



**Cisco**

## **Exam Questions 200-301**

Cisco Certified Network Associate

### NEW QUESTION 1

- (Topic 3)

Which wireless security protocol relies on Perfect Forward Secrecy?

- A. WPA3
- B. WPA
- C. WEP
- D. WPA2

Answer: A

### NEW QUESTION 2

- (Topic 3)

Refer to the exhibit.

<pre>Switch#show ip dhcp snooping Switch DHCP snooping is enabled Switch DHCP gleaning is disabled DHCP snooping is configured on following VLANs:  1 DHCP snooping is operational on following VLANs:  1 DHCP snooping is configured on the following L3 Interfaces: Insertion of option 82 is disabled circuit-id default format: vlan-mod-port remote-id: aabb.cc00.6500 (MAC) Option 82 on untrusted port is not allowed Verification of hwaddr field is enabled Verification of giaddr field is enabled DHCP snooping trust/rate is configured on the following Interfaces: Interface Trusted Allow option Rate limit (pps)</pre>	<pre>Switch#show ip dhcp snooping statistics detail Packets Processed by DHCP Snooping = 34 Packets Dropped Because IDB not known = 0 Queue full = 0 Interface is in errdisabled = 0 Rate limit exceeded = 0 Received on untrusted ports = 32 Nonzero giaddr = 0 Source mac not equal to chaddr = 0 No binding entry = 0 Insertion of opt82 fail = 0 Unknown packet = 0 Interface Down = 0 Unknown output interface = 0 Misdirected Packets = 0 Packets with Invalid Size = 0 Packets with Invalid Option = 0</pre>
--	---

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

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

Answer: C

### NEW QUESTION 3

- (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 4**

DRAG DROP - (Topic 3)

Drag and drop the Rapid PVST+ forwarding slate actions from the left to the right. Not all actions are used.

BPDUs received are forwarded to the system module.

BPDUs received from the system module are processed and transmitted.

Frames received from the attached segment are discarded.

Frames received from the attached segment are processed.

Switched frames received from other ports are advanced.

The port in the forwarding state responds to network management messages.

action

action

action

action

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

BPDUs received are forwarded to the system module.

BPDUs received from the system module are processed and transmitted.

Frames received from the attached segment are discarded.

Frames received from the attached segment are processed.

Switched frames received from other ports are advanced.

The port in the forwarding state responds to network management messages.

BPDUs received are forwarded to the system module.

BPDUs received from the system module are processed and transmitted.

Frames received from the attached segment are discarded.

The port in the forwarding state responds to network management messages.

**NEW QUESTION 5**

- (Topic 3)

What are two benefits of FHRPs? (Choose two.)

- A. They enable automatic failover of the default gateway.

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

**Answer:** AB

**NEW QUESTION 6**

- (Topic 3)

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

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

**Answer:** B

**NEW QUESTION 7**

- (Topic 3)

What is a function of Opportunistic Wireless Encryption in an environment?

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

**Answer:** D

**NEW QUESTION 8**

- (Topic 3)

Which interface mode must be configured to connect the lightweight APs in a centralized architecture?

- A. WLAN dynamic
- B. management
- C. trunk
- D. access

**Answer:** D

**NEW QUESTION 9**

- (Topic 3)

Refer to the exhibit.



```

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

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

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

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

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

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

**Answer:** D

**NEW QUESTION 10**

- (Topic 3)

Which value is the unique identifier that an access point uses to establish and maintain wireless connectivity to wireless network devices?

- A. VLANID
- B. SSID
- C. RFID
- D. WLANID

**Answer: B**

**NEW QUESTION 10**

- (Topic 3)

Refer to the exhibit.

```
A# show ip ospf neighbor
Neighbor ID Pri State Dead Time Address Interface
172.1.1.1 1 EXCHANGE/ - 00:00:36 172.16.32.1 Serial0.1
```

An engineer assumes a configuration task from a peer Router A must establish an OSPF neighbor relationship with neighbor 172.1.1.1 The output displays the status of the adjacency after 2 hours. What is the next step in the configuration process for the routers to establish an adjacency?

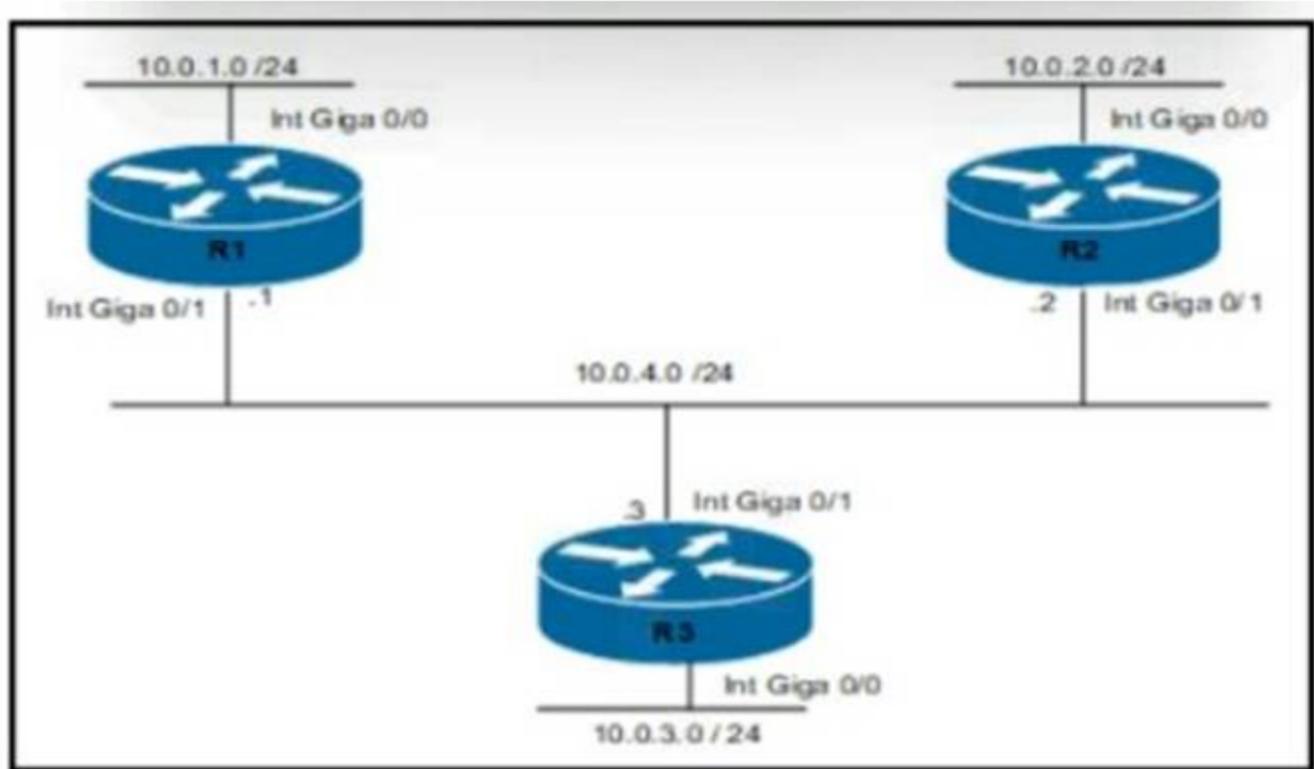
- A. Configure router A to use the same MTU size as router B.
- B. Set the router B OSPF ID to a nonhost address.
- C. Configure a point-to-point link between router A and router B.
- D. Set the router B OSPF ID to the same value as its IP address

**Answer: B**

**NEW QUESTION 14**

- (Topic 3)

Refer to the exhibit.



Routers R1 and R3 have the default configuration The router R2 priority is set to 99 Which commands on R3 configure it as the DR in the 10.0.4.0/24 network?

- A. R3(config)#interface Gig0/1 R3(config-if)#ip ospf priority 100
- B. R3(config)#interface Gig0/0 R3(config-if)#ip ospf priority 100
- C. R3(config)#interface Gig0/0 R3(config-if)#ip ospf priority 1
- D. R3(config)#interface Gig0/1 R3(config-if)#ip ospf priority 0

**Answer: B**

**NEW QUESTION 15**

- (Topic 3)

Which protocol is used for secure remote CLI access?

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

**Answer: D**

**NEW QUESTION 16**

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

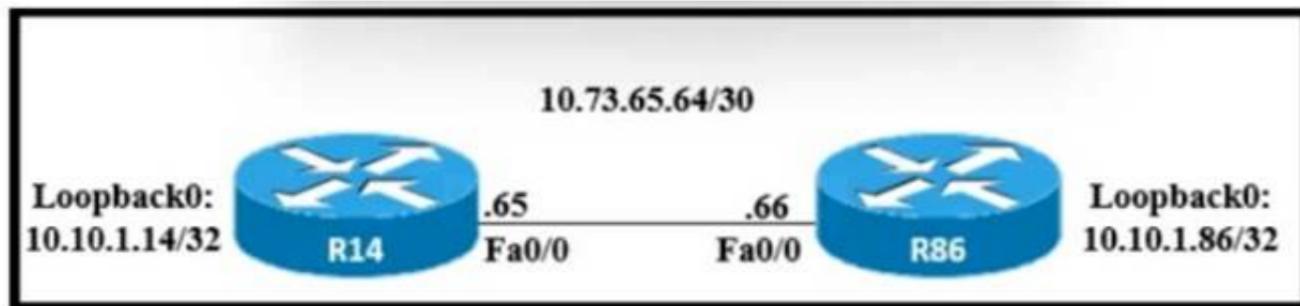
Explanation:

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 18**

- (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 23**

DRAG DROP - (Topic 3)

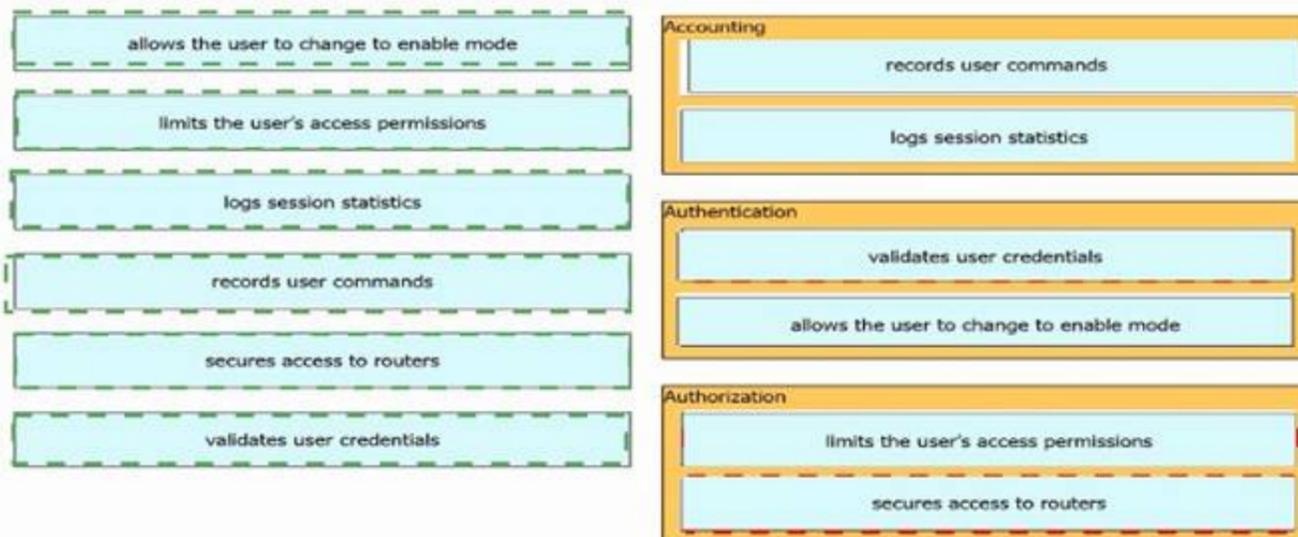
Drag and drop the descriptions of AAA services from the left onto the corresponding services on the right.

allows the user to change to enable mode	Accounting
limits the user's access permissions	
logs session statistics	Authentication
records user commands	
secures access to routers	Authorization
validates user credentials	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 24**

- (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?

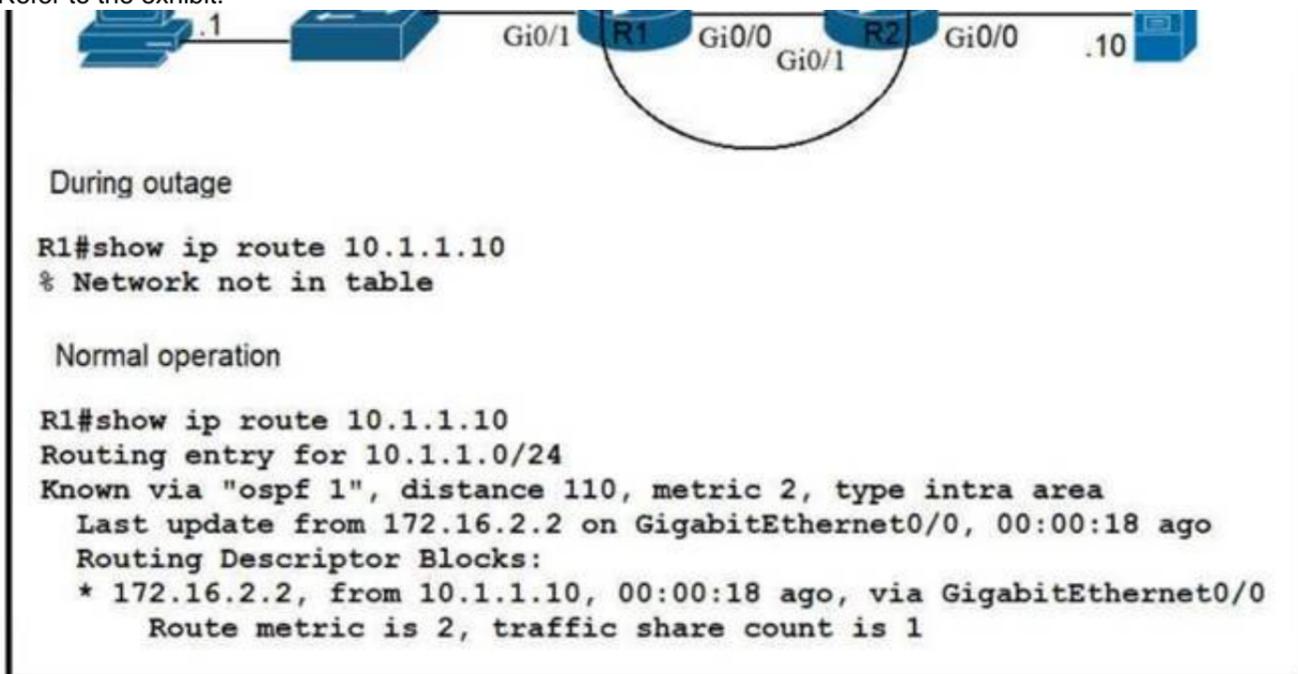
- A. unique local address
- B. link-local address
- C. aggregatable global address
- D. IPv4-compatible IPv6 address

Answer: B

**NEW QUESTION 28**

- (Topic 3)

Refer to the exhibit.



Which route must be configured on R1 so that OSPF routing is used when OSPF is up. but the server is still reachable when OSPF goes down?

- A. ip route 10.1.1.10 255.255.255.255 172.16.2.2 100
- B. ip route 10.1.1.0 255.255.255.0 gi0/1 125
- C. ip route 10.1.1.0 255.255.255.0 172.16.2.2 100
- D. ip route 10.1.1.10 255.255.255.255 gi0/0 125

Answer: D

**NEW QUESTION 30**

- (Topic 3)

How does Rapid PVST+ create a fast loop-free network topology?

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

Answer: A

**NEW QUESTION 32**

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

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

**Answer: BC**

**NEW QUESTION 37**

- (Topic 3)  
 Refer to the exhibit.

```
TenGigabitEthernet0/0/0 is up, line protocol is up
Hardware is BUILT-IN-2T+6X1GE, address is 74a0.2f7a.0123 (bia 74a0.2f7a.0123)
Description: Uplink
Internet address is 10.1.1.1/24
MTU 1500 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive not supported
Full Duplex, 10000Mbps, link type is force-up, media type is unknown media type
output flow-control is on, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:00, output 00:05:40, output hang never
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 6160000 bits/sec, 1113 packets/sec
5 minute output rate 11213000 bits/sec, 1553 packets/sec
12662416065 packets input, 12607032232894 bytes, 0 no buffer
Received 14117163 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 26271385 multicast, 0 pause input
7907779058 packets output, 5073750426832 bytes, 0 underruns
0 output errors, 8662416065 collisions, 1 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 pause output
0 output buffer failures, 0 output buffers swapped out
1 carrier transitions
```

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

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

**Answer: C**

**NEW QUESTION 40**

FILL IN THE BLANK - (Topic 3)  
 Refer to the exhibit.

```
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 45**

- (Topic 3)  
 Refer to the exhibit.

```

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

Which network prefix was learned via EIGRP?

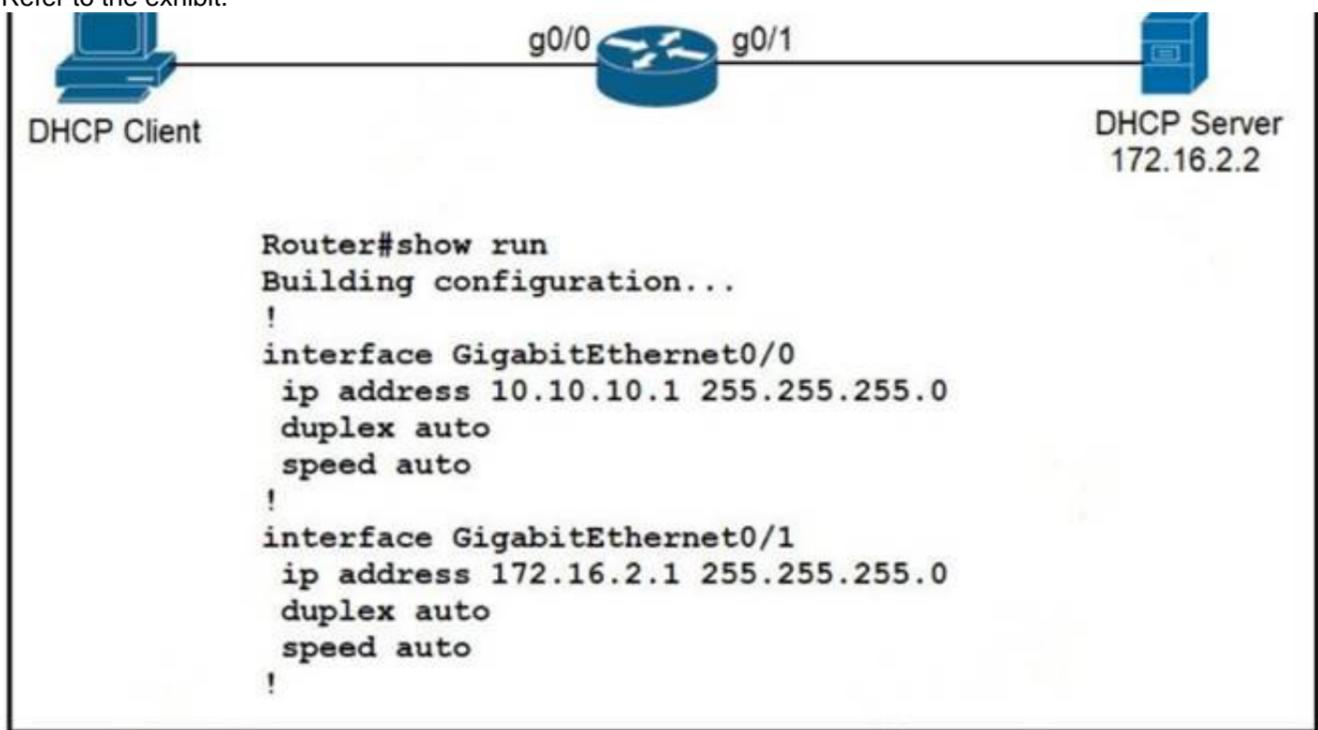
- A. 172.16.0.0/16
- B. 192.168.2.0/24
- C. 207.165.200.0/24
- D. 192.168.1.0/24

Answer: B

**NEW QUESTION 46**

- (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 50**

- (Topic 3)

An engineer must configure R1 for a new user account. The account must meet these requirements:

- \* It must be configured in the local database.
- \* The username is engineer.
- \* It must use the strongest password configurable. Which command must the engineer configure on the router?

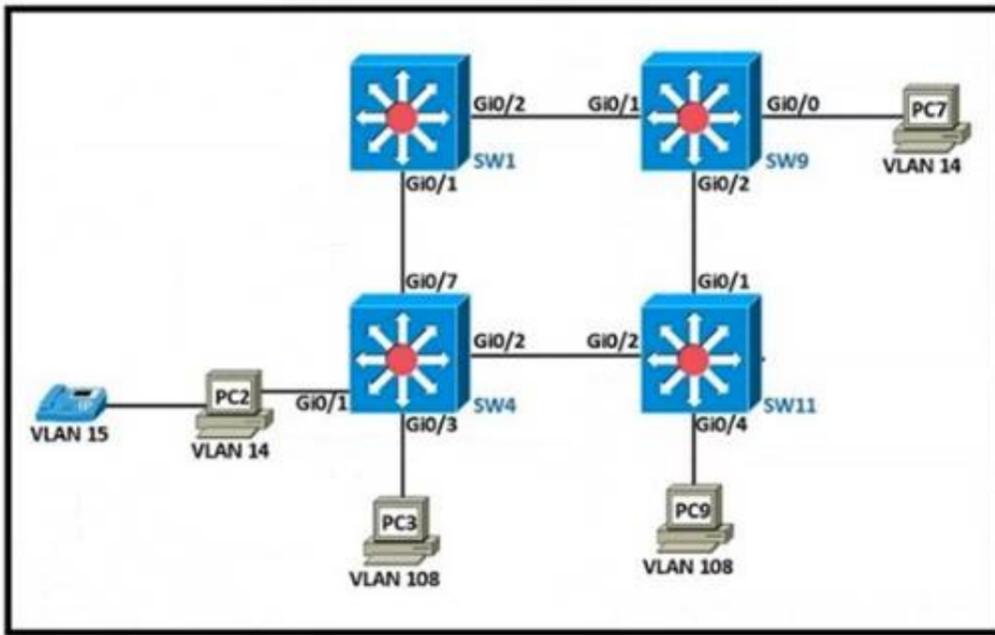
- A. R1 (config)# username engineer2 algorithm-type scrypt secret test2021
- B. R1(config)# username engineer2 secret 5 .password S1\$b1Ju\$kZbBS1Pyh4QzwXyZ
- C. R1(config)# username engineer2 privilege 1 password 7 test2021
- D. R1(config)# username englneer2 secret 4 S1Sb1Ju\$kZbBS1Pyh4QzwXyZ

Answer: B

**NEW QUESTION 51**

- (Topic 3)

Refer to the exhibit.



The following must be considered:

- SW1 is fully configured for all traffic
- The SW4 and SW9 links to SW1 have been configured
- The SW4 interface Gi0/1 and Gi0/0 on SW9 have been configured
- The remaining switches have had all VLANs added to their VLAN database

Which configuration establishes a successful ping from PC2 to PC7 without interruption to traffic flow between other PCs?

A)

