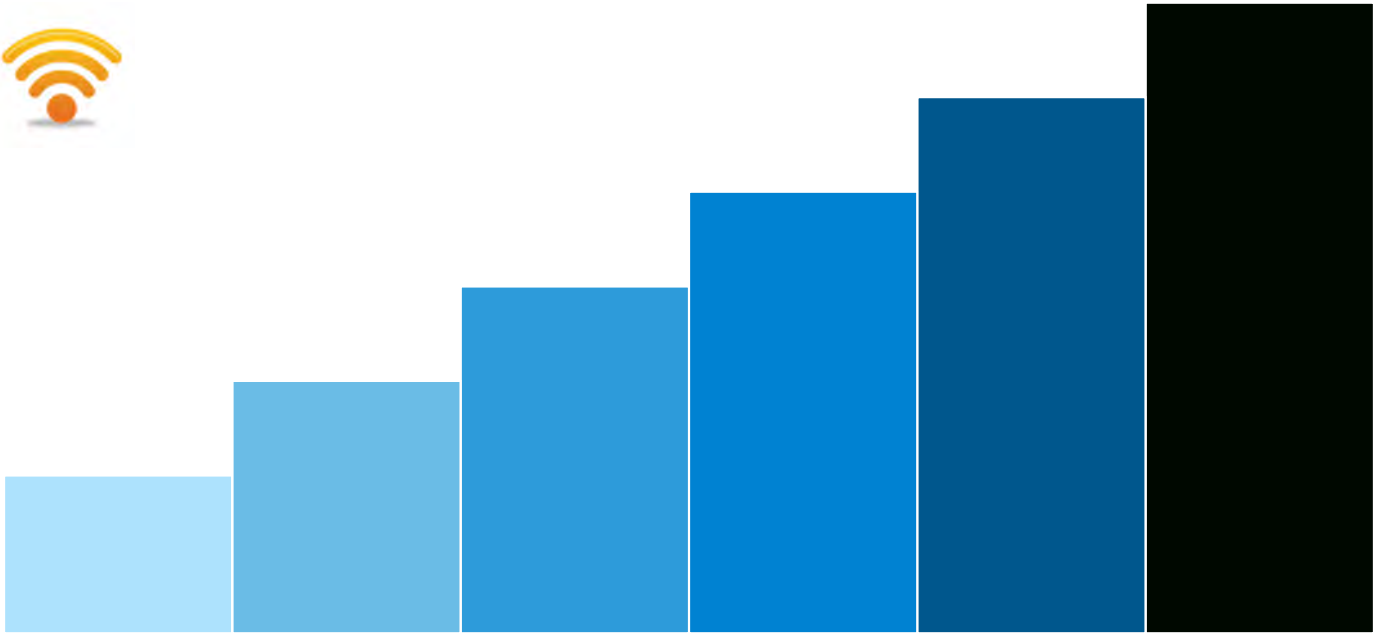

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Vendor: Cisco

Exam Code: 350-401

Exam Name: Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Q&As: 1407(There are 8 parts in the dump, 1407 questions in total.)

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Exam A

QUESTION 1
Refer to the exhibit. A network engineer must simplify the IPsec configuration by enabling IPsec over GRE using IPsec profiles. Which two configuration changes accomplish this? (Choose two).

```
access-list 100 permit gre host 209.165.201.1 host 209.165.201.6

crypto isakmp policy 5
authentication pre-share
hash sha256
encryption aes
group 14

crypto isakmp key D@t@c3nt3r address 209.165.201.6

crypto ipsec transform-set My_Set esp-aes esp-sha-hmac
mode transport

crypto map MAP 10 ipsec-isakmp
 set peer 209.165.201.6
 set transform-set My_Set
 match address 100

interface GigabitEthernet0/0
description outside_interface
 no switchport
 ip address 209.165.201.1 255.255.255.252
 crypto map MAP

interface Tunnel100
ip address 192.168.100.1 255.255.255.0
ip mtu 1400
tunnel source GigabitEthernet0/0
tunnel destination 209.165.201.6

ip route 10.20.0.0 255.255.255.0 192.168.100.2 Tunnel100
```

```
access-list 100 permit gre host 209.165.201.6 host 209.165.201.1

crypto isakmp policy 5
authentication pre-share
hash sha256
encryption aes
group 14

crypto isakmp key D@t@c3nt3 address 209.165.201.1

crypto ipsec transform-set My_Set esp-aes esp-sha-hmac
mode transport

crypto map MAP 10 ipsec-isakmp
 set peer 209.165.201.1
 set transform-set My_Set
 match address 100

interface GigabitEthernet0/1
description outside_interface
 no switchport
 ip address 209.165.201.6 255.255.255.252
 crypto map MAP

interface Tunnel100
ip address 192.168.100.2 255.255.255.0
ip mtu 1400
tunnel source GigabitEthernet0/1
tunnel destination 209.165.201.1

ip route 10.10.0.0 255.255.255.0 192.168.100.1 Tunnel100
```

A. Apply the crypto map to the tunnel interface and change the tunnel mode to tunnel mode ipsec ipv4.
B. Create an IPsec profile, associate the transform-set. and apply the profile to the tunnel interface.
C. Remove the crypto map and modify the ACL to allow traffic between 10.10.0.0/24 to 10.20.0.0/24.

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D. Remove all configuration related to crypto map from R1 and R2 and eliminate the ACL
E. Create an IPsec profile, associate the transform-set ACL. and apply the profile to the tunnel interface

Correct Answer: BD
Explanation

QUESTION 2
A company plans to implement intent-based networking in its campus infrastructure.

Which design facilitates a migration from a traditional campus design to a programmable fabric design?

A. Layer 2 access
B. three-tier
C. two-tier
D. routed access

Correct Answer: D
Explanation

Explanation/Reference:
Layer 3 Routed Access--The use of a Layer 3 routed access network for the fabric provides the highest level of availability without the need to use loop avoidance protocols such as Spanning-Tree (STP), interface bundling techniques using link aggregation technologies such as EtherChannel, and Layer 2 redundancy technologies like StackWise Virtual (SVL), Virtual Switching System (VSS), or Nexus Virtual Port-Channels (vPCs).

Reference:
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.pdf#%5B%7B%22num%22%3A37%2C%22gen%22%3A0%7D%2C%7B%22name%22%3A%22XYZ%22%7D%2C272%2C708%2C0%5D

QUESTION 3
A network engineer configures BGP between R1 and R2. Both routers use BGP peer group CORP and are set up to use MD5 authentication. This message is logged to the console of router R1:

`May 5 39:85:55.469: %TCP-6-BADAUTH` Invalid MD5 digest from 10.10.10.1 (29832) to 10.120.10.1 (179) tebleid -0

Which two configurations allow a peering session to form between R1 and R2? (Choose two.)

A. R1(config-router)#neighbor 10.10.10.1 peer-group CORP
R1(config-router)#neighbor CORP password Cisco
B. R2(config-router)#neighbor 10.120.10.1 peer-group CORP
R2(config-router)#neighbor CORP password Cisco
C. R2(config-router)#neighbor 10.10.10.1 peer-group CORP
R2(config-router)#neighbor PEER password Cisco
D. R1(config-router)#neighbor 10.120.10.1 peer-group CORP
R1(config-router)#neighbor CORP password Cisco
E. R2(config-router)#neighbor 10.10.10.1 peer-group CORP
R2(config-router)#neighbor CORP password Cisco

Correct Answer: AB
Explanation

Explanation/Reference:
The log is on R1.The question states the console output is from R1, which means that R1 is 10.120.10.1, and R2 is 10.10.10.1. If you missed that you may have assumed the reverse and picked DE.

QUESTION 4
An engineer has deployed a single Cisco 5520 WLC with a management IP address of 172.16.50.5/24.

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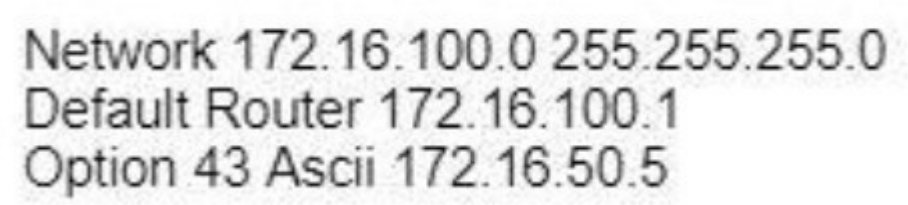
The engineer must register 50 new Cisco AIR-CAP2802I-E-K9 access points to the WLC using DHCP option 43. The access points are connected to a switch in VLAN 100 that uses the 172.16.100.0/24 subnet. The engineer has configured the DHCP scope on the switch as follows:



The access points are failing to join the wireless LAN controller. Which action resolves the issue?

A. configure option 43 Hex F104.AC10.3205
B. configure option 43 Hex F104.CA10.3205
C. configure dns-server 172.16.50.5
D. configure dns-server 172.16.100.1

Correct Answer: A
Explanation

Explanation/Reference:
172.16.50.5 in hex is We will have the answer from this paragraph: "TLV values for the Option 43 suboption: Type + Length + Value. Type is always the suboption code 0xf1. Length is the number of controller management IP addresses times 4 in hex. Value is the IP address of the controller listed sequentially in hex. For example, suppose there are two controllers with management interface IP addresses, 192.168.10.5 and 192.168.10.20. The type is 0xf1. The length is 2 * 4 = 8 = 0x08. The IP addresses translates to c0a80a05 (192.168.10.5) and c0a80a14 (192.168.10.20). When the string is assembled, it yields f108c0a80a05c0a80a14. The Cisco IOS IT Certification Guaranteed, The Easy Way! 81command that is added to the DHCP scope is option 43 hex f108c0a80a05c0a80a14."
Reference: Click
Therefore in this question the option 43 in hex should be "F104.AC10.3205 (the management IP address of 172.16.50.5 in hex is AC.10.32.05).

QUESTION 5
Which configuration restricts the amount of SSH that a router accepts 100 kbps?

A.
```
class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir 100000
exceed-action drop
! ! !
Interface GigabitEthernet0/1
ip address 209.165.200.225 255.255.255.0
ip access-group CoPP_SSH out
duplex auto
speed auto
media-type rj45
service-policy input CoPP_SSH
!
ip access-list extended CoPP_SSH
permit tcp any any eq 22
!
```
B.
```
class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
```

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class CoPP_SSH
police cir CoPP_SSH
exceed-action drop
!
Interface GigabitEthernet0/1
ip address 209.165.200.225 255.255.255.0
ip access-group ... out
duplex auto
speed auto
media-type rj45
service-policy input CoPP_SSH
!
Ip access-list extended CoPP_SSH
deny tcp any any eq 22
!

C. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir 100000
exceed-action drop
!
Control-plane
service-policy input CoPP_SSH
!
Ip access-list extended CoPP_SSH
deny tcp any any eq 22
!

D. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir 100000 exceed-action drop
!
Control-plane transit
service-policy input CoPP_SSH
!
Ip access-list extended CoPP_SSH
permit tcp any any eq 22
!

Correct Answer: C
Explanation

Explanation/Reference:
CoPP protects the route processor on network devices by treating route processor resources as a separate entity with its own ingress interface (and in some implementations, egress also). CoPP is used to police traffic that is destined to the route processor of the router such as:
+ routing protocols like OSPF, EIGRP, or BGP.
+ Gateway redundancy protocols like HSRP, VRRP, or GLBP. + Network management protocols like telnet, SSH, SNMP, or RADIUS.

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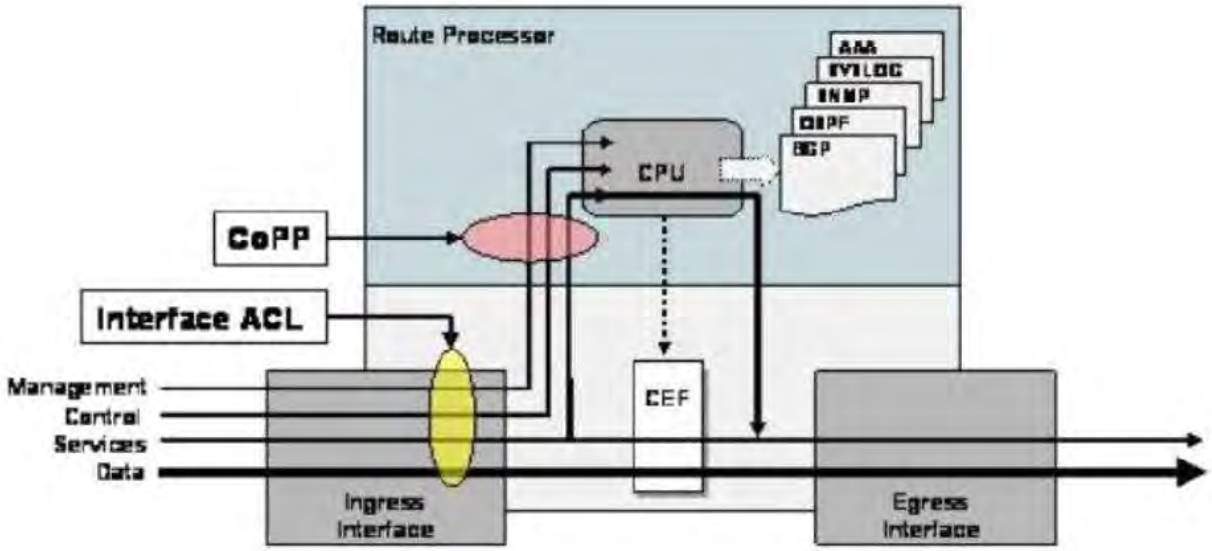

Therefore we must apply the CoPP to deal with SSH because it is in the management plane. CoPP must be put under "control-plane" command.

QUESTION 6
While configuring an IOS router for HSRP with a virtual IP of 10.1.1.1, an engineer sees this log message.

Jan 1 12:12:12.111 : %HSRP-4-DIFFVIP1: GigabitEthernet0/0 Grp 1 active routers virtual IP address 10.1.1.1 is different to the locally configured address 10.1.1.25

Which configuration change must the engineer make?

A. Change the HSRP group configuration on the remote router to 1.
B. Change the HSRP group configuration on the local router to 1.
C. Change the HSRP virtual address on the remote router to 10.1.1.1.
D. Change the HSRP virtual address on the local router to 10.1.1.1.

Correct Answer: D
Explanation

Explanation/Reference:
Syslog points to local router having VIP ip 10.1.1.25, and remote router in g0/0 interface having 10.1.1.1. We want latter to all routers in HSRP so we need to configure local router, hence B.
"is different to the locally configured..."

QUESTION 7
Wireless users report frequent disconnections from the wireless network. While troubleshooting, a network engineer finds that after the user is disconnected, the connection re-establishes automatically without any input required. The engineer also notices these message logs:

AP 'AP2' is down. Reason: Radio channel set. 6:54:04 PM
AP 'AP4' is down. Reason: Radio channel set. 6:44:49 PM

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AP 'AP7' is down. Reason: Radio channel set. 6:34:32 PM

Which action reduces the user impact?

A. increase the AP heartbeat timeout
B. increase BandSelect
C. enable coverage hole detection
D. increase the dynamic channel assignment interval

Correct Answer: D
Explanation

Explanation/Reference:
These message logs inform that the radio channel has been reset (and the AP must be down briefly). With dynamic channel assignment (DCA), the radios can frequently switch from one channel to another but it also makes disruption. The default DCA interval is 10 minutes, which is matched with the time of the message logs. By increasing the DCA interval, we can reduce the number of times our users are disconnected for changing radio channels.

QUESTION 8
What is the data policy in a Cisco SD-WAN deployment?

A. list of ordered statements that define node configurations and authentication used within the SDWAN overlay
B. Set of statements that defines how data is forwarded based on IP packet information and specific VPNs
C. detailed database mapping several kinds of addresses with their corresponding location
D. group of services tested to guarantee devices and links liveliness within the SD-WAN overlay

Correct Answer: B
Explanation

Explanation/Reference:
The Cisco SD-WAN architecture implements two types of data policy:

Centralized data policy controls the flow of data traffic based on the source and destination addresses and ports and DSCP fields in the packet's IP header (referred to as a 5-tuple), and based on network segmentation and VPN membership. These types of data policy are provisioned centrally, on the Cisco vSmart controller, and they affect traffic flow across the entire network.

Localized data policy controls the flow of data traffic into and out of interfaces and interface queues on a Cisco vEdge device. This type of data policy is provisioned locally using access lists. It allows you to classify traffic and map different classes to different queues. It also allows you to mirror traffic and to police the rate at which data traffic is transmitted and received.

QUESTION 9
What are two benefits of YANG? (Choose two.)

A. It enables multiple leaf statements to exist within a leaf list
B. It collects statistical constraint analysis information.
C. It enforces configuration constraints.
D. It enforces configuration semantics.
E. It enforces the use of a specific encoding format for NETCONF

Correct Answer: CE
Explanation

QUESTION 10
A server running Linux is providing support for virtual machines along with DNS and DHCP services for a small business. Which technology does this represent?

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A. container
B. Type 1 hypervisor
C. hardware pass-thru
D. Type 2 hypervisor

Correct Answer: D
Explanation

Explanation/Reference:
In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).

QUESTION 11
Refer to the exhibit.

POSTMAN is showing an attempt to retrieve network device information from Cisco DNA Center API. What is the issue?

A. The URI string is incorrect
B. The token has expired.
C. Authentication has failed.

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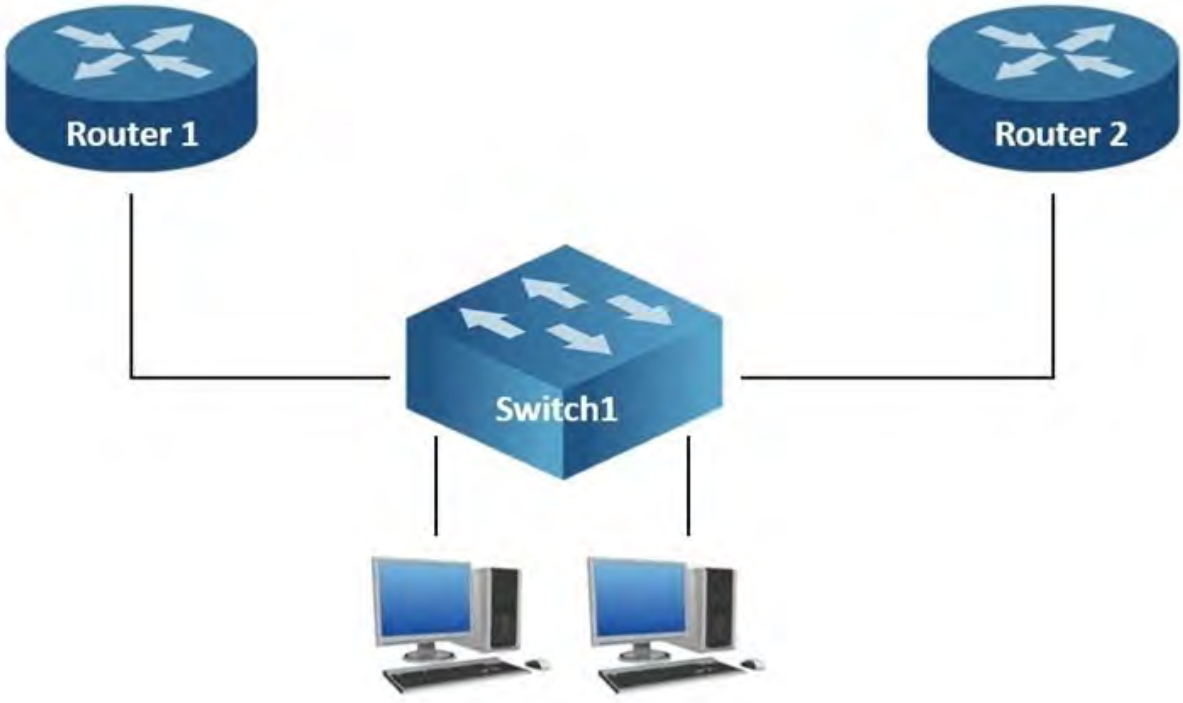
D. The JSON payload contains the incorrect UUID

Correct Answer: A
Explanation

Explanation/Reference:
With 's'
GET https://DNAC:Port//dna/intent/api/v1/network-devices
{
"response": {
"errorCode": "Bad request",
"message": "Invalid input request",
"detail": "s is not a valid UUID of device"
},
"version": "1.0"
}

without 's'
GET https://DNAC:Port//dna/intent/api/v1/network-device
{
"response": [
{
"type": "Cisco 3504 Wireless LAN Controller",
"description": "Cisco Controller Wireless Version:8.5.140.0",
"serialNumber": "FOL25040021",

QUESTION 12
Refer to the exhibit.



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Router 1 is currently operating as the HSRP primary with a priority of 110 router1 fails and router2 take over the forwarding role.

Which command on router1 causes it to take over the forwarding role when it return to service?

A. standby 2 priority
B. standby 2 timers
C. standby 2 track
D. standby 2 preempt

Correct Answer: D
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/ip/hot-standby-router-protocol-hsrp/13780-6.html

QUESTION 13
Refer to the exhibit.

```
username admin privilege 15 password 0 Cisco13579!
aaa new-model
!
aaa authentication login default local
aaa authentication enable default none
!
aaa common-criteria policy Administrators
  min-length 1
  max-length 127
  char-changes 4
  lifetime month 2
!
```

A network engineer must configure a password expiry mechanism on the gateway router for all local passwords to expire after 60 days. What is required to complete this task?

A. Add the username admin privilege 15 common-criteria-policy Administrators password Cisco13579! command.
B. Add the aaa authentication enable default Administrators command.
C. The password expiry mechanism is on the AAA server and must be configured there.
D. No further action is required. The configuration is complete

Correct Answer: A
Explanation

Explanation/Reference:
SUMMARY STEPS
Perform this task to create a password security policy and to apply the policy to a specific user profile.

enable
configure terminal
aaa new-model
aaa common-criteria policy policy-name

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char-changes number
max-length number
min-length number
numeric-count number
special-case number
exit
username username common-criteria-policy policy-name password password
end

QUESTION 14
What is one difference between SaltStack and Ansible?

A. SaltStack uses the Ansible agent on the box, whereas Ansible uses a Telnet server on the box.
B. SaltStack uses an API proxy agent to program Cisco boxes in agent mode, whereas Ansible uses a Telnet connection.
C. SaltStack uses SSH to interact with Cisco devices, whereas Ansible uses an event bus.
D. SaltStack is constructed with minion, whereas Ansible is constructed with YAML.

Correct Answer: D
Explanation

QUESTION 15
What is the differences between TCAM and the MAC address table?

A. The MAC address table is contained in CAM. ACL and QoS information is stored in TCAM.
B. The MAC address table supports partial matches. TCAM requires an exact match
C. Router prefix lookups happens in CAM. MAC address table lookups happen in TCAM.
D. TCAM is used to make Layer 2 forwarding decisions CAM is used to build routing tables

Correct Answer: A
Explanation

Explanation/Reference:
https://community.cisco.com/t5/networking-documents/cam-content-addressable-memory-vs-tcam-ternary-content/ta-p/3107938

When using Ternary Content Addressable Memory (TCAM) inside routers it's used for faster address lookup that enables fast routing. In switches Content Addressable Memory (CAM) is used for building and lookup of mac address table that enables L2 forwarding decisions. Besides Longest-Prefix Matching, TCAM in today's routers and multilayer Switch devices are used to store ACL, QoS and other things from upper-layer processing.

QUESTION 16
What is a characteristic of YANG?

A. It is a Cisco proprietary language that models NETCONF data
B. It allows model developers to create custom data types
C. It structures data in an object-oriented fashion to promote model reuse
D. It provides loops and conditionals to control now within models

Correct Answer: C
Explanation

QUESTION 17
Refer to the exhibit.

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```
SwitchC#show vtp status
VTP Version                     : 2
Configuration Revision          : 0
Maximum VLANs supported locally   : 255
Number of existing VLANs        : 8
VTP Operating Mode              : Transparent
VTP Domain Name                 : cisco.com
VTP Pruning Mode                : Disabled
VTP V2 Mode                     : Disabled
VTP Traps Generation            : Disabled
MD5 digest                      : 0xE5 0x28 0x5D 0x3E 0x2F 0xE5 0xAD 0x2B
Configuration last modified by 0.0.0.0 at 1-10-19 09:01:38

SwitchC#show vlan brief

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa0/3, Fa0/4, Fa0/5, Fa0/6
                                                 Fa0/7, Fa0/8, Fa0/9, Fa0/10
                                                 Fa0/11, Fa0/12, Fa0/13, Fa0/14
                                                 Fa0/15, Fa0/16, Fa0/17, Fa0/18
                                                 Fa0/19, Fa0/20, Fa0/21, Fa0/22
                                                 Fa0/23, Fa0/24, Po1
110  Finance                           active
210  HR                                active    Fa0/1
310  Sales                             active    Fa0/2
[...output omitted...]

SwitchC#show int trunk
Port        Mode         Encapsulation  Status        Native vlan
Gig1/1      on           802.1q         trunking      1
Gig1/2      on           802.1q         trunking      1

Port        Vlans allowed on trunk
Gig1/1      1-1005
Gig1/2      1-1005

Port        Vlans allowed and active in management domain
Gig1/1      1,110,210,310
Gig1/2      1,110,210,310

Port        Vlans in spanning tree forwarding state and not pruned
Gig1/1      1,110,210,310
Gig1/2      1,110,210,310

SwitchC#show run interface port-channel 1
interface Port-channel 1
 description Uplink_to_Core
 switchport mode trunk
```

SwitchC connects HR and Sales to the Core switch However, business needs require that no traffic from the Finance VLAN traverse this switch Which command meets this requirement?

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A.
```
SwitchC(config)#vtp pruning
```

B.
```
SwitchC(config)#vtp pruning vlan 110
```

C.
```
SwitchC(config)#interface port-channel 1
SwitchC(config-if)#switchport trunk allowed vlan add 210,310
```

D.
```
SwitchC(config)#interface port-channel 1
SwitchC(config-if)#switchport trunk allowed vlan remove 110
```

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

Correct Answer: D
Explanation

QUESTION 18
A company has an existing Cisco 5520 HA cluster using SSO. An engineer deploys a new single Cisco Catalyst 9800 WLC to test new features. The engineer successfully configures a mobility tunnel between the 5520 cluster and 9800 WLC. Clients connected to the corporate WLAN roam seamlessly between access points on the 5520 and 9800 WLC. After a failure on the primary 5520 WLC, all WLAN services remain functional; however clients cannot roam between the 5520 and 9800 controllers without dropping their connection. Which feature must be configured to remedy the issue?

A. mobility MAC on the 5520 cluster
B. mobility MAC on the 9800 WLC
C. new mobility on the 5520 cluster
D. new mobility on the 9800 WLC

Correct Answer: B
Explanation

Explanation/Reference:
You have 2 5k devices with SSO, and a 1 9k device.
If cluster and primary works fine, then everything is fine.
However when Primary 5k device fails, secondary should take over. Now Secondary with 9k doesnt talk to each other as it should.

Ensure that you configure the mobility MAC address using the wireless mobility mac-address command for HighAvailability to work.

Therefore you should enable this on the 9k device so it knows about the other devices.

Doing it on the cluster with already established SSO wont do anything. Given answer (B) should be the correct one.

QUESTION 19
Which measure is used by an NTP server to indicate its closeness to the authoritative time source?

A. time zone
B. hop count
C. stratum

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D. latency

Correct Answer: C
Explanation

Explanation/Reference:
NTP uses a stratum to describe the distance between a network device and an authoritative time source: A stratum 1 time server is directly attached to an authoritative time source (such as a radio or atomic clock or a GPS time source)

QUESTION 20
At which Layer does Cisco DNA Center support REST controls?

A. EEM applets or scripts
B. Session layer
C. YMAL output from responses to API calls
D. Northbound APIs

Correct Answer: D
Explanation

QUESTION 21
Which line must be added in the Python function to return the JSON object {"cat_9k": "FXS193202SE")?

```
import json
def get_data():
  test_json = """
  {
     "response": [{
     "managementIpAddress": "10.10.2.253",
     "memorySize": "3398101469",
     "serialNumber": "FXS1932Q2SE",
     "softwareVersion": "16.3.2",
     "hostname": "cat_9k"
    }],
     "version": "1.0"
}
"""
```

A. return (json.dumps({d['hostname']: d['serialNumber'] for d in json.loads(test_json)['response']}))
B. return (json.dumps({for d in json.loads(test_json)['response']: d['hostname']: d['serialNumber']}))
C. return (json.loads({d['hostname']: d['serialNumber'] for d in json.dumps(test_json)['response']}))
D. return (json.loads({for d in json.dumps(test_json)['response']: d['hostname']: d['serialNumber']}))

Correct Answer: A
Explanation

Explanation/Reference:
json.loads = from json to python
json.dumps = from python to json

QUESTION 22
What is the difference between CEF and process switching?

A. CEF processes packets that are too complex for process switching to manage.

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B. CEF is more CPU-intensive than process switching.
C. CEF uses the FIB and the adjacency table to make forwarding decisions, whereas process switching punts each packet.
D. Process switching is faster than CEF.

Correct Answer: C
Explanation

Explanation/Reference:
"Punt" is often used to describe the action of moving a packet from the fast path (CEF) to the route processor for handling. Cisco Express Forwarding (CEF) provides the ability to switch packets through a device in a very quick and efficient way while also keeping the load on the router`s processor low. CEF is made up of two different main components: the Forwarding Information Base (FIB) and the Adjacency Table. Process switching is the slowest switching methods (compared to fast switching and Cisco Express Forwarding) because it must find a destination in the routing table. Process switching must also construct a new Layer 2 frame header for every packet. With process switching, when a packet comes in, the scheduler calls a process that examines the routing table, determines which interface the packet should be switched to and then switches the packet. The problem is, this happens for the every packet.

QUESTION 23
An engineer is concerned with the deployment of a new application that is sensitive to inter-packet delay variance. Which command configures the router to be the destination of jitter measurements?

A. Router(config)# ip sla responder udp-connect 172.29.139.134 5000
B. Router(config)# ip sla responder tcp-connect 172.29.139.134 5000
C. Router(config)# ip sla responder udp-echo 172.29.139.134 5000
D. Router(config)# ip sla responder tcp-echo 172.29.139.134 5000

Correct Answer: C
Explanation

Explanation/Reference:
Cisco IOS IP SLA Responder is a Cisco IOS Software component whose functionality is to respond to Cisco IOS IP SLA request packets. The IP SLA source sends control packets before the operation starts to establish a connection to the responder. Once the control packet is acknowledged, test packets are sent to the responder. The responder inserts a time-stamp when it receives a packet and factors out the destination processing time and adds time-stamps to the sent packets. This feature allows the calculation of unidirectional packet loss, latency, and jitter measurements with the kind of accuracy that is not possible with ping or other dedicated probe testing.
Reference:
UDP Jitter measures the delay, delay variation (jitter), corruption, misordering and packet loss by generating periodic UDP traffic. This operation always requires IP SLA responder. The command to enable UDP Jitter Operation is "ip sla responder udp-echo {destination-ip-address} [destination-port]

QUESTION 24
Which DHCP option helps lightweight APs find the IP address of a wireless LAN controller?

A. Option 43
B. Option 60
C. Option 67
D. Option 150

Correct Answer: A
Explanation

QUESTION 25
Which function is handled by vManage in the Cisco SD-WAN fabric?

A. Establishes BFD sessions to test liveliness of links and nodes

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B. Distributes policies that govern data forwarding
C. Performs remote software upgrades for WAN Edge. vSmart and vBond
D. Establishes IPsec tunnels with nodes.

Correct Answer: C
Explanation

Explanation/Reference:
We can remote upgrades WAN Edge, vSmart and vBond in vManage.
https://sdwan-docs.cisco.com/Product_Documentation/vManage_Help/Release_18.4/Maintenance/Software_Upgrade

QUESTION 26
Which AP mode allows an engineer to scan configured channels for rogue access points?

A. sniffer
B. monitor
C. bridge
D. local

Correct Answer: B
Explanation

Explanation/Reference:
The local and FlexConnect mode access points are designed to serve associated clients. These access points spend relatively less time performing off-channel scanning: about 50 milliseconds on each channel. If you want to perform high rogue detection, a monitor mode access point must be used. Alternatively, you can reduce the scan intervals from 180 seconds to a lesser value, for example, 120 or 60 seconds, ensuring that the radio goes off-channel more frequently, which improves the chances of rogue detection. However, the access point continues to spend about 50 milliseconds on each channel.

https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_010111000.html#:~:text=The%20local%20and%20FlexConnect%20mode% 20access%20points,spend%20about%2050%20milliseconds%20on%20each%20channel.

QUESTION 27
Refer to the exhibit. A network engineer configures OSPF and reviews the router configuration Which interface or interfaces are able to establish OSPF adjacency?

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```
Router#show ip ospf interface
GigabitEthernet0/1.40 is up, line protocol is up
  Internet Address 10.3.5.254/24, Area 0, Attached via Network Statement
  Process ID 1, Router ID 172.16.11.29, Network Type BROADCAST, Cost: 1
  Topology-MTID  Cost  Disabled  Shutdown  Topology Name
        0         1       no        no        Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 172.16.11.29, Interface address 10.3.5.254
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    No Hellos (Passive interface)
  Supports Link-local Signaling (LLS)
  ! lines omitted for brevity
GigabitEthernet0/1 is up, line protocol is up
  Internet Address 172.16.30.1/24, Area 0, Attached via Network Statement
  Process ID 1, Router ID 172.16.11.29, Network Type BROADCAST, Cost: 1
  Topology-MTID  Cost  Disabled  Shutdown  Topology Name
        0         1       no        no        Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 172.16.11.29, Interface address 172.16.30.1
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit S
    oob-resync timeout 40
    No Hellos (Passive interface)
  Supports Link-local Signaling (LLS)
  ! lines omitted for brevity
GigabitEthernet0/0 is up, line protocol is up
  Internet Address 172.16.11.29/24, Area 0, Attached via Network Statement
  Process ID 1, Router ID 172.16.11.29, Network Type BROADCAST, Cost: 1
  Topology-MTID  Cost  Disabled  Shutdown  Topology Name
        0         1       no        no        Base
  Transmit Delay is 1 sec, State DROTHER, Priority 1
  Designated Router (ID) 172.16.11.27, Interface address 172.16.11.27
  Backup Designated router (ID) 172.16.11.30, Interface address 172.16.11.30
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:07
  Supports Link-local Signaling (LLS)
  ! lines omitted for brevity
```

A. GigabitEthemet0/1 and GigabitEthernet0/1.40
B. only GigabitEthernet0/1
C. only GigabttEthernet0/0
D. Gigabit Ethernet0/0 and GigabitEthemet0/1

Correct Answer: C
Explanation

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QUESTION 28
Which method creates an EEM applet policy that is registered with EEM and runs on demand or manually?

A. event manager applet ondemand
   event register
   action 1.0 syslog priority critical msg 'This is a message from ondemand'
B. event manager applet ondemand
   event manual
   action 1.0 syslog priority critical msg 'This is a message from ondemand'
C. event manager applet ondemand
   event none
   action 1.0 syslog priority critical msg 'This is a message from ondemand'
D. event manager applet ondemand
   action 1.0 syslog priority critical msg 'This is a message from ondemand'

Correct Answer: C
Explanation

Explanation/Reference:
An EEM policy is an entity that defines an event and the actions to be taken when that event occurs. There are two types of EEM policies: an applet or a script. An applet is a simple form of policy that is defined within the CLI configuration.
answer 'event manager applet ondemand event register
action 1.0 syslog priority critical msg `This is a message from ondemand' <="" p="" style="box-sizing: border-box;">
There are two ways to manually run an EEM policy. EEM usually schedules and runs policies on the basis of an event specification that is contained within the policy itself. The event none command allows EEM to identify an EEM policy that can be manually triggered. To run the policy, use either the action policy command in applet configuration mode or the event manager run command in privileged EXEC mode.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/eem/configuration/xe-3s/eem-xe-3s-book/eem-policy-cli.html

QUESTION 29
Refer to the exhibit. Which command must be applied to R2 for an OSPF neighborship to form?

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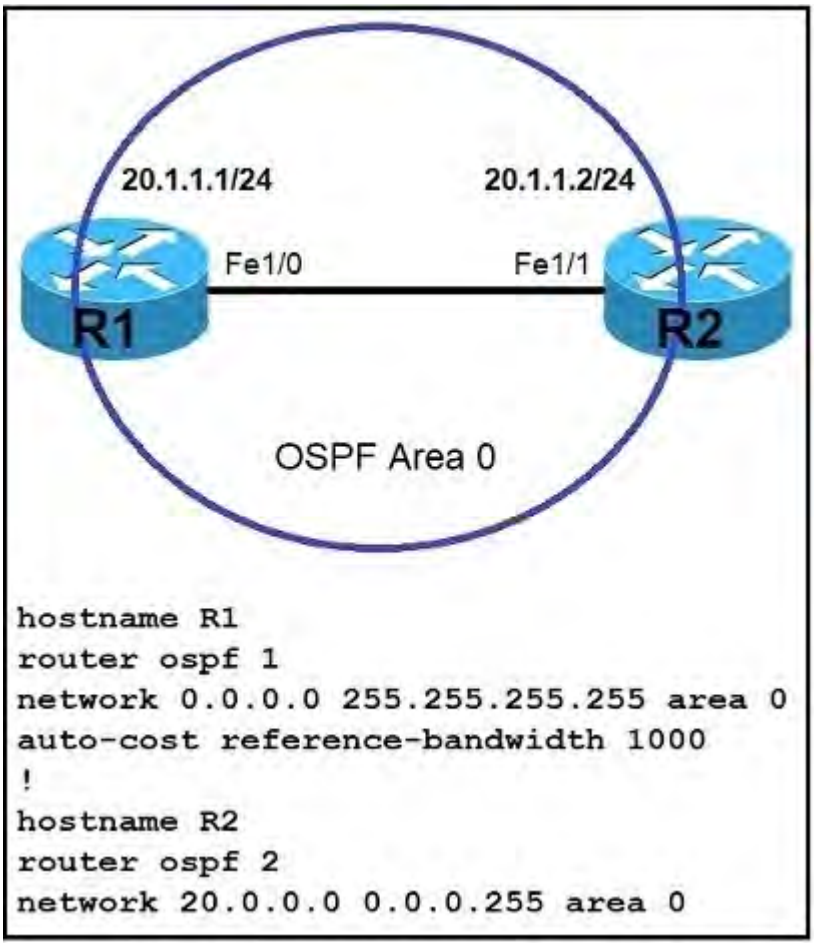

A. network 20.1.1.2.0.0.0.0 area 0
B. network 20.1.1.2 255.255.0.0. area 0
C. network 20.1.1.2.0.0.255.255 area 0
D. network 20.1.1.2 255.255.255 area 0

Correct Answer: A
Explanation

Explanation/Reference:
The network 20.0.0.0 0.0.0.255 area 0 command on R2 did not cover the IP address of Fa1/1 interface of R2 so OSPF did not run on this interface. Therefore we have to use the command network 20.1.1.2 0.0.255.255 area 0 to turn on OSPF on this interface.
Note: The command network 20.1.1.2 0.0.255.255 area 0 can be used too so this answer is also correct but answer C is the best answer here. The network 0.0.0.0 255.255.255.255 area 0 command on R1 will run OSPF on all active

QUESTION 30
An engineer is troubleshooting the Ap join process using DNS. Which FQDN must be resolvable on the network for the access points to successfully register to the WLC?

A. wlcbostname.domain.com
B. cisco-capwap-controller.domain.com
C. ap-manager.domain.com
D. primary-wlc.domain.com

Correct Answer: B
Explanation

Explanation/Reference:

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DNS: If you have configured your DHCP server to provide both option 006 (DNS server address) and option 015 (domain name) information, the AP can obtain WLC addresses from the DNS server. The process works as follows:

1. The AP gets its IP address from DHCP with options 6 and 15 configured.
2. The AP can obtain the IP address of the DNS server from the DHCP option.
3. The AP uses this information to perform a hostname lookup using CISCO-CAPWAP-CONTROLLER.<localdomain>, which resolves to available WLC management interface IP addresses (IPv4 or IPv6, or both).
4. The AP can then perform a directed message to associate to responsive WLCs.

To prevent all APs from joining a single controller based on a DNS name resolution, the domain name may vary; this is what is done to dispatch APs to different controllers across the enterprise network, based on different domain names that are configured in their respective DNS scopes.

QUESTION 31
Which three methods does Cisco DNA Centre use to discover devices? (Choose three)

A. CDP
B. SNMP
C. LLDP
D. ping
E. NETCONF
F. a specified range of IP addresses

Correct Answer: ACF
Explanation

Explanation/Reference:

There are three ways for you to discover devices:

- Use Cisco Discovery Protocol (CDP) and provide a seed IP address.
- Specify a range of IP addresses. (A maximum range of 4096 devices is supported.)
- Use Link Layer Discovery Protocol (LLDP) and provide a seed IP address.

QUESTION 32
Which two operations are valid for RESTCONF? (Choose two.)

A. HEAD
B. REMOVE
C. PULL
D. PATCH
E. ADD
F. PUSH

Correct Answer: AD
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b_166_programmability_cg/b_166_programmability_cg_chapter_01011.html

QUESTION 33
Refer to the exhibit.

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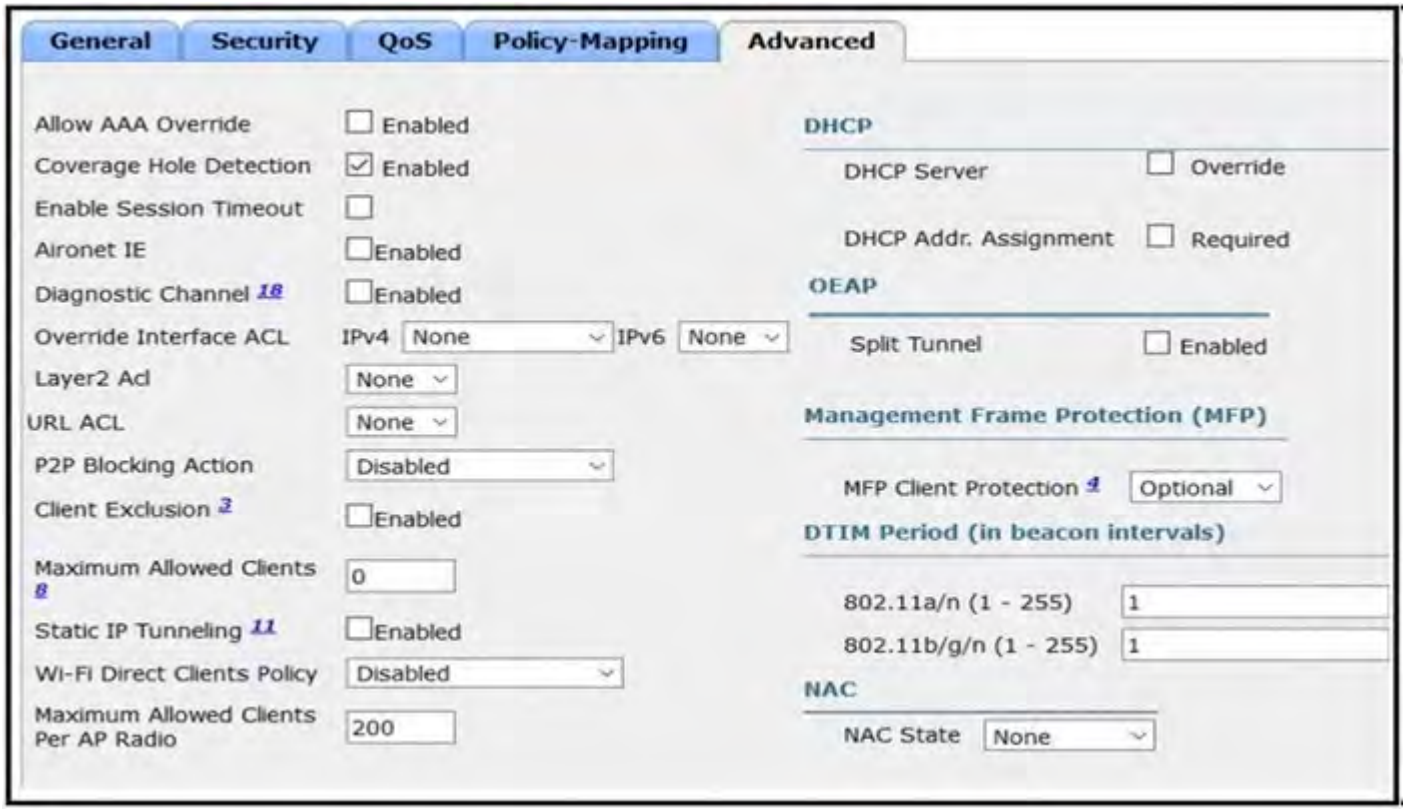

An engineer is investigating why guest users are able to access other guest user devices when the users are connected to the customer guest WLAN. What action resolves this issue?

A. implement MFP client protection
B. implement split tunneling
C. implement P2P blocking
D. implement Wi-Fi direct policy

Correct Answer: C
Explanation

Explanation/Reference:
Reference: 2.3 Ensure `Peer-to-Peer Blocking Action` is set to `Drop' for All `Wireless LAN Identifiers' (Scored)

Description:
This control determines whether the Wireless LAN Controller is configured to prevent clients connected to the same Wireless Local Area Controller from communicating with each other. Wireless Client Isolation prevents wireless clients from communicating with each other over the RF. Packets that arrive on the wireless interface are forwarded only out the wired interface of an Access Point. One wireless client could potentially compromise another client sharing the same wireless network.

QUESTION 34
Refer to the exhibit.

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```
*Sep 12 03:12:42.884: %LINK-3-UPDOWN: Interface Port-channel10, changed state to down
*Sep 12 03:12:43.887: %LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel10, changed state to down
*Sep 12 03:12:46.889: %EC-5-L3DONTBNDL2: Gi0/1 suspended: LACP currently not enabled on the remote port.
*Sep 12 03:12:49.263: %EC-5-L3DONTBNDL2: Gi0/0 suspended: LACP currently not enabled on the remote port.
```

A network engineer troubleshoots an issue with the port channel between SW1 and SW2. which command resolves the issue?

A. SW2(config-if)#switchport mode trunk
B. SW1(config-if)#channel-group 10 mode active
C. SW1(config-if)#channel-group 10 mode desirable
D. SW2(config-if)#channel-group 10 mode on

Correct Answer: B
Explanation

Explanation/Reference:
B is correct for LACP.

QUESTION 35
In an SD-Access solution what is the role of a fabric edge node?

A. to connect external Layer 3- network to the SD-Access fabric
B. to connect wired endpoint to the SD-Access fabric
C. to advertise fabric IP address space to external network
D. to connect the fusion router to the SD-Access fabric

Correct Answer: B
Explanation

Explanation/Reference:
+ Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.

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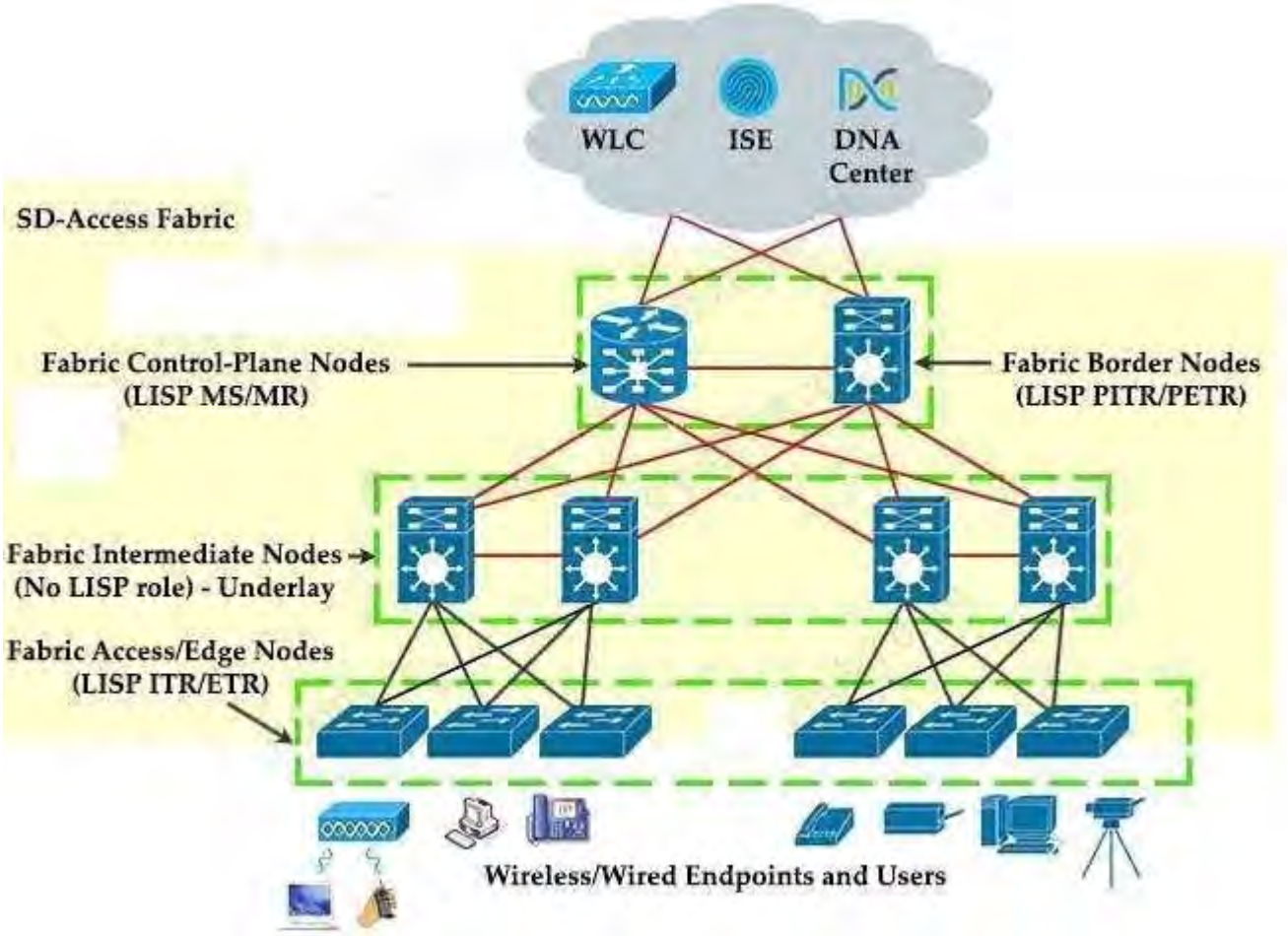

QUESTION 36
Refer to the exhibit.

```
DSW1#sh spanning-tree int fa1/0/7

Vlan                Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
VLAN0001            Desg FWD 2         128.9    P2p Edge
VLAN0010            Desg FWD 2         128.9    P2p Edge
VLAN0020            Desg FWD 2         128.9    P2p Edge
VLAN0030            Desg FWD 2         128.9    P2p Edge
VLAN0040            Desg FWD 2         128.9    P2p Edge
```

How was spanning-tree configured on this interface?

A. By entering the command spanning-tree portfast trunk in the interface configuration mode.
B. By entering the command spanning-tree portfast in the interface configuration mode.
C. By entering the command spanning-tree mst1 vlan 10,20,30,40 in the global configuration mode.
D. By entering the command spanning-tree vlan 10,20,30,40 root primary in the interface configuration mode.

Correct Answer: A
Explanation

QUESTION 37
Refer to the exhibit.

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```
<?xml version="1.0" encoding="utf-8"?>
        <data xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"/>
```

What does the error message relay to the administrator who is trying to configure a Cisco IOS device?

A. A NETCONF request was made for a data model that does not exist.
B. The device received a valid NETCONF request and serviced it without error.
C. A NETCONF message with valid content based on the YANG data models was made, but the request failed.
D. The NETCONF running datastore is currently locked.

Correct Answer: A
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/storage-networking/management/200933-YANG-NETCONF-Configuration-Validation.html

QUESTION 38
Which exhibit displays a valid JSON file?

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A.
```
{
    "hostname": "edge_router_1"
    "interfaces": {
        "GigabitEthernet1/1"
        "GigabitEthernet1/2"
        "GigabitEthernet1/3"
    }
}
```

B.
```
{
    "hostname": "edge_router_1",
    "interfaces": {
        "GigabitEthernet1/1",
        "GigabitEthernet1/2",
        "GigabitEthernet1/3",
    },
}
```

C.
```
{
    "hostname": "edge_router_1"
    "interfaces": [
        "GigabitEthernet1/1"
        "GigabitEthernet1/2"
        "GigabitEthernet1/3"
    ]
}
```

D.
```
{
    "hostname": "edge_router_1",
    "interfaces": [
        "GigabitEthernet1/1",
        "GigabitEthernet1/2",
        "GigabitEthernet1/3"
    ]
}
```

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

Correct Answer: D
Explanation

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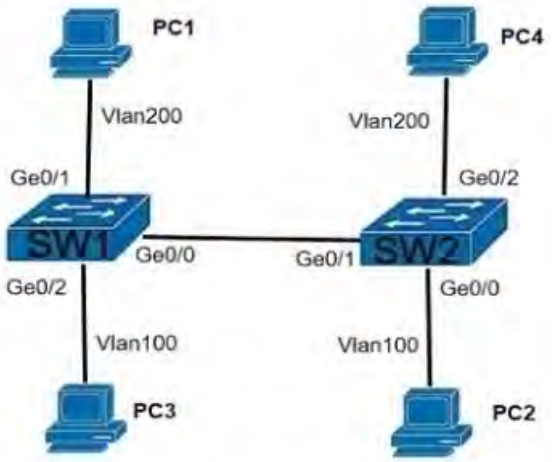
QUESTION 39
Refer to the exhibit.

```
SW1# show interfaces gigabitethernet 0/0 switchport
Name: Gi0/0
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 99 (NATIVE)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
...output omitted...

SW2# show interfaces gigabitethernet 0/1 switchport
Name: Gi0/1
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: trunk
Administrative Trunking Encapsulation: negotiate
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 99 (NATIVE)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
...output omitted...
```



The connecting between SW1 and SW2 is not operational. Which two actions resolve the issue? (Choose two)

A. configure switchport mode access on SW2
B. configure switchport nonegotiate on SW2
C. configure switchport mode trunk on SW2
D. configure switchport nonegotiate on SW1
E. configure switchport mode dynamic desirable on SW2

Correct Answer: CE
Explanation

QUESTION 40
How does the RIB differ from the FIB?

A. The RIB is used to create network topologies and routing tables. The FIB is a list of routes to particular network destinations.
B. The FIB includes many routes a single destination. The RIB is the best route to a single destination.
C. The RIB includes many routes to the same destination prefix. The FIB contains only the best route
D. The FIB maintains network topologies and routing tables. The RIB is a list of routes to particular network destinations.

Correct Answer: C

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Explanation

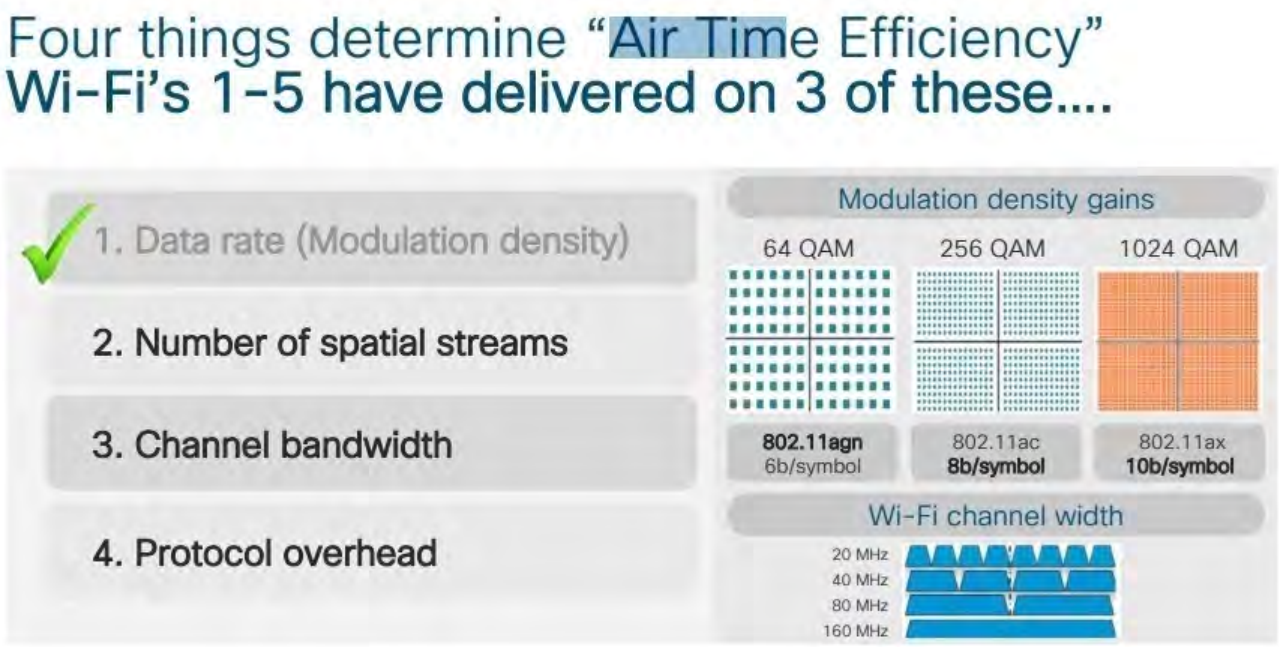
Explanation/Reference:
RIBs maintain the network topologies and routing tables for each protocol. This would include many routes going to the same destination prefix. FIBs are the best route from the possibly many protocols in the RIBs pushed down to fast forwarding lookup memory for the best path(s).

QUESTION 41
Which three elements determine Air Time efficiency? (Choose three)

A. evert-driven RRM
B. data rate (modulation density) or QAM
C. channel bandwidth
D. number of spatial streams and spatial reuse
E. RF group leader
F. dynamic channel assignment

Correct Answer: BCD
Explanation

Explanation/Reference:
https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2020/pdf/BRKEWN-3010.pdf



QUESTION 42
Refer to the exhibit.

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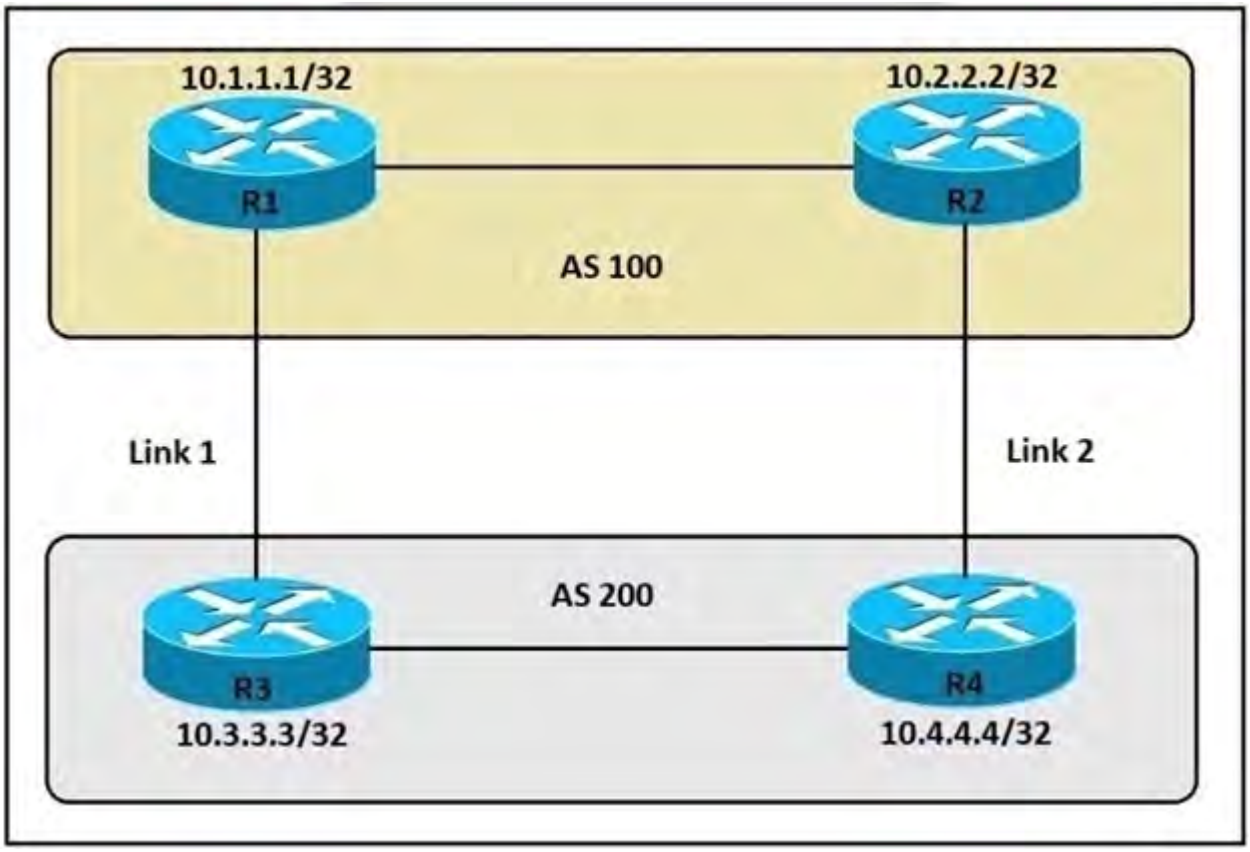

An engineer must ensure that all traffic leaving AS 200 will choose Link 2 as the exit point.

Assuming that all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers, which configuration accomplishes this task?

A. R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 200 200 200
R3(config)#router bgp 200
R3#(config-router)#neighbor 10.1.1.1 route-map PREPEND out

B. R4(config)#route-map PREPEND permit 10
R4(config-route-map)#set as-path prepend 100 100 100
R4(config)#router bgp 200
R4(config-router)#neighbor 10.2.2.2 route-map PREPEND in

C. R4(config)#route-map PREPEND permit 10
R4(config-route-map)#set as-path prepend 200 200 200
R4(config)#router bgp 200
R4(config-router)#neighbor 10.2.2.2 route-map PREPEND out

D. R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 100 100 100
R3(config)#router bgp 200
R3(config-router)#neighbor 10.1.1.1 route-map PREPEND in

Correct Answer: A
Explanation

Explanation/Reference:
R3 advertises BGP updates to R1 with multiple AS 100 so R3 believes the path to reach AS 200 via R3 is farther than R2 so R3 will choose R2 to forward traffic to AS 200.

QUESTION 43
Refer to the exhibit. An engineer implemented several configuration changes and receives the logging message on switch1. Which action should the engineer take to resolve this issue?

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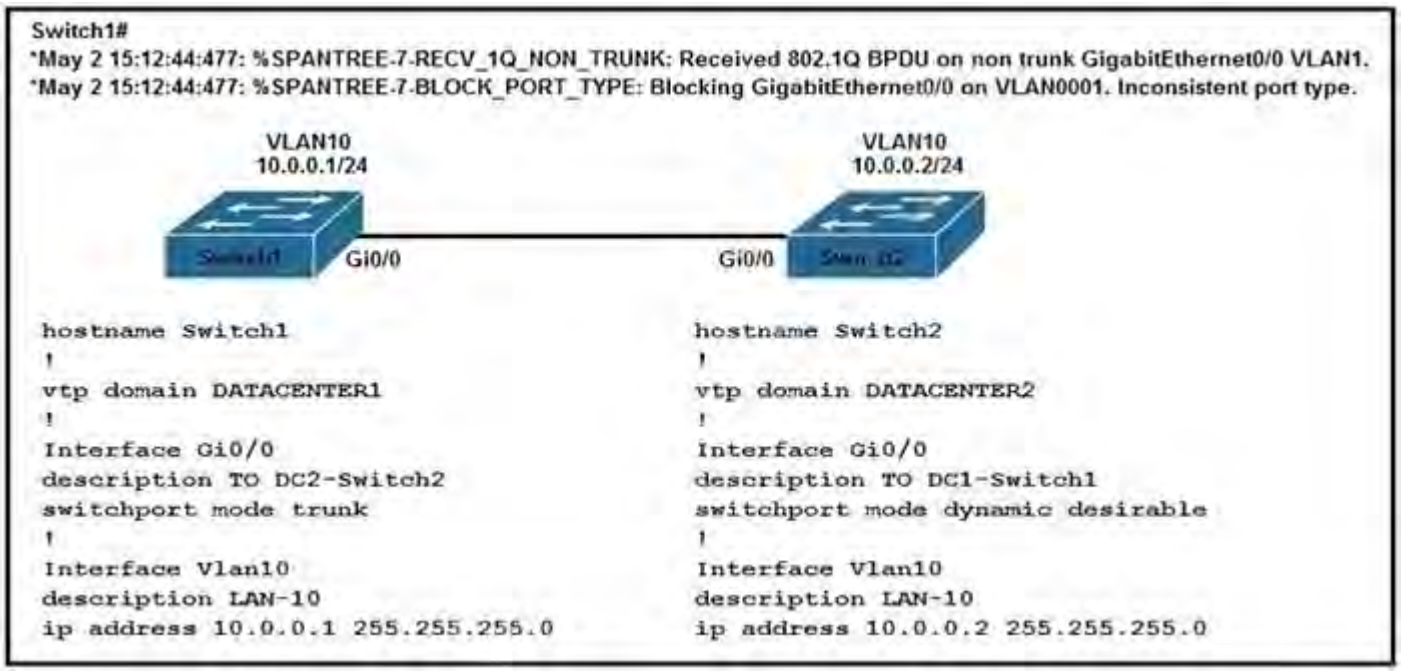

A. Change the VTP domain to match on both switches
B. Change Switch2 to switch port mode dynamic auto
C. Change Switch1 to switch port mode dynamic auto
D. Change Switch1 to switch port mode dynamic desirable

Correct Answer: A
Explanation

Explanation/Reference:
DTP requires that the VTP domain match between the two switches.

QUESTION 44
Refer to the exhibit.

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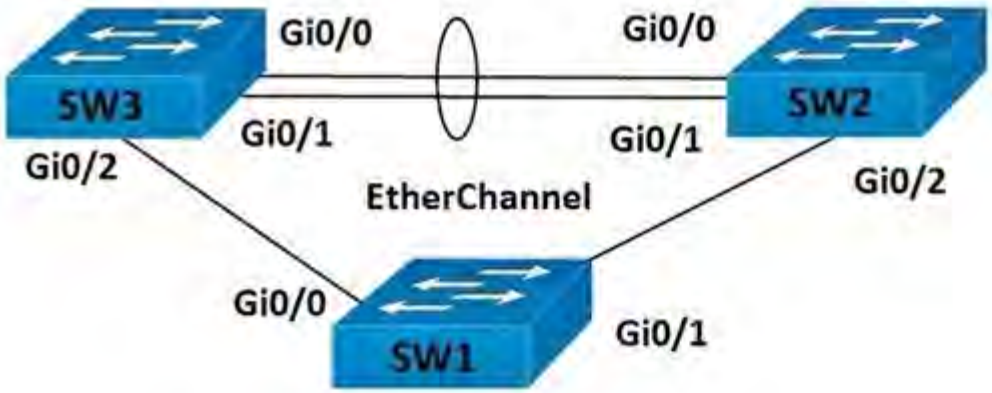


```
SW2# show etherchannel summary
Flags: D - down P - bundled in port-
channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate
aggregator
M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port-channel Protocol Ports
------+-------------+-----------+--
-------------------------------------
1 Pol(S D ) LACP G10/0(I) G10/1 (I)

SW2# show run interface
gigabitethernet 0/0

Building configuration…
Current configuration : 189 bytes
!
interface GigabitEthernet0/0
switchport trunk encapsulation is1
switchport mode accesss
switchport nonegotiate

SW2# show run interface
gigabitetheret 0/1

Building configuration…
Current configuration : 189 bytes
!
interface Gigabitethernat0/1
switchport trunk encapsulation is1
switchport mode trunk
switchport nonegotiate
channel-group 1 mode active end
```

```
SW3# show etherchannel summary
Flags: D - down P - bundled in port-
channel
I - stand alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 s - Layer2
U - in use f - failed to allocate
aggregator
M - not in use, minimum links not
met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port channel Protocol Ports
------+-------------+-----------+--
-------------------------------------
1 Pol(S D ) LACP G10/0(I) G1O/1(I)

SW3# show run interface
gigabitethernet 0/0

Building configuration…
Current configuration : 151 bytes
!
interface Gigabitethernat0/0
switchport trunk encapsulation is1
switchport mode trunk
switchport nonegotiate
channel-group 1 mode passive end

SW3# show run interface
gigabitethernet 0/1

Building configuration…
Current configuration : 151 bytes
!
interface GigabitEthernet0/1
switchport trunk encapsulation is1
switchport mode trunk
switchport nonegotiate
channel-group 1 mode passive end
```

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The EtherChannel between SW2 and SW3 is not operational which action resolves this issue?

A. Configure the channel-group mode on SW2 Gi0/0 and Gi0/1 to on.
B. Configure the channel-group mode on SW3 Gi0/0 and Gi0/1 to active.
C. Configure the mode on SW2 Gi0/0 to trunk.
D. Configure the mode on SW2 Gi0/1 to access.

Correct Answer: C
Explanation

Explanation/Reference:
TCKOON is right the immage is missing the channel-group 1 mode active statement but if you google it you will find the right picture.

QUESTION 45
Refer to the exhibit.

```
event snmp oid 1.3.6.1.4.1.9.9.109.1.1.1.1.3 get-type next entry-op gt entry-val 80 poll-interval 5
!
action 1.0 cli command "enable"
action 2.0 syslog msg "high cpu"
action 3.0 cli command "term length 0"
```

An engineer must create a script that appends the output of the show process cpu sorted command to a file. Which action completes the configuration?

A. action 4.0 syslog command "show process cpu sorted | append flash:high-cpu-file"
B. action 4.0 cli command "show process cpu sorted | append flash:high-cpu-file"
C. action 4.0 ens-event "show process cpu sorted | append flash:high-cpu-file"
D. action 4.0 publish-event "show process cpu sorted | append flash:high-cpu-file"

Correct Answer: B
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/eem/command/eem-cr-book/eem-cr-a2.html

QUESTION 46
Which benefit is offered by a cloud infrastructure deployment but is lacking in an on-premises deployment?

A. efficient scalability
B. virtualization
C. storage capacity
D. supported systems

Correct Answer: A
Explanation

QUESTION 47
Refer to the exhibit.

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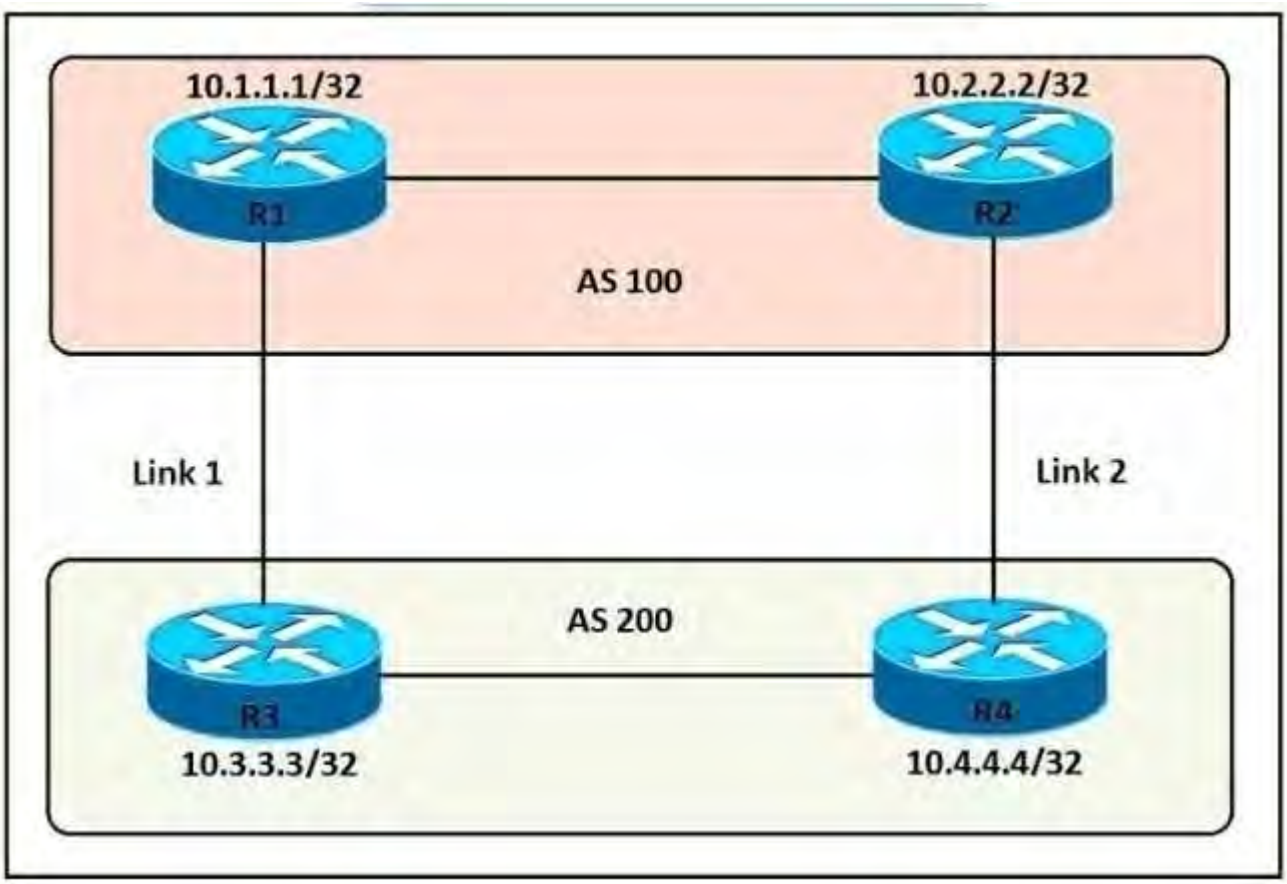

An engineer must ensure that all traffic leaving AS 200 will choose Link 2 as an entry point. Assuming that all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers, which configuration accomplish task?

```
R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 200 200 200

R3(config)#router bgp 200
R3(config-router)#neighbor 10.1.1.1 route-map PREPEND out

R4(config)#route-map PREPEND permit 10
R4(config-route-map)#set as-path prepend 100 100 100

R4(config)#router bgp 200
R4(config-router)#neighbor 10.2.2.2 route-map PREPEND in

R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 100 100 100

R3(config)#router bgp 200
R3(config-router)#neighbor 10.1.1.1 route-map PREPEND in

R4(config)#route-map PREPEND permit 10
R4(config-route-map)#set as-path prepend 200 200 200

R4(config)#router bgp 200
R4(config-router)#neighbor 10.2.2.2 route-map PREPEND out
```

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

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D. Option D

Correct Answer: A
Explanation

QUESTION 48
When using TLS for syslog, which configuration allows for secure and reliable transportation of messages to its default port?

A. logging host 10.2.3.4 vrf mgmt transport tcp port 6514
B. logging host 10.2.3.4 vrf mgmt transport udp port 6514
C. logging host 10.2.3.4 vrf mgmt transport tcp port 514
D. logging host 10.2.3.4 vrf mgmt transport udp port 514

Correct Answer: A
Explanation

Explanation/Reference:
The TCP port 6514 has been allocated as the default port for syslog over Transport Layer Security (TLS).

TCP/514 - shell cmd
UDP/514 - syslog
TCP/6514 - syslog over TLS
UDP/6514 - syslog over DTLS

Reference: https://tools.ietf.org/html/rfc5425

QUESTION 49
What is a characteristic of MACsec?

A. 802.1AE provides encryption and authentication services
B. 802.1AE is bult between the host and switch using the MKA protocol, which negotiates encryption keys based on the master session key from a successful 802 1X session
C. 802.1AE is bult between the host and switch using the MKA protocol using keys generated via the Diffie-Hellman algorithm (anonymous encryption mode)
D. 802.1AE is negotiated using Cisco AnyConnect NAM and the SAP protocol

Correct Answer: B
Explanation

Explanation/Reference:
MACsec, defined in 802.1AE, provides MAC-layer encryption over wired networks by using out-of-band methods for encryption keying. The MACsec Key Agreement (MKA) Protocol provides the required session keys and manages the required encryption keys. MKA and MACsec are implemented after successful authentication using the 802.1x Extensible Authentication Protocol (EAP-TLS) or Pre Shared Key (PSK) framework.

Reference:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9300/software/release/16-9/configuration_guide/sec/b_169_sec_9300_cg/macsec_encryption.html

QUESTION 50
Refer to the exhibit.

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```
ip nat pool Internet 10.10.10.1 10.10.10.100 netmask 255.255.255.0
ip nat inside source route-map Users pool Internet
!
ip access-list standard Users
  10 permit 192.168.1.0 0.0.0.255
!
route-map Users permit 10
  match ip address Users
```

Which action completes the configuration to achieve a dynamic continuous mapped NAT for all users?

A. Configure a match-host type NAT pool
B. Reconfigure the pool to use the 192.168 1 0 address range
C. Increase the NAT pool size to support 254 usable addresses
D. Configure a one-to-one type NAT pool

Correct Answer: C
Explanation

Explanation/Reference:
Why would you want to chose match-host option? This is just to ensure that you're matching the host portion of the IP range given of the Inside local to the inside global, which is not very applicable here.
Go for C, this is much more applicable, if we assume we need to use the whole IP range of /24 and not just 1-100.

QUESTION 51
Running the script causes the output in the exhibit. Which change to the first line of the script resolves the error?

```
import ncclient

with ncclient.manager.connect(
   host = '192.168.1.1',
   port=830,
   username = 'root',
   password = 'test398101469!',
   allow_agent = False) as m:
   print(m.get_config('running').data_xml)

Output
$ python get_config.py
Traceback (most recent call last ) :
   File "get_config.py", line 3, in <module>
      with ncclient.manager.connect (host = '192.168.1.1, port = 830, username = 'root',
AttributeError: 'module' object has no attribute 'manager'
```

A. from ncclient import manager
B. import manager
C. from ncclient import *
D. ncclient manager import

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Correct Answer: C
Explanation

Explanation/Reference:
"from module_name import * "
All the functions and constants can be imported using *.

QUESTION 52
Which two methods are used to reduce the AP coverage area? (Choose two.)

A. Increase minimum mandatory data rate
B. Reduce AP transmit power
C. Disable 2.4 GHz and use only 5 GHz.
D. Enable Fastlane.
E. Reduce channel width from 40 MHz to 20 MHz

Correct Answer: AB
Explanation

Explanation/Reference:
Reducing the channel width does not affect directly the coverage area.
Settings the transmit power and increases the minimum data rate do.

QUESTION 53
What is a characteristic of a next-generation firewall?

A. only required at the network perimeter
B. required in each layer of the network
C. filters traffic using Layer 3 and Layer 4 information only
D. provides intrusion prevention

Correct Answer: D
Explanation

Explanation/Reference:
The feature set for NGFWs build upon traditional firewall features by including critical security functions like intrusion prevention, VPN, and anti-virus, and even encrypted web traffic inspection to help prevent packets containing malicious content from entering the network

QUESTION 54
Refer to exhibit.

VLANs 50 and 60 exist on the trunk links between all switches All access ports on SW3 are configured for VLAN 50 and SW1 is the VTP server.
Which command ensures that SW3 receives frames only from VLAN 50?

A. SW1 (config)#vtp pruning
B. SW3(config)#vtp mode transparent
C. SW2(config)=vtp pruning
D. SW1 (config >tp mode transparent

Correct Answer: A

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Explanation

Explanation/Reference:
SW3 does not have VLAN 60 so it should not receive traffic for this VLAN (sent from SW2). Therefore we should configure VTP Pruning on SW3 so that SW2 does not forward VLAN 60 traffic to SW3. Also notice that we need to configure pruning on SW1 (the VTP Server), not SW2.

Reference: https://www.orbit-computer-solutions.com/vtp-pruning/

QUESTION 55
What is used to perform OoS packet classification?

A. the Options field in the Layer 3 header
B. the Type field in the Layer 2 frame
C. the Flags field in the Layer 3 header
D. the TOS field in the Layer 3 header

Correct Answer: D
Explanation

Explanation/Reference:
Type of service, when we talk about PACKET, means layer 3

QUESTION 56
Which method should an engineer use to deal with a long-standing contention issue between any two VMs on the same host?

A. Adjust the resource reservation limits
B. Live migrate the VM to another host
C. Reset the VM
D. Reset the host

Correct Answer: A
Explanation

QUESTION 57
What is the function of a VTEP in VXLAN?

A. provide the routing underlay and overlay for VXLAN headers
B. dynamically discover the location of end hosts in a VXLAN fabric
C. encapsulate and de-encapsulate traffic into and out of the VXLAN fabric
D. statically point to end host locations of the VXLAN fabric

Correct Answer: C
Explanation

Explanation/Reference:
VXLAN Tunnel Endpoint
The VTEP device uses this IP address to encapsulate Ethernet frames and transmits the encapsulated packets to the transport network through the IP interface.

QUESTION 58
What does the Cisco DNA REST response Indicate?

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```
{
   "response": [
      {
         "family": "Routers",
         "interfaceCount": "12",
         "lineCardCount": "9",
         "platformId": "ASR1001-X",
         "reachabilityFailureReason": "",
         "reachabilityStatus": "Reachable",
         "hostname": "RouterASR-1",
         "macAddress": "00:c8:8b:80:bb:00",
      },
      {
         "family": "Switches and Hubs",
         "interfaceCount": "41",
         "lineCardCount": "2",
         "platformId": "C9300-24UX",
         "reachabilityFailureReason": "",
         "reachabilityStatus": "Authentication Failed",
         "hostname": "cat9000-1",
         "macAddress": "f8:7b:20:67:62:80",
      },
      {
         "family": "Switches and Hubs",
         "interfaceCount": "59",
         "lineCardCount": "2",
         "platformId": "WS-C3850-48U-E",
         "reachabilityFailureReason": "",
         "reachabilityStatus": "Unreachable",
         "hostname": "cat3850-1",
         "macAddress": "cc:d8:c1:15:d2:80",
      }
   ],
   "version": "1.0"
}
```


A. Cisco DNA Center has the incorrect credentials for cat3850-1
B. Cisco DNA Center Is unable to communicate with cat9000-1
C. Cisco DNA Center has the incorrect credentials for cat9000-1
D. Cisco DNA Center has the Incorrect credentials for RouterASR-1

Correct Answer: C
Explanation

Explanation/Reference:
"reachabilityStatus";"Authentication Failed",

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"hostname":"cat9000-1",

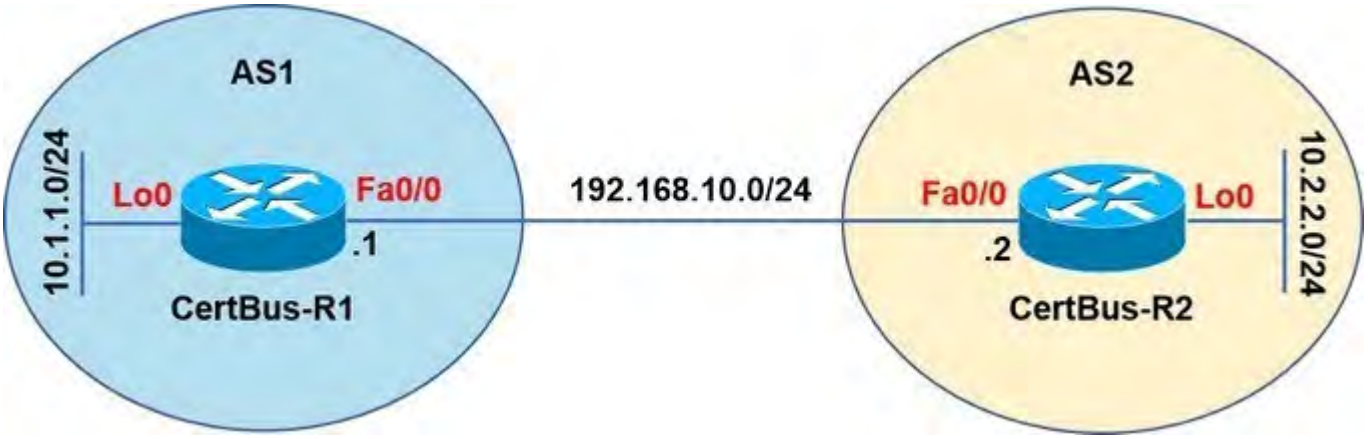
QUESTION 59
What is one benefit of implementing a VSS architecture?

A. It provides multiple points of management for redundancy and improved support.
B. It uses GLBP to balance traffic between gateways.
C. It provides a single point of management for improved efficiency.
D. It uses a single database to manage configuration for multiple switches.

Correct Answer: C
Explanation

Explanation/Reference:
Support Virtual Switching System (VSS) to provide resiliency, and increased operational efficiency with a single point of management; VSS increases operational efficiency by simplifying the network, reducing switch management overhead by at least 50 percent. ?Single configuration file and node to manage. Removes the need to configure redundant switches twice with identical policies.

QUESTION 60
Refer to the exhibit.



Which configuration establishes EBGP neighborship between these two directly connected neighbors and exchanges the loopback network of the two routers through BGP?

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A

```
CertBus-R1(config)#router bgp 1
CertBus-R1(config-router)#neighbor 192.168.10.2 remote-as 2
CertBus-R1(config-router)#network 10.1.1.0 mask 255.255.255.0

CertBus-R2(config)#router bgp 2
CertBus-R2(config-router)#neighbor 192.168.10.1 remote-as 1
CertBus-R2(config-router)#network 10.2.2.0 mask 255.255.255.0
```

B

```
CertBus-R1(config)#router bgp 1
CertBus-R1(config-router)#neighbor 10.2.2.2 remote-as 2
CertBus-R1(config-router)#network 10.1.1.0 mask 255.255.255.0

CertBus-R2(config)#router bgp 2
CertBus-R2(config-router)#neighbor 10.1.1.1 remote-as 1
CertBus-R2(config-router)#network 10.2.2.0 mask 255.255.255.0
```

C

```
CertBus-R1(config)#router bgp 1
CertBus-R1(config-router)#neighbor 192.168.10.2 remote-as 2
CertBus-R1(config-router)#network 10.0.0.0 mask 255.0.0.0

CertBus-R2(config)#router bgp 2
CertBus-R2(config-router)#neighbor 192.168.10.1 remote-as 1
CertBus-R2(config-router)#network 10.0.0.0 mask 255.0.0.0
```

D

```
CertBus-R1(config)#router bgp 1
CertBus-R1(config-router)#neighbor 10.2.2.2 remote-as 2
CertBus-R1(config-router)#neighbor 10.2.2.2 update-source lo0
CertBus-R1(config-router)#network 10.1.1.0 mask 255.255.255.0

CertBus-R2(config)#router bgp 2
CertBus-R2(config-router)#neighbor 10.1.1.1 remote-as 1
CertBus-R2(config-router)#neighbor 10.1.1.1 update-source lo0
CertBus-R2(config-router)#network 10.2.2.0 mask 255.255.255.0
```

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

Correct Answer: A
Explanation

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Explanation/Reference:
With BGP, we must advertise the correct network and subnet mask in the "network" command (in this case network 10.1.1.0/24 on R1 and network 10.2.2.0/24 on R2). BGP is very strict in the routing advertisements. In other words, BGP only advertises the network which exists exactly in the routing table. In this case, if you put the command "network x.x.0.0 mask 255.255.0.0" or "network x.0.0.0 mask 255.0.0.0" or "network x.x.x.x mask 255.255.255.255" then BGP will not advertise anything.
It is easy to establish eBGP neighborship via the direct link. But let's see what are required when we want to establish eBGP neighborship via their loopback interfaces. We will need two commands:
+ the command "neighbor 10.1.1.1 ebgp-multihop 2" on R1 and "neighbor 10.2.2.2 ebgpmultihop 2" on R1. This command increases the TTL value to 2 so that BGP updates can reach the BGP neighbor which is two hops away.
+ Answer `R1 (config) #router bgp 1
R1 (config-router) #neighbor 192.168.10.2 remote-as 2
R1 (config-router) #network 10.1.1.0 mask 255.255.255.0 R2 (config) #router bgp 2
R2 (config-router) #neighbor 192.168.10.1 remote-as 1
R2 (config-router) #network 10.2.2.0 mask 255.255.255.0 Quick Wireless Summary
Cisco Access Points (APs) can operate in one of two modes: autonomous or lightweight + Autonomous: self-sufficient and standalone. Used for small wireless networks. + Lightweight: A Cisco lightweight AP (LAP) has to join a Wireless LAN Controller (WLC) to function.
LAP and WLC communicate with each other via a logical pair of CAPWAP tunnels. ?Control and Provisioning for Wireless Access Point (CAPWAP) is an IETF standard for control messaging for setup, authentication and operations between APs and WLCs. CAPWAP is similar to LWAPP except the following differences:
+CAPWAP uses Datagram Transport Layer Security (DTLS) for authentication and encryption to protect traffic between APs and controllers. LWAPP uses AES. + CAPWAP has a dynamic maximum transmission unit (MTU) discovery mechanism. + CAPWAP runs on UDP ports 5246 (control messages) and 5247 (data messages) An LAP operates in one of six different modes:
+ Local mode (default mode): measures noise floor and interference, and scans for intrusion detection (IDS) events every 180 seconds on unused channels + FlexConnect, formerly known as Hybrid Remote Edge AP (H-REAP), mode: allows data traffic to be switched locally and not go back to the controller. The FlexConnect AP can perform standalone client authentication and switch VLAN traffic locally even when it's disconnected to the WLC (Local Switched). FlexConnect AP can also tunnel (via CAPWAP) both user wireless data and control traffic to
a centralized WLC (Central Switched).
+ Monitor mode: does not handle data traffic between clients and the infrastructure. It acts like a sensor for location-based services (LBS), rogue AP detection, and IDS + Rogue detector mode: monitor for rogue APs. It does not handle data at all. + Sniffer mode: run as a sniffer and captures and forwards all the packets on a particular channel to a remote machine where you can use protocol analysis tool (Wireshark, Airopeek, etc) to review the packets and diagnose issues. Strictly used for troubleshooting purposes. + Bridge mode: bridge together the WLAN and the wired infrastructure together. Mobility Express is the ability to use an access point (AP) as a controller instead of a real WLAN controller. But this solution is only suitable for small to midsize, or multi-site branch locations where you might not want to invest in a dedicated WLC. A Mobility Express WLC can support up to 100 Aps

QUESTION 61
An engineer measures the Wi-Fi coverage at a customer site. The RSSI values are recorded as follows:

Location A: -72 dBm
Location B: -75 dBm
Location C: -65 dBm
Location D: -80 dBm

Which two statemets does the engineer use to explain these values to the customer? (Choose two)

A. The signl strength at location B is 10 dB better than location C
B. Location D has the strongest RF signal strength.
C. The signal strength at location C is too weak to support web surfing.
D. The RF signal strength at location B is 50% weaker than location A
E. The RF signal strength at location C is 10 times stronger than location B

Correct Answer: DE

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Explanation

QUESTION 62
"HTTP/1.1 204 No Content" is returned when the curl -i -X DELETE command is issued. Which situation has occurred?

A. The object could not be located at the URI path.
B. The command succeeded in deleting the object.
C. The object was located at the URI, but it could not be deleted.
D. The URI was invalid.

Correct Answer: B
Explanation

Explanation/Reference:
The HTTP 204 No Content success status response code indicates that a request has succeeded, but that the client doesn't need to navigate away from its current page.

QUESTION 63
Which encryption hashing algorithm does NTP use for authentication?

A. SSL
B. MD5
C. AES128
D. AES256

Correct Answer: B
Explanation

Explanation/Reference:
An example of configuring NTP authentication is shown below:
Router1(config)#ntp authentication-key 2 md5 certbus
Router1(config)#ntp authenticate
Router1(config)#ntp trusted-key 2

QUESTION 64
A customer requests a network design that supports these requirements:

1. FHRP redundancy
2. multivendor router environment
3. IPv4 and IPv6 hosts

Which protocol does the design include?

A. GLBP
B. VRRP version 2
C. VRRP version 3
D. HSRP version 2

Correct Answer: C
Explanation

Explanation/Reference:
HSRP and GLBP are Cisco propietary, so they won't work in a multivendor setup. VRRPv3 us multivendor and supports IPv4 and 6.

QUESTION 65
Under which network conditions is an outbound QoS policy that is applied on a router WAN interface most beneficial?

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A. under all network conditions
B. under network convergence conditions
C. under traffic classification and marking conditions
D. under interface saturation conditions

Correct Answer: D
Explanation

Explanation/Reference:
Marking is done at the edge, QOS performs no useful functions other than marking unless there is congestion.

QUESTION 66
A customer has recently implemented a new wireless infrastructure using WLC-5520S at a site directly next to a large commercial airport Users report that they intermittently lose Wi-Fi connectivity, and troubleshooting reveals it is due to frequent channel changes Which two actions fix this issue? (Choose two)

A. Remove UNII-2 and Extended UNII-2 channels from the 5 Ghz channel list
B. Restore the OCA default settings because this automatically avoids channel interference
C. Disable DFS channels to prevent interference writ) Doppler radar
D. Enable DFS channels because they are immune to radar interference
E. Configure channels on the UNII-2 and the Extended UNII-2 sub-bands of the 5 Ghz band only

Correct Answer: AC
Explanation

QUESTION 67
What is the output of this code?

```
def get_credentials():
    creds={'username': 'cisco', 'password': 'c3577dc8ae4e36c0bfb6fe5399079338'}
    return (creds.get('username'))

print(get_credentials())
```

A. username: cisco
B. get_credentials
C. username
D. cisco

Correct Answer: D
Explanation

QUESTION 68
Refer to the exhibit.

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```
Tunnel100 is up, line protocol is up
 Hardware is Tunnel
 Internet address is 192.168.200.1/24
 MTU 17912 bytes, BW 100 Kbit/sec, DLY 50000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation TUNNEL, loopback not set
 Keepalive set (10 sec), retries 3
 Tunnel source 209.165.202.129 (GigabitEthernet0/1)
  Tunnel Subblocks:
   src-track:
     Tunnel100 source tracking subblock associated with GigabitEthernet0/1
      Set of tunnels with source GigabitEthernet0/1, 1 members (includes iterators), on interface <OK>
 Tunnel protocol/transport GRE/IP
  Key disabled, sequencing disabled
  Checksumming of packets disabled
 Tunnel TTL 255, Fast tunneling enabled
 Tunnel transport MTU 1476 bytes
```

A network engineer configures a GRE tunnel and enters the show interface tunnel command. What does the output confirm about the configuration?

A. The keepalive value is modified from the default value.
B. Interface tracking is configured.
C. The tunnel mode is set to the default.
D. The physical interface MTU is 1476 bytes.

Correct Answer: C
Explanation

Explanation/Reference:
Not A : configure keepalive without define value, it default is 10.
Not B : Its refer to PHYSICAL interface MTU, what output shown is the MTU of the Tunnel transport MTU
Not D : It seem to be tracking , but not. The output "source tracking" may lead us to believe it is.
Actually when define the tunnel source use phyiscal interface, this tunnel source output shown.
C is correct answer : No tunnel mode define it default is GRE/IP.

QUESTION 69
Refer to the exhibit.

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```
Switch2#
01:25:08: %PM-4-ERR_DISABLE: channel-misconfig error detected on
Fa0/23, putting Fa0/23 in err-disable
state
01:25:08: %PM-4-ERR_DISABLE: channel-misconfig error detected on
Fa0/24, putting Fa0/24 in err-disable
state
Switch2#

Switch1#show etherchannel summary

!output omitted

Group  Port-channel  Protocol    Ports
------------------------------------------
1      Po2(SD)          LACP      Fa1/0/23(D)


Switch2#show etherchannel summary

!output omitted

Group  Port-channel  Protocol    Ports
------------------------------------------------------------
1      Po1(SD)           -        Fa0/23(D)     Fa0/24(D)
```

An engineer is configuring an EtherChannel between Switch1 and Switch2 and notices the console message on Switch2. Based on the output, which action resolves this issue?

A. Configure less member ports on Switch2.
B. Configure the same port channel interface number on both switches
C. Configure the same EtherChannel protocol on both switches
D. Configure more member ports on Switch1.

Correct Answer: C
Explanation

Explanation/Reference:
In this case, we are using your EtherChannel without a negotiation protocol on Switch2. As a result, if the opposite switch is not also configured for EtherChannel operation on the respective ports, there is a danger of a switching loop. The EtherChannel Misconfiguration Guard tries to prevent that loop from occuring by disabling all the ports bundled in the EtherChannel.

QUESTION 70
Which TCP setting is tuned to minimize the risk of fragmentation on a GRE/IP tunnel?

A. MTU
B. Window size
C. MRU
D. MSS

Correct Answer: D

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Explanation

Explanation/Reference:
The TCP Maximum Segment Size (TCP MSS) defines the maximum amount of data that a host is willing to accept in a single TCP/IP datagram. This TCP/IP datagram might be fragmented at the IP layer. The MSS value is sent as a TCP header option only in TCP SYN segments. Each side of a TCP connection reports its MSS value to the other side. Contrary to popular belief, the MSS value is not negotiated between hosts. The sending host is required to limit the size of data in a single TCP segment to a value less than or equal to the MSS reported by the receiving host. TCP MSS takes care of fragmentation at the two endpoints of a TCP connection, but it does not handle the case where there is a smaller MTU link in the middle between these two endpoints. PMTUD was developed in order to avoid fragmentation in the path between the endpoints. It is used to dynamically determine the lowest MTU along the path from a packet's source to its destination.
Reference: http://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulationgre/ 25885-pmtud-ipfrag.html (there is some examples of how TCP MSS avoids IP Fragmentation in this link but it is too long so if you want to read please visit this link) Note: IP fragmentation involves breaking a datagram into a number of pieces that can be reassembled later.

QUESTION 71
A network administrator has designed a network with two multilayer switches on the distribution layer, which act as default gateways for the end hosts. Which two technologies allow every end host in a VLAN to use both gateways? (Choose two)

A. GLBP
B. HSRP
C. MHSRP
D. VSS
E. VRRP

Correct Answer: AD
Explanation

Explanation/Reference:
VSS combine two switches into one logical switch.
both of them have their own control and data plane,
both of their data plane will keep alive,
once the master control plane is down,
the other take charge.

MHSRP
mhsrp can't let all host use both gateway, 50% host use gateway1, another 50% host use gateway 2 (fromWINDSON)

QUESTION 72
How does an on-premises infrastructure compare to a cloud infrastructure?

A. On-premises can increase compute power faster than cloud
B. On-premises requires less power and cooling resources than cloud
C. On-premises offers faster deployment than cloud
D. On-premises offers lower latency for physically adjacent systems than cloud.

Correct Answer: D
Explanation

QUESTION 73
Refer to the exhibit.

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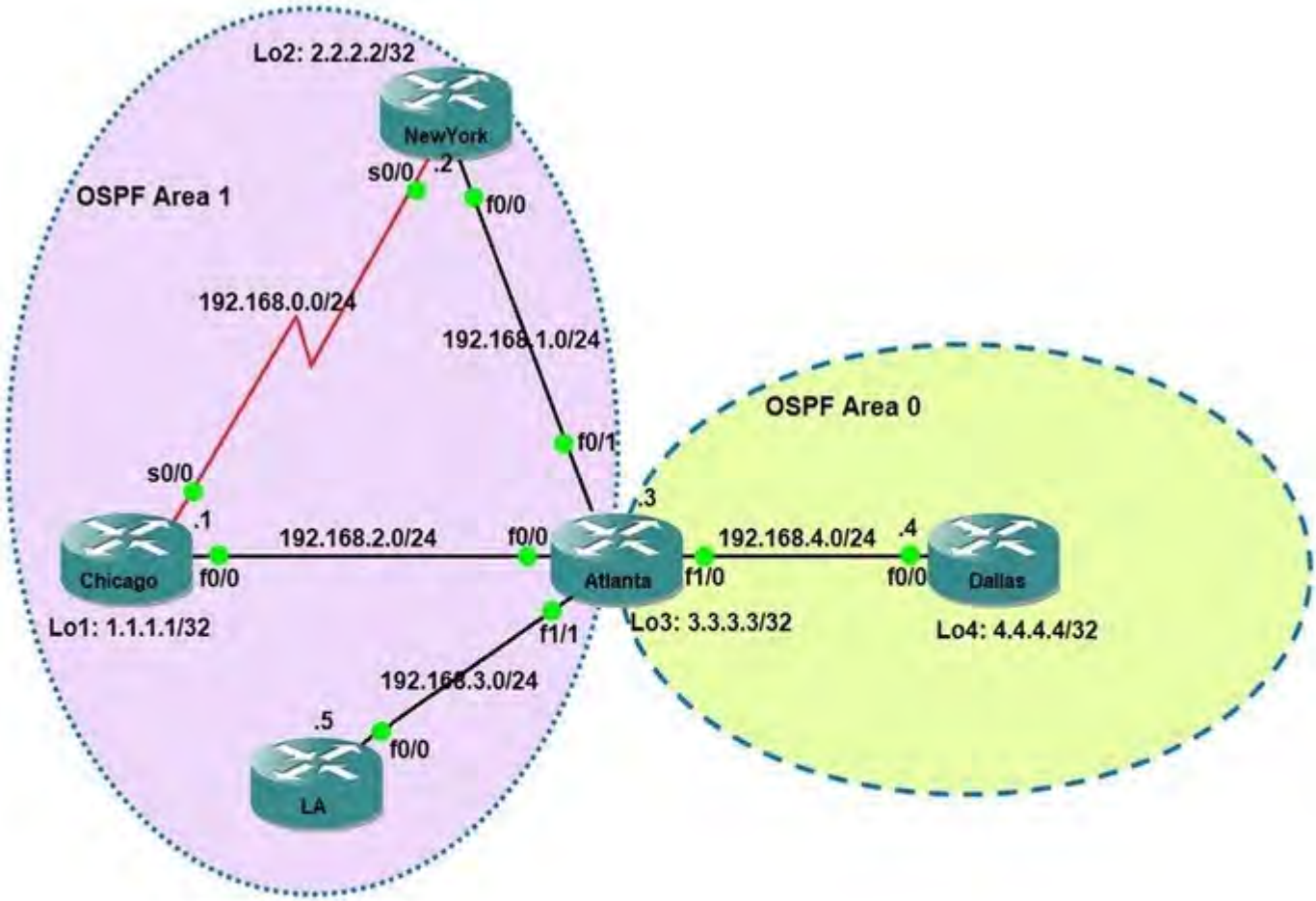


```
Chicago#show ip ospf nei
Neighbor ID     Pri   State           Dead Time   Address         Interface
3.3.3.3           1   FULL/BDR        00:00:37    192.168.2.3     FastEthernet0/0
2.2.2.2           0   FULL/  -        00:00:32    192.168.0.2     Serial0/0
Chicago#
Chicago#show ip ospf int bri
Interface    PID   Area            IP Address/Mask    Cost  State Nbrs F/C
Fa0/0        1     1               192.168.2.1/24     40000 DR    1/1
Se0/0        1     1               192.168.0.1/24     65535 P2P   1/1
Chicago#
```

Which router is the designated router on the segment 192.168.0.0/24?

A. This segment has no designated router because it is a nonbroadcast network type.
B. This segment has no designated router because it is a p2p network type.
C. Router Chicago because it has a lower router ID
D. Router NewYork because it has a higher router ID

Correct Answer: B
Explanation

QUESTION 74
Refer to the exhibit.

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```
Extended IP access list EGRESS
10 permit ip 10.0.0.0 0.0.0.255 any
!
<Output Omitted>
!
interface GigabitEthernet0/0
ip address 209.165.200.225  255.255.255.0
ip access-group EGRESS out
duplex auto
speed auto
media-type rj45
!
```

An engineer must block all traffic from a router to its directly connected subnet 209.165.200.0/24. The engineer applies access control list EGRESS in the outbound direction on the GigabitEthernet0/0 interface of the router. However, the router can still ping hosts on the 209.165.200.0/24 subnet.

Which explanation of this behavior is true?

A. Access control lists that are applied outbound to a router interface do not affect traffic that is sourced from the router.
B. Only standard access control lists can block traffic from a source IP address.
C. After an access control list is applied to an interface, that interface must be shut and no shut for the access control list to take effect.
D. The access control list must contain an explicit deny to block traffic from the router.

Correct Answer: A
Explanation

Explanation/Reference:
Locally (control plane) generated traffic goes from control plane directly to "tx-ring". That is different from processing/forwarding of Transit traffic. Please see the platform's "packet journey" session of Cisco Live or other documentation to see the different internal path & processing for: Transit, forus, exception, locally generated.

QUESTION 75
Refer to the exhibit.

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```
ip vrf BLUE
 rd 1:1
!
interface Vlan100
 description GLOBAL_INTERFACE
 ip address 10.10.1.254 255.255.255.0
!
access-list 101 permit ip 10.10.5.0 0.0.0.255 10.10.1.0
255.255.255.0
!
route-map VRF_TO_GLOBAL permit 10
 match ip address 101
set global
!
interface Vlan500
 description VRF_BLUE
 ip vrf forwarding BLUE
 ip address 10.10.5.254 255.255.255.0
ip policy route-map VRF_TO_GLOBAL
```

An engineer attempts to create a configuration to allow the Blue VRF to leak Into the global fouling table, but the configuration does not function as expected. Which action resolves this Issue?

A. Change the access-list destination mask to a wildcard.
B. Change the source network that Is specified in access-list 101.
C. Change the route-map configuration to VRF_BLUE.
D. Change the access-list number in the route map

Correct Answer: A
Explanation

QUESTION 76
An engineer must configure HSRP group 300 on a Cisco IOS router. When the router is functional, it must be the active HSRP router

The peer router has been configured using the default priority value.

Which three commands are required? (Choose three.)

A. standby version 2
   standby 300 priority 110
   standby 300 preempt
B. standby 300 priority 110
   standby 300 timers 1 110
C. standby version 2
   standby 300 priority 90
   standby 300 preempt
D. standby 300 priority 90
   standby 300 preempt

Correct Answer: A

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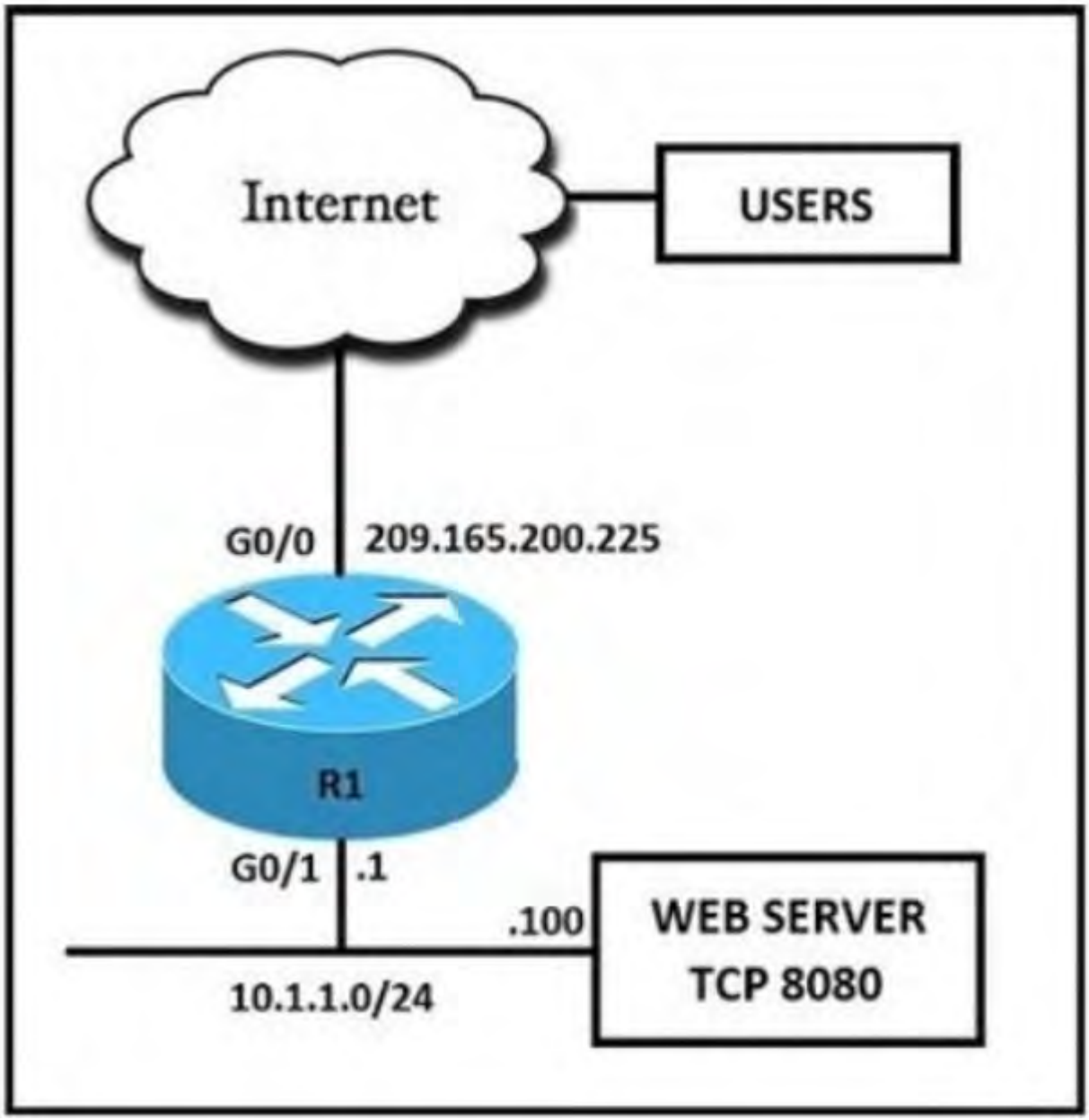
Explanation

Explanation/Reference:
In HSRP version 1, group numbers are supported the range from 0 to 255 and HSRP version 2 expands the group number range from 0 to 4095.
* So it should HSRP v2 to assign the group no. 300
* Default priority of the HSRP is 100 and the Router with higher priority no. will become Active Router. So the priority set over 100 for active router.

QUESTION 77
Refer to the exhibit.



Cloud deployments require less frequent upgrades than

External users require HTTP connectivity to an internal company web server that is listening on TCP port 8080. Which command set accomplishes this requirement?

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```
interface G0/0
ip address 209.165.200.225 255.255.255.224
ip nat inside

interface G0/1
ip address 10.1.1.1 255.255.255.0
ip nat outside

ip nat inside source static tcp 10.1.1.1 8080 209.165.200.225 80
```

```
interface G0/0
ip address 209.165.200.225 255.255.255.224
ip nat outside

interface G0/1
ip address 10.1.1.1 255.255.255.0
ip nat inside

ip nat inside source static tcp 10.1.1.100 8080 interface G0/0 80
```

```
interface G0/0
ip address 209.165.200.225 255.255.255.224
ip nat inside
```

```
interface G0/0
ip address 209.165.200.225 255.255.255.224
ip nat inside

interface G0/1
ip address 10.1.1.1 255.255.255.0
ip nat outside

ip nat inside source static tcp 209.165.200.225 80 10.1.1.100 8080
```

```
interface G0/0
ip address 209.165.200.225 255.255.255.224
ip nat outside

interface G0/1
ip address 10.1.1.1 255.255.255.0
ip nat inside

ip nat inside source static tcp 209.165.200.225 8080 10.1.1.100 8080
```

External users require HTTP connectivity to an internal company web server that is listening on TCP port

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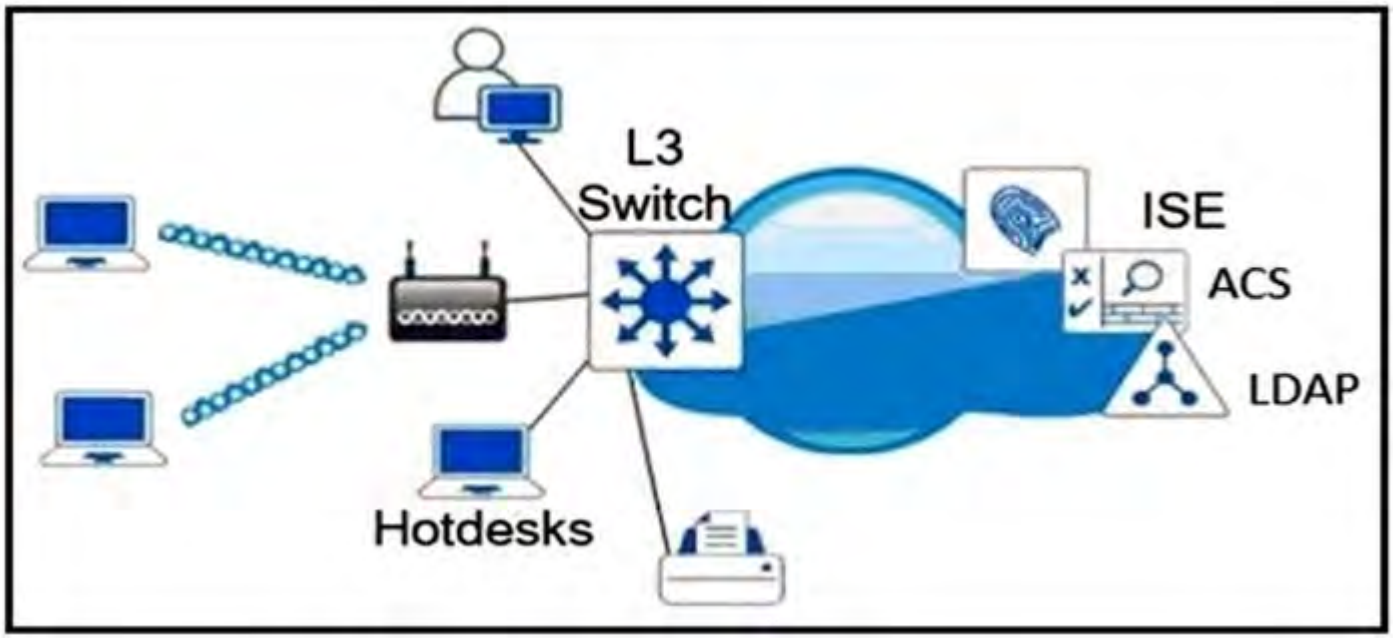
8080. Which command set accomplishes this requirement?

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

Correct Answer: B
Explanation

QUESTION 78
Refer to the exhibit



Which single security feature is recommended to provide Network Access Control m the enterprise?

A. MAB
B. 802.1X
C. WebAuth
D. port security sticky MAC

Correct Answer: B
Explanation

QUESTION 79
Where is radio resource management performed in a Cisco SD-Access wireless solution?

A. DNA Center
B. control plane node
C. wireless controller
D. Cisco CMX

Correct Answer: C
Explanation

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Explanation/Reference:
Fabric wireless controllers manage and control the fabric-mode APs using the same general model as the traditional local-mode controllers which offers the same operational advantages such as mobility control and radio resource management. A significant difference is that client traffic from wireless endpoints is not tunnelled from the APs to the wireless controller. Instead, communication from wireless clients is encapsulated in VXLAN by the fabric APs which build a tunnel to their first-hop fabric edge node. Wireless traffic it tunneled to the edge nodes as the edge nodes provide fabric services such as the Layer 3 Anycast Gateway, policy, and traffic enforcement.
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html

QUESTION 80
What is a benefit of a virtual machine when compared with a physical server?

A. Multiple virtual servers can be deployed on the same physical server without having to buy additional hardware.
B. Virtual machines increase server processing performance.
C. The CPU and RAM resources on a virtual machine cannot be affected by other virtual machines.
D. Deploying a virtual machine is technically less complex than deploying a physical server.

Correct Answer: A
Explanation

Explanation/Reference:
Definitely not C, because CPU resources are shared in all well known hypervisors, RAM may be shared or not (depends on hypervisor)

QUESTION 81
Refer to the exhibit.

```
Extended IP access list EGRESS
10 permit ip 10.1.100.0  0.0.0.255 10.1.2.0 0.0.0.255
20 deny ip any any
```

An engineer must modify the access control list EGRESS to allow all IP traffic from subnet 10.1.10.0/24 to 10.1.2.0/24. The access control list is applied in the outbound direction on router interface GigabitEthernet 0/1.

Which configuration command set will allow this traffic without disrupting existing traffic flows?

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A.
```
config t
 ip access-list extended EGRESS
 permit ip 10.1.10.0 255.255.255.0 10.1.2.0 255.255.255.0
```

B.
```
config t
 ip access-list extended EGRESS2
 permit ip 10.1.10.0 0.0.0.255 10.1.2.0 0.0.0.255
 permit ip 10.1.100.0 0.0.0.255 10.1.2.0 0.0.0.255
 deny ip any any
 !
 interface g0/1
 no ip access-group EGRESS out
 ip access-group EGRESS2 out
```

C.
```
config t
 ip access-list extended EGRESS
 permit ip 10.1.10.0 0.0.0.255 10.1.2.0 0.0.0.255
```

D.
```
config t
 ip access-list extended EGRESS
 5 permit ip 10.1.10.0 0.0.0.255 10.1.2.0 0.0.0.255
```

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

Correct Answer: D
Explanation

QUESTION 82
Which command set configures RSPAN to capture outgoing traffic from VLAN3 on interface GigabitEthernet 0/3 while ignoring other VLAN trafic on the same interface?

A. monitor session 2 source interface gigabitethernet 0/3 tx
monitor session 2 filter vlan 1 - 2 , 4 - 4094
B. monitor session 2 source interface gigabitethernet 0/3 tx
monitor session 2 filter vlan 3
C. monitor session 2 source interface gigabitethernet 0/3 rx
monitor session 2 filter vlan 1 - 2 , 4 - 4094
D. monitor session 2 source interface gigabitethernet 0/3 rx
monitor session 2 filter vlan 3

Correct Answer: B

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Explanation

QUESTION 83
Refer to the exhibit.

```
R2#show standby
FastEthernet1/0 - Group 50
  State is Active
    2 state changes, last state change 00:04:02
  Virtual IP address is 10.10.1.1
  Active virtual MAC address is 0000.0c07.ac32 (MAC In Use)
    Local virtual MAC address is 0000.0c07.ac32 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.504 secs
  Preemption enabled, delay reload 90 secs
  Active router is local
  Standby router is unknown
  Priority 200 (configured 200)
    Track interface FastEthernet0/0 state Up decrement 20
  Group name is "hsrp-Fa1/0-50" (default)
R2#
%IP-4-DUPADDR: Duplicate address 10.10.1.1 on FastEthernet1/0, sourced by 0000.0c07.ac28
R2#
```

An engineer configures a new HSRP group. While reviewing the HSRP status, the engineer sees the logging message generated on R2. Which is the cause of the message?

A. The same virtual IP address has been configured for two HSRP groups
B. The HSRP configuration has caused a spanning-tree loop
C. The HSRP configuration has caused a routing loop
D. A PC is on the network using the IP address 10.10.1.1

Correct Answer: A
Explanation

QUESTION 84
If the noise floor is -90 dBm and the wireless client is receiving a signal of -75 dBm, what is the SNR?

A. 15
B. 1.2
C. -165
D. 83

Correct Answer: A
Explanation

Explanation/Reference:
There is obviously a typo here, you cant go to the + range.. Maximum achievable strength is -30dbm. The question should say -75, not 75.

QUESTION 85

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Which two threats does AMP4E have the ability to block? (Choose two.)

A. DDoS
B. ransomware
C. Microsoft Word macro attack
D. SQL injection
E. email phishing

Correct Answer: BC
Explanation

Explanation/Reference:
https://www.cisco.com/c/dam/en/us/products/collateral/security/amp-for-endpoints/c11-742008-00-cisco-amp-for-endpoints-wp-v2a.pdf

QUESTION 86
What is one fact about Cisco SD-Access wireless network deployments?

A. The access point is part of the fabric underlay
B. The WLC is part of the fabric underlay
C. The access point is part the fabric overlay
D. The wireless client is part of the fabric overlay

Correct Answer: C
Explanation

Explanation/Reference:
Access Points
+ AP is directly connected to FE (or to an extended node switch)
+ AP is part of Fabric overlay

Reference: https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2018/pdf/BRKEWN-2020.pdf

QUESTION 87
Refer to the exhibit.

```
aaa new-model
aaa authentication login default local-case enable
aaa authentication login ADMIN local-case
username CCNP secret Str0ngP@ssw0rd!
line 0 4
   login authentication ADMIN
```

An engineer must create a configuration that executes the show run command and then terminates the session when user CCNP logs in. Which configuration change is required?

A. Add the access-class keyword to the username command
B. Add the access-class keyword to the aaa authentication command
C. Add the autocommand keyword to the username command
D. Add the autocommand keyword to the aaa authentication command

Correct Answer: C
Explanation

Explanation/Reference:

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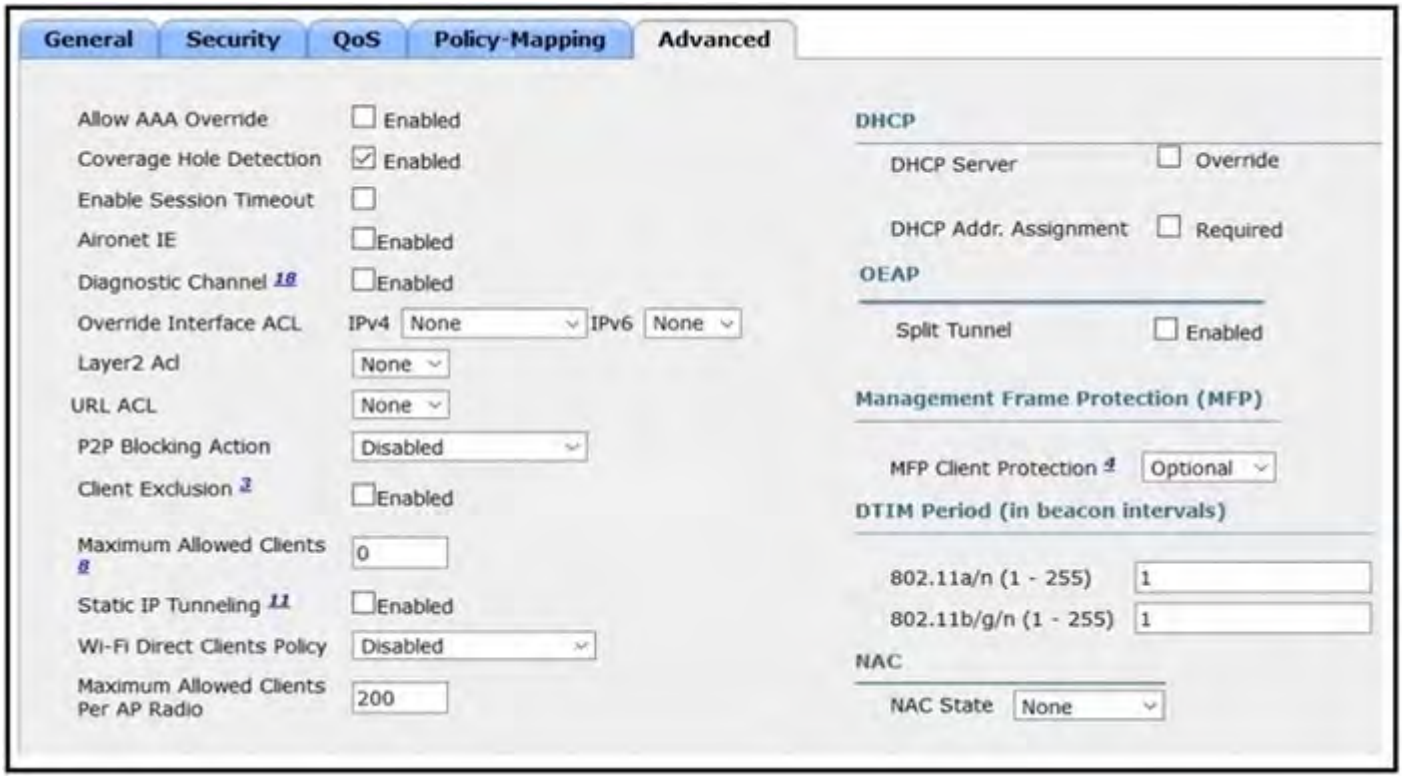
The autocommand causes the specified command to be issued automatically after the user logs in. When the command is complete, the session is terminated. Because the command can be any length and can contain embedded spaces, commands using the autocommand keyword must be the last option on the line. In this specific question, we have to enter this line username CCNP autocommand show running-config.

QUESTION 88
Refer to the exhibit. An engineer has configured Cisco ISE to assign VLANs to clients based on their method of authentication, but this is not working as expected.

Which action will resolve this issue?



A. enable AAA override
B. utilize RADIUS profiling
C. require a DHCP address assignment
D. set a NAC state

Correct Answer: B
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_010110111.html

QUESTION 89
Refer to the exhibit.

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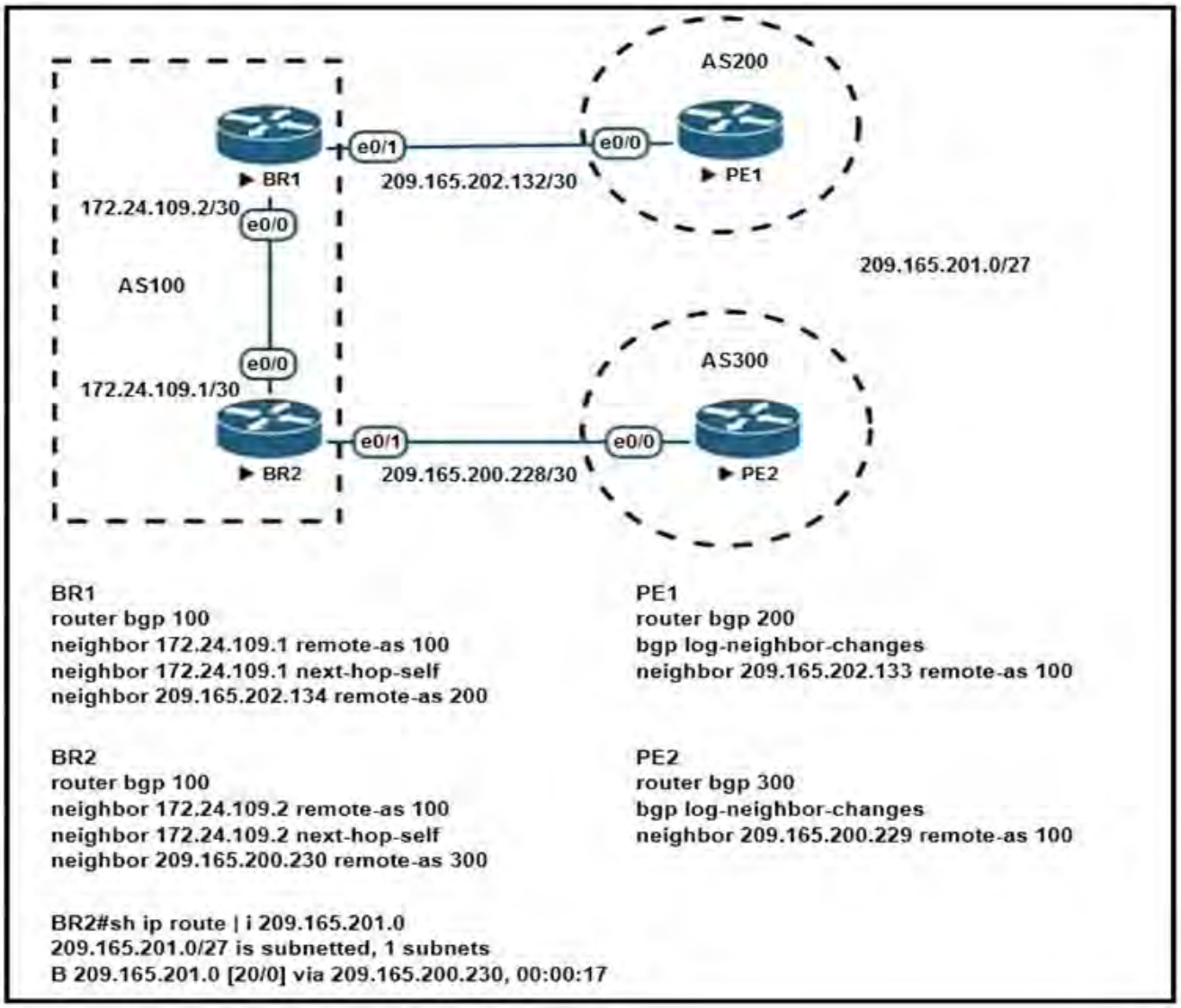

Which configuration change will force BR2 to reach 209 165 201 0/27 via BR1?

A. Set the weight attribute to 65.535 on BR1 toward PE1.
B. Set the local preference to 150 on PE1 toward BR1 outbound
C. Set the MED to 1 on PE2 toward BR2 outbound.
D. Set the origin to igp on BR2 toward PE2 inbound.

Correct Answer: C
Explanation

Explanation/Reference:
(laboratory validated)
BR2#show ip bgp
Network Next Hop Metric LocPrf Weight Path
* i209.165.201.0/27 172.24.109.2 0 100 0 200 i
*> 209.165.200.230 0 0 300 i
BR2#show ip bgp
Network Next Hop Metric LocPrf Weight Path

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* i209.165.201.0/27 172.24.109.2 0 100 0 200 i
*> 209.165.200.230 1 0 300 i

QUESTION 90
Refer to the exhibit.

```
with manager.connect(host=192.168.0.1, port=22,
                     username='admin', password='password1', hostkey_verify=True,
                     device_params={'name':'nexus'}) as m:
```

What does the snippet of code achieve?

A. It creates a temporary connection to a Cisco Nexus device and retrieves a token to be used for API calls.
B. It opens a tunnel and encapsulates the login information, if the host key is correct.
C. It opens an ncclient connection to a Cisco Nexus device and maintains it for the duration of the context.
D. It creates an SSH connection using the SSH key that is stored, and the password is ignored.

Correct Answer: C
Explanation

Explanation/Reference:
ncclient is a Python library that facilitates client-side scripting and application development around the NETCONF protocol. The above Python snippet uses the ncclient to connect and establish a NETCONF session to a Nexus device (which is also a NETCONF server).

QUESTION 91
Refer to the exhibit.

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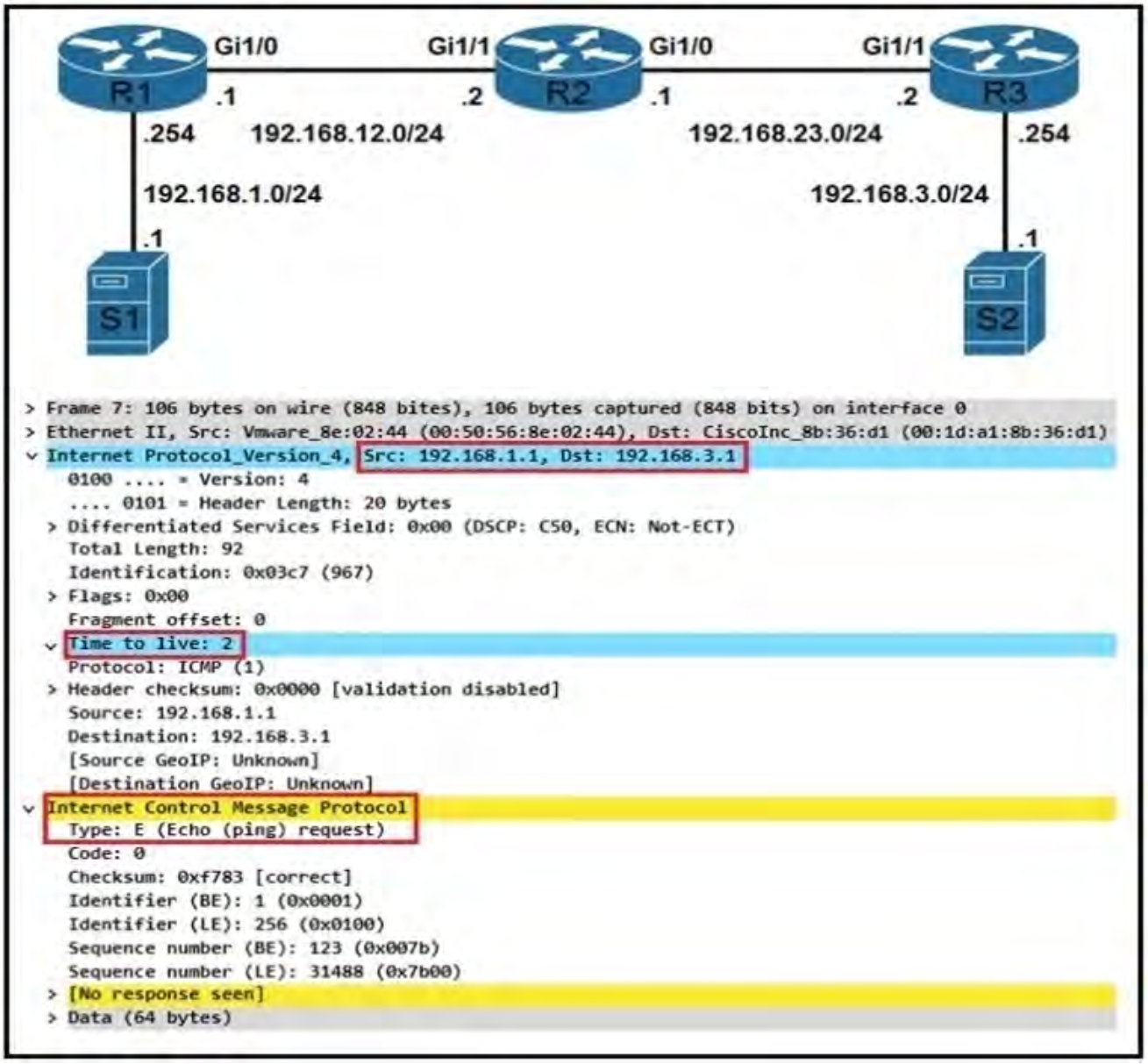

Which troubleshooting a routing issue, an engineer issues a ping from S1 to S2. When two actions from the initial value of the TTL? (Choose two.)

A. The packet reaches R3, and the TTL expires
B. R2 replies with a TTL exceeded message
C. R3 replies with a TTL exceeded message.
D. The packet reaches R2, and the TTL expires.
E. R1 replies with a TTL exceeded message
F. The packet reaches R1 and the TTL expires.

Correct Answer: BD
Explanation

Explanation/Reference:

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When a labeled packet is received with a TTL of 1, the receiving LSR drops the packet and sends an ICMP message "time exceeded" (type 11, code 0) to the originator of the IP packet. This is the same behavior that a router would exhibit with an IP packet that had an expiring TTL.

https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_010111000.html#:~:text=The%20local%20and%20FlexConnect%20mode% 20access%20points,spend%20about%2050%20milliseconds%20on%20each%20channel.

QUESTION 92
Which controller is capable of acting as a STUN server during the onboarding process of Edge devices?

A. vBond
B. vSmart
C. vManage
D. PNP server

Correct Answer: A
Explanation

Explanation/Reference:
vbond-as-stun-server:
Enable Session Traversal Utilities for NAT (STUN) to allow the tunnel interface to discover its public IP address and port number when the vEdge router is located behind a NAT (on vEdge routers only).
When you configure this command, vEdge routers can exchange their public IP addresses and port numbers over private TLOCs.
With this configuration, the vEdge router uses the vBond orchestrator as a STUN server, so the router can determine its public IP address and public port number. (With this configuration, the router cannot learn the type of NAT that it is behind.)
No overlay network control traffic is sent and no keys are exchanged over tunnel interface configured to the the vBond orchestrator as a STUN server. However, BFD does come up on the tunnel, and data traffic can be sent on it.

QUESTION 93
What are two benefits of virtual switching when compared to hardware switching? (Choose two.)

A. increased MTU size
B. hardware independence
C. VM-level isolation
D. increased flexibility
E. extended 802.1Q VLAN range

Correct Answer: BD
Explanation

QUESTION 94
Refer to the exhibit.

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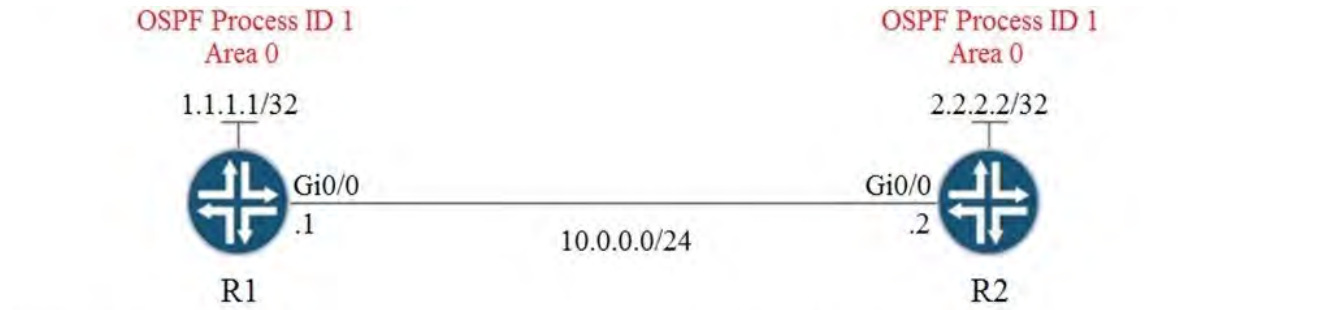


```
Router R1
router ospf 1
   router-id 1.1.1.1
   network 1.1.1.1 0.0.0.0 area 0
   network 10.0.0.0 0.0.0.255 area 0
```

```
Router R2
router ospf 1
   router-id 2.2.2.2
   network 2.2.2.2 0.0.0.0 area 0
   network 10.0.0.0 0.0.0.255 area 0
```

A network engineer is configuring OSPF between router R1 and router R2. The engineer must ensure that a DR/BDR election does not occur on the Gigabit Ethernet interfaces in area 0.

Which configuration set accomplishes this goal?

A. R1(config-if)interface Gi0/0
R1(config-if)ip ospf network point-to-point
R2(config-if)interface Gi0/0
R2(config-if)ip ospf network point-to-point

B. R1(config-if)interface Gi0/0
R1(config-if)ip ospf network broadcast
R2(config-if)interface Gi0/0
R2(config-if)ip ospf network broadcast

C. R1(config-if)interface Gi0/0
R1(config-if)ip ospf database-filter all out
R2(config-if)interface Gi0/0
R2(config-if)ip ospf database-filter all out

D. R1(config-if)interface Gi0/0
R1(config-if)ip ospf priority 1
R2(config-if)interface Gi0/0
R2(config-if)ip ospf priority 1

Correct Answer: A
Explanation

Explanation/Reference:
Broadcast and Non-Broadcast networks elect DR/BDR while Point-to-point/multipoint do not elect DR/BDR. Therefore we have to set the two Gi0/0 interfaces to point-to-point or point-to-multipoint network to ensure that a DR/BDR election does not occur.

QUESTION 95
What is the function of the LISP map resolver?

A. to send traffic to non-LISP sites when connected to a service provider that does not accept nonroutable EIDs as packet sources
B. to connect a site to the LISP-capable part of a core network, publish the EID-to-RLOC mappings for the

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site and respond to map-request messages

C. to decapsulate map-request messages from ITRs and forward the messages to the MS

D. to advertise routable non-USP traffic from one address family to LISP sites in a different address family

Correct Answer: C
Explanation

Explanation/Reference:
Like an MS, a LISP MR connects to the ALT. The function of the LISP MR is to accept encapsulated Map-Request messages from ingress tunnel routers (ITRs), decapsulate those messages, and then forward the messages to the MS responsible for the egress tunnel routers (ETRs) that are authoritative for the requested EIDs.

When an MR is implemented concurrently with an MS in a private mapping system deployment, the concurrent MS forwards the encapsulated Map-Request messages to the authoritative ETRs. When a LISP ALT is present in the deployment, the MR forwards the Map-Request messages directly over the ALT to the MS responsible for the ETRs that are authoritative for the requested EIDs. An MR also sends Negative Map-Replies to ITRs in response to queries for non-LISP addresses.
source: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe-3s/irl-xe-3s-book/irl-overview.html#GUID-89BB8D34-63BF-43DE-8743-5572D357CDB3

QUESTION 96
Refer to the exhibit. An engineer configures CoPP and enters the show command to verify the implementation. What is the result of the configuration?

```
Router2# show policy-map control-plane

Control Plane
Service-policy input:CISCO
Class-map:CISCO (match-all)
    20 packets, 11280 bytes
    5 minute offered rate 0 bps, drop rate 0 bps
    Match:access-group 120
    police:
      8000 bps, 1500 limit, 1500 extended limit
      conformed 15 packets, 6210 bytes; action:transmit
      exceeded 5 packets, 5070 bytes; action:drop
      violated 0 packets, 0 bytes; action:drop
      conformed 0 bps, exceed 0 bps, violate 0 bps
Class-map:class-default (match-day)
    105325 packets, 11415151 bytes
    5 minute offered rate 0 bps, drop rate 0 bps
    Match:any
```

A. All traffic will be policed based on access-list 120.

B. If traffic exceeds the specified rate, it will be transmitted and remarked.

C. Class-default traffic will be dropped.

D. ICMP will be denied based on this configuration.

Correct Answer: A

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Explanation

QUESTION 97
What is a characteristic of a virtual machine?

A. It must be aware of other virtual machines, in order to allocate physical resources for them
B. It is deployable without a hypervisor to host it
C. It must run the same operating system as its host
D. It relies on hypervisors to allocate computing resources for it

Correct Answer: D
Explanation

QUESTION 98
Which characteristic distinguishes Ansible from Chef?

A. Ansible lacs redundancy support for the master server. Chef runs two masters in an active/active mode.
B. Ansible uses Ruby to manage configurations. Chef uses YAML to manage configurations.
C. Ansible pushes the configuration to the client. Chef client pulls the configuration from the server.
D. The Ansible server can run on Linux, Unix or Windows. The Chef server must run on Linux or Unix.

Correct Answer: C
Explanation

Explanation/Reference:
Ansible works by connecting to your nodes and pushing out small programs, called "Ansible modules" to them. These programs are written to be resource models of the desired state of the system. Ansible then executes these modules (over SSH by default), and removes them when finished.
Chef is a much older, mature solution to configure management. Unlike Ansible, it does require an installation of an agent on each server, named chef-client. Also, unlike Ansible, it has a Chef server that each client pulls configuration from.

QUESTION 99
In a Cisco SD-Access solution, what is the role of the Identity Services Engine?

A. It is leveraged for dynamic endpoint to group mapping and policy definition.
B. It provides GUI management and abstraction via apps that share context.
C. it is used to analyze endpoint to app flows and monitor fabric status.
D. It manages the LISP EID database.

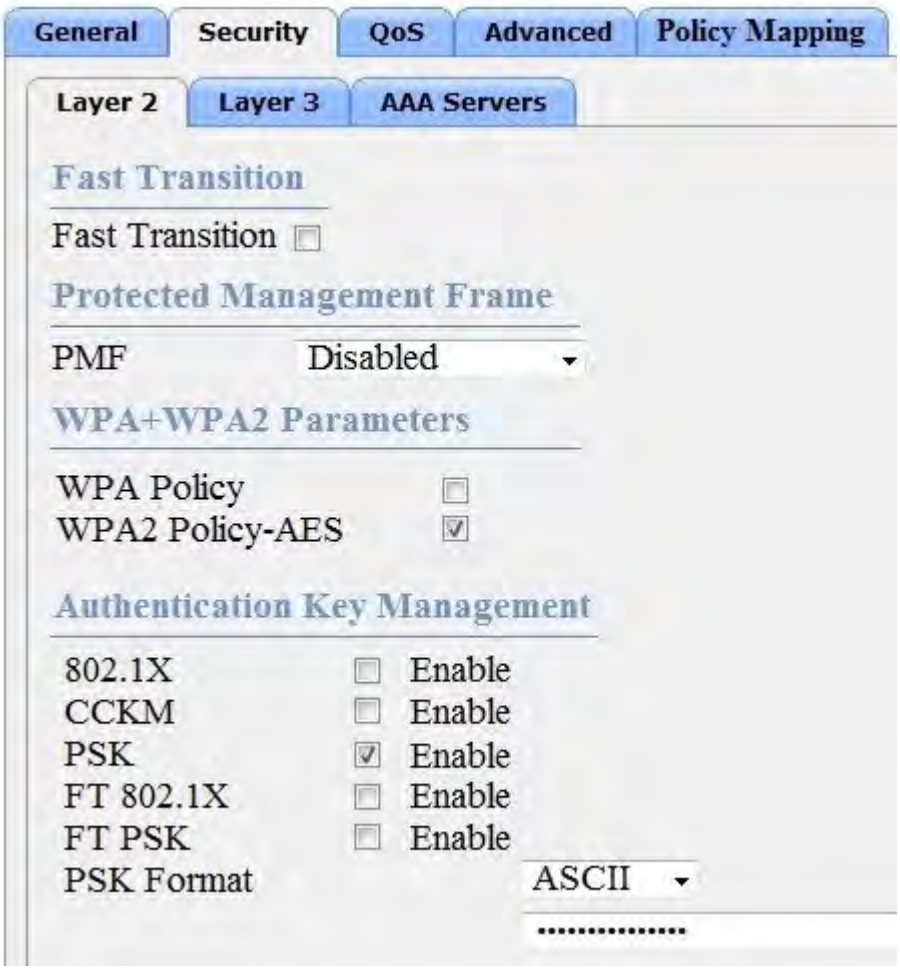
Correct Answer: A
Explanation

Explanation/Reference:
DNA Controller ?Enterprise SDN Controller (e.g. DNA Center) provides GUI management and abstraction via Apps that share context Identity Services ?External ID System(s) (e.g. ISE) are leveraged for dynamic Endpoint to Group mapping and Policy definition Analytics Engine ?External Data Collector(s) (e.g. NDP) are leveraged to analyze Endpoint to App flows and monitor fabric status

Reference:
https://www.cisco.com/c/dam/global/da_dk/assets/training/seminaria-materials/Software_Defined_Access_2017.pdf

QUESTION 100
Refer to the exhibit.

https://t.me/learningnets



Based on the configuration in this WLAN security setting, which method can a client use to authenticate to the network?

A. text string
B. username and password
C. certificate
D. RADIUS token

Correct Answer: A
Explanation

QUESTION 101
What is a fact about Cisco EAP-FAST?

A. It does not require a RADIUS server certificate.
B. It requires a client certificate.
C. It is an IETF standard.
D. It operates in transparent mode.

Correct Answer: A
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/99791-eapfast-wlc-rad-config.html

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QUESTION 102
What is the purpose of the LISP routing and addressing architecture?

A. It creates two entries for each network node, one for Its identity and another for its location on the network.
B. It allows LISP to be applied as a network visualization overlay though encapsulation.
C. It allows multiple Instances of a routing table to co-exist within the same router.
D. It creates head-end replication used to deliver broadcast and multicast frames to the entire network.

Correct Answer: A
Explanation

Explanation/Reference:
Locator ID Separation Protocol (LISP) solves this issue by separating the location and identity of a device through the Routing locator (RLOC) and Endpoint identifier (EID):
+ Endpoint identifiers (EIDs) -assigned to end hosts.
+ Routing locators (RLOCs) -assigned to devices (primarily routers) that make up the global routing system.

QUESTION 103
Which devices does Cisco DNA Center configure when deploying an IP-based access control policy?

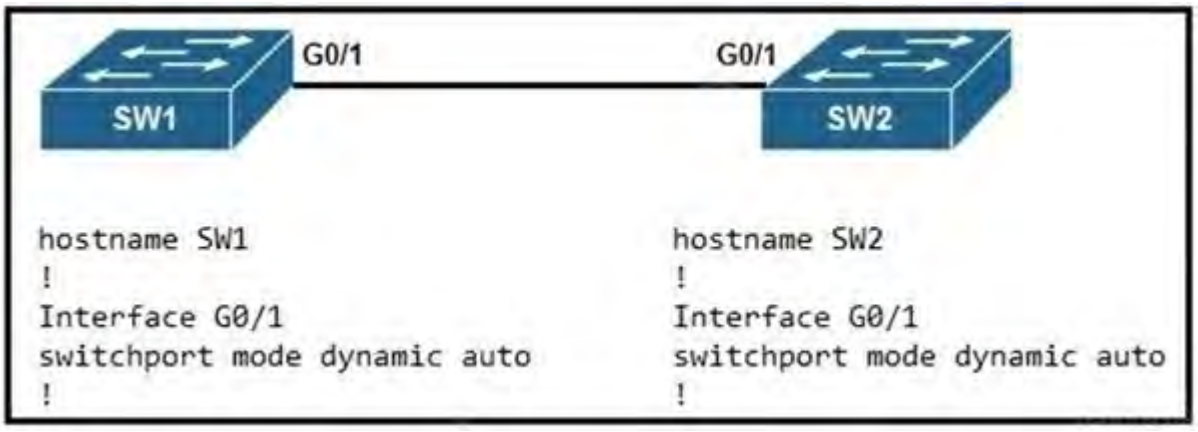
A. All devices integrating with ISE
B. selected individual devices
C. all devices in selected sites
D. all wired devices

Correct Answer: C
Explanation

Explanation/Reference:
When you click Deploy, Cisco DNA Center requests the Cisco Identity Services Engine (Cisco ISE) to send notifications about the policy changes to the network devices.

Reference:
https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-2/user_guide/b_dnac_ug_1_2/b_dnac_ug_1_2_chapter_01000.html#id_53453 https://www.cisco.com/c/en/us/td/docs/ cloud-systems-management/network-automation-and-management/dna-center/1-3-1-0/user_guide/ b_cisco_dna_center_ug_1_3_1_0/ b_cisco_dna_center_ug_1_3_1_0_chapter_01011.html

QUESTION 104
Refer to the exhibit.



An engineer attempts to configure a trunk between switch SW1 and switch SW2 using DTP, but the trunk does not form.

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Which command should the engineer apply to switch SW2 to resolve this issue?

A. switchport mode dynamic desirable
B. switchport mode access
C. no switchport
D. switchport nonegotiate

Correct Answer: A
Explanation

Explanation/Reference:
DESIRABLE must be paired with AUTO on other side to form.

QUESTION 105
Refer to the exhibit.

```
ip sla 10
icmp-echo 192.168.10.20
timeout 500
frequency 3
ip sla schedule 10 life forever start-time now
track 10 ip sla 10 reachability
```

The IP SLA is configured in a router. An engineer must configure an EEM applet to shut down the interface and bring it back up when there is a problem with the IP SLA. Which configuration should the engineer use?

A. event manager applet EEM_IP_SLA
event track 10 state down
B. event manager applet EEM_IP_SLA
event track 10 state unreachable
C. event manager applet EEM_IP_SLA
event sla 10 state unreachable
D. event manager applet EEM_IP_SLA
event sla 10 state down

Correct Answer: A
Explanation

Explanation/Reference:
The ip sla 10 will ping the IP 192.168.10.20 every 3 seconds to make sure the connection is still up. We can configure an EEM applet if there is any problem with this IP SLA via the command event track 10 state down.
Reference: https://www.theroutingtable.com/ip-sla-and-cisco-eem/

QUESTION 106
How is 802.11 traffic handled in a fabric-enabled SSID?

A. centrally switched back to WLC where the user traffic is mapped to a VXLAN on the WLC
B. converted by the AP into 802.3 and encapsulated into VXLAN
C. centrally switched back to WLC where the user traffic is mapped to a VLAN on the WLC
D. converted by the AP into 802.3 and encapsulated into a VLAN

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Correct Answer: B
Explanation

Explanation/Reference:
Fabric AP communicates with fabric WLC using capwap for control plnae comms ony. To communicate with the SD-Access fabric, the AP will use vxlan encapsulation.

https://www.cisco.com/c/dam/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/deploy-guide/cisco-dna-center-sd-access-wl-dg.pdf

QUESTION 107
What are two differences between the RIB and the FIB? (Choose two.)

A. The FIB is derived from the data plane, and the RIB is derived from the FIB.
B. The RIB is a database of routing prefixes, and the FIB is the Information used to choose the egress interface for each packet.
C. FIB is a database of routing prefixes, and the RIB is the information used to choose the egress interface for each packet.
D. The FIB is derived from the control plane, and the RIB is derived from the FIB.
E. The RIB is derived from the control plane, and the FIB is derived from the RIB.

Correct Answer: BE
Explanation

Explanation/Reference:
The Forwarding Information Base (FIB) contains destination reachability information as well as next hop information. This information is then used by the router to make forwarding decisions. The FIB allows for very efficient and easy lookups.

QUESTION 108
What are two characteristics of VXLAN? (Choose two)

A. It uses VTEPs to encapsulate and decapsulate frames.
B. It has a 12-bit network identifier
C. It allows for up to 16 million VXLAN segments
D. It lacks support for host mobility
E. It extends Layer 2 and Layer 3 overlay networks over a Layer 2 underlay.

Correct Answer: AC
Explanation

QUESTION 109
Refer to the exhibit. Which action resolves the EtherChannel issue between SW2 and SW3?

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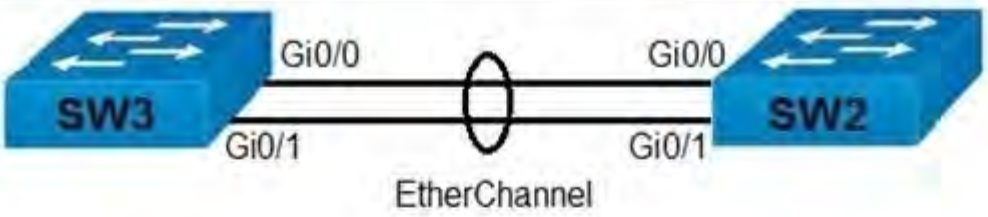


```
SW2# show ip interface brief | include Port
Port-channel1 unassigned YES unset down down
SW2# show etherchannel summary
Flags: D - down P - bundled in port-channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate aggregator
M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port-channel Protocol Ports
------+-------------+-----------+----------------
-------
1 Po1(S D ) PAgP Gi0/0(I) Gi0/1(I)

SW3# show etherchannel summary
Flags: D - down P - bundled in port-channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate aggregator
M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port-channel Protocol Ports
------+-------------+-----------+----------------
-------
1 Po1(S D ) LACP Gi0/0(I) Gi0/1(I)
```

A. Configure switchport mode trunk on SW2.
B. Configure switchport nonegotiate on SW3
C. Configure channel-group 1 mode desirable on both interfaces.

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D. Configure channel-group 1 mode active on both interfaces.

Correct Answer: C
Explanation

Explanation/Reference:
SW2 is using PAgP and both members interface Gi0/0 and Gi0/1 are in state(I), it means they are not receiving any activity.

QUESTION 110
Which device makes the decision for a wireless client to roam?

A. wireless client
B. wireless LAN controller
C. access point
D. WCS location server

Correct Answer: A
Explanation

Explanation/Reference:
Reference:
https://documentation.meraki.com/MR/WiFi_Basics_and_Best_Practices/
Client_roaming_and_connectivity_decisions_explained

QUESTION 111
An engineer must provide wireless converge in a square office. The engineer has only one AP and believes that it should be placed it in the middle of the room. Which antenna type should the engineer use?

A. directional
B. polarized
C. Yagi
D. omnidirectional

Correct Answer: D
Explanation

QUESTION 112
Refer to the exhibit.

Which set of commands on router r R1 Allow deterministic translation of private hosts PC1, PC2, and PC3 to addresses in the public space?

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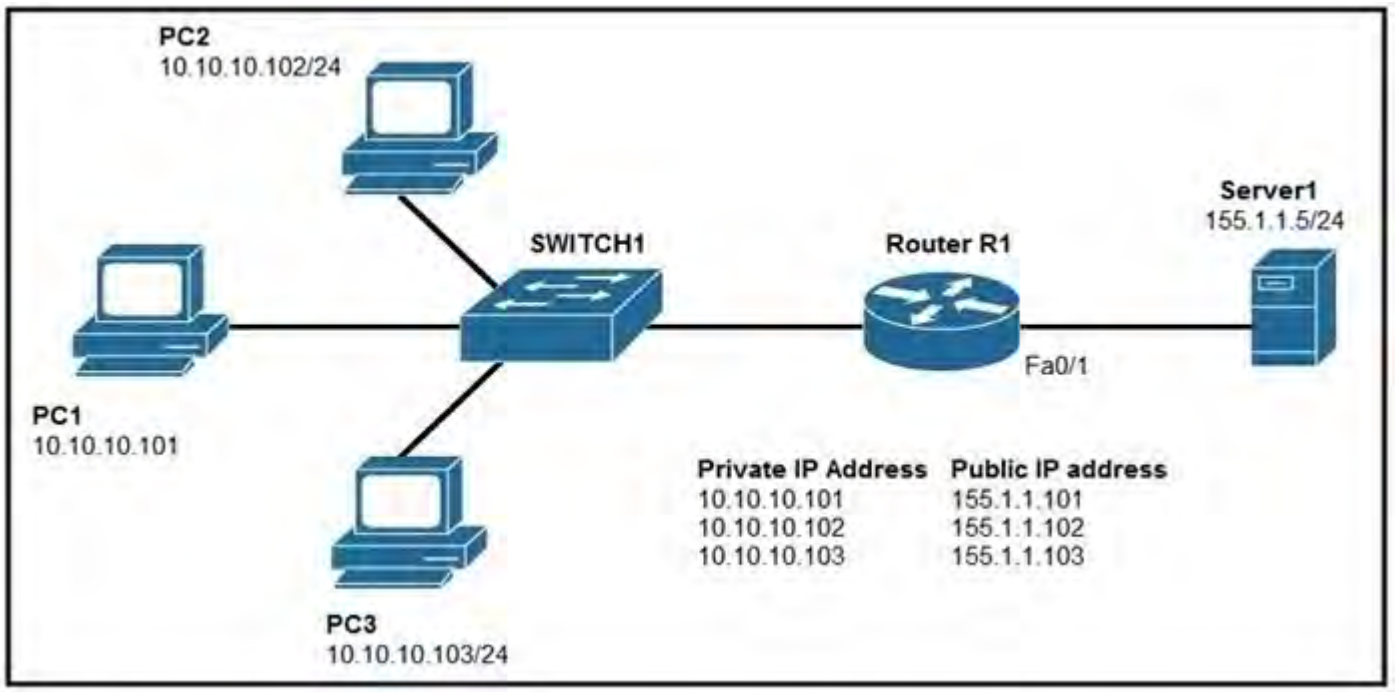

A. RouterR1(config)#int f0/0
RouterR1(config)#ip nat inside
RouterR1(config)#exit
RouterR1(config)#int f0/1
RouterR1(config)#ip nat outside
RouterR1(config)#exit
RouterR1(config)#access-list 1 10.10.10.0 0.0.0.255
RouterR1(config)#ip nat inside source list 1 interface f0/1 overload

B. RouterR1(config)#int f0/0
RouterR1(config)#ip nat inside
RouterR1(config)#exit
RouterR1(config)#int f0/1
RouterR1(config)#ip nat outside
RouterR1(config)#exit
RouterR1(config)#access-list 1 10.10.10.0 0.0.0.255
RouterR1(config)#ip nat pool POOL 155.1.1.101 155.1.1.103 netmask 255.255.255.0
RouterR1(config)#ip nat inside source list 1 pool POOL

C. RouterR1(config)#int f0/0
RouterR1(config)#ip nat inside
RouterR1(config)#exit
RouterR1(config)#int f0/1
RouterR1(config)#ip nat outside
RouterR1(config)#exit
RouterR1(config)#ip nat inside source static 10.10.10.101 155.1.1.101
RouterR1(config)#ip nat inside source static 10.10.10.102 155.1.1.102
RouterR1(config)#ip nat inside source static 10.10.10.103 155.1.1.103

D. RouterR1(config)#int f0/0
RouterR1(config)#ip nat outside
RouterR1(config)#exit
RouterR1(config)#int f0/1
RouterR1(config)#ip nat inside
RouterR1(config)#exit
RouterR1(config)#ip nat inside source static 10.10.10.101 155.1.1.101
RouterR1(config)#ip nat inside source static 10.10.10.102 155.1.1.102
RouterR1(config)#ip nat inside source static 10.10.10.103 155.1.1.103

Correct Answer: C
Explanation

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QUESTION 113
Which data is properly formatted with JSON?

A.
```
{
        "name":"Peter"
        "age":"25"
        "likesJson":true
        "characteristics":["small","strong",18]
}
```
B.
```
{
        "name": "Peter",
        "age": "25",
        "likesJson": true,
        "characteristics": ["small","strong",18]
}
```
C.
```
{
        "name": Peter,
        "age": 25,
        "likesJson": true,
        "characteristics": ["small","strong","18"],
}
```
D.
```
{
        "name": "Peter",
        "age": "25",
        "likesJson": true,
        "characteristics": ["small","strong","18"],
}
```

A. Opiton A
B. Opiton B
C. Opiton C
D. Opiton D

Correct Answer: B
Explanation

Explanation/Reference:
B is correct, checked in JSONLint validator numbers 18 and 25 can be in "" or not still valid.

QUESTION 114
A network administrator applies the following configuration to an IOS device:

aaa new-model
aaa authentication login default local group tacacs+

What is the process of password checks when a login attempt is made to the device?

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A. A TACACS+server is checked first. If that check fail, a database is checked?
B. A TACACS+server is checked first. If that check fail, a RADIUS server is checked. If that check fail. a local database is checked.
C. A local database is checked first. If that fails, a TACACS+server is checked, if that check fails, a RADUIS server is checked.
D. A local database is checked first. If that check fails, a TACACS+server is checked.

Correct Answer: D
Explanation

Explanation/Reference:
The "aaa authentication login default local group tacacs+" command is broken down as follows:
+ The `aaa authentication' part is simply saying we want to configure authentication settings.
+ The `login' is stating that we want to prompt for a username/ password when a connection is made to the device.
+ The `default' means we want to apply for all login connections (such as tty, vty, console and aux). If we use this keyword, we don't need to configure anything else under tty, vty and aux lines. If we don't use this keyword then we have to specify which line(s) we want to apply the authentication feature.
+ The `local group tacacs+" means all users are authenticated using router's local database (the first method). If the credentials are not found on the local database, then the TACACS+ server is used (the second method).

Reference: https://www.cisco.com/c/en/us/support/docs/security-vpn/terminal-access-controller-access-control-system-tacacs-/200606-aaa-authentication-login-default-local.html

QUESTION 115
When is an external antenna used inside a building?

A. only when using Mobility Express
B. when it provides the required coverage
C. only when using 2 4 GHz
D. only when using 5 GHz

Correct Answer: B
Explanation

QUESTION 116
Which HTTP code must be returned to prevent the script form exiting?

```
def get_token () :
   device_uri = "https://192.168.1.1/dna/system/api/v1/auth/token"
   http_result = requests.post(device_uri, auth = ("test", "test399079338!") )
   if http_result.status_code != requests.codes.ok:
      print ("Call failed! Review get_token () . ")
      sys.exit ()
   return (http_result.json () ["Token"] )
```

A. 200
B. 201
C. 300
D. 301

Correct Answer: D
Explanation

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QUESTION 117
Which protocol does REST API rely on to secure the communication channel?

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

Correct Answer: B
Explanation

Explanation/Reference:
The REST API accepts and returns HTTP (not enabled by default) or HTTPS messages that contain JavaScript Object Notation (JSON) or Extensible Markup Language (XML) documents. You can use any programming language to generate the messages and the JSON or XML documents that contain the API methods or Managed Object (MO) descriptions. Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/2- x/rest_cfg/2_1_x/ b_Cisco_APIC_REST_API_Configuration_Guide/b_Cisco_APIC_REST_API_Config uration_Guide_chapter_01.html

QUESTION 118
Which algorithms are used to secure REST API from brute attacks and minimize the impact?

A. SHA-512 and SHA-384
B. MD5 algorithm-128 and SHA-384
C. SHA-1, SHA-256, and SHA-512
D. PBKDF2, BCrypt, and SCrypt

Correct Answer: D
Explanation

Explanation/Reference:
One of the best practices to secure REST APIs is using password hash. Passwords must always be hashed to protect the system (or minimize the damage) even if it is compromised in some hacking attempts. There are many such hashing algorithms which can prove really effective for password security e.g. PBKDF2, bcrypt and scrypt algorithms.
Other ways to secure REST APIs are: Always use HTTPS, Never expose information on URLs (Usernames, passwords, session tokens, and API keys should not appear in the URL), Adding Timestamp in Request, Using OAuth, Input Parameter Validation.

Reference: https://restfulapi.net/security-essentials/

We should not use MD5 or any SHA (SHA-1, SHA-256, SHA-512...) algorithm to hash password as they are not totally secure. Note: A brute-force attack is an attempt to discover a password by systematically trying every possible combination of letters, numbers, and symbols until you discover the one correct combination that works.

QUESTION 119
Refer to the exhibit.

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```
aaa new-model
aaa authentication login authorizationlist tacacs+
tacacs-server host 192.168.0.202
tacacs-server key ciscotestkey
line vty 04
login authentication authorizationlist
```

What is the effect of this configuration?

A. The device will allow users at 192.168.0.202 to connect to vty lines 0 through 4 using the password ciscotestkey
B. The device will allow only users at 192 168.0.202 to connect to vty lines 0 through 4
C. When users attempt to connect to vty lines 0 through 4. the device will authenticate them against TACACS* if local authentication fails
D. The device will authenticate all users connecting to vty lines 0 through 4 against TACACS+

Correct Answer: D
Explanation

QUESTION 120
Refer to the exhibit.

```
SW1#sh monitor session all
Session 1
------------

Type                   : Remote Destination Session
Source RSPAN VLAN      : 50

Session 2
------------

Type                   : Local Session
Source Ports           :
      Both             : Fa0/14
  Destination Ports    : Fa0/15
      Encapsulation    : Native
            Ingress    : Disables
```

An engineer configures monitoring on SW1 and enters the show command to verify operation. What does the output confirm?

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A. SPAN session 1 monitors activity on VLAN 50 of a remote switch
B. SPAN session 2 only monitors egress traffic exiting port FastEthernet 0/14.
C. SPAN session 2 monitors all traffic entering and exiting port FastEthernet 0/15.
D. RSPAN session 1 is incompletely configured for monitoring

Correct Answer: D
Explanation

Explanation/Reference:
SW1 has been configured with the following commands:
SW1(config)#monitor session 1 source remote vlan 50
SW1(config)#monitor session 2 source interface fa0/14
SW1(config)#monitor session 2 destination interface fa0/15
The session 1 on SW1 was configured for Remote SPAN (RSPAN) while session 2 was configured for local SPAN.
For RSPAN we need to configure the destination port to complete the configuration.
Note: In fact we cannot create such a session like session 1 because if we only configure Source RSPAN VLAN 50 (with the command monitor session 1 source remote vlan 50) then we will receive a Type: Remote Source Session (not Remote Destination Session).

QUESTION 121
Refer to the exhibit.

PYTHON CODE:

```
import requests
import json

url='http://YOURIP/ins'
switchuser='USERID'
switchpassword='PASSWORD'

myheaders={'content-type':'application/json'}
payload={
 "ins_api":{
  "version": "1.0",
  "type": "cli_show",
  "chunk": "0",
  "sid": "1"
  "input": "show version",
  "output_format": "json"
  }
}
response = requests.post(url,data=json.dumps(payload), headers=myheaders,auth=(switchuser,switchpassword)).json( )

print(response['ins_api']['outputs']['output']['body']['kickstart_ver_str'])
```

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HTTP JSON Response:


```
{
 "ins_api":{
 "type": "cli_show",
 "version": "1.0",
 "sid": "eoc",
 "outputs": {
  "output": {
    "input": "show version",
     "msg": "Success",
     "code": "200",
     "body": {
       "bios_ver_str", "07.61",
       "kickstart_ver_str": "7.0(3)|7(4)",
       "bios_cmpl_time": "04/06/2017",
       "kick_file_name": "bootflash:///nxos.7.0.3.|7.4.bin",
       "kick_cmpl_time", "6/14/1970 2:00:00",
       "kick_tmstmp": "06/14/1970 09:49:04",
       "chassis_id": "Nexus9000 93180YC-EX chassis",
       "cpu_name": "Intel(R) Xeon(R) CPU @ 1.80GHz",
       "memory": 24633488,
       "mem_type": "kB",
       "rr_usecs": 134703,
       "rr_crime": "Sun Mar 10 15:41:46 2019",
       "rr_reason": "Reset Requested by CLI command reload",
       "rr_sys_ver": "7.0(3)|7(4)",
       "rr_service":"",
       "manufacturer": "Cisco Systems, Inc.",
       "TABLE_package_list": {
        "ROW_package_list": {
          "package_id": {}
        }
       }
     }
  }
 }
}
```


Which HTTP JSON response does the Python code output give?

A. NameError: name 'json' is not defined
B. KeyError 'kickstart_ver_str'
C. 7.61
D. 7.0(3)I7(4)

Correct Answer: D
Explanation

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QUESTION 122
Which two components are supported by LISP? (choose two)

A. proxy ETR
B. egress tunnel router
C. route reflector
D. HMAC algorithm
E. spoke

Correct Answer: AB
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe-3s/irl-xe-3s-book/irl-overview.html

QUESTION 123
Which two network problems indicate a need to implement QoS in a campus network? (Choose two)

A. port flapping
B. excess jitter
C. misrouted network packets
D. duplicate IP addresses
E. bandwidth-related packet loss

Correct Answer: BE
Explanation

QUESTION 124
Which statement about TLS is true when using RESTCONF to write configurations on network devices?

A. It is provided using NGINX acting as a proxy web server.
B. It is no supported on Cisco devices.
C. It required certificates for authentication.
D. It is used for HTTP and HTTPs requests.

