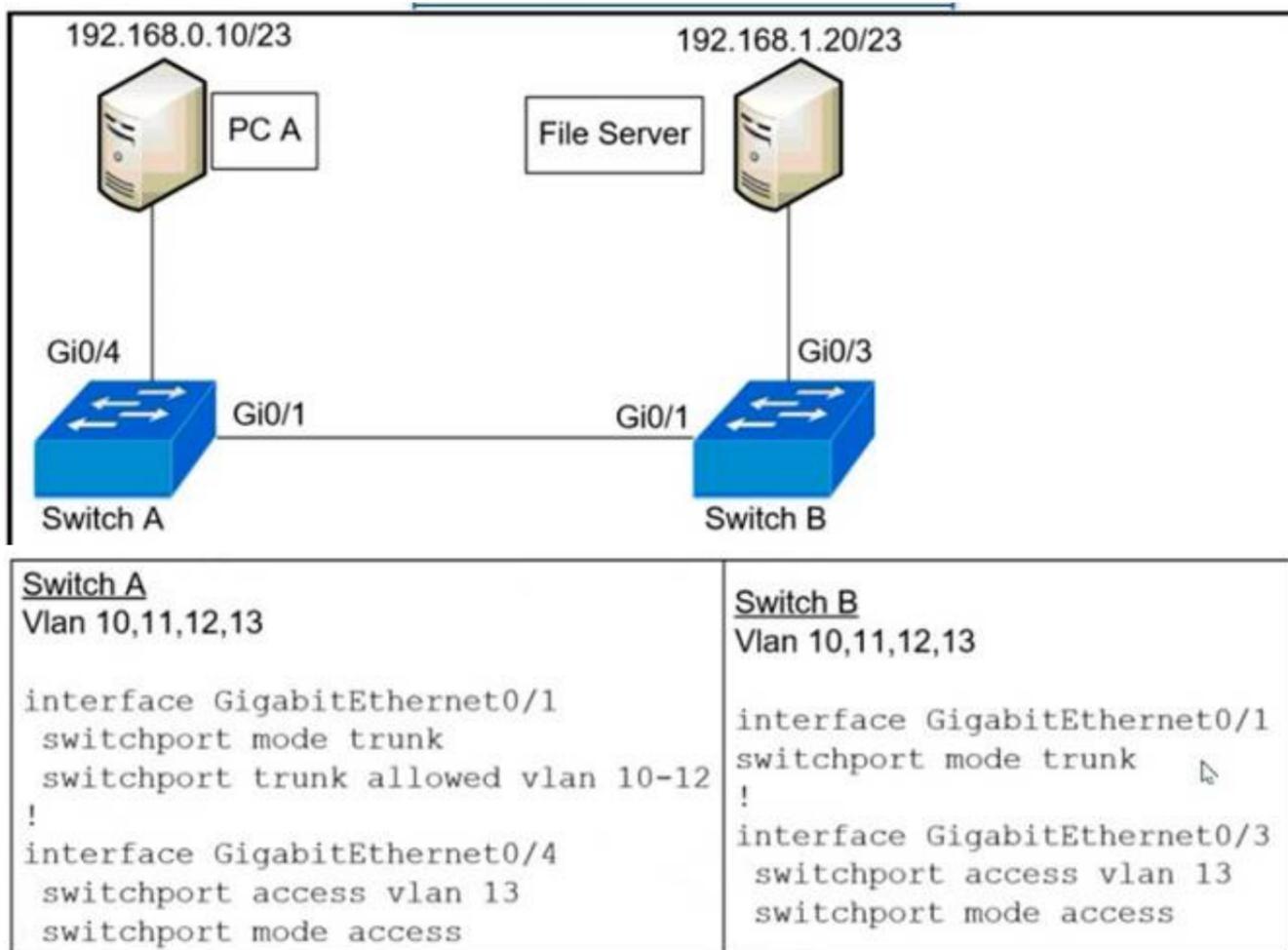
- A. set the default network as 20.20.20.0/24
- B. set the default gateway as 20.20.20.2
- C. configure a static route with Fa0/1 as the egress interface to reach the 20.20.20.0/24 network
- D. configure a static route with 10.10.10.2 as the next hop to reach the 20.20.20.0/24 network

Answer: D

NEW QUESTION 220

- (Topic 2)

Refer to the exhibit.



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 for 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 File Server allowing for intra-VLAN communication.

Answer: B

NEW QUESTION 221

- (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 226

- (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 228

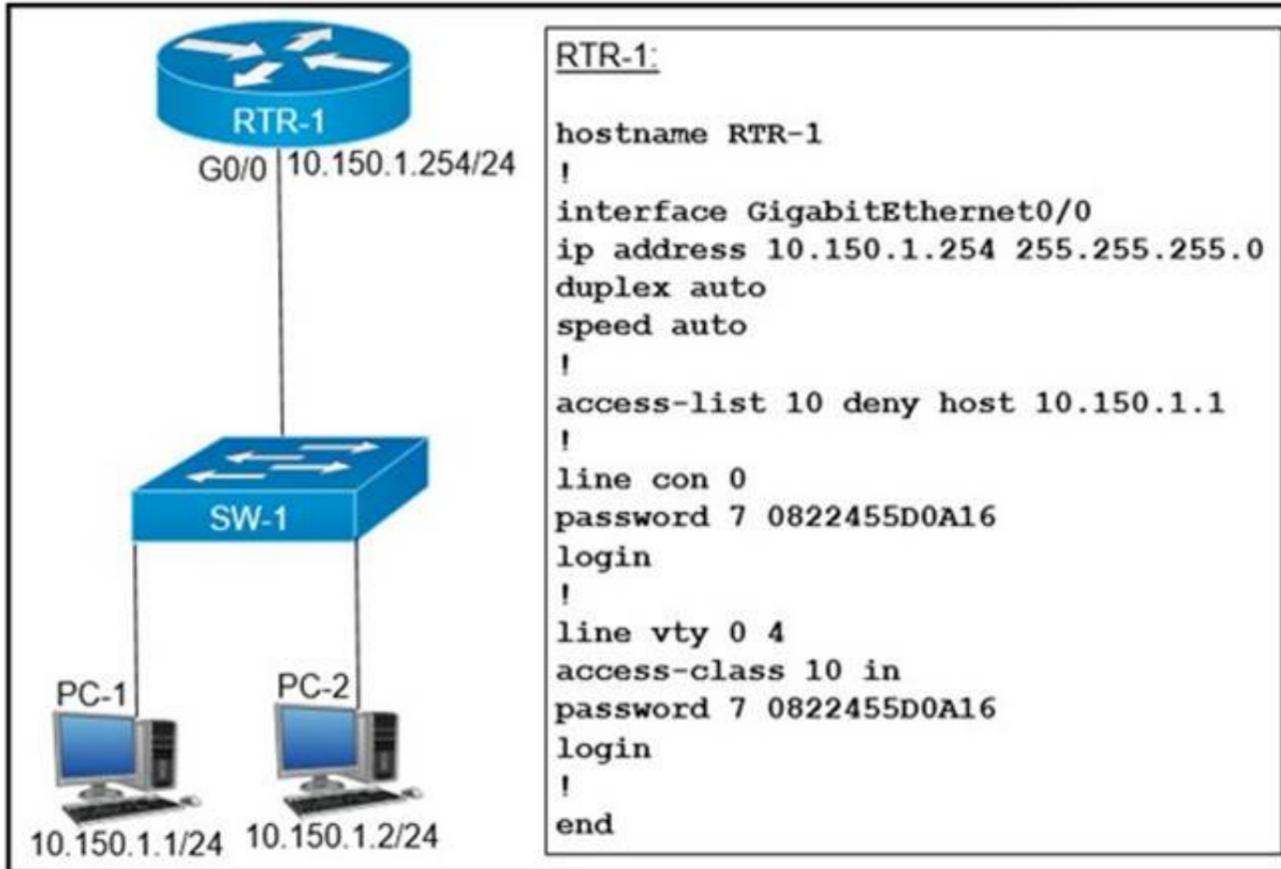
- (Topic 2)
 Which network plane is centralized and manages routing decisions?

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

Answer: C

NEW QUESTION 233

- (Topic 2)
 Refer to the exhibit.



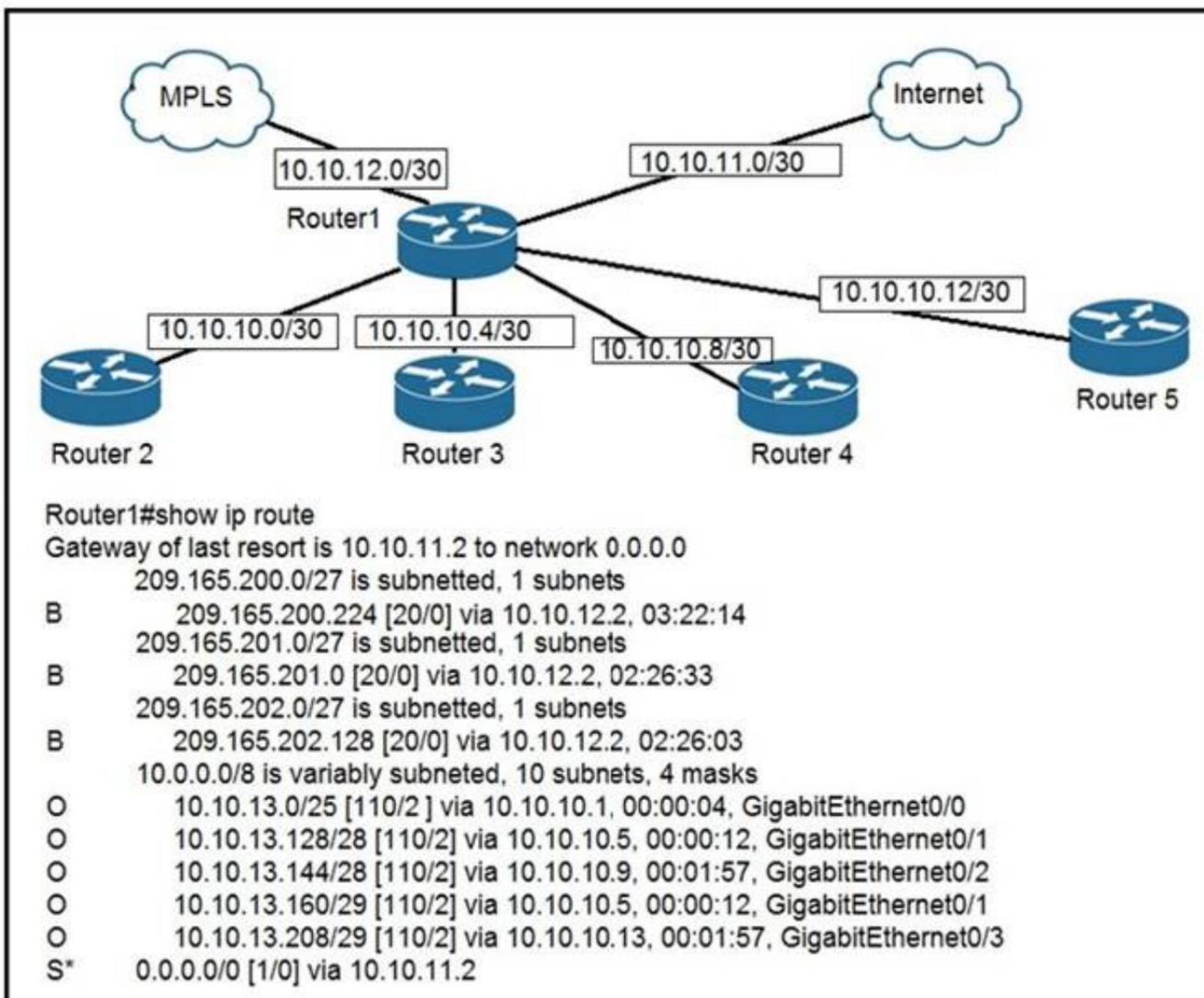
An access list is created to deny Telnet access from host PC-1 to RTR-1 and allow access from all other hosts A Telnet attempt from PC-2 gives this message: "% Connection refused by remote host" Without allowing Telnet access from PC-1, which action must be taken to permit the traffic?

- A. Add the access-list 10 permit any command to the configuration
- B. Remove the access-class 10 in command from line vty 0.4.
- C. Add the ip access-group 10 out command to interface g0/0.
- D. Remove the password command from line vty 0 4.

Answer: A

NEW QUESTION 234

- (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 239

- (Topic 2)

Refer to the exhibit.

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

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

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

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

Answer: A

Explanation:

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

NEW QUESTION 240

- (Topic 2)

A router running EIGRP has learned the same route from two different paths. Which parameter does the router use to select the best path?

- A. cost
- B. administrative distance
- C. metric
- D. as-path

Answer: C

Explanation:

If a router learns two different paths for the same network from the same routing protocol, it has to decide which route is better and will be placed in the routing table. Metric is the measure used to decide which route is better (lower number is better). Each routing protocol uses its own metric. For example, RIP uses hop counts as a metric, while OSPF uses cost.