```

SW4#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 14

SW11#
interface Gi0/1
switchport mode trunk
switchport trunk allowed vlan 14

SW9#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 108
    
```

B)

```

SW4#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 14

SW11#
interface Gi0/1
switchport mode trunk
switchport trunk allowed vlan 14

SW9#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 108
    
```

C)

```

SW4#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 14,108

SW11#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 14,108
!
interface Gi0/1
switchport mode trunk
switchport trunk allowed vlan 14,108

SW9#
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan 14
  
```

D)

```

SW4#
interface Gi0/2
switchport mode access
switchport access vlan 14

SW11#
interface Gi0/2
switchport mode access
switchport access vlan 14
!
interface Gi0/0
switchport mode access
switchport access vlan 14
!
interface Gi0/1
switchport mode trunk

SW9#
interface Gi0/2
switchport mode access
switchport access vlan 14
  
```

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

Answer: C

#### NEW QUESTION 55

- (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 57**

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

**NEW QUESTION 58**

- (Topic 3)

Which two spanning-tree states are bypassed on an interface running PortFast? (Choose two.)

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

Answer: BD

**NEW QUESTION 60**

DRAG DROP - (Topic 3)

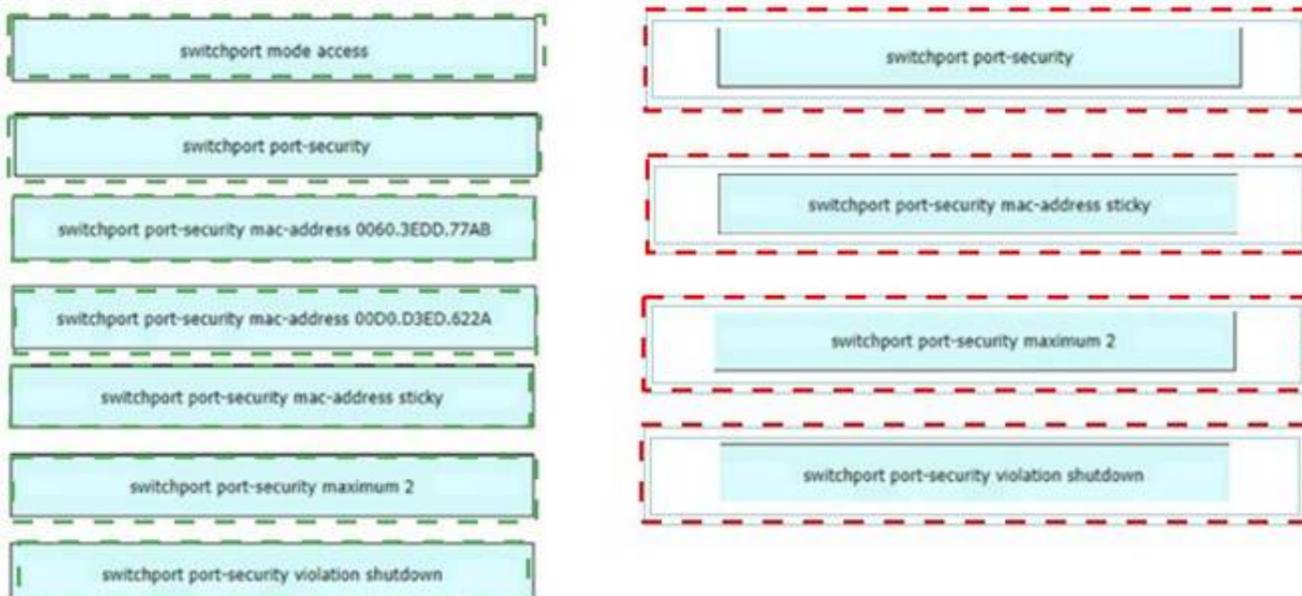
An engineer is tasked to configure a switch with port security to ensure devices that forward unicasts multicasts and broadcasts are unable to flood the port The port must be configured to permit only two random MAC addresses at a time Drag and drop the required configuration commands from the left onto the sequence on the right Not all commands are used.

switchport mode access	1
switchport port-security	2
switchport port-security mac-address 0060.3E0D.77AB	3
switchport port-security mac-address 00D0.D3ED.622A	4
switchport port-security mac-address sticky	
switchport port-security maximum 2	
switchport port-security violation shutdown	

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**



**NEW QUESTION 65**

- (Topic 3)

Which type of IPv6 address is similar to a unicast address but is assigned to multiple devices on the same network at the same time?

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

Answer: B

**NEW QUESTION 66**

- (Topic 3)

Refer to the exhibit.

```
ip domain-name CNAC.com
!
interface GigabitEthernet0/0/0
 ip address 192.168.1.10 255.255.255.0
 duplex auto
 speed auto
!
line vty 0 15
 login local

R1#show crypto key mypubkey rsa

R1#show ssh
%No SSHv2 server connections running.
%No SSHv1 server connections running.
```

Which two commands must be added to update the configuration of router R1 so that it accepts only encrypted connections? (Choose two )

- A. username CNAC secret R!41!4319115@
- B. ip ssh version 2
- C. line vty 0 4
- D. crypto key generate rsa 1024
- E. transport input ssh

Answer: DE

**NEW QUESTION 71**

- (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 72

- (Topic 2)

Which networking function occurs on the data plane?

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

**Answer:** A

#### NEW QUESTION 73

- (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 76

- (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 79

- (Topic 2)

Which two protocols must be disabled to increase security for management connections to a Wireless LAN Controller? (Choose two)

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

**Answer:** AC

#### NEW QUESTION 80

- (Topic 2)

What is the same for both copper and fiber interfaces when using SFP modules?

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

**Answer:** B

#### NEW QUESTION 83

- (Topic 2)

Router A learns the same route from two different neighbors, one of the neighbor routers is an OSPF neighbor and the other is an EIGRP neighbor. What is the administrative distance of the route that will be installed in the routing table?

- A. 20
- B. 90
- C. 110
- D. 115

**Answer:** B

#### Explanation:

The Administrative distance (AD) of EIGRP is 90 while the AD of OSPF is 110 so EIGRP route will be chosen to install into the routing table.

#### NEW QUESTION 86

- (Topic 2)

Why does a switch flood a frame to all ports?

- A. The frame has zero destination MAC addresses.
- B. The source MAC address of the frame is unknown
- C. The source and destination MAC addresses of the frame are the same
- D. The destination MAC address of the frame is unknown.

**Answer: B**

#### NEW QUESTION 91

- (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 92

- (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 95

- (Topic 2)

A corporate office uses four floors in a building

- Floor 1 has 24 users
- Floor 2 has 29 users
- Floor 3 has 28 users
- Floor 4 has 22 users

Which subnet summarizes and gives the most efficient distribution of IP addresses for the router configuration?

- A. 192.168.0.0/26 as summary and 192.168.0.0/29 for each floor
- B. 192.168.0.0/24 as summary and 192.168.0.0/28 for each floor
- C. 192.168.0.0/23 as summary and 192.168.0.0/25 for each floor
- D. 192.168.0.0/25 as summary and 192.168.0.0/27 for each floor

**Answer: D**

#### NEW QUESTION 100

- (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 101

- (Topic 2)

Which function is performed by DHCP snooping?

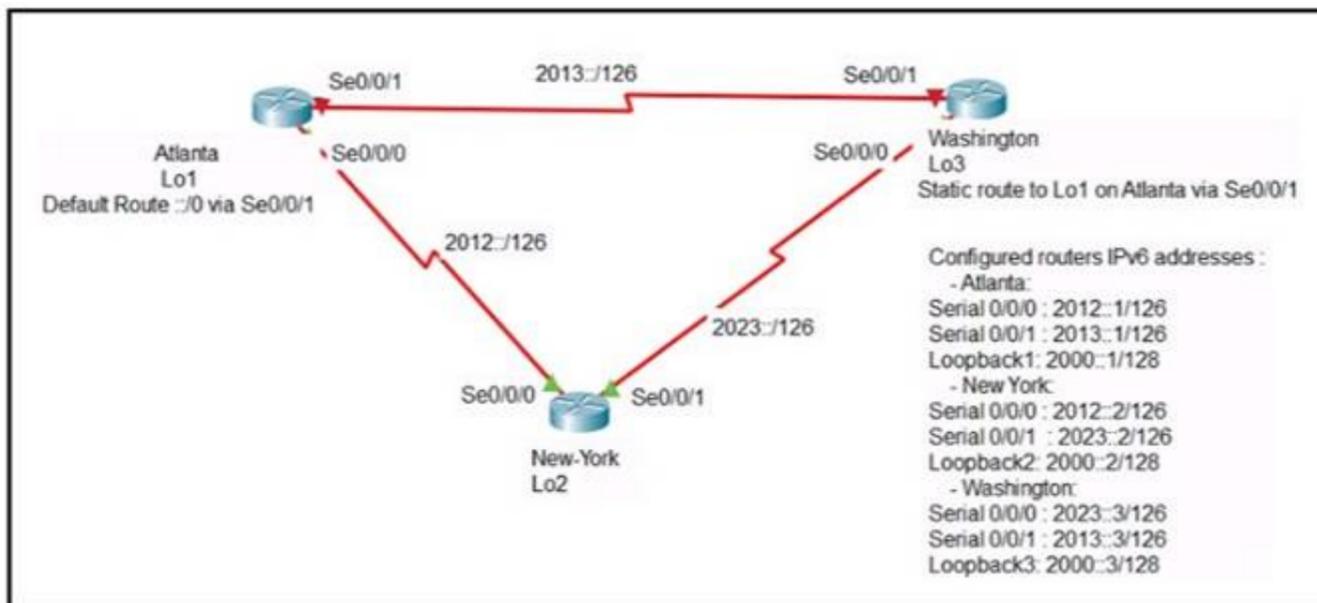
- A. propagates VLAN information between switches
- B. listens to multicast traffic for packet forwarding
- C. provides DDoS mitigation
- D. rate-limits certain traffic

**Answer: A**

#### NEW QUESTION 102

- (Topic 2)

Refer to Exhibit.



An engineer is configuring the NEW York router to reach the Lo1 interface of the Atlanta router using interface Se0/0/0 as the primary path. Which two commands must be configured on the New York router so that it can reach the Lo1 interface of the Atlanta router via Washington when the link between New York and Atlanta goes down? (Choose two)

- A. ipv6 router 2000::1/128 2012::1
- B. ipv6 router 2000::1/128 2012::1 5
- C. ipv6 router 2000::1/128 2012::2
- D. ipv6 router 2000::1/128 2023::2 5
- E. ipv6 router 2000::1/128 2023::3 5

Answer: AE

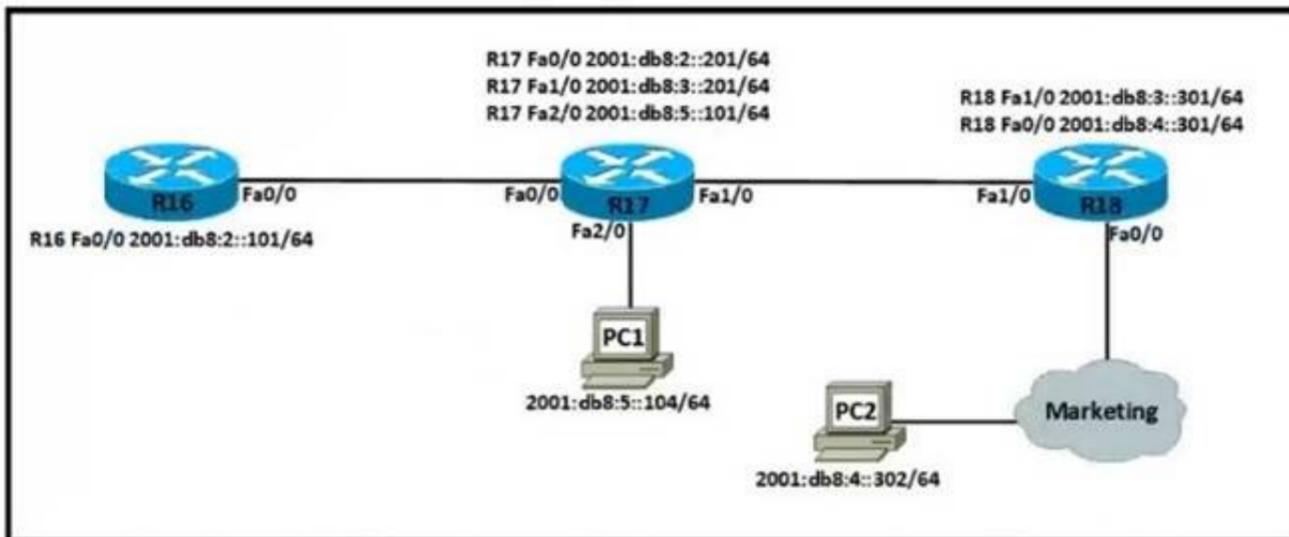
**Explanation:**

Floating static routes are static routes that have an administrative distance greater than the administrative distance (AD) of another static route or dynamic routes. By default a static route has an AD of 1 then floating static route must have the AD greater than 1. Floating static route has a manually configured administrative distance greater than that of the primary route and therefore would not be in the routing table until the primary route fails.

**NEW QUESTION 106**

- (Topic 2)

Refer to the exhibit.



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

A)

```

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

```

B)

```

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

```

C)

```

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

```

D)

```

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

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

Answer: B

**Explanation:**

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

**NEW QUESTION 111**

- (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 112**

- (Topic 2)

Refer to the exhibit.

```

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

An administrator is tasked with configuring a voice VLAN. What is the expected outcome when a Cisco phone is connected to the GigabitEthernet3/1/4 port on a switch?

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

D. The phone sends and receives data in VLAN 50, but a workstation connected to the phone sends and receives data in VLAN 1

**Answer:** D

**NEW QUESTION 117**

- (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 119**

- (Topic 2)

When OSPF learns multiple paths to a network, how does it select a route?

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

**Answer:** C

**NEW QUESTION 123**

- (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 125**

- (Topic 2)

Which protocol requires authentication to transfer a backup configuration file from a router to a remote server?

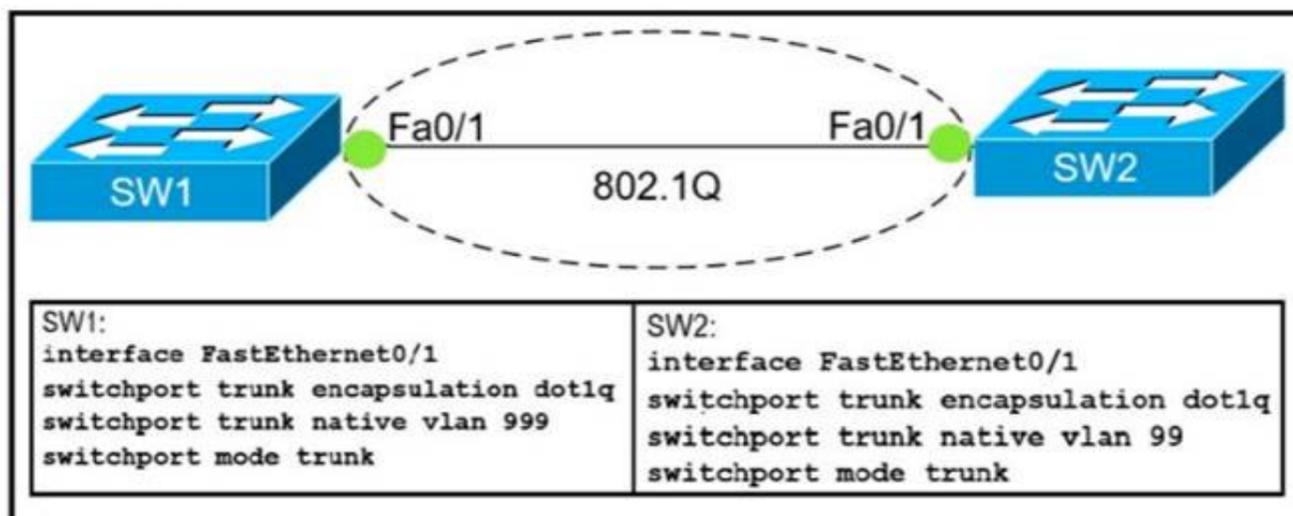
- A. DTP
- B. FTP
- C. SMTP
- D. TFTP

**Answer:** B

**NEW QUESTION 130**

- (Topic 2)

Refer to Exhibit.



Which action do the switches take on the trunk link?

- A. The trunk does not form and the ports go into an err-disabled status.

- B. The trunk forms but the mismatched native VLANs are merged into a single broadcast domain.
- C. The trunk does not form, but VLAN 99 and VLAN 999 are allowed to traverse the link.
- D. The trunk forms but VLAN 99 and VLAN 999 are in a shutdown state.

**Answer:** B

**Explanation:**

The trunk still forms with mismatched native VLANs and the traffic can actually flow between mismatched switches. But it is absolutely necessary that the native VLANs on both ends of a trunk link match; otherwise a native VLAN mismatch occurs, causing the two VLANs to effectively merge. For example with the above configuration, SW1 would send untagged frames for VLAN 999. SW2 receives them but would think they are for VLAN 99 so we can say these two VLANs are merged.

**NEW QUESTION 133**

- (Topic 2)

What is the primary function of a Layer 3 device?

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

**Answer:** C

**NEW QUESTION 138**

- (Topic 2)

Refer to the exhibit.

```
Switch1#show etherchannel summary
Flags: D - down          P - in port-channel
       I - stand-alone  s - suspended
       H - Hot-standby (LACP only)
       R - Layer3       S - Layer2
       U - in use       f - failed to allocate aggregator
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

Number of channel-groups in use: 1
Number of aggregators:          1
Group  Port-channel  Protocol    Ports
-----+-----+-----+-----
  1      Po1 (SD)          LACP        Fa0/2 (I) Fa0/1 (I)

Switch1#show run
Building configuration...
interface Port-channell
!
interface FastEthernet0/1
 channel-group 1 mode passive
!
interface FastEthernet0/2
 channel-group 1 mode passive

Switch2#show run
Building configuration...
interface Port-channell
!
interface FastEthernet0/1
 channel-group 1 mode passive
!
interface FastEthernet0/2
 channel-group 1 mode passive
```

Which change to the configuration on Switch? allows the two switches to establish an EtherChannel?

- A. Change the protocol to EtherChannel mode on.
- B. Change the LACP mode to active
- C. Change the LACP mode to desirable
- D. Change the protocol to PAqP and use auto mode

**Answer:** B

**NEW QUESTION 139**

- (Topic 2)

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

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

**Answer:** DE

**NEW QUESTION 144**

- (Topic 2)

What is the benefit of configuring PortFast on an interface?

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

Answer: B

**NEW QUESTION 145**

- (Topic 2)

Refer to the exhibit.

```
R2#show ip route
C    192.168.1.0/26 is directly connected, FastEthernet0/1
```

Which two prefixes are included in this routing table entry? (Choose two.)

- A. 192.168.1.17
- B. 192.168.1.61
- C. 192.168.1.64
- D. 192.168.1.127
- E. 192.168.1.254

Answer: BC

**NEW QUESTION 148**

- (Topic 2)

What prevents a workstation from receiving a DHCP address?

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

Answer: B

**NEW QUESTION 153**

DRAG DROP - (Topic 2)

Refer to the exhibit.

```
[root@HostTest ~]# ip route
default via 192.168.1.193 dev eth1 proto static
192.168.1.0/26 dev eth1 proto kernel scope link src 192.168.1.200 metric 1

[root@HostTest ~]# ip addr show eth1
eth1: mtu 1500 qdisc pfifo fast qlen 1000
link/ether 00:0c:22:83:79:a3 brd ff:ff:ff:ff:ff:ff
inet 192.168.1.200/26 brd 192.168.1.255 scope global eth1
inet6 fe80::20c:29ff:fe89:79b3/64 scope link
valid_lft forever preferred_lft forever
```

Drag and drop the networking parameters from the left onto the correct values on the right.

default gateway	00:0c:22
host IP address	00:0c:22:83:79:a3
NIC MAC address	192.168.1.193
NIC vendor OUI	192.168.1.200
subnet mask	255.255.255.192

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

NIC vendor OUI → 00:0c:22  
 NIC MAC address → 00:0c:22:83:79:a3  
 default gateway → 192.168.1.193  
 host IP address → 192.168.1.200  
 subnet mask → 255.255.255.192

The “ip route” and “ip addr show eth1” are Linux commands.  
 + “ip route”: display the routing table  
 + “ip addr show eth1”: get depth information (only on eth1 interface) about your network interfaces like IP Address, MAC Address information

**NEW QUESTION 155**

- (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 160**

- (Topic 2)

What are two benefits of FHRPs? (Choose two.)

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

**Answer: DE**

**NEW QUESTION 165**

- (Topic 2)

Refer to the exhibit.

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

What is the effect of this configuration?

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

**Answer: D**

**NEW QUESTION 167**

- (Topic 2)

Which configuration management mechanism uses TCP port 22 by default when communicating with managed nodes?

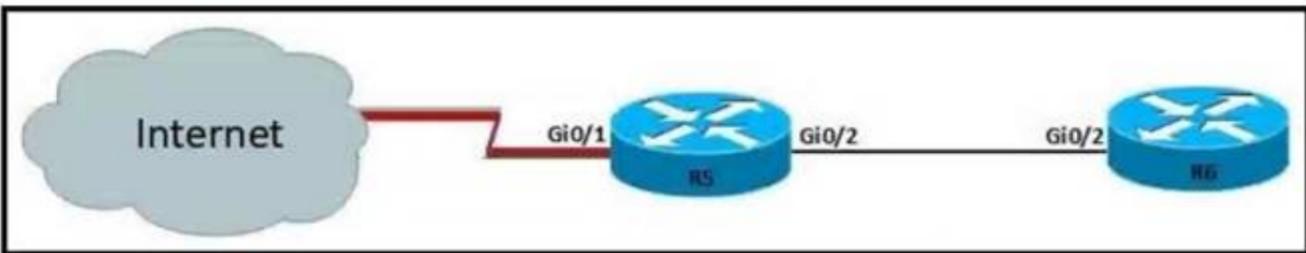
- A. Ansible
- B. Python
- C. Puppet
- D. Chef

**Answer: A**

**NEW QUESTION 170**

- (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 172**

- (Topic 2)

Refer to the exhibit.

