

## 200-301 Dumps

### Cisco Certified Network Associate

<https://www.certleader.com/200-301-dumps.html>



**NEW QUESTION 1**

- (Exam Topic 2)

Refer to the exhibit.

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

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

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

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

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

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

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

**Answer: A**

**NEW QUESTION 2**

- (Exam Topic 2)

Refer to the exhibit.

```
C:\>ipconfig/all

Windows IP Configuration

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

Wireless LAN adapter Local Area Connection* 12:

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

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
Description . . . . . : Dell Wireless 1703 802.11b/g/n (2.4GHz)
Physical Address. . . . . : B8-76-3F-7C-57-DF
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::e09f:9839:6e86:f755%12(Preferred)
. . . . . : 192.168.1.20(Preferred)
. . . . . : 255.255.255.0
. . . . . : 192.168.1.1
DHCPv6 IAID . . . . . : 263747135
DHCPv6 Client DUID. . . . . : 00-01-00-01-18-E6-32-43-B8-76-3F-7C-57-DF
. . . . . : 192.168.1.15
. . . . . : 192.168.1.16
NetBIOS over Tcpip. . . . . : Enabled
```

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

192.168.1.1	broadcast address
192.168.1.20	default gateway
192.168.1.254	host IP address
192.168.1.255	last assignable IP address in the subnet
B8-76-3F-7C-57-DF	MAC address
1A-76-3F-7C-57-DF	network address
192.168.1.0	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

192.168.1.1	192.168.1.255
192.168.1.20	192.168.1.1
192.168.1.254	192.168.1.20
192.168.1.255	192.168.1.254
B8-76-3F-7C-57-DF	B8-76-3F-7C-57-DF
1A-76-3F-7C-57-DF	192.168.1.0
192.168.1.0	

**NEW QUESTION 3**

- (Exam Topic 2)

Which set of action satisfy the requirement for multifactor authentication?

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 4**

- (Exam Topic 2)

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

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

**Answer:** CE

#### NEW QUESTION 5

- (Exam Topic 1)

An engineer is configuring data and voice services to pass through the same port. The designated switch interface fastethernet0/1 must transmit packets using the same priority for data when they are received from the access port of the IP phone. Which configuration must be used?

A)

```
interface fastethernet0/1
switchport priority extend cos 7
```

B)

```
interface fastethernet0/1
switchport voice vlan untagged
```

C)

```
interface fastethernet0/1
switchport voice vlan dot1p
```

D)

```
interface fastethernet0/1
switchport priority extend trust
```

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

**Answer:** A

#### NEW QUESTION 6

- (Exam Topic 1)

Which command is used to specify the delay time in seconds for LLDP to initialize on any interface?

- A. lldp timer
- B. lldp holdtime
- C. lldp reinit
- D. lldp tlv-select

**Answer:** C

#### Explanation:

Reference:

[https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960/software/release/12-2\\_37\\_ey/configuration/gui](https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960/software/release/12-2_37_ey/configuration/gui)

+ lldp holdtime seconds: Specify the amount of time a receiving device should hold the information from your device before discarding it+ lldp reinit delay: Specify the delay time in seconds for LLDP to initialize on an interface+ lldp timer rate: Set the sending frequency of LLDP updates in seconds

#### NEW QUESTION 7

- (Exam 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 8

- (Exam 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 9**

- (Exam 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 10**

- (Exam Topic 1)

How do TCP and UDP differ in the way they provide reliability for delivery of packets?

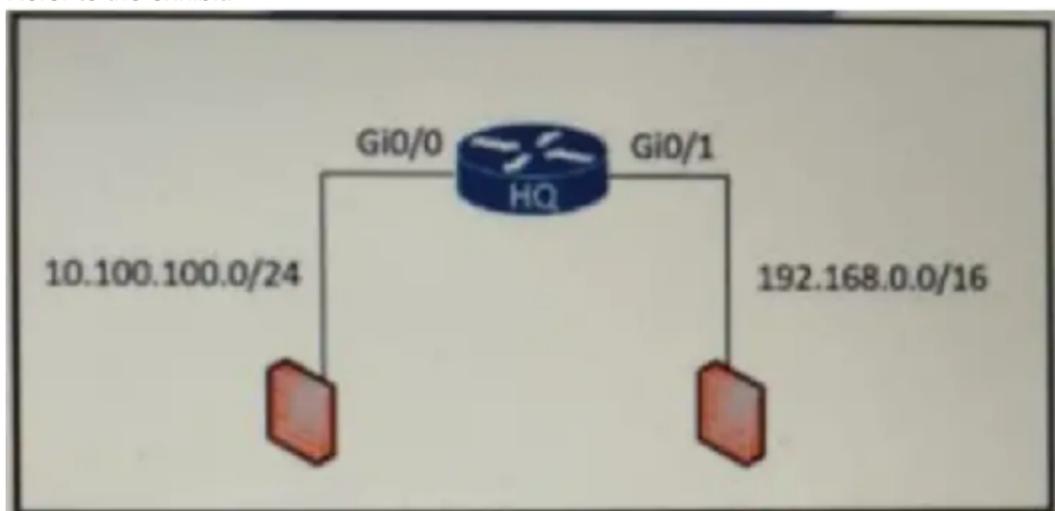
- A. TCP is a connectionless protocol that does not provide reliable delivery of data, UDP is a connection-oriented protocol that uses sequencing to provide reliable delivery.
- B. TCP does not guarantee delivery or error checking to ensure that there is no corruption of data UDP provides message acknowledgement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

**Answer: C**

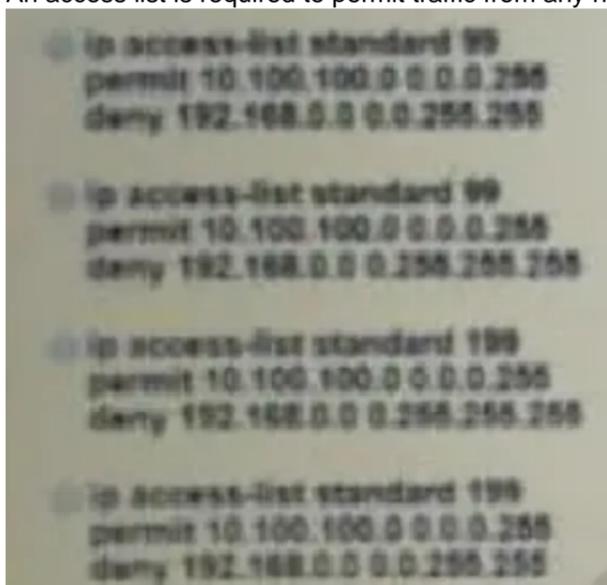
**NEW QUESTION 10**

- (Exam Topic 1)

Refer to the exhibit.



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



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

**Answer: A**

**NEW QUESTION 13**

- (Exam Topic 1)

Which device performs stateful inspection of traffic?

- A. firewall
- B. switch
- C. access point

D. wireless controller

**Answer:** A

**NEW QUESTION 14**

- (Exam Topic 1)

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

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

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

	WFQ
	CBWFQ
	FIFO
	PQ
	CQ

**NEW QUESTION 19**

- (Exam Topic 1)

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

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

**Answer:** DE

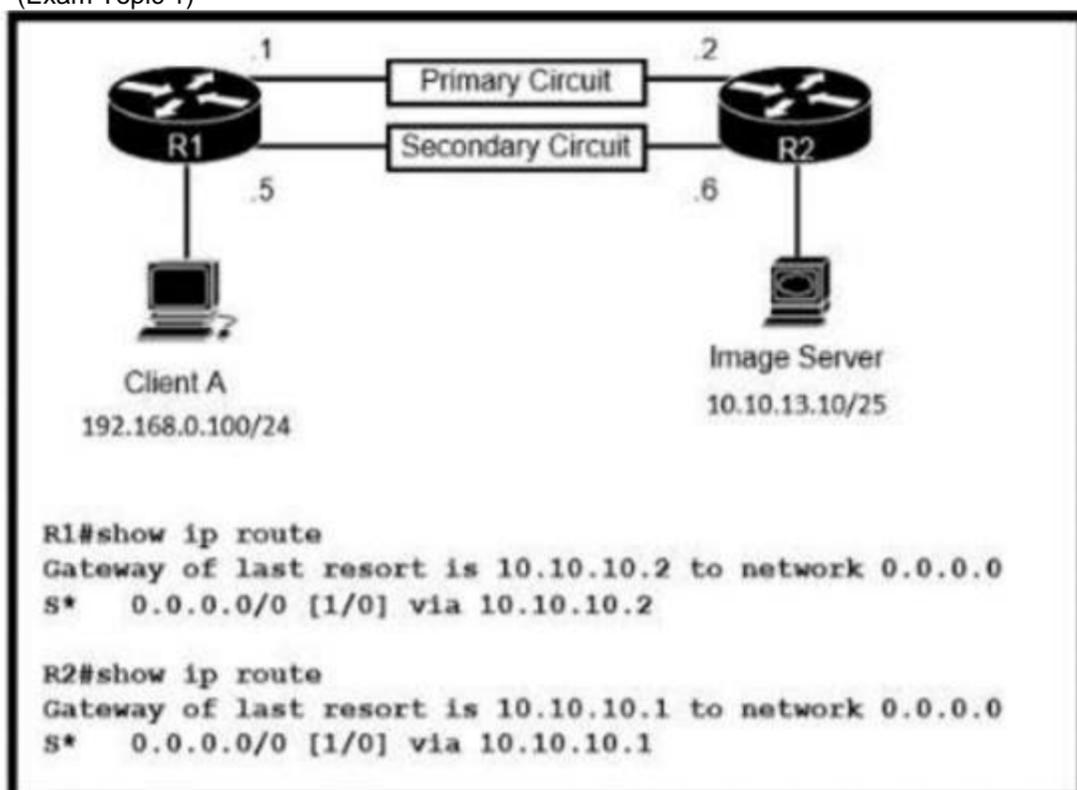
**Explanation:**

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

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

**NEW QUESTION 23**

- (Exam Topic 1)



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

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

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

**Answer: B**

**NEW QUESTION 26**

- (Exam Topic 1)

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

- A. configure port in the native VLAN
- B. configure ports in a black hole VLAN

- C. configure in a nondefault native VLAN
- D. configure ports as access ports

**Answer:** B

**NEW QUESTION 31**

- (Exam 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 35**

- (Exam Topic 1)

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

**Answer Area**

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

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

**Answer Area**

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

**NEW QUESTION 37**

- (Exam Topic 1)

What is a characteristic of a SOHO network?

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

**Answer:** B

**NEW QUESTION 39**

- (Exam Topic 1)

Refer to the exhibit.

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

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

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

**Answer: D**

**NEW QUESTION 44**

- (Exam Topic 1)

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

provides reliability when loading an IOS image upon boot up	FTP
does not require user authentication	
uses port 69	
uses ports 20 and 21	TFTP
uses TCP	
uses UDP	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

provides reliability when loading an IOS image upon boot up	FTP
uses ports 20 and 21	
uses TCP	
does not require user authentication	TFTP
uses port 69	
uses UDP	

**NEW QUESTION 45**

- (Exam Topic 1)

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

**Answer Area**

cache	local database of address mappings that improves name-resolution performance
DNS	service that maps hostnames to IP addresses
domain	disable 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, such as .com or .edu

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Diagram Description automatically generated

**NEW QUESTION 50**

- (Exam Topic 1)

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

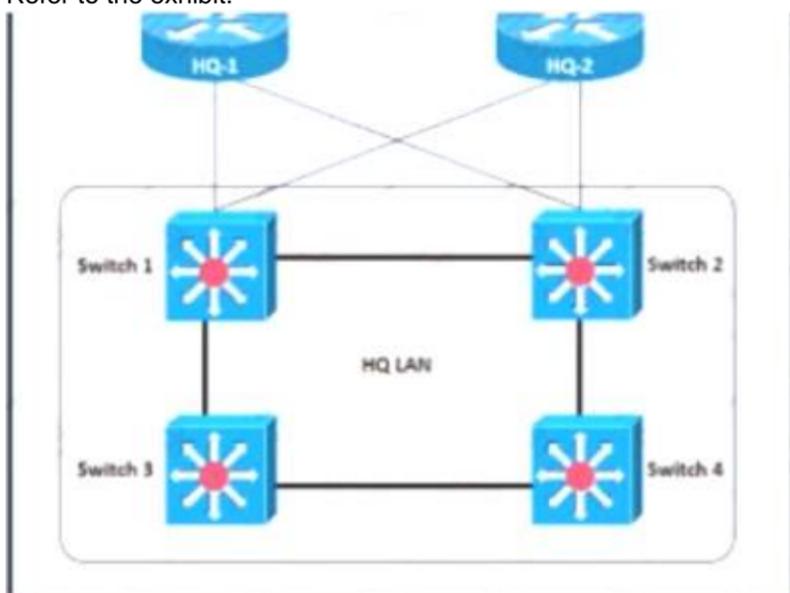
- A. Central AP management requires more complex configurations
- B. Unique SSIDs cannot use the same authentication method
- C. It supports autonomous and lightweight APs
- D. It eliminates the need to configure each access point individually

**Answer:** D

**NEW QUESTION 52**

- (Exam Topic 1)

Refer to the exhibit.



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

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 57**

- (Exam Topic 1)

What is the purpose of traffic shaping?

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

**Answer: B**

**Explanation:**

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

**NEW QUESTION 59**

- (Exam Topic 1)

Refer to the exhibit.

```
interface GigabitEthernet0/1
ip address 192.168.1.2 255.255.255.0
ip access-group 2699 in
!
access-list 2699 deny icmp any 10.10.1.0 0.0.0.255 echo
access-list 2699 deny ip any 10.20.1.0 0.0.0.255
access-list 2699 permit ip any 10.10.1.0 0.0.0.255
access-list 2699 permit tcp any 10.20.1.0 0.0.0.127 eq 22
```

A network administrator must permit SSH access to remotely manage routers in a network. The operations team resides on the 10.20.1.0/25 network. Which command will accomplish this task?

- A. access-list 2699 permit udp 10.20.1.0 0.0.0.255
- B. no access-list 2699 deny tcp any 10.20.1.0 0.0.0.127 eq 22
- C. access-list 2699 permit tcp any 10.20.1.0 0.0.0.255 eq 22
- D. no access-list 2699 deny ip any 10.20.1.0 0.0.0.255

**Answer: D**

**Explanation:**

Note : Already a statement is there in last to allow SSH Traffic for network 10.20.1.0 0.0.0.127, but Second statement says deny ip any 10.20.1.0 0.0.0.255, so how it will work once it is denied. So the right answer is remove the --- no access-list 2699 deny ip any 10.20.1.0 0.0.0.255.

**NEW QUESTION 61**

- (Exam Topic 1)

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

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

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

Graphical user interface, text, application, email Description automatically generated

**NEW QUESTION 66**

- (Exam 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 70**

- (Exam Topic 1)

Refer to the exhibit.

```

EIGRP: 192.168.12.0/24
RIP: 192.168.12.0/27
OSPF: 192.168.12.0/28
    
```

How does the router manage traffic to 192.168.12.16?

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

**Answer:** A

**NEW QUESTION 71**

- (Exam Topic 1)

Which state does the switch port move to when PortFast is enabled?

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

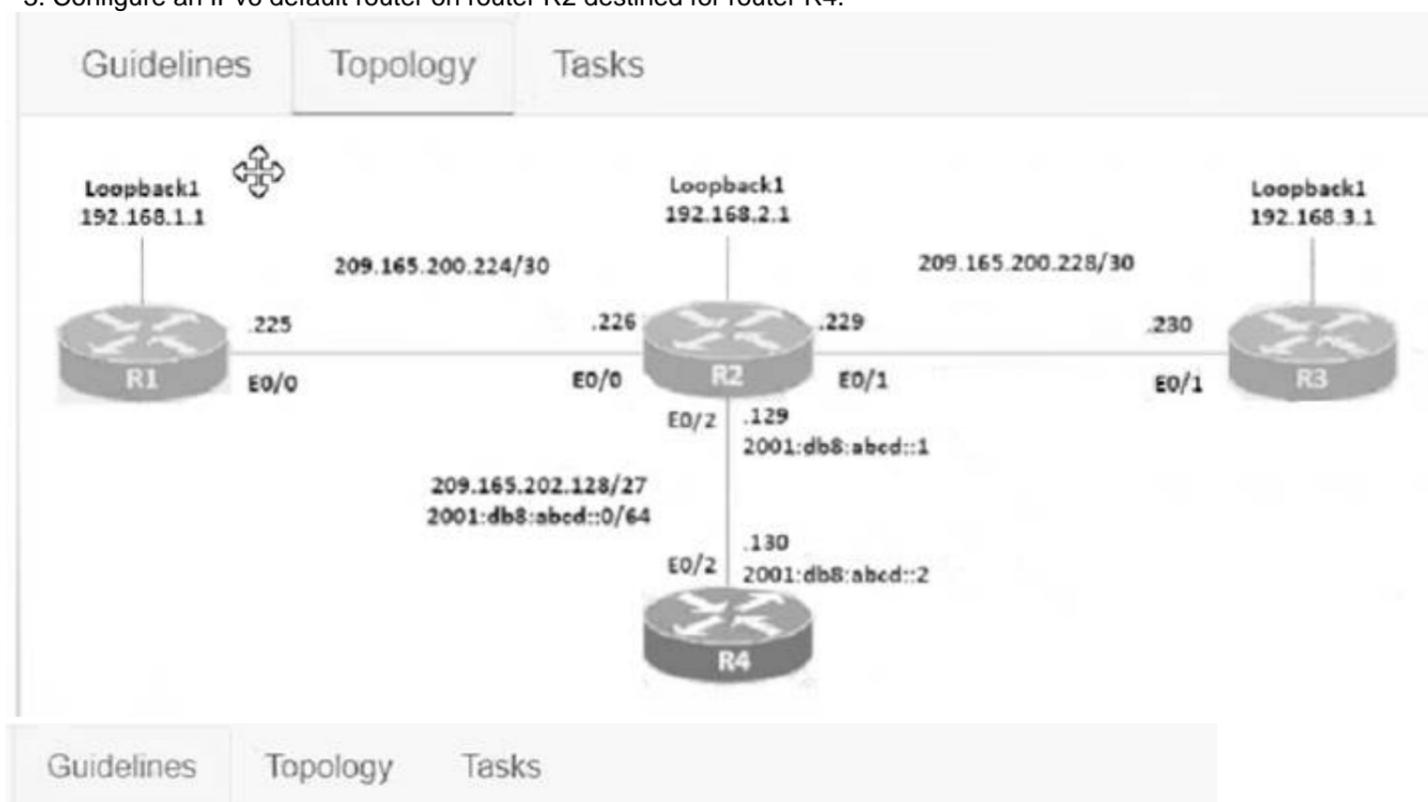
**Answer:** A

**NEW QUESTION 74**

- (Exam Topic 5)

Connectivity between four routers has been established. IP connectivity must be configured in the order presented to complete the implementation. No dynamic routing protocols are included.

- \* 1. Configure static routing using host routes to establish connectivity from router R3 to the router R1 Loopback address using the source IP of 209.165.200.230.
- \* 2. Configure an IPv4 default route on router R2 destined for router R4.
- \* 3. Configure an IPv6 default router on router R2 destined for router R4.



## Guidelines

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:**

Answer as below configuration:

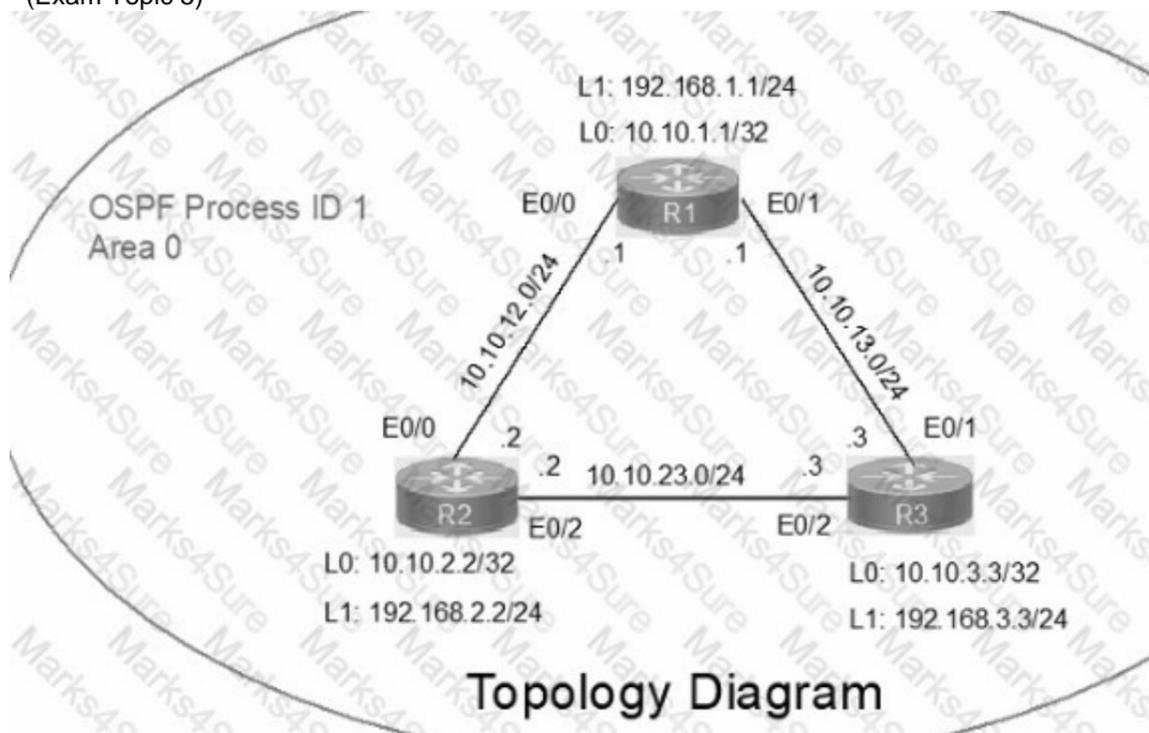
```
* 1.- on R3
config terminal
ip route 192.168.1.1 255.255.255.255 209.165.200.229
end
copy running start

* 2.- on R2
config terminal
ip route 0.0.0.0 0.0.0.0 209.165.202.130
end
copy running start

* 3.- on R2
config terminal
ipv6 route ::/0 2001:db8:abcd::2 end
copy running start
```

**NEW QUESTION 78**

- (Exam Topic 5)



## Guidelines

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- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
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IP connectivity between the three routers is configured. OSPF adjacencies must be established.

\* 1. Configure R1 and R2 Router IDs using the interface IP addresses from the link that is shared between them.

\* 2. Configure the R2 links with a max value facing R1 and R3. R2 must become the DR. R1 and R3 links facing R2 must remain with the default OSPF configuration for DR election. Verify the configuration after clearing the OSPF process.

\* 3. Using a host wildcard mask, configure all three routers to advertise their respective Loopback1 networks.

\* 4. Configure the link between R1 and R3 to disable their ability to add other OSPF routers.