NEW QUESTION 241

- (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 209.165.200.250, Serial0/0/0
O   172.16.3.0/28 [110/1] via 209.165.200.254, 00:00:28, Serial0/0/1
   209.165.200.0/24 is variably subnetted, 6 subnets, 2 masks
C   209.165.200.244/30 is directly connected, Serial0/1/0
L   209.165.200.245/32 is directly connected, Serial0/1/0
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
```

A packet is being sent across router R1 to host 172.16.0.14. What is the destination route for the packet?

- A. 209.165.200.254 via Serial0/0/1
- B. 209.165.200.254 via Serial0/0/0
- C. 209.165.200.246 via Serial0/1/0
- D. 209.165.200.250 via Serial0/0/0

Answer: A

NEW QUESTION 244

- (Topic 2)

What is the function of a server?

- A. It transmits packets between hosts in the same broadcast domain.
- B. It provides shared applications to end users.
- C. It routes traffic between Layer 3 devices.
- D. It Creates security zones between trusted and untrusted networks

Answer: B

NEW QUESTION 249

- (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 252

- (Topic 2)

Which action must be taken to assign a global unicast IPv6 address on an interface that is derived from the MAC address of that interface?

- A. configure a stateful DHCPv6 server on the network
- B. enable SLAAC on an interface
- C. disable the EUI-64 bit process
- D. explicitly assign a link-local address

Answer: A

NEW QUESTION 257

- (Topic 2)

What is a function of a Layer 3 switch?

- A. move frames between endpoints limited to IP addresses
- B. transmit broadcast traffic when operating in Layer 3 mode exclusively
- C. forward Ethernet frames between VLANs using only MAC addresses
- D. flood broadcast traffic within a VLAN

Answer: A

NEW QUESTION 260

- (Topic 2)

What is a difference between RADIUS and TACACS+?

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

Answer: C

NEW QUESTION 261

- (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 263

- (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 than traditional 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 268

- (Topic 2)

What are two recommendations for protecting network ports from being exploited when located in an office space outside of an IT closer? (Choose two.)

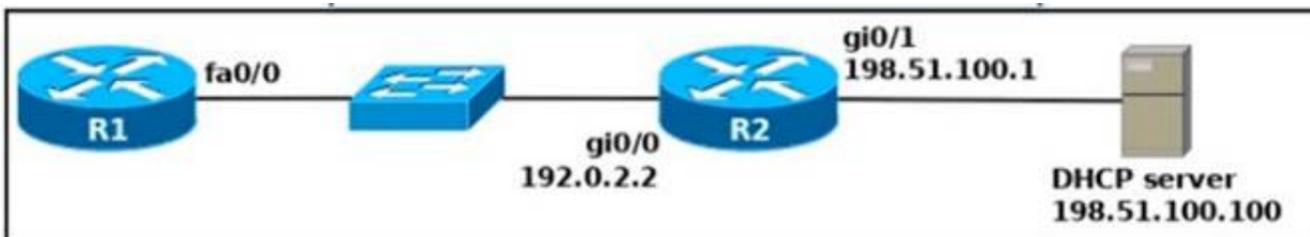
- A. enable the PortFast feature on ports
- B. implement port-based authentication
- C. configure static ARP entries
- D. configure ports to a fixed speed
- E. shut down unused ports

Answer: BE

NEW QUESTION 272

- (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 fa0/0 R1(config-if)# ip helper-address 198.51.100.100
- B. R2(config)# interface gi0/0 R2(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 fa0/0 R1(config-if)# ip helper-address 192.0.2.2

Answer: BC

NEW QUESTION 276

- (Topic 2)

An engineer needs to configure LLDP to send the port description time length value (TLV). What command sequence must be implemented?

- A. switch(config-line)#lldp port-description
- B. switch(config)#lldp port-description
- C. switch(config-if)#lldp port-description
- D. switch#lldp port-description

Answer: B

NEW QUESTION 279

- (Topic 1)

Which access layer threat-mitigation technique provides security based on identity?

- A. Dynamic ARP Inspection
- B. using a non-default native VLAN
- C. 802.1x
- D. DHCP snooping

Answer: C

NEW QUESTION 284

- (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 286

DRAG DROP - (Topic 1)

Drag and drop the SNMP components from the left onto the descriptions on the right.

MIB	collection of variables that can be monitored
SNMP agent	unsolicited message
SNMP manager	responds to status requests and requests for information about a device
SNMP trap	resides on an NMS

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

MIB	MIB
SNMP agent	SNMP manager
SNMP manager	SNMP trap
SNMP trap	SNMP agent

NEW QUESTION 288

- (Topic 1)

An engineering team asks an implementer to configure syslog for warning conditions and error conditions. Which command does the implementer configure to achieve the desired result?

- A. logging trap 5
- B. logging trap 2
- C. logging trap 4
- D. logging trap 3

Answer: C

NEW QUESTION 293

- (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 297

- (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 302

- (Topic 1)

Which 802.11 frame type is association response?

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

Answer: A

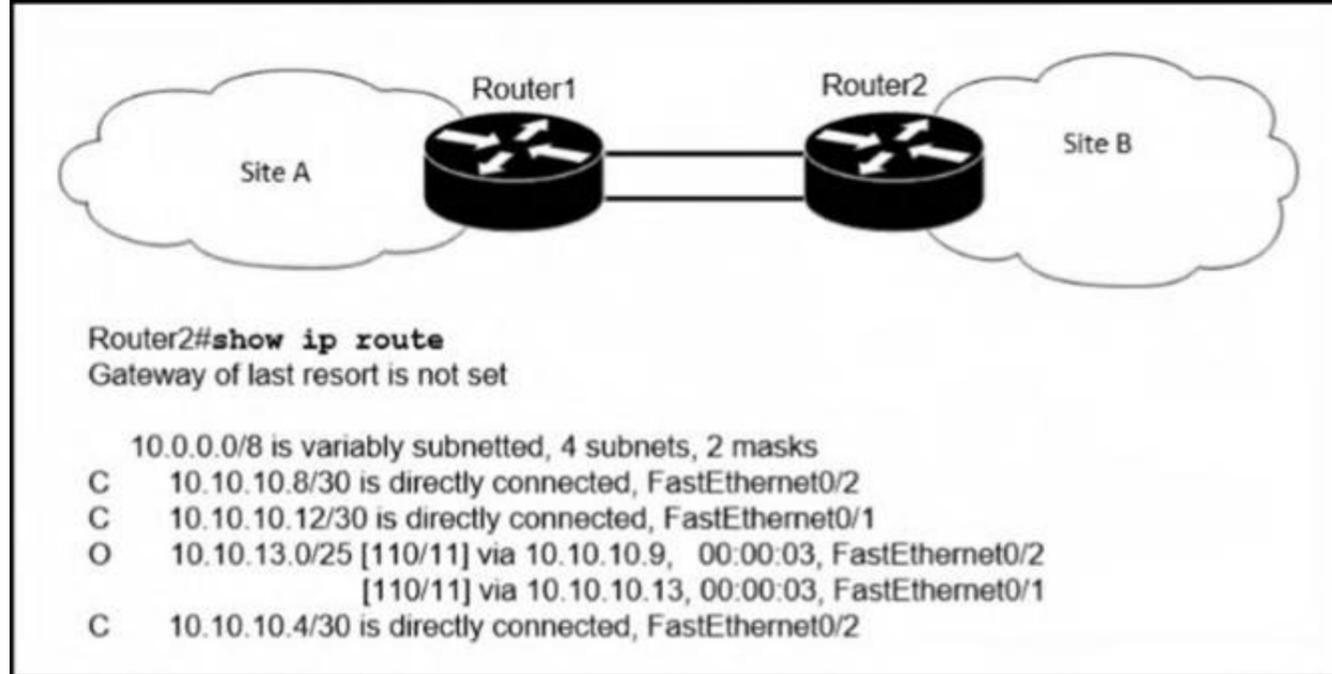
Explanation:

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

NEW QUESTION 303

- (Topic 1)

Refer to the exhibit.



```

Router2#show ip route
Gateway of last resort is not set

 10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C   10.10.10.8/30 is directly connected, FastEthernet0/2
C   10.10.10.12/30 is directly connected, FastEthernet0/1
O   10.10.13.0/25 [110/11] via 10.10.10.9, 00:00:03, FastEthernet0/2
    [110/11] via 10.10.10.13, 00:00:03, FastEthernet0/1
C   10.10.10.4/30 is directly connected, FastEthernet0/2
    