Correct Answer: A
Explanation

Explanation/Reference:
When a device boots up with the startup configuration, the nginx process will be running. NGINX is an internal webserver that acts as a proxy webserver. It provides Transport Layer Security (TLS)-based HTTPS. RESTCONF request sent via HTTPS is first received by the NGINX proxy web server, and the request is transferred to the confd web server for further syntax/semantics check.

Reference:
https://www.cisco.com/c/en/us/td/docs/iosxml/ ios/prog/configuration/168/b_168_programmability_cg/RESTCONF.html
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b_166_programmability_cg/b_166_programmability_cg_chapter_01011.html

The https-based protocol-RESTCONF (RFC 8040), which is a stateless protocol, uses secure HTTP methods to provide CREATE, READ, UPDATE and DELETE (CRUD) operations on a conceptual datastore containing YANG-defined data - > RESTCONF only uses HTTPs.

QUESTION 125
When configuration WPA2 Enterprise on a WLAN, which additional security component configuration is

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required?

A. NTP server
B. PKI server
C. RADIUS server
D. TACACS server

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/100708-wpa-uwn-config.html#conf

QUESTION 126
Refer to me exhibit.

```
%OSPF-5-ADJCHG: Process 1, Nbr 10.0.0.2 on FastEthernet0/0 from
FULL to DOWN, Neighbor Down: Interface down or detached
%OSPF-6-AREACHG: 10.0.0.1/32 changed from area 0 to area 1
%OSPF-4-ERRRCV: Received invalid packet: mismatch area ID, from
backbone area must be virtual-link but not found from 10.0.0.2,
FastEthernet0/0
```

What is the cause of the log messages?

A. hello packet mismatch
B. OSPF area change
C. MTU mismatch
D. IP address mismatch

Correct Answer: B
Explanation

QUESTION 127
A network engineer is configuring Flexible Netflow and enters these commands:

1. Sampler Netflow1
2. Mode random one-out-of 100
3. Interface fastethernet 1/0
4. Flow-sampler netflow1

Which are two results of implementing this feature instead of traditional Netflow? (Choose two.)

A. CPU and memory utilization are reduced.
B. Only the flows of top 100 talkers are exported
C. The data export flow is more secure.
D. The number of packets to be analyzed are reduced
E. The accuracy of the data to be analyzed is improved

Correct Answer: AD
Explanation

Explanation/Reference:
Flow sampling reduces the CPU overhead of analyzing traffic with Flexible NetFlow by reducing the number of packets that are analyzed. Flow samplers are used to reduce the load on the device that is

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running by limiting the number of packets that are selected for analysis.

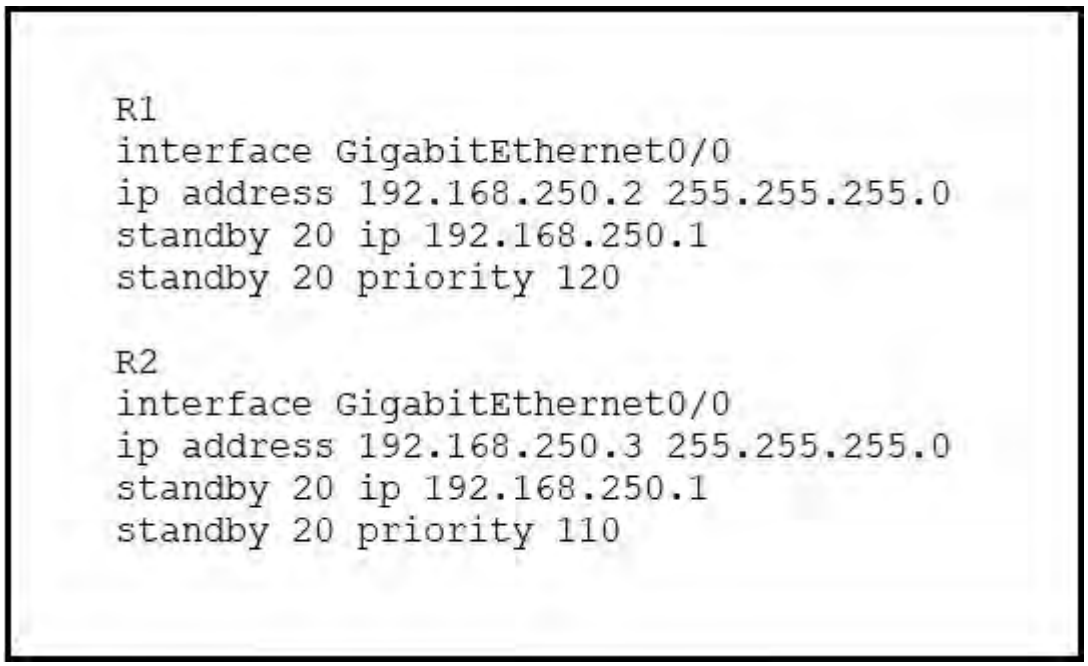
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/fnetflow/configuration/15-mt/fnf-15-mt-book/use-fnflow-redce-cpu.pdf

QUESTION 128
Which outbound access list, applied to the WAN interface of a router, permits all traffic except for http traffic sourced from the workstation with IP address 10.10.10.1?

A. ip access-list extended 100
deny tcp host 10.10.10.1 any eq 80
permit ip any any
B. ip access-list extended 200
deny tcp host 10. 10.10.1 eq 80 any
permit ip any any
C. ip access-list extended NO_HTTP
deny tcp host 10.10.10.1 any eq 80
D. ip access-list extended 10
deny tcp host 10.10.10.1 any eg 80
permit ip any any

Correct Answer: A
Explanation

QUESTION 129
Refer to the exhibit.



What are two effects of this configuration? (Choose two.)

A. R1 becomes the active router.
B. If R1 goes down, R2 becomes active but reverts to standby when R1 comes back online.
C. R1 becomes the standby router
D. If R2 goes down, R1 becomes active but reverts to standby when R2 comes back online.
E. If R1 goes down, R2 becomes active and remains the active device when R1 comes back online.

Correct Answer: AE
Explanation

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Explanation/Reference:
router with higher priority will become active, without preempt r1 will not become active after come online. preempt is not a default command with hsrp

QUESTION 130
Which action is the vSmart controller responsible for in an SD-WAN deployment?

A. onboard vEdge nodes into the SD-WAN fabric
B. distribute security information for tunnel establishment between vEdge routers
C. manage, maintain, and gather configuration and status for nodes within the SD-WAN fabric
D. gather telemetry data from vEdge routers

Correct Answer: B
Explanation

Explanation/Reference:
+ Orchestration plane (vBond) assists in securely onboarding the SD-WAN WAN Edge routers into the SD-WAN overlay (-> Therefore answer "onboard vEdge nodes into the SD-WAN fabric" mentioned about vBond). The vBond controller, or orchestrator, authenticates and authorizes the SD-WAN components onto the network. The vBond orchestrator takes an added responsibility to distribute the list of vSmart and vManage controller information to the WAN Edge routers. vBond is the only device in SD-WAN that requires a public IP address as it is the first point of contact and authentication for all SD-WAN components to join the SD-WAN fabric. All other components need to know the vBond IP or DNS information. + Management plane (vManage) is responsible for central configuration and monitoring. The vManage controller is the centralized network management system that provides a single pane of glass GUI interface to easily deploy, configure, monitor and troubleshoot all Cisco SD-WAN components in the network. (-> Answer "manage, maintain, and gather configuration and status for nodes within the SD-WAN fabric" and answer "gather telemetry data from vEdge routers" are about vManage)
+ Control plane (vSmart) builds and maintains the network topology and make decisions on the traffic flows. The vSmart controller disseminates control plane information between WAN Edge devices, implements control plane policies and distributes data plane policies to network devices for enforcement (-> Answer "distribute security information for tunnel establishment between vEdge routers" is about vSmart)

QUESTION 131
How does EIGRP differ from OSPF?

A. EIGRP is more prone to routing loops than OSPF
B. EIGRP has a full map of the topology, and OSPF only knows directly connected neighbors
C. EIGRP supports equal or unequal path cost, and OSPF supports only equal path cost.
D. EIGRP uses more CPU and memory than OSPF

Correct Answer: C
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol-eigrp/13677-19.html

QUESTION 132
A network engineer configures a new GRE tunnel and enters the show run command. What does the output verify?

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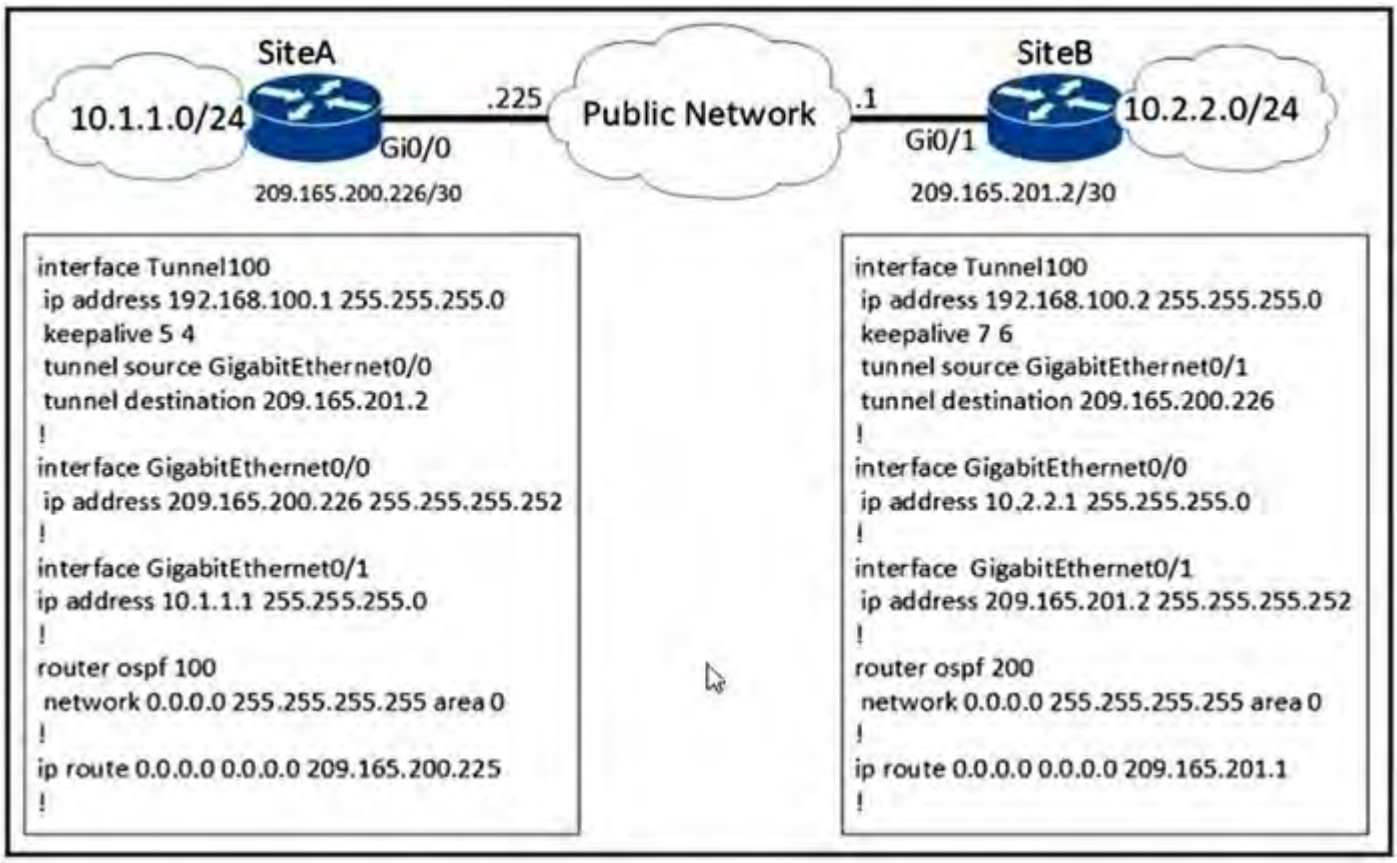

A. The tunnel will be established and work as expected
B. The tunnel destination will be known via the tunnel interface
C. The tunnel keepalive is configured incorrectly because they must match on both sites
D. The default MTU of the tunnel interface is 1500 byte.

Correct Answer: B
Explanation

Explanation/Reference:
Some have brought up the fact that the default route will have the preferred AD of 1.
While this is true, it is forgetting the path selection order:
1: Prefer the most specific route - Longest Match
2: Prefer the lowest Administrative Distance - Most Trusted Routing Protocol
3: Prefer the lowest Metric - Shortest Calculated Distance/Cost

In other words, while the default route is going to have an AD of 1, the more specific destination address is going to be learned from OSPF through the Tunnel. The Source Router is going to learn the more specific route and prefer it over the default route, causing the recursive routing error.

QUESTION 133
Refer to the exhibit.

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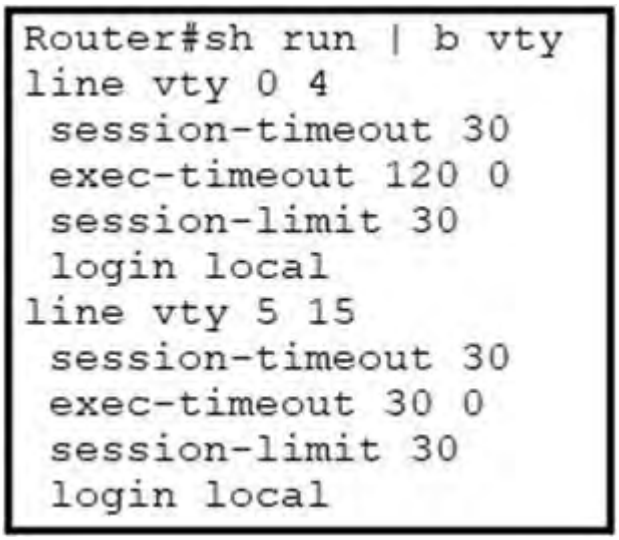

Router#sh run | b vty

line vty 0 4
session-timeout 30
exec-timeout 20 0
session-limit 30
login local
line vty 5 15
session-timeout 30
exec-timeout 20 0
session-limit 30
login local

Security policy requires all idle-exec sessions to be terminated in 600 seconds. Which configuration achieves this goal?

A. line vty 0 15
absolute-timeout 600
B. line vty 0 15
exec-timeout
C. line vty 01 5
exec-timeout 10 0
D. line vty 0 4
exec-timeout 600

Correct Answer: C
Explanation

Explanation/Reference:
The "exec-timeout" command is used to configure the inactive session timeout on the console port or the virtual terminal. The syntax of this command is:
exec-timeout minutes [seconds]
Therefore we need to use the "exec-timeout 10 0" command to set the user inactivity timer to 600 seconds (10 minutes).

QUESTION 134
How are the different versions of IGMP compatible?

A. IGMPv2 is compatible only with IGMPv1.
B. IGMPv2 is compatible only with IGMPv2.
C. IGMPv3 is compatible only with IGMPv3.
D. IGMPv3 is compatible only with IGMPv1

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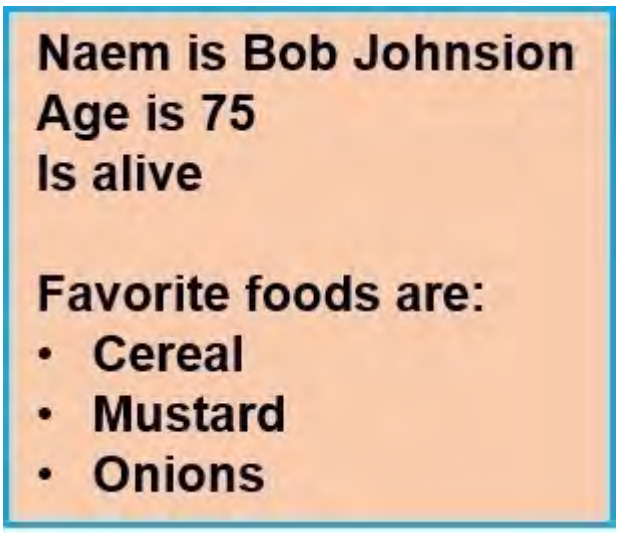
Correct Answer: A
Explanation

QUESTION 135
An engineer configures HSRP group 37. The configuration does not modify the default virtual MAC address. Which virtual MAC address does the group use?

A. C0.00:00:25:00:00
B. 00:00:0c:07:ac:37
C. C0:39:83:25:258:5
D. 00:00:0c:07:ac:25

Correct Answer: D
Explanation

QUESTION 136
Refer to the exhibit.



What is the JSON syntax that is formed from the data?

A. Name: Bob, Johson, Age: 75, Alive: true, Favourite Foods. [Cereal, "Mustard", "Onions}}
B. Name", "Bob" Johson", "Age", 75, "Alive", true, "favourite Foods", ["Cereal, "Mustard", Onions"}}
C. {"Name": "Bob Johnson", "Age": 75, "Alive": true, "Favorite Foods": ["Cereal", "Mustard", "Onions"]}
D. Name". "Bob Johson", "Age": Seventyfive, "Alive" true, "favourite Foods" ,[Cereal" "Mustard" "Onions"}}

Correct Answer: C
Explanation

Explanation/Reference:
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,
"alive":true,
"cars":["Ford", "BMW", "Fiat"]
}

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QUESTION 137
How does Cisco TrustSec enable more flexible access controls for dynamic networking environments and data centers?

A. uses flexible NetFlow
B. assigns a VLAN to the endpoint
C. classifies traffic based on advanced application recognition
D. classifies traffic based on the contextual identity of the endpoint rather than its IP address

Correct Answer: D
Explanation

Explanation/Reference:
The Cisco TrustSec solution simplifies the provisioning and management of network access control through the use of software-defined segmentation to classify network traffic and enforce policies for more flexible access controls. Traffic classification is based on endpoint identity, not IP address, enabling policy change without net-work redesign.

Reference: https://www.cisco.com/c/dam/en/us/products/collateral/security/identity-services-engine/at_a_glance_c45-726831.pdf

QUESTION 138
When a wireless client roams between two different wireless controllers, a network connectivity outage is experienced for a period of time.

Which configuration issue would cause this problem?

A. Not all of the controllers in the mobility group are using the same mobility group name.
B. Not all of the controllers within he mobility group are using the same virtual interface IP address.
C. All of the controllers within the mobility group are using the same virtual interface IP address.
D. All of the controllers in the mobility group are using the same mobility group name.

Correct Answer: B
Explanation

Explanation/Reference:
A prerequisite for configuring Mobility Groups is "All controllers must be configured with the same virtual interface IP address". If all the controllers within a mobility group are not using the same virtual interface, inter-controller roaming may appear to work, but the handoff does not complete, and the client loses connectivity for a period of time. -> Answer B is correct.

Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/config-guide/b_cg85/mobility_groups.html
https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/107188-mobility-groups-faq.html

QUESTION 139
Refer to the exhibit.

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```
interface Vlan10
 ip vrf forwarding Customer1
 ip address 192.168.1.1 255.255.255.0
!
interface Vlan20
 ip vrf forwarding Customer2
 ip address 172.16.1.1 255.255.255.0
!
interface Vlan30
 ip vrf forwarding Customer3
 ip address 10.1.1.1 255.255.255.0
```

Which configuration allows Customer2 hosts to access the FTP server of Customer1 that has the IP address of 192.168.1.200?

A. ip route vrf Customerl 172.16.1.0 255.255.255.0 172.16.1.1 global
   ip route vrf Customer 192.168.1.200 255.255.255.255 192.168.1.1 global
   ip route 192.168.1.0 255.255.255.0 VlanlO
   ip route 172.16.1.0 255.255.255.0 Vlan20
B. ip route vrf Customerl 172.16.1.0 255.255.255.0 172.16.1.1 Customer2
   ip route vrf Customer 192.168.1.200 255.255.255.255 192.168.1.1 Customerl
C. ip route vrf Customerl 172.16.1.0 255.255.255.0 172.16.1.1 Customerl
   ip route vrf Customer 192.168.1.200 255.255.255.255 192.168.1.1 Customer2
D. ip route vrf Customerl 172.16.1.1 255.255.255.255 172.16.1.1 global
   ip route vrf Customer 192.168.1.200 255.255.255.0 192.168.1.1 global
   ip route 192.168.1.0 255.255.255.0 VlanlO
   ip route 172.16.1.0 255.255.255.0 Vlan20

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/ip-routing/200158-Configure-Route-Leaking-between-Global-a.html

QUESTION 140
What is the centralized control policy in a Cisco SD-WAN deployment?

A. list of ordered statements that define user access policies
B. set of statements that defines how routing is performed
C. set of rules that governs nodes authentication within the cloud
D. list of enabled services for all nodes within the cloud

Correct Answer: B
Explanation

QUESTION 141
Which congestion queuing method on Cisco IOS based routers uses four static queues?

A. Priority
B. custom
C. weighted fair
D. low latency

Correct Answer: A

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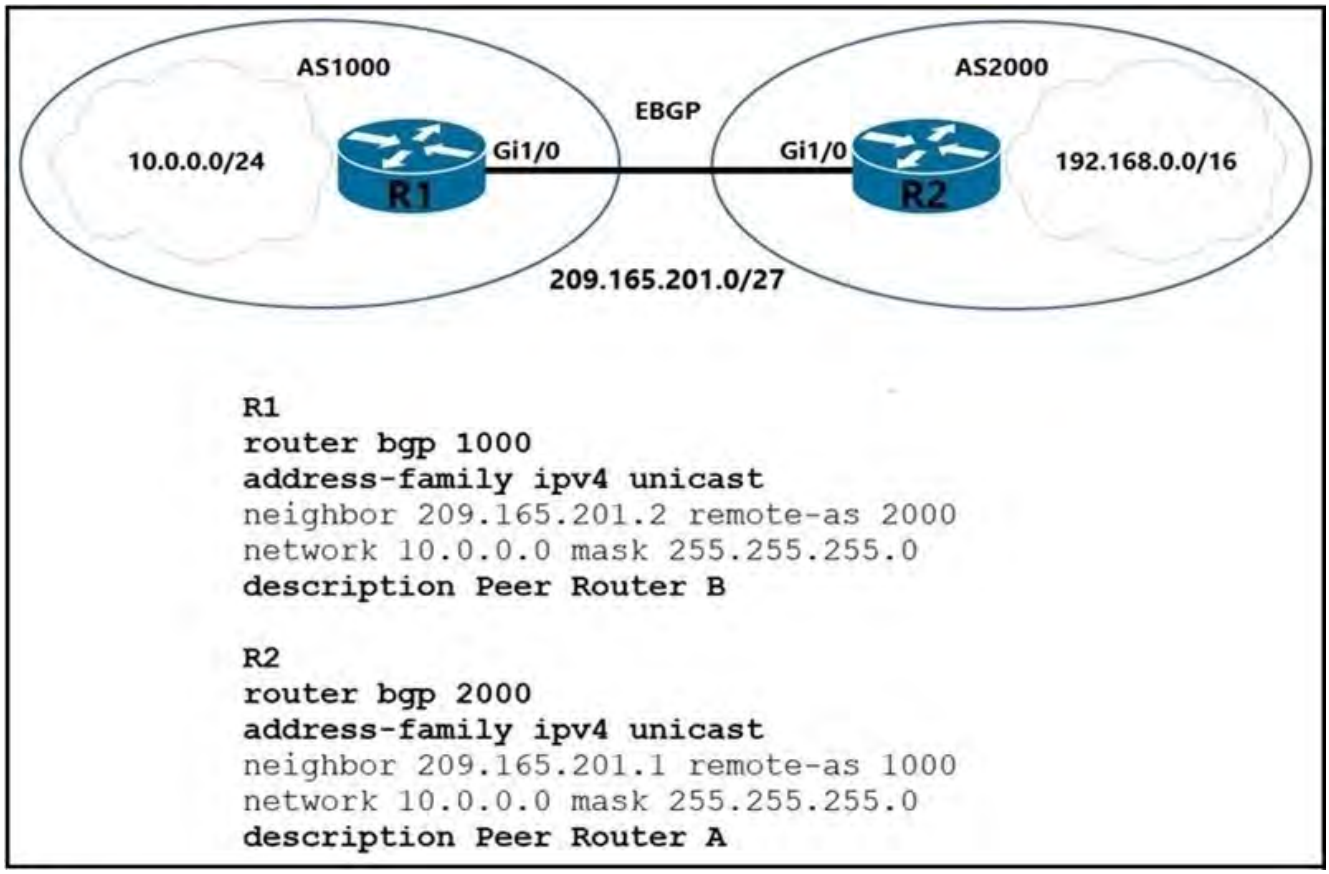
Explanation

QUESTION 142
Refer to the exhibit.



Which two commands are needed to allow for full reachability between AS 1000 and AS 2000? (Choose two.)

A. R2#no network 10.0.0.0 255.255.255.0
B. R2#network 209.165.201.0 mask 255.255.192.0
C. R2#network 192.168.0.0 mask 255.255.0.0
D. R1#no network 10.0.0.0 255.255.255.0
E. R1#network 192.168.0.0 mask 255.255.0.0

Correct Answer: AC
Explanation

Explanation/Reference:
A & C are correct. Need to negate the 10.0.0.0 /24 network on R2 and then add the 192.168.0.0 /16 network on R2. Hence, A & C, although I think to be exact the answer on A should be "no network 10.0.0.0 mask 255.255.255.0" vs. the "no network 10.0.0.0 255.255.255.0".

QUESTION 143
Refer to the exhibit.

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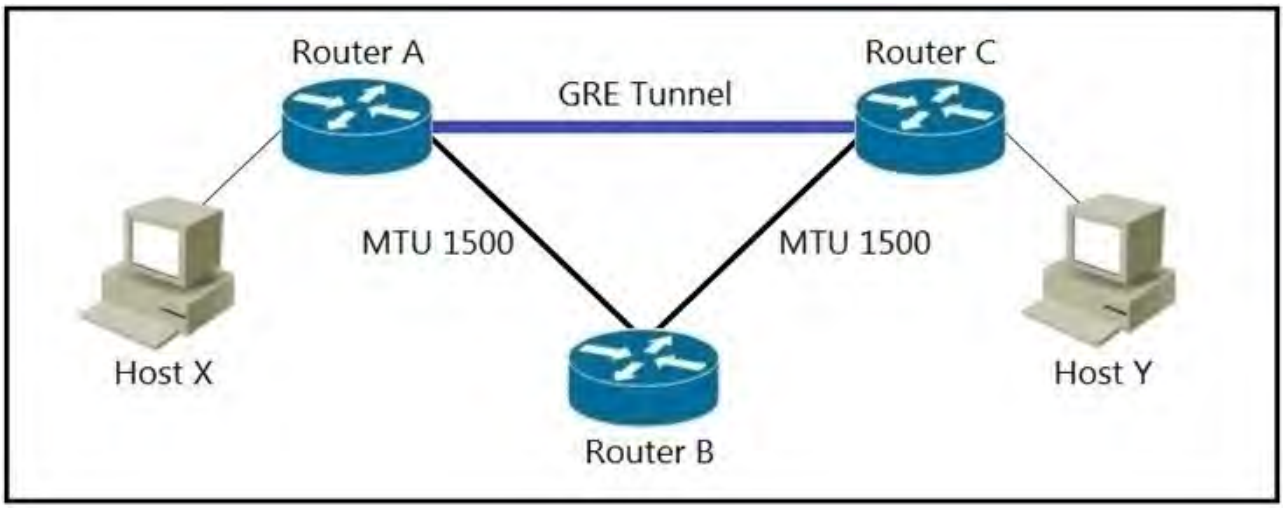

MTU has been configured on the underlying physical topology, and no MTU command has been configured on the tunnel interfaces.

What happens when a 1500-byte IPv4 packet traverses the GRE tunnel from host X to host Y, assuming the DF bit is cleared?

A. The packet arrives on router C without fragmentation.
B. The packet is discarded on router A
C. The packet is discarded on router B
D. The packet arrives on router C fragmented.

Correct Answer: D
Explanation

Explanation/Reference:

Like any protocol, using GRE adds a few bytes to the size of data packets. This must be factored into the MSS and MTU settings for packets. If the MTU is 1,500 bytes and the MSS is 1,460 bytes (to account for the size of the necessary IP and TCP headers), the addition of GRE 24-byte headers will cause the packets to exceed the MTU:

1,460 bytes [payload] + 20 bytes [TCP header] + 20 bytes [IP header] + 24 bytes [GRE header + IP header] = 1,524 bytes

As a result, the packets will be fragmented. Fragmentation slows down packet delivery times and increases how much compute power is used, because packets that exceed the MTU must be broken down and then reassembled.

QUESTION 144
Refer to the exhibit.

1. When a device is connected, the port transitions immediately to a forwarding state.
2. The interface should not send or receive BPDUs.
3. If a BPDU is received, it continues operating normally.

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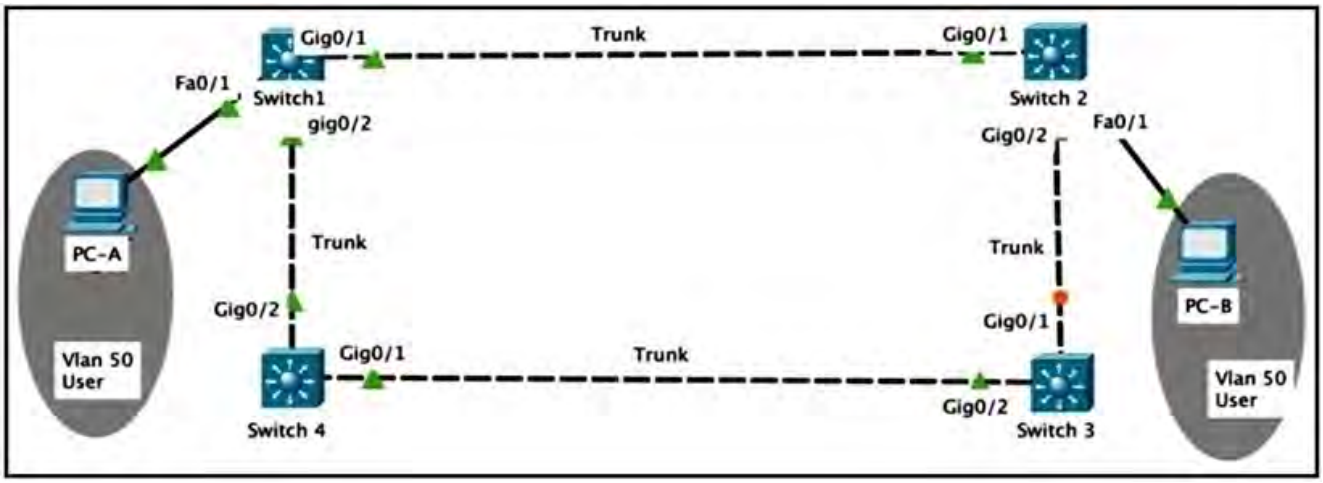
A.
```
Switch1(config)# interface f0/1
Switch1(config-if)# spanning-tree portfast
```

B.
```
Switch1(config)# spanning-tree portfast bpdufilter default
Switch1(config)# interface f0/1
Switch1(config-if)# spanning-tree portfast
```

C.
```
Switch1(config)# spanning-tree portfast bpduguard default
Switch1(config)# interface f0/1
Switch1(config-if)# spanning-tree portfast
```

D.
```
Switch1(config)# interface f0/1
Switch1(config-if)# spanning-tree portfast
Switch1(config-if)# spanning-tree bpduguard enable
```

Rapid PVST+ is enabled on all switches. Which command set must be configured on switch1 to achieve the following results on port fa0/1?



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

Correct Answer: B
Explanation

Explanation/Reference:
BPDU filtering allows you to avoid transmitting BPDUs on PortFast-enabled ports that are connected to an end system. When you enable PortFast on the switch, spanning tree places ports in the forwarding state immediately, instead of going through the listening, learning, and forwarding states.

By default, spanning tree sends BPDUs from all ports regardless of whether PortFast is enabled. BDPU filtering is on a per-switch basis; after you enable BPDU filtering, it applies to all PortFast-enabled ports on the switch.

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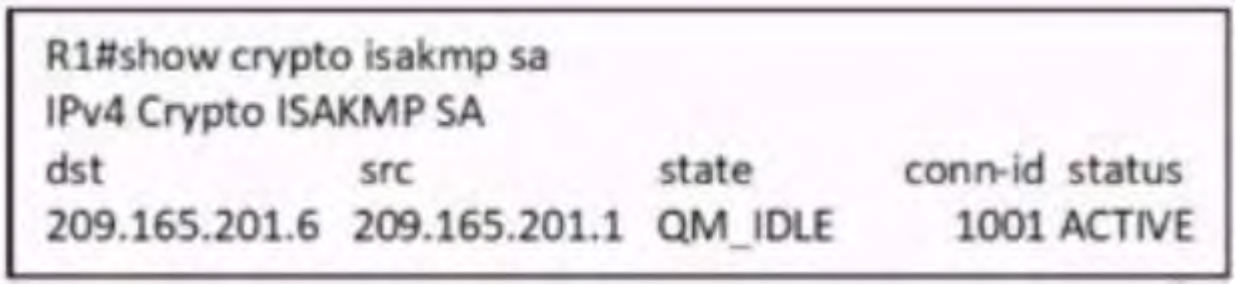
QUESTION 145
After a redundant route processor failure occurs on a Layer 3 device, which mechanism allows for packets to be forwarded from a neighboring router based on the most recent tables?

A. RPVST+
B. NSF
C. BFD
D. RP failover

Correct Answer: B
Explanation

Explanation/Reference:
It's NSF https://www.youtube.com/watch?v=Dm-3UxiKPtc

QUESTION 146
Refer to the exhibit.



After configurating an IPsec VPN, an engineer enters the show command to verify the ISAKMP SA status. What does the status show?

A. ISAKMP SA is authenticated and can be used for Quick Mode.
B. Peers have exchanged keys, but ISAKMP SA remains unauthenticated.
C. VPN peers agreed on parameters for the ISAKMP SA
D. ISAKMP SA has been created, but it has not continued to form.

Correct Answer: A
Explanation

Explanation/Reference:
The ISAKMP SA has been authenticated. If the router initiated this exchange, this state transitions immediately to QM_IDLE, and a Quick Mode exchange begins.

https://www.ciscopress.com/articles/article.asp?p=606584

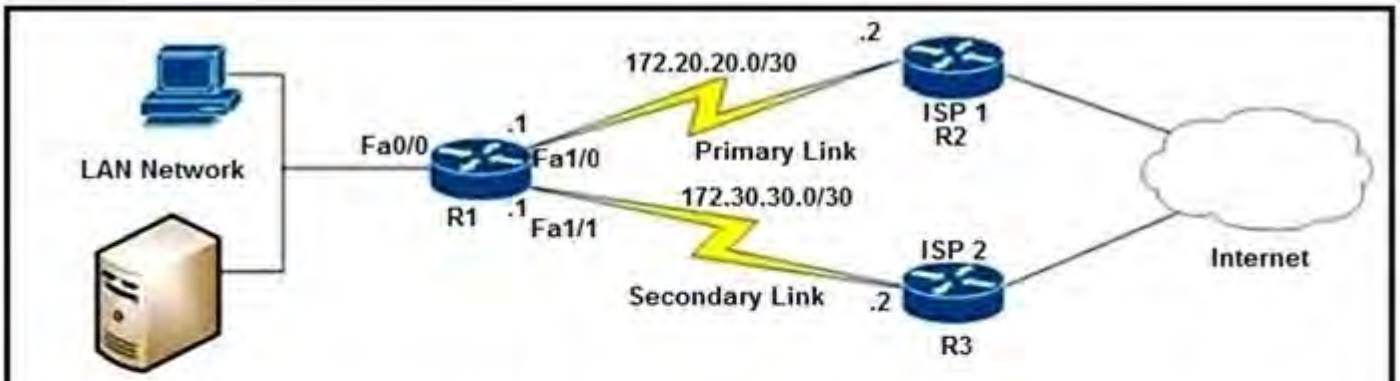
QUESTION 147
Which entity is a Type 1 hypervisor?

A. Oracle VM VirtualBox
B. VMware server
C. Citrix XenServer
D. Microsoft Virtual PC

Correct Answer: C
Explanation

QUESTION 148
Refer to the exhibit.

https://t.me/learningnets




```
R1(config)#ip sla1
R1(config-ip-sla)#icmp-echo 172.20.20.2 source-interface FastEthernet 1/0
R1(config-ip-sla-echo)#timeout5000
R1(config-ip-sla-echo)#frequency10
R1(config-ip-sla-echo)#threshold500
R1(config)#ip sla schedule 1 start-time now life forever
R1(config)#track10 ip sla 1 reachability
R1(config)#ip route 0.0.0.0 0.0.0.0 172.20.20.2
```

After implementing the configuration 172.20.20.2 stops replaying to ICMP echoes, but the default route fails to be removed. What is the reason for this behavior?

A. The source-interface is configured incorrectly.
B. The destination must be 172.30.30.2 for icmp-echo
C. The default route is missing the track feature
D. The threshold value is wrong.

Correct Answer: C
Explanation

Explanation/Reference:
The last command should be "R1(config)#ip route 0.0.0.0 0.0.0.0 172.20.20.2 track 10".

QUESTION 149
What does Call Admission Control require the client to send in order to reserve the bandwidth?

A. SIP flow information
B. Wi-Fi multimedia
C. traffic specification
D. VoIP media session awareness

Correct Answer: C
Explanation

QUESTION 150
Which entity is responsible for maintaining Layer 2 isolation between segments In a VXLAN environment?

A. switch fabric
B. VTEP
C. VNID
D. host switch

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Correct Answer: C
Explanation

Explanation/Reference:
VXLAN uses an 8-byte VXLAN header that consists of a 24-bit VNID and a few reserved bits. The VXLAN header together with the original Ethernet frame goes in the UDP payload. The 24-bit VNID is used to identify Layer 2 segments and to maintain Layer 2 isolation between the segments.
Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/7-x/vxlan/configuration/guide/b_Cisco_Nexus_9000_Series_NX- OS_VXLAN_Configuration_Guide_7x/b_Cisco_Nexus_9000_Series_NX- OS_VXLAN_Configuration_Guide_7x_chapter_010.html

QUESTION 151
Which design principle slates that a user has no access by default to any resource, and unless a resource is explicitly granted, it should be denied?

A. least privilege
B. fail-safe defaults
C. economy of mechanism
D. complete mediation

Correct Answer: B
Explanation

Explanation/Reference:
The Principle of Fail-Safe Defaults states that, unless a subject is given explicit access to an object, it should be denied access to that object

QUESTION 152
Which measurement is used from a post wireless survey to depict the cell edge of the access points?

A. SNR
B. Noise
C. RSSI
D. CCI

Correct Answer: C
Explanation

Explanation/Reference:
Coverage defines the ability of wireless clients to connect to a wireless AP with a signal strength and quality high enough to overcome the effects of RF interference. The edge of the coverage for an AP is based on the signal strength and SNR measured as the client device moves away from the AP.

The signal strength required for good coverage varies dependent on the specific type of client devices and applications on the network.

To accommodate the requirement to support wireless Voice over IP (VoIP), refer to the RF guidelines specified in the Cisco 7925G Wireless IP Phone Deployment Guide. The minimum recommended wireless signal strength for voice applications is -67 dBm and the minimum SNR is 25 dB.

The first step in the analysis of a post site survey is to verify the `Signal Coverage'. The signal coverage is measured in dBm. You can adjust the color-coded signal gauge to your minimum-allowed signal level to view areas where there are sufficient and insufficient coverage. The example in Figure 8 shows blue, green, and yellow areas in the map have signal coverage at -67 dBm or better. The areas in grey on the coverage maps have deficient coverage. Source from Cisco

https://www.cisco.com/c/en/us/td/docs/wireless/technology/vowlan/troubleshooting/vowlan_troubleshoot/8_Site_Survey_RF_Design_Valid.html

QUESTION 153
How is Layer 3 roaming accomplished in a unified wireless deployment?

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A. An EoIP tunnel is created between the client and the anchor controller to provide seamless connectivity as the client is associated with the new AP.
B. The client entry on the original controller is passed to the database on the new controller.
C. The new controller assigns an IP address from the new subnet to the client
D. The client database on the original controller is updated the anchor entry, and the new controller database is updated with the foreign entry.

Correct Answer: D
Explanation

QUESTION 154
Which features does Cisco EDR use to provide threat detection and response protection?

A. containment, threat intelligence, and machine learning
B. firewalling and intrusion prevention
C. container-based agents
D. cloud analysis and endpoint firewall controls

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/products/security/endpoint-security/what-is-endpoint-detection-response-edr.html

QUESTION 155
An engineer runs the code against an API of Cisco DMA Center, and the platform returns this output What does the response indicate?

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```
import requests
import sys
import urllib3

urllib3.disable_warnings(urllib3.exceptions.InsecureRequestWarning)

def main():
   device_uri = "https://192.168.1.1/dna/system/api/v1/auth/token"
   http_result = requests.get(device_uri, auth=("root", "test398555469!"))
   print(http_result)
   if http_result.status_code != requests.codes.ok:
      print("Call failed! Review get_token() .")
      sys.exit()
   print(http_result.json()["Token"])

if _name_ == "_main_":
   sys.exit(main())
```

Output

```
$ python get_token.py
<Response [405]>
Call failed! Review get_token ().
```

A. The authentication credentials are incorrect.
B. The URI string is incorrect.
C. The Cisco DNA Center API port is incorrect.
D. The HTTP method is incorrect.

Correct Answer: D
Explanation

Explanation/Reference:
Reference:
https://developer.mozilla.org/en-US/docs/Web/HTTP/Status/405
https://developer.mozilla.org/en-US/docs/Web/HTTP/Status
Invalid authentication credentials would return code 401

QUESTION 156
What is a consideration when designing a Cisco SD-Access underlay network?

A. End user subnets and endpoints are part of the underlay network.
B. The underlay switches provide endpoint physical connectivity for users.
C. Static routing is a requirement,
D. It must support IPv4 and IPv6 underlay networks.

Correct Answer: B
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html#Underlay

QUESTION 157

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In a wireless Cisco SD-Access deployment, which roaming method is used when a user moves from one access point to another on a different access switch using a single WLC?

A. Layer 3
B. inter-xTR
C. auto anchor
D. fast roam

Correct Answer: B
Explanation

Explanation/Reference:
SDA RoamingSDA supports two additional types of roaming, which are Intra-xTR and Inter-xTR. In SDA, xTR stands for an access-switch that is a fabric edge node. It serves both as an ingress tunnel router as well as an egress tunnel router.

Intra-xTR
When a client on a fabric enabled WLAN, roams from an access point to another access point on the same access-switch, it is called Intra-xTR. Here, the local client database and client history table are updated with the information of the newly associated access point.

Inter-xTR.
When a client on a fabric enabled WLAN, roams from an access point to another access point on a different access-switch, it is called Inter-xTR.

https://www.cisco.com/c/en/us/td/docs/wireless/controller/9800/config-guide/b_wl_16_10_cg/mobility.html

QUESTION 158
Which JSON syntax is valid?

A. {"switch": "name": "dist1", "interfaces": ["gig1", "gig2", "gig3"]}
B. {/"switch/": {/"name/": "dist1", /"interfaces/": ["gig1", "gig2", "gig3"]}}
C. {"switch": {"name": "dist1", "interfaces": ["gig1", "gig2", "gig3"]}}
D. {`switch': (`name': `dist1', `interfaces': [`gig1', `gig2', `gig3'])}

Correct Answer: C
Explanation

Explanation/Reference:
This JSON can be written as follows:
{
'switch': {
'name': 'dist1',
'interfaces': ['gig1', 'gig2', 'gig3']
}
}

QUESTION 159
Refer to the exhibit.

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```
Router# traceroute 10.10.10.1

Type escape sequence to abort.
Tracing the route to 10.10.10.1

1 10.0.0.1 5 msec 5 msec 5 msec
2 10.5.0.1 15 msec 17 msec 17 msec
3 10.10.10.1     *     *     *
```

An engineer is troubleshooting a connectivity issue and executes a traceoute. What does the result confirm?

A. The destination server reported it is too busy
B. The protocol is unreachable
C. The destination port is unreachable
D. The probe timed out

Correct Answer: D
Explanation

Explanation/Reference:
In Cisco routers, the codes for a traceroute command reply are:

! -- success
* -- time out
N -- network unreachable
H -- host unreachable
P -- protocol unreachable
A -- admin denied
Q -- source quench received (congestion)
? -- unknown (any other ICMP message)

QUESTION 160
What is a benefit of data modeling languages like YANG?

A. They enable programmers to change or write their own application within the device operating system.
B. They create more secure and efficient SNMP OIDs.
C. They make the CLI simpler and more efficient.
D. They provide a standardized data structure, which results in configuration scalability and consistency.

Correct Answer: D
Explanation

Explanation/Reference:
Yet Another Next Generation (YANG) is a language which is only used to describe data models (structure). It is not XML or JSON.

QUESTION 161
In cisco SD_WAN, which protocol is used to measure link quality?

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A. OMP
B. BFD
C. RSVP
D. IPsec

Correct Answer: B
Explanation

Explanation/Reference:
The BFD (Bidirectional Forwarding Detection) is a protocol that detects link failures as part of the Cisco SD-WAN (Viptela) high availability solution, is enabled by default on all vEdge routers, and you cannot disable it.

QUESTION 162
Which two mechanisms are available to secure NTP? (Choose two.)

A. IP prefix list-based
B. IPsec
C. TACACS-based authentication
D. IP access list-based
E. Encrypted authentication

Correct Answer: DE
Explanation

Explanation/Reference:
The time kept on a machine is a critical resource and it is strongly recommend that you use the security features of NTP to avoid the accidental or malicious setting of incorrect time. The two security features available are an access list-based restriction scheme and an encrypted authentication mechanism.

Reference: https://www.cisco.com/c/dam/en/us/td/docs/ios-xml/ios/bsm/configuration/xe-3se/3650/bsm-xe-3se-3650-book.html

QUESTION 163
Which method of account authentication does OAuth 2.0 within REST APIs?

A. username/role combination
B. access tokens
C. cookie authentication
D. basic signature workflow

Correct Answer: B
Explanation

Explanation/Reference:
The most common implementations of OAuth (OAuth 2.0) use one or both of these tokens:
+ access token: sent like an API key, it allows the application to access a user's data; optionally, access tokens can expire. + refresh token: optionally part of an OAuth flow, refresh tokens retrieve a new access token if they have expired.
OAuth2 combines Authentication and Authorization to allow more sophisticated scope and validity control.

Reference: https://www.cisco.com/c/en/us/td/docs/security/firepower/ftd-api/guide/ftd-rest-api/auth-ftd-rest-api.pdf

QUESTION 164
What is the recommended MTU size for a Cisco SD-Access Fabric?

A. 1500
B. 9100

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C. 4464
D. 17914

Correct Answer: B
Explanation

Explanation/Reference:
VXLAN adds 50 bytes to the original packet. The common denominator and recommended MTU value available on devices operating in a fabric role is 9100. Network should have a minimum starting MTU of at least 1550 bytes to support the fabric overlay. MTU values between 1550 and 9100 are supported along with MTU values larger than 9100 though there may be additional configuration and limitations based on the original packet size. MTU 9100 is provisioned as part of LAN Automation. Devices in the same routing domain and Layer 2 domain should be configured with a consistent MTU size to support routing protocol adjacencies and packet forwarding without fragmentation.

QUESTION 165
Which LISP component is required for a LISP site to communicate with a non-LISP site?

A. ETR
B. ITR
C. Proxy ETR
D. Proxy ITR

Correct Answer: C
Explanation

Explanation/Reference:
ETR, (Egress) from internal to External
ITR, (Internal) from External to Internal

QUESTION 166
Which two operational models enable an AP to scan one or more wireless channels for rouge access points and at the same time provide wireless services to clients? (Choose two.)

A. Rouge detector
B. Sniffer
C. FlexConnect
D. Local
E. Monitor

Correct Answer: CD
Explanation

Explanation/Reference:
Rogue Detection is performed by Local and Flex-Connect (in connected mode) mode APs and utilizes a time-slicing technique which allows client service and channel scanning with the usage of the same radio. With the move to off channel for a period of 50ms every 16 seconds, the AP, by default, only spends a small percentage of its time to not serve clients.

Monitor mode serves only to scan, not to serve clients.

Monitor mode APs are also far superior at the detection of rogue clients as they have a more comprehensive view of the activity that occurs in each channel.

Just as @YTAKE, @Adrenalina73, @xziomal9, @wifishark and others say.

https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/112045-handling-rogue-cuwn-00.html#anc8

QUESTION 167

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How is MSDP used to interconnect multiple PIM-SM domains?

A. MSDP depends on BGP or multiprotocol BGP for interdomain operation.
B. MSDP SA request messages are used to request a list of active sources for a specific group.
C. MSDP allows a rendezvous point to dynamically discover active sources outside of its domain.
D. MSDP messages are used to advertise active sources in a domain.

Correct Answer: C
Explanation

Explanation/Reference:
Allows a rendezvous point (RP) to dynamically discover active sources outside of its domain.

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipmulti_pim/configuration/xe-16/imc-pim-xe-16-book/imc-msdp-im-pim-sim.html

QUESTION 168
Which technology provides a secure communication channel for all traffic at Layer 2 of the OSI model?

A. MACsec
B. IPsec
C. SSL
D. Cisco Trustsec

Correct Answer: A
Explanation

Explanation/Reference:
MACsec, defined in 802.1AE, provides MAC-layer encryption over wired networks by using out- ofband methods for encryption keying. The MACsec Key Agreement (MKA) Protocol provides the required session keys and manages the required encryption keys. MKA and MACsec are implemented after successful authentication using the 802.1x Extensible Authentication Protocol (EAP-TLS) or Pre Shared Key (PSK) framework.
A switch using MACsec accepts either MACsec or non-MACsec frames, depending on the policy associated with the MKA peer. MACsec frames are encrypted and protected with an integrity check value (ICV). When the switch receives frames from the MKA peer, it decrypts them and calculates the correct ICV by using session keys provided by MKA. The switch compares that ICV to the ICV within the frame. If they are not identical, the frame is dropped. The switch also encrypts and adds an ICV to any frames sent over the secured port (the access point used to provide the secure MAC service to a MKA peer) using the current session key.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9300/software/release/1 6-9/configuration_guide/sec/b_169_sec_9300_cg/macsec_encryption.html

Note: Cisco Trustsec is the solution which includes MACsec.

QUESTION 169
Which component of the Cisco Cyber Threat Defense solution provides user and flow context analysis?

A. Cisco Firepower and FireSIGHT
B. Cisco Stealthwatch system
C. Advanced Malware Protection
D. Cisco Web Security Appliance

Correct Answer: B
Explanation

Explanation/Reference:
The goal of the Cyber Threat Defense solution is to introduce a design and architecture that can help facilitate the discovery, containment, and remediation of threats once they have penetrated into the

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network interior. Cisco Cyber Threat Defense version 2.0 makes use of several solutions to accomplish its objectives:

* NetFlow and the Lancope StealthWatch System
1. Broad visibility
2. User and flow context analysis
3. Network behavior and anomaly detection
4. Incident response and network forensics

* Cisco FirePOWER and FireSIGHT
1. Real-time threat management
2. Deeper contextual visibility for threats bypassing the perimeters ?URL control

* Advanced Malware Protection (AMP)
1. Endpoint control with AMP for Endpoints
2. Malware control with AMP for networks and content

* Content Security Appliances and Services
1. Cisco Web Security Appliance (WSA) and Cloud Web Security (CWS)
2. Dynamic threat control for web traffic
3. Outbound URL analysis and data transfer controls
4. Detection of suspicious web activity
5. Cisco Email Security Appliance (ESA)
6. Dynamic threat control for email traffic
7. Detection of suspicious email activity

* Cisco Identity Services Engine (ISE)
1. User and device identity integration with Lancope StealthWatch
2. Remediation policy actions using pxGrid

Reference:
https://www.cisco.com/c/dam/en/us/td/docs/security/network_security/ctd/ctd2-0/design_guides/ctd_2-0_cvd_guide_jul15.pdf

QUESTION 170
What is the function of a fabric border node in a Cisco SD-Access environment?

A. To collect traffic flow information toward external networks.
B. To connect the Cisco SD-Access fabric to another fabric or external Layer 3 networks.
C. To attach and register clients to the fabric.
D. To handle an ordered list of IP addresses and locations for endpoints in the fabric.

Correct Answer: B
Explanation

Explanation/Reference:
Border Node is an Entry & Exit point for data traffic going Into & Out of a Fabric

Referenced:
https://www.cisco.com/c/dam/m/hr_hr/training-events/2019/cisco-connect/pdf/VH-Cisco-SD-Access-Connecting.pdf

QUESTION 171
A customer has several small braches and wants to deploy a WI-FI solution with local management using CAPWAP.
Which deployment model meets this requirement?

A. Autonomous
B. Mobility express
C. SD-Access wireless
D. Local mode

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Correct Answer: B
Explanation

Explanation/Reference:
Correct answer is Mobility Express. From Encor Cert guide: "As you might have guessed, it is also possible to move the WLC even below the access layer and into an AP. Figure 18-7 illustrates the Mobility Express topology, where a fully functional Cisco AP also runs software that acts as a WLC. This can be useful in small scale environments,such as small, midsize, or multi-site branch locations, where you might not want to invest in dedicated WLCs at all. The AP that hosts the WLC forms a CAPWAP tunnel with the WLC, as do any other APs at the same location. A Mobility Express WLC can support up to 100 APs."

QUESTION 172
Refer to the exhibit.

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```
London(config)#interface range fa0/1-2
London(config-if-range)#switchp trunk encapsulation dot1q
London(config-if-range)#switchp mode trunk
London(config-if-range)#channel-group 1 mode active
London(config-if-range)#end
London#

NewYork#show etherchannel summary
Flags:  D - down         P - in port-channel
        I - stand-alone  s - suspended
        H - Hot-standby (LACP only)
        R - Layer3       S - Layer2
        U - in use       f - failed to allocate aggregator
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port
Number of channel-groups in use: 1
Number of aggregators:           1
Group Port-channel   Protocol    Ports
------------------------------------------------------------------
1     Po1(SD)            PAgP   Fa0/1(I) Fa0/2(D)
NewYork#
NewYork#show etherchannel port-channel
                Channel-group listing:
                ----------------------

Group: 1
----------
                Port-channels in the group:
                ---------------------------
Port-channel: Po1
------------
Age of the Port-channel   = 00d:00h:14m:20s
Logical slot/port   = 2/1       Number of ports = 0
GC                  = 0x00000000      HotStandBy port = null
Port state          = Port-channel |
Protocol            =   PAGP
Port Security       = Disabled
```

Communication between London and New York is down. Which command set must be applied to the NewYork switch to resolve the issue?

A. NewYork(config)#no interface po1
NewYork(config)#interface range fa0/1-2
NewYork(config-if)#channel-group 1 mode negotiate
NewYork(config-if)#end NewYork#

B. NewYork(config)#no interface po1

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NewYork(config)#interface range fa0/1-2
NewYork(config-if)#channel-group 1 mode on
NewYork(config-if)#end NewYork#

C. NewYork(config)#no interface po1
NewYork(config)#interface range fa0/1-2
NewYork(config-if)#channel-group 1 mode passive
NewYork(config-if)#end NewYork#

D. NewYork(config)#no interface po1
NewYork(config)#interface range fa0/1-2
NewYork(config-if)#channel-group 1 mode auto
NewYork(config-if)#end NewYork#

Correct Answer: C
Explanation

QUESTION 173
Refer to the exhibit.

Assuming the WLC's interfaces are not in the same subnet as the RADIUS server, which interface would the WLC use as the source for all RADIUS-related traffic?

A. the interface specified on the WLAN configuration
B. any interface configured on the WLC
C. the controller management interface
D. the controller virtual interface

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Correct Answer: A
Explanation

Explanation/Reference:
From the guide, the the tick box wasn't checked it would be A. - Check the RADIUS Server Overwrite interface check box to enable the per-WLAN RADIUS source support. When enabled, the controller uses the interface specified on the WLAN configuration as identity and source for all RADIUS related traffic on that WLAN

QUESTION 174
Refer to the Exhibit.

```
R1
key chain cisco123
  key 1
    key-string Cisco123!
```

```
Ethernet0/0 - Group 10
  State is Active
    8 state changes, last state change 00:03:33
  Virutal IP address is 192.168.0.1
  Active virtual MAC address is 0000.0c07.ac0a
    Local virtual MAC address Is 0000.0c07.ac0a (v1 default)
  Hello time 5 sec, hold time 15 sec
    Next hello sent in 2.704 secs
Authentication MD5, key-chain "cisco123"
Preemption enabled
  Active router is local
  Standby router is unknown
  Priority 255 (configured 255)
  Group name is "workstation-group" (cfgd)
```

```
R1
key chain cisco123
  key 1
    key-string Cisco123!
```

```
Ethernet0/0 - Group 10
  State is Active
    17 state changes, last state change 00:03:33
  Virutal IP address is 192.168.0.1
  Active virtual MAC address is 0000.0c07.ac0a
    Local virtual MAC address Is 0000.0c07.ac0a (v1 default)
  Hello time 10 sec, hold time 30 sec
    Next hello sent in 6.704 secs
Authentication MD5, key-chain "cisco123"
Preemption disabled
  Active router is local
  Standby router is unknown
  Priority 200 (configured 200)
  Group name is "workstation-group" (cfgd)
```

An engineer is installing a new pair of routers in a redundant configuration. When checking on the standby status of each router the engineer notices that the routers are not functioning as expected.
Which action will resolve the configuration error?

A. configure matching hold and delay timers
B. configure matching key-strings
C. configure matching priority values
D. configure unique virtual IP addresses

Correct Answer: D
Explanation

Explanation/Reference:

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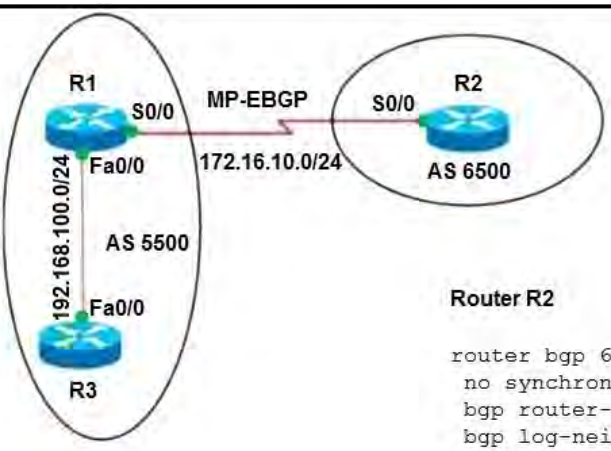
The most situable for this question is D (configure unique virtual address) as is one of requirements for a group to work, as seeing in the image. The others are wrong for the following reason. (so Wrong based in the question) A) Not mandatory the timers must match to work on HSRP. on HSRP negotiation the active router will override the standby timers.
https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.pdf
B) On the image key string match so is not this reason HSRP cant be seen each other
C) Wrong, priority is for selecing the active router, the best practice is should be different thus (WRONG)
D) Different virtual Gateway configured on the same group number indeed will make HSRP routers negotiation fail for that group thus (CORRECT)

QUESTION 175
Refer to the exhibit. An engineer configures the BGP adjacency between R1 and R2, however, it fails to establish Which action resolves the issue?



Router R1

```
router bgp 5500
 no synchronization
 bgp router-id 10.10.10.10
 bgp log-neighbor-changes
 network 192.168.100.0
 redistribute connected
 neighbor 172.16.10.2 remote-as 5500
 neighbor 172.16.10.2 soft-reconfiguration inbound
 neighbor 192.168.100.11 remote-as 5500
 no auto-summary
 !
 address-family vpnv4
  neighbor 172.16.10.2 activate
  neighbor 172.16.10.2 send-community both
 exit-address-family
```

Router R2

```
router bgp 6500
 no synchronization
 bgp router-id 20.20.20.20
 bgp log-neighbor-changes
 neighbor 172.16.10.1 remote-as 5500
 no auto-summary
 !
 !
 address-family vpnv4
  neighbor 172.16.10.1 activate
  neighbor 172.16.10.1 send-community both
 exit-address-family
 !
 address-family ipv4 vrf WAN
  redistribute connected
  redistribute static
  neighbor 172.16.10.1 remote-as 5500
  neighbor 172.16.10.1 activate
  no synchronization
  exit-address-family
```

A. Change the network statement on R1 to 172.16 10.0
B. Change the remote-as number for 192 168.100.11.
C. Enable synchronization on R1 and R2

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D. Change the remote-as number on R1 to 6500.

Correct Answer: D
Explanation

Explanation/Reference:
The EBGP neighbor for R1 is in the AS 6500, and not the same AS 5500

QUESTION 176
Which technology uses network traffic telemetry, contextual information, and file reputation to provide insight into cyber threats?

A. threat defense
B. security services
C. security intelligence
D. segmentation

Correct Answer: A
Explanation

Explanation/Reference:
The initial version of the Cisco Cyber Threat Defense solution was introduced in 2013, with a Cisco Validated Design (CVD) to bring together NetFlow telemetry from the Cisco network infrastructure, the Cisco Identity Services Engine (ISE) for user and device identity, and the StealthWatch System through a partnership with Lancope, Inc. to provide network behavior analysis and threat detection in the interior of the network.

QUESTION 177
Which technology is used as the basis for the cisco SD-Access data plane?

A. IPsec
B. LISP
C. VXLAN
D. 802.1Q

Correct Answer: C
Explanation

Explanation/Reference:
A virtual network identifier (VNI) is a value that identifies a specific virtual network in the data plane.

QUESTION 178
How does CEF switching differ from process switching on Cisco devices?

A. CEF switching saves memory by sorting adjacency tables in dedicate memory on the line cards, and process switching stores all tables in the main memory
B. CEF switching uses adjacency tables built by the CDP protocol, and process switching uses the routing table
C. CEF switching uses dedicated hardware processors, and process switching uses the main processor
D. CEF switching uses proprietary protocol based on IS-IS for MAC address lookup, and process switching uses in MAC address table

Correct Answer: B
Explanation

Explanation/Reference:
Cisco Express Forwarding (CEF) switching is a proprietary form of scalable switching intended to tackle the problems associated with demand caching. With CEF switching, the information which is conventionally stored in a route cache is split up over several data structures. The CEF code is able to maintain these data structures in the Gigabit Route Processor (GRP), and also in slave processors such

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as the line cards in the 12000 routers. The data structures that provide optimized lookup for efficient packet forwarding include:

1. The Forwarding Information Base (FIB) table - CEF uses a FIB to make IP destination prefix-based switching decisions. The FIB is conceptually similar to a routing table or information base. It maintains a mirror image of the forwarding information contained in the IP routing table. When routing or topology changes occur in the network, the IP routing table is updated, and these changes are reflected in the FIB. The FIB maintains next-hop address information based on the information in the IP routing table.
2. Because there is a one-to-one correlation between FIB entries and routing table entries, the FIB contains all known routes and eliminates the need for route cache maintenance that is associated with switching paths such as fast switching and optimum switching.
3. Adjacency table - Nodes in the network are said to be adjacent if they can reach each other with a single hop across a link layer. In addition to the FIB, CEF uses adjacency tables to prepend Layer 2 addressing information. The adjacency table maintains Layer 2 next-hop addresses for all FIB entries.

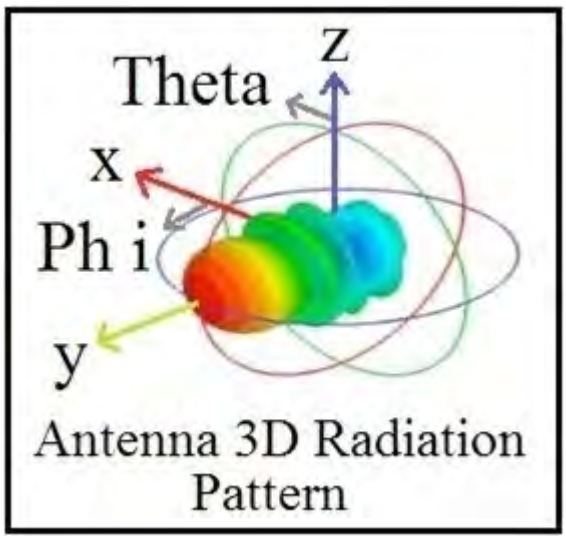
CEF can be enabled in one of two modes:

1. Central CEF mode - When CEF mode is enabled, the CEF FIB and adjacency tables reside on the route processor, and the route processor performs the express forwarding. You can use CEF mode when line cards are not available for CEF switching, or when you need to use features not compatible with distributed CEF switching.
2. Distributed CEF (dCEF) mode - When dCEF is enabled, line cards maintain identical copies of the FIB and adjacency tables. The line cards can perform the express forwarding by themselves, relieving the main processor - Gigabit Route Processor (GRP) - of involvement in the switching operation. This is the only switching method available on the Cisco 12000 Series Router.

CEF uses an Inter-Process Communication (IPC) mechanism to ensure synchronization of FIBs and adjacency tables on the route processor and line cards.

For more information about CEF switching, see Cisco Express Forwarding (CEF) White Paper.

QUESTION 179
Refer to the exhibit.



Which type of antenna does the radiation pattern represent?

A. Yagi
B. multidirectional
C. directional patch
D. omnidirectional

Correct Answer: A
Explanation

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Explanation/Reference:
A Yagi antenna is formed by driving a simple antenna, typically a dipole or dipolelike antenna, and shaping the beam using a well-chosen series of non-driven elements whose length and spacing are tightly controlled.

Reference:
https://www.cisco.com/c/en/us/products/collateral/wireless/aironetantennas-accessories/prod_white_paper0900aecd806a1a3e.htm

QUESTION 180
By default, which virtual MAC address does HSRP group 16 use?

A. c0:41:99:98:06:16
B. 00:00:0c:07:ac:16
C. 00:00:0c:07:ac:22
D. c0:07:0c:ac:00:22

Correct Answer: B
Explanation

QUESTION 181
Refer to the exhibit.

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```
flow record v4_r1
match ipv4 tos
match ipv4 protocol
match ipv4 source address
match ipv4 destination address
match transport source-port
match transport destination-port
collect counter bytes long
collect counter packets long
!
flow monitor FLOW-MONITOR-1
 record v4_r1
 exit
!
sampler SAMPLER-1
 mode random 1 out-of 2
 exit
!
ip cef
!
interface GigabitEthernet 0/0/0
 ip address 172.16.6.2 255.255.255.0
```

Which command set must be added to the configuration to analyze 50 packets out of every 100?

A. sampler SAMPLER-1
   mode random 1-out-of 2
   flow FLOW-MONITOR-1
   Interface GigabitEthernet 0/0/0
   ip flow monitor SAMPLER-1 input
B. sampler SAMPLER-1
   no mode random 1-out-of 2
   mode percent 50
   interface GigabitEthernet 0/0/0
   ip flow monitor FLOW-MONITOR-1 sampler SAMPLER-1 input
C. interface GigabitEthernet 0/0/0
   ip flow monitor FLOW-MONITOR-1 sampler SAMPLER-1 input
D. flow monitor FLOW-MONITOR-1
   record v4_r1
   sampler SAMPLER-1
   interface GigabitEthernet 0/0/0
   ip flow monitor FLOW-MONITOR-1 sampler SAMPLER-1 input

Correct Answer: C
Explanation

Explanation/Reference:
Everything is complete and configured correctly, we just have to apply it on an interface.

QUESTION 182
What is the responsibility of a secondary WLC?

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A. It shares the traffic load of the LAPs with the primary controller.
B. It avoids congestion on the primary controller by sharing the registration load on the LAPs.
C. It registers the LAPs if the primary controller fails.
D. It enables Layer 2 and Layer 3 roaming between Itself and the primary controller.

Correct Answer: C
Explanation

Explanation/Reference:
When the primary controller (WLC-1) goes down, the APs automatically get registered with the secondary controller (WLC-2). The APs register back to the primary controller when the primary controller comes back on line.
Reference: https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/69639-wlc-failover.html

QUESTION 183
Which DHCP option provides the CAPWAP APs with the address of the wireless controller(s)?

A. 43
B. 66
C. 69
D. 150

Correct Answer: A
Explanation

Explanation/Reference:
DHCP option 43 is an option used for providing Wireless LAN Controller IP addresses to the AP. The DHCP option 43 is used to notify the AP to convert into CAPWAP AP.

QUESTION 184
Which statement about a fabric access point is true?

A. It is in local mode an must be connected directly to the fabric border node.
B. It is in FlexConnect mode and must be connected directly to the fabric border node.
C. It is in local mode an must connected directly to the fabric edge switch.
D. It is in FlexConnect mode and must be connected directly to the fabric edge switch.

Correct Answer: C
Explanation

Explanation/Reference:
Fabric mode APs continue to support the same wireless media services that traditional APs support; apply AVC, quality of service (QoS), and other wireless policies; and establish the CAPWAP control plane to the fabric WLC. Fabric APs join as local-mode APs and must be directly connected to the fabric edge node switch to enable fabric registration events, including RLOC assignment via the fabric WLC. The fabric edge nodes use CDP to recognize APs as special wired hosts, applying special port configurations and assigning the APs to a unique overlay network within a common EID space across a fabric. The assignment allows management simplification by using a single subnet to cover the AP infrastructure at a fabric site.

Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/sda-sdg-2019oct.html

QUESTION 185
Refer to the exhibit.

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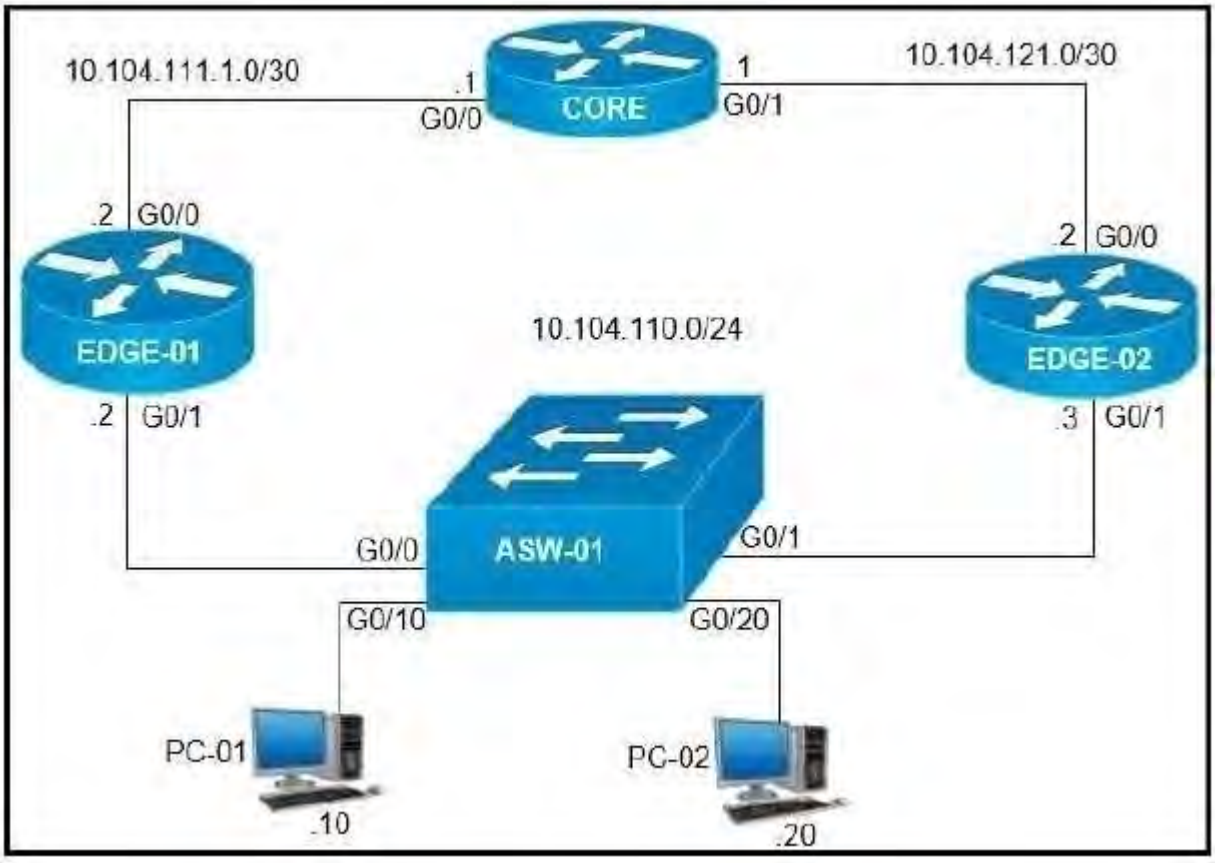

On which interfaces should VRRP commands be applied to provide first hop redundancy to PC-01 and PC-02?

A. G0/0 and G0/1 on Core
B. G0/0 on Edge-01 and G0/0 on Edge-02
C. G0/1 on Edge-01 and G0/1 on Edge-02
D. G0/0 and G0/1 on ASW-01

Correct Answer: C
Explanation

Explanation/Reference:
Correct as the FRRP protocol should be configured on interfaces that have the end nodes network.

QUESTION 186
Refer to the exhibit. A network engineer must configure NETCONF. After creating the configuration, the engineer gets output from the command show line, but not from show runningconfig. Which command completes the configuration?

```
Device# configure terminal
Device(config)# netconf ssh acl 1
Device(config)# netconf lock-time 100
Device(config)# netconf max-sessions 1
Device(config)# netconf max-message 10
```

A. Device(config)# netconf max-sessions 100
B. Device(config)# no netconf ssh acl 1

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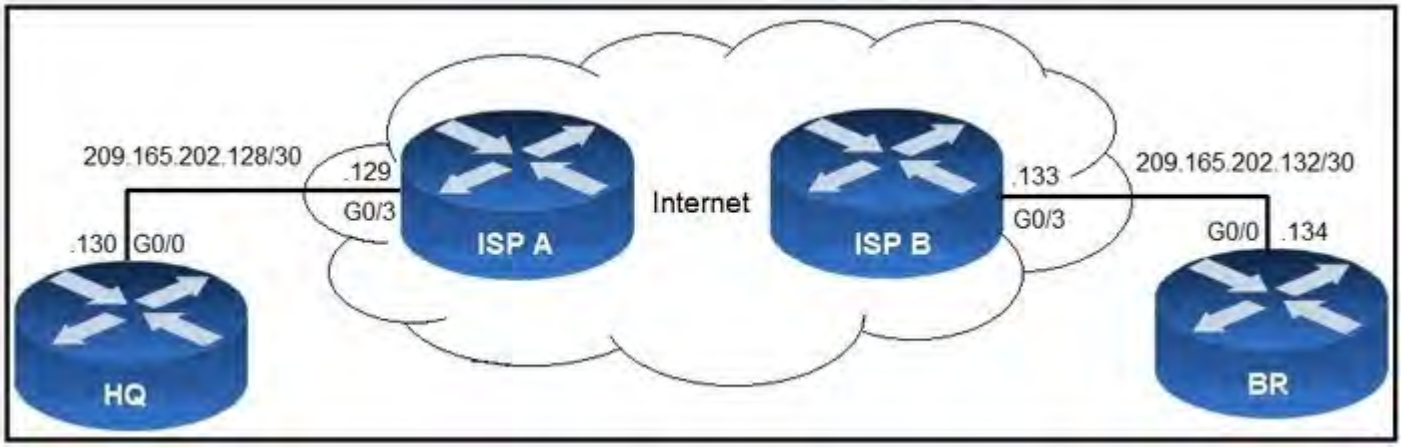
C. Device(config)# netconf lock-time 500
D. Device(config)# netconf max-message 1000

Correct Answer: D
Explanation

Explanation/Reference:
A : The valid range is 4 to 16 (X
B : Disable netconf over sshv2 (X
C : The valid range is 1 to 300 (X
D : The valid range is 1 to 2147483. The default value is infinite

Command: netconf max-message <1-2147483> Kbytes. The engineer gets output from the command show line, but not from show running-config, because max-message is too small, it is not enough for data of running-config.

QUESTION 187
Refer to the exhibit.



What is the effect of these commands on the BR and HQ tunnel interfaces?

```
BR(config)#interface tunnel1
BR(config-if)#keepalive 5 3

HQ(config)#interface tunnel1
HQ(config-if)#keepalive 5 3
```

A. The tunnel line protocol goes down when the keepalive counter reaches 6
B. The keepalives are sent every 5 seconds and 3 retries
C. The keepalives are sent every 3 seconds and 5 retries.
D. The tunnel line protocol goes down when the keepalive counter reaches 5

Correct Answer: B
Explanation

QUESTION 188
What Is the process for moving a virtual machine from one host machine to another with no downtime?

A. high availability
B. disaster recovery

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C. live migration
D. multisite replication

Correct Answer: C
Explanation

QUESTION 189
Refer to the exhibit.

Cisco DNA Center has obtained the username of the client and the multiple devices that the client is using on the network. How is Cisco DNA Center getting these context details?

A. The administrator had to assign the username to the IP address manually in the user database tool on Cisco DNA Center.
B. Those details are provided to Cisco DNA Center by the Identity Services Engine
C. Cisco DNA Center pulled those details directly from the edge node where the user connected.
D. User entered those details in the Assurance app available on iOS and Android devices

Correct Answer: B
Explanation

QUESTION 190
What NTP Stratum level is a server that is connected directly to an authoritative time source?

A. Stratum 0
B. Stratum 1
C. Stratum 14
D. Stratum 15

Correct Answer: B
Explanation

Explanation/Reference:
The stratum levels define the distance from the reference clock. A reference clock is a stratum 0 device

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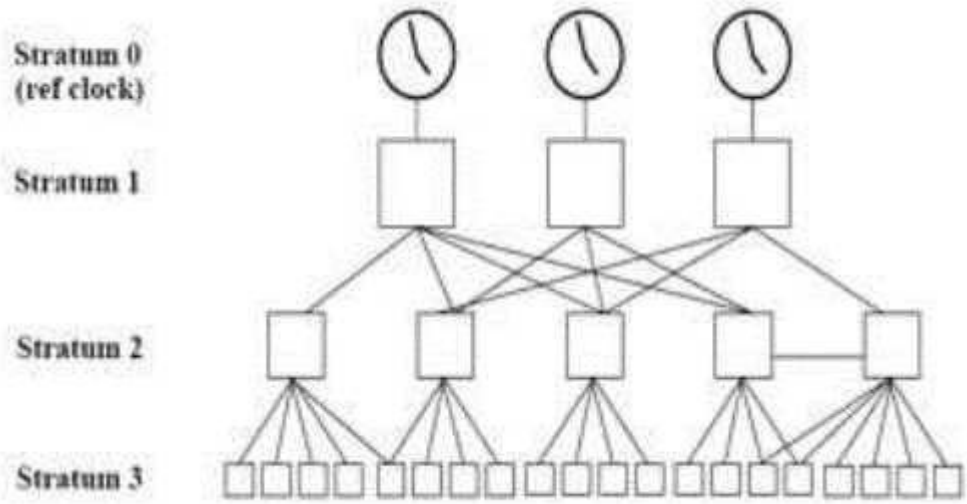
that is assumed to be accurate and has little or no delay associated with it. Stratum 0 servers cannot be used on the network but they are directly connected to computers which then operate as stratum-1 servers. A stratum 1 time server acts as a primary network time standard.



A stratum 2 server is connected to the stratum 1 server; then a stratum 3 server is connected to the stratum 2 server and so on. A stratum 2 server gets its time via NTP packet requests from a stratum 1 server. A stratum 3 server gets its time via NTP packet requests from a stratum-2 server... A stratum server may also peer with other stratum servers at the same level to provide more stable and robust time for all devices in the peer group (for example a stratum 2 server can peer with other stratum 2 servers). NTP uses the concept of a stratum to describe how many NTP hops away a machine is from an authoritative time source. A stratum 1 time server typically has an authoritative time source (such as a radio or atomic clock, or a Global Positioning System (GPS) time source) directly attached, a stratum 2 time server receives its time via NTP from a stratum 1 time server, and so on.

Reference: https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/bsm/16-6-1/b-bsm-xe-16-6-1-asr920/bsm-time-calendar-set.html

QUESTION 191
Which two items are found in YANG data models? (Choose two.)

A. HTTP return codes
B. rpc statements
C. JSON schema
D. container statements
E. XML schema

Correct Answer: BD
Explanation

QUESTION 192
Refer to the exhibit.

```
logging buffered discriminator Disc1
logging monitor discriminator Disc1
logging host 10.1.55.237 discriminator Disc1
```

A network engineer is enabling logging to a local buffer, to the terminal and to a syslog server for all

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debugging level logs filtered by facility code 7.

Which command is needed to complete this configuration snippet?

A. logging buffered debugging
B. logging discriminator Disc1 severity includes 7
C. logging buffered discriminator Dlsd debugging
D. logging discriminator Disc1 severity includes 7 facility includes fac7

Correct Answer: D
Explanation

Explanation/Reference:
The "logging discriminator Disc1 severity includes 7 facility includes fac7" command enables the logging discriminator named Disc1 to filter messages with a severity level of 7 (debugging level) and facility code 7.

QUESTION 193
A network monitoring system uses SNMP polling to record the statistics of router interfaces The SNMP queries work as expected until an engineer installs a new interface and reloads the router After this action, all SNMP queries for the router fail What is the cause of this issue?

A. The SNMP community is configured incorrectly
B. The SNMP interface index changed after reboot.
C. The SNMP server traps are disabled for the interface index
D. The SNMP server traps are disabled for the link state.

Correct Answer: B
Explanation

Explanation/Reference:
In order to tell IOS to keep ifindex value unchanged even after reboot, use the "snmp-server ifindex persist" command

QUESTION 194
An engineer must create an EEM script to enable OSPF debugging in the event the OSPF neighborship goes down. Which script must the engineer apply?

A. event manager applet ENABLE_OSPF_DEBUG
event syslog pattern "%OSPF-5-ADJCHG: Process 6, Nbr 1.1.1.1 on Serial0/0 from FULL to DOWN"
action 1.0 cli command "enable"
action 2.0 cli command "debug ip ospf event"
action 3.0 cli command "debug ip ospf adj"
action 4.0 syslog priority informational msg "ENABLE_OSPF_DEBUG"
B. event manager applet ENABLE_OSPF_DEBUG
event syslog pattern "%OSPF-5-ADJCHG: Process 5, Nbr 1.1.1.1 on Serial0/0 from LOADING to FULL"
action 1.0 cli command "debug ip ospf event"
action 2.0 cli command "debug ip ospf adj"
action 3.0 syslog priority informational msg "ENABLE_OSPF_DEBUG"
C. event manager applet ENABLE_OSPF_DEBUG
event syslog pattern "%OSPF-1-ADJCHG: Process 5, Nbr 1.1.1.1 on Serial0/0 from FULL to DOWN"
action 1.0 cli command "debug ip ospf event"
action 2.0 cli command "debug ip ospf adj"
action 3.0 syslog priority informational msg "ENABLE_OSPF_DEBUG"
D. event manager applet ENABLE_OSPF_DEBUG
event syslog pattern "%OSPF-5-ADJCHG: Process 5, Nbr 1.1.1.1 on Serial0/0 from LOADING to FULL"
action 1.0 cli command "enable"
action 2.0 cli command "debug ip ospf event"
action 3.0 cli command "debug ip ospf adj"

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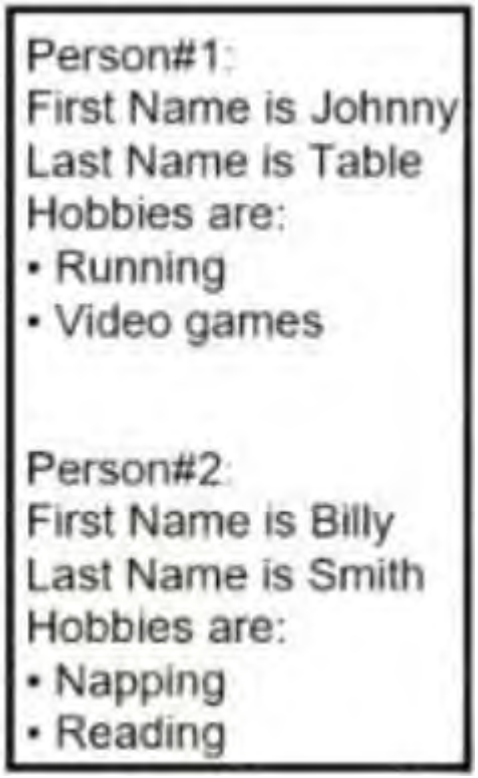
action 4.0 syslog priority informational msg "ENABLE_OSPF_DEBUG"

Correct Answer: A
Explanation

QUESTION 195
Refer to the exhibit. Which JSON syntax is derived from this data?



A. {[{'First Name': 'Johnny', 'Last Name': 'Table', 'Hobbies': ['Running', 'Video games']}, {'First Name': 'Billy', 'Last Name': 'Smith', 'Hobbies': ['Napping', 'Reading']}]}
B. {'Person': [{'First Name': 'Johnny', 'Last Name': 'Table', 'Hobbies': 'Running', 'Video games'}, {'First Name': 'Billy', 'Last Name': 'Smith', 'Hobbies': 'Napping', 'Reading'}]}
C. {[{'First Name': 'Johnny', 'Last Name': 'Table', 'Hobbies': 'Running', 'Hobbies': 'Video games'}, {'First Name': 'Billy', 'Last Name': 'Smith', 'Hobbies': 'Napping', 'Reading'}]}
D. {'Person': [{'First Name': 'Johnny', 'Last Name': 'Table', 'Hobbies': ['Running', 'Video games']}, {'First Name': 'Billy', 'Last Name': 'Smith', 'Hobbies': ['Napping', 'Reading']}]}

Correct Answer: D
Explanation

Explanation/Reference:
{
`Person':
[
{
`First Name': `Johnny',
`Last Name': `Table',
`Hobbies': [`Running', `Video games']
},

{
`First Name': `Billy',
`Last Name': `Smith',
`Hobbies': [`Napping', `Reading']

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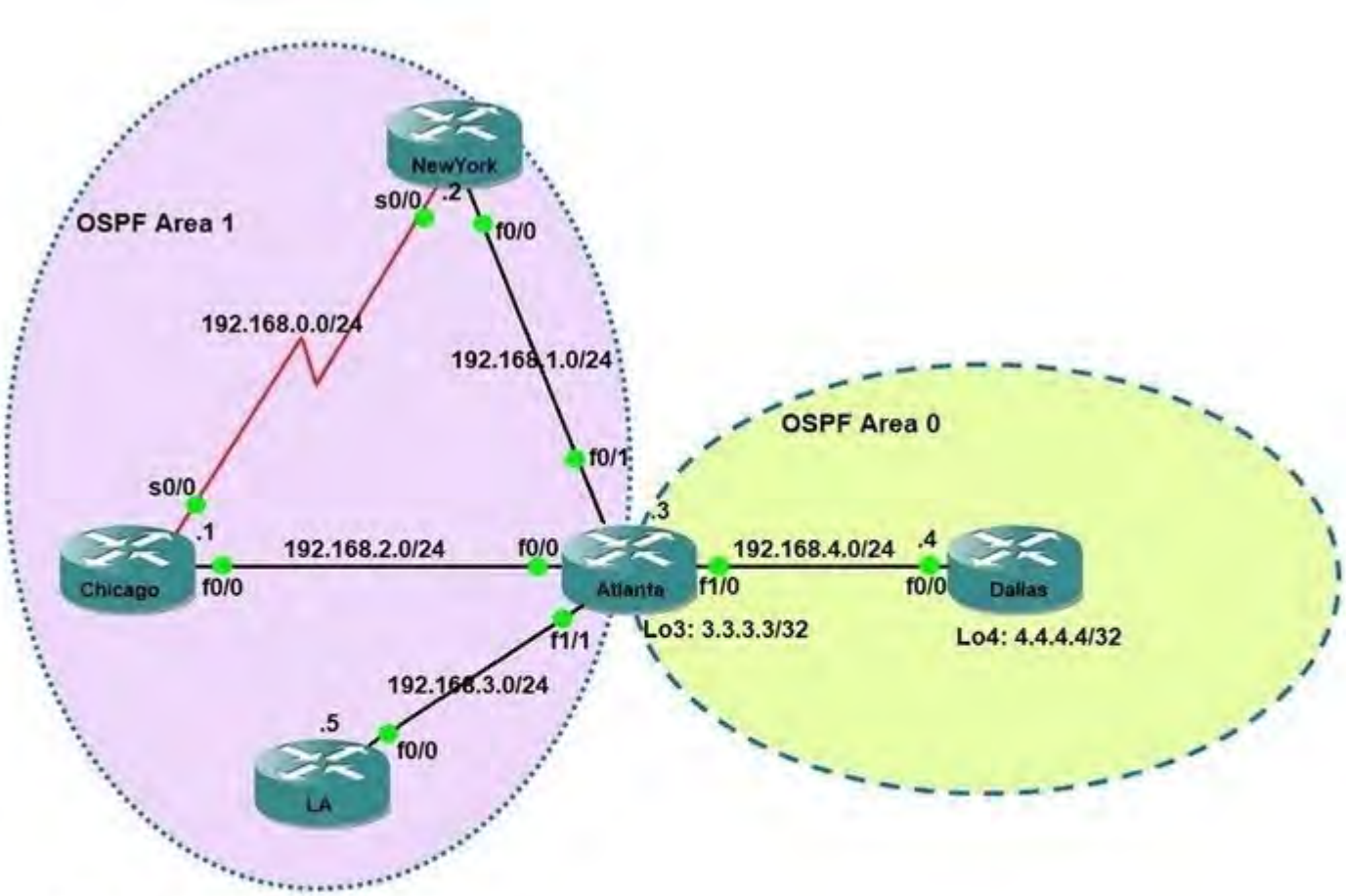
}
]
}

QUESTION 196
Refer to the exhibit.




```
Dallas#show ip route ospf
     3.0.0.0/32 is subnetted, 1 subnets
0       3.3.3.3 [110/40001] via 192.168.4.3, 00:32:18, FastEthernet0/0
0 IA 192.168.0.0/24 [110/145535] via 192.168.4.3, 00:44:29, FastEthernet0/0
0 IA 192.168.1.0/24 [110/80000] via 192.168.4.3, 00:44:29, FastEthernet0/0
0 IA 192.168.2.0/24 [110/80000] via 192.168.4.3, 00:44:29, FastEthernet0/0
0 IA 192.168.3.0/24 [110/44000] via 192.168.4.3, 00:44:29, FastEthernet0/0
Dallas#
```

Which command when applied to the Atlanta router reduces type 3 LSA flooding into the backbone area and summarizes the inter-area routes on the Dallas router?

A. Atlanta(config-route)#area 0 range 192.168.0.0 255.255.248.0
B. Atlanta(config-route)#area 0 range 192.168.0.0 255.255.252.0
C. Atlanta(config-route)#area 1 range 192.168.0.0 255.255.252.0
D. Atlanta(config-route)#area 1 range 192.168.0.0 255.255.248.0

Correct Answer: C
Explanation

QUESTION 197
Refer to the exhibit. CR2 and CR3 ate configured with OSPF. Which configuration, when applied to CR1.

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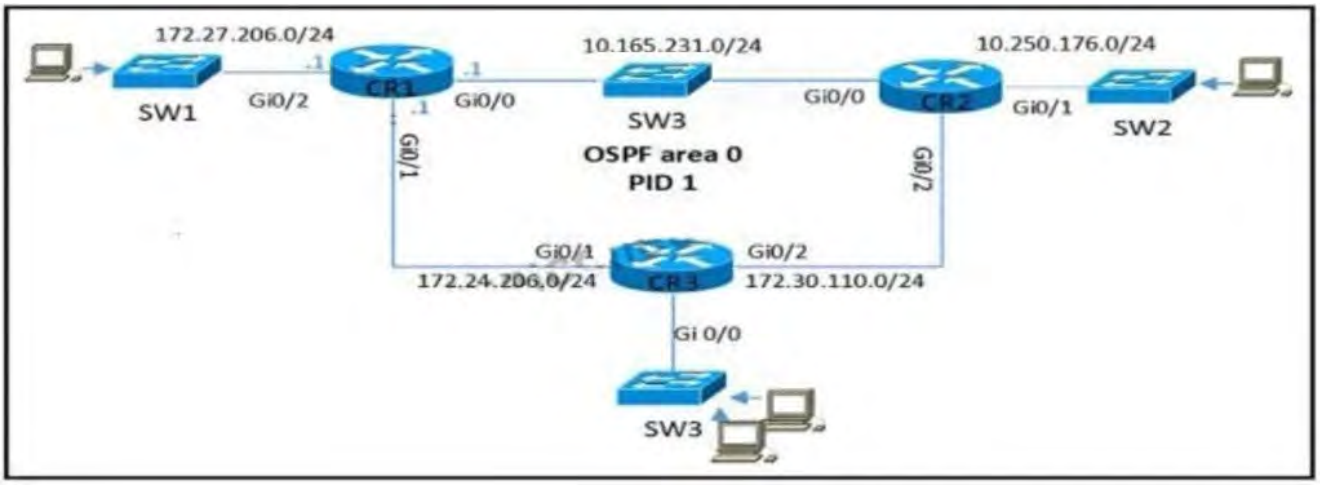
allows CR1 to exchange OSPF Information with CR2 and CR3 but not with other network devices or on new Interfaces that are added to CR1?



A. router ospf 1
network 0.0.0.0 255.255.255.255 area 0
passive-interface GigabitEthernet0/2

B. router ospf 1
network 10.165.231.0 0.0.0.255 area 0
network 172.27.206.0 0.0.0.255 area 0
network 172.24.206.0 0.0.0.255 area 0

C. interface Gi0/2
ip ospf 1 area 0
router ospf 1
passive-interface GigabitEthernet0/2

D. router ospf 1
network 10.0.0.0 0.255.255.255 area 0
network 172.16.0.0 0.15.255.255 area 0
passive-interface GigabitEthernet0/2

Correct Answer: D
Explanation

QUESTION 198
Which two parameters are examples of a QoS traffic descriptor? (Choose two)

A. MPLS EXP bits
B. bandwidth
C. DSCP
D. ToS
E. packet size

Correct Answer: AC
Explanation

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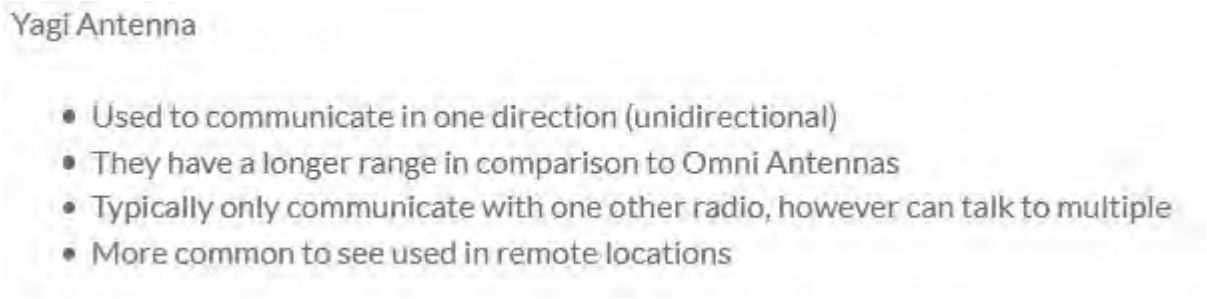
Explanation/Reference:
From the OCG page 368:
"The following traffic descriptors are typically used for classification:
Internal: QoS groups (locally significant to a router)
Layer 1: Physical interface, subinterface, or port
Layer 2: MAC address and 802.1Q/p Class of Service (CoS) bits
Layer 2.5: MPLS Experimental (EXP) bits
Layer 3: Differentiated Services Code Points (DSCP), IP Precedence (IPP), and source/destination IP address
Layer 4: TCP or UDP ports
Layer 7: Next Generation Network-Based Application Recognition (NBAR2)".

QUESTION 199
Which antenna type should be used for a site-to-site wireless connection?

A. Omnidirectional
B. dipole
C. patch
D. Yagi

Correct Answer: D
Explanation

Explanation/Reference:


A Yagi antenna contains a dipole but also has reflectors and directors.

QUESTION 200
What is the wireless received signal strength indicator?

A. The value given to the strength of the wireless signal received compared to the noise level
B. The value of how strong the wireless signal Is leaving the antenna using transmit power, cable loss, and antenna gain
C. The value of how much wireless signal is lost over a defined amount of distance
D. The value of how strong a tireless signal is receded, measured in dBm

Correct Answer: D
Explanation

Explanation/Reference:
RSSI, or "Received Signal Strength Indicator," is a measurement of how well your device can hear a signal from an access point or router. It's a value that is useful for determining if you have enough signal to get a good wireless connection. This value is measured in decibels (dBm) from 0 (zero) to -120 (minus 120). The closer to 0 (zero) the stronger the signal is which means it's better, typically voice networks require a -65db or better signal level while a data network needs - 80db or better.

QUESTION 201
What is a characteristic of Wi-Fi channels?

A. The 2.4-GHz band has 24 non-overlapping channels.
B. Devices that connect to the same Wi-Fi channel reside in the same collision domain.

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C. Wi-Fi channels are spaced 30 MHz apart.
D. The 5-GHz band offers 11 different channels for Wi-Fi clients.

Correct Answer: B
Explanation

QUESTION 202
How does a Type 2 hypervisor function?

A. It runs on a virtual server and includes its own operating system.
B. It runs directly on a physical server and includes its own operating system.
C. It is installed as an application on an already installed operating system.
D. It enables other operating systems to run on it.

Correct Answer: C
Explanation

QUESTION 203
Which encoding is used to protect a username and login with RESTful API basic authentication?

A. Base64
B. MD5
C. SHA-1
D. Type-7

Correct Answer: A
Explanation

QUESTION 204
What is the result of this Python code?

```
>>> (3 * 5) % 2
```

A. 1
B. 0
C. 7
D. 7.5

Correct Answer: A
Explanation

QUESTION 205
Which protocol is used to encrypt control plane traffic between SD-WAN controllers and SDWAN endpoints?

A. DTLS
B. IPsec
C. PGP
D. HTTPS

Correct Answer: A
Explanation

Explanation/Reference:

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DTLS protocol is used to encrypt control plane traffic between vSmart (controllers) and other SD-WAN endpoints.

QUESTION 206
Refer to the exhibit.

```
>>> netconf_data["GigabitEthernet"][0]["enabled"]
u'false'
>>> netconf_data["GigabitEthernet"][1]["enabled"]
u'true'
>>> netconf_data["GigabitEthernet"][2]["enabled"]
u'false'
>>> netconf_data["GigabitEthernet"[0]["description"]
u'my description'
```

Which Python code snippet prints the descriptions of disabled interfaces only?

A.
```
for interface in netconf_data["GigabitEthernet"]:
    if interface["enabled"] != 'false':
        print(interface["description"])
```
B.
```
for interface in netconf_data["GigabitEthernet"]:
    if interface["enabled"] != 'true':
        print(interface["description"])
```
C.
```
for interface in netconf_data["GigabitEthernet"]:
    if interface["disabled"] != 'true':
    print(interface["description"])
```
D.
```
for interface in netconf_data["GigabitEthernet"]:
    print(interface["enabled"])
    print(interface["description"])
```

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

Correct Answer: B
Explanation

Explanation/Reference:
!= is the "Is not true operator" think along these lines and B is clarly correct.

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QUESTION 207
An engineer must create an EEM applet that sends a syslog message in the event a change happens in the network due to trouble with an OSPF process. Which action should the engineer use?

```
event manager applet LogMessage
  event routing network 172.30.197.0/24 type all
```

A. action 1 syslog msg "OSPF ROUTING ERROR"
B. action 1 syslog send "OSPF ROUTING ERROR"
C. action 1 syslog pattern "OSPF ROUTING ERROR"
D. action 1syslog write "OSPF ROUTING ERROR"

Correct Answer: A
Explanation

Explanation/Reference:
Only these keywords are available:

Router1(config-applet)#action 1 syslog
facility Facility string
filter Filter destination of syslog message
msg Syslog message
priority Priority of syslog message

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/eem/command/eem-cr-book/eem-cr-a2.html

QUESTION 208
Which protocol infers that a YANG data model is being used?

A. SNMP
B. NX-API
C. REST
D. RESTCONF

Correct Answer: D
Explanation

Explanation/Reference:
YANG (Yet another Next Generation) is a data modeling language for the definition of data sent over network management protocols such as the NETCONF and RESTCONF.

QUESTION 209
Refer to the exhibit. The trunk does not work over the back-to-back link between Switch1 interface Giq1/0/20 and Switch2 interface Gig1/0/20. Which configuration fixes the problem?

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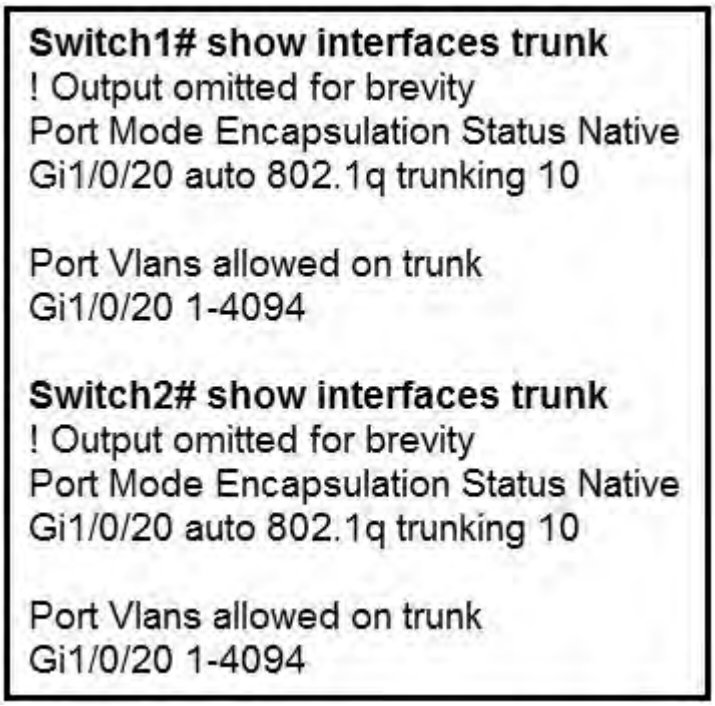

A. Switch 1(config)#interface gig1/0/20
Switch 1(config-if)#switchport mode dynamic auto
B. Switch(config)#interface gig1/0/20
Switch(config-if)#switchport mode dynamic desirable
C. Switch 1(config)#interface gig1/0/20
Switch1(config-if)#switchport trunk native vlan 1
Switch2(config)#interface gig1/0/20
Switch2(config-if)#switchport trunk native vlan 1
D. Switch(config)#interface gig1/0/20
Switch2(config-if)#switchport mode dynamic auto

Correct Answer: B
Explanation

QUESTION 210
What is one primary REST security design principle?

A. fail-safe defaults
B. password hash
C. adding a timestamp in requests
D. OAuth

Correct Answer: A
Explanation

Explanation/Reference:
https://yurisubach.com/2017/04/04/restful-api-security-principles/
"Fail-safe defaultsAccess to any resource (like API endpoint) should be denied by default. Access granted only in case of specific permission.

QUESTION 211
What is the structure of a JSON web token?

A. three parts separated by dots: header payload, and signature
B. header and payload

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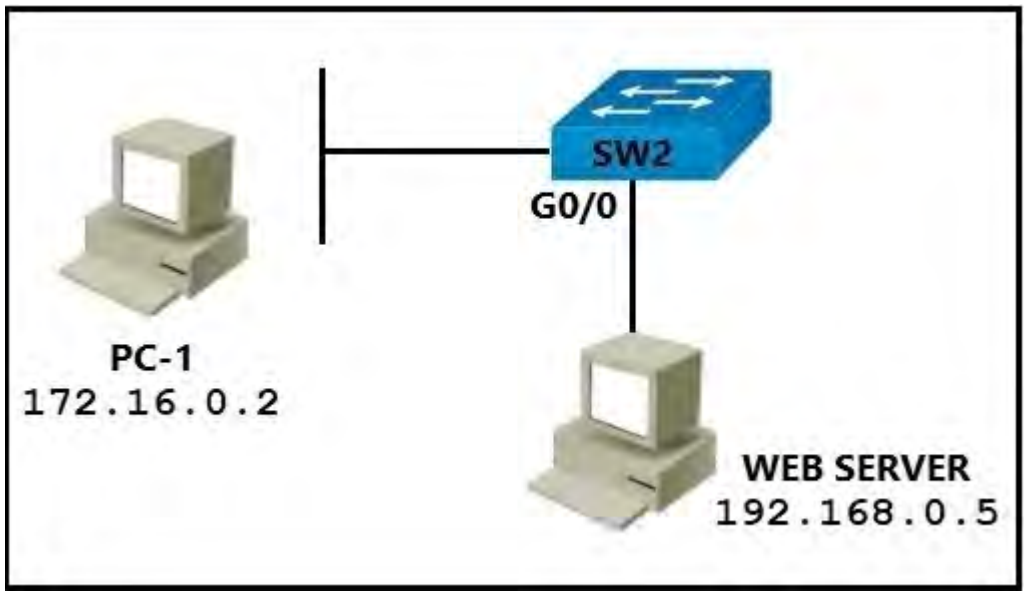
C. three parts separated by dots: version header and signature
D. payload and signature

Correct Answer: A
Explanation

Explanation/Reference:
JSON Web Token (JWT) is an open standard (RFC 7519) that defines a compact and self-contained way for securely transmitting information between parties as a JSON object. This information can be verified and trusted because it is digitally signed. JWTs can be signed using a secret (with the HMAC algorithm) or a public/private key pair using RSA or ECDSA. JSON Web Tokens are composed of three parts, separated by a dot (.): Header, Payload, Signature. Therefore, a JWT typically looks like the following:
xxxxx.yyyyy.zzzzz
The header typically consists of two parts: the type of the token, which is JWT, and the signing algorithm being used, such as HMAC SHA256 or RSA. The second part of the token is the payload, which contains the claims. Claims are statements about an entity (typically, the user) and additional data. To create the signature part you have to take the encoded header, the encoded payload, a secret, the algorithm specified in the header, and sign that.
Reference: https://jwt.io/introduction/

QUESTION 212
Refer to the exhibit.



Refer to the exhibit. PC-1 must access the web server on port 8080. To allow this traffic, which statement must be added to an access control list that is applied on SW2 port G0/0 in the inbound direction?

A. permit host 172.16.0.2 host 192.168.0.5 eq 8080
B. permit host 192.168.0.5 host 172.16.0.2 eq 8080
C. permit host 192.168.0.5 eq 8080 host 172.16.0.2
D. permit host 192.168.0.5 it 8080 host 172.16.0.2

Correct Answer: C
Explanation

Explanation/Reference:
The inbound direction of G0/0 of SW2 only filter traffic from Web Server to PC-1 so the source IP address and port is of the Web Server.

QUESTION 213
Refer to the exhibit. An engineer attempts to establish BGP peering between router CORP and two ISP routers. What is the root cause for the failure between CORP and ISP#2?

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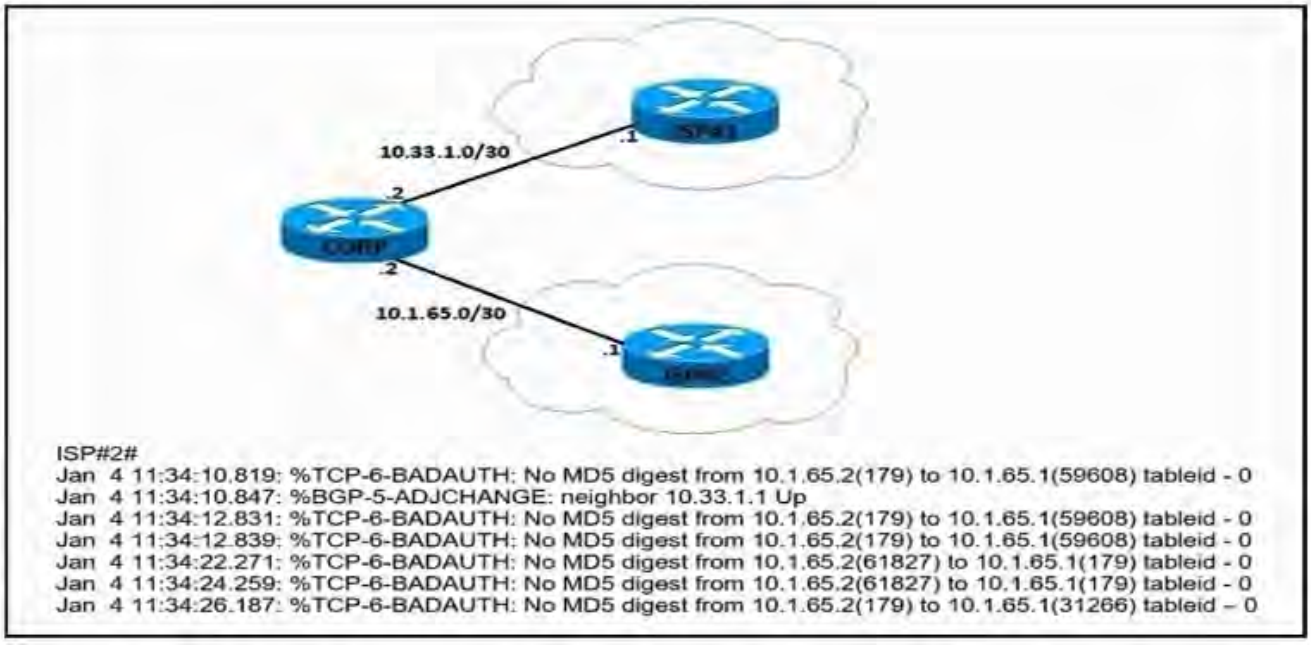

A. Router ISP#2 is configured to use SHA-1 authentication.
B. There is a password mismatch between router CORP and router ISP#2.
C. Router CORP is configured with an extended access control list.
D. MD5 authorization is configured incorrectly on router ISP#2.

Correct Answer: B
Explanation

QUESTION 214
When firewall capabilities are considered, which feature is found only in Cisco nextgeneration firewalls?

A. malware protection
B. stateful inspection
C. traffic filtering
D. active/standby high availability

Correct Answer: A
Explanation

Explanation/Reference:
Malware protection
IPS/IDS
URL Filtering

QUESTION 215
Refer to the exhibit. Which configuration must be applied to R1 to enable R1 to reach the server at 172.16.0.1?

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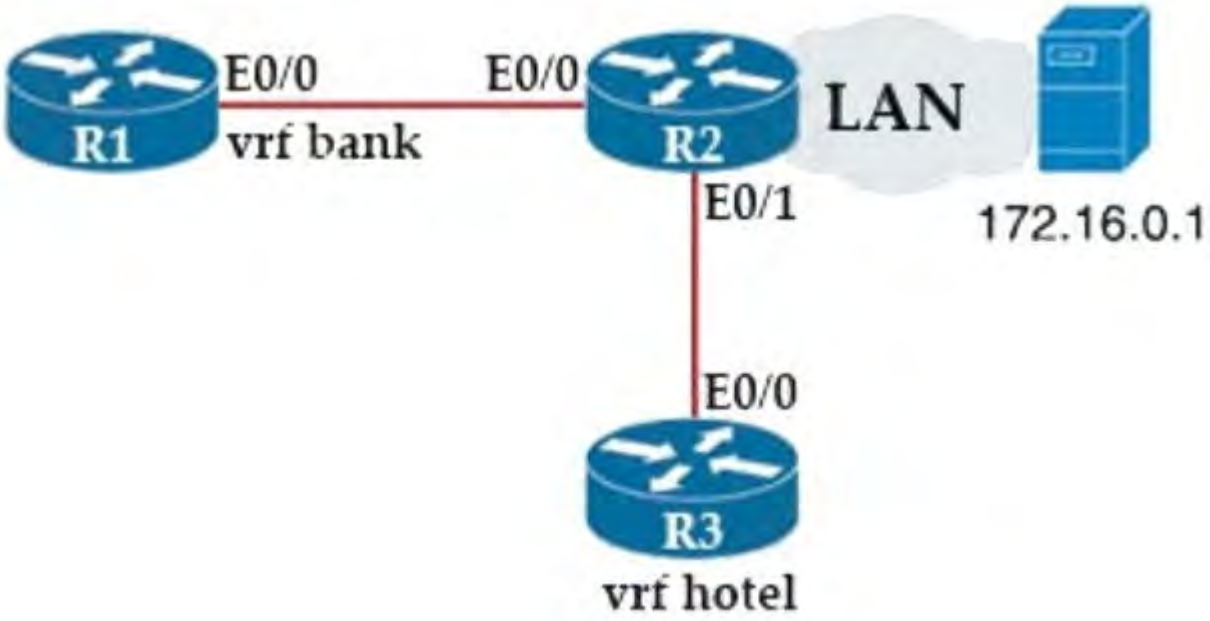

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R2:

```
vrf definition hotel
 address-family ipv4
 exit-address-family

vrf definition bank
 address-family ipv4
 exit-address-family

interface Ethernet0/0
 vrf forwarding bank
 ip address 172.16.0.4 255.255.0.0

interface Ethernet0/1
 vrf forwarding hotel
 ip address 172.1.0.5 255.255.0.0

router ospf 42 vrf bank
 router-id 1.1.1.1
 network 172.16.0.0 0.0.255.255 area 0

router ospf 43 vrf hotel
 router-id 3.3.3.3
 network 172.16.0.0 0.0.255.255 area 0
```

R1:

```
vrf definition bank
!
 address-family ipv4
 exit-address-family
```

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A. interface Ethernet0/0
ip address 172.16.0.7 255.255.0.0
router ospf 44 vrf hotel
network 172.16.0.0 255.255.0.0

B. interface Ethernet0/0
vrf forwarding hotel
ip address 172.16.0.7 255.255.0.0
router ospf 44 vrf Hotel
network 172.16.0.0 0.0.255.255 area 0

C. interface Ethernet0/0
vrf forwarding bank
ip address 172.16.0.7 255.255.0.0
router ospf 44 vrf bank
network 172.16.0.0 0.0.255.255 area 0

D. interface Ethernet0/0
ip address 172.16.0.7 255.255.0.0
router ospf 44 vrf bank
network 172.16.0.0 0.0.255.255

Correct Answer: C
Explanation

QUESTION 216
Refer to the exhibit.

An engineer is troubleshooting an application running on Apple phones. The application Is receiving incorrect QoS markings. The systems administrator confirmed that ail configuration profiles are correct on the Apple devices. Which change on the WLC optimizes QoS for these devices?

A. Enable Fastlane
B. Set WMM to required
C. Change the QoS level to Platinum
D. Configure AVC Profiles

Correct Answer: C

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Explanation

QUESTION 217
Which action is performed by Link Management Protocol In a Cisco StackWise Virtual domain?

A. it determines if the hardware Is compatible to form the StackWise Virtual domain.
B. It determines which switch becomes active or standby.
C. It discovers the StackWise domain and brings up SVL interfaces.
D. It rejects any unidirectional link traffic forwarding.

Correct Answer: D
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.pdf Page 7 Figure 6

A: WRONG (SDP) It determines which switch becomes active or standby.
B: WRONG (SDP) It determines if the hardware is compatible to form the StackWise Virtual domain.
C: OK It rejects any unidirectional link traffic forwarding.
D: WONRG ("Pre-parse configuration file") It discovers the StackWise domain and brings up SVL interfaces.

The Link Management Protocol (LMP) is activated on each link of the StackWise Virtual link as soon as it is brought up
online. The LMP performs the following functions:
Verifies link integrity by establishing bidirectional traffic forwarding, and rejects any unidirectional links

QUESTION 218
Refer to the exhibit. Which command set changes the neighbor state from Idle (Admin) to Active?

```
R1#show ip bgp sum
BGP router identifier 1.1.1.1, local AS number 650001
<output omitted>

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.50.2    4        65002       0       0        1    0    0 00:00:46 Idle (Admin)
```

A. R1(config)#router bgp 65002
R1(config-router)#neighbor 192.168.50.2 activate
B. R1(config)#router bgp 65001
R1(config-router)#neighbor 192.168.50.2 activate
C. R1(config)#router bgp 65001
R1(config-router)#no neighbor 192.168.50.2 shutdown
D. R1(config)#router bgp 65001
R1(config-router)#neighbor 192.168.50.2 remote-as 65001

Correct Answer: C
Explanation

Explanation/Reference:
Idle (Admin) means that the BGP session is in shutdown state, so we have to turn it on with the "no neighbor 192.168.50.2 shutdown" command

QUESTION 219

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How is a data modelling language used?

A. To enable data to be easily structured, grouped, validated, and replicated.
B. To represent finite and well-defined network elements that cannot be changed.
C. To model the flows of unstructured data within the infrastructure
D. To provide human readability to scripting languages

Correct Answer: A
Explanation

Explanation/Reference:
As per the practice exam in: CCNP: ENCOR: 350-401: CCNP ENTERPRISE: Cisco Certified Network Professional: Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

https://developer.cisco.com/docs/nx-os/#!the-nature-of-data-models

QUESTION 220
Which feature does Cisco TrustSec use to provide scalable, secure communication throughout a network?

A. security group tag ACL assigned to each port on a switch
B. security group tag number assigned to each port on a network
C. security group tag number assigned to each user on a switch
D. security group tag ACL assigned to each router on a network

Correct Answer: C
Explanation

Explanation/Reference:
Cisco TrustSec uses tags to represent logical group privilege. This tag, called a Security Group Tag (SGT), is used in access policies. The SGT is understood and is used to enforce traffic by Cisco switches, routers and firewalls . Cisco TrustSec is defined in three phases: classification, propagation and enforcement. When users and devices connect to a network, the network assigns a specific security group. This process is called classification. Classification can be based on the results of the authentication or by associating the SGT with an IP, VLAN, or port-profile (-> Answer 'security group tag ACL assigned to each port on a switch' and answer 'security group tag number assigned to each user on a switch' are not correct as they say "assigned ... on a switch" only. Answer 'security group tag ACL assigned to each router on a network' is not correct either as it says "assigned to each router").

Reference: https://www.cisco.com/c/dam/en/us/solutions/collateral/borderless-networks/trustsec/C07-730151-00_overview_of_trustSec_og.pdf

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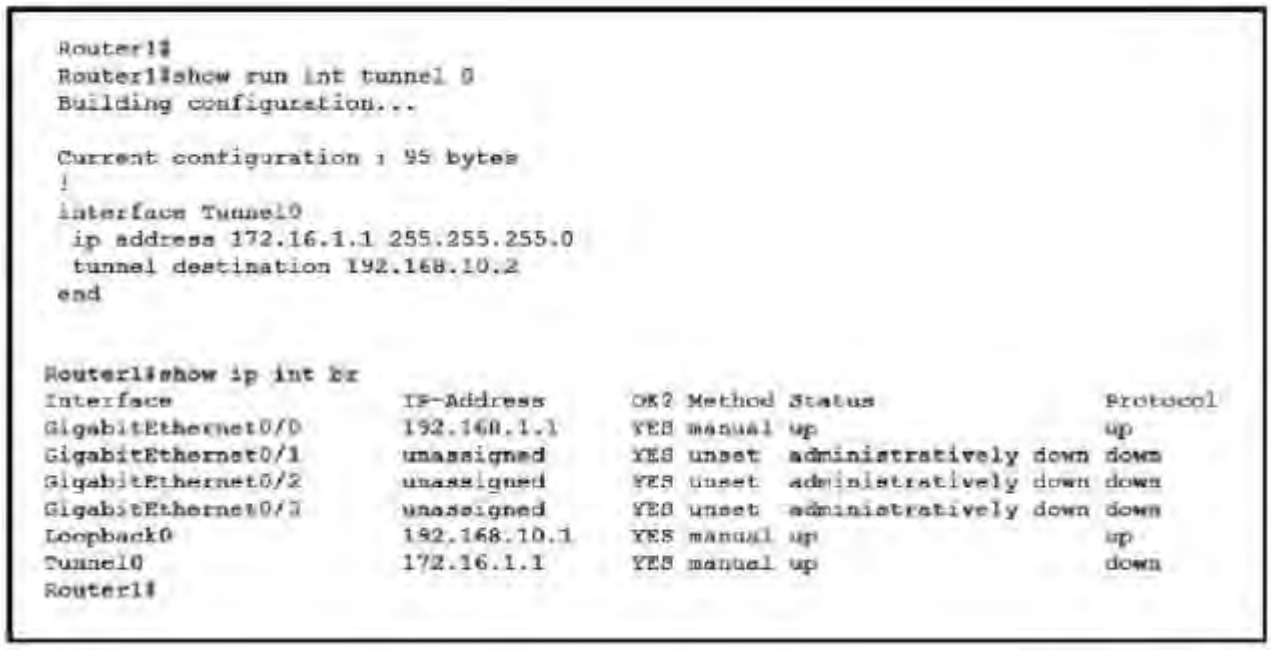
Exam B

QUESTION 1
Refer to the exhibit.



```
Router1#
Router1#show run int tunnel 0
Building configuration...

Current configuration : 95 bytes
!
interface Tunnel0
 ip address 172.16.1.1 255.255.255.0
 tunnel destination 192.168.10.2
end


Router1#show ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     192.168.1.1     YES manual up                    up
GigabitEthernet0/1     unassigned      YES unset  administratively down down
GigabitEthernet0/2     unassigned      YES unset  administratively down down
GigabitEthernet0/3     unassigned      YES unset  administratively down down
Loopback0              192.168.10.1    YES manual up                    up
Tunnel0                172.16.1.1      YES manual up                    down
Router1#
```

Which command must be applied to Routed to bring the GRE tunnel to an up/up state?

A. Router1(config)#interface tunnel0
B. Router1(config-if)#tunnel source GigabitEthernet0/1
C. Router1(config-if)#tunnel mode gre multipoint
D. Router1(config-if)#tunnel source Loopback0

Correct Answer: D
Explanation

QUESTION 2
Why would a log file contain a * next to the date?

A. The network device was receiving NTP time when the log messages were recorded
B. The network device was unable to reach the NTP server when the log messages were recorded.
C. The network device is not configured to use NTP
D. The network device is not configured to use NTP time stamps for logging.

Correct Answer: C
Explanation

Explanation/Reference:
"Network device is not configured to use NTP" is the only answer which may justify the fact that system clock has not been set and thus date and time are preceded by an asterisk (*),

QUESTION 3
An engineer configures GigabitEthernet 0/1 for VRRP group 115. The router must assume the primary role when it has the highest priority in the group.

Which command set is required to complete this task?

interface GigabitEthernet0/1

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ip address 10.10.10.2 255.255.255.0
vrrp 115 ip 10.10.10.1
vrrp 115 authentication 406630697

A. Router(config if)# vrrp 115 track 1 decrement 100
   Router(config-if)# vrrp 115 preempt
B. Router(config-if)# vrrp 115 priority 100
C. Router(config-if)# vrrp 115 track 1 decrement 10
   Router(config-if)# vrrp 115 preempt
D. Router(config-if)# standby 115 priority 100
   Router(config-if)# standby 115 preempt

Correct Answer: C
Explanation

QUESTION 4
Refer to the exhibit.

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```
R1#show running-config interface fa0/0
Building configuration...

Current configuration: 192 bytes
!
interface FastEthernet0/0
 ip address 192.68.3.5 255.255.255.0
 duplex full
 vrrp 1 ip 192.168.3.1
 vrrp 1 priority 110
 vrrp 1 authentication text cisco
 vrrp 1 track 20 decrement 20
end

R1#show running-config | include track 20
track 20 ip route 10.10.1.1 255.255.255.255 reachability
```

```
R2#show running-config interface fa0/0
Building configuration...

Current configuration: 141 bytes
!
interface FastEthernet0/0
 ip address 192.68.3.2 255.255.255.0
 duplex full
 vrrp 1 ip 192.168.3.1
 vrrp 1 authentication text cisco
end
```

An engineer configures VRRP and issues to show commands to verify operation. What does the engineer confirm about VRRP group 1 from the output?

A. Communication between VRRP members is encrypted using MD5
B. If R1 reboot, R2 becomes the master virtual router until R2 reboots
C. There is no route to 10.10.1.1/32 in R2's routing table
D. R1 is master if 10.10.1.1/32 is in its routing table

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Correct Answer: D
Explanation

Explanation/Reference:
R1 is primary if 10.10.1.1/32 is in its routing table. -> because of track 20 command

QUESTION 5
Refer to the exhibit.

```
import ncclient

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

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

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

Correct Answer: B
Explanation

Explanation/Reference:
"using the Pythonic approach with ncclient and its get_config() method, has a filter argument where you simply specify the filter type, in this case subtree, along with the XML RPC that you want to get a configuration rpc-reply."

https://yang-prog-lab.ciscolive.com/pod/0/ncclient/get_config

QUESTION 6
Which element enables communication between guest VMs within a virtualized environment?

A. hypervisor
B. vSwitch
C. virtual router
D. pNIC

Correct Answer: B
Explanation

Explanation/Reference:
Each VM is provided with a virtual NIC (vNIC) that is connected to the virtual switch. Multiple vNICs can connect to a single vSwitch, allowing VMs on a physical host to communicate with one another at layer 2 without having to go out to a physical switch.

QUESTION 7
Which method is used by an AP to join HA controllers and is configured in NVRAM?

A. stored WLC information
B. DNS
C. IP Helper Addresses
D. Primary/Secondary/Tertiary/Backup

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Correct Answer: D
Explanation

Explanation/Reference:
(Locally Stored IPv4 or IPv6 address: If the AP was previously associated to a controller, which can be done through a manual configuration, the IP addresses of the primary, secondary, and tertiary controllers are stored in the nonvolatile memory of the AP. Also, several controllers can be grouped to form a mobility group. Upon associating to a Cisco WLC, the AP learns the IP addresses of the other members of the mobility group. This information is stored in the AP and cached even after a reboot.)

QUESTION 8
A customer wants to provide wireless access to contractors using a guest portal on Cisco ISE. The portal is also used by employees. A solution is implemented, but contractors receive a certificate error when they attempt to access the portal. Employees can access the portal without any errors. Which change must be implemented to allow the contractors and employees to access the portal?

A. Install a trusted third-party certificate on the Cisco ISE
B. Install an internal CA signed certificate on the Cisco ISE.
C. Install a trusted third-party certificate on the contractor devices.
D. Install an internal CA signed certificate on the contractor devices.

Correct Answer: A
Explanation

Explanation/Reference:
"It is recommended to use the Company Internal CA for Admin and EAP certificates, and a publicly-signed certificate for Guest/Sponsor/Hotspot/etc portals. The reason is that if a user or guest comes onto the network and ISE portal uses a privately-signed certificate for the Guest Portal, they get certificate errors or potentially have their browser block them from the portal page. To avoid all that, use a publicly-signed certificate for Portal use to ensure better user experience".

https://www.cisco.com/c/en/us/support/docs/security/identity-services-engine/215621-tls-ssl-certificates-in-ise.html

QUESTION 9
What is the function of a control-plane node in a Cisco SD-Access solution?

A. to run a mapping system that manages endpoint to network device relationships
B. to implement policies and communicate with networks outside the fabric
C. to connect external Layer 3 networks to the SD Access fabric.
D. to connect APs and wireless endpoints to the SD-Access fabric

Correct Answer: A
Explanation

QUESTION 10
Refer to the exhibit. How does the router handle traffic after the CoPP policy is configured on the router?

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```
R1#show policy-map control-plane
 Control Plane

  Service-policy output: CoPP

    Class-map: SNMP-Out (match-all)
      0 packets, 0 bytes
      5 minute offered rate 0000 bps, drop rate 0000 bps
      Match: access-group name SNMP
      police:
          cir 8000 bps, bc 1500 bytes
        conformed 0 packets, 0 bytes; actions:
          transmit
        exceeded 0 packets, 0 bytes; actions:
          drop
        conformed 0000 bps, exceeded 0000 bps

    Class-map: class-default (match-any)
      13858 packets, 1378745 bytes
      5 minute offered rate 0000 bps, drop rate 0000 bps
      Match: any
```

A. Traffic coming to R1 that does not match access list SNMP is dropped.
B. Traffic coming to R1 that matches access list SNMP is policed.
C. Traffic passing through R1 that matches access list SNMP is policed.
D. Traffic generated by R1 that matches access list SNMP is policed.

Correct Answer: D
Explanation

Explanation/Reference:
Service Policy is in the output direction. So traffic generated by router will be policed.

QUESTION 11
What is required for a virtual machine to run?

A. a Type 1 hypervisor and a host operating system
B. a hypervisor and physical server hardware
C. only a Type 1 hypervisor
D. only a Type 2 hypervisor

Correct Answer: B
Explanation

QUESTION 12
Which outcome is achieved with this Python code?

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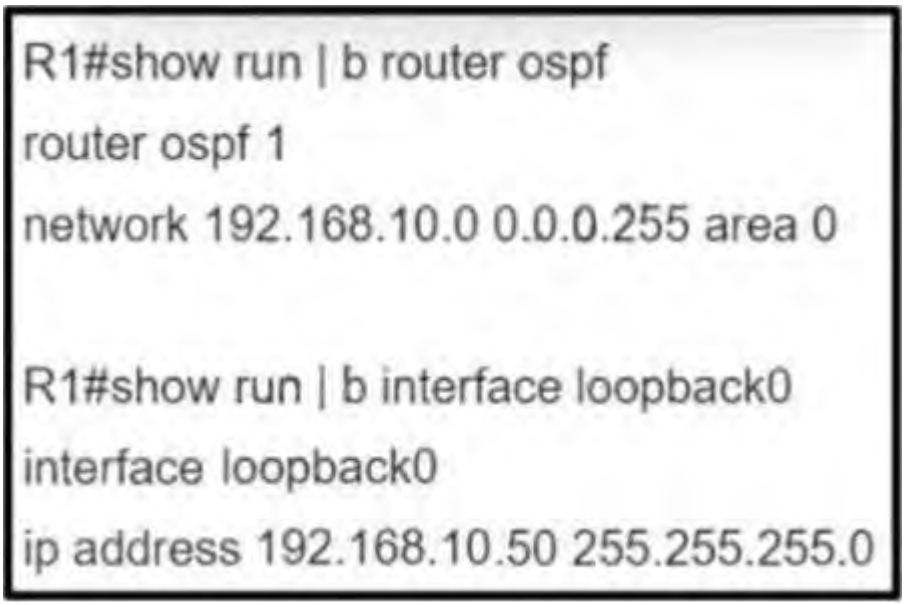
```
client.connect (ip, port= 22, username= usr, password= pswd )
stdin, stdout, stderr = client.exec_command ( 'show ip bgp 192.168.101.0 bestpath\n ' )
print (stdout)
```

A. connects to a Cisco device using SSH and exports the routing table information
B. displays the output of the show command in a formatted way
C. connects to a Cisco device using SSH and exports the BGP table for the prefix
D. connects to a Cisco device using Telnet and exports the routing table information

Correct Answer: C
Explanation

QUESTION 13
Refer to the exhibit. R2 is the neighboring router of R1. R2 receives an advertisement for network 192 168.10.50/32. Which configuration should be applied for the subnet to be advertised with the original /24 netmask?



A. R1(config)# router ospf 1
   R1(config-router)# network 192.168.10.0 255.255.255.0 area 0
B. R1(config)#interface loopback0
   R1(confia-if)# ip ospf 1 area 0
C. R1(config)# interface loopback0
   R1(config-if)# ip ospf network point-to-point
D. R1(config)# interface loopback0
   R1(config-if)# ip ospf network non-broadcast

Correct Answer: C
Explanation

Explanation/Reference:
Loopback Networks
The OSPF network type loopback is enabled by default for loopback interfaces and can be used only on loopback interfaces. The OSPF loopback network type states that the IP address is always advertised with a /32 prefix length, even if the IP address configured on the loopback interface does not have a /32 prefix length. It is possible to demonstrate this
behavior by reusing Figure 8-11 and advertising a Loopback 0 interface. Example 8-21 provides the updated configuration. Notice that the network type for R2's loopback interface is set to the OSPF point-to-point network type.

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QUESTION 14
Which threat defence mechanism, when deployed at the network perimeter, protects against zero-day attacks?

A. intrusion prevention
B. stateful inspection
C. sandbox
D. SSL decryption

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/products/collateral/security/amp-appliances/datasheet-c78-733182.html

"File analysis and sandboxing: Secure Malware Analytics' highly secure environment helps you execute, analyze, and test malware behavior to discover previously unknown ZERO-DAY threats. The integration of Secure Malware Analytics' sandboxing technology into Malware Defense results in more dynamic analysis checked against a larger set of behavioral indicators. "

QUESTION 15
Refer to the exhibit. An engineers reaching network 172 16 10 0/24 via the R1-R2-R4 path. Which configuration forces the traffic to take a path of R1-R3-R4?

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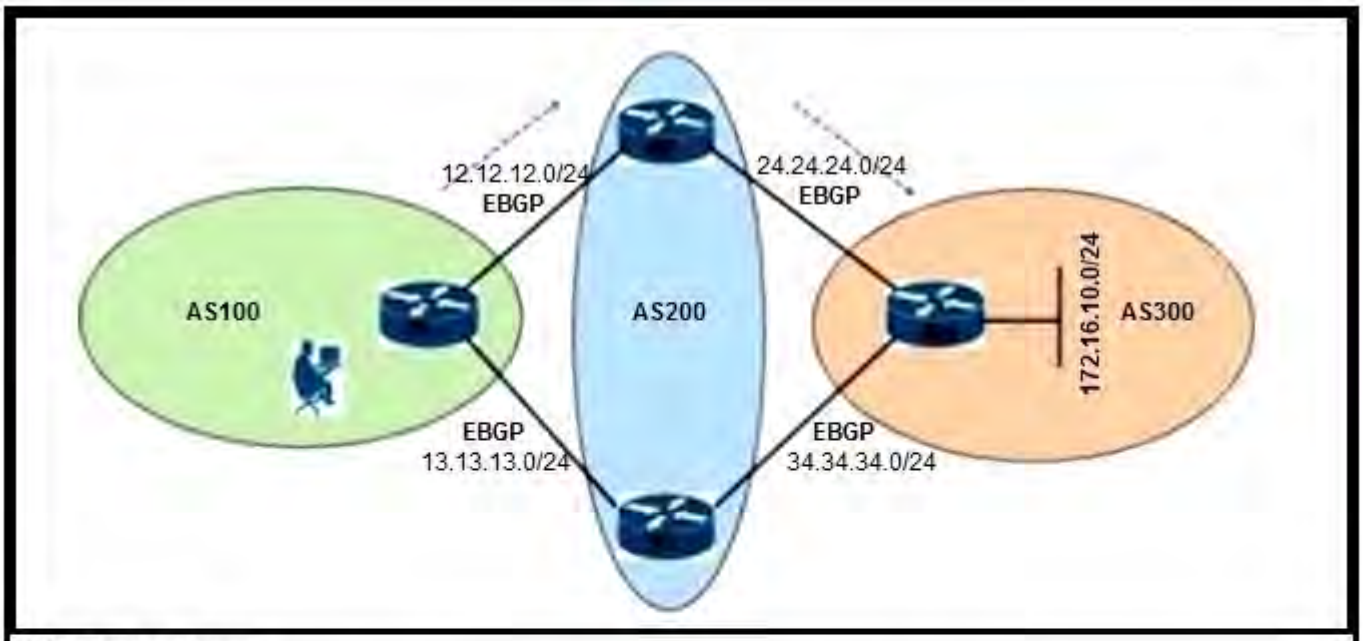


```
R1#sh ip bgp
BGP table version is 2, local router ID is 13.13.13.13.1
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-
Filter
              x best-external, a additional-path, c RIB-compressed,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I Invalid, N Not found
       Network                Next
Hop            Metric      LocPrf      Weight      Path
*  172.16.1.0/24           13.13.13.3                                0
     200 300 i
*>                         12.12.12.2                                  0
          200 300 i
```

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A)

```
R1(config)#route-map RM_AS_PATH_PREPEND
R1(config-route-map)#set as-path prepend 200 200
R1(config-route-map)#exit
R1(config)#router bgp 100
R1(config-router)#neighbor 12.12.12.2 route-map RM_AS_PATH_PREPEND in
R1(config-router)#end
R1#clear ip bgp 12.12.12.2 soft in
```

B)

```
R1(config)#router bgp 100
R1(config-router)#neighbor 13.13.13.3 weight 1
R1(config-router)#end
```

C)

```
R2(config)#route-map RM_MED permit 10
R2(config-route-map)#set metric 1
R2(config-route-map)#exit
R2(config)#router bgp 200
R2(config-router)#neighbor 12.12.12.1 route-map RM_MED out
R2(config-router)#end
R2#clear ip bgp 12.12.12.1 soft out
```

D)

```
R1(config)#route-map RM_LOCAL_PREF permit 10
R1(config-route-map)#set local-preference 101
R1(config-route-map)#exit
R1(config)#router bgp 100
R1(config-router)#neighbor 13.13.13.3 route-map RM_LOCAL_PREF in
R1(config-router)#end
R1#clear ip bgp 13.13.13.3 soft in
```

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

Correct Answer: D
Explanation

Explanation/Reference:
https://community.cisco.com/t5/networking-documents/understanding-bgp-best-path-selection-manipulation/ta-p/3150576

QUESTION 16

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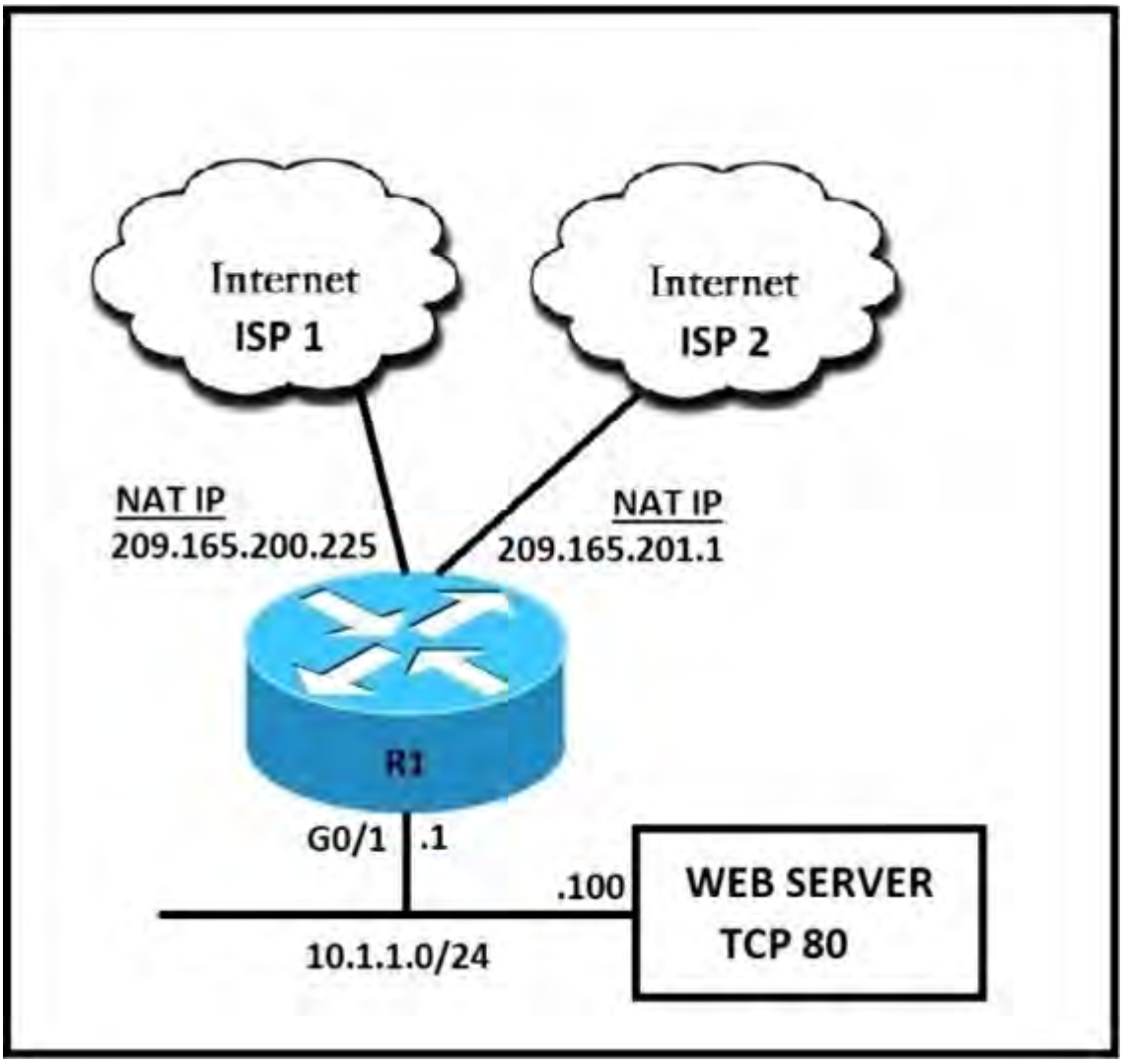
Refer to the exhibit. An engineer must configure static NAT on R1 lo allow users HTTP access to the web server on TCP port 80. The web server must be reachable through ISP 1 and ISP 2. Which command set should be applied to R1 to fulfill these requirements?



A. ip nat inside source static tcp 10.1.1.100 80 209.165.200.225 80 extendable
ip nat inside source static tcp 10.1.1.100 80 209.165.201.1 80 extendable
B. ip nat inside source static tcp 10.1.1.100 80 209.165.200.225 80
ip nat inside source static tcp 10.1.1.100 80 209.165.201.1 80
C. ip nat inside source static tcp 10.1.1.100 80 209.165.200.225 80
ip nat inside source static tcp 10.1.1.100 8080 209.165.201.1 8080
D. ip nat inside source static tcp 10.1.1.100 80 209.165.200.225 80 no-alias
ip nat inside source static tcp 10.1.1.100 80 209.165.201.1 80 no-alias

Correct Answer: A
Explanation

Explanation/Reference:
the "extendable" keyword should be added if the same Inside Local is mapped to different Inside Global Addresses (the IP address of an inside host as it appears to the outside network). An example of this case is when you have two connections to the Internet on two ISPs for redundancy. So you will need to map two Inside Global IP addresses into one inside local IP address.

QUESTION 17
In a Cisco SD-WAN solution, how is the health of a data plane tunnel monitored?

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A. with IP SLA
B. ARP probing
C. using BFD
D. with OMP

Correct Answer: C
Explanation

QUESTION 18
An engineer is implementing a Cisco MPLS TE tunnel to improve the streaming experience for the clients of a video-on-demand server.

Which action must the engineer perform to configure extended discovery to support the MPLS LDP session between the headend and tailend routers?

A. Configure the interface bandwidth to handle TCP and UDP traffic between the LDP peers
B. Configure a Cisco MPLS TE tunnel on both ends of the session
C. Configure an access list on the interface to permit TCP and UDP traffic
D. Configure a targeted neighbor session.

Correct Answer: B
Explanation

QUESTION 19
What is the difference between a RIB and a FIB?

A. The RIB is used to make IP source prefix-based switching decisions.
B. The FIB is where all IP routing information is stored.
C. The RIB maintains a mirror image of the FIB.
D. The FIB is populated based on RIB content.

Correct Answer: D
Explanation

Explanation/Reference:
CEF uses a Forwarding Information Base (FIB) to make IP destination prefix-based switching decisions. The FIB is conceptually similar to a routing table or information base. It maintains a mirror image of the forwarding information contained in the IP routing table. When routing or topology changes occur in the network, the IP routing table is updated, and those changes are reflected in the FIB. The FIB maintains next-hop address information based on the information in the IP routing table. Because there is a one-to-one correlation between FIB entries and routing table entries, the FIB contains all known routes and eliminates the need for route cache maintenance that is associated with earlier switching paths such as fast switching and optimum switching.
Note: In order to view the Routing information base (RIB) table, use the "show ip route" command. To view the Forwarding Information Base (FIB), use the "show ip cef" command. RIB is in Control plane while FIB is in Data plane.

QUESTION 20
When is the Design workflow used In Cisco DNA Center?

A. in a greenfleld deployment, with no existing infrastructure
B. in a greenfield or brownfield deployment, to wipe out existing data
C. in a brownfield deployment, to modify configuration of existing devices in the network
D. in a brownfield deployment, to provision and onboard new network devices

Correct Answer: A
Explanation

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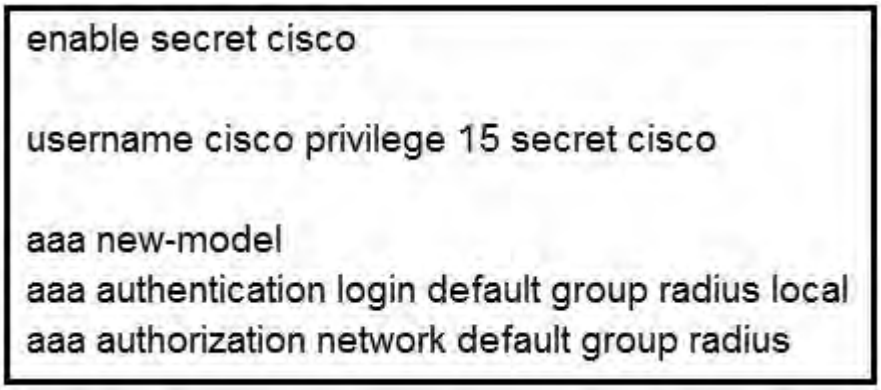
Explanation/Reference:
"The Design area is where you create the structure and framework of your network, including the physical topology, network settings, and device type profiles that you can apply to devices throughout your network. Use the Design workflow if you do not already have an existing infrastructure. If you have an existing infrastructure, use the Discovery feature."

QUESTION 21
Refer to the exhibit



The network administrator must be able to perform configuration changes when all the RADIUS servers are unreachable. Which configuration allows all commands to be authorized if the user has successfully authenticated?

A. aaa authorization exec default group radius none
B. aaa authentication login default group radius local none
C. aaa authorization exec default group radius if-authenticated
D. aaa authorization exec default group radius

Correct Answer: C
Explanation

Explanation/Reference:
The keyword"if-authenticated" sayings that if we are authenticated we will immediately be dropped into exec (enable) mode.

QUESTION 22
Which statement about multicast RPs is true?

A. RPs are required only when using protocol independent multicast dense mode.
B. RPs are required for protocol independent multicast sparse mode and dense mode.
C. By default, the RP is needed periodically to maintain sessions with sources and receivers
D. By default, the RP is needed only to start new sessions with sources and receivers.

Correct Answer: D
Explanation

Explanation/Reference:
A rendezvous point (RP) is required only in networks running Protocol Independent Multicast sparse mode (PIM-SM).
By default, the RP is needed only to start new sessions with sources and receivers. Reference: https:// www.cisco.com/c/en/us/td/docs/ios/solutions_docs/ip_multicast/White_papers /rps.html For your information, in PIM-SM, only network segments with active receivers that have explicitly requested multicast data will be forwarded the traffic. This method of delivering multicast data is in contrast to the PIM dense mode (PIM-DM) model. In PIM-DM, multicast traffic is initially flooded to all segments of the network. Routers that have no downstream neighbors or directly connected receivers prune back the unwanted traffic.

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Reference: https://www.cisco.com/c/en/us/td/docs/ios/solutions_docs/ip_multicast/White_papers/rps.html

QUESTION 23
Which technology does VXLAN use to provide segmentation for Layer 2 and Layer 3 traffic?

A. bridge domain
B. VLAN
C. VRF
D. VNI

Correct Answer: D
Explanation

Explanation/Reference:
VXLAN has a 24-bit VXLAN network identifier (VNI), which allows for up to 16 million (= 224) VXLAN segments to coexist within the same infrastructure. This surely solve the small number of traditional VLANs.

QUESTION 24
Refer to the exhibit.

An engineer attempts to configure a router on a stick to route packets between Clients, Servers, and Printers; however, initial tests show that this configuration is not working.
Which command set resolves this issue?

```
interface Vlan10
 ip vrf forwarding Clients
 ip address 192.168.1.1 255.255.255.0
!
interface Vlan20
 ip vrf forwarding Servers
 ip address 172.16.1.1 255.255.255.0
!
interface Vlan30
 ip vrf forwarding Printers
 ip address 10.1.1.1 255.255.255.0
 – output omitted for brevity –
router eigrp 1
10.0.0.0
172.16.0.0
192.168.1.0
```

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A.
```
router eigrp 1
network 10.0.0.0 255.0.0.0
network 172.16.0.0 255.255.0.0
network 192.168.1.0 255.255.0.0
```

B.
```
router eigrp 1
network 10.0.0.0 255.255.255.0
network 172.16.0.0 255.255.255.0
network 192.168.1.0 255.255.255.0
```

C.
```
interface Vlan10
no  ip vrf forwarding Clients
 ip address 192.168.1.2 255.255.255.0
!
interface Vlan20
 no ip vrf forwarding Servers
 ip address 172.16.1.2 255.255.255.0
!
interface Vlan30
no  ip vrf forwarding Printers
 ip address 10.1.1.2 255.255.255.0
```

D.
```
interface Vlan10
no  ip vrf forwarding Clients
!
interface Vlan20
no  ip vrf forwarding Servers
!
interface Vlan30
no  ip vrf forwarding Printers
```

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

Correct Answer: C
Explanation

Explanation/Reference:
We must reconfigure the IP address after assigning or removing an interface to a VRF. Otherwise that interface does not have an IP address.

QUESTION 25
How do cloud deployments differ from on-prem deployments?

A. Cloud deployments require longer implementation times than on-premises deployments
B. Cloud deployments are more customizable than on-premises deployments.
C. Cloud deployments require less frequent upgrades than on-premises deployments.
D. Cloud deployments have lower upfront costs than on-premises deployments.

Correct Answer: D
Explanation

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QUESTION 26
What does a northbound API accomplish?

A. programmatic control of abstracted network resources through a centralized controller
B. access to controlled network resources from a centralized node
C. communication between SDN controllers and physical switches
D. controlled access to switches from automated security applications

Correct Answer: A
Explanation

QUESTION 27
Refer to the exhibit.

```
vlan 222
 remote-span
!
vlan 223
 remote-span
!
monitor session 1 source interface FastEthernet0/1 tx
monitor session 1 source interface FastEthernet0/2 rx
monitor session 1 source interface port-channel 5
monitor session 1 destination remote vlan 222
!
```

What is the result when a technician adds the monitor session 1 destination remote vlan 223 command?

A. The RSPAN VLAN is replaced by VLAN 223.
B. RSPAN traffic is sent to VLANs 222 and 223.
C. An error is flagged for configuring two destinations.
D. RSPAN traffic is split between VLANs 222 and 223.

Correct Answer: A
Explanation

Explanation/Reference:
This is the result in a lab.
switch-1(config)#do sh run | s monitor
monitor session 1 source interface Gi1/0/2 rx
monitor session 1 source interface Gi1/0/1 tx
monitor session 1 source interface Po14
monitor session 1 destination remote vlan 222

switch-1(config)#do sh monitor session 1
Session 1

Type : Remote Source Session
Source Ports :
RX Only : Gi1/0/2
TX Only : Gi1/0/1

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Both : Po14
Dest RSPAN VLAN : 222

switch-1(config)#monitor session 1 destination remote vlan 223
switch-1(config)#do sh run | s monitor
monitor session 1 source interface Gi1/0/2 rx
monitor session 1 source interface Gi1/0/1 tx
monitor session 1 source interface Po14
monitor session 1 destination remote vlan 223
switch-1(config)#do sh monitor session 1
Session 1

Type : Remote Source Session
Source Ports :
RX Only : Gi1/0/2
TX Only : Gi1/0/1
Both : Po14
Dest RSPAN VLAN : 223

QUESTION 28
How can an engineer prevent basic replay attacks from people who try to brute force a system via REST API?

A. Add a timestamp to the request In the API header.
B. Use a password hash
C. Add OAuth to the request in the API header.
D. UseHTTPS

Correct Answer: A
Explanation

Explanation/Reference:
Reference:
https://security.stackexchange.com/questions/221708/golang-rest-api-security-checks

QUESTION 29
Which access point mode allows a supported AP to function like a WLAN client would, associating and identifying client connectivity issues?

A. client mode
B. SE-connect mode
C. sensor mode
D. sniffer mode

Correct Answer: C
Explanation

Explanation/Reference:
As these wireless networks grow especially in remote facilities where IT professionals may not always be onsite, it becomes even more important to be able to quickly identify and resolve potential connectivity issuesideally before the users complain or notice connectivity degradation. To address these issues we have created Cisco's Wireless Service Assurance and a new AP mode called "sensor"mode. Cisco's Wireless Service Assurance platform has three components, namely, Wireless PerformanceAnalytics, Real-time Client Troubleshooting, and Proactive Health Assessment. Using a supported AP ordedicated sensor the device can actually function much like a WLAN client would associating andidentifying client connectivity issues within the network in real time without requiring an IT or technician to beon site.

Reference:
https://content.cisco.com/chapter.sjs?uri=/searchable/chapter/content/dam/en/us/td/docs/wireless/controller/technotes/8-5/b_Cisco_Aironet_Sensor_Deployment_Guide.html.xml

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QUESTION 30
An engineer is implementing a route map to support redistribution within BGP. The route map must configured to permit all unmatched routes. Which action must the engineer perform to complete this task?

A. Include a permit statement as the first entry
B. Include at least one explicit deny statement
C. Remove the implicit deny entry
D. Include a permit statement as the last entry

Correct Answer: D
Explanation

QUESTION 31
In a Cisco SD-WAN solution, which two functions are performed by OMP? (Choose two.)

A. advertisement of network prefixes and their attributes
B. configuration of control and data policies
C. gathering of underlay infrastructure data
D. delivery of crypto keys
E. segmentation and differentiation of traffic

Correct Answer: AD
Explanation

Explanation/Reference:
Service routes orginated from vEdges/vSmarts

Reachability [vRoutes, TLOCs]
Security [Encryption Keys]
Service routes [Firewall/IDS]
Policies throughout the fabric [Data/App-route Policies]

https://www.grandmetric.com/knowledge-base/design_and_configure/sd-wan-overlay-management-protocol-omp/

OMP is the control protocol that is used to exchange routing, policy, and management information between Cisco vSmart Controllers and Cisco IOS XE SD-WAN devices in the overlay network. These devices automatically initiate OMP peering sessions between themselves, and the two IP end points of the OMP session are the system IP addresses of the two devices.

QUESTION 32
Refer to the exhibit.

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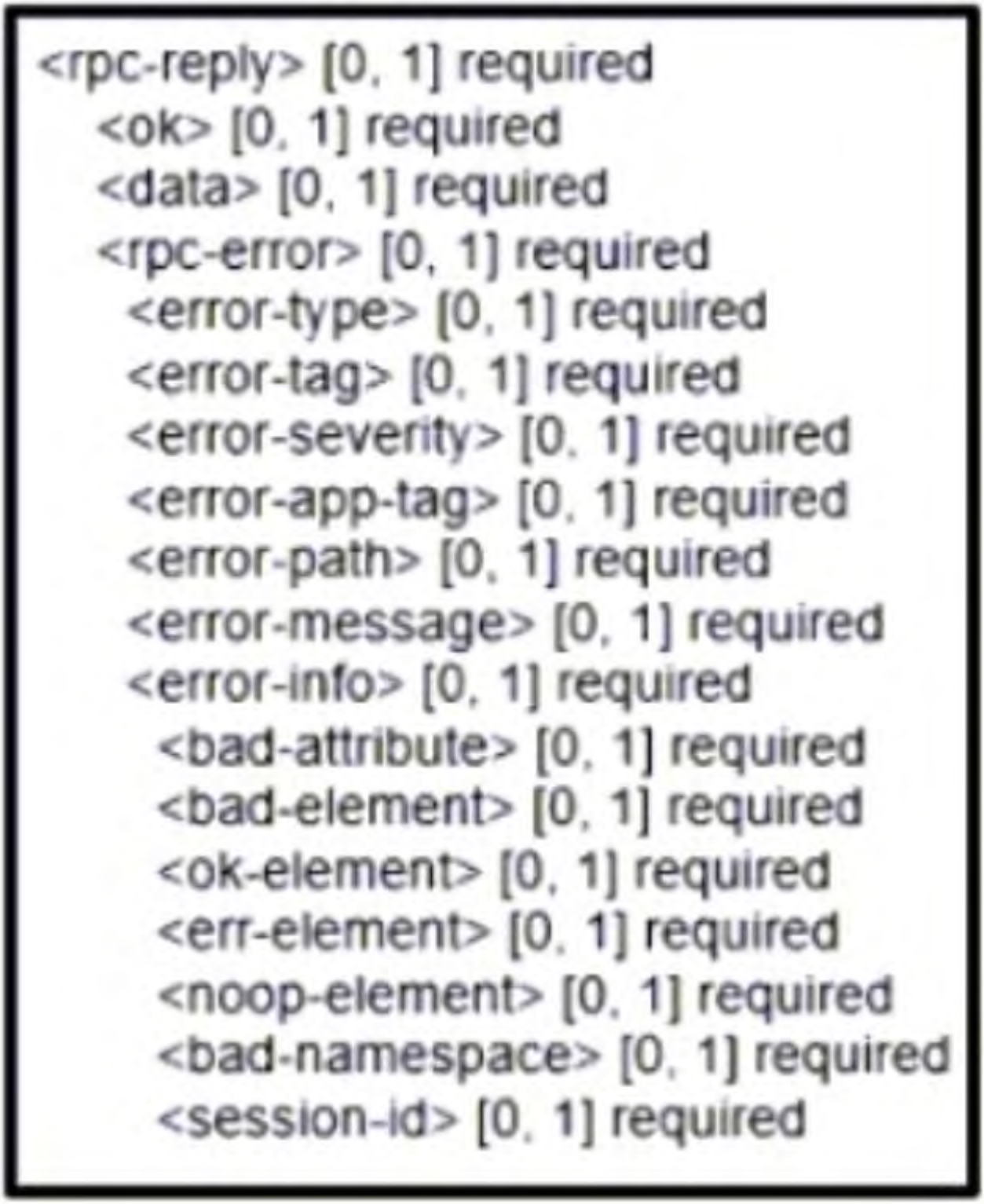

Which command is required to verify NETCONF capability reply messages?

A. show netconf | section rpc-reply
B. show netconf rpc-reply
C. show netconf xml rpc-reply
D. show netconf schema | section rpc-reply

Correct Answer: D
Explanation

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Explanation/Reference:
The output of the show netconf schema command displays the element structure for a NETCONF request and the resulting reply. This schema can be used to construct proper NETCONF requests and parse the resulting replies.

QUESTION 33
Which NGFW mode block flows crossing the firewall?

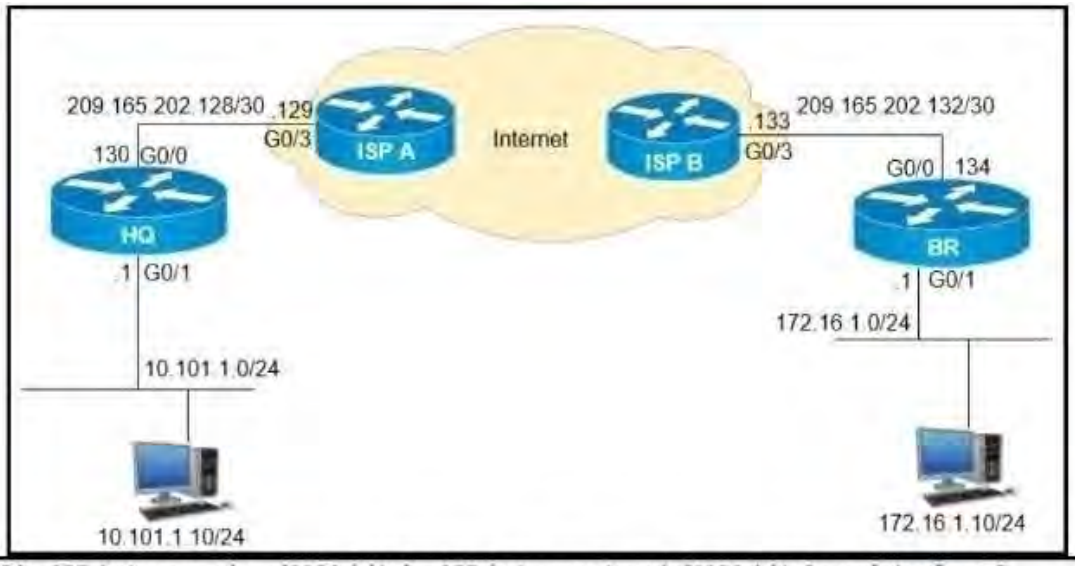
A. Passive
B. Tap
C. Inline tap
D. Inline

Correct Answer: D
Explanation

Explanation/Reference:
Firepower Threat Defense (FTD) provides six interface modes which are: Routed, Switched, Inline Pair, Inline Pair with Tap, Passive, Passive (ERSPAN). When Inline Pair Mode is in use, packets can be blocked since they are processed inline When you use Inline Pair mode, the packet goes mainly through the FTD Snort engine When Tap Mode is enabled, a copy of the packet is inspected and dropped internally while the actual traffic goes through FTD unmodified

https://www.cisco.com/c/en/us/support/docs/security/firepower-ngfw/200924-configuringfirepower-threat-defense-int.html

QUESTION 34
Refer to the exhibit.




```
> Frame 24: 138 bytes on wire (1104 bits), 138 bytes captured (1104 bits) on interface 0
> Ethernet II, Src: 50:00:00:01:00:01 (50:00:00:01:00:01), Dst: 50:00:00:02:00:01 (50:00:00:02:00:01)
> Internet Protocol Version 4, Src: 209.165.202.130, Dst: 209.165.202.134
> Generic Routing Encapsulation (IP)
> Internet Protocol Version 4, Src: 10.111.111.1, Dst: 10.111.111.2
> Internet Control Message Protocol
```

A GRE tunnel has been created between HO and BR routers.
What is the tunnel IP on the HQ router?

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A. 10.111.111.1
B. 10.111.111.2
C. 209.165.202.130
D. 209.165.202.134

Correct Answer: A
Explanation

Explanation/Reference:
In the above output, the IP address of "209.165.202.130" is the tunnel source IP while the IP 10.111.1.1 is the tunnel IP address.

QUESTION 35
Why is an AP joining a different WLC than the one specified through option 43?

A. The WLC is running a different software version.
B. The AP is joining a primed WLC.
C. The AP multicast traffic unable to reach the WLC through Layer 3.
D. The APs broadcast traffic is unable to reach the WLC through Layer 2.

Correct Answer: B
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/wireless/5500-series-wireless-controllers/119286-lap-notjoin-wlc-tshoot.html#:~:text=on%20document%20conventions.-,Overview%20of%20the%20Wireless%20LAN%20Controller%20(WLC)% 20Discovery%20and%20Join%20Process,-In%20a%20Cisco

QUESTION 36
The login method is configured on the VTY lines of a router with these parameters.

1. The first method for authentication is TACACS
2. If TACACS is unavailable, login is allowed without any provided credentials

Which configuration accomplishes this task?

A. R1#sh run | include aaa
aaa new-model
aaa authentication login VTY group tacacs+ none
aaa session-id common
R1#sh run | section vty
line vty 0 4
password 7 0202039485748
R1#sh run | include username
R1#
B. R1#sh run | include aaa
aaa new-model
aaa authentication login telnet group tacacs+ none
aaa session-id common
R1#sh run | section vty
line vty 0 4
R1#sh run | include username
R1#
C. R1#sh run | include aaa
aaa new-model
aaa authentication login default group tacacs+ none
aaa session-id common
R1#sh run | section vty
line vty 0 4

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password 7 0202039485748
R1#sh run | include username
R1#

D. R1#sh run | include aaa
aaa new-model
aaa authentication login default group tacacs+
aaa session-id common
R1#sh run | section vty
line vty 0 4
transport input none
R1#

Correct Answer: C
Explanation

Explanation/Reference:
According to the requirements (first use TACACS+, then allow login with no authentication), we have to use "aaa authentication login ... group tacacs+ none" for AAA command. The next thing to check is the if the "aaa authentication login default" or "aaa authentication login list-name" is used. The `default' keyword means we want to apply for all login connections (such as tty, vty, console and aux). If we use this keyword, we don't need to configure anything else under tty, vty and aux lines. If we don't use this keyword then we have to specify which line(s) we want to apply the authentication feature.
From above information, we can find out answer 'R1#sh run | include aaa aaa new-model
aaa authentication login default group tacacs+ none
aaa session-id common
R1#sh run | section vty
line vty 0 4
password 7 0202039485748
If you want to learn more about AAA configuration, please read our AAA TACACS+ and RADIUS Tutorial ? Part 2.
For your information, answer 'R1#sh run | include aaa
aaa new-model
aaa authentication login telnet group tacacs+ none
aaa session-id common
R1#sh run | section vty
line vty 0 4
R1#sh run | include username
R1#' would be correct if we add the following command under vty line ("line vty 0 4"): "login authentication telnet" ("telnet" is the name of the AAA list above)

QUESTION 37
What is a characteristic of Cisco StackWise technology?

A. It uses proprietary cabling
B. It supports devices that are geographically separated
C. It combines exactly two devices
D. It is supported on the Cisco 4500 series.

Correct Answer: A
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9200-series-switches/nb-06-stackwise-architecture-cte-en.html

QUESTION 38
Refer to the exhibit. What does the output confirm about the switch's spanning tree configuration?

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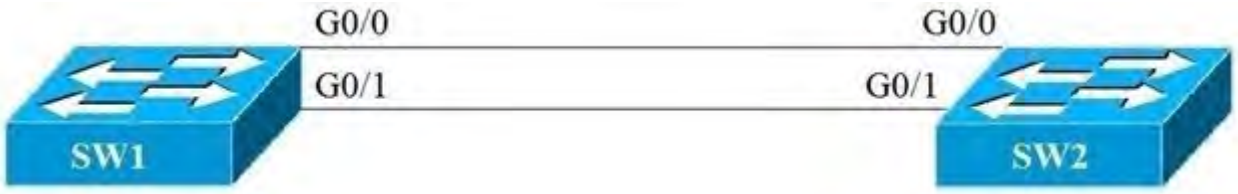
```
DSW1#sh spanning-tree vlan 20

VLAN0020
  Spanning tree enabled protocol ieee
  Root ID     Priority    24596
              Address     0018.7363.4300
              Cost        2
              Port        13 (FastEthernet1/0/11)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    28692  (priority 28672 sys-id-ext 20)
              Address     001b.0d8e.e080
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Fa1/0/7             Desg FWD 2         128.9    P2p
Fa1/0/10            Desg FWD 2         128.12   P2p
Fa1/0/11            Root FWD 2         128.13   P2p
Fa1/0/12            Altn BLK 2         128.14   P2p
```

A. The spanning-tree mode stp ieee command was entered on this switch
B. The spanning-tree operation mode for this switch is PVST.
C. The spanning-tree operation mode for this switch is PVST+.
D. The spanning-tree operation mode for this switch is IEEE

Correct Answer: C
Explanation

Explanation/Reference:
PVST+ enables support to IEEE Devices, "SPanning tree enabled protocol IEEE" output confirms PVST+

QUESTION 39
Refer to the exhibit.



An engineer reconfigures the port-channel between SW1 and SW2 from an access port to a trunk and immediately notices this error in SW1's log:

*Mar 1 09:47:22.245: %PM-4-ERR_DISABLE: bpduguard error detected on Gi0/0, putting Gi0/0 in err-disable state

Which command set resolves this error?

A. SW1(config-if)#interface G0/0
SW1(config-if)#no spanning-tree bpdufilter
SW1(config-if)#shut
SW1(config-if)#no shut
B. SW1(config-if)#interface G0/0
SW1(config-if)#no spanning-tree bpduguard enable

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SW1(config-if)#shut
SW1(config-if)#no shut

C. SW1(config-if)#interface G0/0
SW1(config-if)#spanning-tree bpduguard enable
SW1(config-if)#shut
SW1(config-if)#no shut

D. SW1(config-if)#interface G0/1
SW1(config-if)#spanning-tree bpduguard enable
SW1(config-if)#shut
SW1(config-if)#no shut

Correct Answer: B
Explanation

QUESTION 40
Refer to the exhibit.

```
configure terminal
ip flow-export destination 192.168.10.1 9991
ip flow-export version 9
```

What is required to configure a second export destination for IP address 192.168.10.1?

A. Specify a VRF.
B. Specify a different UDP port.
C. Specify a different flow ID
D. Configure a version 5 flow-export to the same destination.
E. Specify a different TCP port.

Correct Answer: B
Explanation

Explanation/Reference:
To configure multiple NetFlow export destinations to a router, use the following commands in global configuration mode:
Step 1: Router(config)# ip flow-export destination ip-address udp-port
Step 2: Router(config)# ip flow-export destination ip-address udp-port
The following example enables the exporting of information in NetFlow cache entries:
ip flow-export destination 10.42.42.1 9991
ip flow-export destination 10.0.101.254 1999
Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/12s_mdnf.html

QUESTION 41
An engineer must export the contents of the devices object in JSON format. Which statement must be used?

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A. json.repr(Devices)
B. json.dumps(Devices)
C. json.prints(Devices)
D. json.loads(Devices)

Correct Answer: B
Explanation

QUESTION 42
Refer to the exhibit.

```
DSW2#sh spanning-tree vlan 10

VLAN0010
  Spanning tree enabled protocol rstp
  Root ID     Priority    4106
              Address     0018.7363.4300
              This bridge is the root
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4106  (priority 4096 sys-id-ext 20)
              Address     0018.7363.4300
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Fa1/0/7             Desg FWD 2         128.9    P2p Peer(STP)
Fa1/0/10            Desg FWD 4         128.12   P2p Peer(STP)
Fa1/0/11            Desg FWD 2         128.13   P2p Peer(STP)
Fa1/0/12            Desg FWD 2         128.14   P2p Peer(STP)
```

What is the result when a switch that is running PVST+ is added to this network?