```

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

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

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

D. There are six OSPF neighbors on this interface

**Answer:** C

**Explanation:**

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

**NEW QUESTION 176**

- (Topic 2)

R1 has learned route 10.10.10.0/24 via numerous routing protocols. Which route is installed?

- A. route with the lowest cost
- B. route with the next hop that has the highest IP
- C. route with the shortest prefix length
- D. route with the lowest administrative distance

**Answer:** D

**NEW QUESTION 181**

- (Topic 2)

Which protocol prompts the Wireless LAN Controller to generate its own local web administration SSL certificate for GUI access?

- A. HTTPS
- B. RADIUS
- C. TACACS+
- D. HTTP

**Answer:** A

**Explanation:**

Reference: [https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configuration-guide/b\\_cg80/b\\_cg80\\_chapter\\_011.html](https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configuration-guide/b_cg80/b_cg80_chapter_011.html)

**NEW QUESTION 183**

- (Topic 2)

Refer to the exhibit.



An engineer configured the New York router with static routes that point to the Atlanta and Washington sites. What command must be configured on the Atlanta and Washington routers so that both sites are able to reach the loopback2 interface on the New York router?

- A. ipv6 route ::/0 Serial 0/0/1
- B. ipv6 route 0/0 Serial 0/0/0
- C. ipv6 route ::/0 Serial 0/0/0
- D. ip route 0.0.0.0.0.0.0.0 Serial 0/0/0
- E. ipv6 route ::/0 2000::2

**Answer:** C

**NEW QUESTION 186**

- (Topic 2)

Refer to the exhibit.

```

R1#config t
R1(config)# interface gil/1
R1(config-if)# ip address 192.168.0.1 255.255.255.0

R1(config)# router bgp 65000
R1(config-router)# neighbor 192.168.0.2 remote-as 65001
R1(config-router)# network 10.1.1.0 mask 255.255.255.0

R1(config)# router ospf 1
R1(config)# router-id 1.1.1.1
R1(config)# network 192.168.0.1 0.0.0.0 area 0
R1(config)# network 10.1.1.0 0.0.0.255 area 0

R1(config)# router eigrp 1
R1(config)# eigrp router-id 1.1.1.1
R1(config)# network 10.1.1.0 0.0.0.255
R1(config)# network 192.168.0.1 0.0.0.0

R2#config t
R2(config)# interface gil/1
R2(config-if)# ip address 192.168.0.2 255.255.255.0

R2#config t
R2(config)# router bgp 65001
R2(config-router)# neighbor 192.168.0.1 remote-as 65000

R2(config)# router ospf 1
R2(config)# router-id 2.2.2.2
R2(config)# network 192.168.1.2 0.0.0.0 area 0

R2(config)# router eigrp 1
R2(config)# eigrp router-id 1.1.1.1
R2(config)# network 192.168.0.1 0.0.0.0

R2(config)# ip route 10.1.1.0 255.255.255.0 192.168.0.1

```

Router R2 is configured with multiple routes to reach network 10.1.1.0/24 from router R1. What protocol is chosen by router R2 to reach the destination network 10.1.1.0/24?

- A. eBGP
- B. static
- C. OSPF
- D. EIGRP

**Answer: B**

#### NEW QUESTION 189

- (Topic 2)

Which type of traffic is sent with pure IPsec?

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

**Answer: D**

#### Explanation:

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

#### NEW QUESTION 191

- (Topic 2)

What does an SDN controller use as a communication protocol to relay forwarding changes to a southbound API?

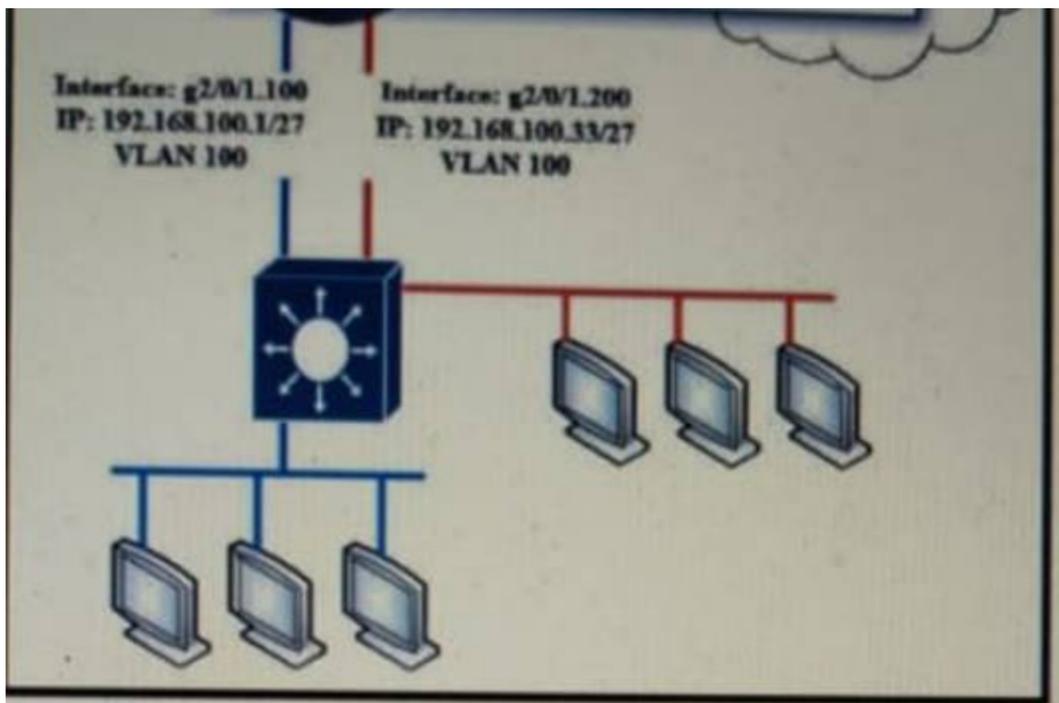
- A. OpenFlow
- B. Java
- C. REST
- D. XML

**Answer: A**

#### NEW QUESTION 196

- (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 201**

- (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 203**

- (Topic 2)  
 What is a syslog facility?

- A. Host that is configured for the system to send log messages
- B. password that authenticates a Network Management System to receive log messages
- C. group of log messages associated with the configured severity level
- D. set of values that represent the processes that can generate a log message

**Answer: C**

**Explanation:**

Cisco Community – Difference between logging level and logging facility Post by ahmednaas  
 “The logging facility command basically tells the syslog server where to put the log message. You configure the syslog server with something like:  
 local7.debug /var/adm/local7.log  
 Now, when you use the “logging facility local7” on your device, all messages with severity “debug” or greater should be saved in /var/adm/local7.log.”  
 Example: on a switch, any process (CDP, SNMP, etc.) can generate a log message. On a syslog server, the logging facility is the place where all received messages with the same priority level are stored.

**NEW QUESTION 206**

- (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 210**

- (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

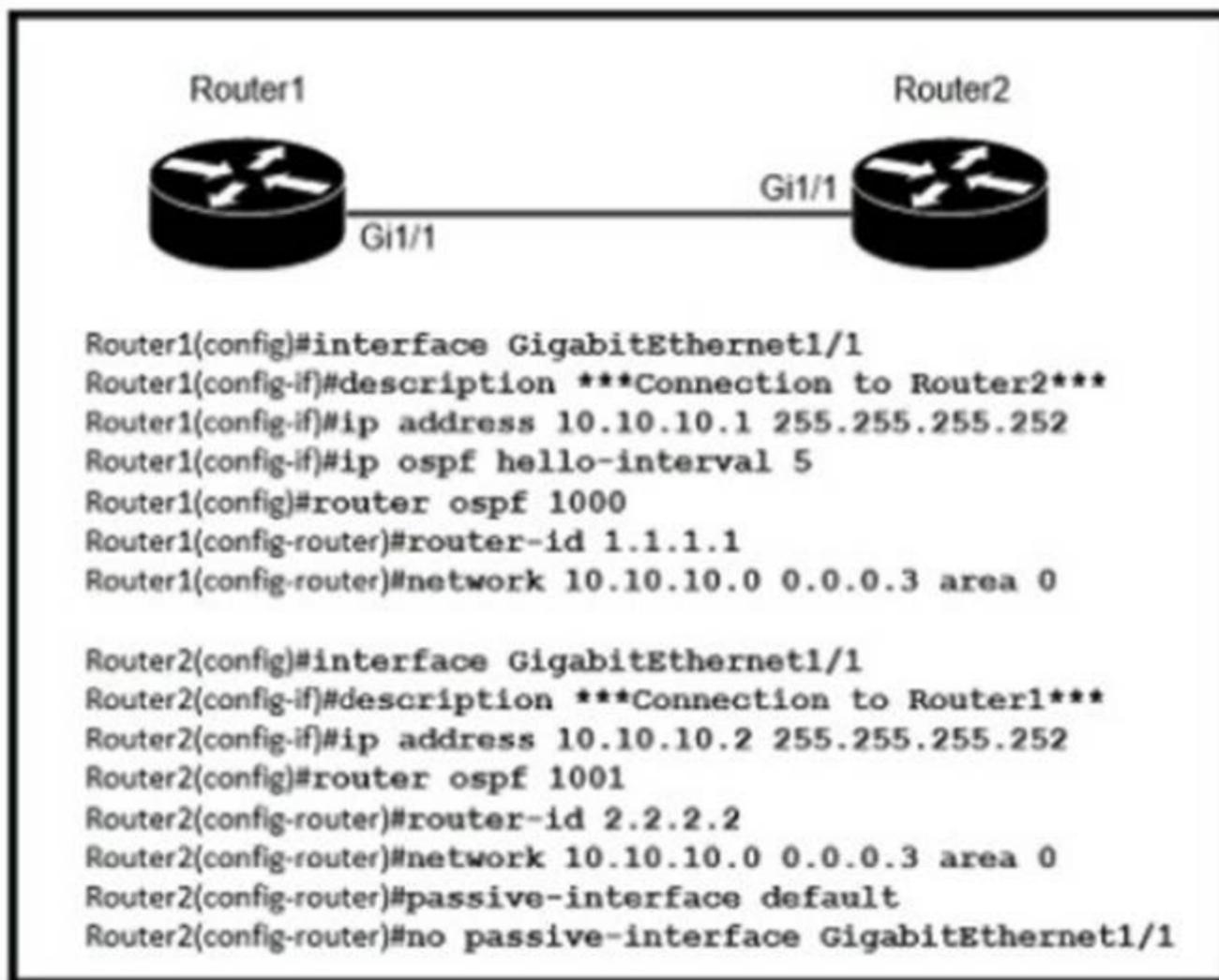
**Answer: D**

**Explanation:**

Cisco overview doc for SDN here: [https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data\\_Center/VMDC/SDN/SDN.html](https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/VMDC/SDN/SDN.html)

**NEW QUESTION 215**

- (Topic 2)



Refer to the exhibit. After the configuration is applied, the two routers fail to establish an OSPF neighbor relationship. what is the reason for the problem?

- A. The OSPF router IDs are mismatched.
- B. Router2 is using the default hello timer.
- C. The network statement on Router1 is misconfigured.
- D. The OSPF process IDs are mismatched.

Answer: B

**NEW QUESTION 216**

DRAG DROP - (Topic 2)

Drag and drop the AAA terms from the left onto the description on the right.

accounting	tracks activity
authentication	updates session attributes
authorization	verifies access rights
CoA	verifies identity

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

1-1, 2-4, 3-3, 4-2

**NEW QUESTION 219**

- (Topic 2)

When a WPA2-PSK WLAN is configured in the wireless LAN Controller, what is the minimum number of characters that in ASCII format?

- A. 6
- B. 8
- C. 12
- D. 18

Answer: B

**NEW QUESTION 221**

- (Topic 2)  
 What are two characteristics of an SSID? (Choose Two)

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

**Answer:** BE

**NEW QUESTION 224**

- (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 226**

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

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

**Answer:** C

**NEW QUESTION 227**

- (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 230**

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

- A. moves from a two-tier to a three-tier network architecture to provide maximum redundancy
- B. provides an added layer of security to protect from DDoS attacks
- C. allows configuration and monitoring of the network from one centralized port

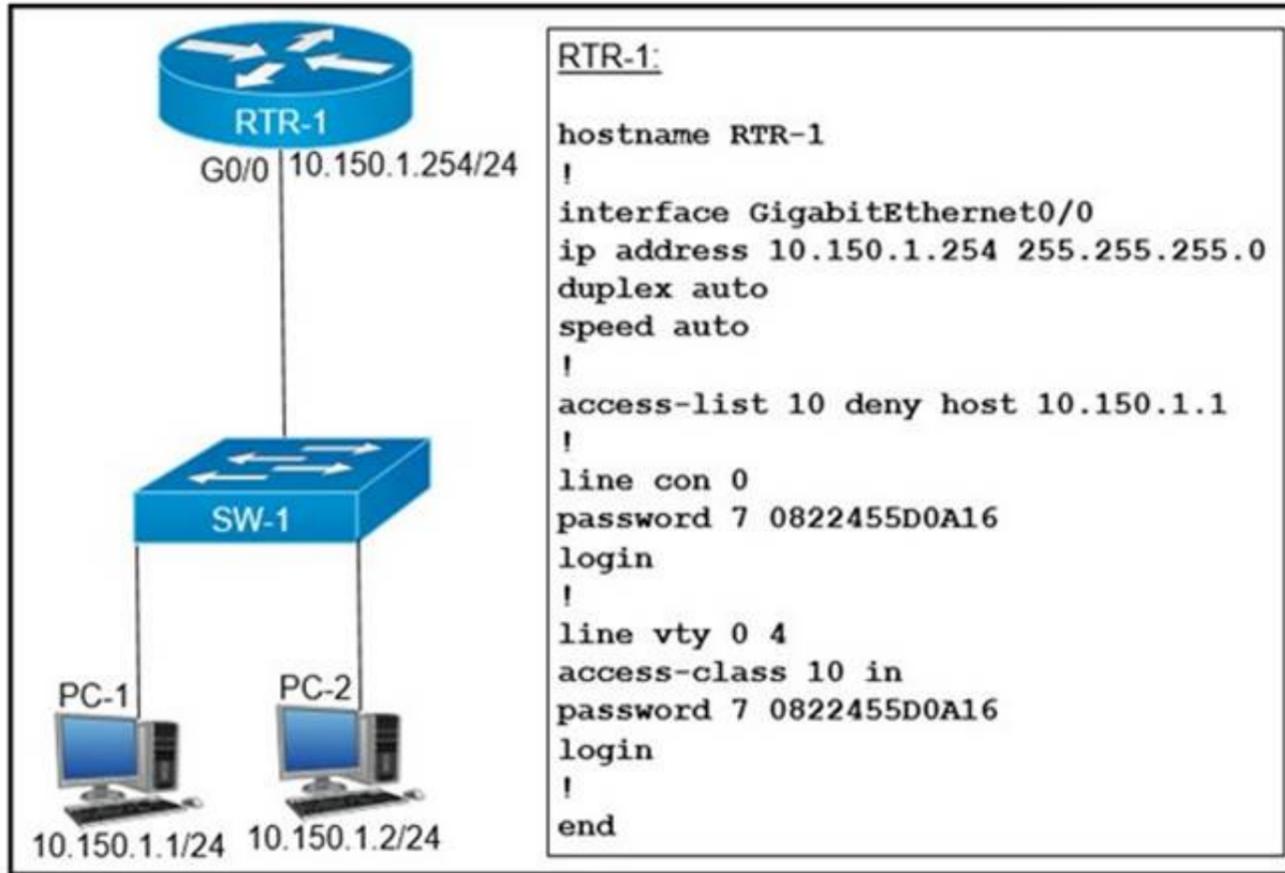
D. combines control and data plane functionality on a single device to minimize latency

Answer: C

**NEW QUESTION 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?

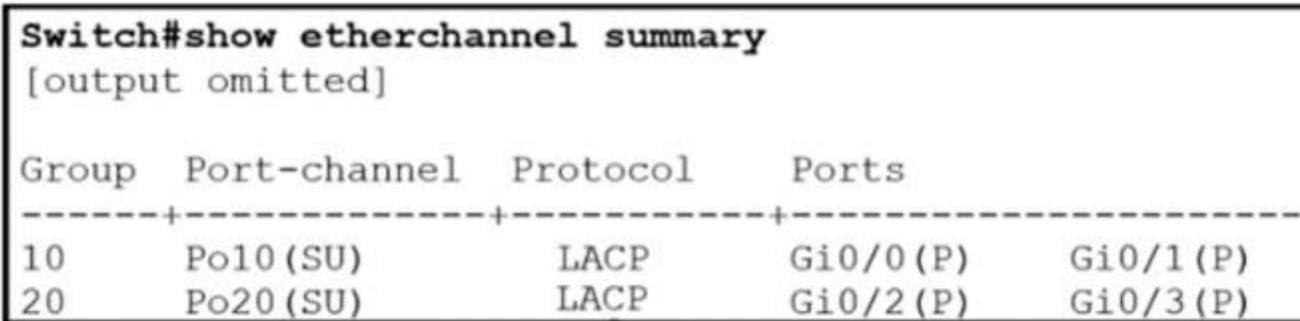
- A. Add the access-list 10 permit any command to the configuration
- B. Remove the access-class 10 in command from line vty 0.4.
- C. Add the ip access-group 10 out command to interface g0/0.
- D. Remove the password command from line vty 0 4.

Answer: A

**NEW QUESTION 234**

- (Topic 2)

Refer to the exhibit.



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

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

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

Answer: AC

**NEW QUESTION 239**

- (Topic 2)

Which two primary drivers support the need for network automation? (Choose two.)

- A. Eliminating training needs
- B. Increasing reliance on self-diagnostic and self-healing
- C. Policy-derived provisioning of resources
- D. Providing a ship entry point for resource provisioning
- E. Reducing hardware footprint

Answer: CD

**NEW QUESTION 243**

- (Topic 2)

What is the path for traffic sent from one user workstation to another workstation on a separate switch in a three-tier architecture model?

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

Answer: D

**NEW QUESTION 245**

- (Topic 2)

Which technology must be implemented to configure network device monitoring with the highest security?

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

Answer: C

**NEW QUESTION 247**

- (Topic 2)

Refer to the exhibit.

```

10.0.0.0/24 is subnetted, 1 subnets
C      10.0.0.0 is directly connected, FastEthernet0/1
C      172.160.0/16 is directly connected, FastEthernet0/0
D      192.168.0.0/24 [90/30720] via 172.16.0.2, 00:00:03, FastEthernet0/0
```

Which route type does the routing protocol Code D represent in the output?

- A. internal BGP route

- B. /24 route of a locally configured IP
- C. statically assigned route
- D. route learned through EIGRP

**Answer:** D

**NEW QUESTION 250**

- (Topic 2)

Where is the interface between the control plane and data plane within the software- defined architecture?

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

**Answer:** A

**NEW QUESTION 251**

- (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 255**

- (Topic 2)

Which port type supports the spanning-tree portfast command without additional configuration?

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

**Answer:** A

**NEW QUESTION 257**

- (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 260**

- (Topic 2)

What are two characteristics of a controller-based network? (Choose two)

- A. The administrator can make configuration updates from the CLI
- B. It uses northbound and southbound APIs to communicate between architectural layers
- C. It moves the control plane to a central point.

- D. It decentralizes the control plane, which allows each device to make its own forwarding decisions
- E. It uses Telnet to report system issues.

**Answer:** BC

#### NEW QUESTION 264

- (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 266

- (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 270

- (Topic 2)

Which two must be met before SSH can operate normally on a Cisco IOS switch? (Choose two)

- A. The switch must be running a k9 (crypto) IOS image
- B. The Ip domain-name command must be configured on the switch
- C. IP routing must be enabled on the switch
- D. A console password must be configured on the switch
- E. Telnet must be disabled on the switch

**Answer:** AB

#### Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/security-vpn/secure-shell-ssh/4145-ssh.html>

#### NEW QUESTION 272

- (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 276

- (Topic 2)

Which result occurs when PortFast is enabled on an interface that is connected to another switch?

- A. Spanning tree may fail to detect a switching loop in the network that causes broadcast storms
- B. VTP is allowed to propagate VLAN configuration information from switch to switch automatically.
- C. Root port choice and spanning tree recalculation are accelerated when a switch link goes down
- D. After spanning tree converges PortFast shuts down any port that receives BPDUs.

**Answer:** A

#### Explanation:

Enabling the PortFast feature causes a switch or a trunk port to enter the STP forwarding-state immediately or upon a linkup event, thus bypassing the listening and learning states.

Note: To enable portfast on a trunk port you need the trunk keyword "spanning-tree portfast trunk"

#### NEW QUESTION 280

- (Topic 2)

Which IPv6 address type provides communication between subnets and is unable to route on the Internet?