```

If OSPF Is running on this network, how does Router2 handle traffic from Site B to 10.10.13.128/25 at Site A?

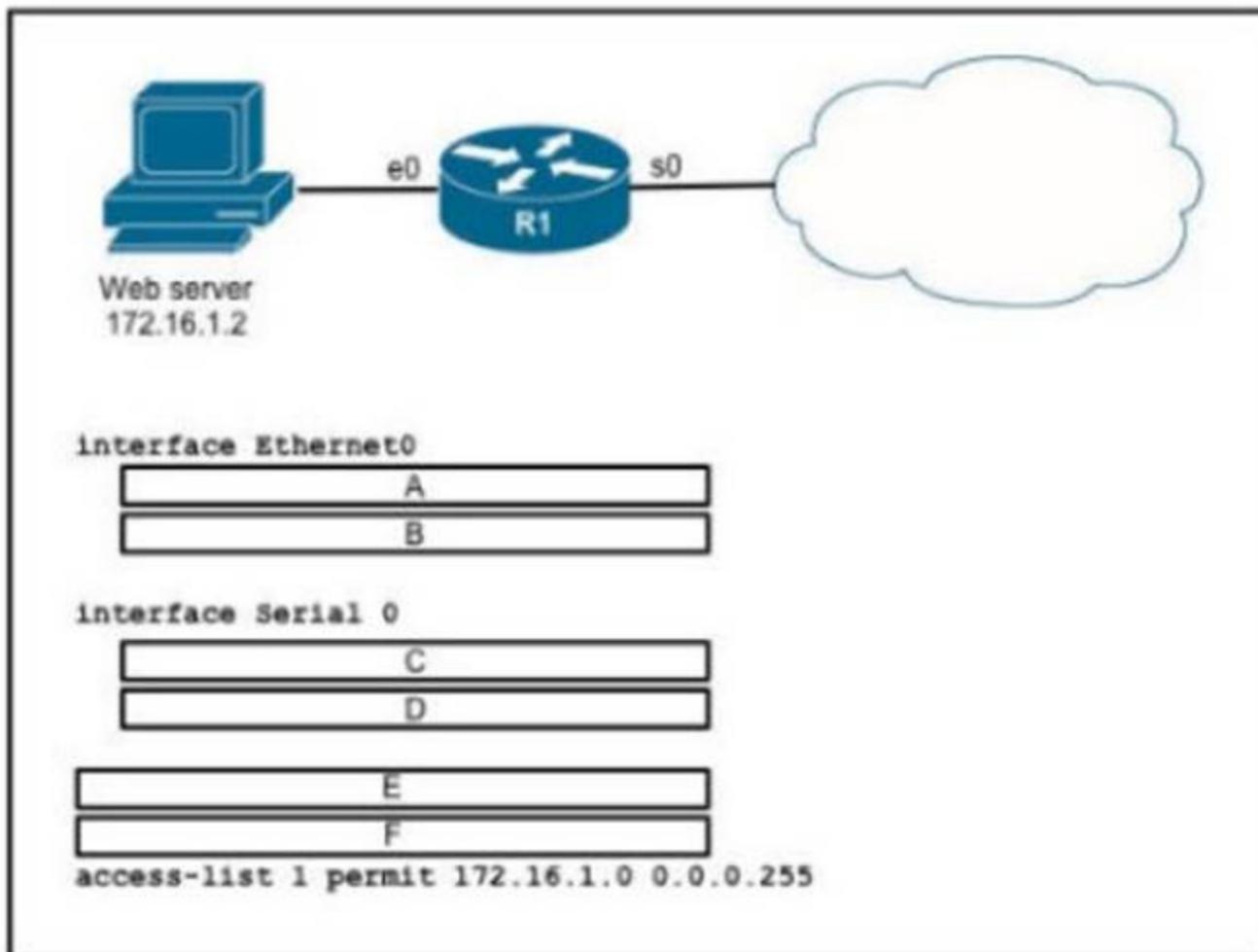
- A. It load-balances traffic out of Fa0/1 and Fa0/2.
- B. It is unreachable and discards the traffic.
- C. It sends packets out of interface Fa0/2.
- D. It sends packets out of interface Fa0/1.

Answer: B

NEW QUESTION 308

DRAG DROP - (Topic 1)

Refer to the exhibit.



An engineer is configuring the router to provide static NAT for the webserver Drag and drop the configuration commands from the left onto the letters that correspond to its position in the configuration on the right.

ip address 172.16.1.1 255.255.255.0	position A
ip address 45.83.2.214 255.255.255.240	position B
ip nat inside	position C
ip nat inside source list 1 interface s0 overload	position D
ip nat inside source static tcp 172.16.1.2 80 45.83.2.214 80 extendable	position E
ip nat outside	position F

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

ip address 172.16.1.1 255.255.255.0	ip address 172.16.1.1 255.255.255.0
ip address 45.83.2.214 255.255.255.240	ip nat inside
ip nat inside	ip address 45.83.2.214 255.255.255.240
ip nat inside source list 1 interface s0 overload	ip nat outside
ip nat inside source static tcp 172.16.1.2 80 45.83.2.214 80 extendable	ip nat inside source static tcp 172.16.1.2 80 45.83.2.214 80 extendable
ip nat outside	ip nat inside source list 1 interface s0 overload

NEW QUESTION 313

- (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 the interface. 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 (DHCP Server). 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 316

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.

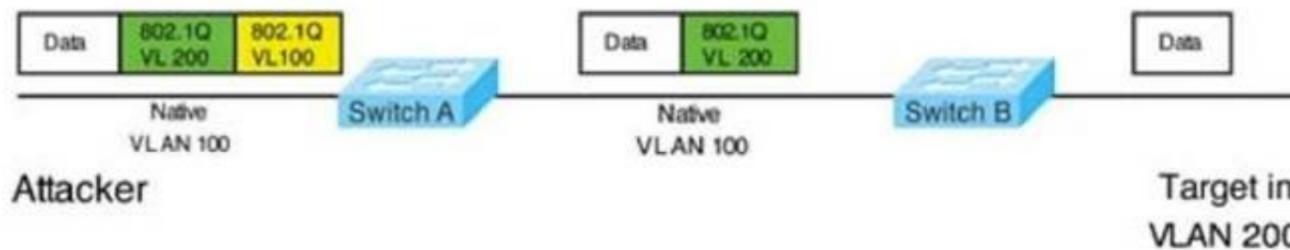
Configure BPDU guard.	802.1q double tagging
Configure dynamic ARP inspection.	ARP spoofing
Configure root guard.	unwanted superior BPDUs
Configure VACL.	unwanted BPDUs on PortFast-enabled interfaces

- 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 a 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 320

- (Topic 1)

What is a DNS lookup operation?

- A. DNS server pings the destination to verify that it is available
- B. serves requests over destination port 53
- C. DNS server forwards the client to an alternate IP address when the primary IP is down
- D. responds to a request for IP address to domain name resolution to the DNS server

Answer: D

NEW QUESTION 321

- (Topic 1)

Which statement identifies the functionality of virtual machines?

- A. Virtualized servers run most efficiently when they are physically connected to a switch that is separate from the hypervisor
- B. The hypervisor can virtualize physical components including CP
- C. memory, and storage
- D. Each hypervisor can support a single virtual machine and a single software switch

E. The hypervisor communicates on Layer 3 without the need for additional resources

Answer: B

NEW QUESTION 324

- (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 325

- (Topic 1)

What describes the operation of virtual machines?

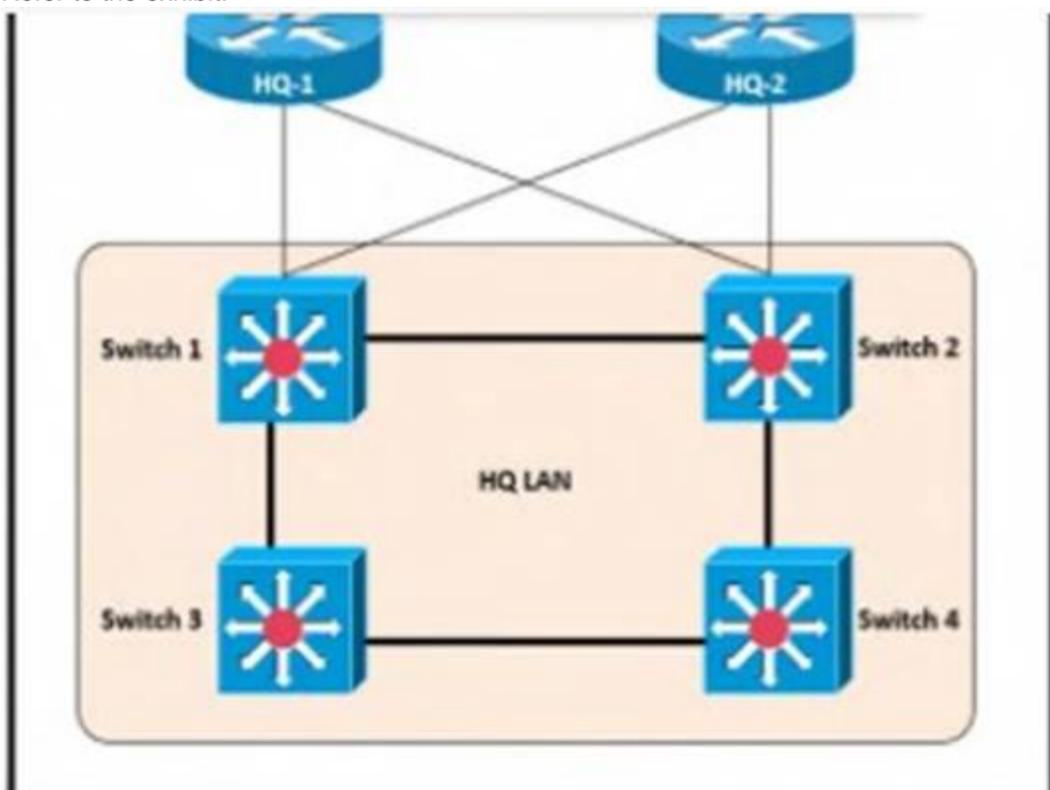
- A. Virtual machines are responsible for managing and allocating host hardware resources
- B. In a virtual machine environment, physical servers must run one operating system at a time.
- C. Virtual machines are the physical hardware that support a virtual environment.
- D. Virtual machines are operating system instances that are decoupled from server hardware

Answer: B

NEW QUESTION 326

- (Topic 1)

Refer to the exhibit.



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

- Switch 1: 0C:E0:38:58:15:77
- Switch 2: 0C:0E:15:22:1A:61
- Switch 3: 0C:0E:15:1D:3C:9A
- Switch 4: 0C:E0:19:A1:4D:16

- 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 available, the MAC address is used to determine the root bridge. Because S3 has the lowest MAC address, S3 becomes the root bridge.

NEW QUESTION 330

- (Topic 1)

When configuring a WLAN with WPA2 PSK in the Cisco Wireless LAN Controller GUI, which two formats are available to select? (Choose two)

- A. ASCII
- B. base64
- C. binary
- D. decimal
- E. hexadecimal

Answer: AE

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_01010001.html

NEW QUESTION 332

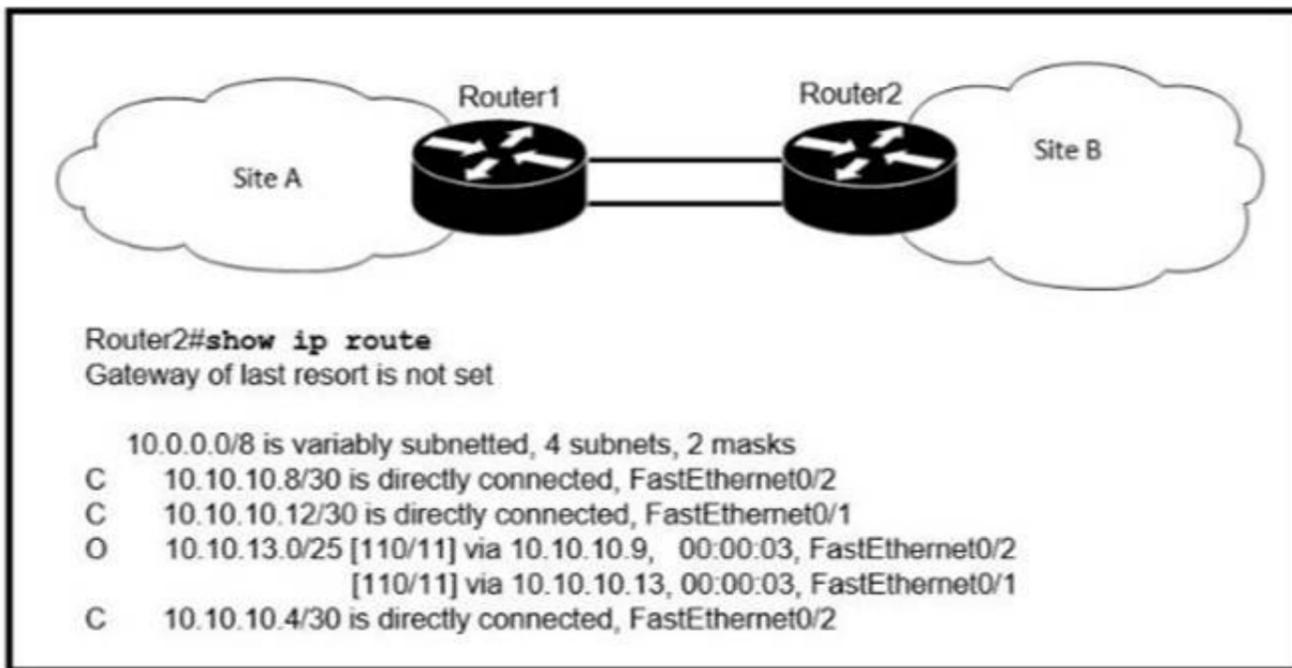
- (Topic 1)
 What uses HTTP messages to transfer data to applications residing on different hosts?

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

Answer: D

NEW QUESTION 336

- (Topic 1)
 Refer to the exhibit.



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

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

Answer: C

Explanation:

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

NEW QUESTION 341

- (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 346

- (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 348

- (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 350

- (Topic 1)

What is a benefit of using a Cisco Wireless LAN Controller?

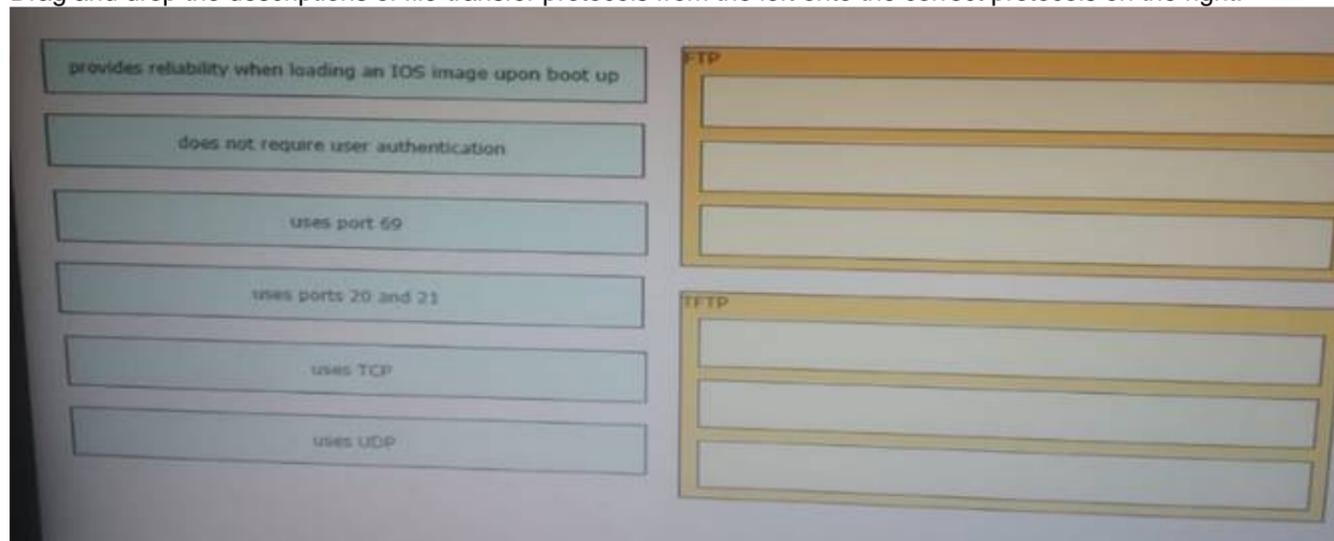
- A. Central AP management requires more complex configurations
- B. Unique SSIDs cannot use the same authentication method
- C. It supports autonomous and lightweight APs
- D. It eliminates the need to configure each access point individually

Answer: D

NEW QUESTION 354

DRAG DROP - (Topic 1)

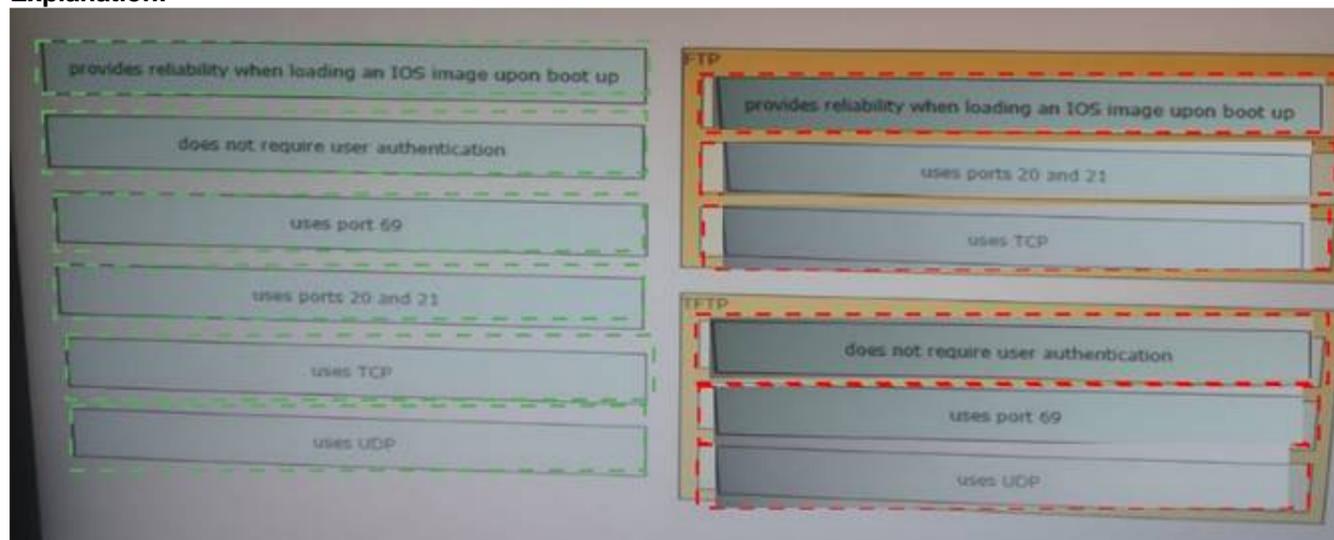
Drag and drop the descriptions of file-transfer protocols from the left onto the correct protocols on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 358

- (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 360

- (Topic 1)

Which resource is able to be shared among virtual machines deployed on the same physical server?

- A. disk
- B. applications
- C. VM configuration file
- D. operating system

Answer: C

NEW QUESTION 362

- (Topic 1)

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

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

Answer: D

NEW QUESTION 367

DRAG DROP - (Topic 1)

Drag and drop the WLAN components from the left onto the correct descriptions on the right.

access point	device that manages access points
virtual interface	device that provides Wi-Fi devices with a connection to a wired network
dynamic interface	used for out of band management of a WLC
service port	used to support mobility management of the WLC
wireless LAN controller	applied to the WLAN for wireless client communication

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

access point	wireless LAN controller
virtual interface	access point
dynamic interface	service port
service port	virtual interface
wireless LAN controller	dynamic interface

NEW QUESTION 372

- (Topic 1)

Which type of attack can be mitigated by dynamic ARP inspection?

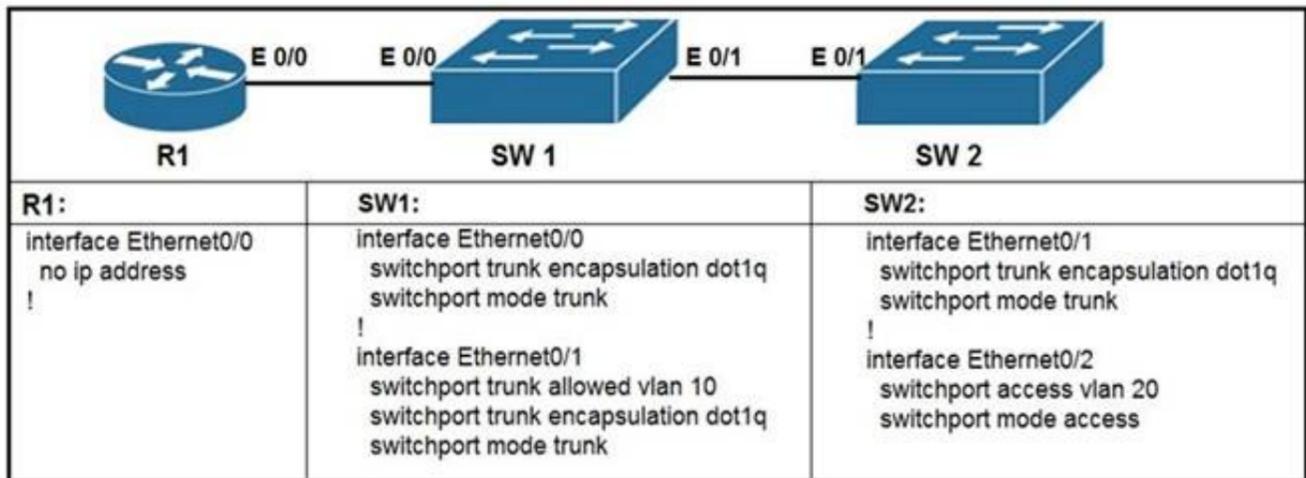
- A. worm
- B. malware
- C. DDoS
- D. man-in-the-middle

Answer: D

NEW QUESTION 375

- (Topic 1)

Refer to the exhibit.



What commands are needed to add a subinterface to Ethernet0/0 on R1 to allow for VLAN 20, with IP address 10.20.20.1/24?

- A. R1(config)#interface ethernet0/0 R1(config)#encapsulation dot1q 20R1(config)#ip address 10.20.20.1 255.255.255.0
- B. R1(config)#interface ethernet0/0.20 R1(config)#encapsulation dot1q 20R1(config)#ip address 10.20.20.1 255.255.255.0
- C. R1(config)#interface ethernet0/0.20 R1(config)#ip address 10.20.20.1 255.255.255.0
- D. R1(config)#interface ethernet0/0 R1(config)#ip address 10.20.20.1 255.255.255.0

Answer: B

NEW QUESTION 380

- (Topic 1)

What criteria is used first during the root port selection process?

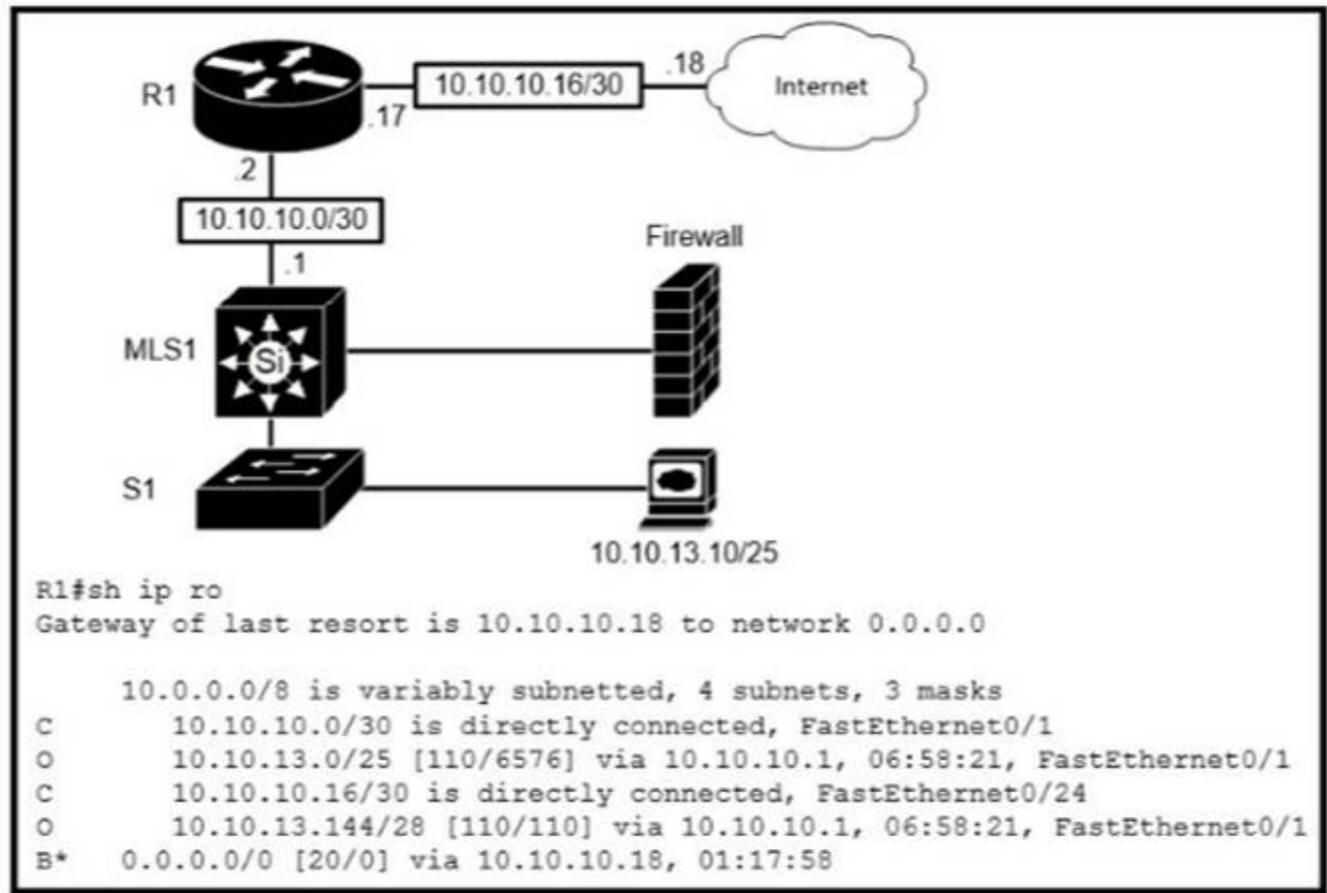
- A. local port ID
- B. lowest path cost to the root bridge
- C. lowest neighbor's bridge ID
- D. lowest neighbor's port ID

Answer: B

NEW QUESTION 384

- (Topic 1)

Refer to the exhibit.



Which type of route does R1 use to reach host 10.10.13.10/32?

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

Answer: D

Explanation:

From the output, we see R1 will use the entry "O 10.10.13.0/25 [110/4576] via 10.10.10.1, ..." to reach host 10.10.13.10. This is a network route. Note: "B* 0.0.0.0/0..." is a default route.

NEW QUESTION 389

- (Topic 1)

What is recommended for the wireless infrastructure design of an organization?

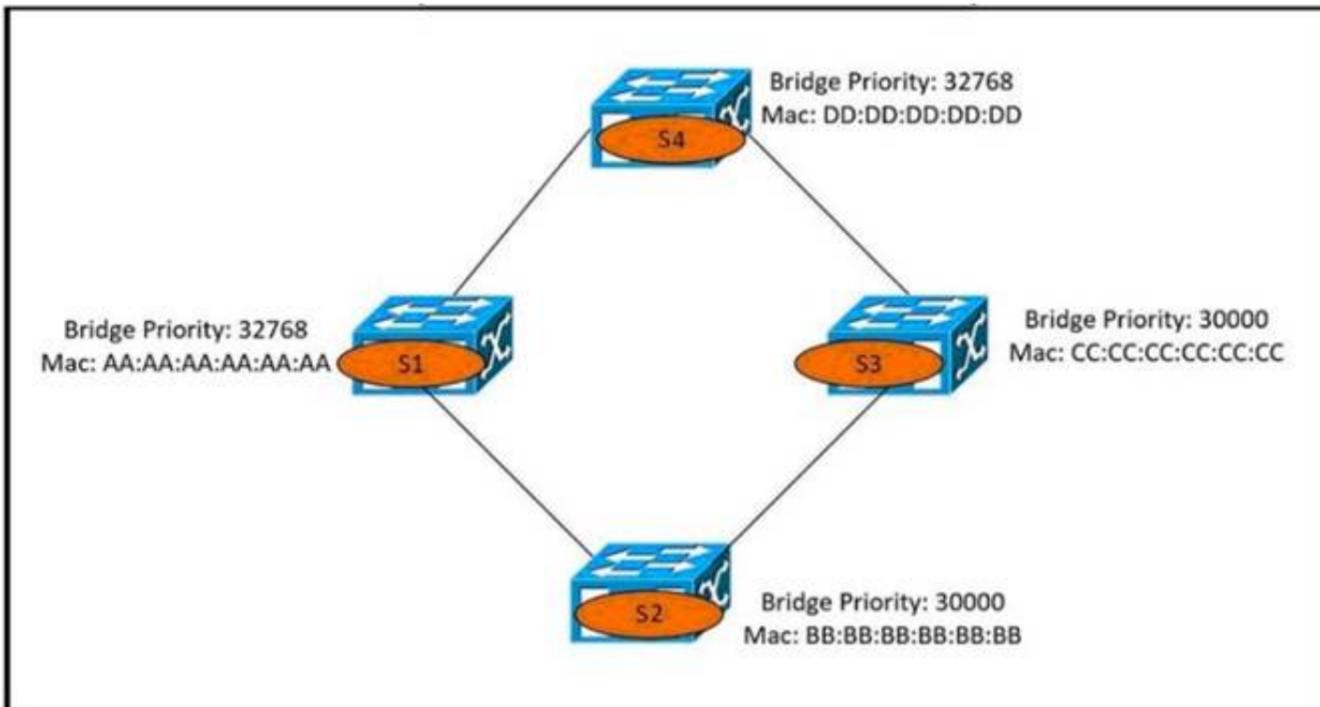
- A. group access points together to increase throughput on a given channel
- B. configure the first three access points are configured to use Channels 1, 6, and 11
- C. include a least two access points on nonoverlapping channels to support load balancing
- D. assign physically adjacent access points to the same Wi-Fi channel

Answer: B

NEW QUESTION 392

- (Topic 1)

Refer to the exhibit.



Which switch becomes the root bridge?

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

Answer: B

NEW QUESTION 393

- (Topic 1)

Which two encoding methods are supported by REST APIs? (Choose two)

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

Answer: BE

Explanation:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/2-x/rest_cfg/2_1_x/b_Cisco_APIC_REST_API_Configuration_Guide/b_Cisco_APIC_REST_API_Configuration_Guide_chapter_01.html

Reference:

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/5_x/rest_api_config/b_Cisco_N1KV_VMware_REST_API_Config_5x/b_Cisco_N1KV_VMware_REST_API_Config_5x_chapter_010.pdf

The Application Policy Infrastructure Controller (APIC) REST API is a programmatic interface that uses REST architecture. The API accepts and returns HTTP (not enabled by default) or HTTPS messages that contain JavaScript Object Notation (JSON) or Extensible Markup Language (XML) documents.

NEW QUESTION 396

DRAG DROP - (Topic 1)

Drag and drop the QoS congestion management terms from the left onto the description on the right.

CBWQ	places packets into one of four priority-based queues
CQ	provides guaranteed bandwidth to a specified class of traffic
FIFO	provides minimum guaranteed bandwidth to one or more flows
PQ	services a specified number of bytes in one queue before continuing to the next queue
WFQ	uses store-and-forward queueing

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

NEW QUESTION 399

- (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 403

- (Topic 1)

A network engineer must back up 20 network router configurations globally within a customer environment. Which protocol allows the engineer to perform this function using the Cisco IOS MIB?

- A. CDP
- B. SNMP
- C. SMTP
- D. ARP

Answer: B

Explanation:

SNMP is an application-layer protocol that provides a message format for communication between SNMP managers and agents. SNMP provides a standardized framework and a common language used for the monitoring and management of devices in a network. The SNMP framework has three parts: + An SNMP

manager+ An SNMP agent+ A Management Information Base (MIB)The Management Information Base (MIB) is a virtual information storage area for network management information, which consists of collections of managed objects.With SNMP, the network administrator can send commands to multiple routers to do the backup

NEW QUESTION 405

- (Topic 1)

Which function is performed by the collapsed core layer in a two-tier architecture?

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

Answer: A

NEW QUESTION 410

- (Topic 1)

Which CRUD operation modifies an existing table or view?

- A. read
- B. create
- C. replace
- D. update

Answer: D

NEW QUESTION 412

- (Topic 1)

Refer to the exhibit.