A. DSW2 operates in Rapid PVST+ and the new switch operates in PVST+
B. Both switches operate in the PVST+ mode
C. Spanning tree is disabled automatically on the network
D. Both switches operate in the Rapid PVST+ mode.

Correct Answer: A
Explanation

Explanation/Reference:
From the output we see DSW2 is running in RSTP mode (in fact Rapid PVST+ mode as Cisco does not support RSTP alone). When a new switch running PVST+ mode is added to the topology, they keep running the old STP instances as RSTP (in fact Rapid PVST+) is compatible with PVST+.

QUESTION 43
What does the Cisco DNA Center use to enable the delivery of applications through a network and to yield analytics for innovation?

A. process adapters
B. Command Runner

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C. intent-based APIs
D. domain adapters

Correct Answer: C
Explanation

Explanation/Reference:
The Cisco DNA Center open platform for intent-based networking provides 360- degree extensibility across multiple components, including:
+ Intent-based APIs leverage the controller to enable business and IT applications to deliver intent to the network and to reap network analytics and insights for IT and business innovation. These enable APIs that allow Cisco DNA Center to receive input from a variety of sources, both internal to IT and from line-of-business applications, related to application policy, provisioning, software image management, and assurance.
...
Reference: https://www.cisco.com/c/en/us/products/collateral/cloud-systemsmanagement/ dna-center/nb-06-dna-cent-plat-sol-over-cte-en.html

QUESTION 44
Refer to the exhibit.

R1

```
key chain cisco123
 key 1
  key-string Cisco123!
```

```
Ethernet0/0 - Group 10
  State is Active
    8 state changes, last state change 00:02:49
  Virtual IP address is 192.168.0.1
  Active virtual MAC address is 0000.0c07.ac0a
```

R2

```
key chain cisco123
 key 1
  key-string Cisco123!
```

```
Ethernet0/0 - Group 10
  State is Active
    17 state changes, last state change 00:02:17
  Virtual IP address is 192.168.0.1
  Active virtual MAC address is 0000.0c07.ac0a
```

An engineer is installing a new pair of routers in a redundant configuration.

Which protocol ensures that traffic is not disrupted in the event of a hardware failure?

A. HSRPv1
B. GLBP
C. VRRP

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D. HSRPv2

Correct Answer: A
Explanation

Explanation/Reference:
The virtual MAC address is 0000.0c07.acXX (XX is the hexadecimal group number) so it is using HSRPv1.
Note: HSRP Version 2 uses a new MAC address which ranges from 0000.0C9F.F000 to 0000.0C9F.FFFF.

QUESTION 45
What occurs when a high bandwidth multicast stream is sent over an MVPN using Cisco hardware?

A. The traffic uses the default MDT to transmit the data only if it isa (S,G) multicast route entry.
B. A data MDT is created to if it is a (*, G) multicast route entries.
C. A data and default MDT are created to flood the multicast stream out of all PIM-SM neighbors.
D. A data MDT is created to allow for the best transmission through the core for (S, G) multicast route entries.

Correct Answer: D
Explanation

QUESTION 46
Refer to the exhibit.

```
RP/0/0/CPU0:BRDR-1#show route ipv4 0.0.0.0
Routing entry for 0.0.0.0/0
   Known via "bgp 65001", distance 20, metric 0, candidate default path
   Tag 65002, type external
   Installed Jan 2 08:40:59.889 for 00:01:18
   Routing Descriptor Blocks
      100.65.19.1, from 100.65.19.1, BGP external
         Route metric is 0
   No advertising protos.

RP/0/0/CPU0:BRDR-1#show run router ospf
router ospf 1
   redistribute bgp 65001 route-policy BGP-TO-OSPF
   area 0
      mpls traffic-eng
      interface Loopback0
      interface GigabitEthernet0/0/0/0.92
      interface GigabitEthernet0/0/0/0.3132
   mpls traffic-eng router-id Loopback0

RP/0/0/CPU0:BRDR-1#show rpl route-policy BGP-TO-OSPF
route-policy BGP-TO-OSPF
   if destination in (0.0.0.0/0) then
      set metric-type type-1
   endif
   set metric-type type-2
   set ospf-metric 100
end-policy
```

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Router BRDR-1 is configured to receive the 0.0.0.0/0 and 172.17.1.0/24 network via BGP and advertise them into OSPF are 0. An engineer has noticed that the OSPF domain is receiving only the 172.17.1.0/24 route and default route 0.0.0.0/0 is still missing. Which configurating must engineer apply to resolve the problem?

A. router ospf 1
   redistribute bgp 65001 metric 100 route-policy BGP-TO-OSPF
   end
B. router ospf 1
   default-information originate
   end
C. router ospf 1
   default-metric 100
   end
D. router ospf 1
   default-information originate always
   end

Correct Answer: B
Explanation

QUESTION 47
An engineer must create a new SSID on a Cisco 9800 wireless LAN controller. The client has asked to use a pre-shared key for authentication Which profile must the engineer edit to achieve this requirement?

A. RF
B. Policy
C. WLAN
D. Flex

Correct Answer: B
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/116880-config-wpa2-psk-00.html

QUESTION 48
What is the function of cisco DNA center in a cisco SD-access deployment?

A. It is responsible for routing decisions inside the fabric
B. It is responsible for the design, management, deployment, provisioning, and assurance of the fabric network devices.
C. It possesses information about all endpoints, nodes and external networks to the fabric
D. IT provides integration and automation for all nonfabric nodes and their fabric counterparts.

Correct Answer: B
Explanation

QUESTION 49
Refer to the exhibit.

```
monitor session 1 source vlan 10 -12 rx
monitor session 1 destination interface gigabitethernet0/1
```

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An engineer must configure a SPAN session. What is the effect of the configuration?

A. Traffic sent on VLANs 10 and 12 only is copied and sent to interface g0/1
B. Traffic received on VLANs 10, 11, and 12 is copied and sent to interface g0/1
C. Traffic received on VLANs 10 and 12 only is copied and sent to interface g0/1.
D. Traffic sent on VLANs 10, 11 , and 12 is copied and sent to interface g0/1

Correct Answer: B
Explanation

QUESTION 50
Which new enhancement was implemented in Wi-Fi 6?

A. Wi-Fi Protected Access 3
B. 4096 Quadrature Amplitude Modulation Mode
C. Channel bonding
D. Uplink and Downlink Orthogonal Frequency Division Multiple Access

Correct Answer: D
Explanation

Explanation/Reference:
Reference:
https://ibwave.com/wi-fi-6-networks/#:~:text=1024%2DQAM%20(Quadrature%20Amplitude%20Modulation,speeds%20by%20up%20to%2025%25

QUESTION 51
Which OSPF networks types are compatible and allow communication through the two peering devices?

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

Correct Answer: A
Explanation

Explanation/Reference:
The following different OSPF types are compatible with each other:
+ Broadcast and Non-Broadcast (adjust hello/dead timers) + Point-to-Point and Point-to-Multipoint (adjust hello/dead timers) Broadcast and Non-Broadcast networks elect DR/BDR so they are compatible. Point-topoint/ multipoint do not elect DR/BDR so they are compatible.

Reference: https://www.freeccnaworkbook.com/workbooks/ccna/configuring-ospf-network-types

QUESTION 52
Refer to the exhibit.

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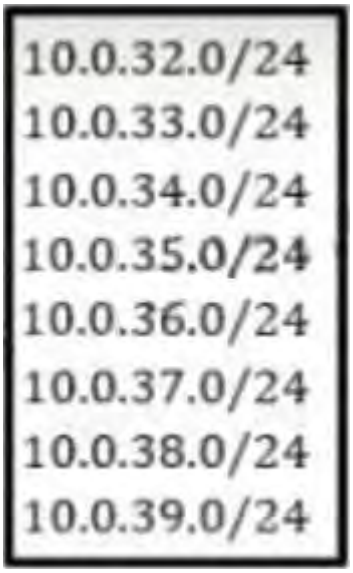

An engineer must permit traffic from these networks and block all other traffic An informational log message should be triggered when traffic enters from these prefixes

Which access list must be used?

A. access-list acl_subnets permit ip 10.0.32.0 0 0.0.255 log
B. access-list acl_subn*ls permit ip 10.0.32.0 0.0.7.255 log
C. access-list acl_subnets permit ip 10.0.32.0 0.0.7.255 access-list acl_subnets deny ip any log
D. access-list acl_subnets permit ip 10.0.32.0 255.255.248.0 log

Correct Answer: B
Explanation

QUESTION 53
An engineer is configuring local web authentication on a WLAN. The engineer chooses the Authentication radio button under the Layer 3 Security options for Web Policy.
Which device presents the web authentication for the WLAN?

A. ISE server
B. local WLC
C. RADIUS server
D. anchor WLC

Correct Answer: B
Explanation

Explanation/Reference:
"The next step is to configure the WLC for the Internal web authentication. Internal web authentication is the defaultweb authentication type on WLCs." In step 4 of the link above, we will configure Security as described in this question.
Therefore we can deduce thisconfiguration is for Internal web authentication.

This paragraph was taken from the link
https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wlan-security/69340-web-auth-config.html#c5 :

QUESTION 54
Refer to the exhibit. An engineer must create a configuration that prevents R3from receiving the LSA about 172.16.1.4/32.

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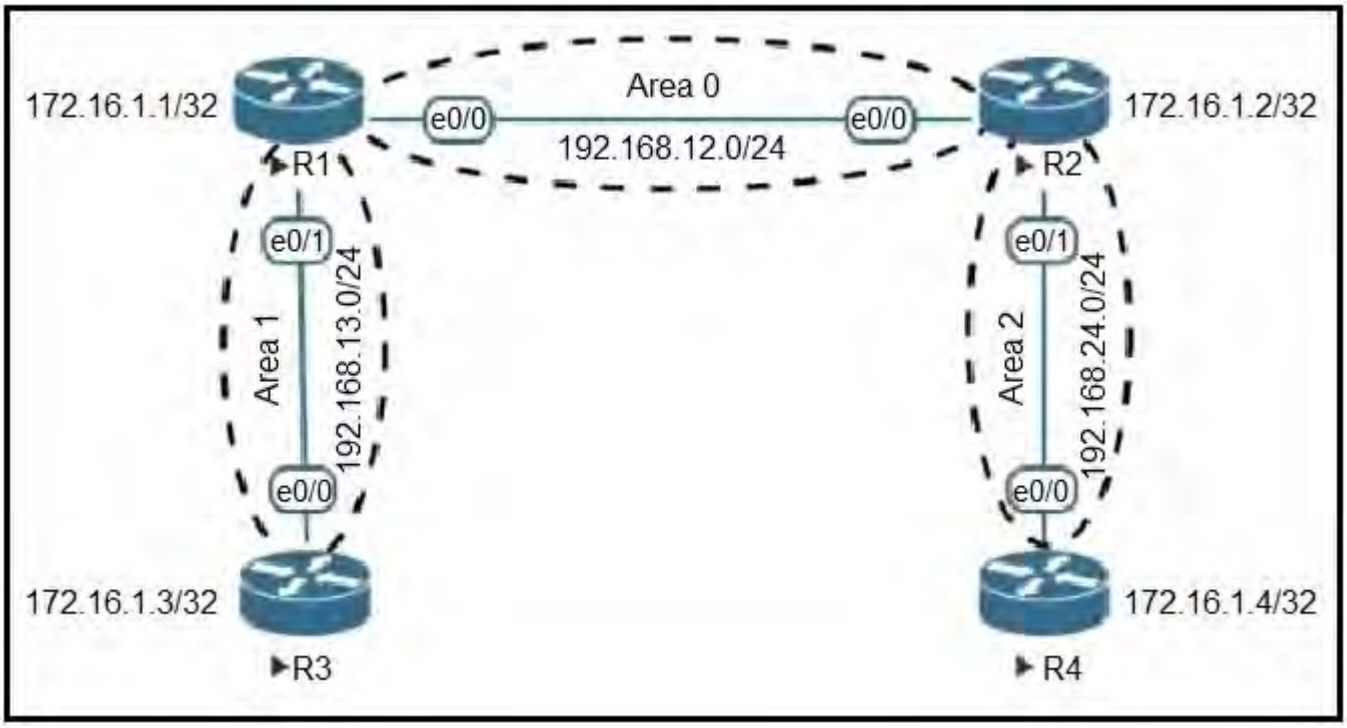
Which configuration set achieves this goal?



A. On R3
ip access-list standard R4_L0
deny host 172.16.1.4 permit any
router ospf 200
distribute-list R4_L0 in

B. On R3
ip prefix-list INTO-AREA1 seq 5 deny 172.16.1.4/32
ip prefix-list INTO-AREA1 seq 10 permit 0.0.0.0/0 le 32
router ospf 200
area 1 filter-list prefix INTO-AREA 1 in

C. On R1
ip prefix-list INTO-AREA1 seq 5 deny 172.16.1.4/32
ip prefix-list INTO-AREA 1 seq 10 permit 0.0.0.0/0 le 32
router ospf 200
area 1 filter-list prefix IN TO-AREA1 in

D. On R1
ip prefix-list INTO-AREA1 seq 5 deny 172.16.1.4/32
ip prefix-list INTO-AREA1 seq 10 permit 0.0.0.0/0 le 32
router ospf 200
area 1 filter-list prefix INTO-AREA1 out

Correct Answer: C
Explanation

Explanation/Reference:
in - Filters networks sent TO this area
out - Filters network sent FROM this area

QUESTION 55
Which Python code snippet must be added to the script to save the returned configuration as a JSON-formatted file?

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```
import json
import requests

Creds = ("admin", "S!415535759$Ptx")
Headers = { "Content-Type" : "appiication/yang-data+json",
                    "Accept" : "appiication/yang-data+json" }
BaseURL = https://cpe/restconf/data"
URL = BaseURL + "/Cisco-IOS-XE-native/interface/GigabitEtherenet"

Response = requests.get(URL, auth = Creds, headers = Headers, verify = False)
```

A. with open("ifaces.json", "w") as OutFile:
   OutFile.write(Response.text)
B. with open("ifaces.json", "w") as OutFile:
   OutFile.write(Response.json())
C. with open("ifaces.json", "w") as OutFile:
   JSONResponse = json.loads(Response.text)
   OutFile.write(JSONResponse)
D. with open("ifaces.json", "w") as OutFile:
   OutFile.write(Response)

Correct Answer: B
Explanation

Explanation/Reference:
The json() method of the Response interface takes a Response stream and reads it to completion. It returns a promise which resolves with the result of parsing the body text as JSON.

QUESTION 56
An engineer must configure and validate a CoPP policy that allows the network management server to monitor router R1 via SNMP while protecting the control plane. Which two commands or command sets must be used? (Choose two.)

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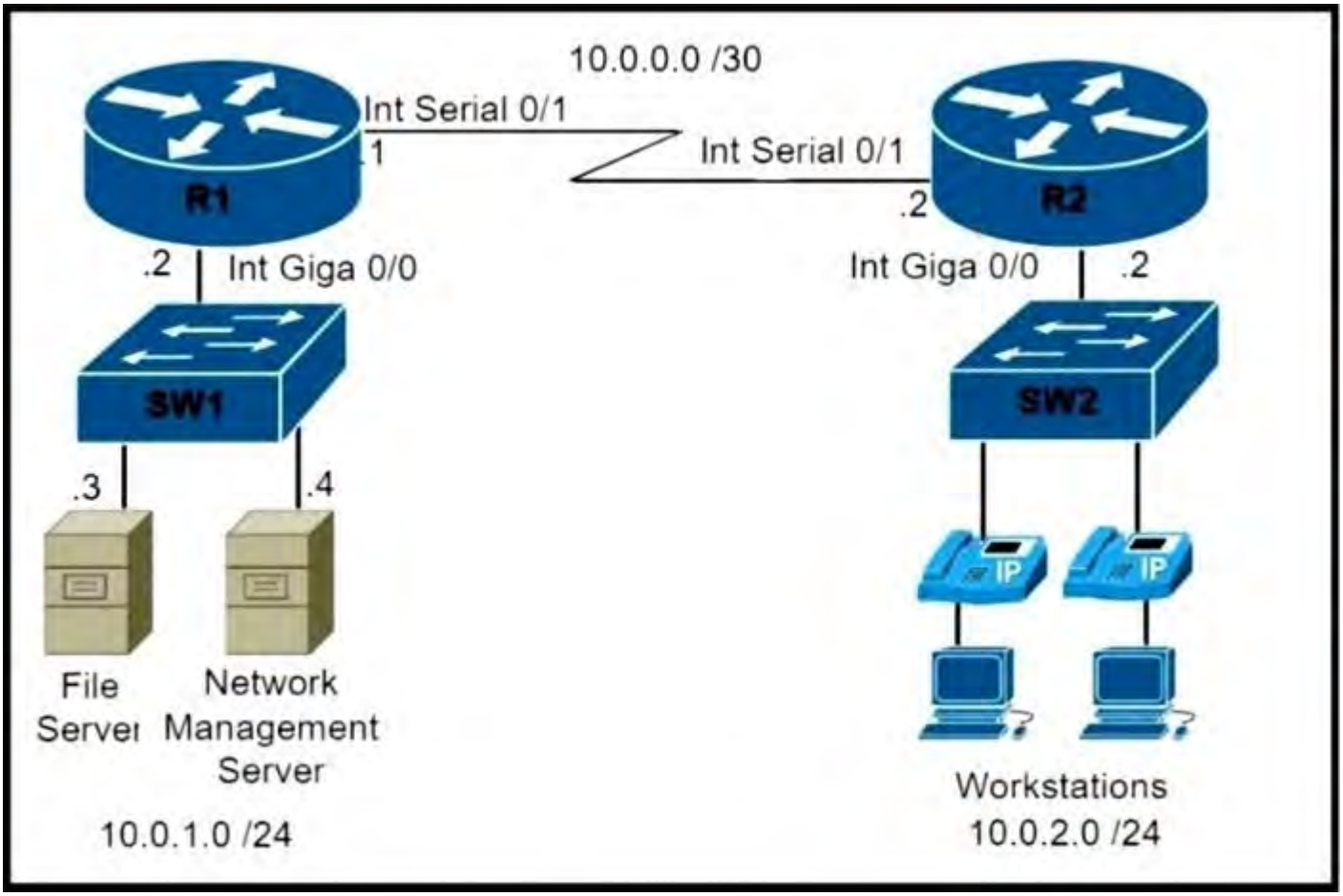

A. access-list 150 permit udp 10.0.1.4 0.0.0.0 host 10.0.1.2 eq snmp
access-list 150 permit udp 10.0.1.4 0.0.0.0 eq snmp host 10.0.1.2
class-map match-all CoPP-management
match access-group 150
policy-map CoPP-policy
class CoPP-management
police 8000 conform-action transmit exceed-action transmit
violate-action drop
control-plane
Service-policy input CoPP-policy

B. show ip interface brief

C. show quality-of-service-profile

D. access-list 150 permit udp 10.0.1.4 0.0.0.0 host 10.0.1.2 eq snmp
class-map match-all CoPP-management
match access-group 150
policy-map CoPP-policy
class CoPP-management
police 8000 conform-action transmit exceed-action transmit
violate-action transmit
control-plane
Service-policy input CoPP-policy

E. show policy-map control-plane

Correct Answer: AE
Explanation

QUESTION 57
Refer to the exhibit. VPN-A sends point-to-point traffic to VPN-B and receives traffic only from VPN-C VPN-B sends point-to-point traffic to VPN-C and receives traffic only from VPN-A. Which configuration is

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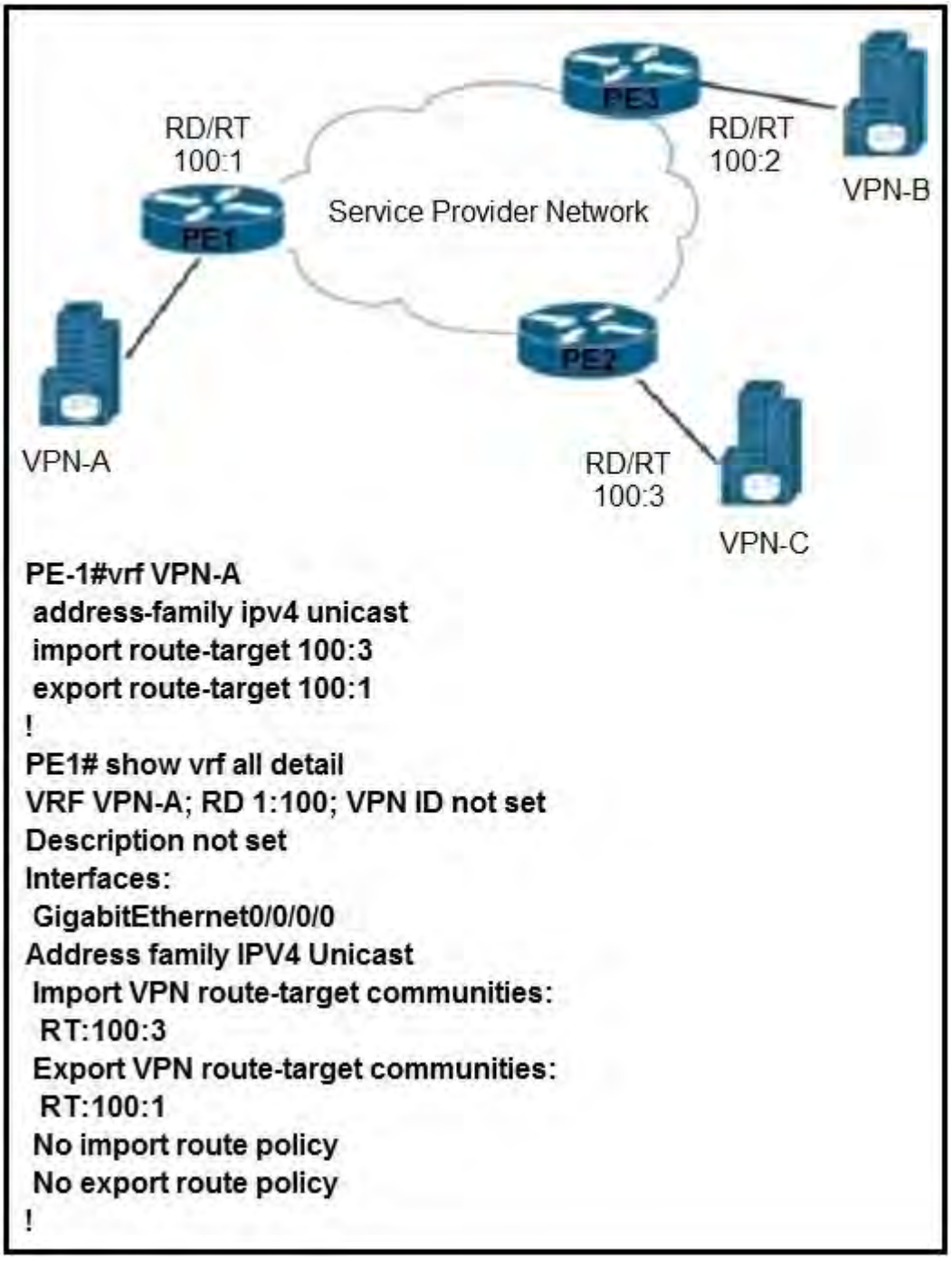
applied?



A. PE-2
vrf VPN-B
address-family ipv4 unicast
import route-target 100:1
export route-target 100:2

B. PE-3
vrf VPN-B
address-family ipv4 unicast
import route-target 100:1
export route-target 100:2

C. PE-2
vrf VPN-B
address-family ipv4 unicast

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import route-target 100:1
export route-target 100:2

D. PE-3
vrf VPN-B
address-family ipv4 unicast
import route-target 100:2
export route-target 100:2

Correct Answer: B
Explanation

QUESTION 58
What is a VPN in a Cisco SD-WAN deployment?

A. common exchange point between two different services
B. attribute to identify a set of services offered in specific places in the SD-WAN fabric
C. virtualized environment that provides traffic isolation and segmentation in the SD-WAN fabric
D. virtual channel used to carry control plane information

Correct Answer: C
Explanation

Explanation/Reference:
Ref: Cisco SD-WAN (Viptela) Configuration Guide, Release 18.1

"...
Segmentation (VPN) Overview

This article illustrates the segmentation and VPN capabilities of the Viptela overlay network solution.

Network segmentation has existed for over a decade and has been implemented in multiple forms and shapes. At its most rudimentary level, segmentation provides traffic isolation. The most common forms of network segmentation are virtual LANs, or VLANs, for Layer 2 solutions, and virtual routing and forwarding, or VRF, for Layer 3 solutions.
..."

QUESTION 59
Refer to the exhibit.

```
RP/0/0/CPU0:R2#debug isis adjacencies
RP/0/0/CPU0:Apr 2 20:57:00.421 : isis[1010]: RECV P2P IIH (L2)
from GigabitEthernet0/0/0/0 SNPA fal6.3ebe.a7bc: System ID R2,
Holdtime 30, length 1429
RP/0/0/CPU0:Apr 2 20:57:01.761 : isis[1010]: SEND P2P IIH (Ll)
on GigabitEthernet0/0/0/0: Holdtime 30s, Length 41
```

A network operator is attempting to configure an IS-IS adjacency between two routers, but the adjacency cannot be established. To troubleshoot the problem, the operator collects this debugging output. Which interfaces are misconfigured on these routers?

A. The peer router interface is configured as Level 1 only, and the R2 interface is configured as Level 2 only.
B. The R2 interface is configured as Level 1 only, and the Peer router interface is configured as Level 2 only.
C. The R2 interface is configured as point-to-point, and the peer router interface is configured as multipoint.

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D. The peer router interface is configured as point-as-point, and the R2 interface is configured as multipoint.

Correct Answer: B
Explanation

QUESTION 60
A network engineer configures a WLAN controller with increased security for web access. There is IP connectivity with the WLAN controller, but the engineer cannot start a management session from a web browser. Which action resolves the issued?

A. Disable JavaScript on the web browser
B. Disable Adobe Flash Player
C. Use a browser that supports 128-bit or larger ciphers.
D. Use a private or incognito session.

Correct Answer: C
Explanation

QUESTION 61
Refer to the exhibit.

```
AP(config)# aaa group server radius rad_auth
AP(config-sg-radius)# server 10.0.0.3 auth-port 1645 acct-port 1646
AP(config)# aaa new-model
AP(config)# aaa authentication login eap_methods group rad_auth
AP(config)# radius-server host 10.0.0.3 auth-port 1645 acct-port 1646 key
labap1200
AP(config)# interface dot11radio 0
AP(config-if)# ssid labap1200
AP(config-if-ssid)# encryption mode wep mandatory
```

A company requires that all wireless users authenticate using dynamic key generation. Which configuration must be applied?

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A. AP(config-if-ssid)# authentication open wep wep_methods
B. AP(config-if-ssid)# authentication dynamic wep wep_methods
C. AP(config-if-ssid)# authentication dynamic open wep_dynamic
D. AP(config-if-ssid)# authentication open eap eap_methods

Correct Answer: D
Explanation

QUESTION 62
A network administrator is Implementing a routing configuration change and enables routing debugs to track routing behavior during the change. The logging output on the terminal is interrupting the command typing process.

Which two actions can the network administrator take to minimize the possibility of typing commands incorrectly? (Choose two.)

A. Configure the logging synchronous global configuration command
B. Configure the logging delimiter feature
C. Configure the logging synchronous command under the vty
D. Press the TAB key to reprint the command in a new line
E. increase the number of lines on the screen using the terminal length command

Correct Answer: CD
Explanation

QUESTION 63
What is YANG used for?

A. scraping data via CLI
B. processing SNMP read-only polls
C. describing data models
D. providing a transport for network configuration data between client and server

Correct Answer: C
Explanation

Explanation/Reference:
YANG is used to model each protocol based on RFC 6020.
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/datamodels/configuration/xe-16/data-models-xe-16-book/yang-netconf.html

QUESTION 64
A client on different floors in an atrium. The access points are joined to the same controller and configured in local mode. The access points are in different AP groups and have different IP addresses, but the client VLAN in the groups is the same.

What type of roam occurs?

A. inter-controller
B. inter-subnet
C. intra-VLAN
D. intra-controller

Correct Answer: D
Explanation

Explanation/Reference:

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Mobility, or roaming, is a wireless LAN client's ability to maintain its association seamlessly from one access point to another securely and with as little latency as possible. Three popular types of client roaming are:

1. Intra-Controller Roaming: Each controller supports same-controller client roaming across access points managed by the same controller. This roaming is transparent to the client as the session is sustained, and the client continues using the same DHCP-assigned or client-assigned IP address.
2. Inter-Controller Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group and on the same subnet. This roaming is also transparent to the client because the session is sustained and a tunnel between controllers allows the client to continue using the same DHCP- or client-assigned IP address as long as the session remains active.
3. Inter-Subnet Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group on different subnets. This roaming is transparent to the client because the session is sustained and a tunnel between the controllers allows the client to continue using the same DHCP-assigned or client-assigned IP address as long as the session remains active.

QUESTION 65
Refer to the exhibit.

```
R1#show ip bgp
BGP table version is 32, local router ID is 192.168.101.5
Status codes: S suppressed, d damped, h history, *valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, c RIB-compressed,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found
     Network          Next Hop            Metric  LocPrf  Weight  Path
*    192.168.102.0    192.168.101.18          80              0  64517i
*                     192.168.101.14          80      80      0  64516i
*                     192.168.101.10                          0  64515 64515i
*>                    192.168.101.2                       32768  64513i
*                     192.168.101.6                   80      0  64514 64514i
```

Which IP address becomes the active next hop for 192.168.102 0/24 when 192.168.101.2 fails?

A. 192.168.101.18
B. 192.168.101.6
C. 192.168.101.10
D. 192.168.101.14

Correct Answer: A
Explanation

Explanation/Reference:
The `>' shown in the output above indicates that the path with a next hop of 192.168.101.2 is the current best path.
Path Selection Attributes: Weight > Local Preference > Originate > AS Path > Origin > MED > External > IGP Cost > eBGP Peering > Router ID BGP prefers the path with highest weight but the weights here are all 0 (which indicate all routes that are not originated by the local router) so we need to check the Local Preference. Answer '192.168.101.18' path without LOCAL_PREF (LocPrf column) means it has the default value of 100. Therefore we can find the two next best paths with the next hop of 192.168.101.18 and 192.168.101.10. We have to move to the next path selection attribute: Originate. BGP prefers the path that the local router originated (which is indicated with the "next hop 0.0.0.0"). But none of the two best paths is self-originated. The AS Path of the next hop 192.168.101.18 is shorter than the AS Path of the next hop 192.168.101.10 then the next hop 192.168.101.18 will be chosen as the next best path.

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QUESTION 66
What are two benefits of implementing a Cisco SD-WAN architecture? (Choose two)

A. It provides resilient and effective traffic flow using MPLS.
B. It improves endpoint protection by integrating embedded and cloud security features.
C. It allows configuration of application-aware policies with real time enforcement.
D. It simplifies endpoint provisioning through standalone router management
E. It enforces a single. scalable. hub-and-spoke topology.

Correct Answer: CD
Explanation

Explanation/Reference:
The top SD-WAN benefits are:
+ Increased bandwidth at a lower cost
+ Centralized management across branch networks
+ Full visibility into the network
+ Providing organizations with more connection type options and vendor selection when building a network.
Reference: https://www.sdxcentral.com/networking/sd-wan/definitions/sd-wan-technology/

-> We can provision endpoints (vEdges) through a centralized router vManage -> Answer D is correct. Answer A is not correct as we can use different kind of connections on SD-WAN: MPLS, LTE, 4G, xDSL, Internet connections...

Application-Aware Routing policy is configured in vManage as a centralized data policy that maps the serviceside application(s) to specific SLA requirements. The centralized policies provisioned in vSmart controller is pushed to relevant WAN Edge devices for enforcement. The defined policy consists of matchaction pairs, where the match statement defines the application-list or the type of traffic to match, and the action statement defines the SLA action the WAN Edge devices must enforce for the specified traffic.

Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/SDWAN/cisco-sdwanapplication-awarerouting-deploy-guide.html

QUESTION 67
A vulnerability assessment highlighted that remote access to the switches is permitted using unsecure and unencrypted protocols Which configuration must be applied to allow only secure and reliable remote access for device administration?

A. line vty 0 15
   login local
   transport input none
B. line vty 0 15
   login local
   transport input telnet ssh
C. line vty 0 15
   login local
   transport input ssh
D. line vty 0 15
   login local
   transport input all

Correct Answer: C
Explanation

QUESTION 68
Why would an engineer use YANG?

A. to transport data between a controller and a network device

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B. to access data using SNMP
C. to model data for NETCONF
D. to translate JSON into an equivalent XML syntax

Correct Answer: C
Explanation

QUESTION 69
If a client's radio device receives a signal strength of -67 dBm and the noise floor is -85 dBm, what is the SNR value?

A. 15 dB
B. 16 dB
C. 18 dB
D. 20 dB

Correct Answer: C
Explanation

Explanation/Reference:
-67 - (-85)=18

QUESTION 70
An engineer must configure AAA on a Cisco 9800 WLC for central web authentication Which two commands are needed to accomplish this task? (Choose two.)

A. (Cisco Controller) > config wlan aaa-override disable <wlan-id>
B. (Cisco Controller) > config radius acct add 10.10.10.12 1812 SECRET
C. (Cisco Controller) > config wlan aaa-override enable <wlan-id>
D. Device(config-locsvr-da-radius)# client 10.10.10.12 server-key O SECRET
E. Device(config)# aaa server radius dynamic-author

Correct Answer: DE
Explanation

QUESTION 71
An engineer must enable a login authentication method that allows a user to log in by using local authentication if all other defined authentication methods fail Which configuration should be applied?

A. aaa authentication login CONSOLE group radius local-case enable aaa
B. authentication login CONSOLE group radius local enable none
C. aaa authentication login CONSOLE group radius local enable
D. aaa authentication login CONSOLE group tacacs+ local enable

Correct Answer: D
Explanation

QUESTION 72
Refer to the exhibit. Which two facts does the device output confirm? (Choose two)

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```
Vlan503 - Group 1
   State is Active
      1 state change, last state change 32w6d
   Virtual IP address is 10.0.3.241
   Active virtual MAC address is 0000.0c07.ac01
      Local virtual MAC address is 0000.0c07.ac01 (v1 default)
   Hello time 3 sec, hold time 10 sec
      Next hello sent in 0.064 secs
   Preemption enabled
   Active router is local
   Standby router is 10.0.3.242, priority 100 (expires in 10.624 sec)
   Priority 110 (configured 110)
   Group name is "hsrp-V1503-1" (default)
```

A. The device is using the default HSRP hello timer
B. The standby device is configured with the default HSRP priority
C. The device's HSRP group uses the virtual IP address 10.0.3.242.
D. The device is configured with the default HSRP priority
E. The device sends unicast messages to its peers

Correct Answer: AD
Explanation

Explanation/Reference:
hsrp uses multicast: 224.0.0.2 v1, 224.0.0.102 v2, 224.0.0.18 vrrp. default hsrp hello time is 3 sec, hold timer is 10 sec

QUESTION 73
Which deployment option of Cisco NGFW provides scalability?

A. tap
B. inline tap
C. high availability
D. clustering

Correct Answer: D
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/security/firepower/fxos/clustering/asa-cluster-solution.html

Clustering lets you group multiple Firepower Threat Defense (FTD) units together as a single logical device. Clustering is only supported for the FTD device on the Firepower 9300 and the Firepower 4100 series. A cluster provides all the convenience of a single device (management, integration into a network) while achieving the increased throughput and redundancy of multiple devices.

QUESTION 74
An engineer configures a WLAN with fast transition enabled Some legacy clients fail to connect to this WLAN.
Which feature allows the legacy clients to connect while still allowing other clients to use fast transition based on then OLTIs?

A. over the DS
B. adaptive R
C. 802.11V
D. 802.11k

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Correct Answer: B
Explanation

QUESTION 75
In a three-tier hierarchical campus network design, which action is a design best-practice for the core layer?

A. provide QoS prioritization services such as marking, queueing, and classification for critical network traffic
B. provide redundant Layer 3 point-to-point links between the core devices for more predictable and faster convergence
C. provide advanced network security features such as 802. IX, DHCP snooping, VACLs, and port security
D. provide redundant aggregation for access layer devices and first-hop redundancy protocols such as VRRP

Correct Answer: B
Explanation

Explanation/Reference:
All policies are configured an the access and distribution layer, CORE must be use ony to forward packets and be highly redundant an usually be on L3

QUESTION 76
Refer to the exhibit.

An engineer is designing a guest portal on Cisco ISE using the default configuration. During the testing phase, the engineer receives a warning when displaying the guest portal. Which issue is occurring?

A. The server that is providing the portal has an expired certificate
B. The server that is providing the portal has a self-signed certificate
C. The connection is using an unsupported protocol
D. The connection is using an unsupported browser

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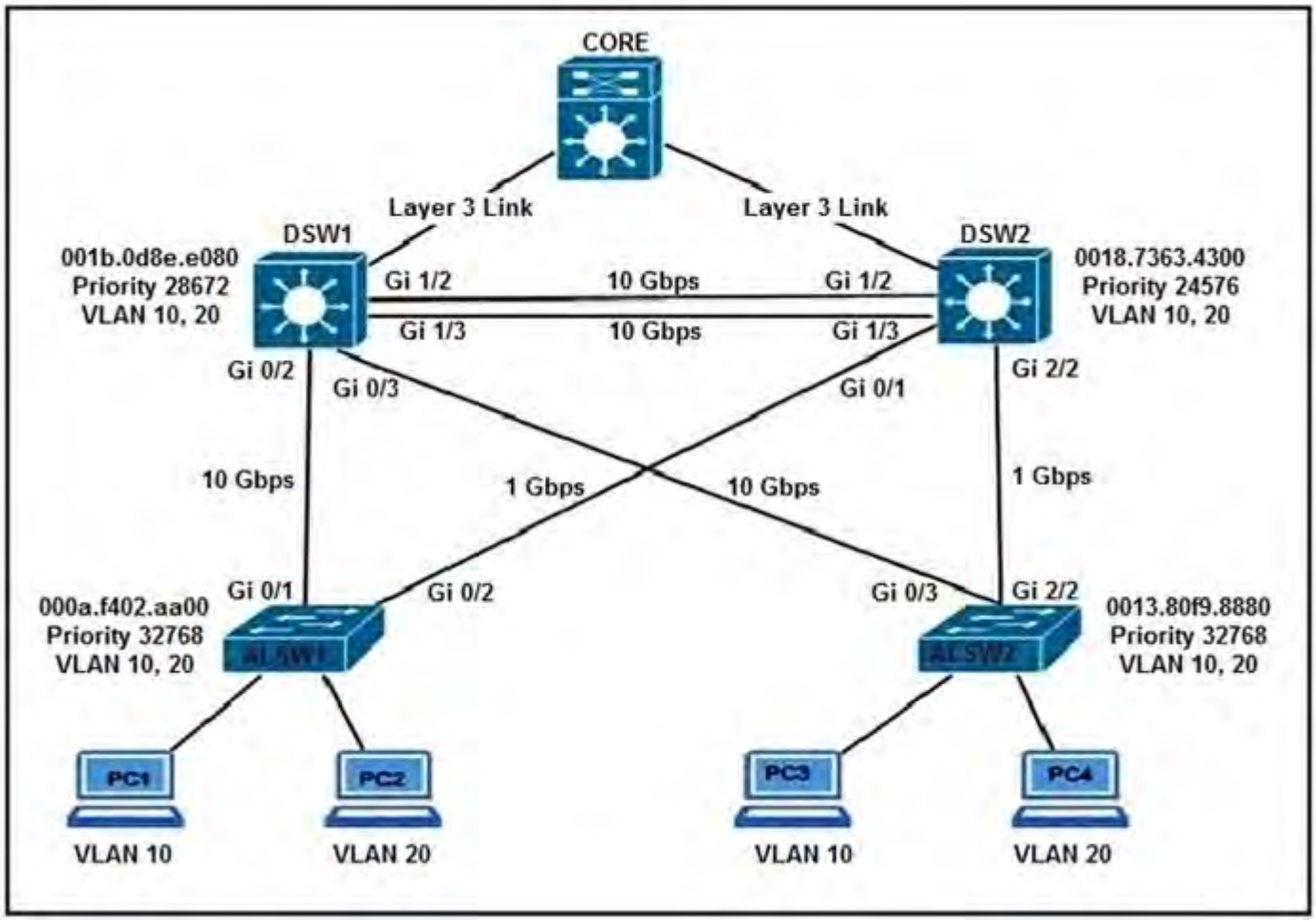
Correct Answer: B
Explanation

QUESTION 77
Refer to the exhibit.



All switches are configured with the default port priority value. Which two commands ensure that traffic from PC1 is forwarded over Gi1/3 trunk port between DWS1 and DSW2? (Choose two)

A. DSW2(config-if)#spanning-tree port-priority 128
B. DSW2(config-if)#spanning-tree port-priority 16
C. DSW2(config-if)#interface gi1/3
D. DSW1(config-if)#interface gi1/3
E. DWS1(config-if)#spanning-tree port-priority 0

Correct Answer: BC
Explanation

QUESTION 78
How does the EIGRP metric differ from the OSPF metric?

A. The EIGRP metric is calculated based on bandwidth only. The OSPF metric is calculated on delay only.
B. The EIGRP metric is calculated based on delay only. The OSPF metric is calculated on bandwidth and delay.
C. The EIGRP metric Is calculated based on bandwidth and delay. The OSPF metric is calculated on bandwidth only.

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D. The EIGRP metric Is calculated based on hop count and bandwidth. The OSPF metric is calculated on bandwidth and delay.

Correct Answer: C
Explanation

Explanation/Reference:
By default, EIGRP metric is calculated:
metric = bandwidth + delay
While OSPF is calculated by:
OSPF metric = Reference bandwidth / Interface bandwidth in bps (Or Cisco uses 100Mbps (108) bandwidth as reference bandwidth.
With this bandwidth, our equation would be:
Cost = 108/interface bandwidth in bps)

QUESTION 79
Refer to the exhibit. After configuring HSRP an engineer enters the show standby command. Which two facts are derived from the output? (Choose two.)

```
R2#show standby
FastEthernet1/0 - Group 40
  State is Standby
    4 state changes, last state change 00:01:51
  Virtual IP address is 10.10.1.1
  Active virtual MAC address is 0000.0c07.ac28 (MAC Not In Use)
    Local virtual MAC address is 0000.0c07.ac28 (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 1.856 secs
  Preemption disabled
  Active router is 10.10.1.3, priority 85 (expires in 8.672 sec)
  Standby router is local
  Priority 90 (configured 90)
    Track interface FastEthernet0/0 state Up decrement 10
  Group name is "hsrp-Fa1/0-40" (default)
```

A. The router with IP 10.10 1.3 is active because it has a higher IP address
B. If Fa0/0 is shut down, the HSRP pnonty on R2 becomes 80
C. R2 Fa1/0 regains the primary role when the link comes back up
D. R2 becomes the active router after the hold time expires.
E. R2 is using the default HSRP hello and hold timers.

Correct Answer: BE
Explanation

Explanation/Reference:
Very tricky question, but i will try to explain.

That is position of darude or the A&E guys:
R2 is in standby with prio 90.
R1 is active with prio 85.
Fa0/0 is down, because otherwise R2 would have prio 80.
Assuming Fa0/0 is the keep-alive between R2 and R1, R1 is down.

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R2 will detect, that R1 is down in 8.672sec and will take over the active role.

But from my point of view we can not assume, that Fa0/0 is the keep-alive, because the hold time is 10sec and hello time 3sec. The hold time is expired by only 1.328sec, so we can't know, if the hello message could have reached R1, because the hello time is 3sec.

QUESTION 80
What does the LAP send when multiple WLCs respond to the CISCO_CAPWAPCONTROLLER.localdomain hostname during the CAPWAP discovery and join process?

A. broadcast discover request
B. join request to all the WLCs
C. unicast discovery request to each WLC
D. Unicast discovery request to the first WLS that resolves the domain name

Correct Answer: C
Explanation

Explanation/Reference:
The AP will attempt to resolve the DNS name CISCO-CAPWAP- CONTROLLER.localdomain. When the AP is able to resolve this name to one or more IP addresses, the AP sends a unicast CAPWAP Discovery Message to the resolved IP address(es). Each WLC that receives the CAPWAP Discovery Request Message replies with a unicast CAPWAP Discovery Response to the AP.

Reference:
https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/107606-dns-wlc-config.html

QUESTION 81
What are two considerations when using SSO as a network redundancy feature? (Choose two)

A. both supervisors must be configured separately
B. the multicast state is preserved during switchover
C. must be combined with NSF to support uninterrupted Layer 2 operations
D. must be combined with NSF to support uninterrupted Layer 3 operations
E. requires synchronization between supervisors in order to guarantee continuous connectivity

Correct Answer: DE
Explanation

Explanation/Reference:
While SSO is happening, routing protocol communication between 2 supervisor stopped because lost of adjacency.

It and cause interuption, to avoid this we need NFS.

in order for NFS to work properly,
both supervisor must NFS.

Cisco IOS Nonstop Forwarding(NSF) always runs with stateful switchover (SSO) and provides redundancy for Layer 3 traffic.

Reference:
https://www.cisco.com/en/US/docs/switches/lan/catalyst3850/software/release/3se/consolidated_guide/b_consolidated_3850_3se_cg_chapter_01101110.pdf

QUESTION 82
Which function does a fabric edge node perform in an SD-Access deployment?

A. Connects the SD-Access fabric to another fabric or external Layer 3 networks.
B. Connects endpoints to the fabric and forwards their traffic.

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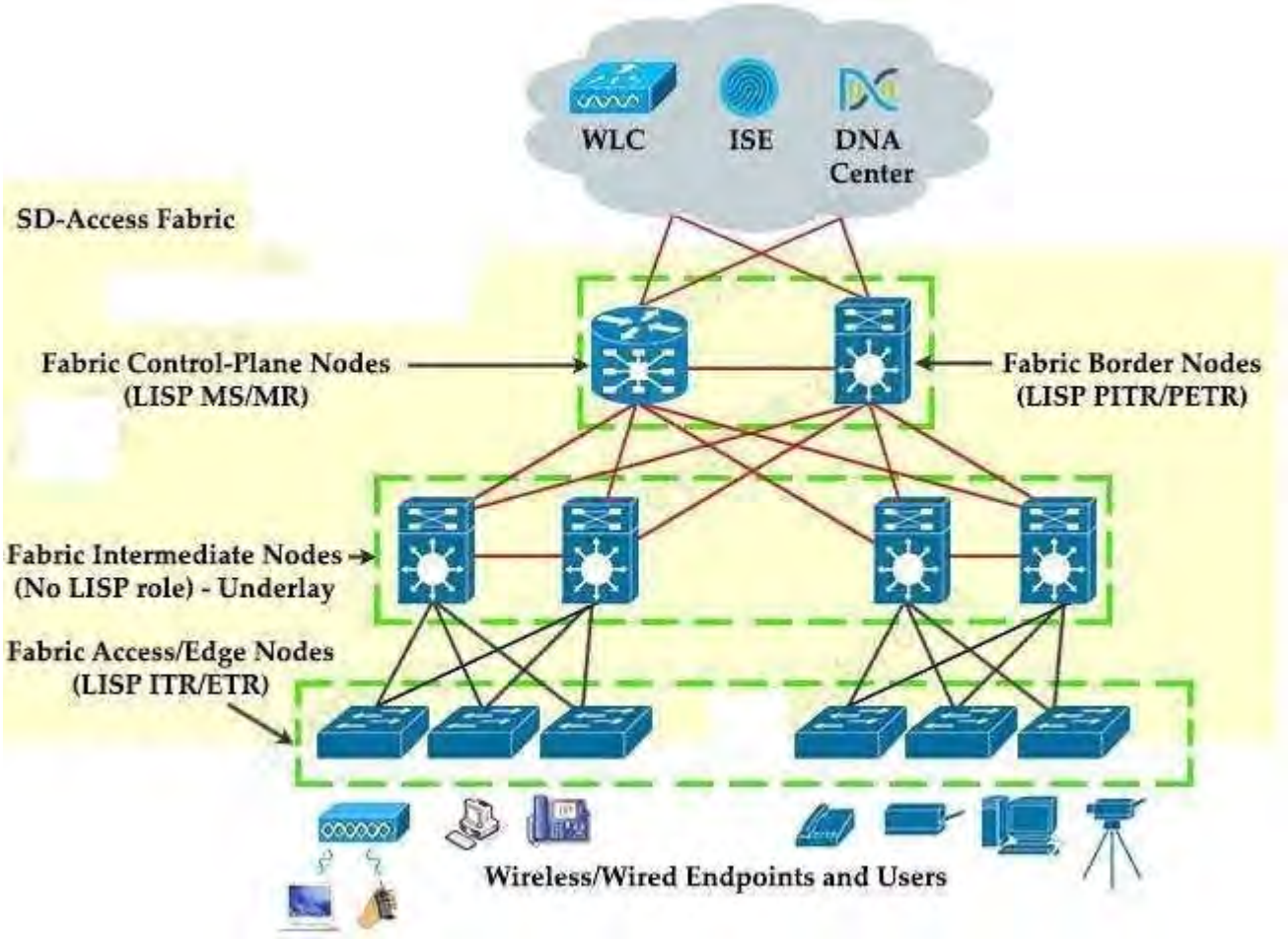
C. Provides reachability border nodes in the fabric underlay.
D. Encapsulates end-user data traffic into LISP.

Correct Answer: B
Explanation

Explanation/Reference:
There are five basic device roles in the fabric overlay:
+ Control plane node: This node contains the settings, protocols, and mapping tables to provide the endpoint-to-location (EID-to-RLOC) mapping system for the fabric overlay. + Fabric border node: This fabric device (for example, core layer device) connects external Layer 3 networks to the SDA fabric. + Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.
+ Fabric WLAN controller (WLC): This fabric device connects APs and wireless endpoints to the SDA fabric.
+ Intermediate nodes: These are intermediate routers or extended switches that do not provide any sort of SD-Access fabric role other than underlay services.



QUESTION 83
A client device roams between wireless LAN controllers that are mobility peers, Both controllers have dynamic interface on the same client VLAN which type of roam is described?

A. intra-VLAN
B. inter-controller
C. intra-controller
D. inter-subnet

Correct Answer: B
Explanation

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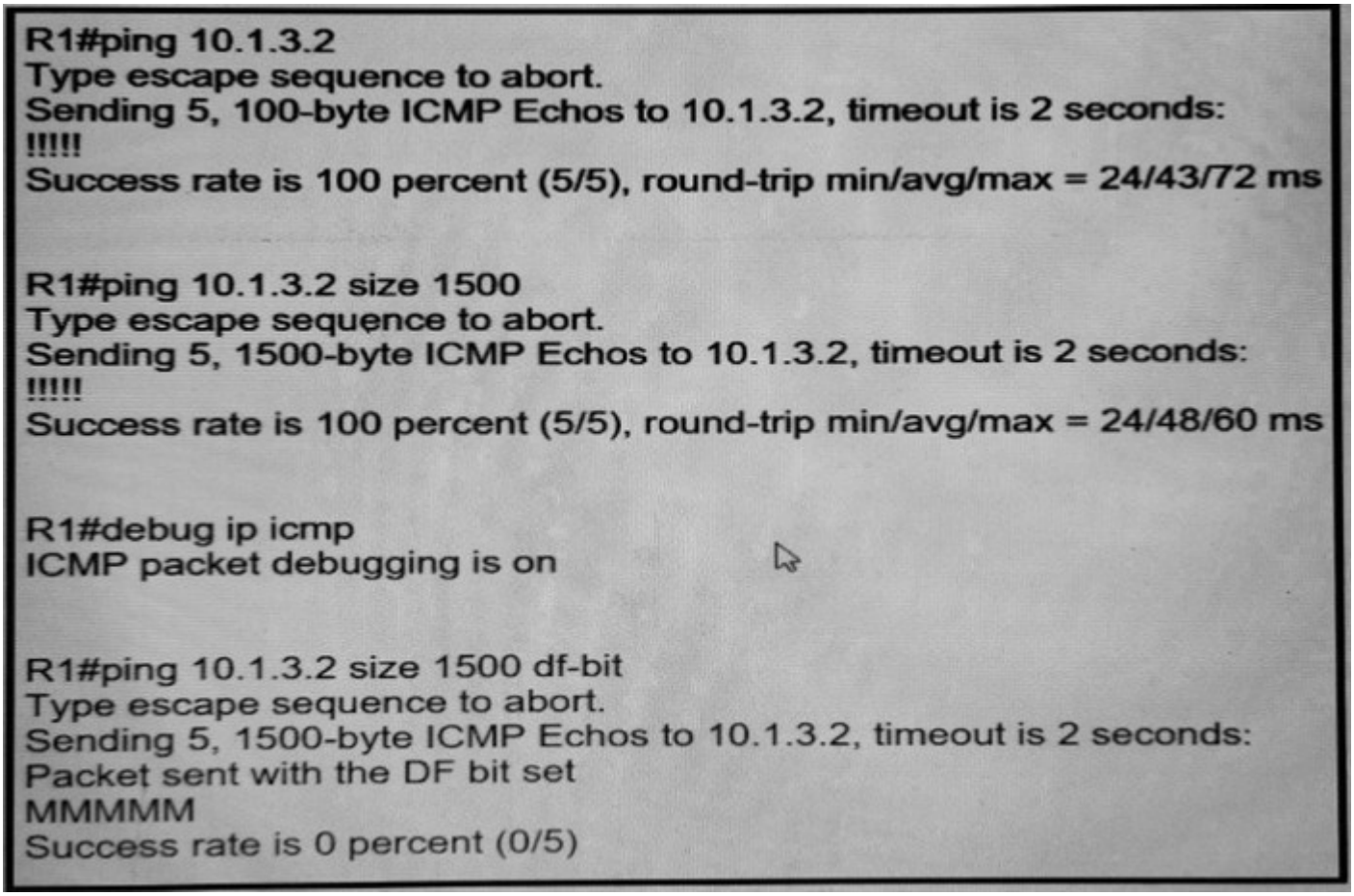
QUESTION 84
Refer to the exhibit. An engineer troubleshoots connectivity issues with an application. Testing is performed from the server gateway, and traffic with the DF bit set is dropped along the path after increasing packet size. Removing the DF bit setting at the gateway prevents the packets from being dropped. What is the cause of this issue?



A. PMTUD does not work due to ICMP Packet Too Big messages being dropped by an ACL
B. The remote router drops the traffic due to high CPU load.
C. The server should not set the DF bit in any type of traffic that is sent toward the network
D. There is a CoPP policy in place protecting the WAN router CPU from this type of traffic

Correct Answer: C
Explanation

QUESTION 85
Which solution do IaaS service providers use to extend a Layer 2 segment across a Layer 3 network?

A. VLAN
B. VTEP
C. VXLAN
D. VRF

Correct Answer: C
Explanation

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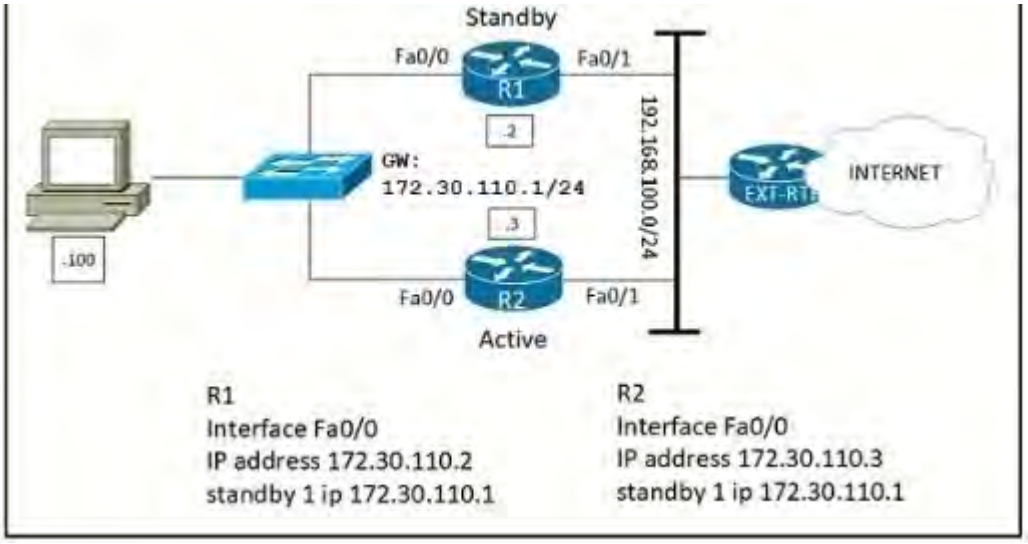
QUESTION 86
Refer to the exhibit.



Option A R1 standby 1 preempt R2 standby 1 priority 90	**Option B** R1 standby 1 preempt R2 standby 1 priority 100
Option C R2 standby 1 priority 100 standby 1 preempt	**Option D** R2 standby 1 priority 110 standby 1 preempt

Which configuration change ensures that R1 is the active gateway whenever it is in a functional state for the 172.30.110.0724 network?

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

Correct Answer: A
Explanation

QUESTION 87
A customer requests a design that includes GLBP as the FHRP The network architect discovers that the members of the GLBP group have different throughput capabilities. Which GLBP load balancing method supports this environment?

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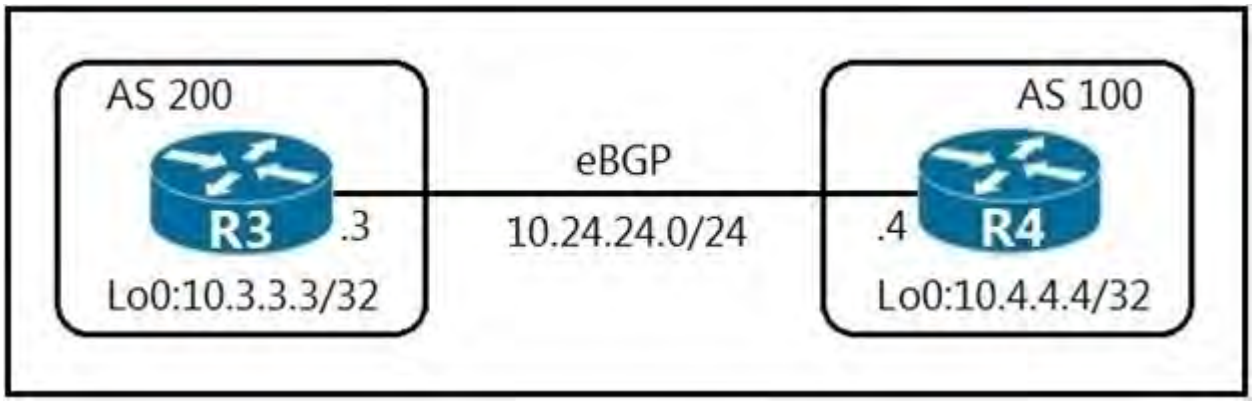
A. host dependent
B. least connection
C. round robin
D. weighted

Correct Answer: D
Explanation

Explanation/Reference:
Weighted: Defines weights to each device in the GLBP group to define the ratio of load balancing between the devices. This allows for a larger weight to be assigned to bigger routers that can handle more traffic.
Host dependent: Uses the host MAC address to decide to which virtual forwarder MAC to redirect the packet. This method ensures that the host uses the same virtual MAC address as long as the number of virtual forwarders does not change within the group.

QUESTION 88
Refer to the exhibit.



An engineer must establish eBGP peering between router R3 and router R4. Both routers should use their loopback interfaces as the BGP router ID.

Which configuration set accomplishes this task?

A. R3(config)#router bgp 200
R3(config-router)#neighbor 10.4.4.4 remote-as 100
R3(config-router)# neighbor 10.4.4.4 update-source Loopback0
R4(config)#router bgp 100
R4(config-router)#neighbor 10.3.3.3 remote-as 200
R4(config-router)#network 10.3.3.3 update-source Loopback0

B. R3(config)#router bgp 200
R3(config-router)#neighbor 10.24.24.4 remote-as 100
R3(config-router)#neighbor 10.24.24.4 update-source Loopback0
R4(config)#router bgp 100
R4(config-router)#neighbor 10.24.24.3 remote-as 200
R4(config-router)#neighbor 10.24.24.3 update-source Loopback0

C. R3(config)#router bgp 200
R3(config-router)#neighbor 10.4.4.4 remote-as 100
R3(config-router)#bgp router-id 10.3.3.3
R4(config)#router bgp 100
R4(config-router)#neighbor 10.3.3.3 remote-as 200
R4(config-router)#bgp router-id 10.4.4.4

D. R3(config)#router bgp 200
R3(config-router)#neighbor 10.24.24.4 remote-as 100
R3(config-router)#bgp router-id 10.3.3.3
R4(config)#router bgp 100
R4(config-router)#neighbor 10.24.24.3 remote-as 200

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R4(config-router)#bgp router-id 10.4.4.4

Correct Answer: D
Explanation

QUESTION 89
Which network devices secure API platform?

A. next-generation intrusion detection systems
B. Layer 3 transit network devices
C. content switches
D. web application firewalls

Correct Answer: D
Explanation

QUESTION 90
Refer to the exhibit.

Script

```
import ncclient

with ncclient.manager.connect(host='192.168.1.1',
     port=830, username='root', password='test123!",
     allow_agent=False) as m:
       print(m.get_config('running').data_xml)
```

Output

```
$ python get_config.py
Traceback (most recent call last):
     File "get_config.py", line 3, in <module>
       with ncclient.manager.connect(host='192.168.1.1',
       port=830, username='root',
       AttributeError: 'module' object has no attribute 'manager'
```

Running the script causes the output in the exhibit. What should be the first line of the script?

A. from ncclient import manager
B. import manager
C. from ncclient import *
D. ncclient manager import

Correct Answer: A
Explanation

Explanation/Reference:

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https://ncclient.readthedocs.io/en/latest/
Multiple examples shown using "from ncclient import manager" and then using manager.connect

QUESTION 91
Refer to the exhibit.

An engineer must add the SNMP interface table to the NetFlow protocol flow records. Where should the SNMP table option be added?

```
flow record Recorder
 match ipv4 protocol
 match ipv4 source address
 match ipv4 destination address
 match transport source-port
 match transport destination-port
!
flow exporter Exporter
 destination 192.168.100.22
 transport udp 2055
!
flow monitor Monitor
 exporter Exporter
 record Recorder
!
et-analytics
 ip flow-export destination 192.168.100.22 2055
!
interface gi1
ip flow monitor Monitor input
ip flow monitor Monitor output
et-analytics enable
!
```

A. under the interface
B. under the flow record
C. under the flow monitor
D. under the flow exporter

Correct Answer: D
Explanation

Explanation/Reference:
option interface-table

This command causes the periodic sending of an options table, which will allow the collector to map the interface SNMP indexes provided in the flow records to interface names. The optional timeout can alter the frequency at which the reports are sent.

Router(config)# flow exporter FLOW-EXPORTER-1

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Router(config-flow-exporter)# option interface-table

https://www.cisco.com/c/en/us/td/docs/ios/fnetflow/command/reference/fnf_book/fnf_02.html

QUESTION 92
An engineer must configure the strongest password authentication to locally authenticate on a router. Which configuration must be used?

A. username netadmin
secret 5 1b1JUSkZbBS1Pyh4OzwXyZ1kSZ2
B. username netadmin
secret $15b1JuSk404850110QzwXyZ1k SZ2
C. line Console 0
password $15b1Ju$
D. username netadmin
secret 9 9vFpMfBelbRVV8SseX/bDAxtuV

Correct Answer: D
Explanation

Explanation/Reference:
Scrypt is safer than MD5, so answer A is wrong and answer D is correct

R1(config)#username user secret 0 Specifies an UNENCRYPTED secret will follow5 Specifies a MD5 HASHED secret will follow8 Specifies a PBKDF2 HASHED secret will follow9 Specifies a SCRYPT HASHED secret will follow<0-9> Encryption types not explicitly specifiedLINE The UNENCRYPTED (cleartext) user secretLINE The UNENCRYPTED (cleartext) user secret

QUESTION 93
An engineer must protect their company against ransom ware attacks. Which solution allows the engineer to block the execution stage and prevent file encryption?

A. Use Cisco AMP deployment with the Malicious Activity Protection engineer enabled.
B. Use Cisco AMP deployment with the Exploit Prevention engine enabled.
C. Use Cisco Firepower and block traffic to TOR networks.
D. Use Cisco Firepower with Intrusion Policy and snort rules blocking SMB exploitation.

Correct Answer: A
Explanation

Explanation/Reference:
Ransomware are malicious software that locks up critical resources of the users. Ransomware uses well-established public/private key cryptography which leaves the only way of recovering the files being the payment of the ransom, or restoring files from backups.

Cisco Advanced Malware Protection (AMP) for Endpoints Malicious Activity Protection (MAP) engine defends your endpoints by monitoring the system and identifying processes that exhibit malicious activities when they execute and stops them from running. Because the MAP engine detects threats by observing the behavior of the process at run time, it can generically determine if a system is under attack by a new variant of ransomware or malware that may have eluded other security products and detection technology, such as legacy signature-based malware detection. The first release of the MAP engine targets identification, blocking, and quarantine of ransomware attacks on the endpoint.

https://www.cisco.com/c/dam/en/us/products/collateral/security/amp-for-endpoints/white-paper-c11-740980.pdf

QUESTION 94
An administrator must enable Telnet access to Router X using the router username and password database for authentication. Which configuration should be applied?

A. RouterX(config)# line aux 0

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RouterX(config line)# password cisco
RouterX(config-line)# login

B. RouterX(config)# aaa new-model
RouterX(config)# aaa authentication login auth-list local

C. RouterX(config)# line vty 0 4
RouterX(config-line)# login local
RouterX(config-line)# end

D. RouterX(config)# line vty 0 4
RouterX(config-line)# login
RouterX(config-line)# end

Correct Answer: C
Explanation

QUESTION 95
Refer to the exhibit.

```
psswd = (base64.b64decode('SzFwM001RzchCg==').decode('utf-8')).strip('\n')
d = datetime.date.today()
date = str(10000*d.year + 100*d.month + d.day)
```

Which result does the python code achieve?

A. The code encrypts a base64 decrypted password.
B. The code converts time to the "year/month/day" time format.
C. The code converts time to the yyyymmdd representation.
D. The code converts time to the Epoch LINUX time format.

Correct Answer: C
Explanation

Explanation/Reference:
print(str(10000*d.year + 100*d.month + d.day))

QUESTION 96
An engineer must configure a GRE tunnel interface in the default mode. The engineer has assigned an IPv4 address on the tunnel and sourced the tunnel from an ethernet interface. Which additional configuration must be made on the tunnel interface?

A. (config-if)#tunnel destination <ip address>
B. (config-if)#keepalive <seconds retries>
C. (config-if)#ip mtu <value>
D. (config-if)#ip tcp adjust-mss <value>

Correct Answer: A
Explanation

Explanation/Reference:
A GRE interface definition includes:

+ An IPv4 address on the tunnel + A tunnel source + A tunnel destination

Below is an example of how to configure a basic GRE tunnel:

interface Tunnel 0 ip address 10.10.10.1 255.255.255.0 tunnel source fa0/0 tunnel destination 172.16.0.2

In this case the "IPv4 address on the tunnel" is 10.10.10.1/24 and "sourced the tunnel from an Ethernet interface" is the command "tunnel source fa0/0". Therefore it only needs a tunnel destination, which is

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172.16.0.2.

Note: A multiple GRE (mGRE) interface does not require a tunnel destination address.

QUESTION 97
What are two common sources of interference for Wi-Fi networks? (Choose two.)

A. LED lights
B. radar
C. fire alarm
D. conventional oven
E. rogue AP

Correct Answer: BE
Explanation

QUESTION 98
What is a benefit of Type 1 hypervisors?

A. Administrators are able to load portable virtual machine packages in OVA or QCOW2 formats.
B. Network engineers are able to create virtual networks o interconnect virtual machines in Layer 2 topologies
C. Operators are able to leverage orchestrators to manage workloads that run on multiple Type 1 hypervisors
D. Storage engineers are able to leverage VMDK files to provide storage to virtual machine.

Correct Answer: B
Explanation

QUESTION 99
Which method does Cisco DNA Center use to allow management of non-Cisco devices through southbound protocols?

A. It creates device packs through the use of an SDK
B. It uses an API call to interrogate the devices and register the returned data.
C. It obtains MIBs from each vendor that details the APIs available.
D. It imports available APIs for the non-Cisco device in a CSV format.

Correct Answer: A
Explanation

Explanation/Reference:
Cisco DNA Center allows customers to manage their non-Cisco devices through the use of a Software Development Kit (SDK) that can be used to create Device Packages for third-party devices.

Reference:https://developer.cisco.com/docs/dna-center/#!cisco-dna-center-platform-overview/multivendor-support-southbound

QUESTION 100
What is the role of the RP in PIM sparse mode?

A. The RP responds to the PIM join messes with the source of requested multicast group
B. The RP maintains default aging timeouts for all multicast streams requested by the receivers.
C. The RP acts as a control-plane node and does not receive or forward multicast packets.
D. The RP is the multicast that is the root of the PIM-SM shared multicast distribution tree.

Correct Answer: D

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Explanation

Explanation/Reference:
Multicast Distribution Shared Tree - Unlike source trees that have their root at the source, shared trees use a single common root placed at some chosen point in the network. This shared root is called a rendezvous point (RP).
Source:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9300/software/release/16-5/configuration_guide/ip_mcast_rtng/b_165_ip_mcast_rtng_9300_cg/b_165_ip_mcast_rtng_9300_9500_cg_chapter_0100.html https://netcraftsmen.com/ pim-sparse-mode/

QUESTION 101
How must network management traffic be treated when defining QoS policies?

A. as delay-sensitive traffic in a low latency queue
B. using minimal bandwidth guarantee
C. using the same marking as IP routing
D. as best effort

Correct Answer: A
Explanation

Explanation/Reference:
Low latency queuing (LLQ) adds a priority queue to CBWFQ from which delay-sensitive traffic, such as voice traffic, can be transmitted ahead of packets in other queues. By configuring the quality of service (QoS), you can provide preferential treatment to specific types of traffic at the expense of other traffic types. Without QoS, the device offers best-effort service for each packet, regardless of the packet contents or size. The device sends the packets without any assurance of reliability, delay bounds, or throughput.
The following are specific features provided by QoS:
* Low latency
* Bandwidth guarantee
* Buffering capabilities and dropping disciplines
* Traffic policing
* Enables the changing of the attribute of the frame or packet header
* Relative services
* Modular QoS Command-Line Interface
* Supported QoS Features for Wired Access
* Hierarchical QoS

QUESTION 102
Refer to the exhibit. What step resolves the authentication issue?

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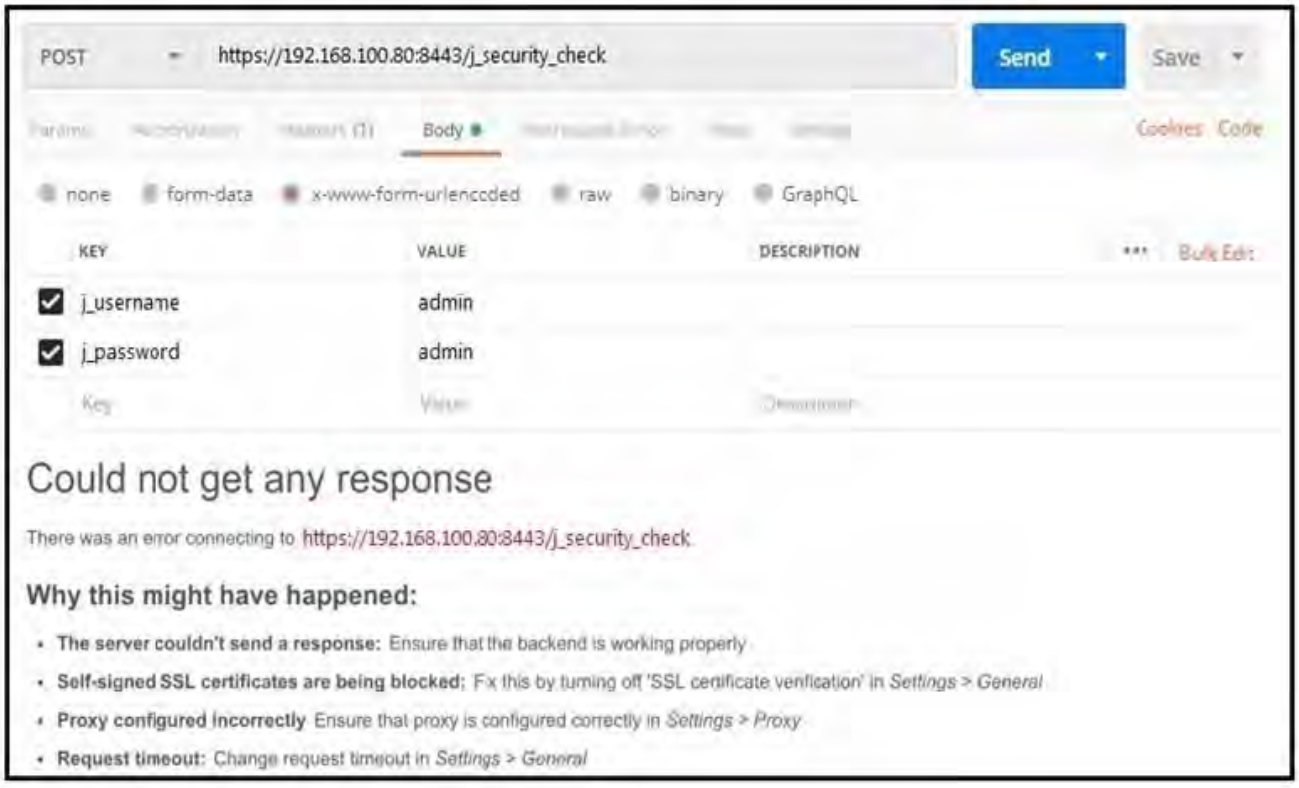
```
vedge-001# show control connections

PEER                                PEER
CONTROLLER
PEER  PEER PEER        SITE  DOMAIN PEER
PRIV PEER                           PUB
GROUP
TYPE  PROT SYSTEM IP  ID    ID     PRIVATE IP                          PORT
PUBLIC IP                    PORT LOCAL COLOR   PROXY STATE UPTIME   ID
-------------------------------------------------------------------------
-------------------------------------------------------------------------
------
vsmart  dtls 4.4.4.70  100   1      192.168.100.80
12446 10.10.20.70                   12446 default      No    up
0:02:24:09 0
vbond   dtls 0.0.0.0   0     0      192.168.100.81
12346 10.10.20.80                   12346 default      -     up
0:02:24:10 0
vmanage dtls 4.4.4.90  100   0      192.168.100.82
12446 10.10.20.90                   12446 default
```



A. use basic authentication
B. change the port to 12446
C. target 192 168 100 82 in the URI
D. restart the vsmart host

Correct Answer: C

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Explanation

Explanation/Reference:
He first figure is the output of the "show control connections" command. From this figure we learned that the 192.168.100.82 so we need to connect to this IP address (not 192.168.100.80).

QUESTION 103
What is required for intercontroller Layer 3 roaming?

A. Mobility groups are established between wireless controllers.
B. The management VLAN is present as a dynamic VLAN on the second WLC.
C. WLCs use separate DHCP servers.
D. WLCs have the same IP addresses configured on their interfaces.

Correct Answer: D
Explanation

QUESTION 104
Which LISP device is responsible for publishing EID-to-RLOC mappings for a site?

A. ETR
B. MS
C. ITR
D. MR

Correct Answer: A
Explanation

Explanation/Reference:
An Egress Tunnel Router (ETR) connects a site to the LISP-capable part of a core network (such as the Internet), publishes EID-to-RLOC mappings for the site, responds to Map-Request messages, and decapsulates and delivers LISP- encapsulated user data to end systems at the site.

Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe- 3s/irl-xe-3s-book/irl-overview.html
https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/locator-id-separation-protocol-lisp/white_paper_c11-652502.html

QUESTION 105
What is one difference between EIGRP and OSPF?

A. OSPF is a Cisco proprietary protocol, and EIGRP is an IETF open standard protocol.
B. OSPF uses the DUAL distance vector algorithm, and EIGRP uses the Dijkstra link-state algorithm
C. EIGRP uses the variance command lot unequal cost load balancing, and OSPF supports unequal cost balancing by default.
D. EIGRP uses the DUAL distance vector algorithm, and OSPF uses the Dijkstra link-state algorithm

Correct Answer: D
Explanation

Explanation/Reference:
EIGRP is based on DUAL (Diffusing Update Algorithm) while OSPF uses Dijkstra's Shortest Path Algorithm with the major difference in how they calculate the shortest routing path. OSPF has capability to calculate the best shortest path to each reachable subnet/network using an algorithm called SFP (Shortest Path First) also known as Dijkstra algorithm. "Neighbor Table" that contain all discovered OSPF neighbour with whom routing information will be interchanged.

QUESTION 106

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An engineer must configure HSRP for VLAN 1000 on SW2. The secondary switch must immediately take over the role of active router If the interlink with the primary switch fails. Which command set completes this task?

SW2(config)#track 1000 interface gigabitEthernet0/0 line-protocol
SW2(config-track)#exit
SW2(config)#interface vlan 1000
SW2(config-if)#ip address 10.23.87.3 255.255.255.0

A. SW2(config-if)# standby version 2
   SW2(config-if)# standby 1000 ip 10.23.87.1
   SW2(config-if)# standby 1000 priority 95
   SW2(config-if)# standby 1000 preelept
   SW2(config-if)# standby 1000 track gigabitethernet0/0
B. SW2(config-if)# standby 1000 ip 10.23.87.1
   SW2(config-if)# standby 1000 priority 95
   SW2(config-if)# standby 1000 preempt
   SW2(config-if)# standby 1000 track 1000
C. SW2(config-if)# standby version 2
   SW2(config-if)# standby 1000 ip 10.23.87.1
   SW2(config-if)# standby 1000 priority 95
   SW2(config-if)# standby 1000 preempt
   SW2(config-if)# standby 1000 track 1000
D. SW2(config if)# standby version 2
   SW2(config-if)# standby 1000 ip 10.23.87.1
   SW2(config-if)# standby 1000 priority 95
   SW2(config-if)# standby 1000 track 1000

Correct Answer: C
Explanation

QUESTION 107
In which two ways does TCAM differ from CAM? (Choose two.)

A. CAM is used to make Layer 2 forwarding decisions, and TCAM is used for Layer 3 address lookups.
B. The MAC address table is contained in CAM, and ACL and QoS Information Is stored in TCAM.
C. CAM Is used by routers for IP address lookups, and TCAM is used to make Layer 2 forwarding decisions.
D. CAM is used for software switching mechanisms, and TCAM Is used for hardware switching mechanisms.
E. The MAC address table Is contained in TCAM, and ACL and QoS information is stored in CAM.

Correct Answer: AB
Explanation

QUESTION 108
In a Cisco SD-Access solution, which protocol is used by an extended node to connect to a single edge node?

A. VXLAN
B. IS-IS
C. 802 1Q
D. CTS

Correct Answer: C
Explanation

Explanation/Reference:

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SD-Access Extended Nodes provide the ability to extend the enterprise network by providing connectivity to non-carpeted spaces of an enterprise ?commonly called the Extended Enterprise. This allows network connectivity and management of IoT devices and the deployment of traditional enterprise end devices in outdoor and non-carpeted environments such as distribution centers, warehouses, or Campus parking lots. This feature extends consistent, policy-based automation to Cisco Industrial Ethernet, Catalyst 3560-CX Compact, and Digital Building Series switches and enables segmentation for user endpoints and IoT devices connected to these nodes. Using Cisco DNA Center automation, switches in the extended node role are onboarded to their connected edge node using an 802.1Q trunk over an EtherChannel with one or multiple physical link members. Extended nodes are discovered using zero-touch Plug-and-Play.

Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html#Network_Components

QUESTION 109
Refer to the exhibit.

```
#! /usr/bin/env python3

from env_lab import dnac
import json
import requests
import urllib3
from requests.auth import HTTPBasicAuth
from prettytable import PrettyTable

dnac_devices = PrettyTable(['Hostname','Platform Id','Software Type','Software Version','Up
Time'])
dnac_devices.padding_width = 1
headers = {
          'content-type': "application/json",
          'x-auth-token': ""
        }

def dnac_login(host, username, password):
   url = "https://{}/api/system/v1/auth/token".format(host)
   response = requests.request("POST", url, auth=HTTPBasicAuth(username, password),
                        headers=headers, verify=False)
   return response.json()["Token"]

def network_device_list(dnac, token):
   url = "https://{}/api/v1/network-device".format(dnac['host'])
   headers["x-auth-token"] = token
   response = requests.get(url, headers=headers, verify=False)
   data = response.json()
   for item in data['response']:
      dnac_devices.add_row([item["hostname"],item["platformid"],item["softwareType"],item["soft
wareVersion"],item["upTime"]])
```

Which code results in the working python script displaying a list of network devices from the Cisco DNA center?

A. network_device_list(dnac["host"], dnac["username"],dnac["password"])
   login = dnac_login(dnac)
   print(dnac_devices)
B. login = dnac_login(dnac["host"], dnac["username"], dnac["password"])
   network_device_list(dnac, login)
   print(dnac_devices)
C. login = dnac_login(dnac["host"], dnac["username"], dnac["password"])
   network_device_list(dnac, login) for item in dnac_devices:
   print(dnac_devices.item)

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D. network_device_list(dnac["host"], dnac["username"], dnac["password"])
login = dnac_login(dnac) for item in dnac_devices:
print(dnac_devices.item)

Correct Answer: B
Explanation

Explanation/Reference:
https://github.com/bigevilbeard/dnac-device-info/blob/master/get_dnac_devices.py

QUESTION 110
What is provided by the Stealthwatch component of the Cisco Cyber Threat Defense solution?

A. real-time threat management to stop DDoS attacks to the core and access networks
B. real-time awareness of users, devices and traffic on the network
C. malware control
D. dynamic threat control for web traffic

Correct Answer: B
Explanation

Explanation/Reference:
Cisco Stealthwatch is a comprehensive, network telemetry-based, security monitoring and analytics solution that streamlines incident response through behavioral analysis; detecting denial of service attacks, anomalous behaviour, malicious activity and insider threats. Based on a scalable enterprise architecture, Stealthwatch provides near real-time situational awareness of all users and devices on the network.

Reference: https://www.endace.com/cisco-stealthwatch-solution-brief.pdf

Note: Although answer A seems to be correct but in fact, Stealthwatch does not provide real-time protection for DDoS attack. It just helps detect DDoS attack only.

Stealthwatch aggregates observed network activity and performs behavioral and policy driven analytics against what it sees in order to surface problematic activities. While we don't position our self as a DDOS solution, we're going to leverage our analytical capabilities to identify a DDoS attack against an internal host using the WebUI.

Reference: https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2016/pdf/LTRSEC-8421-LG.pdf

QUESTION 111
A network engineer is enabling HTTPS access to the core switch, which requires a certificate to be installed on the switch signed by the corporate certificate authority

Which configuration commands are required to issue a certificate signing request from the core switch?

A. Core-Switch(config)#crypto pki enroll Core-Switch
Core-Switch(config)#ip http secure-trustpoint Core-Switch
B. Core-Switch(config)#crypto pki trustpoint Core-Switch
Core-Switch(ca-trustpoint)#enrollment terminal
Core-Switch(config)#crypto pki enroll Core-Switch
C. Core-Switch(config)#crypto pki trustpoint Core-Switch
Core-Switch(ca-trustpoint)#enrollment terminal
Core-Switch(config)#ip http secure-trustpoint Core-Switch
D. Core-Switch(config)#ip http secure-trustpoint Core-Switch
Core-Switch(config)#crypto pki enroll Core-Switch

Correct Answer: B
Explanation

Explanation/Reference:
1. generate an RSA key

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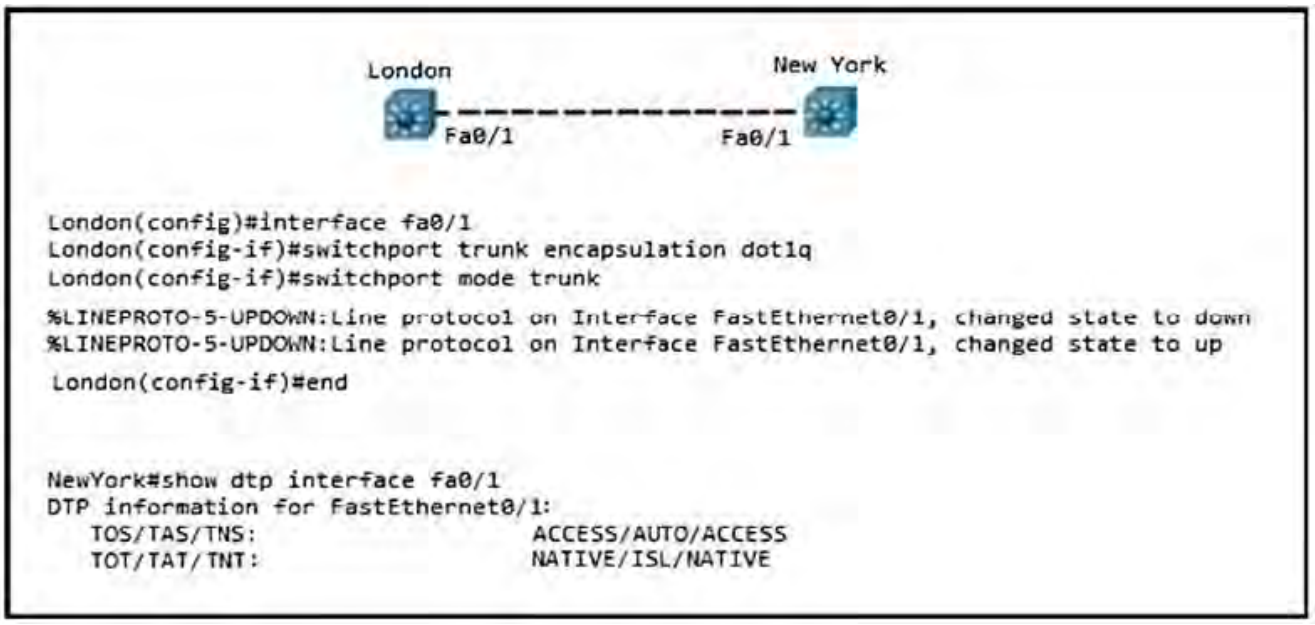
2. Create a trust point.
3. Enter the command "Crypto PKI enroll"

https://community.cisco.com/t5/vpn/certificate-signing-request-csr-guideline/td-p/2778928

QUESTION 112
Refer to the exhibit. Communication between London and New York is down

Which command set must be applied to resolve this issue?



A.
NewYork(config)#**int f0/1**
NewYork(config)#**switchport trunk encap dot1q**
NewYork(config)#**end**
NewYork#

B.
NewYork(config)#**int f0/1**
NewYork(config)#**switchport mode trunk**
NewYork(config)#**end**
NewYork#

C.
NewYork(config)#**int f0/1**
NewYork(config)#**switchport nonegotiate**
NewYork(config)#**end**
NewYork#

D.
NewYork(config)#**int f0/1**
NewYork(config)#**switchport mode dynamic desirable**
NewYork(config)#**end**
NewYork#

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

Correct Answer: A

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Explanation

Explanation/Reference:
https://learningnetwork.cisco.com/s/question/0D53i00000Ksyty/tostastns-tottattnt

QUESTION 113
A network is being migrated from IPV4 to IPV6 using a dual-stack approach. Network management is already 100% IPV6 enabled.

In a dual-stack network with two dual-stack NetFlow collections, how many flow exporters are needed per network device in the flexible NetFlow configuration?

A. 1
B. 2
C. 4
D. 8

Correct Answer: B
Explanation

Explanation/Reference:
A dual-stack device is a device with network interfaces that can originate and understand both IPv4 and IPv6 packets.

It is because each flow collector can only send to a single destination. In this question there are two NetFlow collectors... thus two destination. Thus the need for 2 flow exporters. Each flow exporter supports only one destination. If you want to export the data to multiple destinations, you must configure multiple flow exporters and assign them to the flow monitor.

You can export to a destination using either an IPv4 or IPv6 address.

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/fnetflow/configuration/15-mt/fnf-15-mt-book/cfg-de-fnflow-exprts.html

Look under the section "Configuring the Flow Exporter"

QUESTION 114
How does Cisco Trustsec enable more access controls for dynamic networking environments and data centers?

A. uses flexible NetFlow
B. assigns a VLAN to the endpoint
C. classifies traffic based an the contextual identity of the endpoint rather than its IP address
D. classifies traffic based on advanced application recognition

Correct Answer: C
Explanation

Explanation/Reference:
The Cisco TrustSec solution simplifies the provisioning and management of network access control through the use of software-defined segmentation to classify network traffic and enforce policies for more flexible access controls. Traffic classification is based on endpoint identity, not IP address, enabling policy change without net-work redesign.

QUESTION 115
A customer transitions a wired environment to a Cisco SD-Access solution. The customer does not want to integrate the wireless network with the fabric. Which wireless deployment approach enables the two systems to coexist and meets the customer requirement?

A. Deploy a separate network for the wireless environment.
B. Implement a Cisco DNA Center to manage the two networks.

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C. Deploy the wireless network over the top of the fabric.
D. Deploy the APs in autonomous mode.

Correct Answer: C
Explanation

Explanation/Reference:
Looking at the SD-Access Design Considerations > Wireless Design Section:

SD-Access supports two options for integrating wireless access into the network. One option is to use traditional Cisco Unified Wireless Network (CUWN) local-mode configurations over-the-top as a non-native service. In this mode, the SD- Access fabric is simply a transport network for the wireless traffic, which can be useful during migrations to transport CAPWAP-tunneled endpoint traffic from the APs to the WLCs.

QUESTION 116
Which two characteristics define the Intent API provided by Cisco DNA Center? (Choose two.)

A. northbound API
B. business outcome oriented
C. device-oriented
D. southbound API
E. procedural

Correct Answer: AB
Explanation

Explanation/Reference:
The Intent API is a Northbound REST API that exposes specific capabilities of the Cisco DNA Center platform. The Intent API provides policy-based abstraction of business intent, allowing focus on an outcome rather than struggling with individual mechanisms steps.

Reference: https://developer.cisco.com/docs/dna-center/#!cisco-dna-center-platform-overview/intent-api-northbound

QUESTION 117
Refer to the exhibit.

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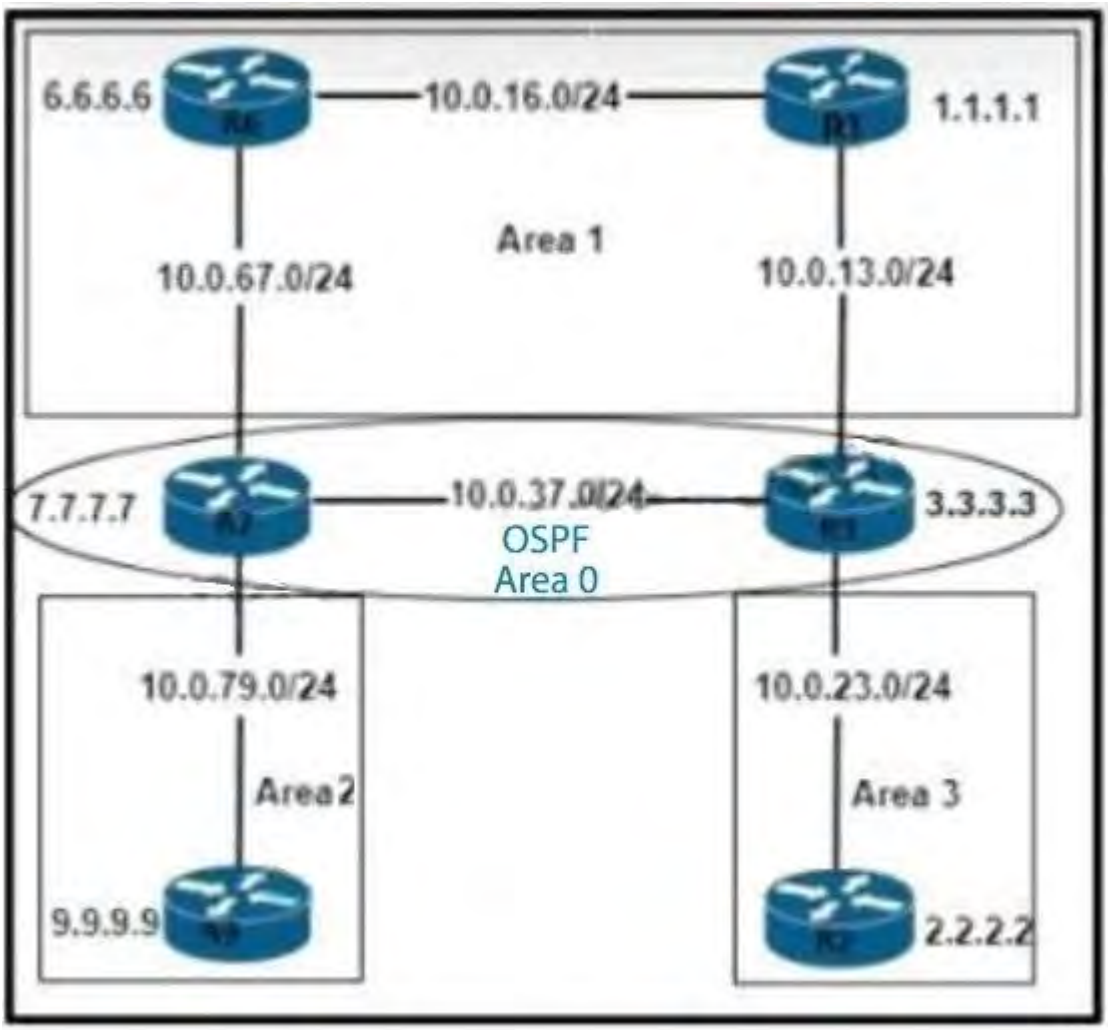

An engineer must prevent the R6 loopback from getting into Area 2 and Area 3 from Area 0 Which action must the engineer take?

A. Apply a fitter list inbound on R2 and R9
B. Apply a filter list outbound on R3 and R7
C. Apply a filter list outbound on R7 only.
D. Apply a filter list inbound on R3 and R7

Correct Answer: B
Explanation

Explanation/Reference:
This question asks to prevent route advertised into Area 2 and Area 3 only. It does not ask to prevent route advertised into Area 0 so applying a filter list outbound on R3 and R7 would best fit the requirement.

QUESTION 118
An engineer is implementing MPLS OAM to monitor traffic within the MPLS domain. Which action must the engineer perform to prevent from being forwarded beyond the service provider domain when the LSP is down?

A. Disable IP redirects only on outbound interfaces.
B. Implement the destination address for the LSP echo request packet in the 127.x.y.z/8 network.
C. Disable IP redirects on all ingress interfaces.
D. Configure a private IP address as the destination address of the headend router of Cisco MPLS TE.

Correct Answer: C

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Explanation

QUESTION 119
A network engineer must configure a router to send logging messages to a syslog server based on these requirements:

1. uses syslog IP address: 10.10.10.1
2. uses a reliable protocol
3. must not use any well-known TCP/UDP ports

Which configuration must be used?

A. logging host 10.10.10.1 transport tcp port 1024
B. logging origin-id 10.10.10.1
C. logging host 10.10.10.1 transport udp port 1023
D. logging host 10.10.10.1 transport udp port 1024

Correct Answer: A
Explanation

QUESTION 120
Refer to the exhibit.

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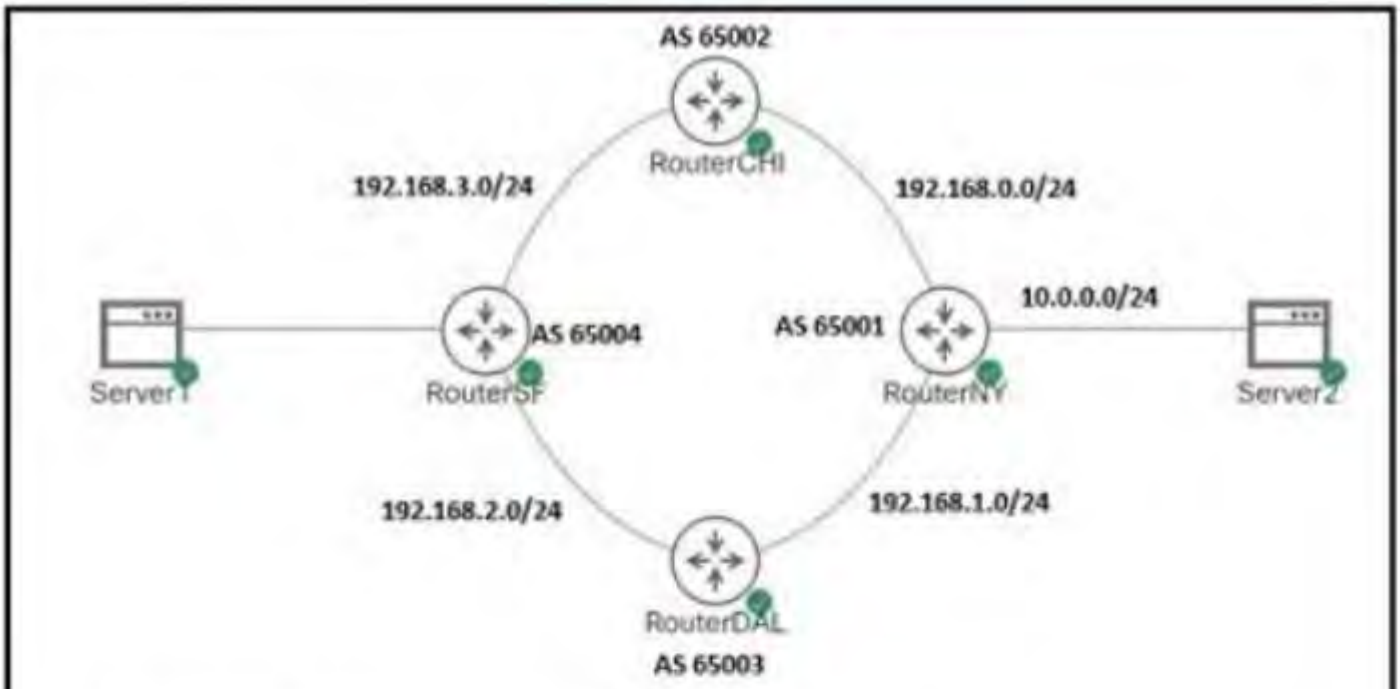


```
RouterSF#show ip route 10.0.0.0
Routing entry for 10.0.0.0/24, 1 known subnets
B        10.0.0.0 [20/0] via 192.168.2.2, 00:03:23
RouterSF#
RouterSF#show bgp 10.0.0.0
BGP routing table entry for 10.0.0.0/24, version 8
Paths: (2 available, best #2, table default)
Multipath: eiBGP
  Advertised to update-groups:
     2
  Refresh Epoch 1
  65002 65001
    192.168.3.2 from 192.168.3.2 (192.168.3.2)
      Origin IGP, localpref 100, valid, external
      rx pathid: 0, tx pathid: 0
      Updated on Sep 22 2020 21:32:27 UTC
  Refresh Epoch 2
  65003 65001
    192.168.2.2 from 192.168.2.2 (192.168.2.2)
      Origin IGP, localpref 100, valid, external, best
      rx pathid: 0, tx pathid: 0x0
      Updated on Sep 22 2020 21:31:57 UTC
RouterSF#
```

After configuring the BGP network, an engineer verifies that the path between Servers and Server2 Is functional. Why did RouterSF choose the route from RouterDAL instead of the route from RouterCHI?

A. The Router-ID Tor Router DAL is lower than the Roter-ID for RouterCHI.

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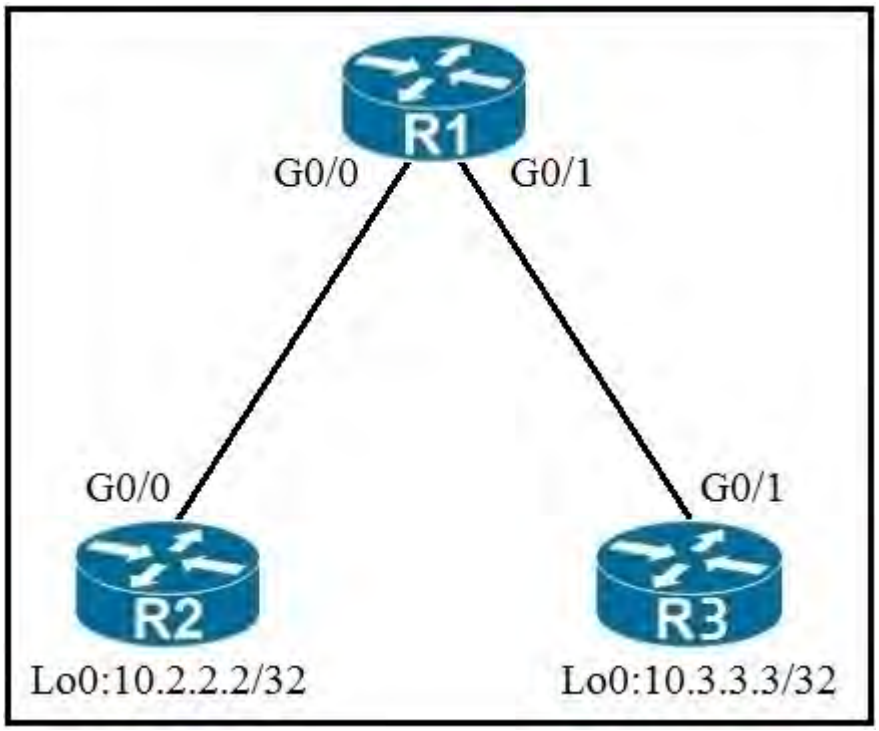
B. The route from RouterOAL has a lower MED.
C. BGP is not running on RouterCHI.
D. There is a static route in RouterSF for 10.0.0.0/24.

Correct Answer: A
Explanation

QUESTION 121
Refer to the exhibit.



An engineer must deny Telnet traffic from the loopback interface of router R3 to the loopback interface of router R2 during the weekend hours. All other traffic between the loopback interfaces of routers R3 and R2 must be allowed at all times.

Which command set accomplishes this task?

A. R3(config)#time-range WEEKEND
R3(config-time-range)#periodic Saturday Sunday 00:00 to 23:59
R3(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R3(config)#access-list 150 permit ip any any time-range WEEKEND
R3(config)#interface G0/1
R3(config-if)#ip access-group 150 out

B. R1(config)#time-range WEEKEND
R1(config-time-range)#periodic weekend 00:00 to 23:59
R1(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R1(config)#access-list 150 permit ip any any
R1(config)#interface G0/1
R1(config-if)#ip access-group 150 in

C. R3(config)#time-range WEEKEND
R3(config-time-range)#periodic weekend 00:00 to 23:59
R3(config)#access-list 150 permit tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R3(config)#access-list 150 permit ip any any time-range WEEKEND
R3(config)#interface G0/1
R3(config-if)#ip access-group 150 out

D. R1(config)#time-range WEEKEND

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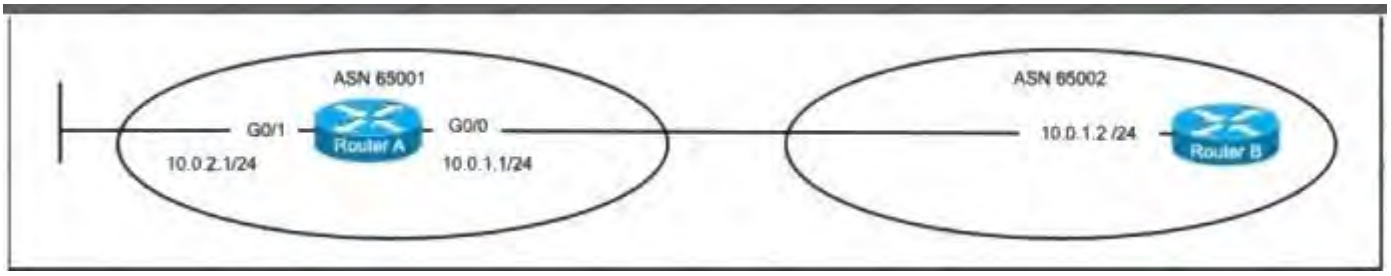
R1(config-time-range)#periodic Friday Sunday 00:00 to 00:00
R1(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R1(config)#access-list 150 permit ip any any
R1(config)#interface G0/1
R1(config-if)#ip access-group 150 in

Correct Answer: B
Explanation

Explanation/Reference:
We cannot filter traffic that is originated from the local router (R3 in this case) so we can only configure the ACL on R1 or R2. "Weekend hours" means from Saturday morning through Sunday night so we have to configure: "periodic weekend
00:00 to 23:59".
Note: The time is specified in 24-hour time (hh:mm), where the hours range from 0 to 23 and the minutes range from 0 to 59.

QUESTION 122
Refer to the exhibit.



An engineer must configure an eBGP neighborship to Router B on Router A. The network that is connected to GO/1 on Router A must be advertised to Router B.
Which configuration should be applied?

A.
```
router bgp 65001
neighbor 10.0.1.2 remote-as 65002
redistribute static
```

B.
```
router bgp 65002
neighbor 10.0.1.2 remote-as 65002
network 10.0.2.0 255.255.255.0
```

C.
```
router bgp 65001
neighbor 10.0.1.2 remote-as 65002
network 10.0.2.0 255.255.255.0
```

D.
```
router bgp 65001
neighbor 10.0.1.2 remote-as 65002
network 10.0.1.0 255.255.255.0
```

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

Correct Answer: C
Explanation

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QUESTION 123
Which benefit is provided by the Cisco DNA Center telemetry feature?

A. provides improved network security
B. inventories network devices
C. aids In the deployment network configurations
D. improves the user experience

Correct Answer: B
Explanation

QUESTION 124
By default, which virtual MAC address does HSRP group 14 use?

A. 04.16.19.09.4c.0e
B. 00:05:5e:19:0c:14
C. 00:05:0c:07:ac:14
D. 00:00:0c:07:ac:0e

Correct Answer: D
Explanation

QUESTION 125
Which three resources must the hypervisor make available to the virtual machines? (Choose three)

A. memory
B. bandwidth
C. IP address
D. processor
E. storage
F. secure access

Correct Answer: ADE
Explanation

QUESTION 126
Which function does a fabric AP perform in a Cisco SD-Access deployment?

A. It updates wireless clients' locations in the fabric
B. It connects wireless clients to the fabric.
C. It manages wireless clients' membership information in the fabric
D. It configures security policies down to wireless clients in the fabric

Correct Answer: B
Explanation

QUESTION 127
Refer to the exhibit.

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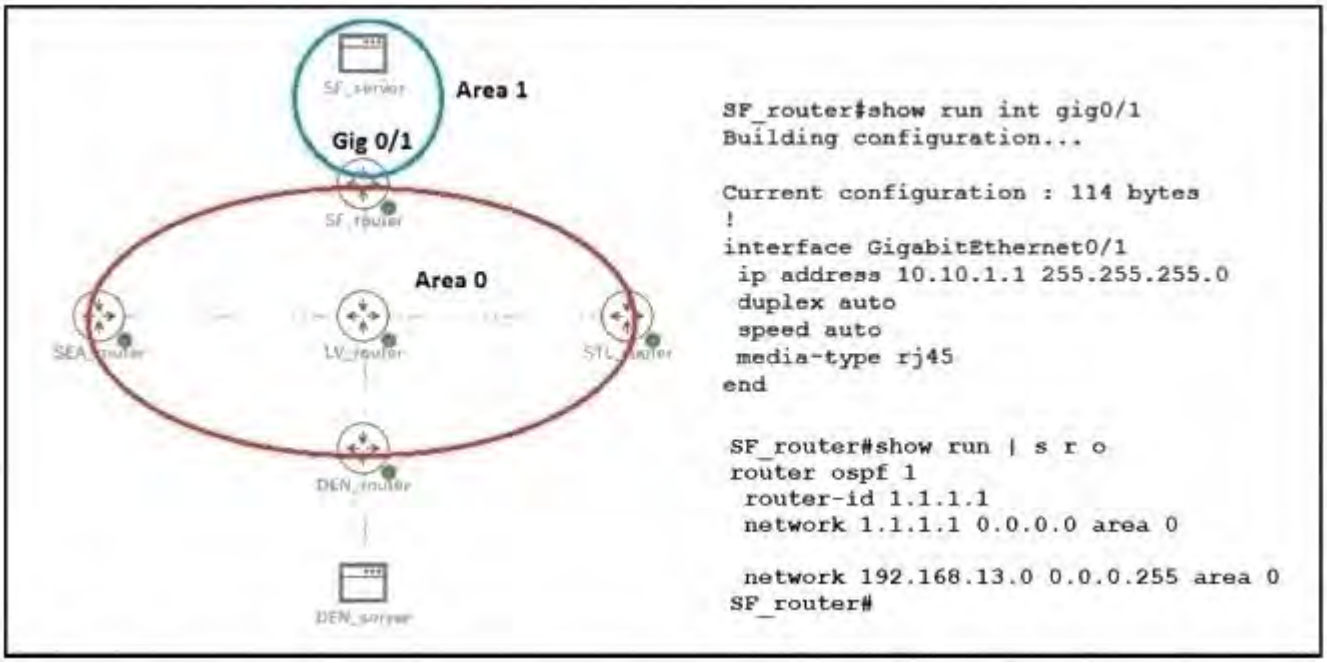
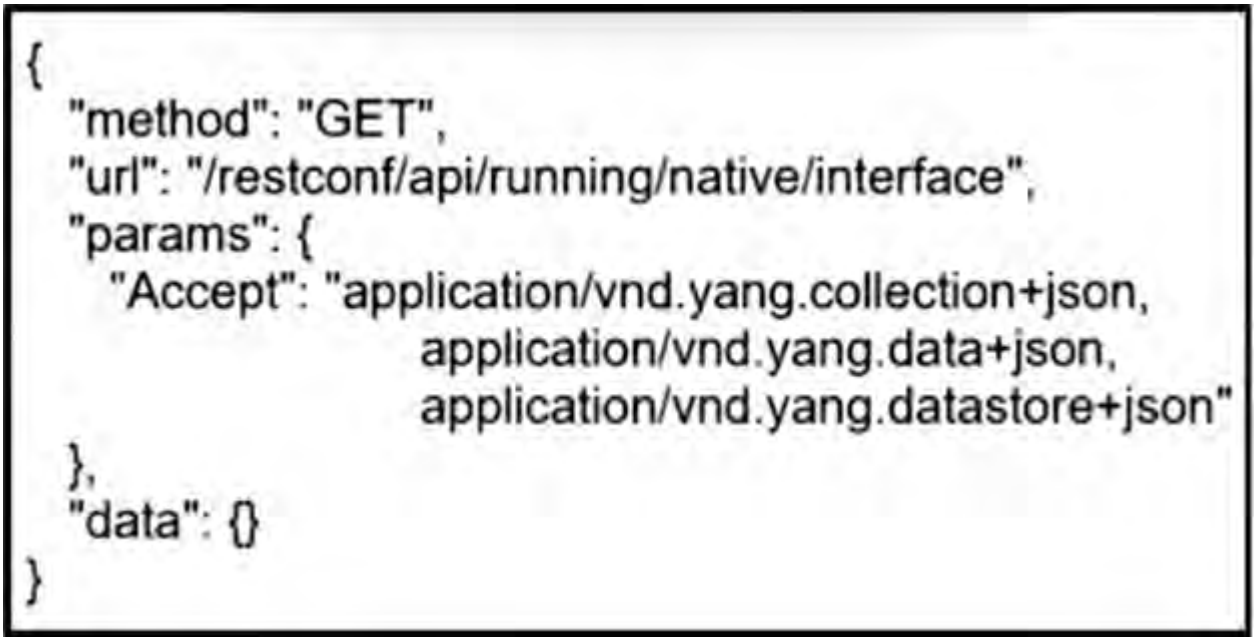


Which configuration must be added to enable GigabitEthemet 0/1 to participate in OSPF?

A. SF_router (config-router)# network 10.10.1.0 0.0.0.255 area 0
B. SF_rouier (conng)# network 10.10.1.0 0.0.0.255 area 1
C. SF_router (conflg-routerp)# network 10.10.1.0 0.0.0.255 area 1
D. SF_rouler (contlg-rouler)# network 10.10.1.0 255.255.255.0 area 0

Correct Answer: C
Explanation

QUESTION 128
Refer to the exhibit. What is the result of the API request?



A. The "params" variable sends data fields to the network appliance.
B. The native interface information is read from the network appliance.

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C. The Information for all interfaces is read from the network appliance.
D. The "params" variable reads data fields from the network appliance

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2019/pdf/5eU6DfQV/LTRCRT-2700-LG.pdf page 10 step 7
:Issue an API call to see all configured interfaces on the system.
Method: GET
URL: https://csr1kv/restconf/data/Cisco-IOS-XE-native:native/interface

QUESTION 129
Refer to the exhibit. An engineer must configure an ERSPAN session with the remote end of the session 10.10.0.1. Which commands must be added to complete the configuration?

```
Device> enable
Device# configure terminal
Device(config)# monitor session 1 type erspan-source
Device(config-mon-erspan-src)# description source1
Device(config-mon-erspan-src)# source interface GigabitEthernet1/0/1 rx
Device(config-mon-ertspan-src)# source interface GigabitEthernet1/0/4 - 8 tx
Device(config-mon-erspan-src)# source interface GigabitEthernet1/0/3
Device(config-mon-erspan-src)# destination
Device(config-mon-erspan-src-dst)# erspan-id 100
Device(conflg-mon-erspan-src-dst)# origin ip address 10.1.0.1
Devlce(config-mon-erspan-src-dst)# ip prec 5
Device(config-mon-erspan-src-dst)# ip ttl 32
Device(config-mon-erspan-src-dst)# mtu 1700
Device(config-mon-erspan-src-dst)# origin ip address 10.10.0.1
Device(config-mon-erspan-src-dst)# vrf 1
Device(config-mon-erspan-src-dst)# no shutdown
Devlce(config-mon-erspan-src-dst)# end
```

A. Device(config)# monitor session 1 type erspan-source
Device(config-mon-erspan-src)# destination
Device(config-mon-erspan-src-dst)#no origin ip address 10.10.0.1
Device(config-mon-erspan-src-dst)#ip address 10.10.0.1
B. Device(config)# monitor session 1 type erspan-destination
Device(config-mon-erspan-src)# source
Device(config-mon-erspan-src-dst)#origin ip address 10.1.0.1
C. Device(config)# monitor session 1 type erspan-source
Device(config-mon-erspan-src)# destination
Device(config-mon-erspan-src-dst)#no origin ip address 10.10.0.1
Device(config-mon-erspan-src-dst)#ip destination address 10.10.0.1
D. Device(config)# monitor session 1 type erspan-source
Device(config-mon-erspan-src)# destination

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Device(config-mon-erspan-src-dst)#no vrf 1

Correct Answer: A
Explanation

Explanation/Reference:
For the source session, we have to configure:
+ Unique session ID.
+ List of source interfaces or source VLANs that you want to monitor. Not all platforms support every possible source.
+ What traffic we want to capture: tx, rx or both.
+ Destination IP address for the GRE tunnel.
+ Origin IP address which is used as the source for the GRE tunnel.
+ Unique ERSPAN flow ID.
+ Optional: you can specify attributes like the ToS (Type of Service), TTL, etc.

Reference: https://networklessons.com/cisco/ccie-routing-switching-written/erspanThe configuration in the exhibit is missing destination IP adress for the GRE tunnel so we have to add it with the "ip address 10.10.0.1".

QUESTION 130
Which benefit is realized by implementing SSO?

A. IP first-hop redundancy
B. communication between different nodes for cluster setup
C. physical link redundancy
D. minimal network downtime following an RP switchover

Correct Answer: D
Explanation

QUESTION 131
By default, which virtual MAC address does HSRP group 32 use?

A. 00:5e:0c:07:ac:20
B. 04:18:20:83:2e:32
C. 05:5e:5c:ac:0c:32
D. 00:00:0c:07:ac:20

Correct Answer: D
Explanation

Explanation/Reference:
The virtual IP resolves to a virtual MAC address in the format 0000.0c07.acxx, xx being the group number in hexadecimal. For example, if you use group number 3, the last part of the MAC address is ac03.
32 is in binary 0010 0000 that's mean in HEX its 2 0

QUESTION 132
Refer to the exhibit.

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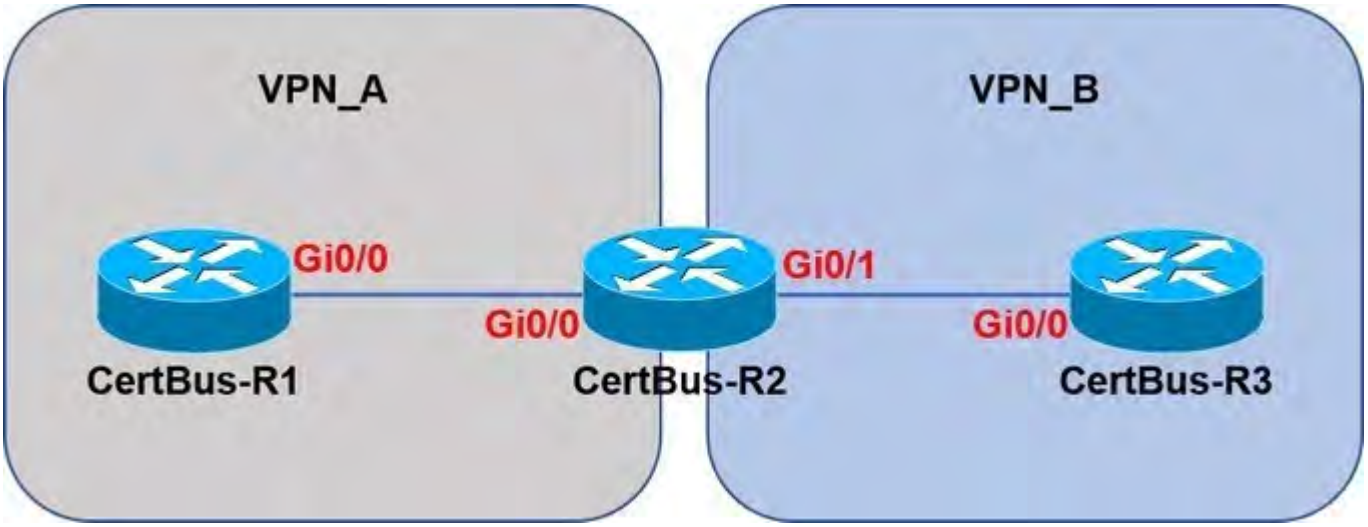

Assuming that R1 is a CE router, which VRF is assigned to Gi0/0 on R1?

A. VRF VPN_B
B. Default VRF
C. Management VRF
D. VRF VPN_A

Correct Answer: B
Explanation

Explanation/Reference:
There is nothing special with the configuration of Gi0/0 on R1. Only Gi0/0 interface on R2 is assigned to VRF VPN_A. The default VRF here is similar to the global routing table concept in Cisco IOS

QUESTION 133
What Is the difference between the MAC address table and TCAM?

A. The MAC address table supports partial matches. TCAM requires an exact match.
B. The MAC address table is contained in TCAM ACL and QoS information is stored in CAM.
C. Router prefix lookups happen in TCAM. MAC address table lookups happen In CAM.
D. TCAM is used to make L2 forwarding decisions. CAM is used to build routing tables

Correct Answer: C
Explanation

Explanation/Reference:
"TCAM is most useful for building tables for searching on longest matches such as IP routing tables organized by IP prefixes. The TCAM table stores ACL, QoS and other information generally associated with upper-layer processing. As a result of using TCAM, applying ACLs does not affect the performance of the switch."

https://community.cisco.com/t5/networking-documents/cam-content-addressable-memory-vs-tcam-ternary-content/ta-p/3107938

QUESTION 134
Refer to the exhibit. R1 is able to ping the R3 fa0/1 interface. Why do the extended pings fail?

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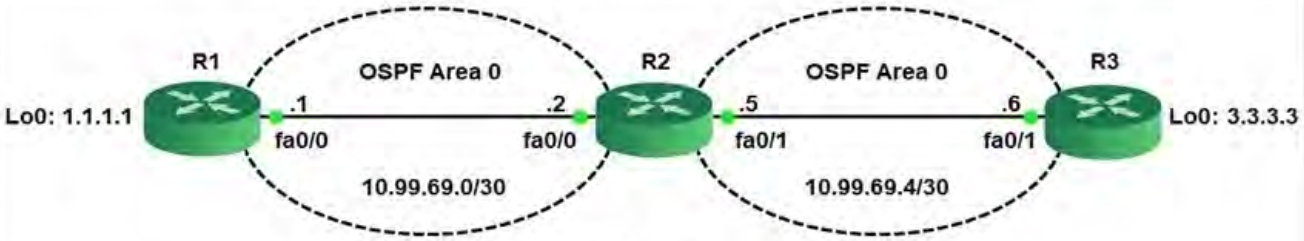


```
R1#ping
Protocol [ip]:
Target IP address: 3.3.3.3
Repeat count [5]: 3
Datagram size [100]: 1500
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 1.1.1.1
Type of service [0]:
Set DF bit in IP header? [no]: yes
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]: Record
Number of hops [ 9 ]:
Loose, Strict, Record, Timestamp, Verbose[RV]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 3, 1500-byte ICMP Echos to 3.3.3.3, timeout is 2 seconds:
Packet sent with a source address of 1.1.1.1
Packet sent with the DF bit set
Packet has IP options: Total option bytes= 39, padded length=40
 Record route: <*>
   (0.0.0.0)
   (0.0.0.0)

Unreachable from 10.99.69.2, maximum MTU 1492. Received packet has options
 Total option bytes= 39, padded length=40
 Record route: <*>
   (0.0.0.0)
   (0.0.0.0)

[output omitted]
```

A. The maximum packet size accepted by the command is 1476 bytes.
B. R3 is missing a return route to 10.99.69.0/30
C. R2 and R3 do not have an OSPF adjacency
D. The DF bit has been set

Correct Answer: D
Explanation

Explanation/Reference:

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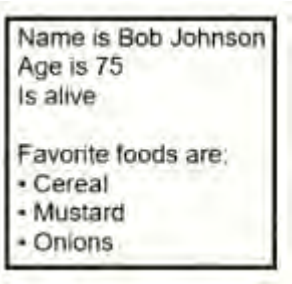
If the DF bit is set, routers cannot fragment packets. From the output below, we learn that the maximum MTU of R2 is 1492 bytes while we sent ping with 1500 bytes.

Therefore these ICMP packets were dropped.

Note: Record option displays the address(es) of the hops (up to nine) the packet goes through.

QUESTION 135
What is the JSON syntax that is formed the data?



A. {'Name";"Bob johnon';"Age': Sevenfive,"Alive": true,"FavoriteFoods';["Cereal";"Mustard";"Onions'}}
B. {'Name":"Bob johnon':"Age': 75 "Alive": true,"Favorite Foods';["Cereal";"Mustard";"Onions'}}
C. {'Name":"Bob johnon':"Age: 75,"Alive: true, FavoriteFoods;[Cereal, Mustard';"Onions}}
D. {'Name": 'Bob johnon','Age': 75,'Alive': true,"FavoriteFoods': 'Cereal';'Mustard','Onions'}}

Correct Answer: B
Explanation

QUESTION 136
In a Cisco Catalyst switch equipped with two supervisor modules an administrator must temporally remove the active supervisor from the chassis to perform hardware maintenance on it. Which mechanism ensure that the active supervisor removal is not disruptive to the network operation?

A. NSF/NSR
B. SSO
C. HSRP
D. VRRP

Correct Answer: B
Explanation

Explanation/Reference:
Stateful Switchover (SSO) provides protection for network edge devices with dual Route Processors (RPs) that represent a single point of failure in the network design, and where an outage might result in loss of service for customers. Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SY/configuration/ guide/sy_swcg/stateful_switchover.html

QUESTION 137
In a Cisco SD-Access wireless architecture, which device manages endpoint ID to Edge Node bindings?

A. fabric control plane node
B. fabric wireless controller
C. fabric border node
D. fabric edge node.

Correct Answer: A
Explanation

Explanation/Reference:

https://t.me/learningnets

SD-Access Wireless Architecture Control Plane Node Closer Look Fabric Control-Plane Node is based on a LISP Map Server / Resolver Runs the LISP Endpoint ID Database to provide overlay reachability information + A simple Host Database, that tracks Endpoint ID to Edge Node bindings (RLOCs)
+ Host Database supports multiple types of Endpoint ID (EID), such as IPv4 /32, IPv6 /128* or MAC/48
+ Receives prefix registrations from Edge Nodes for wired clients, and from Fabric mode WLCs for wireless clients
+ Resolves lookup requests from FE to locate Endpoints
+ Updates Fabric Edge nodes, Border nodes with wireless client mobility and RLOC information

Reference: https://www.ciscolive.com/c/dam/r/ciscolive/latam/docs/2018/pdf/BRKEWN-2020.pdf

QUESTION 138
Reter to the exhibit.

https://t.me/learningnets

```
CPE# debug ip nat

*Jun 28 19:14:41.463: NAT: Entry assigned id 11
*Jun 28 19:14:41.463: NAT*: s=10.0.1.1->198.51.100.5, d=203.0.113.8 [59922]NAT: dyn flow info
download suppressed for flow 11
*Jun 28 19:14:41.463: NAT*: s=203.0.113.8, d=198.51.100.5->10.0.1.1 [53790]NAT: dyn flow info
download suppressed for flow 11
[...]
*Jun 28 19:14:46.147: NAT: Entry assigned id 13
*Jun 28 19:14:46.147: NAT*: s=10.0.2.1->198.51.100.6, d=203.0.113.8 [60095]NAT: dyn flow info
download suppressed for flow 13
*Jun 28 19:14:46.148: NAT*: s=203.0.113.8, d=198.51.100.6->10.0.2.1 [32109]NAT: dyn flow info
download suppressed for flow 13
[...]
*Jun 28 19:14:50.462: %IPNAT-4-ADDR_ALLOC_FAILURE: Address allocation failed for 10.0.3.1,
pool NAT might be exhausted
*Jun 28 19:14:50.462: NAT: translation failed (A), dropping packet s=10.0.3.1 d=203.0.113.8

CPE# show ip nat translation
Pro Inside global     Inside local   Outside local      Outside global
tcp 198.51.100.5:61082 10.0.1.1:61082 203.0.113.8:23     203.0.113.8:23
--- 198.51.100.5      10.0.1.1       ---                ---
tcp 198.51.100.6:15350 10.0.2.1:15350 203.0.113.8:23     203.0.113.8:23
--- 198.51.100.6      10.0.2.1       ---                ---

CPE# show ip nat statistics
Total active translations: 4 (0 static, 4 dynamic; 2 extended)
Outside interfaces:
  Ethernet0/0
Inside interfaces:
  Ethernet0/1
Hits: 234  Misses: 0
CEF Translated packets: 234, CEF Punted packets: 7
Expired translations: 2
Dynamic mappings:
-- Inside Source
[Id: 1] access-list NAT pool NAT refcount 4
 pool NAT: id 1, netmask 255.255.255.0
    start 198.51.100.5 end 198.51.100.6
    type generic, total addresses 2, allocated 2 (100%), misses 7
nat-limit statistics:
 max entry: max allowed 0, used 0, missed 0
Outside global interfaces count: 1
```

An administrator troubleshoots intermittent connectivity from internal hosts to an external public server. Some internal hosts can connect to the server while others receive an ICMP Host Unreachable message and these hosts change over time. What is the cause of this issue?

A. The translator does not use address overloading
B. The NAT ACL does not match alt internal hosts
C. The NAT ACL and NAT pool share the same name

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D. The NAT pool netmask rs excessively wide

Correct Answer: A
Explanation

QUESTION 139
What is the calculation that is used to measure the radiated power of a signal after it has gone through the radio, antenna cable, and antenna?

A. EIRP
B. mW
C. dBm
D. dBi

Correct Answer: A
Explanation

QUESTION 140
Which definition describes JWT in regard to REST API security?

A. an encrypted JSON token that is used for authentication
B. an encrypted JSON token that is used for authorization
C. an encoded JSON token that is used to securely exchange information
D. an encoded JSON token that is used for authentication

Correct Answer: D
Explanation

Explanation/Reference:
JWT: JSON Web Tokens are an open and standard (RFC 7519) way for you to represent your user's identity securely during a two-party interaction. That is to say, when two systems exchange data you can use a JSON Web Token to identify your user without having to send private credentials on every request.

QUESTION 141
Which feature Is used to propagate ARP broadcast, and link-local frames across a Cisco SDAccess fabric to address connectivity needs for silent hosts that require reception of traffic to start communicating?

A. Native Fabric Multicast
B. Layer 2 Flooding
C. SOA Transit
D. Multisite Fabric

Correct Answer: B
Explanation

Explanation/Reference:
Layer2 FloodingCisco SD-Access fabric provides many optimizations to improve unicast traffic flow, and to reduce the unnecessary flooding of data such as broadcasts. But, for some traffic and applications, it may be desirable to enable broadcast forwarding within the fabric.
By default, this is disabled in the Cisco SD-Access architecture. If broadcast, Link local multicast and Arp flooding is required, it must be specifically enabled on a per-subnet basis using Layer 2 flooding feature. Layer 2 flooding can be used to forward broadcasts for certain traffic and application types which may require leveraging of Layer 2 connectivity, such as silent hosts, card readers, door locks, etc.

QUESTION 142
What is one benefit of adopting a data modeling language?

A. augmenting management process using vendor centric actions around models

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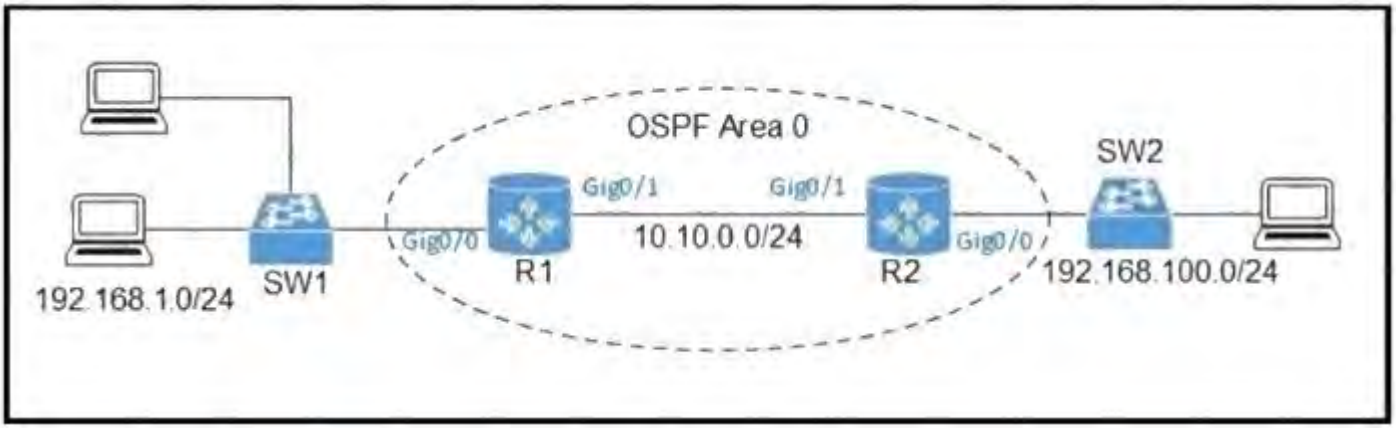
B. refactoring vendor and platform specific configurations with widely compatible configurations
C. augmenting the use of management protocols like SNMP for status subscriptions
D. deploying machine-friendly codes to manage a high number of devices

Correct Answer: B
Explanation

QUESTION 143
Refer to the exhibit.



An engineer must allow R1 to advertise the 192 168.1 0/24 network to R2 R1 must perform this action without sending OSPF packets to SW1 Which command set should be applied?

A.
```
R1(config)# router ospf 1
R1(config-router)# no passive-interface gig0/0
```

B.
```
R1(config)# router ospf 1
R1(config-router)# passive-interface gig0/0
```

C.
```
R1(config)# interface gig0/0
R1(config-if)# ip ospf hello-interval 0
```

D.
```
R1(config)# interface gig0/0
R1(config-if)# ip ospf hello-interval 65535
```

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

Correct Answer: B
Explanation

QUESTION 144
What is an emulated machine that has dedicated compute, memory, and storage resources and a fully installed operating system?

A. host
B. mainframe
C. container
D. virtual machine

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Correct Answer: D
Explanation

Explanation/Reference:
Mainframe + Host are Hardware Devices and they do not EMULATE but rather EXECUTE.

Virtual Machine is the only "EMULATION" capable thing in the list.

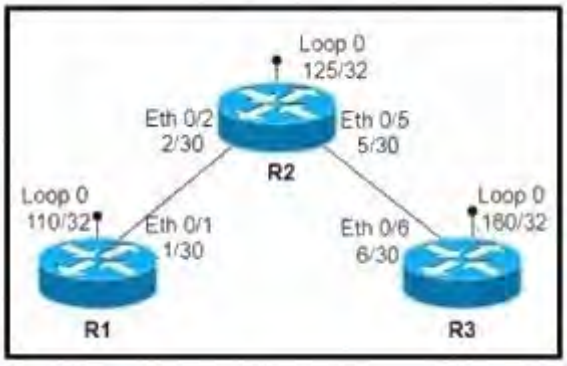
A container is a software wrapper that allows programs to run inside it, but itself it still needs to be executed and not emulated.

QUESTION 145
Which option works with a DHCP server to return at least one WLAN management interface IP address during the discovery phase and is dependent upon the VCI of the AP?

A. Option 42
B. Option 15
C. Option 125
D. Option 43

Correct Answer: D
Explanation

QUESTION 146
Refer to the exhibit.



An engineer configures routing between all routers and must build a configuration to connect R1 to R3 via a GRE tunnel Which configuration must be applied?

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A.
```
R1
interface Tunnel1
 ip address 1.1.1.13 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.110

R3
interface Tunnel1
 ip address 1.1.1.31 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.160
```

B.
```
R1
interface Tunnel1
 ip address 1.1.1.13 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.110

R3
interface Tunnel1
 ip address 1.1.1.31 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.125
```

C.
```
R1
interface Tunnel2
 ip address 1.1.1.12 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.125

R2
interface Tunnel1
 ip address 1.1.1.125 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.110
interface Tunnel3
 ip address 1.1.1.125 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.160

R3
interface Tunnel2
 ip address 1.1.1.32 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.125
```

D.
```
R1
interface Tunnel1
 ip address 1.1.1.13 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.160

R3
interface Tunnel1
 ip address 1.1.1.31 255.255.255.0
 tunnel source Loopback0
 tunnel destination x.y.z.110
```

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

Correct Answer: D
Explanation

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QUESTION 147
Which configuration creates a CoPP policy that provides unlimited SSH access from dient 10.0.0.5 and denies access from all other SSH clients'?

A.
```
access-list 100 permit tcp any any eq 22
access-list 100 deny tcp host 10.0.0.5 any eq 22
!
class-map match-all telnet_copp
 match access-group 100
!
policy-map CoPP
 class telnet_copp
  police 8000
!
control-plane
 service-policy input CoPP
!
```

B.
```
!
access-list 100 deny tcp host 10.0.0.5 any eq 22
access-list 100 permit tcp any any eq 22
!
class-map match-all telnet_copp
 match access-group 100
!
policy-map CoPP
 class telnet_copp
  drop
!
control-plane
 service-policy input CoPP
!
```

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C.

```
!
access-list 100 permit tcp host 10.0.0.5 any eq 22
access-list 100 deny tcp any any eq 22
!
class-map match-all telnet_copp
 match access-group 100
!
policy-map CoPP
 class telnet_copp
  drop
!
control-plane
 service-policy input CoPP
!
```

D.

```
!
access-list 100 permit tcp host 10.0.0.5 any eq 22
access-list 100 deny tcp any any eq 22
!
class-map match-all telnet_copp
 match access-group 100
!
policy-map CoPP
 class telnet_copp
  police 8000
!
control-plane
 service-policy input CoPP
!
```

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

Correct Answer: B
Explanation

QUESTION 148
Refer to the exhibit.

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enable secret CISCO
aaa new-model

tacacs server ise-1
address 10.1.1.1
key cisco1231

tacacs server ISE-2
address 10.2.2.1
key cisco1231

aaa group server tacacs+ ISE-Servers
server name ise-1
server name ise-2

A network engineer must configure the router to use the ISE-Servers group for authentication. If both ISE servers are unavailable, the local username database must be used. If no usernames are defined in the configuration, then the enable password must be the last resort to log in.

Which configuration must be applied to achieve this result?

A. aaa authentication login default group ISE-Servers local enable
B. aaa authentication login default group enable local ISE-Servers
C. aaa authorization exec default group ISE-Servers local enable
D. aaa authentication login error-enable
E. aaa authentication login default group enable local ISE-Servers

Correct Answer: A
Explanation

QUESTION 149
Refer to the exhibit.

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```
flow monitor FLOW-MONITOR-1
record netflow ipv6 original-input
exit
!
sampler SAMPLER-1
mode deterministic 1 out-of 2
exit
!
ip cef
ipv6 cef
!
interface GigabieEthernet 0/0/0
ipv6 address 2001:DB8:2ABCD::2/48
ipv6 flow monitro FLOW-MONITOR-1 sampler SAMPLER-1 input
```

What is the effect of introducing the sampler feature into the Flexible NetFlow configuration on the router?

A. NetFlow updates to the collector are sent 50% less frequently.
B. Every second IPv4 packet is forwarded to the collector for inspection.
C. CPU and memory utilization are reduced when compared with what is required for full NetFlow.
D. The resolution of sampling data increases, but it requires more performance from the router.

Correct Answer: C
Explanation

Explanation/Reference:
it's about what record the router is analyzing and not about what is been sent to the collector.

QUESTION 150
A company requires a wireless solution to support its mam office and multiple branch locations. All sites have local Internet connections and a link to the main office lor corporate connectivity. The branch offices are managed centrally. Which solution should the company choose?

A. Cisco United Wireless Network
B. Cisco DNA Spaces
C. Cisco Catalyst switch with embedded controller
D. Cisco Mobility Express

Correct Answer: A
Explanation

Explanation/Reference:
Spaces is for location services etc not a wireless solution.
Centrally managed corp and branch offices gives you a clue

QUESTION 151
Refer to the exhibit.

```
ip sla 100
 udp-echo 10.10.10.15 6336
 frequency 30
```

An engineer has configured an IP SLA for UDP echo's. Which command is needed to start the IP SLA to test every 30 seconds and continue until stopped?

A. ip sla schedule 100 life forever
B. ip sla schedule 30 start-time now life forever

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C. ip sla schedule 100 start-time now life 30
D. ip sla schedule 100 start-time now life forever

Correct Answer: D
Explanation

Explanation/Reference:
Frequency 30 already sends it every 30 seconds

QUESTION 152
What is the purpose of an RP in PIM?

A. send join messages toward a multicast source SPT
B. ensure the shortest path from the multicast source to the receiver.
C. receive IGMP joins from multicast receivers.
D. secure the communication channel between the multicast sender and receiver.

Correct Answer: A
Explanation

QUESTION 153
Refer to the exhibit. What is generated by the script?

```
from ncclient import manager

with manager.connect(host=host, port=830, username=user, hostkey_verify=False) as m:
  c = m.get_config(source='running').data_xml
  with open("%s.xml" % host, 'w') as f:
    f.write(c)
```

A. the cdp neighbors
B. the routing table
C. the router processes
D. the running configuration

Correct Answer: D
Explanation

QUESTION 154
Which two Cisco SD-WAN components exchange OMP information?

A. vAnaiytlcs
B. vSmart
C. WAN Edge
D. vBond
E. vManage

Correct Answer: BC
Explanation

Explanation/Reference:
OMP is the control protocol that is used to exchange routing, policy, and management information between the vSmart controllers and vEdge routers in the overlay network.

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QUESTION 155
What is the recommended minimum SNR for data applications on wireless networks?

A. 15
B. 20
C. 25
D. 10

Correct Answer: B
Explanation

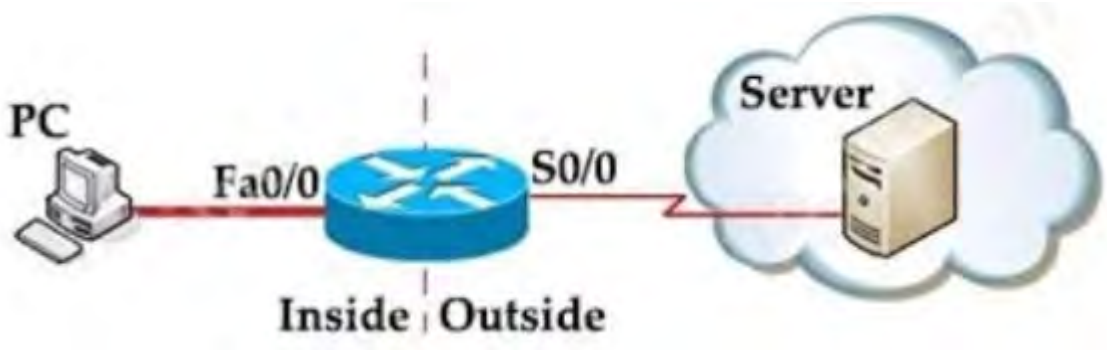
Explanation/Reference:
https://documentation.meraki.com/MR/WiFi_Basics_and_Best_Practices/Signal-to-Noise_Ratio_(SNR)_and_Wireless_Signal_Strength#:~:text=Generally%2C%20a%20signal%20with%20an,networks%20that%20use%20voice% 20applications.

QUESTION 156
An engineer must configure a ACL that permits packets which include an ACK In the TCP header.
Which entry must be Included In the ACL?

A. access-list 110 permit tcp any any eq 21 tcp-ack
B. access-list 10 permit ip any any eq 21 tcp-ack
C. access-list 10 permit tcp any any eq 21 established
D. access-list 110 permit tcp any any eq 21 established

Correct Answer: D
Explanation

Explanation/Reference:
The established keyword is only applicable to TCP access list entries to match TCP segments that have the ACK and/or RST control bit set (regardless of the source and destination ports), which assumes that a TCP connection has already been established in one direction only. Let's see an example below:



Suppose you only want to allow the hosts inside your company to telnet to an outside server but not vice versa, you can simply use an "established" access-list like this:
access-list 100 permit tcp any any established
access-list 101 permit tcp any any eq telnet
!
interface S0/0
ip access-group 100 in
ip access-group 101 out

Note: Suppose host A wants to start communicating with host B using TCP. Before they can send real data, a three-way handshake must be established first. Let`s see how this process takes place:

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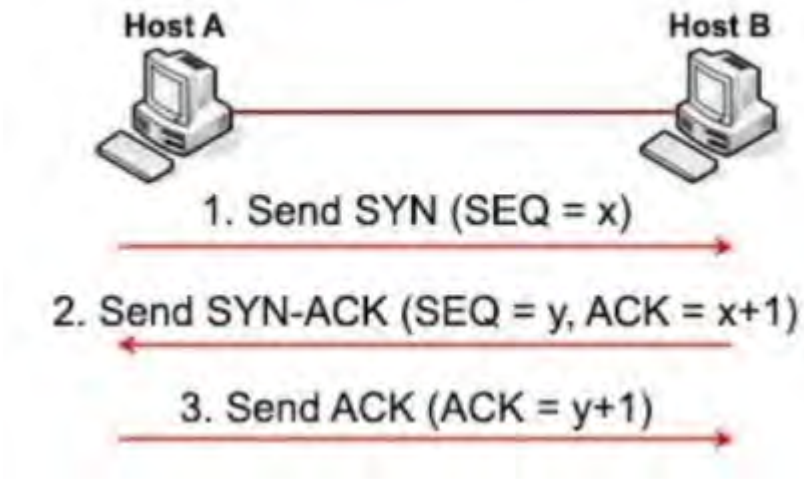

1. First host A will send a SYN message (a TCP segment with SYN flag set to 1, SYN is short for SYNchronize) to indicate it wants to setup a connection with host B. This message includes a sequence (SEQ) number for tracking purpose.
This sequence number can be any 32-bit number (range from 0 to 232) so we use "x" to represent it.
2. After receiving SYN message from host A, host B replies with SYN-ACK message (some books may call it SYN/ACK or SYN, ACK message. ACK is short for ACKnowledge). This message includes a SYN sequence number and an ACK number:
+ SYN sequence number (let`s called it "y") is a random number and does not have any relationship with Host A`s SYN SEQ number. + ACK number is the next number of Host A`s SYN sequence number it received, so we represent it with "x +1. It means I received your part. Now send me the next part (x + 1)".

The SYN-ACK message indicates host B accepts to talk to host A (via ACK part). And ask if host A still wants to talk to it as well (via SYN part).
3. After Host A received the SYN-ACK message from host B, it sends an ACK message with ACK number "y+1" to host B. This confirms host A still wants to talk to host B.

QUESTION 157
Refer to the exhibit.

```
access-list 1 permit 10.1.1.0 0.0.0.31
ip nat pool cisco 209.165.201.1 209.165.201.30 netmask 255.255.255.224
ip nat inside source list 1 pool CISCO
```

What are two effect of this configuration? (Choose two.)

A. Inside source addresses are translated to the 209.165.201.0/27 subnet.
B. It establishes a one-to-one NAT translation.
C. The 10.1.1.0/27 subnet is assigned as the inside global address range.
D. The 209.165.201.0/27 subnet is assigned as the outside local address range.
E. The 10.1.1.0/27 subnet is assigned as the inside local addresses.

Correct Answer: AE
Explanation

QUESTION 158
Refer to the exhibit. Which commands are required to allow SSH connection to the router?

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```
Router#show policy-map control-plane
 Control Plane

  Service-policy input: CoPP

    Class-map: class-telnet (match-all)
      0 packets, 0 bytes
      5 minute offered rate 0 bps, drop rate 0 bps
      Match: access-group 100
      police:
          cir 100000 bps, bc 3125 bytes
        conformed 0 packets, 0 bytes; actions:
          transmit
        exceeded 0 packets, 0 bytes; actions:
          drop
        conformed 0 bps, exceed 0 bps

    Class-map: class-default (match-any)
      56 packets, 9874 bytes
      5 minute offered rate 0 bps, drop rate 0 bps
      Match: any

Router#show access-list 100
Extended IP access list 100
    10 permit tcp any any eq telnet
```

A. Router(config)#access-list 100 permit udp any any eq 22
Router(config)#access-list 101 permit top any any eq 22
Router(config)#class-map class-ssh ONU
Router(config-cmap)#match access-group 101
Router(config)#policy-map COPP
Router(config-pmap)#police 100000 conform-action transmit

B. Router(config)#access-list 100 permit top any eq 22 any
Router(config)#class-map class-ssh
Router(config-cmap)#match access-group 10
Router(config)#policy-map COPP
Router(config-pmap)#class class-ssh
Router(config-pmap-c)#police 100000 conform-action transmit

C. Router(config)#access-list 10 permit top any eq 22 any
Router(config)#class-map class-ssh
Router(config-cmap)#match access-group 10
Router(config)#policy-map COPP
Router(config-pmap)#class class-ssh
Router(config-pmap-c)#police 100000 conform-action transmit

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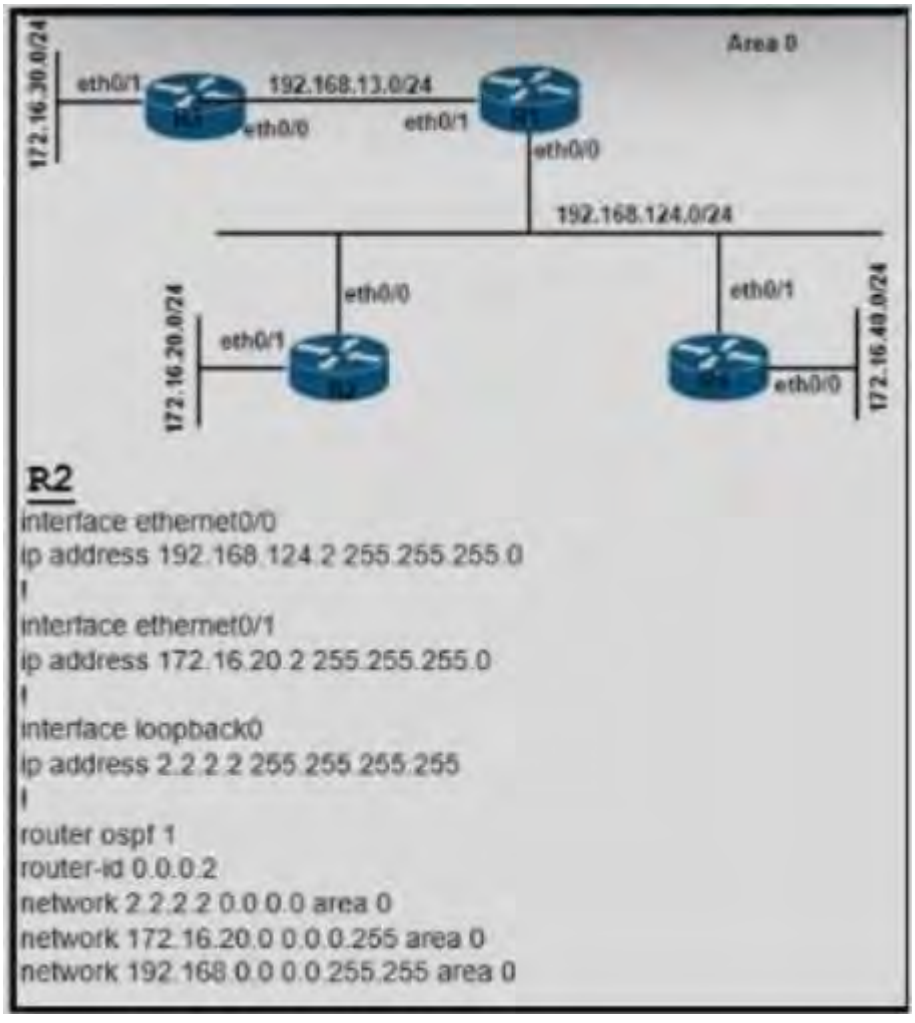
D. Router(config)#access-list 100 permit tcp any any eq 22
Router(config)#access-list 101 permit tcp any any eq 22
Router(config)#class-map class-ssh
Router(config-cmap)#match access-group 101
Router(config)#policy-map COPP
Router(config-pmap)#class class-ssh
Router(config-pmap-c)#police 100000 conform-action transmit

Correct Answer: D
Explanation

Explanation/Reference:
the ACL itself is wrong, the eq keyword should be placed at the end because we want to match incoming ssh requests so the destination "ssh server" will use port 22, and the source "ssh client" will use a random port number.

QUESTION 159
Refer to the exhibit.



An attacker can advertise OSPF fake routes from 172.16.20.0 network to the OSPF domain and black hole traffic. Which action must be taken to avoid this attack and still be able to advertise this subnet into OSPF?

A. Configure 172.16.20.0 as a stub network.
B. Apply a policy to filter OSPF packets on R2.
C. Configure a passive Interface on R2 toward 172.16.20.0.
D. Configure graceful restart on the 172.16.20.0 interface.

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Correct Answer: C
Explanation

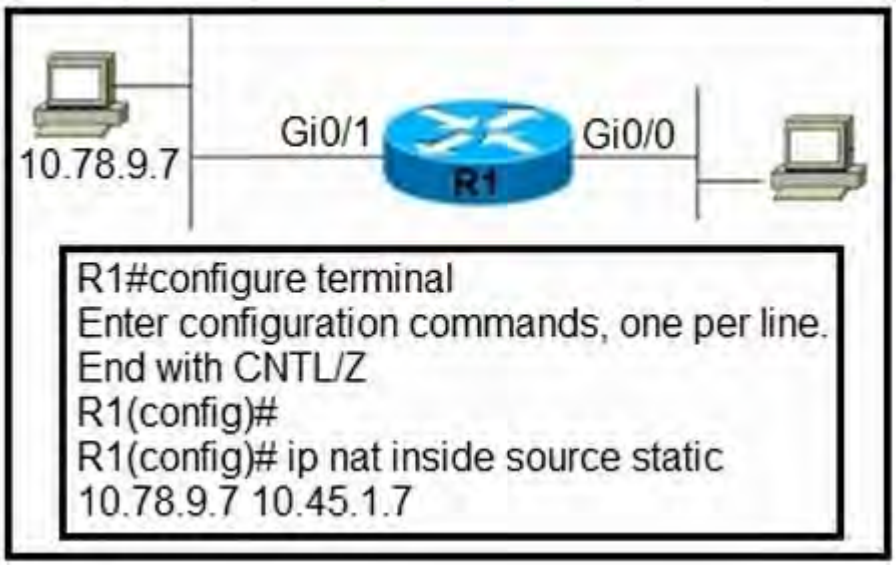
Explanation/Reference:
agree with passive interface
reference:
https://networklessons.com/ospf/ospf-passive-interface

QUESTION 160
What is a characteristic of a type 2 hypervisor?

A. ideal for data center
B. complicated deployment
C. ideal for client/end-user system
D. referred to as bare-metal

Correct Answer: C
Explanation

QUESTION 161
Refer to the exhibit.



A network architect has partially configured static NAT. which commands should be asked to complete the configuration?

A. R1(config)#interface GigabitEthernet0/0
R1(config)#ip pat outside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip pat inside
B. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat outside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat inside
C. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat inside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat outside
D. R1(config)#interface GigabitEthernet0/0
R1(config)#ip pat inside
R1(config)#interface GigabitEthernet0/1

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R1(config)#ip pat outside

Correct Answer: B
Explanation

QUESTION 162
Refer to the exhibit. An engineer attempts to bundle interface GiO/0 into the port channel, but it does not function as expected. Which action resolves the issue?

```
Switch1#show lacp internal
Flags:  S - Device is requesting Slow LACPDUs
        F - Device is requesting Fast LACPDUs
        A - Device is in Active mode       P - Device is in Passive mode

Channel group 1
                            LACP port     Admin     Oper    Port         Port
Port      Flags  State      Priority      Key       Key     Number       State
Gi0/0     SP     hot-sby    20            0x1       0x1     0x1          0x5
Gi0/1     SA     bnd1       15            0x1       0x1     0x2          0x3C
```

A. Configure channel-group 1 mode active on interface Gi0/0.
B. Configure no shutdown on interface Gi0/0.
C. Enable fast LACP PDUs on interface Gi0/0.
D. Set LACP max-bundle to 2 on interface Port-channel1.

Correct Answer: D
Explanation

Explanation/Reference:
If we only have 2 interfaces in Port-channel, then in the display you will see "hot-sby" only if the command (config-if)#lacp max-bundle is 1 is executed on Po1. If we then configure the respective port as "Active", it remains unbundled.

QUESTION 163
Refer to the exhibit. After the code is run on a Cisco IOS-XE router, the response code is 204. What is the result of the script?

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```
response = requests.patch(
     url = 'https://192.168.1.1/restconf/dataCisco-IOS-XE-
native:native/interface/GigabitEthernet=2',
     auth = ('admin', 'admin'),
     headers = {
          'Accept':'application/yang-data+json',
          'Content-Type': 'application/yang-data+json'
     },
     data = json.dumps({
          'Cisco-IOS-XE-native:GigabitEthernet': {
               'ip': {
                    'address': {
                         'primary': {
                              'address": '10.10.10.1',
                              'mask': '255.255.255.0'
                         }
                    }
               }
          }
     }),
     verify = False)

#Print the HTTP response code
print('Response Code: ' + str(response.status_code))
```

A. The configuration fails because another interface is already configured with IP address 10.10.10.1/24.
B. The configuration fails because interface GigabitEthernet2 is missing on the target device.
C. The configuration is successfully sent to the device in cleartext.
D. Interface GigabitEthernet2 is configured with IP address 10.10.10.1/24

Correct Answer: D
Explanation

Explanation/Reference:
https://ultraconfig.com.au/blog/restconf-tutorial-everything-you-need-to-know-about-restconf-in-2020/

QUESTION 164
Which HHTP status code is the correct response for a request with an incorrect password applied to a REST API session?

A. HTTP Status Code 200
B. HTTP Status Code 302
C. HTTP Status Code 401
D. HTTP Status Code: 504

Correct Answer: C

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Explanation

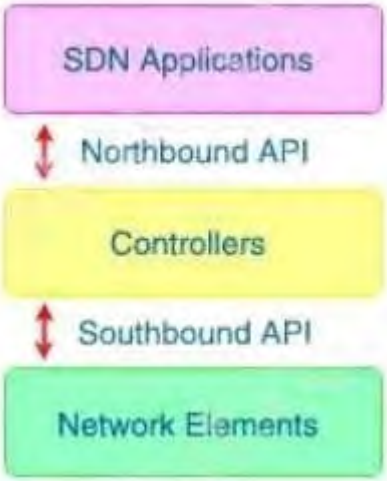
Explanation/Reference:
A 401 error response indicates that the client tried to operate on a protected resource without providing the proper authorization. It may have provided the wrong credentials or none at all. Note: answer 'HTTP Status Code 200' 4xx code indicates a "client error" while a 5xx code indicates a "server error".
Reference: https://restfulapi.net/http-status-codes/

QUESTION 165
What do Cisco DNA southbound APIs provide?

A. Interface between the controller and the network devices
B. NETCONF API interface for orchestration communication
C. RESful API interface for orchestrator communication
D. Interface between the controller and the consumer

Correct Answer: A
Explanation

Explanation/Reference:
The Southbound API is used to communicate with network devices.



QUESTION 166
What is a type 2 hypervisor?

A. Installed as an application on an already installed operating system.
B. Runs directly on a physical server and includes its own operating system.
C. Supports over-allocation of physical resources.
D. Also referred to as a "bare metal hypervisor" because it sits directly on the physical server.

Correct Answer: A
Explanation

QUESTION 167
Refer to the exhibit. An engineer configures OSPF and wants to verify the configuration

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```
GigabitEthernet0/1 is up, line protocol is up
Internet Address 192.168.50.1/24, Area 0, Attached via Interface Enable
Process ID 1, Router ID 192.168.50.1/24, Network Type BROADCAST, Cost: 1
Topology-MTID   Cost     Disabled       Shutdown      Topology Name
      0          1          no            no            Base
Enabled by interface config, including secondary ip addresses
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 192.168.50.1, Interface address 192.168.50.1
No backup designated router on this network
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:07
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 1/2/2, flood queue length 0
Next 0x0(0)/0x0(0)/0x0(0)
Last flood scan length is 0, maximum is 0
Last flood scan time is 1 msec, maximum is 1 msec
Neighbor Count is 0, Adjacent neighbor count is 0
Suppress hello for 0 neighbor(s)
```

Which configuration is applied to this device?

A. R1(config)#router ospf 1
R1(config-router)#network 192.168.50.0 0.0.0.255 area 0

B. R1(config)#router ospf 1
R1(config-router)#network 0.0.0.0 0.0.0.0 area 0
R1(config-router)#no passive-interface Gi0/1

C. R1(config)#interface Gi0/1
R1(config-if)#ip ospf enable
R1(config-if)#ip ospf network broadcast
R1(config-if)#no shutdown

D. R1(config)#interface Gi01
R1(config-if)#ip ospf 1 area 0
R1(config-if)#no shutdown

Correct Answer: D
Explanation

Explanation/Reference:
When you ue the "show ip ospf interface intx/x/x" command, what difference will you see in the old vs new OSPFv2 config?
- One will say attached via Interface Enable, the other will say Attached via Network Statement
https://www.chegg.com/flashcards/chapter-20-implementing-ospf-61b573b4-141b-4f63-bac9-ee35462d315e/deck

QUESTION 168
A customer wants to use a single SSID to authenticate IoT devices using different passwords. Which Layer 2 security type must be configured in conjunction with Cisco ISE to achieve this requirement?

A. Fast Transition

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B. Central Web Authentication
C. Cisco Centralized Key Management
D. Identity PSK

Correct Answer: D
Explanation

Explanation/Reference:
With the advent of internet of things, the number of devices that connect to the internet is increased multifold. Not all of these devices support 802.1x supplicant and need an alternate mechanism to connect to the internet. One of the security mechanisms, WPA-PSK could be considered as an alternative. With the current configuration, the pre-shared-key is the same for all clients that connect to the same WLAN. In certain deployments such as Educational Institutions, this results in the key being shared to unauthorized users resulting in security breach. Therefore, above mentioned and other requirements lead to the need for provisioning unique pre-shared keys for different clients on a large scale.

Identity PSKs are unique pre-shared keys created for individuals or groups of users on the same SSID.

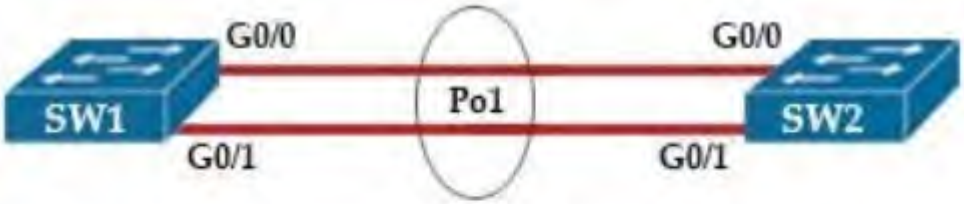
No complex configuration required for clients. The same simplicity of PSK, making it ideal for IoT, BYOD, and guest deployments.

Supported on most devices, where 802.1X may not, enabling stronger security for IoT.

Easily revoke access, for a single device or individual, without affecting everyone else.

Thousands of keys can easily be managed and distributed via the AAA server.

QUESTION 169
Refer to the exhibit.




```
SW1# show etherchannel summary

! output omitted

Group    Port-channel    Protocol    Ports
--------+---------------+-----------+-----
1        Po1 (SD)            -
```

After an engineer configures an EtherChannel between switch SW1 and switch SW2, this error message is logged on switch SW2.

```
SW2#
08:33:23: %PM-4-ERR_DISABLE: channel-misconfig error detection on Gi0/0, putting
Gi0/0 in err-disable state
08:33:23: %PM-4-ERR_DISABLE: channel-misconfig error detection on Gi0/1, putting
Gi0/1 in err-disable state
```

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Based on the output from SW1 and the log message received on Switch SW2, what action should the engineer take to resolve this issue?

A. Configure the same protocol on the EtherChannel on switch SW1 and SW2.
B. Connect the configuration error on interface Gi0/1 on switch SW1.
C. Define the correct port members on the EtherChannel on switch SW1.
D. Correct the configuration error on interface Gi0/0 switch SW1.

Correct Answer: A
Explanation

Explanation/Reference:
In this case, we are using your EtherChannel without a negotiation protocol. As a result, if the opposite switch is not also configured for EtherChannel operation on the respective ports, there is a danger of a switching loop. The EtherChannel Misconfiguration Guard tries to prevent that loop from occuring by disabling all the ports bundled in the EtherChannel.

QUESTION 170
Which two GRE features are configured to prevent fragmentation? (Choose two.)

A. TCP MSS
B. PMTUD
C. DF bit Clear
D. MTU ignore
E. IP MTU
F. TCP window size

Correct Answer: AE
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulation-gre/25885-pmtud-ipfrag.html

QUESTION 171
Refer to the exhibit.

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```
CertBus-R1#sh run | begin line con
line con 0
  exec-timeout 0 0
  privilege level 15
  logging synchronous
  stopbits 1
line aux 0
  exec timeout 0 0
  privilege level 15
  logging synchronous
  stopbits 1
line vty 0 4
  password 7 045802150C2E
  login
line vty 5 15
  password 7 045802150C2E
  login
!
end

CertBus-R1#sh run | include aaa | enable
no aaa new-model
CertBus-R1#
```

Which privilege level is assigned to VTY users?

A. 1
B. 7
C. 13
D. 15

Correct Answer: A
Explanation

Explanation/Reference:
Lines (CON, AUX, VTY) default to level 1 privileges.

QUESTION 172

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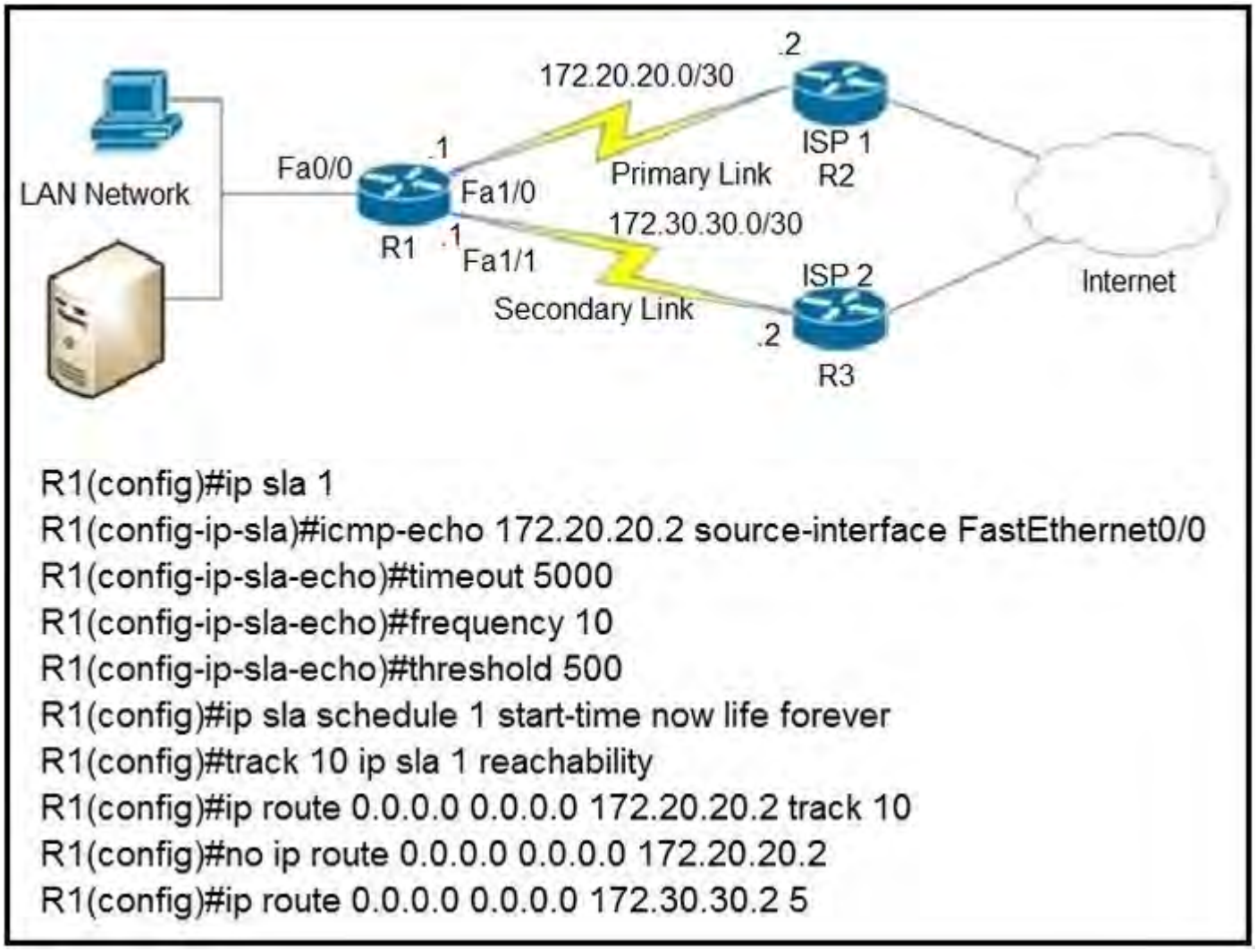
Refer to exhibit.



What are two reasons for IP SLA tracking failure? (Choose two)

A. The destination must be 172.30 30 2 for icmp-echo
B. The threshold value is wrong
C. A route back to the R1 LAN network is missing in R2
D. The source-interface is configured incorrectly.
E. The default route has the wrong next hop IP address

Correct Answer: CD
Explanation

Explanation/Reference:
Timeout (in milliseconds) sets the amount of time an IP SLAs operation waits for a response from its request packet. In other words, the timeout specifies how long the router should wait for a response to its ping before it is considered failed.Threshold (in milliseconds too) sets the upper threshold value for calculating network monitoring statistics created by an IP SLAs operation. Threshold is used to activate a response to IP SLA violation, e.g. send SNMP trap or start secondary SLA operation. In other words, the threshold value is only used to indicate over threshold events, which do not affect reachability but may be used to evaluate the proper settings for the timeout command.
For reachability tracking, if the return code is OK or OverThreshold, reachability is up; if not OK, reachability is down.
This tutorial can help you revise IP SLA tracking topic:
http://www.firewall.cx/cisco-technical-knowledgebase/cisco-routers/813-cisco-router-ipslabasic.html

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Note: Maybe some of us will wonder why there are these two commands:
R1(config)#ip route 0.0.0.0 0.0.0.0 172.20.20.2 track 10
R1(config)#no ip route 0.0.0.0 0.0.0.0 172.20.20.2
In fact the two commands:
ip route 0.0.0.0 0.0.0.0 172.20.20.2 track 10
ip route 0.0.0.0 0.0.0.0 172.20.20.2
are different. These two static routes can co-exist in the routing table. Therefore if the tracking goes down, the first command will be removed but the second one still exists and the backup path is not preferred. So we have to remove the second one.

QUESTION 173
How are map-register messages sent in a LISP deployment?

A. egress tunnel routers to map resolvers to determine the appropriate egress tunnel router
B. ingress tunnel routers to map servers to determine the appropriate egress tunnel router
C. egress tunnel routers to map servers to determine the appropriate egress tunnel router
D. ingress tunnel routers to map resolvers to determine the appropnate egress tunnel router

Correct Answer: C
Explanation

Explanation/Reference:
During operation, an Egress Tunnel Router (ETR) sends periodic Map-Register messages to all its configured map servers.

QUESTION 174
An engineer is configuring a new SSID to present users with a splash page for authentication. Which WLAN Layer 3 setting must be configured to provide this functionally?

A. CCKM
B. WPA2 Policy
C. Local Policy
D. Web Policy

Correct Answer: D
Explanation

QUESTION 175
What is a characteristic of Cisco DNA Northbound APIs?

A. They simplify the management of network infrastructure devices.
B. They enable automation of network infrastructure based on intent.
C. They utilize RESTCONF.
D. They utilize multivendor support APIs.

Correct Answer: C
Explanation

QUESTION 176
Refer to the exhibit. Which python code parses the response and prints "18:32:21.474 UTC sun Mar 10 2019?

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```
import requests
import json

url='https://switchIP.foo.com/ins'
switchuser='username'
switchpassword='password123'

myheaders={'content-type':'application/json-rpc'}
payload=[
  {
    "jsonrpc": "2.0",
    "method": "cli",
    "params": {
      "cmd": "show clock",
      "version": 1
    },
    "id": 1
  }
]
response = requests.post(url,data=json.dumps(payload), headers=myheaders,auth=(switchuser,switchpassword), verify=False).json()
```

A. print(response['resut'][0||'simple_time']}
B. print(response[result']['body']['simple_time']}
C. print(response['body']['simple_time']}
D. print(response[jresult']['body']['simple_time']}

Correct Answer: B
Explanation

Explanation/Reference:
response['result']['body']['simple_time']
{
"jsonrpc": "2.0",
"result": {
"body": {
"simple_time": "17:53:49.435 UTC Tue Nov 22 2022\n",
"time_source": "NTP"
}
},
"id": 1
}

QUESTION 177
Which protocol is implemented to establish secure control plane adjacencies between Cisco SD-WAN nodes?