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

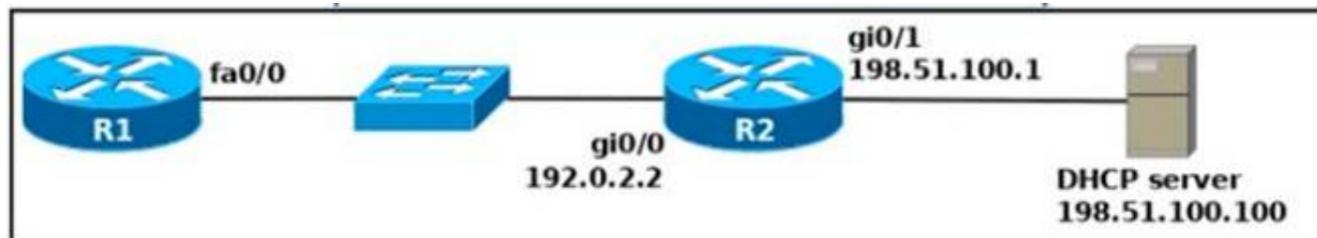
D. multicast

Answer: B

**NEW QUESTION 283**

- (Topic 2)

Refer to the exhibit.



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

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

Answer: BC

**NEW QUESTION 287**

- (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 292**

- (Topic 2)

A network administrator enabled port security on a switch interface connected to a printer. What is the next configuration action in order to allow the port to learn the MAC address of the printer and insert it into the table automatically?

- A. enable dynamic MAC address learning
- B. implement static MAC addressing.
- C. enable sticky MAC addressing
- D. implement auto MAC address learning

Answer: C

**NEW QUESTION 293**

- (Topic 1)

Refer to the exhibit Router R1 Fa0/0 is unable to 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 298

- (Topic 1)

What is the difference regarding reliability and communication type between TCP and UDP?

- A. TCP is reliable and is a connection-oriented protocol UDP is not reliable and is a connectionless protocol
- B. TCP is not reliable and is a connection-oriented protocol; UDP is reliable and is a connectionless protocol
- C. TCP is not reliable and is a connectionless protocol; UDP is reliable and is a connection-oriented protocol
- D. TCP is reliable and is a connectionless protocol; UDP is not reliable and is a connection-oriented protocol

**Answer:** A

#### NEW QUESTION 299

- (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 304

- (Topic 1)

Which switch technology establishes a network connection immediately when it is plugged in?

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 308

- (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](https://en.wikipedia.org/wiki/802.11_Frame_Types)

#### NEW QUESTION 309

- (Topic 1)

Two switches are connected and using Cisco Dynamic Trunking Protocol SW1 is set to Dynamic Desirable  
What is the result of this configuration?

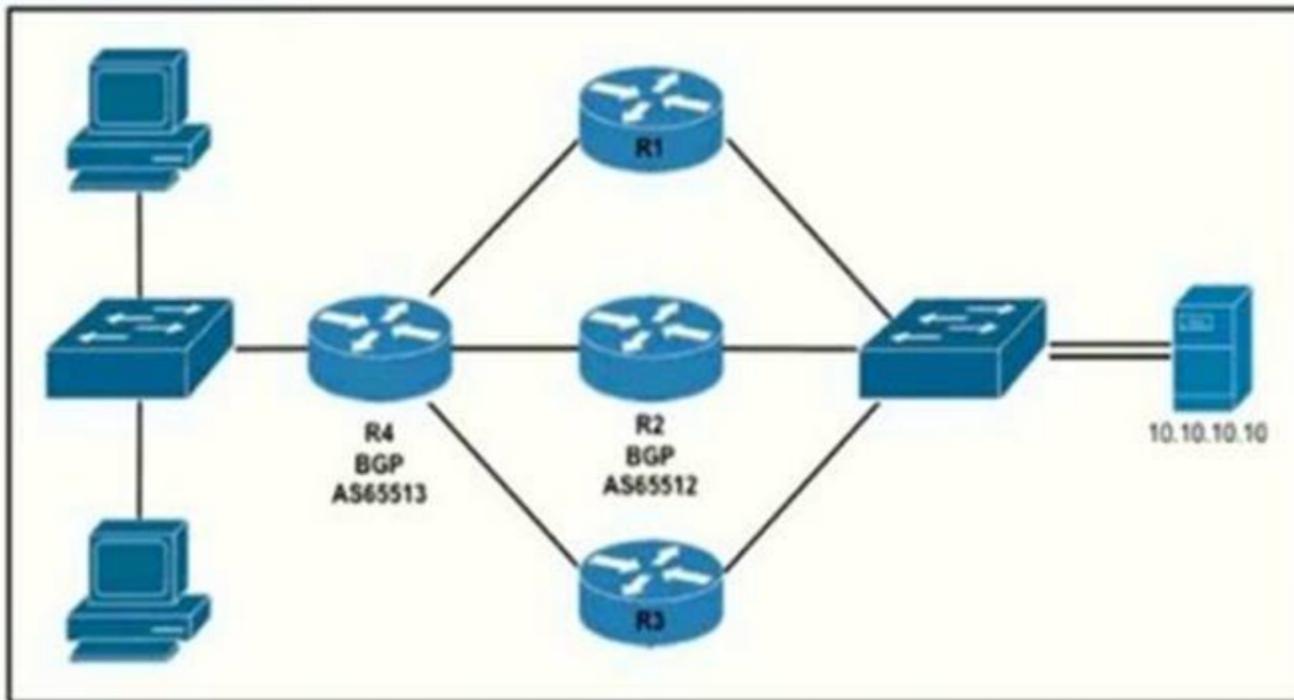
- A. The link is in a down state.
- B. The link is in an error disables state
- C. The link is becomes an access port.
- D. The link becomes a trunk port.

**Answer:** D

#### NEW QUESTION 314

- (Topic 1)

Refer to the exhibit.



Router R4 is dynamically learning the path to the server. If R4 is connected to R1 via OSPF Area 20, to R2 via R2 BGP, and to R3 via EIGRP 777, which path is installed in the routing table of R4?

- A. the path through R1, because the OSPF administrative distance is 110
- B. the path through R2, because the IBGP administrative distance is 200
- C. the path through R2 because the EBGP administrative distance is 20
- D. the path through R3, because the EIGRP administrative distance is lower than OSPF and BGP

Answer: C

**NEW QUESTION 319**

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

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

Answer: A

**NEW QUESTION 323**

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

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

Answer: A

**NEW QUESTION 324**

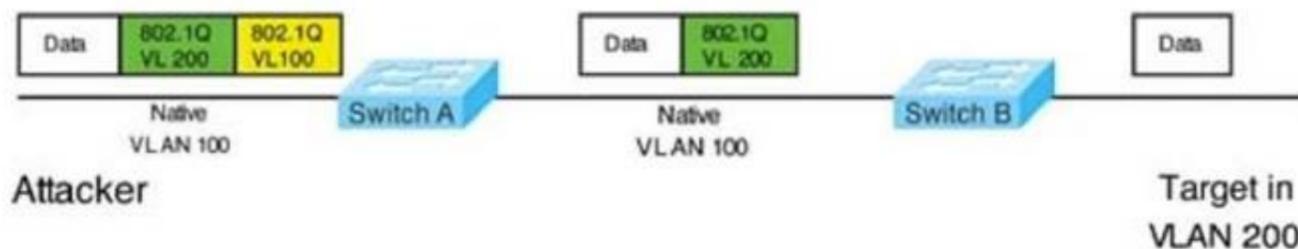
DRAG DROP - (Topic 1)  
 Drag and drop the threat-mitigation techniques from the left onto the types of threat or attack they mitigate on the right.

Configure BPDUs 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 an tag of VLAN 20 so it removes this tag and forwards out to the Victim computer. Note: This attack only works if the trunk (between two switches) has the same native VLAN as the attacker. To mitigate this type of attack, you can use VLAN access control lists (VACLs, which applies to all traffic within a VLAN. We can use VACL to drop attacker traffic to specific victims/servers) or implement Private VLANs. ARP attack (like ARP poisoning/spoofing) is a type of attack in which a malicious actor sends falsified ARP messages over a local area network as ARP allows a gratuitous reply from a host even if an ARP request was not received. This results in the linking of an attacker's MAC address with the IP address of a legitimate computer or server on the network. This is an attack based on ARP which is at Layer 2. Dynamic ARP inspection (DAI) is a security feature that validates ARP packets in a network which can be used to mitigate this type of attack.

### NEW QUESTION 325

- (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 328

- (Topic 1)

What are two benefits of controller-based networking compared to traditional networking?

- A. controller-based increases network bandwidth usage, while traditional lightens the load on the network.
- B. controller-based inflates software costs, while traditional decreases individual licensing costs
- C. Controller-based reduces network configuration complexity, while traditional increases the potential for errors
- D. Controller-based provides centralization of key IT function
- E. While traditional requires distributes management function
- F. controller-based allows for fewer network failure, while traditional increases failure rates.

**Answer: CD**

#### Explanation:

Cisco DNA Center Device Management

\* 3. Monitor the cloud for software update

\* 5. Uses CLI templates to apply a consistent configuration to multiple devices at an individual location

\* 6. Uses NetFlow to analyse potential security threats throughout the network and take appropriate action on that traffic

Traditional device management

\* 2. Manages device configuration on a per-device basis

\* 4. Security is managed near the perimeter of the network with firewalls, VPNs, and IPS

? Implements changes via an SSH terminal

### NEW QUESTION 330

- (Topic 1)

Which implementation provides the strongest encryption combination for the wireless environment?

- A. WPA2 + AES
- B. WPA + AES
- C. WEP
- D. WPA + TKIP

**Answer: A**

### NEW QUESTION 332

- (Topic 1)

In QoS, which prioritization method is appropriate for interactive voice and video?

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

**Answer: D**

### NEW QUESTION 334

- (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 336**

- (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 339**

DRAG DROP - (Topic 1)

Drag and drop the IPv4 network subnets from the left onto the correct usable host ranges on the right

172.28.228.144/18	172.28.228.1 - 172.28.229.254
172.28.228.144/21	172.28.224.1 - 172.28.231.254
172.28.228.144/23	172.28.228.129 - 172.28.228.254
172.28.228.144/25	172.28.228.145 - 172.28.228.150
172.28.228.144/29	172.28.192.1 - 172.28.255.254

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

172.28.228.144/18	172.28.228.144/23
172.28.228.144/21	172.28.228.144/21
172.28.228.144/23	172.28.228.144/25
172.28.228.144/25	172.28.228.144/29
172.28.228.144/29	172.28.228.144/18

**NEW QUESTION 342**

- (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 344**

- (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)

How does HSRP provide first hop redundancy?

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

**Answer:** D

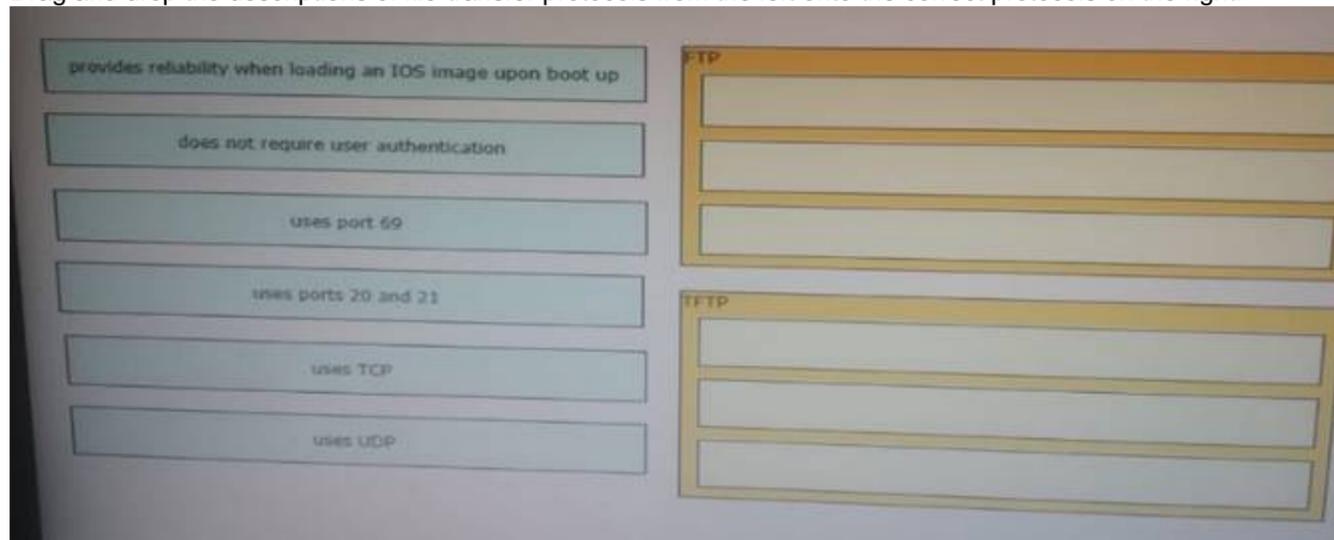
**Explanation:**

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp\\_fhrp/configuration/xr-16/fhrp-xr-16-book/fhrp-hsrp-mgo.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp_fhrp/configuration/xr-16/fhrp-xr-16-book/fhrp-hsrp-mgo.html)

**NEW QUESTION 352**

DRAG DROP - (Topic 1)

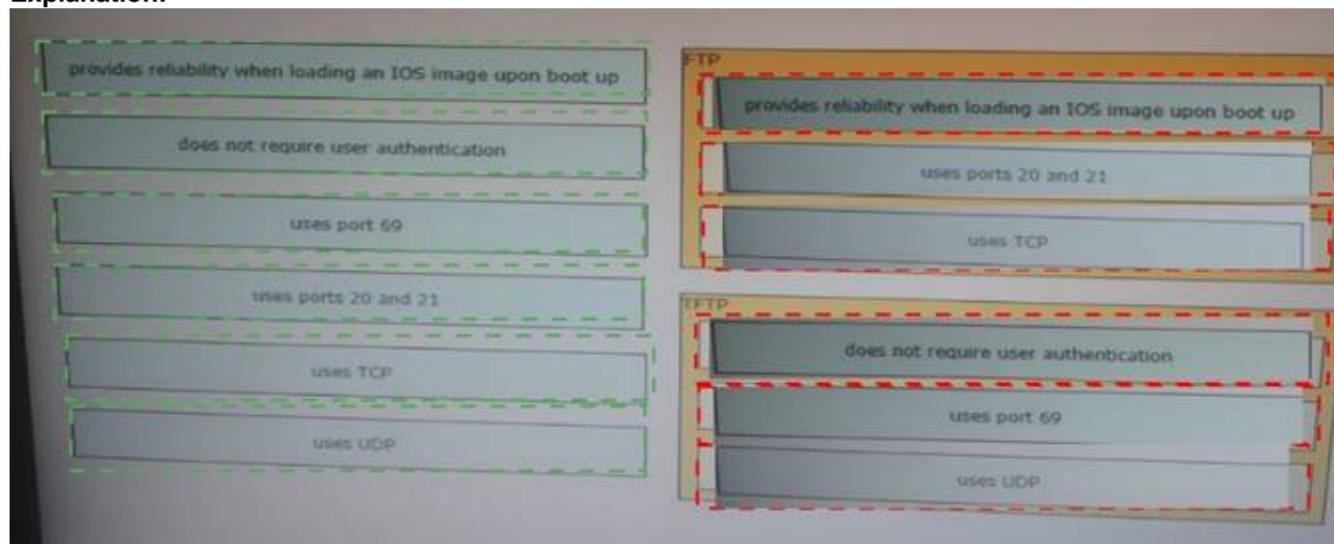
Drag and drop the descriptions of file-transfer protocols from the left onto the correct protocols on the right.



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 355**

- (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 356**

- (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 360**

- (Topic 1)

What is an advantage of Cisco DNA Center versus traditional campus device management?

- A. It supports numerous extensibility options including cross-domain adapters and third- party SDKs.
- B. It supports high availability for management functions when operating in cluster mode.
- C. It enables easy autodiscovery of network elements m a brownfield deployment.
- D. It is designed primarily to provide network assurance.

**Answer: A**

**NEW QUESTION 363**

- (Topic 1)

What occurs to frames during the process of frame flooding?

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

**Answer: A**

**NEW QUESTION 365**

- (Topic 1)

What must be considered when using 802:11 ta?

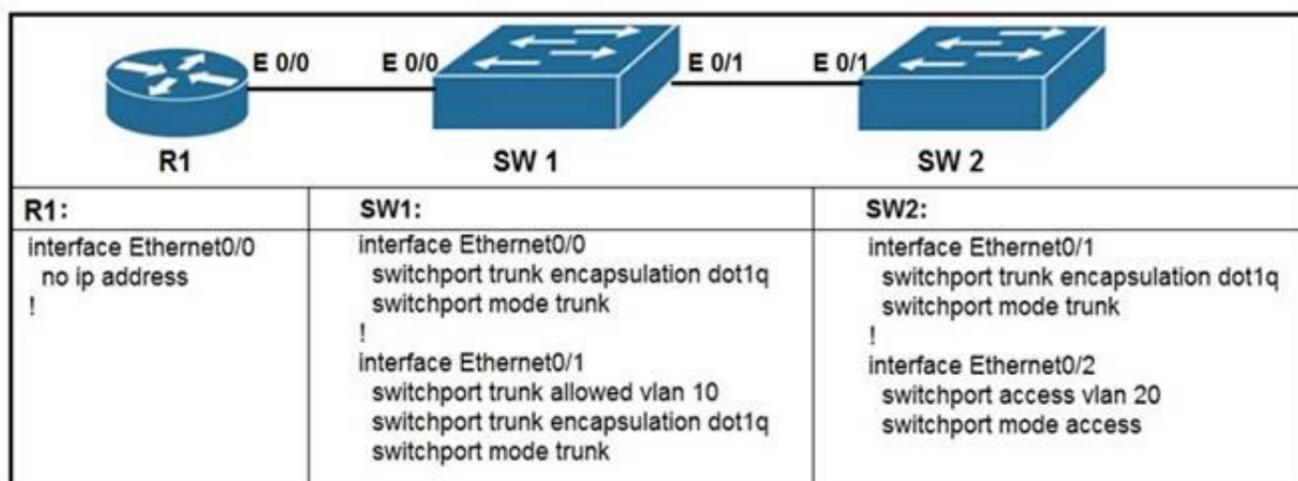
- A. It is compatible with 802 lib- and 802 11-compliant wireless devices
- B. It is used in place of 802 11b/g when many nonoverlapping channels are required
- C. It is susceptible to interference from 2 4 GHz devices such as microwave ovens.
- D. It is chosen over 802 11b/g when a lower-cost solution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

**Answer: A**

**NEW QUESTION 367**

- (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 368**

- (Topic 1)

Which mode must be used to configure EtherChannel between two switches without using a negotiation protocol?

- A. on
- B. auto
- C. active
- D. desirable

**Answer: A**

**Explanation:**

The Static Persistence (or “on” mode) bundles the links unconditionally and no negotiation protocol is used. In this mode, neither PAgP nor LACP packets are sent or received.

**NEW QUESTION 369**

- (Topic 1)

Refer to the exhibit.

```
ip arp inspection vlan 2-10
interface fastethernet 0/1
ip arp inspection trust
```

If the network environment is operating normally, which type of device must be connected to interface FastEthernet 0/1?

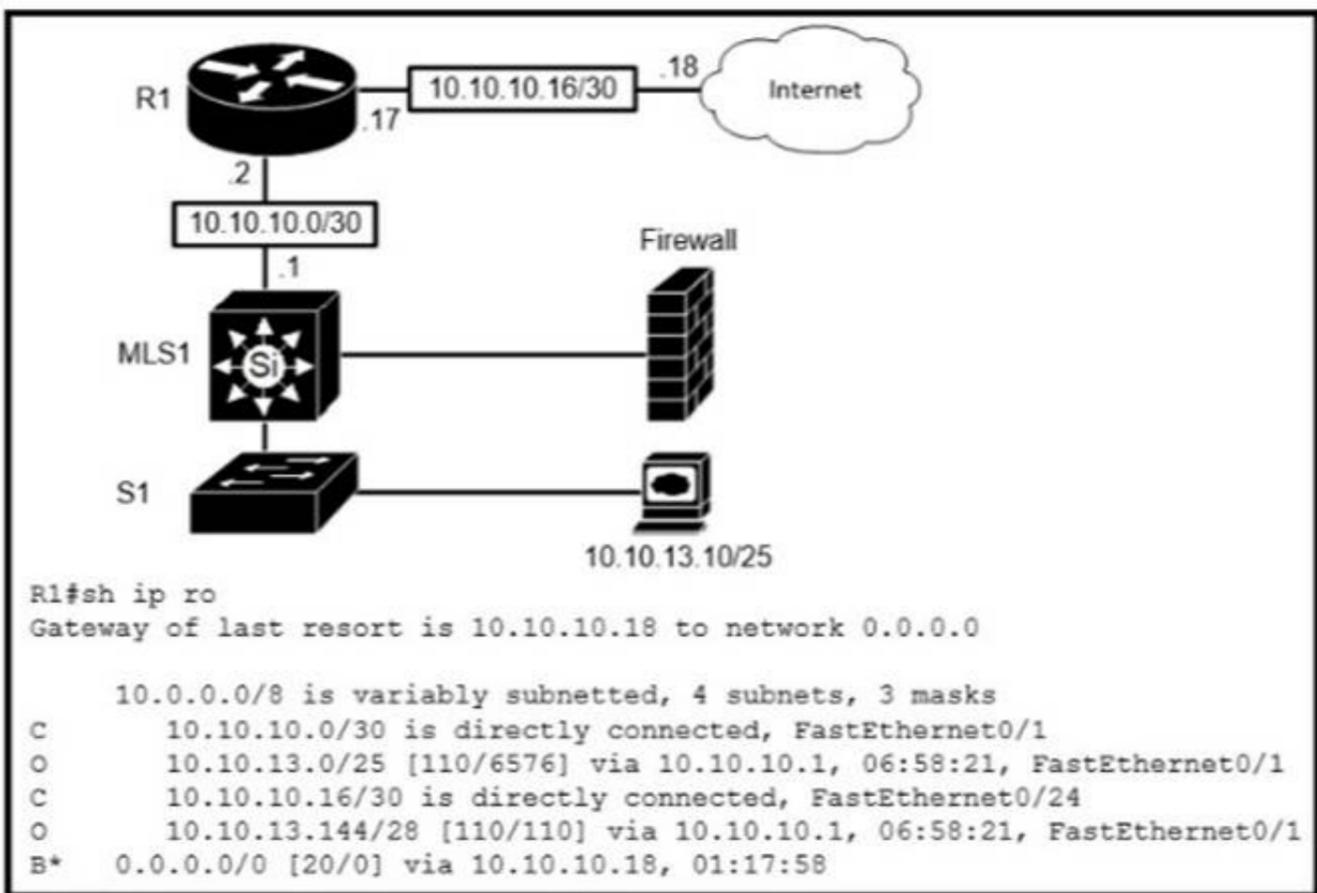
- A. DHCP client
- B. access point
- C. router
- D. PC

**Answer: C**

**NEW QUESTION 374**

- (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 375**

- (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 380**

- (Topic 1)

What is the purpose of a southbound API in a control based networking architecture?