- A. Mastered
- B. Not Mastered

**Answer:** A

### Explanation:

Answer as below configuration:

```

on R1
conf terminal interface Loopback0
ip address 10.10.1.1 255.255.255.255
!
interface Loopback1
ip address 192.168.1.1 255.255.255.0
!
interface Ethernet0/0 no shut
ip address 10.10.12.1 255.255.255.0
ip ospf 1 area 0 duplex auto
!
interface Ethernet0/1 no shut
ip address 10.10.13.1 255.255.255.0
ip ospf 1 area 0 duplex auto
!
router ospf 1
router-id 10.10.12.1
network 10.10.1.1 0.0.0.0 area 0
network 192.168.1.0 0.0.0.255 area 0
!
copy run star
    
```

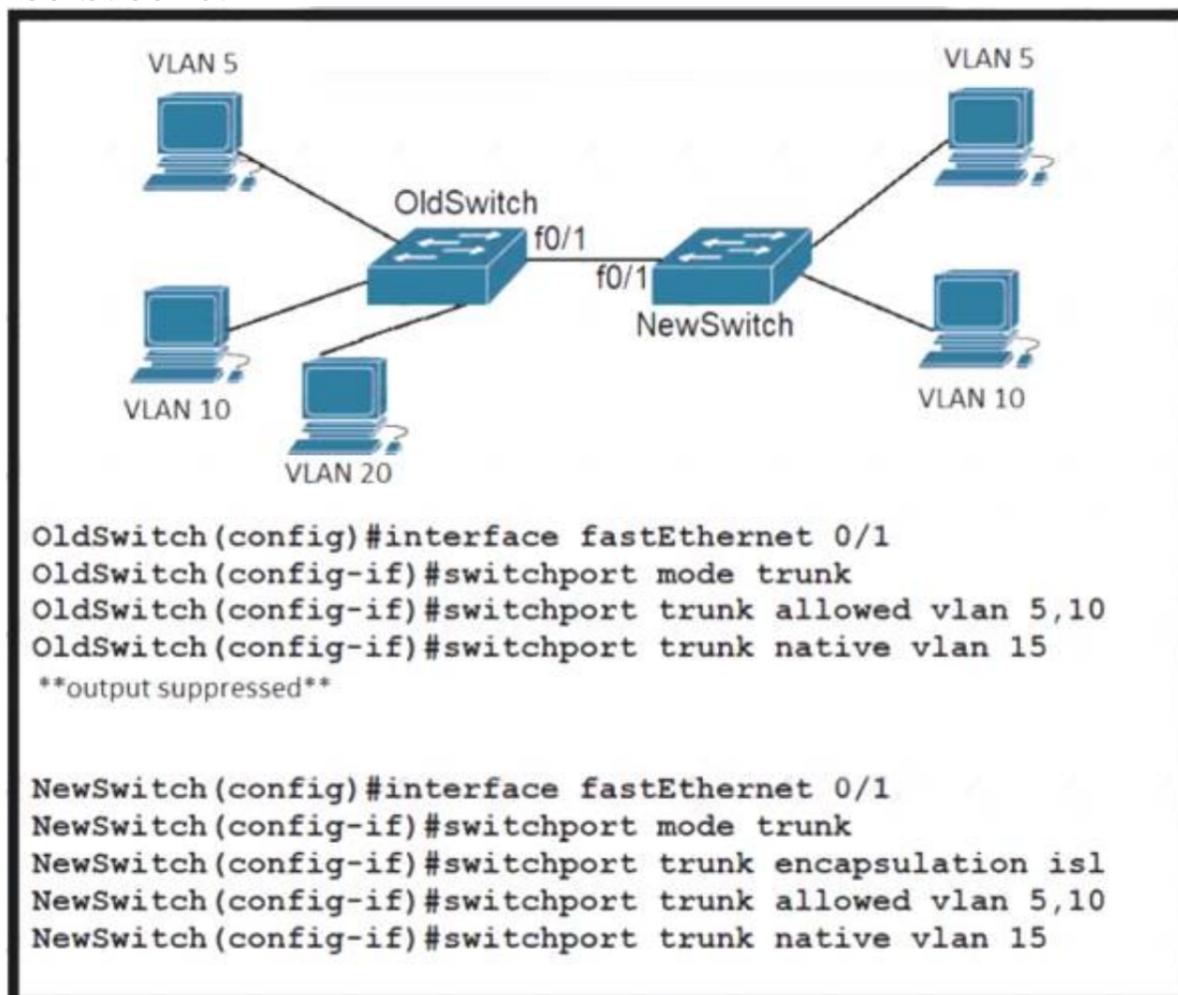
```
On R2
conf terminal interface Loopback0
ip address 10.10.2.2 255.255.255.255
!
interface Loopback1
ip address 192.168.2.2 255.255.255.0
!
interface Ethernet0/0 no shut
ip address 10.10.12.2 255.255.255.0
ip ospf priority 255 ip ospf 1 area 0 duplex auto
!
interface Ethernet0/2 no shut
ip address 10.10.23.2 255.255.255.0
ip ospf priority 255 ip ospf 1 area 0
duplex auto
!
router ospf 1
network 10.10.2.2 0.0.0.0 area 0
network 192.168.2.0 0.0.0.255 area 0
!
copy runs start
-----
```

```
On R3
conf ter
interface Loopback0
ip address 10.10.3.3 255.255.255.255
!
interface Loopback1
ip address 192.168.3.3 255.255.255.0
!
interface Ethernet0/1 no shut
ip address 10.10.13.3 255.255.255.0
ip ospf 1 area 0 duplex auto
!
interface Ethernet0/2 no shut
ip address 10.10.23.3 255.255.255.0
ip ospf 1 area 0
duplex auto
!
router ospf 1
network 10.10.3.3 0.0.0.0 area 0
network 192.168.3.0 0.0.0.255 area 0
!
copy run start
!
```

**NEW QUESTION 79**

- (Exam Topic 4)

Refer to the exhibit.



A new VLAN and switch are added to the network. A remote engineer configures OldSwitch and must ensure that the configuration meets these requirements:

- accommodates current configured VLANs

- expands the range to include VLAN 20
  - allows for IEEE standard support for virtual LANs
- Which configuration on the NewSwitch side of the link meets these requirements?

- A)  
no switchport trunk encapsulation isl  
switchport trunk encapsulation dot1q  
switchport trunk allowed vlan add 20
- B)  
switchport nonegotiate  
no switchport trunk allowed vlan 5,10  
switchport trunk allowed vlan 5,10,15,20
- C)  
no switchport mode trunk  
switchport trunk encapsulation isl  
switchport mode access vlan 20
- D)  
switchport mode dynamic  
channel-group 1 mode active  
switchport trunk allowed vlan 5,10,15, 20

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

**Answer: C**

**NEW QUESTION 80**

- (Exam Topic 4)

Which two transport layer protocols carry syslog messages? (Choose two.)

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

**Answer: AD**

**NEW QUESTION 85**

- (Exam Topic 4)

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

provides one-to-many communications	Global Unicast Address
has a unicast source sent to a group	
enables aggregation of routing prefixes	Multicast
is routable and reachable via the Internet	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

provides one-to-many communications

has a unicast source sent to a group

**Global Unicast Address**

enables aggregation of routing prefixes

is routable and reachable via the Internet

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 87**

- (Exam 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 88**

- (Exam Topic 4)

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

<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">identifies an interface on an IPv6 device</div> <div style="border: 1px solid black; padding: 5px;">includes link-local and loopback addresses</div>	<div style="border: 1px solid black; padding: 5px; height: 60px;"><b>Anycast</b></div>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">provides one-to-many communications</div> <div style="border: 1px solid black; padding: 5px;">used exclusively by a non-host device</div>	<div style="border: 1px solid black; padding: 5px; height: 60px;"><b>Multicast</b></div>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">assigned to more than one interface</div> <div style="border: 1px solid black; padding: 5px;">derived from the FF00::/8 address range</div>	<div style="border: 1px solid black; padding: 5px; height: 60px;"><b>Unicast</b></div>

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

Graphical user interface, diagram Description automatically generated

**NEW QUESTION 91**

- (Exam Topic 4)

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

BPDUs received are forwarded to the system module	action
BPDUs received from the system module are processed and transmitted	action
Frames received from the attached segment are discarded	action
Frames received from the attached segment are processed	action
Switched frames received from other ports are advanced	
The port in the forwarding state responds to network management messages	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

- \* 1. BPDUs received are forwarded to the system module.
  - \* 2. Frames received from the attached segment are processed.
  - \* 3. Switched frames received from other ports are advanced.
  - \* 4. The port in the forwarding state responds to network management messages.
- [https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/layer2/503\\_n1\\_1/Cisco\\_n5k\\_layer2\\_c](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/layer2/503_n1_1/Cisco_n5k_layer2_c)

**NEW QUESTION 95**

- (Exam Topic 4)

Which 802.11 frame type is Association Response?

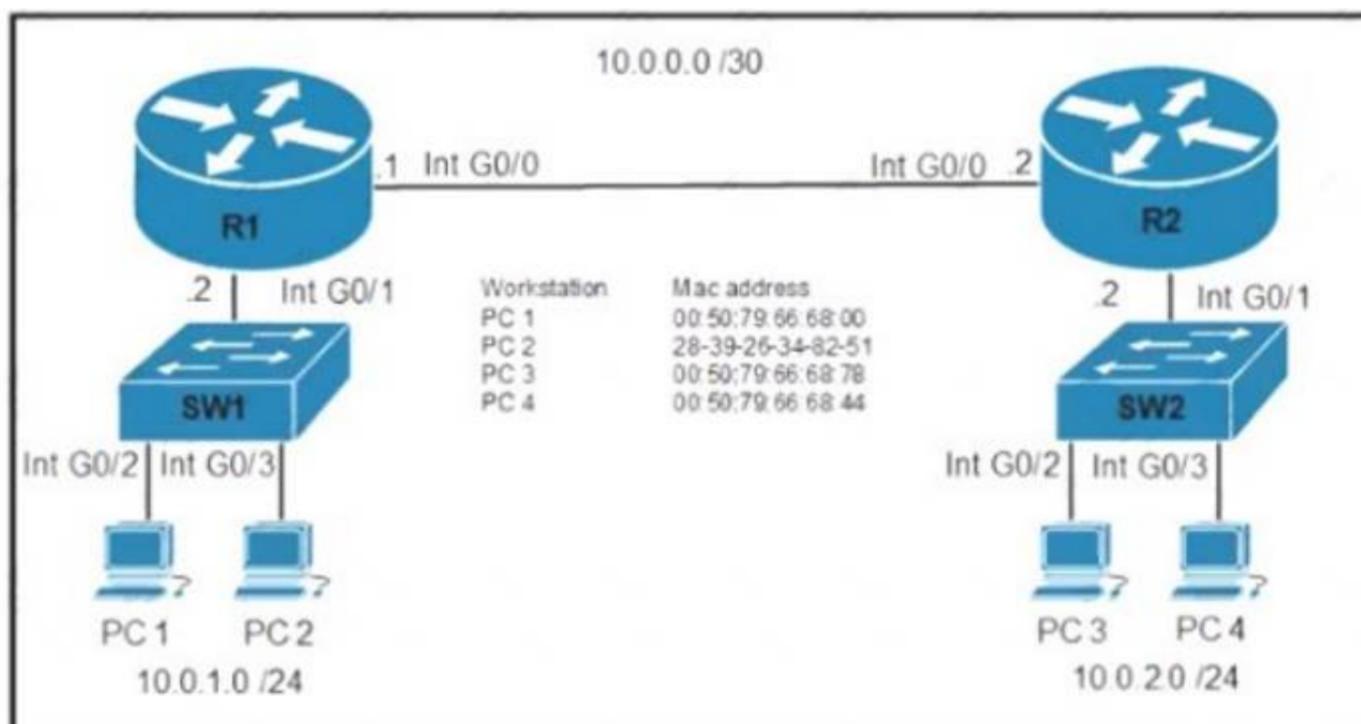
- A. management
- B. control
- C. action
- D. protected frame

**Answer:** A

**NEW QUESTION 100**

- (Exam Topic 4)

Refer to the exhibit.



An engineer must configure the interface that connects to PC 1 and secure it in a way that only PC1 is allowed to use the port No VLAN tagging can be used except for a voice VLAN. Which command sequence must be entered to configure the switch?

A)

```
SW1(config-if)#switchport mode nonegotiate
SW1(config-if)#switchport port-security
SW1(config-if)#switchport port-security maximum 1
```

B)

```
SW1(config-if)#switchport mode access
SW1(config-if)#switchport port-security
SW1(config-if)#switchport port-security mac-address 0050.7966.6800
```

C)

```
SW1(config-if)#switchport mode dynamic auto
SW1(config-if)#switchport port-security
SW1(config-if)#switchport port-security violation restrict
```

D)

```
SW1(config-if)#switchport mode dynamic desirable
SW1(config-if)#switchport port-security mac-address 0050.7966.6800
SW1(config-if)#switchport port-security mac-address sticky
```

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

**Answer: B**

**NEW QUESTION 104**

- (Exam Topic 4)

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

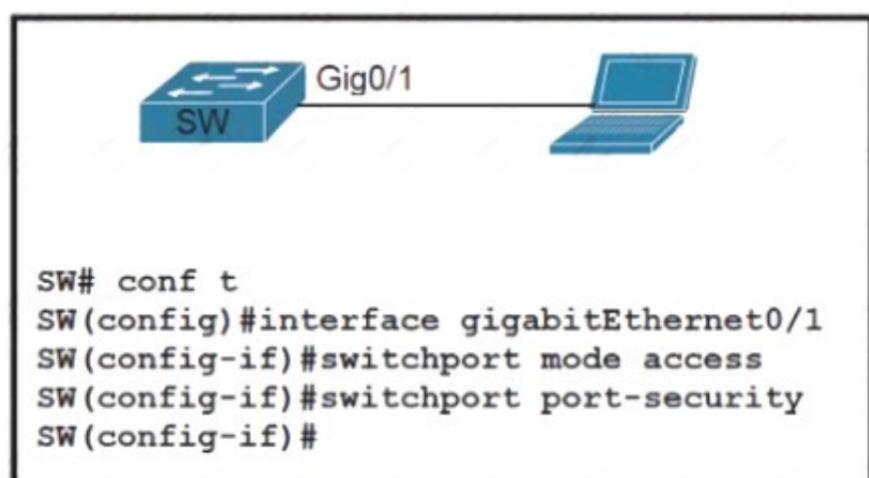
- A. 200 seconds
- B. 300 seconds
- C. 600 seconds
- D. 900 seconds

**Answer: B**

**NEW QUESTION 107**

- (Exam Topic 4)

Refer to the exhibit



A network engineer started to configure port security on a new switch. These requirements must be met:

\* MAC addresses must be learned dynamically  
\* Log messages must be generated without disabling the interface when unwanted traffic is seen Which two commands must be configured to complete this task"?  
(Choose two)

- A. SW(ccnfig-if)=switchport port-security mac-address sticky
- B. SW(confKj-if)=switchport port-security violation restrict
- C. SW(config.if)sswitchport port-security mac-address 0010.7B84.45E6
- D. SW(config-if)aswitchport port-security maximum 2
- E. SW(ccnfig-if)=switchport port-security violation shutdown

**Answer: C**

**NEW QUESTION 111**

- (Exam Topic 4)

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

used to reliably share files between devices	TCP
appropriate for streaming operations with minimal latency	
provides best-effort service	UDP
supports reliable data transmission	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

Graphical user interface, application Description automatically generated

**NEW QUESTION 116**

- (Exam Topic 4)

Refer to the exhibit.

```
SW1#show run
Building configuration...
!
hostname SW1
!
ip domain-name CCNA-test
!
username CCNA privilege 1 password 0 cisco123
!
interface FastEthernet0/1
  switchport access vlan 10
!
interface Vlan10
  ip address 192.168.1.2 255.255.255.0
!
line vty 0 4
  login local
  transport input telnet
line vty 5 15
  login local
  transport input telnet

SW1#show crypto key mypubkey rsa
% Key pair was generated at: 0:1:23 UTC Mar 1 2020
Key name: SW1.CCNA-test
```

An engineer is updating the management access configuration of switch SW1 to allow secured, encrypted remote configuration. Which two commands or command sequences must the engineer apply to the switch? (Choose two.)

- A. SW1(config)#enable secret ccnaTest123
- B. SW1(config)#username NEW secret R3mote123
- C. SW1(config)#line vty 0 15 SW1(config-line)#transport input ssh
- D. SW1(config)# crypto key generate rsa
- E. SW1(config)# interface f0/1 SW1(config-if)# switchport mode trunk

**Answer:** CD

**NEW QUESTION 118**

- (Exam Topic 4)

A network engineer must migrate a router loopback interface to the IPv6 address space. If the current IPv4 address of the interface is 10.54.73.1/32, and the engineer configures IPv6 address 0.0.0.0:ffff:a36:4901, which prefix length must be used?

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

**Answer:** D

**NEW QUESTION 119**

- (Exam Topic 4)

What is the purpose of configuring different levels of syslog for different devices on the network?

- A. to rate-limit messages for different severity levels from each device
- B. to set the severity of syslog messages from each device
- C. to identify the source from which each syslog message originated
- D. to control the number of syslog messages from different devices that are stored locally

**Answer:** B

**NEW QUESTION 122**

- (Exam Topic 4)

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

enables aggregation of routing prefixes

provides for one-to-one communication

provides one-to-many communications

sends packets to a group address rather than a single address

**Global Unicast Address**

**Multicast**

- A. Mastered
- B. Not Mastered

**Answer:** A

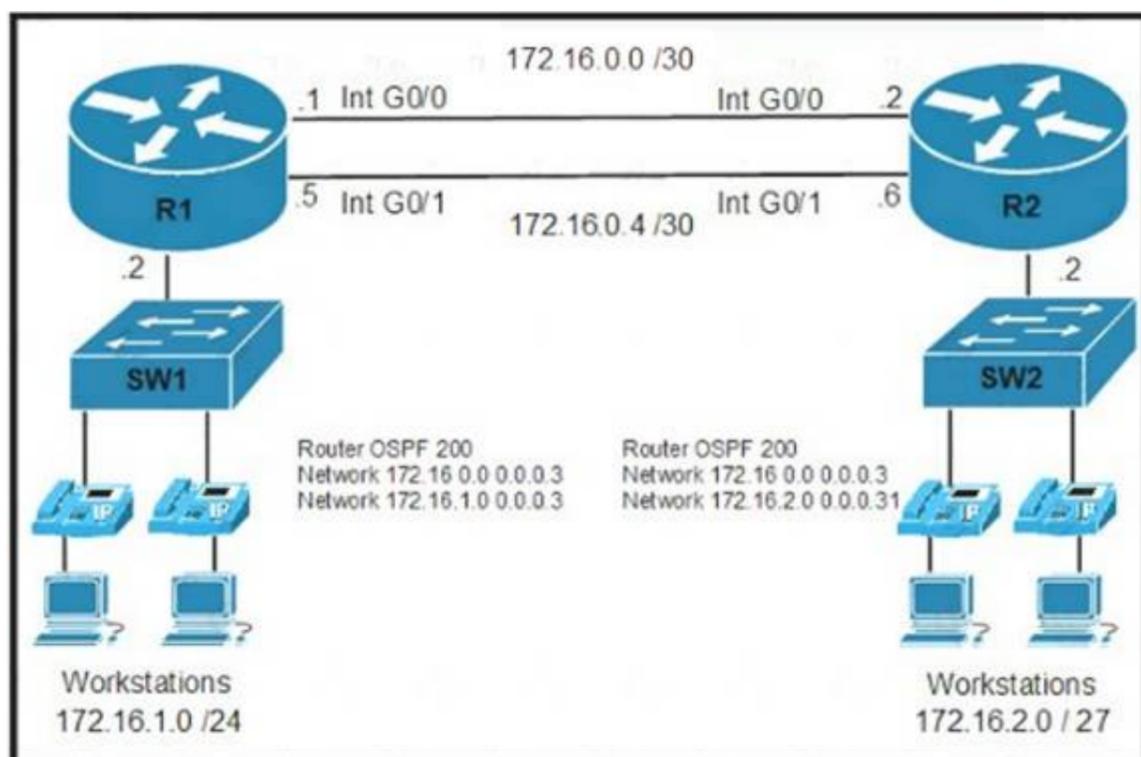
**Explanation:**

Graphical user interface, application Description automatically generated

**NEW QUESTION 125**

- (Exam Topic 4)

Refer to the exhibit.



The primary route across Gi0/0 is configured on both routers. A secondary route must be configured to establish connectivity between the workstation networks. Which command set must be configured to complete this task?

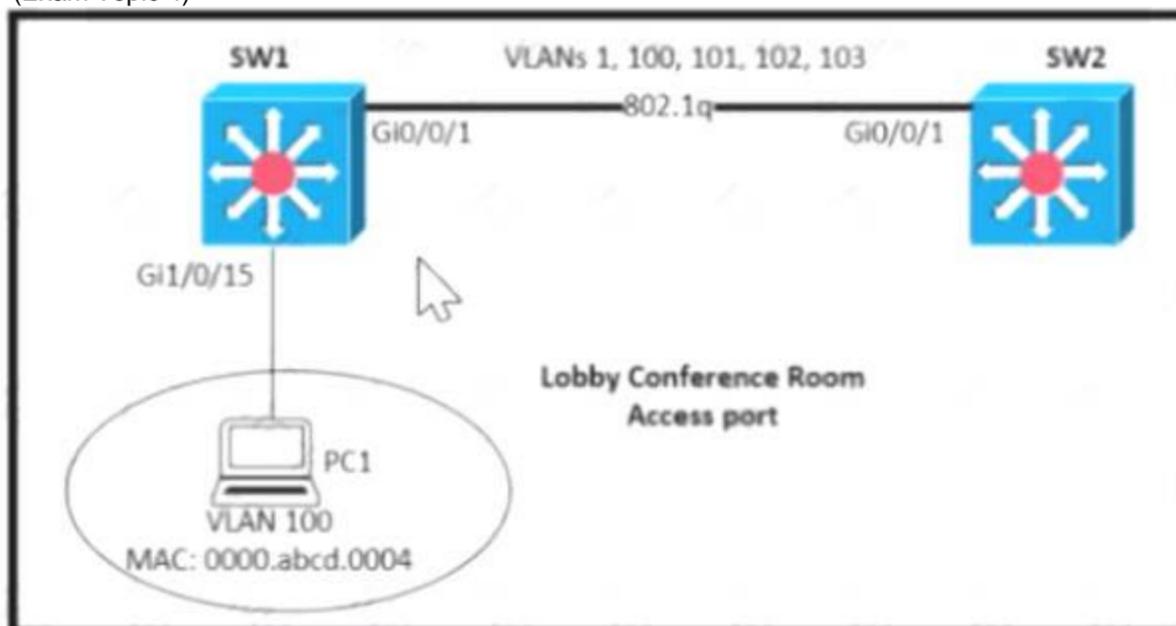
- A)
  - R1
  - `ip route 172.16.2.0 255.255.255.240 172.16.0.2 113`
  - R2
  - `ip route 172.16.1.0 255.255.255.0 172.16.0.1 114`
- B)
  - R1
  - `ip route 172.16.2.0 255.255.255.240 172.16.0.5 89`
  - R2
  - `ip route 172.16.1.0 255.255.255.0 172.16.0.6 89`
- C)
  - >R1
  - `ip route 172.16.2.0 255.255.255.248 172.16.0.5 110`
  - R2
  - `ip route 172.16.1.0 255.255.255.0 172.16.0.6 110`
- D)
  - R1
  - `ip route 172.16.2.0 255.255.255.224 172.16.0.6 111`
  - R2
  - `ip route 172.16.1.0 255.255.255.0 172.16.0.5 112`

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

**Answer: D**

**NEW QUESTION 128**

- (Exam Topic 4)



SW1 supports connectivity for a lobby conference room and must be secured. The engineer must limit the connectivity from PC1 to the SW1 and SW2 network. The MAC addresses allowed must be limited to two. Which configuration secures the conference room connectivity?

A)

```
> interface gi1/0/15
  switchport port-security mac-address 0000.abcd.0004 vlan 100
```

B)

```
interface gi1/0/15
  switchport port-security
  switchport port-security maximum 2
```

C)

```
interface gi1/0/15
  switchport port-security mac-address 0000.abcd.0004 vlan 100
  interface switchport secure-mac limit 2
```

D)

```
interface gi1/0/15
  switchport port-security
  switchport port-security mac-address 0000.abcd.0004 vlan 100
```

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

**Answer: B**

**NEW QUESTION 133**

- (Exam Topic 4)

What describes a northbound REST API for SON?

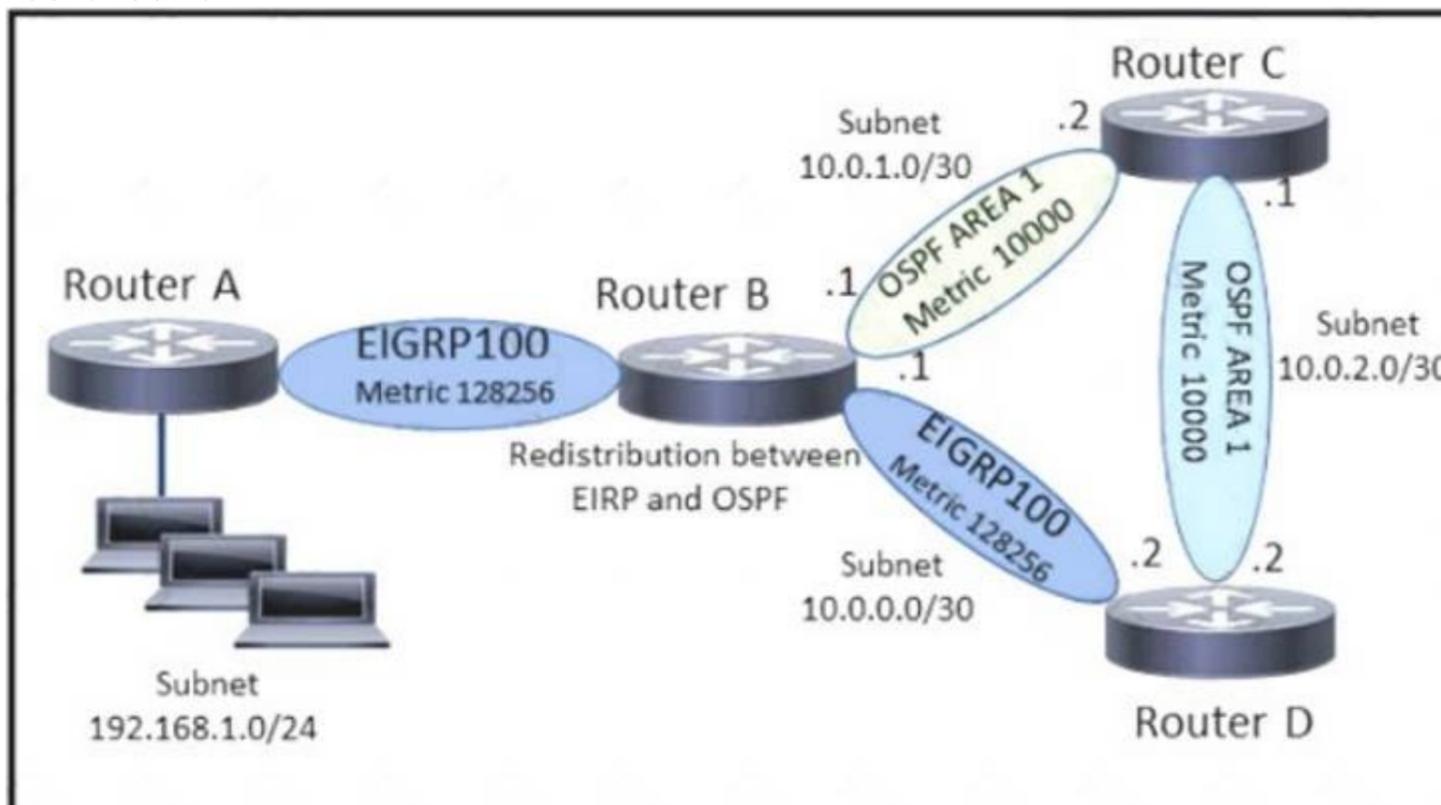
- A. application-facing interface for SNMP GET requests
- B. network-element-facing interface for GET POST PUT and DELETE methods
- C. network-element-facing interface for the control and data planes
- D. application-facing interface far GET, POST, PUT, and DELETE methods

**Answer: D**

**NEW QUESTION 138**

- (Exam Topic 4)

Refer to the exhibit.