A. IKE
B. TLS
C. IPsec
D. ESP

Correct Answer: B
Explanation

Explanation/Reference:
The Cisco SD-WAN control plane has been designed with network and device security in mind. The foundation of the control plane is one of two security protocols derived from SSL (Secure Sockets Layer)-the Datagram Transport Layer Security (DTLS) protocol and the Transport Layer Security (TLS) protocol.
Reference:
https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/security/vedge/securitybook/security-overvi

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QUESTION 178
How does NETCONF YANG represent data structures?

A. as strict data structures denned by RFC 6020
B. in an XML tree format
C. in an HTML format
D. as modules within a tree

Correct Answer: B
Explanation

QUESTION 179
Refer io me exhibit.

```
switch > enable
switch # configure terminal
switch(config)# interface GigabitEthernet 1/10
switch(config-if)# switchport mode trunk
switch(config-if)# switchport trunk allowed vlan 10,20,30
switch(config-if)# exit
switch (config)# monitor session 1 type erspan-source
 switch(config-mon-erspan-src)# description source1
 switch(config-mon-erspan-src)# source vlan 10
 switch(config-mon-erspan-src)# source vlan 20
 switch(config-mon-erspan-src)# filter vlan 30
 switch(config-mon-erspan-src)# destination
 switch(config-mon-erspan-src-dst)# erspan-id 100
 switch(config-mon-erspan-src-dst)# origin ip address 10.1.0.1
 switch(config-mon-erspan-src-dst)# ip prec 5
 switch(config-mon-erspan-src-dst)# ip ttl 32
 switch(config-mon-erspan-src-dst)# mtu 1500
 switch(config-mon-erspan-src-dst)# ip address 10.10.0.1
 switch(config-mon-erspan-src-dst)# vrf 1
 switch(config-mon-erspan-src-dst)# no shutdown
 switch(config-mon-erspan-src-dst)# end
```

An engineer configures the trunk and proceeds to configure an ESPAN session to monitor VLANs10. 20. and 30.

Which command must be added to complete this configuration?

A. Device(config.mon.erspan.stc)# no filter vlan 30
B. Devic(config.mon.erspan.src-dst)# no vrf 1
C. Devic(config.mon.erspan.src-dst)# erspan id 6
D. Device(config.mon-erspan.Src-dst)# mtu 1460

Correct Answer: A
Explanation

Explanation/Reference:
You cannot include source VLANs and filter VLANs in the same session
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3850/software/release/16-5/configuration_guide/nmgmt/b_165_nmgmt_3850_cg/b_165_nmgmt_3850_cg_chapter_0111.pdf

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QUESTION 180
Refer to the exhibit.

```
event manager applet config-alert
event cli pattern "write mem.*" sync yes
```

Which EEM script generates a critical-level syslog message and saves a copy of the running configuration to the bootflash when an administrator saves the running configuration to the startup configuration?

A
```
action 1.0 cli command copy running-config bootflash:/current_config.txt
action 2.0 syslog msg "Configuration saved and copied to bootflash"
```

B
```
action 1.0 cli command "enable"
action 2.0 cli command "configure terminal"
action 3.0 cli command "file prompt quiet"
action 4.0 cli command "end"
action 5.0 cli command copy running-config bootflash:/current_config.txt
action 6.0 cli command "configure terminal"
action 7.0 cli command "no file prompt quiet"
action 8.0 syslog priority critical msg "Configuration saved and copied to bootflash"
```

C
```
action 1.0 cli command "enable"
action 2.0 cli command "file prompt quiet"
action 3.0 cli command copy running-config bootflash:/current_config.txt
action 4.0 cli command "no file prompt quiet"
action 5.0 syslog priority critical msg "Configuration saved and copied to bootflash"
```

D
```
action 1.0 cli command copy running-config bootflash:/current_config.txt
action 2.0 syslog priority critical msg"Configuration saved and copied to bootflash"
```

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

Correct Answer: B
Explanation

QUESTION 181
Refer to the exhibit.

```
event manager applet config-alert
event cli pattern "conf t.*" sync yes
```

A network engineer must be notified when a user switches to configuration mode. Which script should be applied to receive an SNMP trap and a critical-level log message?

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A. action 1.0 snmp-trap strdata "Configuration change alarm"
action 1.0 syslog priority critical msg "Configuration change alarm"
B. action 1.0 snmp-trap strdata "Configuration change alarm"
action 2.0 syslog msg "Configuration change alarm"
C. action 1.0 snmp-trap strdata "Configuration change alarm"
action 1.1 syslog priority critical msg "Configuration change alarm"
D. action 1.0 snmp-trap strdata "Configuration change critical alarm"

Correct Answer: C
Explanation

QUESTION 182
Refer to the exhibit. The administrator troubleshoots an EtherChannel that keeps moving to err-disabled. Which two actions must be taken to resolve the issue? (Choose two.)

```
Cat3650# show logging
[ ... cut ... ]
*Sep 11 19:06:25.595: %PM-4-ERR_DISABLE: channel-misconfig error detected on Po1, putting Gi1/0/2
in err-disable state
*Sep 11 19:06:25.606: %PM-4-ERR_DISABLE: channel-misconfig error detected on Po1, putting Gi1/0/3
in err-disable state
*Sep 11 19:06:25.622: %PM-4-ERR_DISABLE: channel-misconfig error detected on Po1, putting Po1 in
err-disable state

Cat3650# show etherchannel summary
[ ... cut ... ]
Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------------------
1      Po1(SD)           -        Gi1/0/2(D)  Gi1/0/3(D)

Cat3650# show interface status err-disabled
Port      Name      Status       Reason              Err-disabled Vlans

Gi1/0/2             err-disabled  channel-misconfig
Gi1/0/3             err-disabled  channel-misconfig
Po1                 err-disabled  channel-misconfig
```

A. Reload the switch to force EtherChannel renegotiation
B. Ensure that interfaces Gi1/0/2 and Gi1/0/3 connect to the same neighboring switch.
C. Ensure that the switchport parameters of Port channel1 match the parameters of the port channel on the neighbor switch
D. Ensure that the corresponding port channel interface on the neighbor switch is named Portchannel1.
E. Ensure that the neighbor interfaces of Gi1/0/2 and Gi/0/3 are configured as members of the same EtherChannel

Correct Answer: BE
Explanation

Explanation/Reference:
This feature was first implemented in order to handle special collision situations in which the switch detected excessive or late collisions on a port. Excessive collisions occur when a frame is dropped because the switch encounters 16 collisions in a row. Late collisions occur after every device on the wire should have recognized that the wire was in use. Possible causes of these types of errors include:
A cable that is out of specification (either too long, the wrong type, or defective) A bad network interface card (NIC) card (with physical problems or driver problems) A port duplex misconfiguration is a common cause of the errors because of failures to negotiate the speed and duplex properly between two directly

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connected devices (for example, a NIC that connects to a switch). Only half-duplex connections should ever have collisions in a LAN. Because of the carrier sense multiple access (CSMA) nature of Ethernet, collisions are normal for half duplex, as long as the collisions do not exceed a small percentage of traffic.

QUESTION 183
Which protocol is responsible for data plane forwarding in a Cisco SD-Access deployment?

A. VXLAN
B. IS-IS
C. OSPF
D. LISP

Correct Answer: A
Explanation

Explanation/Reference:
In SD-Access the control plane is based on LISP (Locator/ID Separation Protocol), the data plane is based on VXLAN (Virtual Extensible LAN), the policy plane is based on Cisco TrustSec, and the management plane is enabled and powered by Cisco DNA Center.
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html#:~:text=In%20SD%

QUESTION 184
What is the recommended minimum SNR for voice applications on wireless networks?

A. 10
B. 15
C. 20
D. 25

Correct Answer: D
Explanation

Explanation/Reference:
Generally, a signal with an SNR value of 20 dB or more is recommended for data networks where as an SNR value of 25 dB or more is recommended for networks that use voice applications.

QUESTION 185
What happens when a FlexConnect AP changes to standalone mode?

A. All controller-dependent activities stop working except the DFS.
B. All client roaming continues to work
C. Only clients on central switching WLANs stay connected.
D. All clients on an WLANs are disconnected

Correct Answer: A
Explanation

Explanation/Reference:
When a FlexConnect access point enters standalone mode, it disassociates all clients that are on centrally switched WLANs. [not all clients, locally switched WLAN clients stay connected]

Controller-dependent activities, such as network access control (NAC) and web authentication (guest access), are disabled, and the access point does not send any intrusion detection system (IDS) reports to the controller.

Most radio resource management (RRM) features (such as neighbor discovery; noise, interference, load, and coverage measurements; use of the neighbor list; and rogue containment and detection) are disabled. However, a FlexConnect access point supports dynamic frequency selection in standalone mode.
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-2/configuration/guide/cg/cg_flexconnect.html

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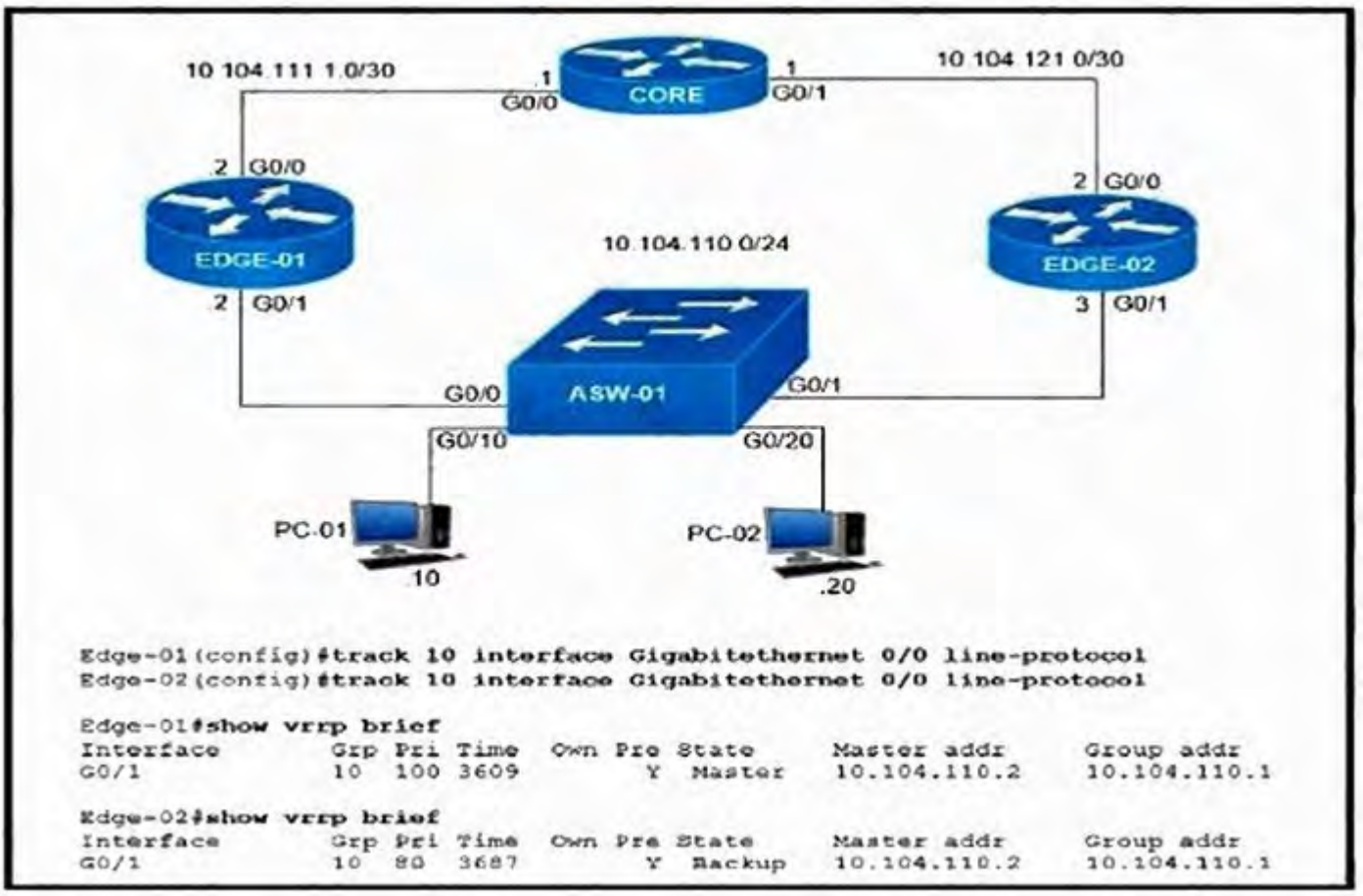
QUESTION 186
Refer to the exhibit.




```
Edge-01(config)#track 10 interface GigabitEthernet 0/0 line-protocol
Edge-02(config)#track 10 interface GigabitEthernet 0/0 line-protocol

Edge-01#show vrrp brief
Interface          Grp  Pri  Time   Own  Pre  State    Master addr     Group addr
G0/1               10   100  3609          Y    Master   10.104.110.2    10.104.110.1

Edge-02#show vrrp brief
Interface          Grp  Pri  Time   Own  Pre  State    Master addr     Group addr
G0/1               10   80   3687          Y    Backup   10.104.110.2    10.104.110.1
```

Object tracking has been configured for VRRP-enabled routers Edge-01 and Edge-02 Which commands cause Edge-02 to preempt Edge-01 in the event that interface G0/0 goes down on Edge-01?

A. Edge-01(config)#interface G0/1
Edge-01(config-if)#vrrp 10 track 10 decrement 30
B. Edge-02(config)#interface G0/1
Edge-02(config-if)#vrrp 10 track 10 decrement 30
C. Edge-02(config)#interface G0/1
Edge-02(config-if)#vrrp 10 track 10 decrement 10
D. Edge-01(config)#interface G0/1
Edge-01(config-if)#vrrp 10 track 10 decrement 10

Correct Answer: A
Explanation

QUESTION 187
Which component transports data plane traffic across a Cisco SD-WAN network?

A. vSmart
B. vManage
C. cEdge
D. vBond

Correct Answer: D

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Explanation

QUESTION 188
If the maximum power level assignment for global TPC 802.11a/n/ac is configured to 10 dBm, which power level effectively doubles the transmit power?

A. 13dBm
B. 14 dBm
C. 17dBm
D. 20 dBm

Correct Answer: A
Explanation

Explanation/Reference:
Suppose a transmitter is configured for a power level of 10 dBm. A cable with 5-dB loss connects the transmitter to an antenna with an 8-dBi gain. The resulting EIRP of the system is EIRP = 10 dBm ?5 dB + 8 dBi = 13 dBm.

QUESTION 189
Refer to the exhibit. Which command must be configured for RESTCONF to operate on port 8888?

```
restconf
!
ip http server
ip http authentication local
ip http secure-server
!
```

A. ip http port 8888
B. restconf port 8888
C. ip http restconf port 8888
D. restconf http port 8888

Correct Answer: A
Explanation

QUESTION 190
A Cisco DNA Center REST API sends a PUT to the /dna/intent/api/v1/network-device endpoint A response code of 504 is received What does the code indicate?

A. The response timed out based on a configured interval
B. The user does not have authorization to access this endpoint.
C. The username and password are not correct
D. The web server is not available

Correct Answer: A
Explanation

QUESTION 191
Refer to the exhibit. Which command set must be applied on R1 to establish a BGP neighborship with R2 and to allow communication from R1 to reach the networks?

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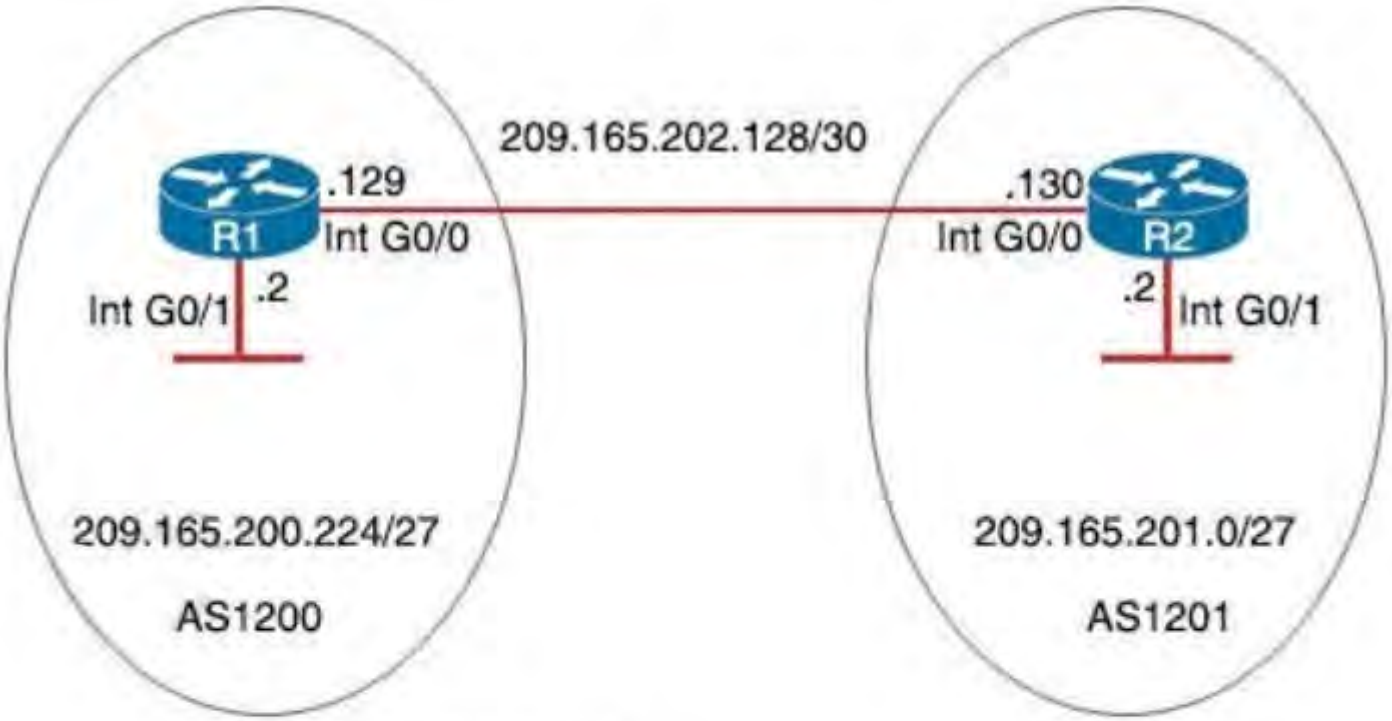


```
hostname R2
!
interface GigabitEthernet0/0
 ip address 209.165.202.130 255.255.255.252
!
router bgp 1201
 log-neighbor-changes
 network 209.165.201.0 mask 255.255.255.224
 neighbor 209.165.202.129 remote-as 1200
```

A. router bgp 1200
network 209.165.200.224 mask 255.255.255.224
neighbor 209.165.202.130 remote-as 1201

B. router bgp 1200
network 209.165.201.0 mask 255.255.255.224
neighbor 209.165.202.130 remote-as 1201

C. router bgp 1200
network 209.165.200.224 mask 255.255.255.224
neighbor 209.165.202.130 remote-as 1200

D. router bgp 1200
network 209.165.200.224 mask 255.255.255.224
neighbor 209.165.201.2 remote-as 1200

Correct Answer: A
Explanation

QUESTION 192
A network engineer is configuring OSPF on a router. The engineer wants to prevent having a route to

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177.16.0.0/16 learned via OSPF. In the routing table and configures a prefix list using the command ip prefix-list OFFICE seq S deny 172.16.0.0/16. Winch two identical configuration commands must be applied to accomplish the goal? (Choose two.)

A. distribute-list prefix OFFICE in under the OSPF process
B. Ip prefix-list OFFICE seq 10 permit 0.0.0.0/0 Ie 32
C. ip prefix-list OFFICE seq 10 permit 0.0.0.0/0 ge 32
D. distribute-list OFFICE out under the OSPF process
E. distribute-list OFFICE in under the OSPF process

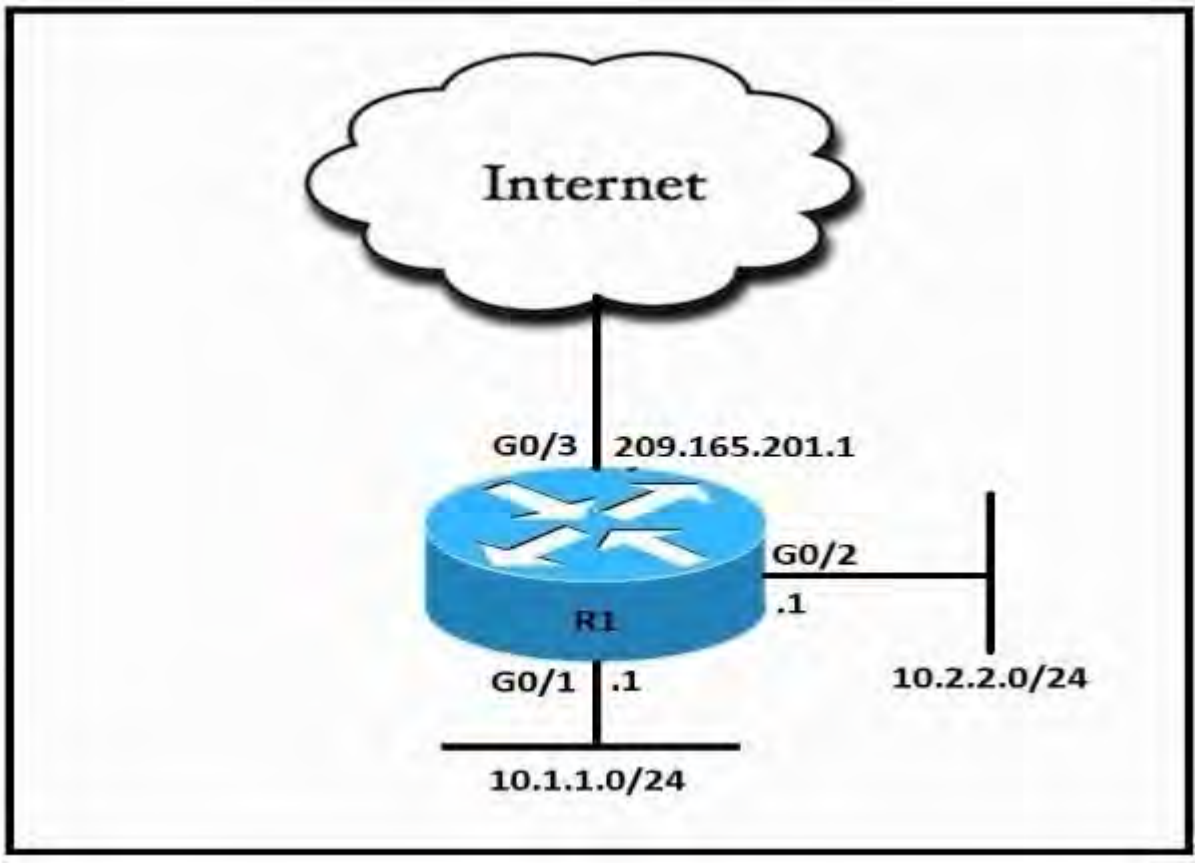
Correct Answer: AB
Explanation

QUESTION 193
How do EIGRP metrics compare to OSPF metrics?

A. EIGRP metrics are based on a combination of bandwidth and packet loss, and OSPF metrics are based on interface bandwidth.
B. EIGRP uses the Dijkstra algorithm, and OSPF uses The DUAL algorithm
C. The EIGRP administrative distance for external routes is 170. and the OSPF administrative distance for external routes is undefined
D. The EIGRP administrative distance for external routes is 170. and the OSPF administrative distance for external routes is 110

Correct Answer: A
Explanation

QUESTION 194
Refer to the exhibit.



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An engineer must allow all users In the 10.2.2.0/24 subnet to access the Internet. To conserve address space, the public interface address of 209.165.201.1 must be used for all external communication. Which command set accomplishes these requirements?

A.
```
access-list 10 permit 10.2.2.0 0.0.0.255

interface G0/3
ip nat outside

interface G0/2
ip nat inside

ip nat inside source list 10 interface G0/2 overload
```

B.
```
access-list 10 permit 10.2.2.0 0.0.0.255

interface G0/3
ip nat outside

interface G0/2
ip nat inside

ip nat inside source list 10 209.165.201.1
```

C.
```
access-list 10 permit 10.2.2.0 0.0.0.255

interface G0/3
ip nat outside

interface G0/2
ip nat inside

ip nat inside source list 10 interface G0/3
```

D.
```
access-list 10 permit 10.2.2.0 0.0.0.255

interface G0/3
ip nat outside

interface G0/2
ip nat inside

ip nat inside source list 10 interface G0/3 overload
```

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

Correct Answer: D
Explanation

Explanation/Reference:
The command ip nat inside source list 10 interface G0/3 overload configures NAT to overload (PAT) on the address that is assigned to the G0/3 interface.

QUESTION 195
What is a TLOC in a Cisco SD-WAN deployment?

A. value that identifies a specific tunnel within the Cisco SD-WAN overlay

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B. identifier that represents a specific service offered by nodes within the Cisco SD-WAN overlay
C. attribute that acts as a next hop for network prefixes
D. component set by the administrator to differentiate similar nodes that offer a common service

Correct Answer: C
Explanation

Explanation/Reference:
OMP Routes, also referred to as vRoutes, are prefixes learned at the local site via connected interfaces, static routes, and dynamic routing protocols (such as OSPF, EIGRP, and BGP) running on the service side of the vEdge. These prefixes are redistributed into OMP and advertised to the vSmart controller so that they can be carried across the overlay fabric to all other WAN edge nodes. OMP routes resolve their next-hop to a TLOC. An OMP route is installed in the forwarding table only if the next-hop TLOC is known and there is a BFD session in UP state associated with that TLOC;

QUESTION 196
What is a characteristic of the overlay network in the Cisco SD-Access architecture?

A. It uses a traditional routed access design to provide performance and high availability to the network.
B. It consists of a group of physical routers and switches that are used to maintain the network.
C. It provides isolation among the virtual networks and independence from the physical network.
D. It provides multicast support to enable Layer 2 Hooding capability in the underlay network.

Correct Answer: C
Explanation

QUESTION 197
Which two characteristics apply to the endpoint security aspect of the Cisco Threat Defense architecture? (Choose two.)

A. detect and black ransomware in email attachments
B. outbound URL analysis and data transfer controls
C. user context analysis
D. blocking of fileless malware in real time
E. cloud-based analysis of threats

Correct Answer: BD
Explanation

QUESTION 198
By default, which virtual MAC address does HSRP group 25 use?

A. 05:5c:5e:ac:0c:25
B. 04:16:6S:96:1C:19
C. 00:00:0c:07:ac:19
D. 00:00:0c:07:ac:25

Correct Answer: D
Explanation

QUESTION 199
Which VXLAN component is used to encapsulate and decapsulate Ethernet frames?

A. VNI
B. GRE

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C. VTEP
D. EVPN

Correct Answer: C
Explanation

Explanation/Reference:
VTEP (Virtual Tunnel Endpoint) - This is the device that does the encapsulation and de-encapsulation.

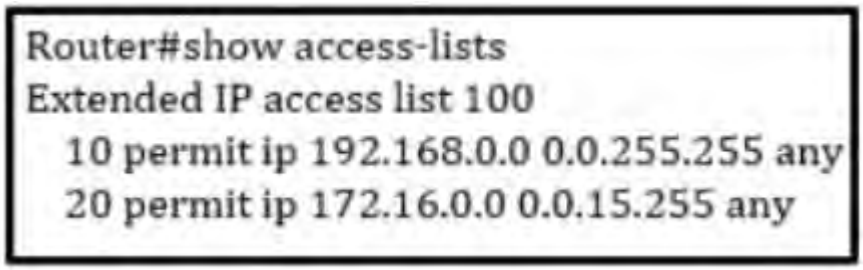
QUESTION 200
Which function does a fabric wireless LAN controller perform In a Cisco SD-Access deployment?

A. manages fabric-enabled APs and forwards client registration and roaming information to the Control Plane Node
B. coordinates configuration of autonomous nonfabric access points within the fabric
C. performs the assurance engine role for both wired and wireless clients
D. is dedicated to onboard clients in fabric-enabled and nonfabric-enabled APs within the fabric

Correct Answer: A
Explanation

Explanation/Reference:
Fabric Enabled WLC:
Fabric enabled WLC is integrated with LISP control plane. This WLC is responsible for AP image /Config, Radio Resource Management, Client Session management and roaming and all other wireless control plane functions.
For WLC Fabric Integration:
* Wireless Client MAC address is used as EID
* It inform about Wireless MAC address with its other information like SGT and Virtual Network Information
* VN information is mapped to VLAN on FEs
* WLC is responsible for updating Host Database tracking DB with roaming information

QUESTION 201
Refer to the exhibit.



Router#show access-lists
Extended IP access list 100
10 permit ip 192.168.0.0 0.0.255.255 any
20 permit ip 172.16.0.0 0.0.15.255 any

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A.
```
Router(config)#no access-list 100 permit ip 172.16.0.0 0.0.15.255 any
Router(config)#access-list 100 permit ip 172.16.0.0 0.0.15.255 any log
Router(config)#interface GigabitEthernet0/1
Router(config-if)#access-group 100 in
```

B.
```
Router(config)#access-list 100 seq 5 permit ip host 172.20.10.1 any log
Router(config)#interface GigabitEthernet0/1
Router(config-if)#access-group 100 in
```

C.
```
Router(config)#ip access-list extended 100
Router(config-ext-nacl)#5 permit ip 172.20.10.0 0.0.0.255 any log
Router(config)#interface GigabitEthernet0/1
Router(config-if)#access-group 100 in
```

D.
```
Router(config)#access-list 100 permit ip host 172.20.10.1 any log
Router(config)#interface GigabitEthernet0/1
Router(config-if)#access-group 100 in
```

Which command set must be added to permit and log all traffic that comes from 172.20.10.1 in interface GigabitEthernet0/1 without impacting the functionality of the access list?

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

Correct Answer: D
Explanation

Explanation/Reference:
The syntax is wrong for B. You can't have everything on a single line.
(config)#access-list 100 seq 5
% Unrecognized command

QUESTION 202
The Gig0/0 interface of two routers is directly connected with a 1G Ethernet link. Which configuration must be applied to the interface of both routers to establish an OSPF adjacency without maintaining a DR/BDR relationship?

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A.
```
interface Gig0/0
ip ospf network point-to-multipoint
```

B.
```
interface Gig0/0
ip ospf network point-to-point
```

C.
```
interface Gig0/0
ip ospf network broadcast
```

D.
```
interface Gig0/0
ip ospf network non-broadcast
```

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

Correct Answer: B
Explanation

Explanation/Reference:
cisco_R3#show run int e0/0.50
Building configuration...

Current configuration : 189 bytes
!
interface Ethernet0/0.50
encapsulation dot1Q 50
ip address 10.111.10.1 255.255.255.252
ip ospf network point-to-point <<<<<<<<<<<<<<<<<<< ip ospf 1 area 22
bfd interval 999 min_rx 999 multiplier 3
end

cisco_R3#show ip ospf neighbor

Neighbor ID Pri State Dead Time Address Interface 192.168.255.2 1 FULL/DROTHER 00:00:33 192.168.255.2 Ethernet0/0.10 200.200.200.200 1 FULL/DR 00:00:34 192.168.255.22 Ethernet0/0.10 5.5.5.5 0 FULL/ - 00:00:34 10.111.10.2 Ethernet0/0.50 <<<<<<<<<<<<<<<< cisco_R3#

QUESTION 203
What is one main REST security design principle?

A. separation of privilege
B. password hashing
C. confidential algorithms
D. OAuth

Correct Answer: A
Explanation

Explanation/Reference:
Separation of Privilege: Granting permissions to an entity should not be purely based on a single condition, a combination of conditions based on the type of resource is a better idea.

https://restfulapi.net/security-essentials/#:~:text=REST%20Security%20Design%20Principles&text=Least%20Privilege%3A%20An%20entity%20should,when%20no%20longer%20in%20use.

QUESTION 204

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Refer to the exhibit.

```
DSW2#sh spanning-tree vlan 10

VLAN0010
  Spanning tree enabled protocol ieee
  Root ID     Priority    10
              Address     0013.80f9.8880
              Cost        2
              Port        9 (FastEthernet1/0/7)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4106   (priority 4096 sys-id-ext 10)
              Address     0018.7363.4300
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Fa1/0/7             Root FWD 2         128.9    P2p
Fa1/0/10            Desg FWD 4         128.12   P2p
Fa1/0/11            Desg FWD 2         128.13   P2p
Fa1/0/12            Desg FWD 2         128.14   P2p


DSW2#
*Mar  3 07:29:24.854: %SPANTREE-2-BLOCK_BPDUGUARD: Received BPDU on port Fa1/0/7
 with BPDU Guard enabled. Disabling port.
*Mar  3 07:29:24.854: %PM-4-ERR_DISABLE: bpduguard error detected on Fa1/0/7, put
 ting Fa1/0/7 in err-disable state
*Mar  3 07:29:24.879: %SPANTREE-2-BLOCK_BPDUGUARD: Received BPDU on port Fa1/0/7
 with BPDU Guard enabled. Disabling port.
*Mar  3 07:29:25.869: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEtherne
 t1/0/7, changed state to down
*Mar  3 07:29:26.884: %LINK-3-UPDOWN: Interface FastEthernet1/0/7, changed state
 to down
```

An engineer entered the command no spanning-tree bpduguard enable on interface Fa 1/0/7. What is the effect of this command on Fa 1/0/7?

A. It remains in err-disabled state until the shutdown/no shutdown command is entered in the interface configuration mode.
B. It remains in err-disabled state until the errdisable recovery cause failed-port-state command is entered in the global configuration mode.
C. It remains in err-disabled state until the no shutdown command is entered in the interface configuration mode.
D. It remains in err-disabled state until the spanning-tree portfast bpduguard disable command is entered in the interface configuration mode.

Correct Answer: A
Explanation

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Explanation/Reference:
Seems someone maybe trying to insert a switch into that port which sends bpdu packets. The port is configured to not allow this so it goes into an error disable mode and shuts the port down. You have to do a shut and no shut on the port to bring it back up. However, it may go down again if the device sending bpdu's is still active on the port.

QUESTION 205
Refer to the exhibit.

```
import json
from requests import get

Headers = { "Content-Type" : "application/yang-data+json", "Accept" : "application/yang-data+json" }

Devices = open("devices.txt", "r")

for Device in Devices.readlines():
Hostname, IP, Login, Pass = Device.strip().split(",")
URL = f"https://{IP}/restconf/data/Cisco-IOS-XE-native:native"
Creds = (Login, Pass)
Response = get(URL, auth = Creds, headers = Headers, verify = False)
```

How should the script be completed so that each device configuration is saved into a JSON-formatted file under the device name?

A. Insert after the for loop:

```
with open(f'{Hostname}.json", "w") as OutFile:
 OutFile.write(Response)
```

B. Insert after the for loop:

```
with open(f'{Hostname}.json", "w") as OutFile:
 OutFile.write(json.dumps(Response.text))
```

C. Append to the body of the for loop:

```
with open(f'{Hostname}.json", "w") as OutFile:
 OutFile.write(Response.text)
```

D. Insert immediately before the for loop:

```
with open(f'{Hostname}.json", "w") as OutFile:
 OutFile.write(json.load(Devices))
```

A. Option A
B. Option B

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C. Option C
D. Option D

Correct Answer: A
Explanation

QUESTION 206
What is one characteristic of the Cisco SD-Access control plane?

A. It is based on VXLAN technology.
B. Each router processes every possible destination and route
C. It allows host mobility only in the wireless network.
D. It stores remote routes in a centralized database server

Correct Answer: D
Explanation

Explanation/Reference:
A control plane node maintains a host tracking database (HTDB), and also uses Locator/ID Separation Protocol (LISP) to provide a map server, populating the HTDB from fabric edge registration messages; and a map resolver to respond to queries from edge devices requesting location information about destination nodes.

QUESTION 207
What is used to validate the authenticity of the client and is sent in HTTP requests as a JSON object?

A. SSH
B. HTTPS
C. JWT
D. TLS

Correct Answer: C
Explanation

Explanation/Reference:
JWT or JSON Web Token is a string that is sent in the HTTP request (from client to server) to validate the authenticity of the client https://developer.atlassian.com/server/crowd/json-requests-and-responses/

QUESTION 208
Which Python snippet should be used to store the devices data structure in a JSON file?

```
import json
Devices = {'Switches': [{'name': 'AccSw1',
                         'ip': '2001:db8:4166:8961:5::1'},
                         {'name': 'AccSw2',
                         'ip':'2001:db8:12b1:31a7:fffe::2'}],
           'Routers': [{'name': 'CE1', 'ip': '2001:db8:31ac:a97a:8::1'},
                         {'name': 'CE2', 'ip': '2001:db8:7ac8:9ab7::2'}
                         ]
}
```

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A.
```
with open("devices.json", "w") as OutFile:
  json.dumps(Devices)
```

B.
```
OutFile = open("devices.json", "w")
OutFile.write(str(Devices))
OutFile.close()
```

C.
```
OutFile = open("devices.json", "w")
json.dump(Devices, OutFile)
OutFile.close()
```

D.
```
with open("devices.json", "w") as OutFile:
  Devices = json.load(OutFile)
```

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

Correct Answer: C
Explanation

Explanation/Reference:
the same configuration can be found in multiple examples here:
reference:
https://www.section.io/engineering-education/storing-data-in-python-using-json-module/

QUESTION 209
Refer to the exhibit.

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```
Router1$ ssh -s admin@192.168.20.3 -p 830 netconf
admin@192.168.20.3's password: cisco123

<?xml version="1.0" encoding="UTF-8"?>
<hello xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
<capabilities>
<capability>urn:ietf:params:netconf:base:1.0</capability>
<capability>urn:ietf:params:netconf:base:1.1</capability>
<capability>urn:ietf:params:netconf:capability:writable-
running:1.0</capability>
<capability>urn:ietf:params:netconf:capability:xpath:1.0</capability>
<capability>urn:ietf:params:netconf:capability:validate:1.0</capability>
<capability>urn:ietf:params:netconf:capability:validate:1.1</capability>
<capability>urn:ietf:params:netconf:capability:rollback-on-
error:1.0</capability
--snip--
</capabilities>
<session-id>2870</session-id></ hello>]]>]]>

Use < ^C > to exit
```

An engineer tries to log in to router R1. Which configuration enables a successful login?

A. R1#aaa new-model
aaa authorization exec default local
enable aaa admin privilege 15

B. R1#username admin privilege 15
aaa authorization exec default local
netconf-yang

C. R1#netconf-yang
username admin privilege 15 secret cisco123
aaa new-model
aaa authorization exec default local

D. R1#username admin privilege 15

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aaa authorization exec default local

Correct Answer: C
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/storage-networking/management/200933-YANG-NETCONF-Configuration-Validation.html#:~:text=Configure-,1.%20Basic%20Configuration%20of%20a%20Catalyst%203850%20Running%20IOS %2DXE%2016.3.3%20Software%20to%20Support%20NETCONF/YANG%20Data%20Modeling,-3850%2D1%23

QUESTION 210
Refer to the exhibit.

```
switch1(config)# interface GigabitEthernet 1/1
switch1(config-if)# switchport mode trunk
switch1(config-if)# switchport trunk allowed vlan 10,20,30,40,50,60,70-90
switch1(config)# exit
switch1(config)# monitor session 1 source vlan 10
switch1(config)# monitor session 1 destination remote vlan 70


switch2(config)# interface GigabitEthernet 1/1
switch2(config-if)# switchport mode trunk
switch2(config-if)# switchport trunk allowed vlan 10,20,30,40,50,60,80-90
switch2(config)# exit
switch2(config)# monitor session 2 source remote vlan 70
switch2(config)# monitor session 2 destination interface GigabitEthernet1/1
```

A network administrator configured RSPAN to troubleshoot an issue between switchl and switch2. The switches are connected using interface GigabitEthernet 1/1 An external packet capture device is connected to swich2 interface GigabitEthernet1/2 Which two commands must be added to complete this configuration? (Choose two)

A. switch2(config-if)# switchport trunk allowed vlan 10,20,30,40,50,60,70-80
B. switch2(config)# monitor session 1 source remote vlan 70
   switch2(config)# monitor session 1 destination interface GigabitEthernet1/2
C. switch1(config)# interface GigabitEthernet 1/1
   switch1(config-if)# switchport mode access
   switch1(config-if)# switchport access vlan 10
   switch2(config)# interface GigabitEthernet 1/1
   switch2(config-if)# switchport mode access
   switch2(config-if)# switchport access vlan 10
D. switch2(config)# monitor session 2 destination vlan 10
E. switch2(config)# monitor session 1 source remote vlan 70
   switch2(config)# monitor session 1 destination interface GigabitEthernet1/1

Correct Answer: AB
Explanation

QUESTION 211
A large campus network has deployed two wireless LAN controllers to manage the wireless network.

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WLC1 and WLC2 have been configured as mobility peers. A client device roams from AP1 on WLC1 to AP2 on WLC2, but the controller's client interfaces are on different VLANs.

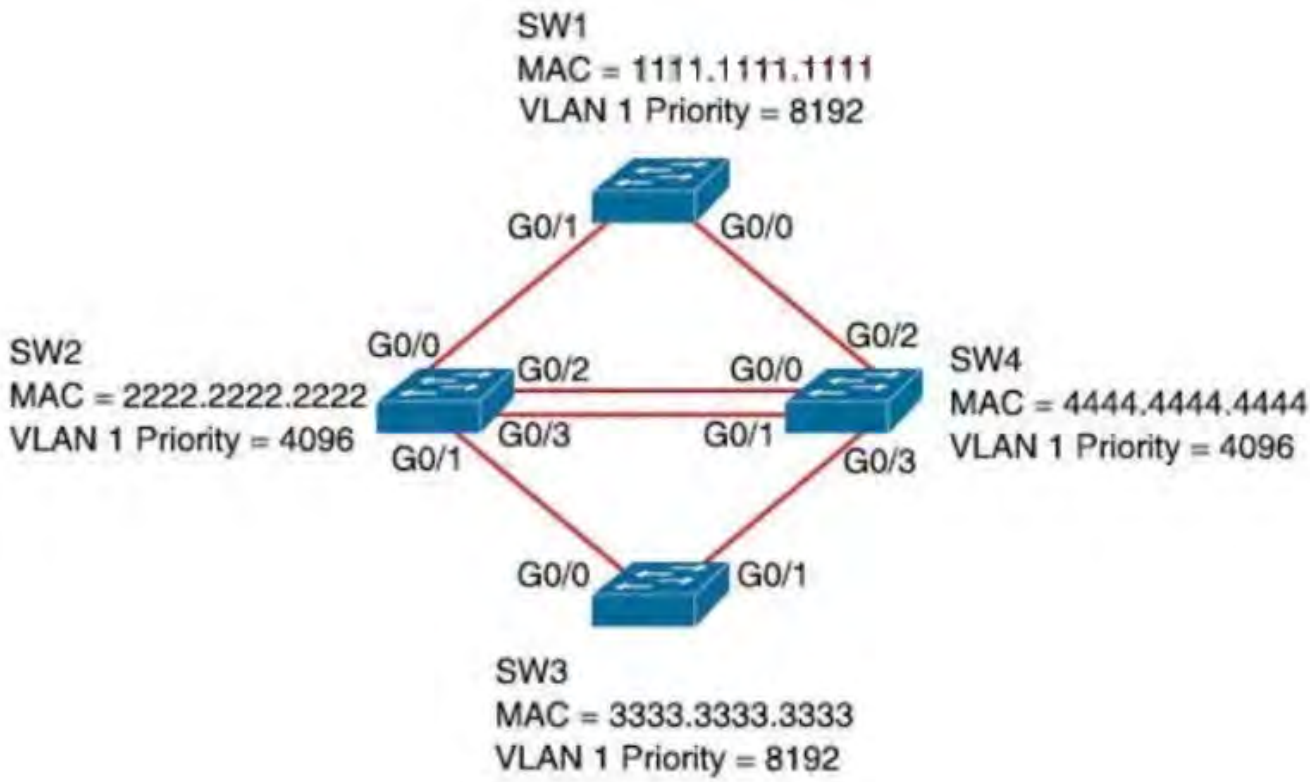
How do the wireless LAN controllers handle the inter-subnet roaming?

A. WLC1 marks the client with an anchor entry in its own database. The database entry is copied to the new controller and marked with a foreign entry on WLC2.
B. WLC2 marks the client with an anchor entry in its own database. The database entry is copied to the new controller and marked with a foreign entry on WLC1.
C. WLC1 marks the client with a foreign entry in its own database. The database entry is copied to the new controller and marked with an anchor entry on WLC2.
D. WLC2 marks the client with a foreign entry in its own database. The database entry is copied to the new controller and marked with an anchor entry on WLC1.

Correct Answer: A
Explanation

Explanation/Reference:
Inter-subnet roaming is similar to inter-controller roaming in that the controllers exchange mobility messages on the client roam. However, instead of moving the client database entry to the new controller, the original controller marks the client with an "Anchor" entry in its own client database. The database entry is copied to the new controller client database and marked with a "Foreign" entry in the new controller. The roam remains transparent to the wireless client, and the client maintains its original IP address.
reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-3/configuration/guide/b_cg73/b_wlc-cg_chapter_01111.html

QUESTION 212
Refer the exhibit. Which configuration elects SW4 as the root bridge for VLAN 1 and puts G0/2 on SW2 into a blocking state?



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A. SW4(config)#spanning-tree vlan 1 priority 32768
!
SW2(config)#interface G0/2
SW2(config-if)#spanning-tree vlan 1 port-priority 0

B. SW4(config)#spanning-tree vlan 1 priority 32768
!
SW2(config)#int G0/2
SW2(config-if)#spanning-tree cost 128

C. SW4(config)#spanning-tree vlan 1 priority 0
!
SW2(config)#int G0/2
SW2(config-if)#spanning-tree cost 128

D. SW4(config)#spanning-tree vlan 1 priority 0
!
SW2(config)#interface G0/2
SW2(config-if)#spanning-tree vlan 1 port-priority 64

Correct Answer: C
Explanation

QUESTION 213
Refer to the exhibit.

A network engineer must log in to the router via the console, but the RADIUS servers are not reachable. Which credentials allow console access?

```
Router# show running-config

! lines omitted for brevity

username cisco password 0 cisco

aaa authentication login group1 group radius line
aaa authentication login group2 group radius local
aaa authentication login group3 group radius none

line con 0
password 0 cisco123
login authentication group1
line aux 0
login authentication group3
line vty 0 4
password 0 test123
login authentication group2
```

A. the username "cisco" and the password "cisco123"
B. no username and only the password "test123"
C. no username and only the password "cisco123"
D. the username "cisco" and the password "cisco"

Correct Answer: C
Explanation

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Explanation/Reference:
We tested with GNS3 and the router only requires password "cisco123" configured under line console to authenticate. So we can deduce the "password" command under line interface is preferred over "login authentication" command.

QUESTION 214
What is an OVF?

A. a package that is similar to an IMG and that contains an OVA file used to build a virtual machine
B. an alternative form of an ISO that Is used to install the base operating system of a virtual machine
C. the third step in a P2V migration
D. a package of files that is used to describe a virtual machine or virtual appliance

Correct Answer: D
Explanation

QUESTION 215
Refer to the exhibit.

```
R1#show ip interface brief | include 192.168.12
FastEthernet0/0     192.168.12.1   YES manual up                    up

R1#ping vrf CUST-A 192.168.12.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms

R1#show ip arp 192.168.12.2
R1#
```

A network engineer checks connectivity between two routers. The engineer can ping the remote endpoint but cannot see an ARP entry. Why is there no ARP entry?

A. The ping command must be executed in the global routing table.
B. Interface FastEthernet0/0 Is configured in VRF CUST-A, so the ARP entry is also in that VRF.
C. When VRFs are used. ARP protocol must be enabled In each VRF.
D. When VRFs are used. ARP protocol is disabled in the global routing table.

Correct Answer: B
Explanation

QUESTION 216
Which IPv4 packet field carries the QoS IP classification marking?

A. ID
B. TTL
C. FCS
D. ToS

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Correct Answer: D
Explanation

Explanation/Reference:
The classification is carried in the IP packet header, using 6 bits from the deprecated IP type of service (ToS) field to carry the classification (class) information. Classification can also be carried in the Layer 2 frame.

QUESTION 217
Refer to the exhibit. An engineer must set up connectivity between a campus aggregation layer and a branch office access layer. The engineer uses dynamic trunking protocol to establish this connection, however, management traffic on VLAN1 is not passing. Which action resolves the issue and allow communication for all configured VLANs?

```
SW2#
%CDP-4-NATIVE_VLAN_MISMATCH:   Native VLAN mismatch discovered on
GigabitEthernet0/1 (1), with SW1 GigabitEthernet 0/1 (30).
SW2#
```

A. Allow all VLANs on the trunk links
B. Disable Spanning Tree for the native VLAN.
C. Configure the correct native VLAN on the remote interface
D. Change both interfaces to access ports.

Correct Answer: C
Explanation

QUESTION 218
Which resource is able to be shared among virtual machines deployed on the same physical server?

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

Correct Answer: A
Explanation

QUESTION 219
Which Cisco FlexConnect state allows wireless users that are connected to the network to continue working after the connection to the WLC has been lost?

A. Authentication Down/Switching Down
B. Authentication-Central/Switch-Local
C. Authentication- Down/Switch-Local
D. Authentication-Central/Switch-Central

Correct Answer: C
Explanation

Explanation/Reference:
Operation Modes
There are two modes of operation for the FlexConnect AP.
* Connected mode: The WLC is reachable. In this mode the FlexConnect AP has CAPWAP connectivity

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with its WLC.
* Standalone mode: The WLC is unreachable. The FlexConnect has lost or failed to establish CAPWAP connectivity with its WLC. A WAN-link outage between a branch and its central site is a example of such a mode of operation.

FlexConnect States
A FlexConnect WLAN, depending on its configuration and network connectivity, is classified as being in one of the following defined states.
* Authentication-Central/Switch-Central: This state represents a WLAN that uses a centralized authentication method such as 802.1X, VPN, or web. User traffic is sent to the WLC via CAPWAP (Central switching). This state is supported only when FlexConnect is in connected mode.
* Authentication Down/Switching Down: Central switched WLANs no longer beacon or respond to probe requests when the FlexConnect AP is in standalone mode. Existing clients are disassociated.
* Authentication-Central/Switch-Local: This state represents a WLAN that uses centralized authentication, but user traffic is switched locally. This state is supported only when the FlexConnect AP is in connected mode.
* Authentication-Down/Switch-Local: A WLAN that requires central authentication rejects new users. Existing authenticated users continue to be switched locally until session time-out if configured. The WLAN continues to beacon and respond to probes until there are no more existing users associated to the WLAN. This state occurs as a result of the AP going into standalone mode.
* Authentication-local/switch-local: This state represents a WLAN that uses open, static WEP, shared, or WPA2 PSK security methods. User traffic is switched locally. These are the only security methods supported locally if a FlexConnect goes into standalone mode. The WLAN continues to beacon and respond to probes. Existing users remain connected and new user associations are accepted. If the AP is in connected mode, authentication information for these security types is forwarded to the WLC.

QUESTION 220
An engineer is configuring Local WebAuth on a Cisco Wireless LAN Controller. According to RFC 5737

Which VIRTUAL IP address must be used in this configuration?

A. 192.0.2.1
B. 172.20.10.1
C. 1.1.1.1
D. 192.168.0.1

Correct Answer: A
Explanation

Explanation/Reference:
The virtual interface IP address (IPv4 or IPv6) is used only in communications between the controller and wireless clients. It serves as the redirect address for the web authentication login page. It is recommended that you configure a nonroutable IP address for the virtual interface, ideally not overlapping with the network infrastructure addresses. Use one of the options proposed in RFC 5737, for example, 192.0.2.0/24, 198.51.100.0/24, and 203.0.113.0/24 networks.

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Exam C

QUESTION 1
Which two solutions are used for backing up a Cisco DNA Center Assurance database? (Choose two)

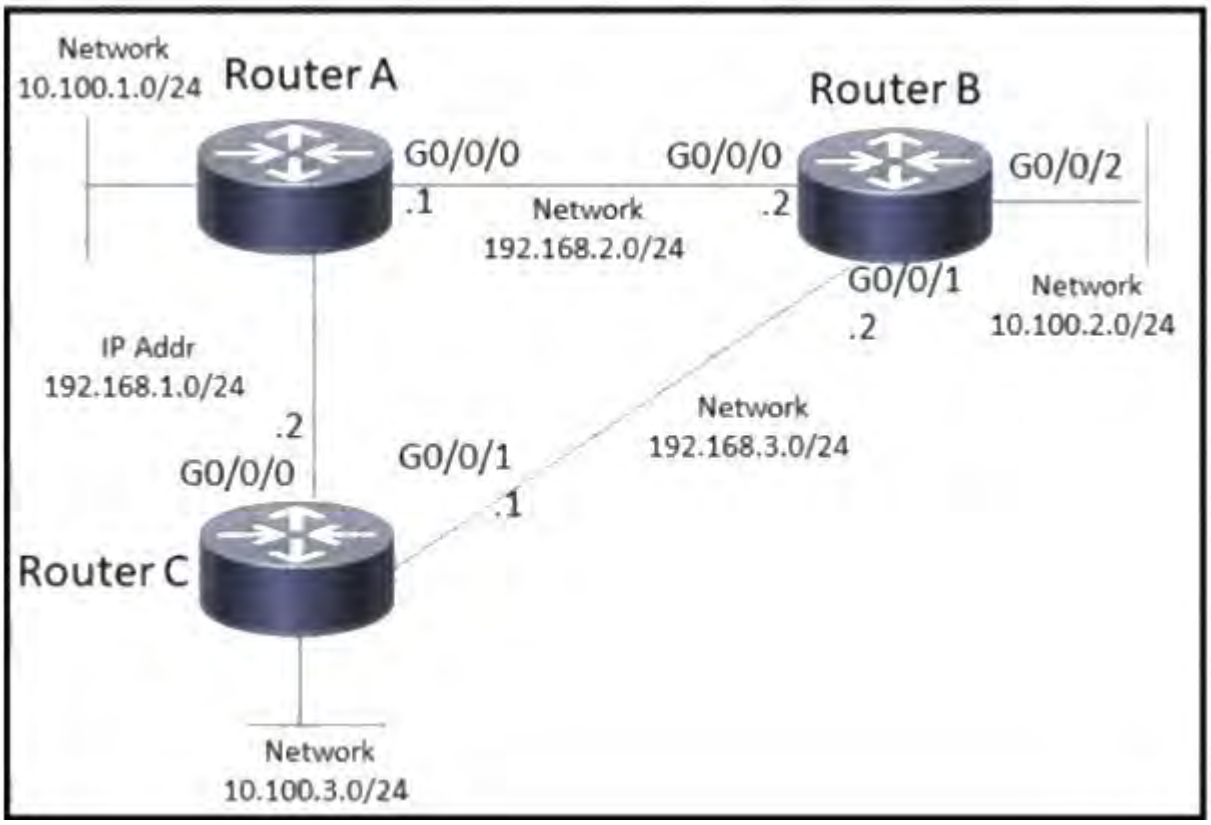
A. NFS share
B. local server
C. non-linux server
D. remote server
E. bare metal server

Correct Answer: AD
Explanation

Explanation/Reference:
Cisco DNA Center creates the backup files and posts them to a remote server. Each backup is uniquely stored using the UUID as the directory name.To support Assurance data backups, the server must be a Linux-based NFS server that meets the following requirements:
?Support NFS v4 and NFS v3.
?Cisco DNA Center stores backup copies of Assurance data on an external NFS device and automation data on an external remote sync (rsync) target location.
?The remote share for backing up an Assurance database (NDP) must be an NFS share.

Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/2-1-2/admin_guide/b_cisco_dna_center_admin_guide_2_1_2/b_cisco_dna_center_admin_guide_2_1_1_chapter_0110.html

QUESTION 2
Refer to the exhibit. A network engineer must block Telnet traffic from hosts in the range of 10.100 2.248 to 10.100.2 255 to the network 10.100.3.0 and permit everything else.



Which configuration must the engineer apply?

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A.
```
RouterB(config)# access-list 101 deny tcp 10.100.2.0 0.0.0.248 10.100.3.0 0.0.0.255 eq 22
RouterB(config)# access-list 101 permit any any
RouterB(config)# int g0/0/2
RouterB(config-if)# ip access-group 101 in
```

B.
```
RouterB(config)# access-list 101 deny icmp 10.100.2.0 0.0.0.248 10.100.2.0 0.0.0.248
RouterB(config)# access-list 101 permit any any
RouterB(config)# int g0/0/2
RouterB(config-if)# ip access-group 101 in
```

C.
```
RouterB(config)# access-list 101 deny tcp 10.100.2.0 0.0.0.248 10.100.3.0 0.0.0.255 eq 23
RouterB(config)# access-list 101 permit any any
RouterB(config)# int g0/0/2
RouterB(config-if)# ip access-group 101 in
```

D.
```
RouterB(config)# access-list 101 permit tcp 10.100.2.0 0.0.0.252 10.100.3.0 0.0.0.255
RouterB(config)# int g0/0/2
RouterB(config-if)# ip access-group 101 in
```

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

Correct Answer: C
Explanation

QUESTION 3
What does the number in an NTP stratum level represent?

A. The number of hops it takes to reach the master time server.
B. The number of hops it takes to reach the authoritative time source.
C. The amount of offset between the device clock and true time.
D. The amount of drift between the device clock and true time.

Correct Answer: B
Explanation

Explanation/Reference:
NTP uses the concept of a stratum to describe how many hops (routers) away a machine is from an authoritative time source, usually a reference clock. A reference clock is a stratum 0 device that is assumed to be accurate and has little or no delay associated with it. Stratum 0 servers cannot be used on the network but they are directly connected to computers which then operate as stratum-1 servers. A stratum 1 time server acts as a primary network time standard.

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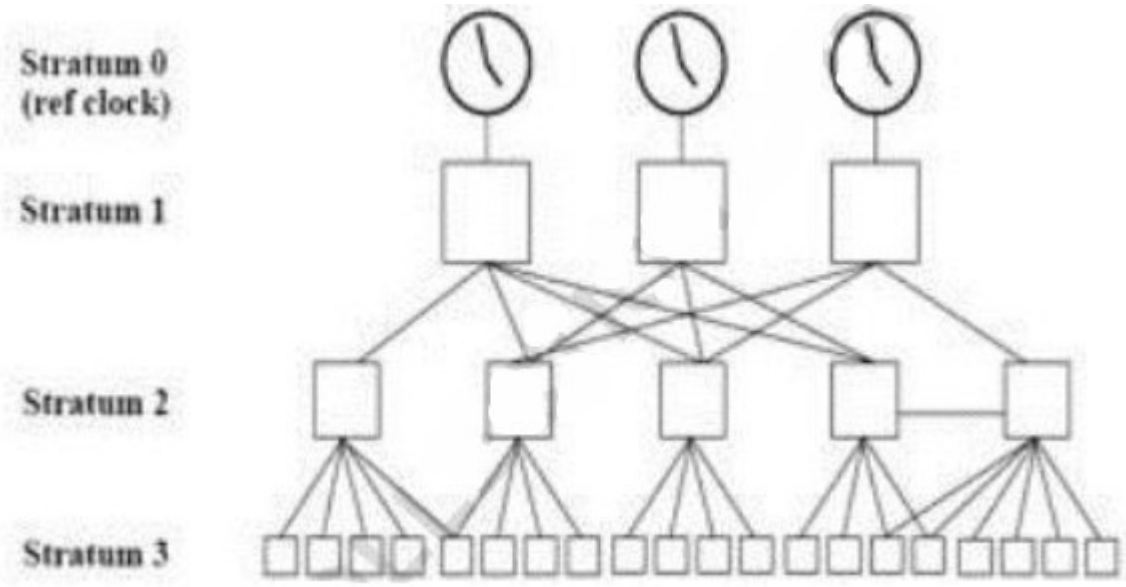

QUESTION 4
Which method displays text directly into the active console with a synchronous EEM applet policy?

A. event manager applet boom
event syslog pattern 'UP'
action 1.0 gets 'logging directly to console'
B. event manager applet boom
event syslog pattern 'UP'
action 1.0 syslog priority direct msg 'log directly to console'
C. event manager applet boom
event syslog pattern 'UP'
action 1.0 puts 'logging directly to console'
D. event manager applet boom
event syslog pattern 'UP'
action 1.0 string 'logging directly to console'

Correct Answer: C
Explanation

Explanation/Reference:
"Writing Input to the Active Console
When a synchronous policy is triggered, the related console is stored in the publish information specification. The policy director will query this information in an event_reqinfo call, and store the given console information for use by the action puts command.

The action puts command will write the string to the active console. A new line will be displayed unless the nonewline keyword is specified. The output from the action puts command for a synchronous applet is displayed directly to the console, bypassing the system logger. The output of the action puts command for an asynchronous applet is directed to the system logger."

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/eem/configuration/xe-3s/eem-xe-3s-book/eem-policy-cli.html

QUESTION 5
What is a characteristics of traffic policing?

A. lacks support for marking or remarking
B. must be applied only to outgoing traffic
C. can be applied in both traffic directions
D. queues out-of-profile packets until the buffer is full

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Correct Answer: D
Explanation

QUESTION 6
What is a characteristic of a Type 2 hypervisor?

A. It is completely independent of the operating system.
B. It is installed on an operating system and supports other operating systems.
C. It eliminates the need for an underlying operating system.
D. Its main task is to manage hardware resources between different operating systems.

Correct Answer: B
Explanation

QUESTION 7
What is a benefit of using a Type 2 hypervisor instead of a Type 1 hypervisor?

A. better application performance
B. Improved security because the underlying OS is eliminated
C. Improved density and scalability
D. ability to operate on hardware that is running other OSs

Correct Answer: D
Explanation

Explanation/Reference:
There are two types of hypervisors: type 1 and type 2 hypervisor.
In type 1 hypervisor (or native hypervisor), the hypervisor is installed directly on the physical server. Then instances of an operating system (OS) are installed on the hypervisor. Type 1 hypervisor has direct access to the hardware resources. Therefore they are more efficient than hosted architectures.
Some examples of type 1 hypervisor are VMware vSphere/ESXi, Oracle VM Server, KVM and Microsoft Hyper-V.
In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows). Type 1 is more efficient and well performing, it is also more secure than type 2 because the flaws and vulnerabilities that are endemic to Operating Systems are often absent from Type 1, bare metal hypervisors.
Type 1 has better performance, scalability and stability but supported by limited hardware.

QUESTION 8
Refer to the exhibit.

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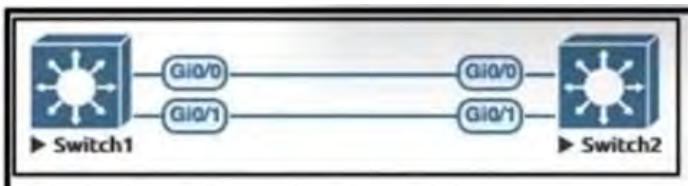


```
Switch1#show run interface Gi0/0
!
interface GigabitEthernet0/0
 switchport trunk encapsulation dot1q
 switchport mode trunk
 negotiation auto
 channel-group 1 mode active
end

Switch1#show run interface Gi0/1
!
interface GigabitEthernet0/1
 switchport trunk encapsulation dot1q
 switchport mode trunk
 negotiation auto
 channel-group 1 mode passive
end
```

```
Switch2#show run interface Gi0/0
!
interface GigabitEthernet0/0
 negotiation auto
 channel-group 1 mode active
end

Switch2#show run interface Gi0/1
!
interface GigabitEthernet0/1
 negotiation auto
 channel-group 1 mode passive
end
```

The port channel between the switches does not work as expected. Which action resolves the issue?

A. Interface Gi0/0 on Switch2 must be configured as passive.
B. Interface Gi0/1 on Switch1 must be configured as desirable.
C. interface Gi0/1 on Switch2 must be configured as active.
D. Trucking must be enabled on both Interfaces on Switch2.

Correct Answer: C
Explanation

QUESTION 9
A system must validate access rights to all its resources and must not rely on a cached permission matrix. If the access level to a given resource is revoked but is not reflected in the permission matrix, the security is violates Which term refers to this REST security design principle?

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A. economy of mechanism
B. complete mediation
C. separation of privilege
D. least common mechanism

Correct Answer: B
Explanation

Explanation/Reference:
A system should validate access rights to all its resources to ensure that they are allowed and should not rely on the cached permission matrix. If the access level to a given resource is being revoked, but that is not being reflected in the permission matrix, it would be violating security.

https://medium.com/strike-sh/rest-security-design-principles-434bd6ee57ea

QUESTION 10
Which two features does the Cisco SD-Access architecture add to a traditional campus network? (Choose two.)

A. software-defined segmentation
B. private VLANs
C. SD-WAN
D. modular QoS
E. identity services

Correct Answer: AE
Explanation

Explanation/Reference:
https://www.cisco.com/c/dam/en/us/td/docs/solutions/CVD/Campus/CVD-Software-Defined-Access-Segmentation-Design-Guide-2018MAY.pdf

QUESTION 11
What is the API keys option for REST API authentication?

A. a predetermined string that is passed from client to server
B. a one-time encrypted token
C. a username that is stored in the local router database
D. a credential that is transmitted unencrypted

Correct Answer: A
Explanation

Explanation/Reference:
In REST API Security ?API keys are widely used in the industry and became some sort of standard, however, this method should not be considered a good security measure.

API Keys were created as somewhat of a fix to the early authentication issues of HTTP Basic Authentication and other such systems. In this method, a unique generated value is assigned to each first time user, signifying that the user is known. When the user attempts to re-enter the system, their unique key (sometimes generated from their hardware combination and IP data, and other times randomly generated by the server which knows them) is used to prove that they're the same user as before.

Reference: https://blog.restcase.com/4-most-used-rest-api-authentication-methods/

QUESTION 12
What are the main components of Cisco TrustSec?

A. Cisco ISE and Enterprise Directory Services

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B. Cisco ISE. network switches, firewalls, and routers
C. Cisco ISE and TACACS+
D. Cisco ASA and Cisco Firepower Threat Defense

Correct Answer: B
Explanation

Explanation/Reference:
https://www.cisco.com/c/dam/en/us/products/collateral/security/identity-services-engine/at_a_glance_c45-726831.pdf

QUESTION 13
An engineer must configure a new loopback Interface on a router and advertise the interface as a fa4 in OSPF. Which command set accomplishes this task?

A. R2(config)# interface Loopbacko
R2(config-if)# ip address 172.22.2.1 255.255.255.0
R2(config-if)# ip ospf 100 area 0
B. R2(config)# interface Loopbacko
R2(config-if)# ip address 172.22.2.1 255.255.255.0
R2(config-if)# ip ospf network point-to-point
R2(config-if)#ip ospf 100 area 0
C. R2(config)# interface Loopbacko
R2(config-if)# ip address 172.22.2.1 255.255.255.0
R2(config-if)# ip ospf network point-to-multipoint
R2(config-if)# router ospf 100
R2(config-router)# network 172.22.2.0 0.0.0.265 area 0
D. R2(config)# interface Loopbacko
R2(config-if)# ip address 172.22.2.1 255.255.255.0
R2(config-if)# ip ospf network broadcast
R2(config-if)# ip ospf 100 area 0

Correct Answer: B
Explanation

Explanation/Reference:
When OSPF is running on a given loopback interface, it sees the network type of "LOOPBACK" and it knows that it can not establish an adjacency through that loopback interface with another router so it advertises that loopback as a host route or the only IP address on that logical interface. As Martin explained so nicely you can tell OSPF that it is not a loopback and it is a point-to-point network type, and OSPF says "OK I am going to advertise the interface with its correct mask". In MPLS environment where OSPF is the IGP in the core, and you have configured the loopback interface of the PE router with a /24 mask, you can have some problems, because there is a discrepancy, the loopback's mask is 24 but OSPF is advertising a mask of /32. There are few solutions to fix this problem, one solution is to reconfigure the mask to be /32, another solution is to configure the loopback interface with "ip ospf network point-to-point".

QUESTION 14
Which type of tunnel Is required between two WLCs to enable Intercontroller roaming?

A. mobility
B. LWAPP
C. CAPWAP
D. iPsec

Correct Answer: A
Explanation

QUESTION 15
An administrator is configuring NETCONF using the following XML string. What must the administrator end the request with?

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```
<?xml version="1.0" encoding="UTF-8" ?>
<rpc message-id="9.0"><notification-on/>
```

A. </rpc>]]>]]>
B. </rpc-reply>
C. </rpc>
D. <rpc message.id="9.0"><notificationoff/>

Correct Answer: A
Explanation

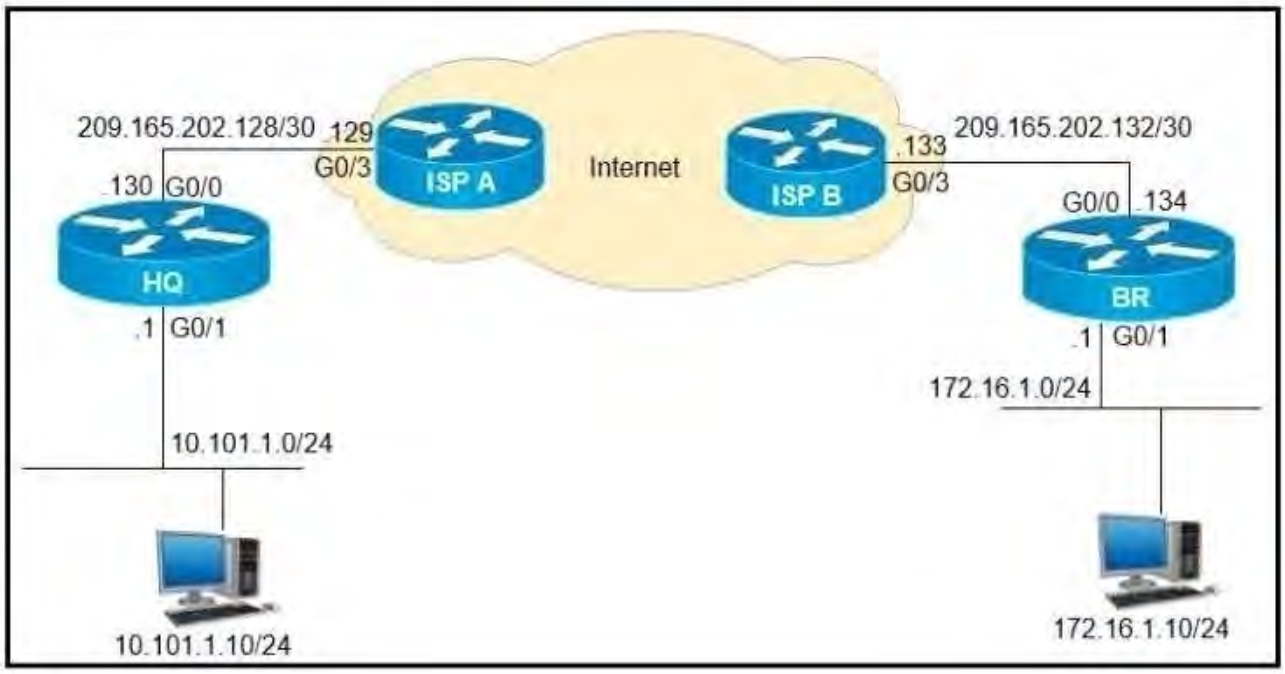
Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/cns/configuration/xe-16/cns-xe-16-book/cns-netconf.html

QUESTION 16
What is a characteristics of a vSwitch?

A. supports advanced Layer 3 routing protocols that are not offered by a hardware switch
B. enables VMs to communicate with each other within a virtualized server
C. has higher performance than a hardware switch
D. operates as a hub and broadcasts the traffic toward all the vPorts

Correct Answer: B
Explanation

QUESTION 17
Refer to the exhibit.



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Which configuration must be applied to the HQ router to set up a GRE tunnel between the HQ and BR routers?

A. interface Tunnel1
ip address 10.111.111.1 255.255.255.0
tunnel source GigabitEthernet0/0
tunnel destination 209.165.202.134

B. interface Tunnel1
ip address 10.111.111.1 255.255.255.0
tunnel source GigabitEthernet0/0
tunnel destination 209.165.202.129

C. interface Tunnel1
ip address 10.111.111.1 255.255.255.0
tunnel source GigabitEthernet0/0
tunnel destination 209.165.202.133

D. interface Tunnel1
ip address 10.111.111.1 255.255.255.252
tunnel source GigabitEthernet0/0
tunnel destination 209.165.202.129

Correct Answer: A
Explanation

QUESTION 18
An engineer must configure a router to leak routes between two VRFs

Which configuration must the engineer apply?

A. ip access-list extended acl-to-red
permit ip any 10.1.1.0 0.0.0.255
route-map rm-to-red permit 10
match ip address 50
ip vrf RED
rd 1:1
import ipv4 unicast map rm-to-red

B. ip access-list extended acl-to-red
permit ip 10.1.1.0 0.0.0.255 any
route-map rm-to-red permit 10
match ip address acl-to-red
ip vrf RED
rd 1:1
import ipv4 unicast route-map acl-to-red

C. ip access-list extended acl-to-red
permit ip 10.1.1.0 0.0.0.255 any
route-map rm-to-red permit 10
match ip address acl-to-red
ip vrf RED
rd 1:1
import ipv4 unicast map rm-to-red

D. ip access-list extended acl-to-red
permit ip 10.1.1.0 0.0.0.255 any
route-map rm-to-red permit 10
match ip address acl-to-red
ip vrf RED
rd 1:1
import ipv4 unicast acl-to-red

Correct Answer: B
Explanation

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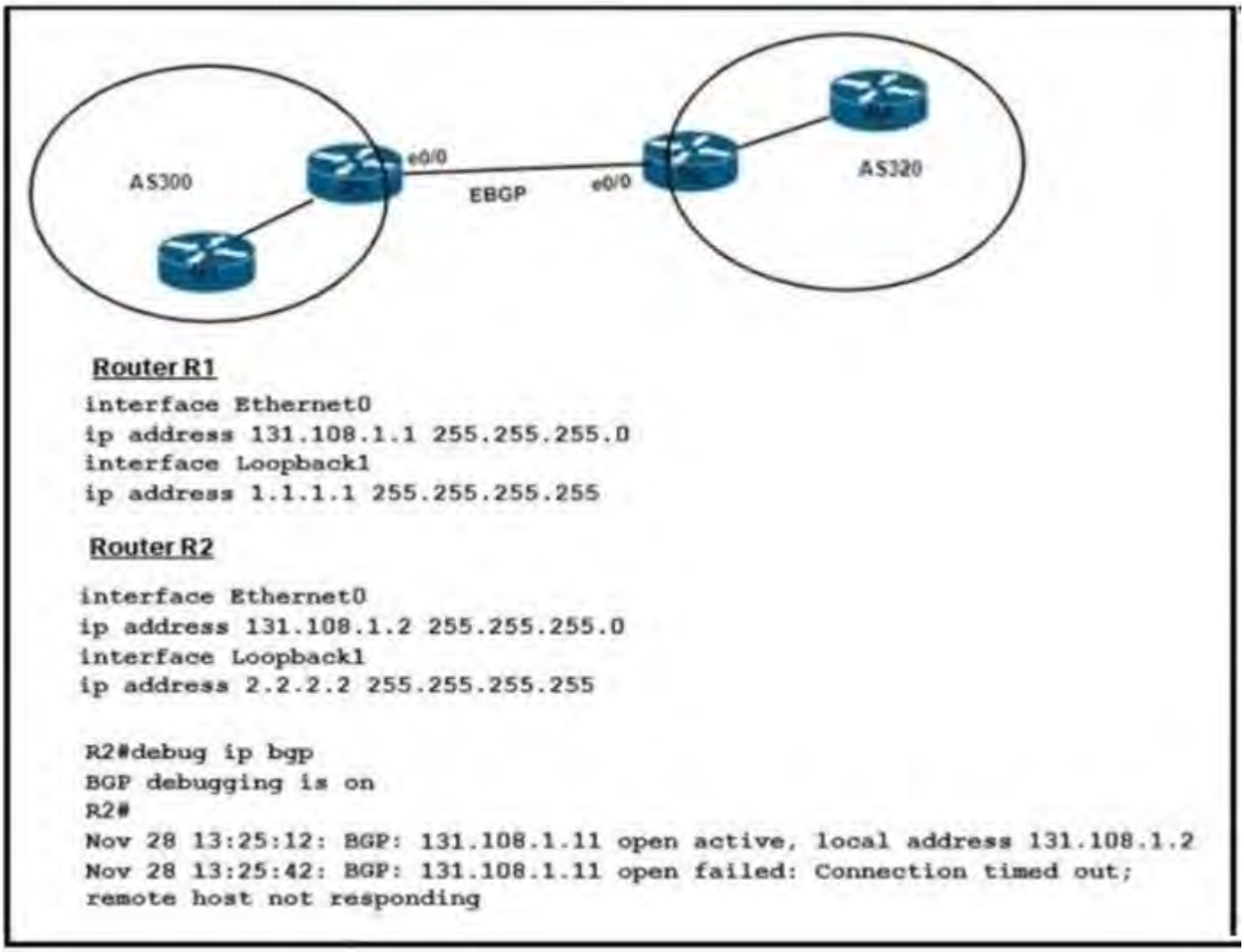
Explanation/Reference:
The key word is using unicast map instead of route-map
https://www.cisco.com/c/en/us/td/docs/ios/12_2s/feature/guide/fs_bgivt.html

QUESTION 19
Refer to the exhibit.



Which configuration must be implemented to establish EBGP peering between R1 and R2?

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A.

```
R2
router bgp 300
neighbor 131.108.1.1 remote-as 320
R1
router bgp 320
neighbor 131.108.1.2 remote-as 300
```

B.

```
R2
router bgp 320
neighbor 131.108.1.11 remote-as 300
R1
router bgp 300
neighbor 131.108.1.2 remote-as 320
```

C.

```
R2
router bgp 320
neighbor 131.108.1.1 remote-as 300
R1
router bgp 300
neighbor 131.108.1.2 remote-as 320
```

D.

```
R2
router bgp 320
neighbor 1.1.1.1 remote-as 300
R1
router bgp 300
neighbor 2.2.2.2 remote-as 320
```

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

Correct Answer: C
Explanation

QUESTION 20
Which option must be used to support a WLC with an IPv6 management address and 100 Cisco Aironet 2800 Series access points that will use DHCP to register?

A. 43
B. 52
C. 60

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D. 82

Correct Answer: B
Explanation

Explanation/Reference:
Reference https://insinuator.net/2016/02/dhcpv6-option-52-on-cisco-dhcpv6-server/

QUESTION 21
What is a characteristic of a WLC that is in master controller mode?

A. All new APs that join the WLAN are assigned to the master controller.
B. The master controller is responsible for load balancing all connecting clients to other controllers.
C. All wireless LAN controllers are managed by the master controller.
D. Configuration on the master controller is executed on all wireless LAN controllers.

Correct Answer: A
Explanation

Explanation/Reference:
When should I use the master controller mode on a WLC? ?When there is a master controller enabled, all newly added access points with no primary, secondary, or tertiary controllers assigned associate with the master controller on the same subnet.

QUESTION 22
Refer to the exhibit.

```
<interface>
   <Loopback>
     <name>100</name>
     <enabled>true</enabled>
   </Loopback>
 </interface>
```

What is achieved by this code?

A. It unshuts the loopback interface
B. It renames the loopback interface
C. It deletes the loopback interface
D. It displays the loopback interface

Correct Answer: A
Explanation

QUESTION 23
Refer to the exhibit.

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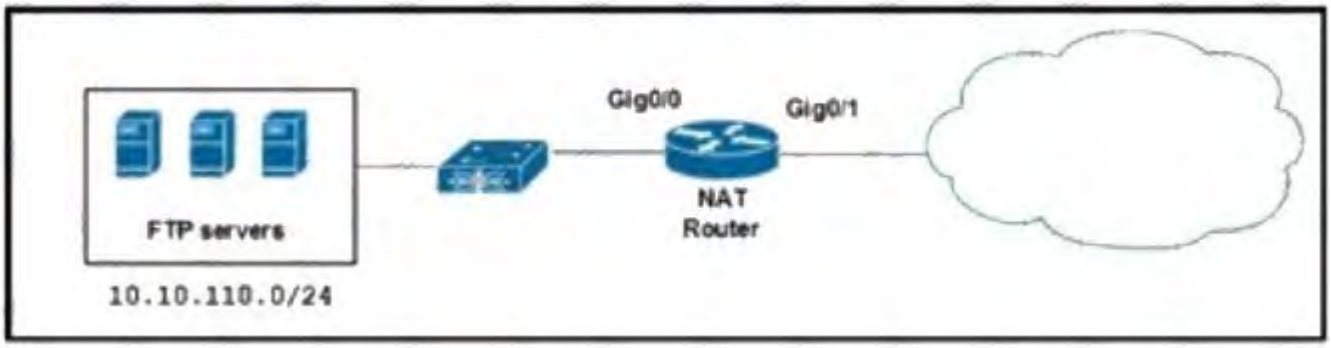

A network engineer must load balance traffic that comes from the NAT Router and is destined to 10.10.110.10, to several FTP servers.

Which two commands sets should be applied? (Choose two).

A.
```
interface gig0/0
ip address 10.10.110.1 255.255.255.0
ip nat inside
interface gig0/1
ip address 172.16.1.1 255.255.255.252
ip nat outside
```

B.
```
ip nat pool ftp-pool 10.10.110.2 10.10.110.9 netmask 255.255.255.0
access-list 23 permit 10.10.110.10
ip nat inside destination-list 23 pool ftp-pool
```

C.
```
ip nat pool ftp-pool 10.10.110.2 10.10.110.9 netmask 255.255.255.0 type rotary
access-list 23 permit 10.10.110.10
ip nat inside destination-list 23 pool ftp-pool
```

D.
```
ip nat pool ftp-pool 10.10.110.2 10.10.110.9 netmask 255.255.255.0 type rotary
access-list 23 permit 10.10.110.10
ip nat outside destination-list 23 pool ftp-pool
```

E.
```
interface gig0/0
ip address 10.10.110.1 255.255.255.0
ip nat outside
interface gig0/1
ip address 172.16.1.1 255.255.255.252
ip nat inside
```

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

Correct Answer: AC
Explanation

QUESTION 24
Which two Cisco SD-Access components provide communication between traditional network elements and controller layer? (choose two)

A. network data platform
B. network underlay
C. fabric overlay

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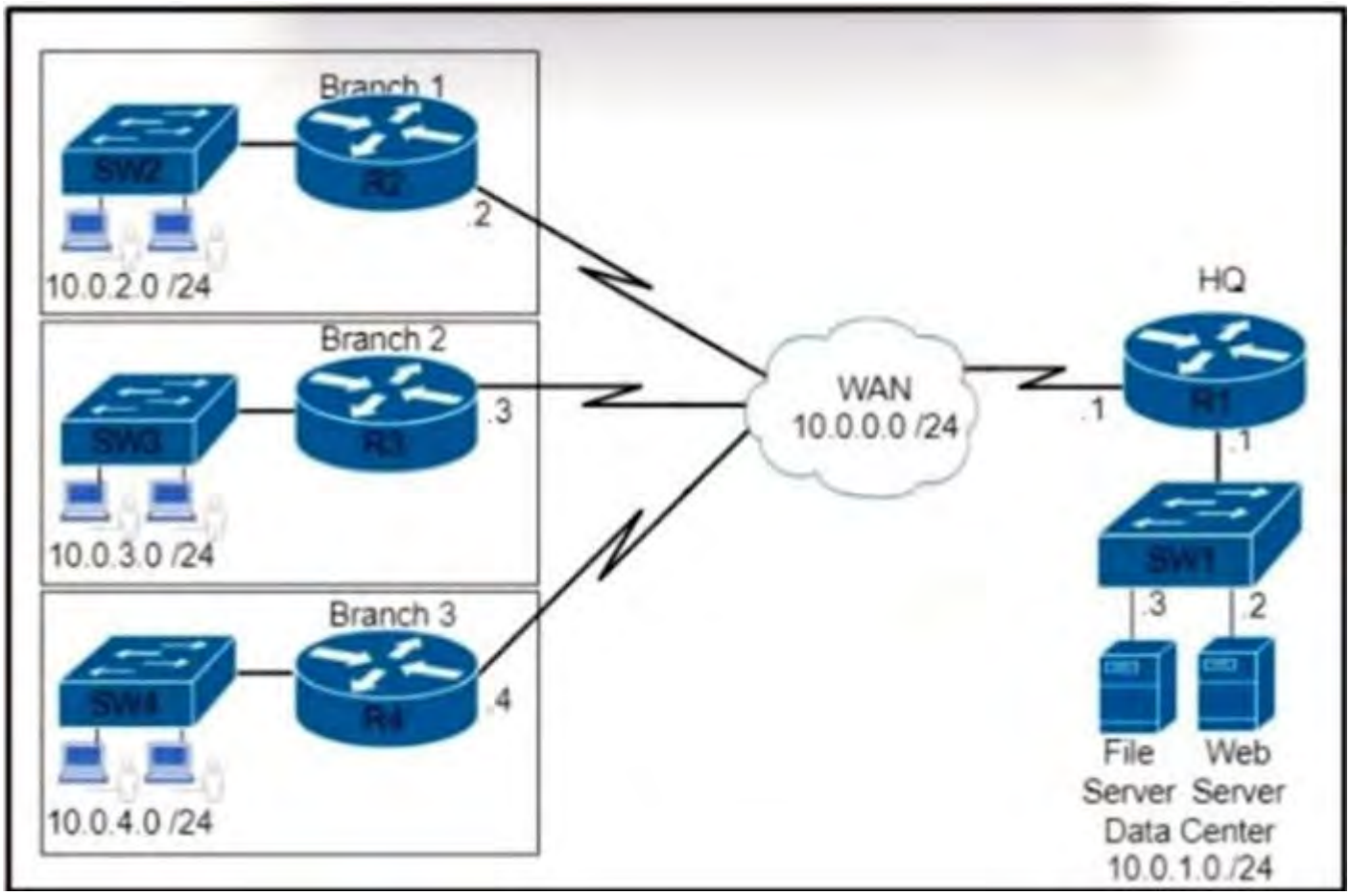
D. network control platform
E. partner ecosystem

Correct Answer: BC
Explanation

QUESTION 25
Refer to the exhibit.



Which command set is needed to configure and verify router R3 to measure the response time from router R3 to the file server located in the data center?

A. ip sla 6
icmp-echo 10.0.1.3 source-ip 10.0.0.3
frequency 300
ip sla schedule 6 life forever start-time now
show ip sla statistics 6

B. ip sla 6
icmp-echo 172.29.139.134 source-ip 172.29.139.132
frequency 300
ip sla schedule 6 start-time now

C. ip sla 6
icmp-echo 172.29.139.134 source-ip 172.29.139.132
frequency 300
ip sla schedule 6 Start-time now
show ip protocol

D. ip sla 6
icmp-echo 10.0.1.3 source-ip 10.0.0.3
frequency 300

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ip sla schedule 6 life forever start-time now
show ip protocol

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/smb/switches/cisco-550x-series-stackable-managedswitches/smb57

QUESTION 26
In a Cisco SD-Access fabric, which control plane protocol is used for mapping and resolving endpoints?

A. DHCP
B. VXLAN
C. SXP
D. LISP

Correct Answer: D
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html

QUESTION 27
Refer to the exhibit.

```
router#debug ip packet detail 100
IP packet debugging is on (detailed) for access list 100
router#

12:11:05: IP: s=1.1.1.1 (Serial1/0), d=10.1.1.1 (Serial3/0),
g=10.1.1.1, len 100, forward
12:11:05:     ICMP type=0, code=0
12:11:05: IP: s=1.1.1.1 (Serial1/0), d=10.1.1.1 (Serial3/0),
g=10.1.1.1, len 100, forward
12:11:05:     ICMP type=0, code=0
12:11:05: IP: s=1.1.1.1 (Serial1/0), d=10.1.1.1 (Serial3/0),
g=10.1.1.1, len 100, forward
12:11:05:     ICMP type=0, code=0
```

A network engineer issues the debug command while troubleshooting a network issue. What does the output confirm?

A. ACL 100 is tracking ICMP traffic from 10.1.1.1 destined for 1.1.1.1.
B. ACL100 is tracking all traffic from 10.1.1.1 destined for 1.1.1.1.
C. ACL100 is tracking ICMP traffic from Serial1/0 destined for Serial3/0.
D. ACL100 is tracking ICMP traffic from 1.1.1.1 destined for 10.1.1.1.

Correct Answer: D
Explanation

QUESTION 28
An engineer is describing QoS to a client. Which two facts apply to traffic policing? (Choose two.)

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A. Policing adapts to network congestion by queuing excess traffic
B. Policing should be performed as close to the destination as possible
C. Policing drops traffic that exceeds the defined rate
D. Policing typically delays the traffic, rather than drops it
E. Policing should be performed as close to the source as possible

Correct Answer: CE
Explanation

Explanation/Reference:
Traffic policing propagates bursts. When the traffic rate reaches the configured maximum rate (or committed information rate), excess traffic is dropped (or remarked). The result is an output rate that appears as a saw-tooth with crests and troughs.
Unlike traffic shaping, traffic policing does not cause delay. Classification (which includes traffic policing, traffic shaping and queuing techniques) should take place at the network edge. It is recommended that classification occur as close to the source of the traffic as possible. Also according to this Cisco link, "policing traffic as close to the source as possible".

QUESTION 29
What is a command-line tool for consuming REST APIs?

A. Python requests
B. Postman
C. cURL
D. Firefox

Correct Answer: C
Explanation

Explanation/Reference:
curl is a command-line tool for transferring data, and it supports about 22 protocols, including HTTP. This combination makes it a very good ad-hoc tool for testing our REST services.

QUESTION 30
What is the function of vBond in a Cisco SDWAN deployment?

A. initiating connections with SD-WAN routers automatically
B. pushing of configuration toward SD-WAN routers
C. onboarding of SD-WAN routers into the SD-WAN overlay
D. gathering telemetry data from SD-WAN routers

Correct Answer: C
Explanation

Explanation/Reference:
Orchestration plane (vBond) assists in securely onboarding the SD-WAN WAN Edge routers into the SD-WAN overlay.
References: https://www.cisco.com/c/dam/en/us/td/docs/solutions/CVD/SDWAN/sdwan-wan-edge-onboarding-deploy-guide-2020nov.pdf

QUESTION 31
Why would a customer implement an on-premises solution instead of a cloud solution?

A. On-premises Offers greater compliance for government regulations than cloud
B. On-premises offers greater scalability than cloud.
C. On-premises oilers shorter deployment time than cloud.
D. On-premises is more secure man cloud.

Correct Answer: D

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Explanation

QUESTION 32
Which DNS lookup does an AP perform when attempting CAPWAP discovery?

A. CAPWAP-CONTROLLER.local
B. CISCO-CAPWAP-CONTROLLER.local
C. CISCO-DNA-CONTROLLER.local
D. CISCO-CONTROLLER.local

Correct Answer: B
Explanation

QUESTION 33
Which version of NetFlow does Cisco Threat Defense utilize to obtain visibility into the network?

A. NBAR2
B. IPFIX
C. 8
D. flexible

Correct Answer: D
Explanation

Explanation/Reference:
https://community.cisco.com/t5/security-knowledge-base/configuring-nsel-netflow-on-cisco-firepower-threat-defense-ftd/ta-p/3646300

QUESTION 34
Which two actions, when applied in the LAN network segment, will facilitate Layer 3 CAPWAP discovery for lightweight AP? (Choose two.)

A. Utilize DHCP option 17.
B. Configure WLC IP address on LAN switch.
C. Utilize DHCP option 43.
D. Configure an ip helper-address on the router interface
E. Enable port security on the switch port

Correct Answer: CD
Explanation

Explanation/Reference:
In a Cisco Unified Wireless network, the LAPs must first discover and join a WLC before they can service wireless clients.
However, this presents a question: how did the LAPs find the management IP address of the controller when it is on a different subnet? If you do not tell the LAP where the controller is via DHCP option 43, DNS resolution of "Cisco-capwap- controller.local_domain", or statically configure it, the LAP does not know where in the network to find the management interface of the controller.

Reference: https://www.cisco.com/c/en/us/support/docs/wireless/5500-series-wireless-controllers/119286-lap-notjoin-wlc-tshoot.html

QUESTION 35
Using the EIRP formula, what parameter is subtracted to determine the EIRP value?

A. transmitter power
B. antenna cable loss

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C. antenna gain
D. signal-to-noise ratio

Correct Answer: B
Explanation

Explanation/Reference:
Once you know the complete combination of transmitter power level, the length of cable, and the antenna gain, you can figure out the actual power level that will be radiated from the antenna. This is known as the effective isotropic radiated power (EIRP), measured in dBm. EIRP is a very important parameter because it is regulated by governmental agencies in most countries. In those cases, a system cannot radiate signals higher than a maximum allowable EIRP. To find the EIRP of a system, simply add the transmitter power level to the antenna gain and subtract the cable loss.

QUESTION 36
Refer to the exhibit.

```
access-list 1 permit 172.16.1.0 0.0.0.255
ip nat inside source list 1 interface gigabitethernet0/0 overload
```

The inside and outside interfaces in the NAT configuration of this device have been correctly identified.

What is the effect of this configuration?

A. dynamic NAT
B. NAT64
C. PAT
D. static NAT

Correct Answer: C
Explanation

Explanation/Reference:
The command "ip nat inside source list 1 interface gigabitethernet0/0 overload" translates all source addresses that pass access list 1, which means 172.16.1.0/24 subnet, into an address assigned to gigabitethernet0/0 interface. Overload keyword allows to map multiple IP addresses to a single registered IP address (many- to-one) by using different ports so it is called Port Address Translation (PAT).

QUESTION 37
The following system log message is presented after a network administrator configures a GRE tunnel:

%TUN-RECURDOWN Interface Tunnel 0 temporarily disabled due to recursive routing.

Why is Tunnel 0 disabled?

A. Because dynamic routing is not enabled
B. Because the tunnel cannot reach its tunnel destination
C. Because the best path to the tunnel destination is through the tunnel itself
D. Because the router cannot recursively identify its egress forwarding interface.

Correct Answer: C
Explanation

Explanation/Reference:
The %TUN-5-RECURDOWN: Tunnel0 temporarily disabled due to recursive routing error message means that the generic routing encapsulation (GRE) tunnel router has discovered a recursive routing problem. This condition is usually due to one of these causes:
+ A misconfiguration that causes the router to try to route to the tunnel destination address using the tunnel

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interface itself (recursive routing) + A temporary instability caused by route flapping elsewhere in the network Reference: https:// www.cisco.com/c/en/us/support/docs/ip/enhan

QUESTION 38
Which solution supports end to end line-rate encryption between two sites?

A. IPsec
B. TrustSec
C. MACseC
D. GRE

Correct Answer: A
Explanation

QUESTION 39
Which hypervisor requires a host OS to run and is not allowed to directly access the hosts hardware and resources?

A. native
B. bare metal
C. type 1
D. type 2

Correct Answer: D
Explanation

QUESTION 40
Refer to the exhibit.

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```
Router A
Interface GigabitEthernet 1/0
ip address 192.168.0.1 255.255.255.0
vrrp priority 120

Router B
Interface GigabitEthernet 1/0
ip address 192.168.0.200 255.255.255.0
vrrp priority 100

Router C
Interface GigabitEthernet 1/0
ip address 192.168.0.3 255.255.255.0
vrrp priority 130

Router D
Interface GigabitEthernet 1/0
ip address 192.168.0.4 255.255.255.0
vrrp priority 90
```

Which router is elected as the VRRP primary virtual router?

A. Router B
B. Router D
C. Router C
D. Router A

Correct Answer: C
Explanation

QUESTION 41
Which of the following are examples of Type 2 hypervisors? (Choose three.)

A. VMware ESXi
B. Oracle VirtualBox
C. Oracle Solaris Zones
D. Microsoft Hyper-V
E. Microsoft Virtual PC

Correct Answer: BCE
Explanation

QUESTION 42
What is a characteristic of VXLAN?

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A. It extends Layer 2 and Layer 3 overlay networks over a Layer 2 underlay
B. It has a 12-byte packet header
C. It uses TCP for transport,
D. It is a multi-tenant solution.

Correct Answer: D
Explanation

QUESTION 43
When a wired client connects to an edge switch in an SDA fabric, which component decides whether the client has access to the network?

A. control-plane node
B. Identity Service Engine
C. RADIUS server
D. edge node

Correct Answer: B
Explanation

Explanation/Reference:
Eventhought 802.1X can run with a 3rd party radius server, for SDA policy to work must be with ISE as use trusect for the security plane.

ex. https://community.cisco.com/t5/networking-documents/how-to-use-group-based-policies-with-3rd-party-radius-using/ta-p/3930041

QUESTION 44
In a campus network design, what are two benefits of using BFD for failure detection? (Choose two.)

A. BFD speeds up routing convergence time.
B. BFD is an efficient way to reduce memory and CPU usage.
C. BFD provides fault tolerance by enabling multiple routers to appear as a single virtual router.
D. BFD provides path failure detection in less than a second.
E. BFD enables network peers to continue forwarding packets in the event of a restart.

Correct Answer: AD
Explanation

QUESTION 45
Refer to the exhibit.

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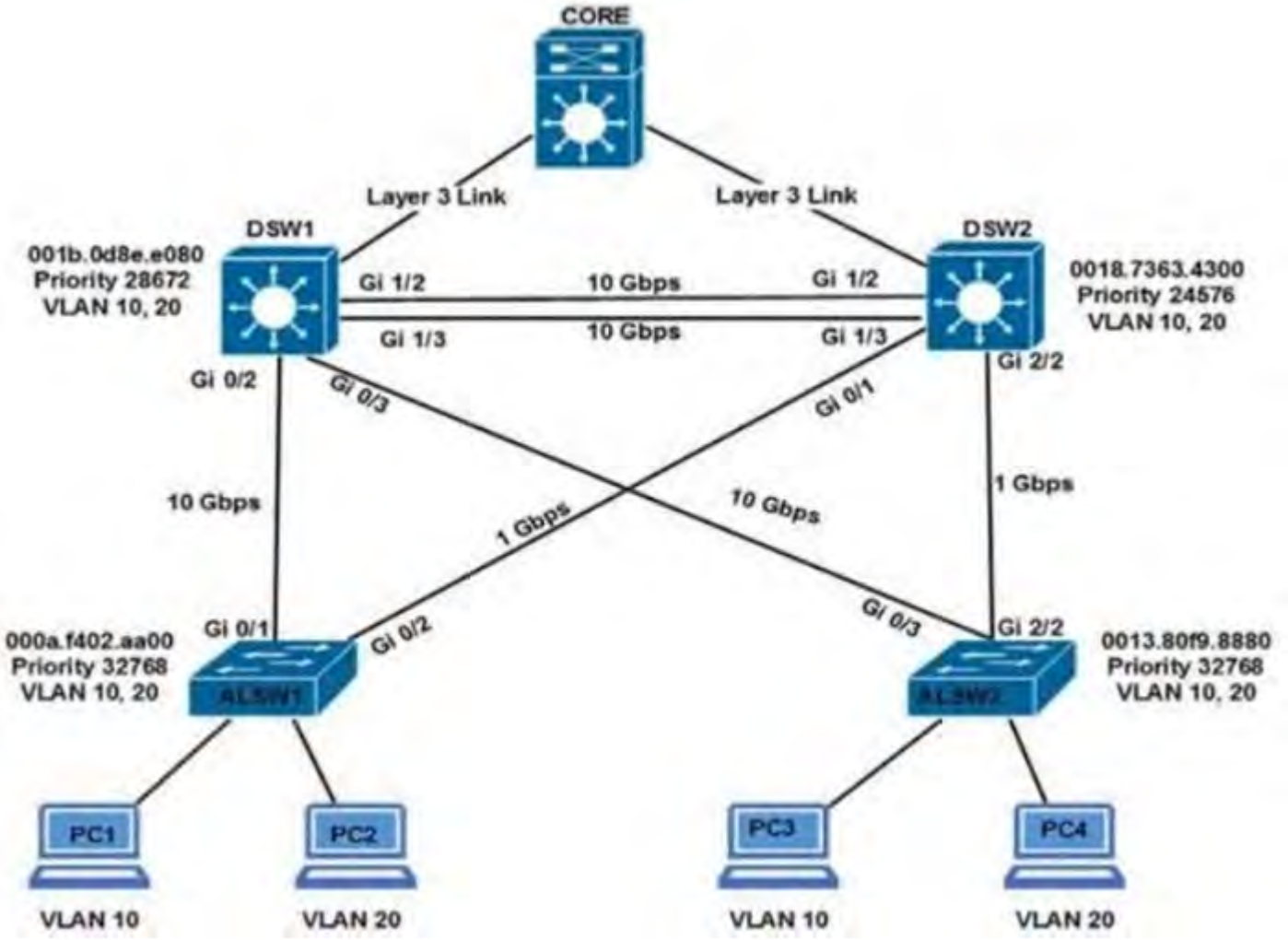

Assuming all links are functional, which path does PC1 take to reach DSW1?

A. PC1 goes from ALSW1 to DSW2 to CORE to DSW1.
B. PC1 goes from ALSW1 to DSW2 to ALSW2 to DSW1.
C. PC1 goes from ALSW1 to DSW2 to DSW1.
D. PC1 goes from ALSW1 to DSW1.

Correct Answer: C
Explanation

Explanation/Reference:
Path cost from ALSW1 to root bridge(DSW2) via DSW1 is 2 + 2 = cost of 4. (10gbps+10Gbps)
Path cost from ALSW1 to root bridge(DSW2) is 4 = cost of 4. (1Gbps)
Therefore the patch cost equal and DSW2 is root bridge Therefore it will via Gi0/2.

Answer is C.
IF let say the question change the ALSW1 to DSW2 Gi0/2 interface to 100Mbps (cost=19) , the answer will be different.
ALSW1 to DSW2 will be blocked.
Answer will be D.

QUESTION 46
What is the purpose of the weight attribute in an EID-to-RLOC mapping?

A. It determines the administrative distance of LISP generated routes in the RIB.
B. It indicates the load-balancing ratio between ETRs of the same priority.

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C. It indicates the preference for using LISP over native IP connectivity.
D. It identifies the preferred RLOC address family.

Correct Answer: B
Explanation

QUESTION 47
What does the destination MAC on the outer MAC header identify in a VXLAN packet?

A. thee emote spine
B. the next hop
C. the leaf switch
D. the remote switch

Correct Answer: B
Explanation

QUESTION 48
In a Cisco SD-Access environment, which function is performed by the border node?

A. Connect uteri and devices to the fabric domain.
B. Group endpoints into IP pools.
C. Provide reachability information to fabric endpoints.
D. Provide connectivity to traditional layer 3 networks.

Correct Answer: D
Explanation

QUESTION 49
What ate two characteristics of Cisco SD-Access elements? (Choose two)

A. The border node is required for communication between fabric and nonfabric devices.
B. Fabric endpoints are connected directly to the border node
C. Traffic within the fabric always goes through the control plane node
D. The control plane node has the full RLOC-to-EID mapping database
E. The border node has the full RLOC-to-EID mapping database

Correct Answer: AD
Explanation

QUESTION 50
Which mobility role is assigned to a client in the client table of the new controller after a Layer 3 roam?

A. anchor
B. foreign
C. mobility
D. transparent

Correct Answer: D
Explanation

QUESTION 51
Which Quality of Service (QoS) mechanism allows the network administrator to control the maximum rate

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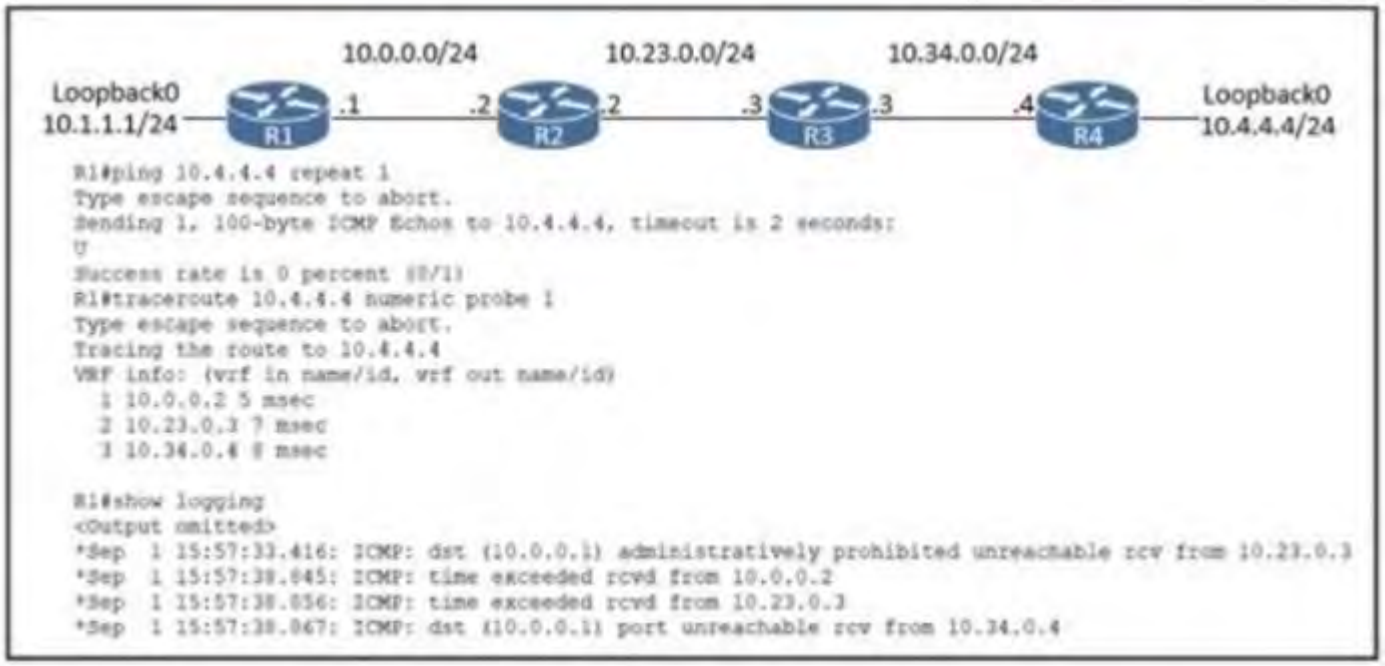
of traffic received or sent on a given interface?

A. Policing
B. Marking
C. Queueing
D. Classification

Correct Answer: A
Explanation

Explanation/Reference:
Traffic Policing
In general, traffic policing allows you to control the maximum rate of traffic sent or received on an interface and to partition a network into multiple priority levels or class of service (CoS).

QUESTION 52
Refer to the exhibit.



What is the cause of the communication failure between R1 and R4?

A. R1 is configured with the no ip unreachables command.
B. R2 is denying ICMP
C. R4 is denying ICMP.
D. R3 is denying ICMP.

Correct Answer: A
Explanation

QUESTION 53
Refer to the exhibit.

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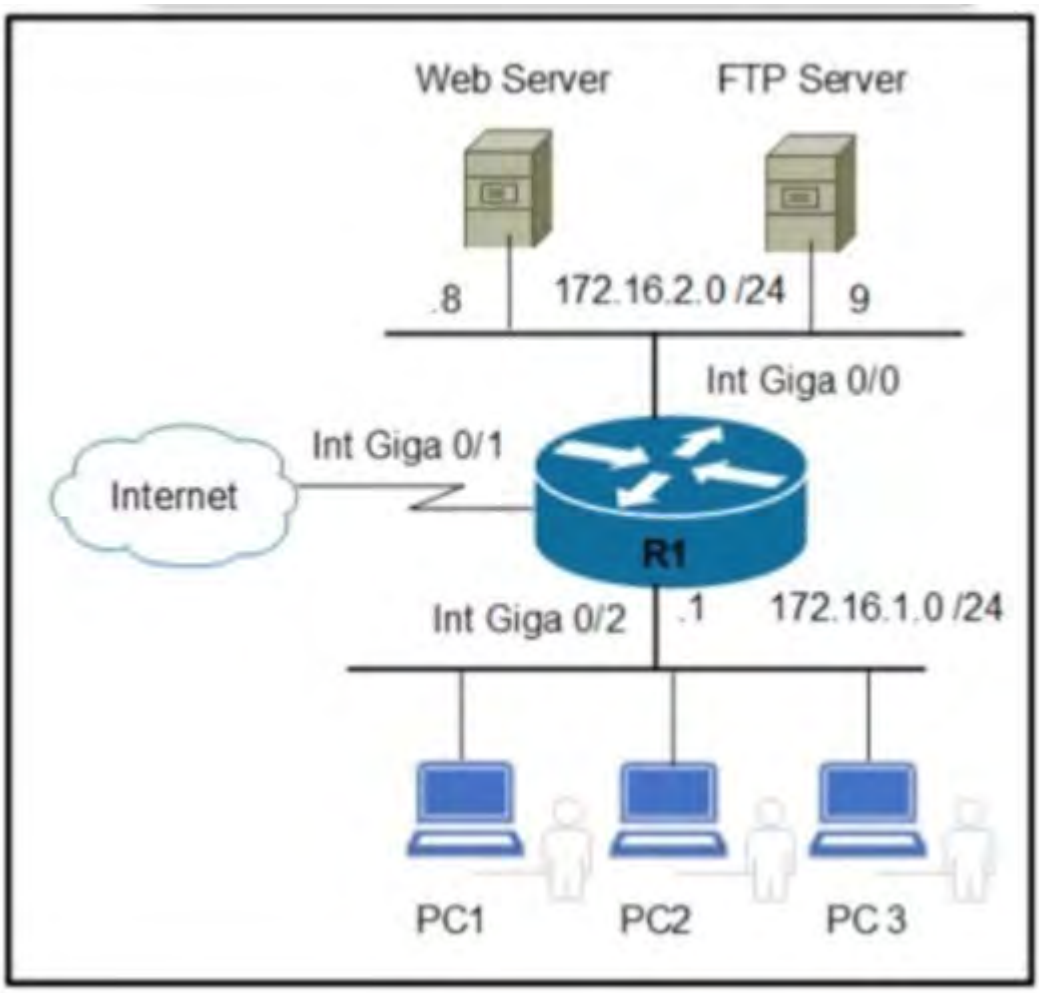

An engineer must allow the FTP traffic from users on 172.16.1.0 /24 to 172.16.2.0 /24 and block all other traffic. Which configuration must be applied?

A. R1(config)# access-list 120 permit tcp 172.16.1.0 0.0.0.255 21 172.16.2.0 0.0.0.255
R1 (config)#interface giga 0/2
R1 (config-if)#ip access-group 120 in

B. R1(config)# access-list 120 permit tcp 172.16.1.0 0.0.0.255 172.16.2.0 0.0.0.255 20
R1(config)# access-list 120 permit tcp 172.16.1.0 0.0.0.255 172.16.2.0 0.0.0.255 21
R1(config)#interface giga 0/2
R1 (config-if)#ip access-group 120 in

C. R1 (config)# access-list 120 deny any any
R1(config)# access-list 120 permit tcp 172.16.1.0 0.0.0.255 172.16.2.0 0.0.0.255 21
R1 (config)#interface giga 0/0
R1(config-if)#ip access-group 120 out

D. R1(config)# access-list 120 permit tcp 172.16.1.0 0.0.0.255 21 172.16.2.0 0.0.0.255
R1(config)# access-list 120 permit udp 172.16.1.0 0.0.0.255 21 172.16.2.0 0.0.0.255
R1 (config)#interface giga 0/2
R1(config-if)#ip access-group 120 out

Correct Answer: B
Explanation

QUESTION 54
Refer to the exhibit.

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Extended access-list 100 is configured on interface GigabitEthernet 0/0 in an inbound direction, but it does not have the expected behavior of allowing only packets to or from 192 168 0.0/16

Which command set properly configures the access list?

A. R1(config)#no access-list 100 deny ip any any
B. R1(config)#no access-list 100 seq 10
R1(config)#access-list 100 seq 40 deny ip any any
C. R1(config)#ip access-list extended 100
R1(config-ext-nacl)#5 permit ip any any
D. R1(config)#ip access-list extended 100
R1(config-ext-nacl)#no 10

Correct Answer: D
Explanation

Explanation/Reference:
The first ACL statement of "10 deny ip any any" will match and drop all traffic so we have to remove this statement.

QUESTION 55
Refer to the exhibit.

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Clients report that they cannot connect to this SSID using the provided PSK. Which action will resolve this issue?

A. Apply the correct interface to this WLAN.
B. Apply the changes this SSID.
C. Select the PSK under authentication key management.
D. Define the correct Radio Policy.

Correct Answer: C
Explanation

Explanation/Reference:
As it stands it is configured for radius auth and must be changed to PSK.

QUESTION 56
Refer to the exhibit.

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```
SW1#show cdp neighbors | include Local|0/1
Device ID      Local Intrfce    Holdtme    Capability  Platform  Port ID
SW2            Fas 0/1          131        R S  WS-C3750-  Fas 0/1

SW1#show interfaces FastEthernet0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: static access
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: native
Negotiation of Trunking: On

SW2#show cdp neighbors | include Local|0/1
Device ID      Local Intrfce    Holdtme    Capability  Platform  Port ID
SW1            Fas 0/1          142        R S  WS-C3750-  Fas 0/1

SW2#show interfaces FastEthernet0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: static access
Administrative Trunking Encapsulation: isl
Operational Trunking Encapsulation: native
Negotiation of Trunking: On
```

An engineer configures a trunk between SW1 and SW2 but tagged packets are not passing. Which action fixes the issue?

A. Configure SW1 with dynamic auto mode on interface FastEthernet0/1.
B. Configure the native VLAN to be the same VLAN on both switches on interface FastEthernet0/1.
C. Configure SW2 with encapsulation dot1q on interface FastEthernet0/1.
D. Configure FastEthernet0/1 on both switches for static trunking.

Correct Answer: C
Explanation

QUESTION 57
How do cloud deployments compare to on-premises deployments?

A. Cloud deployments provide a better user experience across world regions, whereas on- premises

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deployments depend upon region-specific conditions

B. Cloud deployments are inherently unsecure. whereas a secure architecture is mandatory for on-premises deployments.
C. Cloud deployments mandate a secure architecture, whereas on-premises deployments are inherently unsecure.
D. Cloud deployments must include automation infrastructure, whereas on-premises deployments often lack the ability for automation.

Correct Answer: A
Explanation

Explanation/Reference:
Easily deploy your application in multiple regions around the world with just a few clicks. This means you can provide lower latency and a better experience for your customers at minimal cost.
https://docs.aws.amazon.com/whitepapers/latest/aws-overview/six-advantages-of-cloud-computing.html

QUESTION 58
Which free application has the ability to make REST calls against Cisco DNA Center?

A. API Explorer
B. REST Explorer
C. Postman
D. Mozilla

Correct Answer: C
Explanation

Explanation/Reference:
Reference:
https://developer.cisco.com/docs/dna-center/#!getting-started

QUESTION 59
Refer to the exhibit.

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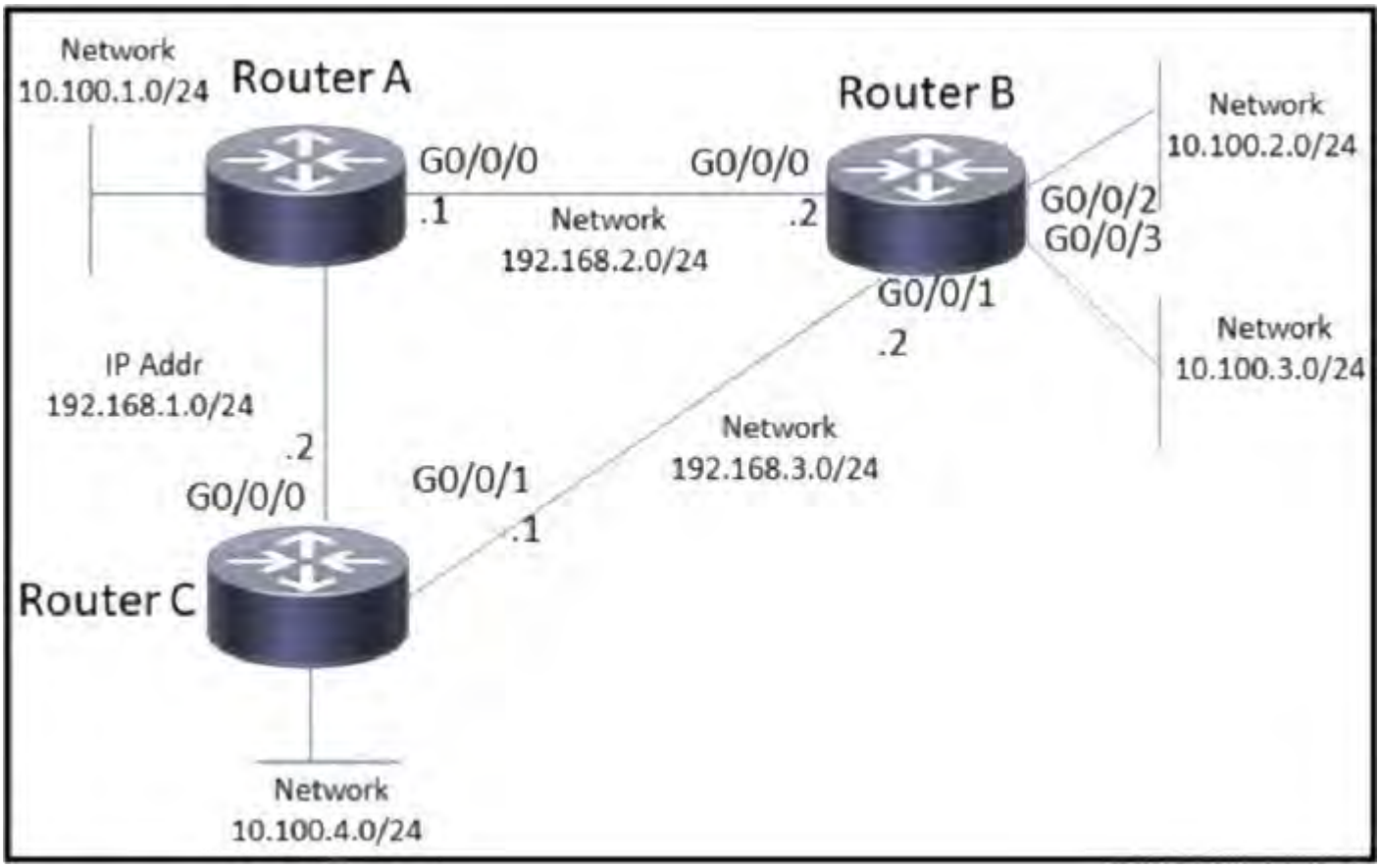

A network administrator must configure router B to allow traffic only from network 10.100.2.0 to networks outside of router B. Which configuration must be applied?

A. RouterB(config)# access-list 101 permit ip 10.100.2.0 0.0.0.255 any
RouterB(config)# access-list 101 deny any
RouterB(config)# int g0/0/0
RouterB(config-if)# ip access-group 101 out

B. RouterB(config)# access-list 101 permit ip 10.100.3.0 0.0.0.255 any
RouterB(config)# access-list 101 deny any
RouterB(config)# int g0/0/0
RouterB(config-if)# ip access-group 101 out
RouterB(config)# int g0/0/1
RouterB(config-if)# ip access-group 101 out

C. RouterB(config)# access-list 101 permit ip 10.100.2.0 0.0.0.255 any
RouterB(config)# access-list 101 deny any
RouterB(config)# int g0/0/2
RouterB(config-if)# ip access-group 101 in

D. RouterB(config)# access-list 101 permit ip 10.100.2.0 0.0.0.255 any
RouterB(config)# int g0/0/0
RouterB(config-if)# ip access-group 101 out
RouterB(config)# int g0/0/1
RouterB(config-if)# ip access-group 101 out

Correct Answer: D
Explanation

QUESTION 60
Refer to the exhibit.

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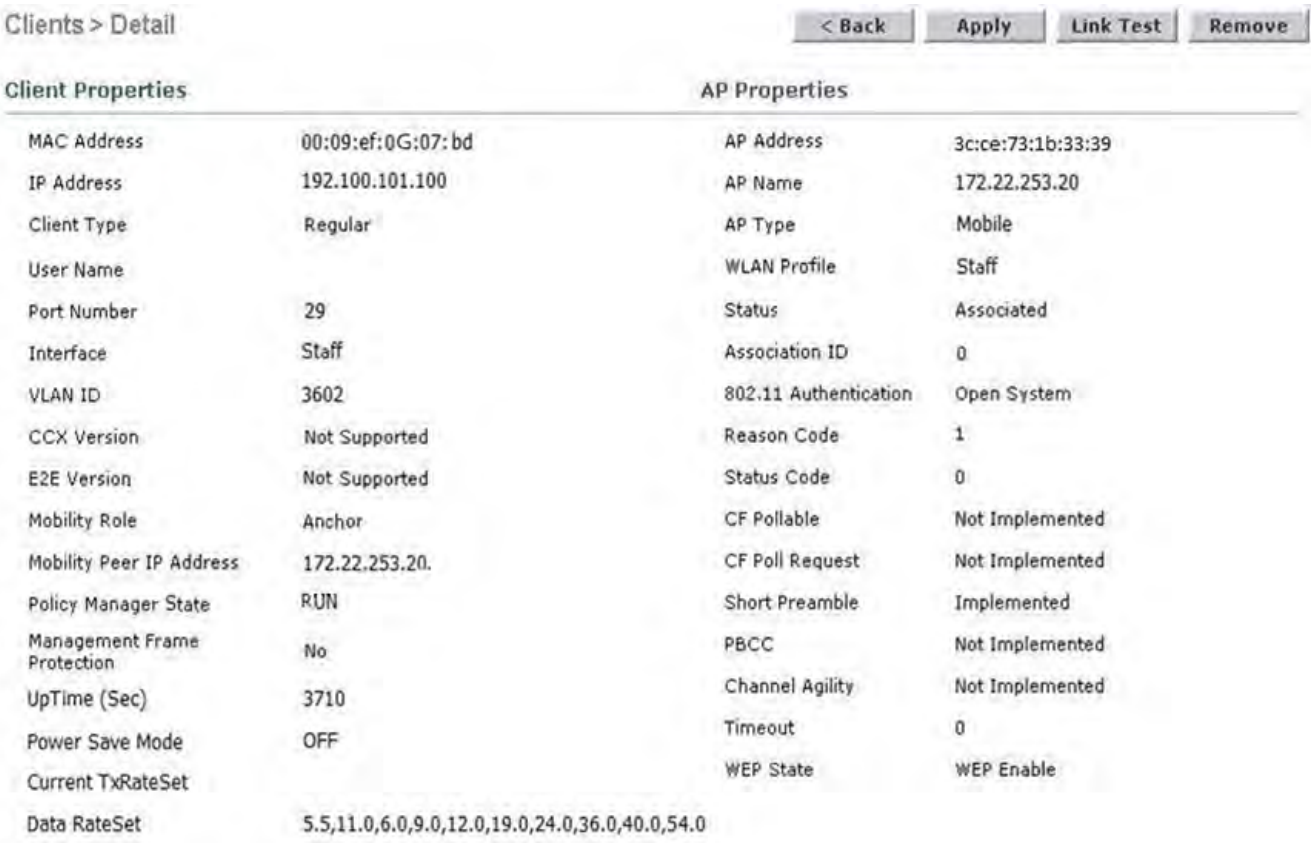

The WLC administrator sees that the controller to which a roaming client associates has Mobility Role Anchor configured under Clients > Detail.

Which type of roaming is supported?

A. Indirect
B. Layer 3 intercontroller
C. Layer 2 intercontroller
D. Intercontroller

Correct Answer: B
Explanation

Explanation/Reference:
What is a Mobility Anchor?
Mobility Anchor, also referred to as Guest tunneling or Auto Anchor Mobility, is a feature where all the client traffic that belongs to a WLAN (Specially Guest WLAN) is tunneled to a predefined WLC or set of controllers that are configured as Anchor for that specific WLAN. This feature helps to restrict clients to a specific subnet and have more control over the user traffic. Refer to theConfiguring Auto-Anchor Mobilitysection of Cisco Wireless LAN Controller Configuration Guide, Release 8.8for more information on this feature.

This would be a L3 Roam as the client is Anchored to the AP with a CAPWAP tunnel formed between the Anchor WLC and the associated WLC

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https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/107188-mobility-groups-faq.html#anc15

QUESTION 61
A company recently decided to use RESTCONF instead of NETCONF and many of their NETCONF scripts contain the operation

<edit-config>(operation="create").

Which RESTCONF operation must be used to replace these statements?

A. POST
B. GET
C. PUT
D. CREATE

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/dcn/nx-os/nexus9000/101x/programmability/cisco-nexus-9000-series-nx-os-programmability-guide-release-101x/m-n9k-agent-restconf-101x.pdf

QUESTION 62
Which component handles the orchestration plane of the Cisco SD-WAN?

A. vBond
B. vSmart
C. vManage
D. vEdge

Correct Answer: A
Explanation

Explanation/Reference:
+ Orchestration plane (vBond) assists in securely onboarding the SD-WAN WAN Edge routers into the SD-WAN overlay. The vBond controller, or orchestrator, authenticates and authorizes the SD-WAN components onto the network. The vBond orchestrator takes an added responsibility to distribute the list of vSmart and vManage controller information to the WAN Edge routers. vBond is the only device in SD-WAN that requires a public IP address as it is the first point of contact and authentication for all SD-WAN components to join the SD-WAN fabric. All other components need to know the vBond IP or DNS information.

Reference: https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2018/pdf/BRKCRS-2112.pdf page 8.

QUESTION 63
Company policy restricts VLAN 10 to be allowed only on SW1 and SW2. All other VLANs can be on all three switches. An administrator has noticed that VLAN 10 has propagated to SW3.

Which configuration corrects the issue?

A. SW1(config)#int gi1/1
SW1(config)#switchport trunk allowed vlan 1-9,11-4094
B. SW2(config)#int gi1/2

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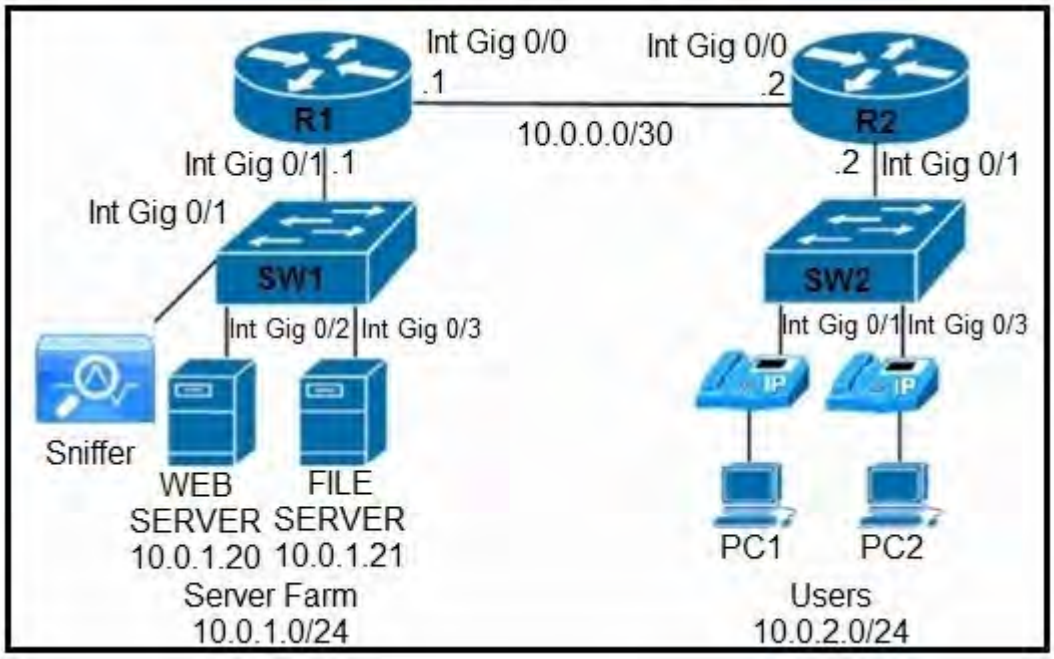
SW2(config)#switchport trunk allowed vlan 10

C. SW2(config)#int gi1/2
SW2(config)#switchport trunk allowed vlan 1-9,11-4094

D. SW1(config)#int gi1/1
SW1(config)#switchport trunk allowed vlan 10

Correct Answer: C
Explanation

QUESTION 64
Refer to the exhibit.



A network engineer is troubleshooting an issue with the file server based on reports of slow file transmissions. Which two commands or command sets are required to switch SW1 to analyze the traffic from the file server with a packet analyzer? (Choose two.)

A. SW1#show monitor

B. SW1(config)#monitor session 1 source interface gigabitethernet0/3
SW1(config)#monitor session 1 destination interface gigabitethernet0/1 encapsulation replicate

C. SW1#show ip route

D. SW1#show vlan

E. SW1(config)#monitor session 1 source interface gigabitethernet0/1
SW1(config)#monitor session 1 destination interface gigabitethernet0/3 encapsulation replicate

Correct Answer: AB
Explanation

QUESTION 65
What is a Type 1 hypervisor?

A. runs directly on a physical server and depends on a previously installed operating system

B. runs directly on a physical server and includes its own operating system

C. runs on a virtual server and depends on an already installed operating system

D. run on a virtual server and includes its own operating system

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Correct Answer: B
Explanation

Explanation/Reference:
A type 1 hypervisor, also known as a bare-metal or native hypervisor, runs directly on the physical server and its underlying hardware. It does not depend on a previously installed operating system, but rather includes its own operating system that is designed to run virtual machines. A type 1 hypervisor provides excellent performance and stability, as it has direct access to the hardware resources and can allocate them to the virtual machines. A type 1 hypervisor is typically used in enterprise environments, where multiple virtual machines run on a single server.

QUESTION 66
Refer to the exhibit.

```
R2#show ip ospf neighbor

R2#show ip ospf interface fastEthernet 1/1
FastEthernet1/1 is up, line protocol is up
  Internet Address 192.168.0.5/30, Area 0
  Process ID 1, Router ID 10.0.0.5, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 10.0.0.5, Interface address 192.168.0.5
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:00
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 0, maximum is 0
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
R2#ping 192.168.0.6 df-bit size 1500

Type escape sequence to abort.
Sending 5, 1500-byte ICMP Echos to 192.168.0.6, timeout is 2 seconds:
Packet sent with the DF bit set
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/12/16 ms
```

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```
R3#show ip ospf neighbor

R3#show ip ospf interface fastEthernet 1/1
FastEthernet1/1 is up, line protocol is up
  Internet Address 192.168.0.6/29, Area 0
  Process ID 1, Router ID 10.0.0.3, Network Type BROADCAST, Cost: 1
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 10.0.0.3, Interface address 192.168.0.6
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:06
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 0, maximum is 0
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
R3#ping 192.168.0.5 df-bit size 1500

Type escape sequence to abort.
Sending 5, 1500-byte ICMP Echos to 192.168.0.5, timeout is 2 seconds:
Packet sent with the DF bit set
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/12/20 ms
```

Why does the OSPF neighborship fail between the two interfaces?

A. The IP subnet mask is not the same.
B. There is a mismatch in the OSPF interface network type.
C. The OSPF timers are different.
D. The MTU is nor the same.

Correct Answer: A
Explanation

Explanation/Reference:
R2: /30 vs R3: /29

QUESTION 67
Refer to the exhibit.

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```
R1# show run int tunnel 0
Building configuration...
Current configuration : 127 bytes
!
interface Tunnel0
ip address 192.168.1.1 255.255.255.252
tunnel source FastEthernet1/0
tunnel destination 200.1.1.1
end
```

```
R2# show run int tunnel 0
Building configuration...
Current configuration : 125 bytes
!
interface Tunnel0
ip address 192.168.1.2 255.255.255.252
tunnel destination 100.1.1.1
end
```

```
R1#show interfaces tunnel 0
Tunnel0 is up, line protocol is up
Hardware is Tunnel
Internet address is 192.168.1.1/30
MTU 17916 bytes, BW 100 Kbit/sec, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel source 100.1.1.1 (FastEthernet1/0), destination
200.1.1.1
Tunnel Subblocks:
src-track:
Tunnel0 source tracking subblock associated with
FastEthernet1/0
Set of tunnels with source FastEthernet1/0, 1 member
(includes iterators), on interface
<OK>
Tunnel protocol/transport GRE/IP
Key disabled, sequencing disabled
Checksumming of packets disabled
Tunnel TTL 255, Fast tunneling enabled
Tunnel transport MTU 1476 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
```

Which GRE tunnel configuration command is missing on R2?

A. tunnel source 192.181.2
B. tunnel source 172.16.1.0
C. tunnel source 200.1.1.1
D. tunnel destination 200.1.1.1

Correct Answer: C
Explanation

QUESTION 68
Refer to the exhibit.

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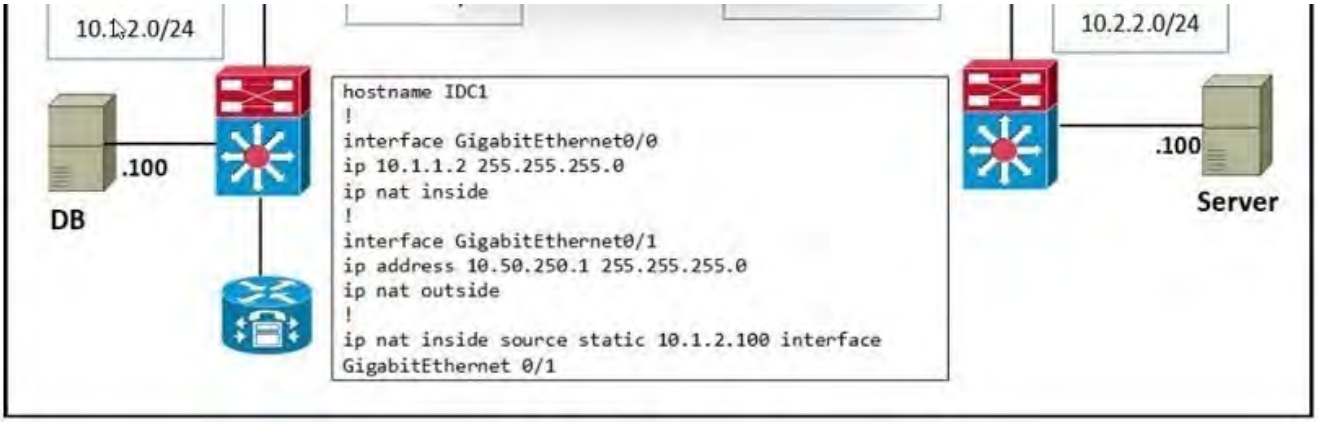

The server in DC2 is expecting traffic from the database in DC1 to use the source network of 10.50.250.0/24. The server sends the initial request. The inside global IP is configured for 10.50.250.1. What is the result of this configuration?

A. Only the server can initiate communication.
B. The server and the database cannot communicate.
C. The server and the database can initiate communication.
D. Only the database can initiate communication

Correct Answer: C
Explanation

QUESTION 69
What is a characteristic of a Type 1 hypervisor?

A. It is referred to as a hosted hypervisor.
B. It is completely independent of the operating system.
C. Problems in the base operating system can affect the entire system.
D. It is installed on an operating system and supports other operating systems above it.

Correct Answer: B
Explanation

QUESTION 70
Refer to the exhibit. An engineer must assign an IP address of 192.168.1.1/24 to the GigabitEthemet1 interface. Which two commands must be added to the existing configuration to accomplish this task? (Choose two)

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```
Current configuration : 142 bytes
vrf definition STAFF
!
!
interface GigabitEthernet1
 vrf forwarding STAFF
 no ip address
 negotiation auto
 no mop enabled
 no mop sysid
end
```

A. Router(config-vrf)#address-family ipv6
B. Router(config-if)#ip address 192.168.1.1 255.255.255.0
C. Router(config-vrf)Sip address 192.168.1.1 255.255.255.0
D. Router(config-if)=address-family ipv4
E. Router(config-vrf)#address-family ipv4

Correct Answer: BE
Explanation

Explanation/Reference:
Router#show run vrf STAFF
Building configuration...

Current configuration : 237 bytes
vrf definition STAFF
!
address-family ipv4
exit-address-family

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```
!
!
interface GigabitEthernet0/1
vrf forwarding STAFF
ip address 192.168.1.1 255.255.255.0
standby version 2
shutdown
duplex auto
speed auto
media-type rj45
!
end
```

QUESTION 71
Refer to the exhibit.

```
1  def main():
2      vlans = {'vlan10':'192.168.1.0',
3           'vlan20':'192.168.2.0',
4           'vlan30':'192.168.3.0' }
5      vlans_key(vlans)
6
7  def vlans_key(vlans):
8      for key in vlans.keys():
9          print(str(key) +' '+ str(vlans[key]))
10
11 if __name__ == '__main__':
12     main()
```

What is printed to the console when this script is run?

A. a key-value pair in tuple type
B. a key-value pair in list type
C. a key-value pair in string type
D. an error

Correct Answer: C
Explanation

QUESTION 72
High bandwidth utilization is occurring on interface Gig0/1 of a router. An engineer must identify the flows that are consuming the most bandwidth. Cisco DNA Center is used as a flow exporter and is configured with the IP address 192.168.23.1 and UDP port 23000. Which configuration must be applied to set NetFlow data export and capture on the router?

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A.
```
R1(config)# ip flow-export
R1(config)# ip flow-export destination 192.168.23.1 23000
R1(config)# interface Gig0/1
R1(config-if)# ip flow monitor
```

B.
```
R1(config)# ip flow-export
R1(config)# ip flow-export destination 192.168.23.1
R1(config)# interface Gig0/1
R1(config-if)# collect counter bytes
R1(config-if)# collect counter packets
```

C.
```
R1(config)# ip flow-export version 9
R1(config)# ip flow-export destination 192.168.23.1 23000
R1(config)# interface Gig0/1
R1(config-if)# ip flow ingress
R1(config-if)# ip flow egress
```

D.
```
R1(config)# ip flow-export version 9
R1(config)# ip flow-export destination 192.168.23.1 23000
R1(config)# interface Gig0/1
R1(config-if)# ip flow-top-talkers
```

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

Correct Answer: C
Explanation

Explanation/Reference:
https://www.cisco.com/c/dam/en/us/td/docs/security/stealthwatch/netflow/Cisco_NetFlow_Configuration.pdf

QUESTION 73
Refer to the exhibit.

```
import sqlite3
a= sqlite3.connect('/home/sdwan-lab/user.sqlite3')
b= a.cursor()
c= "select user from monitor_branch where loopbackip='" + str(ip[i]) + "'"
d= b.execute(c)
e= b.fetchall()
usr= str(e[0])
usr= usr.replace("('","")
usr= usr.replace("',)","")
```

What does this Python script do?

A. enters the TACACS+ username for a specific IP address
B. reads the username for a specific IP address from a light database
C. writes the username for a specific IP address into a light database
D. enters the RADIUS username for a specific IP address

Correct Answer: B

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Explanation

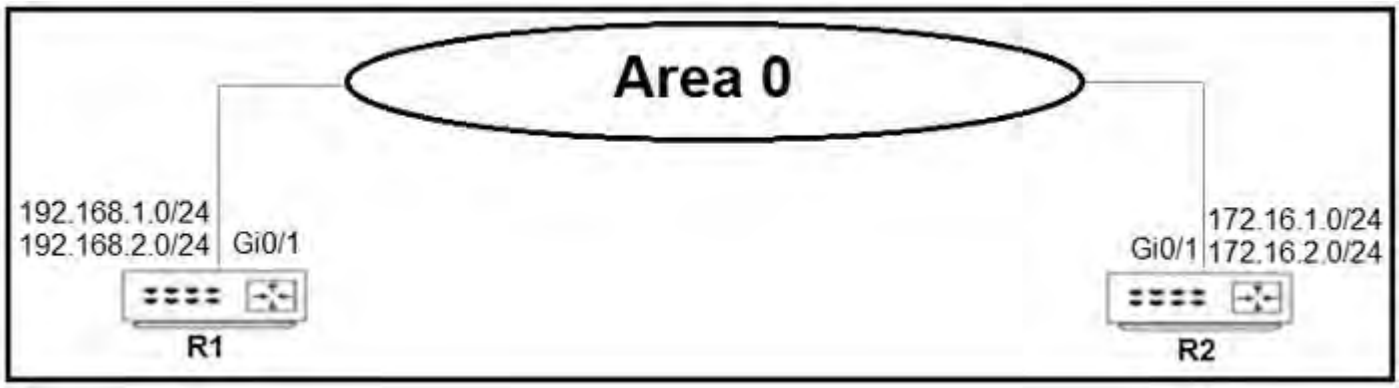
QUESTION 74
Which LISP component decapsulates messages and forwards them to the map server responsible for the egress tunnel routers?

A. Router Locator
B. Map Resolver
C. Proxy ETR
D. Ingress Tunnel Router

Correct Answer: B
Explanation

Explanation/Reference:
reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe-3s/irl-xe-3s-book/irl-overview.pdf

QUESTION 75
Refer to the exhibit.



Which two configurations enable R1 and R2 to advertise routes into OSPF? (Choose two)

A. R2
router ospf 0
network 172.16.1.0 0.0.0.255 area 0
network 172.16.2.0 0.0.0.255 area 0

B. R1
router ospf 0
network 192.168.1.0 255.255.255.0 area 0
network 192.168.2.0 255.255.255.0 area 0

C. R2
router ospf 0
network 172.16.1.0 255.255.255.0 area 0
network 172.16.2.0 255.255.255.0 area 0

D. R1
router ospf 0
network 192.168.1.0 0.0.0.255 area 0
network 192.168.2.0 0.0.0.255 area 0

E. R2
router ospf 0
network 172.16.1.0 0.0.0.255 area 0
network 172.16.2.0 255.255.255.0 area 0

Correct Answer: AD
Explanation

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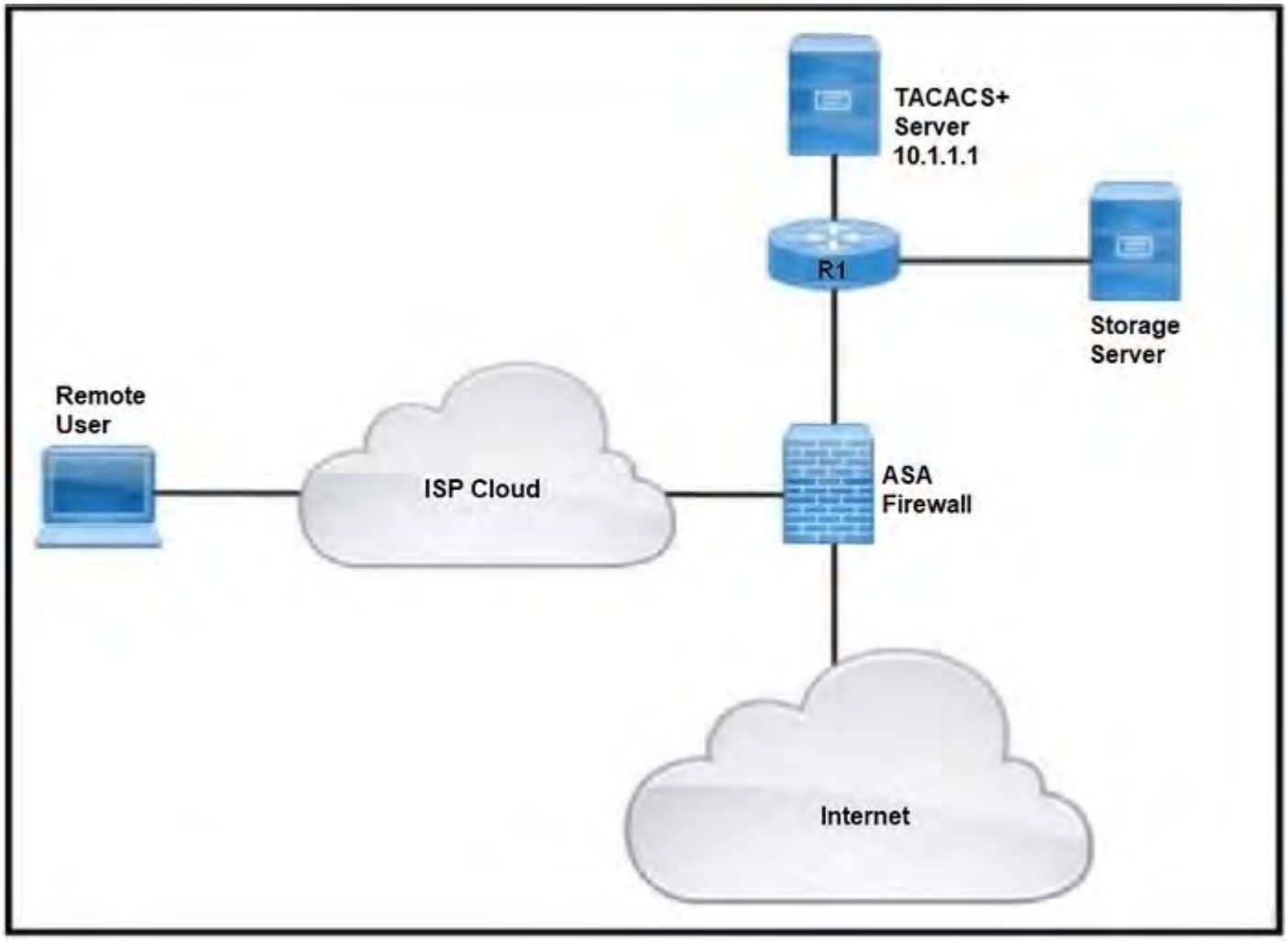
QUESTION 76
Which NTP mode must be activated when using a Cisco router as an NTP authoritative server?

A. primary
B. server
C. broadcast client
D. peer

Correct Answer: B
Explanation

QUESTION 77
Refer to the exhibit



Remote users cannot access the Internet but can upload files to the storage server.

Which configuration must be applied to allow Internet access?

A. ciscoasa(config)# access-list MAIL_AUTH extended permit udp any any eq http
ciscoasa(config)# aaa authentication listener http outside redirect
B. ciscoasa(config)# access-list MAIL_AUTH extended permit tcp any any eq www
ciscoasa(config)# aaa authentication listener http inside redirect
C. ciscoasa(config)# access-list MAIL_AUTH extended permit tcp any any eq http

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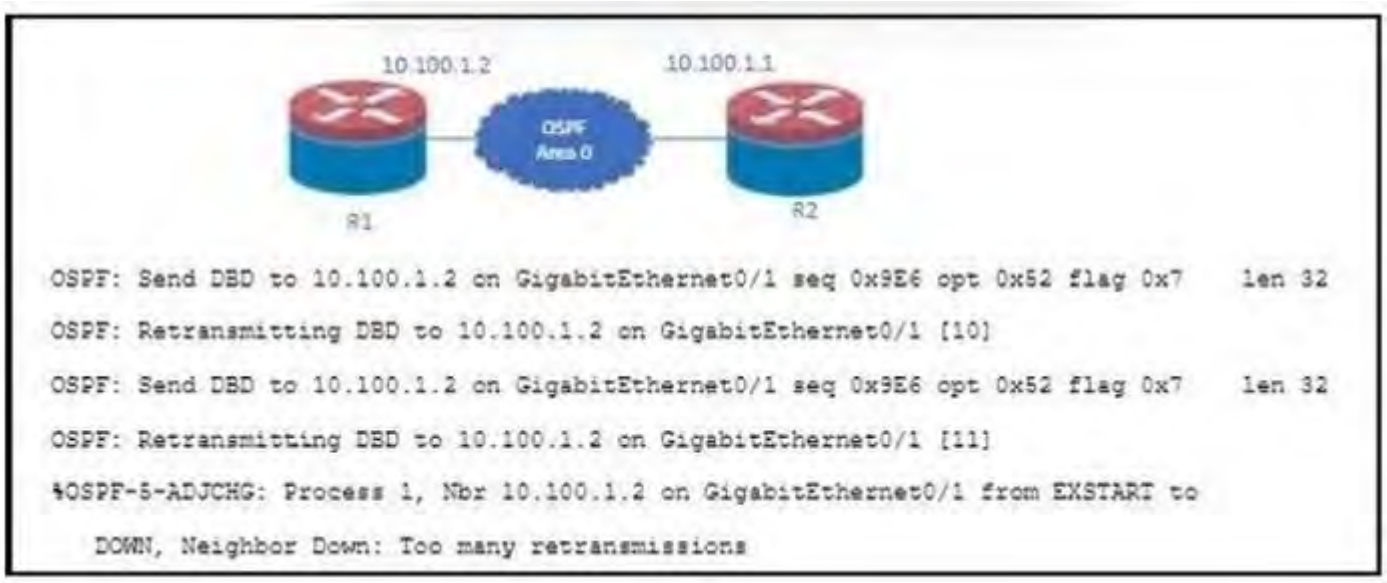
ciscoasa(config)# aaa authentication listener http inside port 43

D. ciscoasa(config)# access-list HTTP_AUTH extended permit udp any any eq http
ciscoasa(config)# aaa authentication listener http outside port 43

Correct Answer: B
Explanation

QUESTION 78
Refer to the exhibit.



Why does OSPF fail to establish an adjacency between R1 and R2?

A. authentication mismatch
B. interface MTU mismatch
C. area mismatch
D. timers mismatch

Correct Answer: B
Explanation

QUESTION 79
An engineer must configure a multicast UDP jitter operation. Which configuration should be applied?

A. Router(config)#ip sla 1
Router(config)#udp-jitter 192.0.2.115 65051
B. Router(config)#ip sla 1
Router(config)#udp jitter 239.1.1.1 65051 end-point list List source-ip 192.168.1.1
C. Router(config)#ip sla 1
Router(config)#udp-jitter 192.0.2.115 65051 num-packets 20
D. Router(config)#ip sla 1
Router(config)#udp jitter 10.0.0.1 source-ip 192.168.1.1

Correct Answer: B
Explanation

Explanation/Reference:
Basically you could argue that A, B and D are correct answers but only with regards to UDP Jitter IP SLA configuration. This question refers to multicast network meaning only B is correct as it identifes a multicast

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responder in the command line
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-s/sla-15-s-book/sla_mcast_suppt.pdf

QUESTION 80
Which configuration restricts the amount of SSH traffic that a router accepts to 100 kbps?

A.

```
class-map match-all CoPP_SSH
    match access-group name CoPP_SSH
   !
policy-map CoPP_SSH
    class CoPP_SSH
  police cir 100000
      exceed-action drop
     !
!
!
  interface GigabitEthernet0/1
   ip address 209.165.200.225 255.255.255.0
   ip access-group EGRESS out
   duplex auto
   speed auto
   media-type rj45
   service-policy input CoPP_SSH
!
  ip access-list extended CoPP_SSH
   permit tcp any any eg 22
!
```

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B.

```
class-map match-all CoPP_SSH
    match access-group name CoPP_SSH
   !
policy-map CoPP_SSH
    class CoPP_SSH
  police cir 100000
      exceed-action drop
     !
!
!
  interface GigabitEthernet0/1
   ip address 209.165.200.225 255.255.255.0
   ip access-group EGRESS out
   duplex auto
   speed auto
   media-type rj4
   service-policy input CoPP_SSH
!
  ip access-list extended CoPP_SSH
   deny tcp any any eg 22
!
```

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C.

```
class-map match-all CoPP_SSH
    match access-group name CoPP_SSH
   !
policy-map CoPP_SSH
    class CoPP_SSH
  police cir 100000
      exceed-action drop
     !
!
!
  control-plane
   service-policy input CoPP_SSH
!
  ip access-list extended CoPP_SSH
   permit tcp any any eg 22
!
```

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D.

```
class-map match-all CoPP_SSH
    match access-group name CoPP_SSH
   !
policy-map CoPP_SSH
    class CoPP_SSH
  police cir 100000
      exceed-action drop
     !
!
!
  control-plane transit
   service-policy input CoPP_SSH
!
  ip access-list extended CoPP_SSH
   permit tcp any any eg 22
!
```

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

Correct Answer: C
Explanation

QUESTION 81
Which function is performed by vSmart in the Cisco SD-WAN architecture'?

A. distribution of IPsec keys/
B. execution of localized policies
C. redistribution between OMP and other routing protocols
D. facilitation of NAT detection and traversal

Correct Answer: A
Explanation

Explanation/Reference:
Authentication: As mentioned, the Cisco SD-WAN control plane contributes the underlying infrastructure for data plane security. In addition, authentication is enforced by two other mechanisms:

In the traditional key exchange model, the Cisco vSmart Controller sends IPsec encryption keys to each edge device

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https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/security/vedge-20-x/security-book/security-overview.html

QUESTION 82
Which two new security capabilities are introduced by using a next-generation firewall at the Internet edge? (Choose two.)

A. DVPN
B. NAT
C. stateful packet inspection
D. application-level inspection
E. integrated intrusion prevention

Correct Answer: DE
Explanation

QUESTION 83
Which A record type should be configured for access points to resolve the IP address of a wireless LAN controller using DNS?

A. CISCO.CONTROLLER.localdomain
B. CISCO.CAPWAP.CONTROLLER.localdomain
C. CISCO-CONTROLLER.localdomain
D. CISCO-CAPWAP-CONTROLLER.localdomain

Correct Answer: D
Explanation

QUESTION 84
Refer to the exhibit.

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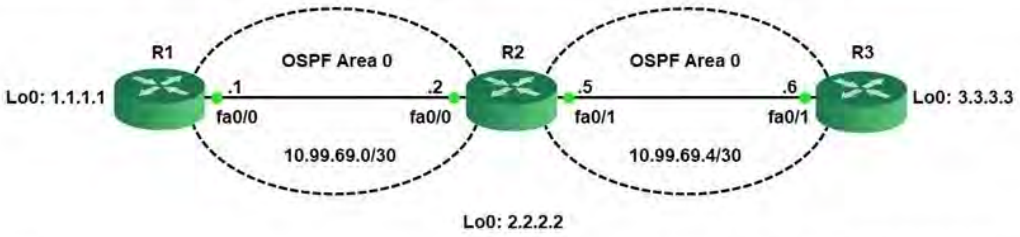


```
R1#traceroute
Protocol [ip]:
Target IP address: 3.3.3.3
Source address: 1.1.1.1
Numeric display [n]:
Timeout in seconds: [3]:
Probe count [3]:
Minimum Time to Live [1]:
Maximum Tine to Live [30]:
Port Number [33434]:
Loose, Strict, Record, Timestamp, Verbose [none]: Record
Number of hops [9]:
Loose, Strict, Record, Timestamp, Verbose [RV]:
Type escape sequence to abort.

Continued --->
```

```
Tracing the route to 3.3.3.3

  1 10.99.69.2 36 msec
Received packet has options
Total option bytes = 40, padded length = 40
  Record route:
    (10.99.69.1) <*>
    (0.0.0.0)
    (0.0.0.0)
   End of list

----output omitted--

  2 10.99.69.6 !A
Received packet has options
Total option bytes = 40, padded length = 40
  Record route:
    (10.99.69.1)
    (10.99.69.5) <*>
    (0.0.0.0)
    (0.0.0.0)
  End of list
  !A
----output omitted---
```

The traceroute fails from R1 to R3.

What is the cause of the failure?

A. The loopback on R3 Is in a shutdown stale.
B. An ACL applied Inbound on loopback0 of R2 Is dropping the traffic.
C. An ACL applied Inbound on fa0/1 of R3 is dropping the traffic.
D. Redistribution of connected routes into OSPF is not configured.

Correct Answer: C
Explanation

Explanation/Reference:
We see in the traceroute result the packet could reach 10.99.69.5 (on R2) but it could not go any further so we can deduce an ACL on R3 was blocking it. Note: Record option displays the address(es) of the hops

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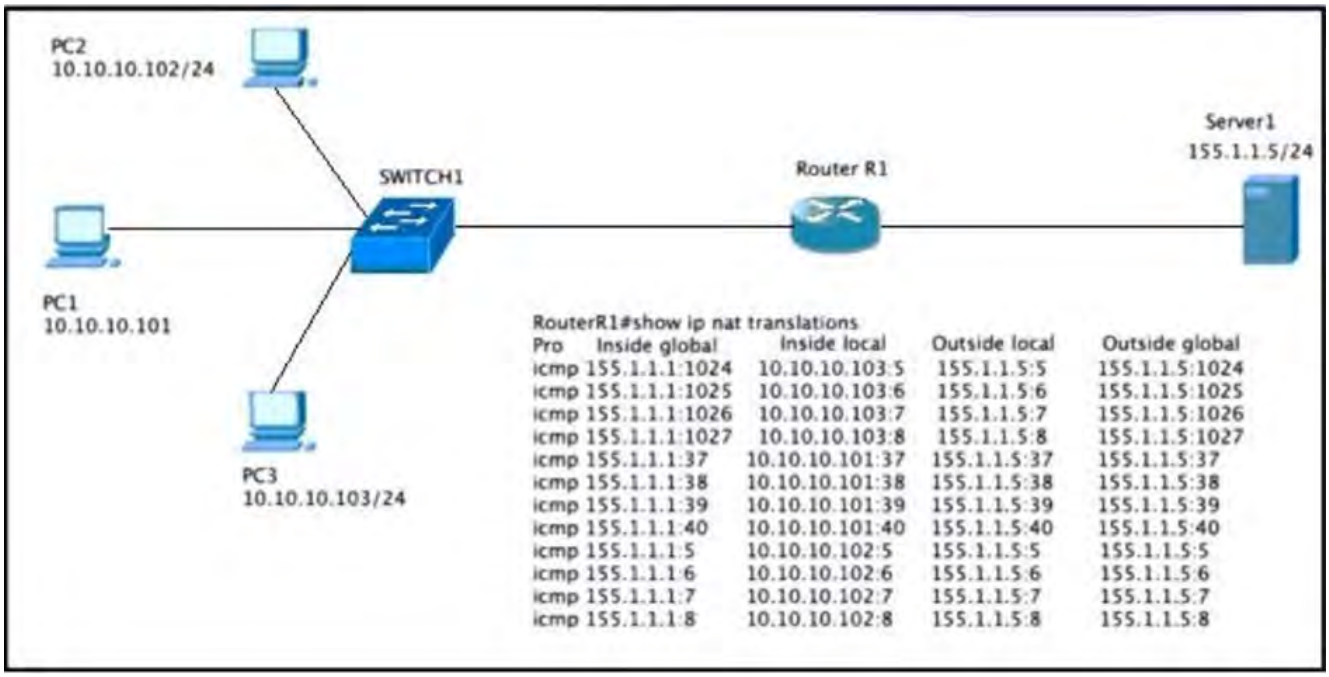
(up to nine) the packet goes through.

QUESTION 85
Refer to the exhibit.



Hosts PC1 PC2 and PC3 must access resources on Serve 1. An engineer configures NAT on Router R1 1e enable the communication and enters the show command to verify operation.

Which IP address is used by the hosts when they communicate globally to Server1?

A. 155.1.1.1
B. randorm addresses in the 155.1.1.0/24 range
C. their own address in the 10.10.10.0/24 rance
D. 155.1.1.5

Correct Answer: A
Explanation

Explanation/Reference:
from inside host perspective the global address is 15.1.1.1

QUESTION 86
What function does VXLAN perform in a Cisco SD-Access deployment?

A. policy plane forwarding
B. control plane forwarding
C. data plane forwarding
D. systems management and orchestration

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Correct Answer: C
Explanation

QUESTION 87
Which technology reduces the implementation of STP and leverages both unicast and multicast?

A. VSS
B. VXLAN
C. VPC
D. VLAN

Correct Answer: B
Explanation

QUESTION 88
A network administrator is preparing a Python scrip to configure a Cisco IOS XE-based device on the network. The administrator is worried that colleagues will make changes to the device while the script is running. Which operation of he in client manager prevent colleague making changes to the device while the scrip is running?

A. m.lock(config='running')
B. m.lock(target='running')
C. m.freeze(target='running')
D. m.freeze(config='running')

Correct Answer: B
Explanation

Explanation/Reference:
The example below shows the usage of lock command:
def demo(host, user, names):
With manager. Connect(host=host, port=22, username=user) as m:
With m.locked(target='running'):
for n in names:
m.edit_config (target='running', config=template % n)
The command "m.locked (target='running')" causes a lock to be acquired on the running datastore.

QUESTION 89
What is the result when an active route processor fails in a design that combines NSF with SSO?

A. An NSF-aware device immediately updates the standby route processor RIB without churning the network
B. The standby route processor temporarily forwards packets until route convergence is complete
C. An NSF-capable device immediately updates the standby route processor RIB without churning the network
D. The standby route processor immediately takes control and forwards packets along known routes

Correct Answer: D
Explanation

Explanation/Reference:
Stateful Switchover
Routers specifically designed for high availability include hardware redundancy, such as dual power supplies and route processors (RPs). An RP is responsible for learning the network topology and building the route table (RIB). An RP failure can trigger routing protocol adjacencies to reset, resulting in packet loss and network instability. During an RP failure, it may be more desirable to hide the failure and allow the router to continue forwarding packets using the previously programmed CEF table entries rather than

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temporarily drop packets while waiting for the secondary RP to reestablish the routing protocol adjacencies and rebuild the forwarding table.

Stateful switchover (SSO) is a redundancy feature that allows a Cisco router with two RPs to synchronize router configuration and control plane state information. The process of mirroring information between RPs is referred to as checkpointing. SSO-enabled routers always checkpoint line card operation and Layer 2 protocol states. During a switchover, the standby RP immediately takes control and prevents basic problems such as interface link flaps. However, Layer 3 packet forwarding is disrupted without additional configuration.

The RP switchover triggers a routing protocol adjacency flap that clears the route table. When the routing table is cleared, the CEF entries are purged, and traffic is no longer routed until the network topology is relearned and the forwarding table is reprogrammed. Enabling nonstop forwarding (NSF) or nonstop routing (NSR) high availability capabilities informs the router(s) to maintain the CEF entries for a short duration and continue forwarding packets through an RP failure until the control plane recovers.

QUESTION 90
Which JSON script is properly formatted?

A.
```
"student":[
        {
            "grade":"9",
            "ID":"7460059362",
            "type":"on-line",
         }]
```

B.
```
{
    "plants":
      [
          "name":"Fern",
          "color":"green",
          "type":"indoor",
       ]
}
```

C.
```
{
  "class": [
   {
   "title":"Cooking 101",
    "type":"elective",
    "session":"fall"
   }
 ]
}
```

D.
```
[
 "class": {
  [
    "title":"History",
    "grade":"5",
    "location":"Site 2"
   }
  ]
]
```

A. Option A
B. Option B

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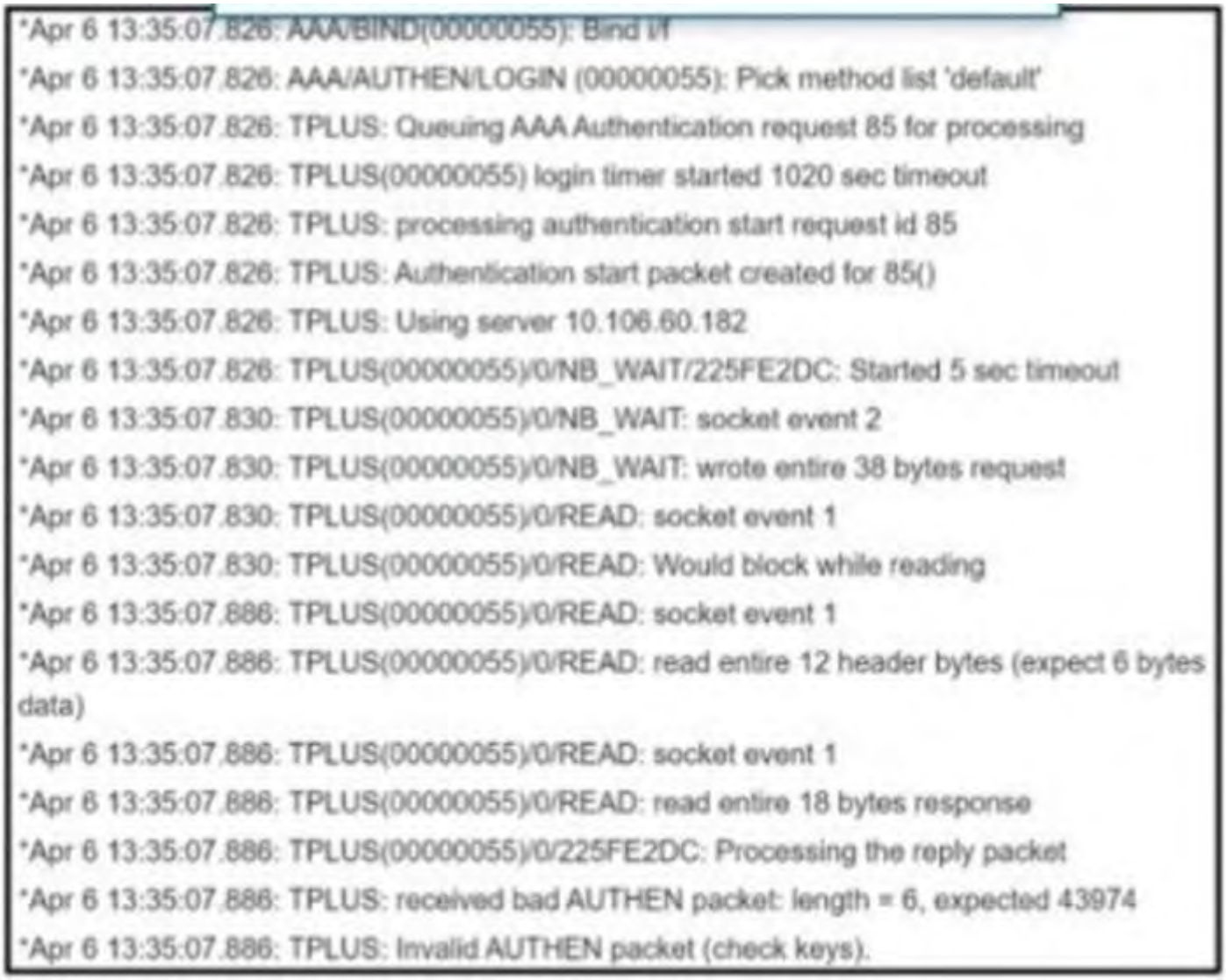
C. Option C
D. Option D

Correct Answer: C
Explanation

QUESTION 91
Refer to the exhibit.



An engines configured TACACS^ to authenticate remote users but the configuration is not working as expected.
Which configuration must be applied to enable access?

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A.
```
R1(config)# ip tacacs source-interface Gig 0/0
```

B.
```
R1(config)# tacacs server prod
R1(config-server-tacacs)# key cisco123
```

C.
```
R1(config)# aaa authorization exec default group tacacs+ local
```

D.
```
R1(config)# tacacs server prod
R1(config-server-tacacs)# port 1020
```

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

Correct Answer: C
Explanation

QUESTION 92
Which language defines the structure or modelling of data for NETCONF and RESTCONF?

A. YAM
B. YANG
C. JSON
D. XML

Correct Answer: B
Explanation

QUESTION 93
What does a YANG model provide?

A. standardized data structure independent of the transport protocols
B. creation of transport protocols and their interaction with the OS
C. user access to interact directly with the CLI of the device to receive or modify network configurations
D. standardized data structure that can be used only with NETCONF or RESTCONF transport protocols

Correct Answer: A
Explanation

Explanation/Reference:
YANG is a standards-based, extensible data modeling language that is used to model the configuration and operational state data, remote procedure calls (RPCs), and server event notifications of network devices. The NETMOD working group in the IETF originally designed YANG to model network management data and to provide a standard for the content layer of the Network Configuration Protocol (NETCONF) model. However, YANG is protocol independent, and YANG data models can be used independent of the transport or RPC protocol and can be converted into any encoding format supported by the network configuration protocol.