```

R1# show ip route
Codes: C - connected, S - static, I - IGRP, 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, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default
       U - per-user static route, o - ODR
Gateway of last resort is not set
C    1.0.0.0/8 is directly connected, Loopback0
     10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
O    10.0.1.3/32 [110/100] via 10.0.1.3, 00:39:08, Serial0
C    10.0.1.0/24 is directly connected, Serial0
O    10.0.1.5/32 [110/5] via 10.0.1.50, 00:39:08, Serial0
O    10.0.1.4/32 [110/10] via 10.0.1.4, 00:39:08, Serial0
    
```

What is the next hop address for traffic that is destined to host 10.0.1.5?

- A. 10.0.1.3
- B. 10.0.1.50
- C. 10.0.1.4
- D. Loopback D

Answer: B

NEW QUESTION 416

- (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
    
```

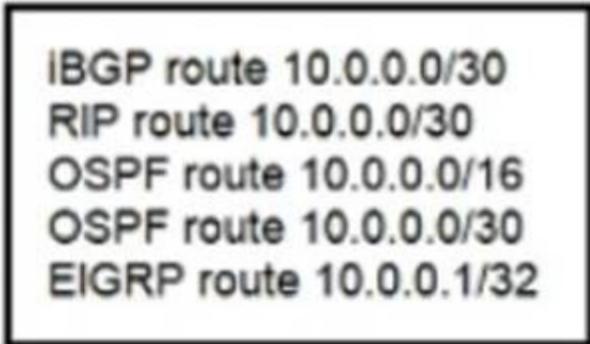
What is the result if Gig1/11 receives an STP BPDU?

- 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 421

- (Topic 1)
 Refer to the exhibit.



A router reserved these five routes from different routing information sources. Which two routes does the router install in its routing table? (Choose two)

- A. RIP route 10.0.0.0/30
- B. iBGP route 10.0.0.0/30
- C. OSPF route 10.0.0.0/30
- D. EIGRP route 10.0.0.1/32
- E. OSPF route 10.0.0.0/16

Answer: CD

NEW QUESTION 425

- (Topic 1)
 Which device performs stateful inspection of traffic?

- A. firewall
- B. switch
- C. access point
- D. wireless controller

Answer: A

NEW QUESTION 428

- (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 432

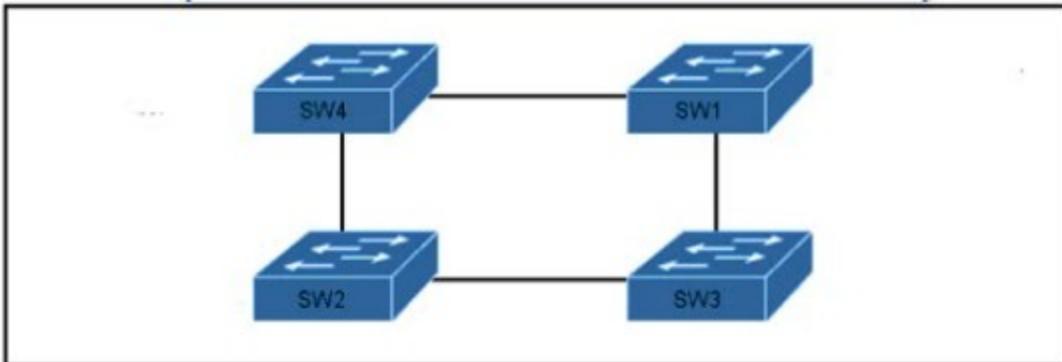
- (Topic 1)
 What does a switch use to build its MAC address table?

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

Answer: D

NEW QUESTION 433

- (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 438

- (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 441

- (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.)

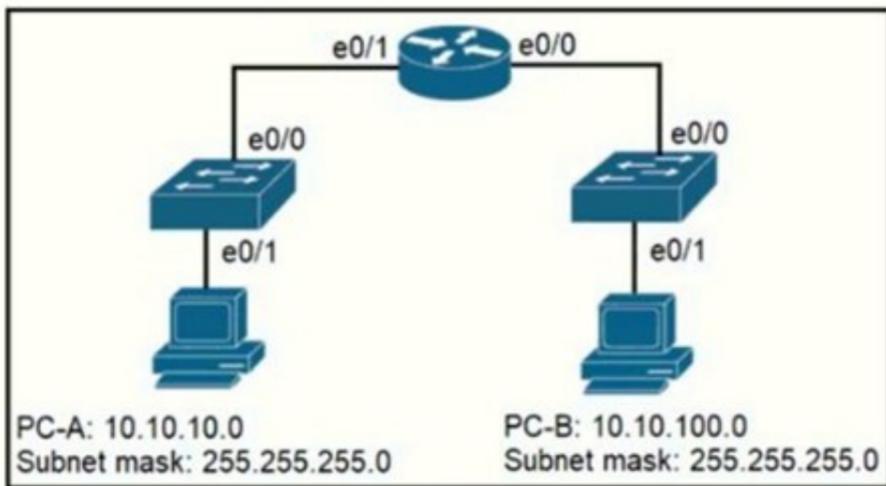
- A. 5GHz provides increased network capacity with up to 23 nonoverlapping channels.
- B. For maximum throughput, the WLC is configured to dynamically set adjacent access points to the same channel.
- C. 5GHz channel selection requires an autonomous access point.
- D. Adjacent cells with overlapping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

Answer: BE

NEW QUESTION 443

- (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 444

- (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 445

- (Topic 1)

Which network allows devices to communicate without the need to access the Internet?

- A. 1729.0.0/16
- B. 172.28.0.0/16
- C. 192.0.0.0/8
- D. 209.165.201.0/24

Answer: B

Explanation:

The private ranges of each class of IPv4 are listed below:

Class A private IP address ranges from 10.0.0.0 to 10.255.255.255 Class B private IP address ranges from 172.16.0.0 to 172.31.255.255 Class C private IP address ranges from 192.168.0.0 to 192.168.255.255 Only the network 172.28.0.0/16 belongs to the private IP address (of class B).

NEW QUESTION 450

- (Topic 1)

What is the benefit of using FHRP?