A network engineer executes the show ip route command on router D. What is the next hop to network n192.168 1 0/24 and why?

- A. The next hop is 10.0.2.1 because it uses distance vector routing
- B. The next hop is 10.0.2.1 because it is a link-state routing protocol
- C. The next hop is 10.0.0.1 because it has a better administrative distance
- D. The next hop is 10.0.0.1 because it has a higher metric.

**Answer: B**

**NEW QUESTION 140**

- (Exam Topic 4)

How do UTP and STP cables compare?

- A. STP cables are cheaper to procure and easier to install and UTP cables are more expensive and harder to install.

- B. UTP cables are less prone to crosstalk and interference and STP cables are more prone to crosstalk and interference.
- C. UTP cables provide taster and more reliable data transfer rates and STP cables are slower and less reliable.
- D. STP cables are shielded and protect against electromagnetic interference and UTP lacks the same protection against electromagnetic interference.

**Answer: D**

**NEW QUESTION 141**

- (Exam Topic 4)

Which type of port is used to connect to the wired network when an autonomous AP maps two VLANs to its WLANs?

- A. LAG
- B. EtherChannel
- C. trunk
- D. access

**Answer: C**

**NEW QUESTION 143**

- (Exam Topic 4)

Which protocol is used in Software Defined Access (SDA) to provide a tunnel between two edge nodes in different fabrics?

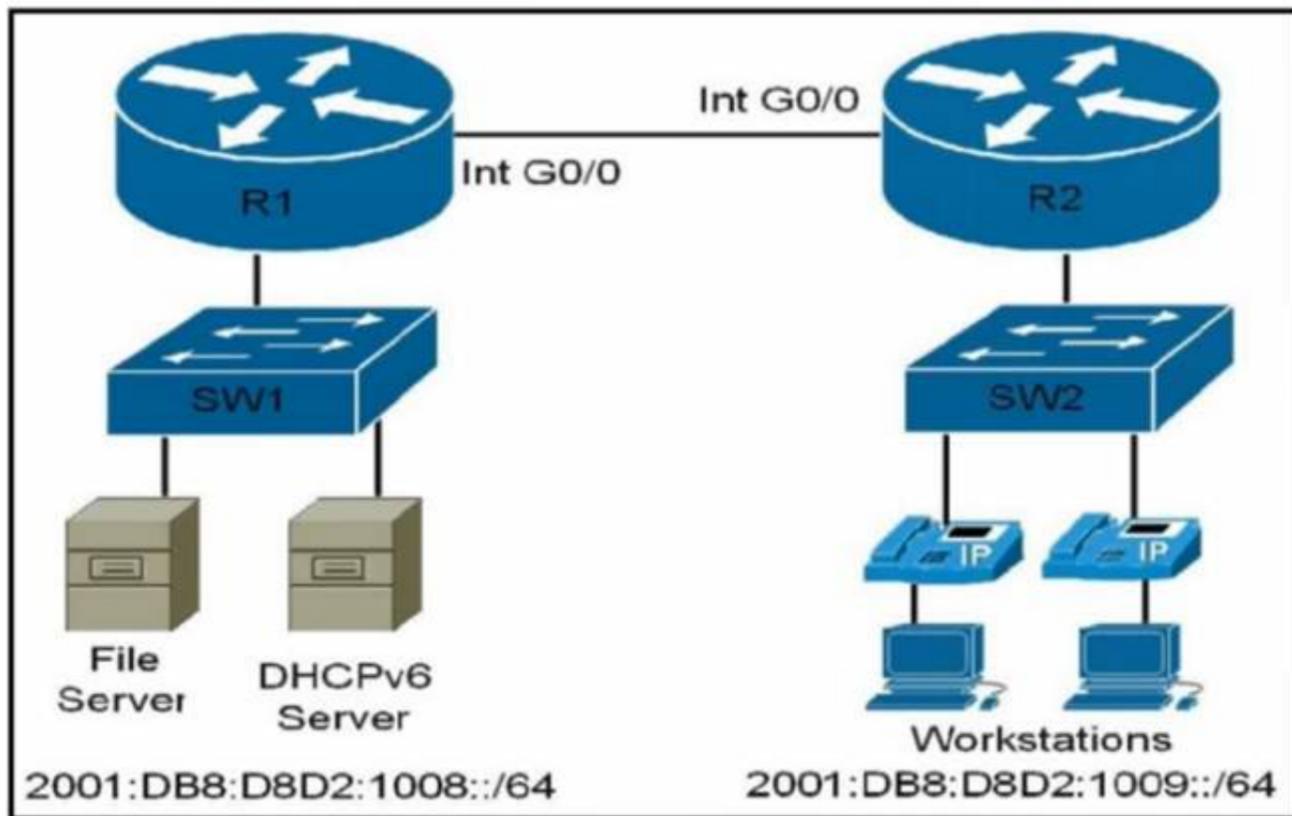
- A. Generic Router Encapsulation (GRE)
- B. Virtual Local Area Network (VLAN)
- C. Virtual Extensible LAN (VXLAN)
- D. Point-to-Point Protocol

**Answer: C**

**NEW QUESTION 146**

- (Exam Topic 4)

Refer to the exhibit An IPv6 address must be obtained automatically on the LAN interface on R1 Which command must be implemented to accomplish the task?



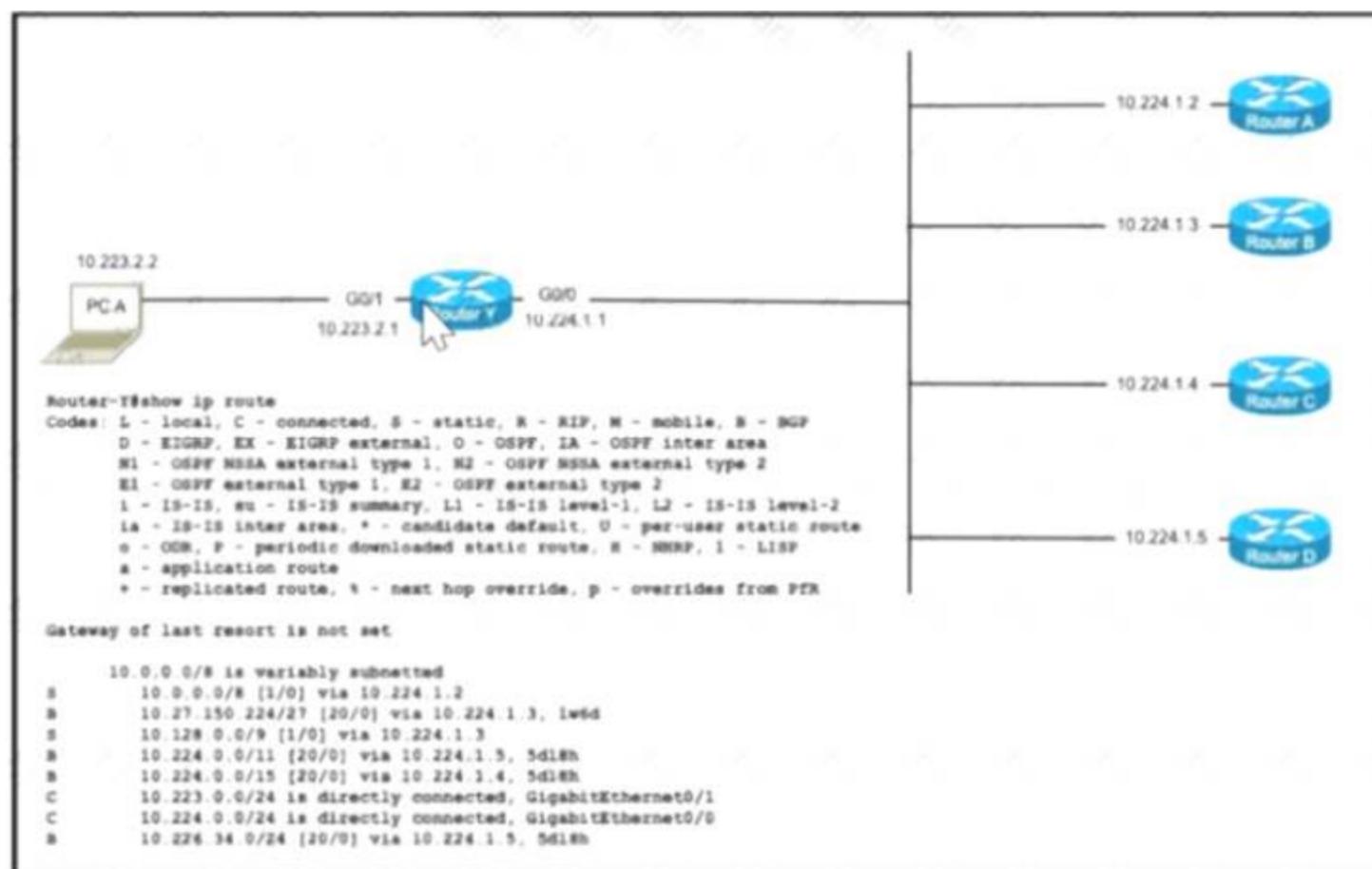
- A. Ipv6 address 2001:dbB:d8d2:1008:4343:61:0010::/64
- B. Ipv6 address autoconfig
- C. Ipv6 address fe80::/10
- D. Ipv6 address dhcp

**Answer: B**

**NEW QUESTION 151**

- (Exam Topic 4)

Refer to the exhibit.



PC A is communicating with another device at IP address 10.227.225.255. Through which router does router Y route the traffic?

- A. router A
- B. router B
- C. router C
- D. router D

**Answer: C**

**NEW QUESTION 156**

- (Exam Topic 4)

Which remote access protocol provides unsecured remote CLI access?

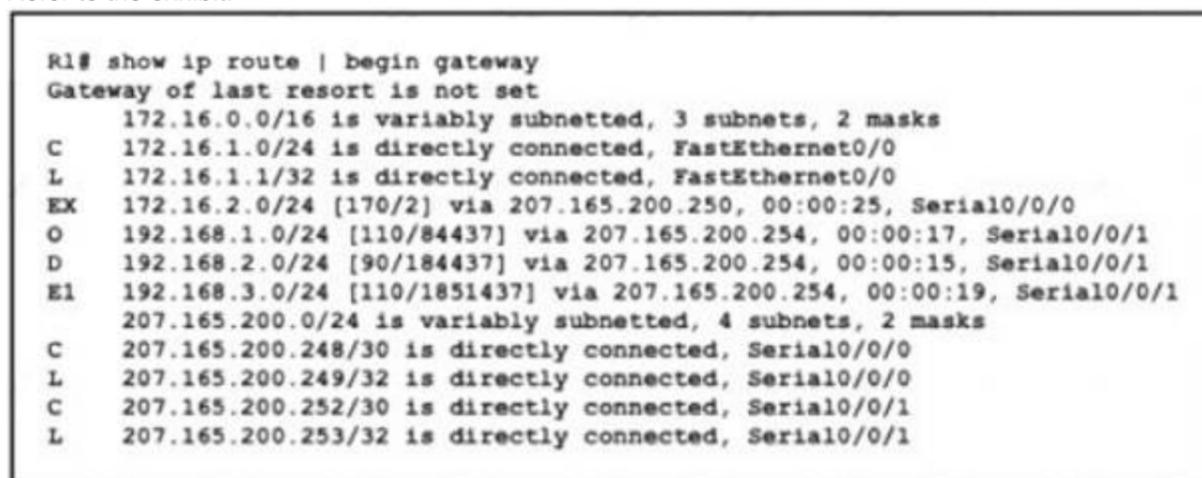
- A. console
- B. Telnet
- C. Bash
- D. SSH

**Answer: B**

**NEW QUESTION 161**

- (Exam Topic 4)

Refer to the exhibit.



Which prefix did router R1 learn from internal EIGRP?

- A. 192.168.10/24
- B. 192.168.3.0/24
- C. 192.168.2.0/24
- D. 172.16.1.0/24

**Answer: C**

**NEW QUESTION 165**

- (Exam Topic 4)

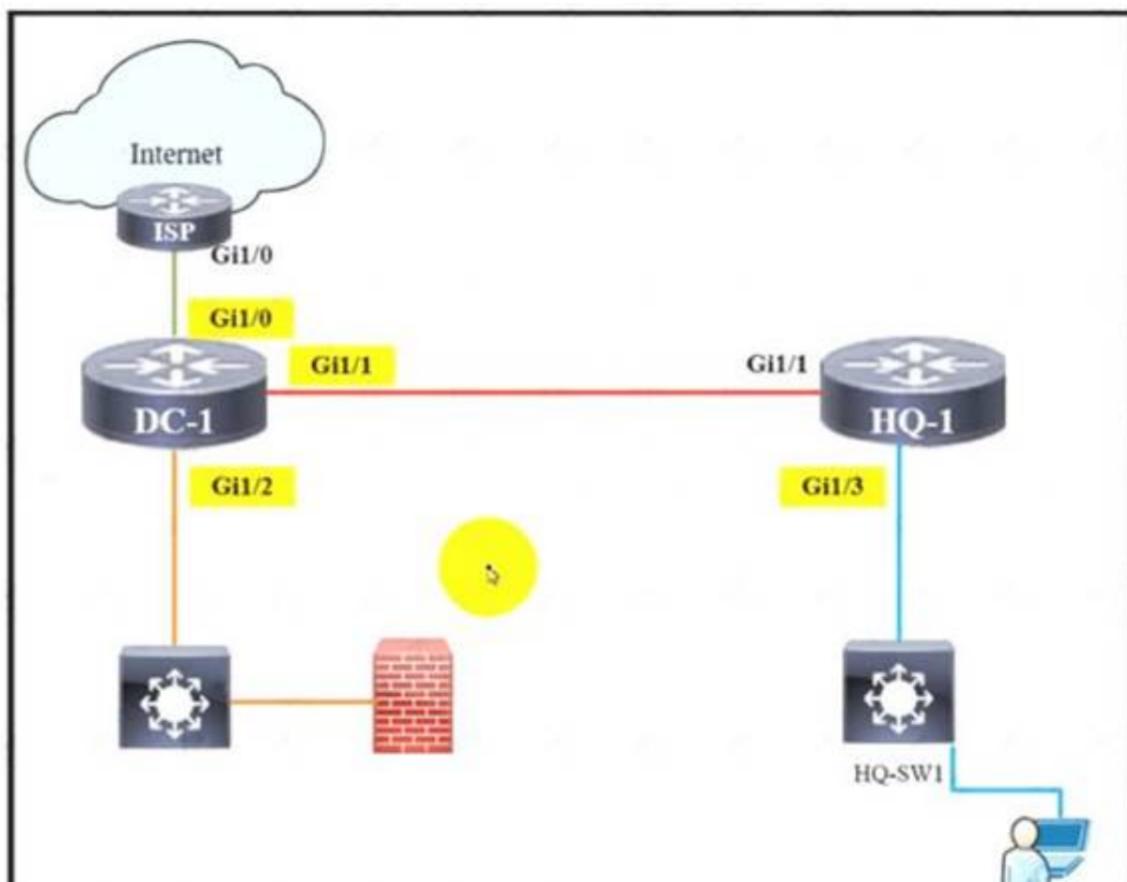
To improve corporate security, an organization is planning to implement badge authentication to limit access to the data center. Which element of a security program is being deployed?

- A. user training
- B. user awareness
- C. vulnerability verification
- D. physical access control

Answer: D

**NEW QUESTION 166**

- (Exam Topic 4)  
Refer to Exhibit.



Refer to the exhibit. The IP address configurations must be completed on the DC-1 and HQ-1 routers based on these requirements:  
DC-1 Gi1/0 must be the last usable address on a /30  
DC-1 Gi1/1 must be the first usable address on a /29  
DC-1 Gi1/2 must be the last usable address on a /28  
HQ-1 Gi1/3 must be the last usable address on a /29

Drag and drop the commands from the left onto the destination interfaces on the right. Not all commands are used

ip address 192.168.4.9 255.255.255.248	DC-1	Gi1/0
ip address 192.168.3.14 255.255.255.240		Gi1/1
ip address 209.165.202.129 255.255.255.252		Gi1/2
ip address 192.168.4.13 255.255.255.240	HQ-1	Gi1/3
ip address 209.165.202.130 255.255.255.252		
ip address 209.165.202.131 255.255.255.252		
ip address 192.168.3.14 255.255.255.248		

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

Graphical user interface, application Description automatically generated

**NEW QUESTION 168**

- (Exam Topic 4)

Which type of address is shared by routers in a HSRP implementation and used by hosts on the subnet as their default gateway address?

- A. multicast address
- B. loopback IP address
- C. virtual IP address

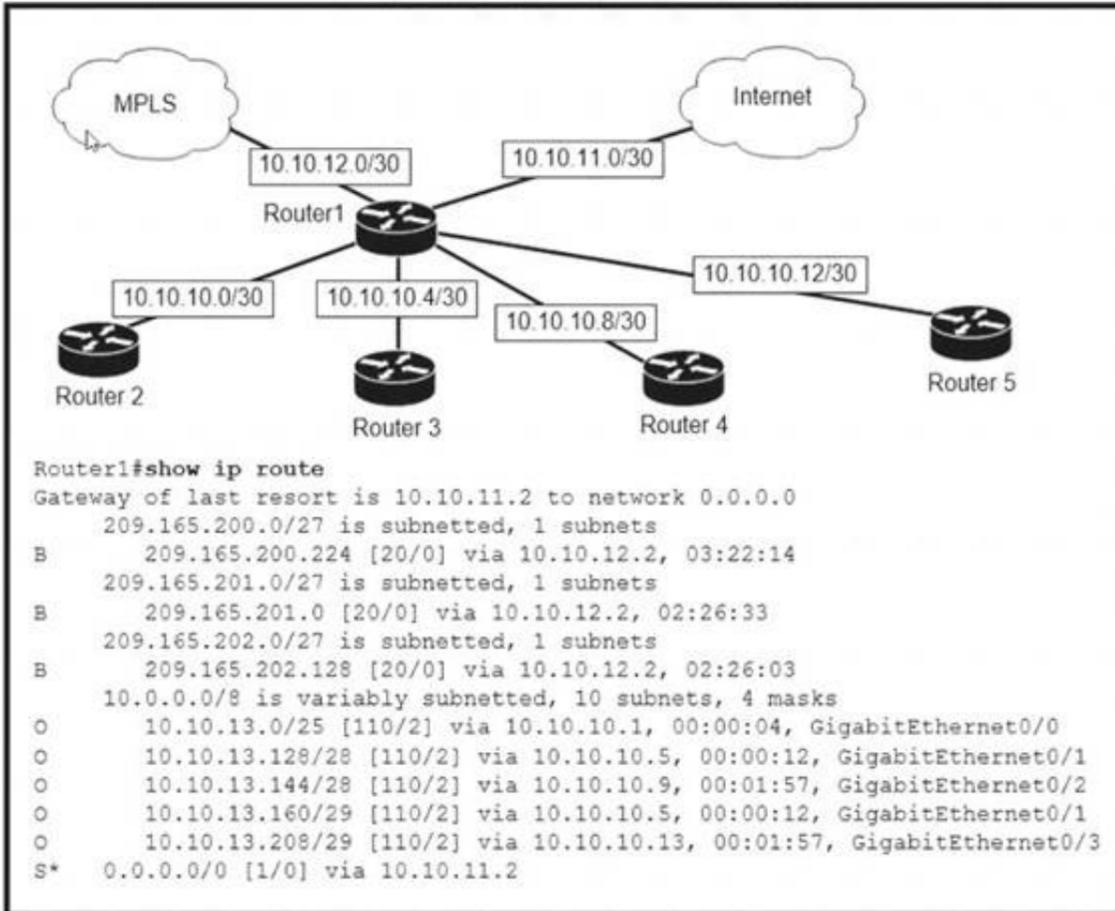
D. broadcast address

Answer: C

**NEW QUESTION 172**

- (Exam Topic 4)

Refer to the exhibit.



Drag and drop the destination IPs from the left onto the paths to reach those destinations on the right.

1.1.1.1	Router2
10.10.13.126	Router3
10.10.13.129	Router4
10.10.13.150	Router5
10.10.13.209	Internet cloud
209.165.200.30	MPLS cloud

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 177**

- (Exam Topic 4)

Which IPsec transport mode encrypts the IP header and the payload?

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

**Answer: D**

**NEW QUESTION 179**

- (Exam Topic 4)

Refer to the exhibit.

```
R2#show ip ospf interface
GigabitEthernet0/0/0 is up, line protocol is up
  Internet address is 192.168.1.1/24, Area 0
  Process ID 1, Router ID 192.168.1.1, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DROTHER, Priority 1
  Designated Router (ID) 192.168.1.1, Interface address 192.168.1.2
  Backup Designated Router (ID) 192.168.1.1, Interface address 192.168.1.2
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  Hello due in 00:00:02
  Index 2/2, flood queue length 0
  Neighbor Count is 1, Adjacent neighbor count is 2
```

Router OldR is replacing another router on the network with the intention of having OldR and R2 exchange routes. After the engineer applied the initial OSPF configuration: the routes were still missing on both devices. Which command sequence must be issued before the clear IP ospf process command is entered to enable the neighbor relationship?

- OldR(config)#interface g0/0/0  
OldR(config-if)#ip ospf dead-interval 15
- OldR(config)#router ospf 1  
OldR(config-router)#no router-id 192.168.1.1
- OldR(config)#router ospf 1  
OldR(config-router)#network 192.168.1.0 255.255.255.0 area 2
- OldR(config)#interface g0/0/0  
OldR(config-if)#ip ospf hello-interval 15

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

**Answer: C**

**NEW QUESTION 180**

- (Exam 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 184**

- (Exam Topic 4)

Which two HTTP methods are suitable for actions performed by REST-based APIs? (Choose two.)

- A. REMOVE
- B. REDIRECT
- C. OPOST
- D. GET
- E. UPOP

Answer: CD

**NEW QUESTION 188**

- (Exam 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 189**

- (Exam 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.

**Answer Area**

- It enables the device to allow user- or group-based access.
- 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 restricts the CLI commands that a user can perform.
- It uses TACACS+ to log the configuration commands entered by a network administrator.
- It verifies the user and password before granting access to the device.

**Accounting**

**Authorization**

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**

**Answer Area**

It enables the device to allow user- or group-based access.	<p><b>Accounting</b></p> <div style="background-color: #ADD8E6; padding: 5px;">It records the amount of time for which a user accesses the network on a remote server.</div> <div style="background-color: #ADD8E6; padding: 5px;">It uses TACACS+ to log the configuration commands entered by a network administrator.</div> <p><b>Authorization</b></p> <div style="background-color: #ADD8E6; padding: 5px;">It leverages a RADIUS server to grant user access to a reverse Telnet session.</div> <div style="background-color: #ADD8E6; padding: 5px;">It restricts the CLI commands that a user can perform.</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.	
It restricts the CLI commands that a user can perform.	
It uses TACACS+ to log the configuration commands entered by a network administrator.	
It verifies the user and password before granting access to the device.	

**NEW QUESTION 191**

- (Exam Topic 4)

What is a benefit for external users who consume public cloud resources?

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

**Answer: D**

**NEW QUESTION 196**

- (Exam Topic 4)

Which interface enables communication between a program on the controller and a program on the networking devices?

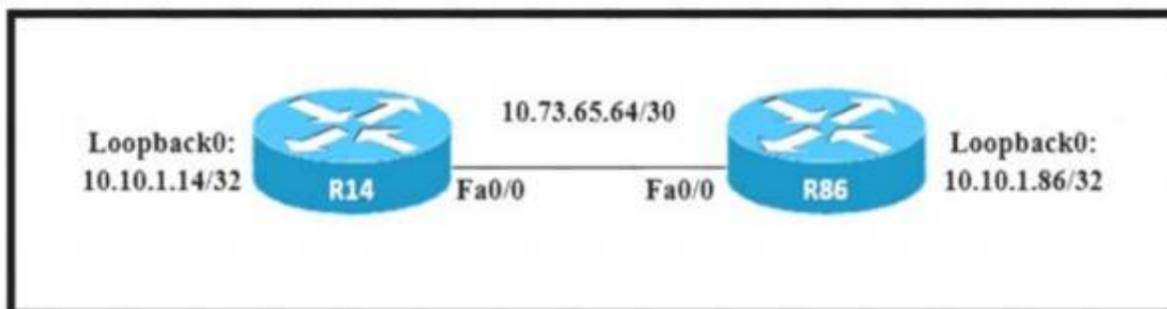
- A. northbound interface
- B. software virtual interface
- C. southbound interface
- D. tunnel Interface

**Answer: B**

**NEW QUESTION 200**

- (Exam Topic 4)

Refer to the exhibit.



All interfaces are configured with duplex auto and ip ospf network broadcast. Which configuration allows routers R14 and R86 to form an OSPFv2 adjacency and act as a central point for exchanging OSPF information between routers?