QUESTION 94
What does the Cisco DNA Center Authentication API provide?

A. list of global issues that are logged in Cisco DNA Center
B. access token to make calls to Cisco DNA Center

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C. list of VLAN names
D. dent health status

Correct Answer: B
Explanation

QUESTION 95
Which technology enables a redundant supervisor engine to take over when the primary supervisor engine fails?

A. NSF
B. graceful restart
C. SSO
D. FHRP

Correct Answer: C
Explanation

Explanation/Reference:
SSO is the base technology that has this capability at L-2. NSF sits on top of SSO to extend the same capability to L-3.

QUESTION 96
Which tool is used in Cisco DNA Center to build generic configurations that are able to be applied on device with similar network settings?

A. Command Runner
B. Template Editor
C. Application Policies
D. Authentication Template

Correct Answer: B
Explanation

Explanation/Reference:
Cisco DNA Center provides an interactive editor called Template Editor to author CLI templates. Template Editor is a centralized CLI management tool to help design a set of device configurations that you need to build devices in a branch. When you have a site, office, or branch that uses a similar set of devices and configurations, you can use Template Editor to build generic configurations and apply the configurations to one or more devices in the branch. Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3/user_guide/b_cisco_dna_center_ug_1_3/b_cisco_dna_center_ug_1_3_chapter_0111.html

QUESTION 97
Refer to the exhibit.

```
R2#
*May 27 15:33:59.642: OSPF-1 ADJ   Gi1: Send DBD to 192.168.201.137 seq 0xDE7 opt 0x52 flag 0x7 len 32
*May 27 15:33:59.642: OSPF-1 ADJ   Gi1: Retransmitting DBD to 192.168.201.137 [15]
*May 27 15:33:59.645: OSPF-1 ADJ   Gi1: Rcv DBD from 192.168.201.137 seq 0xDE7 opt 0x52 flag 0x2 len 112  mtu 9100 state EXSTART
```

The OSPF neighborship fails between two routers. What is the cause of this issue?

A. The OSPF router ID is missing on this router.
B. The OSPF process is stopped on the neighbor router.
C. There is an MTU mismatch between the two routers.
D. The OSPF router ID is missing on the neighbor router.

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Correct Answer: C
Explanation

Explanation/Reference:
Stuck in ExStart and jumbo points to MTU.

cisco_R2(config-subif)#do debug ip osp adj
OSPF adjacency debugging is on
cisco_R2(config-subif)#ip mtu 1111 <<<<<<<<<<<<<<< cisco_R2(config-subif)#
cisco_R2(config-subif)#
cisco_R2(config-subif)#do clear ip ospf

!!!debug shows this:
cisco_R2(config-subif)#
*Dec 23 13:02:27.164: OSPF-1 ADJ Et0/0.10: Rcv DBD from 6.6.6.6 seq 0x19FD opt 0x52 flag 0x7 len 32 mtu 1500 state EXSTART <<<<<<<<<<<< *Dec 23 13:02:27.164: OSPF-1 ADJ Et0/0.10: Nbr 6.6.6.6 has larger interface MTU <<<<<<<<<
*Dec 23 13:02:27.164: OSPF-1 ADJ Et0/0.10: Rcv DBD from 6.6.6.6 seq 0x26B opt 0x52 flag 0x2 len 112 mtu 1500 state EXSTART
*Dec 23 13:02:27.164: OSPF-1 ADJ Et0/0.10: Nbr 6.6.6.6 has larger interface MTU *Dec 23 13:02:27.395: OSPF-1 ADJ Et0/0.10: Rcv DBD from 6.6.6.6 seq 0x26B opt 0x52 flag 0x2 len 112 mtu 1500 state EXSTART

QUESTION 98
Refer to the exhibit.

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```
R1#show ip bgp summary
BGP router identifier 1.1.1.1, local AS number 65001
<output omitted>
Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.50.2    4        65002      10       9        5    0    0 00:04:56        2

R1#show ip bgp 2.2.2.2
BGP routing table entry for 2.2.2.2/32, version 2
Paths: (1 available, best #1, table default)
  Not advertised to any peer
  Refresh Epoch 1
  65002
    192.168.50.2 from 192.168.50.2 (172.20.0.2)
      Origin IGP, metric 0, localpref 100, valid, external, best
      rx pathid: 0, tx pathid: 0x0

 <CONFIGURATION CHANGE MADE>

R1#show ip bgp 2.2.2.2
BGP routing table entry for 2.2.2.2/32, version 6
Paths: (1 available, best #1, table default, RIB-failure(17))
  Not advertised to any peer
  Refresh Epoch 1
  65002
    192.168.50.2 from 192.168.50.2 (172.20.0.2)
      Origin IGP, metric 0, localpref 100, valid, external, best
      rx pathid: 0, tx pathid: 0x0
```

R1 has a BGP neighborship with a directly connected router on interface Gi0/0.

Which command set is applied between the iterations of show ip bgp 2.2.2.2?

A. R1(config)#router bgp 65001
   R1(config-router)#neighbor 192.168.50.2 shutdown
B. R1(config)#router bgp 65002
   R1(config-router)#neighbor 192.168.50.2 shutdown
C. R1(config)#no ip route 192.168.50.2 255.255.255.255 Gi0/0
D. R1(config)#ip route 2.2.2.2 255.255.255.255 192.168.50.2

Correct Answer: D
Explanation

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QUESTION 99
Refer to the exhibit.

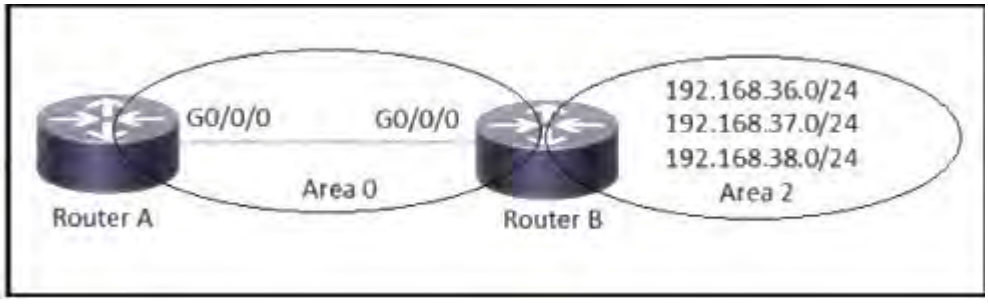
```
!
interface FastEthernet0/1
 ip address 209.165.200.225 255.255.255.224
 ip nat outside
!
interface FastEthernet0/2
 ip address 10.10.10.1 255.255.255.0
 ip nat inside
!
access-list 10 permit 10.10.10.0 0.0.0.255
!
```

Which command allows hosts that are connected to FastEthernet0/2 to access the Internet?

A. ip nat inside source list 10 interface FastEthernet0/1 overload
B. ip nat inside source list 10 interface FastEthernet0/2 overload
C. ip nat outside source list 10 interface FastEthernet0/2 overload
D. ip nat outside source static 209.165.200.225 10.10.10.0 overload

Correct Answer: A
Explanation

QUESTION 100
Refer to the exhibit.



Which configuration is required to summarize the Area 2 networks that are advertised to Area 0?

```
RouterB(config)# router ospf 1
RouterB(config-router)# network 192.168.38.0 255.255.252.0

RouterB(config)# router ospf 1
RouterB(config-router)# network 192.168.38.0 255.255.255.0

RouterB(config)# router ospf 1
RouterB(config-router)# area 2 range 192.168.36.0 255.255.252.0

RouterB(config)# router ospf 1
RouterB(config-router)# area 2 range 192.168.36.0 255.255.255.0
```

A. Option A

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

Correct Answer: C
Explanation

QUESTION 101
Which router is elected the IGMP Querier when more than one router is in the same LAN segment?

A. The router with the shortest uptime
B. The router with the lowest IP address
C. The router with the highest IP address
D. The router with the longest uptime

Correct Answer: B
Explanation

Explanation/Reference:
Query messages are used to elect the IGMP querier as follows: 1. When IGMPv2 devices start, they each multicast a general query message to the all-systems group address of 224.0.0.1 with their interface address in the source IP address field of the message. 2. When an IGMPv2 device receives a general query message, the device compares the source IP address in the message with its own interface address. The device with the lowest IP address on the subnet is elected the IGMP querier. 3. All devices (excluding the querier) start the query timer, which is reset whenever a general query message is received from the IGMP querier. If the query timer expires, it is assumed that the IGMP querier has gone down, and the election process is performed again to elect a new IGMP querier.

Reference:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/release/15-2_2_e/multicast/configuration_guide/b_mc_1522e_3750x_3560x_cg/b_ipmc_3750x_3560x_chapte r_01000.html

QUESTION 102
Refer to the exhibit.

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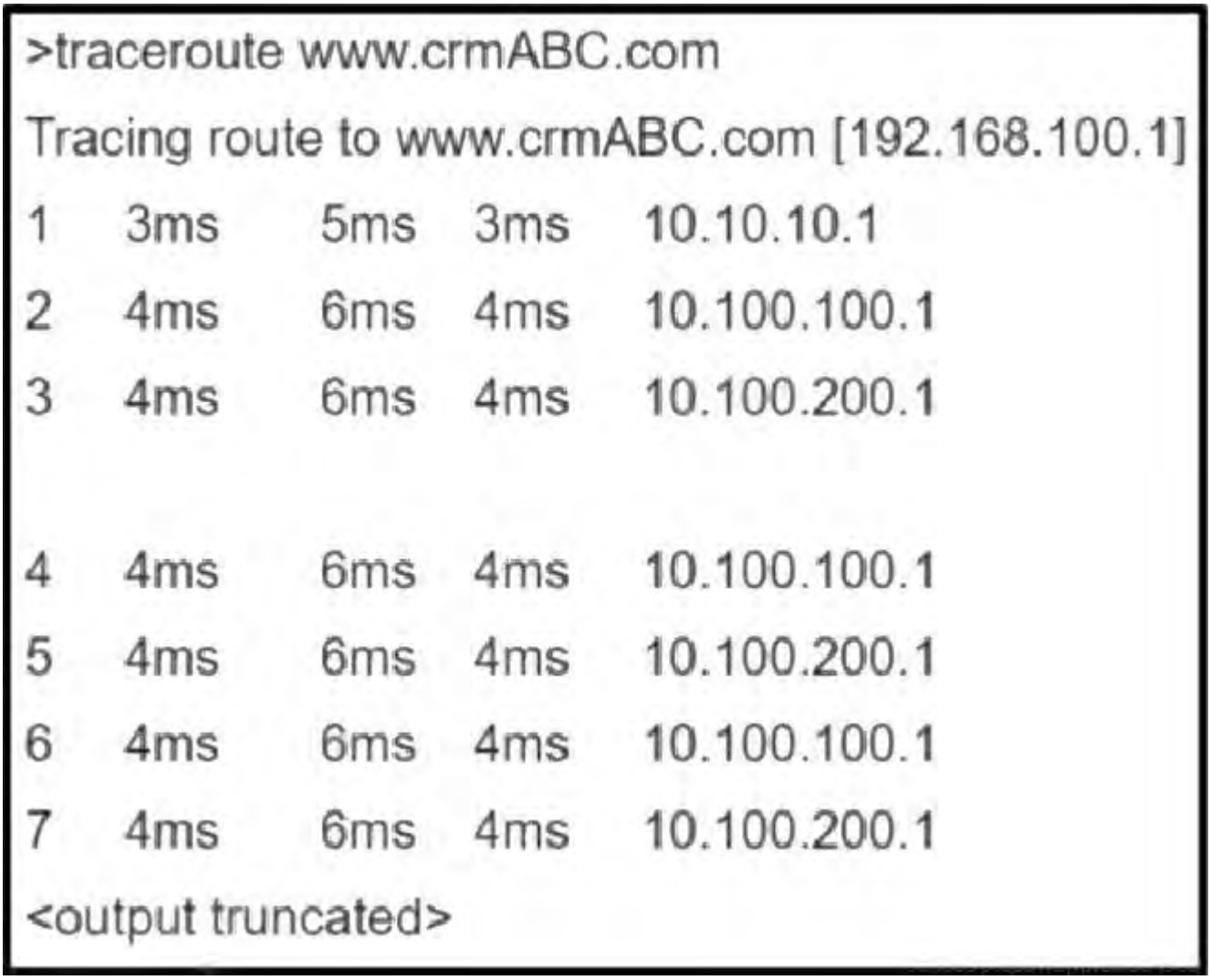

Users cannot reach the web server at 192.168.100.1. What is the root cause for the failure?

A. The server is attempting to load balance between links 10.100.100.1 and 10.100.200.1.
B. There is a loop in the path to the server.
C. The gateway cannot translate the server domain name.
D. The server is out of service.

Correct Answer: B
Explanation

QUESTION 103
Refer to the exhibit.

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An engineer must update the existing configuration to achieve these results:

1. Only administrators from the 192.168.1.0/24 subnet can access the vty lines.
2. Access to the vty lines using clear-text protocols is prohibited.

Which command set should be applied?

A.
```
access-list 1 permit 192.168.1.0 0.0.0.255
line vty 0 15
access-class 1 in
transport input none
```

B.
```
access-list 1 permit 192.168.1.0 0.0.0.255
line vty 0 15
access-class 1 in
transport input telnet ssh
```

C.
```
access-list 1 permit 192.168.1.0 0.0.0.255
line vty 0 15
access-class 1 in
transport input ssh
```

D.
```
access-list 1 permit 192.168.1.0 255.255.255.0
line vty 0 15
access-class 1 in
transport input telnet rlogin
```

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

Correct Answer: C

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Explanation

Explanation/Reference:
clear-text protocols is prohibited.
Transport input SSH

QUESTION 104
Refer to the exhibit.

```
from pythonping import ping
import paramiko
import sys

s= "%s %s" % (sys.argv[1],'')
s1=s.replace(' ','')
ip= s1
t= "%s %s" % (sys.argv[2],'')
r= ping(s1, count=7)
r1= r.success()
if r1 != True:
   exit()
client= paramiko.SSHClient()
client.load_system_host_keys()
client.set_missing_host_key_policy(paramiko.AutoAddPolicy())
client.connect(ip, port= 22, username= usr, password= pswd)
stdin, stdout, stderr = client.exec_command(t + '\n')
time.sleep(3)
print(t)
for u in stdout:
   print(u)
client.close()
```

Which action results from executing the Python script?

A. display the output of a command that is entered on that device in a single line
B. SSH to the IP address that is manually entered on that device
C. display the output of a command that is entered on that device
D. display the unformatted output of a command that is entered on that device

Correct Answer: C
Explanation

Explanation/Reference:

QUESTION 105
Which device is responsible for finding EID-to-RLOC mappings when traffic is sent to a LISP-capable site?

A. map server
B. map resolver
C. ingress tunnel router

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D. egress tunnel router

Correct Answer: C
Explanation

QUESTION 106
Refer to the exhibit. What happens to access interfaces where VLAN 222 is assigned?

```
vlan 222
 remote-span
!
vlan 223
 remote-span
!
monitor session 1 source interface FastEthernet0/1 tx
monitor session 1 source interface FastEthernet0/2 rx
monitor session 1 source interface port-channel 5
monitor session 1 destination remote vlan 222
!
```

A. STP BPDU guard is enabled
B. A description "RSPAN" is added
C. They are placed into an inactive state
D. They cannot provide PoE

Correct Answer: C
Explanation

Explanation/Reference:
This is because the exhibit shows the configuration of a remote SPAN (RSPAN) VLAN, which is a special VLAN that is used to transport mirrored traffic from one switch to another switch over a trunk link. The RSPAN VLAN is configured with the remote- span option, which indicates that the VLAN is dedicated for RSPAN use only. The access interfaces where the RSPAN VLAN is assigned are placed into an inactive state, which means that they cannot forward any traffic other than the mirrored traffic. The source of this answer is the Cisco ENCOR v1.1 course, module 6, lesson 6.2: Implementing SPAN, RSPAN, and ERSPAN.

QUESTION 107
What is one characteristic of VXLAN?

A. It supports a maximum of 4096 VLANs.
B. It supports multitenant segments.
C. It uses STP to prevent loops in the underlay network.
D. It uses the Layer 2 header to transfer packets through the network underlay.

Correct Answer: B
Explanation

QUESTION 108
When is GLBP preferred over HSRP?

A. When encrypted helm are required between gateways h a single group.

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B. When the traffic load needs to be shared between multiple gateways using a single virtual IP.
C. When the gateway routers are a mix of Cisco and non-Cisco routers
D. When clients need the gateway MAC address lo Be the same between multiple gateways

Correct Answer: B
Explanation

QUESTION 109
Refer to the exhibit.

```
Router# configure terminal
Router(config)# interface GigabitEthernet0/1
Router(config-if)# ip address 10.0.0.3 255.255.255.0
Router(config-if)# standby 512 ip 10.0.0.1
```

An engineer attempts to configure standby group 512 on interface GigabitEthernet0/1, but the configuration is not accepted. Which command resolves this problem?

A. standby version 2
B. standby 512 preempt
C. standby redirects
D. standby 512 priority 100

Correct Answer: A
Explanation

QUESTION 110
Refer to the exhibit.

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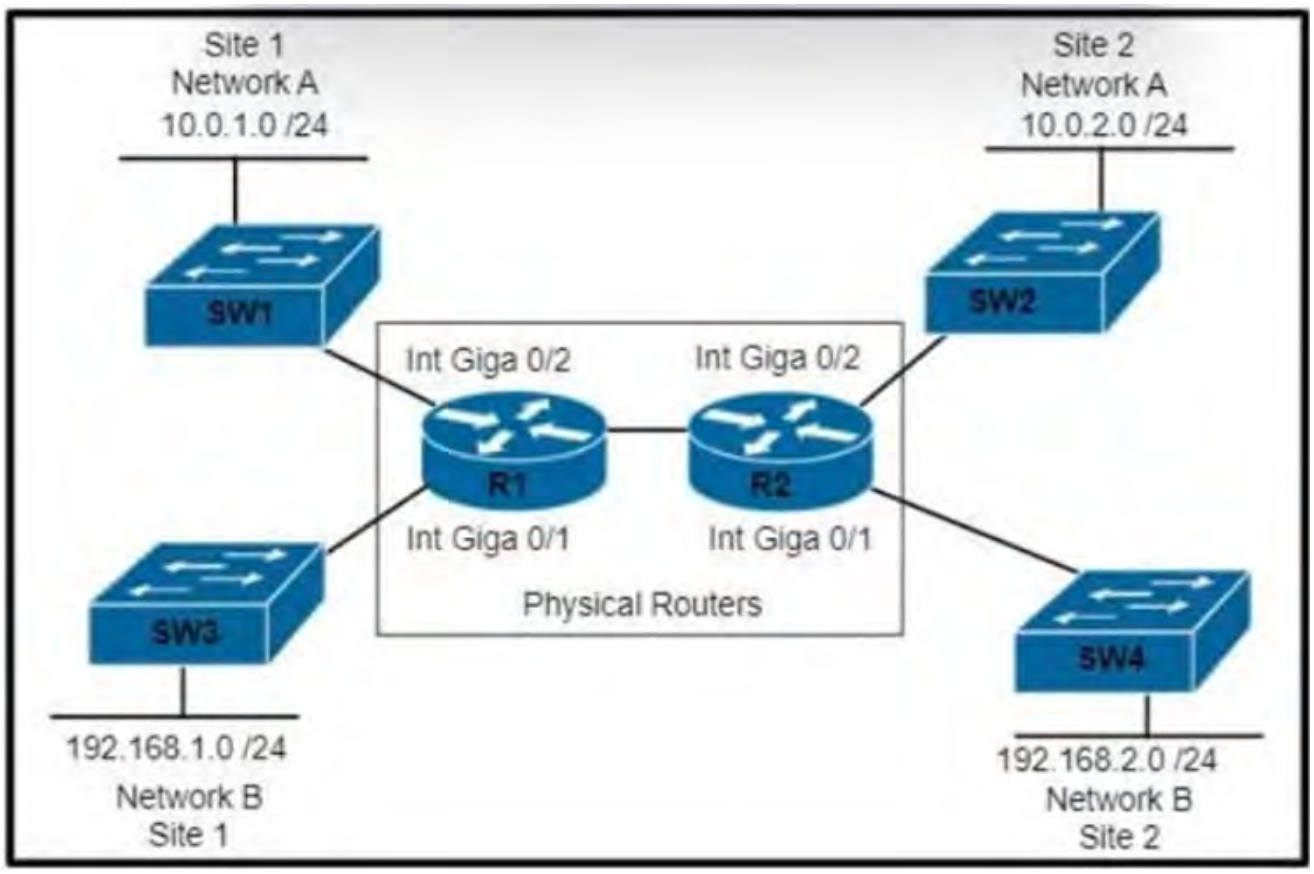

Which set of commands is required to configure and verify the VRF for Site 1 Network A on router R1?

A. R1#ip routing
R1#(config)#ip vrf 100
R1#(config-vrf)#rd 100:1
R1#(config-vrf)# address family ipv4
!
R1(config)#interface Gi0/2
R1(config-if)#ip address 10.0.1.1 255.255.255.0
R1#show ip route

B. R1#ip routing
R1#(config)#ip vrf 100
!
R1(config)#interface Gi0/2
R1(config-if)#ip address 10.0.1.1 255.255.255.0
R1#showip route

C. R1#ip routing
R1#(config)#ip vrf 100
!
R1(config)#interface Gi0/2
R1(config-if)#ip vrf forwarding 100
R1(config-if)#ip address 10.0.1.1 255.255.255.0
R1#show ip vrf

D. R1#ip routing
R1#(config)#ip vrf 100
!
R1(config)#interface Gi0/2
R1(config-if)#ip address 10.0.1.1 255.255.255.0

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R1#showip route

Correct Answer: C
Explanation

QUESTION 111
By default, which virtual MAC address does HSRP group 22 use?

A. c0:42:01:67:05:16
B. c0:07:0c:ac:00:22
C. 00:00:0c:07:ac:16
D. 00:00:0c:07:ac:22

Correct Answer: C
Explanation

Explanation/Reference:
hex 16 == (16x1) + 6 == 22

QUESTION 112
Which two methods are used to assign security group tags to the user in a Cisco Trust Sec architecture? (Choose two)

A. modular QoS
B. policy routing
C. web authentication
D. DHCP
E. IEEE 802.1x

Correct Answer: CE
Explanation

Explanation/Reference:
Web authentication
Used when a user logs in using a web browser. When a user accesses the network using this method, web authentication authenticates the user and assigns a security group tag.
This is an effective authentication method when the client terminal does not have an 802.1X supplicant function.

IEEE 802.1x
A network access control protocol that provides authentication and authorization. It consists of three elements: an authentication server, an authenticator, and a supplicant. When a user connects to a network, they are authenticated using 802.1x and are granted permission to access the network. Through this authentication process, users are assigned the appropriate security group tag.

QUESTION 113
A firewall address of 192 166.1.101 can be pinged from a router but, when running a traceroute to It, this output is received

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What is the cause of this issue?

A. The firewall blocks ICMP traceroute traffic.
B. The firewall rule that allows ICMP traffic does not function correctly
C. The firewall blocks ICMP traffic.
D. The firewall blocks UDP traffic

Correct Answer: D
Explanation

QUESTION 114
How do stratum levels relate to the distance from a time source?

A. Stratum 0 devices are connected directly to an authoritative time source
B. Stratum 1 devices are connected directly to an authoritative time source
C. Stratum 15 devices are connected directly to an authoritative time source
D. Stratum 15 devices are an authoritative time source

Correct Answer: B
Explanation

QUESTION 115
Which element is unique to a Type 2 hypervisor?

A. memory
B. VM OS
C. host OS
D. host hardware

Correct Answer: C
Explanation

QUESTION 116
In which two ways does the routing protocol OSPF differ from EIGRP? (Choose two.)

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A. OSPF supports an unlimited number of hops. EIGRP supports a maximum of 255 hops.
B. OSPF provides shorter convergence time than EIGRP.
C. OSPF is distance vector protocol. EIGRP is a link-state protocol.
D. OSPF supports only equal-cost load balancing. EIGRP supports unequal-cost load balancing.
E. OSPF supports unequal-cost load balancing. EIGRP supports only equal-cost load balancing.

Correct Answer: AD
Explanation

QUESTION 117
Which QoS feature uses the IP Precedence bits in the ToS field of the IP packet header to partition traffic into different priority levels?

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

Correct Answer: D
Explanation

Explanation/Reference:
Using packet classification, you can partition network traffic into multiple priority levels or classes of service.
..packet classification features, such as IP precedence, to select
packets (or traffic flows) traversing a router or interface for different types of QoS service. For example, using the three precedence bits in the type of service (ToS) field of the IP packet header...

reference:https://www.cisco.com/c/en/us/td/docs/routers/ncs4000/software/qos/configuration_guide/b-qos-cg/b-qos-cg_chapter_0101.pdf#_OPENTOPIC_TOC_PROCESSING_d108e235

QUESTION 118
A customer has a pair of Cisco 5520 WLCs set up in an SSO cluster to manage all APs. Guest traffic is anchored to a Cisco 3504 WLC located in a DMZ. Which action is needed to ensure that the EoIP tunnel remains in an UP state in the event of failover on the SSO cluster?

A. Use the mobility MAC when the mobility peer is configured
B. Use the same mobility domain on all WLCs
C. Enable default gateway reachability check
D. Configure back-to-back connectivity on the RP ports

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/7-5/High_Availability_DG.html

QUESTION 119
By default, which virtual MAC address does HSRP group 12 use?

A. 00 5e0c:07:ac:12
B. 05:44:33:83:68:6c
C. 00:00:0c:07:ac:0c
D. 00:05:5e:00:0c:12

Correct Answer: C
Explanation

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QUESTION 120
A customer has a wireless network deployed within a multi-tenant building. The network provides client access, location-based services, and is monitored using Cisco DNA Center. The security department wants to locate and track malicious devices based on threat signatures.

Which feature is required for this solution?

A. Cisco aWIPS policies on the WLC
B. Cisco aWIPS policies on Cisco DNA Center
C. malicious rogue rules on the WLC
D. malicious rogue rules on Cisco DNA Center

Correct Answer: B
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center-rogue-management-application/2-1-2/quick-start-guide/b_rogue_management_qsg_2_1_2/ b_rogue_management_qsg_1_4_chapter_00.html

QUESTION 121
What is an advantage of utilizing data models in a multivendor environment?

A. lowering CPU load incurred to managed devices
B. improving communication security with binary encoded protocols
C. facilitating a unified approach to configuration and management
D. removing the distinction between configuration and runtime state data

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/routers/ncs6000/software/ncs6k-7-4/programmability/configuration/guide/b-programmability-cg-ncs6000-74x/m-unified-data-models.pdf

QUESTION 122
Refer to the exhibit.

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```
pl1= [
"""
<get-config xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
 <source>
  <running/>
 </source>
 <filter>
  <native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native">
   <ip>
    <access-list>
     <extended xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-acl">
      <name>flp</name>
     </extended>
    </access-list>
   </ip>
  </native>
 </filter>
</get-config>
"""
]
with manager.connect(host=10.1.1.1, port=830, username=cisco, password=cisco, timeout=90, hostkey_verify=False) as m:
  for rpc in pl1:
    r1= m.dispatch(et.fromstring(rpc))
    d1= xmltodict.parse(r1.xml)['rpc-reply']['data']['native']['ip']['access-list']['extended']['access-list-seq-rule']
```

What is achieved by the XML code?

A. It reads the access list sequence numbers from the output of the show ip access-list extended flp command into a dictionary list.
B. It displays the output of the show ip access-list extended flp command on the terminal screen
C. It displays the access list sequence numbers from the output of the show Ip access-list extended flp command on the terminal screen
D. It reads the output of the show ip access-list extended flp command into a dictionary list.

Correct Answer: A
Explanation

QUESTION 123
In Cisco DNA Center, what is the integration API?

A. southbound consumer-facing RESTful API. which enables network discovery and configuration management
B. westbound interface, which allows the exchange of data to be used by ITSM. IPAM and reporting
C. an interface between the controller and the network devices, which enables network discovery and configuration management
D. northbound consumer-facing RESTful API, which enables network discovery and configuration management

Correct Answer: B
Explanation

Explanation/Reference:
https://developer.cisco.com/docs/dna-center/#!cisco-dna-center-platform-overview/integration-api-

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westbound

QUESTION 124
Which unit of measure is used to measure wireless RF SNR?

A. mW
B. bBm
C. dB
D. dBi

Correct Answer: C
Explanation

QUESTION 125
In a wireless network environment, what is calculated using the numerical values of the transmitter power level, cable loss, and antenna gain?

A. EIRP
B. dBi
C. RSSI
D. SNR

Correct Answer: A
Explanation

Explanation/Reference:
Once you know the complete combination of transmitter power level, the length of cable, and the antenna gain, you can figure out the actual power level that will be radiated from the antenna. This is known as the effective isotropic radiated power (EIRP), measured in dBm. EIRP is a very important parameter because it is regulated by governmental agencies in most countries. In those cases, a system cannot radiate signals higher than a maximum allowable EIRP. To find the EIRP of a system, simply add the transmitter power level to the antenna gain and subtract the cable loss.

QUESTION 126
By default, which virtual MAC address does HSRP group 15 use?

A. 05:5e:ac:07:0c:0f
B. c0:42:34:03:73:0f
C. 00:00:0c:07:ac:0f
D. 05:af:1c:0f:ac:15

Correct Answer: C
Explanation

Explanation/Reference:
interface Ethernet0/0.100
encapsulation dot1Q 100
ip address 10.0.111.1 255.255.255.0
standby 15 ip 10.0.111.254
!

cisco(config-subif)#do s stand

Ethernet0/0.100 - Group 15
State is Speak
Virtual IP address is 10.0.111.254
Active virtual MAC address is unknown
Local virtual MAC address is 0000.0c07.ac0f (v1 default) Hello time 3 sec, hold time 10 sec
Next hello sent in 1.200 secs

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Preemption disabled
Active router is unknown
Standby router is unknown

QUESTION 127
In lhe Cisco DNA Center Image Repository, what is a golden image?

A. The latest software image that is available for a specific device type
B. The Cisco recommended software image for a specific device type.
C. A software image that is compatible with multiple device types.
D. A software image that meets the compliance requirements of the organization.

Correct Answer: B
Explanation

Explanation/Reference:
Cisco DNA Center allows you to designate software images and SMUs as golden. A golden software image or SMU is a validated image that meets the compliance requirements for the particular device type.

QUESTION 128
Which configuration filters out DOT1X messages in the format shown below from being sent toward Syslog server 10.15.20.33?

Nov 20 13:47:32/553 %DOT1X-5-FAIL:Authentication failed for client (e04f.438e.de4f) on interface Gi1/0/1 AudtiSessionID 0A0B50A5000004543910739E

A. logging discriminator DOT1X facility drops DOT1X
   logging host 10.15.20.33 discriminator DOT1X
B. logging discriminator DOT1X msg-body drops DOTX
   logging host 10.15.20.33 discriminator DOTX
C. logging discriminator DOT1X mnemonics includes DOTX
   logging host 10.15.20.33 discriminator DOT1X
D. logging discriminator DOT1X mnemonics includes DOT1X
   logging host 10.15.20.33 discriminator DOTX

Correct Answer: A
Explanation

QUESTION 129
If AP power level is increased from 25 mW to 100 mW. what is the power difference in dBm?

A. 6 dBm
B. 14 dBm
C. 17 dBm
D. 20 dBm

Correct Answer: A
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/23231-powervalues-23231.html

QUESTION 130
Refer to the exhibit.

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A company has an internal wireless network with a hidden SSID and RADIUS-based client authentication for increased security. An employee attempts to manually add the company network to a laptop, but the laptop does not attempt to connect to the network. The regulatory domains of the access points and the laptop are identical.

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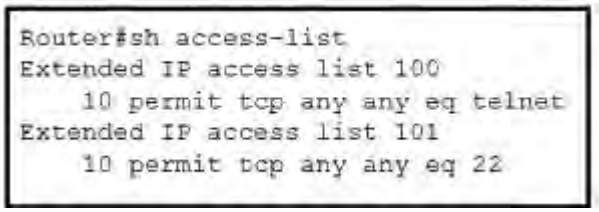
Which action resolves this issue?

A. Ensure that the "Connect even if this network is not broadcasting" option is selected.
B. Limit the enabled wireless channels on the laptop to the maximum channel range that is supported by the access points.
C. Change the security type to WPA2-Personal AES.
D. Use the empty string as the hidden SSID network name.

Correct Answer: A
Explanation

QUESTION 131
Refer to the exhibit.



Which configuration set implements Control plane Policing for SSH and Telnet?

A. Router(config)#/class-map match-all class-control
Router(config-cmap)#match access-group 100
Router(config-cmap)#match access-group 101
Router(config)#policy-map COPP
Router(config-pmap)#class class-control
Router(config-pmap-c)#police 1000000 conform-action transmit
Router(config)#control-plane
Router(config-cp)#service-policy output CoPP
B. Router(config)#class-map type inspect match-all
Router(config-cmap)#match access-group 100
Router(config-cmap)#match access-group 101
Router(config)#policy-map CoPP
Router(config-pmap)#class class-control
Router(config-pmap-c)#police 1000000 conform-action transmit
Router(config)#control-plane
Router(config-cp)#service-policy output CoPP
C. Router(config)#class-map class-telnet
Router(config-cmap)#match access-group 100
Router(config)#class-map class-ssh
Router(config-cmap)#match access-group 101
Router(config)#policy-map CoPP
Router(config-pmap)#class class-telnet-ssh
Router(config-pmap-c)#police 1000000 conform-action transmit
Router(config)#control-plane
Router(config-cp)#service-policy input CoPP
D. Router(config)#class-map match-any class-control
Router(config-cmap)#match access-group 100
Router(config-cmap)#match access-group 101
Router(config)#policy-map CoPP
Router(config-pmap)#class class-control
Router(config-pmap-c)#police 1000000 conform-action transmit
Router(config)#control-plane
Router(config-cp)#service-policy input CoPP

Correct Answer: D
Explanation

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QUESTION 132
Refer to the exhibit.

```
ip access-list extended 101
 10 deny   ip any any
!
event manager applet Block_Users
 action 1.0 cli command "enable"
 action 2.0 cli command "configure terminal"
 action 3.0 cli command "interface GigabitEthernet1"
 action 4.0 cli command "ip access-group 101 in"
 action 5.0 cli command "ip access-group 101 out"
```

An engineer builds an EEM script to apply an access list. Which statement must be added to complete the script?

A. event none
B. action 2.1 cli command "ip action 3.1 ell command 101"
C. action 6.0 ell command "ip access-list extended 101"
D. action 6.0 cli command "ip access-list extended 101"

Correct Answer: A
Explanation

Explanation/Reference:
The applet is missing the trigger event configuration. In this case there is no trigger event, so none must be selected. The access list is already configured, the applet only needs to apply it.

event manager applet Block_Users
event none
action 1.0 cli command "enable"
action 2.0 cli command "configure terminal"
action 3.0 cli command "interface GigabitEthernet1"
action 4.0 cli command "ip access-group 101 in"
action 5.0 cli command "ip access-group 101 out"
action 7.0 cli command "end"

QUESTION 133
Refer to the exhibit.

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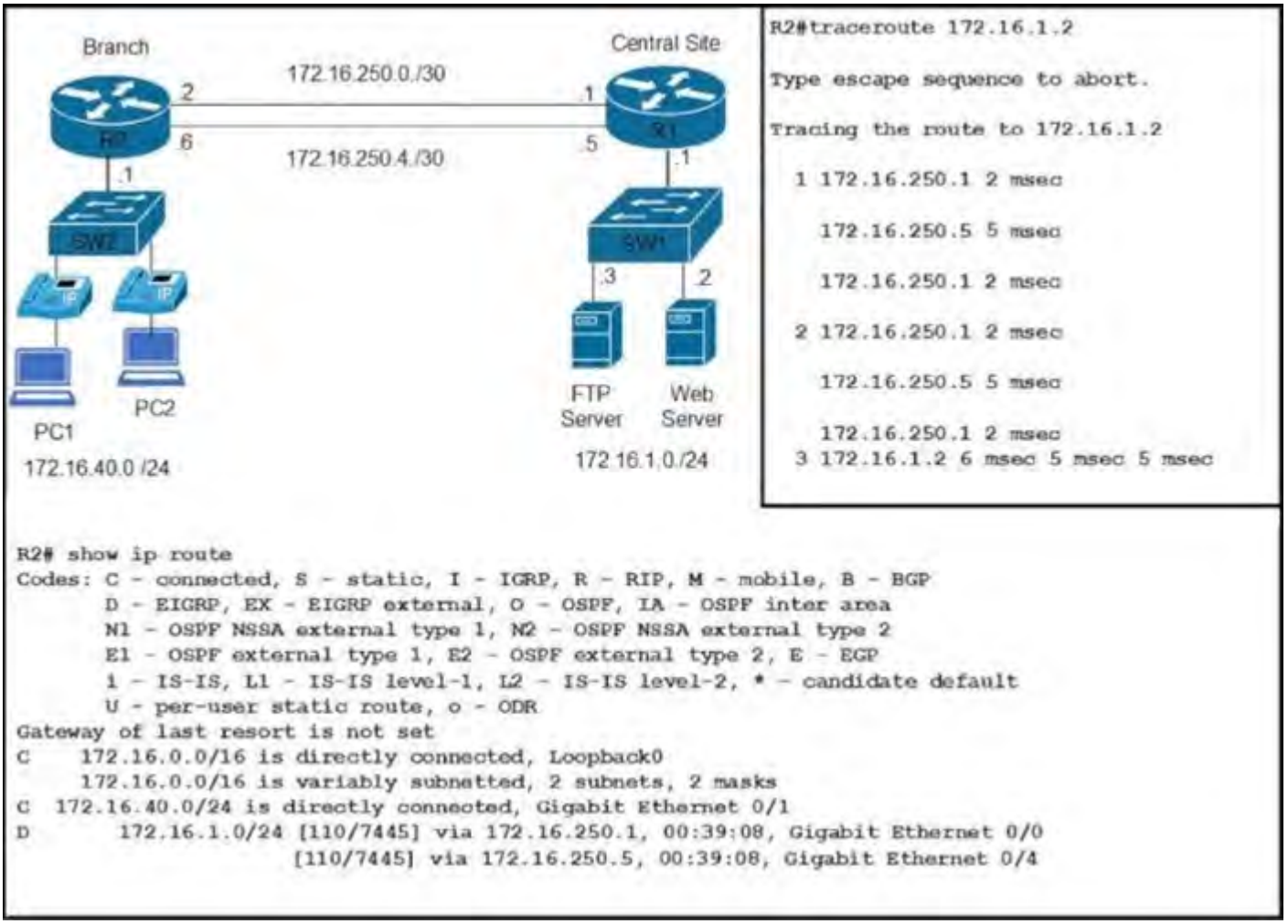

Clients are reporting an issue with the voice traffic from the branch site to the central site.

What is the cause of this issue?

A. There is a routing loop on the network
B. There is a high delay on the WAN links
C. Traffic is load-balancing over both links, causing packets to arrive out of order
D. The voice traffic is using the link with less available bandwidth

Correct Answer: A
Explanation

Explanation/Reference:
Looking at the Traceroute results, I see the same IP address repeated on each hop. This may be caused by repeated hops to the same IP address, causing packets to become stuck in a loop.

QUESTION 134
Refer to the exhibit. Why was the response code generated?

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```
Request URL: https://www.cisco.com/libs/granite/csrf/token.json
Request Method: GET
Status Code: 403
Remote Address: 23.207.65.173:443
Referrer Policy: strict-origin-when-cross-origin
```

A. The resource was unreachable.
B. Access was denied based on the user permissions.
C. Access was denied based on the credentials.
D. The resource is no longer available on the server.

Correct Answer: B
Explanation

Explanation/Reference:
401 = Unauthorized (Bad credentials)
403 = Forbidden (Service refused, for insufficient permissions)

QUESTION 135
Which two methods are used to interconnect two Cisco SD-Access Fabric sites? (Choose two.)

A. SD-Access transit
B. fabric interconnect
C. wireless transit
D. IP-based transit
E. SAN transit

Correct Answer: AD
Explanation

QUESTION 136
Refer to the exhibit. What is the value of the variable list after the code is run?

```
list = [1, 2, 3, 4]
list[3] = 10
print(list)
```

A. [1, 10, 10, 10]
B. [1, 2, 10]
C. [1, 2, 10, 4]
D. [1, 2, 3, 10]

Correct Answer: D

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Explanation

Explanation/Reference:
The first element of an array is at index 0 so list[3] gets the fourth element of the array.

QUESTION 137
A customer wants to connect a device to an autonomous Cisco AP configured as a WGB. The WGB is configured properly: however, it fails to associate to a CAPWAP- enabled AP. Which change must be applied in the advanced WLAN settings to resolve this issue?

A. Enable Aironet IE.
B. Enable passive client.
C. Disable AAA override.
D. Disable FlexConnect local switching.

Correct Answer: A
Explanation

Explanation/Reference:
To enable the WGB to communicate with the lightweight access point, create a WLAN and make sure that Aironet IE is enabled.
https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-1/configuration-guide/b_cg81/workgroup_bridges.pdf

QUESTION 138
Which two steps are required for a complete Cisco DNA Center upgrade? (Choose two.)

A. golden image selection
B. automation backup
C. proxy configuration
D. application updates
E. system update

Correct Answer: DE
Explanation

Explanation/Reference:
A complete Cisco DNA Center upgrade includes "System Update" and "Appplication Updates"
Reference:
https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/upgrade/ b_cisco_dna_center_upgrade_guide/m_upgrade_to_cisco_dna_center_2_2_2_x.html

QUESTION 139
An engineer uses the Design workflow to create a new network infrastructure in Cisco DNA Center. How is the physical network device hierarchy structured?

A. by location
B. by role
C. by organization
D. by hostname naming convention

Correct Answer: A
Explanation

Explanation/Reference:
This is because the Design workflow in Cisco DNA Center allows the engineer to create a new network infrastructure by defining the physical network device hierarchy based on the location of the devices. The location hierarchy consists of four levels: global, area, building, and floor. The engineer can add, edit, or delete locations and assign devices to them. The location hierarchy helps to organize the network devices and apply policies and settings based on the location. The source of this answer is the Cisco ENCOR v1.1

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course, module 8, lesson 8.6: Implementing Network Design Processes.

QUESTION 140
A network engineer wants to configure console access to a router without using AAA so that the privileged exec mode is entered directly after a user provides the correct login credentials. Which action achieves this goal?

A. Configure login authentication privileged on line con 0.
B. Configure a local username with privilege level 15.
C. Configure privilege level 15 on line con 0.
D. Configure a RADIUS or TACACS+ server and use it to send the privilege level.

Correct Answer: C
Explanation

QUESTION 141
What is one method for achieving REST API security?

A. using a combination of XML encryption and XML signatures
B. using HTTPS and TLS encryption
C. using a MDS hash to verify the integrity
D. using built-in protocols known as Web Services Security

Correct Answer: B
Explanation

QUESTION 142
Which solution simplifies management of secure access to network resources?

A. RFC 3580-based solution to enable authenticated access leveraging RADIUS and AV pairs
B. 802.1AE to secure communication in the network domain
C. ISE to automate network access control leveraging RADIUS AV pairs
D. TrustSec to logically group internal user environments and assign policies

Correct Answer: D
Explanation

Explanation/Reference:
Cisco TrustSec simplifies the provisioning and management of secure access to network services and applications.

QUESTION 143
Refer to the exhibit

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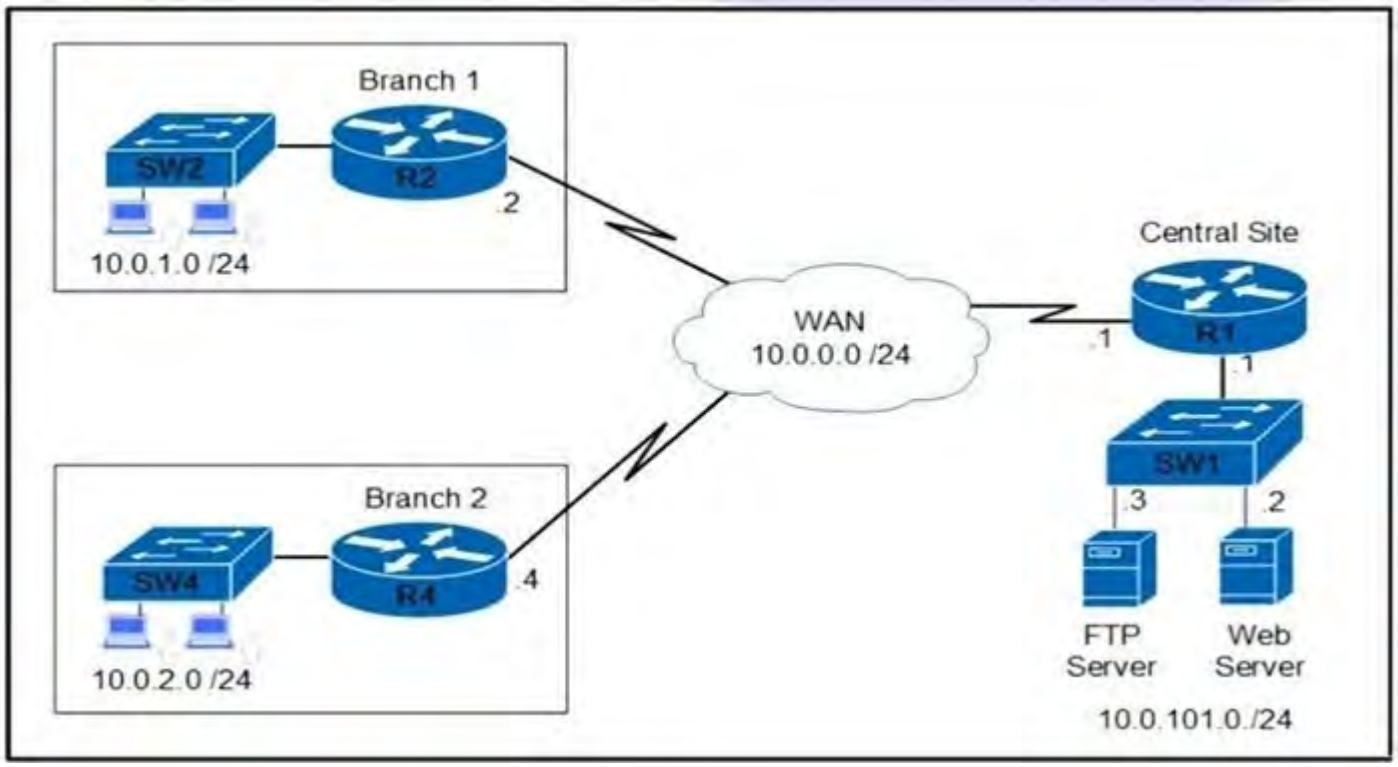

Which two commands are required on route?R1 to block FTP and allow all other traffic from the Branch 2 network? (Choose two)

A. access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp
access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp-data
access-list 101 permit ip any any

B. access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp-data
access-list 101 permit ip any any

C. interface GigabitEthernet0/0
ip address 10.0.0.1 255.255.255.252
ip access-group 101 out

D. access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp
access-list 101 permit ip any any

E. interface GigabitEthernet0/0
ip address 10.0.101.1 255.255.255.252
ip access-group 101 in

Correct Answer: AC
Explanation

QUESTION 144
Refer to the exhibit.

```
event manager applet Config
 event cli pattern "configure terminal" [          ]
 action 1.0 cli command "enable"
```

An engineer constructs an EEM applet to prevent anyone from entering configuration mode on a switch. Which snippet is required to complete the EEM applet?

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A. sync yes skip yes
B. sync no skip yes
C. sync no skip no
D. sync yes skip no

Correct Answer: B
Explanation

QUESTION 145
Why does the vBond orchestrator have a public IP?

A. to allow for global reachability from all WAN Edges in the Cisco SD-WAN and to facilitate NAT traversal
B. to provide access to Cisco Smart Licensing servers for license enablement
C. to enable vBond to learn the public IP of WAN Edge devices that are behind NAT gateways or in private address space
D. to facilitate downloading and distribution of operational and security patches

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/sdwan-xe-gs-book/system-overview.html#:~:text=Cisco%20vBond%20Orchestrator%20is%20a,network%20can%20connect%20to%20it

QUESTION 146
Which two pieces of information are necessary to compute SNR? (Choose two.)

A. EIRP
B. noise floor
C. antenna gain
D. RSSI
E. transmit power

Correct Answer: BD
Explanation

Explanation/Reference:
signal-to-noise ratio (SNR) A measure of received signal quality, calculated as the difference between the signal's RSSI and the noise floor. A higher SNR is preferred.

Reference: https://community.cisco.com/t5/wireless-mobility-documents/snr-rssi-eirp-and-free-space-path-loss/ta-p/3128478

QUESTION 147
Which signal strength and noise values meet the minimum SNR for voice networks?

A. signal strength -69 dBm, noise 94 dBm
B. signal strength -67 dBm, noise 91 dBm
C. signal strength -68 dBm, noise 89 dBm
D. signal strength -66 dBm, noise 90 dBm

Correct Answer: A
Explanation

QUESTION 148
Refer to the exhibit

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```
R1# show ip bgp summary
BGP router identifier 10.255.255.1, local AS number 65000
BGP table version is 1, main routing table version 1

Neighbor        V    AS   MsgRcvd   MsgSent   TblVer   InQ   OutQ   Up/Down   State/PfxRcd
10.255.255.3    4   65000   0         0         1       0     0     Never       Idle

R1# ping 10.255.255.3 source lo0
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.255.255.3, timeout is 2 seconds
Packet sent with a source address of 10.255.255.1
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/3 ms

R1# telnet 10.255.255.3 179 /source-interface lo0
Trying 10.255.255.3, 179 . . .
% Destination unreachable; gateway or host down

R1# debug ip tcp transactions
TCP special event debugging is on
R1#
*Sep 12 10:15:07.958: TCB7F0E49C5AA38 created
*Sep 12 10:15:07.958: TCP0: state was LISTEN -> SYNRCVD [179 -> 10.255.255.3(55290)]
*Sep 12 10:15:07.958: TCP: tcb 7F0E49C5AA38 connection to 10.255.255.3:55290, peer MSS 1460, MSS is 516
*Sep 12 10:15:07.958: TCP: pmtu enabled, mss is now set to 1460
*Sep 12 10:15:07.958: TCP: sending SYN, seq 2953990054, ack 2359850152
*Sep 12 10:15:07.958: TCP0: Connection to 10.255.255.3:55290, advertising MSS 1460
*Sep 12 10:15:07.958: TCP0: ICMP destination unreachable received
```

An engineer is troubleshooting a newly configured BGP peering that does not establish

What is the reason for the failure?

A. BGP peer 10 255 255 3 is not configured for peenng wth R1
B. Mandatory BOP parameters between R1 and 10 255 255 3 are mismatched
C. A firewall is blocking access to TCP port 179 on the BGP peer 10 255 255.3
D. Both BGP pern are configured for passive TCP transport

Correct Answer: A
Explanation

QUESTION 149
A script contains the statement "while loop != 999:". Which value terminates the loop?

A. A value less then or equal to 999
B. A value greater then or equal to 999
C. A value not equal to 999
D. A value equal to 999

Correct Answer: D
Explanation

QUESTION 150
How is traffic classified when using Cisco TrustSec technology?

A. with the IP address

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B. with the VLAN
C. with the security group tag
D. with the MAC address

Correct Answer: C
Explanation

QUESTION 151
A customer deploys a new wireless network to perform location-based services using Cisco DNA Spaces The customer has a single WLC located on-premises in a secure data center. The security team does not want to expose the WLC to the public Internet.

Which solution allows the customer to securely send RSSI updates to Cisco DNA Spaces?

A. Implement Cisco Mobility Services Engine
B. Replace the WLC with a cloud-based controller.
C. Perform tethering with Cisco DNA Center.
D. Deploy a Cisco DNA Spaces connector as a VM.

Correct Answer: D
Explanation

QUESTION 152
What is a characteristics of Cisco SD-WAN?

A. operates over DTLS/TLS authenticated and secured tunnels
B. requires manual secure tunnel configuration
C. uses unique per-device feature templates
D. uses control connections between routers

Correct Answer: A
Explanation

QUESTION 153
Witch two actions provide controlled Layer 2 network connectivity between virtual machines running on the same hypervisor? (Choose two.)

A. Use a single trunk link to an external Layer2 switch.
B. Use a virtual switch provided by the hypervisor.
C. Use a virtual switch running as a separate virtual machine.
D. Use a single routed link to an external router on stick.
E. Use VXLAN fabric after installing VXLAN tunneling drivers on the virtual machines.

Correct Answer: BC
Explanation

Explanation/Reference:
Source 1:
https://www.cisco.com/c/dam/en/us/products/collateral/switches/nexus-1000v-switchvmware-vsphere/at_a_glance_c45-532467.pdf
Source 2:
https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/sw/vm_fex/vmware/gui/config_guide/2-1/b_GUI_VMware_VMFEX_UCSM_Configuration_Guide_2_1/b_GUI_VMware_VMFEX_UCSM_Configuration_Guide_2_1_chapter_0110.pdf

QUESTION 154

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Which technology is used to provide Layer 2 and Layer 3 logical networks in the Cisco SD-Access architecture?

A. underlay network
B. VPN routing/forwarding
C. easy virtual network
D. overlay network

Correct Answer: D
Explanation

Explanation/Reference:

An *overlay* network is created on top of the underlay network through virtualization (virtual networks). The data plane traffic and control plane signaling are contained within each virtualized network, maintaining isolation among the networks and an independence from the underlay

QUESTION 155
What is a benefit of using segmentation with TrustSec?

A. Integrity checks prevent data from being modified in transit.
B. Packets sent between endpoints on a LAN are encrypted using symmetric key cryptography.
C. Security group tags enable network segmentation.
D. Firewall rules are streamlined by using business-level profiles.

Correct Answer: D
Explanation

QUESTION 156
An engineer must configure GigabitEthernet 0/0 for VRRP group 65. The rouler must assume the primary rote when it has the highest priority in the group. Which command set must be applied?

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A.
```
interface GigabitEthernet0/0
 ip address 10.10.10.1 255.255.255.0
 vrrp 65 ip 10.10.10.1
 standby 65 priority 100
 standby 65 preempt
```

B.
```
interface GigabitEthernet0/0
 ip address 10.10.10.2 255.255.255.0
 standby 65 ip 10.10.10.1
 standby 65 track 1 decrement 10
 standby 65 preempt
```

C.
```
interface GigabitEthernet0/0
 ip address 10.10.10.2 255.255.255.0
 vrrp 65 ip 10.20.20.1
 vrrp 65 track 1 decrement 100
 vrrp 65 preempt
 vrrp 65 authentication $2#442619822
```

D.
```
interface GigabitEthernet0/0
 ip address 10.10.10.2 255.255.255.0
 vrrp 65 ip 10.10.10.1
 vrrp 65 priority 110
```

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

Correct Answer: D
Explanation

QUESTION 157
Refer to the exhibit.

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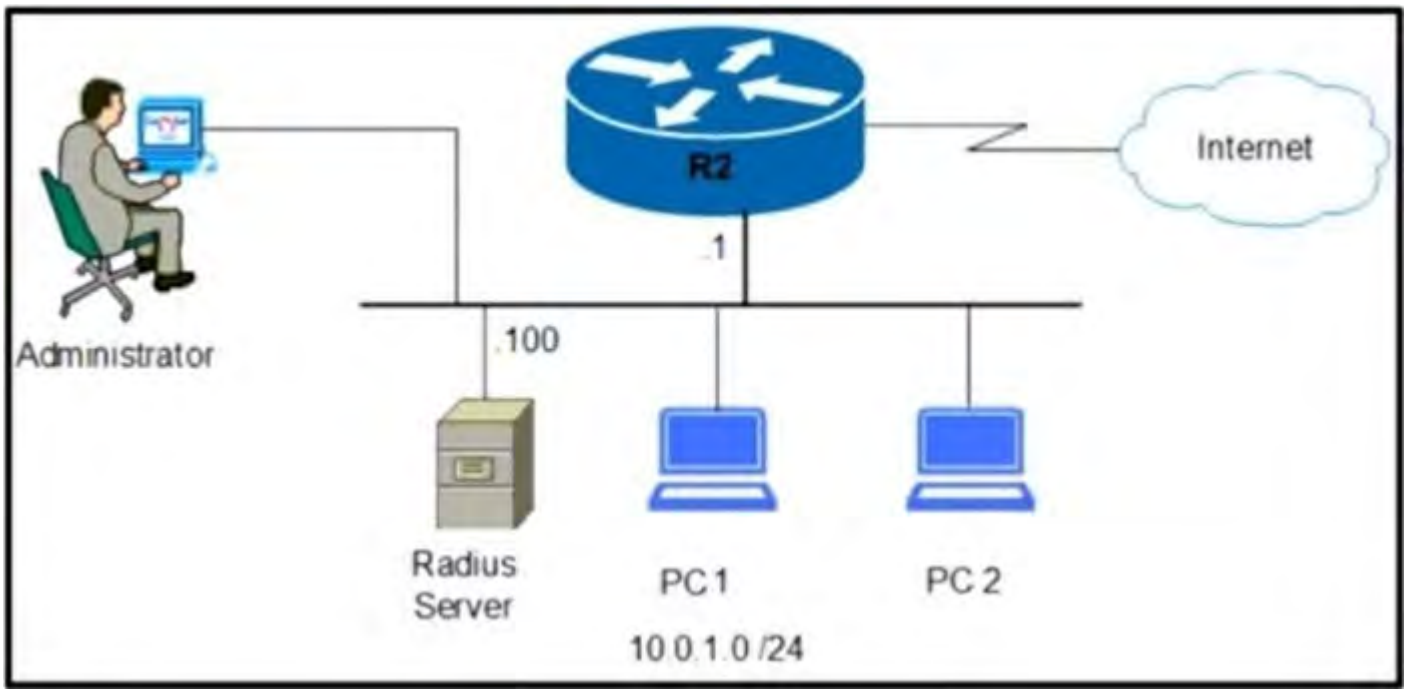

Which command set enables router R2 to be configured via NETCONF?

Administrator with PC LAN with a RADIUS Server, two PCs 10.0.1.0/24, R2 a link to the Internet cloud.

A. R2(config)#username Netconf privilege 15 password example_password
R2(config)#netconf-yang
R2(config)# netconf-yang feature candidate-datastore
B. R2(config)#snmp-server manager
R2(config)#snmp-server community ENCOR ro
C. R2(config)#snmp-server manager
R2(config)#snmp-server community ENCOR rw
D. R2(config)#netconf
R2(config)#ip http secure server

Correct Answer: A
Explanation

Explanation/Reference:
https://developer.cisco.com/docs/ios-xe/#!enabling-netconf-on-ios-xe/authentication

QUESTION 158
Which two functions is an edge node responsible for? (Choose two.)

A. provides multiple entry and exit points for fabric traffic
B. provides the default exit point for fabric traffic
C. provides the default entry point for fabric traffic
D. provides a host database that maps endpoint IDs to a current location
E. authenticates endpoints

Correct Answer: CE
Explanation

QUESTION 159
Which QoS queuing method transmits packets out of the interface in the order the packets arrive?

A. custom

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B. weighted- fair
C. FIFO
D. priority

Correct Answer: C
Explanation

Explanation/Reference:
First-in, first-out (FIFO): FIFO entails no concept of priority or classes of traffic. With FIFO, transmission of packets out the interface occurs in the order the packets arrive, which means no QoS

QUESTION 160
What is difference between TCAM and the MAC address table?

A. TCAM is used to make Lalyer 2 forwarding decisions CAM is used to build routing tables.
B. The MAC address table supports partial matches .TCAM requires an exact match.
C. The MAC address table is contained in CAM.ACL and QoS information is stored in TCAM.
D. Router prefix lookups happens in CAM.MAC address table lookups happen in TCAM.

Correct Answer: D
Explanation

QUESTION 161
Refer to me exhibit.

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```
<?xml version="1.0"?>
<nc:rpc message-id="101" xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0">
    <nc:get>
        <nc:filter type="subtree">
            <native xmlns="http://cisco.com/ns/yang/ned/ios">
             <interface>
              <GigabitEthernet>
               <name>1</name>
                 <ip></ip>
              </GigabitEthernet>
             </interface>
            </native>
        </nc:filter>
    </nc:get>
</nc:rpc>
]]>]]>
```

The NETCONF object is sent to a Cisco IOS XE switch. What is me purpose of the object?

A. View the configuration of all GigabitEthernet interfaces
B. Discover the IP address of interface GigabitEthernet1
C. Set the description of interface GigabitEthernet1 to "1"
D. Remove the IP address from interface GigabitEthernet1

Correct Answer: A
Explanation

QUESTION 162
Refer to the exhibit.

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```
monitor session 11 type erspan-source
source interface GigabitEthernet3
destination
erspan-id 12
ip address 10.10.10.10
origin ip address 10.100.10.10
```

Which command set completes the ERSPAN session configuration?

A.
```
monitor session 12 type erspan-destination
 destination interface GigabitEthernet4
 source
  erspan-id 12
  ip address 10.10.10.10
```

B.
```
monitor session 11 type erspan-destination
 destination interface GigabitEthernet4
 source
  erspan-id 12
  ip address 10.100.10.10
```

C.
```
monitor session 11 type erspan-destination
 destination interface GigabitEthernet4
 source
  erspan-id 11
  ip address 10.10.10.10
```

D.
```
monitor session 12 type erspan-destination
 destination interface GigabitEthernet4
 source
  erspan-id 11
  ip address 10.10.10.10
```

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

Correct Answer: A

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Explanation

Explanation/Reference:
the source IP of erspan-destination is local IP(or erspan-source destination IP)
reference:https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus3000/sw/system_mgmt/503_u2_2/Cisco_Nexus_3000_system_mgmt_config_gd_503_U2_2_chapter14.pdf

QUESTION 163
Which authorization framework gives third-party applications limited access to HTTP services?

A. iPsec
B. Basic Auth
C. GRE
D. OAuth 2.0

Correct Answer: D
Explanation

Explanation/Reference:
https://auth0.com/docs/authenticate/protocols/oauth
"The OAuth 2.0 authorization framework is a protocol that allows a user to grant a third-party web site or application access to the user's protected resources, without necessarily revealing their long-term credentials or even their identity."

https://auth0.com/intro-to-iam/what-is-oauth-2
"...is a standard designed to allow a website or application to access resources hosted by other web apps on behalf of a user."

QUESTION 164
An engineer receives a report that an application exhibits poor performance. On the switch where the server is connected, this syslog message is visible: SW_MATM-4-MACFLAP_NOTIF: Host 0054.3962.7651 in vlan 14 is flapping between port Gi1/0/1 and port Gi1/0/2.

What is causing the problem?

A. undesirable load-balancing configuration on the switch
B. invalid port channel configuration on the switch
C. wrong SFP+ and cable connected between the server and the switch
D. failed NIC on the server

Correct Answer: B
Explanation

Explanation/Reference:
If the EtherChannel has not been established (for some misconfiguration), and the switch still treats the ports as individual ports while the other end is already using them as a bundle We have MAC flapping...

https://learningnetwork.cisco.com/s/question/0D53i00000Kt7h8CAB/mac-address-flapping-on-port-channel

QUESTION 165
Which function is performed by vSmart in the Cisco SD-WAN architecture?

A. distribution of centralized policies
B. execution of localized policies
C. redistribution between OMP and other routing protocols
D. facilitation of NAT detection and traversal

Correct Answer: A
Explanation

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QUESTION 166
Which capability does a distributed virtual switch have?

A. use floating static routes
B. provide centralized management for virtual switches
C. run dynamic routing protocols
D. use advanced IPsec encryption algorithms

Correct Answer: B
Explanation

QUESTION 167
Refer to the exhibit.

```
v= json.loads(requests.get("http://10.66.77.88:3000/version").text)[0]['ver']
c= json.loads(requests.get("http://10.66.77.88:3000/version").text)[1]['cnt']
bp= []
for i in range (int(c)):
   bp.append(json.loads(requests.get("http://10.66.77.88:3000/badip").text)[i]['ip'])
```

What is achieved by this Python script?

A. It counts JSON data from a website.
B. It loads JSON data into an HTTP request.
C. It reads JSON data into a formatted list.
D. It converts JSON data to an HTML document.

Correct Answer: C
Explanation

QUESTION 168
What is a characteristic of traffic shaping?

A. drops out-of-profile packets
B. causes TCP retransmits when packets are dropped
C. can be applied in both traffic directions
D. queues out-of-profile packets until the buffer is full

Correct Answer: D
Explanation

QUESTION 169
When a DNS host record is configured for a new Cisco AireOS WLC, which hostname must be added to allow APs to successfully discover the WLC?

A. CONTROLLER-CAPWAP-CISCO
B. CISCO-CONTROLLER-CAPWAP
C. CAPWAP-CISCO-CONTROLLER
D. CISCO-CAPWAP-CONTROLLER

Correct Answer: D
Explanation

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Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/5700/software/release/3e/consolidated/configuration-guide/b_multi_3e_5700_cg/b_multi_3e_5700_cg_chapter_01001011.html#:~:text=CAPWAP%2C%20which%20is%20based% 20on,Cisco%20products%20that%20use%20CAPWAP

QUESTION 170
What do Chef and Ansible have in common?

A. They rely on a declarative approach.
B. They rely on a procedural approach.
C. They use YAML as their primary configuration syntax.
D. They are clientless architectures.

Correct Answer: B
Explanation

QUESTION 171
Refer to the exhibit.

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```
R1
interface Ethernet0/0
ip address 10.1.1.10 255.255.255.0
ip nat inside
!
interface Serial0/0
ip address 209.165.201.1 255.255.255.224
ip nat outside
!
ip nat pool Busi 209.165.201.1 209.165.201.2 netmask 255.255.255.252
ip nat inside source list 1 pool Busi
!
access-list 1 permit 10.1.1.0 0.0.0.255
!

R1# show ip nat statistics
Total active translations: 1 (0 static, 1 dynamic; 0 extended)
Outside interface:
Serial0/0
Inside interfaces:
Ethernet0/0
Hits: 119 Misses: 1
Expired translations: 0
Dynamic mappings:
-- Inside Source
access-list 1 pool Busi refcount 1
pool fred: netmask 255.255.255.252
start 209.165.201.1 end 209.165.201.2
type generic, total addresses 2, allocated 1 (50%), misses 0
!
```

A network engineer configures NAT on R1 and enters the show command to verify the configuration.

What does the output confirm?

A. The first pocket triggered NAT to add on entry to NAT table
B. R1 is configured with NAT overload parameters
C. A Telnet from 160.1.1 1 to 10.1.1.10 has been initiated.
D. R1 to configured with PAT overload parameters

Correct Answer: A
Explanation

QUESTION 172
Based on the router's API output In JSON format below, which Python code will display the value of the

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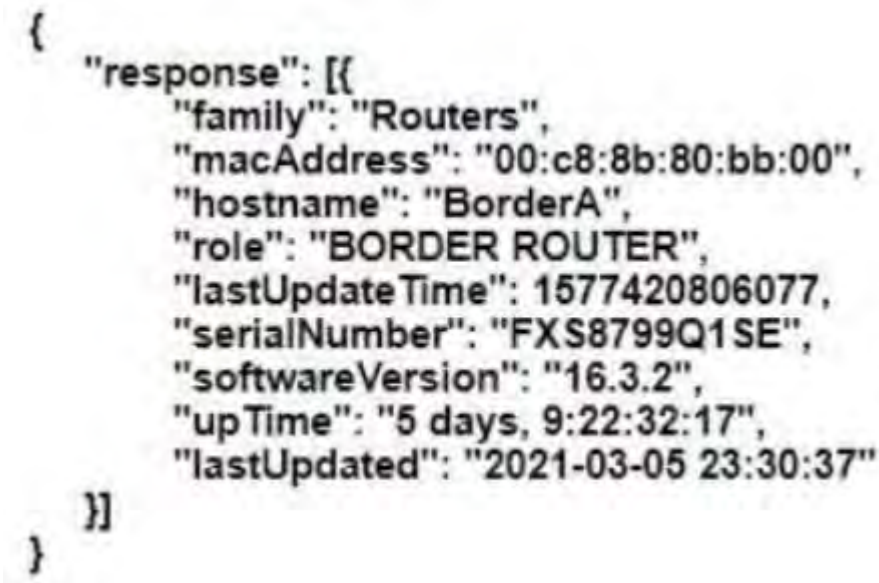
'role' key?



```
{
    "response": [{
            "family": "Routers",
            "macAddress": "00:c8:8b:80:bb:00",
            "hostname": "BorderA",
            "role": "BORDER ROUTER",
            "lastUpdateTime": 1577420806077,
            "serialNumber": "FXS8799Q1SE",
            "softwareVersion": "16.3.2",
            "upTime": "5 days, 9:22:32:17",
            "lastUpdated": "2021-03-05 23:30:37"
    }]
}
```

A.

```
json_data = json.loads(response.text)
print(json_data['response']['family']['role'])
```

B.

```
json_data = response.json()
print(json_data['response'][0]['role'])
```

C.

```
json_data = response.json()
print(json_data['response'][family]['role'])
```

D.

```
json_data = json.loads(response.text)
print(json_data[response][0][role])
```

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

Correct Answer: B
Explanation

QUESTION 173
What mechanism does PIM use to forward multicast traffic?

A. PIM sparse mode uses a pull model to deliver multicast traffic.

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B. PIM dense mode uses a pull model to deliver multicast traffic.
C. PIM sparse mode uses receivers to register with the RP.
D. PIM sparse mode uses a flood and prune model to deliver multicast traffic.

Correct Answer: A
Explanation

Explanation/Reference:
PIM dense mode (PIM-DM) uses a push model to flood multicast traffic to every corner of the network. This push model is a brute-force method of delivering data to the receivers. This method would be efficient in certain deployments in which there are active receivers on every subnet in the network. PIM-DM initially floods multicast traffic throughout the network. Routers that have no downstream neighbors prune the unwanted traffic. This process repeats every 3 minutes. PIM Sparse Mode (PIM-SM) uses a pull model to deliver multicast traffic. Only network segments with active receivers that have explicitly requested the data receive the traffic. PIM-SM distributes information about active sources by forwarding data packets on the shared tree. Because PIM-SM uses shared trees (at least initially), it requires the use of an RP. The RP must be administratively configured in the network. Answer C seems to be correct but it is not, PIM spare mode uses sources (not receivers) to register with the RP. Sources register with the RP, and then data is forwarded down the shared tree to the receivers.
Reference: Selecting MPLS VPN Services Book, page 193

QUESTION 174
Which LISP infrastructure device provides connectivity between non-sites and LISP sites by receiving non-LISP traffic with a LISP site destination?

A. PETR
B. PITR
C. map resolver
D. map server

Correct Answer: B
Explanation

Explanation/Reference:
Proxy ingress tunnel router (PITR): answer 'PETR' PITR is an infrastructure LISP network entity that receives packets from non-LISP sites and encapsulates the packets to LISP sites or natively forwards them to non-LISP sites.

Reference:
https://www.ciscopress.com/articles/article.asp?p=2992605
https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/DCI/5-0/LISPmobility/DCI_LISP_Host_Mobility/LISPmobile_2.html

QUESTION 175
What does the statement print(format(0.8, '.0%')) display?

A. 80%
B. 8%
C. .08%
D. 8.8%

Correct Answer: A
Explanation

QUESTION 176
In which way are EIGRP and OSPF similar?

A. They both support unequal-cost load balancing
B. They both support MD5 authentication for routing updates.

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C. They nave similar CPU usage, scalability, and network convergence times.
D. They both support autosummarization

Correct Answer: C
Explanation

QUESTION 177
What is one benefit of implementing a data modeling language?

A. use XML style of data formatting
B. interoperability to allow unlimited implementations
C. machine-oriented logic and language-facilitated processing
D. conceptual representation makes interpretation simple

Correct Answer: D
Explanation

QUESTION 178
Which two methods are used by an AP that is typing to discover a wireless LAN controller? (Choose two.)

A. Cisco Discovery Protocol neighbour
B. broadcasting on the local subnet
C. DNS lookup cisco-DNA-PRIMARY.localdomain
D. DHCP Option 43
E. querying other APs

Correct Answer: BD
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/wireless/5500-series-wireless-controllers/119286-lap-notjoin-wlc-tshoot.html#backinfo

QUESTION 179
Why would a small or mid-size business choose a cloud solution over an on-premises solution?

A. Cloud provides greater ability for customization than on-premises.
B. Cloud provides more control over the implementation process than on-premises.
C. Cloud provides lower upfront cost than on-premises.
D. Cloud provides higher data security than on-premises.

Correct Answer: C
Explanation

QUESTION 180
How do the RIB and the FIB differ?

A. FIB contains routes learned through a dynamic routing protocol, and the RIB contains routes that are static or directly connected.
B. RIB contains the interface for a destination, and the FIB contains the next hop information.
C. FIB is derived from the control plane, and the RIB is derived from the data plane.
D. RIB is derived from the control plane, and the FIB is derived from the RIB.

Correct Answer: D
Explanation

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QUESTION 181
Which device, in a LISP routing architecture, receives and de-encapsulates LISP traffic for endpoints within a LISP-capable site?

A. MR
B. ETR
C. OMS
D. ITR

Correct Answer: B
Explanation

QUESTION 182
An engineer applies this EEM applet to a router:

```
event manager applet Test
 event timer watchdog time 600
 action 1.0 cli command "enable"
 action 2.0 cli command "term exec prompt timestamp"
 action 3.0 cli command "term length 0"
 action 4.0 cli command "show ip arp | in 0005.4319.7489"
 action 5.0 regexp ".*(ARPA).*" $_cli_result
 action 6.0 if $_regexp_result eq 1
 action 7.0 syslog msg $_cli_result
 action 8.0 end
```

What does the applet accomplish?

A. It generates a syslog message every 600 seconds on the status of the specified MAC address.
B. It checks the MAC address table every 600 seconds to see if the specified address has been learned.
C. It compares syslog output to the MAC address table every 600 seconds and generates an event when there is a match.
D. It compares syslog output to the MAC address table every 600 seconds and generates an event when no match is found.

Correct Answer: A
Explanation

QUESTION 183
Which action limits the total amount of memory and CPU that is used by a collection of VMs?

A. Place the collection of VMs in a resource pool.
B. Place the collection of VMs in a vApp.
C. Limit the amount of memory and CPU that is available to the cluster.
D. Limit the amount of memory and CPU that is available to the individual VMs.

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Correct Answer: A
Explanation

QUESTION 184
In a Cisco SD-Access wireless environment, which device is responsible for hosting the anycast gateway?

A. fusion router
B. control plane node
C. fabric border node
D. fabric edge node

Correct Answer: D
Explanation

Explanation/Reference:
"..... Inter-VLAN traffic is attracted to the edge node because the AnyCast gateway for the end hosts resides there." Here is the link: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html

QUESTION 185
Which two features are available only in next-generation firewalls? (Choose two.)

A. virtual private network
B. deep packet inspection
C. stateful inspection
D. application awareness
E. packet filtering

Correct Answer: BD
Explanation

QUESTION 186
Refer to the exhibit.

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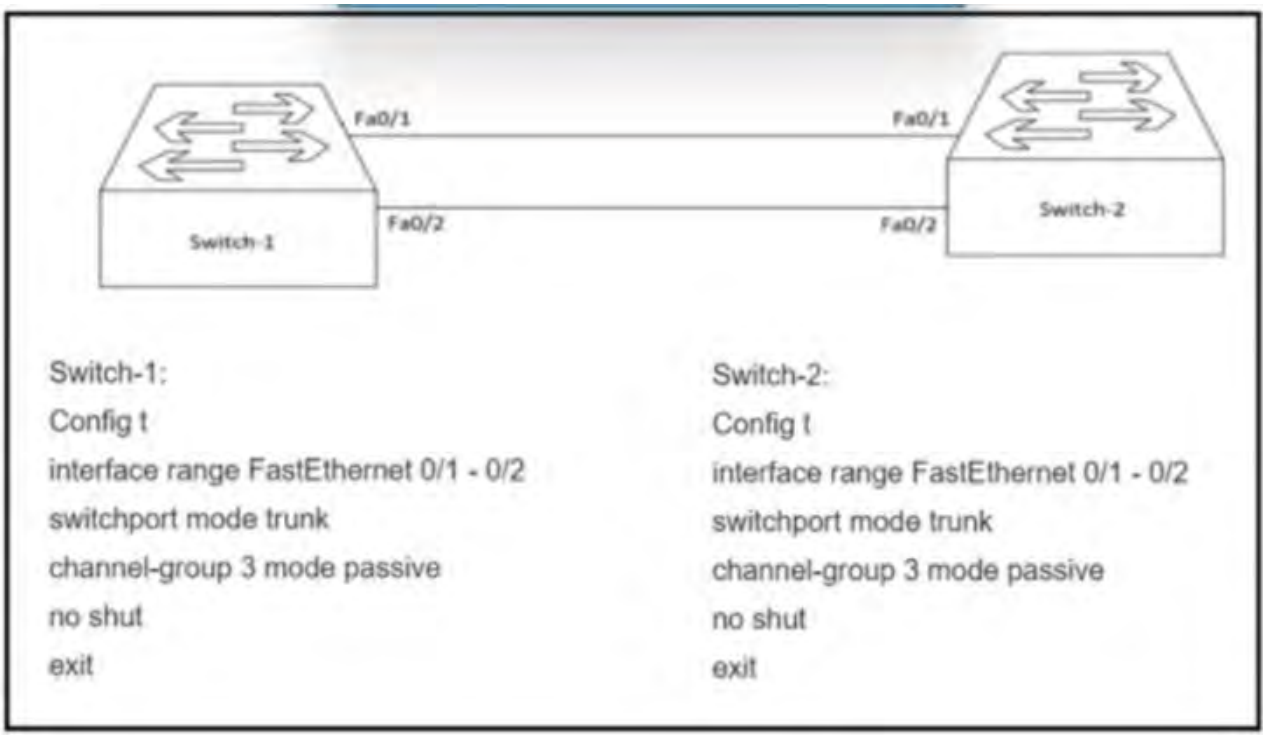

An LACP port channel is configured between Switch-1 and Switch-2, but It falls to come up.
Which action will resolve the issue?

A. Configure Switch-1 with channel-group mode active
B. Configure Switch-2 with channel-group mode desirable.
C. Configure Switch-1 with channel-group mode on.
D. Configure SwKch-2 with channel-group mode auto

Correct Answer: A
Explanation

QUESTION 187
Which there application has the ability to make REST calls against Cisco DNA Center?

A. API Explorer
B. REST Explorer
C. Postman
D. Mozilla

Correct Answer: C
Explanation

QUESTION 188
An engineer is configuring RADIUS-Based Authentication with EAP MS-CHAPv2 is configured on a client device. Which outer method protocol must be configured on the ISE to support this anthentication type?

A. EAP-TLS
B. LDAP
C. EAP-FAST

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D. PEAP

Correct Answer: D
Explanation

Explanation/Reference:
If you use EAP-MSCHAPv2, it means that your clients doesn't need to have a certificate, but your authentication server (NPS) has a certificate. Passwords from the clients are send using hashes to the authentication server. To protect these password hashes being send over the network, you can use PEAP which act as a TLS/SSL tunnel to protect the authentication traffic.

Reference: https://social.technet.microsoft.com/Forums/Lync/en-US/7962d24d-7aa2-4413-97da-4f03793f2405/very-confused-on-authenciation-concepts-eap-peap-eapmschapv2-?forum=winserversecurity

QUESTION 189
What is a characteristic of a traditional WAN?

A. low complexity and high overall solution scale
B. centralized reachability, security, and application policies
C. operates over DTLS and TLS authenticated and secured tunnels
D. united data plane and control plane

Correct Answer: D
Explanation

QUESTION 190
What is one role of the VTEP in a VXLAN environment?

A. to forward packets to non-LISP sites
B. to encapsulate the tunnel
C. to maintain VLAN configuration consistency
D. to provide EID-to-RLOC mapping

Correct Answer: B
Explanation

QUESTION 191
What is a client who is running 802.1x for authentication reffered to as?

A. supplicant
B. NAC device
C. authenticator
D. policy enforcement point

Correct Answer: A
Explanation

QUESTION 192
Refer to the exhibit.

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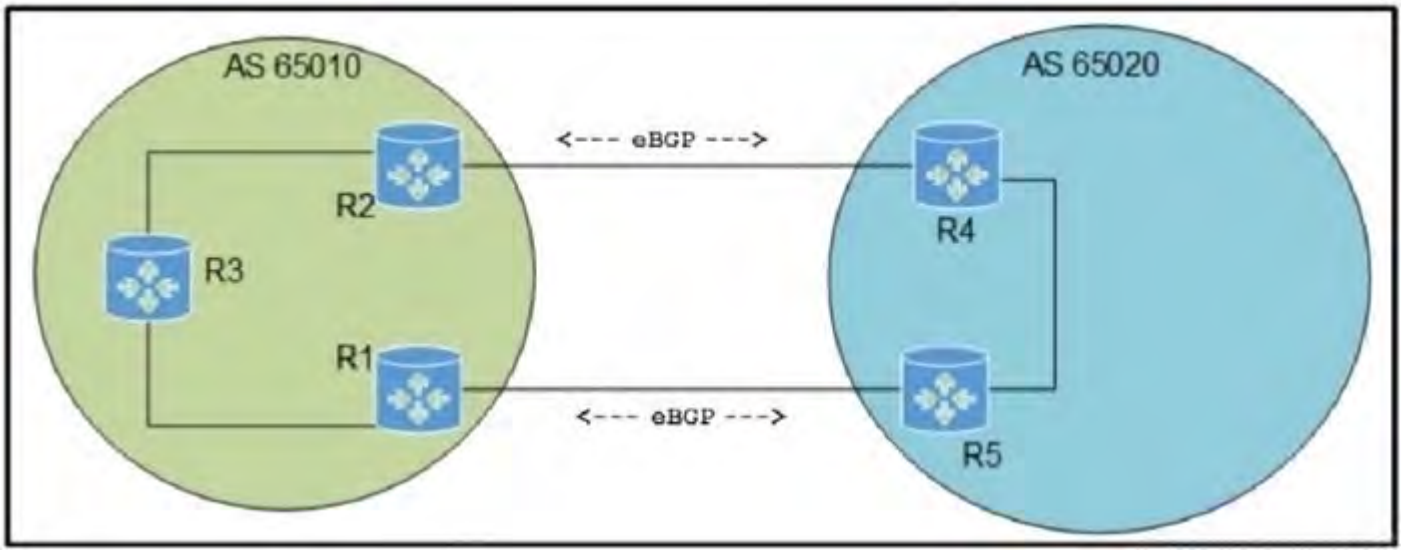

Which configuration must be applied to ensure that the preferred path for traffic from AS 65010 toward AS 65020 uses the R2 to R4 path?

A. R4(config)# router bgp 65020
R4(config-router)# bgp default local-preference 300
R5(config)# router bgp 65020
R5(config-router)# bgp default local-preference 200

B. R2(config)# router bgp 65010
R2(config-router)# bgp default local-preference 300
R1(config)# router bgp 65010
R1(config-router)# bgp default local-preference 200

C. R2(config)# router bgp 65010
R2(config-router)# bgp default local-preference 200
R1(config)# router bgp 65010
R1(config-router)# bgp default local-preference 300

D. R4(config)# router bgp 65020
R4(config-router)# bgp default local-preference 200
R5(config)# router bgp 65020
R5(config-router)# bgp default local-preference 300

Correct Answer: B
Explanation

QUESTION 193
What is one characteristic of Cisco DNA Center and vManage northbound APIs?

A. They push configuration changes down to devices.
B. They implement the RESTCONF protocol.
C. They exchange XML-formatted content.
D. They implement the NETCONF protocol.

Correct Answer: B
Explanation

QUESTION 194
Refer to the exhibit.

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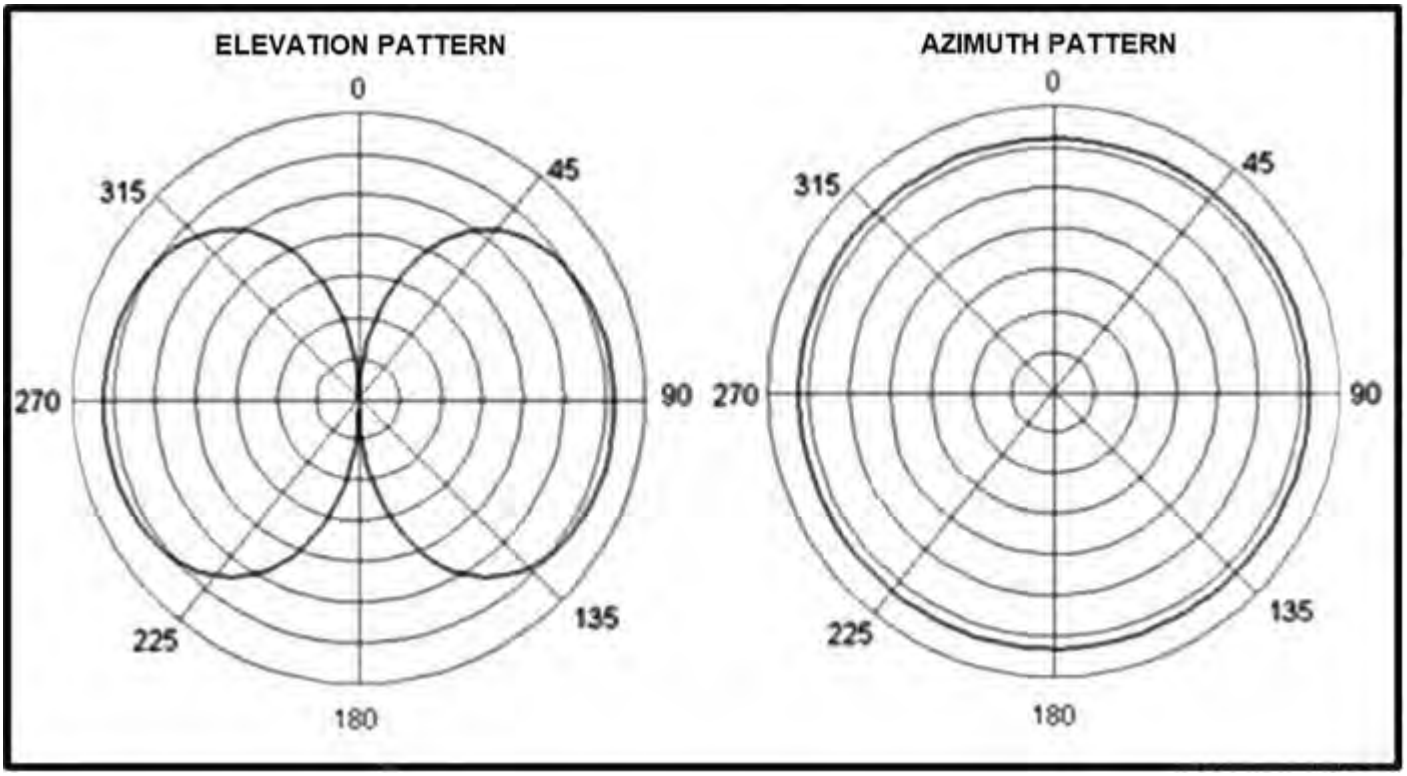

Which antenna emits this radiation pattern?

A. omnidirectional
B. RP-TNC
C. dish
D. Yagi

Correct Answer: A
Explanation

QUESTION 195
Refer to the exhibit.

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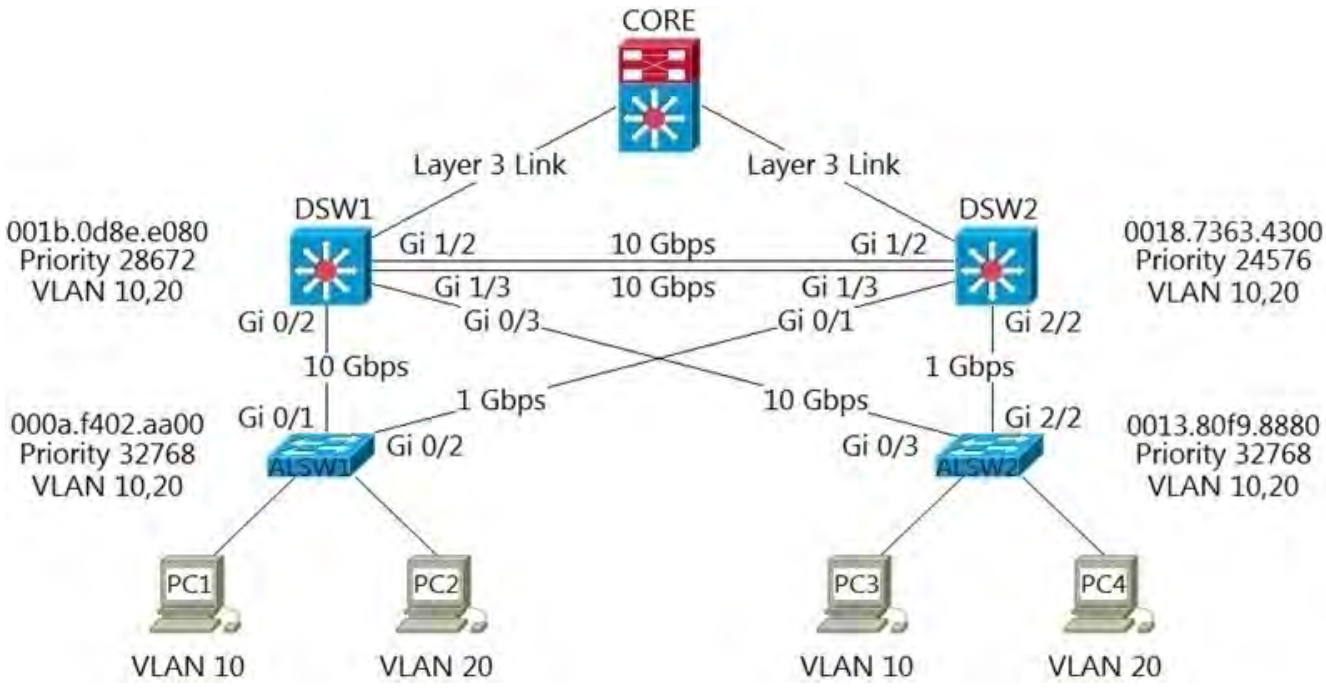

Which two commands ensure that DSW1 becomes root bridge for VLAN 10? (Choose two.)

A. DSW1(config)#spanning-tree vlan 10 priority 4096
B. DSW1(config)#spanning-tree vlan 10 priority root
C. DSW2(config)#spanning-tree vlan 10 priority 61440
D. DSW1(config)#spanning-tree vlan 10 port-priority 0
E. DSW2(config)#spanning-tree vlan 20 priority 0

Correct Answer: AB
Explanation

QUESTION 196
Which behavior can be expected when the HSRP versions is changed from 1 to 2?

A. Each HSRP group reinitializes because the virtual MAC address has changed.
B. No changes occur because version 1 and 2 use the same virtual MAC OUI.
C. Each HSRP group reinitializes because the multicast address has changed.
D. No changes occur because the standby router is upgraded before the active router.

Correct Answer: A
Explanation

Explanation/Reference:
Even though HSRP version 2 uses the new IP multicast address 224.0.0.102 to send hello packets instead of the multicast address of 224.0.0.2, used by HSRP version 1; when the HSRP version is changed, each group will reinitialize because it now has a new virtual MAC address.

QUESTION 197
An engineer must configure a new WLAN that allows a user to enter a passphrase and provides forward secrecy as a security measure. Which Layer 2 WLAN configuration is required on the Cisco WLC?

A. WPA2 Personal

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B. WPA3 Enterprise
C. WPA3 Personal
D. WPA2 Enterprise

Correct Answer: C
Explanation

Explanation/Reference:
WPA3-Personal provides the following key advantages:
?Creates a shared secret that is different for each SAE authentication.
?Protects against brute force "dictionary" attacks and passive attacks.
?Provides forward secrecy.<;---
Reference: https://www.cisco.com/c/en/us/products/collateral/wireless/catalyst-9100ax-access-points/wpa3-dep-guide-og.pdf

WPA3 Personal provides forward secrecy.
Reference: https://blogs.cisco.com/networking/wpa3-bringing-robust-security-for-wi-fi-networks

QUESTION 198
Refer to the exhibit.

```
R1#show ip bgp summary
BGP router identifier 1.1.1.1, local AS number 65001
BGP table version is 1, main routing table version 1

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.12.2    4        65002       0       0        1    0    0 00:00:15 Idle
R1#show ip interface brief | include 192.168.12
FastEthernet0/0            192.168.12.1    YES NVRAM  up                    up

R2#show ip bgp summary
BGP router identifier 2.2.2.2, local AS number 65002
BGP table version is 1, main routing table version 1

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.12.1    4        65001       0       0        1    0    0 00:01:00 Idle (Admin)
R2#show ip interface brief | include 192.168.12
Ethernet0/0                192.168.12.2    YES NVRAM  up                    up
R2#ping 192.168.12.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.12.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
```

R1 and R2 are directly connected, but the BGP session does not establish. Which action must be taken to build an eBGP session?

A. Configure ip route 1.1.1.1 0.0.0.0 192.168.12.1 on R2.
B. Configure neighbor 192.168.12.1 activate under R2 BGP process.
C. Configure neighbor 2.2.2.2 remote-as 65002 under R1 BGP process.
D. Configure no neighbor 192.168.12.1 shutdown under R2 BGP process.

Correct Answer: D
Explanation

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Explanation/Reference:
Reference:
https://www.noction.com/blog/debug-bgp-states#:~:text=Idle%20(Admin)%20means%20that%20the,!&text=This%20is%20a%20good%20way,BGP%20section%20of%20the%20configuration

QUESTION 199
When using BFD in a network design, which consideration must be made?

A. BFD is used with first hop routing protocols to provide subsecond convergence.
B. BFD is more CPU-intensive than using reduced hold timers with routing protocols.
C. BFD is used with dynamic routing protocols to provide subsecond convergence.
D. BFD is used with NSF and graceful to provide subsecond convergence.

Correct Answer: C
Explanation

Explanation/Reference:
https://www.cisco.com/en/US/docs/ios/12_4t/ip_route/configuration/guide/t_bfd.html

QUESTION 200
An engineer applies this configuration to router R1. How does R1 respond when the user `cisco' logs in?

```
username cisco privilege 15 noescape secret 5 F7u$9cyE438490035m8TQ$nv&6502x
username cisco autocommand show startup-config
aaa authentication login default local-case enable
aaa authorization exec default local
```

A. It displays the startup conftg and then permits the user to execute commands
B. It places the user into EXEC mode and permits the user to execute any command
C. It displays the startup conflg and then terminates the session.
D. It places the user into EXEC mode but permits the user to execute only the show startup-config command

Correct Answer: A
Explanation

QUESTION 201
Based on the router's API output in JSON format below, which Python code will display the value of the "hostname" key?

```
{
   "response": [{
        "family": "Switches",
        "macAddress": "00:41:41:43:07:00",
        "hostname": "SwitchIDF14",
        "upTime": "352 days, 6:17:26:10",
        "lastUpdated": "2020-07-12 21:15:29",
   }]
}
```

A. json_data = json.loads(response.text)

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print(json_data[response][0][hostname])

B. json_data = response.json()
print(json_data[`response'][0][`hostname'])

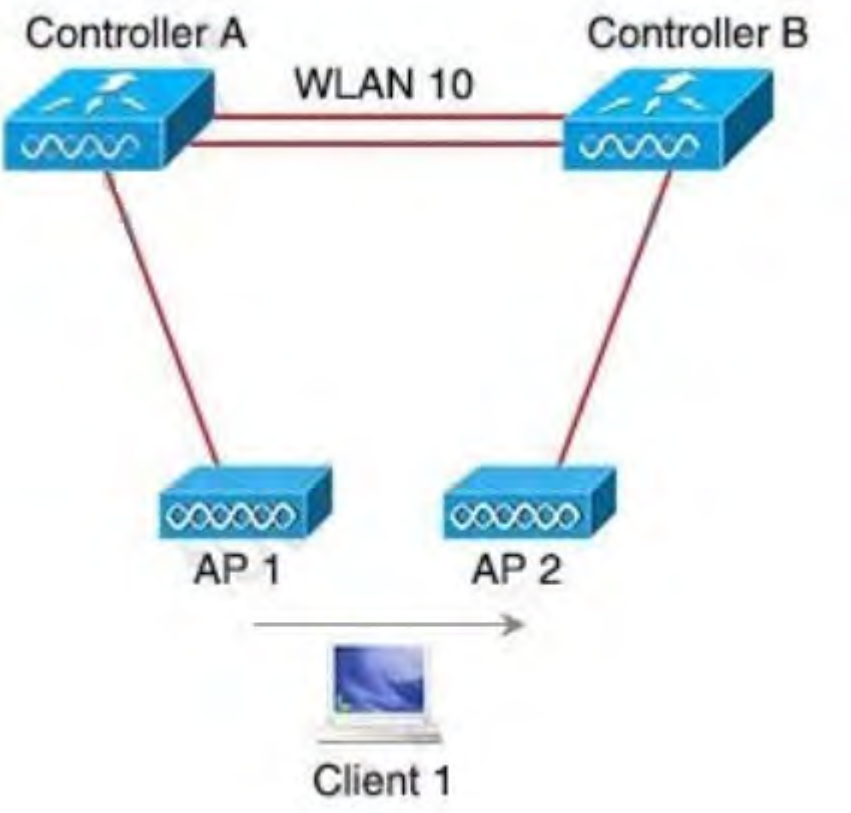
C. json_data = response.json()
print(json_data[`response'][family][hostname'])

D. json_data = json.loads(response.text)
print(json_data[`response'][`family'][`hostname'])

Correct Answer: B
Explanation

Explanation/Reference:
the output was generated from an API get request using "requests" library.
https://www.geeksforgeeks.org/response-json-python-requests/

QUESTION 202
Refer to the exhibit.



Both controllers are in the same mobility group. Which result occurs when client 1 roams between APs that are registered to different controllers in the same WLAN?

A. Client 1 contact controller B by using an EoIP tunnel.
B. CAPWAP tunnel is created between controller A and controller B.
C. Client 1 users an EoIP tunnel to contact controller A.
D. The client database entry moves from controller A to controller B.

Correct Answer: D
Explanation

Explanation/Reference:
This is called Inter Controller-L2 Roaming. Inter-Controller (normally layer 2) roaming occurs when a client roam between two APs registered to two different controllers, where each controller has an interface in the

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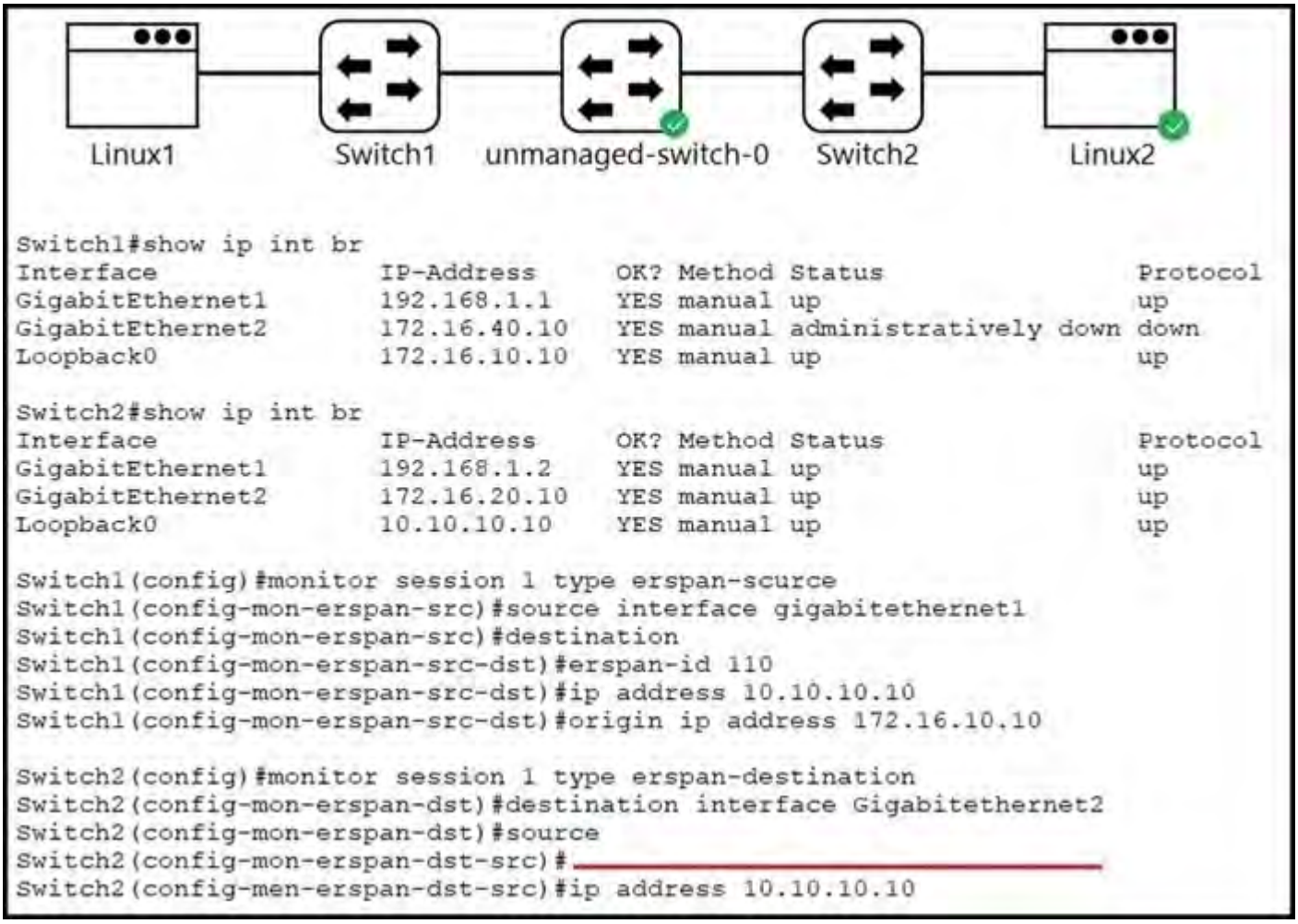
client subnet. In this instance, controllers exchange mobility control messages (over UDP port 16666) and the client database entry is moved from the original controller to the new controller

QUESTION 203
Refer to the exhibit.



An engineer must configure an ERSPAN tunnel that mirrors traffic from Linux1 on Switch1 to Linux2 on Switch2. Which command must be added to the destination configuration to enable the ERSPAN tunnel?

A. (config-mon-erspan-dst-src)# erspan-id 172.16.10.10
B. (config mon erspan-dst-src)# erspan-id 110
C. (config-mon-erspan-dst-src)# no shut
D. (config-mon-erspan-dst-src)# origin ip address 172.16.10.10

Correct Answer: B
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/lanswitch/configuration/xe-3s/lanswitch-xe-3s-book/lnsw-conf-erspan.html

QUESTION 204
Refer to the exhibit.

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```
R1#show ip ospf interface G10/0
GigabitEthernet0/0 is up, line protocol is up
 Internet Address 172.20.0.1/24, Area 0, Attached via
Network Statement
 Process ID 1, RouterID 172.20.0.1, Network Type
BROADCAST, Cost: 1
 Topology-MTID    Cost    Disabled    Shutdown
Topology Name
       0           1         no          no
Base
 Transmit Delay is 1 sec, State DR, Priority 1
 Designated Router (ID) 172.20.0.1, Interface address
172.20.0.1
 No backup designated router on this network
 Timer intervals configured,Hello 10,Dead 40, Wait 40,
Retransmit 5
    oob-resync timeout 40
    No Hellos (Passive interface)
 Supports Link-local Signaling (LLS)
 Cisco NSF helper support enabled
 IETF NSF helper support enabled
 Index 1/1/1, flood queue length 0
 Next 0x0(0)/0x0(0)/0x0(0)
 Last flood scan length is 0, maximum is 0
 Last flood scan time is 0 msec, maximum is 0 msec
 Neighbor Count is 0, Adjacent neighbor count is 0
 Suppress hello for 0 neighbor(s)
```

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```
R2#show ip ospf interface Gi0/0
GigabitEthernet0/0 is up, line protocol is up
 Internet Address 172.20.0.2/24, Area 0, Attached via
Network Statement
 Process ID 1, RouterID 172.20.0.2, Network Type
BROADCAST, Cost: 5
 Topology-MTID    Cost    Disabled    Shutdown
Topology Name
       0           5         no          no
Base
 Transmit Delay is 1 sec, State DR, Priority 1
 Designated Router (ID) 172.20.0.2, Interface address
172.20.0.2
 No backup designated router on this network
 Timer intervals configured,Hello 10,Dead 40, Wait 40,
Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:01
 Supports Link-local Signaling (LLS)
 Cisco NSF helper support enabled
 IETF NSF helper support enabled
 Index 1/1/1, flood queue length 0
 Next 0x0(0)/0x0(0)/0x0(0)
 Last flood scan length is 1, maximum is 2
 Last flood scan time is 2 msec, maximum is 2 msec
 Neighbor Count is 0, Adjacent neighbor count is 0
 Suppress hello for 0 neighbor(s)
```

Cisco IOS routers R1 and R2 are interconnected using interface Gi0/0. Which configuration allows R1 and R2 to form an OSPF neighborship on interface Gi0/0?

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```
R2(config)#router ospf 1
R2(config-router)#passive-interface Gi0/0

R2(config)#interface Gi0/0
R2(config-if)#ip ospf cost 1

R1(config)#router ospf 1
R1(config-router)#no passive-interface Gi0/0

R1(config)#router ospf 1
R1(config-if)#network 172.20.0.0 0.0.0.255 area 1
```

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

Correct Answer: C
Explanation

Explanation/Reference:
Gi0/0 on R1 is not sending hellos on that interface.

QUESTION 205
Where is the wireless LAN controller located in a mobility express deployment?

A. There is no wireless LAN controller in the network.
B. The wireless LAN controller is embedded into the access point.
C. The wireless LAN controller exists in the cloud.
D. The wireless LAN controller exists in a server that is dedicated for this purpose.

Correct Answer: B
Explanation

QUESTION 206
Which collection contains the resources to obtain a list of fabric nodes through the vManage API?

A. device management
B. administration
C. device inventory
D. monitoring

Correct Answer: C
Explanation

Explanation/Reference:
The collection that contains the resources to obtain a list of fabric nodes through the vManage API is the device inventory collection. This collection can be accessed through the Cisco Encor Documents and provides resources such as the Fabric Visualization, Device List, and Fabric Node Inventory APIs. These APIs can be used to obtain information about the fabric nodes, such as the device inventory, status, and version.

QUESTION 207
Which function does a Cisco SD-Access extended node perform?

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A. provides fabric extension to nonfabric devices through remote registration and configuration
B. performs tunneling between fabric and nonfabric devices to route traffic over unknown networks
C. used to extend the fabric connecting to downstream nonfabric enabled Layer 2 switches
D. in charge of establishing Layer 3 adjacencies with nonfabric unmanaged node

Correct Answer: C
Explanation

QUESTION 208
How does Protocol Independent Multicast function?

A. In sparse mode it establishes neighbor adjacencies and sends hello messages at 5-second intervals.
B. It uses the multicast routing table to perform the multicast forwarding function.
C. It uses unicast routing information to perform the multicast forwarding function.
D. It uses broadcast routing information to perform the multicast forwarding function.

Correct Answer: C
Explanation

Explanation/Reference:
Although PIM is called a multicast routing protocol, it actually uses the unicast routing table to perform the reverse path forwarding (RPF) check function instead of building up a completely independent multicast routing table. Unlike other routing protocols, PIM does not send and receive routing updates between routers.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipmulti_pim/configuration/xe-16/imc-pim-xe-16-book/imc-tech-oview.html

QUESTION 209
Where in Cisco DNA Center is documentation of each API call, organized by its functional area?

A. Developer Toolkit
B. platform management
C. platform bundles
D. Runtime Dashboard

Correct Answer: A
Explanation

Explanation/Reference:
https://developer.cisco.com/docs/dna-center/#!api-quick-start/cisco-dna-center-platform-api-overview

QUESTION 210
Which TLV value must be added to Option 43 when DHCP is used to ensure that APs join the WLC?

A. 0x77
B. AAA
C. 0xf1
D. 642

Correct Answer: C
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/97066-dhcp-option-43-00.html

QUESTION 211

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How does SSO work with HSRP to minimize network disruptions?

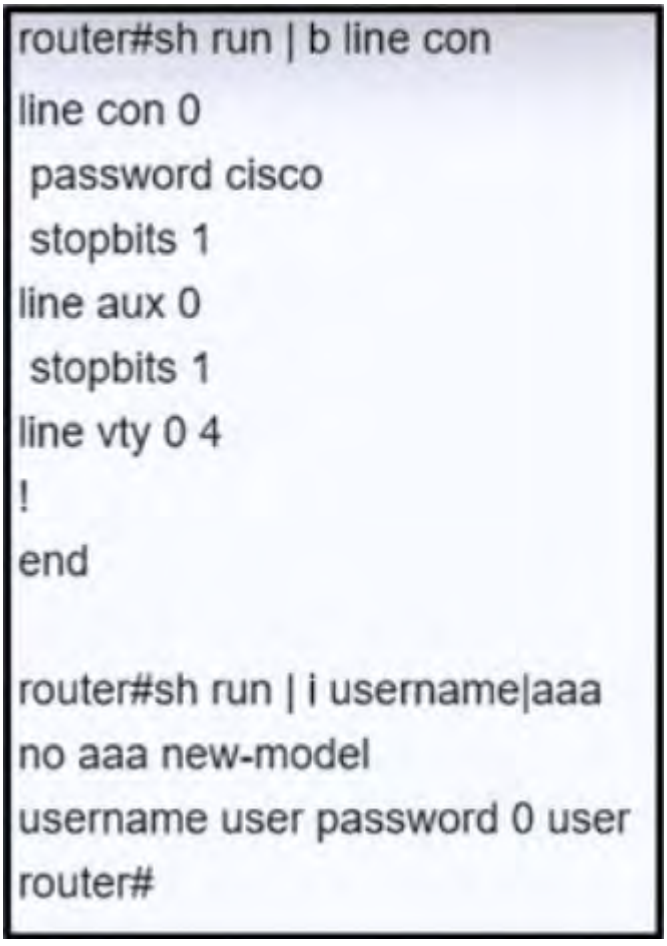
A. It enables HSRP to elect another switch in the group as the active HSRP switch.
B. It ensures fast failover in the case of link failure.
C. It enables data forwarding along known routes following a switchover, white the routing protocol reconverges.
D. It enables HSRP to failover to the standby RP on the same device.

Correct Answer: D
Explanation

Explanation/Reference:
SSO HSRP alters the behavior of HSRP when a device with redundant Route Processors (RPs) is configured for stateful switchover (SSO) redundancy mode. When an RP is active and the other RP is standby, SSO enables the standby RP to take over if the active RP fails. The SSO HSRP feature enables the Cisco IOS HSRP subsystem software to detect that a standby RP is installed and the system is configured in SSO redundancy mode. Further, if the active RP fails, no change occurs to the HSRP group itself and traffic continues to be forwarded through the current active gateway device.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp_fhrp/configuration/15-s/fhp-15-sbook/fhp-hsrp-sso.html

QUESTION 212
Refer to the exhibit



Which configuration enables password checking on the console line, using only a password?

A. router(config)# line con 0
router(config-line)# login
B. router(config)# line con 0

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router(config-line)# exec-timeout 0 0

C. router(config)# line vty 0 4
router(config-line)# login

D. router(config)# line con 0
router(config-line)# login local

Correct Answer: A
Explanation

QUESTION 213
When does a stack master lose its role?

A. When the priority value of a stack member is changed to a higher value
B. when a switch with a higher priority is added to the stack
C. when the stack master is reset
D. when a stack member fails

Correct Answer: C
Explanation

Explanation/Reference:
A stack master retains its role unless one of these events occurs:

1. The switch stack is reset.*
2. The stack master is removed from the switch stack.
3. The stack master is reset or powered off.
4. The stack master fails.
5. The switch stack membership is increased by adding powered-on standalone switches or switch stacks.*

In the events marked by an asterisk (*), the current stack master might be re-elected based on the listed factors.
When you power on or reset an entire switch stack, some stack members might not participate in the stack master election. Stack members that are powered on within the same 20-second time frame participate in the stack master election and have a chance to become the stack master. Stack members that are powered on after the 20-second time frame do not participate in this initial election and become stack members. All stack members participate in re-elections. For all powering considerations that affect stack-master elections, see the "Switch Installation" chapter in the hardware installation guide. The new stack master becomes available after a few seconds. In the meantime, the switch stack uses the forwarding tables in memory to minimize network disruption. The physical interfaces on the other available stack members are not affected during a new stack master election and reset. After a new stack master is elected and the previous stack master becomes available, the previous stack master does not resume its role as stack master. As described in the hardware installation guide, you can use the Master LED on the switch to see if the switch is the stack master.

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/release/12-2_55_se/configuration/guide/3750xscg/swstack.html

QUESTION 214
An engineer is connected to a Cisco router through a Telnet session. Which command must be issued to view the logging messages from the current session as soon as they are generated by the router?

A. logging buffer
B. service timestamps log uptime
C. logging host
D. terminal monitor

Correct Answer: D
Explanation

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QUESTION 215
In a Cisco StackWise Virtual environment, which planes are virtually combined in the common logical switch?

A. management and data
B. control and management
C. control, and forwarding
D. control and data

Correct Answer: B
Explanation

Explanation/Reference:
Read the "StackWise Virtual architecture" from the link below:

https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.html

QUESTION 216
What is the purpose of a data modeling language?

A. to describe the structure and meaning of exchanged data
B. to standardize the procedures that are executed when parsing sent and received data
C. to establish a framework to process data by using an object-oriented programming approach
D. to specify the rules for transcoding between text and binary data encodings

Correct Answer: A
Explanation

Explanation/Reference:
Data models enable data to be easily structured, grouped, and replicated to represent information related to network devices, features, and solutions.
https://developer.cisco.com/docs/nx-os/#!the-nature-of-data-models

QUESTION 217
Which Python library is used to work with YANG data models via NETCONF?

A. Postman
B. requests
C. ncclient
D. cURL

Correct Answer: C
Explanation

Explanation/Reference:
Python files usually start with "from ncclient import manager"

QUESTION 218
What is the result of applying this access control list?

ip access-list extended STATEFUL
10 permit tcp any any established
20 deny ip any any

A. TCP traffic with the URG bit set is allowed
B. TCP traffic with the SYN bit set is allowed
C. TCP traffic with the ACK bit set is allowed

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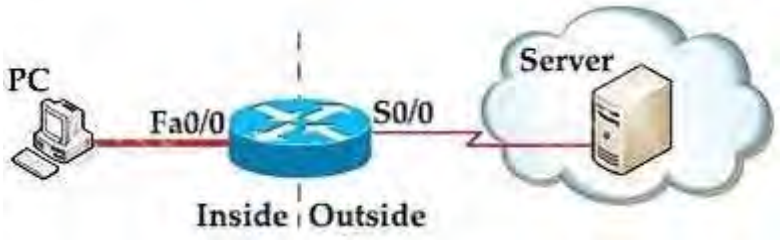
D. TCP traffic with the DF bit set is allowed

Correct Answer: C
Explanation

Explanation/Reference:
The established keyword is only applicable to TCP access list entries to match TCP segments that have the ACK and/or RST control bit set (regardless of the source and destination ports), which assumes that a TCP connection has already been established in one direction only. Let's see an example below:



Suppose you only want to allow the hosts inside your company to telnet to an outside server but not vice versa, you can simply use an "established" access-list like this: access-list 100 permit tcp any any established access-list 101 permit tcp any any eq telnet ! interface S0/0 ip access-group 100 in ip access-group 101 out

QUESTION 219
A wireless administrator must create a new web authentication corporate SSID that will be using ISE as the external RADIUS server. The guest VLAN must be specified after the authentication completes. Which action must be performed to allow the ISE server to specify the guest VLAN?

A. Enable AAA Override.
B. Enable Network Access Control State.
C. Set AAA Policy name.
D. Set RADIUS Profiling.

Correct Answer: A
Explanation

QUESTION 220
Refer to the exhibit.

```
ip access-list extended ACL-CoPP-Management
permit udp any eq ntp any
permit udp any any eq snmp
permit tcp any any eq 22
permit tcp any eq 22 any established

class-map match-all CLASS-CoPP-Management
match access-group name ACL-CoPP-Management
```

An engineer must protect the CPU of the router from high rates of NTP, SNMP, and SSH traffic. Which two configurations must be applied to drop these types of traffic when it continuously exceeds 320 kbps? (Choose two)

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A. R1(config-pmap)#class CLASS-CoPP-Management
R1(config-pmap-c)#police 32 conform-action transmit exceed-action drop violate-action transmit

B. R1(config)#policy-map POLICY-CoPP
R1(config-pmap)#class CLASS-CoPP-Management
R1(config-pmap-c)#police 320000 conform-action transmit exceed-action drop violate-action drop

C. R1(config)#policy-map POLICY-CoPP
R1(config-pmap)#class CLASS-CoPP-Management
R1(config-pmap-c)#police 320000 conform-action transmit exceed-action transmit violate-action drop

D. R1(config)#control-plane
R1(config-cp)# service-policy output POLICY-CoPP

E. R1(config)#control-plane
R1(config-cp)# service-policy input POLICY-CoPP

Correct Answer: CE
Explanation

Explanation/Reference:
"continuously" would imply that occasionally exceeding 320kbps is ok. "exceed drop" will not allow it to ever go above it.

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Exam D

QUESTION 1
What is a characteristic of para-virtualization?

A. Para-virtualization guest servers are unaware of one another
B. Para-virtualization allows direct access between the guest OS and the hypervisor
C. Para-virtualization allows the host hardware to be directly accessed
D. Para-virtualization lacks support for containers

Correct Answer: B
Explanation

Explanation/Reference:
Paravirtualization is virtualization in which the guest operating system (the one being virtualized) is aware that it is a guest and accordingly has drivers that, instead of issuing hardware commands, simply issues commands directly to the host operating system. This will include things such as memory management as well.

QUESTION 2
What is the role of the vsmart controller in a Cisco SD-WAN environment?

A. IT performs authentication and authorization
B. It manages the control plane.
C. It is the centralized network management system.
D. It manages the data plane.

Correct Answer: B
Explanation

Explanation/Reference:
+ Control plane (vSmart) builds and maintains the network topology and make decisions on the traffic flows. The vSmart controller disseminates control plane information between WAN Edge devices, implements control plane policies and distributes data plane policies to network devices for enforcement.

QUESTION 3
Which DNS lookup does an access point perform when attempting CAPWAP discovery?

A. CISCO-DNA-CONTROlLER.local
B. CAPWAP-CONTROLLER.local
C. CISCO-CONTROLLER.local
D. CISCO-CAPWAP-CONTROLLER.local

Correct Answer: D
Explanation

Explanation/Reference:
Reference: http://www.revolutionwifi.net/revolutionwifi/2010/11/capwap-controller-discovery-process_23.html

QUESTION 4
Refer to the exhibit.

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```
line vty 0 4
 session-timeout 30
 exec-timeout 120 0
 session-limit 30
 login local
line vty 5 15
 session-timeout 30
 exec-timeout 30 0
 session-limit 30
 login local
```

Only administrators from the subnet 10.10.10.0/24 are permitted to have access to the router. A secure protocol must be used for the remote access and management of the router instead of clear- text protocols. Which configuration achieves this goal?

A.

```
access-list 23 permit 10.10.10.0 0.0.0.255
line vty 0 15
access-class 23 in
transport input ssh
```

B.

```
access-list 23 permit 10.10.10.0 0.0.0.255
line vty 0 15
access-class 23 out
transport input all
```

C.

```
access-list 23 permit 10.10.10.0 0.0.0.255
line vty 0 4
access-class 23 in
transport input ssh
```

D.

```
access-list 23 permit 10.10.10.0 255.255.255.0
line vty 0 15
access-class 23 in
transport input ssh
```

A. Option A
B. Option B

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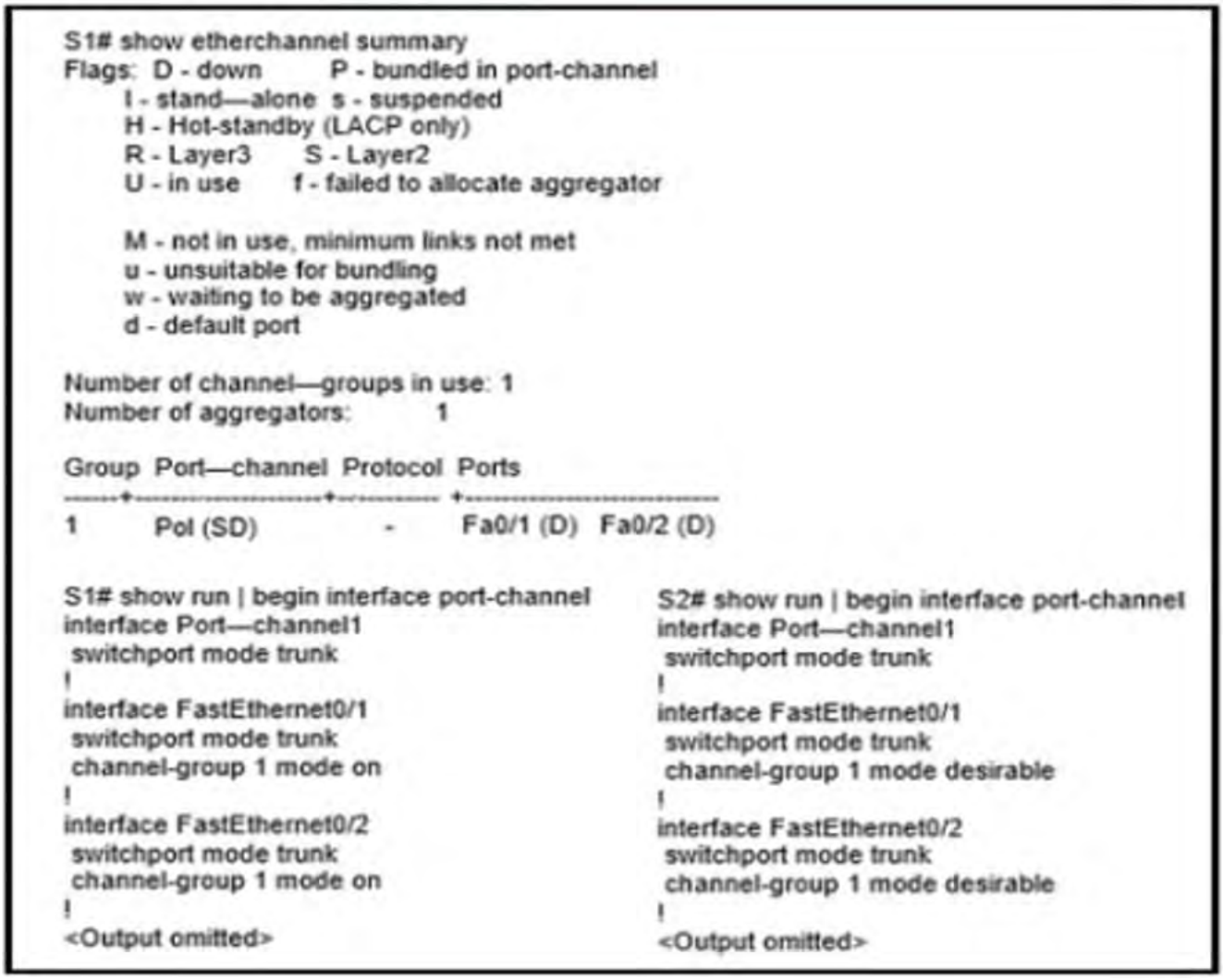
C. Option C
D. Option D

Correct Answer: A
Explanation

QUESTION 5
Refer to the exhibit.



```
S1# show etherchannel summary
Flags:  D - down        P - bundled in port-channel
        I - stand—alone  s - suspended
        H - Hot-standby (LACP only)
        R - Layer3      S - Layer2
        U - in use      f - failed to allocate aggregator

        M - not in use, minimum links not met
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port

Number of channel—groups in use: 1
Number of aggregators:           1

Group  Port—channel  Protocol  Ports
------+-------------+---------+-------------------------------
1      Pol (SD)              -      Fa0/1 (D)  Fa0/2 (D)

S1# show run | begin interface port-channel
interface Port—channel1
 switchport mode trunk
!
interface FastEthernet0/1
 switchport mode trunk
 channel-group 1 mode on
!
interface FastEthernet0/2
 switchport mode trunk
 channel-group 1 mode on
!
<Output omitted>

S2# show run | begin interface port-channel
interface Port—channel1
 switchport mode trunk
!
interface FastEthernet0/1
 switchport mode trunk
 channel-group 1 mode desirable
!
interface FastEthernet0/2
 switchport mode trunk
 channel-group 1 mode desirable
!
<Output omitted>
```

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Traffic is not passing between SW1 and SW2. Which action fixes the issue?

A. Configure LACP mode on S1 to passive.
B. Configure switch port mode to ISL on S2.
C. Configure PAgP mode on S1 to desirable.
D. Configure LACP mode on S1 to active.

Correct Answer: C
Explanation

QUESTION 6
Which Python code snippet must be added to the script to store the changed interface configuration to a local JSON-formatted file?

```
import json
import requests

Creds = ("user", "Z#419010526$mnV")
Headers = { "Content-Type" : "application/yang-data+json",
            "Accept" : "application/yang-data+json" }

BaseURL = https://cpe/restconf/data"
URL = BaseURL + "/Cisco-IOS-XE-native:native/interface"

Response = requests.get(URL, auth = Creds, headers = Headers, verify = False)
UpdatedConfig = Response.text.replace("2001:db8:1:", "2001:db8:café:"
```

A.
```
OutFile = open("ifaces.json", "w")
OutFile.write(Response.text)
OutFile.close()
```

B.
```
OutFile = open("ifaces.json", "w")
OutFile.write(UpdatedConfig)
OutFile.close()
```

C.
```
OutFile = open("ifaces.json", "w")
json.dump(UpdatedConfig,OutFile)
OutFile.close()
```

D.
```
OutFile = open("ifaces.json", "w")
OutFile.write(Response.json())
OutFile.close()
```

A. Option A
B. Option B

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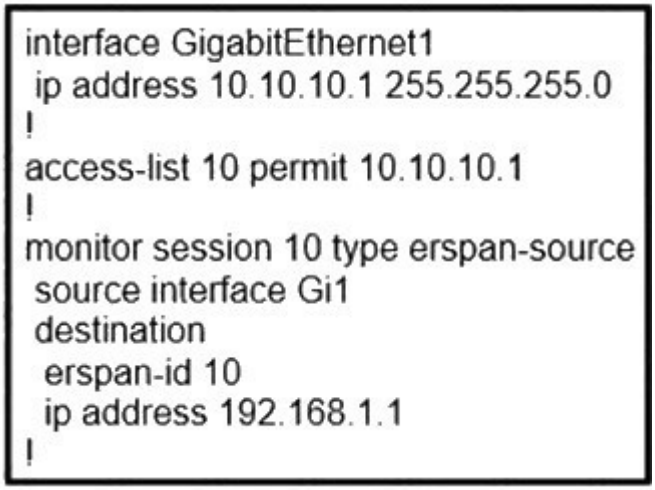
C. Option C
D. Option D

Correct Answer: B
Explanation

Explanation/Reference:
1 - 'response' type is (class Response).
2 - 'UpdateConfig' converted 'response' to a String, so it's a String.
3 - When using write() the passed argument must be a String.

NOT C, json.dump(ARG1, ARG2) method takes a python dictionary NOT a String, and convert it as a JSON file.

QUESTION 7
Refer to the exhibit.



Which command filters the ERSPAN session packets only to interface GigabitEthernet1?

A. source ip 10.10.10.1
B. source interface gigabitethernet1 ip 10.10.10.1
C. filter access-group 10
D. destination ip 10.10.10.1

Correct Answer: C
Explanation

QUESTION 8
Which IP SLA operation requires the IP SLA responder to be configured on the remote end?

A. ICMP echo
B. UDP jitter
C. CMP jitter
D. TCP connect

Correct Answer: B
Explanation

Explanation/Reference:
Cisco IOS IP SLA Responder is a Cisco IOS Software component whose functionality is to respond to Cisco IOS IP SLA request packets. The IP SLA source sends control packets before the operation starts to establish a connection to the responder. Once the control packet is acknowledged, test packets are sent to

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the responder. The responder inserts a time-stamp when it receives a packet and factors out the destination processing time and adds time-stamps to the sent packets. This feature allows the calculation of unidirectional packet loss, latency, and jitter measurements with the kind of accuracy that is not possible with ping or other dedicated probe testing.

The IP SLAs responder is a component embedded in the destination Cisco device that allows the system to anticipate and respond to IP SLAs request packets. The responder provides accurate measurements without the need for dedicated probes.

UDP Jitter measures the delay, delay variation(jitter), corruption, misorderingand packet lossby generating periodic UDP traffic. This operation always requires IP SLA responder.

Reference:
https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2017/pdf/BRKNMS-3043.pdf
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/46sg/configuration/guide/Wrapper-46SG/swipsla.pdf

QUESTION 9
Which JSON script is properly formatted?

A.
```
["animals": {
            "type": horse,
            "breed":"Palamino,
            "color":tan
          }
]
```

B.
```
[ "Vendor":
        {
            "type":wholesale,
            "location":on-line,
            "contact":646-168-2143
        }
]
```

C.
```
[
   "subject":
 {
  "title":"Language"
  "ID":"841963"
  "location":"Main Campus"
 }
]
]
```

D.
```
{
  "plants": [
 {
  "type":"annual",
   "color":"yellow",
   "season":"summer"
 }
]
}
```

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

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Correct Answer: D
Explanation

QUESTION 10
What is a benefit of Cisco TrustSec in a multilayered LAN network design?

A. Policy or ACLS are nor required.
B. There is no requirements to run IEEE 802.1X when TrustSec is enabled on a switch port.
C. Applications flows between hosts on the LAN to remote destinations can be encrypted.
D. Policy can be applied on a hop-by-hop basis.

Correct Answer: C
Explanation

QUESTION 11
An engineer must protect the password for the VTY lines against over-the-shoulder attacks. Which configuration should be applied?

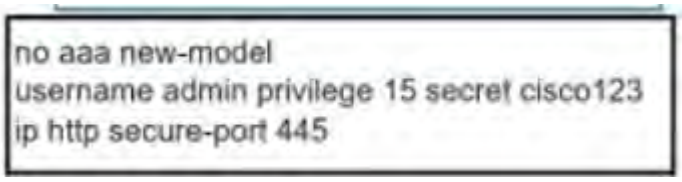
A. service password-encryption
B. username netadmin secret 9 9vFpMf8elb4RVV8$seZ/bDA
C. username netadmin secret 7$1$42J36k33008Pyh4QzwXyZ4
D. line vty 0 15 p3ssword XD822j

Correct Answer: A
Explanation

Explanation/Reference:
cisco(config)#username test privilege 15 password test777 cisco(config)#do s running-config | include user username test privilege 15 password 0 test777

cisco(config)#service password-encryption
cisco(config)#do s running-config | include user username test privilege 15 password 7 044F0E151B761B19 cisco(config)#
cisco(config)#do wr
Building configuration...
[OK]
cisco(config)#

QUESTION 12
Refer to the exhibit



Which command must be applied to complete the configuration and enable RESTCONF?

A. ip http secure-server
B. ip http server
C. ip http secure-port 443
D. ip http client username restconf

Correct Answer: A
Explanation

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QUESTION 13
What is the function of the fabric control plane node In a Cisco SD-Access deployment?

A. It is responsible for policy application and network segmentation in the fabric.
B. It performs traffic encapsulation and security profiles enforcement in the fabric.
C. It holds a comprehensive database that tracks endpoints and networks in the fabric.
D. It provides Integration with legacy nonfabric-enabled environments.

Correct Answer: C
Explanation

Explanation/Reference:
Fabric control plane node (C): One or more network elements that implement the LISP Map-Server (MS) and Map-Resolver (MR) functionality. The control plane node`s host tracking database keep track of all endpoints in a fabric site and associates the endpoints to fabric nodes in what is known as an EID-to-RLOC binding in LISP.

Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-macro-segmentation-deploy-guide.html

QUESTION 14
An engineer must configure router R1 to validate user logins via RADIUS and fall back to the local user database if the RADIUS server is not available. Which configuration must be applied?

A. aaa authorization exec default radius local
B. aaa authorization exec default radius
C. aaa authentication exec default radius local
D. aaa authentication exec default radius

Correct Answer: A
Explanation

QUESTION 15
Which mechanism can be used to enforce network access authentication against an AAA server if the endpoint does not support the 802.1X supplicant functionality?

A. WebAuth
B. MACsec
C. private VLANs
D. port security

Correct Answer: A
Explanation

QUESTION 16
Refer to the exhibit.

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```
DSW1#sh spanning-tree
MST1
  Spanning tree enabled protocol mstp
  Root ID     Priority    32769
              Address     0018.7363.4300
              Cost        2
              Port        13 (FastEthernet1/0/11)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    32769  (priority 32768 sys-id-ext 1)
              Address     001b.0d8e.e080
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Fa1/0/7             Desg FWD 2         128.9    P2p Bound (PVST)
Fa1/0/10            Desg FWD 2         128.12   P2p Bound (PVST)
Fa1/0/11            Root FWD 2         128.13   P2p
Fa1/0/12            Altn BLK 2         128.14   P2p
```

```
DSW#1sh spanning-tree mst

##### MST1    vlans mapped:   10,20
Bridge        address 001b.0d8e.e080 priority     32769 (32768 sysid 1)
Root          address 0018.7363.4300 priority     32769 (32768 sysid 1)
              port    Fa1/0/11       cost         2         rem hops 19
!
... output omitted
!
```

Which two commands ensure that DSW1 becomes the root bridge for VLAN 10 and 20? (Choose two.)

A. spanning-tree mst 1 priority 1
B. spanning-tree mst 1 root primary
C. spanning-tree mstp vlan 10,20 root primary
D. spanning-tree mst vlan 10,20 priority root
E. spanning-tree mst 1 priority 4096

Correct Answer: BE
Explanation

Explanation/Reference:
Priority values are 0, 4096, 8192, 12288, 16384, 20480, 24576, 28672, 32768, 36864, 40960, 45056, 49152, 53248, 57344, and 61440. All other values are rejected.

QUESTION 17
A network engineer must configure a switch to allow remote access for all feasible protocols. Only a password must be requested for device authentication and all idle sessions must be terminated in 30 minutes. Which configuration must be applied?

A. line vty 0 15
   password cisco

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transport input telnet ssh
exec-timeout 30 0

B. line vty 0 15
password cisco
transport input all
exec-timeout 0 30

C. username cisco privilege 15 cisco
line vty 0 15
transport input telnet ssh
login local
exec-timeout 0 30

D. line console 0
password cisco
exec-timeout 30 0

Correct Answer: A
Explanation

Explanation/Reference:
exec-timeout minutes [seconds]

QUESTION 18
Which security measure mitigates a man-in-the-middle attack of a REST API?

A. SSL certificates
B. biometric authentication
C. password hash
D. non repudiotion feature

Correct Answer: A
Explanation

QUESTION 19
Refer to the exhibit.

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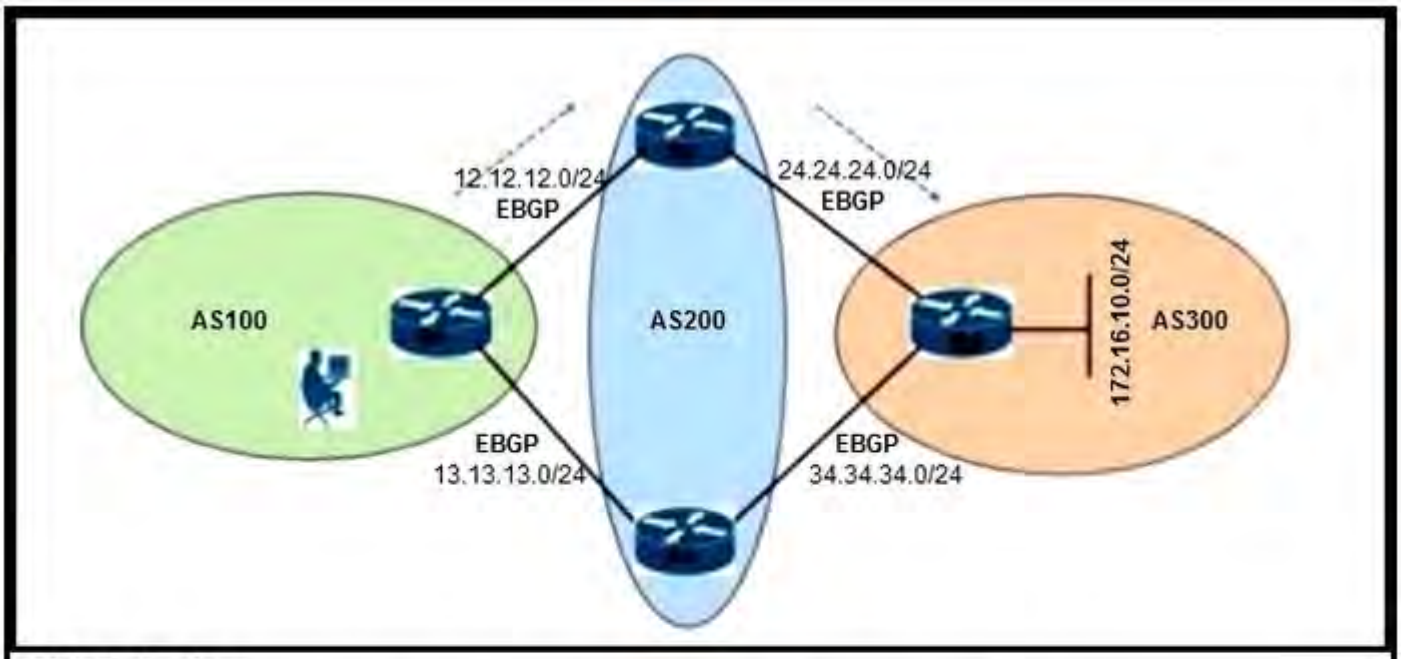


```
R1#sh ip bgp
BGP table version is 2, local router ID is 13.13.13.13.1
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-
Filter
              x best-external, a additional-path, c RIB-compressed,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I Invalid, N Not found
       Network                Next
Hop            Metric      LocPrf      Weight      Path
*  172.16.1.0/24           13.13.13.3                                0
     200 300 i
*>                         12.12.12.2                                  0
          200 300 i
```

An engineer is reaching network 172.16.10.0/24 via the R1-R2-R4 path. Which configuration forces the traffic to fake a path of R1-R3-R4?

A. R1(config)#route-map RM_LOCAL_PREF permit 10
R1(config-route-map)#set local-preference 101
R1(config-route-map)#exit
R1(config)#router bgp 100
R1(config-router)#neighbor 13.13.13.3 route-map RM_LOCAL_PREF in
R1(config-router)#end
R1#clear ip bgp 13.13.13.3 soft in

B. R1(config)#route-map RM_AS_PATH_PREPEND
R1(config-route-map)#set as-path prepend 200 200
R1(config-route-map)#exit R1(config)#router bgp 100
R1(config-router)#neighbor 12.12.12.2 route-map RM_AS_PATH_PREPEND in
R1(config-router)#end
R1#clear ip bgp 12.12.12.2 soft in

C. R1(config)#router bgp 100
R1(config-router)#neighbor 13.13.13.3 weight 1
R1(config-router)#end

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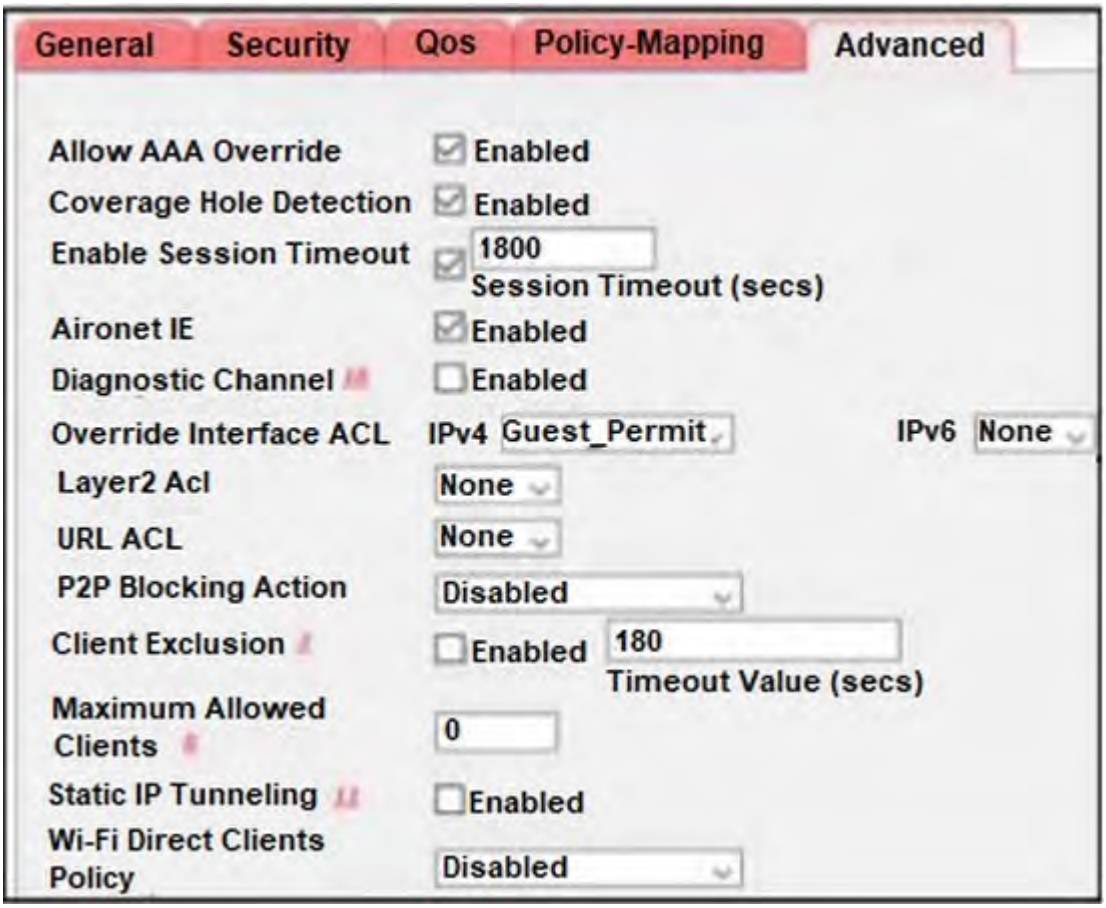
D. R2(config)#route-map RM_MED permit 10
R2(config-route-map)#set metric 1
R2(config-route-map)#exit
R2(config)#router bgp 200
R2(config-router)#neighbor 12.12.12.1 route-map RM_MED out
R2(config-router)#end
R2#clear ip bgp 12.12.12.1 soft out

Correct Answer: A
Explanation

QUESTION 20
Refer to the exhibit.



An engineer configures a new WLAN that will be used for secure communications; however, wireless clients report that they are able to communicate with each other. Which action resolves this issue?

A. Enable Client Exclusions.
B. Disable Aironet IE
C. Enable Wi-Fi Direct Client Policy
D. Enable P2P Blocking.

Correct Answer: D
Explanation

QUESTION 21
Refer to the exhibit.

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```
Router#show running-config | include aaa
aaa new-model
aaa authentication login default group tacacs+
aaa authorization exec default group tacacs+
aaa session-id common
```

Which configuration enables fallback to local authentication and authorization when no TACACS+ server is available?

A. Router(config)# aaa authentication login default local Router(config)# aaa authorization exec default local
B. Router(config)# aaa authentication login default group tacacs+ local Router(config)# aaa authorization exec default group tacacs+ local
C. Router(config)# aaa fallback local
D. Router(config)# aaa authentication login FALLBACK local Router(config)# aaa authorization exec FALLBACK local

Correct Answer: B
Explanation

QUESTION 22
An engineer must configure an EXEC authorization list that first checks a AAA server then a local username. If both methods fail, the user is denied. Which configuration should be applied?

A. aaa authorization exec default local group tacacs+
B. aaa authorization exec default local group radius none
C. aaa authorization exec default group radius local none
D. aaa authorization exec default group radius local

Correct Answer: D
Explanation

QUESTION 23
Refer to the exhibit.

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```
vlan 222
 remote-span
!
vlan 223
 remote-span
!
monitor session 1 source interface FastEthernet0/1 tx
monitor session 1 source interface FastEthernet0/2 rx
monitor session 1 source interface port-channel 5
monitor session 1 destination remote vlan 222
!
```

These commands have been added to the configuration of a switch.

Which command flags an error if it is added to this configuration?

A. monitor session 1 source interface port-channel 6
B. monitor session 1 source vlan 10
C. monitor session 1 source interface FastEthernet0/1 rx
D. monitor session 1 source interface port-channel 7, port-channel 8

Correct Answer: B
Explanation

Explanation/Reference:
RSPAN consists of at least one RSPAN source session, an RSPAN VLAN, and at least one RSPAN destination session. You separately configure RSPAN source sessions and RSPAN destination sessions on different network devices. To configure an RSPAN source session on a device, you associate a set of source ports or source VLANs with an RSPAN VLAN.

Traffic monitoring in a SPAN session has these restrictions: + Sources can be ports or VLANs, but you cannot mix source ports and source VLANs in the same session.

Reference:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/release/12-2_55_se/configuration/guide/3750xscg/swspan.html

Therefore in this question, we cannot configure a source VLAN because we configured source ports for RSPAN session 1 already.

QUESTION 24
Which cisco DNA center application is responsible for group-based access control permissions?

A. Design
B. Provision
C. Assurance
D. Policy

Correct Answer: D

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Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3-1-0/user_guide/ b_cisco_dna_center_ug_1_3_1_0/ b_cisco_dna_center_ug_1_3_1_0_chapter_01011.html

QUESTION 25
Which activity requires access to Cisco DNA Center CLI?

A. provisioning a wireless LAN controller
B. creating a configuration template
C. upgrading the Cisco DNA Center software
D. graceful shutdown of Cisco DNA Center

Correct Answer: D
Explanation

QUESTION 26
A switch is attached to router R1 on its gig 0/0 interface. Fort security reasons, you want to prevent R1 from sending OSPF hellos to the switch. Which command should be enabled to accomplish this?

A. R1(config-router)#ip ospf hello disable
B. R1(config-router)#ip ospf hello-interval 0
C. R1(config)#passive-interface Gig 0/0
D. R1(config-router)#passive-interface Gig 0/0

Correct Answer: D
Explanation

QUESTION 27
An engineer must implement a configuration to allow a network administrator to connect to the console port of a router and authenticate over the network. Which command set should the engineer use?

A. aaa new-model
   aaa authentication login default enable
B. aaa new-model
   aaa authentication login console local
C. aaa new-model
   aaa authentication login console group radius
D. aaa new-model
   aaa authentication enable default

Correct Answer: C
Explanation

Explanation/Reference:
network means Radius, TACACS+
So correct answer should be:

aaa new-model
aaa authentication login default group radius

or

aaa new-model
aaa authentication login console group radius

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line con 0
aaa authentication login console

QUESTION 28
Refer to the exhibit.

```
FastEthernet1/0/47 - Group 1 (version 2)
   State is Standby
      7 state changes, last state change 00:00:02
   Virtual IP address is 10.1.1.1
   Active virtual MAC address is 0000.0c9f.f001
      Local virtual MAC address is 0000.0c9f.f001 (v2 default)
   Hello time 3 sec, hold time 10 sec
      Next hello sent in 0.375 secs
   Authentication MD5, key-string "cisco"
   Preemption enabled, delay min 5 secs
   Active router is 10.1.1.2, priority 255 (expires in 9.396 sec)
   Standby router is local
   Priority 100 (default 100)
   IP redundancy name is "hsrp-Fa1/0/47-1" (default)
```

An engineer configures HSRP and enters the show standby command. Which two facts about the network environment are derived from the output? (Choose two.)

A. The local device has a higher priority selling than the active router
B. The virtual IP address of the HSRP group is 10.1.1.1.
C. If the local device fails to receive a hello from the active router for more than 5 seconds, it becomes the active router.
D. The hello and hold timers are set to custom values.
E. If a router with a higher IP address and same HSRP priority as the active router becomes available, that router becomes the new active router 5 seconds later.

Correct Answer: BE
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/hot-standby-router-protocol-hsrp/9281-3.html#:~:text=The%20priority%20field,default%20of%20100.

QUESTION 29
What are two benefits of implementing a traditional WAN instead of an SD-WAN solution? (Choose two.)

A. comprehensive configuration standardization
B. lower control plane abstraction
C. simplify troubleshooting
D. faster fault detection
E. lower data plane overhead

Correct Answer: BE
Explanation

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Explanation/Reference:
The provided answers are for the benefits of SD-WAN compared to traditional WAN

QUESTION 30
Which two results occur if Cisco DNA Center loses connectivity to devices in the SD-Access fabric? (Choose two)

A. All devices reload after detecting loss of connection to Cisco DNA Center
B. Already connected users are unaffected, but new users cannot connect
C. User connectivity is unaffected.
D. Cisco DNA Center is unable to collect monitoring data in Assurance.
E. Users lose connectivity

Correct Answer: CD
Explanation

Explanation/Reference:
If you have Cisco SD-Access implemented and DNA Centre becomes unreachable then the wired and wireless network will continue to forward packets as usual. There will be no impact to network performance or behavior. Yes you will be able to SSH / telnet / console into switches and wireless network infra as usual. For the period DNA Centre is unreachable, Assurance data will be lost, and you will not be able to make configuration changes to the Cisco SD-Access network.

https://community.cisco.com/t5/cisco-digital-network-architecture-dna/dna-failure-mode/td-p/3841715

QUESTION 31
Refer to the exhibit.

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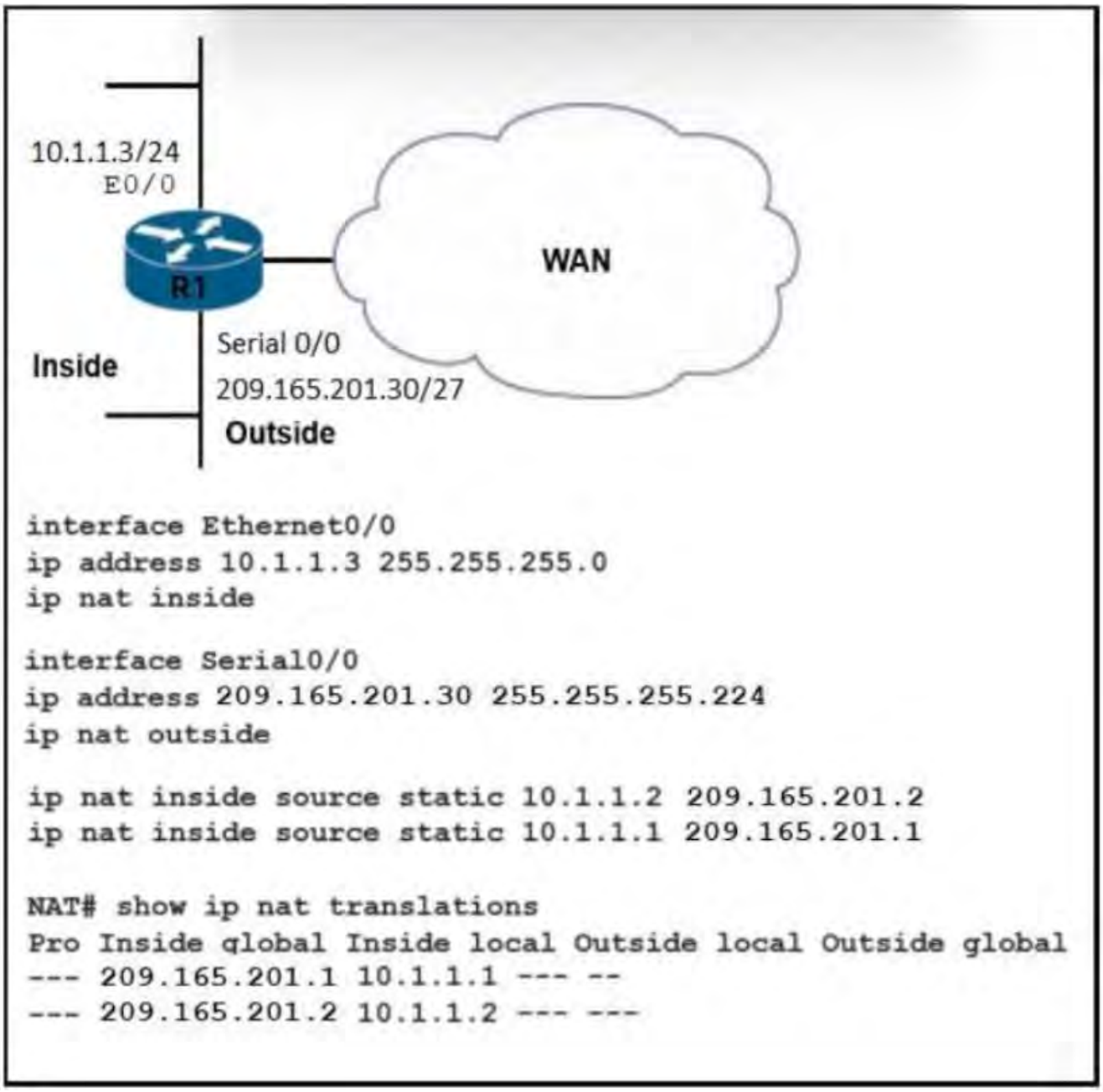


```
interface Ethernet0/0
ip address 10.1.1.3 255.255.255.0
ip nat inside

interface Serial0/0
ip address 209.165.201.30 255.255.255.224
ip nat outside

ip nat inside source static 10.1.1.2 209.165.201.2
ip nat inside source static 10.1.1.1 209.165.201.1

NAT# show ip nat translations
Pro Inside global Inside local Outside local Outside global
--- 209.165.201.1 10.1.1.1 --- --
--- 209.165.201.2 10.1.1.2 --- ---
```

What are two results of the NAT configuration? (Choose two.)

A. Packets with a destination of 200.1.1.1 are translated to 10.1.1.1 or .2. respectively.
B. A packet that is sent to 200.1.1.1 from 10.1.1.1 is translated to 209.165.201.1 on R1.
C. R1 looks at the destination IP address of packets entering S0/0 and destined for inside hosts.
D. R1 processes packets entering E0/0 and S0/0 by examining the source IP address.
E. R1 is performing NAT for inside addresses and outside address.

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Correct Answer: BC
Explanation

QUESTION 32
Which two security features are available when implementing NTP? (Choose two)

A. symmetric server passwords
B. dock offset authentication
C. broadcast association mode
D. encrypted authentication mechanism
E. access list-based restriction scheme

Correct Answer: DE
Explanation

Explanation/Reference:
The time kept on a machine is a critical resource and it is strongly recommend that you use the security features of NTP to avoid the accidental or malicious setting of incorrect time. The two security features available are an access list-based restriction scheme and an encrypted authentication mechanism.

Reference: https://www.cisco.com/c/en/us/support/docs/availability/high-availability/19643-ntpm.html

QUESTION 33
Reler to the exhibit

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```
SW1# show etherchannel summary
Flags: D - down P - bundled in port-channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate aggregator
M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port-channel Protocol Ports
------+-------------+-----------+-------------
1 Po1(S D ) PAgP Gi1/0(I) Gi1/1(I)

SW2# show etherchannel summary
Flags: D - down P - bundled in port-channel
I - stand-alone s - suspended
H - Hot-standby (LACP only)
R - Layer3 S - Layer2
U - in use f - failed to allocate aggregator
M - not in use, minimum links not met
u - unsuitable for bundling
w - waiting to be aggregated
d - default port
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port-channel Protocol Ports
------+-------------+-----------+---------------
1 Po1(S D ) LACP Gi1/0(I) Gi1/1(I)
```

The EtherChannel between SW1 and SW2 is not operational. Which a coon will resolve the issue?

A. Configure channel-group 1 mode active on GVO and G1 1 of SW2.
B. Configure twitchport trunk encapsulation dot1q on SW1 and SW2.
C. Configure channel-group 1 mode active on Gl'O and GM of SW1 .
D. Configure switchport mode dynamic desirable on SW1 and SW2

Correct Answer: C
Explanation

QUESTION 34
Which access control feature does MAB provide?

A. user access based on IP address
B. allows devices to bypass authenticate*
C. network access based on the physical address of a device
D. simultaneous user and device authentication

Correct Answer: C
Explanation

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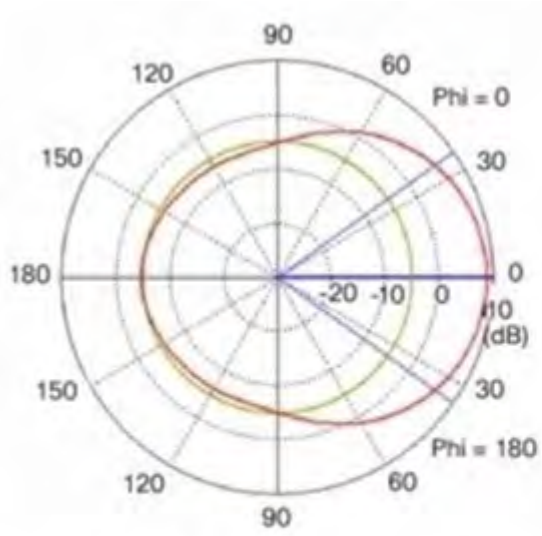
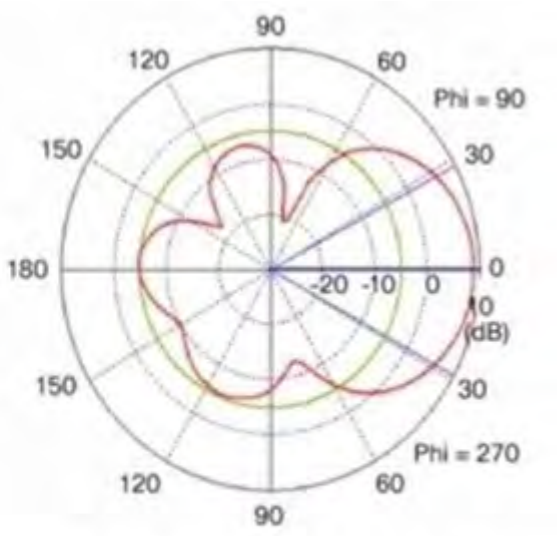
QUESTION 35
Refer to the exhibit.



Antenna Azimuth Plane Pattern



Antenna Elevation Plane Pattern

Which type of antenna do the radiation patterns present?

A. Patch
B. Omnidirectional
C. Yagi
D. Dipole

Correct Answer: A
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/prod_white_paper0900aecd806a1a3e.html

QUESTION 36
A wireless network engineer must configure a WPA2+WPA3 policy with the Personal security type.

Which action meets this requirement?

A. Configure the GCMP256 encryption cipher.
B. Configure the CCMP256 encryption cipher.
C. Configure the CCMP128 encryption cipher.
D. Configure the GCMP128 encryption cipher.

Correct Answer: C
Explanation

QUESTION 37
How do OSPF and EIGKP compare?

A. OSPF and EIGRP us the same administrative distance.
B. Both OSPF and EIGRP use the concept of areas.

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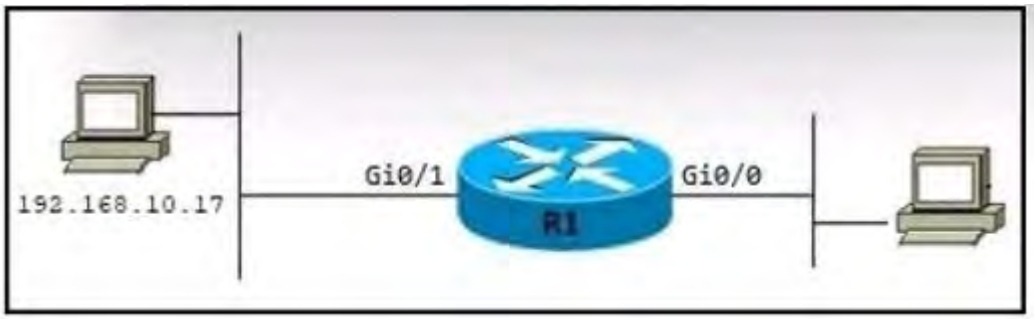
C. EIGRP shows an known routes, and OSPF shows successor and feasible successor routes.
D. EIGRP shows successor and feasible successor routes, and OSPF shows all known routes.

Correct Answer: D
Explanation

QUESTION 38
Refer to the exhibit.



An engineer applies this configuration to R1:

ip nat inside source static 192.168.10.17 192.168.27.42

Which command set should be added to complete the configuration?

A.
```
R1(config)# interface GigabitEthernet 0/0
R1(config)# ip pat inside

R1(config)# interface GigabitEthernet 0/1
R1(config)# ip pat outside
```

B.
```
R1(config)# interface GigabitEthernet 0/0
R1(config-if)# ip nat outside

R1(config)# interface GigabitEthernet 0/1
R1(config-if)# ip nat inside
```

C.
```
R1(config)# interface GigabitEthernet 0/0
R1(config)# ip pat outside

R1(config)# interface GigabitEthernet 0/1
R1(config)# ip pat inside
```

D.
```
R1(config)# interface GigabitEthernet 0/0
R1(config-if)# ip nat inside

R1(config)# interface GigabitEthernet 0/1
R1(config-if)# ip nat outside
```

A. Option A

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

Correct Answer: C
Explanation

QUESTION 39
Why would an architect use an OSPF virtual link?

A. to allow a stub area to transit another stub area
B. to connect two networks that have overlapping private IP address space
C. to merge two existing Area Os through a nonbackbone
D. to connect a nonbackbone area to Area 0 through another nonbackbone area

Correct Answer: D
Explanation

QUESTION 40
Reter to the exhibit.

A client requests a new SSID that will use web-based authentication and external RADIUS servers.

Which Layer 2 security mode must be selected?

A. WPA + WPA2
B. WPA2 + WPA3
C. Static WEP
D. None

Correct Answer: D
Explanation

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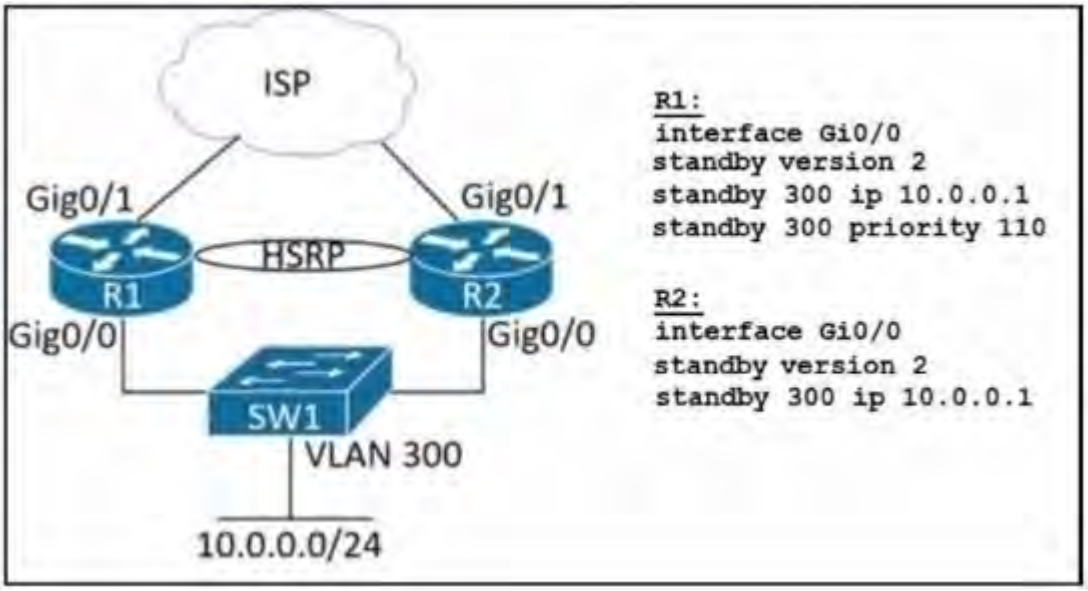
QUESTION 41
A network administrator for a small office is adding a passive IDS to its network switch for the purpose of inspecting network traffic.

Which of the following should the administrator use?

A. SNMPtrap
B. Port mirroring
C. Syslog collection
D. API integration

Correct Answer: B
Explanation

QUESTION 42
Refer to the exhibit.



An engineer must implement HSRP between two WAN routers. In the event R1 tails and then regains operational status, it must allow 100 seconds for the routing protocol to converge before preemption takes effect.

Which configuration is required?

A. R2
interface Gi0/0
standby 300 preempt
standby 300 delay sync 100
B. R1
interface Gi0/0
standby 300 preempt
standby 300 delay minimum 100
C. R1
interface Gi0/0
standby 300 preempt
R2
interface Gi0/0
standby 300 delay sync 100
D. R1
interface Gi0/0
standby 300 preempt

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R2
interface Gi0/0
standby 300 delay minimum 100

Correct Answer: B
Explanation

QUESTION 43
How does Cisco Express Forwarding switching differ from process switching on Cisco devices?

A. Cisco Express Forwarding switching uses adjacency tables built by the CDP protocol, and process switching uses the routing table.
B. Cisco Express Forwarding switching uses dedicated hardware processors, and process switching uses the main processor.
C. Cisco Express Forwarding swithing saves memory by storing adjacency tables in dedicated memory on the line cards, and process switching stores all tables in the main memory.
D. Cisco Express Forwarding switching uses a proprietary protocol based on IS-IS for MAC address lookup, and process switching uses the MAC address table.

Correct Answer: C
Explanation

QUESTION 44
Which of the following attacks becomes more effective because of global leakages of users' passwords?

A. Dictionary
B. Brute-force
C. Phishing
D. Deauthentication

Correct Answer: A
Explanation

QUESTION 45
Which of the following fiber connector types is the most likely to be used on a network interface card?

A. LC
B. SC
C. ST
D. MPO

Correct Answer: A
Explanation

QUESTION 46
Refer to the exhibit.

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```
Status Code: 200
Body:
{
    "response": [
        {
            "memorySize": "3735302144",
            "family": "Wireless Controller",
            "role": "ACCESS",
            "description": "Cisco Controller Wireless Version:8.5.140.0",
            "roleSource": "AUTO",
            "lastUpdated": "2021-09-10 13:48:02",
            "deviceSupportLevel": "Supported",
            "softwareType": "Cisco Controller",
            "softwareVersion": "8.5.140.0",
            "macAddress": "ac:4a:56:6c:7c:00",
            "collectionInterval": "Global Default",
            "inventoryStatusDetail": "<status><general code=\"SUCCESS\"/></
            status>",
            "serialNumber": "FOL25040021",
            "lastUpdateTime": 1631281682276,
            "hostname": "c3504.abc.inc",
            "tagCount": "0",

        ***Output omitted***

            "lineCardId": "",
            "managedAtleastOnce": true,
            "location": null,
            "type": "Cisco 3504 Wireless LAN Controller",
            "managementState": "Managed",
            "instanceUuid": "6b741b27-f7e7-4470-b6fc-d5168cc59502",
            "instanceTenantId": "5e8e896e4d4add00ca2b6487",
            "id": "6b741b27-f7e7-4470-b6fc-d5168cc59502"
        }
    ],
    "version": "1.0"
}
```

Which HTTP request produced the REST API response that was returned by Cisco DNA Center?

A. fetch /network-device?macAddress=ac:4a:56:6c:7c:00
B. POST/network-device?macAddress=ac:4a:56:6c:7c:00
C. GET/network-device?macAddress=ac:4a:56:6c:7c:00
D. PUT /network-device?macAddress=ac:4a:56:6c:7c:00

Correct Answer: C
Explanation

QUESTION 47
Refer to the exhibit.