- A. reduced management overhead on network routers
- B. balancing traffic across multiple gateways in proportion to their loads
- C. higher degree of availability
- D. reduced ARP traffic on the network

Answer: C

NEW QUESTION 451

- (Topic 1)

What is the primary purpose of a First Hop Redundancy Protocol?

- A. It allows directly connected neighbors to share configuration information.
- B. It allows a router to use bridge priorities to create multiple loop-free paths to a single destination.
- C. It reduces routing failures by allowing Layer 3 load balancing between OSPF neighbors that have the same link metric.
- D. It reduces routing failures by allowing more than one router to represent itself, as the default gateway of a network.

Answer: D

NEW QUESTION 454

- (Topic 1)

Which global command encrypt all passwords in the running configuration?

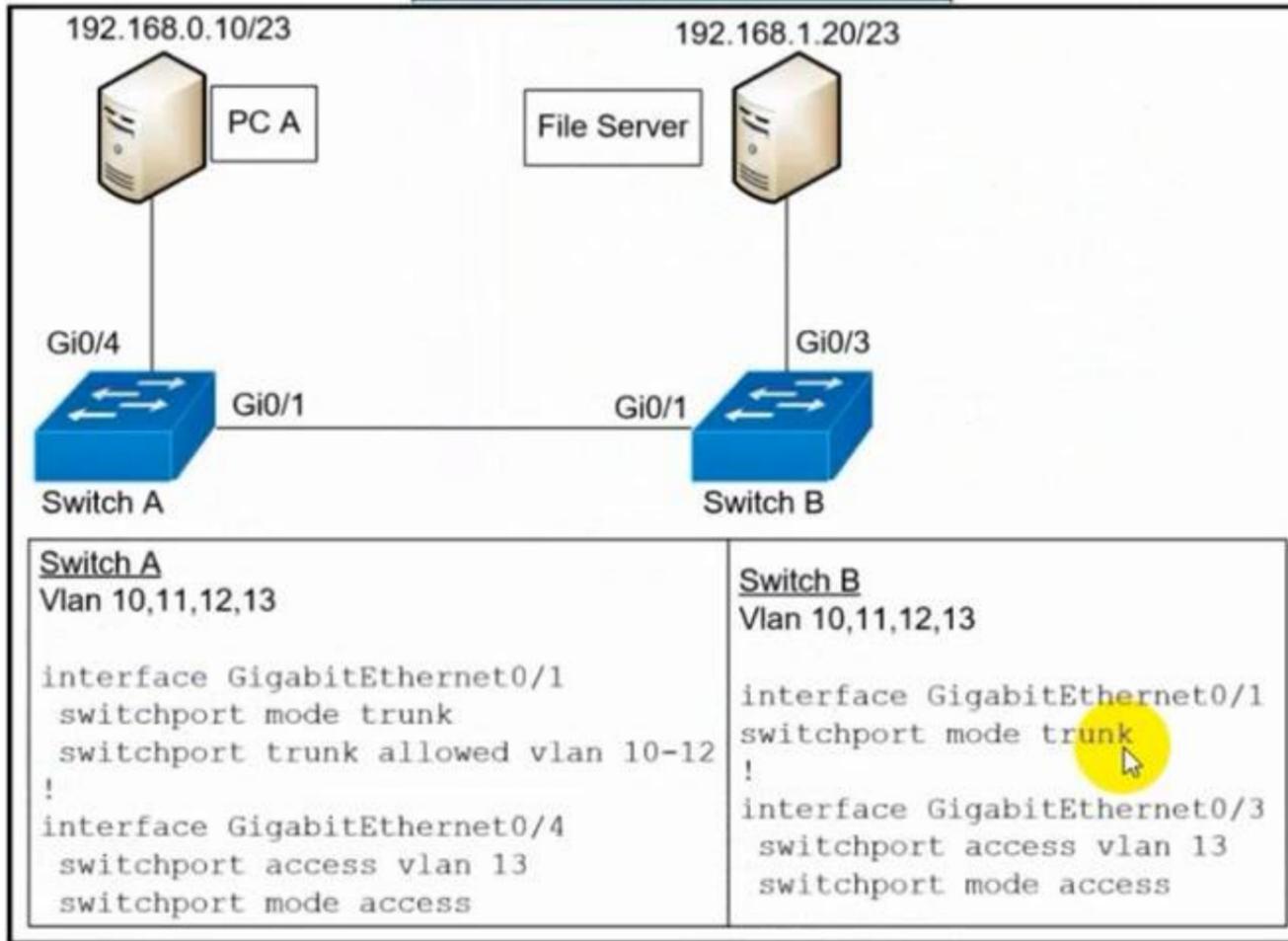
- A. password-encrypt
- B. enable password-encryption
- C. enable secret
- D. service password-encryption

Answer: B

NEW QUESTION 458

- (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 463

- (Topic 1)

What does a router do when configured with the default DNS lookup settings, and a URL is entered on the CLI?

- A. initiates a ping request to the URL
- B. prompts the user to specify the desired IP address
- C. continuously attempts to resolve the URL until the command is cancelled
- D. sends a broadcast message in an attempt to resolve the URL

Answer: D

NEW QUESTION 466

- (Topic 1)

A network administrator is asked to configure VLANS 2, 3 and 4 for a new implementation. Some ports must be assigned to the new VLANS with unused remaining. Which action should be taken for the unused ports?

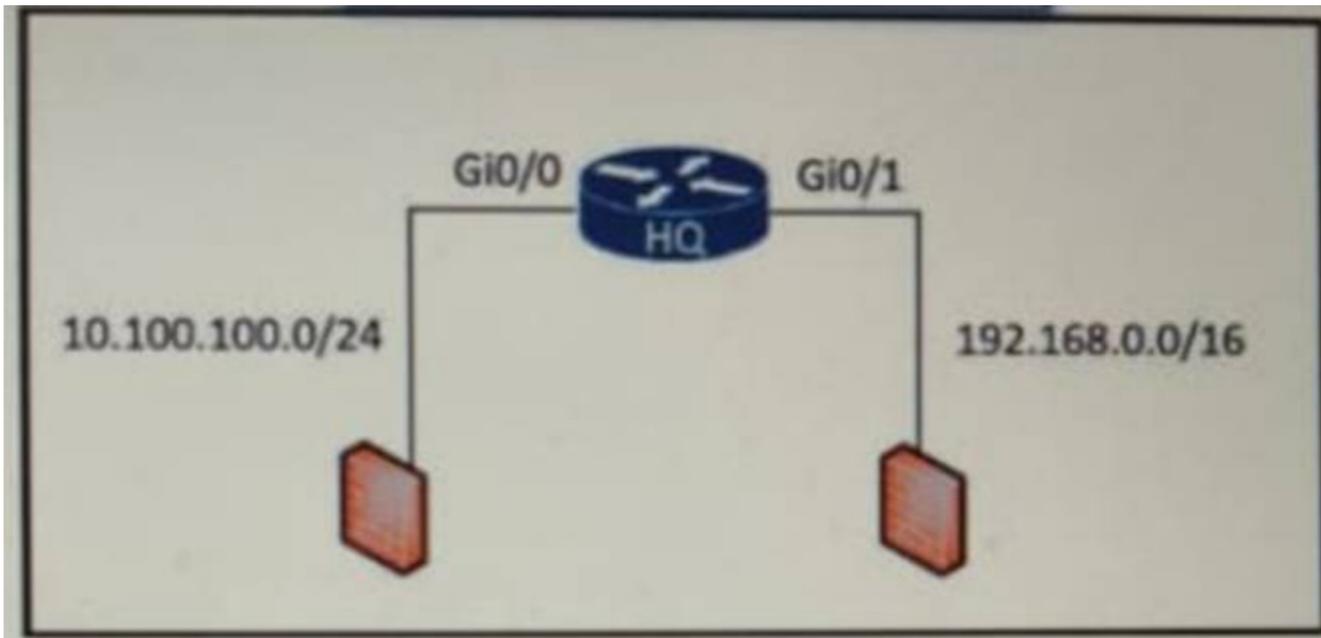
- A. configure port in the native VLAN
- B. configure ports in a black hole VLAN
- C. configure in a nondefault native VLAN
- D. configure ports as access ports

Answer: B

NEW QUESTION 469

- (Topic 1)

Refer to the exhibit.



An access list is required to permit traffic from any host on interface G0/0 and deny traffic from interface G/0/1. Which access list must be applied?

- ip access-list standard 99
 permit 10.100.100.0 0.0.0.255
 deny 192.168.0.0 0.0.255.255
- ip access-list standard 99
 permit 10.100.100.0 0.0.0.255
 deny 192.168.0.0 0.255.255.255
- ip access-list standard 199
 permit 10.100.100.0 0.0.0.255
 deny 192.168.0.0 0.255.255.255
- ip access-list standard 199
 permit 10.100.100.0 0.0.0.255
 deny 192.168.0.0 0.0.255.255

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

Answer: A

NEW QUESTION 472

- (Topic 1)

Which API is used in controller-based architectures to interact with edge devices?

- A. overlay
- B. northbound
- C. underlay
- D. southbound

Answer: D

NEW QUESTION 474

- (Topic 1)

What is a function of the Cisco DNA Center Overall Health Dashboard?

- A. It provides a summary of the top 10 global issues.
- B. It provides detailed activity logging for the 10 devices and users on the network.
- C. It summarizes the operational status of each wireless device on the network.
- D. It summarizes daily and weekly CPU usage for servers and workstations in the network.

Answer: A

NEW QUESTION 479

- (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 481

- (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 485

- (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 490

- (Topic 1)

Which feature on the Cisco Wireless LAN Controller when enabled restricts management access from specific networks?

- A. CPU ACL
- B. TACACS
- C. Flex ACL
- D. RADIUS

Answer: A

Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wlan-security/71978-acl-wlc.html>

NEW QUESTION 493

- (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 495

- (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?

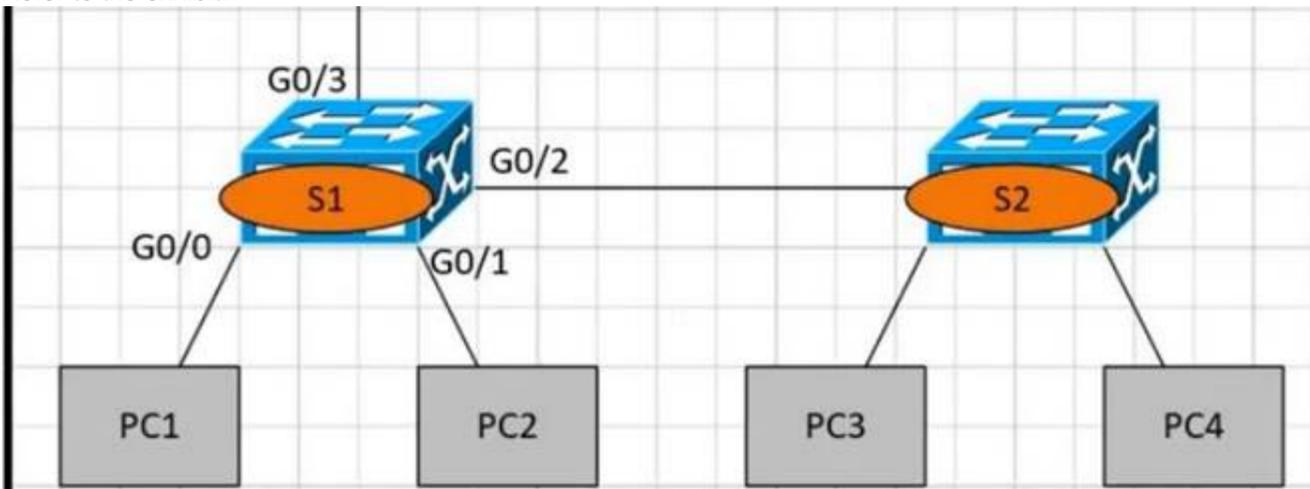
- A. Ansible
- B. JSON
- C. Chef
- D. Puppet

Answer: D

NEW QUESTION 497

- (Topic 1)

Refer to the exhibit.



PC1 is trying to ping PC3 for the first time and sends out an ARP to S1 Which action is taken by S1?

- A. It forwards it out G0/3 only
- B. It is flooded out every port except G0/0.
- C. It drops the frame.
- D. It forwards it out interface G0/2 only.

Answer: B

NEW QUESTION 498

- (Topic 1)

Which technology is used to improve web traffic performance by proxy caching?

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

Answer: A

NEW QUESTION 503

- (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 506

- (Topic 1)

By default, how Does EIGRP determine the metric of a route for the routing table?

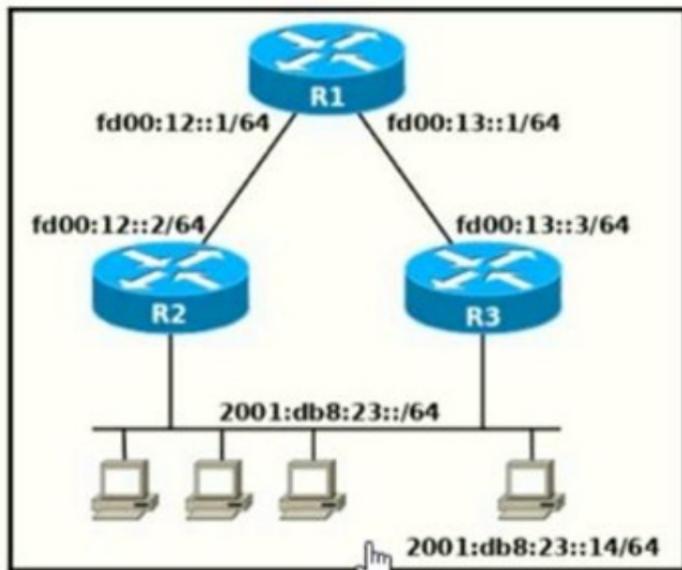
- A. it uses the bandwidth and delay values of the path to calculate the route metric
- B. it uses a default metric of 10 for all routes that are learned by the router
- C. it uses a reference Bandwidth and the actual bandwidth of the connected link to calculate the route metric
- D. it counts the number of hops between the receiving and destination routers and uses that value as the metric

Answer: A

NEW QUESTION 507

- (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:db8:23::/64 must be forwarded through router R2. Packets toward host 2001:db8:23::14 preferably must be forwarded through R3.