Ⓐ R14#  
interface FastEthernet0/0  
ip address 10.73.65.65 255.255.255.252  
ip ospf priority 0  
ip mtu 1500

router ospf 10  
router-id 10.10.1.14  
network 10.10.1.14 0.0.0.0 area 0  
network 10.73.65.64 0.0.0.3 area 0

R86#  
interface FastEthernet0/0  
ip address 10.73.65.66 255.255.255.252  
ip mtu 1500

router ospf 10  
router-id 10.10.1.86  
network 10.10.1.86 0.0.0.0 area 0  
network 10.73.65.64 0.0.0.3 area 0

Ⓑ R14#  
interface Loopback0  
ip ospf 10 area 0  
  
interface FastEthernet0/0  
ip address 10.73.65.65 255.255.255.252  
ip ospf priority 255  
ip ospf 10 area 0  
ip mtu 1500

router ospf 10  
router-id 10.10.1.14

R86#  
interface Loopback0  
ip ospf 10 area 0

interface FastEthernet0/0  
ip address 10.73.65.66 255.255.255.252  
ip ospf 10 area 0  
ip mtu 1500

router ospf 10  
router-id 10.10.1.86

Ⓒ R14#  
interface FastEthernet0/0  
ip address 10.73.65.65 255.255.255.252  
ip ospf priority 255  
ip mtu 1500

router ospf 10  
router-id 10.10.1.14  
network 10.10.1.14 0.0.0.0 area 0  
network 10.73.65.64 0.0.0.3 area 0

R86#  
interface FastEthernet0/0  
ip address 10.73.65.66 255.255.255.252  
ip mtu 1400

router ospf 10  
router-id 10.10.1.86  
network 10.10.1.86 0.0.0.0 area 0  
network 10.73.65.64 0.0.0.3 area 0

```

R14#
interface Loopback0
ip ospf 10 area 0

interface FastEthernet0/0
ip address 10.73.65.65 255.255.255.252
ip ospf 10 area 0
ip mtu 1500

router ospf 10
ip ospf priority 255
router-id 10.10.1.14
R86#
interface Loopback0
ip ospf 10 area 0

interface FastEthernet0/0
ip address 10.73.65.66 255.255.255.252
ip ospf 10 area 0
ip mtu 1500

router ospf 10
router-id 10.10.1.86

```

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

**Answer:** B

**NEW QUESTION 201**

- (Exam Topic 4)

Refer to the exhibit. Local access for R4 must be established and these requirements must be met:

- Only Telnet access is allowed.
- The enable password must be stored securely.
- The enable password must be applied in plain text.
- Full access to R4 must be permitted upon successful login.

Which configuration script meets the requirements?

A)

```

!
conf t
!
username test1 password testpass1
enable secret level 15 0 Test123
!
line vty 0 15
login local
transport input telnet

```

B)

```

!
config t
!
username test1 password testpass1
enable password level 15 0 Test123
!
line vty 0 15
password Test123
transport input all

```

C)

```

!
config t
!
username test1 password testpass1
enable password level 1 7 Test123
!
line vty 0 15
accounting exec default
transport input all

```

```
D)
!  
config t  
!  
username test1 password testpass1  
enable password level 17 Test123  
!  
line vty 0 15  
  accounting exec default  
  transport input all
```

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

**Answer: D**

**NEW QUESTION 204**

- (Exam Topic 4)

What is the MAC address used with VRRP as a virtual address?

- A. 00-00-0C-07-AD-89
- B. 00-00-5E-00-01-0a
- C. 00-07-C0-70-AB-01
- D. 00-C6-41-93-90-91

**Answer: B**

**NEW QUESTION 205**

- (Exam Topic 4)

The address block 192.168.32.0/24 must be subnetted into smaller networks. The engineer must meet these requirements:

- Create 8 new subnets
- Each subnet must accommodate 30 hosts
- Interface VLAN 10 must use the last usable IP in the first new subnet
- A Layer 3 interface is used

Which configuration must be applied to the interface?

- A)  
no switchport mode access  
ip address 192.168.32.62 255.255.255.240
- B)  
switchport  
ip address 192.168.32.65 255.255.255.240
- C)  
no switchport mode trunk  
ip address 192.168.32.97 255.255.255.224
- D)  
no switchport  
ip address 192.168.32.30 255.255.255.224

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

**Answer: D**

**NEW QUESTION 210**

- (Exam Topic 4)

How does authentication differ from authorization?

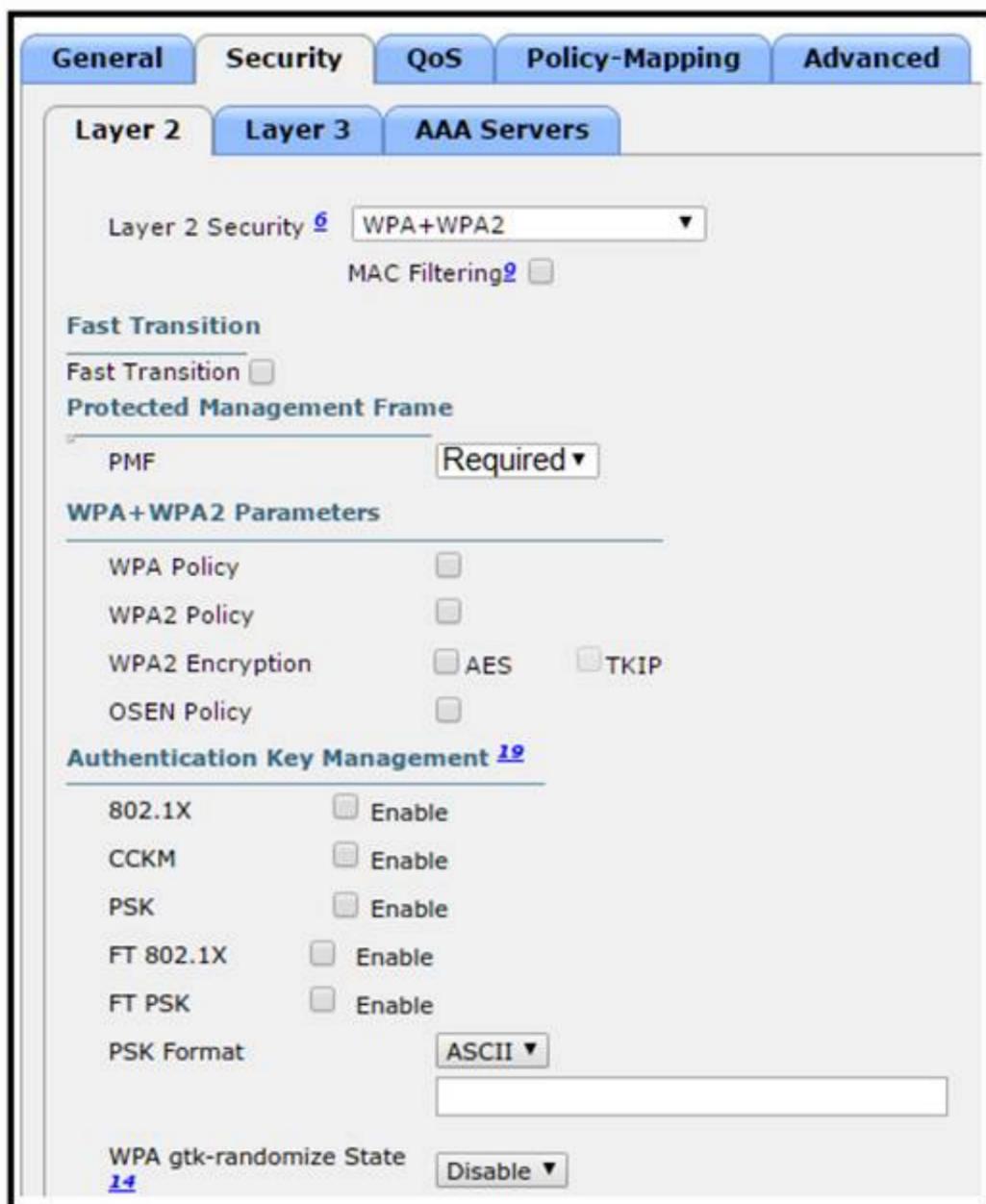
- A. Authentication verifies the identity of a person accessing a network, and authorization determines what resource a user can access.
- B. Authentication is used to record what resource a user accesses, and authorization is used to determine what resources a user can access.
- C. Authentication is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

**Answer: A**

**NEW QUESTION 213**

- (Exam Topic 4)

Refer to the exhibit.



The network engineer is configuring a new WLAN and is told to use a setup password for authentication instead of the RADIUS servers. Which additional set of tasks must the engineer perform to complete the configuration?

- A. Disable PMF Enable PSK Enable 802.1x
- B. Select WPA Policy Enable CCKM Enable PSK
- C. Select WPA Policy Select WPA2 Policy Enable FT PSK
- D. Select WPA2 Policy Disable PMF Enable PSK

Answer: D

**NEW QUESTION 215**

- (Exam Topic 4)

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    172.16.0.0/16 is directly connected, Loopback0
     172.16.0/16 is variably subnetted, 4 subnets, 2 masks
O    172.16.1.3/24 [110/100] via 192.168.7.40, 00:39:08, Serial0
C    172.16.1.0/24 is directly connected, Serial0
O    172.16.1.184/29 [110/5] via 192.168.7.35, 00:39:08, Serial0
O    172.16.3.0/24 [110/10] via 192.168.7.4, 00:39:08, Gigabit Ethernet 0/0
D    172.16.1.0/28 [90/10] via 192.168.7.7, 00:39:08, Gigabit Ethernet 0/0
    
```

Load-balanced traffic is coming in from the WAN destined to a host at 172.16.1.190. Which next-hop is used by the router to forward the request?

- A. 192.168.7.4
- B. 192.168.7.7
- C. 192.168.7.35
- D. 192.168.7.40

Answer: D

**NEW QUESTION 217**

- (Exam Topic 4)

A network engineer is replacing the switches that belong to a managed-services client with new Cisco Catalyst switches. The new switches will be configured for updated security standards, including replacing Telnet services with encrypted connections and doubling the modulus size from 1024. Which two commands must the engineer configure on the new switches? (Choose two.)

- A. crypto key generate rsa general-keys modulus 1024
- B. transport input all
- C. crypto key generate rsa usage-keys
- D. crypto key generate rsa modulus 2048
- E. transport Input ssh

**Answer:** AE

**NEW QUESTION 220**

- (Exam Topic 4)

Which enhancement is implemented in WPA3?

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

**Answer:** D

**NEW QUESTION 221**

- (Exam Topic 4)

What determines the sequence in which materials are planned during the material requirements planning (MRP) run?

- A. The control parameters of the MRP run
- B. The creation date of the materials
- C. The low-level code of the materials
- D. The replenishment lead time of the materials

**Answer:** C

**NEW QUESTION 224**

- (Exam Topic 4)

What does the implementation of a first-hop redundancy protocol protect against on a network?

- A. root-bridge loss
- B. spanning-tree loops
- C. default gateway failure
- D. BGP neighbor flapping

**Answer:** C

**NEW QUESTION 225**

- (Exam Topic 4)

Which command enables HTTP access to the Cisco WLC?

- A. config network secureweb enable
- B. config certificate generate web admin
- C. config network webmode enable
- D. config network telnet enable

**Answer:** C

**NEW QUESTION 226**

- (Exam 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 229**

- (Exam Topic 4)

Refer to the exhibit.

```
R1
interface GigabitEthernet0/1
 ip address 192.168.12.1 255.255.255.128
 no shutdown
router ospf 1
 network 192.168.12.1 0.0.0.0 area 1

R2
interface GigabitEthernet0/1
 ip address 192.168.12.2 255.255.255.128
 no shutdown
```

A network engineer started to configure two directly-connected routers as shown. Which command sequence must the engineer configure on R2 so that the two routers become OSPF neighbors?

- A)  
router ospf 1  
network 192.168.12.1 0.0.0.0 area 1
- B)  
interface GigabitEthernet0/1  
ip ospf 1 area 1
- C)  
interface GigabitEthernet0/1  
ip ospf 1 area 0
- D)  
router ospf 1  
network 192.168.12.0 0.0.0.127 area 0

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

**Answer: D**

**NEW QUESTION 234**

- (Exam Topic 4)

What is a benefit of a point-to-point leased line?

- A. flexibility of design  
B. simplicity of configurator  
C. low cost  
D. full-mesh capability

**Answer: B**

**NEW QUESTION 237**

- (Exam Topic 4)

Why would a network administrator choose to implement automation in a network environment?

- A. To simplify the process of maintaining a consistent configuration state across all devices  
B. To centralize device information storage  
C. To implement centralized user account management  
D. To deploy the management plane separately from the rest of the network

**Answer: A**

**NEW QUESTION 239**

- (Exam Topic 4)

What are two protocols within the IPsec suite? (Choose two)

- A. AH  
B. 3DES  
C. ESP  
D. TLS  
E. AES

**Answer: DE**

**NEW QUESTION 240**

- (Exam 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 245**

- (Exam Topic 4)

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

This type implements changes individually at each device.	<b>Traditional Networking</b>  <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
This type leverages controllers to handle network management.	
Maintenance costs are higher than with other networking options.	<b>Controller-Based Networking</b>  <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
This type provides a centralized view of the network.	

- A. Mastered
- B. Not Mastered

**Answer:** A

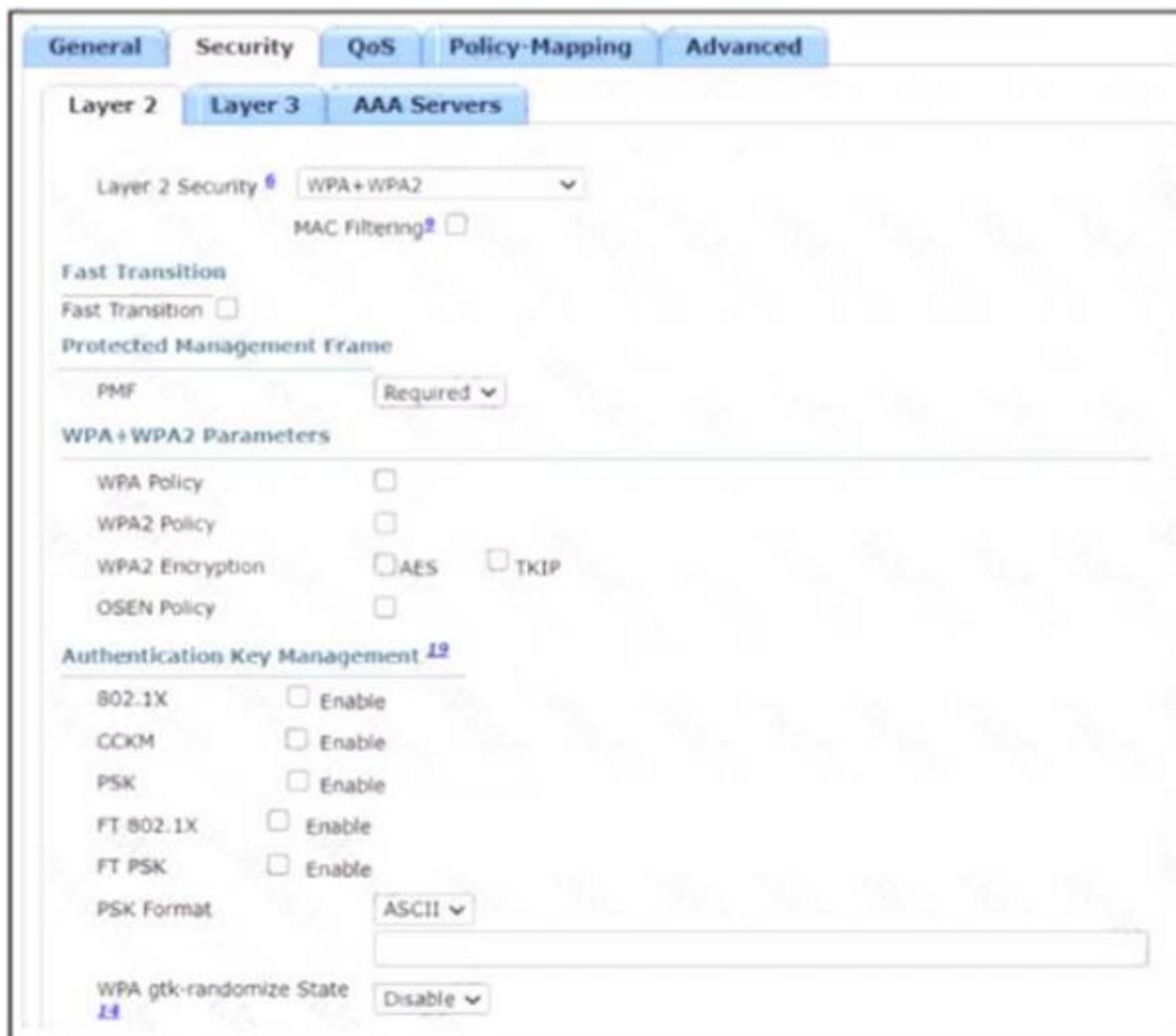
**Explanation:**

This type implements changes individually at each device.	<b>Traditional Networking</b>  <div style="border: 1px solid black; padding: 5px;">This type implements changes individually at each device.</div> <div style="border: 1px solid black; padding: 5px;">Maintenance costs are higher than with other networking options.</div>
This type leverages controllers to handle network management.	
Maintenance costs are higher than with other networking options.	<b>Controller-Based Networking</b>  <div style="border: 1px solid black; padding: 5px;">This type leverages controllers to handle network management.</div> <div style="border: 1px solid black; padding: 5px;">This type provides a centralized view of the network.</div>
This type provides a centralized view of the network.	

**NEW QUESTION 250**

- (Exam Topic 4)

Refer to the exhibit.



- A) Select WPA Policy  
Select WPA2 Policy  
Enable FT PSK
- B) Select WPA2 Policy  
Disable PMF  
Enable PSK
- C) Select WPA Policy  
Enable CCKM  
Enable PSK
- D) Disable PMF  
Enable PSK  
Enable 802.1x

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

**Answer: C**

**NEW QUESTION 253**

- (Exam Topic 4)

Which signal frequency appears 60 times per minute?

- A. 1 Hz signal
- B. 1 GHz signal
- C. 60 Hz signal
- D. 60 GHz signal

**Answer: B**

**NEW QUESTION 256**

- (Exam Topic 4)

What is the function of northbound API?

- A. It upgrades software and restores files.
- B. It relies on global provisioning and configuration.
- C. It supports distributed processing for configuration.
- D. It provides a path between an SDN controller and network applications.

**Answer: D**

**NEW QUESTION 258**

- (Exam 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 259**

- (Exam Topic 4)

Which cable type must be used to interconnect one switch using 1000 BASE-SX GBiC modules and another switch using 1000 BASE-SX SFP modules?

- A. LC to SC
- B. SC to ST
- C. SC to SC
- D. LC to LC

**Answer: D**

**NEW QUESTION 263**

- (Exam Topic 4)

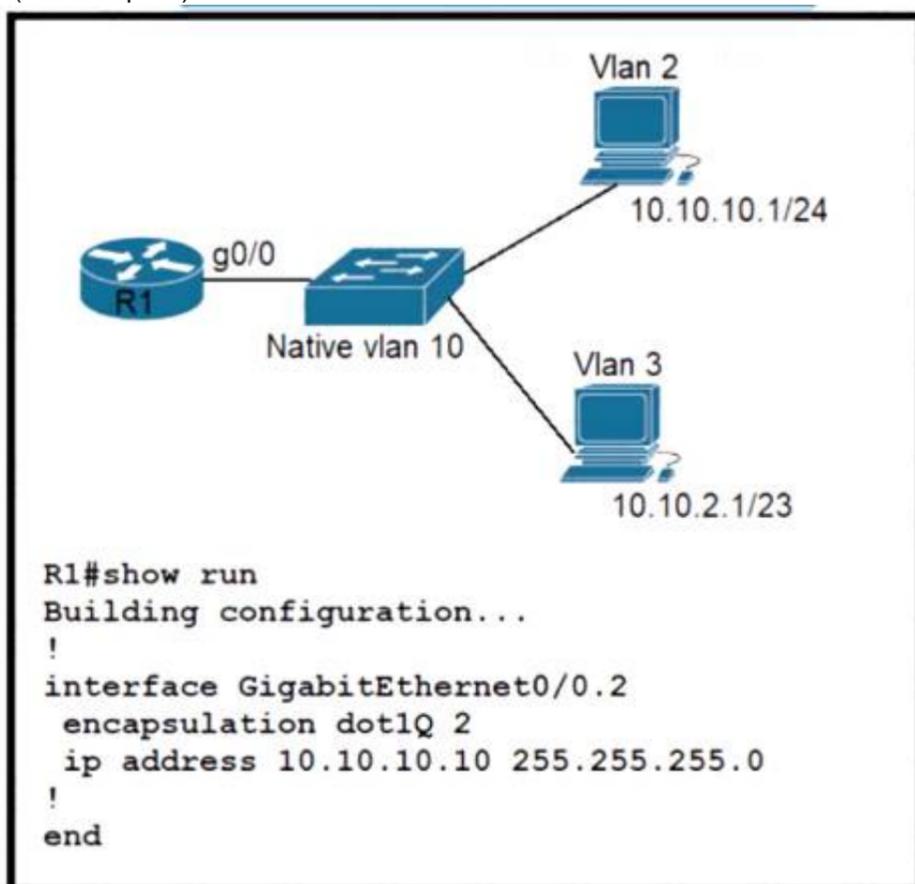
Refer to the exhibit. User traffic originating within site 0 is failing to reach an application hosted on IP address 192.168.0.10. Which is located within site A What is determined by the routing table?

- A. The default gateway for site B is configured incorrectly
- B. The lack of a default route prevents delivery of the traffic
- C. The traffic is blocked by an implicit deny in an ACL on router2
- D. The traffic to 192.168.0.10 requires a static route to be configured in router 1.

**Answer: B**

**NEW QUESTION 265**

- (Exam Topic 4)



A)

```
interface GigabitEthernet0/0  
ip address 10.10.2.10 255.255.252.0
```

B)

```
interface GigabitEthernet0/0.3  
encapsulation dot1Q 10  
ip address 10.10.2.10 255.255.255.252
```

C)

```
interface GigabitEthernet0/0.10  
encapsulation dot1Q 3  
ip address 10.10.2.10 255.255.254.0
```

D)