- A. Facilitates communication between the controller and the applications
- B. Facilitates communication between the controller and the networking hardware
- C. allows application developers to interact with the network
- D. integrates a controller with other automation and orchestration tools.

**Answer: B**

**Explanation:**

<https://www.ciscopress.com/articles/article.asp?p=2995354&seqNum=2#:~:text=The%20Southbound%20Interface,communicate%20to%20the%20networking%20devices.&text=The%20overall%20goal%20is%20network,from%20being%20only%20a%20protocol.>

The Southbound Interface

In a controller-based network architecture, the controller needs to communicate to the networking devices.

**NEW QUESTION 385**

- (Topic 1)

Which WAN topology provides a combination of simplicity quality, and availability?

- A. partial mesh
- B. full mesh
- C. point-to-point
- D. hub-and-spoke

**Answer: C**

**NEW QUESTION 389**

- (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 392**

- (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 397

- (Topic 1)  
Refer to exhibit.

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

Which statement explains the configuration error message that is received?

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

**Answer:** A

#### NEW QUESTION 398

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

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

**Answer:** A

#### NEW QUESTION 399

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

#### NEW QUESTION 402

- (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 403

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

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

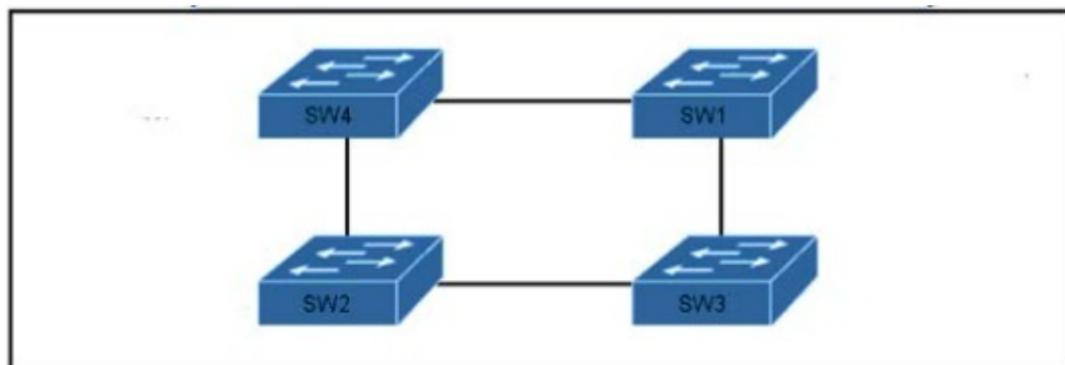
**Answer:** A

#### Explanation:

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

#### NEW QUESTION 404

- (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 408**

- (Topic 1)

Which two events occur automatically when a device is added to Cisco DNA Center?

(Choose two. )

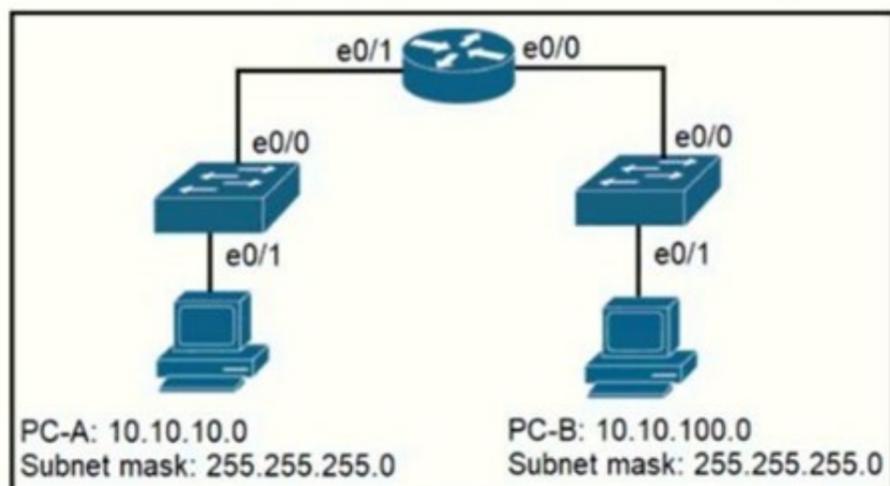
- A. The device is assigned to the Global site.
- B. The device is placed into the Unmanaged state.
- C. The device is placed into the Provisioned state.
- D. The device is placed into the Managed state.
- E. The device is assigned to the Local site.

Answer: AB

**NEW QUESTION 409**

- (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 414**

- (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 415**

- (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 416**

DRAG DROP - (Topic 1)

Drag and drop the network protocols from the left onto the correct transport services on the right.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

**NEW QUESTION 417**

- (Topic 1)

How is the native VLAN secured in a network?

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

**Answer:** A

**NEW QUESTION 421**

- (Topic 1)

Which two components are needed to create an Ansible script that configures a VLAN on a switch? (Choose two.)

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

**Answer:** CD

**NEW QUESTION 426**

- (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 431**

- (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 436**

- (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 437**

- (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 439**

DRAG DROP - (Topic 1)

Drag and drop the IPv6 address type characteristics from the left to the right.

- attached to a single subnet
- addresses with prefix FC00::/7
- configured only once per interface
- addressing for exclusive use internally without Internet routing

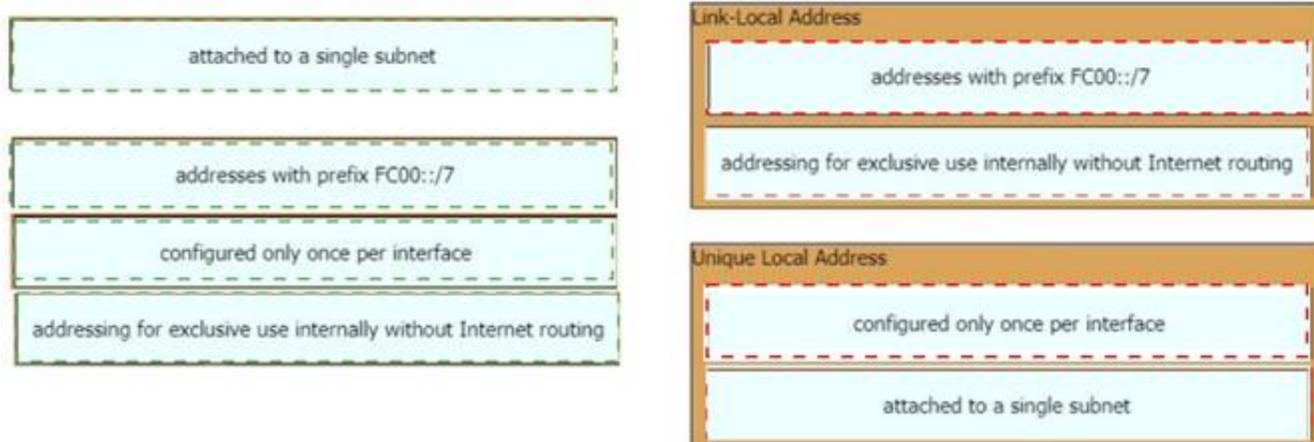
Link-Local Address
Unique Local Address

A. Mastered

B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 441**

- (Topic 1)

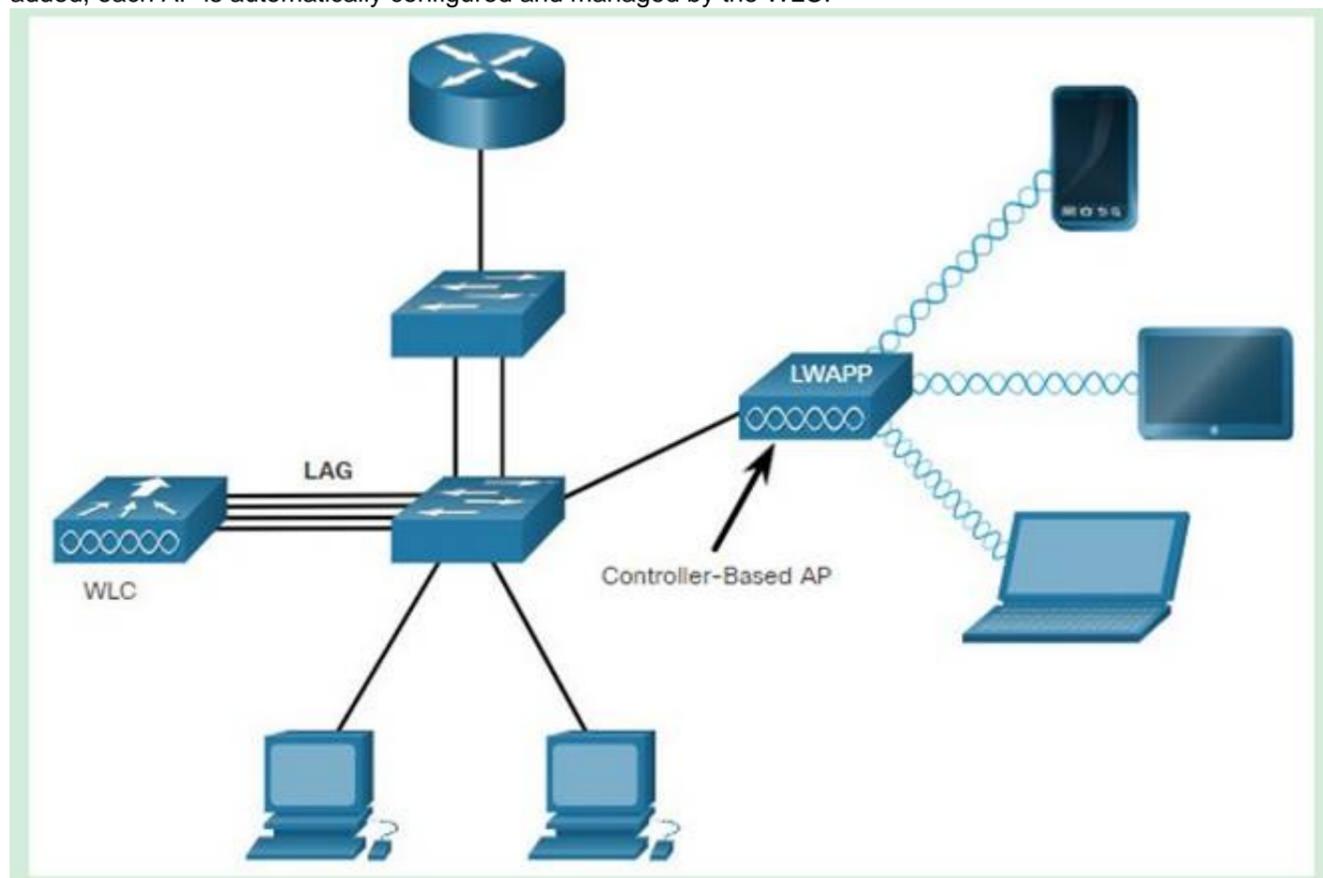
What is a function of Wireless LAN Controller?

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

Answer: C

Explanation:

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



**NEW QUESTION 442**

- (Topic 1)

When configuring IPv6 on an interface, which two IPv6 multicast groups are joined? (Choose two)

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

Answer: DE

Explanation:

Reference:

<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xr-3s/ipv6-xr-36s-book/ipv6-multicast.html>

When an interface is configured with IPv6 address, it automatically joins the all nodes (FF02::1) and solicited-node (FF02::1:FFxx:xxxx) multicast groups. The all-

node group is used to communicate with all interfaces on the local link, and the solicited-nodes multicast group is required for link-layer address resolution. Routers also join a third multicast group, the all-routers group (FF02::2).

**NEW QUESTION 445**

- (Topic 1)

Which protocol does an IPv4 host use to obtain a dynamically assigned IP address?

- A. ARP
- B. DHCP
- C. CDP
- D. DNS

**Answer: B**

**Explanation:**

<https://www.geeksforgeeks.org/how-dhcp-server-dynamically-assigns-ip-address-to-a-host/#:~:text=DHCP%20is%20an%20abbreviation%20for,subnet%20mask%20and%20gateway%20address.>

**NEW QUESTION 446**

DRAG DROP - (Topic 1)

Drag and drop the SNMP manager and agent identifier commands from the left onto the functions on the right

show snmp chassis	displays information about the SNMP recipient
show snmp community	displays the IP address of the remote SNMP device
show snmp engineID	displays the SNMP security model in use
show snmp group	displays the SNMP access string
show snmp host	displays the SNMP server serial number

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

show snmp chassis	show snmp host
show snmp community	show snmp engineID
show snmp engineID	show snmp group
show snmp group	show snmp community
show snmp host	show snmp chassis

**NEW QUESTION 451**

- (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?

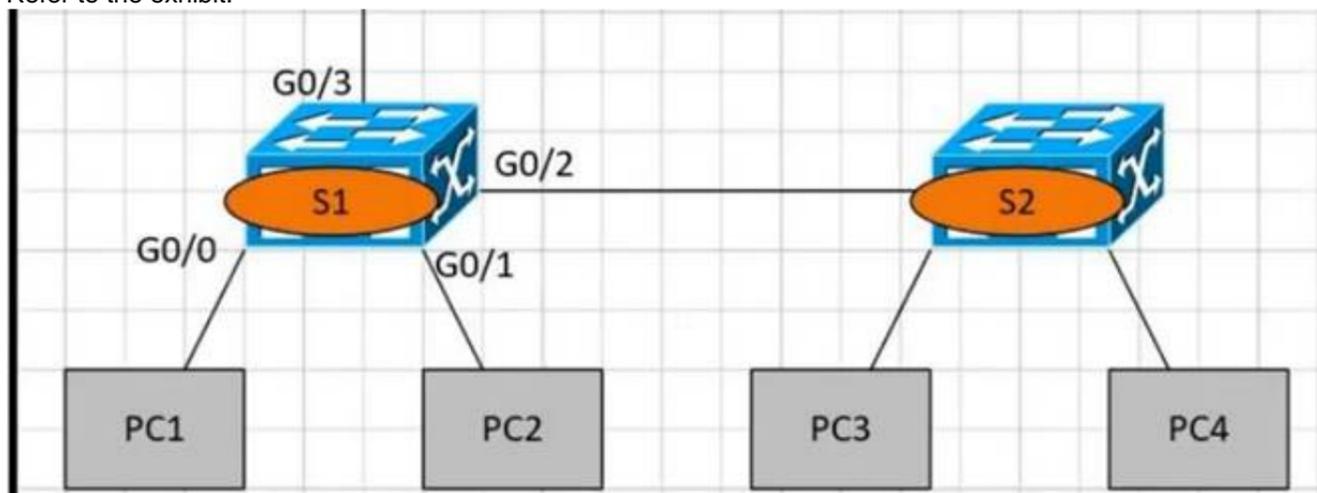
- A. Ansible
- B. JSON
- C. Chef
- D. Puppet

Answer: D

**NEW QUESTION 455**

- (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 457**

- (Topic 1)

What is a recommended approach to avoid co-channel congestion while installing access points that use the 2.4 GHz frequency?

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

Answer: A

**NEW QUESTION 460**

- (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 463**

- (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 465**

- (Topic 1)

What does physical access control regulate?

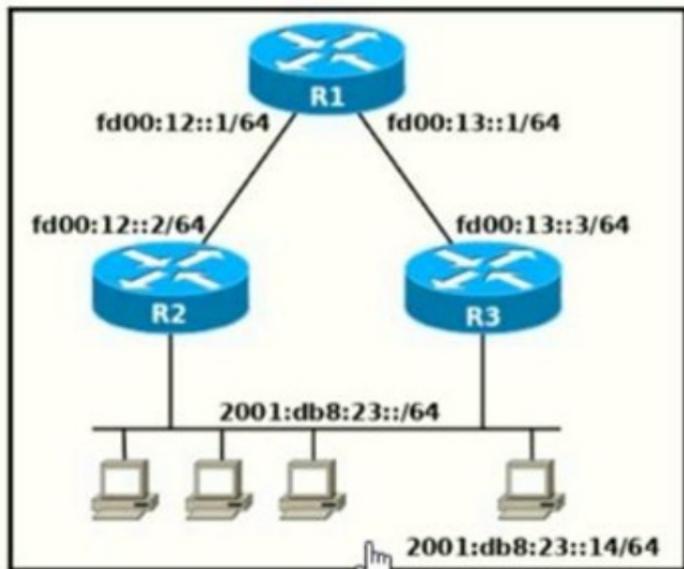
- A. access to spec fie networks based on business function
- B. access to servers to prevent malicious activity
- C. access :o computer networks and file systems
- D. access to networking equipment and facilities

Answer: D

**NEW QUESTION 470**

- (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 475**

DRAG DROP - (Topic 1)

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

DHCP server	list of hosts on the network that are unknown to the administrative domain
snooping binding database	network component that propagates IP addresses to hosts on the network
spurious DHCP server	internal device under the control of the network administrator
trusted	unknown DHCP server within an administrative domain
untrusted	default state of all interfaces

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

DHCP server	snooping binding database
snooping binding database	spurious DHCP server
spurious DHCP server	trusted
trusted	DHCP server
untrusted	untrusted

**NEW QUESTION 478**

DRAG DROP - (Topic 1)

Drag and drop the 802.11 wireless standards from the left onto the matching statements on the right

802.11a	Operates in the 2.4 GHz and 5 GHz bands.
802.11ac	Operates in the 2.4 GHz band only and supports a maximum data rate of 54 Mbps.
802.11b	Operates in the 5 GHz band only and supports a maximum data rate that can exceed 100 Mbps.
802.11g	Supports a maximum data rate of 11 Mbps.
802.11n	Operates in the 5 GHz band only and supports a maximum data rate of 54 Mbps.

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

802.11a	802.11n
802.11ac	802.11g
802.11b	802.11ac
802.11g	802.11b
802.11n	802.11a

**NEW QUESTION 481**

DRAG DROP - (Topic 1)

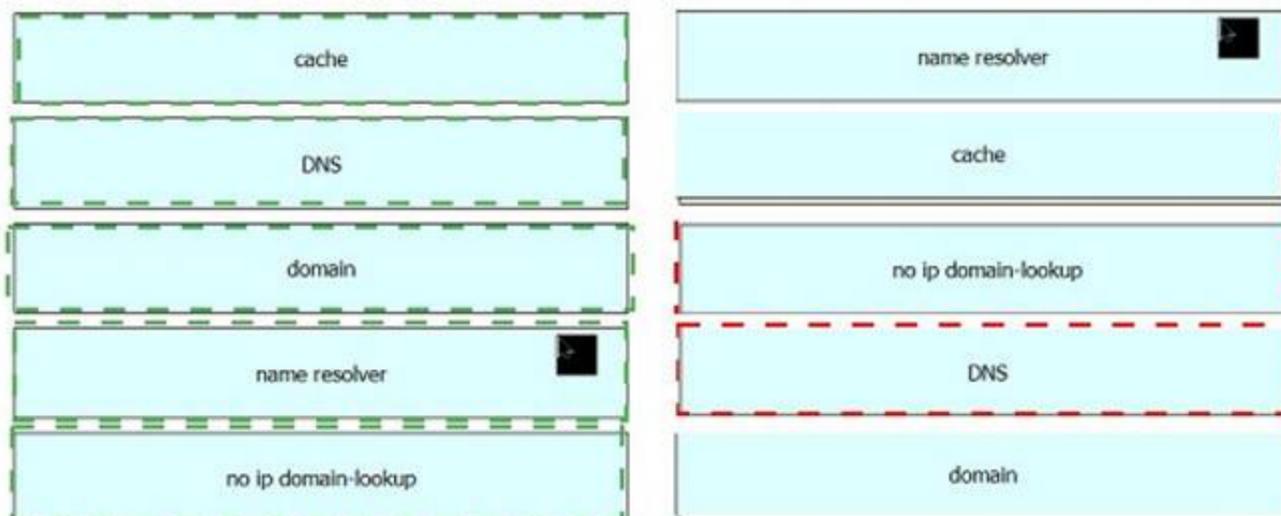
Drag and drop the DNS lookup components from the left onto the functions on the right.

cache	local database of address mappings that improves name-resolution performance
DNS	service that maps hostnames to IP addresses
domain	disables DNS services on a Cisco device
name resolver	in response to client requests, queries a name server for IP address information
no ip domain-lookup	component of a URL that indicates the location or organization type.

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 486**

- (Topic 1)

Aside from discarding, which two states does the switch port transition through while using RSTP (802.1w)? (Choose two)

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

**Answer:** CD

**NEW QUESTION 489**

- (Topic 1)

An engineer must configure a /30 subnet between two routers. Which usable IP address and subnet mask combination meets this criteria?

```
interface e0/0
description to HQ-A371:19452
ip address 209.165.201.2 255.255.255.252
```

```
interface e0/0
description to HQ-A371:19452
ip address 10.2.1.3 255.255.255.252
```

```
interface e0/0
description to HQ-A371:19452
ip address 172.16.1.4 255.255.255.248
```

```
interface e0/0
description to HQ-A371:19452
ip address 192.168.1.1 255.255.255.248
```

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

**Answer:** A

**NEW QUESTION 492**

- (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 493**

- (Topic 1)

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

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

**Answer: D**

**NEW QUESTION 494**

- (Topic 1)

Refer to the exhibit.

```
R2#show ip nat translations
Pro Inside global      Inside local  Outside local  Outside global
tcp 172.23.104.3:43268  10.4.4.4:43268 172.23.103.10:23 172.23.103.10:23
tcp 172.23.104.4:45507  10.4.4.5:45507 172.23.103.10:80 172.23.103.10:80
```

An engineer configured NAT translations and has verified that the configuration is correct. Which IP address is the source IP?