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```
event manager applet CONFIG_BACKUP
action 1.0 cli command "enable"
action 3.0 cli command "end"
action 4.0 cli command "exit"

write_backup.tcl
set output [exec "copy run backup"]
set fd [open "flash:/backup.txt" "w"]
puts $fd $output
close $fd

ios_config "file prompt quiet" "end"
copy flash:/backup.txt tftp://10.1.1.23/backup.txt
ios_config "no file prompt quiet" "end"
file delete -force "flash:/backup.txt "
```

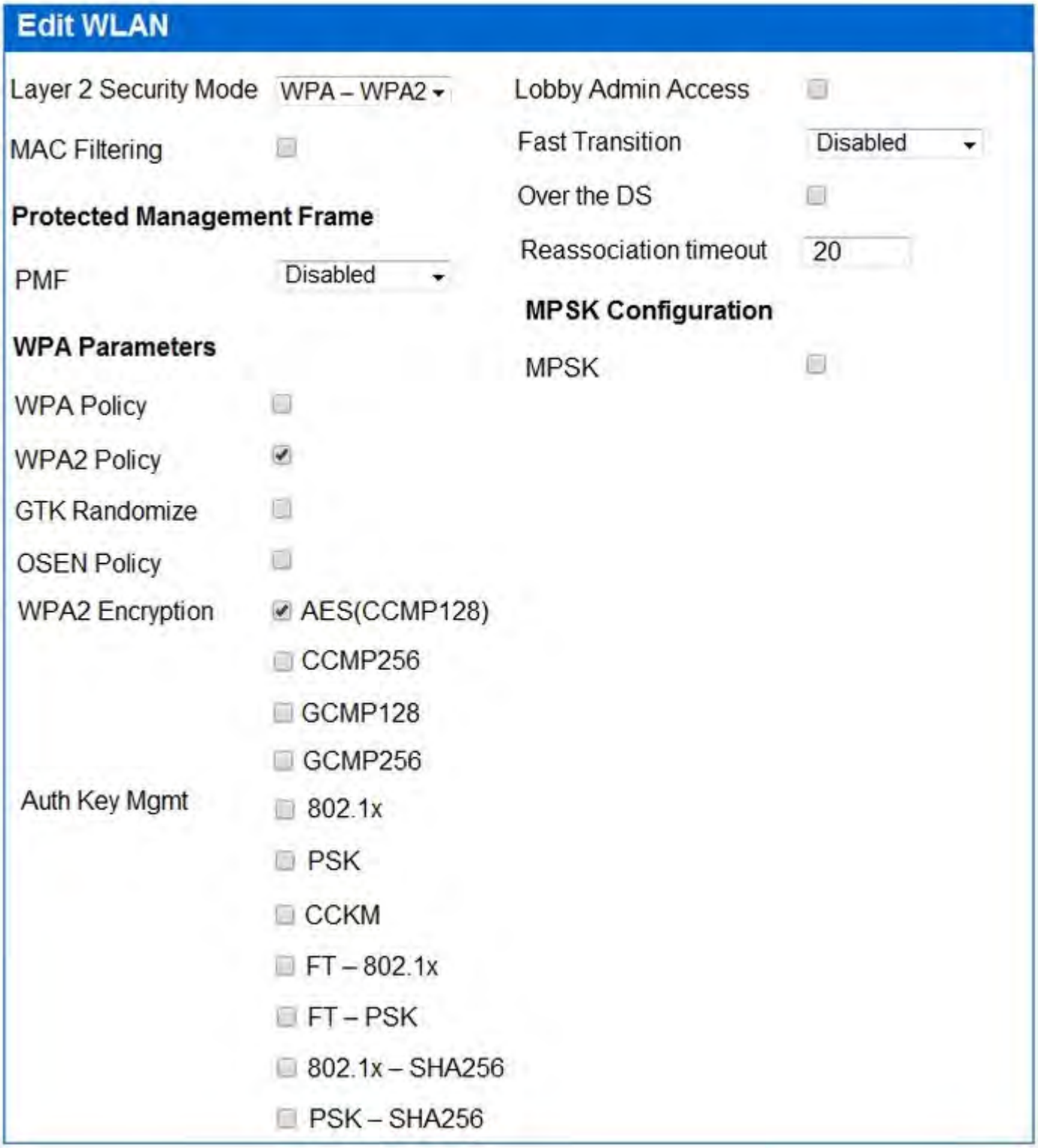
Which statement is needed to complete the EEM applet and use the Tel script to store the backup file?

A. action 2.0 cli command "write_backup.tcl tcl"
B. action 2.0 cli command "flash:write_backup.tcl"
C. action 2.0 cli command "write_backup.tcl"
D. action 2.0 cli command "telsh flash:write_backup.tcl"

Correct Answer: B
Explanation

QUESTION 48
Refer to the exhibit.

https://t.me/learningnets



Which action must be taken to configure a WLAN for WPA2-AES with PSK and allow only 802.l1r-capable clients to connect?

A. Change Fast Transition to Adaptive Enabled and enable FT * PSK
B. Enable Fast Transition and FT + PSK.
C. Enable Fast Transition and PSK
D. Enable PSK and FT + PSK.

Correct Answer: B
Explanation

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QUESTION 49
Which method ensures the confidentiality of data exchanged over a REST API?

A. Use the POST method instead of URL-encoded GET to pass parameters.
B. Encode sensitive data using Base64 encoding.
C. Deploy digest-based authentication to protect the access to the API.
D. Use TLS to secure the underlying HTTP session.

Correct Answer: D
Explanation

QUESTION 50
Users have reported an issue connecting to a server over the network. A workstation was recently added to the network and configured with a shared USB printer. Which of the following is most likely causing the issue?

A. The switch is oversubscribed and cannot handle the additional throughput.
B. The printer is tying up the server with DHCP discover messages.
C. The web server's back end was designed for only single-threaded applications.
D. The workstation was configured with a static IP that is the same as the server.

Correct Answer: D
Explanation

QUESTION 51
What is a characteristic of the Cisco DMA Center Template Editor feature?

A. It facilitates software upgrades lo network devices from a central point.
B. It facilitates a vulnerability assessment of the network devices.
C. It provides a high-level overview of the health of every network device.
D. It uses a predefined configuration through parameterized elements or variables.

Correct Answer: D
Explanation

QUESTION 52
Refer to the exhibit.

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```
R1#show policy-map control-plane
 Control Plane

 Service-policy input: CoPP
  Class-map: telnet_copp (match-all)
     33 packets, 1988 bytes
     5 minute offered rate 0 bps, drop rate 0 bps
     Match: access-group 100
     Police:
          cir 8000 bps, bc 1500 bytes
       conformed 33 packets, 1998 bytes; actions:
          transmit
     exceeded 0 packets, 0 bytes; actions:
          drop
     conformed 0 bps, exceed 0 bps

Class-map: class-default (match-any)
     59 packets, 5516 bytes
     5 minute offered rate 0 bps, drop rate 0 bps
     Match: any
R1#sh access-lists 100
Extended IP access list 100
     10 deny tcp host 10.0.0.5 any eq 22 (13 matches)
     20 permit tcp any any eq 22 (2 matches)
     30 deny tcp host 10.0.0.5 any eq telnet (18 matches)
     40 permit tcp any any eq telnet (31 matches)
R1#
```

Which result Is achieved by the CoPP configuration?

A. Traffic that matches entry 10 of ACL 100 is always allowed.
B. Class-default traffic is dropped.
C. Traffic that matches entry 10 of ACL 100 is always allowed with a limited CIR.
D. Traffic that matches entry 10 of ACL 100 is always dropped.

Correct Answer: A
Explanation

QUESTION 53

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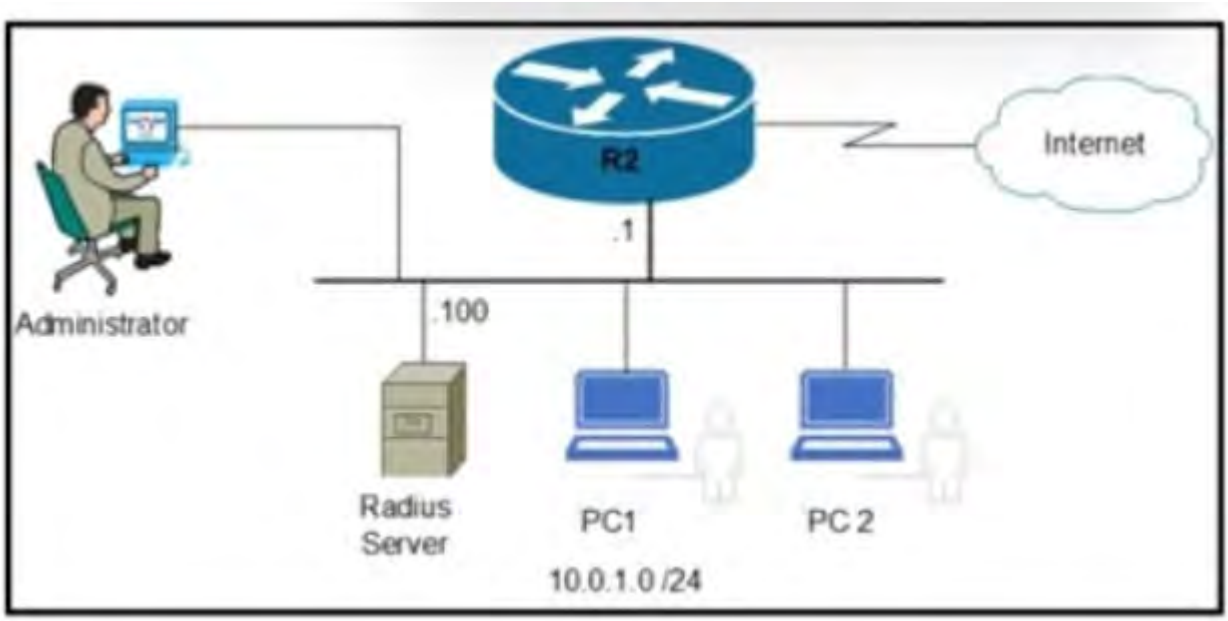

Refer to the exhibit. An engineer must save the configuration of router R2 using the NETCONF protocol. Which script must be used?

○
```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="">
    <cisco-ia:reset xmlns:cisco-ia="http://cisco.com/yang/cisco-ia">
    <cisco-ia:reinitialize>true</cisco-ia:reinitialize>
  </cisco-ia:reset>
</rpc>
```

○
```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="">
  <get>
    <filter type="subtree">
      <ncm:netconf-state xmlns:ncm="urn:ietf:params:xml:ns:yang:ietf-netconf-monitoring">
        <ncm:capabilities/>
      </ncm:netconf-state>
    </filter>
  </get>
</rpc>
```

○
```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="">
  <cisco-ia:save-config xmlns:cisco-ia="http://cisco.com/yang/cisco-ia"/>
</rpc>
```

○
```
<?xml version="1.0" encoding="utf-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="">
    <cisco-ia:sync-from xmlns:cisco-ia="http://cisco.com/yang/cisco-ia"></cisco-ia:sync-from>
</rpc>
```

A. Option A

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

Correct Answer: C
Explanation

QUESTION 54
Which configuration enables a device to be configured via NETCONF over SSHv2?

A.

```
hostname Device
!
username admin password 0 admin
!
ip domain-name cisco.com
crypto key generate rsa modulus 2048
ip ssh version 2
!
netconf-yang
!
line vty 0 15
login local
```

B.

```
hostname Device
!
aaa new-model
!
username cisco privilege 15 password cisco
!
ip domain-name cisco.com
crypto key generate rsa modulus 2048
ip ssh version 2
!
aaa authentication login default local
aaa authorization exec default local
!
netconf-yang
netconf ssh
```

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C.
```
hostname Device
!
aaa new-model
!
username admin privilege 15 password 0 admin
!
ip domain-name cisco.com
crypto key generate rsa modulus 2048
ip ssh version 2
!
netconf-yang
```

D.
```
hostname Device
!
username cisco1 privilege 15 password 0 cisco1
!
ip domain-name cisco.com
crypto key generate rsa modulus 2048
ip ssh version 2
!
netconf ssh
!
line vty 0 15
login local
```

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

Correct Answer: C
Explanation

QUESTION 55
A company's office has publicly accessible meeting rooms equipped with network ports. A recent audit revealed that visitors were able to access the corporate network by plugging personal laptops into open network ports. Which of the following should the company implement to prevent this in the future?

A. URL filters
B. VPN
C. ACLs
D. NAC

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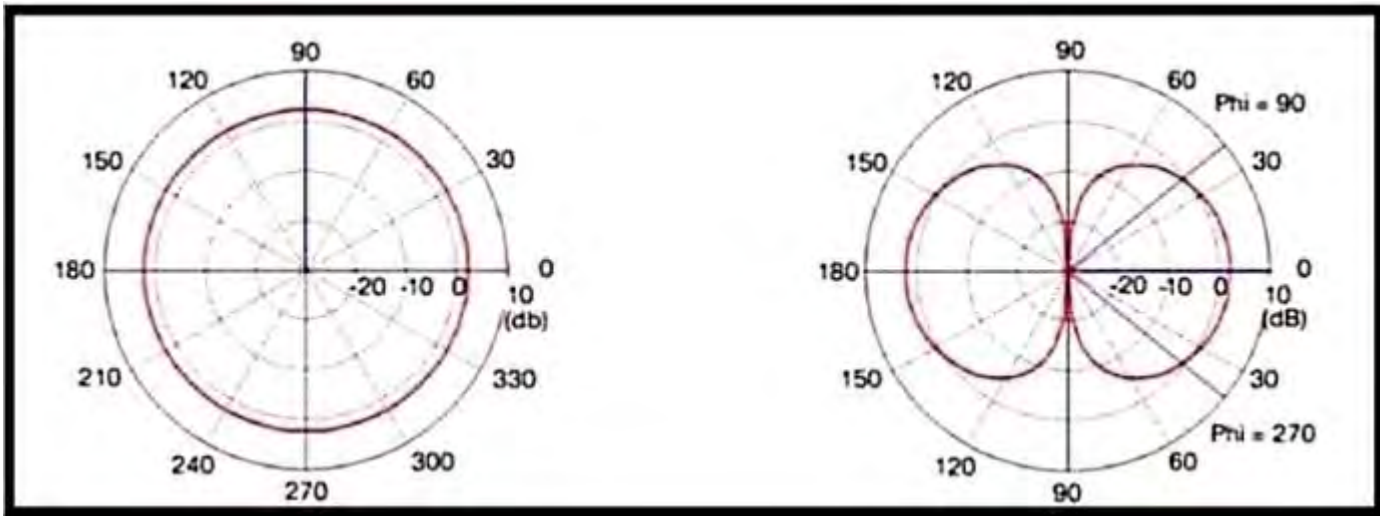
Correct Answer: D
Explanation

QUESTION 56
What is a benefit of YANG modules?

A. tightly coupled models with encoding to improve performance
B. easier multivendor interoperability provided by common or industry models
C. avoidance of ecosystem fragmentation by having fixed that cannot be changed
D. single protocol and model couple to simplify maintenance and supported

Correct Answer: B
Explanation

QUESTION 57
Refer to the exhibit.



Which type of antenna is show on the radiation patterns?

A. Dipole
B. Yagi
C. Patch
D. Omnidirectional

Correct Answer: A
Explanation

QUESTION 58
Which of the following should a junior security administrator recommend implementing to mitigate malicious network activity?

A. Intrusion prevention system
B. Load balancer
C. Access logging
D. Endpoint encryption

Correct Answer: A
Explanation

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QUESTION 59
An engineer must configure Interface and sensor monitoring on a router. The NMS server is located in a trusted zone with IP address 10.15.2.19. Communication between the router and the NMS server must be encrypted and password- protected using the most secure algorithms. Access must be allowed only for the NMS server and with the minimum permission levels needed.

Which configuration must the engineer apply?

A. ip access-list extended nms
permit 1 host 10.15.2.19 any
snmp-server view ro internet included
snmp-server view ro ifEntry included
snmp-server group nms v3 priv notify ro access nms
snmp-server user user1 nms v3 encrypted auth md5 Password1 pri 3des Password123

B. ip access-list standard nms
permit 10.15.2.19 0.0.0.0
snmp-server view ro iso included
snmp-server view ro ifEntry included
snmp-server group nms v3 priv read ro access nms
snmp-server user user1 nms v3 auth sha Password1 pri aes 256 Password123

C. ip access-list standard nms
permit 10.15.2.19 0.0.0.0
snmp-server view rw iso included
snmp-server view rw ifEntry included
snmp-server group nms v3 auth write rw access nms
snmp-server user user1 nms v3 auth des Password1 pri des Password123

D. ip access-list standard nms
permit 10.15.2.19 255.255.255.255
snmp-server view ro iso included
snmp-server view ro ifEntry included
snmp-server group nms v3 priv read ro access nms
snmp-server user user1 nms v3 auth 3des Password1 pri aes 192 Password123

Correct Answer: B
Explanation

QUESTION 60
A VoIP phone is plugged in to a port but cannot receive calls. Which of the following needs to be done on the port to address the issue?

A. Trunk all VLANs on the port.
B. Configure the native VLAN.
C. Tag the traffic to voice VLAN.
D. Disable VLANs.

Correct Answer: C
Explanation

QUESTION 61
Refer to the exhibit.

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```
R2(config)#event manager applet script_1
R2(config-applet)#action 1 cli command "enable"
R2(config-applet)#action 2 cli command "config t"
R2(config-applet)#action 3 cli command "interface ge0/0"
R2(config-applet)#action 4 cli command "ip add 172.16.1.1 255.255.255.0"
R2(config-applet)#action 5 cli command "no sh"
R2(config-applet)#action 6 cli command "end"
R2(config-applet)#exit
```

An engineer must create a manually triggered EEM applet to enable the R2 router interface and assign an IP address to it. What is required to complete this configuration?

A. R2(config-applel)# event oir
B. R2(config-apple)#action 4 cli command "ip add 172.16.1.1 0.0.0.255"
C. R2(config)# event manager session cli username
D. R2(config-apple)# event none sync yes

Correct Answer: D
Explanation

QUESTION 62
A technician needs to find the MAC address of a connecting router. Which of the following commands should the technician use?

A. arp
B. traceroute
C. nslookup
D. ping

Correct Answer: A
Explanation

QUESTION 63
A company recently rearranged some users' workspaces and moved several users to different desks. The network administrator receives a report that all of the users who were moved are having connectivity issues. Which of the following is the most likely reason?

A. Ports are error disabled.
B. Ports are administratively down.
C. Ports are having an MDIX issue.
D. Ports are trunk ports.

Correct Answer: A
Explanation

QUESTION 64
Which JSON script is properly formatted?

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A.

```
[
    "Session":{

            "title":"Writing 201",
            "grade":"11",
            "location":"Maine",
 }
]
]
```

B.

```
{
  "river": [
  {
   "name":"Mississippi",
    "state":"Louisiana",
   "ranking":"13"
  }
]
}
```

C.

```
"paint":[
        {
            "type":"indoor",
            "color":"white",
            "sheen":"satin"
         }]
```

D.

```
{
    "file":
       [
          "name":"File_4616,
          "location":"User_files",
          "bytes":"13070",
        ]
}
```

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

Correct Answer: A
Explanation

QUESTION 65
Refer to the exhibit.

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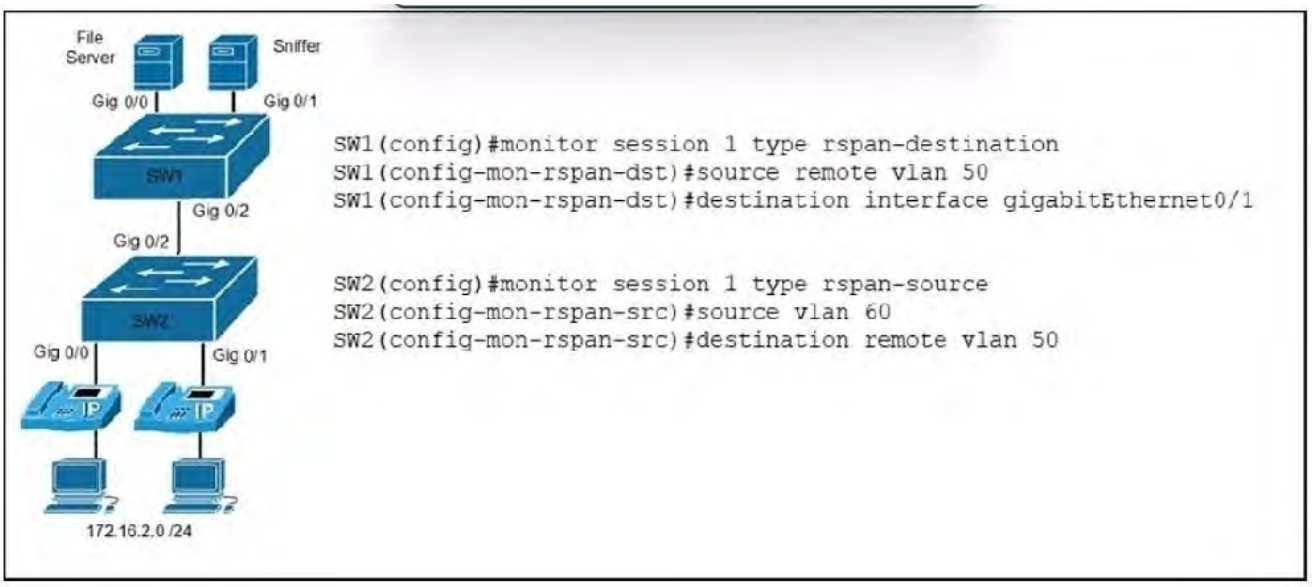
```
count = 8
while count > 4 :
    print(count)
    count -= 1
```

What is output by this code?

A. 8 7 6 5
B. -4 -5 -6 -7
C. -1 -2-3-4
D. 4 5 6 7

Correct Answer: A
Explanation

QUESTION 66
Refer to the exhibit.



An engineer must send the 172.16.2.0 /24 user traffic to a packet capture tool to troubleshoot an issue. Which action completes the configuration?

A. Encrypt the traffic between the users and the monitoring servers.
B. Disable the spanning tree protocol on the monitoring server VLAN.
C. Enable the Cisco Discovery Protocol on the server interfaces.
D. Define the remote span VLAN on SW1 and SW2.

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Correct Answer: D
Explanation

QUESTION 67
Refer lo the exhibit.

```
interface Ethernet0/0
 ipaddress 10.1.1.1 255.255.255.252
 ip natoutside
!
interface Ethernet0/0
 ipaddress 10.10.10.1 255.255.255.0
 ip natinside
!
ip nat inside source static 10.10.10.10 10.0.3.10
```

Which address type is 10.10.10.10 configured for?

A. inside global
B. outside local
C. outside global
D. inside local

Correct Answer: D
Explanation

QUESTION 68
Refer to the exhibit.

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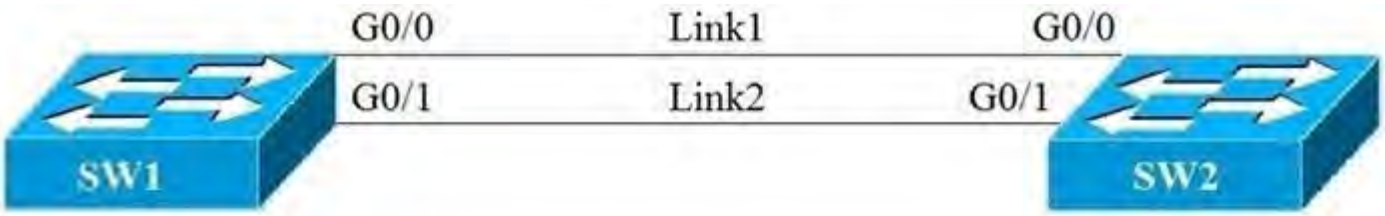


```
SW2#show spanning-tree

 VLAN0001

   Spanning tree enabled protocol ieee

   Root ID     Priority    32769
               Address     5000.0005.0000
               Cost        4
               Port        1 (GigabitEthernet0/0)
               Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

   Bridge ID   Priority    32769 (priority 32768 sys-id-ext 1)
               Address     5000.0006.0000
               Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
               Aging Time  300 sec

Interface           Role  Sts  Cost  Prio.Nbr   Type
---------------     ----  ---  ----  --------   --------------------

Gi0/0               Root  FWD   4    128.1      P2p
Gi0/1               Altn  BLK   4    32.2       P2p
```

Link 1 uses a copper connection and link 2 uses a fiber connection. The fiber port must be the primary port for all forwarding. The output of the show spanning- tree command on SW2 shows that the fiber port is blocked by Spanning Tree.
After entering the spanning-tree port-priority 32 command on G0/1 on SW2, the port remains blocked.

Which command should be entered on the ports connected to Link 2 is resolve the issue?

A. Enter spanning-tree port-priority 64 on SW2
B. Enter spanning-tree port-priority 224 on SW1.
C. Enter spanning-tree port-priority 4 on SW2.
D. Enter spanning-tree port-priority 32 on SW1.

Correct Answer: D
Explanation

QUESTION 69
A company hires a network architect to design a new OTT wireless solution within a Cisco SD-Access Fabric wired network. The architect wants to register access points to the WLC to centrally switch the traffic. Which AP mode must the design include?

A. Bridge
B. Fabric
C. FlexConnect
D. local

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Correct Answer: D
Explanation

QUESTION 70
Refer to the exhibit.

```
aaa new-model
aaa authentication login default group tacacs+ local
!
tacacs server prod
address ipv4 10.10.10.23
key cisco123
!
ip tacacs source-interface Gig 0/0
```

Which configuration must be applied for the TACACS+ server to grant access-level rights to remote users?

A. R1(config)# aaa authentication login enable
B. R1(config)# aaa authorization exec default local if-authenticated
C. R1(config)# aaa authorization exec default group tacacs+
D. R1(config)# aaa accounting commands 15 default start-stop group tacacs+

Correct Answer: C
Explanation

QUESTION 71
Which function does a virtual switch provide?

A. CPU context switching (or multitasking between virtual machines
B. RAID storage for virtual machines
C. emulation of power for virtual machines.
D. connectivity between virtual machines

Correct Answer: D
Explanation

QUESTION 72
Which Cisco WLC feature allows a wireless device to perform a Layer 3 roam between two separate controllers without changing the client IP address?

A. mobile IP
B. mobility tunnel
C. LWAPP tunnel
D. GRE tunnel

Correct Answer: B
Explanation

QUESTION 73
Refer to the exhibit.

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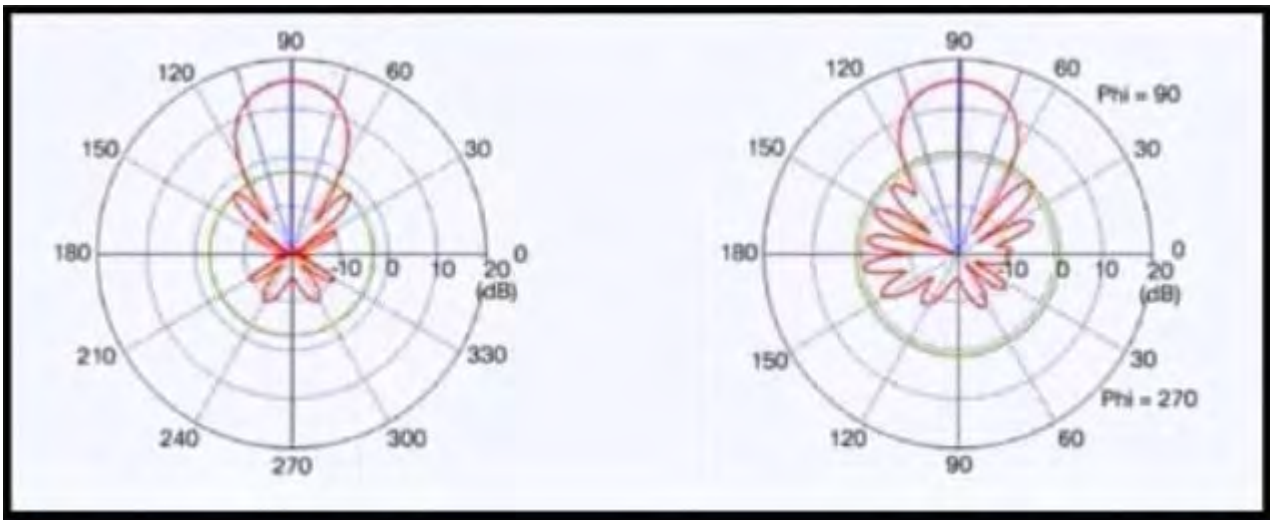

Which type of antenna is shown on the radiation patterns?

A. Yagi
B. dipole
C. patch
D. omnidirectional

Correct Answer: A
Explanation

QUESTION 74
What are two characteristics of vManage APIs? (Choose two.)

A. Southbound API is based on OMP and DTLS.
B. Northbound API is RESTful, using JSON.
C. Northbound API is based on RESTCONF and JSON.
D. Southbound API is based on NETCONF and XML.
E. Southbound API is based on RESTCONF and JSON.

Correct Answer: BD
Explanation

QUESTION 75
A technician is assisting a user who cannot connect to a website. The technician attempts to ping the default gateway and DNS server of the workstation. According to troubleshooting methodology, this is an example of:

A. a divide-and-conquer approach.
B. a bottom-up approach.
C. a top-to-bottom approach.
D. implementing a solution.

Correct Answer: C
Explanation

QUESTION 76
When a branch location loses connectivity, which Cisco FlexConnect state rejects new users but allows existing users to function normally?

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A. Authentication-Down / Switch-Local
B. Authentication-Down / Switching-Down
C. Authentication-Local / Switch-Local
D. Authentication-Central f Switch-Local

Correct Answer: A
Explanation

QUESTION 77
Which of the following protocols has a default administrative distance value of 90?

A. RIP
B. EIGRP
C. OSPF
D. BGP

Correct Answer: B
Explanation

QUESTION 78
What is stateful switchover?

A. mechanism used to prevent routing protocol loops during an RP switchover
B. mechanism to take control from a failed RP while maintaining connectivity
C. First Hop Redundancy Protocol for host gateway connectivity
D. cluster protocol used to facilitate switch faitover

Correct Answer: B
Explanation

QUESTION 79
Refer to the exhibit.

What does the response 204 No Content mean for the REST API request?

A. Interface toopback 100 is not removed from the configuration.
B. Interface toopback 100 is not found in the configuration.
C. Interface toopback 100 is removed from the configuration.
D. The DELETE method is not supported.

Correct Answer: C
Explanation

QUESTION 80
Which configuration protects the password for the VTY lines against over-the-shoulder attacks?

A. username admin
secret 7 6j809j23kpp43883500N7%e$
B. service password-encryption
C. line vty 04

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password 25FpM7182!

D. line vty 0 15
password 25FpM71f82!

Correct Answer: B
Explanation

QUESTION 81
Which of the following security methods uses physical characteristics of a person to authorize access to a location?

A. Access control vestibule
B. Palm scanner
C. PIN pad
D. Digital card reader
E. Photo ID

Correct Answer: B
Explanation

QUESTION 82
A network administrator is designing a new network for a company that has frequent power spikes. The company wants to ensure that employees can the best solution for the administrator to recommend?

A. Generator
B. Cold site
C. Redundant power supplies
D. Uninterruptible power supply

Correct Answer: D
Explanation

QUESTION 83
An engineer must construct an access list tot a Cisco Catalyst 9800 Series WLC that will - edirect wireless guest users to a splash page that is hosted on a Cisco ISE server. The Cisco ISE servers are hosted at 10.9.11.141 and 10.1.11.141.
Which access list meets the requirements?

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A.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 70 permit   ip any host 10.9.11.141
 80 permit   ip any host 10.1.11.141
 500 permit tcp any any eq www
 600 permit tcp any any eq 443
 700 permit tcp any any eq 8443
 800 deny   udp any any eq domain
```

B.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 70 permit ip any host 10.9.11.141
 80 permit ip any host 10.1.11.141
 500 deny   tcp any any eq www
 600 deny   tcp any any eq 443
 700 deny   tcp any any eq 8443
 800 deny   udp any any eq domain
 901 deny   ip any any
```

C.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 70 deny   ip any host 10.9.11.141
 80 deny   ip any host 10.1.11.141
 500 permit tcp any any eq www
 600 permit tcp any any eq 443
 700 permit tcp any any eq 8443
 800 deny   udp any any eq domain
```

D.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 50 deny   ip host 10.9,11.141 any
 60 deny   ip any host 10.9.11.141
 70 deny   ip host 10.1.11.141 any
 80 deny   ip any host 10.1.11.141
 500 permit tcp any any eq www
 600 permit tcp any any eq 443
 700 permit tcp any any eq 80
```

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

Correct Answer: D
Explanation

QUESTION 84
Which solution should be used in a high-density wireless environment to increase bandwidth for each user?

A. Increase antenna size

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B. Increase the mandatory minimum data rate.
C. Increase the cell size of each AP.
D. Increase TX power.

Correct Answer: B
Explanation

QUESTION 85
An engineer must use flexible NetFlow on a group of switches. To prevent overloading of the flow collector, if the flow is idle for 20 seconds, the flow sample should be exported.

Which command set should be applied?

A.
```
flow record recordflow
exporter flowexport
record recordflow
cache timeout active 120
cache timeout inactive 20
cache type immediate
```
B.
```
flow monitor monitorflow
exporter flowexport
record recordflow
cache timeout active 120
cache timeout inactive 20
cache type immediate
```
C.
```
flow monitor monitorflow
exporter recordflow
cache timeout active 120
cache timeout inactive 20
cache type permanent
```
D.
```
flow record recordflow
match ipv6 destination ip-address
match ipv6 source ip-address
match ipv6 protocol-type view
match interface input
match interface output
match transport destination-port
collect counter bytes long
```

Correct Answer: B
Explanation

QUESTION 86
Refer to the exhibit.

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```
from ncclient import manager

netconf_host = manager.connect(host= 'ios-xe-example.com',
                               port=22.
                               username= 'cisco',
                               password= 'cisco',
                               hostkey_verify=False,
                               device_params={'name':'iosxe'})
print (netconf_host.get_config ('running'))
netconf_host.close_session()
```

An engineer deploys a script to retrieve the running configuration from a NETCONF- capable Cisco IOS XE device that is configured with default settings. The script fails.

Which configuration must be applied to retrieve the configuration using NETCONF?

A. Print (netconf_host.get_config('show running'!)
B. hostkey_verify=True,
C. device_params={name':'ios-xe'})
D. port=830

Correct Answer: D
Explanation

QUESTION 87
A customer requires their wireless network to be fully functional, even if the wireless controller fails. Which wireless design supports these requirements?

A. FlexConnect
B. mesh
C. centralized
D. embedded

Correct Answer: A
Explanation

QUESTION 88
Relet lo Ibe exhibit.

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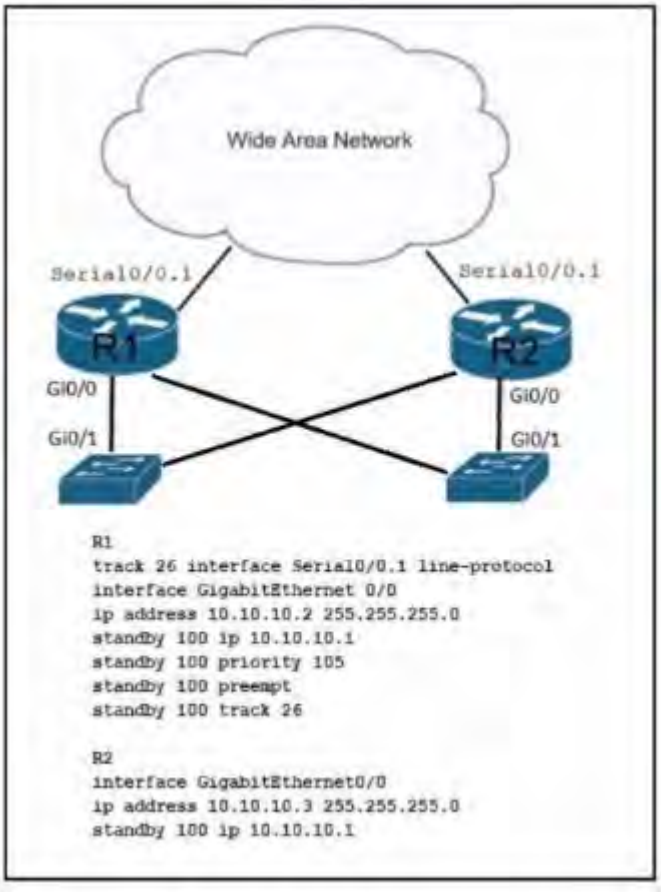

An engineer must modify the existing configuration so that R2 can take over as the primary router when serial interface 0/0.1 on R1 goes down.

Which command must the engineer apply?

A. R2W standby 100 track 26 decrement 10
B. R2# standby 100 preempt
C. R2# track 26 interface SerialWO.1 line-protocol
D. R2# standby 100 priority 100

Correct Answer: A
Explanation

QUESTION 89
Which tunnel type allows clients to perform a seamless Layer 3 roam between a Cisco AireOS WLC and a Cisco IOS XE WLC?

A. Ethernet over IP
B. IPsec
C. Mobility
D. VPN

Correct Answer: C
Explanation

QUESTION 90
By default, which virtual MAC address does HSRP group 30 use?

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A. 00:05:0c:07:ac:30
B. 00:00:0c:07:ac:1e
C. 05:0c:5e:ac:07:30
D. 00:42:18:14:05:1e

Correct Answer: B
Explanation

QUESTION 91
A customer has 20 stores located throughout a city. Each store has a single Cisco access point managed by a central WLC. The customer wants to gather analysis for users in each store. Which technique supports these requirements?

A. angle of arrival
B. hyperlocation
C. trilateration
D. presence

Correct Answer: B
Explanation

QUESTION 92
A network administrator wants to install new VoIP switches in a small network closet but is concerned about the current heat level of the room.

Which of the following should the administrator take into consideration before installing the new equipment?

A. The power load of the switches
B. The humidity in the room
C. The fire suppression system
D. The direction of airflow within the switches

Correct Answer: D
Explanation

QUESTION 93
Which tag defines the roaming domain and properties of an AP deployment?

A. RF tag
B. policy tag
C. site tag
D. AP tag

Correct Answer: D
Explanation

QUESTION 94
To which category does a REST API that has been developed for IP address management integration belong?

A. southbound
B. eastbound
C. northbound

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D. westbound

Correct Answer: C
Explanation

QUESTION 95
Which method requires a client to authenticate and has the capability to function without encryption?

A. open
B. WEP
C. WebAuth
D. PSK

Correct Answer: C
Explanation

QUESTION 96
Which action occurs during a Layer 3 roam?

A. The client receives a new IP adcress after authentication occurs.
B. The client is marked as ``'foreign" on the original controller.
C. The client database entry is moved from the old controller to the new controller.
D. Client traffic is tunneled back to the original control after a Layer 3 roam occurs.

Correct Answer: C
Explanation

QUESTION 97
In a Cisco SD-Access network architecture, which access layer cabling design is optimal for the underlay network?

A. Switches are cross-linked at the same layer and have a single connection to each upstream distribution device.
B. Switches are connected to each upstream distribution and core device.
C. Switches are connected to each upstream distribution device.
D. Switches are cross-linked to devices at the same layer and at the upstream and downstream devices.

Correct Answer: C
Explanation

QUESTION 98
An engineer must use IP SLA to measure the network performance and record statistics hop-by-hop. Which configuration must be used?

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```
ip sla 1
icmp-echo 10.1.1.1
historybuckets-kept 30
```

```
ip sla 1
path-echo 10.1.1.1
```

```
ip sla 1
ip sla responder
path-jitter 10.1.1.1
```

```
ip sla 1
echo 10.1.1.1
historybuckets-kept 30
```

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

Correct Answer: A
Explanation

QUESTION 99
Which RF value represents the decline of the RF signal amplitude over a given distance?

A. signal-to-noise ration
B. effective isotropic racketed power
C. free space path loss
D. received signal strength indicator

Correct Answer: C
Explanation

QUESTION 100
Which technology is the Cisco SD-Access control plane based on?

A. LISP
B. CTS
C. SGT
D. VRF

Correct Answer: A
Explanation

QUESTION 101
How does policy-based routing function?

A. It schedules traffic using classification
B. It is applied to all ingress unicast traffic received on an interlace
C. It is applied to all egress unicast traffic on an interface
D. It controls traffic using embedded event detectors

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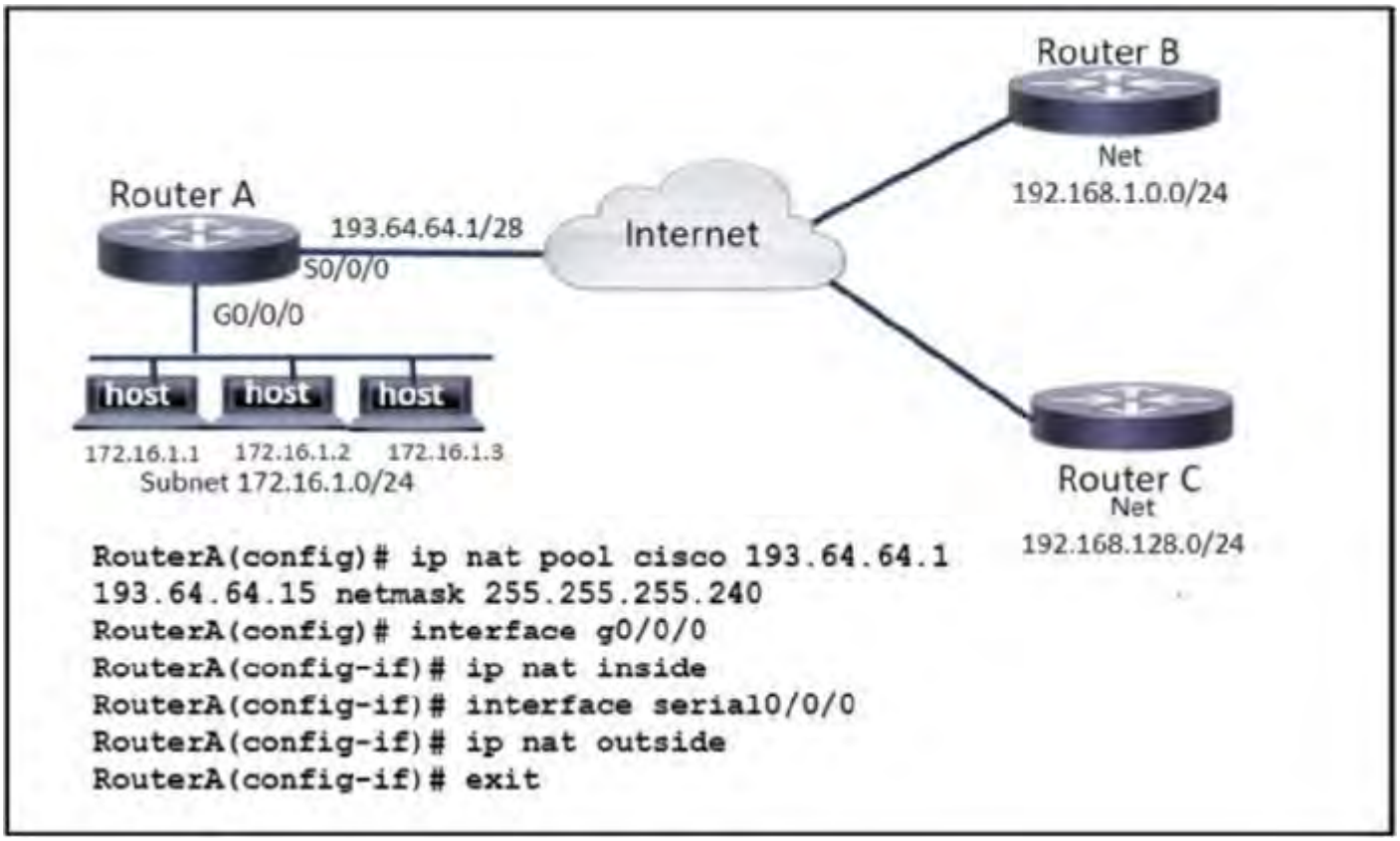
Correct Answer: B
Explanation

QUESTION 102
Refer to the exhibit.



An engineer must configure PAT to provide internet access to all users by using one global address for many local addresses. Which command set completes the configuration?

A. RouterA(config)# ip nat inside source list 1 pool Cisco overload
B. RouterA(config)# ip nat inside source static 172.16.1.1 193.64.64.1
C. RouterA(config)# ip nat inside source static 172.16.1.1 172.16.1.2
D. RouterA(config)# ip nat inside source list 1 pool Cisco

Correct Answer: A
Explanation

QUESTION 103
When the ``deny'' statement is used within a route map that is used for policy-based routing how is the traffic that matches the deny route-map line treated?

A. Traffic is routed to the null 0 interface of the router and discarded.
B. Traffic is returned to the normal forwarding behavior of the router.
C. An additional sequential route-map line is needed to divert the traffic to the router's normal forwarding behavior.
D. An additional sequential route-map line is needed to policy route this irafic.

Correct Answer: B
Explanation

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QUESTION 104
Which port is required to allow APs to join a WLC when directed broadcasts are used on a Cisco iOS switch?

A. UDP 5246
B. TCP 5246
C. TCP 5247
D. UDP 5247

Correct Answer: A
Explanation

QUESTION 105
Refer to the exhibit.

```
import requests
import json

from urllib3.exceptions import InsecureRequestWarning
requests.packages.urllib3.disable_warnings(category=InscureRequestWarning)

def printBytesAsJSON(bytes):
    print(json.dumps(json.loads(bytes), indent=2))

response = requests.get(
     url = 'https://192.168.159.10/restconf/data/Cisco-IOS-XE-
           native:native/interface/GigabitEthernet=2',
     auth = ('cisco',  'cisco'),
     headers = {
          'Accept':  'application/yang-data+json',
          'Content-Type': 'application/yang-data+json'
      },
      data = json.dumps ( {
          'Cisco-IOS-XE-native:GigabitEthernet' : {
               'ip': {
                    'address': {
                         'primary':  {
                              'address' : '10.10.10.1',
                              'mask' : '255.255.255.0'
                          }
                    }
               }
          }
      }),
      verify = False)

print ('Response Code:  ' + str(response.status_code))
```

An engineer attempts to use RESTCONF to configure GigabitEthernet2 on a remote router with IP address 192.168.159.10. but the configuration fails. Which configuration is required to complete the action?

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```
url = 'https://192.168.159.10/restconf/data/Cisco-IOS-XE-native:native/interface/GigabitEthernet2',

data = json.dumps({
 'Cisco-IOS-XE-native:GigabitEthernet2': {

response = requests.patch(

data = json.dumps({
 'Cisco-IOS-XE-native:GigabitEthernet': {
                'ip': {
                        'address': {
                                interface': {
```

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

Correct Answer: C
Explanation

QUESTION 106
An engineer must configure a router to allow users to run spathic configuration commands by validating the user against the router database. Which configuration must be applied?

A. aaa authentication network default local
B. aaa authentication exec default local
C. aaa authorization exec default local
D. aaa authorization network default local

Correct Answer: C
Explanation

QUESTION 107
When should the MAC authentication bypass feature be used on a switch port?

A. when authentication is required, but the attached host does not support 802.1X
B. when the attached host supports limited 802.1X
C. when authentication should be bypassed for select hosts based on their MAC address
D. when the attached host supports 802.1X and must authenticate itself based on its MAC address instead of user credentials

Correct Answer: A
Explanation

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QUESTION 108
Why are stateless calls executed by REST API useful in cloud applications?

A. They control URL decoding.
B. They rely on data stored on the server for calls
C. They use HTTPS to implement all calls.
D. They are easy to redeploy and to scale

Correct Answer: D
Explanation

QUESTION 109
A network administrator received reports that a 40Gb connection is saturated. The only server the administrator can use for data collection in that location has a 10Gb connection to the network. Which of the following is the best method to use on the server to determine the source of the saturation?

A. Port mirroring
B. Log aggregation
C. Flow data
D. Packet capture

Correct Answer: C
Explanation

Explanation/Reference:
This is because flow data is a method of collecting and analyzing information about the traffic flows on a network. Flow data can provide details such as the source and destination IP addresses, ports, protocols, and bytes transferred for each flow. Flow data can help identify the source of the saturation by showing which hosts and applications are generating or consuming the most bandwidth. Flow data can be collected using protocols such as NetFlow, IPFIX, or sFlow. The source of this answer is the Cisco ENCOR v1.1 course, module 10, lesson 10.1: Implementing NetFlow and IPFIX.

QUESTION 110
Which feature does Cisco DNA Center Assurance provide?

A. application policy configuration
B. device onboarding and configuration
C. software upgrade and management
D. data correlation and analysis

Correct Answer: D
Explanation

QUESTION 111
What is provided to the client to identify the authenticated session in subsequent API calls after authenticating to the Cisco DNA Center API?

A. username and password
B. client X.500 certificate
C. authentication token
D. session cookie

Correct Answer: C
Explanation

QUESTION 112

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Refer to the exhibit.

```
aaa new-model
!
username admin privilege 15 secret S3cr3tP4ss
!
ip http secure-server
ip http authentication aaa
```

An administrator must enaWe RESTCONP access to a router. Which two commands or command sets must be added to the existing configuraton? (Choose two.)

A. aaa authentication login default local
   aaa authorization exec default local
B. restconf
C. line vty 0 15
D. netconf-yang
E. username restconf privilege 0

Correct Answer: AB
Explanation

QUESTION 113

```
R1
ntp server 192.168.1.1
ntp server 172.16.10.1
interface GigabitEthernet 0/1
ip address 192.168.100.1 255.255.255.248
 ntp broadcast
```

Refer to the exhibit. What is the result of the configuration?

A. It enables NTP in client mode
B. It allows interface g0/1 to send and receive NTP broadcast packets
C. It allows interface g0/1 to send NTP broadcast packets.
D. It allows interface g0/1 to receive NTP broadcast packets.

Correct Answer: C
Explanation

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QUESTION 114
What is a characteristic of Layer 3 roaming?

A. It provides seamles roaming between APs that are connected to different Layer 3 networks and different mobility groups.
B. It is only supported on controllers that run SSO.
C. It provides seamless client roaming between APs in different Layer 3 networks but within the same mobility group
D. Clients must obtain a new IP address when they roam between APs

Correct Answer: C
Explanation

QUESTION 115
What are two benefits of using Cisco TrustSec? (Choose two.)

A. consistent network segmentation
B. advanced endpoint protection against malware
C. simplified management of network access
D. unknown file analysis using sandboxing
E. end-to-end traffic encryption

Correct Answer: AC
Explanation

QUESTION 116
An engineer must construct an access list for a Cisco Catalyst 9800 Series WLC that will redirect wireless guest users to a splash page that is hosted on a Cisco ISE server The Cisco ISE servers are hosted at 10 9 11 141 and 10 1 11 141.

Which access list meets the requirements?

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A.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 70 permit ip any host 10.9.11.141
 80 permit ip any host 10.1.11.141
 500 deny   tcp any any eq www
 600 deny   tcp any any eq 443
 700 deny   tcp any any eq 8443
 800 deny   udp any any eq domain
 901 deny   ip any any
```

B.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 70 permit   ip any host 10.9.11.141
 80 permit   ip any host 10.1.11.141
 500 permit tcp any any eq www
 600 permit tcp any any eq 443
 700 permit tcp any any eq 8443
 800 deny   udp any any eq domain
```

C.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 70 deny   ip any host 10.9.11.141
 80 deny   ip any host 10.1.11.141
 500 permit tcp any any eq www
 600 permit tcp any any eq 443
 700 permit tcp any any eq 8443
 800 deny   udp any any eq domain
```

D.

```
ip access-list extended ACL_WEBAUTH_REDIRECT
 50 deny   ip host 10.9.11.141 any
 60 deny   ip any host 10.9.11.141
 70 deny   ip host 10.1.11.141 any
 80 deny   ip any host 10.1.11.141
 500 permit tcp any any eq www
 600 permit tcp any any eq 443
 700 permit tcp any any eq 80
```

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

Correct Answer: D
Explanation

QUESTION 117
Which template is used when multiple templates are grouped together to run in succession in Cisco DNA Center?

A. composite
B. regular
C. project
D. configuration

Correct Answer: A
Explanation

QUESTION 118
Refer to the exhibit.

```
Switch(config-ip-sla)# udp-jitter 172.29.139.134 5000
Switch(config-ip-sla-jitter)# frequency 300
Switch(config-ip-sla-jitter)# exit
Switch(config)# ip sla schedule 5 start-time now life forever
Switch(config)# end
```

What is the result of the IP SLA configuration?

A. The operation runs 300 times a day
B. The operation runs 5000
C. The rate is configured to repeat every 5 minutes
D. IP SLA is scheduled to run at 3 a.m

Correct Answer: C
Explanation

QUESTION 119
Refer to the exhibit.

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```
from requests.auth import HTTPBasicAuth
import requests

ROUTER="192.0.2.1"
BASEURI="restconf/data/Cisco-IOS-XE-native:native"
SUBURI="router/router-bgp"

response = requests.get(
        f"https://{ROUTER}/{BASEURI}/{SUBURI}",
        auth=HTTPBasicAuth('admin', 'S3cr3t$4ss'),
        verify=False)

print(f"HTTP Response: {response.status_code} {response.reason}\n")
print(response.text)
```

```
admin@linux:/tmp$ python3 get-bgp.py
HTTP Response: 404 Not Found

<errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
  <error>
        <error-message>uri keypath not found</error-message>
        <error-tag>invalid-value</error-tag>
        <error-type>application</error-type>
  </error>
</errors>

admin@linux:/tmp$
```

An engineer is creating a Pytnon script to fetch the BGP configuration from a device using RESTCONF. What does the output Indicate?

A. The BGP data resource identifier in the URL Incorrect.
B. There is no BGP process running on the device
C. RESTCONF is not enabled on the device.

Correct Answer: A
Explanation

QUESTION 120
Refer to the exhibit.

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```
devices = []

file = open('devices.txt','r')
for line in file:

    device_info_list = line.strip().split(',')
    device_info = {}
    device_info['name'] = device_info_list[0]
    device_info['os-type'] = device_info_list[1]
    device_info['ip'] = device_info_list[2]
    device_info['username'] = device_info_list[3]
    device_info['password'] = device_info_list[4]

    devices.append(device_info)

print(devices)

file.close()
```

What is achieved when this Python script is executed?

A. Each device that is looped through in the devices.txt file is put into its own list that is appended to the parent dictionary.
B. Each device that is looped through in the devices.txt file is put into its own dictionary that is appended to the parent list.
C. All devices that are looped through in the devices.txt file are put into a list that is appended to the parent dictionary.
D. All devices that are looped through in the devices.txt file are put into a single dictionary that is appended to the parent list.

Correct Answer: D
Explanation

QUESTION 121
Which wireless deployment mode uses a Flex architecture and allows Layer 2 roaming between APs without a physical wireless controller?

A. Unified
B. autonomous mode
C. fabric
D. Cisco Mobility Express

Correct Answer: D
Explanation

QUESTION 122

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```
flow record NetFlow-Record
 match ipv4 protocol
 match ipv4 source address
 match ipv4 destination address
 match transport source-port
 match transport destination-port
 collect counter bytes
 collect counter packets

flow exporter NetFlow-Exporter
 destination 192.168.0.254
 transport udp 2055

flow monitor NetFlow-Monitor
 exporter NetFlow-Exporter
 record NetFlow-Record

interface GigabitEthernet0/0
 ip flow monitor NetFlow-Monitor input
```

Refer to the exhibit. The DevOps team noticed missing NetFlow data during peak utilization times for remote branches. Which configuration allows for this issue to be minimized or resolved?

A. Configure NetFlow on the in and outbound directions.
B. Change the transport type from UDP to TCP.
C. Configure long byte counters when specifying a flow record.
D. Change the flow monitor to IPv6 from IPv4.

Correct Answer: A
Explanation

QUESTION 123
What is a common trait between Ansible and Chef?

A. Both are used for mutable infrastructure
B. Both rely on a declarative approach.
C. Both rely on NETCONF.
D. Both require a client to be installed on hosts

Correct Answer: B
Explanation

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QUESTION 124
An engineer must update the local web authentication details on a Cisco 5520 WLC. The engineer has one active SSID configured for web authentication and plans to update the virtual interface with a nonroutable IP address. Which command must the engineer apply?

A. config wlan create wlan_idname
B. config interface address virtual 1.1.1.1
C. config interface address dynamic-interface virtual 192.0.2.1
D. config interface address virtual 192.0.2.1

Correct Answer: D
Explanation

QUESTION 125
How does the Cisco SD-Access control plane simplify traditional routing environments?

A. Routing adjacencies are no longer required.
B. Full routing tables are shared and ensure that all routers know all paths within the underlay fabric and overlay.
C. Separation of EID and RLOC reduces the size of routing tables.
D. Routers query all routes to the map server.

Correct Answer: C
Explanation

QUESTION 126
Which security feature does stateless authentication and authorization use for REST API calls?

A. OAuth 2 token
B. API keys
C. SSL/TLS certificate encryption
D. Cookie-based session authentication

Correct Answer: A
Explanation

QUESTION 127
An engineer must configure HSRP for VLAN 1200 on SW1. The second switch is configured by using the last usable IP address in the network as the virtual IP. Which command set accomplishes litis task?

A. SW1(config)# interface vlan 1200
SW1(config-if)# ip address 172.12.0.254 255.255.255.0
SW1(config-if)# standby version 2
SW1(config-if)# standby 1200 ip 172.12.0.2
SW1(conflg-it)# standby 1200 preempt
B. SW1(config)# interface vlan 1200
SW1(config-if)# ip address 172.12.0.2 255.255.255.0
SW1(config-if)# standby version 2
SW1(config-if)# standby 1200 ip 172.12.0.254
SW1(conflg-it)# standby 1200 preempt
C. SW1(config)# interface vlan 1200
SW1(config-if)# ip address 172.12.0.2 255.255.255.0
SW1(config-if)# standby 1200 ip 172.12.0.254
SW1(config-if)# standby 1200 timers 5 15

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SW1(conflg-it)# standby 1200 preempt

D. SW1(config)# interface vlan 1200
SW1(config-if)# ip address 172.12.0.1 255.255.255.0
SW1(config-if)# standby 1200 ip 172.12.0.254
SW1(config-if)# standby 1200 timers 5 15
SW1(conflg-it)# standby 1200 preempt

Correct Answer: B
Explanation

QUESTION 128
What is the function of an RP in a PIM-SM network?

A. to provide routing to the PIM leaf routers
B. to track sources and recovers on the shared distribution tree
C. to automate the distribution of group-to rendezvous point mappings
D. to connect multicast sources with receivers

Correct Answer: B
Explanation

QUESTION 129
What is the preferred QoS marking for delay-sensitive real-time protocols such as RTP?

A. CS1
B. ATM-CLP
C. EF
D. AF

Correct Answer: C
Explanation

QUESTION 130
Which API does Cisco DNA Center use to retrieve information about images?

A. SWIM
B. Img-Mgmt
C. PnP
D. Client Health

Correct Answer: A
Explanation

QUESTION 131
Refer to the exhibit.

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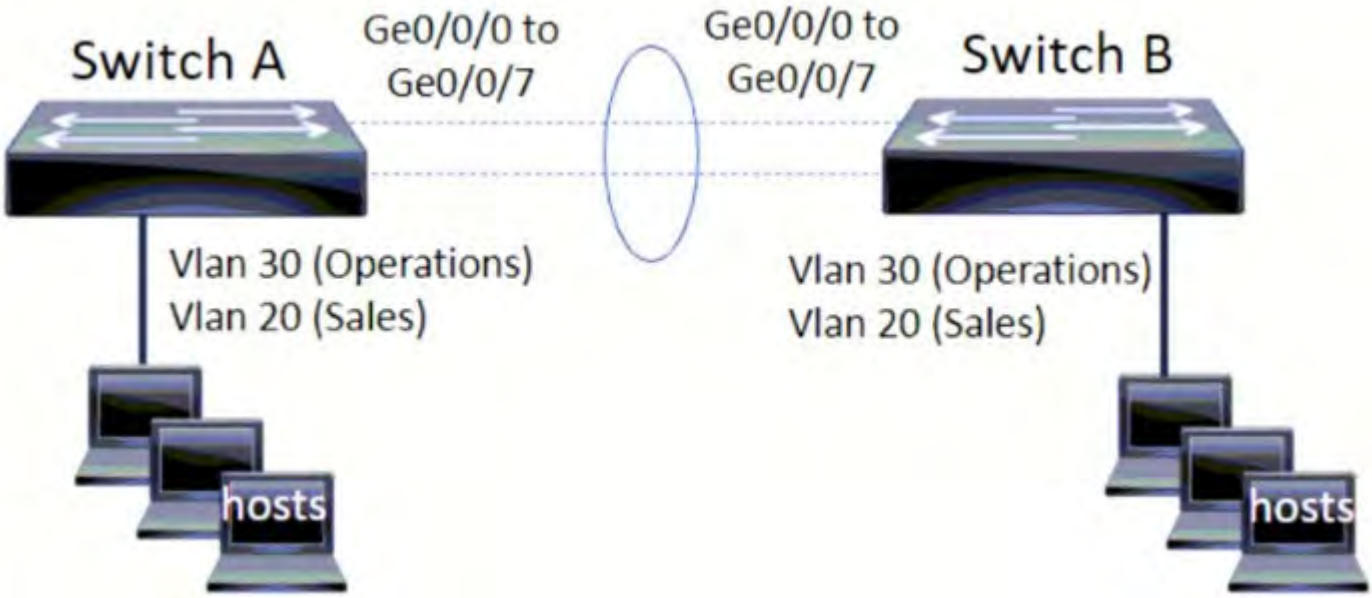


```
SwitchA(config)# interface range gigabitethernet0/0/0 -7
SwitchA(config-if-range)# switchport mode dynamic auto
SwitchA(config-if-range)# switchport trunk encapsulation dot1q
SwitchA(config-if-range)#switchport trunk allowed vlan
1,10,20,30,50
SwitchA(config-if-range)# channel-group 5 mode auto
```

```
SwitchB(config)# interface range gigabitethernet0/0/0 -7
SwitchB(config-if-range)# switchport mode dynamic auto
SwitchB(config-if-range)# switchport trunk encapsulation dot1q
SwitchB(config-if-range)#switchport trunk allowed vlan
1,10,20,30,40
SwitchB(config-if-range)# channel-group 5 mode desirable
```

Users in the Operations VLAN on Switch A are unable to communicate with users in the Operations VLAN on Switch B. Which action resolves the issue?

A. Set the switchport mode to dynamic desirable on Switch B.
B. Set the EtherChannel mode to LACP on Switch A.
C. Configure the same allowed VLAN list on Switch A and Switch B.
D. Set the EtherChannel mode to PAGP on Switch B.

Correct Answer: A
Explanation

QUESTION 132
A customer deployed an ISE solution that allows for web authentication and URL redirect enforced from the access layer. Due to control plane security concerns, only host IP 10.0.1.25 should have HTTP access to these switches. Which configuration must be applied to the switches?

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A.
```
ip access-list extended HOST-ACL
 10 permit host 10.0.1.25 any
 20 deny any any
 ip http server
 ip http secure-server
 ip http secure-active-session-modules none
 ip http active-session-modules none
 ip http access-class HOST-ACL
```

B.
```
ip access-list standard 10
 permit 10.0.1.25 0.0.0.0
 ip http server
 ip http secure-server
 ip http secure-active-session-modules none
 ip http access-class 10
```

C.
```
ip access-list standard 10
 deny 10.0.1.25 0.0.0.0
 permit any
 ip http server
 ip http secure-server
 class-map CoPP_Class
 match access_group 10
 policy-map CoPP_Policy
 class CoPP_Class
 police 100000 conform-action permit exceed-action drop violate-action drop
 control-plane
 service-policy input CoPP_Policy
```

D.
```
ip access-list extended HOST-ACL
 10 permit host 10.0.1.25 any
 20 deny any any
 no ip http server
 ip http secure-server
 class-map CoPP_Class
 match access_group HOST-ACL
 policy-map CoPP_Policy
 class CoPP_Class
 police 100000 conform-action permit exceed-action drop violate-action drop
 control-plane
 service-policy input CoPP_Policy
```

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

Correct Answer: B
Explanation

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QUESTION 133
Refer to the exhibit.

```
pl1= [
"""
<get-config xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
 <source>
  <running/>
 </source>
 <filter>
  <native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native">
   <ip>
    <access-list>
     <extended xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-acl">
      <name>flp</name>
     </extended>
    </access-list>
   </ip>
  </native>
 </filter>
</get-config>
"""
]
with manager.connect(host=c54, port=830, username=c14,
                     password=c24, timeout=90, hostkey_verify=False) as m:
  for rpc in pl1:
    r1= m.dispatch(et.fromstring(rpc))
    d1= xmltodict.parse(r1.xml)['rpc-reply']['data']['native']['ip']
        ['access-list']['extended']['access-list-seq-rule']
```

What is achieved by this Python script?

A. It reads access list statements into a dictionary list.
B. It displays access list statements on a terminal screen.
C. It configures access list statements.
D. It converts access list statements to a human-readable format.

Correct Answer: A
Explanation

QUESTION 134
Which requirement for an Ansible-managed node is true?

A. It must be a Linux server or a Cisco device.
B. It must have an SSH server running.
C. It must support ad hoc commands.
D. It must have an Ansible Tower installed.

Correct Answer: B

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Explanation

QUESTION 135
What is the difference between the enable password and the enable secret password when password encryption is enable on an IOS device?

A. The enable password is encrypted with a stronger encryption method.
B. There is no difference and both passwords are encrypted identically.
C. The enable password cannot be decrypted.
D. The enable secret password is protected via stronger cryptography mechanisms.

Correct Answer: D
Explanation

Explanation/Reference:
The "enable secret" password is always encrypted (independent of the "service passwordencryption" command) using MD5 hash algorithm. The "enable password" does not encrypt the password and can be view in clear text in the running- config. In order to encrypt the "enable password", use the "service password-encryption" command. This command will encrypt the passwords by using the Vigenere encryption algorithm. Unfortunately, the Vigenere encryption method is cryptographically weak and trivial to reverse. The MD5 hash is a stronger algorithm than Vigenere so answer 'The enable secret password is protected via stronger cryptography mechanisms' is correct.

QUESTION 136
In which part of the HTTP message is the content type specified?

A. HTTP method
B. URI
C. header
D. body

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Content-Type

QUESTION 137
A response code of 404 is received while using the REST API on Cisco UNA Center to POST to this URI.

/dna/intent/api/v1 /template-programmer/project

What does the code mean?

A. The client made a request a resource that does not exist.
B. The server has not implemented the functionality that is needed to fulfill the request.
C. The request accepted for processing, but the processing was not completed.
D. The POST/PUT request was fulfilled and a new resource was created, Information about the resource is in the response body.

Correct Answer: A
Explanation

Explanation/Reference:
The 404 (Not Found) error status code indicates that the REST API can't map the client's URI to a resource but may be available in the future. Subsequent requests by the client are permissible.
Reference: https://restfulapi.net/http-status-codes/

QUESTION 138

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What is the structure of a JSON web token?

A. three parts separated by dots header payload, and signature
B. header and payload
C. three parts separated by dots version header and signature
D. payload and signature

Correct Answer: A
Explanation

Explanation/Reference:
JSON Web Token (JWT) is an open standard (RFC 7519) that defines a compact and self-contained way for securely transmitting information between parties as a JSON object. This information can be verified and trusted because it is digitally signed. JWTs can be signed using a secret (with the HMAC algorithm) or a public/private key pair using RSA or ECDSA. JSON Web Tokens are composed of three parts, separated by a dot (.): Header, Payload, Signature. Therefore, a JWT typically looks like the following:
xxxxx.yyyyy.zzzzz
The header typically consists of two parts: the type of the token, which is JWT, and the signing algorithm being used, such as HMAC SHA256 or RSA. The second part of the token is the payload, which contains the claims. Claims are statements about an entity (typically, the user) and additional data. To create the signature part you have to take the encoded header, the encoded payload, a secret, the algorithm specified in the header, and sign that.

Reference:
https://jwt.io/introduction/
https://auth0.com/docs/tokens/references/jwt-structure

QUESTION 139
Which statement about agent-based versus agentless configuration management tools is true?

A. Agentless tools require no messaging systems between master and slaves.
B. Agentless tools use proxy nodes to interface with slave nodes.
C. Agent-based tools do not require a high-level language interpreter such as Python or Ruby on slave nodes.
D. Agent-based tools do not require installation of additional software packages on the slave nodes.

Correct Answer: A
Explanation

QUESTION 140
Which PAgP mode combination prevents an Etherchannel from forming?

A. auto/auto
B. desirable/desirable
C. auto/desirable
D. desirable

Correct Answer: A
Explanation

Explanation/Reference:
There are two PAgP modes:

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Auto	Responds to PAgP messages but does not aggressively negotiate a PAgP EtherChannel. Answer 'auto/auto' channel is formed only if the port on the other end is set to Desirable. This is the default mode.
Desirable	Port actively negotiates channeling status with the interface on the other end of the link. Answer 'auto/auto' channel is formed if the other side is Auto or Desirable.

The table below lists if an EtherChannel will be formed or not for PAgP:

PAgP	Desirable	Auto
Desirable	Yes	Yes
Auto	Yes	No

Reference: https://www.omnisecu.com/cisco-certified-network-associate-ccna/etherchannel-pagp-and-lacp-modes.php

QUESTION 141
In OSPF, which LAS type is responsible for pointing to the ASBR router?

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

Correct Answer: D
Explanation

QUESTION 142
Which two descriptions of FlexConnect mode for Cisco APs are true? (Choose two.)

A. APs that operate in FlexConnect mode cannot detect rogue APs.
B. When connected to the controller, FlexConnect APs can tunnel traffic back to the controller.
C. FlexConnect mode is used when the APs are set up in a mesh environment and used to bridge between each other.
D. FlexConnect mode is a feature that is designed to allow specified CAPWAP-enabled APs to exclude themselves from managing data traffic between dents and infrastructure.
E. FlexConnect mode is a wireless solution for branch office and remote office deployments.

Correct Answer: BE
Explanation

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Explanation/Reference:
A FlexConnect AP can, on a per-WLAN basis, either tunnel client data in CAPWAP to the controller (called Central Switching), or have client data egress at the AP's LAN port (called Local Switching). With Locally Switched WLANs, the AP can tag client traffic in separate VLANs, to segregate the traffic from its management interface.

Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-2/configuration/guide/cg/cg_flexconnect.html
https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/config-guide/b_cg85/flexconnect.html#flexconnect-overview

QUESTION 143
What are two common sources of interface for WI-FI networks? (Choose two.)

A. radar
B. LED lights
C. rogue AP
D. conventional oven
E. fire alarm

Correct Answer: AC
Explanation

Explanation/Reference:
It includes many different types of radio communication, such as low-frequency radio, AM radio, shortwave radio, television, FM radio, microwave, and radar. The microwave category also contains the two main frequency ranges that are used for wireless LAN communication: 2.4 and 5 GHz.

QUESTION 144
Which statement about Cisco EAP-FAST is true?

A. It does not require a RADIUS server certificate
B. It requires a client certificate
C. It is an IETF standard.
D. It operates in transparent mode

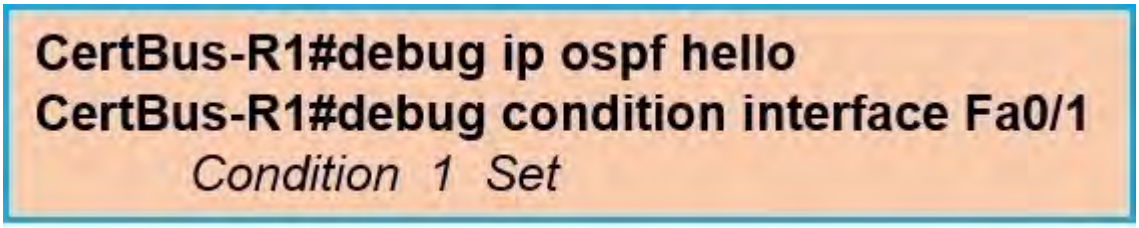
Correct Answer: A
Explanation

Explanation/Reference:
The Cisco switch was configured with PAgP, which is a Cisco proprietary protocol so non-Cisco switch could not communicate.

If your environment is relatively small or you do not have a RADIUS server in production, you can use an authentication server that is built in to the WLC. This is called Local EAP, and it supports LEAP, EAP-FAST, PEAP, and EAP-TLS.

Reference: https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/99791-eapfast-wlc-rad-config.html

QUESTION 145
Refer to the exhibit.



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Which statement about the OPSF debug output is true?

A. The output displays all OSPF messages which router R1 has sent to received on interface Fa0/1.
B. The output displays all OSPF messages which router R1 has sent or received on all interfaces.
C. The output displays OSPF hello messages which router R1 has sent received on interface Fa0/1.
D. The output displays OSPF hello and LSACK messages which router R1 has sent or received.

Correct Answer: C
Explanation

Explanation/Reference:
This combination of commands is known as "Conditional debug" and will filter the debug output based on your conditions. Each condition added, will behave like an `And' operator in Boolean logic. Some examples of the "debug ip ospf hello" are shown below:

```
*Oct 12 14:03:32.595: OSPF: Send hello to 224.0.0.5 area 0 on FastEthernet1/0 from
192.168.12.2
*Oct 12 14:03:33.227: OSPF: Rcv hello from 1.1.1.1 area 0 on FastEthernet1/0 from
192.168.12.1
*Oct 12 14:03:33.227: OSPF: Mismatched hello parameters from 192.168.12.1
```

QUESTION 146
If a VRRP master router fails, which router is selected as the new master router?

A. router with the highest priority
B. router with the highest loopback address
C. router with the lowest loopback address
D. router with the lowest priority

Correct Answer: A
Explanation

Explanation/Reference:
https://www.cisco.com/assets/sol/sb/Switches_Emulators_v2_3_5_xx/help/350_550/index.html#page/tesla_350_550_olh/ts_vrrp_18_09.html

In the "Basic VRRP Topology" figure, if Router A, the virtual router master, fails, a selection process takes place to determine if virtual router backups B or C must take over. If Routers B and C are configured with the priorities of 101 and 100, respectively, Router B is elected to become virtual router master because it has the higher priority. If both have the same priority, the one with the higher IP address value is selected to become the virtual router master.

QUESTION 147
Which description of an SD-Access wireless network infrastructure deployment is true?

A. The access point is part of the fabric underlay.
B. The WLC is part of the fabric underaly.
C. The access point is part the fabirc overlay.
D. The wireless client is part of the fabirc overlay.

Correct Answer: C
Explanation

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Explanation/Reference:
Access Points
+ AP is directly connected to FE (or to an extended node switch) + AP is part of Fabric overlay

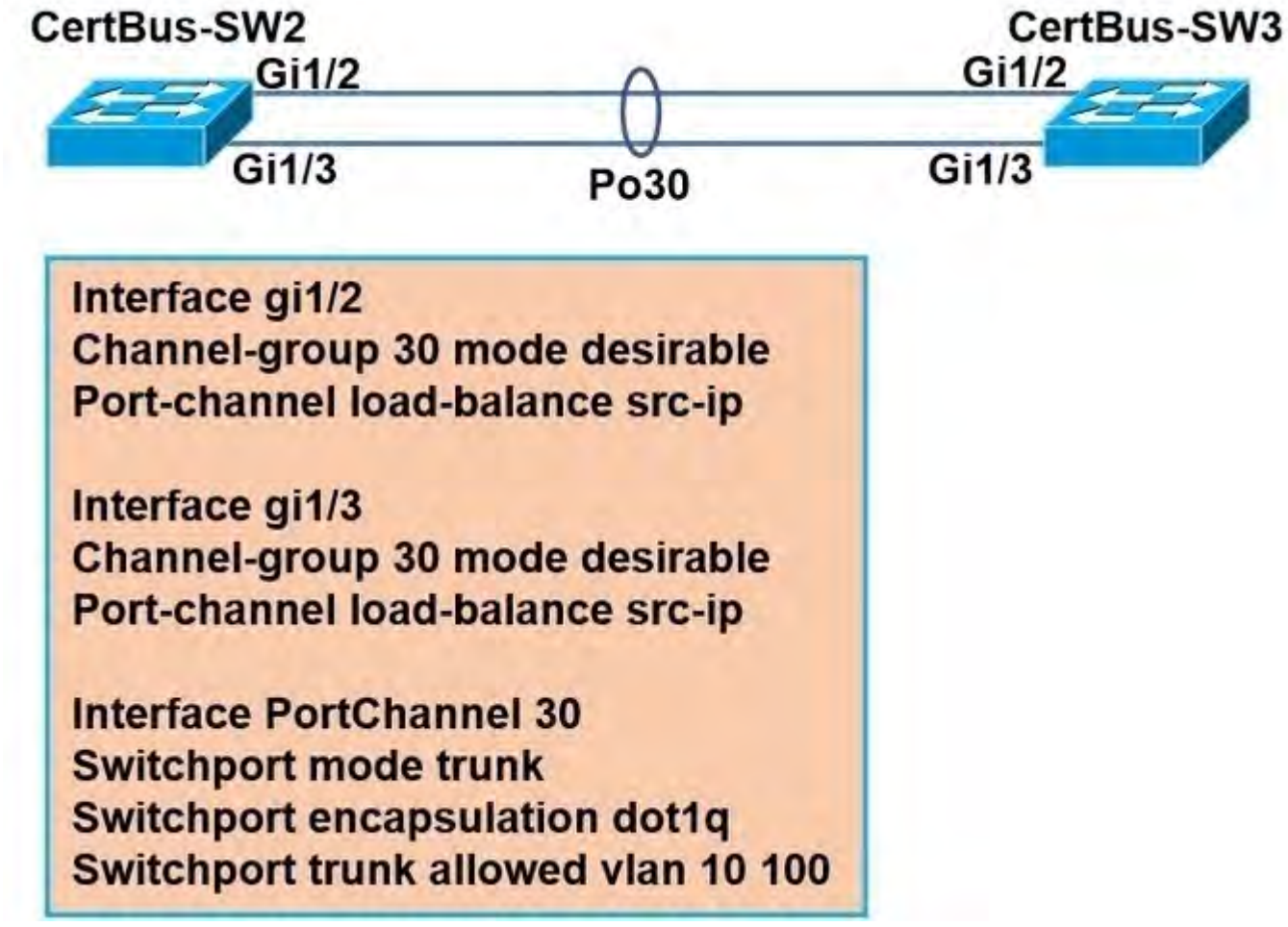
Reference: https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2018/pdf/BRKEWN-2020.pdf

QUESTION 148
A client device fails to see the enterprise SSID, but other devices are connected to it.
What is the cause of this issue?

A. The hidden SSID was not manually configured on the client.
B. The broadcast SSID was not manually configured on the client.
C. The client has incorrect credentials stored for the configured hidden SSID.
D. The client has incorrect credentials stored for the configured broadcast SSID.

Correct Answer: A
Explanation

QUESTION 149
Refer to the exhibit.



A port channel is configured between SW2 and SW3. SW2 is not running a Cisco operating system. When all physical connections are made, the port channel does not establish.

Based on the configuration except of SW3, what is the cause of the problem?

A. The port channel on SW2 is using an incompatible protocol.

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B. The port-channel trunk is not allowing the native VLAN.
C. The port-channel should be set to auto.
D. The port-channel interface lead balance should be set to src-mac

Correct Answer: A
Explanation

Explanation/Reference:
The Cisco switch was configured with PAgP, which is a Cisco proprietary protocol so non-Cisco switch could not communicate.

QUESTION 150
On which protocol or technology is the fabric data plane based in Cisco SD-Access fabric?

A. LISP
B. IS-IS
C. Cisco TrustSec
D. VXLAN

Correct Answer: D
Explanation

Explanation/Reference:
The tunneling technology used for the fabric data plane is based on Virtual Extensible LAN (VXLAN). VXLAN encapsulation is UDP based, meaning that it can be forwarded by any IP-based network (legacy or third party) and creates the overlay network for the SD-Access fabric. Although LISP is the control plane for the SD-Access fabric, it does not use LISP data encapsulation for the data plane; instead, it uses VXLAN encapsulation because it is capable of encapsulating the original Ethernet header to perform MAC-in-IP encapsulation, while LISP does not. Using VXLAN allows the SD-Access fabric to support Layer 2 and Layer 3 virtual topologies (overlays) and the ability to operate over any IP-based network with built-in network segmentation (VRF instance/VN) and built-in group-based policy.
Reference: CCNP and CCIE Enterprise Core ENCOR 350-401 Official Cert Guide

QUESTION 151
To increase total throughput and redundancy on the links between the wireless controller and switch, the customer enabled LAG on the wireless controller.
Which EtherChannel mode must be configured on the switch to allow the WLC to connect?

A. Auto
B. Active
C. On
D. Passive

Correct Answer: C
Explanation

Explanation/Reference:
Link aggregation (LAG) is a partial implementation of the 802.3ad port aggregation standard. It bundles all of the controller's distribution system ports into a single 802.3ad port channel.
Restriction for Link aggregation:
+ LAG requires the EtherChannel to be configured for `mode on' on both the controller and the Catalyst switch. ...
Reference: https://community.cisco.com/t5/wireless-mobility-documents/lag-link-aggregation/ta-p/3128669

QUESTION 152
Which statement about Cisco Express Forwarding is true?

A. It uses a fast cache that is maintained in a router data plane.
B. It maintains two tables in the data plane: the FIB and adjacency table.
C. It makes forwarding decisions by a process that is scheduled through the IOS scheduler.

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D. The CPU of a router becomes directly involved with packet-switching decisions.

Correct Answer: B
Explanation

Explanation/Reference:
Cisco Express Forwarding (CEF) provides the ability to switch packets through a device in a very quick and efficient way while also keeping the load on the router's processor low. CEF is made up of two different main components: the Forwarding Information Base (FIB) and the Adjacency Table. These are automatically updated at the same time as the routing table. The Forwarding Information Base (FIB) contains destination reachability information as well as next hop information. This information is then used by the router to make forwarding decisions. The FIB allows for very efficient and easy lookups. Below is an example of the FIB table:

```
R2#show ip cef
Prefix                Next Hop          Interface
0.0.0.0/0             192.168.201.1     FastEthernet0/0
0.0.0.0/32            receive
192.168.201.0/27      attached          FastEthernet0/0
192.168.201.0/32      receive
192.168.201.1/32      192.168.201.1     FastEthernet0/0
192.168.201.2/32      receive
192.168.201.31/32     receive
224.0.0.0/4           drop
224.0.0.0/24          receive
255.255.255.255/32    receive
```

The adjacency table is tasked with maintaining the layer 2 next-hop information for the FIB. An example of the adjacency table is shown below:

```
Router#show adjacency
Protocol   Interface       Address
------------------------------------------------------------
IP         Serial0         192.168.209.130 (2) (incomplete)
IP         Serial0         192.168.209.131(7)
IP         Ethernet0       192.168.201.1(7)
```

It uses a fast cache that is maintained in a router data plane' fast cache is only used when fast switching is enabled while CEF is disabled.

QUESTION 153
Based on this interface configuration, what is the expected state of OSPF adjacency?

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```
CertBus-R1:
interface GigabitEthernet0/1
  ip address 192.0.2.1 255.255.255.252
  ip ospf 1 area 0
  ip ospf hello-interval 2
  ip ospf cost 1
end

CertBus-R2:
interface GigabitEthernet0/1
  ip address 192.0.2.2 255.255.255.252
  ip ospf 1 area 0
  ip ospf cost 500
end
```

A. Full on both routers
B. not established
C. 2WAY/DROTHER on both routers
D. FULL/BDR on R1 and FULL/BDR on R2

Correct Answer: B
Explanation

Explanation/Reference:
On Ethernet interfaces the OSPF hello intervl is 10 second by default so in this case there would be a Hello interval mismatch -> the OSPF adjacency would not be established.

QUESTION 154
Which statement explains why Type 1 hypervisor is considered more efficient than Type 2 hypervisor?

A. Type 1 hypervisor runs directly on the physical hardware of the host machine without relying on the underlying OS.
B. Type 1 hypervisor enables other operating systems to run on it.
C. Type 1 hypervisor relics on the existing OS of the host machine to access CPU, memory, storage, and network resources.
D. Type 1 hypervisor is the only type of hypervisor that supports hardware acceleration techniques.

Correct Answer: A
Explanation

Explanation/Reference:
There are two types of hypervisors: type 1 and type 2 hypervisor. In type 1 hypervisor (or native hypervisor), the hypervisor is installed directly on the physical server. Then instances of an operating system (OS) are installed on the hypervisor. Type 1 hypervisor has direct access to the hardware resources. Therefore they are more efficient than hosted architectures. Some examples of type 1 hypervisor are VMware vSphere/ESXi, Oracle VM Server, KVM and Microsoft Hyper-V. In contrast to type

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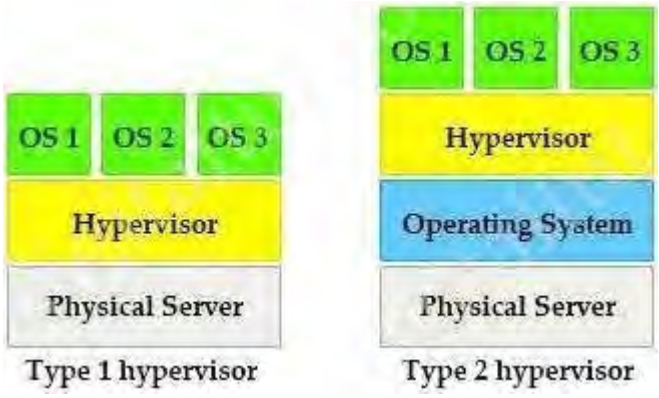
1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. answer 'Type 1 hypervisor runs directly on the physical hardware of the host machine without relying on the underlying OS' big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).



QUESTION 155
Refer to the exhibit.

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```
SwitchC#show vtp status
VTP Version                     : 2
Configuration Revision          : 0
Maximum VLANs supported locally       : 255
Number of existing VLANs        : 8
VTP Operating Mode              : Transparent
VTP Domain Name                 : cisco.com
VTP Pruning Mode                : Disabled
VTP V2 Mode                     : Disabled
VTP Traps Generation            : Disabled
MDS digest                      : 0xES 0x28 0x5D 0x3E 0x2F 0xES 0xAD 0x2B
Configuration last modified by 0.0.0.0 at 1-10-19 09:01:38

SwitchC#show vlan brief

VLAN  Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1     default                          active    Fa0/3, Fa0/4, Fa0/5, Fa0/6,
                                                 Fa0/7, Fa0/8, Fa0/9, Fa0/10,
                                                 Fa0/11, Fa0/12, Fa0/13, Fa0/14,
                                                 Fa0/15, Fa0/16, Fa0/17, Fa0/18,
                                                 Fa0/19, Fa0/20, Fa0/21, Fa0/22,
                                                 Fa0/23, Fa0/24, Po1
110 Finance                          active
210 HR                               active    Fa0/1
310 Sales                            active    Fa0/2
[...output omitted...]

SwitchC#show int trunk
Port        Mode         Encapsulation      Status        Native vlan
Gig1/1      on           802.1q             trunking      1
Gig1/2      on           802.1q             trunking      1

Port        Vlans allowed on trunk
Gig1/1      1-1005
Gig1/2      1-1005

Port        Vlans allowed and active in management domain
Gig1/1      1, 110, 210, 310
Gig1/2      1, 110, 210, 310

Port        Vlans in spanning tree forwarding state and not pruned
Gig1/1      1, 110, 210, 310
Gig1/2      1, 110, 210, 310

SwitchC#show run interface port-channel 1
interface Port-channel 1
 description Uplink_to_Core
 switchport mode trunk
```

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SwitchC connects HR and Sales to the Core switch. However, business needs require that no traffic from the Finance VLAN traverse this switch.

Which command meets this requirement?

A. SwitchC(config)#vtp pruning vlan 110
B. SwitchC(config)#vtp pruning
C. SwitchC(config)#interface port-channel 1
SwitchC(config-if)#switchport trunk allowed vlan add 210,310
D. SwitchC(config)#interface port-channel 1
SwitchC(config-if)#switchport trunk allowed vlan remove 110

Correct Answer: D
Explanation

Explanation/Reference:
From the "show vlan brief" we learn that Finance belongs to VLAN 110 and all VLANs (from 1 to 1005) are allowed to traverse the trunk (port-channel 1). Therefore we have to remove VLAN 110 from the allowed VLAN list with the "switchport trunk allowed vlan remove " command. The pruning feature cannot do this job as Finance VLAN is active.

QUESTION 156
Which QoS component alters a packet to change the way that traffic is treated in the network?

A. Marking
B. Classification
C. Shaping
D. Policing

Correct Answer: A
Explanation

Explanation/Reference:
QoS Packet Marking refers to changing a field within a packet either at Layer 2 (802.1Q/p CoS, MPLS EXP) or Layer 3 (IP Precedence, DSCP and/or IP ECN). Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos_mqc/ configuration/xe- 16/qosmqc-xe-16-book/qos-mrkg.html

QUESTION 157
Which access controls list allows only TCP traffic with a destination port range of 22-433, excluding port 80?

A. deny tcp any any eq 80 permit tcp any any gt 21 lt 444
B. permit tcp any any range 22 443 deny tcp any any eq 80
C. permit tcp any any eq 80
D. deny tcp any any eq 80 permit tcp any any range 22 443

Correct Answer: D
Explanation

QUESTION 158
Which statement about VXLAN is true?

A. VXLAN uses TCP 35 the transport protocol over the physical data cento network.
B. VXLAN extends the Layer 2 Segment ID field to 24-bits. which allows up to 4094 unique Layer 2 segments over the same network.
C. VXLAN encapsulates a Layer 2 frame in an IP-UDP header, which allows Layer 2 adjacency across router boundaries.

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D. VXLAN uses the Spanning Tree Protocol for loop prevention.

Correct Answer: C
Explanation

Explanation/Reference:
802.1Q VLAN identifier space is only 12 bits. The VXLAN identifier space is 24 bits. This doubling in size allows the VXLAN ID space to support 16 million Layer 2 segments -> Answer 'VXLAN extends the Layer 2 Segment ID field to 24-bits, which allows up to 4094 unique Layer 2 segments over the same network' is not correct.
VXLAN is a MAC-in-UDP encapsulation method that is used in order to extend a Layer 2 or Layer 3 overlay network over a Layer 3 infrastructure that already exists.

Reference:
https://www.cisco.com/c/en/us/support/docs/lan-switching/vlan/212682- virtualextensible-lan-and-ethernet-virt.html

QUESTION 159
What is the correct EBGP path attribute list, ordered from most preferred to the least preferred, that the BGP best-path algorithm uses?

A. weight. AS path, local preference. MED
B. weight, local preference AS path, MED
C. local preference weight AS path, MED
D. local preference, weight MED, AS path

Correct Answer: B
Explanation

Explanation/Reference:
Path Selection Attributes: Weight > Local Preference > Originate > AS Path > Origin > MED > External > IGP Cost > eBGP Peering > Router ID

QUESTION 160
Which First Hop Redundancy Protocol maximizes uplink utilization and minimizes the amount of configuration that is necessary?

A. GLBP
B. HSRP v2
C. VRRP
D. HSRP v1

Correct Answer: A
Explanation

Explanation/Reference:
only GLBP can maximize utilzation of links by being ACTIVE/ACTIVE while all others are ACTIVE/ STANDBY/LISTENING

NOTE!!!! there is NO MHSRP only HSRP v1 and 2.

QUESTION 161
Which statements are used for error handling in Python?

A. try/catch
B. try/except
C. block/rescue
D. catch/release

Correct Answer: B

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Explanation

Explanation/Reference:
The words "try" and "except" are Python keywords and are used to catch exceptions.

For example:
try:
print 1/0
except ZeroDivisionError:
print 'Error! We cannot divide by zero!!!'

QUESTION 162
A local router shows an EBGP neighbor in the Active state. Which statement is true about the local router?

A. The local router has active prefix in the forwarding table from the neighboring router.
B. The local router has BGP passive mode configured for the neighboring router.
C. The local router is attempting to open a TCP session with the neighboring router.
D. The local router is receiving prefixes from the neighboring router and adding them in RIB-IN.

Correct Answer: C
Explanation

Explanation/Reference:
The BGP session may report in the following states
1 Idle: the initial state of a BGP connection. In this state, the BGP speaker is waiting for a BGP start event, generally either the establishment of a TCP connection or the re-establishment of a previous connection. Once the connection is established, BGP moves to the next state.
2 Connect: In this state, BGP is waiting for the TCP connection to be formed. If the TCP connection completes, BGP will move to the Open Sent stage; if the connection cannot complete, BGP goes to Active
3 Active: In the Active state, the BGP speaker is attempting to initiate a TCP session with the BGP speaker it wants to peer with. If this can be done, the BGP state goes to Open Sent state.
4 Open Sent: the BGP speaker is waiting to receive an OPEN message from the remote BGP speaker
5 Open Confirm: Once the BGP speaker receives the OPEN message and no error is detected, the BGP speaker sends a KEEPALIVE message to the remote BGP speaker 6 Established: All of the neighbor negotiations are complete. You will see a number, which tells us the number of prefixes the router has received from a neighbor or peer group.

QUESTION 163
Which standard access control entry permits from odd-numbered hosts in the 10.0.0.0/24 subnet?

A. Permit 10.0.0.0.0.0.1
B. Permit 10.0.0.1.0.0.0
C. Permit 10.0.0.1.0.0.254
D. Permit 10.0.0.0.255.255.255.254

Correct Answer: C
Explanation

Explanation/Reference:
Remember, for the wildcard mask, 1s are I DON'T CARE, and 0s are I CARE. So now let's analyze a simple ACL:
access-list 1 permit 172.23.16.0 0.0.15.255
Two first octets are all 0's meaning that we care about the network 172.23.x.x. The third octet of the wildcard mask, 15 (0000 1111 in binary), means that we care about first 4 bits but don't care about last 4 bits so we allow the third octet in the form of 0001xxxx (minimum:00010000 = 16; maximum: 0001111 = 31).

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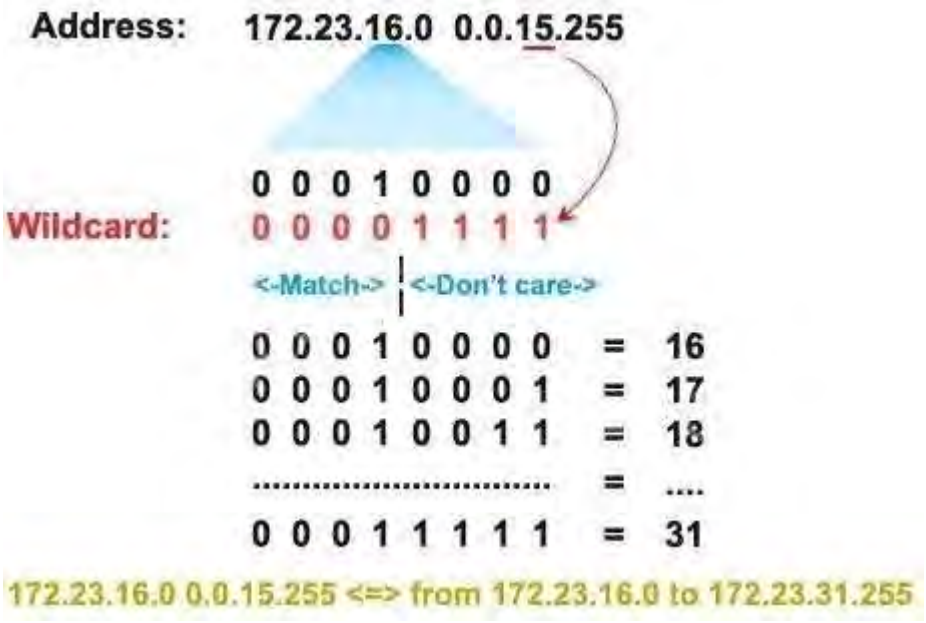

The fourth octet is 255 (all 1 bits) that means I don't care. Therefore network 172.23.16.0 0.0.15.255 ranges from 172.23.16.0 to 172.23.31.255. Now let's consider the wildcard mask of 0.0.0.254 (four octet: 254 = 1111 1110) which means we only care the last bit. Therefore if the last bit of the IP address is a "1" (0000 0001) then only odd numbers are allowed. If the last bit of the IP address is a "0" (0000 0000) then only even numbers are allowed.
Note: In binary, odd numbers are always end with a "1" while even numbers are always end with a "0". Therefore in this question, only the statement "permit 10.0.0.1 0.0.0.254" will allow all oddnumbered hosts in the 10.0.0.0/24 subnet.

QUESTION 164
Which feature must be configured to allow packet capture over Layer 3 infrastructure'?

A. VSPAN
B. IPSPAN
C. RSPAN
D. ERSPAN

Correct Answer: D
Explanation

Explanation/Reference:
Encapsulated remote SPAN (ERSPAN): encapsulated Remote SPAN (ERSPAN), as the name says, brings generic routing encapsulation (GRE) for all captured traffic and allows it to be extended across Layer 3 domains.

Reference:
https://community.cisco.com/t5/networking-documents/understanding-span-rspan-and-erspan/ta-p/3144951

QUESTION 165
What is a benefit of deploying an on-premises infrastructure versus a cloud infrastructure deployment?

A. faster deployment times because additional infrastructure does not need to be purchased
B. lower latency between systems that are physically located near each other
C. less power and cooling resources needed to run infrastructure on-premises
D. ability to quickly increase compute power without the need to install additional hardware

Correct Answer: B
Explanation

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Explanation/Reference:
The difference between on-premise and cloud is essentially where this hardware and software resides. On-premise means that a company keeps all of this IT environment onsite either managed by themselves or a third-party. Cloud means that it is housed offsite with someone else responsible for monitoring and maintaining it.

QUESTION 166
Which statement about route targets is true when using VRF-Lite?

A. When BGP is configured, route targets are transmitted as BGP standard communities.
B. Route targets control the import and export of routes into a customer routing table.
C. Route targets allow customers to be assigned overlapping addresses.
D. Route targets uniquely identify the customer routing table.

Correct Answer: B
Explanation

Explanation/Reference:
Answer 'Route targets allow customers to be assigned overlapping addresses' and answer 'Route targets uniquely identify the customer routing table' are not correct as only route distinguisher (RD) identifies the customer routing table and "allows customers to be assigned overlapping addresses".
Answer 'When BGP is configured, route targets are transmitted as BGP standard communities' is not correct as "When BGP is configured, route targets are transmitted as BGP extended communities"

QUESTION 167
Which statement about an RSPAN session configuration is true?

A. A fitter mutt be configured for RSPAN Regions.
B. Only one session can be configured at a time.
C. A special VLAN type must be used as the RSPAN destination.
D. Only incoming traffic can be monitored.

Correct Answer: C
Explanation

Explanation/Reference:
in all participating switches -> This VLAN can be considered a special VLAN type -> Answer 'A special VLAN type must be used as the RSPAN destination' is correct.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/r elease/12-2_55_se/configuration/guide/3750xscg/swspan.html

We can configure multiple RSPAN sessions on a switch at a time, then continue configuring multiple RSPAN sessions on the other switch without any problem -> Answer 'Only one session can be configured at a time' is not correct. This is how to configure Remote SPAN (RSPAN) feature on two switches. Traffic on FastEthernet0/1 of Switch 1 will be sent to Fa0/10 of Switch2 via VLAN 40.
+ Configure on both switches
Switch1,2(config)#vlan 40
Switch1,2(config-vlan)#remote-span
+ Configure on Switch1
Switch1(config)# monitor session 1 source interface FastEthernet 0/1
Switch1(config)# monitor session 1 destination remote vlan 40 + Configure on Switch2
Switch2(config)#monitor session 5 source remote vlan 40
Switch2(config)# monitor session 5 destination interface FastEthernet 0/10

QUESTION 168
When reason could cause an OSPF neighborship to be in the EXSTART/EXCHANGE state?

A. Mismatched OSPF network type
B. Mismatched areas
C. Mismatched MTU size

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D. Mismatched OSPF link costs

Correct Answer: C
Explanation

Explanation/Reference:
When OSPF adjacency is formed, a router goes through several state changes before it becomes fully adjacent with its neighbor. The states are Down -> Attempt (optional) -> Init -> 2-Way -> Exstart -> Exchange -> Loading -> Full. Short descriptions about these states are listed below:
Down: no information (hellos) has been received from this neighbor. Attempt: only valid for manually configured neighbors in an NBMA environment. In Attempt state, the router sends unicast hello packets every poll interval to the neighbor, from which hellos have not been received within the dead interval.
Init: specifies that the router has received a hello packet from its neighbor, but the receiving router's ID was not included in the hello packet 2-Way: indicates bi-directional communication has been established between two routers. Exstart:
Once the DR and BDR are elected, the actual process of exchanging link state information can start between the routers and their DR and BDR. Exchange: OSPF routers exchange database descriptor (DBD) packets Loading: In this state, the actual exchange of link state information occurs Full: routers are fully adjacent with each other (Reference: http://www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a0080093f0e.shtml) Neighbors Stuck in Exstart/Exchange State
the problem occurs most frequently when attempting to run OSPF between a Cisco router and another vendor's router. The problem occurs when the maximum transmission unit (MTU) settings for neighboring router interfaces don't match. If the router with the higher MTU sends a packet larger that the MTU set on the neighboring router, the neighboring router ignores the packet.

Reference: https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/13684-12.html#neighbors

QUESTION 169
Refer to the exhibit.

```
R1#show ip bgp
BGP table version is 32, local router ID is 192.168.101.5
Status codes: S suppressed, d damped, h history, *valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, c RIB-compressed,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found
     Network          Next Hop            Metric LocPrf Weight Path
*    192.168.102.0    192.168.101.18           80             0 64517i
*                     192.168.101.14           80         80  0 64516i
*                     192.168.101.10                          0 64515 64515i
*>                    192.168.101.2                       32768 64513i
*                     192.168.101.6                       80  0 64514 64514i
```

Which IP address becomes the next active next hop for 192.168.102 0/24 when 192.168.101.2 fails?

A. 192.168.101.18
B. 192.168.101.6
C. 192.168.101.10
D. 192.168.101.14

Correct Answer: A
Explanation

Explanation/Reference:
The `>' shown in the output above indicates that the path with a next hop of 192.168.101.2 is the current

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best path.
Path Selection Attributes: Weight > Local Preference > Originate > AS Path > Origin > MED > External > IGP Cost > eBGP Peering > Router ID BGP prefers the path with highest weight but the weights here are all 0 (which indicate all routes that are not originated by the local router) so we need to check the Local Preference. Answer '192.168.101.18' path without LOCAL_PREF (LocPrf column) means it has the default value of 100. Therefore we can find the two next best paths with the next hop of 192.168.101.18 and 192.168.101.10. We have to move to the next path selection attribute: Originate. BGP prefers the path that the local router originated (which is indicated with the "next hop 0.0.0.0"). But none of the two best paths is self-originated. The AS Path of the next hop 192.168.101.18 is shorter than the AS Path of the next hop 192.168.101.10 then the next hop 192.168.101.18 will be chosen as the next best path.

QUESTION 170
What is the logging severity level?

R1#Feb 14 37:15:12:429: %LINEPROTO-5-UPDOWN Line protocol on interface GigabitEthernet0/1.

Change state to up

A. Notification
B. Alert
C. Critical
D. Emergency

Correct Answer: A
Explanation

Explanation/Reference:
Every Awesome Cisco Engineer Will Need Icecream Daily
0 1 2 3 4 5 6 7

QUESTION 171
Which statement describes the IP and MAC allocation requirements for virtual machines on types 1 hypervisors?

A. Each virtual machine requires a unique IP and MAC addresses to be able to reach to other nodes.
B. Each virtual machine requires a unique IP address but shares the MAC address with the physical server.
C. Each virtual machines requires a unique IP address but shares the MAC address with the address of the physical server.
D. Each virtual machine requires a unique MAC address but shares the IP address with the physical server.

Correct Answer: A
Explanation

Explanation/Reference:
A virtual machine (VM) is a software emulation of a physical server with an operating system. From an application's point of view, the VM provides the look and feel of a real physical server, including all its components, such as CPU, memory, and network interface cards (NICs).
The virtualization software that creates VMs and performs the hardware abstraction that allows multiple VMs to run concurrently is known as a hypervisor. There are two types of hypervisors: type 1 and type 2 hypervisor. In type 1 hypervisor (or native hypervisor), the hypervisor is installed directly on the physical server. Then instances of an operating system (OS) are installed on the hypervisor. Type 1 hypervisor has direct access to the hardware resources. Therefore they are more efficient than hosted architectures. Some examples of type 1 hypervisor are VMware vSphere/ESXi, Oracle VM Server, KVM and Microsoft Hyper-V. In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. answer 'Each virtual machine requires a unique IP and MAC addresses to be able to reach to other nodes' big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).

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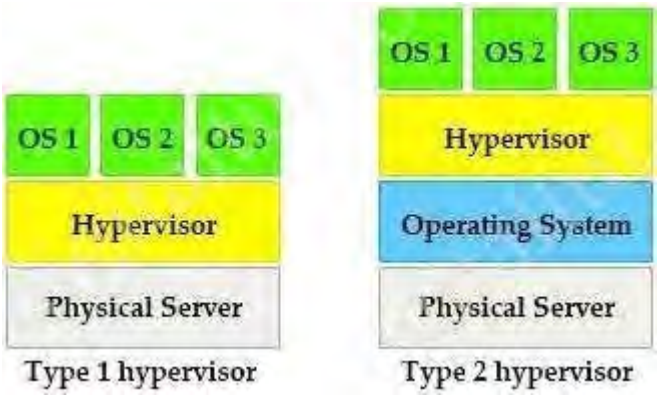

QUESTION 172
Which controller is the single plane of management for Cisco SD-WAN?

A. vBond
B. vEdge
C. vSmart
D. vManange

Correct Answer: D
Explanation

Explanation/Reference:
The primary components for the Cisco SD-WAN solution consist of the vManage network management system (management plane), the vSmart controller (control plane), the vBond orchestrator (orchestration plane), and the vEdge router (data plane).
+ vManage -This centralized network management system provides a GUI interface to easily monitor, configure, and maintain all Cisco SD-WAN devices and links in the underlay and overlay network. + vSmart controller -This software-based component is responsible for the centralized control plane of the SD-WAN network. It establishes a secure connection to each vEdge router and distributes routes and policy information via the Overlay Management Protocol (OMP), acting as a route reflector. It also orchestrates the secure data plane connectivity between the vEdge routers by distributing crypto key information, allowing for a very scalable, IKE-less architecture. + vBond orchestrator -This software-based component performs the initial authentication of vEdge devices and orchestrates vSmart and vEdge connectivity. It also has an important role in enabling the communication of devices that sit behind Network Address Translation (NAT). + vEdge router -This device, available as either a hardware appliance or software-based router, sits at a physical site or in the cloud and provides secure data plane connectivity among the sites over one or more WAN transports. It is responsible for traffic forwarding, security, encryption, Quality of Service (QoS), routing protocols such as Border Gateway Protocol (BGP) and Open Shortest Path First (OSPF), and more.

Reference: https://www.cisco.com/c/dam/en/us/td/docs/solutions/CVD/SDWAN/CVD-SD-WANDesign-2018OCT.pdf

QUESTION 173
What does this EEM applet event accomplish?

"event snmp oid 1.3.6.1.3.7.1.5.1.2.4.2.9 get-type next entry-op g entry-val 75 poll-interval 5"

A. It issues email when the value is greater than 75% for five polling cycles.
B. It reads an SNMP variable, and when the value exceeds 75%, it triggers an action
C. It presents a SNMP variable that can be interrogated.
D. Upon the value reaching 75%, a SNMP event is generated and sent to the trap server.

Correct Answer: B
Explanation

Explanation/Reference:

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EEM offers the ability to monitor events and take informational or corrective action when the monitored events occur or reach a threshold. An EEM policy is an entity that defines an event and the actions to be taken when that event occurs. There are two types of EEM policies: an applet or a script. An applet is a simple form of policy that is defined within the CLI configuration. To specify the event criteria for an Embedded Event Manager (EEM) applet that is run by sampling Simple Network Management Protocol (SNMP) object identifier values, use the event snmp command in applet configuration mode. event snmp oid oid-value get-type {exact | next} entry-op operator entry-val entryvalue [exit-comb {or | and}] [exit-op operator] [exit-val exit-value] [exit-time exit-timevalue] poll-interval poll-int-value + oid: Specifies the SNMP object identifier (object ID) + get-type: Specifies the type of SNMP get operation to be applied to the object ID specified by the oid-value argument.
-- next ?Retrieves the object ID that is the alphanumeric successor to the object ID specified by the oid-value argument.
+ entry-op: Compares the contents of the current object ID with the entry value using the specified operator. If there is a match, an event is triggered and event monitoring is disabled until the exit criteria are met. + entry-val: Specifies the value with which the contents of the current object ID are compared to decide if an SNMP event should be raised. + exit-op: Compares the contents of the current object ID with the exit value using the specified operator. If there is a match, an event is triggered and event monitoring is reenabled. + poll-interval: Specifies the time interval between consecutive polls (in seconds)

Reference: https://www.cisco.com/en/US/docs/ios/12_3t/12_3t4/feature/guide/gtioseem.html

QUESTION 174
What are two benefit of virtualizing the server with the use of VMs in data center environment? (Choose two.)

A. Increased security
B. reduced rack space, power, and cooling requirements
C. reduced IP and MAC address requirements
D. speedy deployment
E. smaller Layer 2 domain

Correct Answer: BD
Explanation

Explanation/Reference:
Server virtualization and the use of virtual machines is profoundly changing data center dynamics. Most organizations are struggling with the cost and complexity of hosting multiple physical servers in their data centers. The expansion of the data center, a result of both scale-out server architectures and traditional "one application, one server" sprawl, has created problems in housing, powering, and cooling large numbers of underutilized servers. In addition, IT organizations continue to deal with the traditional cost and operational challenges of matching server resources to organizational needs that seem fickle and ever changing. Virtual machines can significantly mitigate many of these challenges by enabling multiple application and operating system environments to be hosted on a single physical server while maintaining complete isolation between the guest operating systems and their respective applications. Hence, server virtualization facilitates server consolidation by enabling organizations to exchange a number of underutilized servers for a single highly utilized server running multiple virtual machines.
By consolidating multiple physical servers, organizations can gain several benefits:
+ Underutilized servers can be retired or redeployed.
+ Rack space can be reclaimed.
+ Power and cooling loads can be reduced.
+ New virtual servers can be rapidly deployed.
+ CapEx (higher utilization means fewer servers need to be purchased) and OpEx (few servers means a simpler environment and lower maintenance costs) can be reduced.

Reference: https://www.cisco.com/c/en/us/solutions/collateral/data-centervirtualization/net_implementation_white_paper0900aecd806a9c05.html

QUESTION 175
Which two protocols are used with YANG data models? (Choose two.)

A. HTTPS
B. SSH

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C. RESTCONF
D. TLS
E. NFTCONF

Correct Answer: CE
Explanation

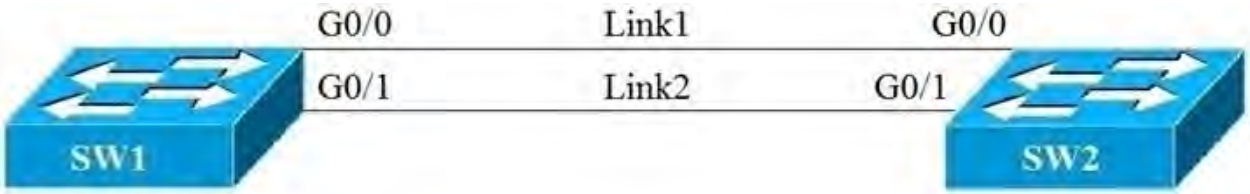
Explanation/Reference:
YANG (Yet Another Next Generation) is a data modeling language for the definition of data sent over network management protocols such as the NETCONF and RESTCONF.

QUESTION 176
Which feature is supported by EIGRP but is not supported by OSPF?

A. route summarization
B. equal-cost load balancing
C. unequal-cost load balancing
D. route filtering

Correct Answer: C
Explanation

QUESTION 177
Refer to the exhibit.




```
SW2#show spanning-tree

 VLAN0001

   Spanning tree enabled protocol ieee

   Root ID     Priority    32769
               Address     5000.0005.0000
               Cost        4
               Port        1 (GigabitEthernet0/0)
               Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

   Bridge ID   Priority    32769 (priority 32768 sys-id-ext 1)
               Address     5000.0006.0000
               Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
               Aging Time  300 sec

Interface           Role  Sts  Cost  Prio.Nbr   Type
---------------     ----  ---  ----  --------  --------------------

Gi0/0               Root  FWD   4    128.1      P2p
Gi0/1               Altn  BLK   4    32.2       P2p
```

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Link1 is a copper connection and Link2 is a fiber connection. The fiber port must be the primary port for all forwarding. The output of the show spanning-tree command on SW2 shows that the fiber port is blocked by spanning tree. An engineer enters the spanning-tree port-priority 32 command on G0/1 on SW2, but the port remains blocked.

Which command should be entered on the ports that are connected to Link2 to resolve the issue?

A. Enter spanning-tree port-priority 32 on SW1.
B. Enter spanning-tree port-priority 224 on SW1.
C. Enter spanning-tree port-priority 4 on SW2.
D. Enter spanning-tree port-priority 64 on SW2.

Correct Answer: A
Explanation

Explanation/Reference:
SW1 needs to block one of its ports to SW2 to avoid a bridging loop between the two switches. Unfortunately, it blocked the fiber port Link2. But how does SW2 select its blocked port? Well, the answer is based on the BPDUs it receives from SW1. answer 'Enter spanning-tree port-priority 32 on SW1' BPDU is superior than another if it has:
1. answer 'Enter spanning-tree port-priority 32 on SW1' lower Root Bridge ID
2. answer 'Enter spanning-tree port-priority 32 on SW1' lower path cost to the Root
3. answer 'Enter spanning-tree port-priority 32 on SW1' lower Sending Bridge ID
4. answer 'Enter spanning-tree port-priority 32 on SW1' lower Sending Port ID These four parameters are examined in order. In this specific case, all the BPDUs sent by SW1 have the same Root Bridge ID, the same path cost to the Root and the same Sending Bridge ID. The only parameter left to select the best one is the Sending Port ID (Port ID = port priority + port index). And the port index of Gi0/0 is lower than the port index of Gi0/1 so Link 1 has been chosen as the primary link.
Therefore we must change the port priority to change the primary link. The lower numerical value of port priority, the higher priority that port has. In other words, we must change the port-priority on Gi0/1 of SW1 (not on Gi0/1 of SW2) to a lower value than that of Gi0/0.

QUESTION 178
What the role of a fusion in an SD-Access solution?

A. provides connectivity to external networks
B. acts as a DNS server
C. performs route leaking between user-defined virtual networks and shared services
D. provides additional forwarding capacity to the fabric

Correct Answer: C
Explanation

Explanation/Reference:
Today the Dynamic Network Architecture Software Defined Access (DNA-SDA) solution requires a fusion router to perform VRF route leaking between user VRFs and Shared-Services, which may be in the Global routing table (GRT) or another VRF. Shared Services may consist of DHCP, Domain Name System (DNS), Network Time Protocol (NTP), Wireless LAN Controller (WLC), Identity Services Engine (ISE), DNAC components which must be made available to other virtual networks (VN's) in the Campus.

Reference: https://www.cisco.com/c/en/us/support/docs/cloud-systems-management/dnacenter/ 213525-sda-steps-to-configure-fusion-router.html

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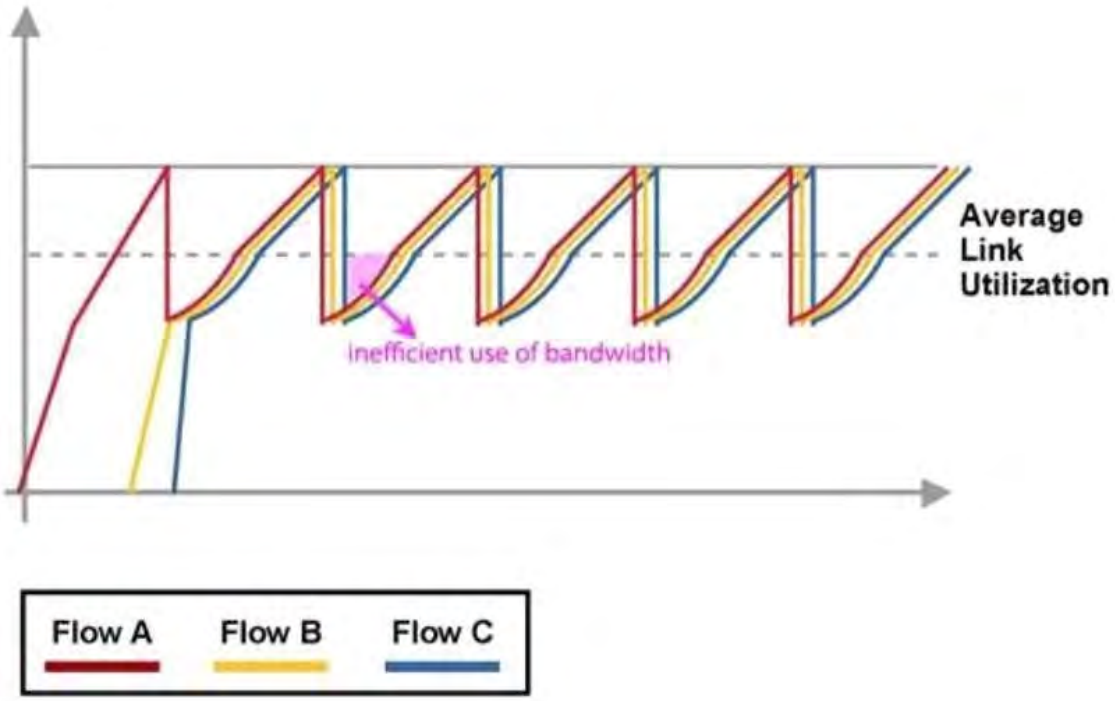

Reference: https://www.cisco.com/c/en/us/support/docs/cloud-systems-management/dna-center/213525-sda-steps-to-configure-fusion-router.html#anc1

QUESTION 179
Which method does the enable secret password option use to encrypt device passwords?

A. AES
B. CHAP
C. PAP
D. MD5

Correct Answer: D
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/security-vpn/remote-authentication-dial-user-service-radius/107614-64.html

QUESTION 180
A client with IP address 209.165.201.25 must access a web server on port 80 at 209.165.200.225. To allow this traffic, an engineer must add a statement to an access control list that is applied in the inbound direction on the port connecting to the web servers. Which statement allows this traffic?

A. permit tcp host 209 165 200 225 eq 80 host 209.165.201.25
B. permit tcp host 209 165.201 25 host 209.165.200.225 eq 80
C. permit tcp host 209.165.200 225 lt 80 host 209.165.201.25

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D. permit tcp host 209.165.200.225 host 209.165.201.25 eq 80

Correct Answer: A
Explanation

QUESTION 181
Refer to the exhibit.

```
Controller(config-wlan)#security pmf
```

You are configuring a controller that runs Cisco IOS XE by using the CLI. Which three configuration options are used for 802.11w Protected Management Frames? (Choose three.)

A. mandatory
B. association-comeback
C. SA teardown protection
D. saquery-retry-time
E. enable
F. comeback-time

Correct Answer: ABD
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/5700/software/release/ios_xe_33/11rkw_DeploymentGuide/b_802point11rkw_deployment_guide_cisco_ios_xe_release33/b_802point11rkw_deployment_guide_cisco_ios_xe_release33_chapter_0100.pdf

QUESTION 182
Refer to the exhibit.

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Which level message does the WLC send to the syslog server?

A. syslog level errors and less severity messages
B. syslog level errors messages
C. all syslog levels messages
D. syslog level errors and greater severity messages

Correct Answer: A
Explanation

Explanation/Reference:
If you set a syslog level, only those messages whose severity is equal to or less than that level are sent to the syslog servers. For example, if you set the syslog level to Notifications (severity level 5), only those messages whose severity is betwen 0 and 5 are sent to the syslog servers.
https://www.cisco.com/c/en/us/support/docs/wireless/4100-series-wireless-lan-controllers/107252-WLC-Syslog-Server.html

QUESTION 183
Refer to the exhibit.

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```
Dec 7 13:56:09.373: dot11_auth_dot1x_start: in the dot11_auth_dot1x_start
Dec 7 13:56:09.373: dot11_auth_dot1x_send_id_req_to_client:
    sending identity request for 0040.96a0.3758
Dec 7 13:56:09.374: dot11_auth_dot1x_send_id_req_to_client:
    Started timer client_timeout 30 seconds
Dec 7 13:56:39.358: dot11_auth_dot1x_run_rfsm:
    Executing Action(CLIENT_WAIT,TIMEOUT) for 0040.96a0.3758
Dec 7 13:56:39.358: dot11_auth_dot1x_send_client_fail:
    Authentication failed for 0040.96a0.3758
Dec 7 13:56:39.358: %DOT11-7-AUTH_FAILED:
    Station 0040.96a0.3758 Authentication failed
```

A client reports being unable to log into the wireless network, which uses PEAPv2. Which two issues appear in the output? (Choose two.)

A. There is a problem with the client supplicant.
B. The AP has the incorrect RADIUS server address.
C. The AP has lost IP connectivity to the authentication server.
D. The EAP client timeout value should be increased.
E. The authentication server is misconfigured on the controller.
F. The authentication server is misconfigured in the WLAN.

Correct Answer: AD
Explanation

QUESTION 184
Refer to the exhibit.

```
wlan CORP_BYOD 1 CORP_BYOD
client vlan 30
nac
ip dhcp required
session-timeout 86400
no shutdown
```

A network engineer must configure a WLAN on a Cisco IOS-XE controller to support corporate devices (using VLAN 30) and BYOD (using VLAN 40) on the same secure SSID. The security team has built an ISE deployment to be used for VLAN assignment and to restrict access based on policy and posture compliance.

Given the existing WLAN configuration, which configuration change must be made?

A. remove ip dhcp required
B. Add aaa-override
C. Remove nac
D. Add mac-filtering default

Correct Answer: B
Explanation

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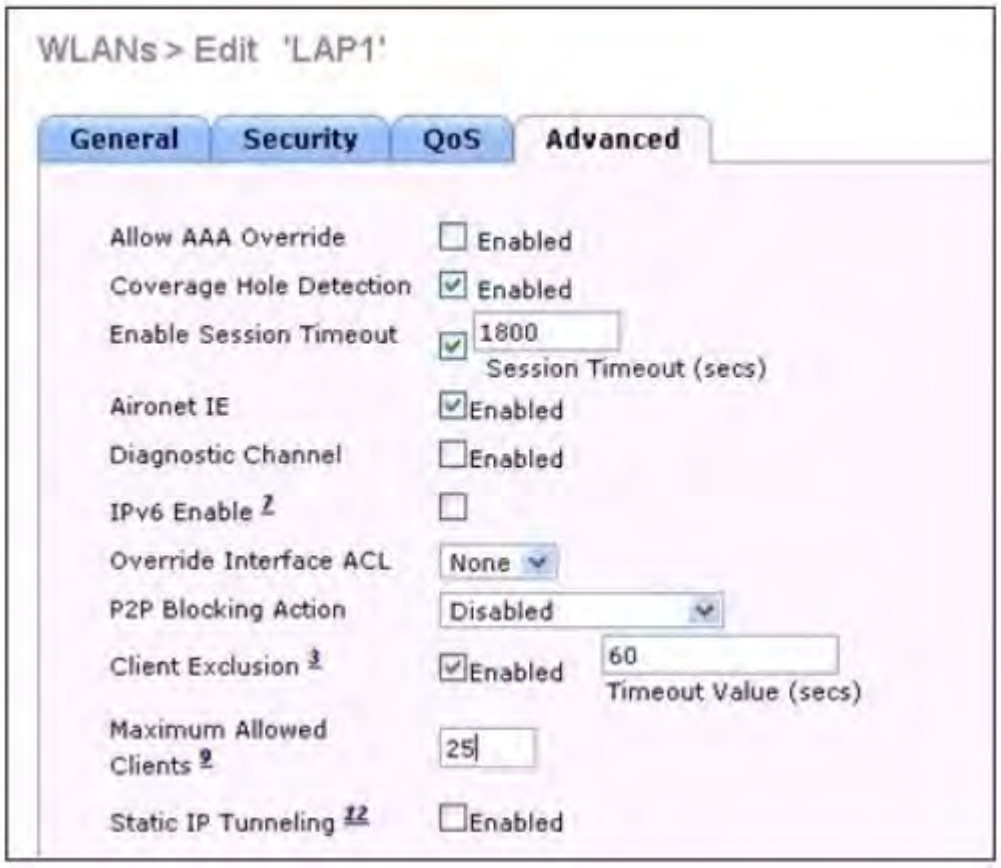
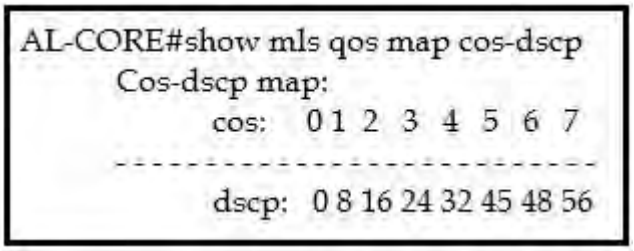
QUESTION 185
Refer to the exhibit. To which setting is the client limitation for WLAN LAP1 configured?



A. 60
B. 1800
C. Client exclusion is not enabled
D. 25

Correct Answer: D
Explanation

QUESTION 186
Refer to the exhibit.



During deployment, a network engineer notices that voice traffic is not being tagged correctly as it traverses the network. Which COS to DSCP map must be modified to ensure that voice traffic is treated properly?

A. COS of 5 to DSCP 46
B. COS of 7 to DSCP 48

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C. COS of 6 to DSCP 46
D. COS of 3 to DSCP of 26

Correct Answer: A
Explanation

QUESTION 187
Refer to the exhibit.

```
(WLC) >show interface summary
Interface Name                Vlan Id
------------------------      -------
deadnet                       999
users1                        14
users2                        15
users3                        16

(WLC) >show wlan 1
WLAN Identifier . . . . . . . . . . . . . . . . . . 1
Network Name (SSID) . . . . . . . . . . . . . . . . wlan1
AAA Policy Override . . . . . . . . . . . . . . . . Enabled
Interface . . . . . . . . . . . . . . . . . . . . . deadnet
FlexConnect Local Switching . . . . . . . . . Enabled
FlexConnect Central Association . . . . . . . Disabled
flexconnect Central Dhcp Flag . . . . . . . . Disabled
flexconnect nat-pat Flag . . . . . . . . . . .  Disabled
flexconnect DNS Override Flag . . . . . . . . Disabled
flexconnect PPPoE pass-through . . . . . . .  Disabled
flexconnect local-switching IP-source-guar . .Disabled
FlexConnect Vlan based Central Switching . .  Enabled
FlexConnect Local Authentication . . . . . .  Disabled
FlexConnect Learn IP Address . . . . . . . .  Enabled
```

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```
(WLC) >show ap config general FlexAP1
AP Mode . . . . . . . . . . . . . . . . . . . . . . . . FlexConnect
FlexConnect Vlan mode : . . . . . . . . . . . . . . . . Enabled
            Native ID : . . . . . . . . . . . . . . . . . . . 1
            WLAN 1 : . . . . . . . . . . . . . . . . . . . . . 10 (AP-Specific)
FlexConnect VLAN ACL Mappings
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . . 10
            Ingress ACL : . . . . . . . . . . . . . . . . . . None
            Egress ACL : . . . . . . . . . . . . . . . . . . . None
VLAN with least priority : . . . . . . . . . . . . . . 13
FlexConnect Group . . . . . . . . . . . . . . . . . . . flexgroup1
Group VLAN ACL Mappings
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . . 11
            Ingress ACL : . . . . . . . . . . . . . . . . . . None
            Egress ACL : . . . . . . . . . . . . . . . . . . . None
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . . 12
            Ingress ACL : . . . . . . . . . . . . . . . . . . None
            Egress ACL : . . . . . . . . . . . . . . . . . . . None
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . . 13
            Ingress ACL : . . . . . . . . . . . . . . . . . . None
            Egress ACL : . . . . . . . . . . . . . . . . . . . None
FlexConnect Backup Auth Radius Servers :
Primary Radius Server . . . . . . . . . . . . . . . . Enabled (Group Level1)
Secondary Radius Server . . . . . . . . . . . . . . . Enabled (Group Level1)
```

A wireless client is connecting to FlexAP1 which is currently working standalone mode. The AAA authentication process is returning the following AVPs:

Tunnel-Private-Group-Id(81): 15
Tunnel-Medium-Type(65): IEEE-802(6)
Tunnel-Type(64): VLAN(13)

Which three behaviors will the client experience? (Choose three.)

A. While the AP is in standalone mode, the client will be placed in VLAN 15.
B. While the AP is in standalone mode, the client will be placed in VLAN 10.
C. When the AP transitions to connected mode, the client will be de-authenticated.
D. While the AP is in standalone mode, the client will be placed in VLAN 13.
E. When the AP is in connected mode, the client will be placed in VLAN 13.
F. When the AP transitions to connected mode, the client will remain associated.
G. When the AP is in connected mode, the client will be placed in VLAN 15.
H. When the AP is in connected mode, the client will be placed in VLAN 10.

Correct Answer: BCG
Explanation

Explanation/Reference:
Traffic flow on WLANs configured for Local Switching when Flex APs are in Connected Mode:

1. If the VLAN is returned as one of the AAA attributes and that VLAN is not present in the Flex AP database, traffic will switch centrally and the client will be assigned this VLAN/Interface returned from the AAA server provided that the VLAN exists on the WLC.
2. If the VLAN is returned as one of the AAA attributes and that VLAN is not present in the Flex AP database, traffic will switch centrally. If that VLAN is also not present on the WLC, the client will be assigned a VLAN/Interface mapped to a WLAN on the WLC.
3. If the VLAN is returned as one of the AAA attributes and that VLAN is present in the FlexConnect AP

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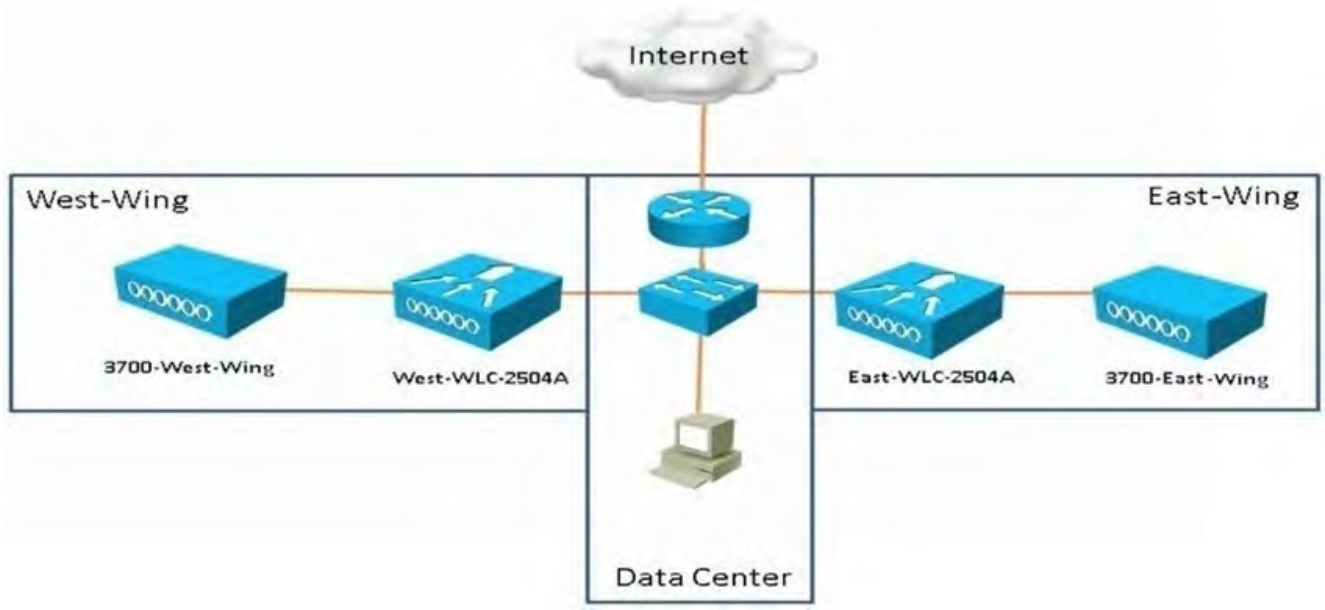
database, traffic will switch locally.
4. If the VLAN is not returned from the AAA server, the client will be assigned a WLAN mapped VLAN on that FlexConnect AP and traffic will switch locally.

Traffic flow on WLANs configured for Local Switching when Flex APs are in Standalone Mode:
1. If the VLAN returned by an AAA server is not present in the Flex AP database, the client will be put to default VLAN (that is, a WLAN mapped VLAN on Flex AP). When the AP connects back, this client will be de-authenticated and will switch traffic centrally.
2. If the VLAN returned by an AAA server is present in the Flex AP database, the client will be put into a returned VLAN and traffic will switch locally.
3. If the VLAN is not returned from an AAA server, the client will be assigned a WLAN mapped VLAN on that FlexConnect AP and traffic will switch locally.

QUESTION 188
The East-WLC-2504A controller has a problem. When configuration changes are made to the Employees-East-Wing AP Group that covers the East-Wing, none of the APs receive the updates. Refer to the exhibits to determine where the problems are.

SSID Name:	Employees
WLAN ID	10
APs:	Preconfigured on WLC
Dynamic Interface Name:	east-wing
Dynamic Interface IP Address:	172.16.1.6/24
Dynamic Interface Gateway IP Address:	172.16.1.1/24
VLAN:	22
Port Number:	1
AP Group Name:	Employees-East-Wing

Note, not all menu items, text boxes, or radio buttons are active.



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Which four changes must be made in the configuration of the East-WLC-2504A controller to restore functionality to the Employees-East-Wing AP Group? (Choose four.)

A. Change the AP in the Employees-East-Wing AP Group.
B. Change the IP Address in the east-wing interface.
C. Change the VLAN Identifier in the east-wing interface.
D. Enable Dynamic AP Management in the east-wing interface.
E. Change the Port Number to 2 in the east-wing interface.
F. Add the Primary Controller and IP address to the 3700-East-Wing AP.
G. Change the SSID in the Employees-East-Wing AP Group.
H. Enable the Employees SSID

Correct Answer: DFGH
Explanation

Explanation/Reference:
References: http://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/69639-wlc-failover.html

QUESTION 189
Which statement about when you configure FlexConnect APs and you want to set up Cisco Centralized Key Management fast roaming is true?

A. FlexConnect groups are required for Cisco Centralized Key Management fast roaming to work with FlexConnect access points.
B. APs that are in the same FlexConnect group but associated to different WLCs support Cisco Centralized Key Management.
C. Cisco Centralized Key Management fast roaming among FlexConnect and non-FlexConnect access points is supported.
D. The FlexConnect access point must be in standalone mode to support Cisco Centralized Key Management.

Correct Answer: A
Explanation

Explanation/Reference:
References: http://www.cisco.com/c/en/us/td/docs/wireless/controller/8-1/Enterprise-Mobility-8-1-Design-Guide/Enterprise_Mobility_8-1_Deployment_Guide/ch7_HREA.html

QUESTION 190
Which NGFW mode blocks flows crossing the firewall?

A. tap
B. inline
C. passive
D. inline tap

Correct Answer: B
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/support/docs/security/firepower-ngfw/200924-configuring-firepower-threat-defense-int.html

QUESTION 191
What are two reasons why broadcast radiation is caused in the virtual machine environment? (Choose two.)

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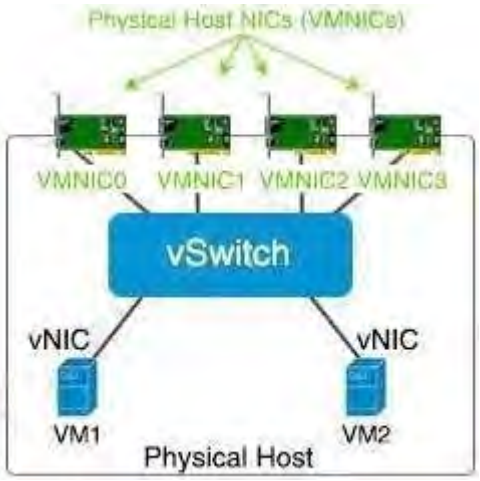
A. vSwitch must interrupt the server CPU to process the broadcast packet.
B. The Layer 2 domain can be large in virtual machine environments.
C. Virtual machines communicate primarily through broadcast mode.
D. Communication between vSwitch and network switch is broadcast based.
E. Communication between vSwitch and network switch is multicast based.

Correct Answer: AB
Explanation

Explanation/Reference:
Broadcast radiation is the accumulation of broadcast and multicast traffic on a computer network. Extreme amounts of broadcast traffic constitute a broadcast storm. The amount of broadcast traffic you should see within a broadcast domain is directly proportional to the size of the broadcast domain. Therefore if the layer 2 domain in virtual machine environment is too large, broadcast radiation may occur - > VLANs should be used to reduce broadcast radiation.
Also if virtual machines communicate via broadcast too much, broadcast radiation may occur.
Another reason for broadcast radiation is using a trunk (to extend VLANs) from the network switch to the physical server.
Note about the structure of virtualization in a hypervisor:
Hypervisors provide virtual switch (vSwitch) that Virtual Machines (VMs) use to communicate with other VMs on the same host. The vSwitch may also be connected to the host's physical NIC to allow VMs to get layer 2 access to the outside world.
Each VM is provided with a virtual NIC (vNIC) that is connected to the virtual switch. Multiple vNICs can connect to a single vSwitch, allowing VMs on a physical host to communicate with one another at layer 2 without having to go out to a physical switch.



Although vSwitch does not run Spanning-tree protocol but vSwitch implements other loop prevention mechanisms. For example, a frame that enters from one VMNIC is not going to go out of the physical host from a different VMNIC card.

Reference:
https://www.cisco.com/c/en/us/solutions/collateral/data-center-virtualization/net_implementation_white_paper0900aecd806a9c05.html

QUESTION 192
Which two namespaces does the LISP network architecture and protocol use? (Choose two.)

A. TLOC
B. RLOC
C. DNS
D. VTEP
E. EID

Correct Answer: BE

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Explanation

Explanation/Reference:
Locator ID Separation Protocol (LISP) is a network architecture and protocol that implements the use of two namespaces instead of a single IP address: + Endpoint identifiers (EIDs)--assigned to end hosts. + Routing locators (RLOCs)-- assigned to devices (primarily routers) that make up the global routing system.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe-3s/irl-xe-3s-book/irl-overview.html

QUESTION 193
Which feature of EIGRP is not supported in OSPF?

A. load balancing of unequal-cost paths
B. load balance over four equal-costs paths
C. uses interface bandwidth to determine best path
D. per-packet load balancing over multiple paths

Correct Answer: A
Explanation

QUESTION 194
What are two device roles in Cisco SD-Access fabric? (Choose two.)

A. core switch
B. vBond controller
C. edge node
D. access switch
E. border node

Correct Answer: CE
Explanation

Explanation/Reference:
There are five basic device roles in the fabric overlay:

+ Control plane node: This node contains the settings, protocols, and mapping tables to provide the endpoint-to-location (EID-to-RLOC) mapping system for the fabric overlay. + Fabric border node: This fabric device (for example, core layer device) connects external Layer 3 networks to the SDA fabric.
+ Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.
+ Fabric WLAN controller (WLC): This fabric device connects APs and wireless endpoints to the SDA fabric.
+ Intermediate nodes: These are intermediate routers or extended switches that do not provide any sort of SD-Access fabric role other than underlay services.

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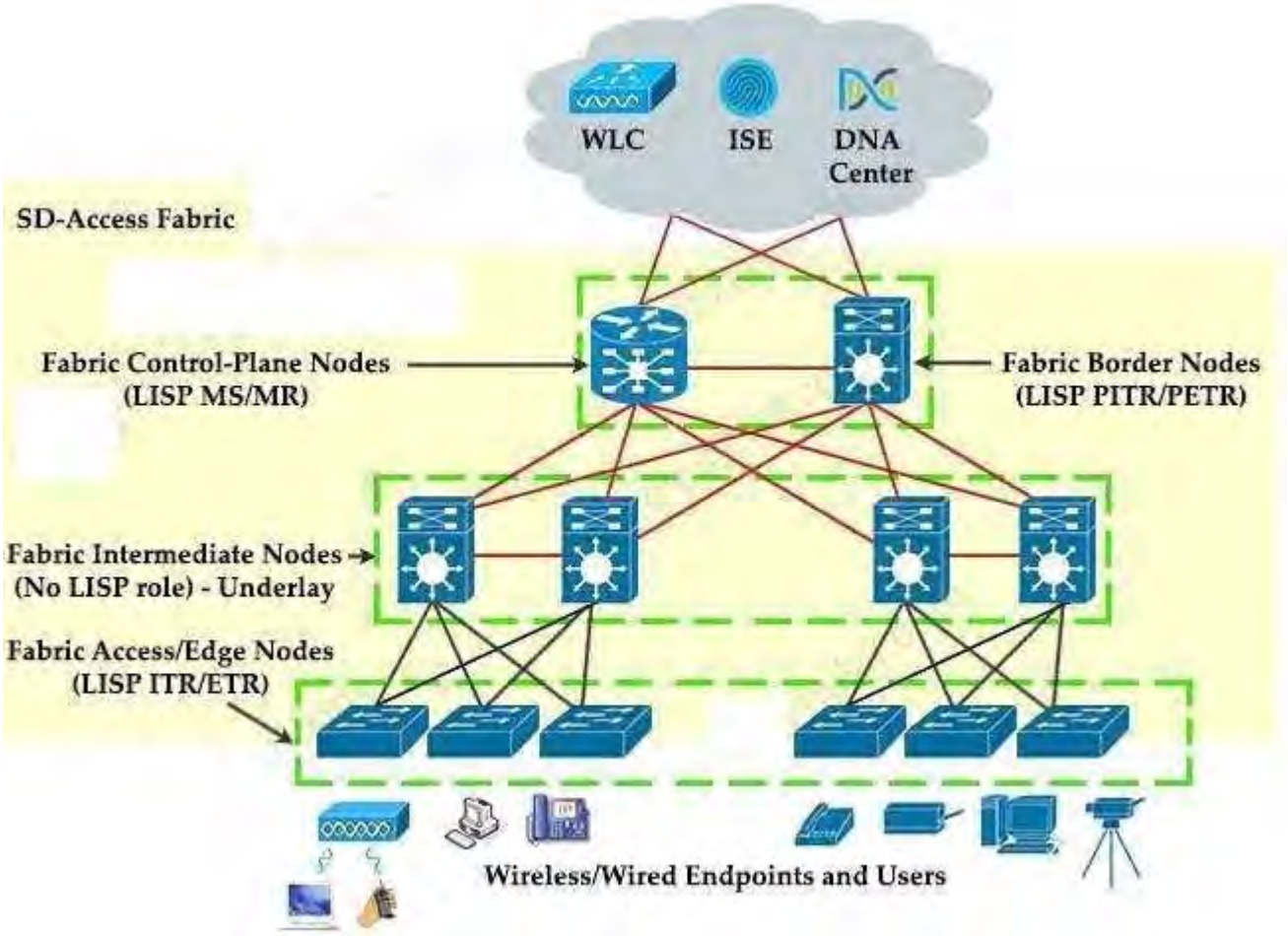

QUESTION 195
How does QoS traffic shaping alleviate network congestion?

A. It drops packets when traffic exceeds a certain bitrate.
B. It buffers and queues packets above the committed rate.
C. It fragments large packets and queues them for delivery.
D. It drops packets randomly from lower priority queues.

Correct Answer: B
Explanation

Explanation/Reference:
Traffic shaping retains excess packets in a queue and then schedules the excess for later transmission over increments of time. The result of traffic shaping is a smoothed packet output rate.

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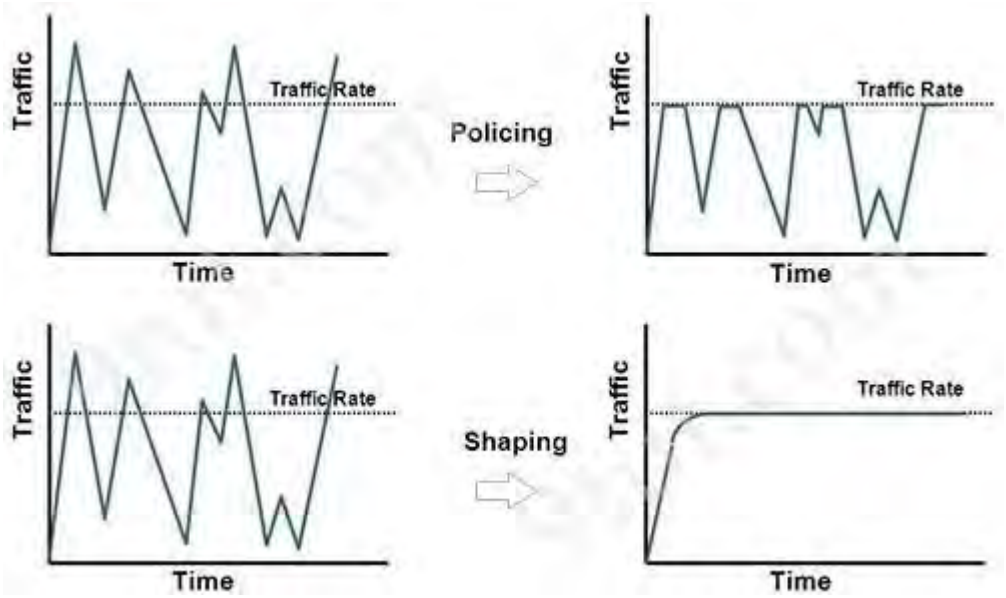

Reference: https://www.cisco.com/c/en/us/support/docs/quality-of-service-qos/qos-policing/19645-policevsshape.html

QUESTION 196
Which two entities are Type 1 hypervisors? (Choose two.)

A. Oracle VM VirtualBox
B. Microsoft Hyper-V
C. VMware server
D. VMware ESX
E. Microsoft Virtual PC

Correct Answer: BD
Explanation

Explanation/Reference:
A bare-metal hypervisor (Type 1) is a layer of software we install directly on top of a physical server and its underlying hardware. There is no software or any operating system in between, hence the name bare-metal hypervisor. A Type 1 hypervisor is proven in providing excellent performance and stability since it does not run inside Windows or any other operating system. These are the most common type 1 hypervisors:
+ VMware vSphere with ESX/ESXi
+ KVM (Kernel-Based Virtual Machine)
+ Microsoft Hyper-V
+ Oracle VM
+ Citrix Hypervisor (formerly known as Xen Server)

Reference: https://phoenixnap.com/kb/what-is-hypervisor-type-1-2

QUESTION 197
Which First Hop Redundancy Protocol should be used to meet a design requirements for more efficient default bandwidth usage across multiple devices?

A. GLBP
B. LCAP
C. HSRP
D. VRRP

Correct Answer: A
Explanation

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Explanation/Reference:
The main disadvantage of HSRP and VRRP is that only one gateway is elected to be the active gateway and used to forward traffic whilst the rest are unused until the active one fails. Gateway Load Balancing Protocol (GLBP) is a Cisco proprietary protocol and performs the similar function to HSRP and VRRP but it supports load balancing among members in a GLBP group.

QUESTION 198
A client device roams between access points located on defferent floors in an atrium. The access points joined to the same controller and configuration in local mode. The access points are in different IP addresses, but the client VLAN in the group same.

What type of roam occurs?

A. inter-controller
B. inter-subnet
C. intra-VLAN
D. intra-controller

Correct Answer: D
Explanation

Explanation/Reference:
Mobility, or roaming, is a wireless LAN client's ability to maintain its association seamlessly from one access point to another securely and with as little latency as possible. Three popular types of client roaming are:
Intra-Controller Roaming: Each controller supports same-controller client roaming across access points managed by the same controller. This roaming is transparent to the client as the session is sustained, and the client continues using the same DHCP-assigned or client-assigned IP address.
Inter-Controller Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group and on the same subnet. This roaming is also transparent to the client because the session is sustained and a tunnel between controllers allows the client to continue using the same DHCP- or client-assigned IP address as long as the session remains active. Inter-Subnet Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group on different subnets. This roaming is transparent to the client because the session is sustained and a tunnel between the controllers allows the client to continue using the same DHCP-assigned or client-assigned IP address as long as the session remains active.

Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/7- 4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDA TED_chapter_01100.html

In three types of client roaming above, only with Inter-Subnet Roaming the controllers are in different subnets.

QUESTION 199
Which action is a function of VTEP in VXLAN?

A. tunneling traffic from IPv6 to IPv4 VXLANs
B. allowing encrypted communication on the local VXLAN Ethernet segment
C. encapsulating and de-encapsulating VXLAN Ethernet frames
D. tunneling traffic from IPv4 to IPv6 VXLANs

Correct Answer: C
Explanation

Explanation/Reference:
VTEPs connect between Overlay and Underlay network and they are responsible for encapsulating frame into VXLAN packets to send across IP network (Underlay) then decapsulating when the packets leaves the VXLAN tunnel.

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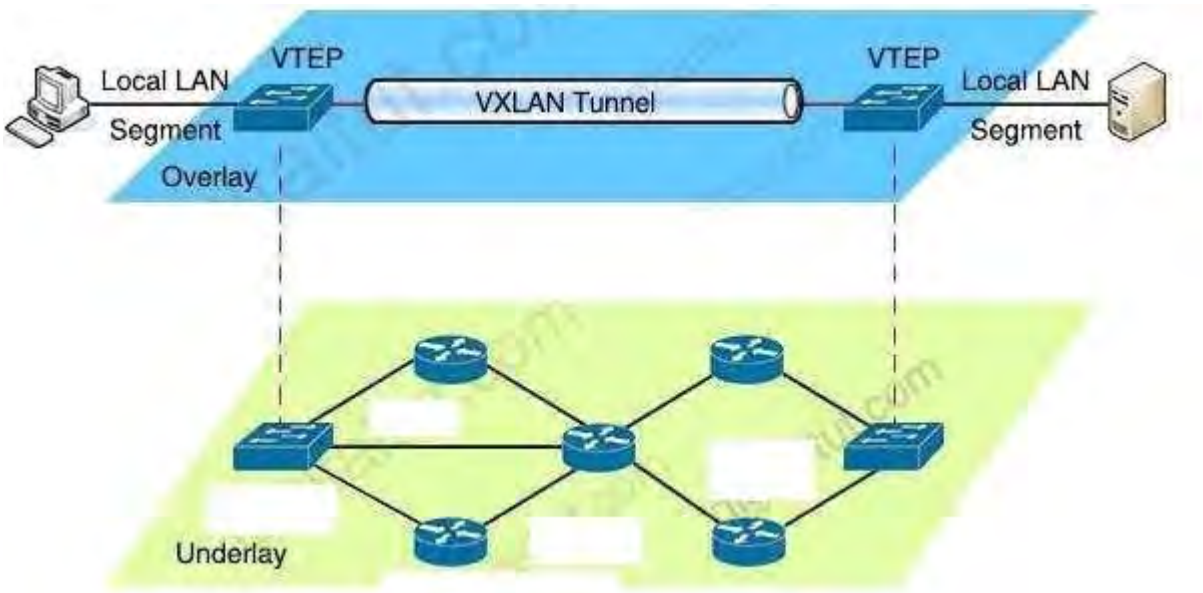

QUESTION 200
Which two LISP infrastructure elements are needed to support LISP to non-LISP internetworking? (Choose two)

A. PETR
B. PITR
C. MR
D. MS
E. ALT

Correct Answer: AC
Explanation

QUESTION 201
In an SD-WAN deployment, which action in the vSmart controller responsible for?

A. handle, maintain, and gather configuration and status for nodes within the SD-WAN fabric
B. distribute policies that govern data forwarding performed within the SD-WAN fabric
C. gather telemetry data from vEdge routers
D. onboard vEdge nodes into the SD-WAN fabric

Correct Answer: B
Explanation

Explanation/Reference:
- onboard WAN Edge nodes into the Cisco SD-WAN fabric. (vBond)
- gather telemetry data from WAN Edge routers. (vAnalytics)
- distribute policies that govern data forwarding performed within the Cisco SD-WAN fabric. (vSmart)
- handle, maintain, and gather configuration and status for nodes within the Cisco SD-WAN fabric. (vManage)

QUESTION 202
In OSPF, which LSA type is responsible for pointing to the ASBR router?

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

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Correct Answer: D
Explanation

Explanation/Reference:
Summary ASBR LSA (Type 4) ?Generated by the ABR to describe an ASBR to routers in other areas so that routers in other areas know how to get to external routes through that ASBR. For example, suppose R8 is redistributing external route (EIGRP, RIP...) to R3. This makes R3 an Autonomous System Boundary Router (ASBR). When R2 (which is an ABR) receives this LSA Type 1 update, R2 will create LSA Type 4 and flood into Area 0 to inform them how to reach R3.
When R5 receives this LSA it also floods into Area 2.
In the above example, the only ASBR belongs to area 1 so the two ABRs (R2 & R5) send LSA Type 4 to area 0 & area 2 (not vice versa). This is an indication of the existence of the ASBR in area 1.
Note:
+ Type 4 LSAs contain the router ID of the ASBR.
+ There are no LSA Type 4 injected into Area 1 because every router inside area 1 knows how to reach R3. R3 only uses LSA Type 1 to inform R2 about R8 and inform R2 that R3 is an ASBR.

QUESTION 203
What is used to measure the total output energy of a Wi-Fi device?

A. dBi
B. EIRP
C. mW
D. dBm

Correct Answer: C
Explanation

Explanation/Reference:
Output power is measured in mW (milliwatts). answer 'dBi' milliwatt is equal to one thousandth (10-3) of a watt.

QUESTION 204
A client with IP address 209.165.201.25 must access a web server on port 80 at 209.165.200.225. To allow this traffic, an engineer must add a statement to an access control list that is applied in the inbound direction on the port connecting to the web server.
Which statement allows this traffic?

A. permit tcp host 209 165 200 225 eq 80 host 209.165.201.25
B. permit tcp host 209 165.201 25 host 209.165.200.225 eq 80
C. permit tcp host 209.165.200 225 lt 80 host 209.165.201.25
D. permit tcp host 209.165.200.225 host 209.165.201.25 eq 80

Correct Answer: A
Explanation

QUESTION 205
Which HTTP status code is the correct response for a request with an incorrect password applied to a REST API session?

A. HTTP Status Code: 200
B. HTTP Status Code: 302
C. HTTP Status Code: 401
D. HTTP Status Code: 504

Correct Answer: C
Explanation

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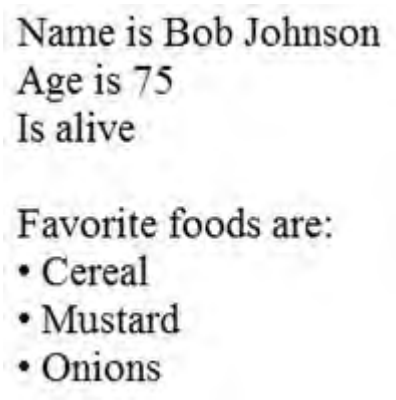
Explanation/Reference:
Reference: https://developer.mozilla.org/en-US/docs/Web/HTTP/Status/401

QUESTION 206
Refer to the exhibit.



What is the JSON syntax that is formed from the data?

A. {Name: Bob Johnson, Age: 75, Alive: true, Favorite Foods: [Cereal, Mustard, Onions]}
B. {"Name": "Bob Johnson", "Age": 75, "Alive": true, "Favorite Foods": ["Cereal", "Mustard", "Onions"]}
C. {`Name': `Bob Johnson', `Age': 75, `Alive': True, `Favorite Foods': `Cereal', `Mustard', `Onions'}
D. {"Name": "Bob Johnson", "Age": Seventyfive, "Alive": true, "Favorite Foods": ["Cereal", "Mustard", "Onions"]}

Correct Answer: B
Explanation

QUESTION 207
Which standard access control entry permits traffic from odd-numbered hosts in the 10.0.0.0/24 subnet?

A. permit 10.0.0.0 0.0.0.1
B. permit 10.0.0.1 0.0.0.254
C. permit 10.0.0.1 0.0.0.0
D. permit 10.0.0.0 255.255.255.254

Correct Answer: B
Explanation

QUESTION 208
A response code of 404 is received while using the REST API on Cisco DNA Center to POST to this URI:

/dna/intent/api/v1/template-programmer/project

What does the code mean?

A. The POST/PUT request was fulfilled and a new resource was created. Information about the resource is in the response body.
B. The request was accepted for processing, but the processing was not completed.
C. The client made a request for a resource that does not exist.
D. The server has not implemented the functionality that is needed to fulfill the request.

Correct Answer: C
Explanation

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Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/application-policy-infrastructure-controller-enterprise-module/1-2-x/config-guide/b_apic-em_config_guide_v_1-2-x/b_apic-em_config_guide_v_1-2- x_chapter_01001.html

QUESTION 209
A network administrator is preparing a Python script to configure a Cisco IOS XE-based device on the network. The administrator is worried that colleagues will make changes to the device while the script is running.

Which operation of the ncclient manager prevents colleagues from making changes to the devices while the script is running?

A. m.lock(config='running')
B. m.lock(target='running')
C. m.freeze(target='running')
D. m.freeze(config='running')

Correct Answer: B
Explanation

QUESTION 210
What does the LAP send when multiple WLCs respond to the CISCO-CAPWAP-CONTROLLER.localdomain hostname during the CAPWAP discovery and join process?

A. unicast discovery request to the first WLC that resolves the domain name
B. broadcast discovery request
C. join request to all the WLCs
D. unicast discovery request to each WLC

Correct Answer: D
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/107606-dns-wlc-config.html#anc5

QUESTION 211
Refer to the exhibit.

```
<errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
    <error>
        <error-message>End-of-file reached in XML stream</error-message>
        <error-path>/ietf-interfaces:interfaces/interface=GigabitEthernet2</error-path>
        <error-tag>malformed-message</error-tag>
        <error-type>application</error-type>
    </error>
< /errors>
```

An engineer is using XML in an application to send information to a RESTCONF-enabled device. After sending the request, the engineer gets this response message and an HTTP response code of 400.

What do these responses tell the engineer?

A. The Accept header sent was application/xml
B. POST was used instead of PUT to update

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C. The Content-Type header sent was application/xml.
D. JSON body was used

Correct Answer: A
Explanation

QUESTION 212
Which DNS record type is required to allow APs to discover a WLC by using DNS on IPv4?

A. NS
B. A
C. SOA
D. MX

Correct Answer: B
Explanation

Explanation/Reference:
For AP discovery of WLC via DNS you need an `A-record' for cisco-lwapp-controller with the Mgmt IP of the WLC (not AP Mgr interface).

QUESTION 213
What is modularity in network design?

A. ability to bundle several functions into a single layer of the network
B. ability to create self-contained, repeatable sections of the network
C. ability to self-heal the network to prevent service outages
D. ability to scale and accommodate future needs of the network

Correct Answer: D
Explanation

Explanation/Reference:
You can design a campus network in a logical manner, using a modular approach. In this approach, each layer of the hierarchical network model can be broken into basic functional units. These units, or modules, then can be sized appropriately and connected, while allowing for future scalability and expansion.
https://www.ccexpert.us/root-bridge/modular-network-design.html

QUESTION 214
A customer has two Cisco WLCs that manage separate APs throughout a building. Each WLC advertises the same SSID but terminates on different interfaces. Users report that they drop their connections and change IP addresses when roaming. Which action resolves this issue?

A. Configure high availability.
B. Enable fast roaming.
C. Configure mobility groups.
D. Enable client load balancing

Correct Answer: C
Explanation

Explanation/Reference:
Mobility or roaming services enables a WLAN client to retain its association !!!seamlessly!!! while moving from one Access Point to another. Cisco WLAN controllers (WLC) can be organized into wireless mobility groups to support intercontroller roaming.

QUESTION 215
What is one difference between the RIB and the FIB?

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A. The RIB keeps all routing information received from peers, and the FIB keeps the minimum information necessary to make a forwarding decision.
B. The RIB works at the data plane, and the FIB works at the control plane.
C. The FIB contains routing prefixes, and the RIB contains the Layer 2 and Layer 3 information necessary to make a forwarding decision.
D. The RIB is known as the CEF table, and the FIB is known as the routing table.

Correct Answer: A
Explanation

QUESTION 216
What is a characteristic of an AP operating in FlexConnect mode?

A. All traffic traverses the WLC to ensure policy enforcement on client traffic.
B. Forwarding for locally switched traffic continues when the AP loses connectivity to the WLC.
C. APs connect in a mesh topology and elect a root AP
D. FlexConnect enables an AP to connect to multiple WLCs.

Correct Answer: B
Explanation

QUESTION 217
What is the benefit of using TCAM for IP forwarding decisions versus using the CAM table?

A. TCAM finds results based on binary, and CAM uses the longest match to find results
B. TCAM processes lookups in a hardware CPU. and CAM relies on binary masks to find results.
C. TCAM finds results based on masks, and CAM finds results basing on exact match.
D. TCAM uses low cost hardware memory to store addresses, and CAM uses expensive hardware memory.

Correct Answer: B
Explanation

Explanation/Reference:
The problem with CAM is that it can only do exact matches on ones and zeros (binary CAMs)

https://community.cisco.com/t5/networking-knowledge-base/cam-content-addressable-memory-vs-tcam-ternary-content/ta-p/3107938

By implementing router prefix lookup in TCAM, we are moving process of Forwarding Information Base lookup from software to hardware.

https://howdoesinternetwork.com/2015/tcam-memory

QUESTION 218
Which feature is provided by Cisco Mobility Services Engine in a Cisco Wireless Unified Network architecture?

A. It adds client packet capturing.
B. It enables NetFlow data collection.
C. It adds client tracking and location API.
D. It identifies authentication problems.

Correct Answer: C
Explanation

Explanation/Reference:

https://t.me/learningnets

This solution allows a customer to track any Wi-Fi device, including clients, active RFID tags, and rogue clients and access points (APs).
https://mrncciew.com/2013/04/05/mobility-service-engine-mse/

QUESTION 219
What is a difference between Chef and other automation tools?

A. Chef is an agentless tool that uses playbooks, and Ansible is an agent-based tool that uses cookbooks.
B. Chef is an agentless tool that uses a primary/minion architecture, and SaltStack is an agent-based tool that uses a primary/secondary architecture
C. Chef is an agent-based tool that uses cookbooks, and Ansible is an agentless tool that uses playbooks.
D. Chef uses Domain Specific Language, and Puppet uses Ruby.

Correct Answer: C
Explanation

QUESTION 220
An engineer must configure a new WLAN that supports 802.11r and requires users to enter a passphrase. What must be configured to support this requirement?

A. 802.1X and Fast Transition
B. FT PSK and Fast Transition
C. 802.1X and SUITEB-1X
D. FT PSK and SUITEB-1X

Correct Answer: B
Explanation

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Exam E

QUESTION 1
How is CAPWAP data traffic encapsulated when running an Over the Top WLAN in a Cisco SD-Access wireless environment?

A. LISP
B. VXLAN
C. GRE
D. IPsec

Correct Answer: B
Explanation

Explanation/Reference:
https://www.cisco.com/c/dam/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/deploy-guide/cisco-dna-center-sd-access-wl-dg.pdf

QUESTION 2
How is OAuth framework used in REST API?

A. as a framework to hash the security information in the REST URL
B. by providing the external application a token that authorizes access to the account
C. as a framework to hide the security information in the REST URL
D. by providing the user credentials to the external application

Correct Answer: B
Explanation

QUESTION 3
What is a characteristic of Cisco DNA southbound APIs?

A. implements monitoring by using the SOAP protocol
B. enables orchestration and automation of network devices based on intent
C. utilizes REST API
D. simplifies management of network devices

Correct Answer: B
Explanation

Explanation/Reference:
outhbound is primarily aimed at non-Cisco "thirdparty" devices!

Northbound: Discovery and management of the network over REST API
Southbound: SDK integration into the DNA Center via device packs to support multivendor environment
Eastbound: Event / Notification Handler
Westbound: Integration of reporting, analysis, service management

QUESTION 4
Which protocol does Cisco SD-WAN use to protect control plane communication?

A. STUN
B. OMP
C. IPsec
D. DTLS

Correct Answer: D
Explanation

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QUESTION 5
Which security option protects credentials from sniffer attacks in a basicAPI authentication?

A. next-generation firewall
B. TLS or SSL for communication
C. VPN connection between client and server
D. AAA services to authenticate the API

Correct Answer: B
Explanation

QUESTION 6
What does the Cisco WLC Layer 3 roaming feature allow clients to do?

A. maintain their IP address when roaming to an AP or controller with a different client VLAN assignment
B. maintain their connection between APs even when the AP management VLANs are different
C. maintain their connection even if the client IP address changes when roaming
D. roam seamlessly between controllers even when the controller management VLANs are different

Correct Answer: A
Explanation

Explanation/Reference:
When a client initiates an L3 intercontroller roam, the two controllers involved can compare the VLAN numbers that are assigned to their respective WLAN interfaces If the two VLAN IDs differ, the controllers arrange a Layer 3 roam (also known as a local-to-foreign roam) that will allow the client to keep using its IP address.

QUESTION 7
How do the MAC address table and TCAM differ?

A. TCAM is populated from the ARP file, and the MAC address table is populated from the switch configuration file
B. TCAM stores Layer 2 forwarding information, and the MAC address table stores QoS information
C. TCAM lookups can match only 1s and 0s, and MAC address lookups can match 1s, 0s and a third "care/don't care" state
D. TCAM is a type of memory and the MAC address table is a logical structure

Correct Answer: D
Explanation

QUESTION 8
Which technology provides an overlay fabric to connect remote locations utilizing commodity data paths and improves network performance, boosts security, and reduces costs?

A. InfiniBand
B. VTEP
C. SD-WAN
D. VXLAN

Correct Answer: C
Explanation

QUESTION 9

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What is a difference between OSPF and EIGRP?

A. OSPF uses a default hello timer of 5 seconds. EIGRP uses a default hello timer of 10 seconds.
B. OSPF uses multicast addresses 224.0.0.5 and 224.0.0.6. EIGRP uses multicast address 224.0.0.10.
C. OSPF uses an administrative distance of 115. EIGRP uses an administrative distance of 160.
D. OSPF uses IP protocol number 88. EIGRP uses IP protocol number 89.

Correct Answer: B
Explanation

QUESTION 10
Which type of antenna is designed to provide a 360-degree radiation pattern?

A. Yagi
B. patch
C. directional
D. omnidirectional

Correct Answer: D
Explanation

QUESTION 11
Which two security mechanisms are used by Cisco Threat Defense to gain visibility into the most dangerous cyber threats? (Choose two.)

A. virtual private networks
B. file reputation
C. VLAN segmentation
D. Traffic Telemetry
E. dynamic enforce policy

Correct Answer: BD
Explanation

QUESTION 12
Which action is a LISP ITR responsible for?

A. responding to map-request messages
B. forwarding user data traffic
C. finding EID-to-RLOC mappings
D. accepting registration requests from ETRs

Correct Answer: C
Explanation

Explanation/Reference:
LISP Ingress Tunnel Router (ITR)
An ITR is responsible for finding EID-to-RLOC mappings for all traffic destined for LISP-capable sites. When the ITR receives a packet destined for an EID, it first looks for the EID in its mapping cache. If the ITR finds a match, it encapsulates the packet inside a LISP header with one of its RLOCs as the IP source address

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/15-mt/irl-15-mt-book/irl-overview.pdf

QUESTION 13

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An engineer modifies the existing ISE guest portal URL to use a static FQDN. Users immediately report that they receive certificate errors when they are redirected to the new page. Which two additional configuration steps are needed to implement the change? (Choose two.)

A. Add a new DNS record to resolve the FQDN to the PSN IP address
B. Create and sign a new CSR that contains the static FQDN entry
C. Manually configure the hosts file on each user device.
D. Disable HTTPS on the WLC under the Management menu
E. Add the FQDN entry under the WLC virtual interface

Correct Answer: AB
Explanation

QUESTION 14
What is contained in the VXLAN header?

A. VXLAN network identifier
B. source and destination RLOC ID
C. endpoint ID
D. original Layer 2 VLAN ID

Correct Answer: A
Explanation

QUESTION 15
Which virtualization component creates VMs and performs hardware abstraction that allows multiple VMs to run at the same time?

A. container
B. Docker
C. hypervisor
D. rkt

Correct Answer: C
Explanation

QUESTION 16
Which capability does a distributed virtual switch have?

A. use floating static routes
B. provide configuration consistency across the hosts
C. run dynamic routing protocols
D. use advanced IPsec encryption algorithms

Correct Answer: B
Explanation

QUESTION 17
Which resource must the hypervisor make available to the virtual machines?

A. bandwidth
B. IP address
C. processor
D. secure access

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Correct Answer: C
Explanation

QUESTION 18
Which two mechanisms are used with OAuth 2.0 for enhanced validation? (Choose two.)

A. authorization
B. custom headers
C. request management
D. authentication
E. accounting

Correct Answer: AD
Explanation

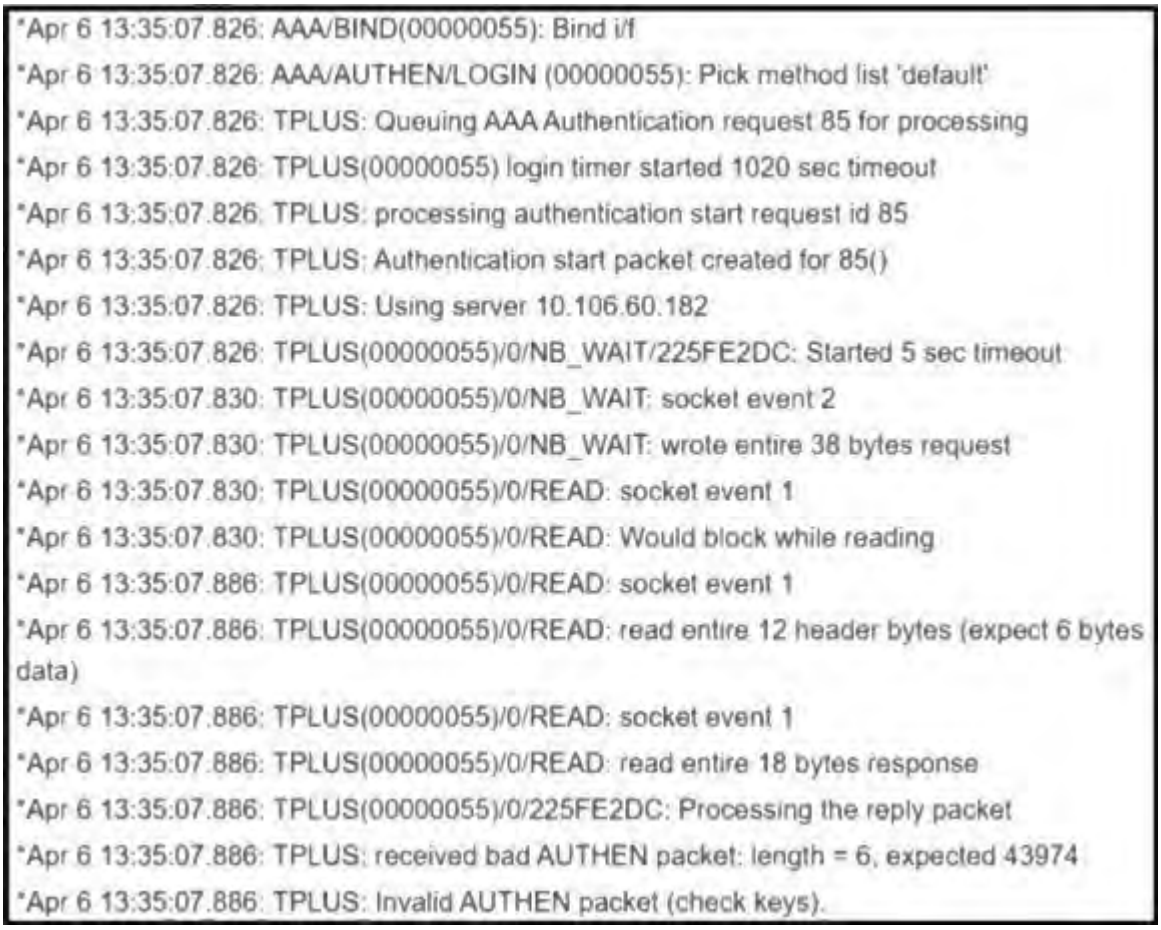
QUESTION 19
Which characteristic applies to the endpoint security aspect of the Cisco Threat Defense architecture?