```
interface GigabitEthernet0/0.3  
encapsulation dot1Q 3 native  
ip address 10.10.2.10 255.255.252.0
```

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

**Answer: C**

**NEW QUESTION 267**

- (Exam Topic 4)

Which WPA mode uses PSK authentication?

- A. Local
- B. Client
- C. Enterprise
- D. Personal

**Answer: C**

**NEW QUESTION 268**

- (Exam Topic 4)

What is the collapsed layer in collapsed core architectures?

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

**Answer: D**

**NEW QUESTION 272**

- (Exam Topic 4)

Refer to the exhibit.

The screenshot shows a configuration page with the following settings:

- General:** Allow AAA Override (Enabled), Coverage Hole Detection (Enabled), Enable Session Timeout (1800), Aironet IE (Enabled), Diagnostic Channel (Enabled), Override Interface ACL (IPv4: None, IPv6: None), Layer2 Ad (None), URL ACL (None), P2P Blocking Action (Disabled), Client Exclusion (Enabled, 180), Maximum Allowed Clients (0), Static IP Tunneling (Enabled), Wi-Fi Direct Clients Policy (Disabled), Maximum Allowed Clients Per AP Radio (200).
- DHCP:** DHCP Server (Override), DHCP Server IP Addr (0.0.0.0), DHCP Addr. Assignment (Required).
- Management Frame Protection (MFP):** MFP Client Protection (Optional).
- DTIM Period (in beacon intervals):** 802.11a/n (1 - 255) (1), 802.11b/g/n (1 - 255) (1).
- NAC:** NAC State (None).
- Load Balancing and Band Select:** Client Load Balancing, Client Band Select.

The P2P blocking action option is disabled on the WLC.

- A. Enable the Static IP Tunneling option.
- B. Disable the Coverage Hole Detection option.
- C. Check the DHCP Add Assignment check box.
- D. Set the P2P Blocking Action option to Forward-UpStream.

**Answer:** A

**NEW QUESTION 276**

- (Exam Topic 4)

Which encryption method is used by WPA3?

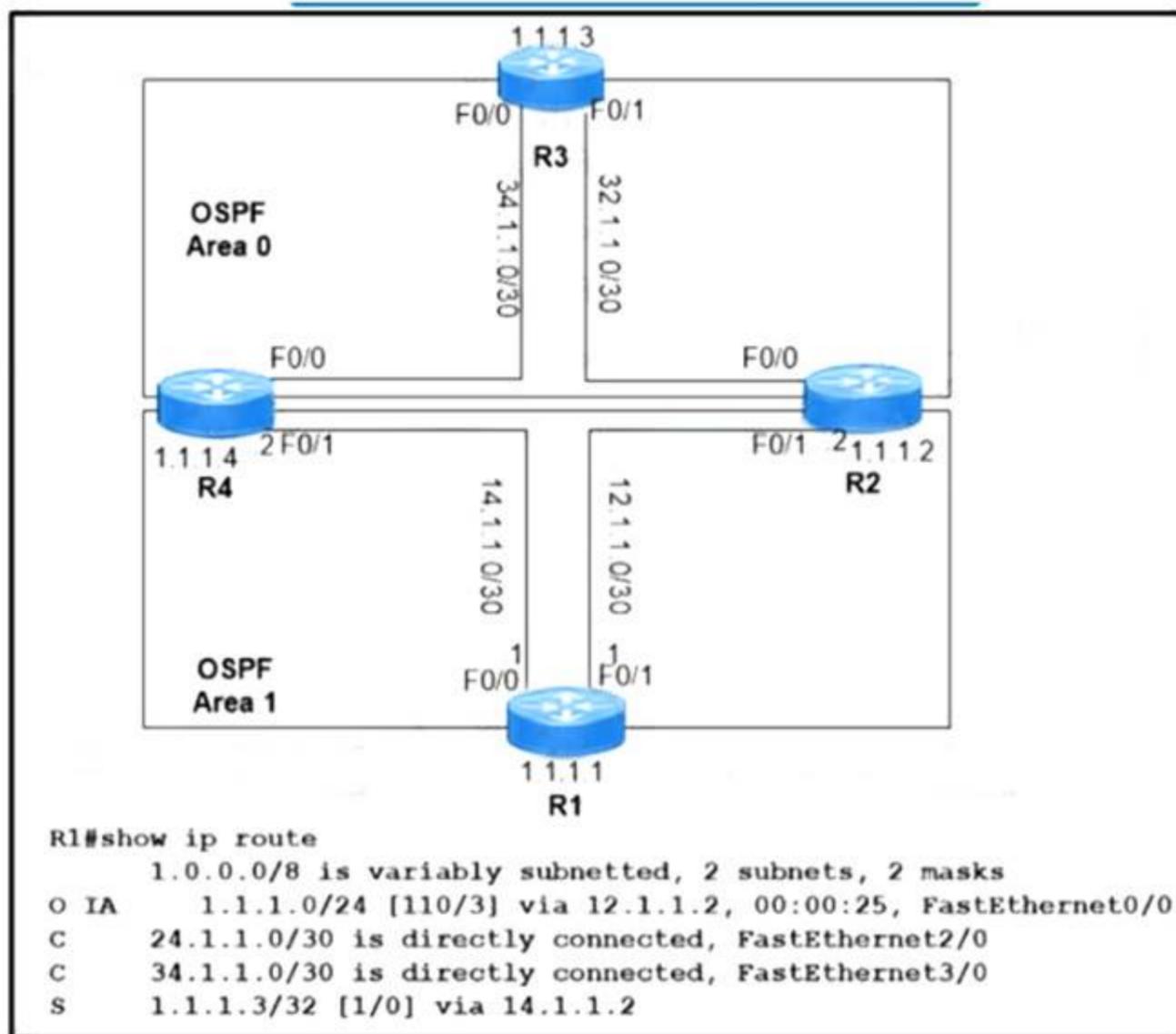
- A. PSK
- B. TKIP
- C. SAE
- D. AES

**Answer:** D

**NEW QUESTION 281**

- (Exam Topic 4)

Refer to the exhibit.



Which two values does router R1 use to identify valid routes for the R3 loopback address 1.1.1.3/32? (Choose two.)

- A. lowest cost to reach the next hop
- B. highest metric
- C. highest administrative distance
- D. lowest metric
- E. lowest administrative distance

**Answer: DE**

**NEW QUESTION 283**

- (Exam Topic 4)

The clients and DHCP server reside on different subnets. Which command must be used to forward requests and replies between clients on the 10.10.0.1/24 subnet and the DHCP server at 192.168.10.1?

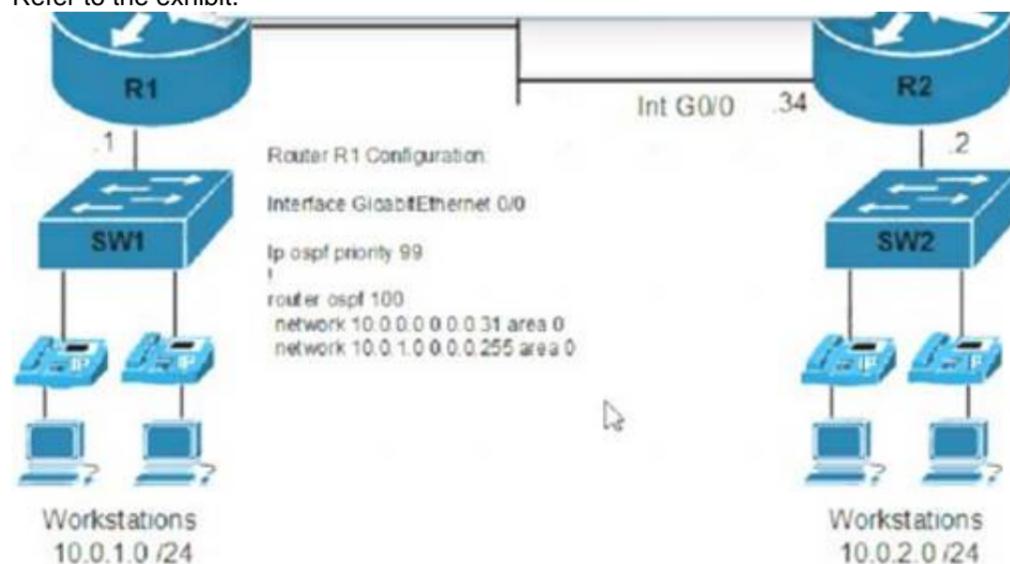
- A. ip route 192.168.10.1
- B. ip default-gateway 192.168.10.1
- C. ip helper-address 192.168.10.1
- D. ip dhcp address 192.168.10.1

**Answer: C**

**NEW QUESTION 285**

- (Exam Topic 4)

Refer to the exhibit.



An engineer must configure router R2 so it is elected as the DR on the WAN subnet. Which command sequence must be configured?

A)

```
interface gigabitethernet0/0
ip address 10.0.0.34 255.255.255.224
ip ospf priority 100
```

B)

```
interface gigabitethernet0/0
ip address 10.0.1.1 255.255.255.224
ip ospf priority 98
```

C)

```
interface gigabitethernet0/0
ip address 10.0.0.34 255.255.255.248
ip ospf priority 0
```

D)

```
interface gigabitethernet0/0
ip address 10.0.1.1 255.255.255.0
ip ospf priority 255
```

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

**Answer:** A

**NEW QUESTION 289**

- (Exam Topic 4)

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

is used exclusively by a non-host device

sends packets to a group address rather than a single address

has a unicast source sent to a group

is routed to the nearest interface that has the address

Multicast

Anycast

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Graphical user interface, application Description automatically generated

**NEW QUESTION 294**

- (Exam Topic 4)

An engineer is installing a new wireless printer with a static IP address on the Wi-Fi network. Which feature must be enabled and configured to prevent connection issues with the printer?

- A. client exclusion
- B. passive client
- C. DHCP address assignment
- D. static IP tunneling

**Answer:** C

**NEW QUESTION 296**

- (Exam Topic 4)

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

class-based weighted fair queuing	categorizes packets based on the value of a traffic descriptor
classification	guarantees minimum bandwidth to specific traffic classes when an interface is congested
congestion	prevents congestion by reducing the flow of outbound traffic
policing	outcome of overutilization
shaping	uses defined criteria to limit the transmission of one or more classes of traffic

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Table Description automatically generated

**NEW QUESTION 300**

- (Exam 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 303**

- (Exam Topic 4)

What is the put method within HTTP?

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

**Answer:** D

**NEW QUESTION 305**

- (Exam Topic 4)

Drag and drop the functions of AAA supporting protocols from the left onto the protocols on the right.

encrypts only the password when it sends an access request	<b>RADIUS</b>   
encrypts the entire body of the access-request packet	
separates all three AAA operations	
combines authentication and authorization	<b>TACACS+</b>   
uses TCP 	
uses UDP	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

A picture containing graphical user interface Description automatically generated

**NEW QUESTION 307**

- (Exam Topic 4)

Which IP header field is changed by a Cisco device when QoS marking is enabled?

- A. Header Checksum
- B. Type of service
- C. DSCP
- D. ECN

**Answer: B**

**NEW QUESTION 311**

- (Exam Topic 4)

Refer to the exhibit.

```
Cat9K-1# show lldp entry Cat9K-2
Local Intf: G11/0/21
Chassis id: 308b.b2b3.2880
Port id: G11/0/21
Port Description: GigabitEthernet1/0/21
System Name: Cat9K-2
Management Addresses:
  IP: 10.5.110.2
```

The network administrator must prevent the switch Cat9K-2 IP address from being visible in LLDP without disabling the protocol. Which action must be taken to complete the task?

- A. Configure the no lldp tlv-select-management-address command globally on Cat9K-2
- B. Configure the no lldp transmit command on interface G1/0/21 in Cat9K-1
- C. Configure the no lldp receive command on interface G1/0/21 on Cat9K-1
- D. Configure the no lldp mac-phy-cfg command globally on Cat9K-2

**Answer: A**

**NEW QUESTION 314**

- (Exam Topic 4)

What is an advantage of using auto mode versus static mode for power allocation when an access point is connected to a PoE switch port?

- A. All four pairs of the cable are used
- B. It detects the device is a powered device
- C. The default level is used for the access point
- D. Power policing is enabled at the same time

**Answer: D**

**NEW QUESTION 316**

- (Exam Topic 4)

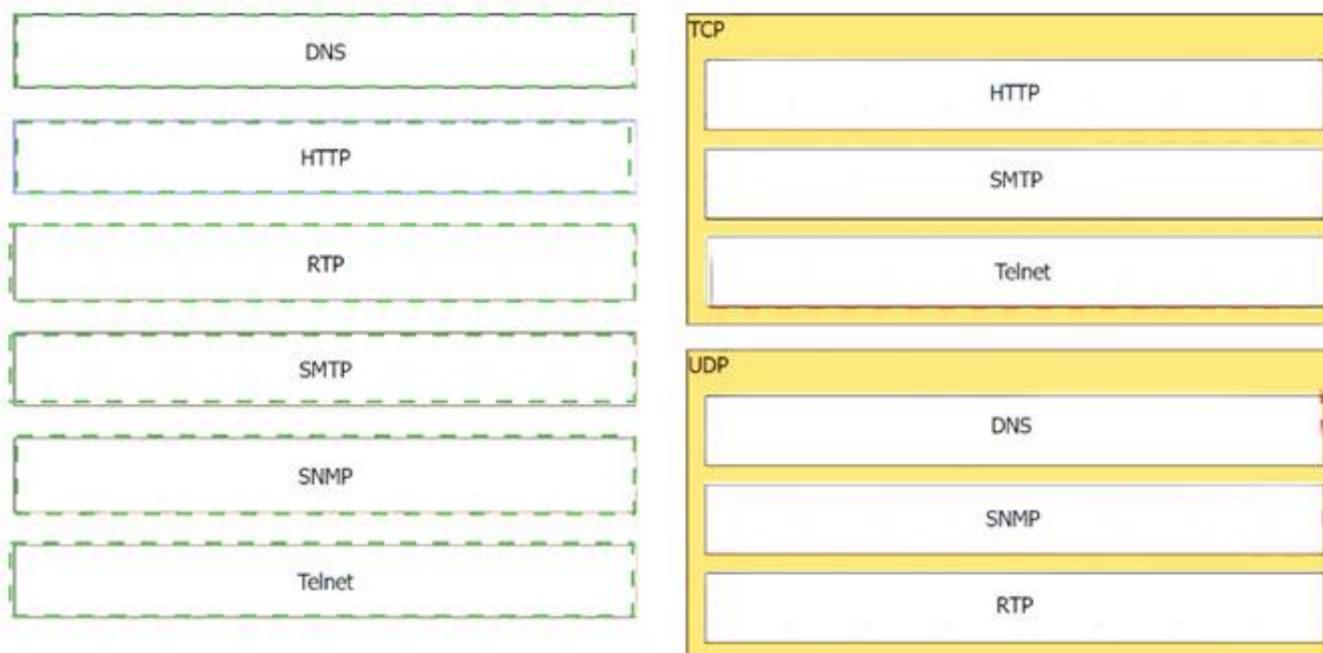
An engineer must configure a core router with a floating static default route to the backup router at 10.200.0.2.

DNS	TCP    
HTTP	
RTP	
SMTP	
SNMP	
Telnet	
	UDP    

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**



**NEW QUESTION 321**

- (Exam Topic 4)

What must be considered for a locally switched FlexConnect AP if the VLANs that are used by the AP and client access are different?

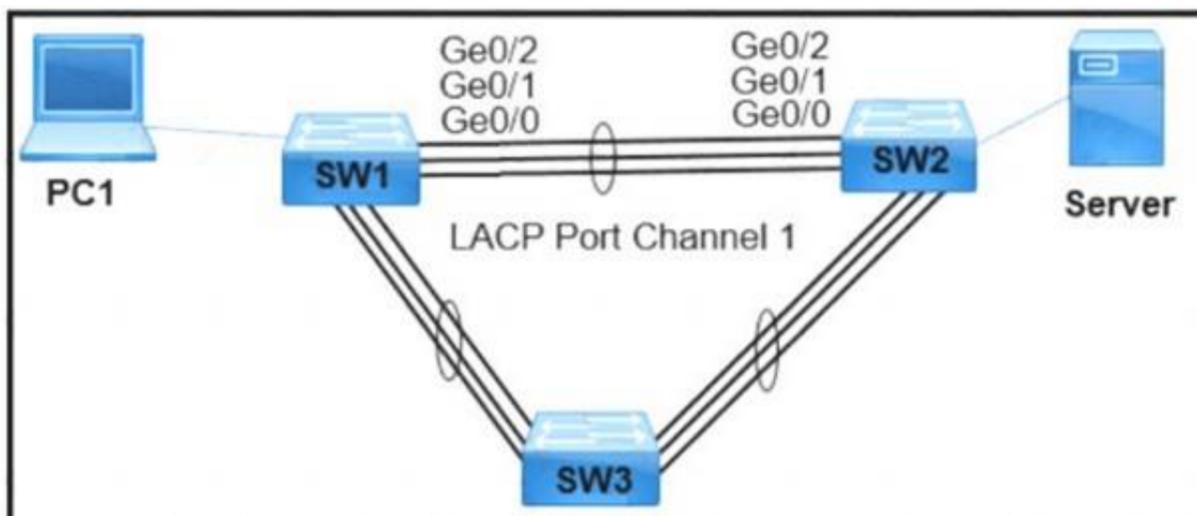
- A. The APs must be connected to the switch with multiple links in LAG mode
- B. The switch port mode must be set to trunk
- C. The native VLAN must match the management VLAN of the AP
- D. IEEE 802.10 trunking must be disabled on the switch port.

**Answer: C**

**NEW QUESTION 325**

- (Exam Topic 4)

Refer to the exhibit.



PC1 regularly sends 1800 Mbps of traffic to the server. A network engineer needs to configure the EtherChannel to disable Port Channel 1 between SW1 and SW2 when the Ge0/0 and Ge0/1 ports on SW2 go down. Which configuration must the engineer apply to the switch?

- A)
 

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# lacp port-priority 32000
```
- B)
 

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# lacp max-bundle 2
```
- C)
 

```
SW2# configure terminal
SW2(config)# lacp system-priority 32000
```
- D)
 

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# port-channel min-links 2
```

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

Answer: D

**NEW QUESTION 330**

- (Exam Topic 4)

Which device segregates a network into separate zones that have their own security policies?

- A. IPS
- B. firewall
- C. access point
- D. switch

Answer: C

**NEW QUESTION 333**

- (Exam Topic 4)

What is the primary purpose of a console port on a Cisco WLC?

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

Answer: D

**NEW QUESTION 337**

- (Exam Topic 4)

Which Cisco proprietary protocol ensures traffic recovers immediately, transparently, and automatically when edge devices or access circuits fail?

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

Answer: D

**NEW QUESTION 339**

- (Exam Topic 4)

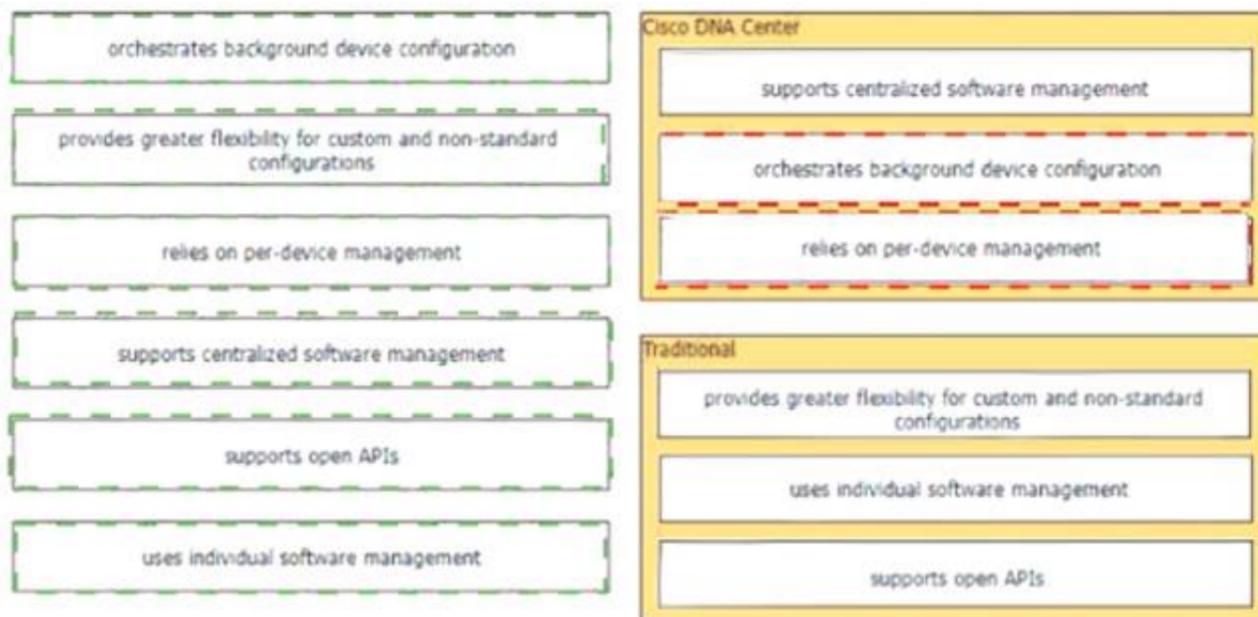
Drag and drop the characteristics of device-management technologies from the left onto the corresponding deployment types on the right.

orchestrates background device configuration	Cisco DNA Center
provides greater flexibility for custom and non-standard configurations	
relies on per-device management	
supports centralized software management	Traditional
supports open APIs	
uses individual software management	

- A. Mastered
- B. Not Mastered

Answer: A

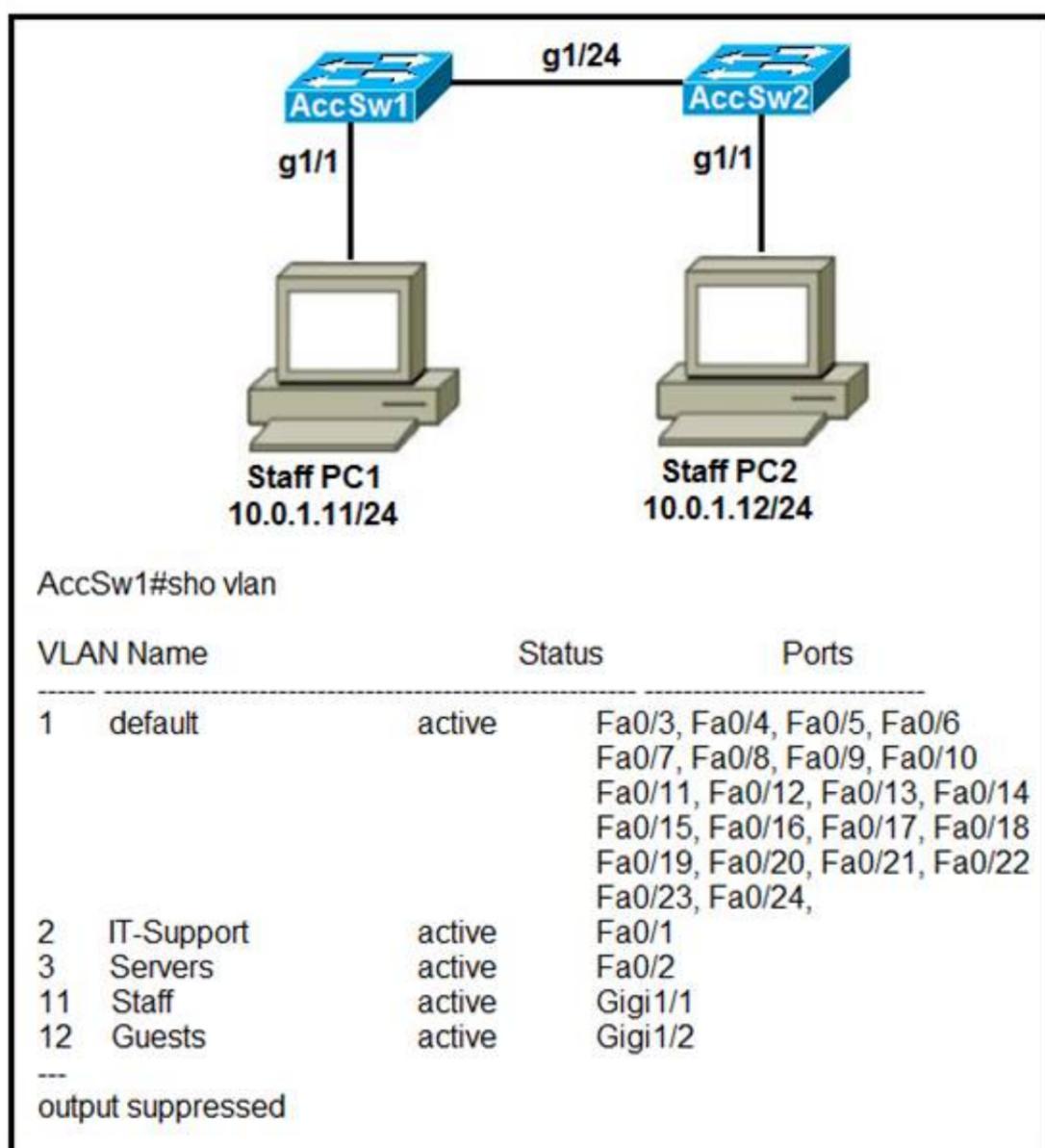
Explanation:



**NEW QUESTION 342**

- (Exam Topic 4)

Refer to the exhibit.



Switch AccSw2 has just been added to the network along with PC2. All VLANs have been implemented on AccSw2. How must the ports on AccSw2 be configured to establish Layer 2 connectivity between PC1 and PC2?

- A. Text Description automatically generated 

```

interface GigabitEthernet1/1
switchport mode access
switchport access vlan 11
!
interface GigabitEthernet1/24
switchport mode trunk
    
```

B. Text Description automatically generated

interface GigabitEthernet1/2  
switchport mode access  
switchport access vlan 12  
!  
interface GigabitEthernet1/24  
switchport mode trunk  
switchport trunk allowed vlan 11,12

C. Text Description automatically generated

interface GigabitEthernet1/24  
switchport mode trunk  
switchport trunk allowed vlan 11,12  
!  
interface GigabitEthernet1/1  
switchport access vlan 11

D. Text Description automatically generated

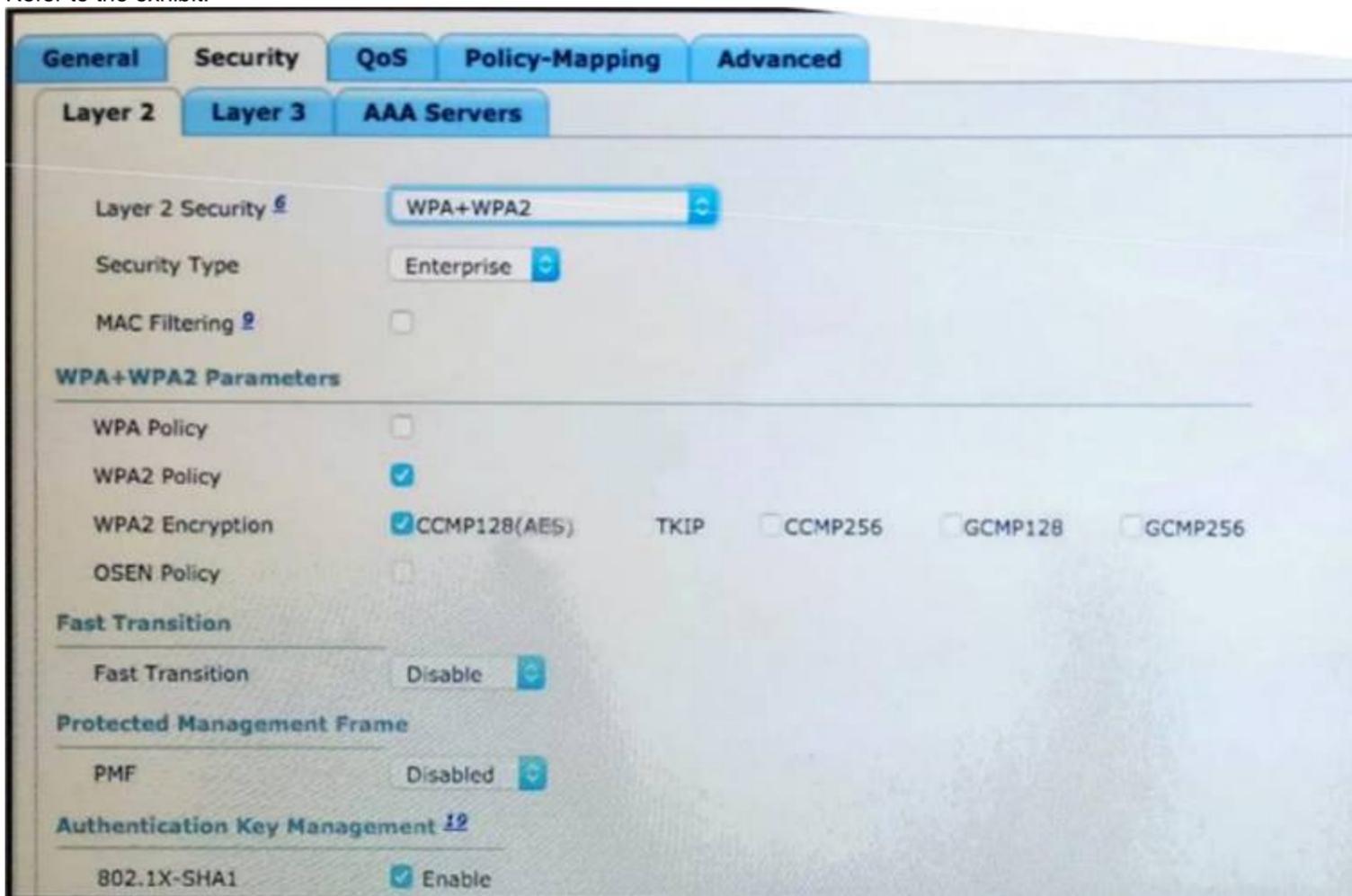
interface GigabitEthernet1/2  
switchport mode access  
switchport access vlan 2  
!  
interface GigabitEthernet1/24  
switchport mode trunk

Answer: A

**NEW QUESTION 345**

- (Exam Topic 4)

Refer to the exhibit.