- A. 10.4.4.4
- B. 10.4.4.5
- C. 172.23.103.10
- D. 172.23.104.4

**Answer: D**

**Explanation:**

NAT is used to send a packet to the outside network, using a public IP address to make it routable. The NAT logic is "inside-to-outside" FIRST and "outside-to-inside" THEN. This way, configuring NAT means "choosing a public IP address" for any outbound packet" IN THE FIRST PLACE, where "public IP address" translates to "inside global address". Among the given answers, the only inside global address is 172.123.104.4.

**NEW QUESTION 495**

- (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**

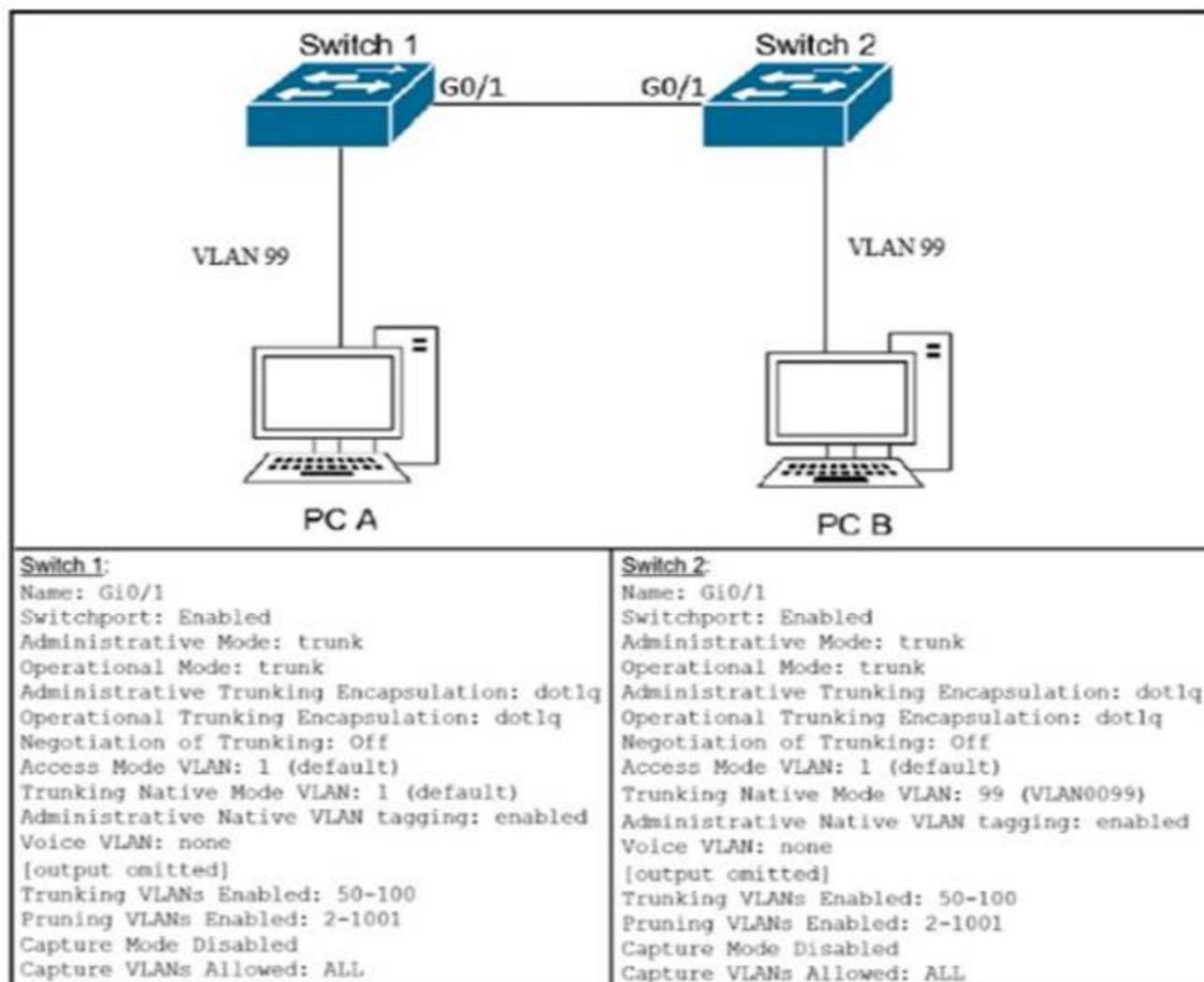
**Explanation:**

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 497**

- (Topic 1)

Refer to the Exhibit.



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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 501**

- (Topic 1)

What is a similarity between OM3 and OM4 fiber optic cable?

- A. Both have a 50 micron core diameter
- B. Both have a 9 micron core diameter
- C. Both have a 62.5 micron core diameter
- D. Both have a 100 micron core diameter

**Answer:** A

**NEW QUESTION 505**

- (Topic 1)

Which device tracks the state of active connections in order to make a decision to forward a packet through?

- A. wireless access point
- B. firewall
- C. wireless LAN controller
- D. router

**Answer:** B

**Explanation:**

Stateful inspection, also known as dynamic packet filtering, is a firewall technology that monitors the state of active connections and uses this information to determine which network packets to allow through the firewall.

**NEW QUESTION 507**

- (Topic 1)

Which spanning-tree enhancement avoids the learning and listening states and immediately places ports in the forwarding state?

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

**Answer:** B

**Explanation:**

PortFast

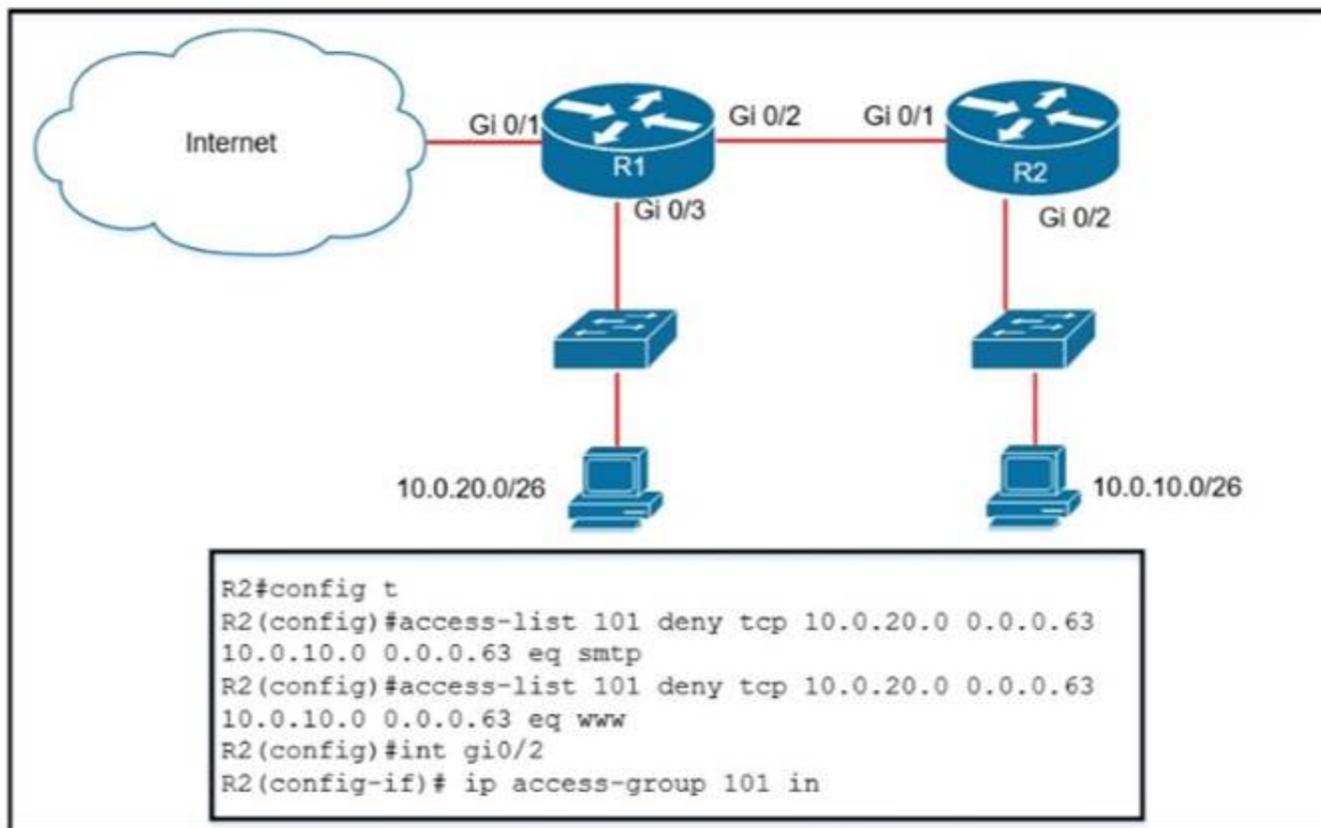
Spanning Tree Portfast causes layer 2 switch interfaces to enter forwarding state immediately, bypassing the listening and learning states. It should be used on ports connected directly to end hosts like servers or workstations. Note: If portfast isn't enabled, DHCP timeouts can occur while STP converges, causing more problems.

<https://skminhaj.wordpress.com/2015/03/04/spanning-tree-stp-rstp-mst-enhancements/>

**NEW QUESTION 510**

- (Topic 1)

Refer to the exhibit.



An extended ACL has been configured and applied to router R2. The configuration failed to work as intended. Which two changes stop outbound traffic on TCP ports 25 and 80 to 10.0.20.0/26 from the 10.0.10.0/26 subnet while still allowing all other traffic? (Choose two)

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

**Answer:** BC

**NEW QUESTION 515**

- (Topic 1)

What protocol allows an engineer to back up 20 network router configurations globally while using the copy function?

- A. SMTP
- B. SNMP
- C. TCP
- D. FTP

**Answer:** B

**NEW QUESTION 516**

- (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 518**

- (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 520**

- (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 525**

- (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 527**

- (Topic 1)

What is the role of a firewall in an enterprise network?

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

**Answer:** C

**NEW QUESTION 529**

SIMULATION - (Topic 5)

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

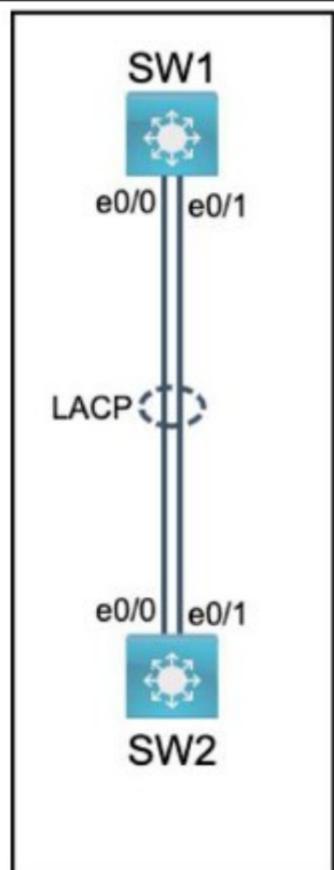
- \* 1. Configure an LACP EtherChannel and number it as 44; configure it between switches SW1 and SW2 using interfaces Ethernet0/0 and Ethernet0/1 on both sides. The LACP mode must match on both ends.
- \* 2. Configure the EtherChannel as a trunk link.
- \* 3. Configure the trunk link with 802.1q tags.
- \* 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 533**

SIMULATION - (Topic 5)

**Guidelines**

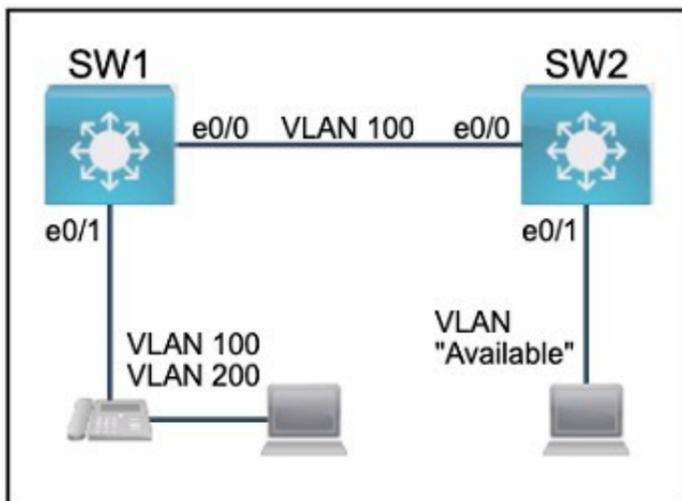
This is a lab item in which tasks will be performed on virtual devices.

- 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.
- When **Next** is clicked, the lab closes and cannot be reopened.

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

- \* 1. Configure VLAN 100 named Compute and VLAN 200 named Telephony where required for each task.
- \* 2. Configure Ethernet0/1 on SW2 to use the existing VLAN named Available.
- \* 3. Configure the connection between the switches using access ports.
- \* 4. Configure Ethernet0/1 on SW1 using data and voice VLANs.

\* 5. Configure Ethemet0/1 on SW2 so that the Cisco proprietary neighbor discovery protocol is turned off for the designated interface only.



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

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

**NEW QUESTION 538**

DRAG DROP - (Topic 4)

Drag and drop the characteristic from the left onto the IPv6 address type on the right.

provides for one-to-one communication	Global Unicast Address
confined to a single link	
serves as the next-hop addresses	Link-Local Address
is routable and reachable via the Internet	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

provides for one-to-one communication	Global Unicast Address
confined to a single link	
serves as the next-hop addresses	Link-Local Address
is routable and reachable via the Internet	

**NEW QUESTION 541**

DRAG DROP - (Topic 4)  
 Refer to the exhibit.

```

R1# show ip route | begin gateway
Gateway of last resort is not set
  172.16.0.0/16 is variably subnetted, 5 subnets, 5 masks
O   172.16.2.128/25 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O   172.16.3.64/27 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O   172.16.3.128/28 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O   172.16.3.192/29 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
O   172.16.4.0/23 [110/3184437] via 207.165.200.250, 00:00:25, Serial0/0/0
  207.165.200.0/24 is variably subnetted, 4 subnets, 2 masks
C   207.165.200.248/30 is directly connected, Serial0/0/0
L   207.165.200.249/32 is directly connected, Serial0/0/0
C   207.165.200.252/30 is directly connected, Serial0/0/1
L   207.165.200.253/32 is directly connected, Serial0/0/1
    
```

Drag and drop the learned prefixes from the left onto the subnet masks on the right

172.16.3.128	255.255.254.0
172.16.3.64	255.255.255.128
172.16.2.128	255.255.255.224
172.16.3.192	255.255.255.240
172.16.4.0	255.255.255.248

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

172.16.3.128	172.16.4.0
172.16.3.64	172.16.2.128
172.16.2.128	172.16.3.64
172.16.3.192	172.16.3.128
172.16.4.0	172.16.3.192

**NEW QUESTION 544**

DRAG DROP - (Topic 4)

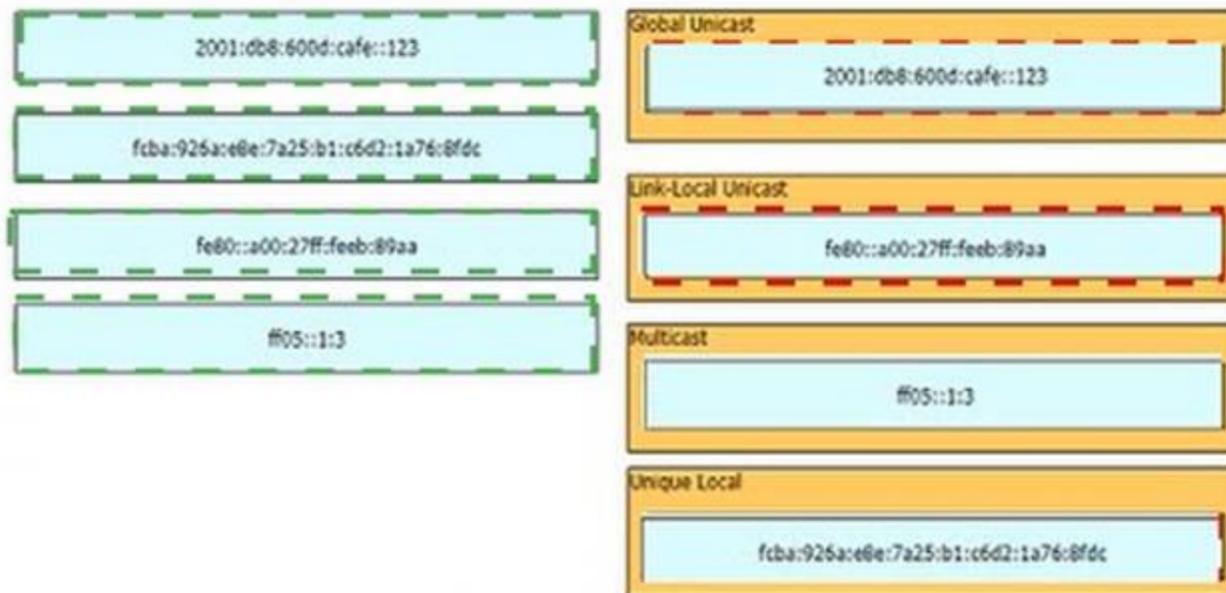
Drag and drop the IPv6 addresses from the left onto the corresponding address types on the right.

2001:db8:600d:cafe::123	Global Unicast
fcba:926ace8e:7a25:b1:c6d2:1a76:8f6c	Link-Local Unicast
fe80::a00:27ff:feeb:89aa	Multicast
ff05::1:3	Unique Local

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 549**

- (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 553**

- (Topic 4)

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

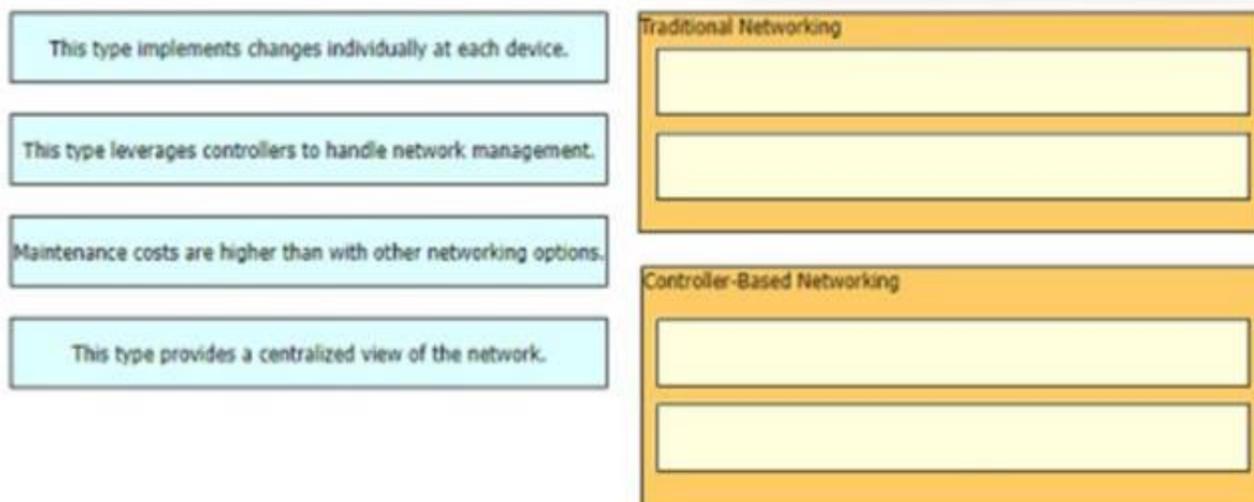
- A. WPA3 uses AES for stronger protection than WPA2 which uses SAE
- B. WPA2 uses 128-bit key encryption and WPA3 requires 256-bit key encryption
- C. WPA3 uses AES for stronger protection than WPA2 which uses TKIP WPA3 uses
- D. SAE for stronger protection than WPA2 which uses AES
- E. WPA2 uses 128-bit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

Answer: CE

**NEW QUESTION 556**

DRAG DROP - (Topic 4)

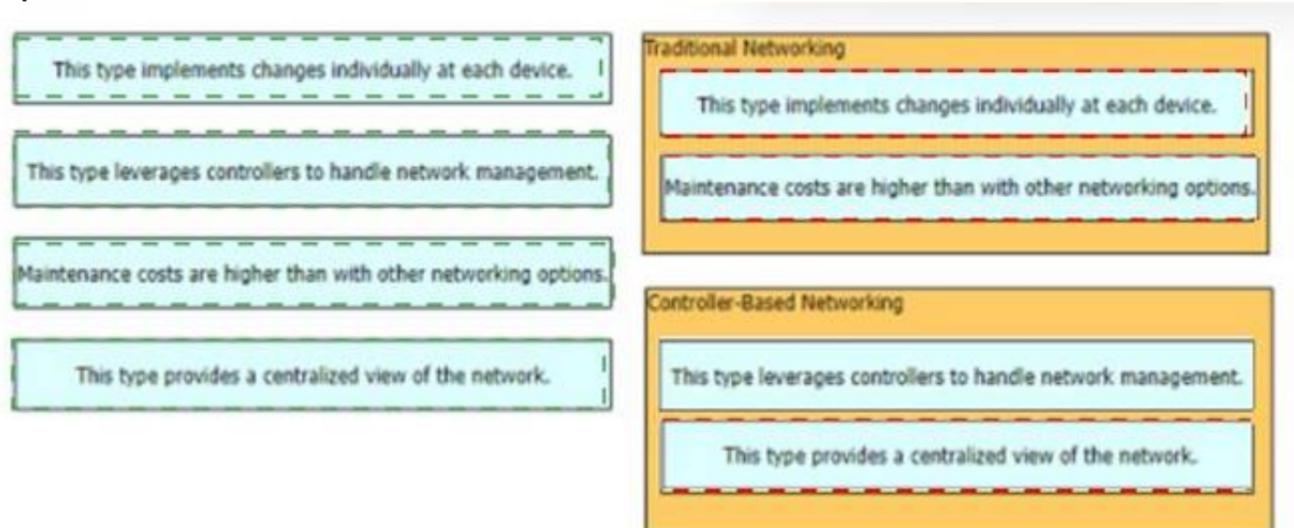
Drag and drop the statements about networking from the left onto the corresponding networking types on the right



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 558**

- (Topic 4)

Which WLC interface provides out-of-band management in the Cisco Unified Wireless Network Architecture?