A. detect and block ransomware in email attachments
B. outbound URL analysis and data transfer controls
C. user context analysis
D. blocking of fileless malware in real time

Correct Answer: D
Explanation

QUESTION 20
Refer to the exhibit.

https://t.me/learningnets



An engineer configured TACACS+ to authenticate remote users, but the configuration is not working as expected. Which configuration must be applied to enable access?

A. R1 (config)# ip tacacs source-interface Gig 0/0
B. R1 (config)# tacacs server prod
R1(config-server-tacacs)# port 1020
C. R1 (config)# aaa authorization exec default group tacacs+ local
D. R1 (config)# tacacs server prod
R1(config-server-tacacs)# key cisco123

Correct Answer: D
Explanation

QUESTION 21
Refer to the exhibit.

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```
R1#
OSPF-1 HELLO Gi0/0: Rcv hello from 10.2.2.2 area 0 10.0.0.2
OSPF-1 HELLO Gi0/0: No more immediate hello for nbr 10.2.2.2, which has been sent on this intf 2 times
OSPF-1 HELLO Gi0/0: Send hello to 224.0.0.5 area 0 from 10.0.0.1
OSPF-1 HELLO Gi0/0: Rcv hello from 10.2.2.2 area 0 10.0.0.2
OSPF-1 HELLO Gi0/0: No more immediate hello for nbr 10.2.2.2, which has been sent on this intf 2 times
OSPF-1 HELLO Gi0/0: Send hello to 224.0.0.5 area 0 from 10.0.0.1
OSPF-1 ADJ   Gi0/0: Rcv DBD from 10.2.2.2 seq 0xE09 opt 0x52 flag 0x7 len 32  mtu 1400 state INIT
OSPF-1 ADJ   Gi0/0: 2 Way Communication to 10.2.2.2, state 2WAY
OSPF-1 ADJ   Gi0/0: Neighbor change event
OSPF-1 ADJ   Gi0/0: Nbr 10.2.2.2: Prepare dbase exchange
OSPF-1 ADJ   Gi0/0: Send DBD to 10.2.2.2 seq 0x1C01 opt 0x52 flag 0x7 len 32
OSPF-1 ADJ   Gi0/0: NBR Negotiation Done. We are the SLAVE
OSPF-1 ADJ   Gi0/0: Nbr 10.2.2.2: Summary list built, size 5
OSPF-1 ADJ   Gi0/0: Send DBD to 10.2.2.2 seq 0xE09 opt 0x52 flag 0x2 len 132
OSPF-1 HELLO Gi0/0: Rcv hello from 10.2.2.2 area 0 10.0.0.2
OSPF-1 ADJ   Gi0/0: Rcv DBD from 10.2.2.2 seq 0xE09 opt 0x52 flag 0x7 len 32  mtu 1400 state EXCHANGE
OSPF-1 ADJ   Gi0/0: Nbr 10.2.2.2 has smaller interface MTU
OSPF-1 ADJ   Gi0/0: Send DBD to 10.2.2.2 seq 0xE09 opt 0x52 flag 0x2 len 132
OSPF-1 HELLO Gi0/0: Rcv hello from 10.2.2.2 area 0 10.0.0.2
OSPF-1 HELLO Gi0/0: Send hello to 224.0.0.5 area 0 from 10.0.0.1
```

Two indirectly connected routers fail to form an OSPF neighborship. What is the cause of the issue?

A. failing hello packets between the two routers
B. DR/BDR selection dispute
C. MTU mismatch
D. OSPF network type mismatch

Correct Answer: C
Explanation

Explanation/Reference:
neighbor 10.2.2.2 has smaller interface MTU

QUESTION 22
Refer to the exhibit.

An engineer is troubleshooting an mDNS issue in an environment where Cisco ISE is used to dynamically assign mDNS roles to users. The engineer has confirmed that ISE is sending the correct values, but name

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resolution is not functioning as expected.

Which WLC configuration change resolves the issue?

A. Enable AAA Override.
B. Enable Aironet IE.
C. Set MFP client protection to Required.
D. Change NAC state to ISE NAC.

Correct Answer: A
Explanation

QUESTION 23
Refer to the exhibit.

PYTHON CODE:

```
import requests
import json

url='http://switch.foo.com/ins'
switchuser='username'
switchpassword='password'

myheaders={'content-type':'application/json'}
payload={
  "ins_api": {
    "version": "1.0",
    "type": "cli_conf",
    "chunk": "0",
    "sid": "1",
    "input": "configure terminal ;interface e1/32 ;shutdown",
    "output_format": "json"
  }
}
response = requests.post(url,data=json.dumps(payload), headers=myheaders,auth=(switchuser,switchpassword)).json()
```

What does the Python code accomplish?

A. It configures interface e1/32 to be in an admin down state
B. It generates a status code of 403 because the type is incorrect.
C. It configures interface e1/32 to be in an err-disable state.
D. It returns data in JSON-RPC format.

Correct Answer: A
Explanation

QUESTION 24
Refer to the exhibit.

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```
CPE# show iox-service
IOx service (CAF)          : Not Running
IOx service (HA)           : Not Supported
IOx service (IOxman)       : Not Running
Libvirtd                   : Running

CPE# show platform software yang-management process
confd            : Running
nesd             : Running
syncfd           : Running
ncsshd           : Not Running
dmiauthd         : Running
nginx            : Not Running
ndbmand          : Running
pubd             : Running
```

Which action must be performed to allow RESTCONF access to the device?

A. Enable the NETCONF service.
B. Enable the SSH service.
C. Enable the IOX service.
D. Enable the HTTPS service.

Correct Answer: D
Explanation

Explanation/Reference:
RESTCONF runs over HTTPS. The following commands must be enabled to support RESTCONF over port 443:

ip http secure-server

https://developer.cisco.com/docs/ios-xe/#!enabling-restconf-on-ios-xe/authentication

QUESTION 25
Refer to the exhibit.

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```
Router# show running-config

! lines omitted for brevity

enable secret 5 $dfefw525ffd$@$R@D2d2d2f

username cisco password 0 cisco

aaa new-model

radius-server host 10.11.11.11 auth-port 1812 acct-port 1646

radius-server host 10.11.11.12 auth-port 1645 acct-port 1646

radius-server key cisco123
```

A network engineer must permit administrators to automatically authenticate if there is no response from either of the AAA servers. Which configuration achieves these results?

A. aaa authentication enable default group radius local
B. aaa authentication login default group radius
C. aaa authentication login default group tacacs+ line
D. aaa authentication login default group radius none

Correct Answer: D
Explanation

QUESTION 26
Refer to the exhibit.

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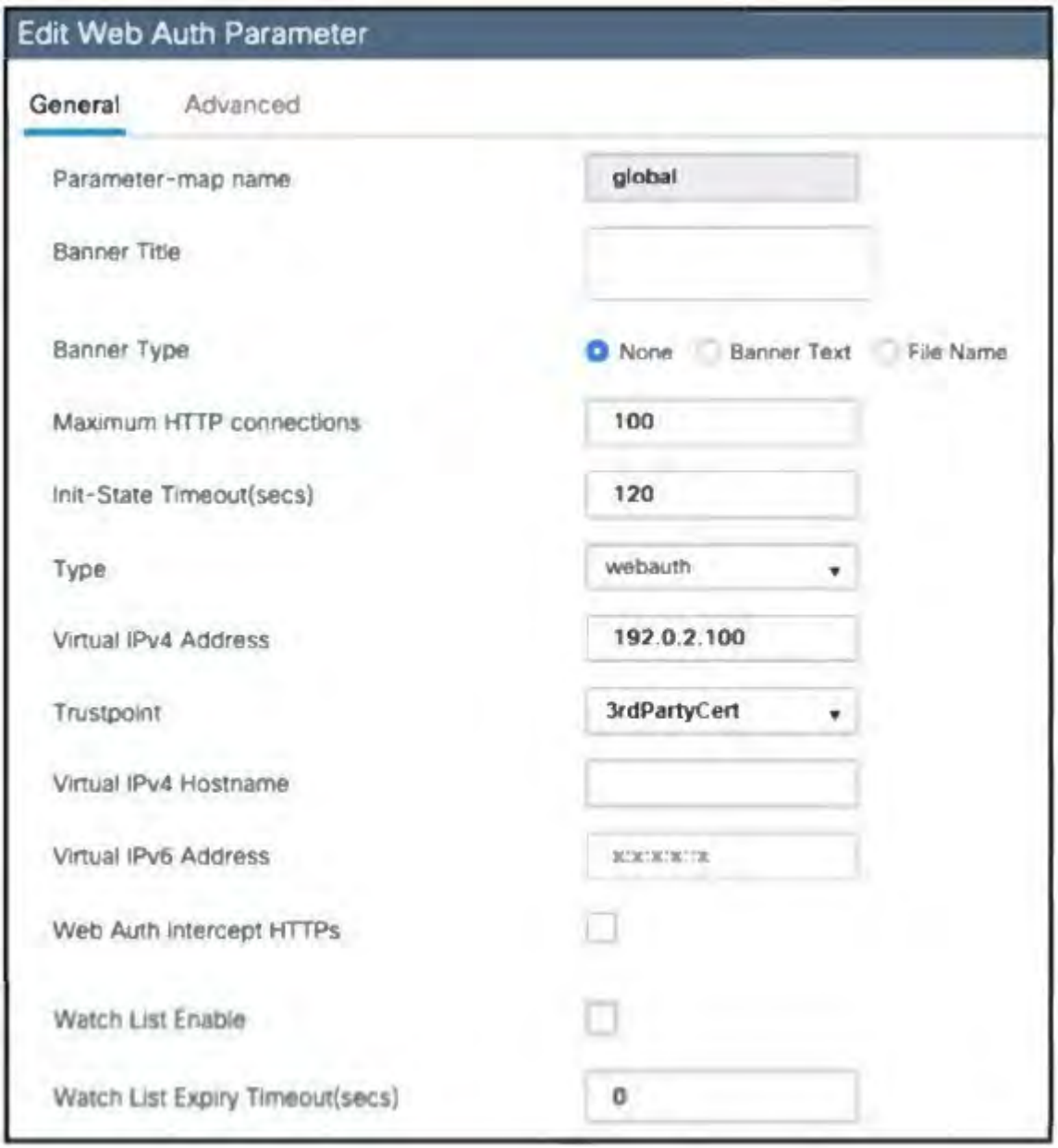

An engineer is configuring WebAuth on a Cisco Catalyst 9800 Series WLC. The engineer has purchased a third-party certificate using the FQDN of the WLC as the CN and intends to use it on the WebAuth splash page. What must be configured so that the clients do not receive a certificate error?

A. Virtual IPv4 Hostname must match the CN of the certificate
B. Virtual IPv4 Address must be set to a routable address
C. Web Auth Intercept HTTPs must be enabled
D. Trustpoint must be set to the management certificate of the WLC

Correct Answer: A
Explanation

QUESTION 27
Refer to the exhibit.

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```
hostname router
ip domain-name cisco.com

line vty 0 15
session-timeout 30
exec-timeout 120 0
login local
```

Which configuration must be added to enable remote access only using SSHv1 or SSHv2 to this router?

A.
```
R1(config)# ip ssh version 2
R1(config)# line vty 0 15
R1(config-line)# transport input ssh
R1(config-line)# transport output ssh
```

B.
```
R1(config)# crypto key generate rsa modulus 2048
R1(config)# line vty 0 15
R1(config-line)# transport input ssh
```

C.
```
R1(config)# line vty 0 15
R1(config-line)# transport input ssh
R1(config-line)# transport output ssh
```

D.
```
R1(config)# crypto key generate rsa modulus 2048
R1(config)# ip ssh version 2
R1(config)# line vty 0 15
R1(config-line)# transport input all
```

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

Correct Answer: B
Explanation

QUESTION 28
Refer to the exhibit.

```
args_dict = {'1st_item':'645298791871446',
             '2nd_item_that_must_display':'jlugyydt'}

for key,value in args_dict.items():
    txt='{:#<15} : {:#<10}'.format(key,str(value))
    print(txt)
```

What is the output of this code?

A. 1st_item#######: 645298791871446
   2nd_item_that_must_display: jlugyydt##
B. 1st_item#######: 6452987918

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2nd_item_that_m: jlugyydt##

C. 1st_item#######: 8791871446
at_must_display: jlugyydt

D. 645298791871446
##jlugyydt

Correct Answer: B
Explanation

Explanation/Reference:
{:#<15} - This is adding # to the returned string to fill 15 characters. It does nothing if the string is greater than 15 characters.
{:#<10} - This is adding # to the returned string to fill 10 characters. It does nothing if the string is greater than 10 characters.

QUESTION 29
Refer to the exhibit.

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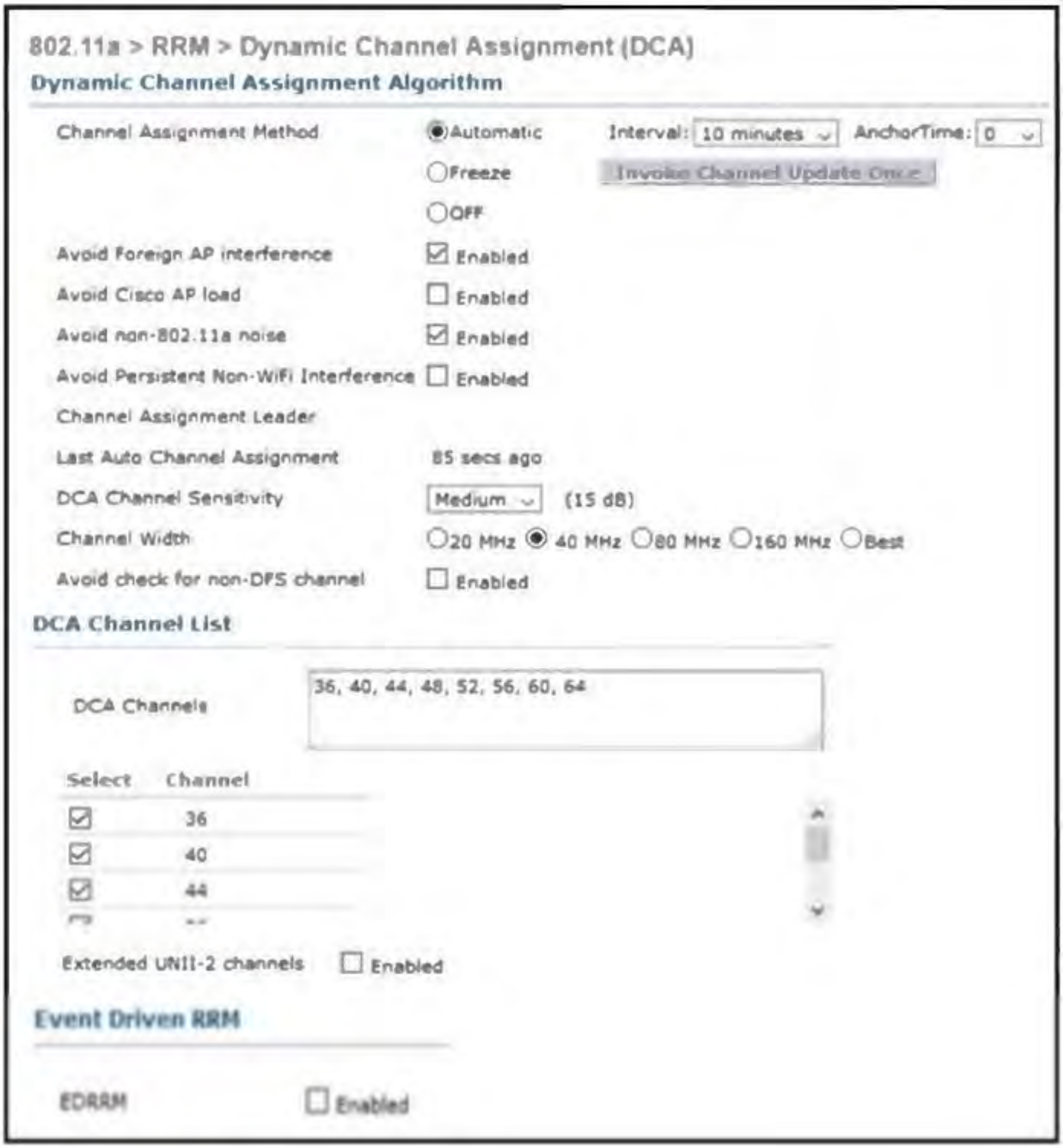

An engineer is troubleshooting an issue with non-Wi-Fi interference on the 5-GHz band. The engineer has enabled Cisco CleanAir and set the appropriate traps, but the AP does not change the channel when it detects significant interference.

Which action will resolve the issue?

A. Enable the Avoid Persistent Non-WiFi interference option
B. Change the DCA Sensitivity option to High
C. Enable the Event Driven Radio Resource Management option
D. Disable the Avoid Foreign AP Interference option

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Correct Answer: C
Explanation

QUESTION 30
Where are operations related to software images located in the Cisco DNA Center GUI?

A. Services
B. Provisioning
C. Assurance
D. Design

Correct Answer: D
Explanation

Explanation/Reference:
The following are some of the Cisco DNA [design] tools:
1. Network Hierarchy:
2. Network Settings:
3. Image Repository:
4. Network Profiles:

QUESTION 31
Which JSON script is properly formatted?

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A.
```
{
 "car": [
  {
   "type":"Ford",
    "color":"red",
    "year":"1998"
  }
 ]
 }
```

B.
```
[
    "book":{

     "title":"Engineering",
      "grade":"11",
      "edition":"4".
        }
]
```

C.
```
"truck":[
      {
          "type":"Dodge",
          "color":"blue",
          "year":"2015"
        }
      ]
```

D.
```
{   "device":
      {[
          "type":"switch,
          "model":"Catalyst",
          "mac":"00:46:10:04:93:6c",
        ]
      }
}
```

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

Correct Answer: A
Explanation

QUESTION 32
Refer to the exhibit.

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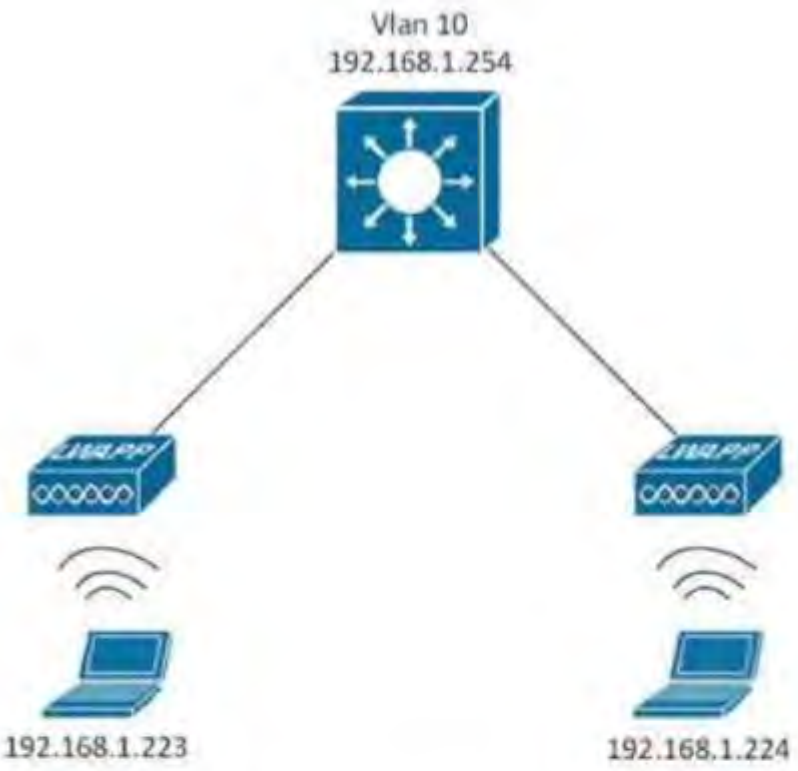


```
ping 192.168.1.224

Pinging 192.168.1.224 with 32 bytes of data:
Reply from 192.168.1.223: Destination host unreachable.
Reply from 192.168.1.223: Destination host unreachable.
Reply from 192.168.1.223: Destination host unreachable.

Ping statistics for 192.168.1.224:
    Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:
Reply from 192.168.1.254: bytes=32 time=4ms TTL=64
Reply from 192.168.1.254: bytes=32 time=6ms TTL=64
Reply from 192.168.1.254: bytes=32 time=5ms TTL=64

Ping statistics for 192.168.1.254:
    Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
```

An SSID is configured and both clients can reach their gateways on the Layer 3 switch, but they cannot communicate with each other. Which action resolves this issue?

A. Set the WMM Policy to Allowed
B. Set the P2P Blocking Action to Disabled
C. Set the WMM Policy to Required
D. Set the P2P Blocking Action to Forward-UpStream

Correct Answer: B
Explanation

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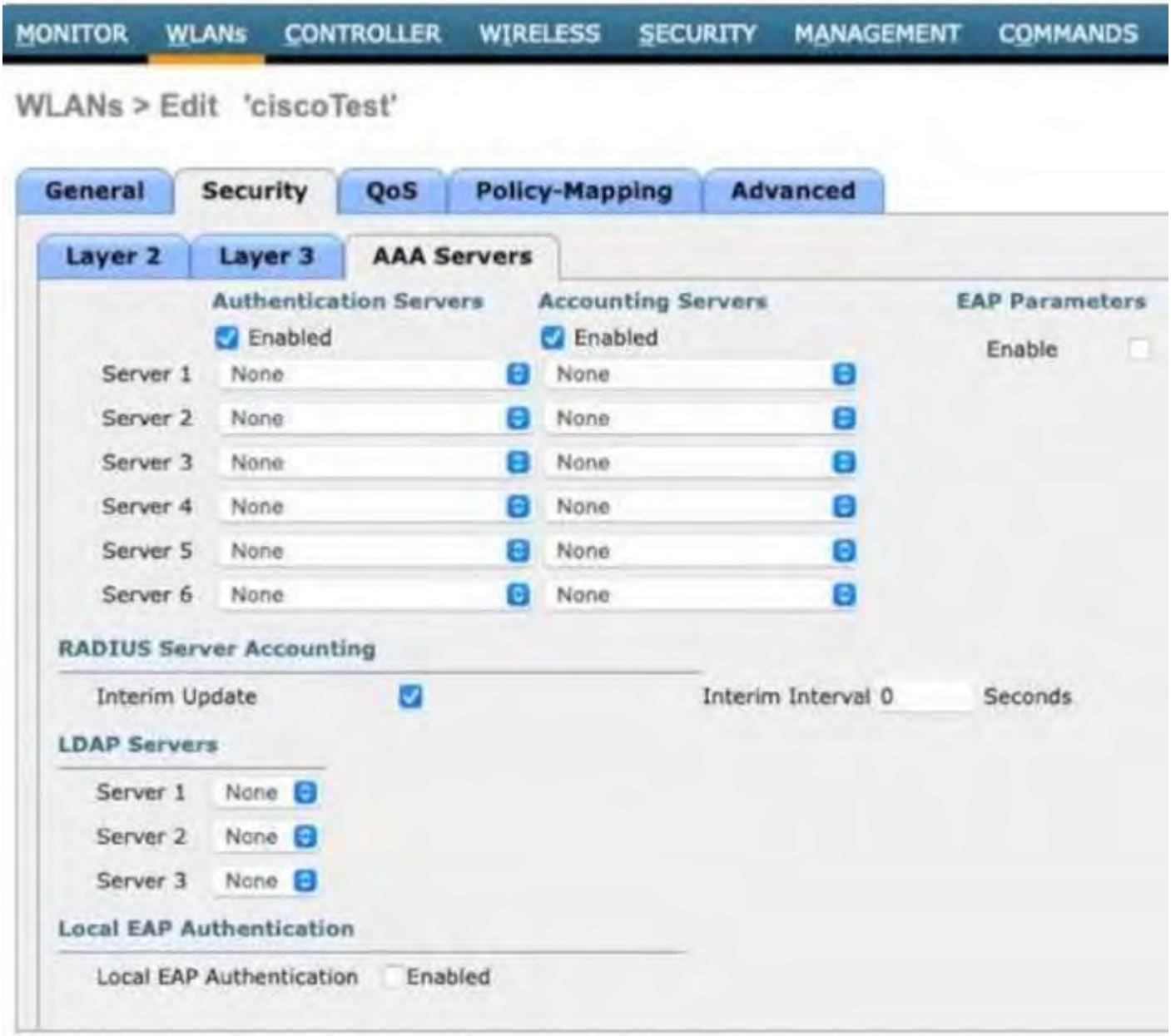
QUESTION 33
Refer to the exhibit.



An engineer must configure a Cisco WLC with WPA2 Enterprise mode and avoid global server lists.

Which action is required?

A. Enable EAP parameters
B. Apply CISCO ISE default settings
C. Select a RADIUS authentication server
D. Disable the RADIUS server accounting interim update

Correct Answer: C
Explanation

Explanation/Reference:
To configure a Cisco WLC with WPA2 Enterprise mode and avoid global server lists, the engineer must perform the following action:

1. Set up a RADIUS server for authentication and authorization.

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2. Configure the WLC to use the RADIUS server for client authentication.
3. Enable WPA2 Enterprise mode on the WLC.
4. Disable the use of global server lists on the WLC.

QUESTION 34
Refer to the exhibit.

```
flow record v4Talkers
 match ipv4 source address
 match ipv4 destination address
 collect counter bytes long
!
flow record v6Talkers
 match ipv6 source address
 match ipv6 destination address
 collect counter bytes long
!
flow monitor v4Talkers
 record v4Talkers
!
flow monitor v6Talkers
 record v6Talkers
```

An administrator must collect basic statistics about the approximate amount of IPv4 and IPv6 flows entering Gi0/0 using NetFlow. However, the administrator is concerned that NetFlow processing during periods of high utilization on Gi0/0 will overwhelm the router CPU.

Which configuration minimizes CPU impact and keeps the data flows across Gi0/0 intact?

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A.
```
sampler R-1-1024
 mode random 1 out-of 1024
!
interface Gi0/0
 ip flow monitor v4Talkers sampler R-1-1024 input
 ipv6 flow monitor v6Talkers sampler R-1-1024 input
```

B.
```
policy-map Talkers
 class class-default
  police cir percent 50
   conform-action transmit
   exceed-action drop
!
interface Gi0/0
 service-policy input Talkers
 ip flow monitor v4Talkers
 ipv6 flow monitor v6Talkers
```

C.
```
interface Gi0/0
 load-interval 600
 ip flow monitor v4Talkers
 ipv6 flow monitor v6Talkers
```

D.
```
interface Gi0/0
 no ip route-cache
 ip flow monitor v4Talkers
 ipv6 flow monitor v6Talkers
```

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

Correct Answer: A
Explanation

QUESTION 35
Refer to the exhibit.

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```
#!/usr/bin/python3

import requests

requests.urllib3.disable_warnings()

AuthURL="https://dna-center/dna/system/api/v1/auth/token"
USER="admin"
PASSWORD="SomePassword"

Response = requests.post(AuthURL, auth=(USER, PASSWORD), verify=False)
if Response.status_code < 200 or Response.status_code > 299:
  print(f"Aborting; received status code {Response.status_code}")
  exit()

<...removed...>
```

```
admin@linux:~$ ./fetch.py
Aborting; received status code 401
```

An administrator writes a script to fetch the list of devices that are registered with Cisco DNA Center. Why does the execution abort?

A. The TLS certificate of DNA Center is invalid
B. The username or the password is incorrect
C. The "dna-center" hostname cannot be resolved to an IP address
D. The authentication URL is incorrect

Correct Answer: B
Explanation

QUESTION 36
Which statement about a Cisco APIC controller versus a more traditional SDN controller is true?

A. APIC does support a Southbound REST API
B. APIC supports OpFlex as a Northbound protocol
C. APIC uses a policy agent to translate policies into instructions
D. APIC uses an imperative model

Correct Answer: C
Explanation

Explanation/Reference:
The southbound protocol used by APIC is OpFlex that is pushed by Cisco as the protocol for policy enablement across physical and virtual switches. Southbound interfaces are implemented with some called Service Abstraction Layer (SAL), which talks to the network elements via SNMP and CLI.
Note: Cisco OpFlex is a southbound protocol in a software-defined network (SDN).

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QUESTION 37
Which QoS mechanism will prevent a decrease in TCP performance?

A. Shaper
B. Rate-Limit
C. Policer
D. Fair-Queue
E. WRED
F. LLQ

Correct Answer: E
Explanation

Explanation/Reference:
Weighted Random Early Detection (WRED) is just a congestion avoidance mechanism. WRED drops packets selectively based on IP precedence. Edge routers assign IP precedences to packets as they enter the network. When a packet arrives, the following events occur:
The average queue size is calculated.
2. If the average is less than the minimum queue threshold, the arriving packet is queued.
3. If the average is between the minimum queue threshold for that type of traffic and the maximum threshold for the interface, the packet is either dropped or queued, depending on the packet drop probability for that type of traffic.
4. If the average queue size is greater than the maximum threshold, the packet is dropped. WRED reduces the chances of tail drop (when the queue is full, the packet is dropped) by selectively dropping packets when the output interface begins to show signs of congestion (thus it can mitigate congestion by preventing the queue from filling up). By dropping some packets early rather than waiting until the queue is full, WRED avoids dropping large numbers of packets at once and minimizes the chances of global synchronization. Thus, WRED allows the transmission line to be used fully at all times. WRED generally drops packets selectively based on IP precedence. Packets with a higher IP precedence are less likely to be dropped than packets with a lower precedence. Thus, the higher the priority of a packet, the higher the probability that the packet will be delivered. Reference: https://www.cisco.com/c/en/ us/td/docs/ios-xml/ios/ qos_conavd/ configuration/15- mt/qos-conavd-15-mt-book/qos-conavd-cfg-wred.html WRED is only useful when the bulk of the traffic is TCP/IP traffic. With TCP, dropped packets indicate congestion, so the packet source will reduce its transmission rate. With other protocols, packet sources may not respond or may resend dropped packets at the same rate. Thus, dropping packets does not decrease congestion. Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos_conavd/ configuration/xe- 16/qos-conavd-xe-16-book/qos-conavd-oview.html Note: Global synchronization occurs when multiple TCP hosts reduce their transmission rates in response to congestion. But when congestion is reduced, TCP hosts try to increase their transmission rates again simultaneously (known as slow-start algorithm), which causes another congestion. Global synchronization produces this graph:

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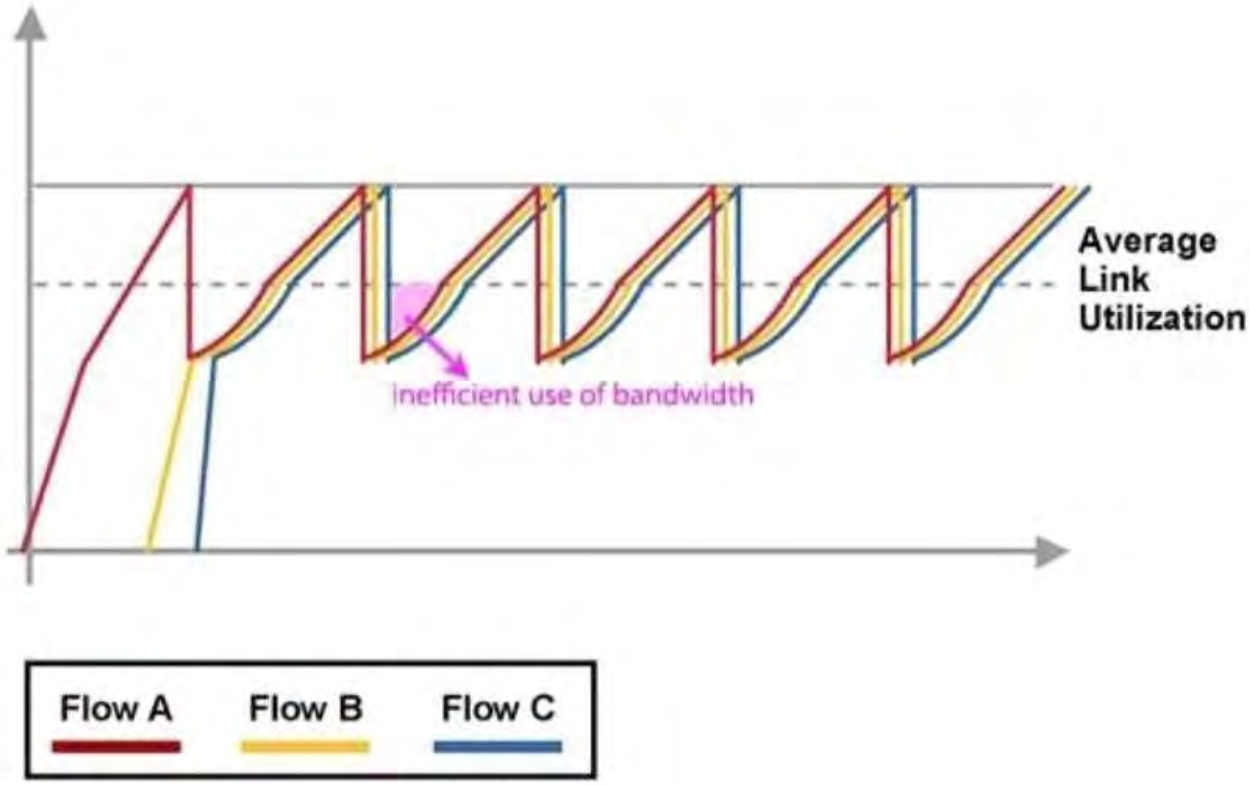

QUESTION 38
Which statement about the default QoS configuration on a Cisco switch is true?

A. The Cos value of each tagged packet is modified
B. Port trust is enabled
C. The Port Cos value is 0
D. All traffic is sent through four egress queues

Correct Answer: C
Explanation

QUESTION 39
How are the Cisco Express Forwarding table and the FIB related to each other?

A. Cisco Express Forwarding uses a FIB to make IP destination prefix-based switching decisions correct
B. The FIB is used to populate the Cisco Express Forwarding table
C. There can be only one FIB but multiple Cisco Express Forwarding tables on IOS devices
D. The Cisco Express Forwarding table allows route lookups to be forwarded to the route processor for processing before they are sent to the FIB

Correct Answer: A
Explanation

Explanation/Reference:
The Forwarding Information Base (FIB) table ?CEF uses a FIB to make IP destination prefix-based

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switching decisions. The FIB is conceptually similar to a routing table or information base. It maintains a mirror image of the forwarding information contained in the IP routing table. When routing or topology changes occur in the network, the IP routing table is updated, and these changes are reflected in the FIB. The FIB maintains next-hop address information based on the information in the IP routing table. Reference: https://www.cisco.com/c/en/us/support/docs/routers/12000-series-routers/47321- ciscoef.html

QUESTION 40
Which two statements about Cisco Express Forwarding load balancing are true? (Choose two)

A. Each hash maps directly to a single entry in the RIB
B. It combines the source IP address subnet mask to create a hash for each destination
C. Cisco Express Forwarding can load-balance over a maximum of two destinations
D. It combines the source and destination IP addresses to create a hash for each destination
E. Each hash maps directly to a single entry in the adjacency table

Correct Answer: DE
Explanation

Explanation/Reference:
Cisco IOS software basically supports two modes of CEF load balancing: On per-destination or perpacket basis.
For per destination load balancing a hash is computed out of the source and destination IP address (-> Answer 'It combines the source and destination IP addresses to create a hash for each destination' is correct). This hash points to exactly one of the adjacency entries in the adjacency table (-> Answer 'Each hash maps directly to a single entry in the adjacency table' is correct), providing that the same path is used for all packets with this source/destination address pair. If per packet load balancing is used the packets are distributed round robin over the available paths. In either case the information in the FIB and adjacency tables provide all the necessary forwarding information, just like for non-load balancing operation. The number of paths used is limited by the number of entries the routing protocol puts in the routing table, the default in IOS is 4 entries for most IP routing protocols with the exception of BGP, where it is one entry. The maximum number that can be configured is 6 different paths -> Answer 'Cisco Express Forwarding can load-balance over a maximum of two destinations' is not correct. Reference: https://www.cisco.com/ en/US/products/hw/modules/ps2033/ prod_technical_reference 09186a00800afeb7.html

QUESTION 41
Which two statements about VRF-lite are true? (Choose two)

A. It can support multiple customers on a single switch
B. It supports most routing protocols, including EIGRP, ISIS, and OSPF
C. It should be used when a customer's router is connected to an ISP over OSPF
D. It can increase the packet switching rate
E. It supports MPLS-VRF label exchange and labeled packets

Correct Answer: AC
Explanation

Explanation/Reference:
VRF-lite does not support IGRP and ISIS.
1. VRF-lite does not support all MPLS-VRF functionality: label exchange, LDP adjacency, or labeled packets.
2. VRF-lite does not affect the packet switching rate.
3. The capability vrf-lite subcommand under router ospf should be used when configuring OSPF as the routing protocol between the PE and the CE.

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/25ew/configuration/guide/conf/ vrf.html#wp1045190

QUESTION 42
Refer to the exhibit.

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```
*Jun19 11:12: BGP(4):10.1.1.2 rcvd UPDATE w/ attr:nexthop 10.1.1.2, origin ?,
localpref 100,metric 0,extended community RT:999:999
*Jun19 11:12: BGP(4):10.1.1.2 rcvd 999:999:192.168.1.99/32,label 29–DENIED due to:
extended community not supported
```

You have just created a new VRF on PE3. You have enabled debug ip bgp vpnv4 unicast updates on PE1, and you can see the route in the debug, but not in the BGP VPNv4 table. Which two statements are true? (Choose two)

A. After you configure route-target import 999:999 for a VRF on PE1, the route will be accepted
B. VPNv4 is not configured between PE1 and PE3
C. address-family ipv4 vrf is not configured on PE3
D. PE1 will reject the route due to automatic route filtering
E. After you configure route-target import 999:999 for a VRF on PE3, the route will be accepted

Correct Answer: AD
Explanation

Explanation/Reference:
Because some PE routers might receive routing information they do not require, a basic requirement is to be able to filter the MP-iBGP updates at the ingress to the PE router so that the router does not need to keep this information in memory. The Automatic Route Filtering feature fulfills this filtering requirement. This feature is available by default on all PE routers, and no additional configuration is necessary to enable it. Its function is to filter automatically VPN-IPv4 routes that contain a route target extended community that does not match any of the PE's configured VRFs. This effectively discards any unwanted VPN-IPv4 routes silently, thus reducing the amount of information that the PE has to store in memory -> Answer 'PE1 will reject the route due to automatic route filtering' is correct.

Reference: MPLS and VPN Architectures Book, Volume 1
The reason that PE1 dropped the route is there is no "route-target import 999:999" command on PE1 (so we see the "DENIED due to: extended community not supported" in the debug) so we need to type this command to accept this route -> Answer 'After you configure route-target import 999:999 for a VRF on PE1, the route will be accepted' is correct.

QUESTION 43
What is the main function of VRF-lite?

A. To connect different autonomous systems together to share routes
B. To allow devices to use labels to make Layer 2 Path decisions
C. To route IPv6 traffic across an IPv4 backbone
D. To segregate multiple routing tables on a single device

Correct Answer: D
Explanation

QUESTION 44
Refer to the exhibit.

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Which LISP component do routers in the public IP network use to forward traffic between the two networks?

A. RLOC
B. map resolver
C. EID
D. map server

Correct Answer: A
Explanation

Explanation/Reference:
Locator ID Separation Protocol (LISP) is a network architecture and protocol that implements the use of two namespaces instead of a single IP address:
+ Endpoint identifiers (EIDs) ?assigned to end hosts. + Routing locators (RLOCs) ?assigned to devices (primarily routers) that make up the global routing system. Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/ configuration/xe- 3s/irl-xe-3s- book/irl-overview.html

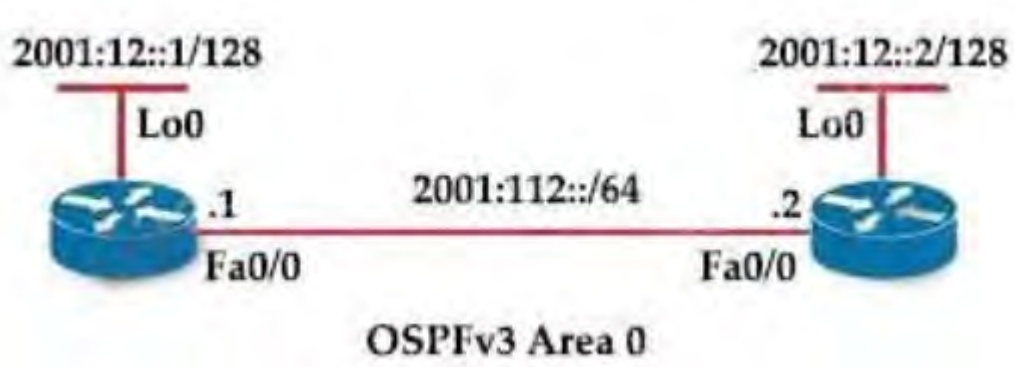
QUESTION 45
Into which two pieces of information does the LISP protocol split the device identity? (Choose two)

A. Device ID
B. Enterprise Identifier
C. LISP ID
D. Routing Locator
E. Resource Location
F. Endpoint Identifier

Correct Answer: DF
Explanation

Explanation/Reference:
Locator ID Separation Protocol (LISP) is a network architecture and protocol that implements the use of two namespaces instead of a single IP address:
+ Endpoint identifiers (EIDs)--assigned to end hosts.
+ Routing locators (RLOCs)--assigned to devices (primarily routers) that make up the global routing system.
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe- 3s/irl-xe-3s-book/irl-overview.html

QUESTION 46
Refer to the exhibit.



Which IPv6 OSPF network type is applied to interface Fa0/0 of R2 by default?

A. multipoint

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B. broadcast
C. Ethernet
D. point-to-point

Correct Answer: B
Explanation

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

QUESTION 47
Which EIGRP feature allows the use of leak maps?

A. neighbor
B. stub
C. offset-list
D. address-family

Correct Answer: B
Explanation

Explanation/Reference:
If we configured an EIGRP stub router so that it only advertises connected and summary routes. But we also want to have an exception to this rule then we can configure a leak-map. For example:
R4(config-if)#router eigrp 1
R4(config-router)#eigrp stub
R4(config)#ip access-list standard R4_L0opback0
R4(config-std-nacl)#permit host 4.4.4.4
R4(config)#route-map R4_L0opback0_LEAKMAP
R4(config-route-map)#match ip address R4_L0opback0
R4(config)#router eigrp 1
R4(config-router)#eigrp stub leak-map R4_L0opback0_LEAKMAP As we can see the leak-map feature goes long with `eigrp stub' command.

QUESTION 48
Which two statements about EIGRP load balancing are true? (Choose two)

A. Cisco Express Forwarding is required to load-balance across interfaces
B. A path can be used for load balancing only if it is a feasible successor
C. EIGRP supports unequal-cost paths by default
D. Any path in the EIGRP topology table can be used for unequal-cost load balancing
E. EIGRP supports 6 unequal-cost paths

Correct Answer: BE
Explanation

Explanation/Reference:
EIGRP provides a mechanism to load balance over unequal cost paths (or called unequal cost load balancing) through the "variance" command. In other words, EIGRP will install all paths with metric < variance * best metric into the local routing table, provided that it meets the feasibility condition to prevent routing loop. The path that meets this requirement is called a feasible successor. If a path is not a feasible successor, it is not used in load balancing. Note: The feasibility condition states that, the Advertised Distance (AD) of a route must be lower than the feasible distance of the current successor route.

QUESTION 49
Which statement about LISP encapsulation in an EIGRP OTP implementation is true?

A. LISP learns the next hop

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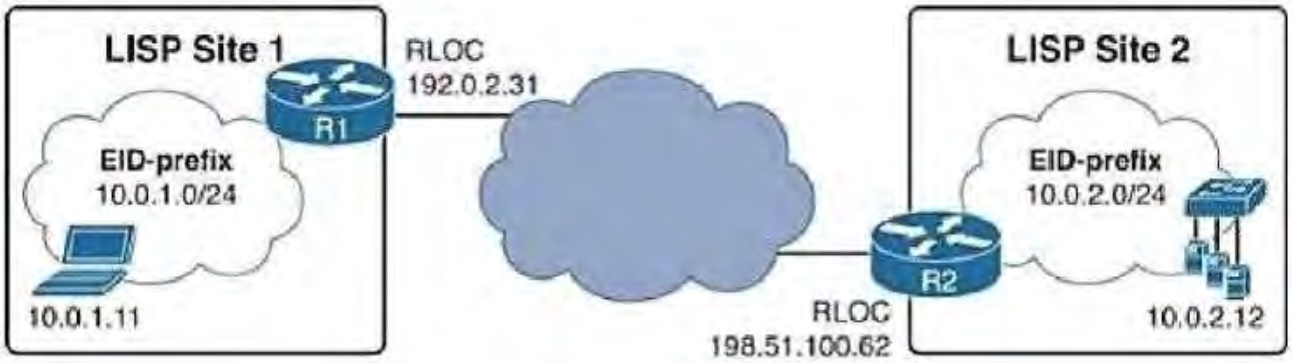
B. OTP uses LISP encapsulation to obtain routes from neighbors
C. OTP uses LISP encapsulation for dynamic multipoint tunneling
D. OTP maintains the LISP control plane

Correct Answer: C
Explanation

Explanation/Reference:
The EIGRP Over the Top solution can be used to ensure connectivity between disparate EIGRP sites. This feature uses EIGRP on the control plane and Locator ID Separation Protocol (LISP) encapsulation on the data plane to route traffic across the underlying WAN architecture. EIGRP is used to distribute routes between customer edge (CE) devices within the network, and the traffic forwarded across the WAN architecture is LISP encapsulated. EIGRP OTP only uses LISP for the data plane, EIGRP is still used for the control plane. Therefore we cannot say OTP uses LISP encapsulation for dynamic multipoint tunneling as this requires encapsulating both data and control plane traffic -> Answer 'OTP uses LISP encapsulation for dynamic multipoint tunneling' is not correct.
In OTP, EIGRP serves as the replacement for LISP control plane protocols (therefore EIGRP will learn the next hop, not LISP -> Answer 'LISP learns the next hop' is not correct). Instead of doing dynamic EID-to-RLOC mappings in native LISP-mapping services, EIGRP routers running OTP over a service provider cloud create targeted sessions, use the IP addresses provided by the service provider as RLOCs, and exchange routes as EIDs. Let's take an example:



If R1 and R2 ran OTP to each other, R1 would learn about the network 10.0.2.0/24 from R2 through EIGRP, treat the prefix 10.0.2.0/24 as an EID prefix, and take the advertising next hop 198.51.100.62 as the RLOC for this EID prefix. Similarly, R2 would learn from R1 about the network 10.0.1.0/24 through EIGRP, treat the prefix 10.0.1.0/24 as an EID prefix, and take the advertising next hop 192.0.2.31 as the RLOC for this EID prefix. On both routers, this information would be used to populate the LISP mapping tables. Whenever a packet from 10.0.1.0/24 to 10.0.2.0/24 would arrive at R1, it would use its LISP mapping tables just like in ordinary LISP to discover that the packet has to be LISP encapsulated and tunneled toward 198.51.100.62, and vice versa. The LISP data plane is reused in OTP and does not change; however, the native LISP mapping and resolving mechanisms are replaced by EIGRP. Reference: CCIE Routing and Switching V5.0 Official Cert Guide, Volume 1, Fifth Edition

QUESTION 50
Which two statements about VRRP are true? (Choose two)

A. It supports both MD5 and SHA1 authentication.
B. It is assigned multicast address 224.0.0.9.
C. Three versions of the VRRP protocol have been defined.
D. It is assigned multicast address 224.0.0.8.
E. The TTL for VRRP packets must be 255.
F. Its IP address number is 115.

Correct Answer: CE
Explanation

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QUESTION 51
Which two statements about HSRP are true? (Choose two)

A. It supports unique virtual MAC addresses
B. Its virtual MAC is 0000.0C07.ACxx
C. Its default configuration allows for pre-emption
D. It supports tracking
E. Its multicast virtual MAC is 0000.5E00.01xx

Correct Answer: BD
Explanation

QUESTION 52
What are three valid HSRP states? (Choose three)

A. INIT
B. listen
C. full
D. learning
E. speak
F. established

Correct Answer: ABE
Explanation

Explanation/Reference:
HSRP StatesWhen in operation, HSRP devices are configured into one of many states:
Active ?This is the state of the device that is actively forwarding traffic.
Init or Disabled ?This is the state of a device that is not yet ready or able to participate in HSRP.
Learn ?This is the state of a device that has not yet determined the virtual IP address and has not yet seen a hello message from an active device.
Listen ?This is the state of a device that is receiving hello messages.
Speak ?This is the state of a device that is sending and receiving hello messages.
Standby ?This is the state of a device that is prepared to take over the traffic forwarding duties from the active device.

QUESTION 53
Which two statements about IP SLA are true? (Choose two)

A. It uses NetFlow for passive traffic monitoring
B. It can measure MOS
C. The IP SLA responder is a component in the source Cisco device
D. It is Layer 2 transport-independent correct
E. It uses active traffic monitoring correct
F. SNMP access is not supported

Correct Answer: DE
Explanation

Explanation/Reference:
IP SLAs allows Cisco customers to analyze IP service levels for IP applications and services, to increase productivity, to lower operational costs, and to reduce the frequency of network outages. IP SLAs uses active traffic monitoringhe generation of traffic in a continuous, reliable, and predictable manneror measuring network performance. Being Layer-2 transport independent, IP SLAs can be configured end-to-end over disparate networks to best reflect the metrics that an end-user is likely to experience. Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-mt/sla-15- mt-book/sla_overview.html

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QUESTION 54
Refer to the exhibit.

```
event manager applet LARGECONFIG
   event cli pattern "show running-config" sync yes
   action 1.0 puts "Warning! This device has a VERY LARGE configuration
         and may take some time to process"
   action 1.1 puts nonewline "Do you wish to continue [Y/N]"
   action 1.2 gets response
   action 1.3 string toupper "$response"
   action 1.4 string match "$_string_result" "Y"
   action 2.0 if $_string_result eq 1
   action 2.1 cli command "enable"
   action 2.2 cli command "show running-config"
   action 2.3 puts $_cli_result
   action 2.4 cli command "exit"
   action 2.9 end
```

Which two statements about the EEM applet configuration are true? (Choose two.)

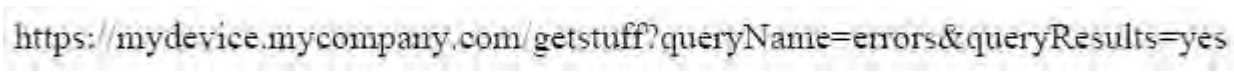
A. The EEM applet runs after the CLI command is executed
B. The running configuration is displayed only if the letter Y is entered at the CLI
C. The EEM applet runs before the CLI command is executed
D. The EEM applet requires a case-insensitive response

Correct Answer: BC
Explanation

Explanation/Reference:
When you use the sync yes option in the event cli command, the EEM applet runs before the CLI command is executed. The EEM applet should set the _exit_status variable to indicate whether the CLI command should be executed (_exit_status set to one) or not (_exit_status set to zero).
With the sync no option, the EEM applet is executed in background in parallel with the CLI command.

Reference:
https://blog.ipspace.net/2011/01/eem-event-cli-command-options-and.html

QUESTION 55
Refer to the exhibit.



Which network script automation option or tool is used in the exhibit?

A. EEM
B. Bash script
C. REST correct
D. NETCONF
E. Python

Correct Answer: C
Explanation

QUESTION 56
Which data modeling language is commonly used by NETCONF?

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A. REST
B. YANG
C. HTML
D. XML

Correct Answer: B
Explanation

Explanation/Reference:
Cisco IOS XE supports the Yet Another Next Generation (YANG) data modeling language. YANG can be used with the Network Configuration Protocol (NETCONF) to provide the desired solution of automated and programmable network operations. NETCONF(RFC6241) is an XML-based protocol that client applications use to request information from and make configuration changes to the device. YANG is primarily used to model the configuration and state data used by NETCONF operations. Reference: https:// www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9500/software/release/1 6-5/ configuration_guide/ prog/b_165_prog_9500_cg/data_models.pdf

QUESTION 57
Which variable in an EEM applet is set when you use the sync yes option?

A. $_cli_result
B. $_exit_status
C. $_string_result
D. $_result

Correct Answer: B
Explanation

Explanation/Reference:
With Synchronous (sync yes), the CLI command in question is not executed until the policy exits. Whether or not the command runs depends on the value for the variable _exit_status. If _exit_status is 1, the command runs, if it is 0, the command is skipped.

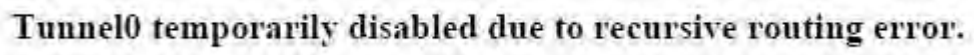
QUESTION 58
Which IPv6 migration method relies on dynamic tunnels that use the 2002::/16 reserved address space?

A. GRE
B. 6RD
C. 6to4
D. ISATAP

Correct Answer: C
Explanation

Explanation/Reference:
6to4 tunnel is a technique which relies on reserved address space 2002::/16 (you must remember this range). These tunnels determine the appropriate destination address by combining the IPv6 prefix with the globally unique destination 6to4 border router's IPv4 address, beginning with the 2002::/16 prefix, in this format:
2002:border-router-IPv4-address::/48
For example, if the border-router-IPv4-address is 64.101.64.1, the tunnel interface will have an IPv6 prefix of 2002:4065:4001:1::/64, where 4065:4001 is the hexadecimal equivalent of 64.101.64.1. This technique allows IPv6 sites to communicate with each other over the IPv4 network without explicit tunnel setup but we have to implement it on all routers on the path.

QUESTION 59
A GRE tunnel is down with the error message %TUN-5-RECUR DOWN:



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Which two options describe possible causes of the error? (Choose two)

A. There is link flapping on the tunnel
B. Incorrect destination IP addresses are configured on the tunnel
C. The tunnel mode and tunnel IP address are misconfigured
D. There is instability in the network due to route flapping
E. The tunnel destination is being routed out of the tunnel interface

Correct Answer: DE
Explanation

Explanation/Reference:
The %TUN-5-RECURDOWN: Tunnel0 temporarily disabled due to recursive routing error message means that the generic routing encapsulation (GRE) tunnel router has discovered a recursive routing problem. This condition is usually due to one of these causes:
+ A misconfiguration that causes the router to try to route to the tunnel destination address using the tunnel interface itself (recursive routing) + A temporary instability caused by route flapping elsewhere in the network Reference: https:// www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routingprotocol- eigrp/22327-gre-flap.html

QUESTION 60
What would be the preferred way to implement a loopless switch network where there are 1500 defined VLANs and it is necessary to load the shared traffic through two main aggregation points based on the VLAN identifier?

A. 802.1D
B. 802.1s
C. 802.1W
D. 802.1AE

Correct Answer: B
Explanation

QUESTION 61
What is the primary effect of the spanning-tree portfast command?

A. It enables BPDU messages
B. It minimizes spanning-tree convergence time
C. It immediately puts the port into the forwarding state when the switch is reloaded
D. It immediately enables the port in the listening state

Correct Answer: C
Explanation

Explanation/Reference:
Portfast feature should only be used on edge ports (ports directly connected to end stations). Neither edge ports or PortFast enabled ports generate topology changes when the link toggles so we cannot say Portfast reduces the STP convergence time.

PortFast causes a switch or trunk port to enter the spanning tree forwarding state immediately, bypassing the listening and learning states so answer 'It immediately puts the port into the forwarding state when the switch is reloaded ' is the best choice.

QUESTION 62
An engineer reviews a router's logs and discovers the following entry. What is the event's logging severity level?

Router# *Jan 01 38:24:04.401: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to up

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A. notification
B. error
C. informational
D. warning

Correct Answer: B
Explanation

Explanation/Reference:
Syslog levels are listed below:

Level	Keyword	Description
0	emergencies	System is unusable
1	alerts	Immediate action is needed
2	critical	Critical conditions exist
3	errors	Error conditions exist
4	warnings	Warning conditions exist
5	notification	Normal, but significant, conditions exist
6	informational	Informational messages
7	debugging	Debugging messages

Number 3 in %LINK-3-UPDOWN is the severity level of this message so in this case it is errors.

QUESTION 63
Which feature is supported by EIGRP but is not supported by OSPF?

A. equal-cost load balancing
B. route filtering
C. unequal-cost load balancing
D. route summarization

Correct Answer: C
Explanation

Explanation/Reference:
EIGRP support unequal-cost load balancing via the "variance ..." while OSPF only supports equalcost load balancing.

QUESTION 64
An engineer connects two switches together and notices that the connected interface on one of the switches is in an err-disabled state.

The engineer then notices that BPDUGuard is enabled on the interface. How would you correct this?

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A. Switch(config)# interface x/x
Switch(config-if)# no spanning-tree bpduguard enable
Switch(config-if)# shut
Switch(config-if)# no shut
B. PlaceHolder
C. PlaceHolder
D. PlaceHolder

Correct Answer: A
Explanation

QUESTION 65
opology:
RouterA<>>RouterB<<>>RouterC
| |
|_____|
(GRE Tunnel: R-A to R-C)

Router A send packet to Router C with MTU 1500 using GRE Tunnel. What happens to the packet ?

A. Router-C will drop the packet
B. Router-C will de-fragment the packet
C. Router-C will receive the packet
D. Router-B will forward the packet

Correct Answer: C
Explanation

QUESTION 66
How do agent-based versus agentless configuration management tools compare?

A. Agent-based tools do not require a high-level language interpreter such as Python or Ruby on slave nodes
B. Agentless tools require no messaging systems bet-veen master and slaves.
C. Agent-based tools do not require instaltation of additional software packages on the slave nodes
D. Agentless tools use proxy nodes to interface with slave nodes

Correct Answer: A
Explanation

QUESTION 67
Refer to the exhibit. An engineer must ensure that all traffic entering AS 200 from AS 100 chooses Link 2 as an entry point. Assume tliat all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers. Which configuration accomplishes this task?

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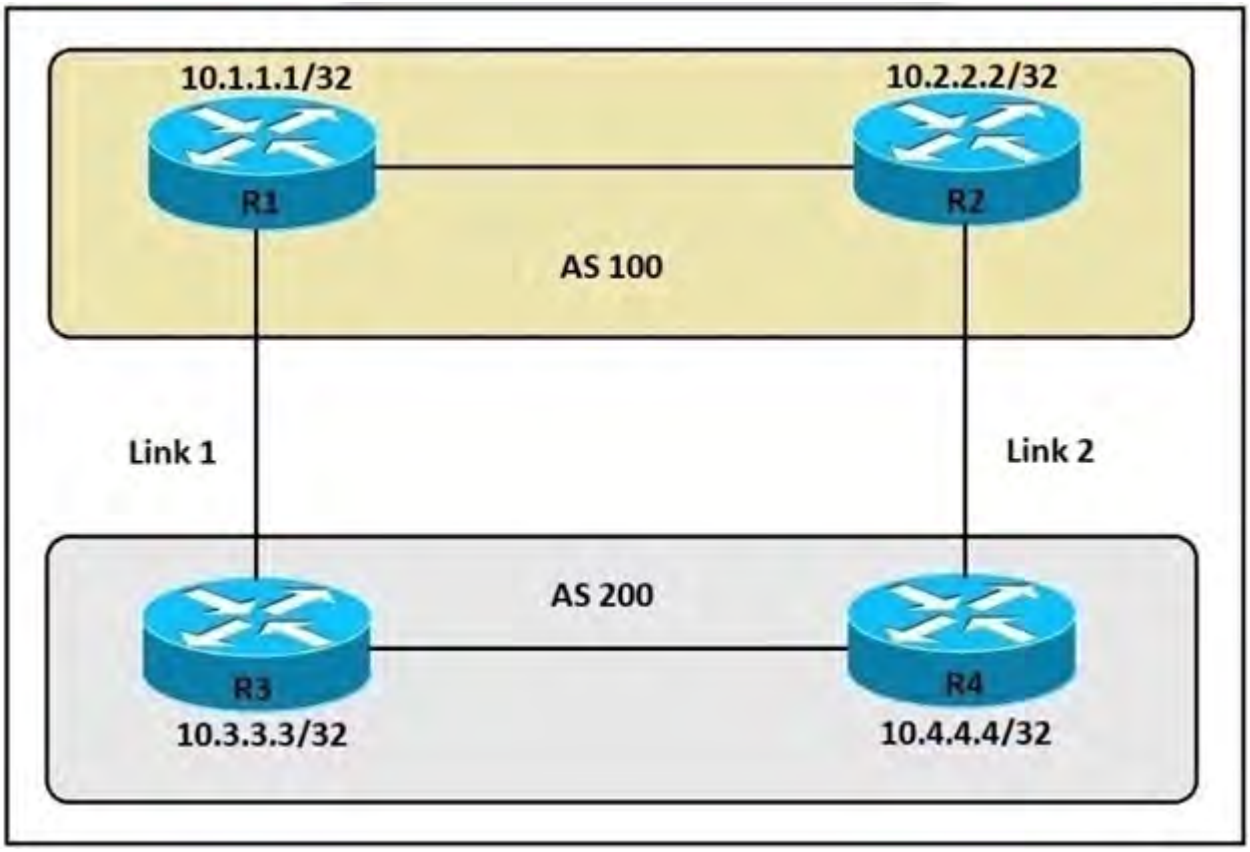

A. R4(config)#route-map PREPEND permit 10
R4(config-route-map)#set as-path prepend 200 200 200
R4(config)#router bgp 200
R4(conflg-router)#neighbor 10.2.2.2 route-map PREPEND out

B. R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 200 200 200
R3(config)#router bgp 200
R3(conflg-router)#neighbor 10.1.1.1 route-map PREPEND out

C. R4(config)#route-map PREPEND permit 10
R4(config-route-map)#set as-path prepend 100 100 100
R4(config)#router bgp 200
R4(config-router)#neighbor 10.2.2.2 route-map PREPEND in

D. R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 100 100 100
R3(config)#router bgp 200
R3(config-router)#neighbor 10.2.2.2 route-map PREPEND in

Correct Answer: B
Explanation

QUESTION 68
Which two sources cause interference for Wi-Fi networks? (Choose two).

A. mirrored wall
B. 900MHz baby monitor
C. fish tank
D. DECT 6.0 cordless
E. Incandesent lights

Correct Answer: AC
Explanation

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Explanation/Reference:
Windows can actually block your WiFi signal. How? Because the signals will be reflected by the glass. Some new windows have transparent films that can block certain wave types, and this can make it harder for your WiFi signal to pass through.
Tinted glass is another problem for the same reasons. They sometimes contain metallic films that can completely block out your signal. Mirrors, like windows, can reflect your signal. They`re also a source of electromagnetic interference because of their metal backings.

Reference: https://dis-dot-dat.net/what-materials-can-block-a-wifi-signal/

An incandescent light bulb, incandescent lamp or incandescent light globe is an electric light with a wire filament heated until it glows. WiFi operates in the gigahertz microwave band. The FCC has strict regulations on RFI (radio frequency interference) from all sorts of things, including light bulbs -> Incandesent lights do not interfere Wi-Fi networks.
Note:
+ Many baby monitors operate at 900MHz and won`t interfere with Wi-Fi, which uses the 2.4GHz band.
+ DECT cordless phone 6.0 is designed to eliminate wifi interference by operating on a different frequency. There is essentially no such thing as DECT wifi interference.

QUESTION 69
Which deployment option of Cisco NQFW provides scalability?

A. clustering
B. Inline tap
C. high availability
D. tap

Correct Answer: C
Explanation

QUESTION 70
Refer to the exhibit.

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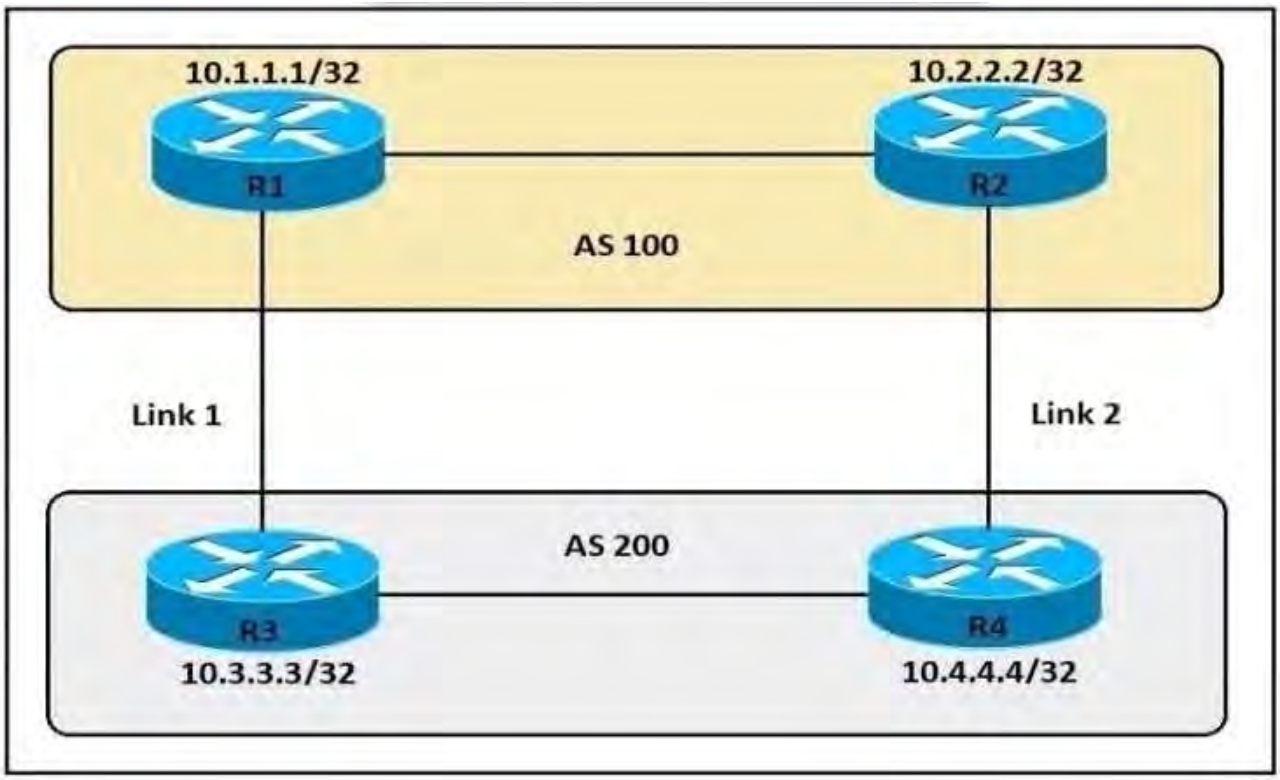

An engineer must ensure that all traffic entering AS 200 form AS 100 chooses link 2 as an entry point. Assume that all BGP neighbor relationship have been formed and that attributes have not been changed on any of the router.
Which configuration accomplishes this task?

R3(config)#**route-map PREPEND permit 10**
R3(config-route-map)#**set as-path prepend 100 100 100**

R3(config)#**router bgp 200**
R3(config-router)#**neighbor 10.1.1.1 route-map PREPEND in**

R3(config)#**route-map PREPEND permit 10**
R3(config-route-map)#**set as-path prepend 200 200 200**

R3(config)#**router bgp 200**
R3(config-router)#**neighbor 10.1.1.1 route-map PREPEND out**

R4(config)#**route-map PREPEND permit 10**
R4(config-route-map)#**set as-path prepend 200 200 200**

R4(config)#**router bgp 200**
R4(config-router)#**neighbor 10.2.2.2 route-map PREPEND out**

R4(config)#**route-map PREPEND permit 10**
R4(config-route-map)#**set as-path prepend 100 100 100**

R4(config)#**router bgp 200**
R4(config-router)#**neighbor 10.2.2.2 route-map PREPEND in**

A. Option A

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

Correct Answer: B
Explanation

QUESTION 71
An engineer is configuring GigabitEthernet1/0/0 for VRRP. When the router has the highest priority in group 5, it must assume the master role.

Which command set should the engineer add to the configuration to accomplish this task?

interface GigabitEthernet1/0/0
description To IDF A 38-70-774-10
ip address 172.16.13.2 255.255.255.0

A. standby 5 ip 172.16.13.254
standby 5 priority 100
standby 5 track 1 decrement 10
B. standby 5 ip 172.16.13.254
standby 5 priority 100
standby 5 preempt
C. vrrp 5 ip 172.16.13.254
vrrp 5 priority 100
D. vrrp 5 ip 172.16.13.254 255.255.255.0
vrrp 5 track 1 decrement 10
vrrp 5 preempt

Correct Answer: C
Explanation

Explanation/Reference:
Preempt is by default enabled on VRRP.

QUESTION 72
Which control plane protocol is used between Cisco SD-WAN routers and vSmart controllers?

A. TCP
B. OMP
C. UDP
D. BGP

Correct Answer: B
Explanation

Explanation/Reference:
Cisco SD-WAN uses Overlay Management Protocol (OMP) which manages the overlay network. OMP runs between the vSmart controllers and WAN Edge routers (and among vSmarts themselves) where control plane information, such as the routing, policy, and management information, is exchanged over a secure connection.

QUESTION 73
Which statement about dynamic GRE between a headend router and a remote router is true?

A. The headend router learns the IP address of the remote end router statically
B. A GRE tunnel without an IP address has a status of administratively down
C. GRE tunnels can be established when the remote router has a dynamic IP address

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D. The remote router initiates the tunnel connection

Correct Answer: D
Explanation

QUESTION 74
Which two statements about AAA authentication are true? (Choose two)

A. RADIUS authentication queries the router`s local username database
B. TACACS+ authentication uses an RSA server to authenticate users
C. Local user names are case-insensitive
D. Local authentication is maintained on the router
E. KRB5 authentication disables user access when an incorrect password is entered

Correct Answer: DE
Explanation

QUESTION 75
A wireless consultant is designing a high-density wireless network for a lecture hall for 1000 students. Which antenna type is recommended for this environment?

A. sector antenna
B. dipole antenna
C. parabolic dish
D. omnidirectional antenna

Correct Answer: D
Explanation

Explanation/Reference:
Directional antennas Directional antennas come in many different styles and shapes. An antenna does not offer any added power to the signal; it simply redirects the energy it receives from the transmitter. By redirecting this energy, it has the effect of providing more energy in one direction and less energy in all other directions. As the gain of a directional antenna increases, the angle of radiation usually decreases, providing a greater coverage distance but with a reduced coverage angle. Directional antennas include patch antennas and parabolic dishes. Parabolic dishes have a very narrow RF energy path, and the installer must be accurate in aiming these types of antennas at each other.

Omnidirectional antennas An omnidirectional antenna is designed to provide a 360-degree radiation pattern. This type of antenna is used when coverage in all directions from the antenna is required. The standard 2.14-dBi "rubber duck" is one style of omnidirectional antenna. Omnidirectional antenna -> Therefore Omnidirectional antenna is best suited for a high-density wireless network in a lecture hall.

QUESTION 76
What is provided by the Stealthwatch component of the Cisco Cyber Threat Defense solution?

A. real-time threat management to stop DDoS attacks to the core and access networks
B. real-time awareness of users, devices, and traffic on the network
C. malware control
D. dynamic threat control for web traffic

Correct Answer: B
Explanation

Explanation/Reference:
"Cisco Stealthwatch collects and analyzes massive amounts of data to give even the largest, most dynamic networks comprehensive internal visibility and protection. It helps security operations teams gain real-time situational awareness of all users, devices, and traffic on the extended network so they can

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quickly and effectively respond to threats" Page 1

https://media.zones.com/images/pdf/cisco-stealthwatch-solution-overview.pdf

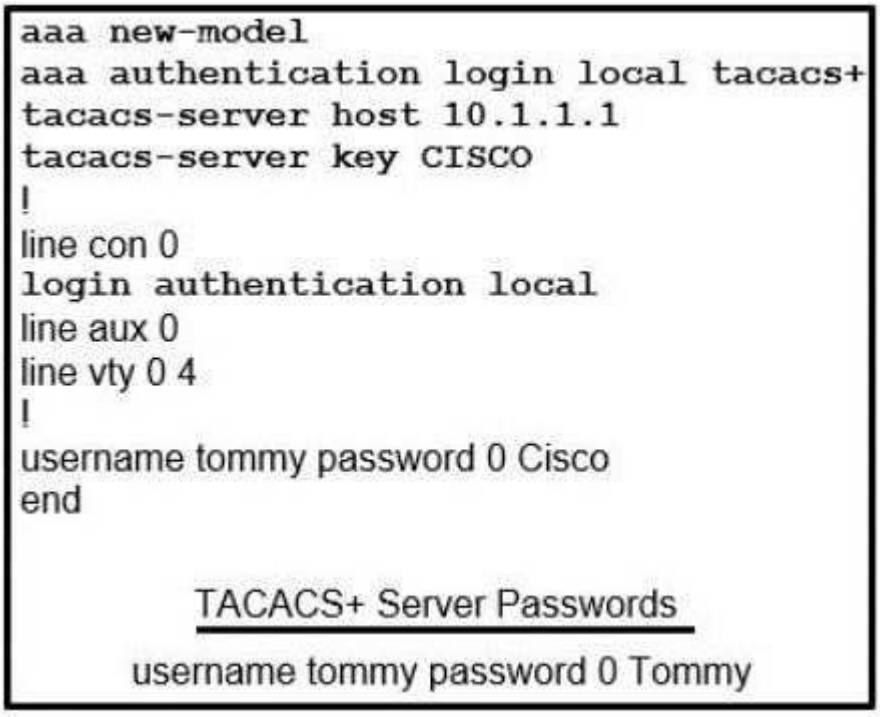
QUESTION 77
In a traditional 3 tier topology, an engineer must explicitly configure a switch as the root bridge and exclude it from any further election process for the spanning-tree domain. Which action accomplishes this task?

A. Configure the spanning-tree priority to 32768
B. Configure root guard and portfast on all access switch ports.
C. Configure BPDU guard in all switch-to-switch connections.
D. Configure the spanning-tree priority equal to 0.

Correct Answer: B
Explanation

Explanation/Reference:
Root guard does not allow the port to become a STP root port, so the port is always STP-designated. If a better BPDU arrives on this port, root guard does not take the BPDU into account and elect a new STP root. Instead, root guard puts the port into the root-inconsistent STP state which is equal to a listening state. No traffic is forwarded across this port.
Reference: http://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/10588-74.html

QUESTION 78
Refer to the exhibit.



Which password allows access to line con 0 for a username of "tommy" under normal operation?

A. Cisco
B. local
C. 0 Cisco
D. Tommy

Correct Answer: A
Explanation

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Explanation/Reference:
In this question, there are two different passwords for user "tommy":
+ In the TACACS+ server, the password is "Tommy"
+ In the local database of the router, the password is "Cisco".
From the line "login authentication local" we know that the router uses the local database for authentication so the password should be "Cisco".
Note: "... password 0 ..." here means unencrypted password.

QUESTION 79
When a wireless client roams between two different wireless controllers, a network connectivity outage is experience for a period of time. Which configuration issue would cause this problem?

A. Not all of the controllers in the mobility group are using the same mobility group name.
B. Not all of the controllers within the mobility group are using the same virtual interface IP address.
C. All of the controllers within the mobility group are using the same virtual interface IP address.
D. All of the controllers in the mobility group are using the same mobility group name.

Correct Answer: B
Explanation

Explanation/Reference:
A prerequisite for configuring Mobility Groups is "All controllers must be configured with the same virtual interface IP address". If all the controllers within a mobility group are not using the same virtual interface, inter-controller roaming may appear to work, but the handoff does not complete, and the client loses connectivity for a period of time. -> Answer B is correct.
Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/configguide/b_cg85/mobility_groups.html

QUESTION 80
Which tunneling technique is used when designing a Cisco SD-Access fabric data plane?

A. LISP
B. VRF Lite
C. VRF
D. VXLAN

Correct Answer: D
Explanation

Explanation/Reference:

Chapter	Section
SD-Access Operational Planes	Control Plane – LISP
	Data Plane - VXLAN
	Policy Plane – Cisco TrustSec
	Management Plane – Cisco DNA Center

QUESTION 81
Refer to the exhibit.

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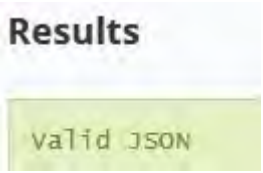
What is the JSON syntax that is formed from the data?

A. Make":`Gocar, "Model': "Zoom", "Features": ["Power Windows", "Manual Dnve", "Auto AC"]}
B. 'Make ": "Gocar1, "Model": "Zoom", "Features": ["Power Windows", "Manual Drive", "Auto AC"]
C. {"Make": Gocar, "Model": Zoom, "Features": Power Windows, Manual Drive, Auto AC}
D. ("Make":["Gocar", "Model": "Zoom"], Features": ["Power Windows", "Manual Drive", "Auto AC"]}

Correct Answer: A
Explanation

Explanation/Reference:

```
{
    "Make": "Gocar",
    "Model": "Zoom",
    "Features": ["Power Windows", "Manual Dnve", "Auto AC"]
}
```



QUESTION 82
A customer has deployed an environment with shared storage to allow for the migration of virtual machines between servers with dedicated operating systems that provide the virtualization platform.

What is this operating system described as?

A. hosted virtualization
B. type 1 hypervisor
C. container oriented
D. decoupled

Correct Answer: B
Explanation

QUESTION 83
In a Cisco DNA Center Plug and Play environment, why would a device be labeled unclaimed?

A. The device has not been assigned a workflow.
B. The device could not be added to the fabric.
C. The device had an error and could not be provisioned.
D. The device is from a third-party vendor.

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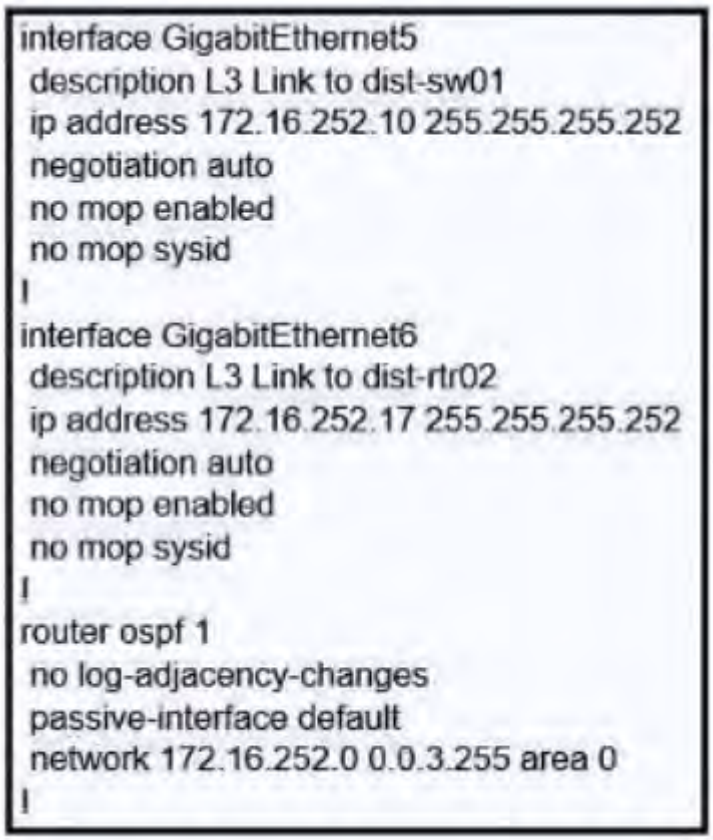
Correct Answer: A
Explanation

Explanation/Reference:
Unclaimed--Device has not been provisioned.
Planned--Device has been claimed but has not yet contacted the server.
Onboarding--Device onboarding is in progress.
Provisioned--Device is successfully onboarded and added to inventory.
Error--Device had an error and could not be provisioned.

QUESTION 84
Refer to the exhibit.



A network engineer connected two routers using OSPF but the routers are not sharing routes. Which command completes the configuration?

A. router ospf 1
   no passive-interface GigabitEthernet5
B. interface GigabitEthernet5
   no passive-interface
C. router ospf 1
   network 172.16.252.0 0.0.0.255 area 0
D. router ospf 1
   no passive-interface default

Correct Answer: D
Explanation

QUESTION 85
Which JSON script is properly formatted?

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A.

```
{
  "activity": [
  {
   "type":"golf",
    "level":"beginning",
    "session":"2024"
   }

  ]

}
```

B.

```
"Stores":[
        {
            "type":"retail",
            "location":"B27",
            "contact":"546-687-7251"
        }
]
```

C.

```
["plants": {
            "type": annual,
            "color":" yellow,
            "season":summer
        }
]
```

D.

```
[
    "subject":{
   [
   "title":"Language"
   "ID":"841963"
   "location":"Main Campus"
  }
 ]
 ]
```

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

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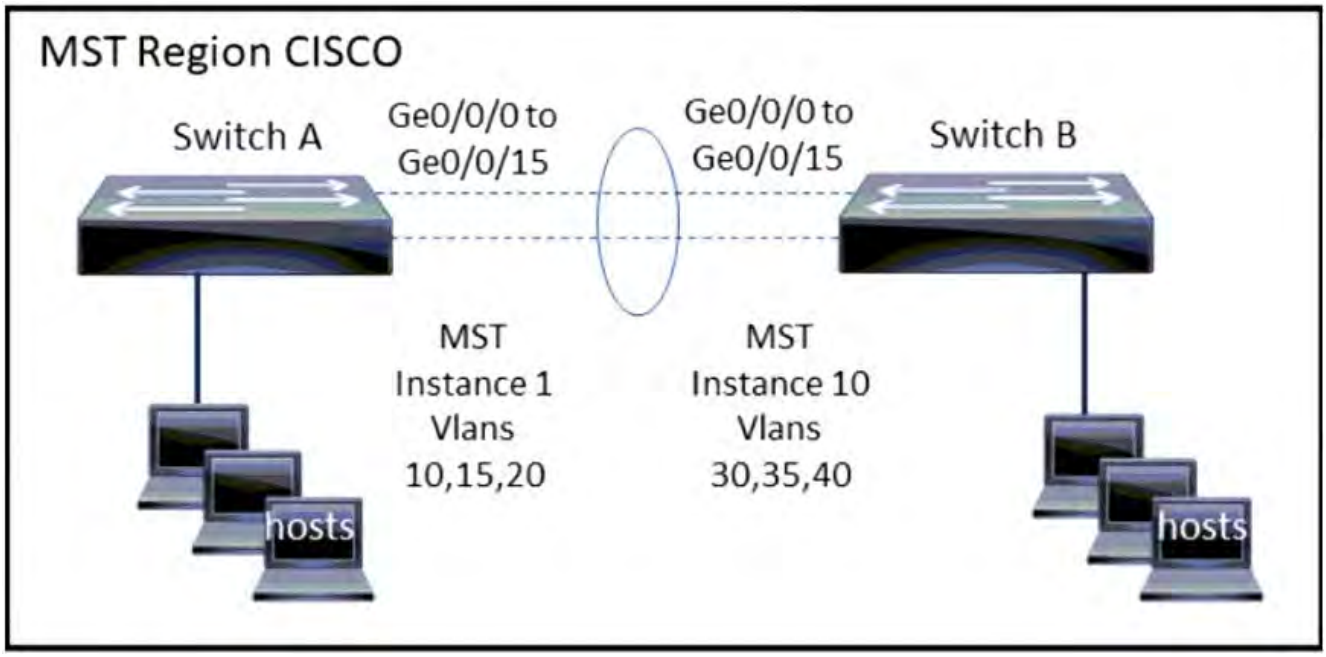
Correct Answer: A
Explanation

QUESTION 86
Refer to the exhibit.



Which command or set of commands configures switch B as the primary root for VLANs 10, 15, and 20?

A. SwitchB(config-mst)# instance 1 vlan 10,20
B. SwitchB(config)# spanning-tree vlan 10,20 root primary
C. SwitchB(config)# interface range g0/0/0-15
SwitchB(config-if)# spanning-tree port-priority 100
SwitchA (config)# interface range g0/0/0-15
SwitchA(config-if)# spanning-tree port-priority 200
D. SwitchB(config)# spanning-tree mst 1 root primary

Correct Answer: D
Explanation

QUESTION 87
Which two advanced security features are available in next-generation firewalls but were not provided by standard firewalls? (Choose two.)

A. stateful traffic inspection
B. remote access VPN
C. network telemetry
D. intrusion prevention
E. application control

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Correct Answer: DE
Explanation

QUESTION 88
The Radio Resource Management software that is embedded in the Cisco WLC acts as a manager to constantly monitor over-the-air metrics. Which other factor does the Radio Resource Management software detect?

A. presence of rogue APs or malicious SSIDs
B. unauthorized wireless network access
C. repeated attempts to authenticate to a wireless network
D. end-node vulnerabilities

Correct Answer: A
Explanation

QUESTION 89
What is used by vManage to interact with Cisco SD-WAN devices in the fabric?

A. IPsec
B. northbound API
C. RESTCONF
D. southbound API

Correct Answer: D
Explanation

QUESTION 90
An engineer adds a new switch to a Cisco StackWise stack. The switch that was active before the switch was added is elected as the active switch again. Which action does the active switch take?

A. It suspends traffic forwarding until the new switch is updated with the current running configuration of the stack.
B. It checks the IOS and running configuration of the new switch and updates them if necessary to match the other switches in the stack.
C. It removes any Layer 3 configuration on the new switch to maintain normal Layer 2 functionality on the stack.
D. It clears the MAC table of the stack and relearns the attached devices.

Correct Answer: B
Explanation

QUESTION 91
What is the architectural difference between the MAC address table and TCAM?

A. TCAM entries are stored for 600 seconds, and MAC address table entries are kept for 200 seconds.
B. TCAM entries are populated using the ARP table, and the MAC address table is populated dynamically from outgoing frames.
C. TCAM entries consist of VLAN, port ID and source MAC Address, and MAC address table entries consist of source MAC address end port ID.
D. TCAM entries are composed of value, mask, and result, and MAC address table entries are composed of value and results.

Correct Answer: D

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Explanation

QUESTION 92
What is a difference between OSPF and EIGRP?

A. OSPF is an advanced distance vector protocol. EIGRP is a link-state protocol.
B. OSPF is a hybrid routing protocol. EIGRP is a link-state routing protocol.
C. OSPF uses the DUAL algorithm. EIGRP uses the SPF algorithm.
D. OSPF uses an administrative distance of 110. EIGRP uses an administrative distance of 170.

Correct Answer: D
Explanation

QUESTION 93
In which way are EIGRP and OSPF similar?

A. Both protocols support autosummarization.
B. Both protocols use hello packets to discover neighbors.
C. Both protocols support unequal-cost load balancing.
D. Both protocols send updates using unicast addresses.

Correct Answer: B
Explanation

QUESTION 94
Refer to the exhibit.

```
client.connect(ip, port=22, username=usr, password=pswd)
stdin, stdout, stderr = client.exec_command('show ip bgp 192.168.101.0 bestpath\n')
print(stdout)
```

Which action does the Python script accomplish?

A. connects to the device using Telnet and exports the routing table information
B. connects to the device using SSH and exports the routing table information
C. displays the output of the show command in an unformatted way
D. displays the output of the show command in a formatted way

Correct Answer: B
Explanation

QUESTION 95
An engineer must configure HSRP group 300 on a Cisco IOS router. When the router is functional, it must be the active HSRP router. The peer router has been configured using the default priority value.

Which command set is required?

A. standby version 2 standby 300 priority 110 standby 300 preempt
B. standby 300 priority 110 standby 300 timers 1 110
C. standby version 2 standby 300 priority 90 standby 300 preempt
D. standby 300 priority 90 standby 300 preempt

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Correct Answer: A
Explanation

Explanation/Reference:
In HSRP version 1, group numbers are supported the range from 0 to 255 and HSRP version 2 expands the group number range from 0 to 4095.
* So it should HSRP v2 to assign the group no. 300 (So. the ans should A or C).
* Default priority of the HSRP is 100 and the Router with higher priority no. will become Active Router. So the priority set over 100 for active router.

QUESTION 96
Which level message does the WLC send to the syslog server?

A. syslog level errors and less severity messages
B. syslog level errors messages
C. all syslog levels messages
D. syslog level errors and greater severity messages

Correct Answer: D
Explanation

QUESTION 97
Which two southbound interfaces originate from Cisco DMA Center and terminate at fabric underlay switches? (Choose two)

A. ICMP: Discovery
B. UDP 67: DHCP
C. TCP 23: Telnet
D. UDP 6007: NetFlow
E. UDP 162: SNMP

Correct Answer: AC
Explanation

Explanation/Reference:
In the figure below, we can see ICMP & SNMP can reach to underlay switches.

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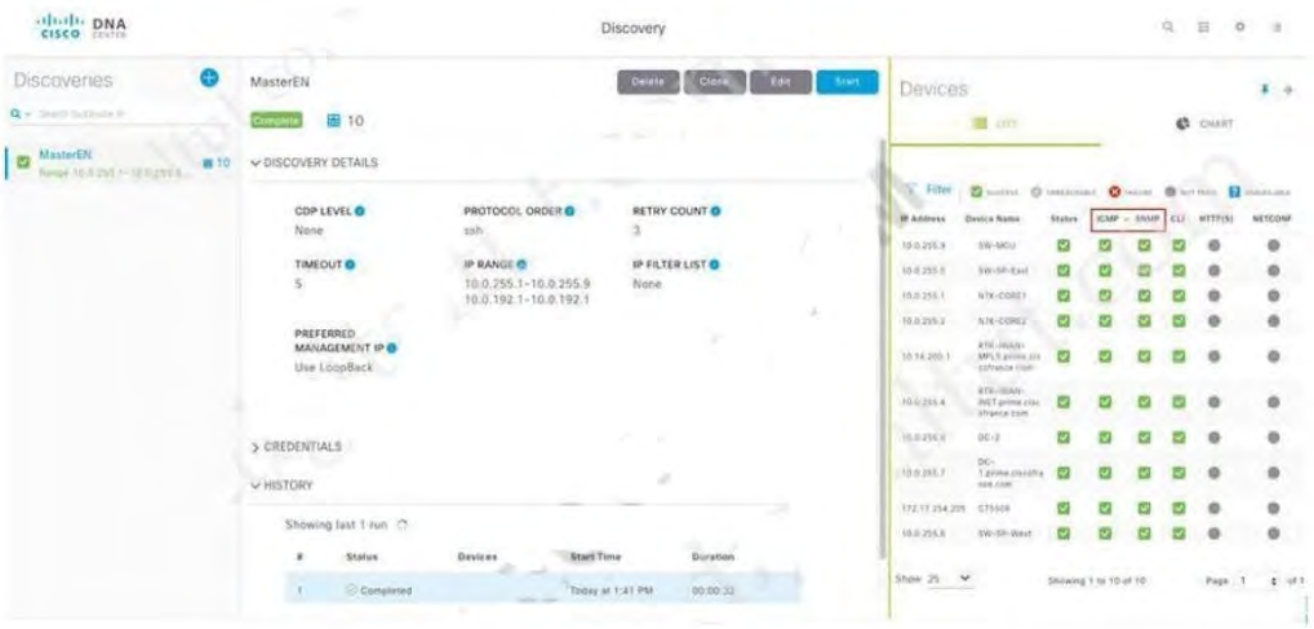

QUESTION 98
Which unit measures the power of a radio signal with reference to 1 milliwatt?

A. dBw
B. dBm
C. mW
D. dBi

Correct Answer: C
Explanation

QUESTION 99
Based on the output below, which Python code shows the value of the "upTime" key?

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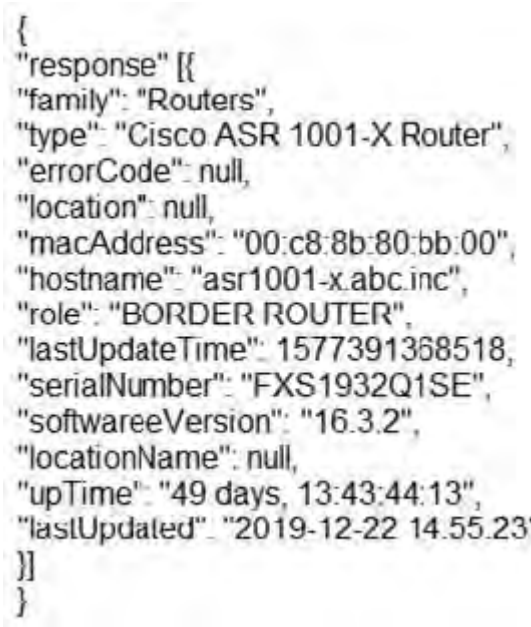

```
{
"response" [{
"family": "Routers",
"type": "Cisco ASR 1001-X Router",
"errorCode": null,
"location": null,
"macAddress": "00:c8:8b:80:bb:00",
"hostname": "asr1001-x.abc.inc",
"role": "BORDER ROUTER",
"lastUpdateTime": 1577391368518,
"serialNumber": "FXS1932Q1SE",
"softwareeVersion": "16.3.2",
"locationName": null,
"upTime": "49 days, 13:43:44:13",
"lastUpdated": "2019-12-22 14.55.23"
}]
}
```

A. json_data = response.json()
print(json_data['response'][0]['upTime'])
B. json_data = response.json()
print(json_data[response][0][upTime])
C. json_data = json.loads(response.text)
print(json_data['response']['family']['upTime'])
D. json_data = response.json()
print(json_data['response'][family]['upTime'])

Correct Answer: A
Explanation

Explanation/Reference:
because the question is asked about 'UpTime', not 'family', both of them are object within array 'response' ,i.e. [{"family:xxx", "UpTime:xxx"}...

QUESTION 100
Which deployment option of Cisco NQFW provides scalability?

A. clustering
B. Inline tap
C. high availability
D. tap

Correct Answer: C
Explanation

QUESTION 101
A customer has completed the installation of a Wi-Fi 6 greenfield deployment at their new campus. They want to leverage Wi-Fi 6 enhanced speeds on the trusted employee WLAN. To configure the employee WLAN, which two Layer 2 security policies should be used? (Choose two.)

A. WPA2 (AES)
B. 802.1X
C. OPEN
D. WEP
E. WPA (AES)

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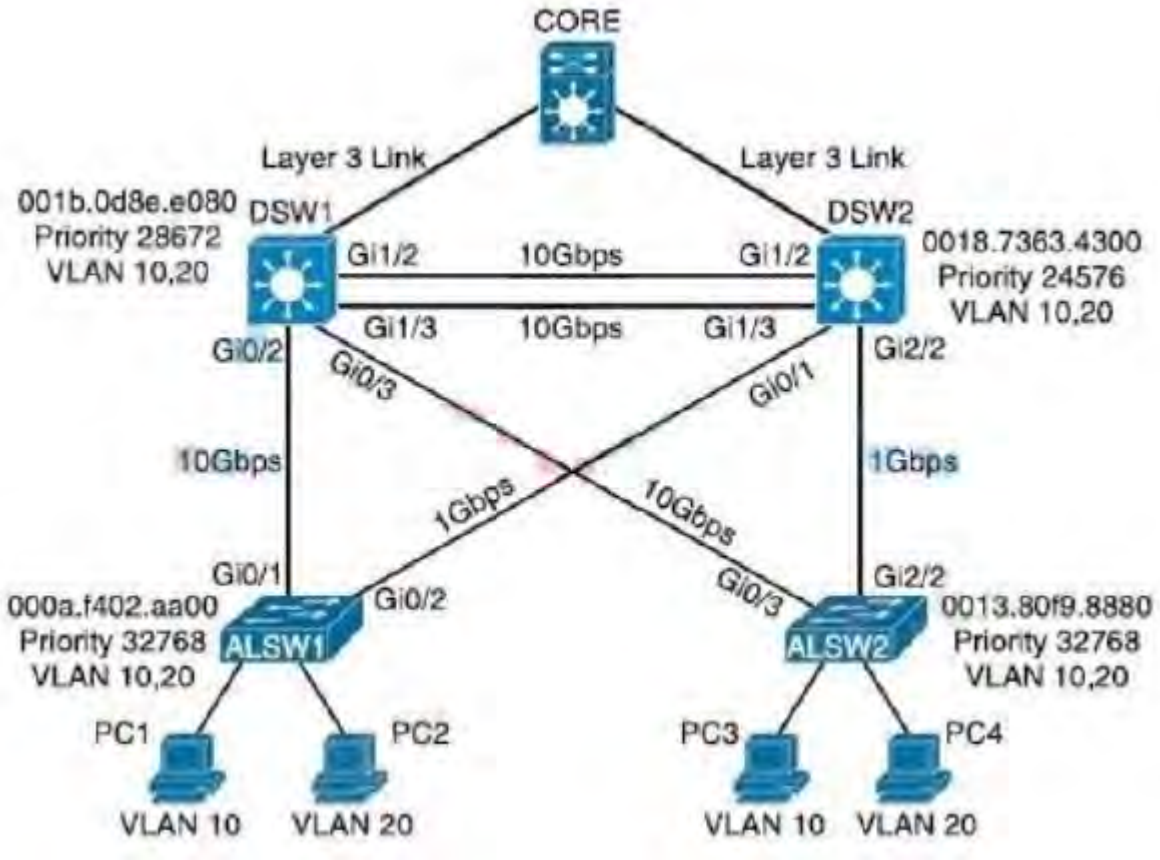
Correct Answer: AB
Explanation

Explanation/Reference:
If some devices experience problems connecting to the Wi-Fi 6 network, the problem may be in missing WPA3 support or the "WPA3/WPA2 mixed mode" feature. Mixed mode is intended to ensure that older clients can still connect, but in practice there are some clients who do not recognize this setting and refuse to connect at all. As WP3 is much safer than WPA2, we do not recommend downgrading the security of WPA2 to let older clients connect.
Well WPA2 always better than OPEN.

QUESTION 102
Refer to the exhibit.



How to make DSW1 the primary root for VLAN 10? (Choose two)

A. DWS1(config-if)#spanning-tree port-priority 0
B. DSW2(config-if)#spanning-tree port-priority 16
C. DSW1(config-if)#interface gi1/3
D. DSW2(config-if)#interface gi1/3
E. DSW2(config-if)#spanning-tree port-priority 128

Correct Answer: AC
Explanation

Explanation/Reference:
Maybe something was wrong with this question but we still have to choose the best answers.

QUESTION 103
Refer to the exhibit.

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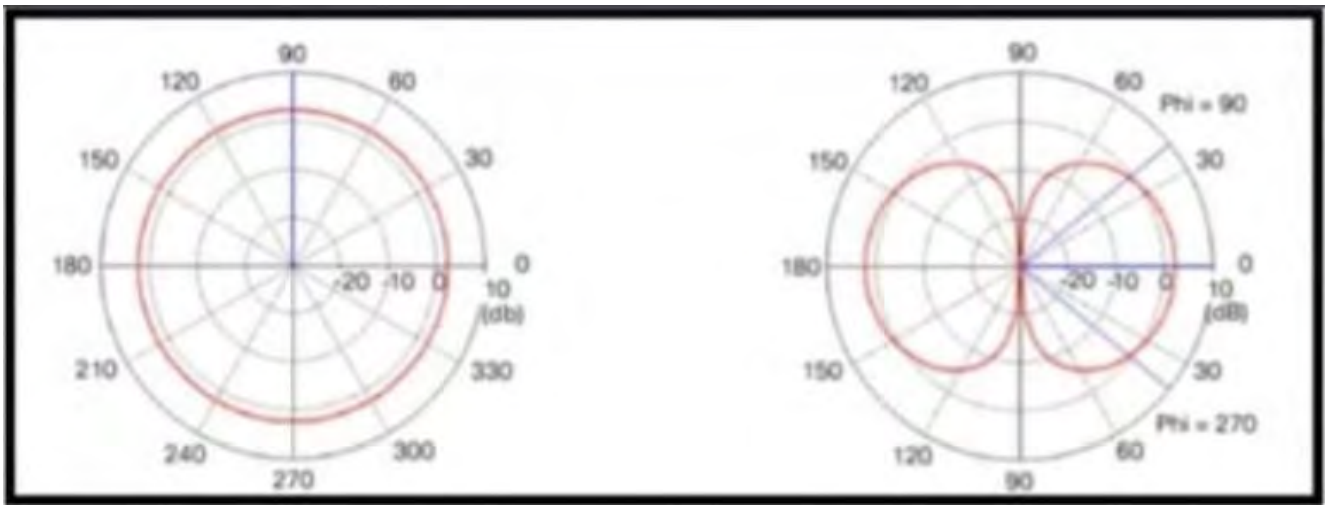

Which type of antenna is shown on the radiation patterns?

A. Dipole
B. Yagi
C. Patch
D. Omnidirectional

Correct Answer: A
Explanation

QUESTION 104
What are two methods of ensuring that the multicast RPF check passes without changing the unicast routing table? (Choose two.)

A. implementing static mroutes
B. disabling BGP routing protocol
C. implementing MBGP
D. disabling the interface of the router back to the multicast source
E. implementing OSPF routing protocol

Correct Answer: AC
Explanation

QUESTION 105
What are two features of NetFlow flow monitoring? (Choose two.)

A. Copies all ingress flow information to an interface
B. Include the flow record and the flow importer
C. Can track ingress and egress information
D. Can be used to track multicast, MPLS, or bridged traffic.
E. Does not required packet sampling on interfaces

Correct Answer: CD
Explanation

QUESTION 106

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In a Cisco DNA Center Plug and Play environment, why would a device be labeled unclaimed?

A. The device has not been assigned a workflow.
B. The device could not be added to the fabric.
C. The device had an error and could not be provisioned.
D. The device is from a third-party vendor.

Correct Answer: A
Explanation

QUESTION 107
Which of the following statements regarding BFD are correct? (Select 2 choices.)

A. BFD is supported by OSPF, EIGRP, BGP, and IS-IS.
B. BFD detects link failures in less than one second.
C. BFD can bypass a failed peer without relying on a routing protocol.
D. BFD creates one session per routing protocol per interface.
E. BFD is supported only on physical interfaces.
F. BFD consumes more CPU resources than routing protocol timers do.

Correct Answer: AB
Explanation

QUESTION 108
An engineer runs the sample code, and the terminal returns this output. Which change to the sample code corrects this issue?

Sample Code

```
#!/usr/bin/env python

import json
import sys

test_json = """
{
  "type": "Cisco ASR 1001-X Router",
  "lastUpdateTime": 1552394222783,
  "macAddress": "00:c8:8b:80:bb:00",
  "serialNumber": "FXS1932Q1SE"
}
"""
print(json.load(test_json))
```

Output

```
$ python print_json.py
Traceback (most recent call last):
  File "question_3.py", line 15, in <module>
    Print(json.load(test_json))
  File
"/System/Library/Framework/Python.framework/Versions/2.7/lib/python2.7/json/__init__.py", line 286 in load
    return loads (fp.read(),
AttributeError: 'str' object has no attribute 'read'
```

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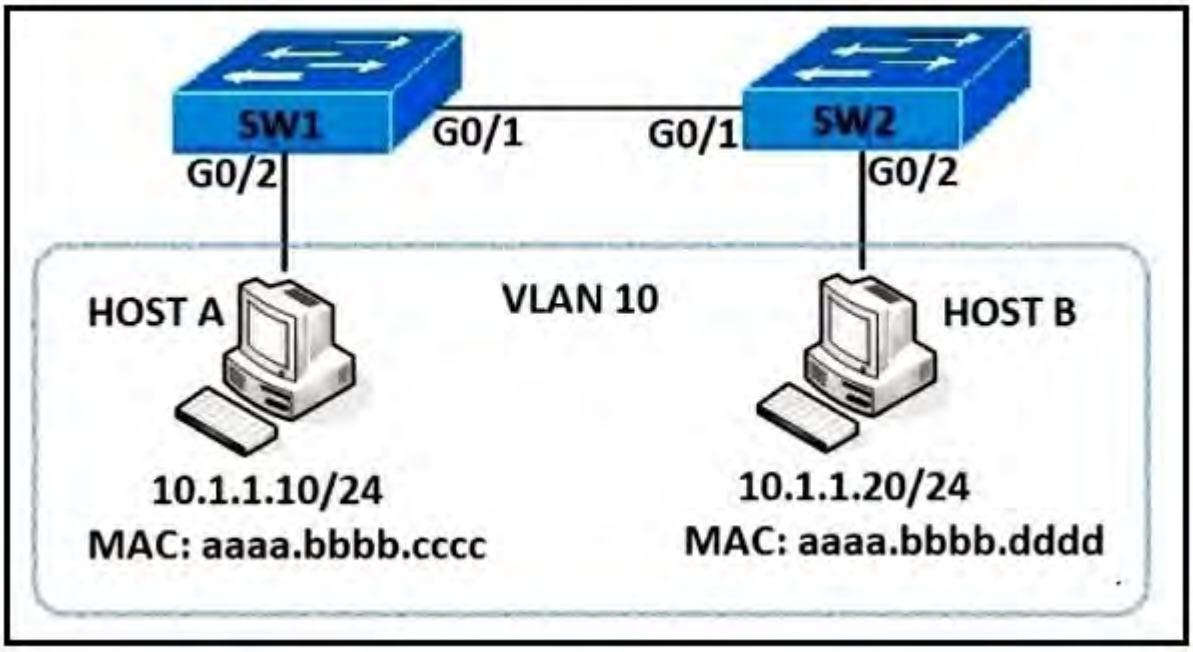
A. Change the JSON method from load() to loads().
B. Enclose null in the test_json string in double quotes
C. Use a single set of double quotes and condense test_json to a single line
D. Call the read() method explicitly on the test_json string

Correct Answer: A
Explanation

Explanation/Reference:

- `json.load()` method (without "**s**" in "load") used to **read JSON encoded data from a file** and convert it into a Python dictionary.
- `json.loads()` method, which is used to **parse valid JSON string** into Python dictionary.

QUESTION 109
Refer to the exhibit.



An engineer must deny HTTP traffic from host A to host B while allowing all other communication between the hosts. Which command set accomplishes this task?

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```
SW1(config)# ip access-list extended DENY-HTTP
SW1(config-ext-nacl)#permit tcp host 10.1.1.10 host 10.1.1.20 eq www

SW1(config)# ip access-list extended MATCH_ALL
SW1(config-ext-nacl)# permit ip any any

SW1(config)# vlan access-map HOST-A-B 10
SW1(config-access-map)# match ip address DENY-HTTP
SW1(config-access-map)# action drop
SW1(config)# vlan access-map HOST-A-B 20
SW1(config-access-map)# match ip address MATCH_ALL
SW1(config-access-map)# action forward

SW1(config)# vlan filter HOST-A-B vlan 10

SW1(config)# mac access-list extended HOST-A-B
SW1(config-ext-macl)# permit host aaaa.bbbb.cccc aaaa.bbbb.dddd

SW1(config)# ip access-list extended DENY-HTTP
SW1(config-ext-nacl)#deny tcp host 10.1.1.10 host 10.1.1.20 eq www

SW1(config)# vlan access-map DROP-MAC 10
SW1(config-access-map)# match mac address HOST-A-B
SW1(config-access-map)# action drop
SW1(config)# vlan access-map HOST-A-B 20
SW1(config-access-map)# match ip address DENY-HTTP
SW1(config-access-map)# action drop
```

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```
SW1(config)# mac access-list extended HOST-A-B
SW1(config-ext-macl)# permit host aaaa.bbbb.cccc aaaa.bbbb.dddd

SW1(config)# ip access-list extended DENY-HTTP
SW1(config-ext-nacl)#permit tcp host 10.1.1.10 host 10.1.1.20 eq www

SW1(config)# vlan access-map DROP-MAC 10
SW1(config-access-map)# match mac address HOST-A-B
SW1(config-access-map)# action forward
SW1(config)# vlan access-map HOST-A-B 20
SW1(config-access-map)# match ip address DENY-HTTP
SW1(config-access-map)# action drop

SW1(config)# vlan filter HOST-A-B vlan 10
```

```
SW1(config)# ip access-list extended DENY-HTTP
SW1(config-ext-nacl)#deny tcp host 10.1.1.10 host 10.1.1.20 eq www

SW1(config)# ip access-list extended MATCH_ALL
SW1(config-ext-nacl)# permit ip any any

SW1(config)# vlan access-map HOST-A-B 10
SW1(config-access-map)# match ip address DENY-HTTP
SW1(config-access-map)# action drop
```

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

Correct Answer: A
Explanation

Explanation/Reference:
In this case we need to configure a VLAN access-map to deny HTTP traffic and apply it to VLAN 10. To do it, first create an access-list, by which interesting traffic will be matched. The principle of VLAN access-map config is similar to the route-map principle.
After this we'll create a vlan access-map, which has two main parameters: action and match. Match: by this parameter the interesting traffic is matched and here RACL or MAC ACL can be applied as well. Action: what to do with matched traffic. Two main parameters exist: Drop and Forward. In case of Drop, matched traffic will be dropped, and in case of forward, matched traffic will be allowed. A good reference and example can be found at https://www.networkstraining.com/ vlan-access-mapexample-configuration/

QUESTION 110
A customer has 20 stores located throughout a city. Each store has a single Cisco AP managed by a central WLC. The customer wants to gather analytics for users in each store. Which technique supports these requirements?

A. angle of arrival
B. presence
C. hyperlocation
D. trilateration

Correct Answer: B
Explanation

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QUESTION 111
Which IEEE standard provides the capability to permit or deny network connectivity based on the user or device identity?

A. 802.1d
B. 802.1w
C. 802.1q
D. 802.1x

Correct Answer: D
Explanation

QUESTION 112
Refer to the exhibit.

```
!
ip dhcp excluded-address 192.168.10.0 192.168.10.10
!
ip dhcp pool LAN
 network 192.168.10.0 255.255.255.0
 default-router 192.168.10.1
 dns-server 192.0.2.254
!
interface Loopback0
 ip address 192.168.255.1 255.255.255.255
!
interface GigabitEthernet0/1
 description => LAN <=
 ip address 192.168.10.1 255.255.255.0
!
--
CPE# debug ip dhcp server packet
DHCP server packet debugging is on.
CPE#
*Sep 11 11:00:12.520: DHCPD: inconsistent relay information.
*Sep 11 11:00:12.520: DHCPD: relay information option exists,
 but giaddr is zero.
CPE#
```

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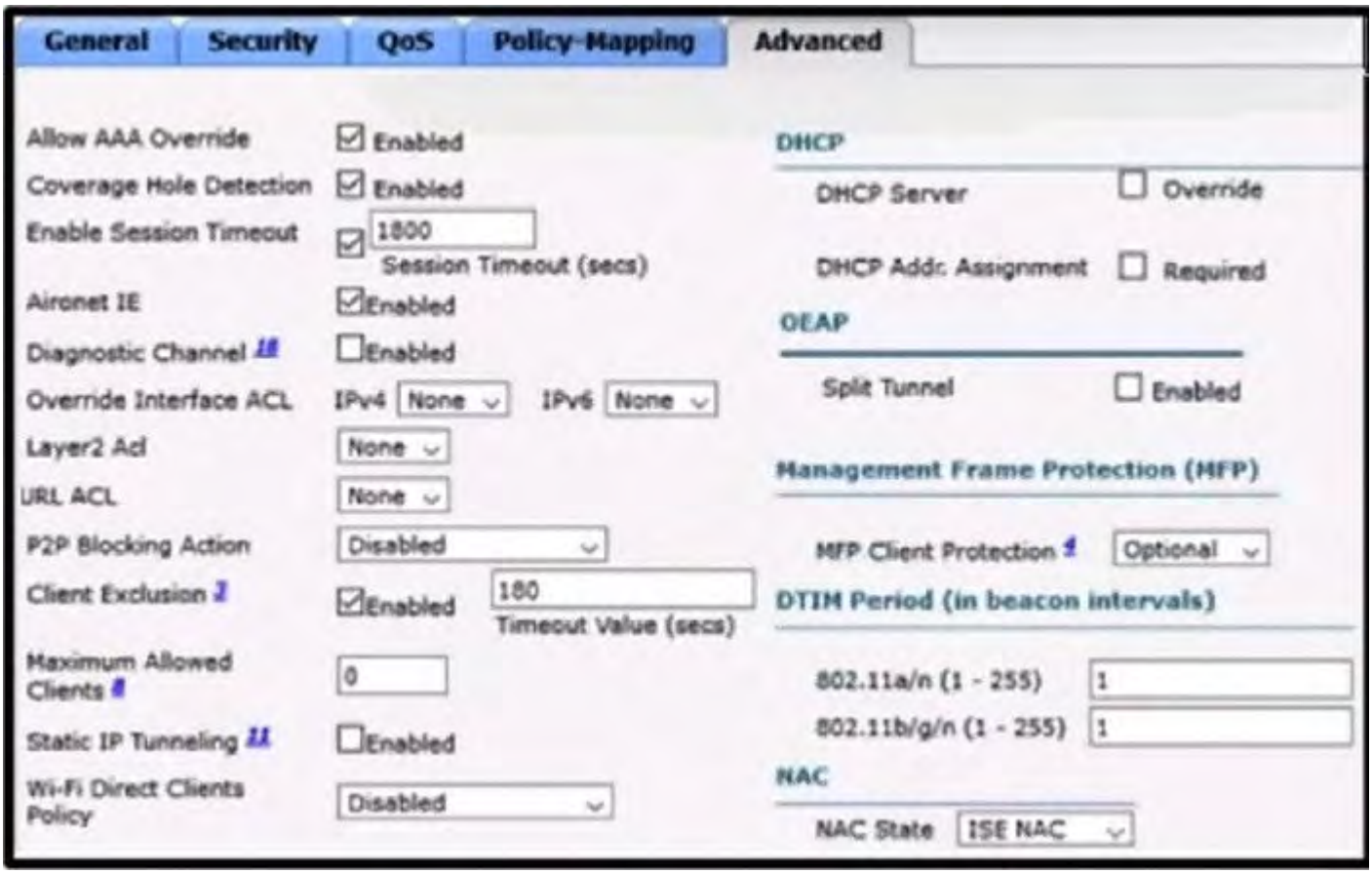
The CPE router acts as a DHCP server for the locally attached LAN. After DHCP snooping is enabled on the switch where the DHCP clients are connected, clients are unable to obtain their configuration from the DHCP server. What is the cause of this issue?

A. The IP address of the DHCP server is in the excluded DHCP range.
B. The configuration of Gi0/1 is missing the ip helper-address 192.168.255.1 command.
C. The DHCP server drops DHCP packets carrying Option 82 and an empty relay agent IP address.
D. The excluded DHCP range contains the subnet address of the entire LAN network.

Correct Answer: C
Explanation

QUESTION 113
Refer to the exhibit.



An engineer is troubleshooting an issue with client devices triggering excessive power changes on APs in the 2.4 GHz band. Which action resolves this issue?

A. Disable Aironet IE.
B. Set the 802.11b/g/n DTIM interval to 0.
C. Enable MFP Client Protection.
D. Disable Coverage Hole Detection.

Correct Answer: D
Explanation

Explanation/Reference:
"The device discriminates between coverage holes that can and cannot be corrected. For coverage holes that can be corrected, the device mitigates the coverage hole by increasing the transmit power level for

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that specific access point"

https://www.cisco.com/c/en/us/td/docs/wireless/controller/ewc/16-12/config-guide/ewc_cg_16_12/coverage_hole_detection.pdf

QUESTION 114
Which statement must be used to export the contents of the devices object in JSON format?

```
from json import dumps, loads


Devices=[
{
   'name' : 'SwitchA',
   'ip' : '10.10.10.1',
   'model' : 'WS-2960',
   'serial' : 'S5016350ADX',
   'user' : 'CiscoAdmin',
   'pass' : 'd451991709c0'
}]
```

A. json.repr(Devices)
B. json.loads(Devices)
C. json.print(Devices)
D. json.dumps(Devices)

Correct Answer: D
Explanation

QUESTION 115
Which mechanism can be used to enforce network access authentication against an AAA server if the endpoint does not support the 802.1X supplicant functionality?

A. private VLANs

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B. port security
C. MAC Authentication Bypass
D. MACsec

Correct Answer: C
Explanation

QUESTION 116
When voice services are deployed over a wireless environment, which service must be disabled to ensure the quality of calls?

A. Aggressive load balancing
B. Dynamic transmit power control
C. Priority queuing
D. Fastlane

Correct Answer: A
Explanation

Explanation/Reference:
To have a successful voice deployment with 792x phones, not only do you need a professional site survey, you also need to make sure that the controller and the switched network are properly configured for voice. The controller has several settings for a proper voice configuration:
Aggressive Load Balancing should be disabled.
Reference: http://what-when-how.com/deploying-and-troubleshooting-cisco-wireless-lan-controllers/ configuration-cisco-wireless-lan-controllers/

QUESTION 117
What is a characteristic of an AP operating in FlexConnect Mode?

A. All traffic traverses the WLC to ensure policy enforcement on client traffic
B. Forwarding continues when the AP loses connectivity to the WLC
C. APs connect in a mesh topology and elect a root AP
D. FlexConnect enables an AP to connect to multiple WLCs

Correct Answer: B
Explanation

Explanation/Reference:
The AP can locally switch traffic between a VLAN and SSID when the CAPWAP tunnel to the WLC is down.
Reference: https://networklessons.com/cisco/ccna-200-301/cisco-wireless-ap-modes

QUESTION 118
Which configuration feature should be used to block rogue router advertisements instead of using the IPv6 Router Advertisement Guard feature?

A. VACL blocking broadcast frames from nonauthorized hosts
B. IPv4 ACL blocking route advertisements from nonauthorized hosts
C. PVLANs with promiscuous ports associated to route advertisements and isolated ports for nodes
D. PVLANs with community ports associated to route advertisements and isolated ports for nodes

Correct Answer: C
Explanation

QUESTION 119
An engineer failed to run diagnostic commands on devices using Cisco DNA center, which action in Cisco

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DNA center resolves the issue?

A. Enable Secure Shell.
B. Enable Command Runner.
C. Enable APIs
D. Enable CDP.

Correct Answer: A
Explanation

QUESTION 120
A network administrator added a new spoke site with dynamic IP on the DMVPN network. Which configuration command passes traffic on the DMVPN tunnel from the spoke router?

A. ip nhrp registration dynamic
B. ip nhrp registration ignore
C. ip nhrp registration no-registration
D. ip nhrp registration no-unique

Correct Answer: D
Explanation

Explanation/Reference:
"ip nhrp registration no-unique": allow the client to not set the unique flag in the NHRP packets. This is useful when a station has a dynamic IP address that could change over time.

QUESTION 121
Which two components are required for MPLS Layer 3 VPN configuration? (Choose two)

A. Use MP-BGP for customer routes.
B. Use LDP for customer routes.
C. Use a unique RD per customer VRF.
D. Use pseudowire for Layer 2 routes
E. Use OSPF between PE and CE

Correct Answer: AC
Explanation

QUESTION 122
Which method provides failure detection in BFD?

A. short duration, high overhead
B. short duration, low overhead
C. long duration, high overhead
D. long duration, low overhead

Correct Answer: B
Explanation

QUESTION 123
A newly installed spoke router is configured for DMVPN with the ip mtu 1400 command. Which configuration allows the spoke to use fragmentation with the maximum negotiated TCP MTU over GRE?

A. ip tcp adjust-mss 1360
crypto ipsec fragmentation after-encryption

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B. ip tcp adjust-mss 1360
crypto ipsec fragmentation mtu-discovery
C. ip tcp payload-mtu 1360
crypto ipsec fragmentation mtu-discovery
D. ip tcp payload-mtu 1360
crypto ipsec fragmentation after-encryption

Correct Answer: A
Explanation

Explanation/Reference:
There is no "ip tcp payload-mtu" command so the correct answer should be "ip tcp adjust-mss".
Note: The "ip tcp adjust-mss 1360" command will signal the source and destination device during the three-way handshake to use the TCP MSS size of 1360 bytes so that if they create the full size packet there will still not be any drop/ fragmentation on the router.
We tested with Cisco IOSv15.4 but could not find the "crypto ipsec fragmentation mtu-discovery" command.

QUESTION 124
Refer to the exhibit.

```
DSW2#sh spanning-tree vlan 10

VLAN0010
  Spanning tree enabled protocol ieee
  Root ID     Priority    10
              Address     0013.80f9.8880
              Cost        2
              Port        9 (FastEthernet1/0/7)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4106   (priority 4096 sys-id-ext 10)
              Address     0018.7363.4300
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Fa1/0/7             Root FWD 2         128.9    P2p
Fa1/0/10            Desg FWD 4         128.12   P2p
Fa1/0/11            Desg FWD 2         128.13   P2p
Fa1/0/12            Desg FWD 2         128.14   P2p


DSW2#
*Mar  3 07:29:24.854: %SPANTREE-2-BLOCK_BPDUGUARD: Received BPDU on port Fa1/0/7
 with BPDU Guard enabled. Disabling port.
*Mar  3 07:29:24.854: %PM-4-ERR_DISABLE: bpduguard error detected on Fa1/0/7, put
 ting Fa1/0/7 in err-disable state
*Mar  3 07:29:24.879: %SPANTREE-2-BLOCK_BPDUGUARD: Received BPDU on port Fa1/0/7
 with BPDU Guard enabled. Disabling port.
*Mar  3 07:29:25.869: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEtherne
 t1/0/7, changed state to down
*Mar  3 07:29:26.884: %LINK-3-UPDOWN: Interface FastEthernet1/0/7, changed state
 to down
```

An engineer entered the no spanning-tree bpduguard enable on interface fa1/0/7 command. Which statement describes the effect of this command?

A. Fa1/0/7 remains in err-disabled state until the shutdown/no shutdown command is entered in the interface configuration mode
B. Interface Fa1/0/7 remains in err-disabled state until the errdisable recovery cause bpduguard command is entered in the interface configuration mode

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C. Fa1/0/7 remains in err-disabled state until the errdisable recovery bpduguard command is entered in the interface configuration mode
D. Interface Fa1/0/7 remains in err-disabled state until the spanning-tree portfast bpduguard disable command is entered in the interface configuration mode
E. Interface Fa1/0/7 returns to an up and operational state

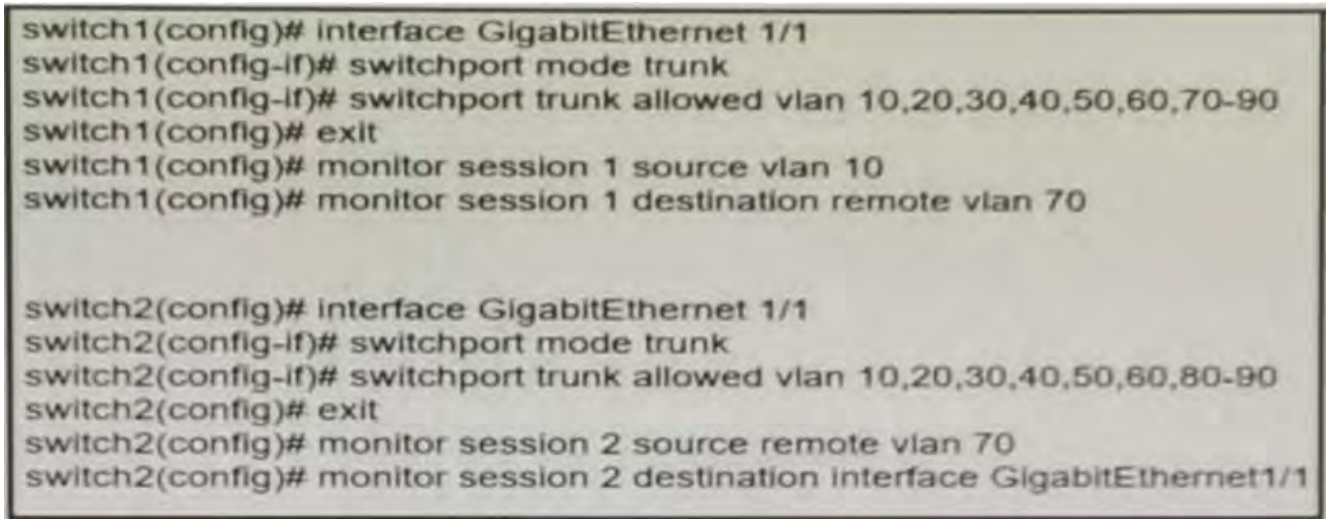
Correct Answer: A
Explanation

QUESTION 125
In a fabric-enabled wireless network, which device is responsible for maintaining the endpoint ID database?

A. fabric border node
B. fabric edge node
C. fabric wireless controller
D. control plane node

Correct Answer: D
Explanation

QUESTION 126
Refer to the exhibit.



A network administrator confiqured RSPAN to troubleshoot an issue between switch1 and switch2. The switches are connected using interface GigabitEthernet 1/1.

An external packet capture device is connected to swich2 interface GigabitEthernet1/2.

Which two commands must be added to complete this confiquration? (Choose two.)

A. switch2(config)# monitor session 2 destination vlan 10
B. switch1(config)# interface GigabitEthernet 1/1
switch1(confia-if# switchport mode access
switch1(config-if)# switchport access vlan 10
switch2(config)# interface GigabitEthernet 1/1
switch2(config-if)# switchport mode access

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switch2(config-if)# switchport access vlan 10

C. switch2(config)# monitor session 1 source remote vlan 70 switch2(config)# monitor session 1 destination interface GigabitEthernet1/1
D. switch2(config-if)# switchport trunk allowed vlan 10,20,30,40,50,60,70-80
E. switch2(config)# monitor session 1 source remote vlan 70 switch2(confia)# monitor session 1 destination interface GigabitEthernet1/2

Correct Answer: DE
Explanation

QUESTION 127
Refer to the exhibit.

```
SW1# show interface trunk

! Output omitted for brevity

Port        Mode     Encapsulation   Status      Native
Gi1/0/1     auto     802.1q          trunking    1

Port        Vlans allowed on trunk
Gi1/0/1     1-4094


SW2# show interface trunk

! Output omitted for brevity

Port        Mode     Encapsulation   Status      Native
Gi1/0/1     auto     802.1q          trunking    1

Port        Vlans allowed on trunk
Gi1/0/1     1-4094
```

The trunk between Gig1/0/1 of switch SW2 and Gig1/0/1 of switch SW1 is not operational.

Which action resolves this issue?

A. Configure both interfaces in dynamic auto DTP mode and ensure that the switches are in the same VTP domain
B. Configure both interfaces in dynamic desirable DTP mode and ensure that the switches are in the same VTP domain
C. Configure both interfaces in nonegotiate and ensure that the switches are in the different VTP domain
D. Configure both interfaces in dynamic auto DTP mode and ensure that the switches are in the different VTP domain

Correct Answer: B
Explanation

QUESTION 128

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How does IGMP function with multicast routing and PIM?

A. IGMP is enabled automatically when multicast routing and PIM are configured on a router
B. IGMP is incompatible with multicast routing
C. IGMP is incompatible with PIM
D. IGMP must be enabled manually when multicast routing and PIM are configured on a router.

Correct Answer: A
Explanation

QUESTION 129
With IGMPv2, which multicast group address does the IGMP querier use to send query messages to all hosts on the LAN?

A. 239.0.0.2
B. 224.0.0.1
C. 239.0.0.1
D. 224.0.0.2

Correct Answer: B
Explanation

QUESTION 130
What happens to the signal strength of an RF signal due to wave spreading?

A. The signal strength of the RF signal will fall off equally near the transmitter and also farther away
B. The signal strength of the RF signal will fall off quickly near the transmitter but more slowly farther away
C. The signal strength of the RF signal will fall off slowly near the receiver and more quickly farther away
D. The signal strength of the RF signal will fall off slowly near the transmitter but more quickly farther away

Correct Answer: B
Explanation

QUESTION 131
Refer to the exhibit.

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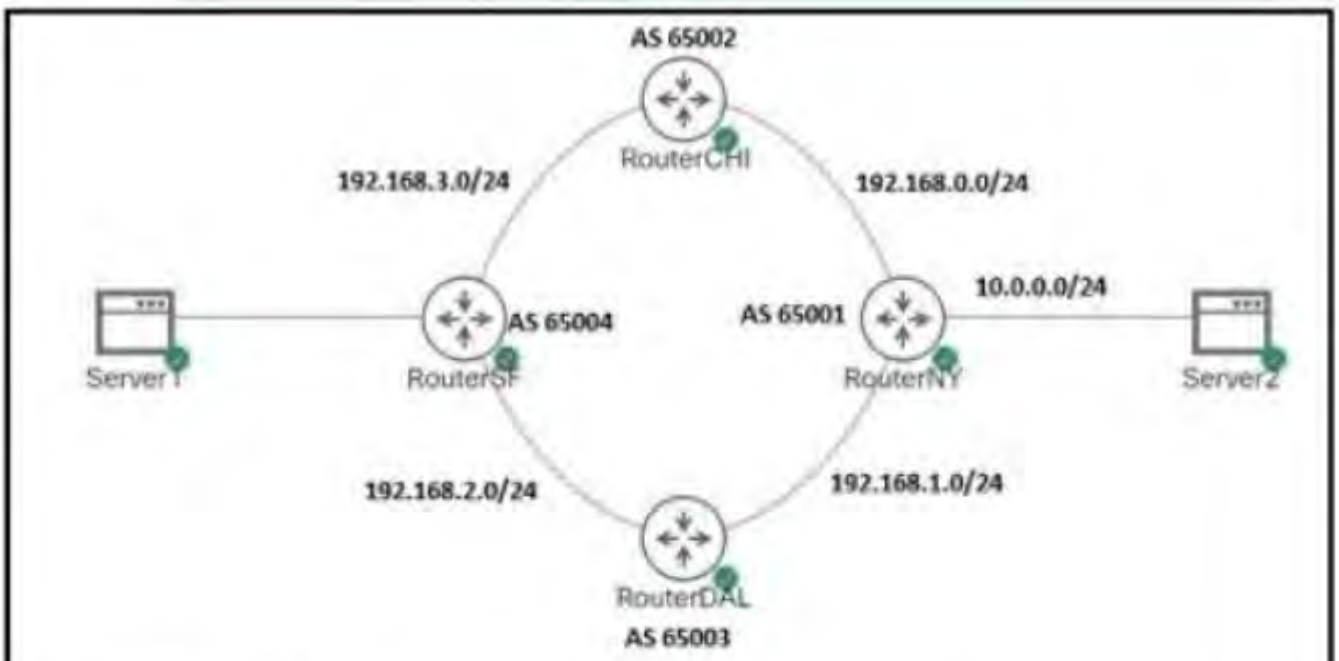


```
RouterSF#show ip route 10.0.0.0
Routing entry for 10.0.0.0/24, 1 known subnets
B        10.0.0.0 [20/0] via 192.168.2.2, 00:03:23
RouterSF#
RouterSF#show bgp 10.0.0.0
BGP routing table entry for 10.0.0.0/24, version 8
Paths: (2 available, best #2, table default)
Multipath: eiBGP
  Advertised to update-groups:
     2
  Refresh Epoch 1
  65002 65001
    192.168.3.2 from 192.168.3.2 (192.168.3.2)
      Origin IGP, localpref 100, valid, external
      rx pathid: 0, tx pathid: 0
      Updated on Sep 22 2020 21:32:27 UTC
  Refresh Epoch 2
  65003 65001
    192.168.2.2 from 192.168.2.2 (192.168.2.2)
      Origin IGP, localpref 100, valid, external, best
      rx pathid: 0, tx pathid: 0x0
      Updated on Sep 22 2020 21:31:57 UTC
RouterSF#
```

After configuring the BGP network, an engineer verifies that the path between server1 and server2 is functional, why did RouterSF choose the route from RouterDAL instead of the route from RouterCHI?

A. BGP is not running on RouterCHI
B. The Router-ID for Router DAL is lower than Router-ID for RouterCHI
C. There is a static route in RouterSF for 10.0.0.0/24

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D. The route from RouterDAL has a lower MED

Correct Answer: B
Explanation

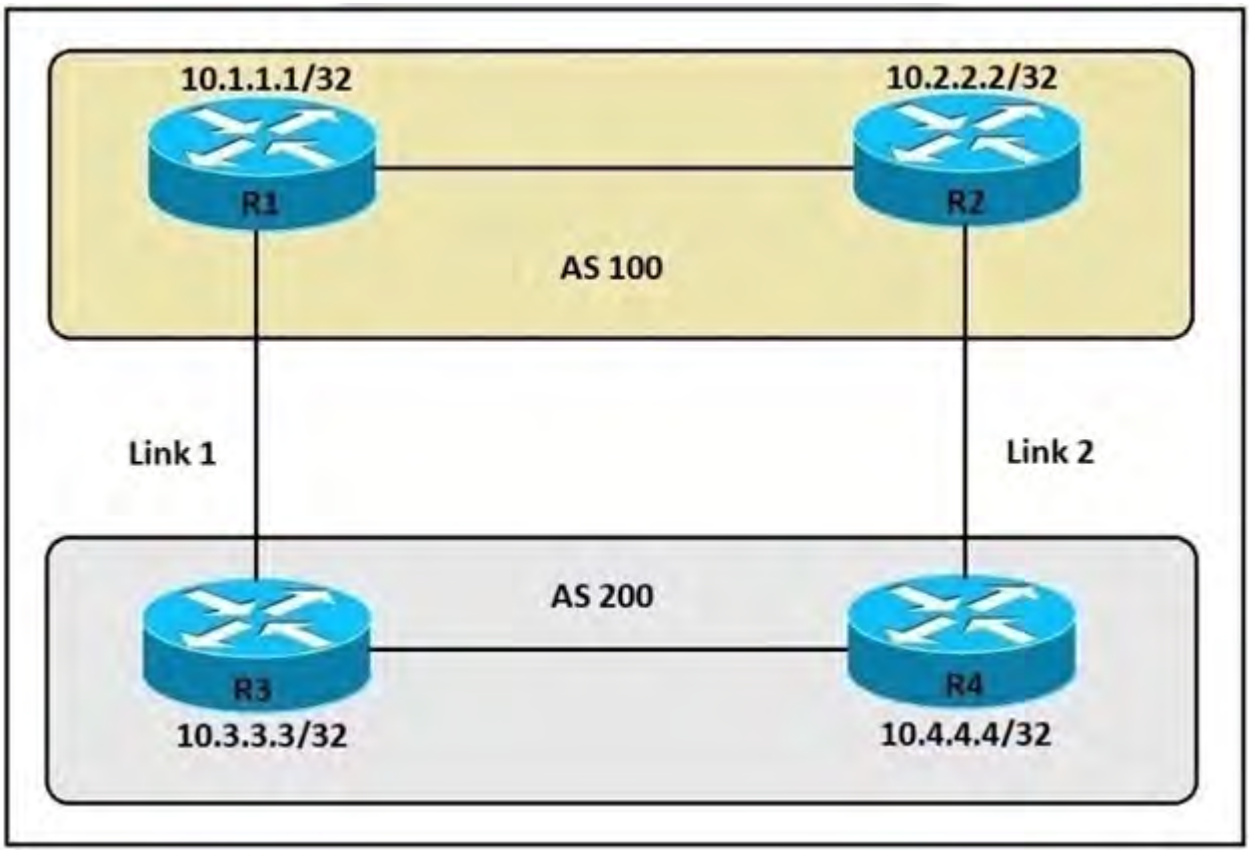
Explanation/Reference:
All things being the same, we see that DAL has the lower router ID. C does not make sense, as the med value is stripped when crossing AS's and is only useable for iBGP peers.

QUESTION 132
A network engineer is designing a Qos policy for voice and video applications. Which software queuing feature provides strict-priority servicing?

A. Class-Based Weighted Fair Queuing
B. Link Fragmentation
C. Low Larency Queuing
D. Automatic Qos

Correct Answer: C
Explanation

QUESTION 133
Refer to the exhibit.



An engineer must ensure that all traffic leaving AS 200 will choose Link 2 as the exit point. Assuming that all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers.

Which configuration accomplish task?

A. R4(config-router)bgp default local-preference 200

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B. R3(config-router)neighbor 10.1.1.1 weight 200
C. R3(config-router)bgp default local-preference 200
D. R4(config-router)nighbor 10.2.2.2 weight 200

Correct Answer: A
Explanation

Explanation/Reference:
Local preference is an indication to the AS about which path has preference to exit the AS in order to reach a certain network. A path with a higher local preference is preferred. The default value for local preference is 100.

Unlike the weight attribute, which is only relevant to the local router, local preference is an attribute that routers exchange in the same AS. The local preference is set with the "bgp default local-preference value " command.

In this case, both R3 & R4 have exit links but R4 has higher local-preference so R4 will be chosen as the preferred exit point from AS 200.

QUESTION 134
What is an advantage of using BFD?

A. It local link failure at layer 1 and updates routing table
B. It detects local link failure at layer 3 and updates routing protocols
C. It has sub-second failure detection for layer 1 and layer 3 problems.
D. It has sub-second failure detection for layer 1 and layer 2 problems.

Correct Answer: B
Explanation

Explanation/Reference:
BFD provides a low-overhead, short-duration method of detecting failures in the forwarding path between two adjacent routers, including the interfaces, data links, and forwarding planes. BFD is a detection protocol that you enable at the interface and routing protocol levels

QUESTION 135
Which unit is used to express the signal-to-noise ratio?

A. mW
B. db
C. amp
D. dbm

Correct Answer: B
Explanation

Explanation/Reference:
Signal-to-noise ratio (SNR or S/N) is the ratio of signal power to the noise power, and its unit of expression is typically decibels (dB).

QUESTION 136
Which design principle should be followed in a Cisco SD-Access wireless network deployment?

A. The WLC is connected outside of the fabric
B. The WLC is part of the fabric underlay
C. The access point is connected outside of the fabric.
D. The WLC is part of the fabric overlay.

Correct Answer: A

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Explanation

Explanation/Reference:
WLC
?WLC is connected outside Fabric (optionally directly to Border)
?WLC needs to reside in global routing table ?to talk to CP!
?No need for inter-VRF leaking for AP to join the WLC
?WLC can only belong to one FD. WLC talks to one CP (two for HA)

Access Points
?AP is directly connected to FE (or to an extended node switch)
?AP is part of Fabric overlay
?AP belongs to the INFRA_VN which is mapped to the global routing table (new in DNAC 1.1)
?AP joins the WLC in Local mode

QUESTION 137
Which three methods does Cisco DNA Center use to discover devices? (Choose three.)

A. CDP
B. SNMP
C. LLDP
D. Ping
E. NETCONF
F. specified range of IP addresses

Correct Answer: ACF
Explanation

Explanation/Reference:
There are three ways for you to discover devices:
1. Use Cisco Discovery Protocol (CDP) and provide a seed IP address.
2. Specify a range of IP addresses. (A maximum range of 4096 devices is supported.)
3. Use Link Layer Discovery Protocol (LLDP) and provide a seed IP address.

QUESTION 138
Which command set configures RSPAN to capture outgoing traffic from VLAN 3 on interface GigabitEthernet 0/3 while ignoring other VLAN traffic on the same interface?

A. monitor session 2 source interface gigabitethernet0/3 rx
   monitor session 2 filter vlan 3
B. monitor session 2 source interface gigabitethernet0/3 rx
   monitor session 2 filter vlan 1 - 2, 4 - 4094
C. monitor session 2 source interface gigabitethernet0/3 tx
   monitor session 2 filter vlan 3
D. monitor session 2 source interface gigabitethernet0/3 tx
   monitor session 2 filter vlan 1- 2, 4 - 4094

Correct Answer: C
Explanation

QUESTION 139
Which outbound access list, applied to the WAN interface of a router, permits all traffic except for http traffic sourced from the workstation with IP address 10.10.10.1?

A. ip access-list extended 10
   deny tcp host 10.10.10.1 any eq 80
   permit ip any any
B. ip access-list extended 200
   deny tcp host 10.10.10.1 eq 80 any

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permit ip any any

C. ip access-list extended NO_HTTP
deny tcp host 10.10.10 1 any eq 80

D. ip access-list extended 100
deny tcp host 10.10.10.1 any eq 80
permit ip any any

Correct Answer: D
Explanation

QUESTION 140
How is a data modeling language used?

A. To enable data to be easily structured, grouped validated, and replicated
B. To represent finite and well-defined network elements that cannot be changed.
C. To model the flows of unstructured data within the infrastructure.
D. To provide human readability to scripting languages

Correct Answer: A
Explanation

Explanation/Reference:
Customer needs are fast evolving. Typically, a network center is a heterogenous mix of various devices at multiple layers of the network. Bulk and automatic configurations need to be accomplished. CLI scraping is not flexible and optimal. Re- writing scripts many times, even for small configuration changes is cumbersome. Bulk configuration changes through CLIs are error-prone and may cause system issues. The solution lies in using data models-a programmatic and standards- based way of writing configurations to any network device, replacing the process of manual configuration. Data models are written in a standard, industry-defined language. Although configurations using CLIs are easier (more human-friendly), automating the configuration using data models results in scalability.

Reference:
https://www.cisco.com/c/en/us/td/docs/optical/ncs1000/60x/b_Datamodels_cg_ncs1000/b_Datamodels_cg_ncs1000_chapter_00.pdf

QUESTION 141
An engineer must configure interface GigabitEthernet0/0 for VRRP group 10. When the router has the highest priority in the group, it must assume the master role. Which command set must be added to the initial configuration to accomplish this task?
Initial Configuration
interface GigabitEthernet0/0
description To IDF A 38-24-044.40
ip address 172.16.13.2 255.255.255.0

A. vrrp 10 ip 172.16.13.254
vrrp 10 preempt

B. standby 10 ip 172.16.13.254
standby 10 priority 120

C. vrrp group 10 ip 172.16.13 254.255.255.255.0
vrrp group 10 priority 120

D. standby 10 ip 172.16.13.254 255.255.255.0
standby 10 preempt

Correct Answer: A
Explanation

Explanation/Reference:
In fact, VRRP has the preemption enabled by default so we don`t need the vrrp 10 preempt command. The default priority is 100 so we don`t need to configure it either. But notice that the correct command to configure the virtual IP address for the group is vrrp 10 ip {ip-address} (not vrrp group 10 ip ...) and this

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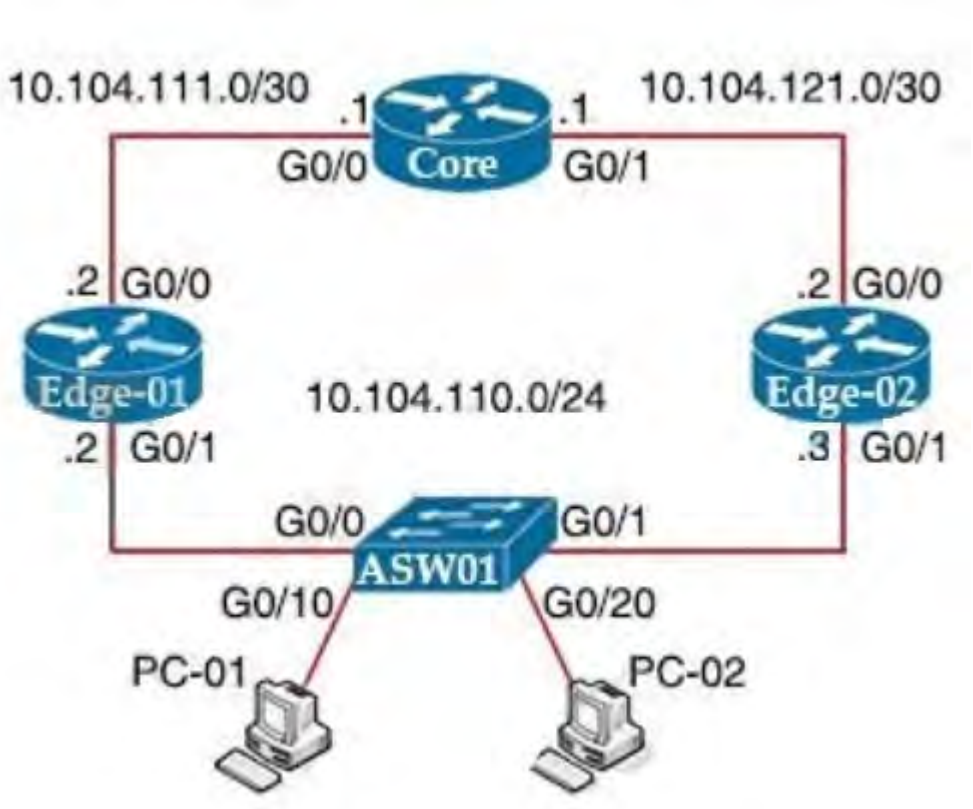
command does not include a subnet mask.

QUESTION 142
What are two reasons a company would choose a cloud deployment over an on-prem deployment? (Choose Two)

A. In a cloud environment, the company controls technical issues. On-prem environments rely on the service provider to resolve technical issue.
B. Cloud costs adjust up or down depending on the amount of resources consumed. On- Prem costs for hardware, power, and space are ongoing regardless of usage
C. Cloud deployments require long implementation times due to capital expenditure processes. On-Prem deployments can be accomplished quickly using operational expenditure processes.
D. Cloud resources scale automatically to an increase in demand. On-prem requires additional capital expenditure.
E. In a cloud environment, the company is in full control of access to their data. On-prem risks access to data due to service provider outages

Correct Answer: BD
Explanation

QUESTION 143
Refer to the exhibit.



Edge-01 is currently operational as the HSRP primary with priority 110. Which command on Edge-02 causes it to take over the forwarding role when Edge-01 is down?

A. standby 10 priority
B. standby 10 preempt
C. standby 10 track
D. standby 10 timers

Correct Answer: B

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Explanation

Explanation/Reference:
The preempt command enables the HSRP router with the highest priority to immediately become the active router.

QUESTION 144
Refer to the exhibit. What is the JSON syntax that is formed from the data?

Make is Gocar
Model is Zoom

Features are:
1. Power Windows
2. Manual Drive
3. Auto AC

A. Make":'Gocar, "Model': "Zoom", "Features": ["Power Windows", "Manual Dnve", "Auto AC"]}
B. `Make ": "Gocar1, "Model": "Zoom", "Features": ["Power Windows", "Manual Drive", "Auto AC"]
C. {"Make": Gocar, "Model": Zoom, "Features": Power Windows, Manual Drive, Auto AC}
D. ("Make":["Gocar", "Model": "Zoom"], Features": ["Power Windows", "Manual Drive", "Auto AC"]}

Correct Answer: A
Explanation

Explanation/Reference:
JSON syntax structure: + uses curly braces {} to hold objects and square brackets [] to hold arrays + JSON data is written as key/value pairs + A key/value pair consists of a key (must be a string in double quotation marks ""), followed by a colon :, followed by a value. For example: "name":"John" + Each key must be unique + Values must be of type string, number, object, array, boolean or null + Multiple key/value within an object are separated by commas , JSON can use arrays. Arrays are used to store multiple values in a single variable. For example:
{
"name":"John",
"age":30,
"cars":["Ford", "BMW", "Fiat"]
}
In the above example, "cars" is an array which contains three values "Ford", "BMW" and "Fiat".
Note: Although our correct answer above does not have curly braces to hold objects but it is still the best choice here.

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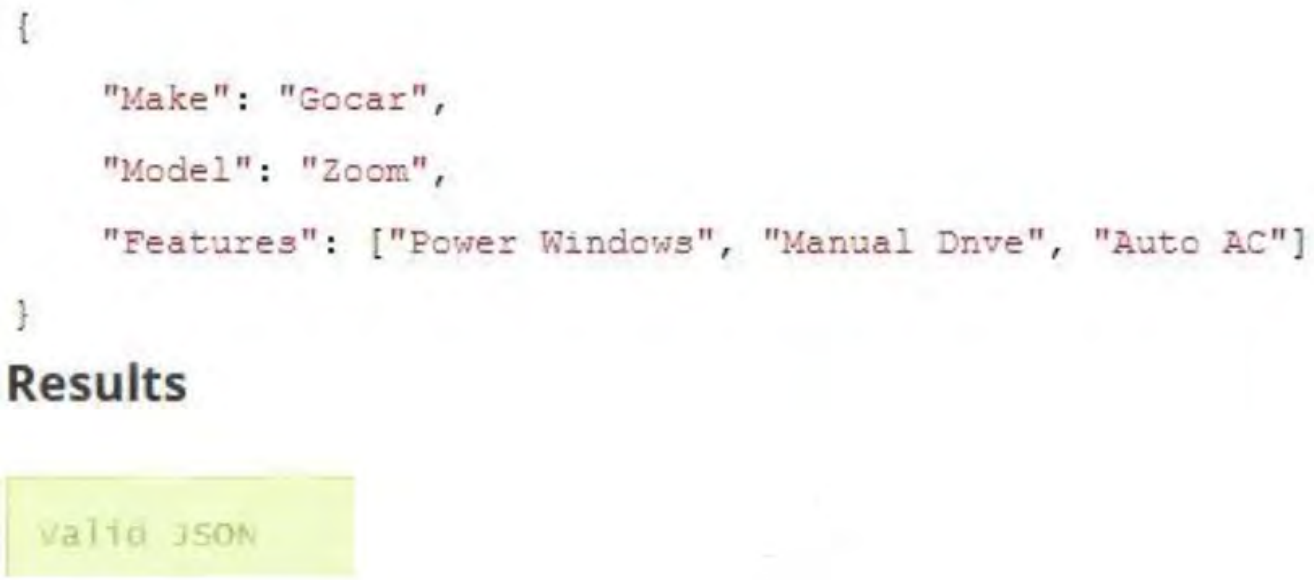

QUESTION 145
What is a capability of the Cisco DNA Center southbound API?

A. It adds support for managing non-Cisco devices from Cisco DNA Center.
B. It connects to ITSM services such as ServiceNow.
C. It sends webhooks from Cisco DNA Center when alerts are triggered.
D. It allows administrators to make API calls to Cisco DNA Center.

Correct Answer: A
Explanation

QUESTION 146
A customer requires their wireless data traffic to egress at the switch port of the access point.

Which access point mode supports this?

A. FlexConnect
B. Sniffer
C. Bridge
D. Monitor

Correct Answer: A
Explanation

Explanation/Reference:
https://study-ccnp.com/cisco-wireless-access-point-ap-modes-explained/

"FlexConnect Mode
FlexConnect AP mode enables switching traffic between an SSID and a VLAN locally if the CAPWAP to the WLC is down, even when the AP is at a remote site. It can also be configured to egress at the access point's LAN port."

QUESTION 147
Refer to the exhibit.

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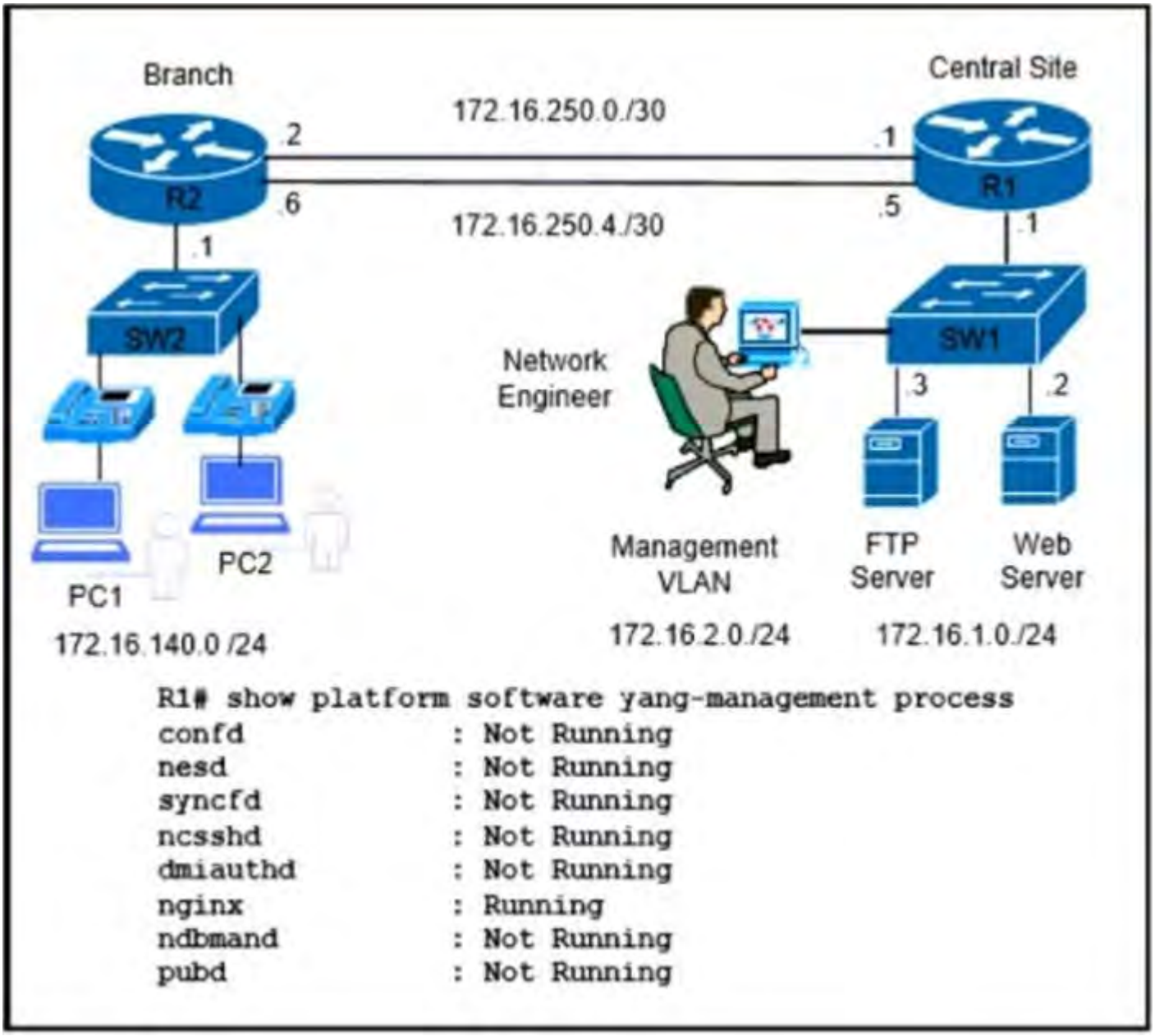

Which command is required on router R1 to start receiving RESTCONF requests?

A. R1(config)# ip http accounting commands 12 default
B. R1(config)# ip http server
C. R1(config)# restconf
D. R1(config)# ip http access-class 12

Correct Answer: C
Explanation

Explanation/Reference:
The example is taken exactly from this document:

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/167/b_167_programmability_cg/restconf_programmable_interface.pdf

Section "Verifying RESTCONF Configuration"

"The nginx process gets restrated and DMI process are started, when the restconf command is configured

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...
After AAA and the RESTCONF interface is configured, and nginx process and relevant DMI processes are running; the device is ready to receive RESTCONF requests."

QUESTION 148
Refer to the exhibit.

```
Cat9300(config)# monitor session 1 type erspan-source
Cat9300(config-mon-erspan-src)# source interface Gi1/0/3
Cat9300(config-mon-erspan-src)# destination
Cat9300(config-mon-erspan-src-dst)# erspan-id 1
Cat9300(config-mon-erspan-src-dst)# ip address 198.51.100.123
Cat9300(config-mon-erspan-src-dst)# origin ip address 10.4.255.100
Cat9300(config-mon-erspan-src-dst)# do ping 198.51.100.123 source 10.4.255.100
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 198.51.100.123, timeout is 2 seconds:
Packet sent with a source address of 10.4.255.100
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/1 ms
```

The administrator configures an ERSPAN session, but no packets are received on the destination host. Which action is required to complete the configuration?

A. Ensure that the ERSPAN destination addresses are not reachable through the Mgmt-vrf VRF.
B. Ensure that the ERSPAN destination is reachable from the switch.
C. Configure the ERSPAN destination VLAN as an RSPAN VLAN.
D. Enable the ERSPAN session.

Correct Answer: D
Explanation

Explanation/Reference:
"Finally, enable the session using the `no shutdown' command to guarantee it is active."

https://study-ccnp.com/erspan-encapsulated-remote-span-explained/

QUESTION 149
Refer to the exhibit.

```
1  def main():
2      vlans_list = [10, 20, 30]
3      add_vlans(vlans_list)
4      print(vlans_list)
5  def add_vlans(vlans):
6      for i in range(len(vlans)):
7          vlans[i]+=100
8
9  if __name__ == '__main__':
10     main()
```

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What is the result of running this code?

A. A list of lists is created.
B. A list of new VLANs is created.
C. An error is displayed.
D. A dictionary is created.

Correct Answer: B
Explanation

Explanation/Reference:
tried it online. the thing is that the vars are referenced and not sent by value.
def main():
vlans_list = [10, 20, 30]
add_vlans(vlans_list)
print(vlans_list)
def add_vlans(vlans):
for i in range(len(vlans)):
vlans[i]+=100

if _name_ == '_main_':
main()

QUESTION 150
What is the purpose of an integration API in Cisco DNA Center?

A. Obtain information about clients, sites, and topology from Cisco DNA Center.
B. Enable external systems to take actions in response to an event.
C. Allow the platform into approval chains in ITSM.
D. Enable discovery and control of the network by using HTTPS verbs.

Correct Answer: C
Explanation

QUESTION 151
Router R1 must be configured as a UDP responder on port 6336. Which configuration accomplishes this task?

A. (config)#ip sla responder udp-echo ipaddress 10.10.10.1 port 6336
B. (config)#ip sla responder udp-echo ipv4 10.10.10.1 port 6336
C. (config)#ip sla responder ipaddress 10.10.10.1 port 6336
D. (config-if)#ip sla responder udp-port ipaddress 10.10.10.1 port 6336

Correct Answer: A
Explanation

QUESTION 152
In Cisco DNA Center, what is used to publish events and notifications to a third-party product such as IPAM?

A. intent API
B. southbound SDK
C. integration API
D. RESTful API

Correct Answer: C

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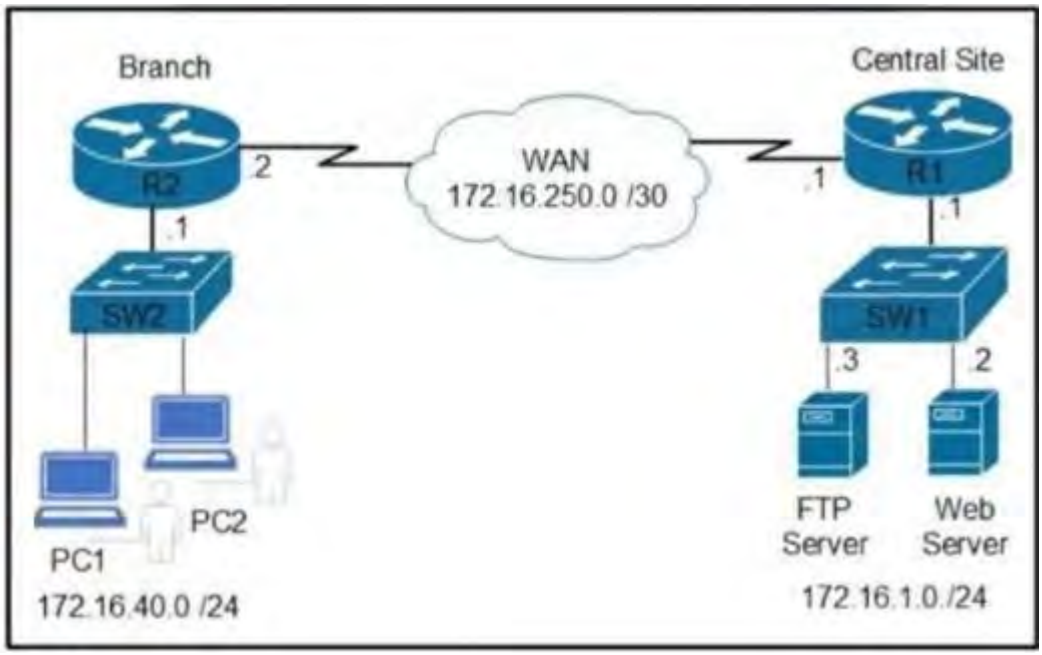
Explanation

QUESTION 153
Refer to the exhibit.



Which command is required to validate that an IP SLA configuration matches the traffic between the branch office and the central site?

A. R1# show ip sla group schedule
B. R1# show ip route
C. R1# show ip sla configuration
D. R1# show ip sla statistics

Correct Answer: D
Explanation

QUESTION 154
Refer to the exhibit.

```
*Sep 16 09:13:40:974: %SPANTREE-7-RECV_1Q_NON_TRUNK: Received 802.1Q BPDU on non
trunk GigabitEthernet0/0 VLAN0001.
*Sep 16 09:13:40:977: %SPANTREE-7-BLOCK_PORT_TYPE: Blocking GigabitEthernet0/0
on VLAN0001. Inconsistent port type.
```

Two switches are interconnected using interface GigabitEthernet0/0 on both sides. While configuring one of the switches, a network engineer receives the logging message. Which action resolves this issue?

A. Block VLAN1 on the trunk interface GigabitEthernet0/0.
B. Configure interface GigabitEthernet0/0 as an access port.
C. Configure interface GigabitEthernet0/0 as a trunk port.
D. Shutdown interface GigabitEthemet0/0 and bring it back up.

Correct Answer: C
Explanation

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QUESTION 155
What is one being of implementing a data modetag language?

A. accuracy of the operations performed
B. uses XML style of data formatting
C. machine-oriented logic and language-facilitated processing.
D. conceptual representation to simplify interpretation.

Correct Answer: A
Explanation

QUESTION 156
Which JSON script is properly formatted?

A.
```
"car":[
    {
        "type":"A New Book",
        "model":"J Doe",
        "year":"1"
    }]
```

B.
```
{
  "host":
    [
        "name":"SwitchA,
        "model":"Catalyst",
        "serial":"0438045649",
    ]
}
```

C.
```
{
  "book":[
    {
        "title":"A New Book,
        "author":"J P Doe",
        "edition":"2"
    }]
}
```

D.
```
[
  "class":{

        "title":"Science",
        "grade":"11",
        "location":"Room C",
    }]
]
```

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

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D. Option D

Correct Answer: B
Explanation

QUESTION 157
"HTTP/1.1 204 content" is returned when cur -I -x DELETE command is issued. Which situation has occurred?

A. The object could not be located at the URI path
B. The command succeeded in deleting the object
C. The object was located at the URI, but it could not be deleted.
D. The URI was invalid

Correct Answer: B
Explanation

QUESTION 158
Where is radio resource management performed in a cisco SD-access wireless solution?

A. DNA Center
B. control plane node
C. wireless controller
D. Cisco CMX

Correct Answer: C
Explanation

Explanation/Reference:
Fabric wireless controllers manage and control the fabric-mode APs using the same general model as the traditional local-mode controllers which offers the same operational advantages such as mobility control and radio resource management. A significant difference is that client traffic from wireless endpoints is not tunnelled from the APs to the wireless controller. Instead, communication from wireless clients is encapsulated in VXLAN by the fabric APs which build a tunnel to their first-hop fabric edge node. Wireless traffic it tunneled to the edge nodes as the edge nodes provide fabric services such as the Layer 3 Anycast Gateway, policy, and traffic enforcement.
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html

QUESTION 159
Which deployment option of Cisco NQFW provides scalability?

A. clustering
B. Inline tap
C. high availability
D. tap

Correct Answer: C
Explanation

QUESTION 160
Refer to the exhibit.

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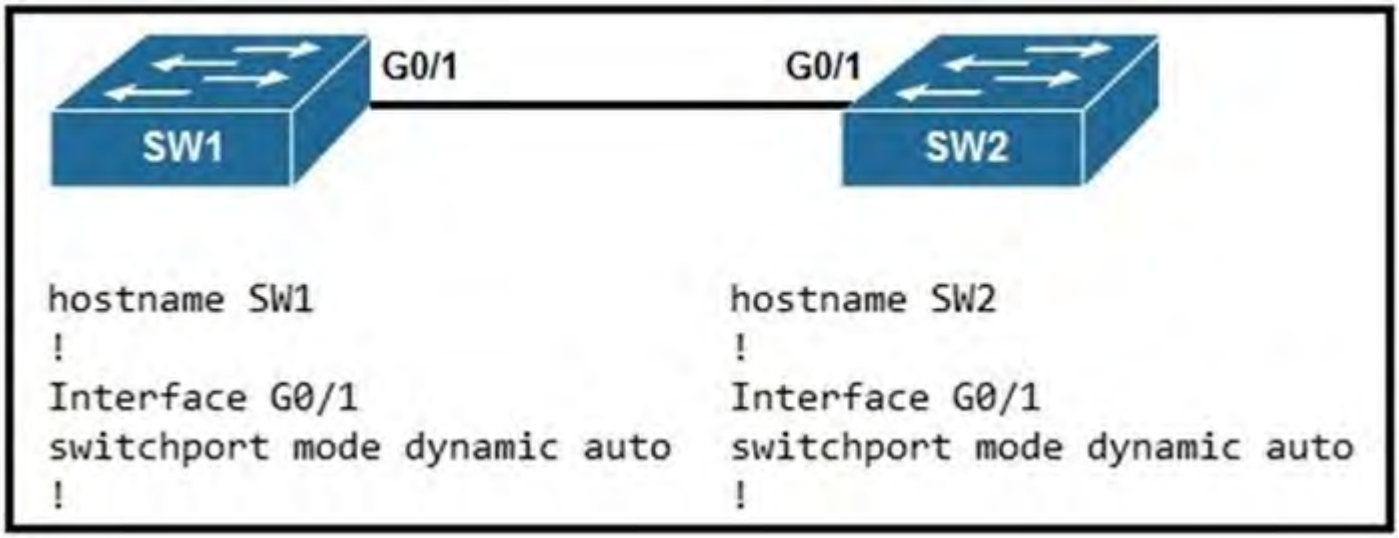

An engineer attempts to configure a trunk between switch sw1 and switch SW2 using DTP, but the trunk does not form. Which command should the engineer apply to switch SW2 to resolve this issue?

A. switchport mode dynamic desirable
B. switchport nonegotiate
C. no switchport
D. switchport mode access

Correct Answer: A
Explanation

QUESTION 161
What is one difference between saltstack and ansible?

A. SaltStack uses an API proxy agent to program Cisco boxes in agent mode, whereas Ansible uses a Telnet connection.
B. SaltStack uses the Ansible agent on the box, whereas Ansible uses a Telnet server on the box
C. SaltStack is agent based, whereas Ansible is agentless.
D. SaltStack uses SSH to interact with Cisco devices, whereas Ansible uses an event bus

Correct Answer: C
Explanation

QUESTION 162
Refer to the exhibit.

A network engineer must simplify the IPsec configuration by enabling IPsec over GRE using IPsec profiles. Which two configuration changes accomplish this? (Choose two).