What must be configured to enable 802.11w on the WLAN?

- A. Set PMF to Required.
- B. Enable MAC Filtering.
- C. Enable WPA Policy.
- D. Set Fast Transition to Enabled

Answer: A

**NEW QUESTION 350**

- (Exam Topic 4)

What is a link-local all-nodes IPv6 multicast address?

- A. ff02:0:0:0:0:0:0:1
- B. 2004:31c:73d9:683e:255::
- C. fffe:034:0dd:45d6:789e::

D. fe80:4433:034:0dd::2

Answer: D

**NEW QUESTION 355**

- (Exam 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 192.168.3.5 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 192.168.0.40, 00:39:08, Serial0
C   10.0.1.0/24 is directly connected, Serial0
O   10.0.1.190/32 [110/5] via 192.168.0.35, 00:39:08, Serial0
O   10.0.1.0/24 [110/10] via 192.168.0.4, 00:39:08, Gigabit Ethernet 0/0
D   10.0.1.0/28 [90/10] via 192.168.0.7, 00:39:08, Gigabit Ethernet 0/0
    
```

Traffic sourced from the loopback0 Interface is trying to connect via ssh to the host at 10.0.1.15. What Is the next hop to the destination address?

- A. 192.168.0.7
- B. 192.168.0.4
- C. 192.168.0.40
- D. 192.168.3.5

Answer: B

**NEW QUESTION 356**

- (Exam Topic 3)

What is a function of a Next-Generation IPS?

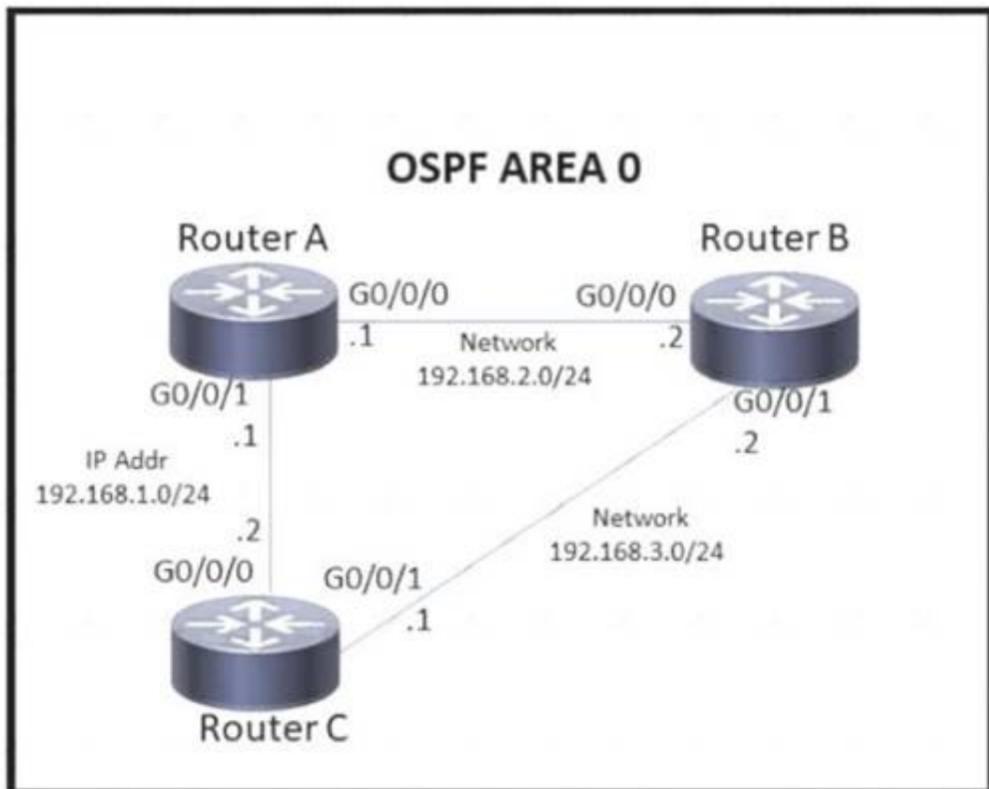
- A. makes forwarding decisions based on learned MAC addresses
- B. serves as a controller within a controller-based network
- C. integrates with a RADIUS server to enforce Layer 2 device authentication rules
- D. correlates user activity with network events

Answer: D

**NEW QUESTION 357**

- (Exam Topic 3)

Refer to the exhibit.



Which action must be taken to ensure that router A is elected as the DR for OSPF area 0?

- A. Configure the OSPF priority on router A with the lowest value between the three routers.
- B. Configure router B and router C as OSPF neighbors of router A.
- C. Configure the router A interfaces with the highest OSPF priority value within the area.
- D. Configure router A with a fixed OSPF router ID

Answer: C

**NEW QUESTION 361**

- (Exam Topic 3)

Which field within the access-request packet is encrypted by RADIUS?

- A. authorized services
- B. authenticator
- C. username
- D. password

**Answer: D**

**NEW QUESTION 365**

- (Exam Topic 3)

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

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

**Answer: D**

**NEW QUESTION 368**

- (Exam Topic 3)

Which two network actions occur within the data plane? (Choose two.)

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

**Answer: BD**

**NEW QUESTION 371**

- (Exam Topic 3)

Refer to the exhibit.

```
CPE# show ip route
      192.168.1.0/24 is variably subnetted, 3 subnets, 3 masks
B    192.168.1.0/24 [20/1] via 192.168.12.2, 00:00:06
R    192.168.1.128/25 [120/5] via 192.168.13.3, 00:02:35, Ethernet0/1
O    192.168.1.192/26 [110/11] via 192.168.14.4, 00:02:23, Ethernet0/2
D    192.168.1.224/27 [90/1024640] via 192.168.15.5, 00:01:40, Ethernet0/3
```

All traffic enters the CPE router from interface Serial0/3 with an IP address of 192.168.50.1. Web traffic from the WAN is destined for a LAN network where servers are load-balanced. An IP packet with a destination address of the HTTP virtual IP of 192.168.1.250 must be forwarded. Which routing table entry does the router use?

- A. 192.168.1.0/24 via 192.168.12.2
- B. 192.168.1.128/25 via 192.168.13.3
- C. 192.168.1.192/26 via 192.168.14.4
- D. 192.168.1.224/27 via 192.168.15.5

**Answer: B**

**NEW QUESTION 374**

- (Exam Topic 3)

Which protocol is used for secure remote CLI access?

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

**Answer: D**

**NEW QUESTION 379**

- (Exam 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.	action
BPDUs received from the system module are processed and transmitted.	action
Frames received from the attached segment are discarded.	action
Frames received from the attached segment are processed.	action
Switched frames received from other ports are advanced.	
The port in the forwarding state responds to network management messages.	

- A. Mastered
- B. Not Mastered

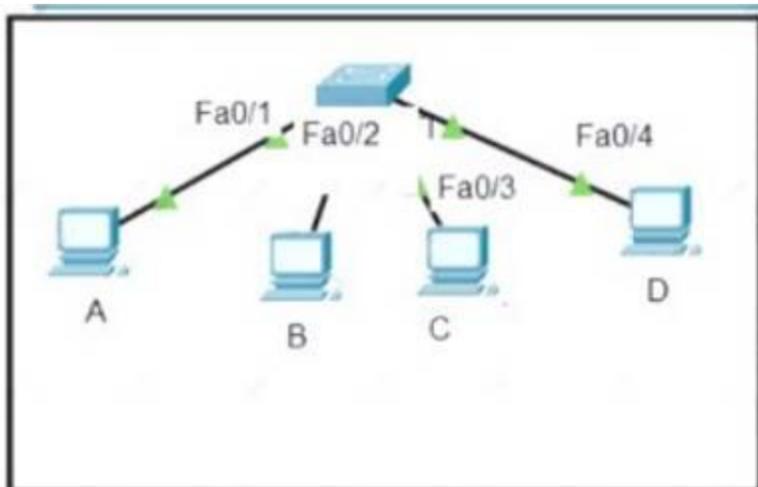
Answer: A

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

**NEW QUESTION 381**

- (Exam Topic 3)  
Refer to the exhibit.



Host A sent a data frame destined for host D

```
SwitchA#show mac-address table
Mac Address Table
```

Vlan	Mac Address	Type	Ports
2	000c.859c.bb7b	DYNAMIC	Fa0/1
2	0010.11dc.3e91	DYNAMIC	Fa0/2
2	0041.45d7.c451	DYNAMIC	Fa0/3

SwitchA#

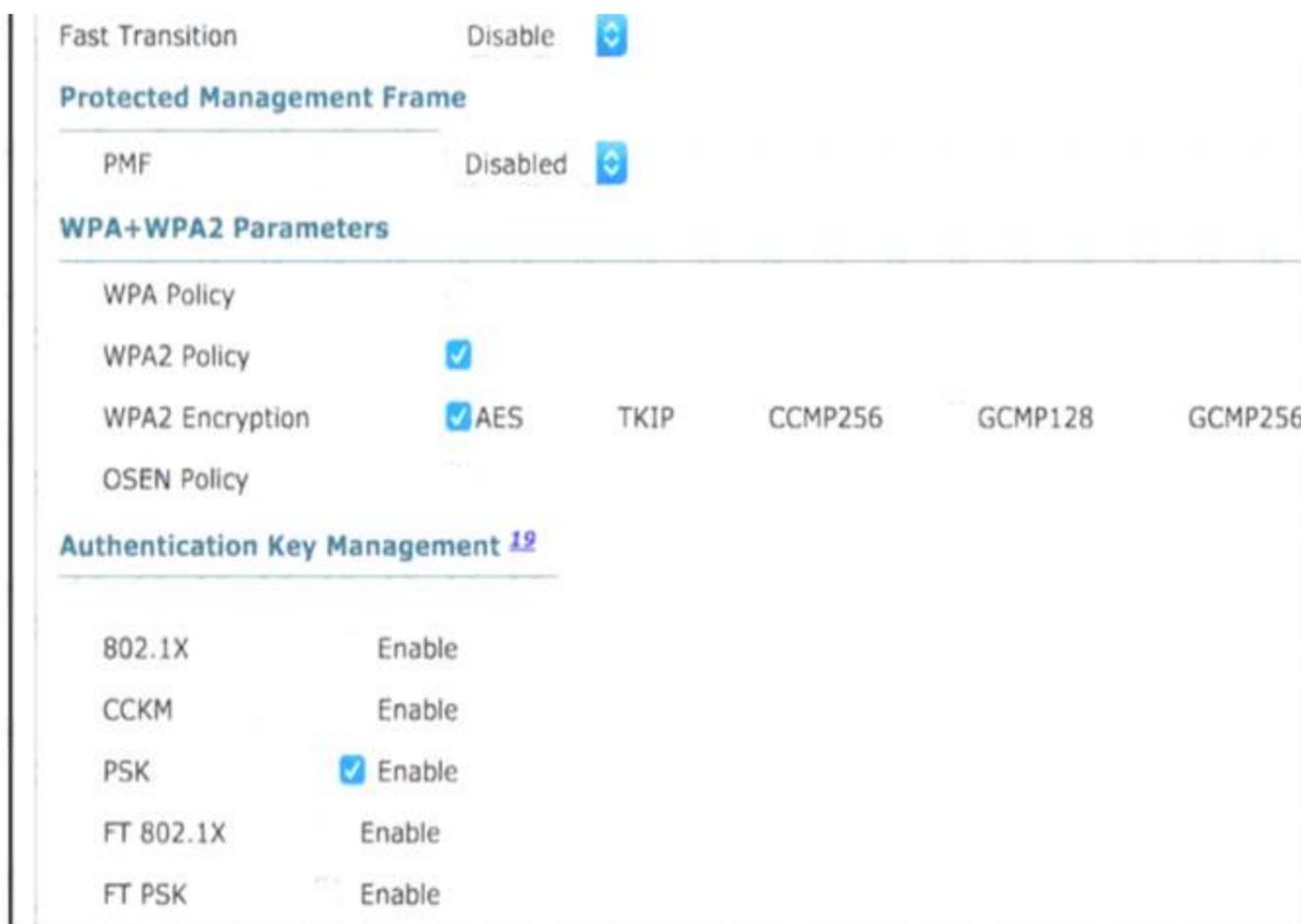
What does the switch do when it receives the frame from host A?

- A. It drops the frame from the switch CAM table.
- B. It floods the frame out of all ports except port Fa0/1.
- C. It shuts down the port Fa0/1 and places it in err-disable mode.
- D. It experiences a broadcast storm.

Answer: B

**NEW QUESTION 382**

- (Exam Topic 3)  
Refer to the exhibit.



Users need to connect to the wireless network with IEEE 802.11r-compatible devices. The connection must be maintained as users travel between floors or to other areas in the building. What must be the configuration of the connection?

- A. Select the WPA Policy option with the CCKM option.
- B. Disable AES encryption.
- C. Enable Fast Transition and select the FT 802.1x option.
- D. Enable Fast Transition and select the FT PSK option.

**Answer: C**

**NEW QUESTION 383**

- (Exam Topic 3)

Refer to the exhibit.

During outage

```
R1#show ip route 10.1.1.10
% Network not in table
```

Normal operation

```
R1#show ip route 10.1.1.10
Routing entry for 10.1.1.0/24
Known via "ospf 1", distance 110, metric 2, type intra area
Last update from 172.16.2.2 on GigabitEthernet0/0, 00:00:18 ago
Routing Descriptor Blocks:
* 172.16.2.2, from 10.1.1.10, 00:00:18 ago, via GigabitEthernet0/0
Route metric is 2, traffic share count is 1
```

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 387**

- (Exam Topic 3)

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

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

D. VLAN marking

**Answer: C**

**NEW QUESTION 388**

- (Exam 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 390**

- (Exam 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 392**

- (Exam 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 396**

- (Exam 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 397**

- (Exam Topic 3)

OSPF must be configured between routers R1 and R2. Which OSPF configuration must be applied to router R1 to avoid a DR/BDR election?

- A. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 interface e1/1 ip address 192.168.1.1 255.255.255.252 ip ospf network broadcast
- B. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 interface e1/1 ip address 192.168.1.1 255.255.255.252 ip ospf network point-to-point
- C. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 interface e1/1 ip address 192.168.1.1 255.255.255.252 ip ospf cost 0
- D. router ospf 1 network 192.168.1.1 0.0.0.0 area 0 hello interval 15 interface e1/1 ip address 192.168.1.1 255.255.255.252

Answer: B

**NEW QUESTION 402**

- (Exam 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 406**

- (Exam Topic 3)

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

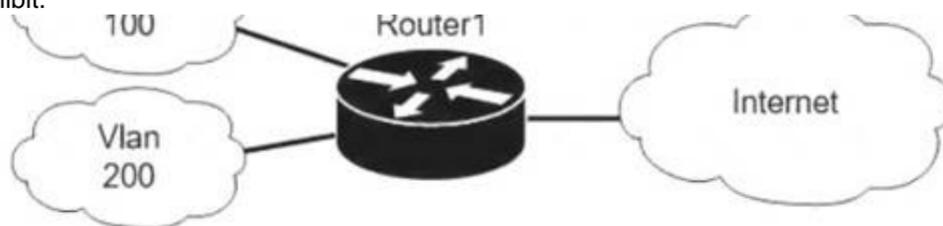
- A. to increase security and encrypt management frames
- B. to provide link redundancy and load balancing
- C. to allow for stateful and link-state failover
- D. to enable connected switch ports to failover and use different VLANs

Answer: B

**NEW QUESTION 409**

- (Exam Topic 3)

Refer to the exhibit.



```
Router1(config)#interface GigabitEthernet0/0
Router1(config-if)#ip address 209.165.200.225 255.255.255.224
Router1(config-if)#ip nat outside
Router1(config)#interface GigabitEthernet0/1
Router1(config-if)#ip nat inside
Router1(config)#interface GigabitEthernet0/1.100
Router1(config-if)#encapsulation dot1Q 100
Router1(config-if)#ip address 10.10.10.1 255.255.255.0
Router1(config)#interface GigabitEthernet0/1.200
Router1(config-if)#encapsulation dot1Q 200
Router1(config-if)#ip address 10.10.20.1 255.255.255.0
Router1(config)#ip access-list standard NAT_INSIDE_RANGES
Router1(config-std-nacl)#permit 10.10.10.0 0.0.0.255
Router1(config)#ip nat inside source list NAT_INSIDE_RANGES interface GigabitEthernet0/0 overload
```

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

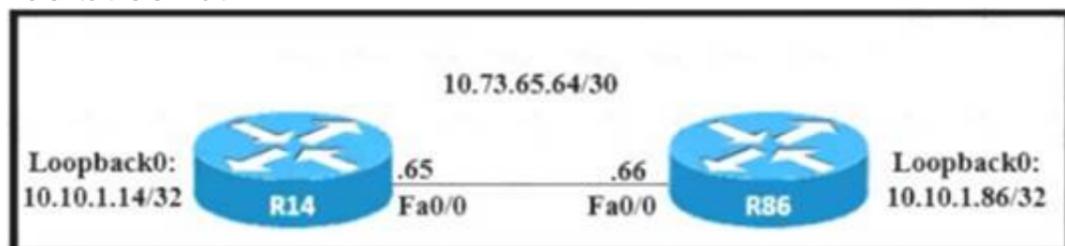
- A. Define a NAT pool on the router.
- B. Configure static NAT translations for VLAN 200.
- C. Configure the ip nat outside command on another interface for VLAN 200.
- D. Update the NAT INSIDF RANGFS ACL

**Answer: B**

**NEW QUESTION 413**

- (Exam 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 418**

- (Exam Topic 3)

Which characteristic differentiates the concept of authentication from authorization and accounting?

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

**Answer: D**

**NEW QUESTION 423**

- (Exam Topic 3)

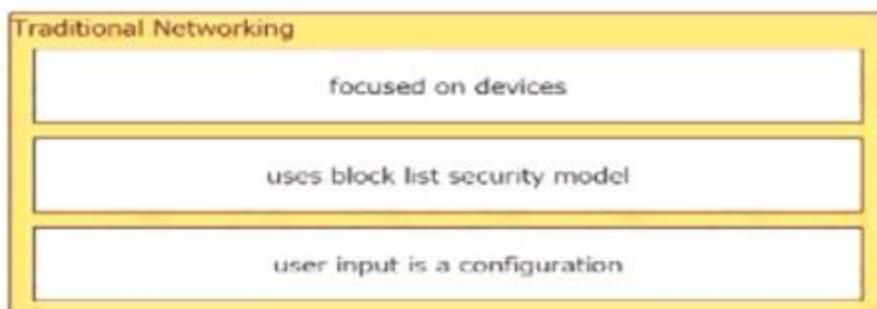
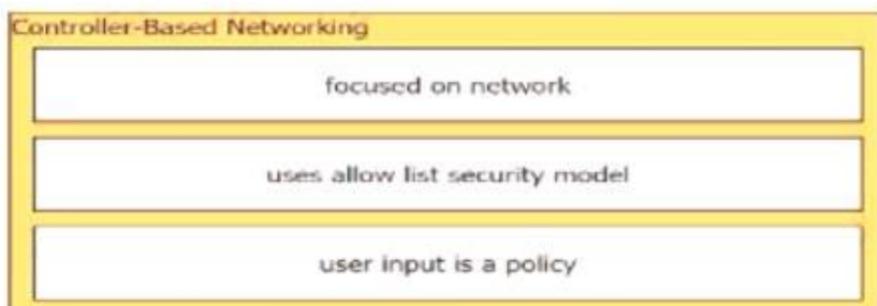
Drag and drop the characteristics of networking from the left onto the networking types on the right.

focused on network	<b>Controller-Based Networking</b> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px;"></div>
focused on devices	
user input is a configuration	
user input is a policy	<b>Traditional Networking</b> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px;"></div>
uses allow list security model	
uses block list security model	

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**



**NEW QUESTION 424**

- (Exam Topic 3)

A network engineer is configuring a switch so that it is remotely reachable via SSH. The engineer has already configured the host name on the router. Which additional command must the engineer configure before entering the command to generate the RSA key?

- A. password password
- B. crypto key generate rsa modulus 1024
- C. ip domain-name domain
- D. ip ssh authentication-retries 2

**Answer:** C

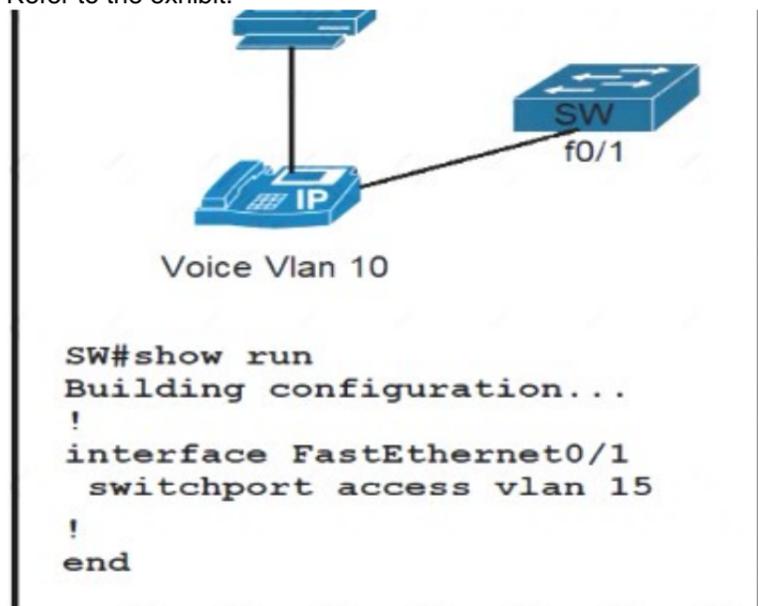
**Explanation:**

<https://www.cisco.com/c/en/us/solutions/small-business/resource-center/networking/how-to-setup-network-swit>

**NEW QUESTION 428**

- (Exam Topic 3)

Refer to the exhibit.



All VLANs are present in the VLAN database. Which command sequence must be applied to complete the configuration?

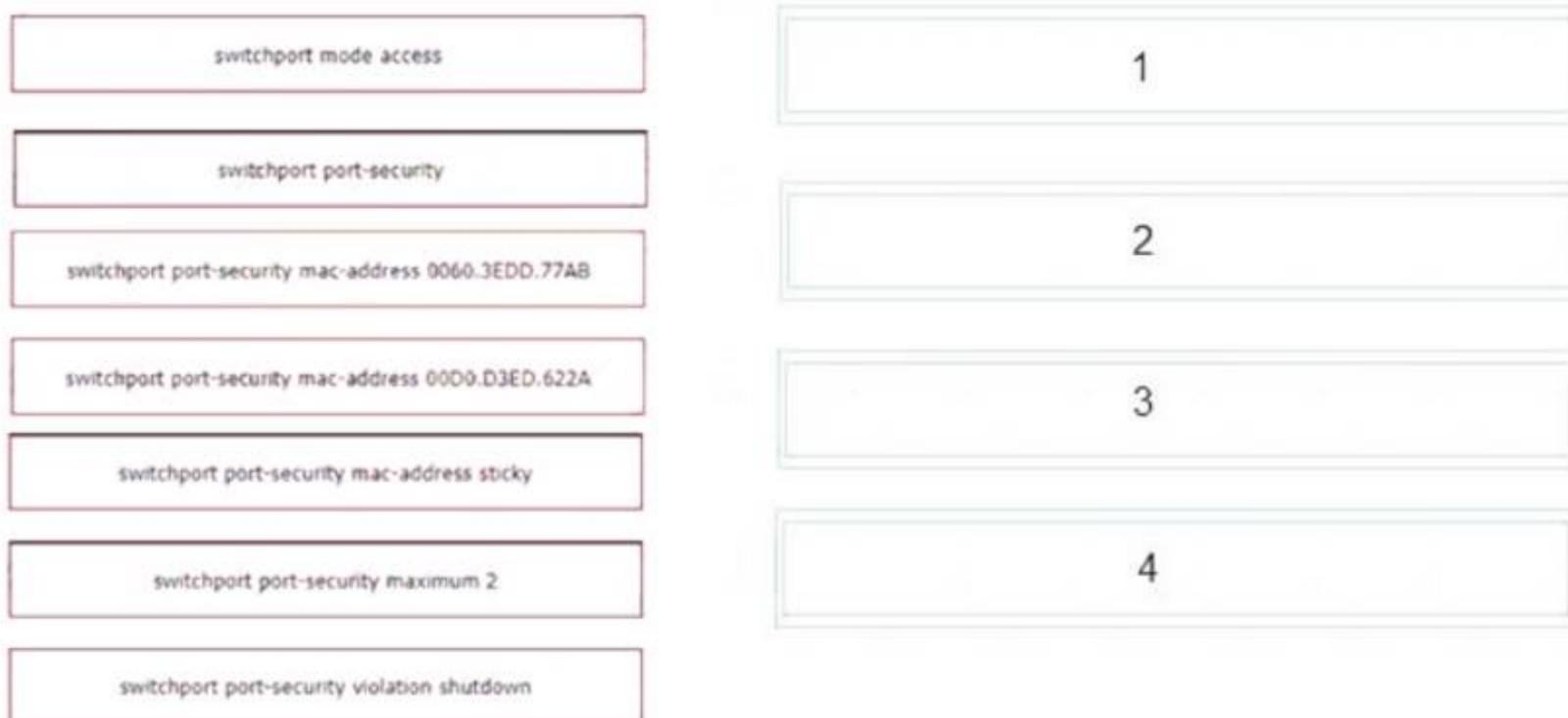
- A. Interface FastEthernet0/1 switchport trunk native vlan 10 switchport trunk allowed vlan 10,15
- B. Interface FastEthernet0/1 switchport mode trunk switchport trunk allowed vlan 10,15
- C. interface FastEthernet0/1 switchport mode access switchport voice vlan 10
- D. Interface FastEthernet0/1 switchport trunk allowed vlan add 10 vlan 10 private-vlan isolated

**Answer:** C

**NEW QUESTION 429**

- (Exam 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.



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Diagram Description automatically generated

**NEW QUESTION 432**

- (Exam 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 434**

- (Exam 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 437**

- (Exam Topic 3)

Refer to the exhibit.

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

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

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

**Answer:** B

**NEW QUESTION 438**

- (Exam 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 441**

- (Exam 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 445**

- (Exam Topic 3)

What is an expected outcome when network management automation is deployed?

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

**Answer: B**

**NEW QUESTION 448**

- (Exam 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 450**

- (Exam Topic 2)

What is a characteristic of private IPv4 addressing?

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

**Answer:** D

**NEW QUESTION 452**

- (Exam 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	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Autonomous Access Point</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Cloud-Based Access Point</div>
managed from a web-based dashboard	
accessible for management via Telnet, SSH, or a web GUI	
configured and managed by a WLC	
requires a management IP address	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Diagram Description automatically generated

**NEW QUESTION 456**

- (Exam Topic 2)

Refer to the exhibit.