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

Answer: A

**NEW QUESTION 559**

- (Topic 4)

How do TCP and UDP fit into a query-response model?

- A. TCP establishes a connection prior to sending data, and UDP sends immediately.
- B. TCP uses error detection for packets, and UDP uses error recovery.
- C. TCP avoids using sequencing, and UDP avoids using acknowledgments.
- D. TCP encourages out-of-order packet delivery, and UDP prevents re-ordering.

Answer: A

**NEW QUESTION 560**

- (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 565**

DRAG DROP - (Topic 4)

Drag and drop the characteristic from the left onto the IPv6 address type on the right.

provides one-to-many communications
has a unicast source sent to a group

enables aggregation of routing prefixes
is routable and reachable via the Internet

Global Unicast Address

Multicast

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

provides one-to-many communications
has a unicast source sent to a group

enables aggregation of routing prefixes
is routable and reachable via the Internet

Global Unicast Address
enables aggregation of routing prefixes
is routable and reachable via the Internet

Multicast
provides one-to-many communications
has a unicast source sent to a group

**NEW QUESTION 570**

- (Topic 4)

After a recent security breach and a RADIUS failure, an engineer must secure the console port of each enterprise router with a local username and password. Which configuration must the engineer apply to accomplish this task?

- aaa new-model**  
**line con 0**  
**password plaintextpassword**  
**privilege level 15**
- username localuser secret plaintextpassword**  
**line con 0**  
**login authentication default**  
**privilege level 15**
- username localuser secret plaintextpassword**  
**line con 0**  
**no login local**  
**privilege level 15**
- aaa new-model**  
**aaa authorization exec default local**  
**aaa authentication login default radius**  
**username localuser privilege 15 secret plaintextpassword**

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

Answer: B

**NEW QUESTION 574**

- (Topic 4)

Refer to the exhibit.

```
{
  "Test_Questions" : [
    "Automation",
    "Configuration",
  ],
  "Test_Exam_Level" : [
    "CCNA",
    "CCNP",
  ],
  "Test_Response" : [
    "Correct",
    "Incorrect",
  ],
}
```

How many objects, Keys and JSON list values are present?

- A. three objects, two Keys, and three JSON list values
- B. three objects, three keys and two JSON MI values
- C. one object, three keys, and three JSON list values
- D. one object, three keys and two JSON list values

**Answer: C**

**NEW QUESTION 577**

- (Topic 4)

What is used as a solution for protecting an individual network endpoint from attack?

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

**Answer: C**

**NEW QUESTION 578**

- (Topic 4)

Refer to the exhibit.

```
access-list 10 permit 10.0.0.0 0.0.0.255

interface Serial0

ip access-list 10 in
```

A network administrator must permit traffic from the 10.10.0.0/24 subnet to the WAN on interlace Seria10. What is the effect of the configuration as the administrator applies the command?

- A. The permit command fails and returns an error code.
- B. The router accepts all incoming traffic to Serial10 with the last octet of the source IP set to 0.
- C. The sourced traffic from IP range 10.0.0.0 -10.0.0.255 is allowed on Seria10.
- D. The router fails to apply the access list to the interface.

**Answer: C**

**NEW QUESTION 583**

- (Topic 4)

What happens when a switch receives a frame with a destination MAC address that recently aged out?

- A. The switch references the MAC address aging table for historical addresses on the port that received the frame.
- B. The switch floods the frame to all ports in all VLANs except the port that received the frame
- C. The switch drops the frame and learns the destination MAC address again from the port that received the frame
- D. The switch floods the frame to all ports in the VLAN except the port that received the frame.

**Answer: D**

**NEW QUESTION 588**

- (Topic 4)

Which IPv6 address range is suitable for anycast addresses for distributed services such as DHCP or DNS?

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

**Answer: A**

**NEW QUESTION 593**

DRAG DROP - (Topic 4)

Drag and drop the characteristics of transport layer protocols from the left onto the corresponding protocols on the right.

guarantees packet delivery	TCP
uses a 32-bit sequence number	
ideal for voice traffic	
provides support for retransmission of lost packets	UDP
offers minimal overhead within a packet	
requires less computer resources	

- A. Mastered
- B. Not Mastered

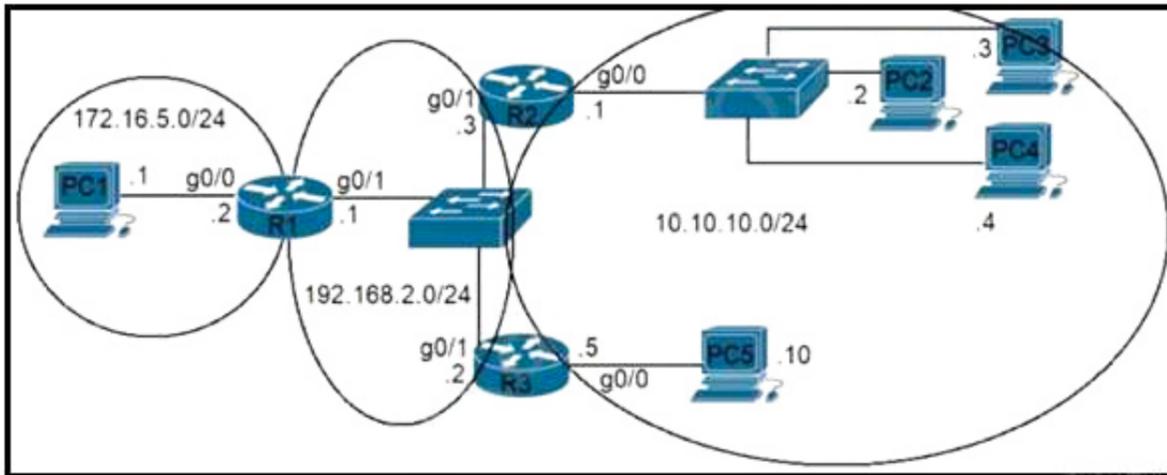
**Answer: A**

**Explanation:**

guarantees packet delivery	TCP
uses a 32-bit sequence number	
ideal for voice traffic	
provides support for retransmission of lost packets	UDP
offers minimal overhead within a packet	
requires less computer resources	

**NEW QUESTION 598**

- (Topic 4)



Refer to the exhibit. The router R1 is in the process of being configured. Routers R2 and R3 are configured correctly for the new environment. Which two commands must be configured on R1 for PC1 to communicate to all PCs on the 10.10.10.0/24 network? (Choose two.)

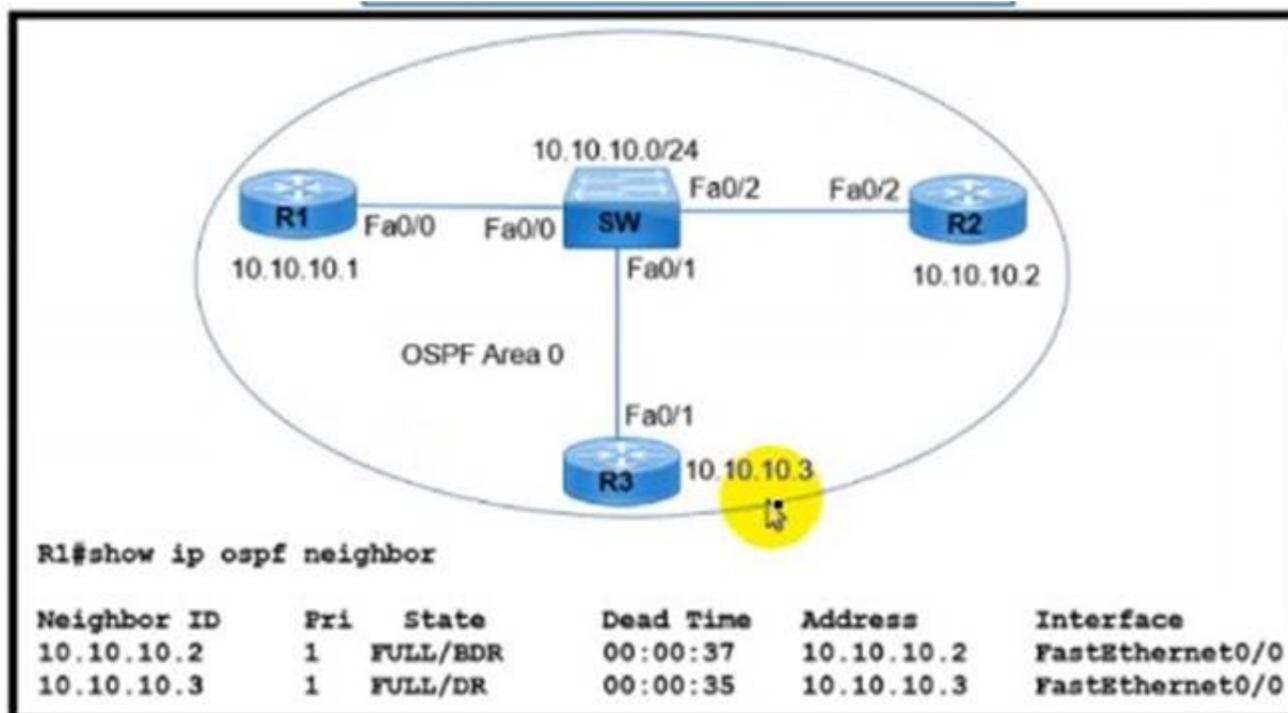
- A. ip route 10.10.10.0 255.255.255.0 192.168.2.3
- B. ip route 10.10.10.0 255.255.255.255 192.168.2.2
- C. ip route 10.10.10.0 255.255.255.255 g0/1
- D. ip route 10.10.10.0 255.255.255.248 g0/1
- E. ip route 10.10.10.0 255.255.255.248 192.168.2.2

Answer: AE

**NEW QUESTION 602**

- (Topic 4)

Refer to the exhibit.



R1 has taken the DROTHER role in the OSPF DR/BDR election process. Which configuration must an engineer implement so that R1 is elected as the DR?

- R1(config)#interface FastEthernet 0/0  
R1(config-if)#ip ospf priority 1  
R1#clear ip ospf process
- R1(config)#interface FastEthernet 0/0  
R1(config-if)#ip ospf priority 200  
R1#clear ip ospf process
- R3(config)#interface FastEthernet 0/1  
R3(config-if)#ip ospf priority 200  
R3#clear ip ospf process
- R2(config)#interface FastEthernet 0/2  
R2(config-if)#ip ospf priority 1  
R2#clear ip ospf process

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

Answer: B

**NEW QUESTION 604**

- (Topic 4)

A router has two static routes to the same destination network under the same OSPF process. How does the router forward packets to the destination if the next-hop devices are different?

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

**Answer:** B

**NEW QUESTION 605**

- (Topic 4)

A WLC sends alarms about a rogue AP, and the network administrator verifies that the alarms are caused by a legitimate autonomous AP.

- A. Place the AP into manual containment.
- B. Remove the AP from WLC management.
- C. Manually remove the AP from Pending state.
- D. Set the AP Class Type to Friendly.

**Answer:** B

**NEW QUESTION 607**

- (Topic 4)

Refer the exhibit.

```
R19#sh int fa0/0
FastEthernet0/0 is up, line protocol is up
Hardware is DEC21140, address is ca02.7788.0000 (bia ca02.7788.0000)
Description: SALES_SUBNET
Internet address is 10.32.102.2/30
MTU 1500 bytes, BW 100000 Kbit/sec, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (60 sec)
Full-duplex, 100Mb/s, 100BaseTX/FX
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:00:00, output hang never
Last clearing of "show interface" counters never
Input queue: 0/300/0/0 (size/max/drops/flushes); Total output drops:
135298429
Queueing strategy: fifo
Output queue: 0/300 (size/max)
30 second input rate 0 bits/sec, 0 packets/sec
30 second output rate 0 bits/sec, 0 packets/sec
73310 packets input, 7101162 bytes
Received 73115 broadcasts (0 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 4 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog
0 input packets with dribble condition detected
3927513096455 packets output, 14404034810952 bytes, 0 underruns
0 output errors. 11 collisions. 0 interface resets
```

What is the cause of poor performance on router R19?

- A. excessive collisions
- B. speed and duplex mismatch
- C. port oversubscription
- D. excessive CRC errors

**Answer:** A

**NEW QUESTION 612**

- (Topic 4)

By default, how long will the switch continue to know a workstation MAC address after the workstation stops sending traffic?

- A. 200 seconds
- B. 300 seconds

- C. 600 seconds
- D. 900 seconds

Answer: B

**NEW QUESTION 616**

DRAG DROP - (Topic 4)

Drag and drop the TCP or UDP details from the left onto their corresponding protocols on the right.

transmitted based on data contained in the packet without the need for a data channel	TCP
provides best-effort service	
requires the client and the server to establish a connection before sending the packet	UDP
supports reliable data transmission	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

transmitted based on data contained in the packet without the need for a data channel	TCP
provides best-effort service	
requires the client and the server to establish a connection before sending the packet	UDP
supports reliable data transmission	

**NEW QUESTION 619**

DRAG DROP - (Topic 4)

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

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

ip domain-lookup	adds an entry to the host table
ip domain-name	completes the FQDN of the DNS server
ip host switch_1 192.168.0.1	displays address-mapping information
ip name-server	enables host-to-IP-address translation
show hosts	specifies the IP address of the DNS server

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

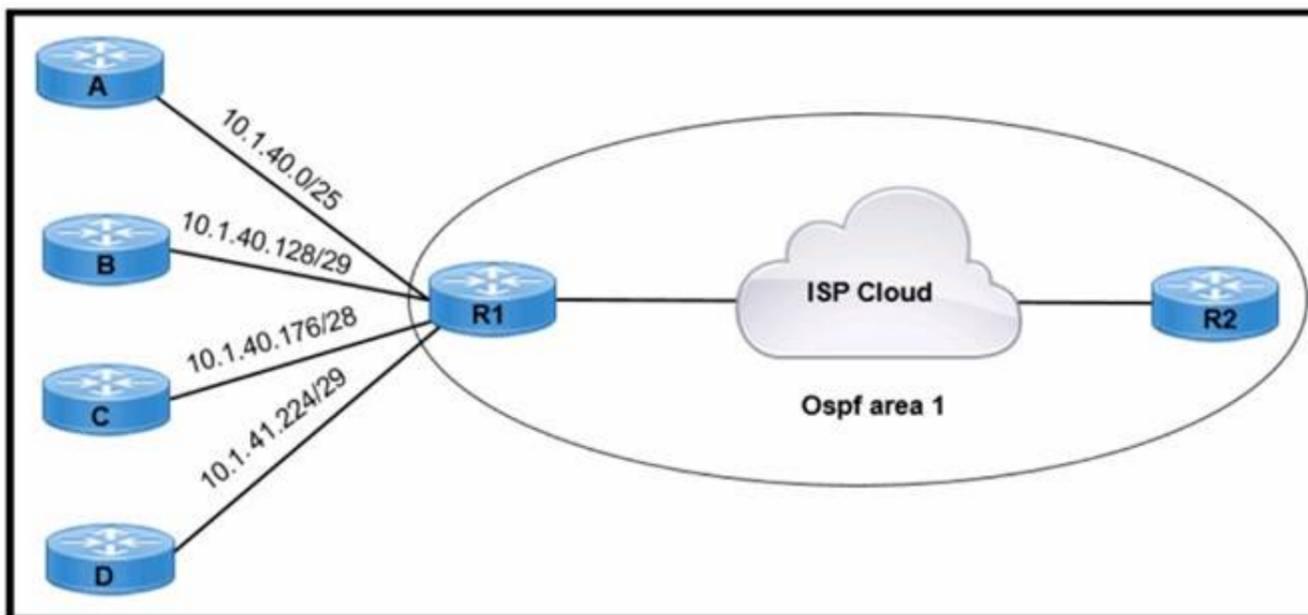
Drag and drop the DNS commands from the left onto their effects on the right.

ip domain-lookup	ip domain-name
ip domain-name	ip domain-lookup
ip host switch_1 192.168.0.1	show hosts
ip name-server	ip host switch_1 192.168.0.1
show hosts	ip name-server

**NEW QUESTION 620**

- (Topic 4)

Refer to the exhibit.



Router R1 receives static routing updates from routers A, B, C, and D. The network engineer wants R1 to advertise static routes in OSPF area 1. Which nary address must be advertised in OSPF?

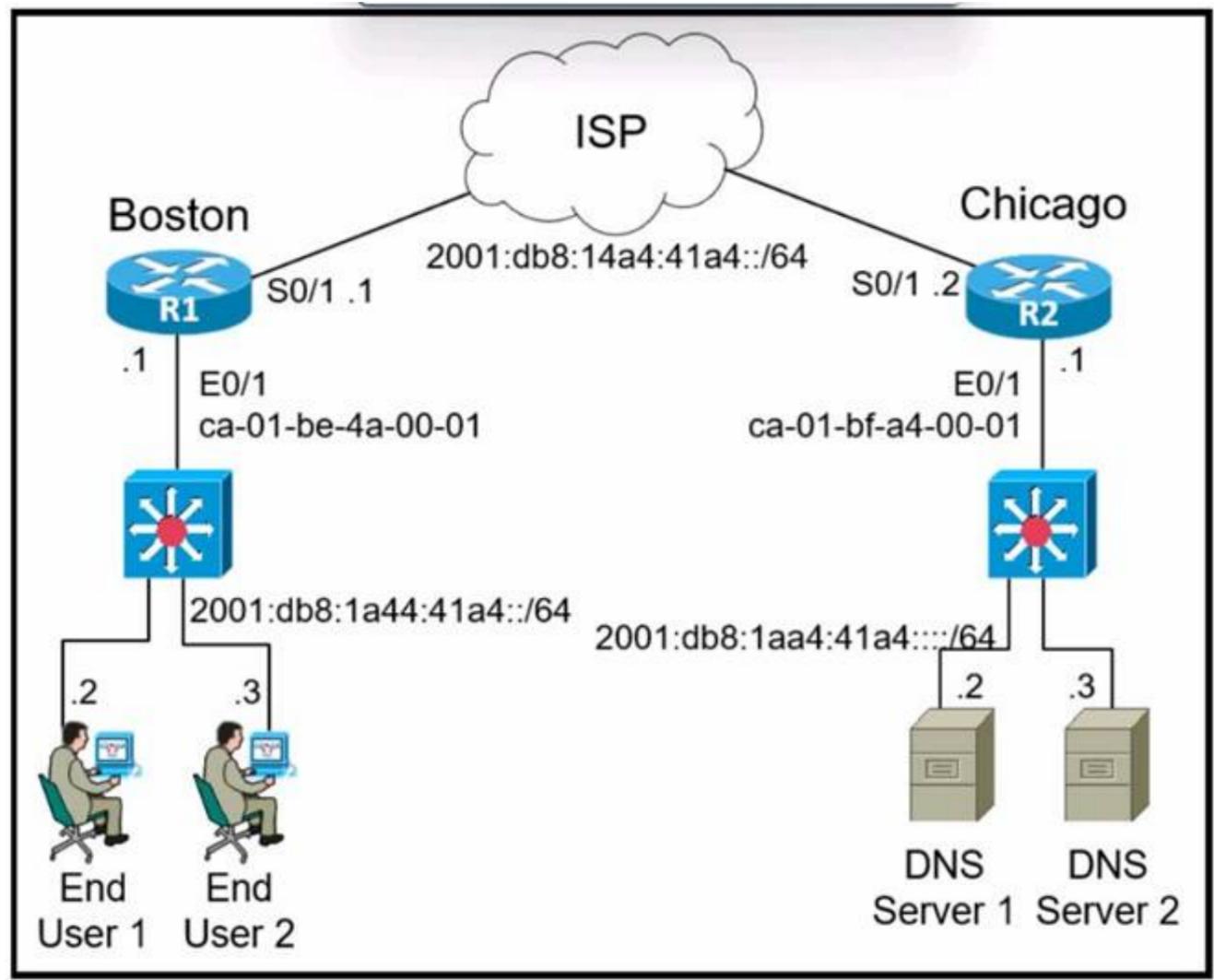
- A. 10.1.40.0/25
- B. 10.1.40.0/24
- C. 10.1.40.0/23
- D. 10.1.41.0/25

Answer: C

**NEW QUESTION 623**

FILL IN THE BLANK - (Topic 4)

Refer to the exhibit.



Refer to the exhibit. The IPv6 address for the LAN segment on router R1 must be configured using the EUI-64 format. When configured which ipv6 address is produced by the router?

- A. 2001:db8:1a44:41a4:C801:BEFF:FE4A:1
- B. 2001:db8:1a44:41a4:C081:BFFF:FE4A:1
- C. 2001:db8:1a44:41a4:4562:098F:FE36:1
- D. 2001:db8:1a44:41a4:C800:BAFE:FF00:1

Answer: B

**NEW QUESTION 627**

- (Topic 4)

Refer to the exhibit.

```
MacOs$ ifconfig
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
options=400<CHANNEL_IO>
ether f0:18:98:64:60:32
inet6 fe80::492:c09f:57cf:8c36%en0 prefixlen 64 secured scopeid 0x6
inet 10.8.138.14 netmask 0xffffe000 broadcast 10.8.159.255
nd6 options=201<PERFORMNUD,DAD>
media: autoselect
status: active
```

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

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

Answer: D

**NEW QUESTION 631**

- (Topic 4)

Why is a first-hop redundancy protocol implemented?