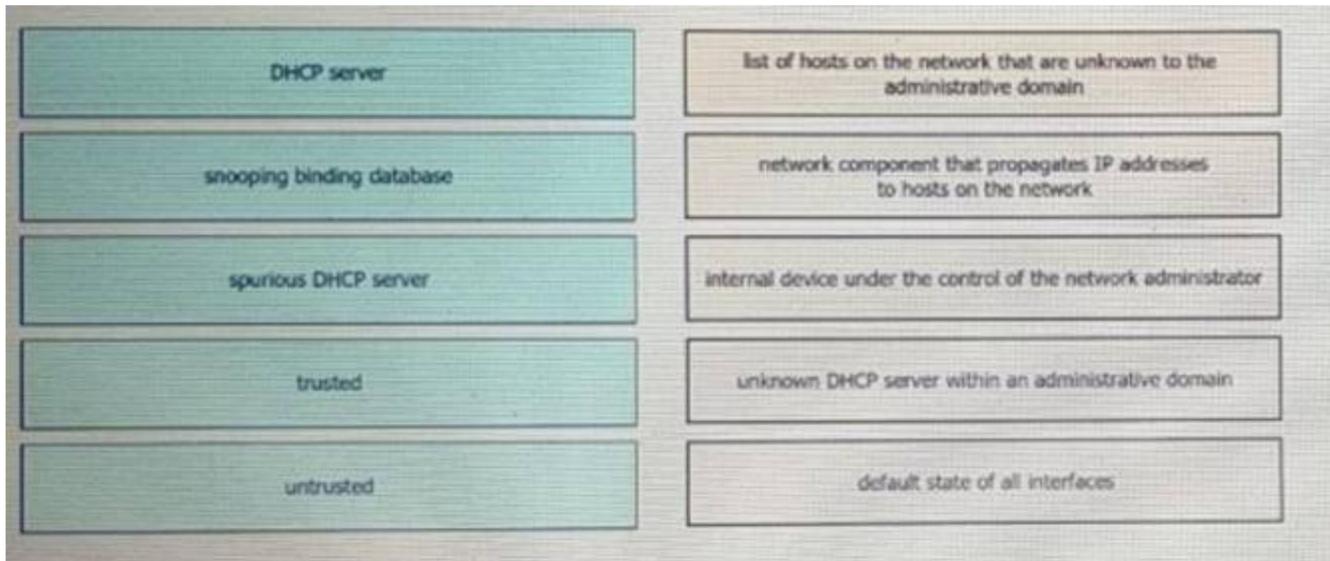
- A. ipv6 route 2001:db8:23::/128 fd00:12::2
- B. ipv6 route 2001:db8:23::14/128 fd00:13::3
- C. ipv6 route 2001:db8:23::14/64 fd00:12::2
- D. ipv6 route 2001:db8:23::/64 fd00:12::2
- E. ipv6 route 2001:db8:23::14/64 fd00:12::2 200

Answer: DE

NEW QUESTION 511

DRAG DROP - (Topic 1)

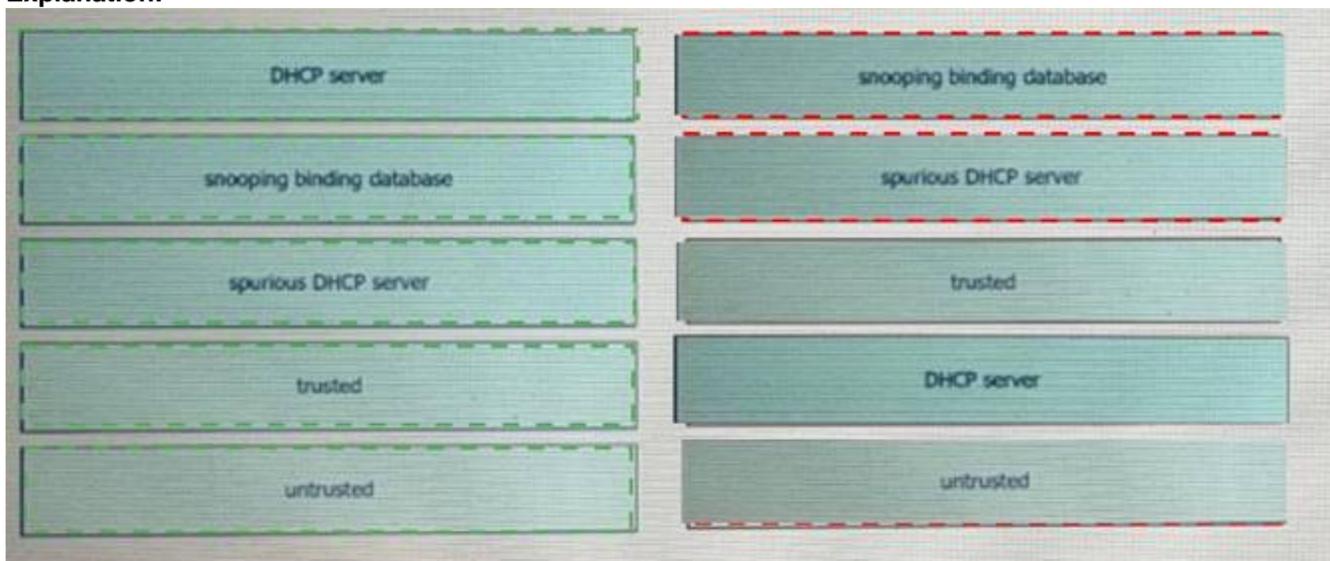
Drag and drop the DHCP snooping terms from the left onto the descriptions on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 513

- (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 514

- (Topic 1)

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

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

Answer: C

Explanation:

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

NEW QUESTION 518

- (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
    
```

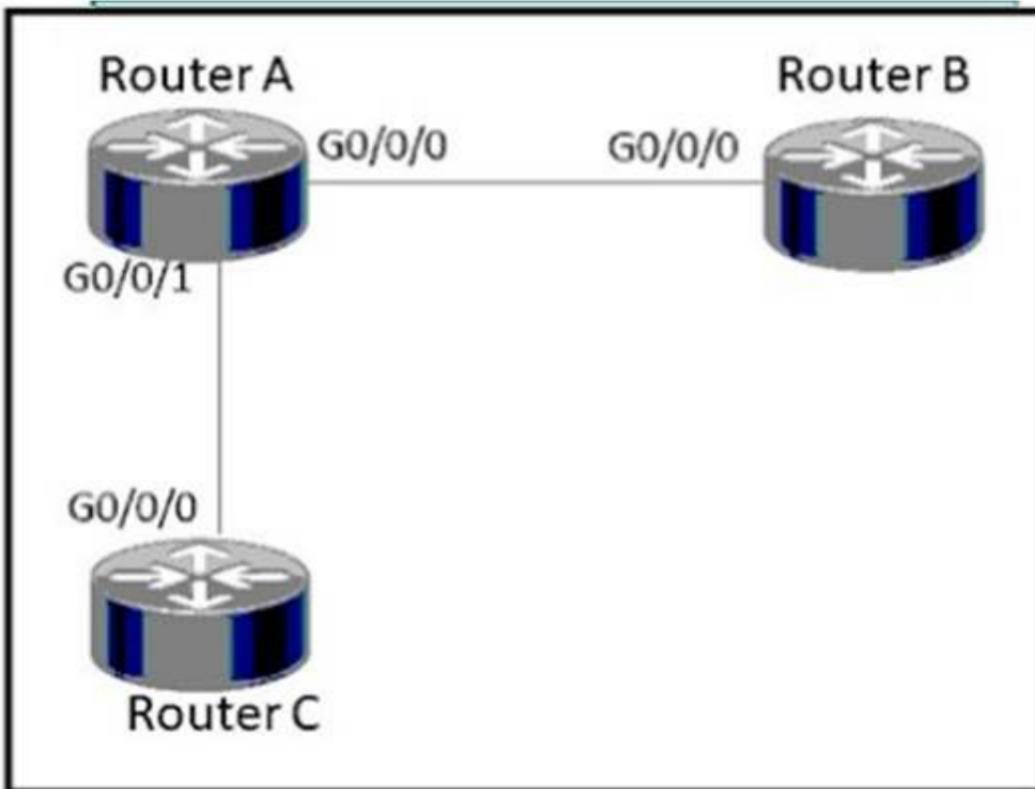
What is the metric of the route to the 192.168.10.33/28 subnet?

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

Answer: E

NEW QUESTION 523

- (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 528

- (Topic 1)

What is the difference in data transmission delivery and reliability between TCP and UDP?

- A. TCP transmits data at a higher rate and ensures packet deliver
- B. UDP retransmits lost data to ensure applications receive the data on the remote end.
- C. UDP sets up a connection between both devices before transmitting dat
- D. TCP uses the three-way handshake to transmit data with a reliable connection.
- E. UDP is used for multicast and broadcast communicatio
- F. TCP is used for unicast communication and transmits data at a higher rate with error checking.
- G. TCP requires the connection to be established before transmitting dat
- H. UDP transmits data at a higher rate without ensuring packet delivery.

Answer: D

NEW QUESTION 532

- (Topic 1)

Which two actions are performed by the Weighted Random Early Detection mechanism? (Choose two)

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

Answer: AD

Explanation:

Weighted Random Early Detection (WRED) is just a congestion avoidance mechanism. WRED drops packets selectively based on IP precedence. Edge routers assign IP precedences to packets as they enter the network. When a packet arrives, the following events occur:

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

NEW QUESTION 533

- (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 536

- (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 541

- (Topic 1)

Which option about JSON is true?

- A. uses predefined tags or angle brackets () to delimit markup text
- B. used to describe structured data that includes arrays
- C. used for storing information
- D. similar to HTML, it is more verbose than XML

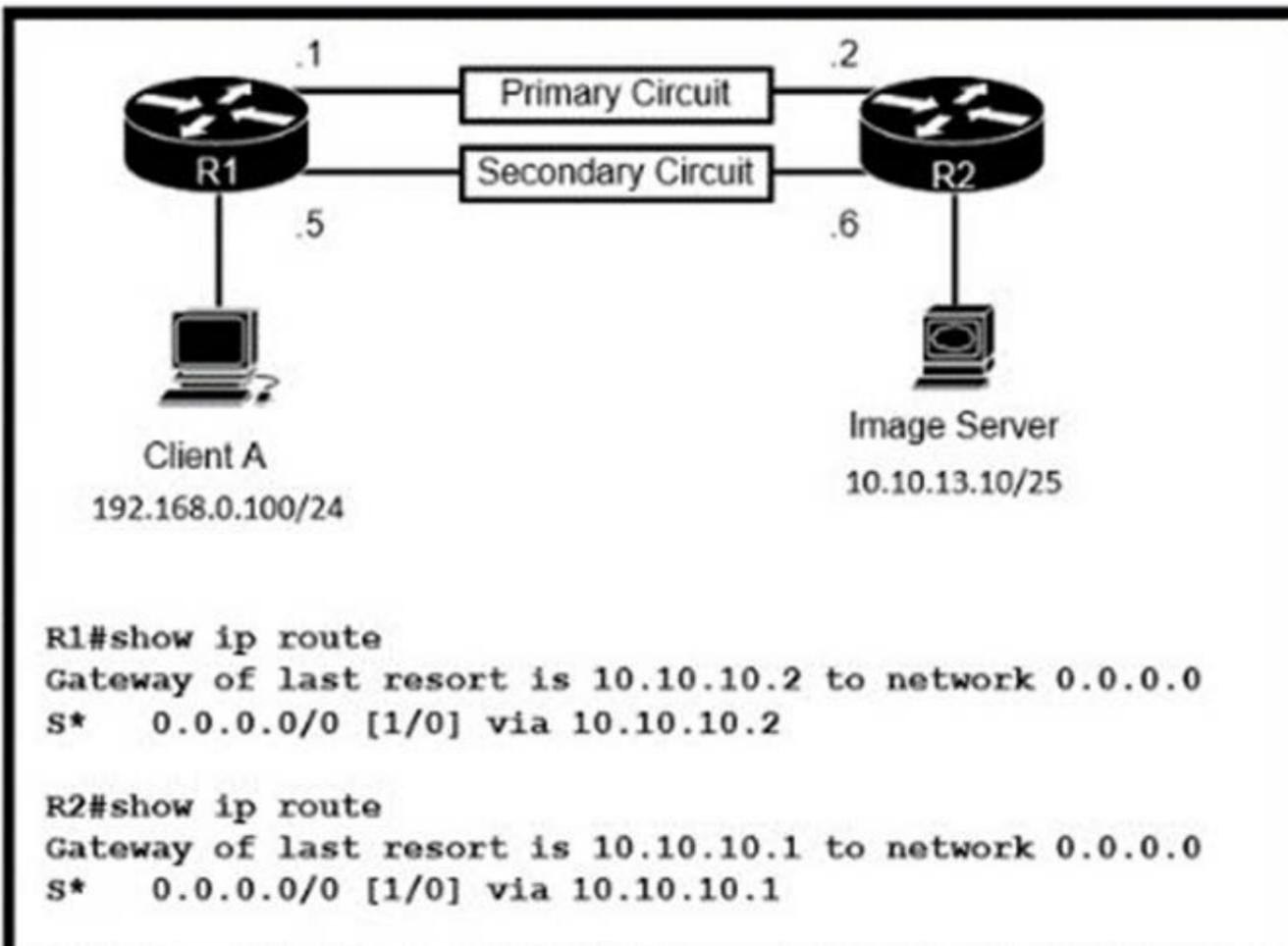
Answer: B

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"]}

NEW QUESTION 544

- (Topic 1)



Refer to the exhibit Routers R1 and R2 have been configured with their respective LAN interfaces The two circuits are operational and reachable across WAN Which command set establishes failover redundancy if the primary circuit goes down?

- R1(config)#ip route 10.10.13.10 255.255.255.255 10.10.10.2
R2(config)#ip route 192.168.0.100 255.255.255.255 10.10.10.1
- R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.6 2
R2(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.5 2
- R1(config)#ip route 10.10.13.10 255.255.255.255 10.10.10.6
R2(config)#ip route 192.168.0.100 255.255.255.255 10.10.10.5
- R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.6
R2(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.5

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

Answer: B

NEW QUESTION 545

- (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 549

DRAG DROP - (Topic 1)

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

provides local control for network segments using a client-server scheme	1
reduces the administrative burden for onboarding end users	2
associates hostnames to IP addresses	3
maintains an address pool	4
assigns IP addresses to local hosts for a configurable lease time	
offers domain name server configuration	
uses authoritative servers for record keeping	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

provides local control for network segments using a client-server scheme	maintains an address pool
reduces the administrative burden for onboarding end users	provides local control for network segments using a client-server scheme
associates hostnames to IP addresses	reduces the administrative burden for onboarding end users
maintains an address pool	assigns IP addresses to local hosts for a configurable lease time
assigns IP addresses to local hosts for a configurable lease time	
offers domain name server configuration	
uses authoritative servers for record keeping	

NEW QUESTION 553

DRAG DROP - (Topic 1)

Drag and drop the attack-mitigation techniques from the left onto the Types of attack that they mitigate on the right.

configure 802.1x authentication	802.1q double-tagging VLAN-hopping attack
configure DHCP snooping	MAC flooding attack
configure the native VLAN with a nondefault VLAN ID	man-in-the-middle spoofing attack
disable DTP	switch-spoofing VLAN-hopping attack

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

configure 802.1x authentication	configure the native VLAN with a nondefault VLAN ID
configure DHCP snooping	configure 802.1x authentication
configure the native VLAN with a nondefault VLAN ID	configure DHCP snooping
disable DTP	disable DTP

NEW QUESTION 557

- (Topic 1)

A frame that enters a switch fails the Frame Check Sequence. Which two interface counters are incremented? (Choose two)

- A. runts
- B. giants
- C. frame
- D. CRC
- E. input errors

Answer: DE

Explanation:

Whenever the physical transmission has problems, the receiving device might receive a frame whose bits have changed values. These frames do not pass the error detection logic as implemented in the FCS field in the Ethernet trailer. The receiving device discards the frame and counts it as some kind of input error. Cisco switches list this error as a CRC error. Cyclic redundancy check (CRC) is a term related to how the FCS math detects an error. The "input errors" includes runts, giants, no buffer, CRC, frame, overrun, and ignored counts. The output below show the interface counters with the "show interface s0/0/0" command:

```
Router#show interface s0/0/0
Serial0/0/0 is up, line protocol is up
  Hardware is M4T
  Description: Link to R2
  Internet address is 10.1.1.1/30
  MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  --output omitted--
  5 minute output rate 0 bits/sec, 0 packets/sec
    268 packets input, 24889 bytes, 0 no buffer
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    251 packets output, 23498 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions      DCD=up  DSR=up  DTR=up  RTS=up  CTS=up
```

NEW QUESTION 560

- (Topic 1)

What causes a port to be placed in the err-disabled state?

- A. latency
- B. port security violation
- C. shutdown command issued on the port
- D. nothing plugged into the port

Answer: B

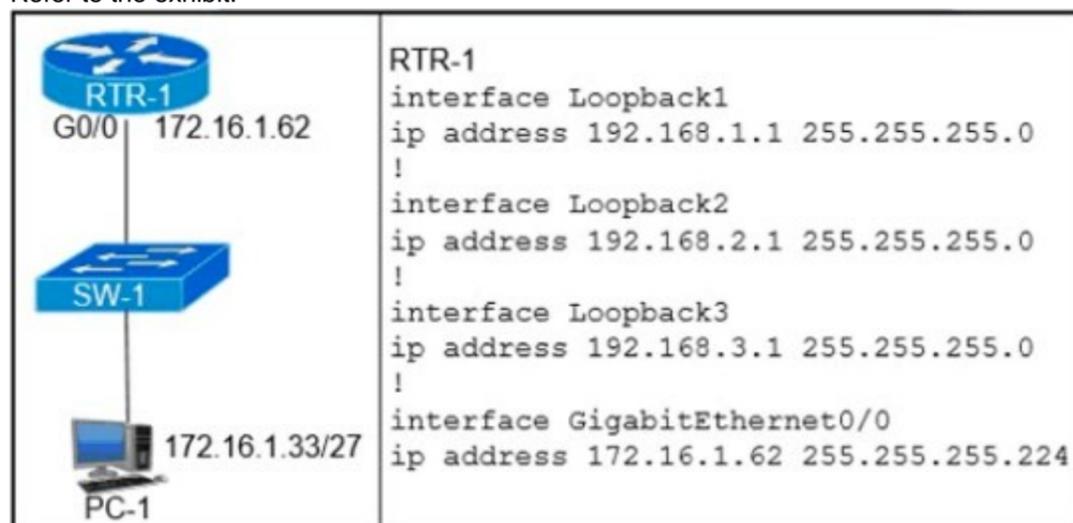
Explanation:

This mode is the default violation mode; when in this mode, the switch will automatically force the switchport into an error disabled (err-disable) state when a violation occurs. While in this state, the switchport forwards no traffic. The switchport can be brought out of this error disabled state by issuing the errdisable recovery cause CLI command or by disabling and reenabling the switchport.

NEW QUESTION 563

- (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 565

DRAG DROP - (Topic 1)

Drag and drop the statement about networking from the left into the Corresponding networking types on the right. Not all statements are used.

This type deploys a consistent configuration across multiple devices.	Controller-Based Networking
A distributed control plane is needed.	
This type requires a distributed management plane.	Traditional Networking
Southbound APIs are used to apply configurations.	
Northbound APIs interact with end devices.	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

This type deploys a consistent configuration across multiple devices.	Controller-Based Networking
A distributed control plane is needed.	
This type requires a distributed management plane.	Traditional Networking
Southbound APIs are used to apply configurations.	
Northbound APIs interact with end devices.	

NEW QUESTION 569

- (Topic 1)

What are two fundamentals of virtualization? (choose two)

- A. The environment must be configured with one hypervisor that serves solely as a network manager to monitor SNMP traffic
- B. It allows logical network devices to move traffic between virtual machines and the rest of the physical network
- C. It allows multiple operating systems and applications to run independently on one physical server.
- D. It allows a physical router to directly connect NICs from each virtual machine into the network
- E. It requires that some servers, virtual machines and network gear reside on the Internet

Answer: BC

NEW QUESTION 573

- (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_time Configures 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 575

- (Topic 1)

Which technology is appropriate for communication between an SDN controller and applications running over the network?

- A. OpenFlow
- B. REST API

- C. NETCONF
- D. Southbound API

Answer: B

NEW QUESTION 576

- (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 578

- (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 579

- (Topic 1)

Which QoS Profile is selected in the GUI when configuring a voice over WLAN deployment?

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

Answer: B

Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/81831-qos-wlc-lap.html>

Cisco Unified Wireless Network solution WLANs support four levels of QoS: Platinum/Voice, Gold/Video, Silver/Best Effort (default), and Bronze/Background.

NEW QUESTION 581

- (Topic 1)

When a switch receives a frame for a known destination MAC address, how is the frame handed?

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

Answer: A

NEW QUESTION 585

- (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 586

- (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 587

- (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 589

SIMULATION - (Topic 5)

Physical connectivity is implemented between the two Layer 2 switches, and the network connectivity between them must be configured.

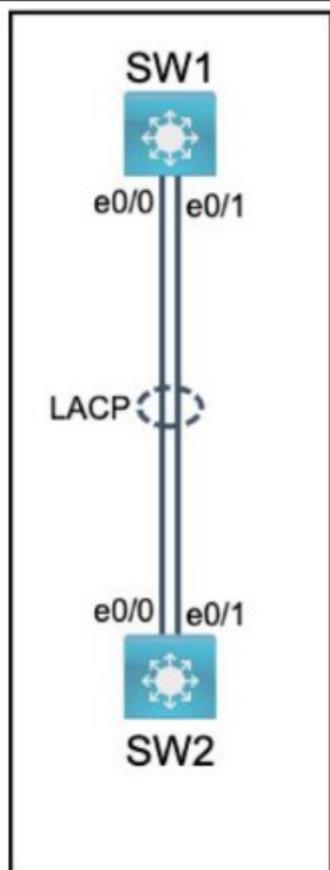
- * 1. Configure an LACP EtherChannel and number it as 44; configure it between switches SW1 and SW2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides. The LACP mode must match on both ends.
- * 2. Configure the EtherChannel as a trunk link.
- * 3. Configure the trunk link with 802.1q tags.
- * 4. Configure VLAN 'MONITORING' as the untagged VLAN of the EtherChannel.

=====

Guidelines

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

- Refer to the Tasks tab to view the tasks for this lab item.
- Refer to the Topology tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- Save your configurations to NVRAM before moving to the next item.
- Click Next at the bottom of the screen to submit this lab and move to the next question.
- When Next is clicked, the lab closes and cannot be reopened.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

To configure an LACP EtherChannel and number it as 44, configure it between switches SW1 and SW2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides, configure the EtherChannel as a trunk link, configure the trunk link with 802.1q tags, and configure VLAN 'MONITORING' as the untagged VLAN of the EtherChannel, you need to follow these steps:

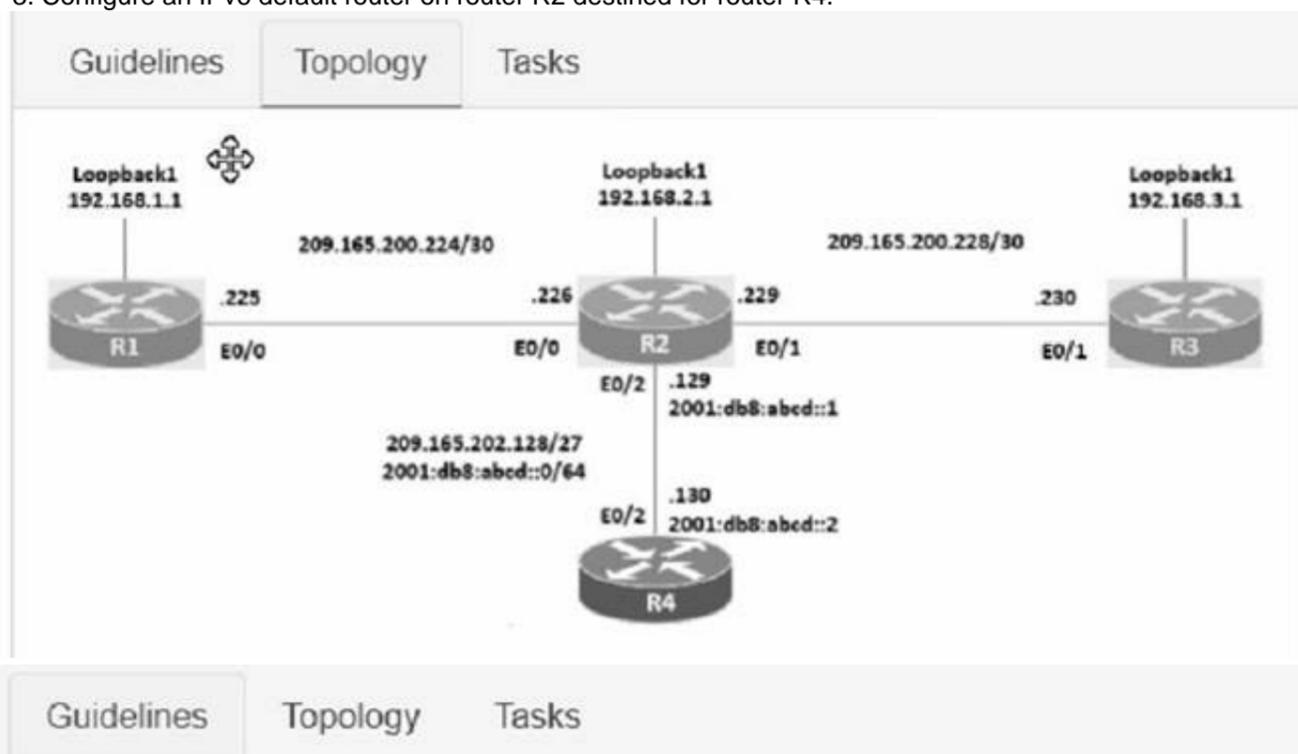
- ? On both SW1 and SW2, enter the global configuration mode by using the configure terminal command.
- ? On both SW1 and SW2, select the two interfaces that will form the EtherChannel by using the interface range ethernet 0/0 - 1 command. This will enter the interface range configuration mode.
- ? On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

NEW QUESTION 592

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.



Guidelines

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

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 597

SIMULATION - (Topic 5)

Guidelines

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

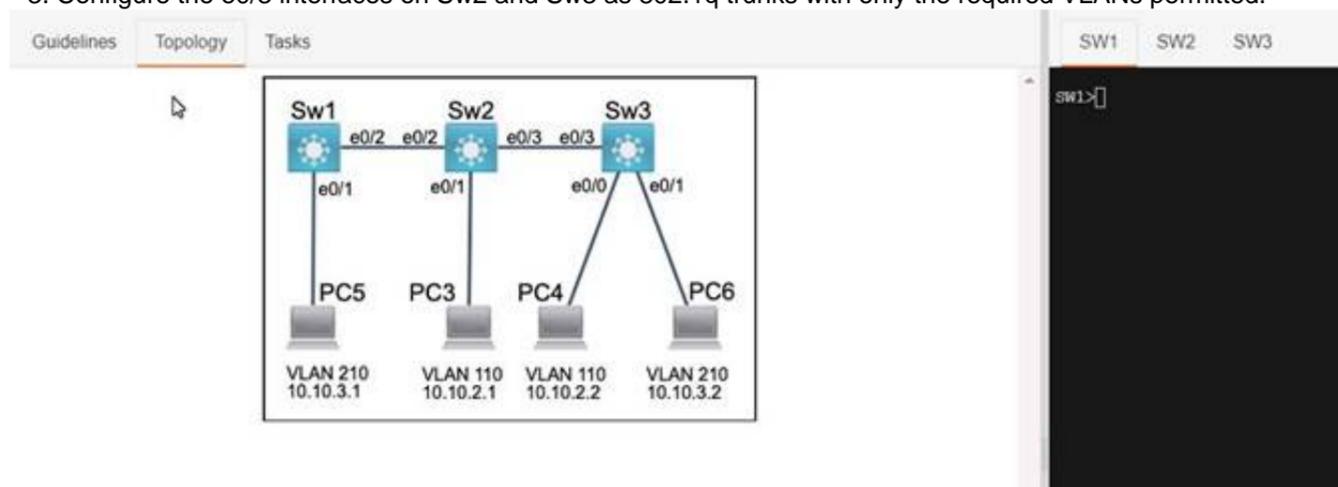
- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations 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.
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Three switches must be configured for Layer 2 connectivity. The company requires only the designated VLANs to be configured on their respective switches and permitted across any links between switches for security purposes. Do not modify or delete VTP configurations. The network needs two user-defined VLANs configured:

VLAN 110: MARKETING

VLAN 210: FINANCE

- * 1. Configure the VLANs on the designated switches and assign them as access ports to the interfaces connected to the PCs.
- * 2. Configure the e0/2 interfaces on Sw1 and Sw2 as 802.1q trunks with only the required VLANs permitted.
- * 3. Configure the e0/3 interfaces on Sw2 and Sw3 as 802.1q trunks with only the required VLANs permitted.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer as below configuration:

```
Sw1 enable config t Vlan 210
Name FINANCE
Inter e0/1
Switchport access vlan 210 do wr
Sw2 Enable config t Vlan 110
Name MARKETING
Int e0/1
Switchport access vlan 110 do wr
Sw3 Enable config t
Vlan 110
```

Name MARKETING
 Vlan 210
 Name FINANCE
 Int e0/0
 Switchport access vlan 110 Int e0/1
 Switchport access vlan 210
 Sw1
 Int e0/1
 Switchport allowed vlan 210
 Sw2
 Int e0/2
 Switchport trunk allowed vlan 210
 Sw3
 Int e0/3
 Switchport trunk allowed vlan 210 Switchport trunk allowed vlan 210,110

NEW QUESTION 601
 SIMULATION - (Topic 5)

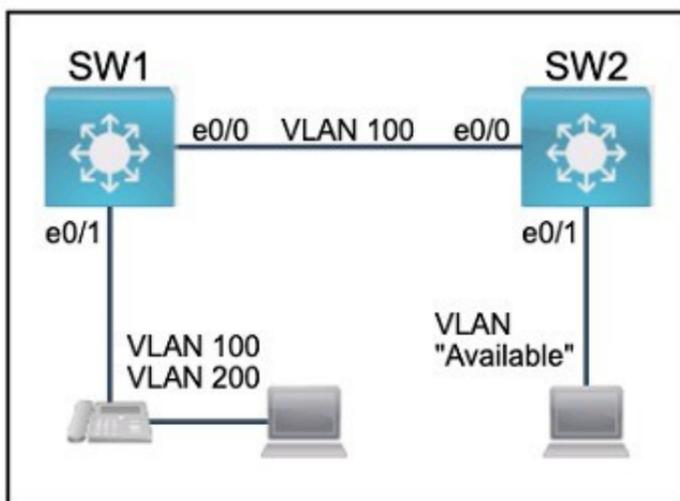
Guidelines

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All physical cabling between the two switches is installed. Configure the network connectivity between the switches using the designated VLANs and interfaces.

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



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

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

NEW QUESTION 606
 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 SW2 using interfaces Ethernet0/0 and Ethernet0/1 on both

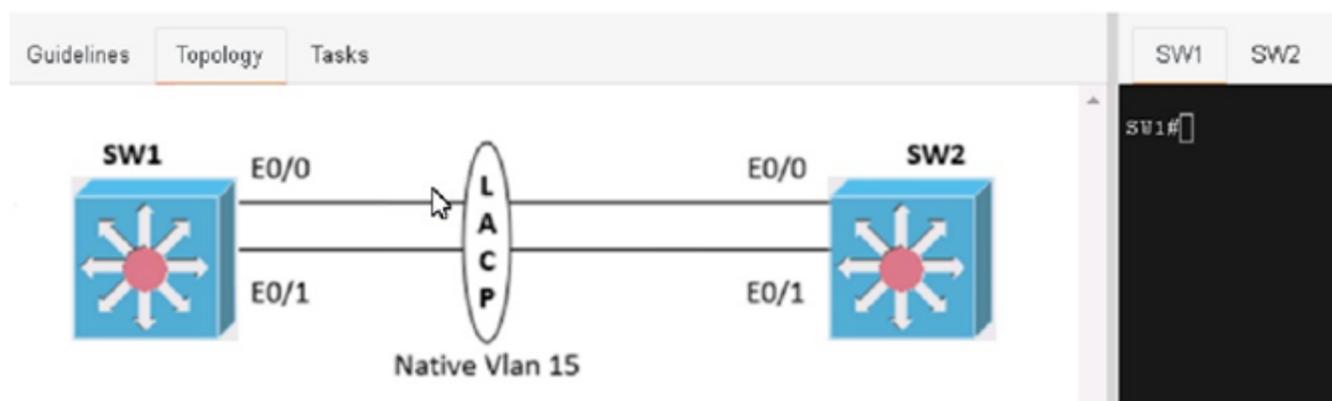
sides. The LACP mode must match on both ends

- * 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.

Guidelines

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- 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 610

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 Sw101
- 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

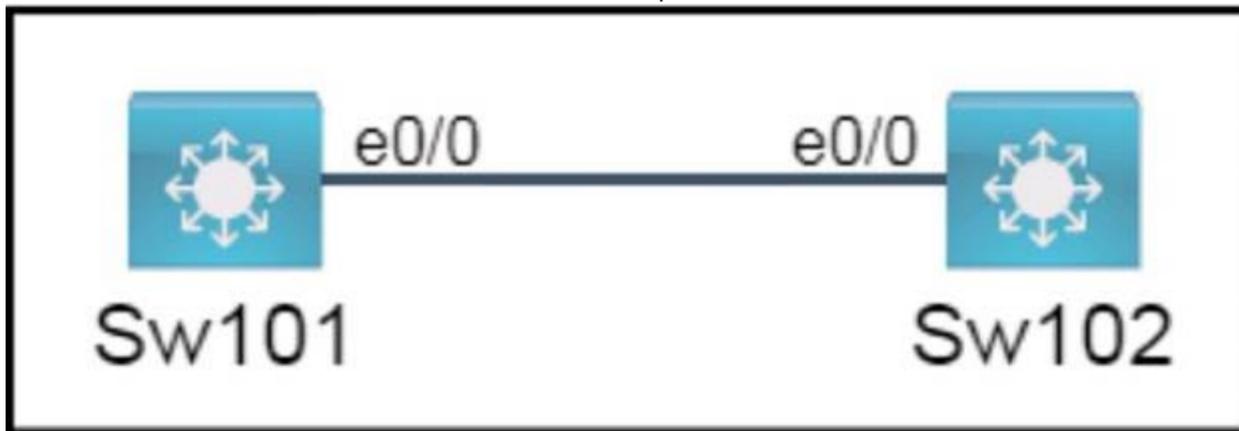
- Assign an IPv6 GUA using a unique 64-Bit interface identifier on e0/0 on Sw101
- Assign an IPv6 GUA using a unique 64-Bit interface identifier on e0/0 on swi02

Guidelines

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- 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 614

SIMULATION - (Topic 5)

Configure IPv4 and IPv6 connectivity between two routers. For IPv4, use a /28 network from the 192.168.1.0/24 private range. For IPv6, use the first /64 subnet from the 2001:0db8:aaaa::/48 subnet.

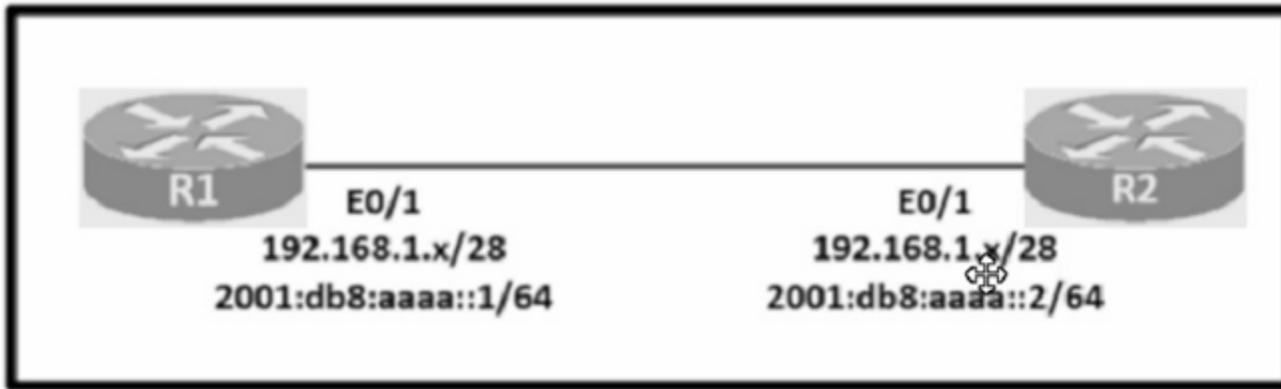
* 1. Using Ethernet0/1 on routers R1 and R2, configure the next usable/28 from the 192.168.1.0/24 range. The network 192.168.1.0/28 is unavailable.

* 2. For the IPv4 /28 subnet, router R1 must be configured with the first usable host address.

* 3. For the IPv4 /28 subnet, router R2 must be configured with the last usable host address.

* 4. For the IPv6 /64 subnet, configure the routers with the IP addressing provided from the topology.

* 5. A ping must work between the routers on the IPv4 and IPv6 address ranges.



Guidelines
Topology
Tasks

Guidelines

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R1
R2

R1#

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer as below configuration:

```

on R1
config terminal
ipv6 unicast-routing inter eth0/1
ip addre 192.168.1.1 255.255.255.240
ipv6 addre 2001:db8:aaaa::1/64 not shut
end
copy running start

on R2
config terminal
ipv6 unicast-routing inter eth0/1
ip address 192.168.1.14 255.255.255.240
ipv6 address 2001:db8:aaaa::2/64 not shut
end
copy running start

-----
for test from R1
ping ipv6 2001:db8:aaaa::1
for test from R2
ping ipv6 2001:db8:aaaa::2
    
```

NEW QUESTION 619

- (Topic 4)

Which IPsec encryption mode is appropriate when the destination of a packet differs from the security termination point?

- A. tunnel
- B. transport
- C. aggressive
- D. main

Answer: B

Explanation:

IPsec encryption mode is the way IPsec secures the data packets that are sent over an IP network. There are two main modes of IPsec encryption: tunnel mode and transport mode¹. Tunnel mode encrypts the entire IP packet, including the original header, and adds a new IP header with the source and destination addresses of the security gateways (routers, firewalls, or VPN servers) that perform the encryption and decryption². Transport mode encrypts only the payload (data) of the IP packet, leaving the original header intact, and uses the original source and destination addresses of the endpoints that generate and consume the data³. Therefore, transport mode is appropriate when the destination of a packet differs from the security termination point, as it does not change the original IP header information. Tunnel mode is more suitable when the security termination point is also the destination of the packet, as it provides more protection for the original IP header information.

NEW QUESTION 621

- (Topic 4)

Which encryption method is used by WPA3?

- A. PSK
- B. TKIP
- C. SAE
- D. AES

Answer: D

NEW QUESTION 622

- (Topic 4)

What is a reason to implement LAG on a Cisco WLC?

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

Answer: A

Explanation:

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

NEW QUESTION 625

DRAG DROP - (Topic 4)

Drag and drop the IPv6 addresses from the left onto the corresponding address types on the right.

2001:db8:600d:cafe::123	Global Unicast
fcba:926a:e8e:7a25:b1:c6d2:1a76:8fdc	Link-Local Unicast
fe80::a00:27ff:feeb:89aa	Multicast
ff05::1:3	Unique Local

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

2001:db8:600d:cafe::123	Global Unicast
fcba:926a:e8e:7a25:b1:c6d2:1a76:8fdc	Link-Local Unicast
fe80::a00:27ff:feeb:89aa	Multicast
ff05::1:3	Unique Local

NEW QUESTION 629

- (Topic 4)

A packet from a company's branch office is destined to host 172.31.0.1 at headquarters. The sending router has three possible matches in its routing table for the packet prefixes: 172.31.0.0/16, 172.31.0.0/24, and 172.31.0.0/25.

How does the router handle the packet?

- A. It sends the traffic via prefix 172.31.0.0/16
- B. It sends the traffic via the default gateway 0.0.0.0/0.
- C. It sends the traffic via prefix 172.31.0.0/24
- D. It sends the traffic via prefix 172.31.0.0/25

Answer: D

NEW QUESTION 631

- (Topic 4)

Which is a fact related to FTP?

- A. It uses block numbers to identify and mitigate data-transfer errors
- B. It always operates without user authentication
- C. It relies on the well-known UDP port 69.
- D. It uses two separate connections for control and data traffic

Answer: D

NEW QUESTION 632

- (Topic 4)

What are two differences between WPA2 and WPA3 wireless security? (Choose two.)

- A. WPA3 uses AES for stronger protection than WPA2 which uses SAE
- B. WPA2 uses 128-bit key encryption and WPA3 requires 256-bit key encryption
- C. WPA3 uses AES for stronger protection than WPA2 which uses TKIP WPA3 uses
- D. SAE for stronger protection than WPA2 which uses AES
- E. WPA2 uses 128-bit key encryption and WPA3 supports 128 bit and 192 bit key encryption

Answer: CE

NEW QUESTION 636

DRAG DROP - (Topic 4)

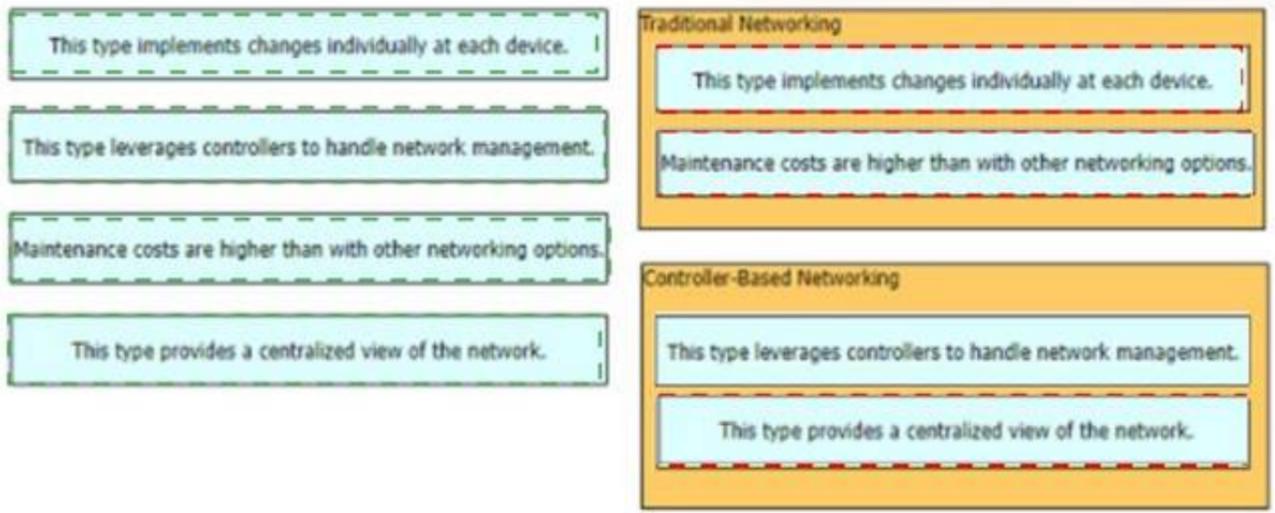
Drag and drop the statements about networking from the left onto the corresponding networking types on the right

This type implements changes individually at each device.	Traditional Networking
This type leverages controllers to handle network management.	
Maintenance costs are higher than with other networking options.	Controller-Based Networking
This type provides a centralized view of the network.	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 640

- (Topic 4)

What is a reason to implement IPv4 private addressing?

- A. Reduce the risk of a network security breach
- B. Comply with PCI regulations
- C. Comply with local law
- D. Reduce the size of the forwarding table on network routers

Answer: D

NEW QUESTION 645

- (Topic 4)

Refer to the exhibit.



Which switch becomes the root bridge?

- A) SW 1
 Bridge Priority - 32768
 mac-address 0d:ca:8e:7f:a0:24
- B) SW 2
 Bridge Priority - 53248
 mac-address 02:3e:ee:61:5b:21
- C) SW 4
 Bridge Priority - 32768
 mac-address 07:c1:b7:27:dd:73
- D)

SW 3
Bridge Priority - 53248
mac-address 02:aa:03:d3:05:87

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

Answer: B

NEW QUESTION 648

- (Topic 4)

Which REST method updates an object in the Cisco DNA Center Intent API?

- A. CHANGE
- B. UPDATE
- C. POST
- D. PUT

Answer: D

Explanation:

PUT is most-often utilized for **update** capabilities, PUT-ing to a known resource URI with the request body containing the newly-updated representation of the original resource. However, PUT can also be used to create a resource in the case where the resource ID is chosen by the client instead of by the server. In other words, if the PUT is to a URI that contains the value of a non-existent resource ID. Again, the request body contains a resource representation. Many feel this is convoluted and confusing. Consequently, this method of creation should be used sparingly, if at all. Alternatively, use POST to create new resources and provide the client-defined ID in the body representation—presumably to a URI that doesn't include the ID of the resource (see POST below). On successful update, return 200 (or 204 if not returning any content in the body) from a PUT. If using PUT for create, return HTTP status 201 on successful creation. A body in the response is optional—providing one consumes more bandwidth. It is not necessary to return a link via a Location header in the creation case since the client already set the resource ID. PUT is not a safe operation, in that it modifies (or creates) state on the server, but it is idempotent. In other words, if you create or update a resource using PUT and then make that same call again, the resource is still there and still has the same state as it did with the first call. If, for instance, calling PUT on a resource increments a counter within the resource, the call is no longer idempotent. Sometimes that happens and it may be enough to document that the call is not idempotent. However, it's recommended to keep PUT requests idempotent. It is strongly recommended to use POST for non-idempotent requests. Examples:
<https://www.restapitutorial.com/lessons/httpmethods.html>

NEW QUESTION 650

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