```

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

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

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

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

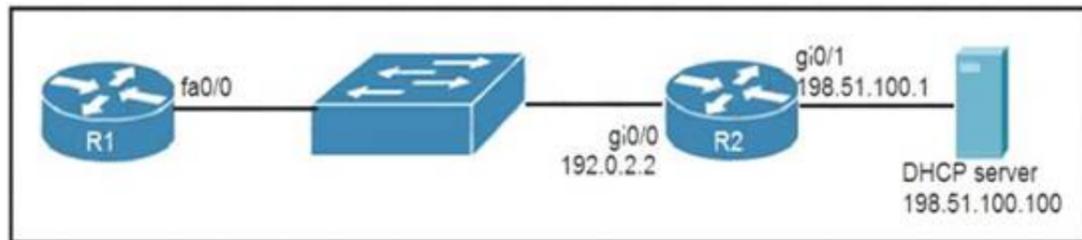
- A. access-list 101 permit tcp 10.1.10 0.0.0.255 172.16.10 0.0.0.255 eq ssh
- B. access-list 101 permit tcp 10.11.0 0.0.0.255 172.16.10 0.0.0.255 eq scp
- C. access-list 101 permit tcp 10.11.0 0.0.0.255 172.16.10 0.0.0.255 eq telnet
- D. access-list 101 permit tcp 10.1.10 0.0.0.255 172.16.10 0.0.0.255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

**Answer:** A

**NEW QUESTION 460**

- (Exam Topic 2)

Refer to the exhibit.



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

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

**Answer: BC**

**NEW QUESTION 461**

- (Exam Topic 2)

A user configured OSPF and advertised the Gigabit Ethernet interface in OSPF. By default, which type of OSPF network does this interface belong to?

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

**Answer: C**

**Explanation:**

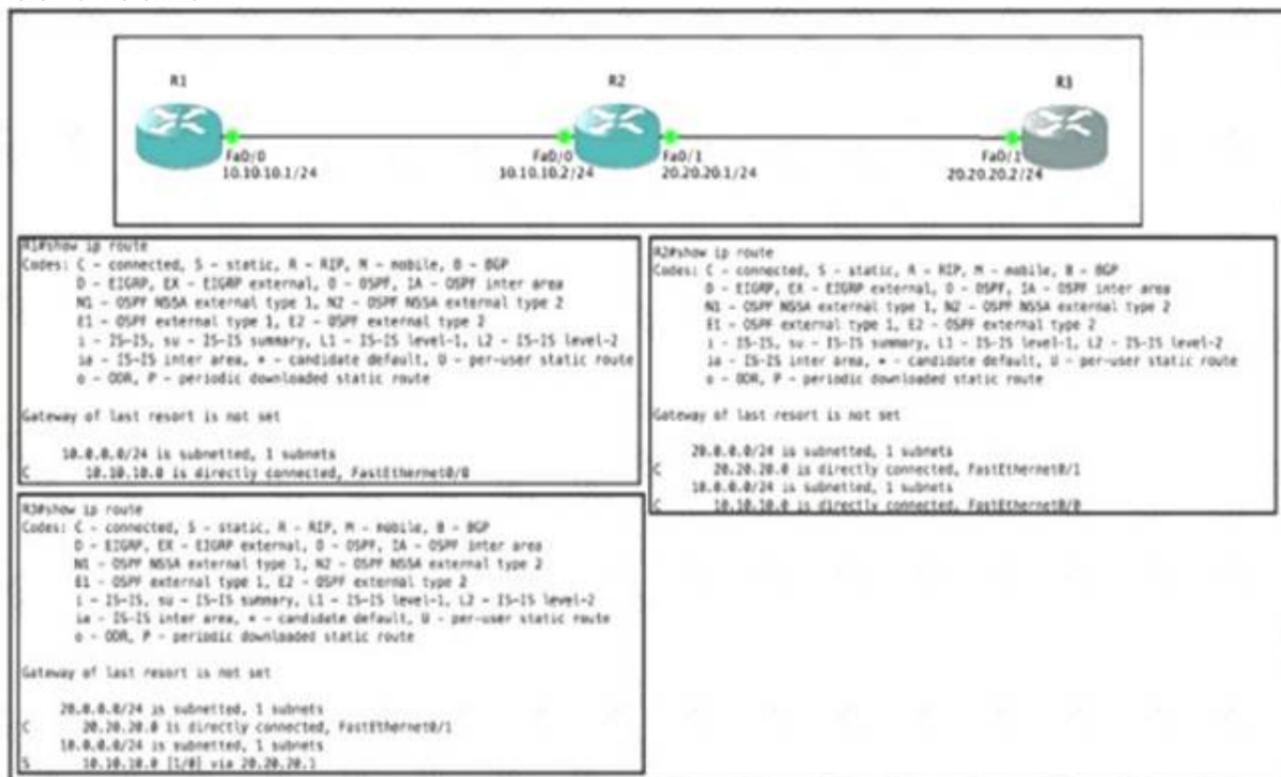
<https://www.oreilly.com/library/view/cisco-ios-cookbook/0596527225/ch08s15.html>

The Broadcast network type is the default for an OSPF enabled ethernet interface (while Point-toPoint is the default OSPF network type for Serial interface with HDLC and PPP encapsulation).

**NEW QUESTION 464**

- (Exam Topic 2)

Refer to the exhibit.



Router R1 Fa0/0 is unable ping router R3 Fa0/1.

Which action must be taken in router R1 to help resolve the configuration issue?

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

**Answer: D**

**NEW QUESTION 469**

- (Exam 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 470**

- (Exam Topic 2)

Refer to the exhibit.

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

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

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

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

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

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

**Answer:** C

**NEW QUESTION 471**

- (Exam Topic 2)

What are two benefits of using the PortFast feature? (Choose two )

- A. Enabled interfaces are automatically placed in listening state
- B. Enabled interfaces come up and move to the forwarding state immediately
- C. Enabled interfaces never generate topology change notifications.
- D. Enabled interfaces that move to the learning state generate switch topology change notifications
- E. Enabled interfaces wait 50 seconds before they move to the forwarding state

**Answer:** AB

**NEW QUESTION 472**

- (Exam Topic 2)

What is a capability of FTP in network management operations?

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 473**

- (Exam Topic 2)

When deploying syslog, which severity level logs informational message?

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 476**

- (Exam 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 479**

- (Exam Topic 2)

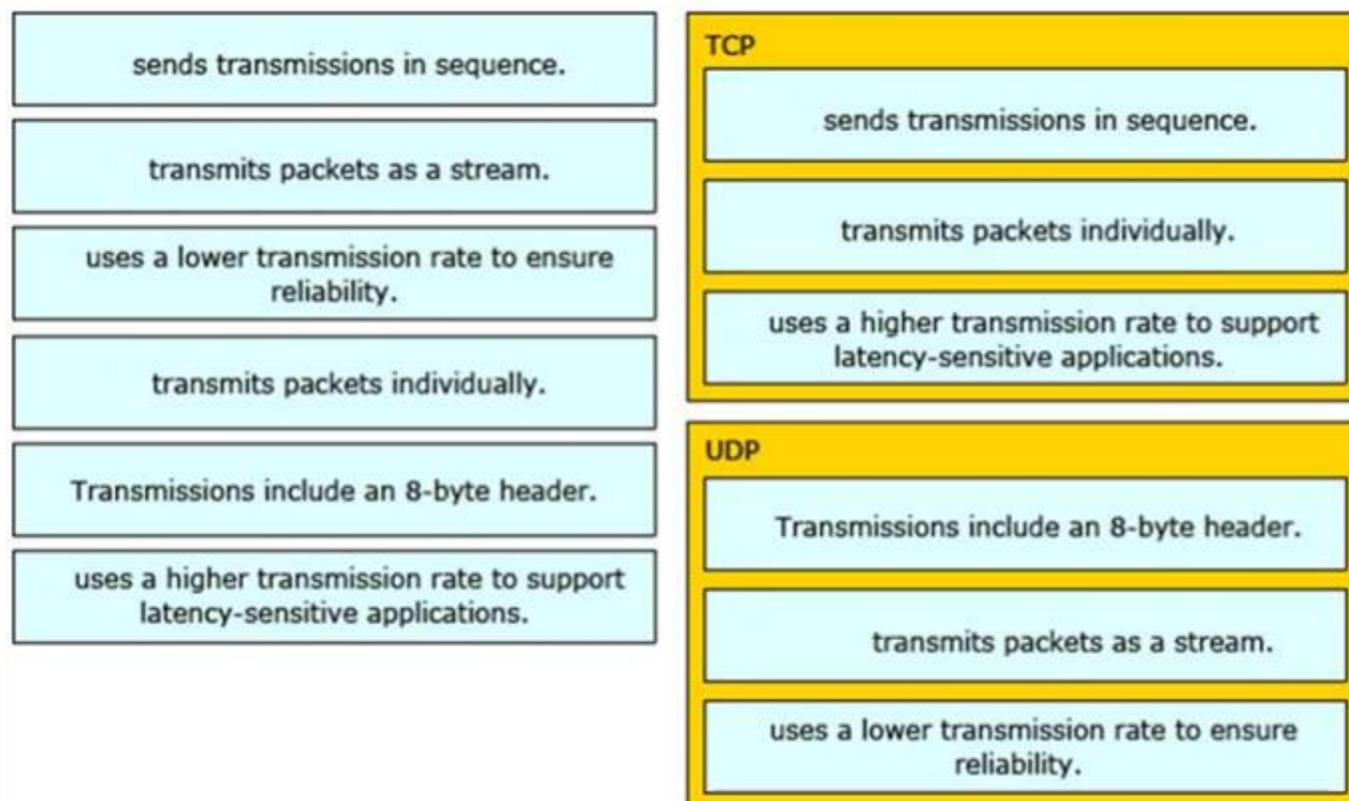
Drag the descriptions of IP protocol transmissions from the left onto the IP traffic types on the right.

sends transmissions in sequence.	<b>TCP</b>   
Transmission include an 8-byte header.	
transmits packets as a stream.	
transmits packets individually	<b>UDP</b>   
uses a higher transmission rate to support latency-sensitive applications	
uses a lower transmission rate to ensure reliability	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 483**

- (Exam Topic 2)

A network engineer must configure the router R1 GigabitEthernet1/1 interface to connect to the router R2 GigabitEthernet1/1 interface. For the configuration to be applied the engineer must compress the address 2001:0db8:0000:0000:0500:000a:400F:583B. Which command must be issued on the interface?

- A. ipv6 address 2001:0db8::5: a: 4F 583B
- B. ipv6 address 2001:db8::500:a:400F:583B
- C. ipv6 address 2001 db8:0::500:a:4F:583B
- D. ipv6 address 2001::db8:0000::500:a:400F:583B

**Answer: B**

**NEW QUESTION 484**

- (Exam 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 486**

- (Exam Topic 2)

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

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

**Answer: D**

**NEW QUESTION 489**

- (Exam Topic 2)

Which type of organization should use a collapsed-core architecture?

- A. large and requires a flexible, scalable network design
- B. large and must minimize downtime when hardware fails
- C. small and needs to reduce networking costs currently
- D. small but is expected to grow dramatically in the near future

**Answer: C**

**Explanation:**

A collapsed-core architecture is a limited investment for a small company, and may be efficient and productive for a limited time.

**NEW QUESTION 494**

- (Exam Topic 2)

An engineer requires a scratch interface to actively attempt to establish a trunk link with a neighbor switch. What command must be configured?

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

Answer: C

**NEW QUESTION 498**

- (Exam Topic 2)

Refer to the exhibit.

```
C:\>ipconfig/all

Windows IP Configuration

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

Wireless LAN adapter Local Area Connection* 12:

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

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :
Description . . . . . : Dell Wireless 1783 802.11b/g/n (2.4GHz)
Physical Address. . . . . : B8-76-3F-7C-57-DF
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::e09f:9839:6e86:f755x12(Preferred)
. . . . . : 192.168.1.20(Preferred)
. . . . . : 255.255.255.0
. . . . . : 192.168.1.1
DHCPv6 IAID . . . . . : 263747135
DHCPv6 Client DUID. . . . . : 00-01-00-01-18-E6-32-43-B8-76-3F-7C-57-DF
. . . . . : 192.168.1.15
. . . . . : 192.168.1.16
NetBIOS over Tcpip. . . . . : Enabled
```

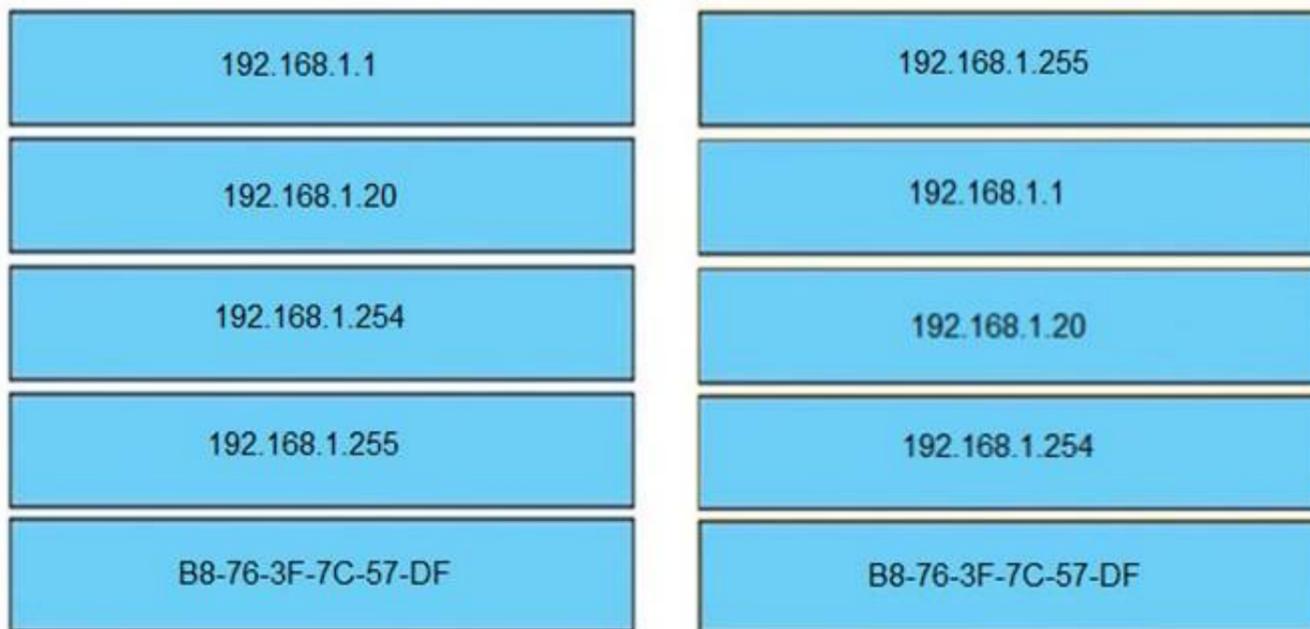
An engineer is tasked with verifying network configuration parameters on a client workstation to report back to the team lead. Drag and drop the node identifiers from the left onto the network parameters on the right.

192.168.1.1	broadcast address
192.168.1.20	default gateway
192.168.1.254	host IP address
192.168.1.255	last assignable IP address in the subnet
B8-76-3F-7C-57-DF	MAC address

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



**NEW QUESTION 503**

- (Exam Topic 2)

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

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

**Answer: B**

**NEW QUESTION 506**

- (Exam Topic 2)

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

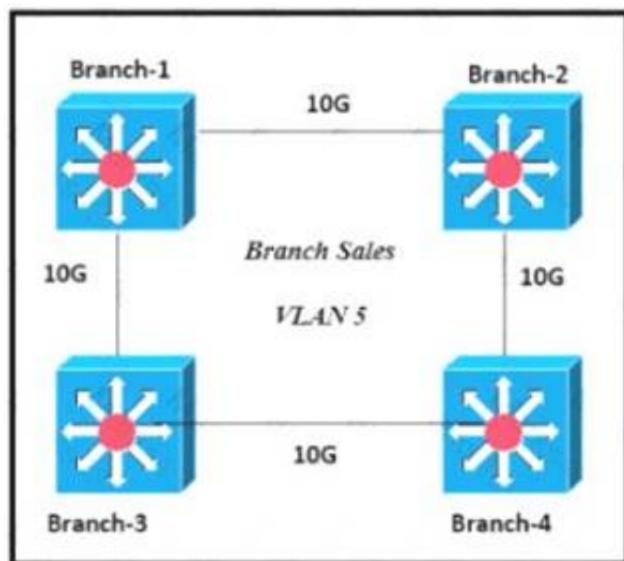
- A. route with the lowest cost
- B. route with the next hop that has the highest IP
- C. route with the shortest prefix length
- D. route with the lowest administrative distance

**Answer: D**

**NEW QUESTION 510**

- (Exam Topic 2)

Refer to the exhibit.



Only four switches are participating in the VLAN spanning-tree process.

Branch-1 priority 614440

Branch-2: priority 39082416

Branch-3: priority 0

Branch-4: root primary

Which switch becomes the permanent root bridge for VLAN 5?

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

**Answer: C**

**Explanation:**

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

**NEW QUESTION 513**

- (Exam 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 515**

- (Exam Topic 2)

While examining excessive traffic on the network, it is noted that all incoming packets on an interface appear to be allowed even though an IPv4 ACL is applied to the interface.

Which two misconfigurations cause this behavior? (Choose two)

- A. The packets fail to match any permit statement
- B. A matching permit statement is too high in the access test
- C. A matching permit statement is too broadly defined
- D. The ACL is empty
- E. A matching deny statement is too high in the access list

**Answer:** BC

**NEW QUESTION 518**

- (Exam Topic 2)

An office has 8 floors with approximately 30-40 users per floor. What command must be configured on the router Switched Virtual Interface to use address space efficiently?

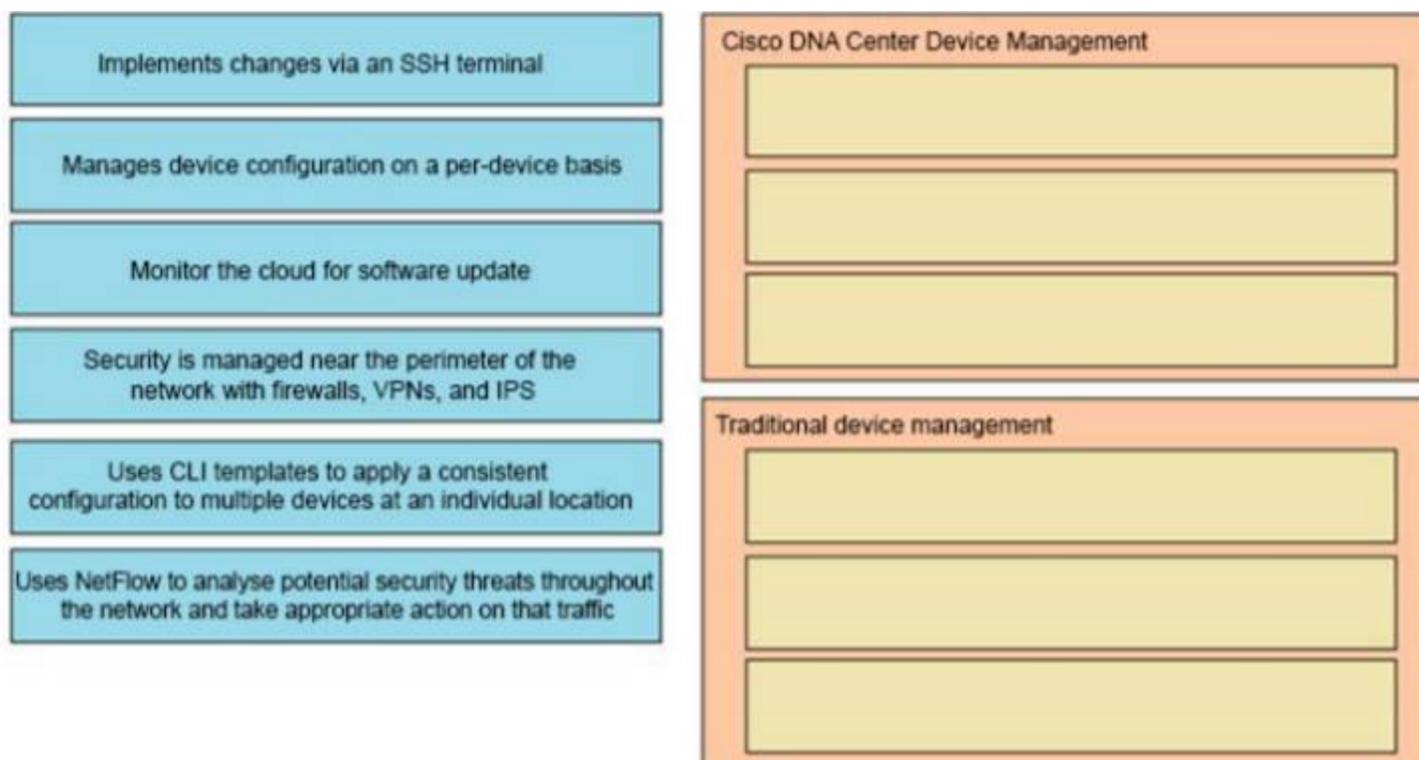
- A. ip address 192.168.0.0 255.255.0.0
- B. ip address 192.168.0.0 255.255.254.0
- C. ip address 192.168.0.0 255.255.255.128
- D. ip address 192.168.0.0 255.255.255.224

**Answer:** B

**NEW QUESTION 519**

- (Exam Topic 2)

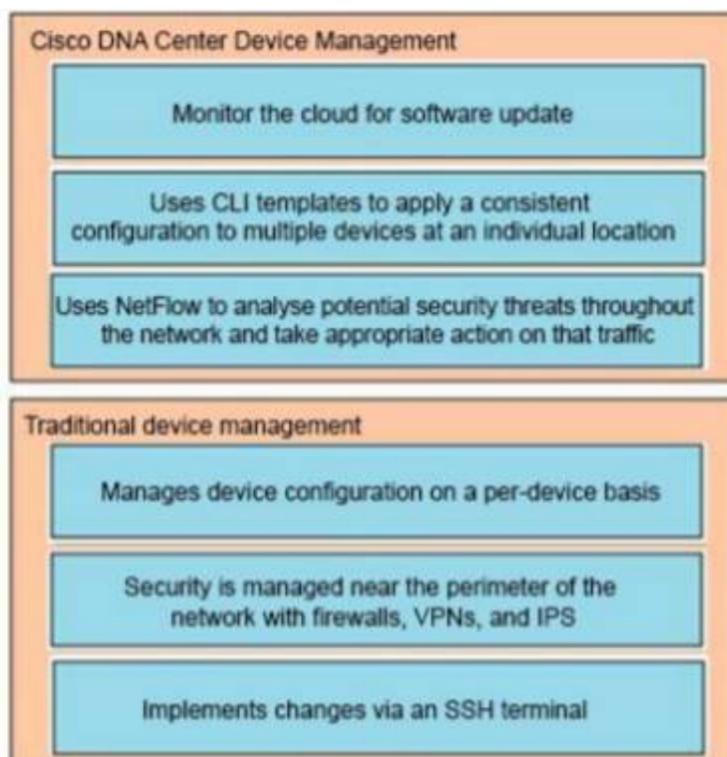
Drag the descriptions of device management from the left onto the types of device management on the right.



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**



**NEW QUESTION 520**

- (Exam Topic 2)

Which 802.11 frame type is indicated by a probe response after a client sends a probe request?