- A. to protect against default gateway failures
- B. to prevent loops in a network
- C. to enable multiple switches to operate as a single unit
- D. to provide load-sharing for a multilink segment

Answer: A

**NEW QUESTION 632**

- (Topic 4)

Refer to the exhibit.

```
{
  "Routers": ["R1", "R2", "R3"],
  "Switches": ["SW1", "SW2", "SW3"]
}
```

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

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

**Answer: C**

**NEW QUESTION 633**

DRAG DROP - (Topic 4)

Drag and drop the statements about networking from the left onto the corresponding networking types on the right. Not all statements are used.

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

- A. Mastered
- B. Not Mastered

**Answer: A**

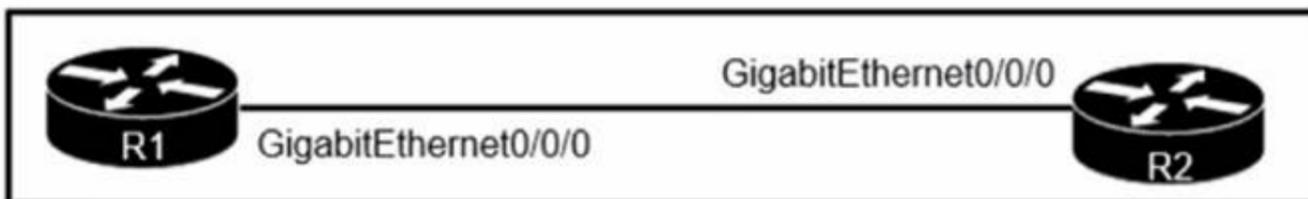
**Explanation:**

Controller-based Networking :- This type deploys a consistent configuration across multiple devices.– Southbound APIs are used to apply configurations.Traditional Networking :- A distributed control plane is needed.– This type requires a distributed management plane. On a SND network the control plane is centralized on the the SND controller not distributed on the networking devices. Northbound APIs do not interact with end devices. They allow the SND controller to interact with applications on the application plane

**NEW QUESTION 634**

- (Topic 4)

Refer to the exhibit.



A network engineer must configure the link with these requirements:

- Consume as few IP addresses as possible.
- Leave at least two additional useable IP addresses for future growth. Which set of configurations must be applied?

A)

```
R1(config-if)#ip address 10.10.10.1 255.255.255.252
R2(config-if)#ip address 10.10.10.2 255.255.255.252
```

B)

```
R1(config-if)#ip address 10.10.10.1 255.255.255.248
R2(config-if)#ip address 10.10.10.4 255.255.255.248
```

C)

```
R1(config-if)#ip address 10.10.10.1 255.255.255.0
R2(config-if)#ip address 10.10.10.5 255.255.255.0
```

D)

```
R1(config-if)#ip address 10.10.10.1 255.255.255.240
R2(config-if)#ip address 10.10.10.12 255.255.255.240
```

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

**Answer:** B

**Explanation:**

We have to configure the link which will need 2 IP addresses, 1 for each port on each Router. We also need 2 spare IPs for future growth, so overall we need 4 usable IP addresses. If we consider using the /30 (255.255.255.252) mask, it will give us  $2^2 (=4)$  i.e., total 4 IPs and 2 usable IPs, which doesn't fulfil the given requirements. So, we can consider using the next /29 (255.255.255.248) mask, which gives us  $2^3 (=8)$  i.e., total 8 IP address and 6 usable IP addresses, which perfectly fulfil the given requirements.

**NEW QUESTION 635**

- (Topic 4)

What is a function performed by a web server?

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

**Answer:** A

**NEW QUESTION 639**

DRAG DROP - (Topic 4)

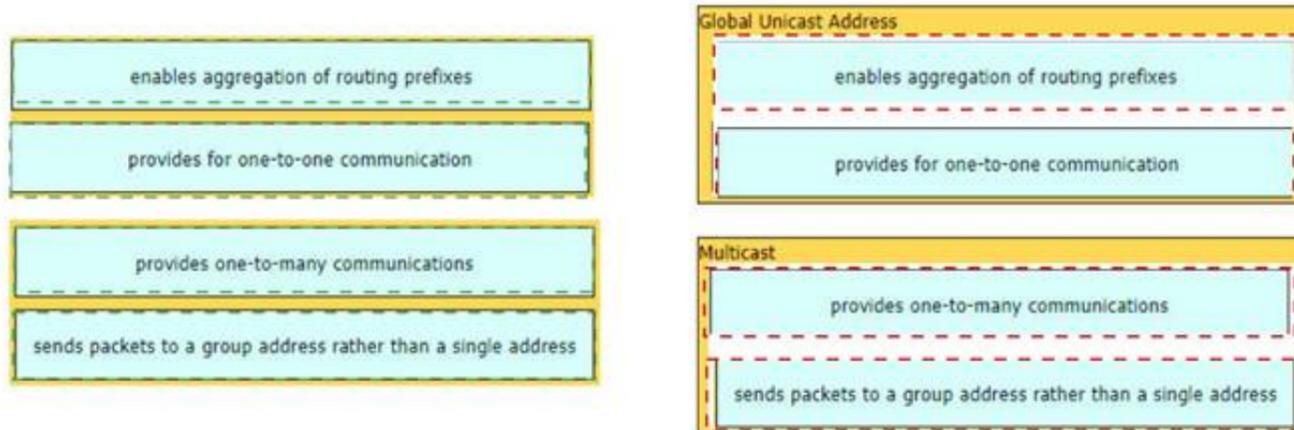
Drag and drop the characteristic from the left onto the IPv6 address type on the right.

enables aggregation of routing prefixes	Global Unicast Address
provides for one-to-one communication	
provides one-to-many communications	Multicast
sends packets to a group address rather than a single address	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 644**

- (Topic 4)

Which security method is used to prevent man-in-the-middle attack?

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

**Answer: B**

**NEW QUESTION 649**

- (Topic 4)

Refer to the exhibit.

```
SW1#show spanning-tree vlan 30

VLAN0030
Spanning tree enabled protocol rstp
Root ID      Priority          32798
             Address          0025.63e9.c800
             Cost              19
             Port              1 (FastEthernet 2/1)
             Hello Time        2 sec
             Max Age           30 sec
             Forward Delay     20 sec

[Output suppressed]
```

What are two conclusions about this configuration? (Choose two.)

- A. The spanning-tree mode is Rapid PVST+.
- B. This is a root bridge.
- C. The root port is FastEthernet 2/1.
- D. The designated port is FastEthernet 2/1.
- E. The spanning-tree mode is PVST+.

**Answer: A**

**NEW QUESTION 650**

- (Topic 4)

Which two capabilities of Cisco DNA Center make it more extensible as compared to traditional campus device management? (Choose two.)

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

**Answer: AC**

**NEW QUESTION 654**

- (Topic 4)

Which benefit does Cisco ONA Center provide over traditional campus management?

- A. Cisco DNA Center leverages SNMPv3 for encrypted management, and traditional campus management uses SNMPv2.

- B. Cisco DNA Center automates HTTPS for secure web access, and traditional campus management uses HTTP.
- C. Cisco DNA Center leverages APIs, and traditional campus management requires manual data gathering.
- D. Cisco DNA Center automates SSH access for encrypted entry, and SSH is absent from traditional campus management.

Answer: B

**NEW QUESTION 656**

DRAG DROP - (Topic 4)

Drag and drop the elements of a security program from the left onto the corresponding descriptions on the right.

awareness	document that outlines an organization's security goals and practices and the roles and responsibilities of the organization's personnel
education	tactical document that sets out specific tasks and methods to maintain security
security policy	user-awareness learning level that focuses on learning about topics and practices beyond what is typically required by the user's job
security standard	user-awareness learning level that focuses on security practices that all employees must understand and enforce
training	user-awareness learning level that focuses on teaching employees how to perform tasks specifically required by their jobs

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

awareness	document that outlines an organization's security goals and practices and the roles and responsibilities of the organization's personnel	<i>Security Standards</i>
education	tactical document that sets out specific tasks and methods to maintain security	<i>Security Policy</i>
security policy	user-awareness learning level that focuses on learning about topics and practices beyond what is typically required by the user's job	<i>Education</i>
security standard	user-awareness learning level that focuses on security practices that all employees must understand and enforce	<i>Awareness</i>
training	user-awareness learning level that focuses on teaching employees how to perform tasks specifically required by their jobs	<i>Training</i>

<https://www.ciscopress.com/articles/article.asp?p=1998559&seqNum=3>

**NEW QUESTION 661**

- (Topic 4)

Refer to the exhibit.

```
R_1# show ip route
.....
D 192.168.20.0/26 [90/24513456] via 10.10.10.1
R 192.168.20.0/24 [120/5] via 10.10.10.2
O 192.168.0.0/19 [110/219414] via 10.10.10.13
B 192.168.0.0/16 is variably subnetted, 4 subnets, 4 masks
D 192.168.20.0/27 [90/4123710] via 10.10.10.12
D 192.168.20.0/25 [90/14464211] via 10.10.10.11
S. 0.0.0.0/0 [1/0] via 10.10.10.14
```

Packets are flowing from 192.168.10.1 to the destination at IP address 192.168.20.75. Which next hop will the router select for the packet?

- A. 10.10101
- B. 10.10.10.11
- C. 10.10.10.12
- D. 10.101014

**Answer:** B

**Explanation:**

The router will select the next hop based on the longest prefix match in the routing table. The destination IP address 192.168.20.75 belongs to the network 192.168.0.0/19, which is a classless network created by subnetting the classful network 192.168.0.0/16. The routing table has two entries for the network 192.168.0.0/19, one with a metric of 219414 and another with a metric of 5. The router will choose the entry with the lower metric, which is 5, and forward the packet to the next hop 10.10.10.11.

**NEW QUESTION 662**

- (Topic 4)

Why would VRRP be implemented when configuring a new subnet in a multivendor environment?

- A. when a gateway protocol is required that support more than two Cisco devices for redundancy
- B. to enable normal operations to continue after a member failure without requiring a change in a host ARP cache
- C. to ensure that the spanning-tree forwarding path to the gateway is loop-free
- D. to interoperate normally with all vendors and provide additional security features for Cisco devices

**Answer:** A

**NEW QUESTION 665**

DRAG DROP - (Topic 4)

Drag and drop the AAA features from the left onto the corresponding AAA security services on the right. Not all options are used.

It enables the device to allow user- or group-based access.	Authentication <div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div> <div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
It leverages a RADIUS server to grant user access to a reverse Telnet session.	
It records the amount of time for which a user accesses the network on a remote server.	Authorization <div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div> <div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
It restricts the CLI commands that a user is able to perform.	
It uses TACACS+ to log the configuration commands entered by a network administrator.	
It verifies the user before granting access to the device.	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

It enables the device to allow user- or group-based access.	<b>Authentication</b>
It leverages a RADIUS server to grant user access to a reverse Telnet session.	It records the amount of time for which a user accesses the network on a remote server.
It records the amount of time for which a user accesses the network on a remote server.	It uses TACACS+ to log the configuration commands entered by a network administrator.
It restricts the CLI commands that a user is able to perform.	<b>Authorization</b>
It uses TACACS+ to log the configuration commands entered by a network administrator.	It leverages a RADIUS server to grant user access to a reverse Telnet session.
It verifies the user before granting access to the device.	It restricts the CLI commands that a user is able to perform.

**NEW QUESTION 668**

- (Topic 4)

Which type of IPv4 address type helps to conserve the globally unique address classes?

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

**Answer: B**

**NEW QUESTION 670**

DRAG DROP - (Topic 4)

Drag and drop the characteristic from the left onto the IPv6 address type on the right.

is publicly routable in the same way as IPv4 addresses	<b>Global Unicast Address</b>
serves as the next-hop addresses	
required on all IPv6 devices	<b>Link-Local Address</b>
provides for one-to-one communication	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

is publicly routable in the same way as IPv4 addresses	<b>Global Unicast Address</b>
serves as the next-hop addresses	is publicly routable in the same way as IPv4 addresses
required on all IPv6 devices	serves as the next-hop addresses
provides for one-to-one communication	<b>Link-Local Address</b>
	required on all IPv6 devices
	provides for one-to-one communication

**NEW QUESTION 671**

DRAG DROP - (Topic 4)

Drag and drop the IPv6 address types from the left onto their description on the right.

2001:DB8::bced:1234:456d:aacc	multicast address used only locally within the site
FD00:0000:0000:1a2d:a153:3992:a19d:ccca	address that is automatically created on a link when IPv6 is enabled on an interface
FE80::abcf:ffff:12de:3992	address that is prohibited from routing to the Internet
FF05::23:befc:22:1111	address that is unique and reserved for documentation purposes

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

2001:DB8::bced:1234:456d:aacc	FF05::23:befc:22:1111
FD00:0000:0000:1a2d:a153:3992:a19d:ccca	FE80::abcf:ffff:12de:3992
FE80::abcf:ffff:12de:3992	FD00:0000:0000:1a2d:a153:3992:a19d:ccca
FF05::23:befc:22:1111	2001:DB8::bced:1234:456d:aacc

**NEW QUESTION 674**

- (Topic 4)  
 What must be considered before deploying virtual machines?

- A. location of the virtual machines within the data center environment
- B. whether to leverage VSM to map multiple virtual processors to two or more virtual machines
- C. resource limitations, such as the number of CPU cores and the amount of memory
- D. support for physical peripherals, such as monitors, keyboards, and mice

Answer: C

**NEW QUESTION 679**

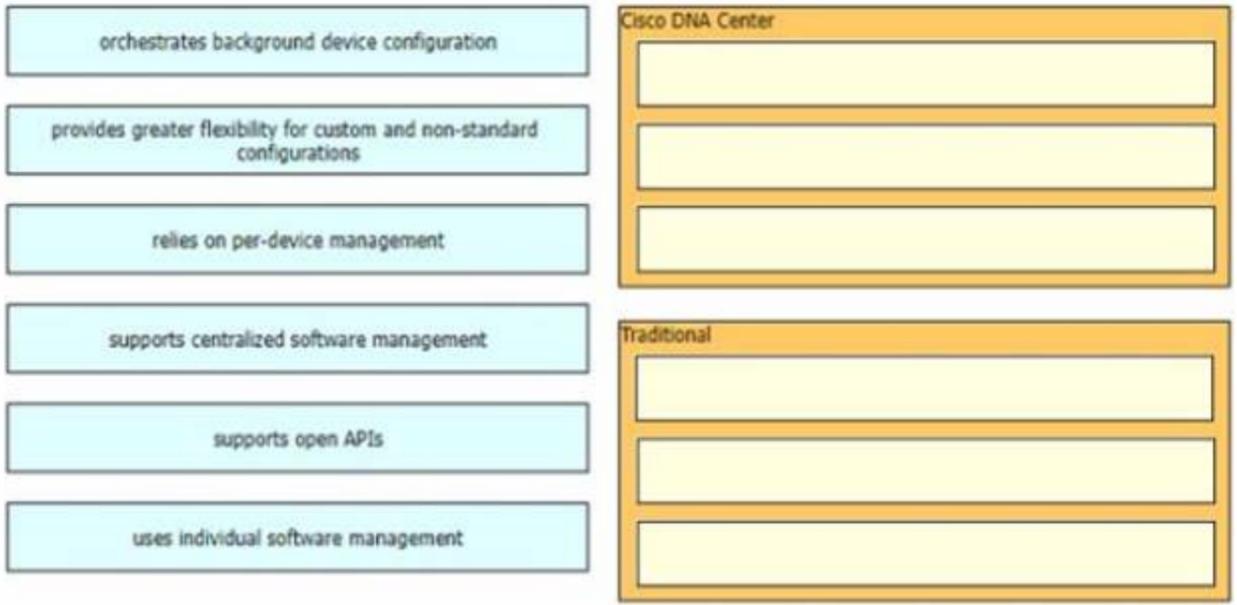
- (Topic 4)  
 Refer to the exhibit.  
 How does router R1 handle traffic to the 172.16.1.4/30 subnet?

- A. It sends all traffic over the path via 172.16.9.5 using 172.16.4.4 as a backup.
- B. It sends all traffic over the path via 10.0.1.100.
- C. It load-balances traffic over 172.16.9.5 and 172.16.4.4.
- D. It sends all traffic over the path via 172.16.4.4.

Answer: C

**NEW QUESTION 680**

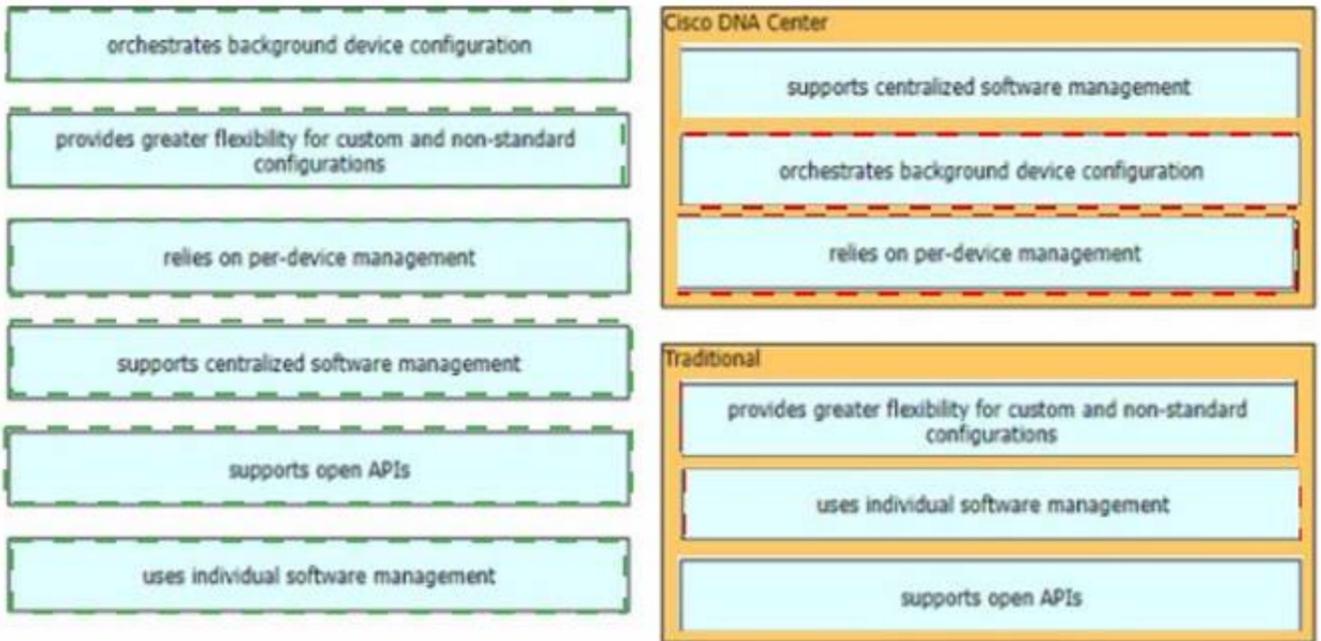
DRAG DROP - (Topic 4)  
 Drag and drop the characteristics of device-management technologies from the left onto the corresponding deployment types on the right.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 682**

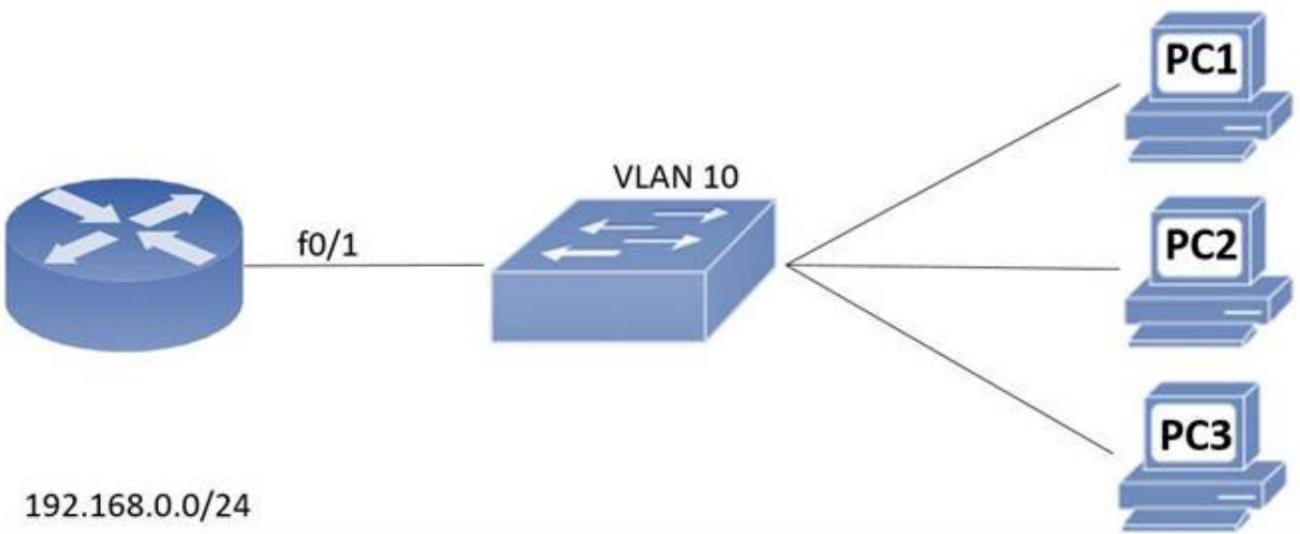
- (Topic 4)  
 When is the PUT method used within HTTP?

- A. when a nonidempotent operation is needed
- B. to update a DNS server
- C. to display a web site
- D. when a read-only operation it required

Answer: B

**NEW QUESTION 683**

- (Topic 4)  
 Refer to the exhibit.



An engineer assigns IP addressing to the current VLAN with three PCs. The configuration must also account for the expansion of 30 additional VLANS using the same Class C subnet for subnetting and host count. Which command set fulfills the request while reserving address space for the expected growth?

- A. Switch(config)#interface vlan 10Switch(config-if)#ip address 192.168.0.1 255 255.255.252
- B. Switch(config)#interface vlan 10Switch(config-if)#ip address 192.168.0.1 255 255.255.248
- C. Switch(config)#interface vlan 10Switch(config-if)#ip address 192.168.0.1 255 255.255.0
- D. Switch(config)#interface vlan 10Switch(config-if)#ip address 192.168.0.1 255.255.255.128

**Answer: B**

#### NEW QUESTION 685

.....

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