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

**Answer:** B

**NEW QUESTION 521**

- (Exam 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 523**

- (Exam Topic 2)

Which two tasks must be performed to configure NTP to a trusted server in client mode on a single network device? (Choose two)

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

**Answer:** AD

**Explanation:**

<https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4000/8-2glx/configuration/guide/ntp.html>

To configure authentication, perform this task in privileged mode: Step 1: Configure an authentication key pair for NTP and specify whether the key will be trusted or untrusted. Step 2: Set the IP address of the NTP server and the public key. Step 3: Enable NTP client mode. Step 4: Enable NTP authentication. Step 5: Verify the NTP configuration.

**NEW QUESTION 524**

- (Exam Topic 2)

Which goal is achieved by the implementation of private IPv4 addressing on a network?

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

**Answer:** A

**NEW QUESTION 528**

- (Exam 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](https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-0/configuration-guide/b_cg80/b_cg80_chapter_011)

**NEW QUESTION 529**

- (Exam 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 533**

- (Exam Topic 2)

A network administrator must to configure SSH for remote access to router R1. The requirement is to use a public and private key pair to encrypt management traffic to and from the connecting client.

Which configuration, when applied, meets the requirements?

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

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

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

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

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

**Answer:** C

**NEW QUESTION 534**

- (Exam Topic 2)

Which statement about Link Aggregation when implemented on a Cisco Wireless LAN Controller is true?

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

**Answer:** D

**Explanation:**

Reference:

[https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-2/config-guide/b\\_cg82/b\\_cg82\\_chapter\\_010101011](https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-2/config-guide/b_cg82/b_cg82_chapter_010101011)

**NEW QUESTION 538**

- (Exam 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:22NIC MAC address → 00:0C:22:83:79:A3default gateway → 192.168.1.193host IP address → 192.168.1.200subnet 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 541**

- (Exam Topic 2)

Refer to the exhibit.

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

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

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

**Answer:** A

**Explanation:**

<https://learningnetwork.cisco.com/s/question/0D53i00000KszSICAJ/administrative-distance-vs-longest-match-r>

**NEW QUESTION 543**

- (Exam 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 544**

- (Exam Topic 2)

How do AAA operations compare regarding user identification, user services and access control?

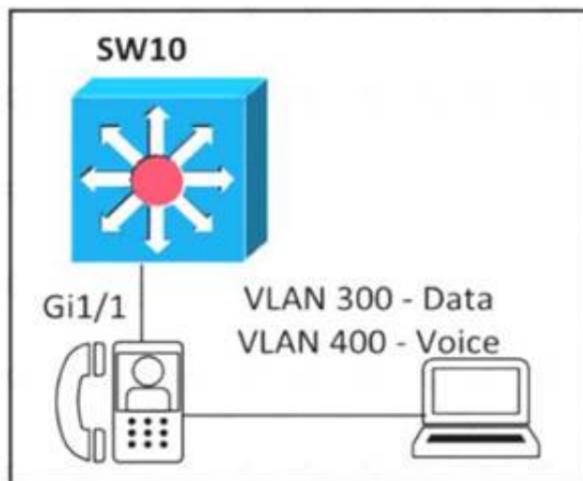
- A. Authorization provides access control and authentication tracks user services
- B. Authentication identifies users and accounting tracks user services
- C. Accounting tracks user services, and authentication provides access control
- D. Authorization identifies users and authentication provides access control

**Answer:** B

**NEW QUESTION 547**

- (Exam Topic 2)

Refer to the exhibit.



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

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

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

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

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

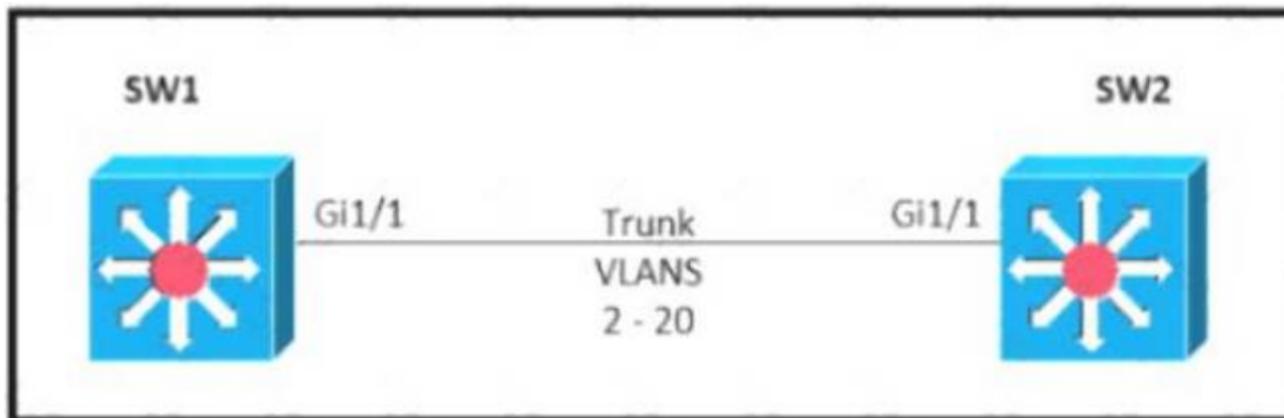
- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** A

**NEW QUESTION 552**

- (Exam Topic 2)

Refer to the exhibit.



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

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

**Answer:** C

**NEW QUESTION 554**

- (Exam 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 558**

- (Exam Topic 2)

Refer to the exhibit.

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

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

- A. 192.168.16.0/21

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 560**

- (Exam Topic 2)

Drag and drop the lightweight access point operation modes from the left onto the descriptions on the right

bridge mode	allows the access point to communicate with the WLC over a WAN link
local mode	allows for packet captures of wireless traffic
monitor mode	rogue detector mode
Flexconnect mode	preferred for connecting access points in a mesh environment
	receive only mode which acts as a dedicated sensor for RFID and IDS
sniffer mode	transmits normally on one channel and monitors other channels for noise and interference

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Table Description automatically generated

**NEW QUESTION 562**

- (Exam 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 566**

- (Exam 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?

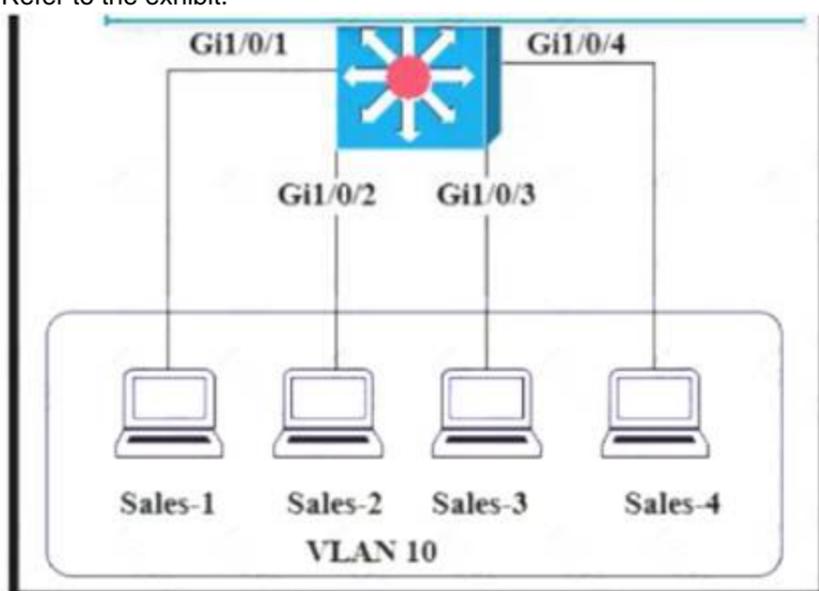
- A. ipv6 route ::0 Serial 0/0/1
- B. ipv6 route 0/0 Serial 0/0/0
- C. ipv6 route ::0 Serial 0/0/0
- D. ip route 0.0.0.0.0.0.0.0 Serial 0/0/0
- E. ipv6 route ::0 2000::2

**Answer: C**

**NEW QUESTION 571**

- (Exam Topic 2)

Refer to the exhibit.



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

```
Sales-SW#show mac-address-table
Mac Address Table
```

VLAN	MAC Address	Type	Ports
10	000c.8590.bb7d	DYNAMIC	Gi1/0/1
10	3910.4161.9bb7	DYNAMIC	Gi1/0/2
10	00d0.d3b6.957c	DYNAMIC	Gi1/0/3

Sales-SW#

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

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

**Answer: B**

**Explanation:**

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

**NEW QUESTION 574**

- (Exam Topic 2)

Which two actions influence the EIGRP route selection process? (Choose two)

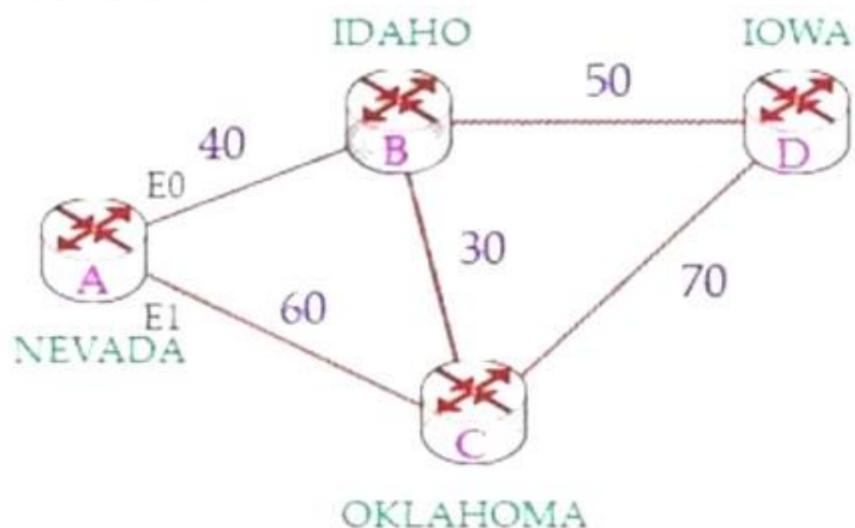
- A. The router calculates the reported distance by multiplying the delay on the exiting Interface by 256.
- B. The router calculates the best backup path to the destination route and assigns it as the feasible successor.
- C. The router calculates the feasible distance of all paths to the destination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

**Answer: BC**

**Explanation:**

The reported distance (or advertised distance) is the cost from the neighbor to the destination. It is calculated from the router advertising the route to the network.

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



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

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

**NEW QUESTION 578**

- (Exam Topic 2)

Which QoS tool is used to optimize voice traffic on a network that is primarily intended for data traffic?

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

Answer: C

**NEW QUESTION 580**

- (Exam Topic 2)

Refer to the exhibit.

```

R1#sh ip ro
Gateway of last resort is 10.10.10.18 to network 0.0.0.0

 10.0.0.0/8 is variably subnetted, 4 subnets, 3 masks
C   10.10.10.0/30 is directly connected, FastEthernet0/1
O   10.10.13.0/25 [110/6576] via 10.10.10.1, 06:58:21, FastEthernet0/1
C   10.10.10.16/30 is directly connected, FastEthernet0/24
O   10.10.13.144/28 [110/110] via 10.10.10.1, 06:58:21, FastEthernet0/1
B*  0.0.0.0/0 [20/0] via 10.10.10.18, 01:17:58
    
```

Which route type is configured to reach the internet?

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

Answer: B

**NEW QUESTION 585**

- (Exam Topic 2)

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

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

**Answer: C**

**Explanation:**

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

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

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

**NEW QUESTION 590**

- (Exam 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 593**

- (Exam Topic 1)

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

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

**Answer: D**

**NEW QUESTION 596**

- (Exam Topic 1)

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

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

**Answer: C**

**NEW QUESTION 599**

- (Exam Topic 1)

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

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

**Answer: A**

**Explanation:**

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

**NEW QUESTION 604**

- (Exam Topic 1)

What is a DNS lookup operation?

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

**Answer: D**

**NEW QUESTION 606**

- (Exam Topic 1)

How does Cisco DNA Center gather data from the network?

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

**Answer: A**

**NEW QUESTION 608**

- (Exam 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 613**

- (Exam Topic 1)

When a floating static route is configured, which action ensures that the backup route is used when the primary route fails?

- A. The floating static route must have a higher administrative distance than the primary route so it is used as a backup
- B. The administrative distance must be higher on the primary route so that the backup route becomes secondary.
- C. The floating static route must have a lower administrative distance than the primary route so it is used as a backup
- D. The default-information originate command must be configured for the route to be installed into the routing table

**Answer: A**

**NEW QUESTION 616**

- (Exam Topic 1)

Which attribute does a router use to select the best path when two or more different routes to the same destination exist from two different routing protocols.

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

**Answer: C**

**Explanation:**

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

**NEW QUESTION 621**

- (Exam Topic 1)

What is a DHCP client?

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

**Answer: A**

**NEW QUESTION 623**

- (Exam Topic 1)

How are VLAN hopping attacks mitigated?

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

**Answer: B**

**NEW QUESTION 627**

- (Exam Topic 1)

When DHCP is configured on a router, which command must be entered so the default gateway is automatically distributed?

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

**Answer: A**

**NEW QUESTION 628**

- (Exam Topic 1)

What is a DHCP client?

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

**Answer: B**

**NEW QUESTION 631**

- (Exam Topic 1)

Which security program element involves installing badge readers on data-center doors to allow workers to enter and exit based on their job roles?

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

**Answer: D**

**NEW QUESTION 632**

- (Exam Topic 1)

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

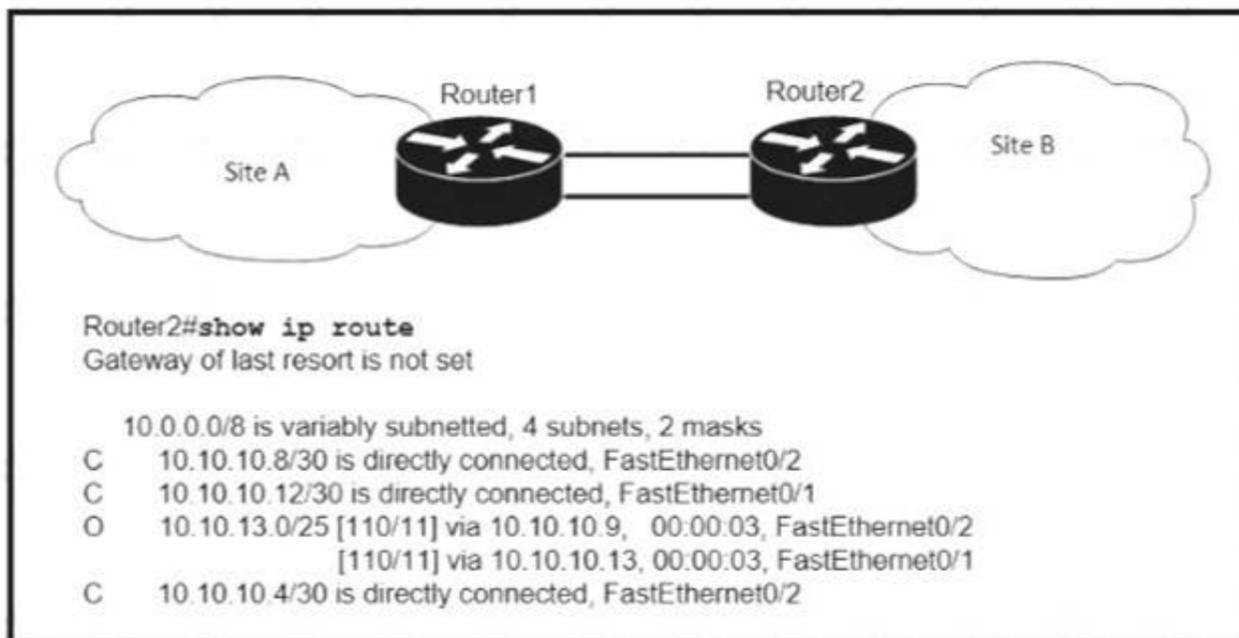
- A. TCP transmits data at a higher rate and ensures packet deliver
- B. UDP retransmits lost data to ensure applications receive the data on the remote end.
- C. UDP sets up a connection between both devices before transmitting dat
- D. TCP uses the three-way handshake to transmit data with a reliable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

**Answer: D**

**NEW QUESTION 634**

- (Exam Topic 1)

Refer to the exhibit.



If OSPF is running on this network, how does Router 2 handle traffic from Site B to 10.10.13.25 at Site A?

- A. It sends packets out of interface Fa0/2 only.
- B. It sends packets out of interface Fa0/1 only.
- C. It cannot send packets to 10.10.13.128/25
- D. It load-balances traffic out of Fa0/1 and Fa0/2

**Answer:** C

**Explanation:**

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

**NEW QUESTION 639**

- (Exam Topic 1)

Which function does the range of private IPv4 addresses perform?

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

**Answer:** A

**NEW QUESTION 640**

- (Exam 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 641**

- (Exam 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 646**

- (Exam Topic 1)

An organization has decided to start using cloud-provided services. Which cloud service allows the organization to install its own operating system on a virtual machine?

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

**Answer:** B

**Explanation:**

Below are the 3 cloud supporting services cloud providers provide to customer:

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

**NEW QUESTION 647**

- (Exam Topic 1)

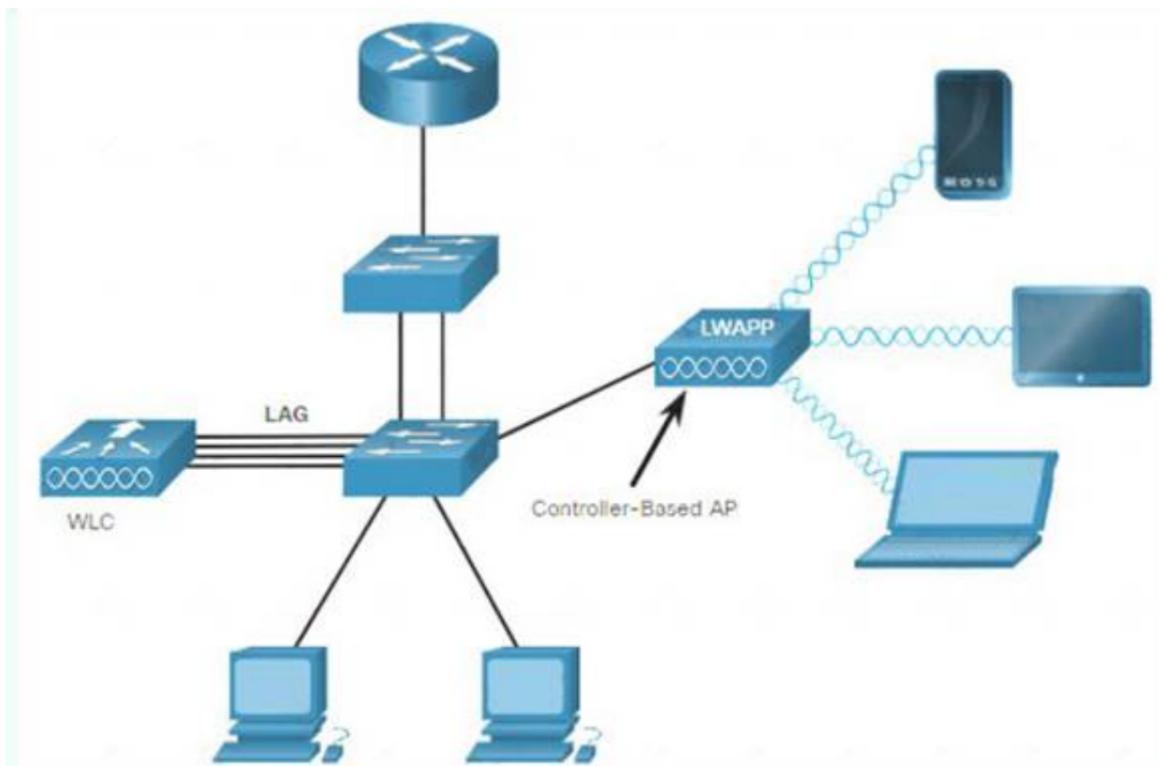
What is a function of Wireless LAN Controller?

- 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:**

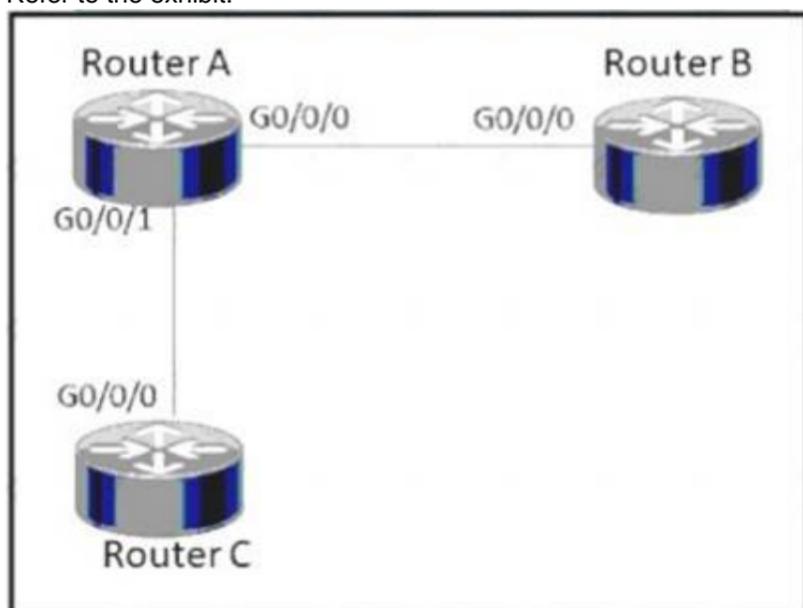
Lightweight APs (LAPs) is devices require no initial configuration. LAPs use the Lightweight Access Point Protocol (LWAPP) to communicate with a WLAN controller (WLC), as shown in the below figure. Controller-based APs are useful in situations where many APs are required in the network. As more APs are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



**NEW QUESTION 648**

- (Exam Topic 1)

Refer to the exhibit.



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

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

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

**Answer: D**

**NEW QUESTION 649**

- (Exam Topic 1)

How does a switch process a frame received on Fa0/1 with the destination MAC address of 0e38.7363.657b when the table is missing the address?

- A. It drops the frame immediately.
- B. It forwards the frame back out of interface Fa0/1.
- C. It floods the frame to all interfaces except Fa0/1.

D. It holds the frame until the MAC address timer expires and then drops the frame.

**Answer:** C

**NEW QUESTION 652**

- (Exam Topic 1)

Which type of information resides on a DHCP server?

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

**Answer:** A

**NEW QUESTION 655**

- (Exam Topic 1)

An engineer is configuring an encrypted password for the enable command on a router where the local user database has already been configured Drag and drop the configuration commands from the left into the correct sequence on the right Not all commands are used

configure terminal	first
enable	second
enable secret \$hf!@4fs	third
exit	fourth
line vty 0 4	
service password-encryption	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Graphical user interface, application Description automatically generated

**NEW QUESTION 657**

- (Exam Topic 1)

Where does the configuration reside when a helper address is configured to support DHCP?

- A. on the router closest to the server
- B. on the router closest to the client
- C. on every router along the path
- D. on the switch trunk interface

**Answer:** B

**NEW QUESTION 661**

- (Exam Topic 1)

What are two improvements provided by automation for network management in an SDN environment? (Choose two)

- A. Data collection and analysis tools establish a baseline for the network
- B. Artificial intelligence identifies and prevents potential design failures.
- C. Machine learning minimizes the overall error rate when automating troubleshooting processes
- D. New devices are onboarded with minimal effort
- E. Proprietary Cisco APIs leverage multiple network management tools.

**Answer:** BE

**NEW QUESTION 666**

- (Exam Topic 1)

How will Link Aggregation be Implemented on a Cisco Wireless LAN Controller?

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

**Answer:** A

**Explanation:**

[https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-5/configuration-guide/b\\_cg75/b\\_cg75\\_chapter\\_010](https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-5/configuration-guide/b_cg75/b_cg75_chapter_010)

**NEW QUESTION 670**

- (Exam Topic 1)

Drag and drop the threat-mitigation techniques from the left onto the types of threat or attack they mitigate on the right.

**Answer Area**

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

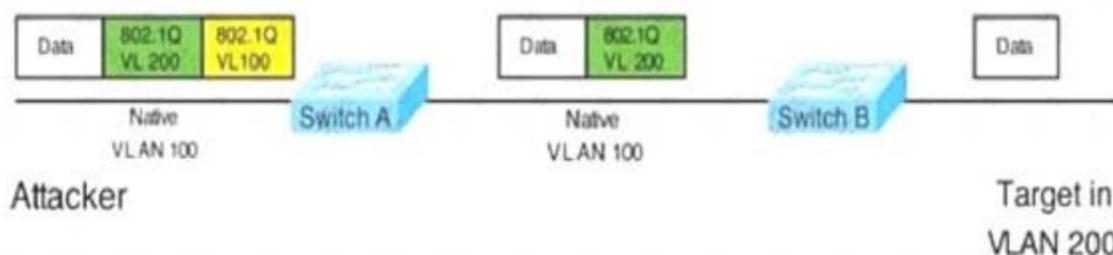
- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

**Double-Tagging attack:** In this attack, the attacking computer generates frames with two 802.1Q tags. The first tag matches the native VLAN of the trunk port (VLAN 10 in this case), and the second matches the VLAN of a host it wants to attack (VLAN 20). When the packet from the attacker reaches Switch A, Switch A only sees the first VLAN 10 and it matches with its native VLAN 10 so this VLAN tag is removed. Switch A forwards the frame out all links with the same native VLAN 10. Switch B receives the frame with 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 671**

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