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```
access-list 100 permit gre host 209.165.201.1 host 209.165.201.6

crypto isakmp policy 5
authentication pre-share
hash sha256
encryption aes
group 14

crypto isakmp key D@t@c3nt3r address 209.165.201.6

crypto ipsec transform-set My_Set esp-aes esp-sha-hmac
mode transport

crypto map MAP 10 ipsec-isakmp
 set peer 209.165.201.6
 set transform-set My_Set
 match address 100

interface GigabitEthernet0/0
description outside_interface
 no switchport
 ip address 209.165.201.1 255.255.255.252
 crypto map MAP

interface Tunnel100
ip address 192.168.100.1 255.255.255.0
ip mtu 1400
tunnel source GigabitEthernet0/0
tunnel destination 209.165.201.6

ip route 10.20.0.0 255.255.255.0 192.168.100.2 Tunnel100
```

```
access-list 100 permit gre host 209.165.201.6 host 209.165.201.1

crypto isakmp policy 5
authentication pre-share
hash sha256
encryption aes
group 14

crypto isakmp key D@t@c3nt3 address 209.165.201.1

crypto ipsec transform-set My_Set esp-aes esp-sha-hmac
mode transport

crypto map MAP 10 ipsec-isakmp
 set peer 209.165.201.1
 set transform-set My_Set
 match address 100

interface GigabitEthernet0/1
description outside_interface
 no switchport
 ip address 209.165.201.6 255.255.255.252
 crypto map MAP

interface Tunnel100
ip address 192.168.100.2 255.255.255.0
ip mtu 1400
tunnel source GigabitEthernet0/1
tunnel destination 209.165.201.1

ip route 10.10.0.0 255.255.255.0 192.168.100.1 Tunnel100
```

A. Create an IPsec profile, associate the transform-set ACL, and apply the profile to the tunnel interface.
B. Apply the crypto map to the tunnel interface and change the tunnel mode to tunnel mode ipsec ipv4.
C. Remove all configuration related to crypto map from R1 and R2 and eliminate the ACL.
D. Create an IPsec profile, associate the transform-set, and apply the profile to the tunnel interface.
E. Remove the crypto map and modify the ACL to allow traffic between 10.10.0.0/24 to 10.20.0.0/24.

Correct Answer: CD
Explanation

Explanation/Reference:
A is wrong, you don't use a "transform-set ACL"
B is wrong. question states use IPsec profiles. Crypto maps was the old way of doing ipsec tunnels before profiles.
C is correct, need to remove crypto map config or it will cause some confusion if the tunnel profile is applied. Didn't lab it up, but book references this. D is correct, all you need to do is create a profile and associate the transform-set to this profile, then apply it to the tunnel. If no transform set was created you would have to create one. E is wrong, i believe removing crypto map would cause the traffic to flow unencrypted over the tunnel. acl in this case is to match the interesting traffic to be encrypted. it's denying it.

QUESTION 163
How does a router behave when configured with the default DNS lookup settings, and a URL is entered on the CLI?

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A. prompts the user to specify the desired IP address.
B. initiates a pinfsfg request to the URL.
C. continuously attxempts tos resolve the URL until the command is cancelled.
D. attempts to query a DNS server on the network

Correct Answer: D
Explanation

QUESTION 164
What does a router do when configured with the default DNS lookup settings, and a URL is entered on the CLI?

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

Correct Answer: D
Explanation

QUESTION 165
What are two benefits of YANG? (choose two)

A. it collects statistical constraint analysis information
B. In enforces the use of specific encoding format for NETCONF
C. in enforces configuration semantics
D. it enables multiple leaf statements to exist within a leaf list
E. it enforces configuration constraints

Correct Answer: BE
Explanation

QUESTION 166
Refer to the exhibit.

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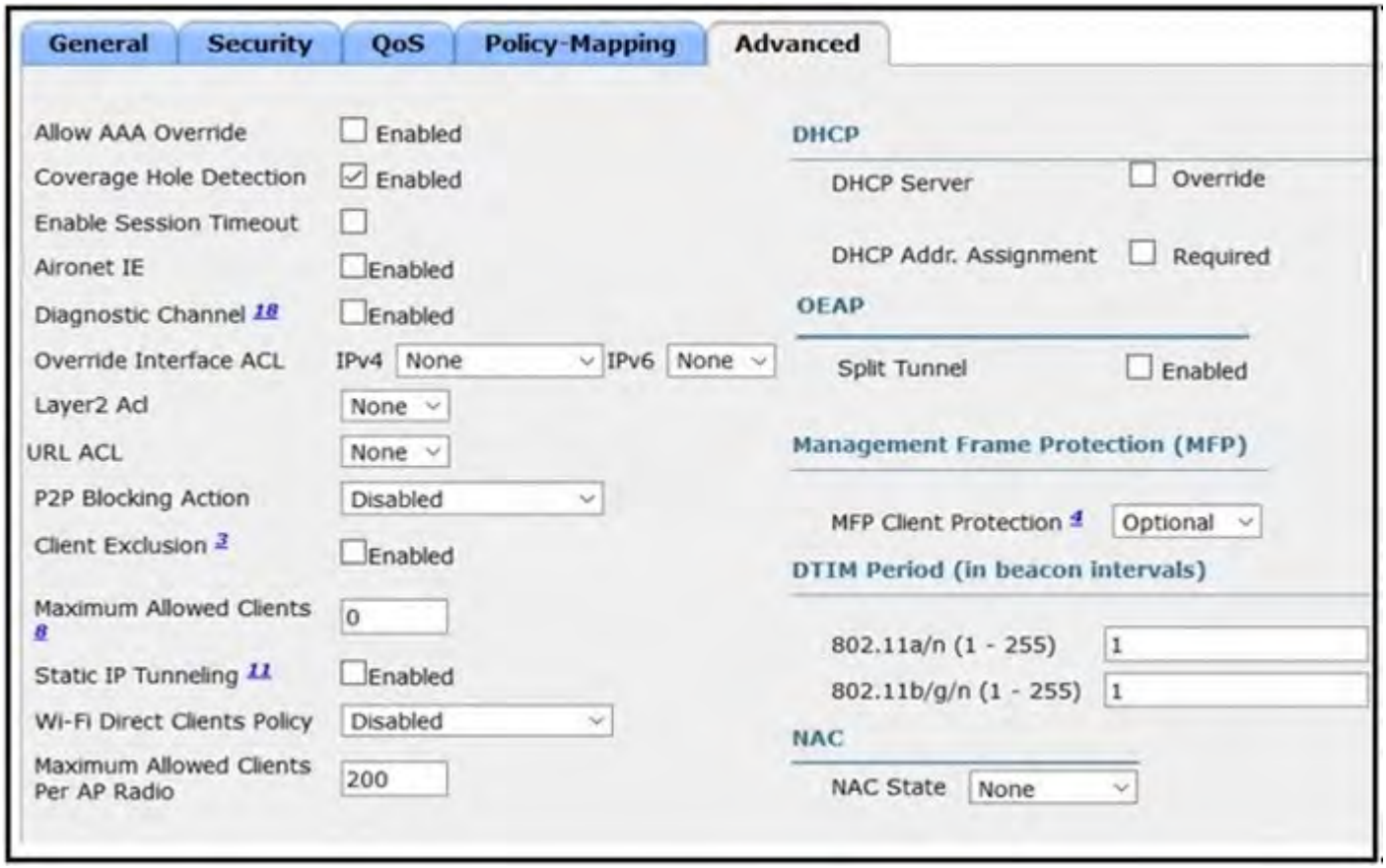

An engineer has configured Cisco ISE to assign VLANs to clients based on their method of authentication, but this is not working as expected. Which action will resolve this issue?

A. require a DHCP address assignment
B. utilize RADIUS profiling
C. set a NAC state
D. enable AAA override

Correct Answer: D
Explanation

Explanation/Reference:
The AAA Override option of a WLAN enables you to configure the WLAN for identity networking. It enables you to apply VLAN tagging, Quality of Service (QoS), and Access Control Lists (ACLs) to individual clients based on the returned RADIUS attributes from the AAA server.
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_010110111.html

QUESTION 167
Refer to the exhibit. An engineer implemented several configuration changes and receives the logging message on switch1. Which action should the engineer take to resolve this issue?

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```
Switch1#
*May 2 15:12:44:477: %SPANTREE-7-RECV_1Q_NON_TRUNK: Received 802.1Q BPDU on non trunk GigabitEthernet0/0 VLAN1.
*May 2 15:12:44:477: %SPANTREE-7-BLOCK_PORT_TYPE: Blocking GigabitEthernet0/0 on VLAN0001. Inconsistent port type.
```

```
hostname Switch1
!
vtp domain DATACENTER1
!
Interface Gi0/0
description TO DC2-Switch2
switchport mode trunk
!
Interface Vlan10
description LAN-10
ip address 10.0.0.1 255.255.255.0
```

```
hostname Switch2
!
vtp domain DATACENTER2
!
Interface Gi0/0
description TO DC1-Switch1
switchport mode dynamic desirable
!
Interface Vlan10
description LAN-10
ip address 10.0.0.2 255.255.255.0
```

A. Change the VTP domain to match on both switches
B. Change Switch2 to switch port mode dynamic auto
C. Change Switch1 to switch port mode dynamic auto
D. Change Switch1 to switch port mode dynamic desirable

Correct Answer: A
Explanation

QUESTION 168
What is a characteristic of MACsec?

A. 802.1AE is built between the host and switch using the MKA protocol, which negotiates encryption keys based on the primary session key from a successful 802.1X session.
B. 802.1AE is negotiated using Cisco AnyConnect NAM and the SAP protocol.
C. 802.1AE is built between the host and switch using the MKA protocol using keys generated via the Diffie-Hellman algorithm (anonymous encryption mode).
D. 802.1AE provides encryption and authentication services.

Correct Answer: A
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/identity-based-networking-services/deploy_guide_c17-663760.html

QUESTION 169
A network engineer attempts to connect to the Router1 console port.
Router1#telnet 192.168.1.1
% telenet connections not permitted from this terminal

Which configuration is needed to allow Telnet connections?

A. Router1(config)# line vty 0 15
Router1(config-line)# transport output telnet
B. Router1(config)# telnet client
C. Router1(config)# line console 0
Router1(config-line)# transport output telnet
D. Router1(config)# access-list 100 permit tcp any any eq telnet

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```
Router1(config)# line console 0
Router1(config-line)# access-class 100 out
```

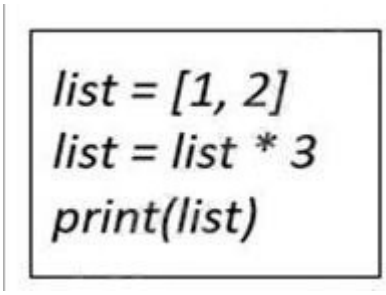
Correct Answer: C
Explanation

Explanation/Reference:
Router#
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#line con 0
Router(config-line)#transport output none
Router(config-line)#end
*Apr 19 17:33:16.198: %SYS-5-CONFIG_I: Configured from console by console
Router#disable
Router>telnet 10.0.0.2
% telnet connections not permitted from this terminal
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#line console 0
Router(config-line)#transport output telnet
Router(config-line)#exit
Router(config)#end
Router#
*Apr 19 17:34:06.111: %SYS-5-CONFIG_I: Configured from console by console
Router#disable
Router>telnet 10.0.0.2
Trying 10.0.0.2 ...
% Connection refused by remote host

Router>

Reference: https://www.cisco.com/c/en/us/td/docs/routers/sdwan/command/iosxe/qualified-cli-command-reference-guide/m-line-commands.pdf

QUESTION 170
Refer to the exhibit.



What is the value of the variable list after the code is run?

A. [1, 2], [1, 2], [1, 2]
B. [1, 2] * 3
C. [1, 2, 1, 2, 1, 2]
D. [3, 6]

Correct Answer: C
Explanation

Explanation/Reference:
>>> list = [1, 2]
>>> list = list * 3

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>>> print (list)
[1, 2, 1, 2, 1, 2]

QUESTION 171
Which protocol is used to encrypt control plane traffic between SD-WAN controllers and SDWAN endpoints?

A. DTLS
B. IPsec
C. PGP
D. HTTPS

Correct Answer: A
Explanation

QUESTION 172
Which method is used by an AP to join HA controllers and is configured in NVRAM?

A. stored WLC information
B. DNS
C. IP Helper Addresses
D. Primary/Secondary/Tertiary/Backup

Correct Answer: D
Explanation

QUESTION 173
Refer to the exhibit. What is displayed when the code is run?

```
def main():
    print("The answer is " + str(magic(5)))

def magic(num):
    try:
        answer = num + 2 * 10
    except:
        answer = 100
    return answer

main()
```

A. The answer is 25
B. The answer is 70
C. The answer is 5
D. The answer is 100

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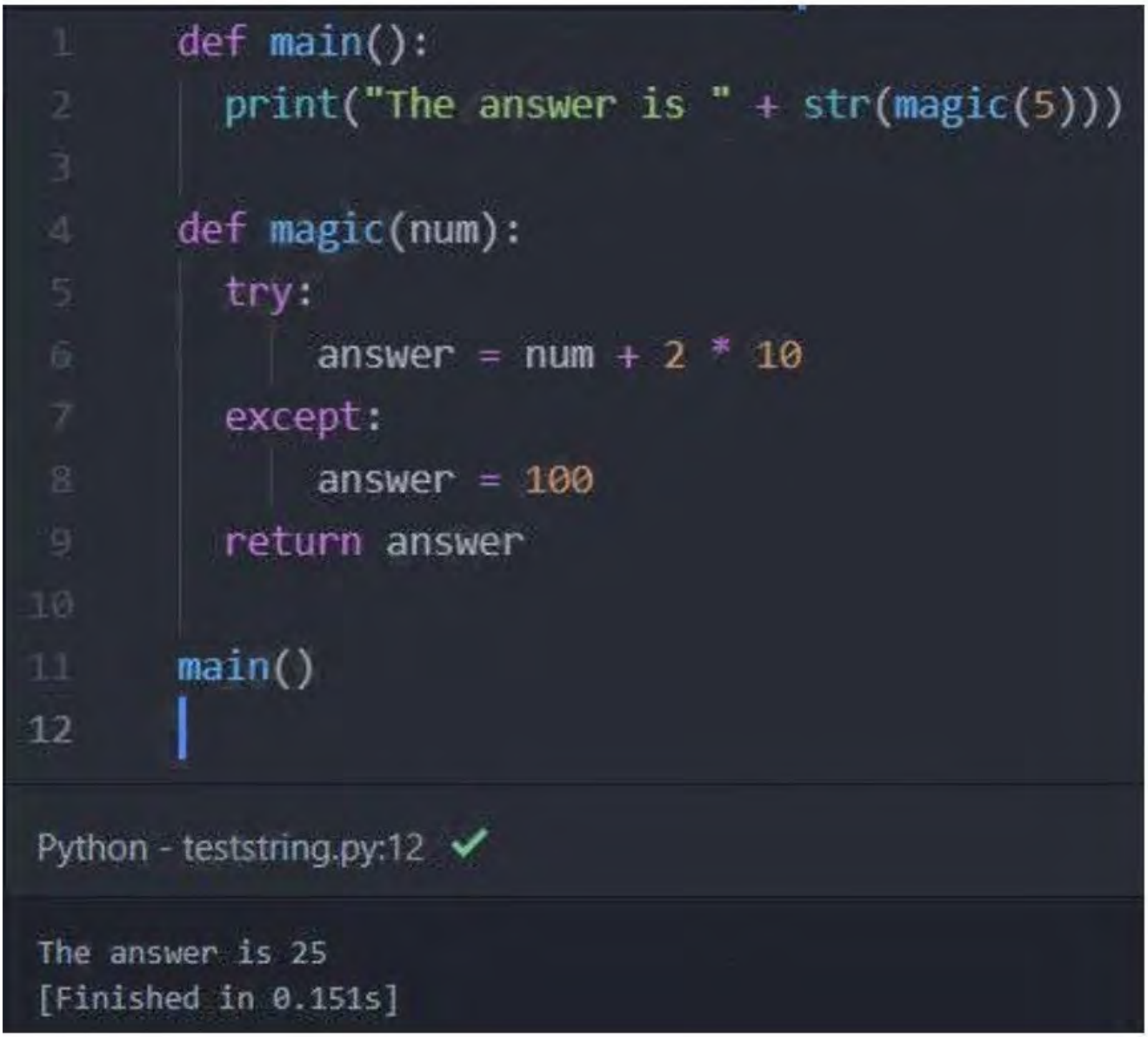
Correct Answer: A
Explanation

Explanation/Reference:
The "magic" function receives a number, which is 5 from main() in this question. This function returns a result of 5 + 2*10 = 25 and the str() function converts it into a string ("25") before printing to the terminal.



QUESTION 174
Refer to the exhibit.

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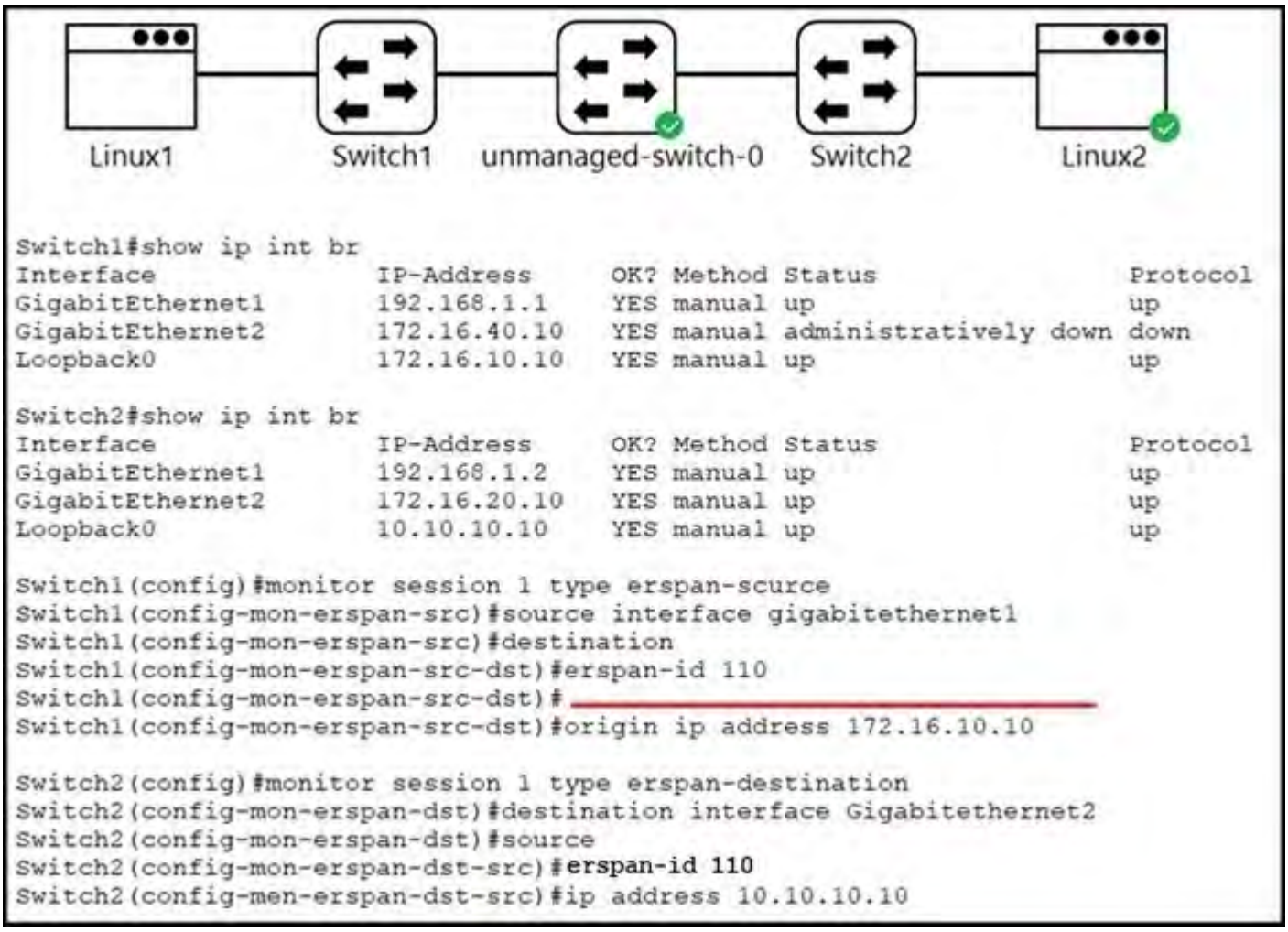

An engineer must configure an ERSPAN tunnel that mirrors traffic from Linux1 on Switch1 to Linux2 on Switch2. Which command must be added to the source configuration to enable the ERSPAN tunnel?

A. (config-mon-erspan-src-dst)#no shut
B. (config-mon-erspan-src-dst)#monitor session 1 activate
C. (config-mon-erspan-src-dst)#traffic bidirectional
D. (config-mon-erspan-src-dst)#ip address 10.10.10.10

Correct Answer: D
Explanation

Explanation/Reference:
IP address in destination session and IP address in source session should match. If they don't- that is causing the drops.

Reference: https://community.cisco.com/t5/networking-documents/understanding-span-rspan-and-erspan/ta-p/3144951

QUESTION 175
Refer to the exhibit.

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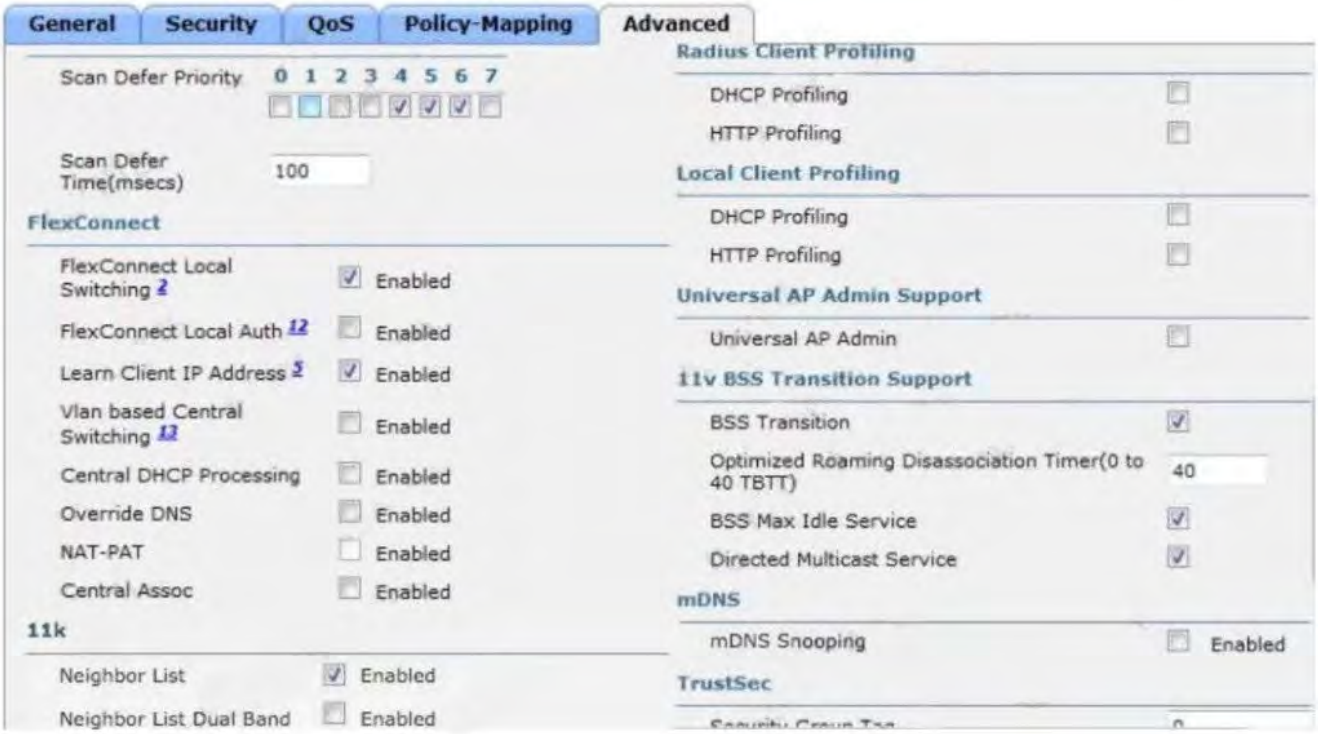

An engineer configured the Bonjour Gateway on a Cisco WLC to support Apple Airplay. Users cannot see Apple TV while on the WLAN. Which action resolves this issue?

A. Disable Neighbor List Dual Band
B. Enable mDNS Snooping
C. Disable Directed Multicast
D. Enable FlexConnect Local Switching

Correct Answer: B
Explanation

Explanation/Reference:
To allow Bonjour to traverse the wireless network there will need to be some features enabled:
+ mDNS
+ Broadcast forwarding
+ Multicast
+ IGMP snooping

Reference: https://packet6.com/configuring-bonjour-cisco-wlc/

QUESTION 176
Refer to the exhibit. Reachability between servers in a network deployed with DHCPv6 is unstable. Which

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command must be removed from the configuration to make DHCPv6 function?

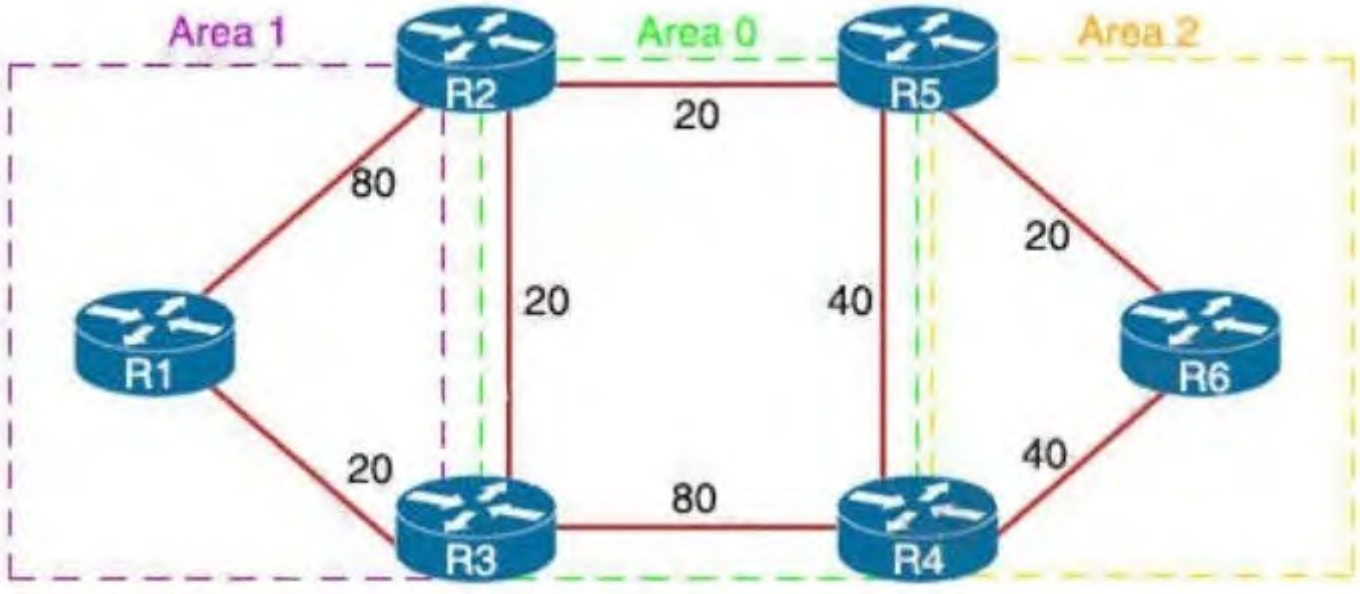
```
ipv6 dhcp pool DHCPPOOL
address prefix 2001:0:1:4:/64 lifetime infinite infinite

interface FastEthernet0/0
ip address 10.0.0.1 255.255.255.240
duplex auto
speed auto
ipv6 address 2001:0:1:4::1/64
ipv6 enable
ipv6 nd ra suppress
ipv6 ospf 1 area 1
ipv6 dhcp server DHCPPOOL
```

A. ipv6 address 2001:0:1:4::1/64
B. ipv6 dhcp server DHCPPOOL
C. ipv6 nd ra suppress
D. address prefix 2001:0:1:4::/64 lifetime infinite infinite

Correct Answer: C
Explanation

QUESTION 177
Refer to the exhibit. R6 should reach R1 via R5>R2>R1. Which action resolves the issue?



A. Decrease the cost to 2 between R6-R5-R2.
B. Decrease the cost to 41 between R2 and R1.

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C. Increase the cost to 61 between R2 and R3.
D. Increase the cost to 61 between R2-R3-R1.

Correct Answer: C
Explanation

Explanation/Reference:
The correct answer should be C.
Answer B cannot be correct because in this case, traffic will be forwarded via R2-R3-R1 (which has a total cost of 40 and is not the desired path) . R2-R1 has a total cost of 41 which is not lower than 40. Increasing the cost between R2 and R3 to 61 will be our best choice because the total cost via R2-R3-R1 will be 81 so this will not be the best path, making our desired path R2-R1 the best one (with a cost of 80).

QUESTION 178
Refer to the exhibit. Router R2 should be learning the route for 10.123.187.0/24 via EIGRP. Which action resolves the issue without introducing more issues?

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```
C       10.1.3.0/30 is directly connected, FastEthernet0/1
C       10.1.2.0/30 is directly connected, FastEthernet0/0
C       10.1.1.0/30 is directly connected, FastEthernet1/0
O E2    10.19.0.0/24 [110/20] via 10.1.3.2, 00:02:04, FastEthernet0/1
D       10.55.13.0/24 [90/409600] via 10.1.2.2, 00:01:00, FastEthernet0/0
D       10.37.100.0/24 [90/409600] via 10.1.2.2, 00:01:00, FastEthernet0/0
C       10.100.10.0/29 is directly connected, FastEthernet2/0.10
D       10.55.72.0/24 [90/409600] via 10.1.2.2, 00:01:01, FastEthernet0/0
C       10.100.20.0/29 is directly connected, FastEthernet2/0.20
O E2    10.144.1.0/24 [110/20] via 10.1.3.2, 00:12:51, FastEthernet0/1
D       10.55.144.0/24 [90/409600] via 10.1.2.2, 00:01:01, FastEthernet0/0
O E2    10.123.187.0/24 [110/20] via 10.1.3.2, 00:12:51, FastEthernet0/1
```

```
R2#sh ip eigrp topology
IP-EIGRP Topology Table for AS(100)/ID(10.100.20.2)

Codes: P - Passiver, A - Active, U - Update, Q - Query, R - Reply,
r- reply Status, s - sia Status
P 10.1.3.0/30, 1 successors, FD is 281600 via Connected, FastEthernet0/1
P 10.1.2.0/30, 1 successors, FD is 281600 via Connected, FastEthernet0/0
P 10.1.1.0/30, 1 successors, FD is 28160 via Connected, FastEthernet1/0
P 10.55.13.0/24, 1 successors, FD is 409600 via 10.1.2.2 (409600/128256), FastEthernet0/0
P 10.55.100.0/24, 1 successors, FD is 409600 via 10.1.2.2 (409600/128256), FastEthernet0/0
P 10.55.72.0/24, 1 successors, FD is 409600 via 10.1.2.2 (409600/128256), FastEthernet0/0
P 10.55.144.0/24, 1 successors, FD is 409600 via 10.1.2.2 (409600/128256), FastEthernet0/0
P 10.123.187.0/24, 0 successors, FD is inaccessible via 10.1.2.2 (409600/128256), FastEthernet0/0
```

A. Remove route redistribution in R2 for this route in OSPF.
B. Use distribute-list to modify the route as an internal EIGRP route.
C. Redistribute the route in EIGRP with metric, delay, and reliability.
D. Use distribute-list to filter the external routes in OSPF.

Correct Answer: A
Explanation

QUESTION 179
Refer to the exhibit.TCP traffic should be reaching host 10.10.10.10/24 via R2. Which action resolves the issue?

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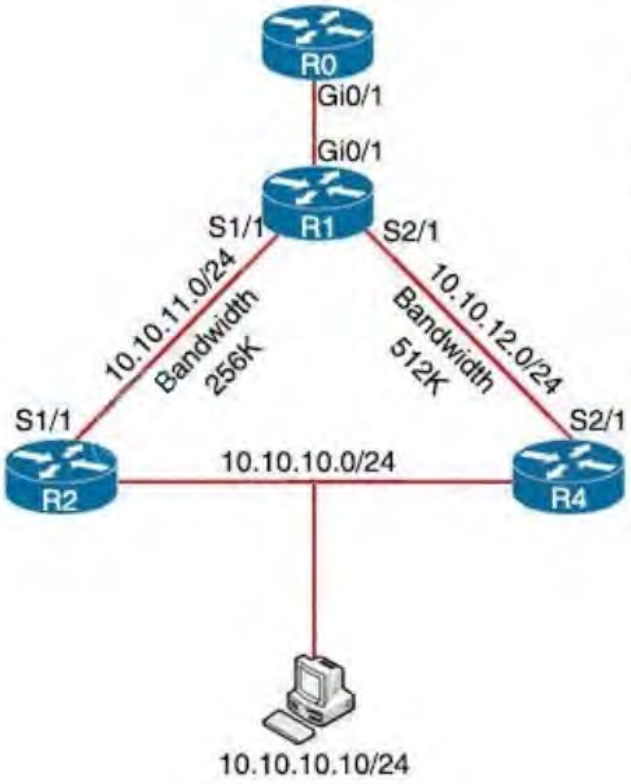


```
R1#config t
R1(config)#ip access-list extended UDP-ACL
R1(config-ext-nacl)#permit udp any any
R1(config-ext-nacl)#exit
R1(config)#route-map VIA-R2 permit 10
R1(config-route-map)#match ip address UDP-ACL
R1(config-route-map)#set ip next-hop 10.10.11.2
R1(config-route-map)#exit
R1(config)#interface Gi0/1
R1(config-if)#ip policy route-map VIA-R2
R1(config-if)#end
```

A. Allow TCP in the access list with no changes to the route map.
B. Set IP next-hop to 10.10.12.2 under the route-map permit 10 to allow TCP traffic.
C. Add a permit 20 statement in the route map to allow TCP traffic.
D. TCP traffic will reach the destination via R2 without any changes.

Correct Answer: A
Explanation

Explanation/Reference:
If we add a "permit 20" statement in the route-map then we will allow other traffic to pass through (in fact Policy-based routing allows other traffic to pass through by default). But the bandwidth of R1-R4 is higher than that of R1-R2 so TCP traffic might go through R4 instead of R2. Therefore we should allow TCP in the ACL so that TCP traffic is forwarded via R2.

QUESTION 180
Refer to the exhibit. A network administrator notices these console messages from host 10.11.110.12 originating from interface E1/0. The administrator considers this an unauthorized attempt to access SNMP on R1. Which action prevents the attempts to reach R1 E1/0?

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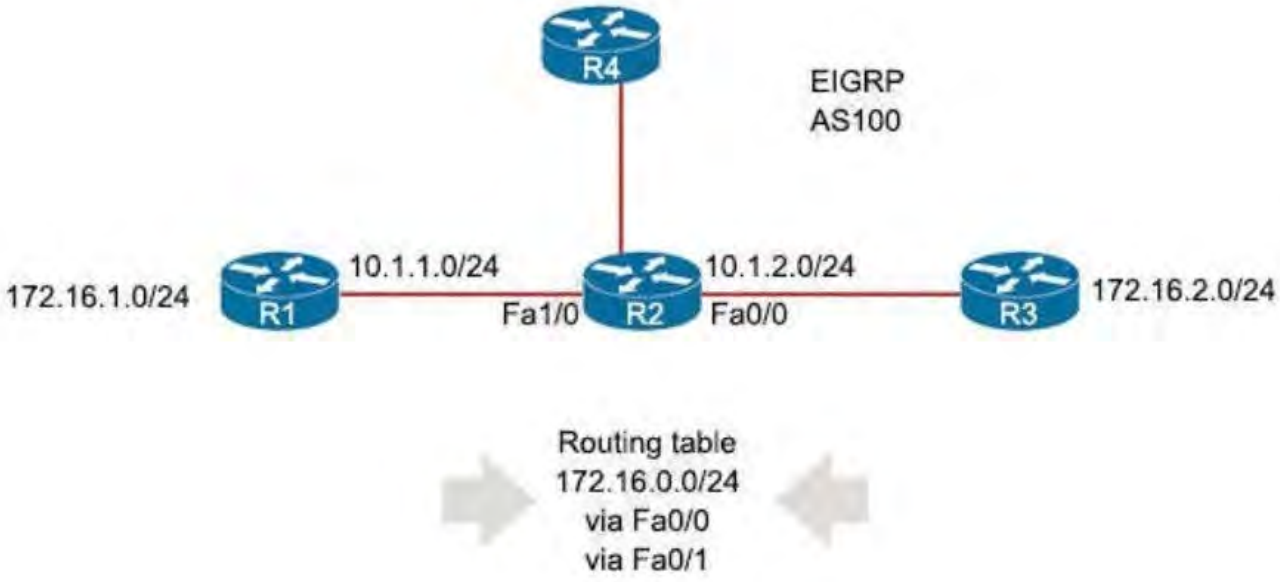
```
snmp-server community Public RO 90
snmp-server community Private RW 90
R1#show access-list 90
Standard IP access list 90
    permit 10.11.110.11
    permit 10.11.111.12

Nov 6 06:45:11: %SNMP-3-AUTHFAIL: Authentication failure for SNMP req from host 10.11.110.12
Nov 6 06:45:12: %SNMP-3-AUTHFAIL: Authentication failure for SNMP req from host 10.11.110.12
```

A. Configure IOS management plane protection using ACL 90 on interface E1/0.
B. Configure IOS control plane protection using ACL 90 on interface E1/0.
C. Add a permit statement including the host 10.11.110.12 into ACL 90.
D. Create an inbound ACL on interface E1/0 to deny SNMP from host 10.11.110.12.

Correct Answer: D
Explanation

QUESTION 181
Refer to the exhibit.R4 is experiencing packet drop when trying to reach 172.16.2.7 behind R2. Which action resolves the issue?



A. Insert a /24 floating static route on R2 toward R3 with metric 254.

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B. Disable auto summarization on R2.
C. Insert a /16 floating static route on R2 toward R3 with metric 254.
D. Enable auto summarization on all three routers R1, R2, and R3.

Correct Answer: B
Explanation

QUESTION 182
Refer to the exhibit.The control plane is heavily impacted after the CoPP configuration is applied to the router. Which command removal lessens the impact on the control plane?

```
!- ACL for CoPP Routing class-map
!
access-list 120 permit tcp any gt 1024 eq bgp log
access-list 120 permit tcp any eq bgp gt 1024 established
access-list 120 permit tcp any gt 1024 eq 639
access-list 120 permit tcp any eq 639 gt 1024 established
access-list 120 permit tcp any eq 646
access-list 120 permit udp any eq 646
access-list 120 permit ospf any
access-list 120 permit ospf any host 224.0.0.5
access-list 120 permit ospf any host 224.0.0.6
access-list 120 permit eigrp any
access-list 120 permit eigrp any host 224.0.0.10
access-list 120 permit udp any any eq pim-auto-rp
```

A. access-list 120 permit eigrp any host 224.0.0.10
B. access-list 120 permit ospf any
C. access-list 120 permit udp any any eq pim-auto-rp
D. access-list 120 permit tcp any gt 1024 eq bgp log

Correct Answer: D
Explanation

QUESTION 183
Refer to the exhibit. R1 and R2 are configured for EIGRP peering using authentication and the neighbors failed to come up. Which action resolves the issue?

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R1 Configuration:

```
key chain cisco
key 2
 key-string abc
!
interface Loopback0
 ip address 10.10.1.1 255.255.255.0
!
interface Serial1/0
ip address 192.168.10.1 255.255.255.0
ip authentication mode eigrp 100 md5
ip authentication key-chain eigrp 100 cisco
serial restart-delay 0
!
router eigrp 100
network 10.10.1.0 0.0.0.255
network 192.168.10.0
no auto-summary
```

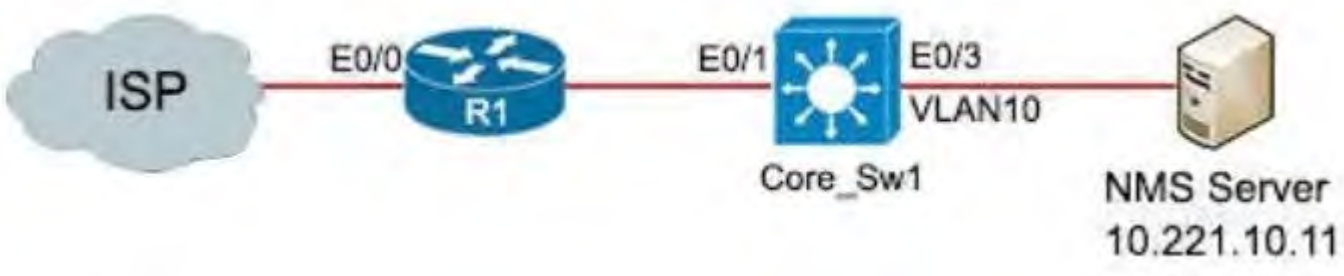
R2 configuration:

```
key chain cisco
key 1
 key-string 123
 key 2
key-string abc
!
interface Loopback0
ip address 10.10.2.2 255.255.255.0
!
interface Sarial1/0
ip address 192.168.10.2 255.255.255.0
ip authentication mode eigrp 100 md5
ip authentication key-chain eigrp 100 cisco
no fair-queue
!
router eigrp 100
network 10.10.2.0 0.0.0.255
network 192.168.10.0
no auto-summary
```

A. Configure a matching key-id number on both routers.
B. Configure a matching lowest key-id on both routers.
C. Configure a matching key-chain name on both routers.
D. Configure a matching authentication type on both routers.

Correct Answer: B
Explanation

QUESTION 184
Refer to the exhibit. During ISP router maintenance, the network produced many alerts because of the flapping interface. Which configuration on R1 resolves the issue?



A. snmp trap ip verify drop-rate
B. no snmp trap link-status
C. ip verify drop-rate notify hold-down 60

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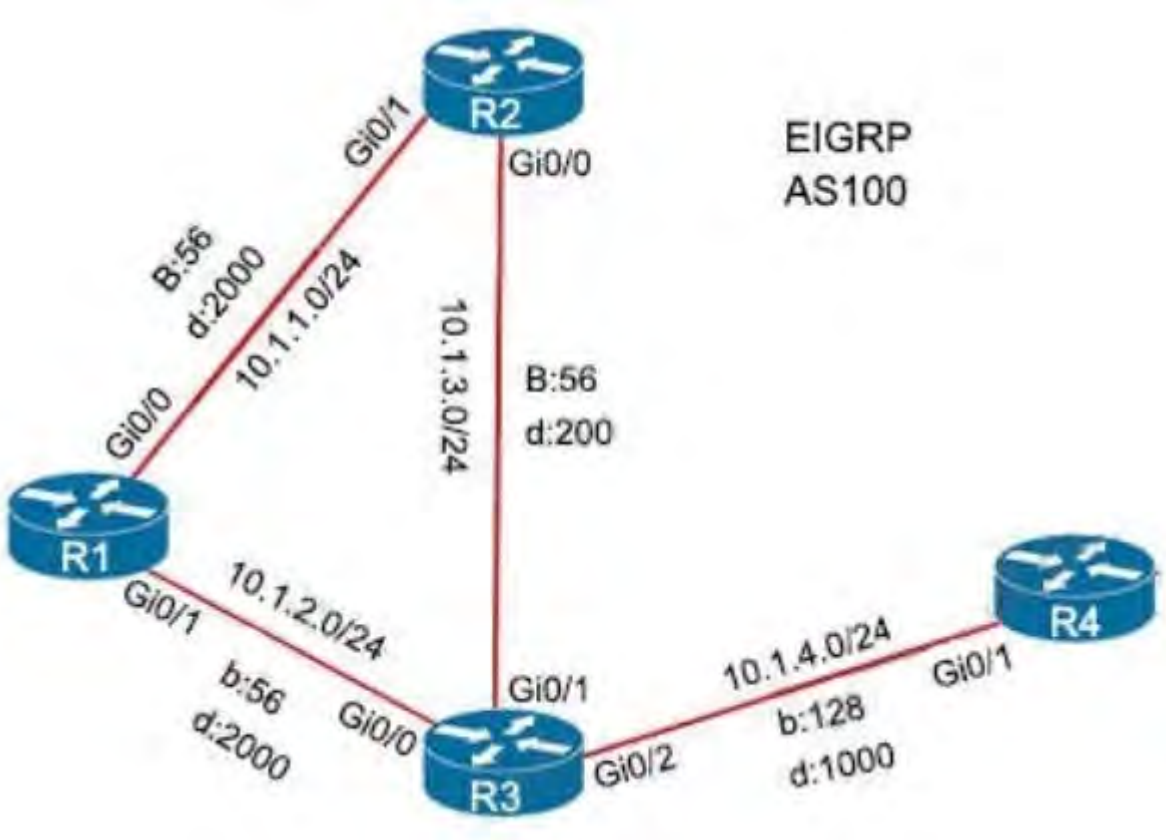
D. snmp trap link-status down

Correct Answer: B
Explanation

Explanation/Reference:
The command "snmp trap link-status" (and "no" form) enables or disable the sending of SNMP traps when an interface goes up and down. This command is useful on interfaces that you expect to change state frequently (for example, dial-on- demand interfaces). You may not want to send an SNMP trap to your network management stations whenever these interfaces change state.

Reference: https://www.oreilly.com/library/view/cisco-ios-in/0596008694/re785.html
Note: The command "ip verify drop-rate notify hold-down ..." configures the minimum time, in seconds, between Unicast RPF drop-rate notifications. But RPF is not a concern in this question.

QUESTION 185
Refer to the exhibit. A loop occurs between R1, R2, and R3 while EIGRP is run with poison reverse enabled. Which action prevents the loop between R1, R2, and R3?



A. Configure route tagging.
B. Enable split horizon.
C. Configure R3 as stub receive-only.
D. Configure route filtering.

Correct Answer: D
Explanation

Explanation/Reference:
In Cisco devices, split horizon is always used along with poison reverse (via the command "ip split-horizon") so in this question split horizon is already turned on. To prevent loop we can only use route filtering.

QUESTION 186

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A customer reports that traffic is not passing on an EIGRP enabled multipoint interface on a router configured as below:

interface Serial0/0/0
no ip address
interface Serial0/0/0.9 multipoint
ip address 10.1.1.1 255.255.255.248
ip split-horizon eigrp 1

Which action resolves the issue?

A. Enable split horizon.
B. Disable poison reverse.
C. Disable split horizon.
D. Enable poison reverse.

Correct Answer: C
Explanation

Explanation/Reference:
In this question sub-interface is used so we have to turn off split-horizon for EIGRP.

QUESTION 187
Refer to the exhibit. A network engineer applied a filter for LSA traffic on OSPFv3 interarea routes on the area 5 ABR to protect advertising the internal routes of area 5 to the business partner network. All other areas should receive the area 5 internal routes. After the respective route filtering configuration is applied on the ABR, area 5 routes are not visible on any of the areas. How must the filter list be applied on the ABR to resolve this issue?

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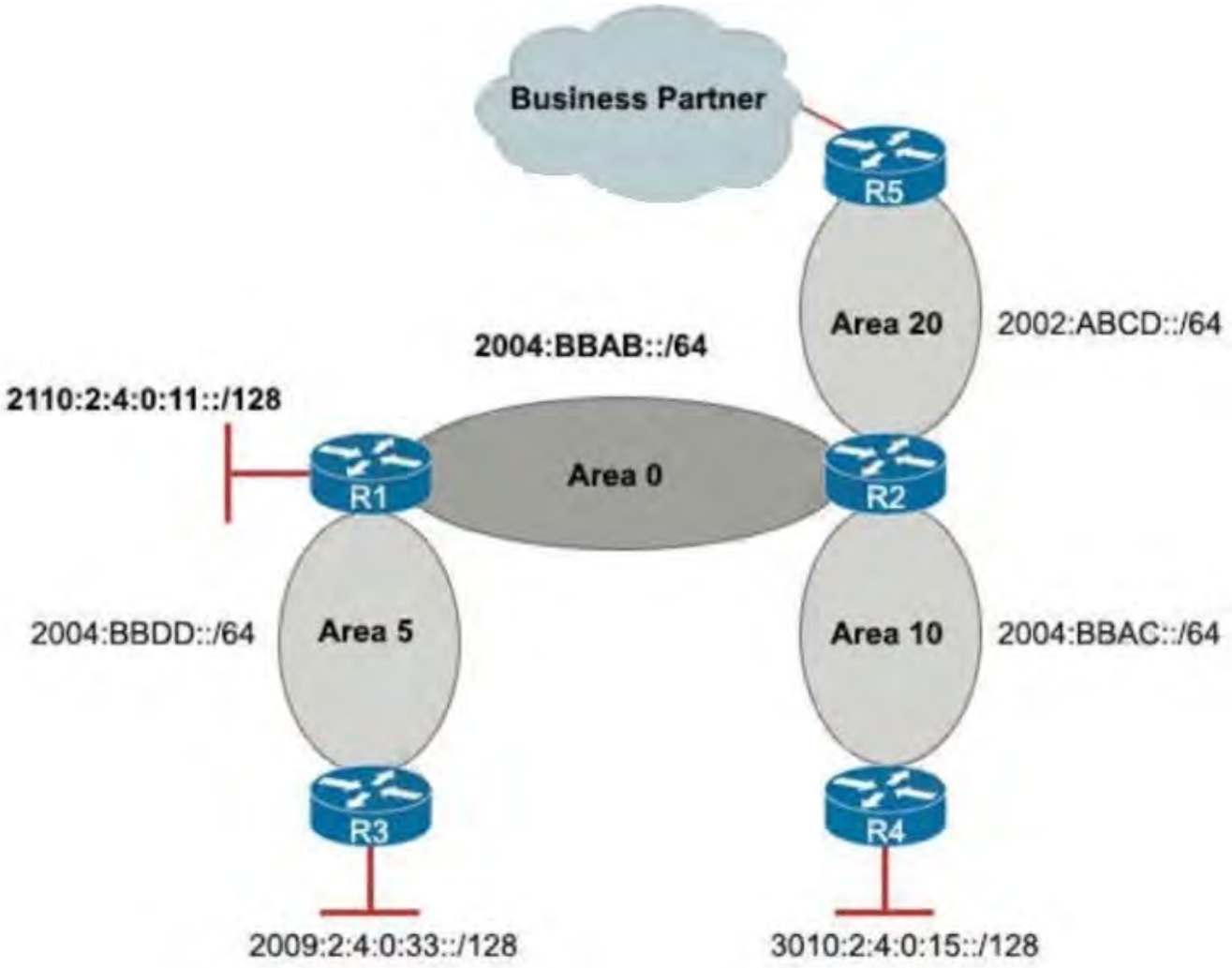

R2#sh ipv6 route ospf

O 2002:ABCD::/64 [110/1]
via FastEthernet0/1, directly connected
O 2004:BBAB::/64 [110/1]
via FastEthernet0/0, directly connected
O 2004:BBAC::/64 [110/1]
via FastEthernet1/0, directly connected
O 3010:2:4:0:15::/128 [110/1]
via FE80::C804:1DFF:FB20:8, FastEthernet0/0

A. in the "out" direction for area 20 on router R2
B. in the "in" direction for area 5 on router R1
C. in the "out" direction for area 5 on router R1
D. in the "in" direction for area 20 on router R2

Correct Answer: A
Explanation

QUESTION 188

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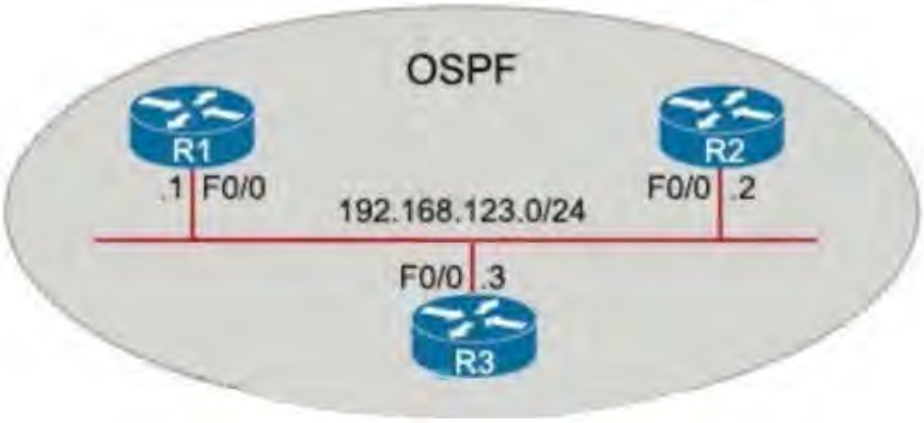
Refer to the exhibit. An administrator wanted to make R1 always elected as DR, R2 as BDR, and R3 as DROTHER but could not achieve the desired results. Which two configurations resolve the issue? (Choose two)



Router R1 Output:
R1#show ip ospf neighbor

Neighbor ID	Pri	State	Dead Time	Address	Interface
192.168.123.2	1	FULL/BDR	00:00:32	192.168.123.2	FastEthernet0/0
192.168.123.3	1	FULL/DR	00:00:31	192.168.123.3	FastEthernet0/0

Router R2 Output:
R2#show ip ospf neighbor

Neighbor ID	Pri	State	Dead Time	Address	Interface
192.168.123.1	1	FULL/DROTHER	00:00:32	192.168.123.1	FastEthernet0/0
192.168.123.3	1	FULL/DR	00:00:31	192.168.123.3	FastEthernet0/0

Router R3 Output:
R3#show ip ospf neighbor

Neighbor ID	Pri	State	Dead Time	Address	Interface
192.168.123.1	1	FULL/DROTHER	00:00:32	192.168.123.1	FastEthernet0/0
192.168.123.2	1	FULL/BDR	00:00:31	192.168.123.2	FastEthernet0/0

A. On the R2 F0/0 interface, configure OSPF priority to 200
B. On the R1 F0/0 interface, configure OSPF priority to 202
C. On the R2 F0/0 interface, configure OSPF priority to 201
D. On the R1 F0/0 interface, configure OSPF priority to 255
E. On the R3 F0/0 interface, configure OSPF priority to 201

Correct Answer: CD

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Explanation

QUESTION 189
Refer to the exhibit. Which configuration enables OSPF for area 0 interfaces to establish adjacency with a neighboring router with the same VRF? ip vrf CCNP rd 1:1
interface Ethernet1
ip vrf forwarding CCNP
ip address 10.1.1.1 255.255.255.252
!
interface Ethernet2
ip vrf forwarding CCNP
ip address 10.2.2.2 255.2555.255.252

A. router ospf 1 vrf CCNP
   network 10.1.1.1 0.0.0.0 area 0
   network 10.2.2.2 0.0.0.0 area 0
B. router ospf 1
   interface Ethernet1
   ip ospf 1 area 0.0.0.0
   interface Ethernet2
   ip ospf 1 area 0.0.0.0
C. router ospf 1 vrf CCNP
   interface Ethernet1
   ip ospf 1 area 0.0.0.0
   interface Ethernet2
   ip ospf 1 area 0.0.0.0
D. router ospf 1 vrf CCNP
   network 10.0.0.0 0.0.255.255 area 0

Correct Answer: A
Explanation

QUESTION 190
Refer to the exhibit. An engineer must advertise routes into IPv6 MP-BGP and failed. Which configuration resolves the issue on R1?

A. router bgp 65000
   no bgp default ipv4-unicast
   address-family ipv6 multicast
   network 2001:DB8::/64
B. router bgp 65000
   no bgp default ipv4-unicast
   address-family ipv6 unicast
   network 2001:DB8::/64
C. router bgp 64900
   no bgp default ipv4-unicast
   address-family ipv6 multicast
   neighbor 2001:DB8:7000::2 translate-update ipv6 multicast
D. router bgp 64900
   no bgp default ipv4-unicast

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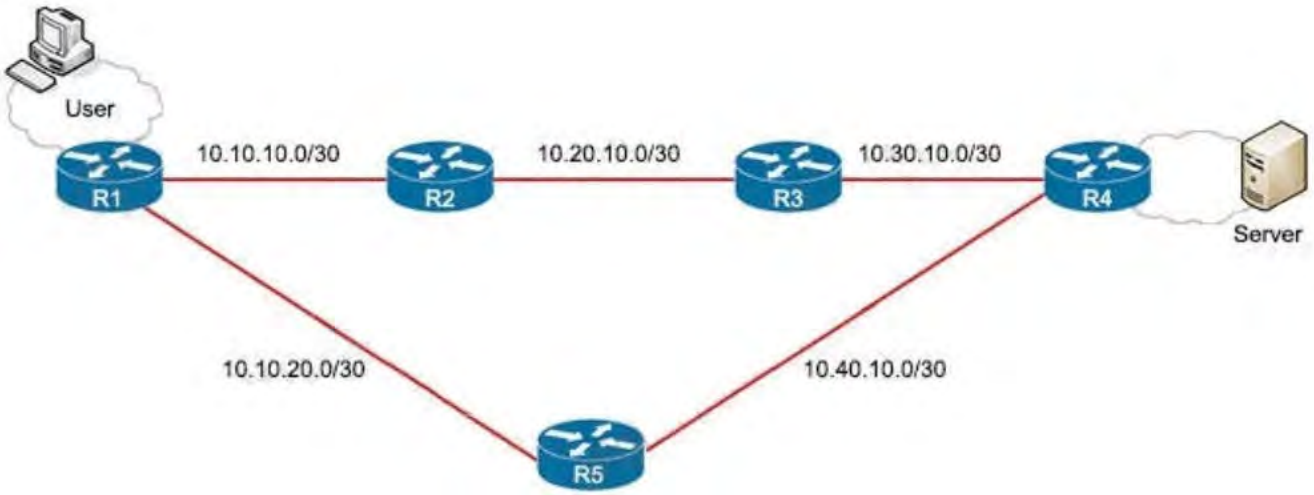
address-family ipv6 unicast
redistribute ospf
network 2001:DB9::/64

Correct Answer: A
Explanation

QUESTION 191
Refer to the exhibit.



R1#show ip route
1.0.0.0/32 is subnetted, 1 subnets
C 1.1.1.1/32 is directly connected, Loopback0
2.0.0.0/32 is subnetted, 1 subnets
O 2.2.2.2/32 [110/2] via 10.10.10.2, 00:09:30, GigabitEthernet0/0/0
10.0.0.0/8 is variably subnetted, 7 subnets, 2 masks
C 10.10.10.0/30 is directly connected, GigabitEthernet0/0/0
L 10.10.10.1/32 is directly connected, GigabitEthernet0/0/0
C 10.10.20.0/30 is directly connected, GigabitEthernet0/0/1
L 10.10.20.1/32 is directly connected, GigabitEthernet0/0/1
D 10.20.10.0/30 [90/3072] via 10.10.10.2, 00:09:30, GigabitEthernet0/0/0
O 10.30.10.0/30 [90/3328] via 10.10.10.2, 00:05:48, GigabitEthernet0/0/0
S 10.40.10.0/30 [1/0] via 10.10.20.2

Routers R1, R2, R3, and R4 use EIGRP. However, traffic always prefers R1 to R5 backup links in non failure scenarios. Which configuration resolves the issue?

A. R1(config)#no ip route 10.40.10.0 255.255.255.252 10.10.20.2
R1(config)#ip route 10.40.10.0 255.255.255.252 10.10.20.2 115
B. R1(config)#int gigabitEthernet 0/0/0
R1 (config-if)#bandwidth 10000000
C. R1(config-if)#int gigabitEthernet 0/0/0
R1(config-if)#bandwidth 10000
D. R1(config)#no ip route 10.40.10.0 255.255.255.252 10.10.20.2
R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.2

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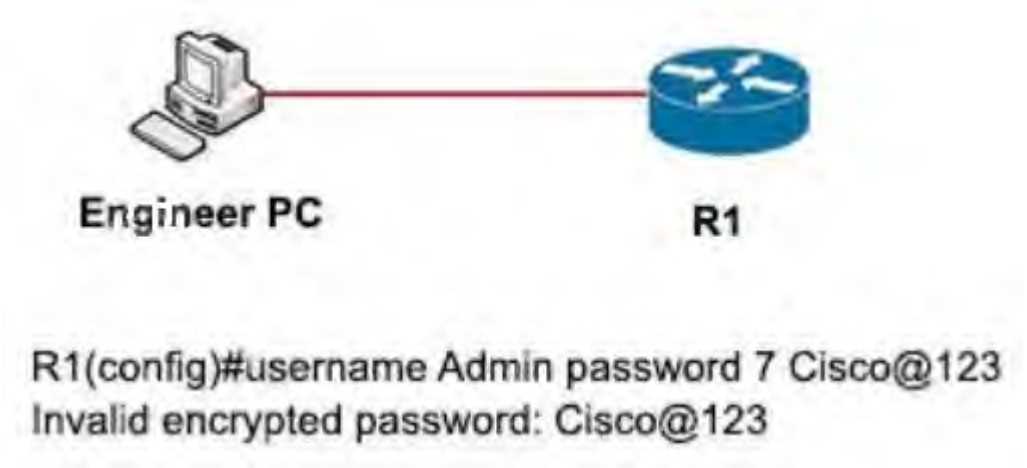
Correct Answer: A
Explanation

QUESTION 192
Refer to the exhibit. An engineer is trying to add an encrypted user password that should not be visible in the router configuration. Which two configuration commands resolve the issue? (Choose two)



A. service password-encryption
B. username Admin password 5 Cisco@123
C. no service password-encryption
D. username Admin password Cisco@123
E. password encryption aes
F. username Admin secret Cisco@123

Correct Answer: AF
Explanation

Explanation/Reference:
We can use the "service password-encryption" to encrypt all current and future passwords. Or we can use the "secret" keyword to encrypt the password with MD5 (although MD5 is not secured nowadays).

Note: The command "service password-encryption" enables the AES password encryption feature (type 6) but we have to converts existing plain or weakly encrypted passwords to type-6 encrypted passwords with the "encryption re-encrypt obfuscated" command.

You can enable the AES password encryption feature without a primary key, but encryption starts only when a primary key is present in the system with the command key config-key password-encrypt super-secret-password.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus3400s/sw/93x/security/configuration/guide/Cisco-n3400-nx-ossecurity-configuration-guide-93x/m-configuring-password-encryption-922.pdf

QUESTION 193
Refer to the exhibit.

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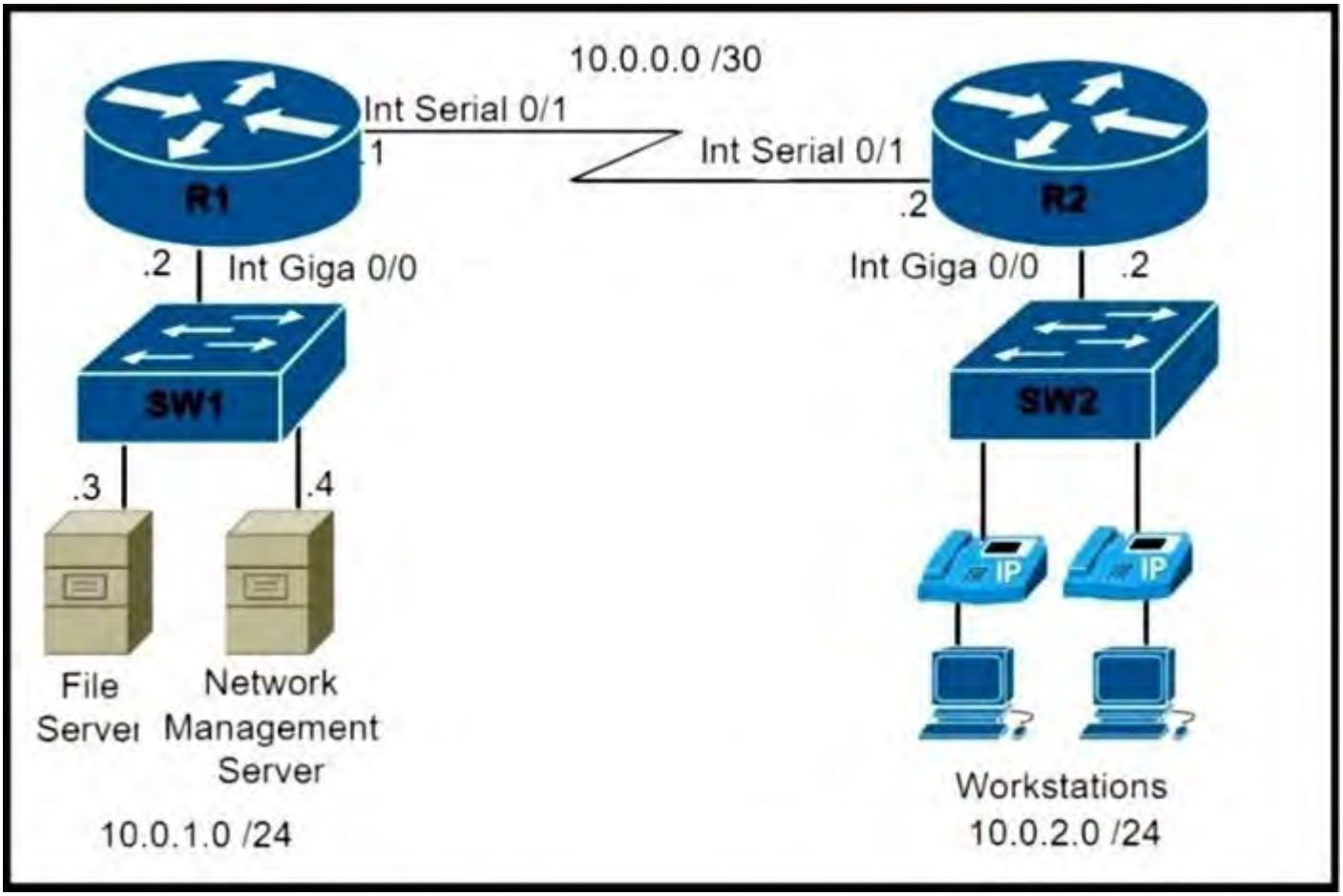

An engineer must configure and validate a CoPP policy that allows the network management server to monitor router R1 via SNMP while protecting the control plane. Which two commands or command sets must be used? (Choose two.)

A. access-list 150 permit udp 10.0.1.4 0.0.0.0 host 10.0.1.2 eq snmp
access-list 150 permit udp 10.0.1.4 0.0.0.0 eq snmp host 10.0.1.2
class-map match-all CoPP-management
match access-group 150
policy-map CoPP-policy
class CoPP-management
police 8000 conform-action transmit exceed-action transmit
violate-action drop
control-plane
Service-policy input CoPP-policy

B. show ip interface brief

C. show quality-of-service-profile

D. access-list 150 permit udp 10.0.1.4 0.0.0.0 host 10.0.1.2 eq snmp
class-map match-all CoPP-management
match access-group 150
policy-map CoPP-policy
class CoPP-management
police 8000 conform-action transmit exceed-action transmit
violate-action transmit
control-plane
Service-policy input CoPP-policy

E. show policy-map control-plane

Correct Answer: DE
Explanation

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Explanation/Reference:
A option has this ACL 150:
access-list 150 permit udp 10.0.1.4 0.0.0.0 host 10.0.1.2 eq snmp
access-list 150 permit udp 10.0.1.4 0.0.0.0 eq snmp host 10.0.1.2
But D option only:
access-list 150 permit udp 10.0.1.4 0.0.0.0 host 10.0.1.2 eq snmp
A option has a violation-action drop, but D option has a violation-action transmit the SNMP traffic will be never dropped

QUESTION 194
A customer requested a GRE tunnel through the provider network between two customer sites using loopback to hide internal networks. Which configuration on R2 establishes the tunnel with R1?

A. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1500
R2(config-if}#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 192.168.20.1
R2(config-if)#tunnel destination 10.10.1.1
B. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1400
R2(config-if)#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 192.168.20.1
R2(config-if)#tunnel destination 192.168.10.1
C. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1400
R2(config-if)#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 10.10.2.2
R2(config-if)#tunnel destination 10.10.1.1
D. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1500
R2(config-if)#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 10.10.2.2
R2(config-if)#tunnel destination 10.10.1.1Correct

Correct Answer: C
Explanation

QUESTION 195
What is the difference in dBm when an AP power increases from 25 mW to 100mW?

A. 75dBm
B. 150dBm
C. 6dBm
D. 125dBm

Correct Answer: C
Explanation

QUESTION 196
Which free application make REST call against DNA center?

A. Postman
B. Ansible
C. Chef

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D. Puppet

Correct Answer: A
Explanation

QUESTION 197
Which marking field is used only as an internal marking within a router?

A. QoS Group
B. Discard Eligibility
C. IP Precedence
D. MPLS Experimental

Correct Answer: A
Explanation

QUESTION 198
Which two actions are recommended as security best practice to protect REST API (Choose two)

A. Use TACACACS+ authentication
B. Enable dual authentication of the session
C. Enable out-of band authentication
D. Use SSL for encryption
E. Use a password hash

Correct Answer: DE
Explanation

QUESTION 199
What are the two protocols redistributed into OMP?

A. OSPF
B. RIP
C. LDP
D. RSVP
E. EIGRP

Correct Answer: AE
Explanation

QUESTION 200
An organization wants to use the cisco SD-WAN regionalized service-chaining feature to optimize cost and user experience with application in the network, which allows branch routers to analyze and steer traffic toward the required network function. Which feature meets this requirement?

A. Cloud Services Platform
B. VNF Service Chaning
C. Cloud onRamp for Colocation
D. Cloud onRamp for IaaS

Correct Answer: C
Explanation

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QUESTION 201
Which component does Cisco Threat Defense use to measure bandwidth, application performance, and utilization?

A. NetFlow
B. Cisco Umbrella
C. TrustSec
D. Advanced Malware Protection for Endpoints

Correct Answer: A
Explanation

Explanation/Reference:
NetFlow was initially created to measure network traffic characteristics such as bandwidth, application performance, and utilization.

Reference: https://www.cisco.com/c/dam/en/us/td/docs/security/network_security/ctd/ctd2-0/design_guides/ctd_2-0_cvd_guide_jul15.pdf

QUESTION 202
A customer has two Cisco WLCs that manage separate APs throughout a building. Each WLC advertises the same SSID but terminates on different interfaces. Users report that they drop their connections and change IP addresses when roaming. Which action resolves this issue?

A. Configure high availability
B. Enable test roaming
C. Enable client load balancing.
D. Configure mobility groups

Correct Answer: D
Explanation

QUESTION 203
Which CISCO SD-WAN component authenticates the routers and the vSmart controllers?

A. vAnalytics
B. vBond orchestrator
C. vEdge
D. vManage NMS

Correct Answer: B
Explanation

QUESTION 204
Refer to the exhibit.

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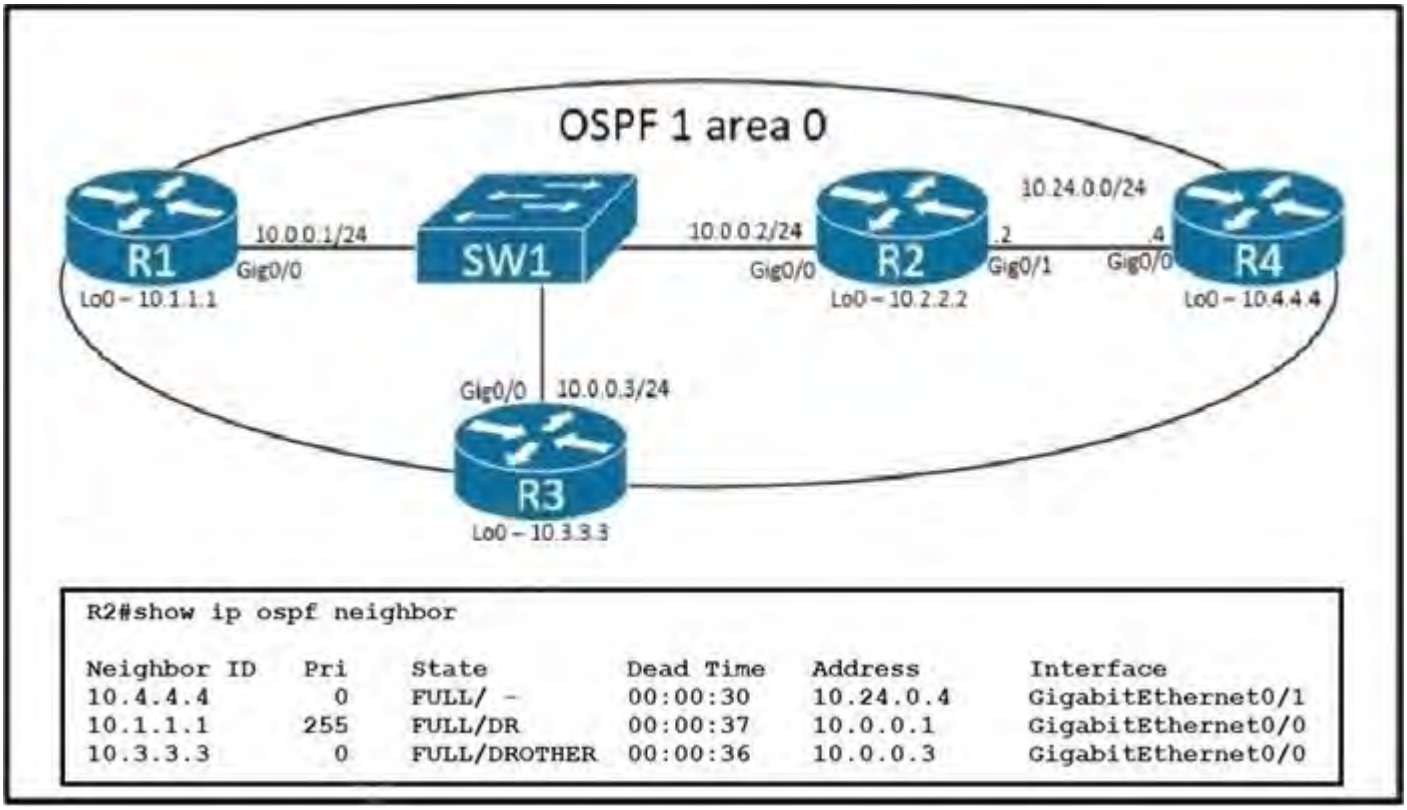

An engineer must reduce the number of Type 1 and Type 2 LSAs that are advertised to R4 within OSPF area 0. Which configuration must be applied?

A. R1# conf t
Router(config)# router ospf 1
Router(config-router)# prefix-suppression

B. R4# conf t
Router(config)# router ospf 1
Router(config-router)# summary-address 10.0.0.0 255.255.255.0

C. R2# conf t
Router(config)# interface Gig0/0
Router(config-router)# ip ospf prefix-suppression

D. R2# conf t
Router(config)# int Gig0/0
Router(config-if)# ip summary-address 10.0.0.0 255.255.255.0

Correct Answer: A
Explanation

QUESTION 205
What are two best practices when designing a campus Layer 3 infrastructure? (Choose two.)

A. Configure passive-interface on nontransit links.
B. Implement security features at the core.
C. Summarize routes from the aggregation layer toward the core layer.
D. Tune Cisco Express Forwarding load balancing hash for ECMP routing.
E. Summarize from the access layer toward the aggregation layer.

Correct Answer: CD
Explanation

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QUESTION 206
Which characteristic applies to a traditional WAN solution but not to a Cisco SD-WAN solution?

A. lengthy installation times
B. centralized reachability, security, and application policies
C. low complexity and increased overall solution scale
D. operates over DTLS/TLS authenticated and secured tunnels

Correct Answer: A
Explanation

QUESTION 207
Refer to the exhibit.

```
for x in range(6):
   print(x)
```

What is output by this code?

A. 0 5
B. 0 1 2 3 4 5
C. 0 1 2 3 4
D. (0,5)

Correct Answer: B
Explanation

QUESTION 208
An EEM applet contains this command:

event snmp oid 1.3.6.1.4.3.8.0.5.8.7.1.3 get-type next entry-op gt entry-val 80 poll-interval 8

What is the result of the command?

A. An SNMP event is generated when the value equals 80% for eight polling cycles.
B. An SNMP event is generated when the value is greater than 80% for eight polling cycles.
C. An SNMP event is generated when the value reaches 80%.
D. An SNMP variable is monitored and an action is triggered when the value exceeds 80%.

Correct Answer: D
Explanation

QUESTION 209
Refer to the exhibit.

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```
import requests

### The authentication part is omitted for brevity purposes

URL = "https://dnac/dna/intent/api/v1/topology/vlan/vlan-names"
VlanNames = requests.get(URL, headers=Header).json()
print(VlanNames)
```

```
{'response': ['Vlan1', 'Vlan3002', 'Vlan3003', 'Vlan1023', 'Vlan2046', 'Vlan3009', 'Vlan3999'], 'version': '1.0'}
```

How should the programmer access the list of VLANs that were received via the API call?

A. VlanNames[`response']
B. VlanNames[0]
C. VlanNames[`Vlan1']
D. list(VlanNames)

Correct Answer: A
Explanation

Explanation/Reference:
>>> VlanNames = {'response':['vlan1','vlan2','vlan3'],'version':'1.0'}
>>> VlanNames['response']
['vlan1', 'vlan2', 'vlan3']

QUESTION 210
What is the role of vSmart in a Cisco SD-WAN environment?

A. to establish secure control plane connections
B. to monitor, configure, and maintain SD-WAN devices
C. to provide secure data plane connectivity over WAN links
D. to perform initial authentication of devices

Correct Answer: A
Explanation

Explanation/Reference:
Reference:https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/sdwan-xe-gs-book/system-overview.html

QUESTION 211
Which statement about a fabric access point is true?

A. It is in local mode and must be connected directly to the fabric edge switch.
B. It is in local mode and must be connected directly to the fabric border node.
C. It is in FlexConnect mode and must be connected directly to the fabric border node.
D. It is in FlexConnect mode and must be connected directly to the fabric edge switch.

Correct Answer: A
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/sda-sdg-2019oct.html

QUESTION 212

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In a Cisco SD-Access solution, what is the role of a fabric edge node?

A. to connect external Layer 3 networks to the SD-Access fabric
B. to connect wired endpoints to the SD-Access fabric
C. to advertise fabric IP address space to external networks
D. to connect the fusion router to the SD-Access fabric

Correct Answer: B
Explanation

Explanation/Reference:
Refer to https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjF37T9udPtAhXwo4sKHfwzDKoQFjAAegQIAxAC&url=https%3A%2F%2Fwww.cisco.com%2Fc%2Fdam%2Fm%2Fhr_hr% 2Ftraining-events%2F2019%2Fcisco-connect%2Fpdf%2FVH-Cisco-SD-Access-Connecting.pdf&usg=AOvVaw26SeDD9KzfyOqR-hk_vF3q

QUESTION 213
What are two valid modes that Cisco Express Forwarding can operate in? (Choose two.)

A. Central CEF mode
B. Dense CEF mode
C. Sparse CEF mode
D. Distributed CEF mode
E. Routed CEF mode

Correct Answer: AD
Explanation

Explanation/Reference:
CEF can be enabled in one of two modes:

Central CEF mode - When CEF mode is enabled, the CEF FIB and adjacency tables reside on the route processor, and the route processor performs the express forwarding. You can use CEF mode when line cards are not available for CEF switching, or when you need to use features not compatible with distributed CEF switching.

Distributed CEF (dCEF) mode - When dCEF is enabled, line cards maintain identical copies of the FIB and adjacency tables. The line cards can perform the express forwarding by themselves, and this relieves the main processor - Gigabit Route Processor (GRP) - of involvement in the switching operation. This is the only switching method available on the Cisco 12000 Series Router.

https://www.cisco.com/c/en/us/support/docs/routers/12000-series-routers/47321-ciscoef.html

QUESTION 214
Which Quality of Service (QoS) mechanism is used to identify traffic flow and to use DSCP, IP Precedence values, and MPLS EXP bits to create different priority levels?

A. Policing
B. Marking
C. Queueing
D. Classification

Correct Answer: B
Explanation

Explanation/Reference:
"Networking devices within your network can then use the newly marked IP precedence values to determine how traffic should be treated. For example, voice traffic can be marked with a particular IP precedence or DSCP, and a queueing mechanism can then be configured to put all packets of that mark

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into a priority queue."

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos_classn/configuration/xe-16/qos-classn-xe-16-book/qos-classn-mrkg-ntwk-trfc-xe.html

QUESTION 215
An engineer must design a wireless network for a school system based on these requirements:

1. The network must be able to triangulate client location based on RSSI.
2. Each client must be able to sustain 5 Mbps of throughput at all times.
3. Each classroom has up to 30 clients.
4. Primary coverage is 5 GHz.

Which design should be used?

A. Place APs in a grid orientation throughout the building, located as close as possible to the center of each classroom.
B. Mount one AP in the center of each classroom.
C. Space APs evenly on both sides of the hallways.
D. Place APs near exterior walls and corners of the building, and fill in the center area with a staggered pattern.

Correct Answer: D
Explanation

Explanation/Reference:
I have seen this at many conferences and webinars - If triangulation is an important factor: line the perimeter with APs (with flat panel antennas). In fact next time you are at Cisco Live, you will see this design all around the perimeter of the venue...

QUESTION 216
Refer to the exhibit.

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```
R2#debug arp
ARP packet debugging is on
R2#show iprap
Protocol Address  Age (min) Hardware Add Type Interface
internet 192.168.0.5   - ca02.099f.001d ARPA FastEthernet1/1
R2#show ip interface brief
Interface          IP-Address OK? Method Status    Protocol
FastElhernet0/0 unassigned   YES NVRAM    administratively down down
FastEthernet0/1 unassigned   YES NVRAM    administratively down down
FastEthernet1/0 unassigned   YES manual up        up
FastEthernet1/1 192.168.0.5  YES NVRAM up        up
Loopback0       10.0.0.2     YES NVRAM up        up
Loopback1       10.0.0.5     YES NVRAM up        up

R2#show ip route
Codes: C - connected, S- static, R - RIP, M - mobile, B - BGP
   D - EIGRP, EX-EIGRP external, Q- OSPF, IA- QSPF inter area
   N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
   E1 - OSPF external type 1, E2 - OSPF external type 2
   i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2- IS-IS level-2
   ia - IS-IS inter area, * - candidate default, U – per-user static route
   o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

    10.0.0.0/32 is subnetted, 2 subnets
C      10.0.0.2 is directly connected, Loopback0
C      10.0.0.5 is directly connected Loopback1
    192.168.0.0/30 is subnetted, 1 subnets
C       192.168.0.4 is directly connected, FastEthernet1/1

R2#
"Jan 17 16:49:46.083: IP ARP req filtered src 192.168.0.1 ca03.05a5.001d, dst 192.168.0.5
0000 0000 0000 wrong cable, interface FastEthernet1/1
"Jan 17 16:49:48.071: IP ARP req filtered src 192.168.0.1 ca03.05a5 001d, dst 192.168.0.5
0000.0000.0000 wrong cable, interface FastEtnemet1/1

***output omitted***
```

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```
R3#debug arp
ARP packet debugging is on
R3#show ip rap
Protocol Address Age (min) Hardware Add Type Interface
Internet 192.168.0.1 - ca03.05a5.001d ARPA FastEthernet1/1
Internet 192.168.0.9 - ca03.05a5.001c ARPA FastEthernet1/0
R3#show ip interface brief
Interface              IP-Address   OK? Method Status     Protocol
FastEthernet0/0   unassigned       YES NVRAM    administratively down down
FastEthernet0/1   unassigned       YES NVRAM    administratively down down
FastEthernet1/0   192.168.0.9      YES NVRAM up              up
FastEthernet1/1   192.168.0.1      YES manual up             up
Loopback0         10.0.0.3         YES NVRAM up              up
R3#ping 192.168.0.5

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.0.5, timeout is 2 seconds:

000030: "Jan 17 16:49:45.879 IP ARP creating incomplete entry for 192.168.0.5 interface FastEthernet1/1
000031: "Jan 17 16:49:45.879 IP ARP sent req src 192.168.0.1 ca03.05a5.001d.
         dst 192.168.0.5 0000.0000.0000 FastEthernet1/1
         ***output omitted***
000035: "Jan 17 16:49:53.875: IP ARP: sent req src 192.168.0.1 ca03.05a5.001d
         dst 192.168.0.5 0000.0000.0000 FastEthernet1/1.
Success rate is 0 percent (0/5)
R3#show ip rap
Protocol Address       Age (min) Hardware Add Type Interface
Internet 192.168.0.1   - ca03.05a5.001d ARPA FastEthernet1/1
Internet 192 168.0.5   0 Incomplete ARPA
Internet 192 168.0.9   - ca03.05a5.001c ARPA FastEthernet1/0
R3# show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/32 is subnetted, 1 subnets
C       10.0.0.3 is directly connected, Loopback0
     192.168.0.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.0.8/30 is directly connected, FastEthernet1/0
C       192.168.0.0/29 is directly connected, FastEthernet1/1
```

Communication between R2 and R3 over FastEthenet1/1 falls. What is the root cause of the failure?

A. The subnet mask is different between the two interfaces.
B. The interface of R3 is not operational.
C. The wrong type of cable is connected between the two interfaces.
D. IP CEF is disabled on R3.

Correct Answer: A
Explanation

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Explanation/Reference:
Provided answer is correct.
I tested this in GNS3. Kept the subnet mask on one side /30 and the other side /29. Got on one side debug outputs:
*Sep 8 22:58:38.295: IP ARP req filtered src 10.10.12.1 ca01.37c4.0000, dst 10.10.12.5 0000.0000.0000 wrong cable, interface FastEthernet0/0 And the other side:
*Sep 8 22:58:37.747: IP ARP: creating incomplete entry for IP address: 10.10.12.5 interface FastEthernet0/0

The output with wrong cable is misleading.

QUESTION 217
Which character formatting is required for DHCP Option 43 to function with current AP models?

A. MD5
B. Base64
C. ASCII
D. Hex

Correct Answer: C
Explanation

QUESTION 218
Refer to the exhibit.

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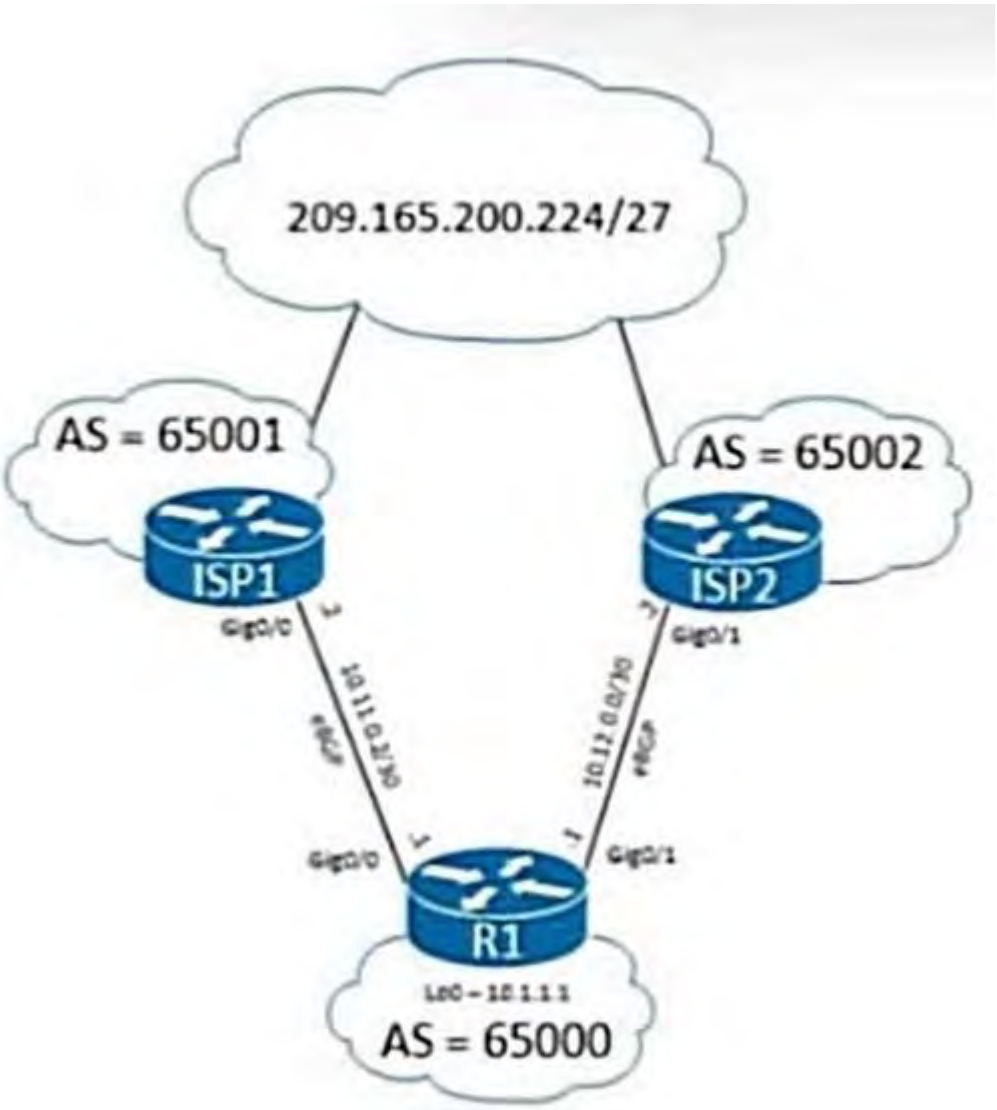

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```
R1#show run | section bgp
router bgp 65000
 bgp router-id 10.1.1.1
 bgp log-neighbor-changes
 network 10.1.1.1 mask 255.255.255.255
 neighbor 10.11.0.2 remote-as 65001
 neighbor 10.11.0.2 route-map AS65001 in
 neighbor 10.12.0.2 remote-as 65002
 neighbor 10.12.0.2 route-map AS65002 in

R1#show route-map
route-map AS65001, permit, sequence 10
  Match clauses:
  Set clauses:
    weight 200
  Policy routing matches: 0 packets, 0 bytes
route-map AS65002, permit, sequence 10
  Match clauses:
  Set clauses:
    as-path prepend 65000 65000 65000
  Policy routing matches: 0 packets, 0 bytes

R1#show bgp 209.165.200.224/27
BGP routing table entry for 209.165.200.224/27, version 3
Paths: (2 available, best #1, table default)
  Advertised to update-groups:
     2
  Refresh Epoch 3
  65001 64500
    10.11.0.2 from 10.11.0.2 (10.1.1.2)
      Origin IGP, localpref 100, weight 200, valid, external, best
      rx pathid: 0, tx pathid: 0x0
  Refresh Epoch 2
  65000 65000 65000 65002 64500
    10.12.0.2 from 10.12.0.2 (10.1.1.3)
      Origin IGP, localpref 100, valid, external
      rx pathid: 0, tx pathid: 0
```

A client has two directly connected eBGP peering links with diverse ISPs. Both providers advertise the same public prefix 209.165.200.224/27 to R1 without any route manipulation. Traffic leaves R1 outbound via ISP1 but returns inbound via ISP2. Which configuration prevents asymmetrical routing and makes ISP1 the preferred path inbound and outbound?

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A.

```
R1# config t
R1(config)# router bgp 65000
R1(config-router)# neighbor 10.11.0.2 route-map AS65001 out
```

B.

```
R1# config t
R1(config)# route-map AS65002 permit 10
R1(config-route-map)# set weight 100
```

C.

```
R1# config t
R1(config)# router bgp 65000
R1(config-router)# neighbor 10.12.0.2 route-map AS65002 out
```

D.

```
R1# config t
R1(config)# route-map AS65001 permit 10
R1(config-route-map)# set local-preference 100
```

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

Correct Answer: C
Explanation

QUESTION 219
Which time protocol offers security features and utilizes site-local IPv6 multicast addresses?

A. NTPv3
B. PTP IEEE 1588v1
C. NTPv4
D. PTP IEEE 1588v2

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/bsm/configuration/15-0sy/ip6-ntpv4.html

QUESTION 220
Which configuration allows administrators to configure the device through the console port and use a network authentication server?

A. aaa new-model
   aaa authentication login default local
   aaa authorization console
   aaa authorization config-commands
   username netadmin secret 9 9vFpMf8elb4RVV8$seZ/bDAx1uV
B. aaa new-model
   aaa authentication login default local

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aaa authorization console
aaa authorization config-commands

C. aaa new-model
aaa authentication login default line

D. aaa new-model
aaa authentication login default group radius
aaa authorization console
aaa authorization config-commands

Correct Answer: D
Explanation

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Exam F

QUESTION 1
Select the devices from the below options that can be fart of Cisco SDWAN Solution. (Choose two.)

A. ISR 2900
B. ASR 1000
C. IR8300
D. FTD 1120
E. ASR 9000

Correct Answer: BC
Explanation

Explanation/Reference:
reference: https://www.cisco.com/c/en/us/td/docs/routers/sdwan/release/compatibility/sdwan-device-compatibility.html#device-compat-ir8300rugged

QUESTION 2
A network administrator is configuring a configuration management tool for some network devices that does not support agent. Select what option will you pick from the below options to successfully configure configuration management tool for that device.

A. Agent based Configuration
B. Agent Less Configuration
C. Proxy-agent Configuration
D. None of the above

Correct Answer: B
Explanation

QUESTION 3
A network administrator need to configure Netflow on the devices in his network. He has Source IP Address, Destination IP Address, Source Port number & Destination port number. What additional information do he need to configure Netflow?

A. Layer 3 Protocol type
B. Encryption type
C. ToS (Type of Service) byte
D. Input Logical Interface
E. Hashing Algorithm
F. Transform-set details

Correct Answer: ACD
Explanation

Explanation/Reference:
NetFlow Flows Key Fields

A network flow is identified as a unidirectional stream of packets between a given source and destination--both are defined by a network-layer IP address and by transport-layer source and destination port numbers. Specifically, a flow is identified as the combination of the following key fields:

Source IP address

Destination IP address

Source port number

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Destination port number

Layer 3 protocol type

Type of service (ToS)

Input logical interface
"

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/netflow/configuration/15-mt/nf-15-mt-book/get-start-cfg-nflow.html#GUID-BE3FF8D7-C298-4C34-95DE-1CA27DB651EF

QUESTION 4
Select the benefits of implementing Cisco DNA Center. (Choose all that apply.)

A. Simplified management
B. Automatic VPN tunnelling
C. One click Configuration
D. Policy Driven Provisioning
E. Ensure Network & Appliance performance

Correct Answer: ADE
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/dna-center/nb-06-dna-center-so-cte-en.html#Benefits

QUESTION 5
Select the prerequisites for configuring LISP from the below options. (Choose two.)

A. Determine the type of LISP deployment you intend to deploy
B. One can directly deploy LISP without determining the type.
C. LISP configuration requires the datak9 license.
D. LISP configuration requires the advanced ip services license.

Correct Answer: AC
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe-3s/irl-xe-3s-book/irl-overview.html#GUID-CE94D60C-573B-40FA-916B-01810FCEF0FB

QUESTION 6
Please select the correct option that shows the correct combination for the Type 1 Hypervisor.

A. Hardware; Hypervisor; Guest OS
B. Hardware; Host OS; Hypervisor; Guest OS
C. Host OS; Hypervisor; Guest OS
D. Hardware; Host OS; Guest OS

Correct Answer: A
Explanation

QUESTION 7
Two Cisco switches are logically configured as a single switch using Cisco Stackwise technology. This will result in virtually combining which two planes? (Choose two.)

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A. Data Plane
B. Control Plane
C. Forwarding Plane
D. Management Plane
E. Bearer Plane

Correct Answer: BD
Explanation

Explanation/Reference:
StackWise Virtual (SV) combines two switches into a single logical network entity from the network control plane and management perspectives.
reference:https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.html

QUESTION 8
In a Cisco VXLAN based network, which of the following best describes the main function of a VXLAN Tunnel Endpoint (VTEP)?

A. A device that performs VXLAN encapsulation and decapsulation.
B. It is a 24 bit segment ID that defines the broadcast domain.
C. It is the Logical interface where the encapsulation and de-encapsulation occurs.
D. It is a device that performs tunneling using GRE.

Correct Answer: A
Explanation

Explanation/Reference:
VTEP (Virtual Tunnel Endpoint) - This is the device that does the encapsulation and de-encapsulation.

reference:https://www.cisco.com/c/en/us/support/docs/switches/nexus-9000-series-switches/118978-config-vxlan-00.html

QUESTION 9
In a Cisco Software Defined Networking (SDN) architecture, what is used to describe the API communication between the SDN controller and the network elements (routers and switches) that it manages?

A. Southbound API
B. Northbound API
C. Westbound API
D. Eastbound API.

Correct Answer: A
Explanation

QUESTION 10
Ansible is being used in a network for configuration and management automation. Which of the following are true statements regarding Ansible? (Choose two.)

A. Requires an agent on the end device.
B. Utilizes the concept of playbooks to execute the configuration.
C. Uses a pull model, where the end devices pull configuration files from the Ansible server.
D. Utilizes SSH.

Correct Answer: BD
Explanation

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Explanation/Reference:
Playbooks
https://docs.ansible.com/ansible-core/devel/getting_started/basic_concepts.html

SSH
https://docs.ansible.com/ansible-core/devel/getting_started/index.html

QUESTION 11
JSON web tokens (JWT) are used to secure JSON based communications. Which of the following fields make up a JWT? (Choose three.)

A. Header
B. Trailer
C. Payload
D. Sequence number
E. Signature

Correct Answer: ACE
Explanation

Explanation/Reference:
reference: https://jwt.io/introduction

QUESTION 12
Which of the following are features typically only found in a Next Generation (NextGen) firewall? (Choose two.)

A. Network Address Translation (NAT)
B. Secure remote access VPN (RA VPN)
C. Deep packet inspection
D. reputation based malware detection
E. IPSec site-to-site VPN

Correct Answer: CD
Explanation

QUESTION 13
In a Cisco SD-Access network architecture, what is the role of the Fabric Edge Node?

A. It manages endpoint to device relationships
B. It connects external layer 3 networks to the SDA fabric
C. It connects wired endpoints to the SDA fabric
D. It connects wireless endpoints to the SDA fabric

Correct Answer: C
Explanation

QUESTION 14
You want to create a policy that allows all TCP traffic in the port range of 20 to 110, except for telnet traffic, which should be dropped. Which of the following access control lists will accomplish this?

A. deny tcp any any eq 22
   permit tcp any any gt 20 lt 110
B. permit tcp any any range 22 443
   deny tcp any any eq 23
C. deny tcp any any eq 23
   permit tcp any any

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D. deny tcp any any eq 23
permit tcp any any range 20 110

Correct Answer: D
Explanation

Explanation/Reference:
for the policy map to MATCH an entry we should use 'permit' otherwise use 'deny'.

QUESTION 15
A new multicast server is being added to an existing PIM Sparse mode network. Which device in this network must the new server register with before its multicast traffic can be dispersed throughout the network?

A. IGMP Querier
B. Local PIM router
C. Local IGMP switch
D. Rendezvous Point (RP)

Correct Answer: D
Explanation

Explanation/Reference:
reference:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3850/software/release/16-9/configuration_guide/sys_mgmt/b_169_ip_mcast_rtng_3850_cg/ip_multicast_optimization__optimizing_pim_sparse_mode_in_a_large_ip_multicast_deployment.html

QUESTION 16
What are the four stages of obtaining an IP address lease from a DHCP server?

A. Discover, Offer, Release, Renew
B. Discover, Obtain, Request, Renew
C. Determine, Obtain, Release, Acknowledge
D. Discover, Offer, Request, Acknowledge

Correct Answer: D
Explanation

Explanation/Reference:
DORA is the correct answer

QUESTION 17
Which Cisco EIGRP K-values are set to zero by default? (Choose three.)

A. Bandwidth
B. Load
C. Total Delay
D. Reliability
E. MTU

Correct Answer: BDE
Explanation

Explanation/Reference:
reference: https://ipwithease.com/eigrp-k-values/
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_eigrp/configuration/15-s/ire-15-s-book/ire-wid-met.html

QUESTION 18

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You want to securely implement the Network Time Protocol (NTP) on your network. What two mechanisms are available to secure NTP? (Choose two.)

A. IPSec communication
B. MD5 authentication keys
C. Role based access control (RBAC)
D. access-group configuration

Correct Answer: BD
Explanation

QUESTION 19
Which of the following are true statements regarding the Virtual Router Redundancy Protocol (VRRP) feature? (Choose two.)

A. Pre-emption is enabled by default
B. The router priority is a configurable value from 0-4095
C. MD5 authentication is supported with VRRP
D. Secondary IP addresses are supported with VRRP
E. VRRP can only be used with Cisco devices

Correct Answer: CD
Explanation

Explanation/Reference:
in every cisco documents is referenced "Preemption" or "preempt" NOT pre-emption.
so i go with C and D
Multiple IP Addresses
The virtual router can manage multiple IP addresses, including secondary IP addresses.

Authentication
VRRP message digest 5 (MD5) algorithm authentication protects against VRRP-spoofing software and uses the industry-standard MD5 algorithm for improved reliability and security.

QUESTION 20
Which of the following are valid Port Aggregation Protocol (PAgP) modes? (Choose two.)

A. On
B. Active
C. Passive
D. Auto
E. Desirable

Correct Answer: DE
Explanation

QUESTION 21
What are some of the key differences between HSRPv1 and HSRPv2? (Choose two.)

A. HSRPv1 uses the multicast address of 224.0.0.102 while HSRPv2 uses 225.0.0.2.
B. HSRP uses a group range of 0-255, while HSRP uses a group range of 0-4095.
C. HSRPv1 uses seconds based timers, while HSRPv2 uses milliseconds based timers.
D. HSRPv1 provides support for IPv6, while HSRPv2 supports IPv4 only.

Correct Answer: BC
Explanation

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Explanation/Reference:
should be HSRPv1, HSRPv2

QUESTION 22
EIRP (Effective Isotropic Radiated Power) is the actual amount of signal leaving the antenna. It is a measurement value in db and is based on which three components? (Choose three.)

A. Transmit Power
B. RSSI
C. Cable Loss
D. Antenna Gain
E. SNR

Correct Answer: ACD
Explanation

Explanation/Reference:
The radiated (transmitted) power is rated in either dBm or W. Power that comes off an antenna is measured as effective isotropic radiated power (EIRP). EIRP is the value that regulatory agencies, such as the FCC or European Telecommunications Standards Institute (ETSI), use to determine and measure power limits in applications such as 2.4-GHz or 5-GHz wireless equipment. In order to calculate EIRP, add the transmitter power (in dBm) to the antenna gain (in dBi) and subtract any cable losses (in dB).

reference:
https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/23231-powervalues-23231.html

QUESTION 23
Which component of TCP defines the maximum packet size that a host interface is able to accept on ingress?

A. MTU
B. PATH MTU
C. Window size
D. MRU

Correct Answer: D
Explanation

Explanation/Reference:
A maximum transmission unit (MTU) is the largest length of a packet that can be transmitted out of an interface toward a destination. maximum receive unit (MRU) is the largest packet size that an interface can receive, so it's an ingress interface parameter.

https://www.networkers-online.com/p/understand-mtu-and-mru-the-full-story

QUESTION 24
Which of the following are benefits from implementing the use of VXLAN's in a network? (Choose two)

A. Increased scalability since VXLAN extends the IF field to 24 bits, providing up to 16 million unique ID values.
B. Makes the implementation of Spanning Tree more efficient.
C. Can be used to replace layer 3 routing protocols and increase routing efficiency at layer 2.
D. Supports Equal Cost Multi-pathing (ECMP) so that load balancing over multiple links can be used.

Correct Answer: AD
Explanation

Explanation/Reference:
VXLAN is a MAC in IP/UDP(MAC-in-UDP) encapsulation technique with a 24-bit segment identifier in the

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form of a VXLAN ID. The larger VXLAN ID allows LAN segments to scale to 16 million in a cloud network. In addition, the IP/UDP encapsulation allows each LAN segment to be extended across existing Layer 3 networks making use of Layer 3 equal-cost multipath (ECMP).
reference:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/nx-os/vxlan/configuration/guide/b_NX-OS_VXLAN_Configuration_Guide/overview.pdf

QUESTION 25
You have configured router R1 with multiple VRF's in order to support multiple customer VPN networks. If you wanted to see the best path for the 10.2.1.0.24 route in VRF Green, what command would you use?

A. show ip route vrf Green 10.2.1.0
B. show ip route 10.2.1.0 vrf Green
C. show route all 10.2.1.0
D. show ip route 10.2.1.0 Green

Correct Answer: A
Explanation

Explanation/Reference:
#show ip route vrf mgmt 10.100.10.1
% IP routing table vrf mgmt does not exist

QUESTION 26
Which of the following statements are true regarding the Link Management Protocol (LMP) when used in the Cisco Stackwise virtual link? (Choose two.)

A. It determines the switch priority.
B. It negotiates the version of the virtual header
C. It verifies link integrity via bidirectional forwarding
D. It performs auto discovery of other active Stackwise switches

Correct Answer: BC
Explanation

Explanation/Reference:
The Link Management Protocol (LMP) is activated on each link of the StackWise Virtual link as soon as it is brought up online. The LMP performs the following functions:

1. Verifies link integrity by establishing bidirectional traffic forwarding, and rejects any unidirectional links
2. Exchanges periodic hellos to monitor and maintain the health of the links
3. Negotiates the version of StackWise Virtual header between the switches StackWise Virtual link role resolution

https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.html

QUESTION 27
Which of the following statements regarding the use of Bidirectional Forwarding Detection (BFD) in a Cisco SD-WAN environment are true?

A. BFD cannot be disabled on SD-WAN routers.
B. OSPFv3 is not supported with BFD.
C. In addition to link failure detection, it is also used to measure loss and latency used by application aware routing.
D. Is not typically enabled for OMP.
E. Does not support BGP.

Correct Answer: AC
Explanation

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Explanation/Reference:
Runs on SD-WAN tunnel to detect failures in the overlay tunnel

Is enabled by default and cannot be disabled

Is typically enabled for OMP

Besides link failures, it also measures latency, loss, and other link statistics used by application-aware routing

https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/routing/ios-xe-17/routing-book-xe/m-bfd-for-routing-protocols.html#Cisco_Concept.dita_26cf6354-cce5-4799-b140-f518adc78a40

QUESTION 28
Which Cisco Locator/ID Separation Protocol (LISP) device receives packets from remote site facing devices and either decapsulates the LISP packets or routes them natively?

A. ITR
B. ETR
C. MS
D. MR

Correct Answer: B
Explanation

QUESTION 29
In a Cisco SD-Access network where VXLAN is used for encapsulating data packets, what is the minimum MTU setting that devices should be configured with?

A. 1492
B. 1500
C. 1518
D. 1550

Correct Answer: D
Explanation

Explanation/Reference:
reference: https://www.cisco.com/c/en/us/td/docs/dcn/nx-os/nexus9000/103x/configuration/vxlan/cisco-nexus-9000-series-nx-os-vxlan-configuration-guide-release-103x/m_configuring_vxlan_93x.html

QUESTION 30
A wireless client roams from one Access Point to another Access Point using a different switch in a Cisco SD-Access network. If only a single Wireless Lan Controller in involved, what roaming methods is being used?

A. L3 roaming
B. inter-xTR
C. auto anchor
D. bridged roaming

Correct Answer: B
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/9800/config-guide/b_wl_16_10_cg/mobility.html

QUESTION 31

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You need to implement a First Hop Redundancy Protocol (FHRP) in a dual stack (IPv4 and IPV6) environment that utilizes devices from multiple different vendors. Which protocol best meets these needs?

A. HSRP
B. GLBP
C. VRRPv1
D. VRRPv2

Correct Answer: D
Explanation

Explanation/Reference:
You have to go with VRRP as the protocol must be vendor agnostic.

QUESTION 32
Which Cisco SD-WAN component acts as a single pane of glass for management and offers centralized fault, performance, accounting, and configuration management?

A. vBond
B. vEdge
C. vSmart
D. vManage

Correct Answer: D
Explanation

QUESTION 33
In a Cisco SD-WAN network, which VPN Identifier is reserved as the transport VPN, carrying control traffic?

A. VPN 0
B. VPN 1
C. VPN 512
D. VPN 514

Correct Answer: A
Explanation

Explanation/Reference:
VPN 0--Transport VPN, which carries control traffic via the configured WAN transport interfaces. Initially, VPN 0 contains all of a device's interfaces except for the management interface, and all interfaces are disabled. VPN 512--Management VPN, which carries out-of-band network management traffic among the Viptela devices in the overlay network. The interface used for management traffic resides in VPN 512. By default, VPN 512 is configured and enabled on all vEdge routers except for vEdge 100. For controller devices, by default, VPN 512 is not configured.
VPNs 1 through 511, and 513 through 65530--VPNs on vEdge routers for service-side data traffic.

https://www.cisco.com/c/en/us/support/docs/routers/12000-series-routers/47321-ciscoef.html

QUESTION 34
In a Cisco SD-WAN network, which VPN Identifier is reserved for carrying out-of-band network management traffic?

A. VPN 0
B. VPN 1
C. VPN 512
D. VPN 514

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Correct Answer: C
Explanation

Explanation/Reference:
VPN 0--Transport VPN, which carries control traffic via the configured WAN transport interfaces. Initially, VPN 0 contains all of a device's interfaces except for the management interface, and all interfaces are disabled. VPN 512--Management VPN, which carries out-of-band network management traffic among the Viptela devices in the overlay network. The interface used for management traffic resides in VPN 512. By default, VPN 512 is configured and enabled on all vEdge routers except for vEdge 100. For controller devices, by default, VPN 512 is not configured.
VPNs 1 through 511, and 513 through 65530--VPNs on vEdge routers for service-side data traffic.

https://www.cisco.com/c/en/us/support/docs/routers/12000-series-routers/47321-ciscoef.html

QUESTION 35
Which of the following are the two components of the two-tier modern data center design? (Choose two.)

A. Distribution
B. Core
C. Access
D. Leaf
E. Spine

Correct Answer: DE
Explanation

Explanation/Reference:
the question is in modern data center not a classical networkd design

QUESTION 36
Which of the following are the three components of the three-tier hierarchical networking model used in the classical Cisco networks design? (Choose three.)

A. Distribution
B. Core
C. Access
D. Leaf
E. Spine

Correct Answer: ABC
Explanation

QUESTION 37
The Overlay Management Protocol (OMP) is used as the control plane protocol and forms peers between the VSmart Controller and the SD-WAN edge devices. OMP is responsible for advertising which three types of routes in the SD-WAN network? (Choose three.)

A. OMP routes
B. TLOCs
C. MP-BGP
D. LISP routes
E. Service routes

Correct Answer: ABE
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/policies/vedge/policies-book/control-

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policies.html

QUESTION 38
In a Cisco SD-Access wireless network, which device is used as an entry and exit point in and out of the fabric?

A. fabric edge node
B. control plane node
C. fabric border node
D. fabric access points

Correct Answer: D
Explanation

QUESTION 39
Which of the following are valid statements when configuring Nonstop Forwarding (NSF) with Stateful Switchover (SSO) on a Cisco device? (Choose two.)

A. supports multicast routing protocols
B. Supports IPv4 and IPv6
C. Nonstop Forwarding requires SSO to also be configured
D. HSRP is not supported with NSF/SSO
E. Improper implementation of NSF/SSO can result in routing loops

Correct Answer: CD
Explanation

Explanation/Reference:
NSF capability is supported for IPv4 routing protocols only. NSF capability is not supported for IPv6 routing protocols.
NSF does not support IP Multicast Routing, as it is not SSO-aware.
You must configure SSO in order to use NSF with any supported protocol.
The Hot Standby Routing Protocol (HSRP) is not supported with NSF SSO. Do not use HSRP with NSF SSO.

https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst9400/software/release/16-6/configuration_guide/stck_mgr_ha/b_166_nsf_sso_9400_cg.html

QUESTION 40
In a Cisco SD-Access fabric architecture, which of the following are valid device roles (Choose three.)

A. Control Plane Node
B. Access routing device
C. Edge Node
D. Border Node
E. Distributed Node

Correct Answer: ACD
Explanation

QUESTION 41
Refer to the following two images regarding QoS Traffic Shaping and Traffic Policing:
Image A:

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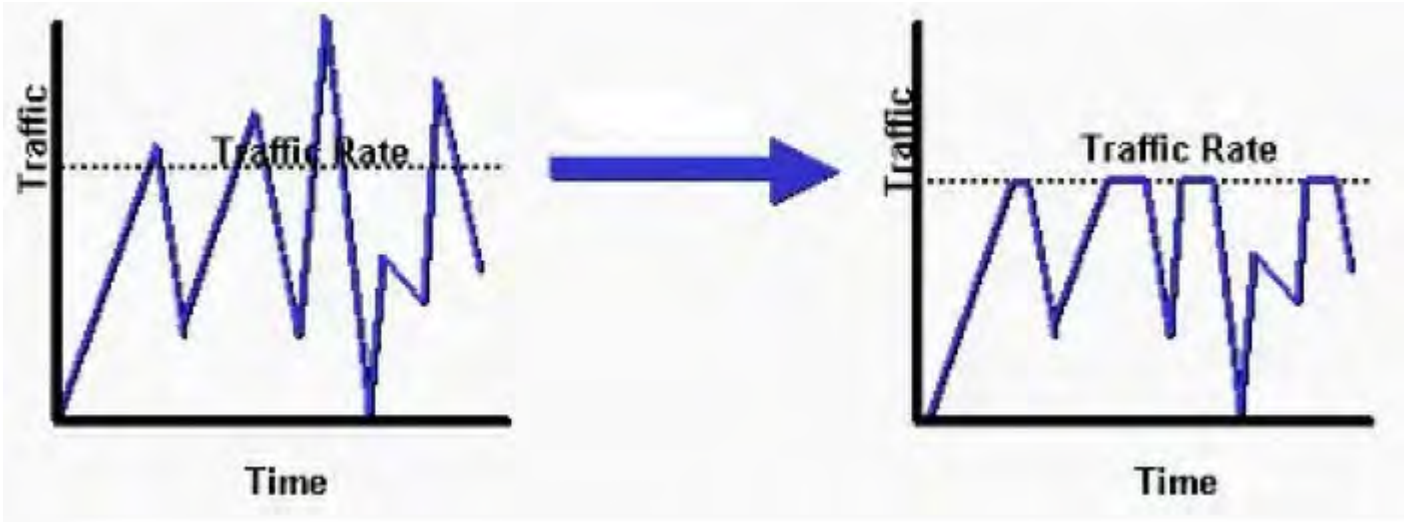
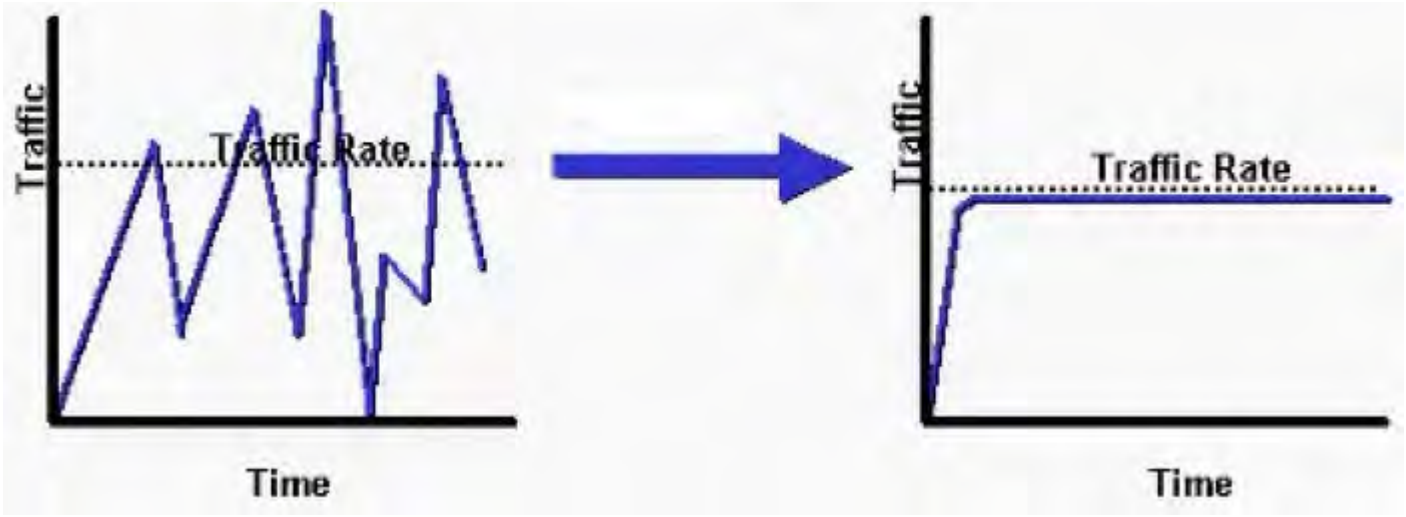


Image B:



Based on the images, which of the following are true? (Choose two.)

A. Image A depicts the result of Traffic Shaping
B. Image A depicts the result of Traffic Policing
C. Image B depicts the result of Traffic Shaping
D. Image B depicts the result of Traffic Policing

Correct Answer: BC
Explanation

Explanation/Reference:
reference:https://www.cisco.com/c/it_it/support/docs/quality-of-service-qos/qos-policing/19645-policevsshape.html

QUESTION 42
Which Quality of Service (QoS) mechanism allows for the creation of multiple levels of QoS policy, providing a more granular degree of traffic management?

A. Policing
B. H-QoS
C. Congestion avoidance
D. Dual Policy

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Correct Answer: B
Explanation

Explanation/Reference:
Hierarchical QoS (H-QoS)

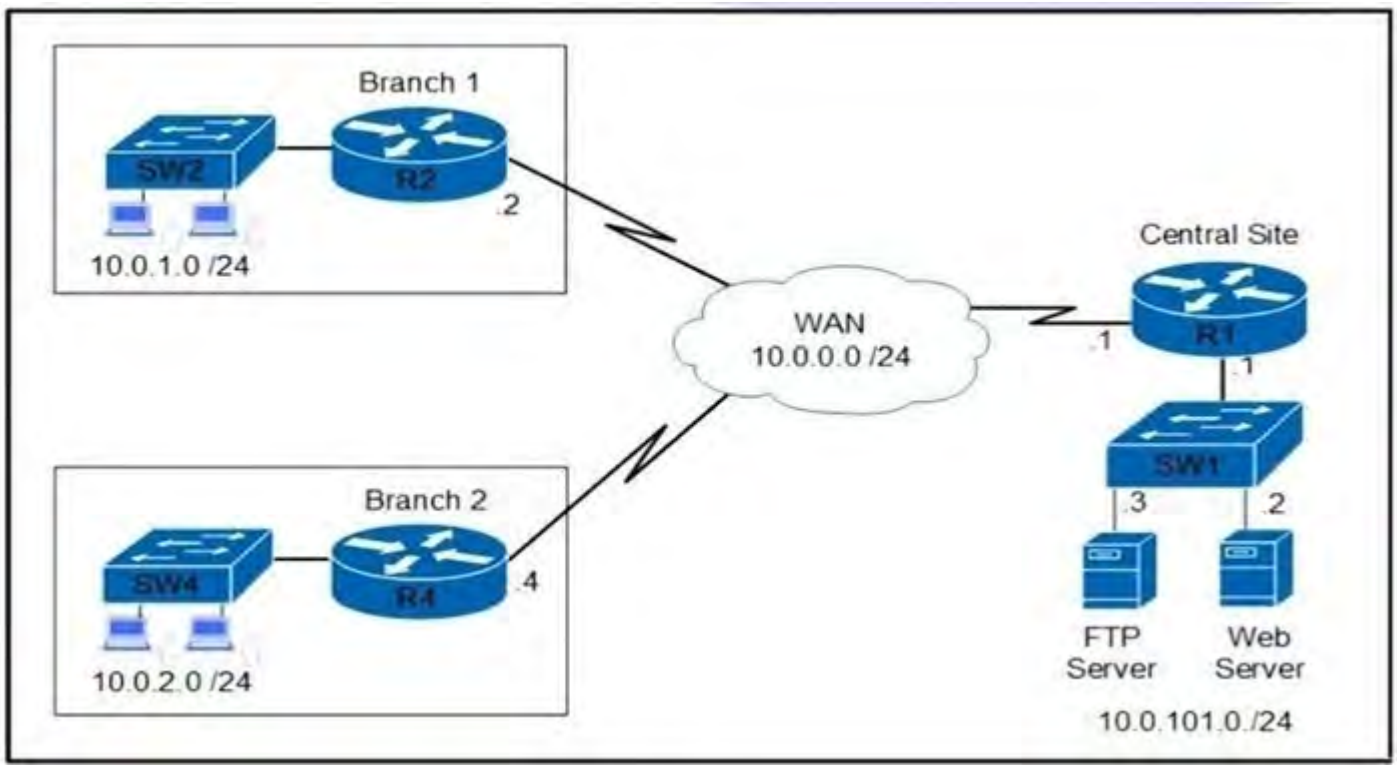
QUESTION 43
You need to weigh the pros and cons of deploying a premise-based data center versus using a cloud-based data center deployment. What is an advantage of using a premise-based solution? (Choose two.)

A. Lower application latency for end users
B. Easily scalable
C. Lower capital costs
D. Reduced deployment times
E. Increased control over the environment

Correct Answer: AE
Explanation

Explanation/Reference:
AE sounds like the only two correct-ish answers in this one, but A is kinda debatable since especially with Work from home culture / VPN's, it doesn't really matter anymore since you'd always connect either to on-prem, or to a cloud environment.

QUESTION 44
Refer to the exhibit



Which two commands are required on route R1 to block FTP and allow all other traffic from the Branch 2 network (Choose two)

A. access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp-data access-list 101 permit ip any any
B. access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp-data access-list 101 permit ip any any
C. interface GigabitEthernet0/0 ip address 10.0.0.1 255.255.255.252 ip access-group 101 out

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D. access-list 101 deny tcp 10.0.2.0 0.0.0.255 host 10.0.101.3 eq ftp access-list 101 permit ip any any
E. interface GigabitEthernet0/0 ip address 10.0.101.1 255.255.255.252 ip access-group 101 in

Correct Answer: AC
Explanation

Explanation/Reference:
A included B&D ACL
C is correct, block Branch 2 ftp traffic exit the R1 to 10.0.101.0/24.
E is setting on WAN port to block ftp traffic in R1

QUESTION 45
When does a Cisco StackWise primary switch lose its role?

A. when a stack member fails
B. when the stack primary is reset
C. when a switch with a higher priority is added to the stack
D. when the priority value of a stack member is changed to a higher value

Correct Answer: C
Explanation

QUESTION 46
How does a fabric AP fit in the network?

A. It is in local mode and must be connected directly to the fabric border node
B. It is in FlexConnect mode and must be connected directly to the fabric edge switch.
C. It is in FlexConnect mode and must be connected directly to the fabric border node
D. It is in local mode and must be connected directly to the fabric edge switch.

Correct Answer: D
Explanation

Explanation/Reference:
Reference:
https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/sda-sdg-2019oct.html

QUESTION 47
Refer to the exhibit.

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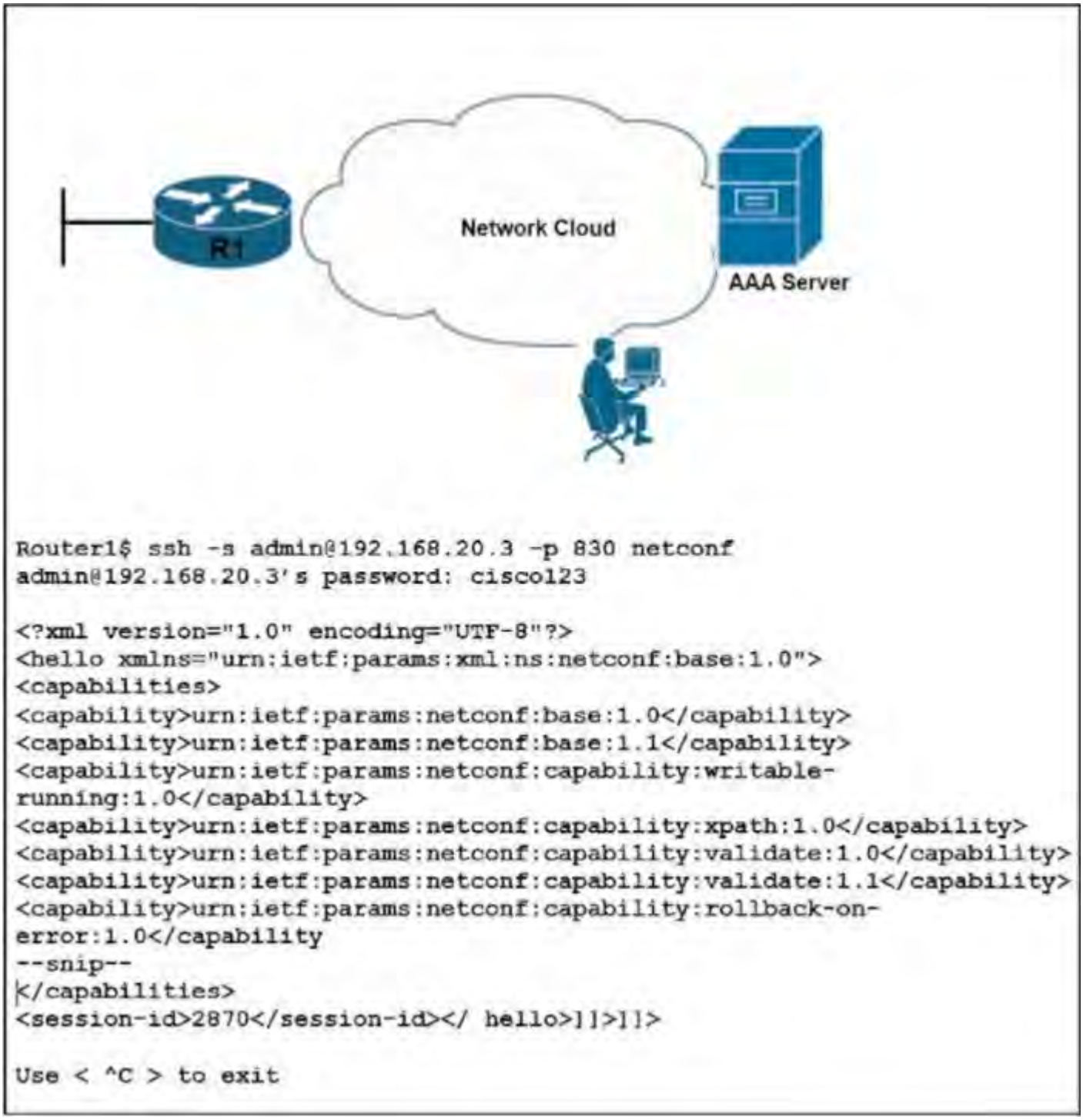


```
Router1$ ssh -s admin@192.168.20.3 -p 830 netconf
admin@192.168.20.3's password: cisco123

<?xml version="1.0" encoding="UTF-8"?>
<hello xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
<capabilities>
<capability>urn:ietf:params:netconf:base:1.0</capability>
<capability>urn:ietf:params:netconf:base:1.1</capability>
<capability>urn:ietf:params:netconf:capability:writable-
running:1.0</capability>
<capability>urn:ietf:params:netconf:capability:xpath:1.0</capability>
<capability>urn:ietf:params:netconf:capability:validate:1.0</capability>
<capability>urn:ietf:params:netconf:capability:validate:1.1</capability>
<capability>urn:ietf:params:netconf:capability:rollback-on-
error:1.0</capability
--snip--
</capabilities>
<session-id>2870</session-id></ hello>]]>]]>

Use < ^C > to exit
```

An engineer tries to log in to router R1. Which configuration enables a successful login?

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A)

```
R1# username admin privilege 15
aaa authorization exec default local
```

B)

```
R1#netconf-yang
username admin privilege 15 secret cisco123
aaa new-model
aaa authorization exec default local
```

C)

```
R1# aaa new-model
aaa authorization exec default local
enable aaa admin privilege 15
```

D)

```
R1#username admin privilege 15
aaa authorization exec default local
netconf-yang
```

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

Correct Answer: B
Explanation

QUESTION 48
What is a characteristic of a Type 2 hypervisor?

A. It is installed on an operating system and supports other operating systems above it.
B. It is referred to as a hosted hypervisor.
C. Problems in the base operating system can affect the entire system.
D. It is completely independent of the operating system.

Correct Answer: C
Explanation

Explanation/Reference:
Type 2 It is completely dependent on Host Operating System for its operations. While having a base operating system allows better specification of policies, any problem in the base operating system affects the entire system even if the hypervisor running above the base OS is secure.

QUESTION 49
When are multicast RPs required?

A. RPs are required only when using protocol independent multicast dense mode.
B. By default, the RP is needed penodically to maintain sessions with sources and receivers.
C. RPs are required for protocol Independent multicast sparse mode and dense mode.

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D. By default, the RP Is needed only start new sessions with sources and receivers.

Correct Answer: D
Explanation

QUESTION 50
A network engineer must configure the VTY lines on a router to achieve these results:

1. Remote access should be permitted only for secure protocols.
2. Only a password should be required for device authentication.
3. All idle EXEC sessions must be terminated in 60 minutes.

Which configuration should be applied?

A. line vty 0 15
password Cisco123
transport input ssh
exec-timeout 60
B. line vty 0 15
login
password Cisco123
transport input ssh
exec-timeout 60
C. line vty 0 15
password Cisco123
transport input telnet ssh
exec-timeout 60
D. line vty 0 15
password Cisco123
transport input all
session-timeout 60

Correct Answer: B
Explanation

QUESTION 51
Refer to the exhibit.

```
Router (config) #ntp master
Router (config) #ntp source loopback 0
```

What is the result of the NTP configuration?

A. The router will use the address of loppback 0 to communicate with the NTP server.
B. The router will advertise but not listen to NTP broadcast packets.
C. The router will be used as an NTP authoritative server only if it synchronized with an outside source.
D. The router will be used as an NTP authoritative server, even if it is not synchronized with an outside source.

Correct Answer: D
Explanation

QUESTION 52
Which mechanism does OAuth use to strengthen REST API security when compared to BasicAuth?

A. Token

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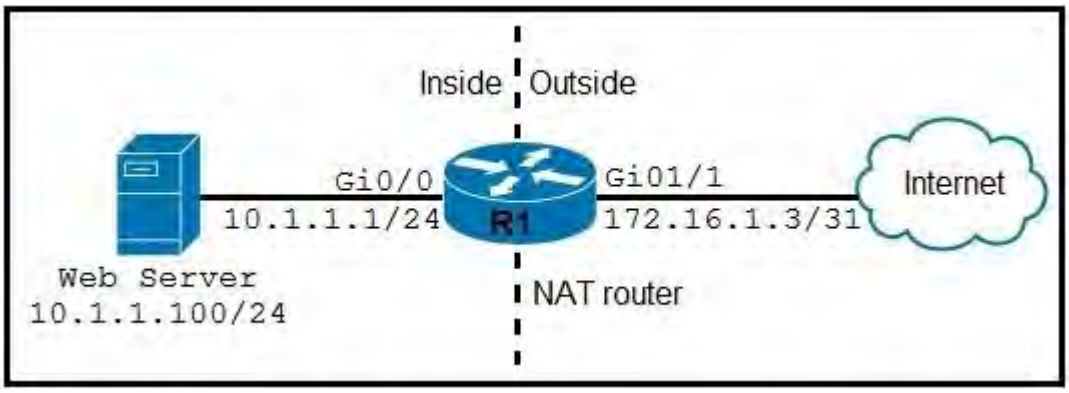
B. SSL
C. Authentication
D. TLS

Correct Answer: A
Explanation

QUESTION 53
Refer to the exhibit.



The web server is configured to listen only to TCP port 8080 for all HTTP requests. Which command is required to allow Internet users to access the web server on HTTP port 80?

A. ip nat outside static tcp 10.1.1.100 8080 10.1.1.100 80
B. ip nat inside static tcp 10.1.1.100 80 10.1.1.100 8080
C. ip nat inside static tcp 10.1.1.100 8080 10.1.1.100 80
D. ip nat outside static tcp 10.1.1.100 80 10.1.1.100 8080

Correct Answer: C
Explanation

QUESTION 54
Refer to the exhibit.

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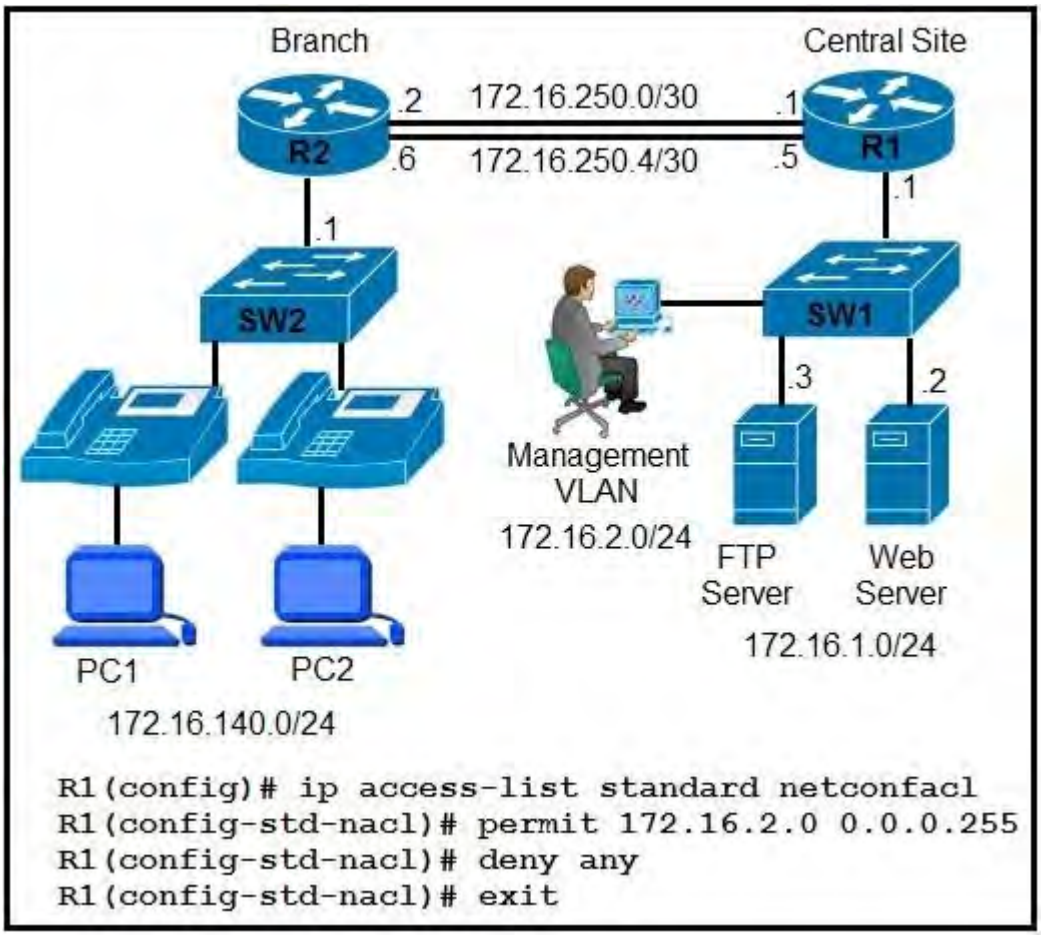

An engineer must configure router R1 to allow only NETCONF connections from the management VLAN. Which command completes this configuration?

A. R1(config-if)# ip access-group netconfacl in
B. R1(config)# netconf-yang ipv4 access-list name netconfacl
C. R1(config)#ip http secure-server
R1(config)# ip http accounting commands 12 default
D. R1(config-if)#ip access-group netconfacl out

Correct Answer: A
Explanation

QUESTION 55
Which configuration saves the running configuration to the startup configuration and logs a "saving configuration automatically" message when a syslog message that contains "SYS-5-CONFIG_I" is received?

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A.
```
event manager applet save_config
 event syslog pattern "SYS-5-CONFIG_I" period 1
 event track 1
 action 1.0 cli command "write mem"
 action 2.0 syslog msg "saving configuration automatically"
```

B.
```
event manager applet save_config
 action 1.0 string match "SYS-5-CONFIG_I" save_config
 action 2.0 cli command "write mem"
 action 3.0 syslog msg "saving configuration automatically"
```

C.
```
event manager applet save_config
 event syslog pattern "SYS-5-CONFIG_I" period 1
 action 1.0 cli command "end"
 action 2.0 cli command "write mem
 action 3.0 syslog msg "saving configuration automatically"
```

D.
```
event manager applet save_config
 event syslog pattern "SYS-5-CONFIG_I" period 1
 action 1.0 cli command "write mem"
 action 2.0 syslog msg "saving configuration automatically"
```

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

Correct Answer: C
Explanation

QUESTION 56
Which type of roaming event occurs when a client roams across multiple mobility groups?

A. Layer1
B. Layer7
C. Layer3
D. Layer2

Correct Answer: D
Explanation

QUESTION 57
A Cisco administrstor deploys a new wireless network but CAPWAP APs cannot communicate with the wireless controller. IP connectivity in the network functions properly. Which action resolves the issue?

A. Open CAPWAP UDP port 12222 in the network firewall.
B. Open CAPWAP UDP ports 5246 and 5247 in the network firewall.
C. Enable the UDP Lite feature on the WLC.
D. Ensure that the controller is connected to a AAA server.

Correct Answer: B

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Explanation

QUESTION 58
Which technique is used to protect end user devices and data from unknown file behavior?

A. crypto file ransomware protection using a file hash calculation
B. file retrospection using continuous scan and analyses
C. file sandboxing using a protected environment to analyze and simulate the behavior of unknown files
D. phishing file quarantine using an internal environment to store attached files

Correct Answer: C
Explanation

QUESTION 59
A client requests a wireless solution for remote branch offices to eliminate the need for a local controller at each branch. The branch users require local termination in a specifc VLAN for local internet breakout. Which solution must be deployed?

A. central switched
B. FlexConnect local switching
C. auto-anchor mobility
D. asymmetric tunneling

Correct Answer: B
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/config-guide/b_cg85/flexconnect.html

QUESTION 60
Which device, in a LISP router architecture, receives LISP map requests and determines which ETR should handle the map request?

A. proxy ETR
B. routing locator
C. map resolver
D. map server

Correct Answer: C
Explanation

Explanation/Reference:
LISP Map Resolver
Like an MS, a LISP MR connects to the ALT. The function of the LISP MR is to accept encapsulated Map-Request messages from ingress tunnel routers (ITRs), decapsulate those messages, and then forward the messages to the MS responsible for the egress tunnel routers (ETRs) that are authoritative for the requested EIDs.

QUESTION 61
How does a WLC achieve stateful switchover for APs and clients?

A. The active WLC establishes a CAPWAP tunnel to the AP, and the standby WLC establishes a LWAPP tunnel to the AP.
B. The active WLC establishes a CAPWAP tunnel with the AP, and the standby WLC copies the AP database and the client database from the active WLC.
C. The active WLC establishes a CAPWAP tunnel with the AP and standby WLC to share the AP

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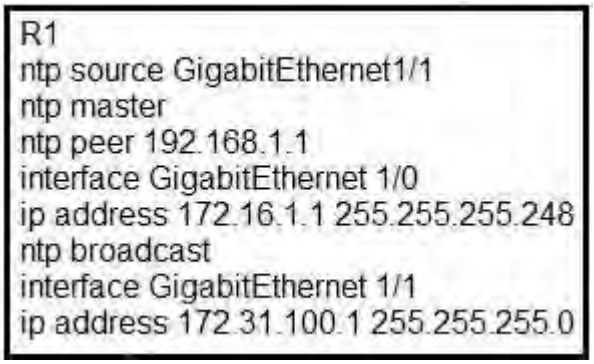
database information.

D. The active and standby WLCs establish separate CAPWAP tunnels to the AP.

Correct Answer: C
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/8-7/High_Availability_DG.html

QUESTION 62
Refer to the exhibit.



What is the purpose of the configuration?

A. The router will function in NTP in client mode.
B. The router will use 172.16.1.1 as the source for NTP packets.
C. The router is allowed to receive NTP broadcast packets.
D. The router will function as an authoritative NTP server.

Correct Answer: D
Explanation

QUESTION 63
Which NTP concept is used to measure the distance from a device to its authoritative time source?

A. stratum
B. NTP peer
C. GPS
D. atomic clock

Correct Answer: A
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/dam/en/us/td/docs/ios-xml/ios/bsm/configuration/xe-3se/3650/bsm-xe-3se-3650-book.html#:~:text=NTP%20uses%20the%20concept%20of,from%20an%20authoritative%20time%20source

QUESTION 64
What gives priority on an egress interface, for database traffic that connected on an ingress interface, without changing the CoS value?

A. QoS group
B. policy map
C. CoS map

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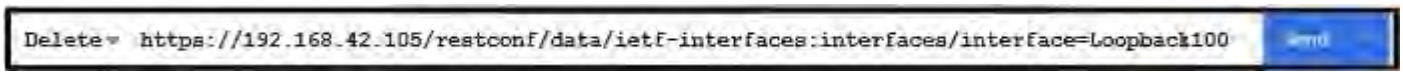
D. class map

Correct Answer: B
Explanation

QUESTION 65
Refer to the exhibit.



What does the response "204 No Content" mean for the REST API request?

A. Interface loopback 100 is removed from the configuration.
B. Interface loopback 100 is not removed from the configuration.
C. Interface loopback 100 is not found in the configuration.
D. The DELETE method is not supported.

Correct Answer: C
Explanation

QUESTION 66
What is a characteristic of vManage?

A. It leverages the overlay management protocol to interface with WAN Edge devices.
B. It supports protocols such as OSPF to integrate with legacy network devices.
C. It requires a public IP address to allow WAN Edge devices to discover fabric components.
D. It uses NETCONF to configure vSmart devices to build the overlay network data plane.

Correct Answer: D
Explanation

QUESTION 67
Refer to the exhibit.

```
Router(config)# clock timezone EST -5 0
Router(config)# clock summer-time EDT recurring
Router(config)#clock calendar-valid
Router(config)#ntp master
Router(config)#interface vlan 3
Router(config-if)#ntp broadcast
```

What are two results of the NTP configuration? (Choose two.)

A. It uses other systems as an authoritative time source.
B. It distributes the time via NTP broadcast and multicast packets.

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C. It distributes the time via NTP broadcast packets.
D. It forms a peer association with another system.
E. It uses the hardware clock as an authoritative time source.

Correct Answer: AC
Explanation

QUESTION 68
What is the purpose of data modeling languages?

A. to describe a data schema convertible into any data encoding format
B. to provide a framework to describe data flow patterns in networks
C. to specify algorithms necessary to decode binary-encoded protocol data units
D. to translate encoded data for interoperability between different CPU architectures

Correct Answer: A
Explanation

QUESTION 69
Which policy feature is used with TrustSec to provide endpoint entitlement in an enterprise network?

A. security group tags
B. access control lists
C. virtual local area network
D. virtual routing and forwarding

Correct Answer: A
Explanation

QUESTION 70
Refer to the exhibit.

```
%PM-4-ERR_DISABLE: channel-misconfig (STP) error detected on Po2, putting Et0/1 in err-disable state
FEC: pagp_switch_hotstandby: for agport Po2
FEC: pagp_switch_hotstandby: PAgP not enabled on agport Po2
FEC: pagp_switch_port_down: Et0/1 Inform no
FEC: pagp_switch_invoke_port_down: Et0/1
FEC: fec_unbundle: Et0/1
FEC: pagp_switch_change_vgc: gcchngreq == 0 for Et0/1
FEC: pagp_switch_change_vgc: Et0/1 gcchngreq = 0 gc = 0
FEC: pagp_switch_delete_port_from_agport_internal: delete_port_from_agport: for port Et0/1
FEC: delete port (Et0/1) from agport (Po2)
FEC: pagp_switch_delete_port_from_agport_list: afb->nports-- = 1 [Et0/1]
FEC: Un-Bndl msg NOT send to PM for port Et0/1 from Po2
FEC: pagp_switch_reset_load_index: reading load-index for port Po2
FEC: fec_set_agport_macaddr: Po2 Et0/1 (remove)
FEC: coerce_hwaddr_unix: get aabb.cc00.2020 for L2 Po2 from Et0/2
FEC: coerce_hwaddr_unix: set aabb.cc00.2020 for Po2, 1/1
```

After unsuccessfully configuring an EtherChannel link, an engineer enables debugging. Which action will resolve the issue?

A. Configure the EtherChannel members in desirable mode.
B. Set the EtherChannel to mode on.
C. Set the EtherChannel to mode active.
D. Configure the EtherChannel members in passive mode.

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Correct Answer: C
Explanation

QUESTION 71
Which Cisco DNA Center Assurance feature verifies host reachability?

A. path trace
B. application experience
C. detail information
D. network time travel

Correct Answer: A
Explanation

QUESTION 72
Which feature is offered by the Cisco Advanced Malware Protection for Endpoints solution?

A. File Sandboxing
B. NetFlow
C. TrustSec
D. DNS Protection

Correct Answer: A
Explanation

QUESTION 73
How are control traffic, client authentication and data traffic handled in a mobility express environment?

A. Control traffic and client authentication is handled centrally by the controller. Data traffic is switched centrally by the controller.
B. Control traffic and client authentication is handled centrally by the controller. Data traffic is switched locally by the access points.
C. Control traffic and client authentication is handled locally by each access point. Data traffic is switched locally by the access points.
D. Control traffic and client authentication is handled locally by each access point. Data traffic is switched centrally by the controller.

Correct Answer: B
Explanation

QUESTION 74
Which feature allows clients to perform Layer 2 roaming between wireless controllers?

A. mobility groups
B. N+1 high availability
C. RF grouping
D. SSO

Correct Answer: A
Explanation

QUESTION 75
Refer to the exhibit.

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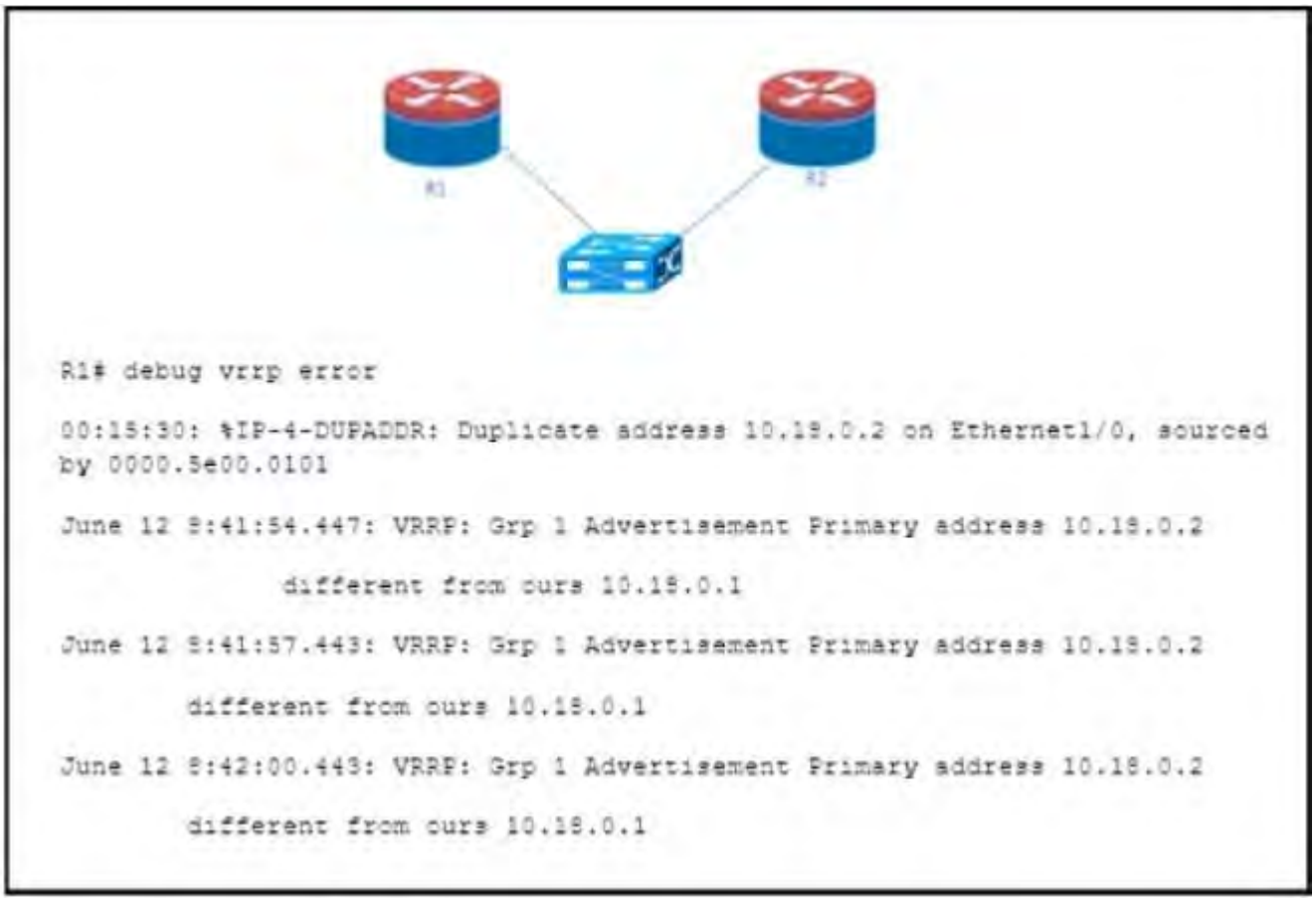

R1 and R2 are on the same VLAN. VRRP is configured between the two routers. What is the cause of the VRRP error?

A. R1 is configured with VIP 10.18.0.2 on VRRP group 1 and R2 is configured with VIP 10.18.0.1 on VRRP group 1.
B. R1 is configured with VIP 10.18.0.2 on VRRP group 1 and R2 is configured with VIP 10.18.0.2 on VRRP group 1.
C. R1 is configured with VIP 10.18.0.1 on VRRP group 1 and R2 is configured with VIP 10.18.0.2 on VRRP group 0.
D. R1 is configured with VIP 10.18.0.1 on VRRP group 1 and R2 is configured with VIP 10.18.0.2 on VRRP group 1.

Correct Answer: D
Explanation

QUESTION 76
What are two characteristics of a directional antenna? (Choose two.)

A. commonly used to cover large areas
B. low gain
C. provides the most focused and narrow beam-width
D. receive signals equally from all directions
E. high gain

Correct Answer: CE
Explanation

QUESTION 77

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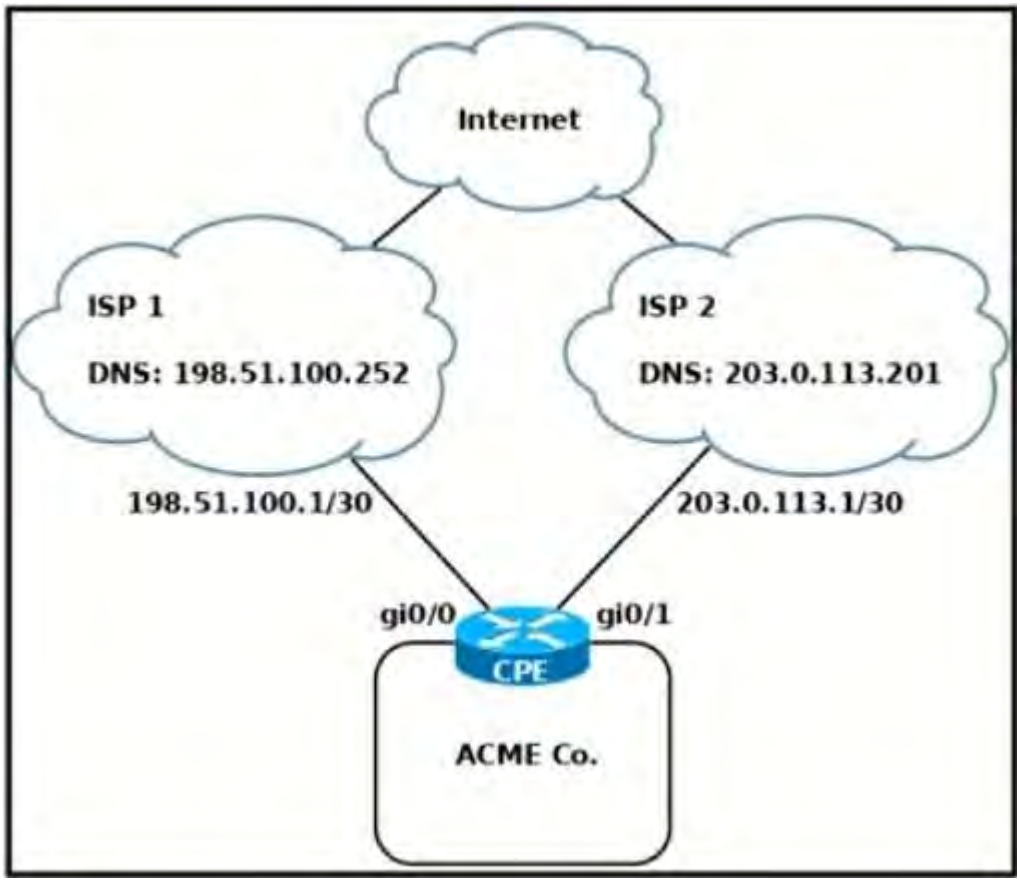
Refer to the exhibit.



An engineer must verify the operational status of ISP 1 by testing the IP reachability of the ISP1 DNS server every 10 seconds. If the DNS server is not reachable from the CPE through the Gi0/0 interface, then the test should fail. Which two configuration sets must be used to accomplish this task? (Choose two.)

A. ip route 0.0.0.0 0.0.0.0 198.51.100.1
   ip route 0.0.0.0 0.0.0.0 203.0.113.1
B. ip route 0.0.0.0 255.255.255.255 198.51.100.1
   ip route 0.0.0.0 255.255.255.255 203.0.113.1
C. ip route 198.51.100.252 255.255.255.255 198.51.100.1
D. ip sla 1
   icmp-echo 198.51.100.252
   frequency 10
   ip sla schedule 1 life forever start-time now
E. ip sla 1
   dns www.cisco.com name-server 198.51.100.252
   frequency 10
   ip sla schedule 1 life forever start-time now

Correct Answer: CD
Explanation

QUESTION 78
Refer to the exhibit.

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```
Device# show flow monitor FLOW-CC
Flow Monitor FLOW-CC:
  Description:        User defined
  Flow Record:        CC
  Flow Exporter:      1
                      2
  Cache:
    Type:               normal (Platform cache)
    Status:             allocated
    Size:               4096 entries / 311316 bytes
    Inactive Timeout:   15 secs
    Active Timeout:     1800 secs
    Update Timeout:     1800 secs
```

What can be determined from the output?

A. Flow record CC is configured with two separate exporters.
B. Flow record CC is configured with a single exporter.
C. Flow monitor FLOW-CC is configured with two separate flow records to a single exporter.
D. Flow monitor FLOW-CC is configured to two separate exporters.

Correct Answer: D
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/fnetflow/configuration/xe-3se/fnf-xe-3e-book/fnf-export-ipv4.html

QUESTION 79
An engineer is implementing a new SSID on a Cisco Catalyst 9800 Series WLC that must be broadcast on 6 GHz radios. Users will be required to use EAP-TLS to authenticate. Which wireless Layer 2 security method is required?

A. WPA2 Enterprise
B. WPA2 Personal
C. WPA3 Enterprise
D. WPA3 Personal

Correct Answer: C
Explanation

QUESTION 80

```
Router#show running-config | section line vty
line vty 0 4
 login local
line vty 5 15
 login local
!
Router#show running-config | include username
username cisco secret 5 $1$cM67$v7NQK0g2BGit77x88U1/00
```

Refer to the exhibit. Which action automatically enables privilege exec mode when logging in via SSH?

A. Configure a password under the line configuration.

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B. Configure the enable secret to be the same as the secret for user "Cisco".
C. Configure privilege level 15 under the line configuration.
D. Configure user "cisco" with privilege level 15.

Correct Answer: D
Explanation

QUESTION 81
Which security actions must be implemented to prevent an API injection attack?

A. Log and monitor failed attempts.
B. Use password hash with biometric authentication.
C. Validate, filter, and sanitize all incoming data.
D. Use short-lived access tokens and authenticate the apps.

Correct Answer: C
Explanation

QUESTION 82

```
count = 8
while count > 4 :
        print(count)
        count -= 1
```

Refer to the exhibit. What is output by this code?

A. -1 -2 -3 -4
B. 8 7 6 5
C. 4 5 6 7
D. -4 -5 -6 -7

Correct Answer: B
Explanation

QUESTION 83
When does Cisco DNA Center make changes to a device?

A. when the device credentials are added
B. when the network device is assigned to the site and device controllability is turned on
C. when the network device is discovered and device controllability is turned on
D. when a NETCONF port has been configured

Correct Answer: C
Explanation

QUESTION 84
Which multicast operational mode sends a prune message to the source when there are no connected members or downstream neighbors?

A. IGMPv3
B. PIM dense mode

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C. PIM sparse mode
D. IGMPv2

Correct Answer: B
Explanation

QUESTION 85
How do OSPF and EIGRP compare?

A. Both OSPF and EIGRP use the concept of areas.
B. OSPF and EIGRP use the same administrative distance.
C. EIGRP shows successor and feasible successor routes, and OSPF shows all known routes.
D. EIGRP shows all known routes, and OSPF shows successor and feasible successor routes.

Correct Answer: C
Explanation

QUESTION 86
A script contains the statement "while loop != 999:" Which value terminates the loop?

A. A value not equal to 999.
B. A value less than or equal to 999.
C. A value equal to 999.
D. A value greater than or equal to 999.

Correct Answer: C
Explanation

QUESTION 87
Which JSON script is properly formatted?

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A.
```
[
  "class":
     {
          "name": Reading 101
          "Session ID": "474604043"
          "location":B-15"
     }
]
```

B.
```
[
     "class":{

     "title": "Science",
     "grade": "11",
     "location": "Room C".
     }
     ]
     ]
```

C.
```
"Auto":[
     {
          "type": "truck",
          "model": "1500",
          "year": "2023"
     }
]
```

D.
```
{
 "music":[
 {
 "title": "A New Song",
 "genre": "Pop",
 "year": "2019"
 }
 ]
```

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

Correct Answer: D
Explanation

QUESTION 88
Refer to the exhibit.

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```
hostname Switch-1
!
interface GigabitEthernet0/0
 ip address 10.1.1.1 255.255.255.0
 duplex auto
 speed auto
!
interface Vlan10
 ip address 192.168.1.254 255.255.255.0
!
router ospf 1
 router-id 10.1.1.1
 log-adjacency-changes
 network 10.1.1.0 0.0.0.255 area 0
 network 192.168.1.0 0.0.0.255 area 0
!
================================================
hostname Switch-2
!
interface GigabitEthernet0/0
 ip address 10.1.1.2 255.255.255.0
 duplex auto
 speed auto
!
interface Vlan20
 ip address 192.168.2.254 255.255.255.0
!
router ospf 1
 router-id 10.1.1.2
 log-adjacency-changes
 network 10.1.1.0 0.0.0.255 area 0
 network 192.168.2.0 0.0.0.255 area 1
!
```

An engineer must prevent VLAN 20 routes from appearing in the routing table of Switch-1. Which command set must be applied?

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A.
On Switch-1:
```
router ospf 1
distribute-list 1 out
access-list 1 deny   192.168.2.0 0.0.0.255
```

B.
On Switch-2:
```
router ospf 1
distribute-list 1 in
access-list 1 deny   192.168.2.0 0.0.0.255
```

C.
On Switch-2:
```
router ospf 1
distribute-list 1 out
access-list 1 permit   192.168.2.0 0.0.0.255
```

D.
On Switch-1:
```
router ospf 1
distribute-list 1 in
access-list 1 deny   192.168.2.0 0.0.0.255
```

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

Correct Answer: D
Explanation

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QUESTION 89
What is a benefit of MACsec in a multilayered LAN network design?

A. Application flows between hosts on the LAN to remote destinations can be encrypted.
B. Layer 2 trunk links between switches can be secured.
C. There is no requirement to run IEEE 802.1X when MACsec is enabled on a switch port.
D. Layer 3 links between switches can be secured.

Correct Answer: B
Explanation

QUESTION 90
Which JSON script is properly formatted?

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A.
```
["Lodging": [
        {
                "type":hotel,
                "location":B01
                "contact":446-301-12847
 }
]
]
```

B.
```
{
 "truck":[
 {
  "type": "Ford",
  "color": "red",
  "year": "1998"
 }
]
}
```

C.
```
["car":{
        "type": "Ford"
        "color": "red",
        "year": "1998",
        }
]
```

D.
```
[
        "subject":{
                "title": "Art History"
                "listing": "elective"
                "session": "Spring"
         }
]
```

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

Correct Answer: B
Explanation

QUESTION 91
Which JSON script is properly formatted?

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A.

```
["class": {
            "title": "Science"
            "Grade":"11"
            "location": "Room C",
          }
]
```

B.

```
[ "Lodging":
        {
            "type":B&B,
            "location":Oceanfront,
            "contact":946-509-6364
        }
]
```

C.

```
[
  "subject": {
  [
 "title":"Sewing"
  "listing":"elective"
  "session":"Summer"
  }
]
]
```

D.

```
{
  "frames": [
  {
   "type":"premium",
   "material":"wood",
   "shape":"square"
  }
]
}
```

A. Option
B. Option

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C. Option
D. Option

Correct Answer: D
Explanation

QUESTION 92
Which JSON script is properly formatted?

A.
```
["Rental": {
            "make": "Chevrolet"
            "model":"Corvette",
            "year": "2023",
          }
]
```

B.
```
[
   "Tables":{

  "use":"dining"
   "material":"glass"
   "shape":"round"
  }
]
]
```

C.
```
[ "Lodging":
       {
           "type":hostel,
           "location": Main Street,
           "phone":346-621-6616
         }
]
```

D.
```
{
  "drinks": [
 {
  "type":"soda",
   "size":"small",
  "cup":"to-go"
  }
 ]
}
```

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

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D. Option D

Correct Answer: D
Explanation

QUESTION 93
Which JSON script is properly formatted?

A.

```
[
  "Plates": {
   [
   "use":"salad"
    "size":"small"
    "shape":"round"
   }
]
]
```

B.

```
["Auto": {
            "maker": "Plymouth",
            "color":"green",
            "year": "1970",
        }
]
```

C.

```
{
  "furniture": [
 {
   "type":"Sofa",
    "material":"cloth",
    "color":"blue"
   }

 ]

}
```

D.

```
[ "Lodging":
        {
            "type":motel,
            "location": Main Street,
            "contact":348-059-6776
         }
]
```

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

Correct Answer: C
Explanation

QUESTION 94
Which function is performed by vSmart in the Cisco SD-WAN architecture?

A. distribution of centralized policies
B. execution of localized policies
C. redistribution between OMP and other routing protocols
D. facilitation of NAT detection and traversal

Correct Answer: A
Explanation

Explanation/Reference:

QUESTION 95
Which resource must a hypervisor make available to the virtual machines?

A. bandwidth
B. IP address
C. storage
D. secure access

Correct Answer: C
Explanation

Explanation/Reference:

QUESTION 96
Refer to the exhibit.

```
Router#sh run | b vty
line vty 0 4
 login local
line vty 5 15
 login local
```

The existing configuration must be updated to terminate EXEC sessions after 20 minutes of idle time.
Which command set should be applied?

A. line vty 015 session-timeout 20
B. line vty 015 session-limit 20
C. line vty 015 exec-timeout 20

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D. line vty 015 absolute-timeout 20

Correct Answer: C
Explanation

Explanation/Reference:

QUESTION 97
Which tag defines the properties to be applied to each specific WLAN?

A. RF tag
B. policy tag
C. AP tag
D. site tag

Correct Answer: B
Explanation

Explanation/Reference:
In the context of Cisco Catalyst 9800 Series Wireless Controllers, a policy tag is used to define the properties that will be applied to each specific WLAN. The policy tag maps the WLAN profile to the policy profile, which in turn defines the wireless characteristics of the WLAN and the network policies and switching policies for the client2.
References: Cisco Catalyst 9800 Series Wireless Controller Software Configuration Guide

QUESTION 98
Which JSON script is properly formatted?

A.
```
{[
    "subject": {
        "title": "Basket Weaving",
        "listing": "841963",
        "session": "3"
    },
]
}
```
B.
```
{
    "class": [
     {
        "title": "science",
        "grade": "11",
        "location": "Room C"
     }
    ]
}
```
C.
```
["frames":{
        "type": "premium",
        "material": "wood",
        "shape": "square"
    }
```
D.
```
[ "restaurant":
    {
     "type": "vegan",
     "location": "B01",
     "contact": "747-006-6954"
    }
]
```

Correct Answer: D
Explanation

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Explanation/Reference:
The JSON script in Option D is properly formatted. A well-structured JSON script should have key-value pairs enclosed within curly braces {}, with keys and values as strings in double quotes "". Each key-value pair should be separated by a comma ,, except for the last pair in an object or array. The JSON script in Option D adheres to these formatting rules, making it the correct choice.

QUESTION 99
What is a characteristics of VXLAN?

A. It extends Layer 2 and Layer 3 overlay networks over a Layer 2 underlay.
B. It has a 12-byt packet header.
C. It frame encapsulation is performed by MAC-In-UDP
D. It uses TCP for transport

Correct Answer: C
Explanation

Explanation/Reference:
VXLAN is a network virtualization technology that encapsulates Layer 2 Ethernet frames within Layer 3 UDP packets. This process is known as MAC-In-UDP encapsulation91011.
References: NetworkLessons.com on VXLAN, Wikipedia on Virtual Extensible LAN, Cisco Press on VXLAN Overview

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QUESTION 100
Which two southbound interfaces originate from Cisco Catalyst Center (formerly DNA Center) and terminate at fabric underlay switches'? (Choose two)

A. ICMP Discovery
B. UDP67 DHCP
C. TCP 23 Telnet
D. UDP6007 NetFlow
E. UDP 162 SNMP

Correct Answer: BE
Explanation

QUESTION 101
At which plane does vBond operate in Cisco SD-WAN solutions?

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

Correct Answer: C
Explanation

QUESTION 102
Which location tracking method is used when locating client devices using Cisco hyperlocation?

A. angle of arrival
B. location patterning
C. TTL
D. line of sight

Correct Answer: A
Explanation

QUESTION 103
An engineer is configuring RADIUS-Based Authentication with EAP. MS-CHAPv2 is configured on a client device. Which outer method protocol must be configured on the ISE to support this authentication type?

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A. EAP-TLS
B. EAP-FAST
C. LDAP
D. PEAP

Correct Answer: D
Explanation

QUESTION 104
Which new security enhancement is introduced by deploying a next-generation firewall at the data center in addition to the Internet edge?

A. virtual private network for remote access
B. DDoS protection
C. firewall protection of the east-west traffic at the data center
D. firewall protection of the south-north traffic at the data center

Correct Answer: C
Explanation

QUESTION 105
Which next generation firewall feature supports separate security services for multiple departments?

A. state sharing mode to .trade the user data sessions and replication to the neighbor firewall using a failover link
B. Layer 3 mode with resource tracking capabilities and automatic configuration synchronization between the nodes and security zones
C. multicontext mode with specific logical or physical interface allocation within each context and grouped into security zones
D. virtual switch mode to provide traffic inspection capabilities for the flows entering the firewall and dropping packets based on policy configuration

Correct Answer: C
Explanation

QUESTION 106
Which Cisco Catalyst SD-WAN component is responsible for distributing data plane traffic policies?

A. vBond
B. vManage
C. vSmart
D. WAN edge

Correct Answer: C
Explanation

QUESTION 107
Which data format can be used for an API request?

A. HTML
B. PERL
C. JSON
D. Python

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Correct Answer: C
Explanation

QUESTION 108
What is the primary responsibility of the vBond orchestrator?

A. to provide centralized management and provisioning of all elements into the network
B. to configure NAT communication on WAN Edge routers
C. to provide configuration synchronization of an WAN Edge devices
D. to facilitate start-up by performing authentication and authorization of all elements into the network

Correct Answer: D
Explanation

QUESTION 109
Which lag/profile on a Cisco Catalyst 9800 Series WLC must be modified to allow Cisco ISE to dynamically assign VLANs to users on an 802.1X-based SSID?

A. interface lag
B. site tag
C. WLAN profile
D. policy profile

Correct Answer: D
Explanation

QUESTION 110
In Cisco Catalyst Center (formerly DNA Center) Inventory, the Software Version of a network device displays a status of OUTDATED. What does It me?

A. There is a later software version available on Cisco Catalyst Center (formerly DNA Center).
B. The current software image does not match the selected Golden image for this type of network device.
C. The current type of software image does not match the type of the network device.
D. There is a later software version available at www.cisco.com website.

Correct Answer: B
Explanation

QUESTION 111
In a wireless network environment, which measurement compares the received signal to the background noise?

A. free space path loss
B. link power budget
C. fading
D. SNR

Correct Answer: D
Explanation

QUESTION 112
How does Cisco DNA Center perform a network discovery?

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A. using SNMP
B. using ICMP
C. through a DHCP server
D. using CDP with a seed IP address

Correct Answer: D
Explanation

QUESTION 113
What is one characteristic of Cisco SD-Access networks?

A. Devices are assigned to virtual networks based on their VLAN membership.
B. Scalable group tags are used for macrosegmentatlon.
C. Virtual networks are used for microsegmentation.
D. All traffic is Layer 3 within the fabric.

Correct Answer: B
Explanation

QUESTION 114
What is a characteristic of a Type 2 hypervisor?

A. quick deployment
B. ideal for data center
C. complicated deployment
D. referred to as bare-metal

Correct Answer: A
Explanation

QUESTION 115
Which AP mode analyzes the spectrum to detect sources of interference?

A. Monitor
B. Rogue detector
C. SE-Connect
D. Sniffer

Correct Answer: C
Explanation

QUESTION 116
Which feature is available to clients using layer 2 roaming in a wireless infrastructure?

A. Room to a different wireless controller that is on o different subnet and maintain the same IP address
B. Associate to a new access point on a different wireless controller and change the IP address without connectivity interruption
C. Associate to a new access point on the same wireless controller and change the IP address without connectivity interruption
D. Roam to a different wireless controller that snares The same subnet and maintain the same IP address

Correct Answer: D
Explanation

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QUESTION 117
Which characteristic applies to Cisco SD-Access?

A. It uses dynamic routing the discover and provision access switches.
B. It uses VXLAN for the control plane
C. It uses VXLAN for the data plane
D. It uses dynamic routing to discover and provision border switches

Correct Answer: B
Explanation

QUESTION 118
What is YANG used for?

A. scraping data via CLI
B. processing SNMP read-only polls
C. describing data models
D. prowling a transport for network configuration data between client and server

Correct Answer: C
Explanation

QUESTION 119
Which tool functions in a push model, supports languages like Python or Ruby, and does not require an agent to be installed per host?

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

Correct Answer: B
Explanation

QUESTION 120
What is the function of the statement "import actions" in this script?

```
Import actions
if process == 'http':
actions.http(site)
```

A. It imports the functions that are not available natively in Python
B. It imports the functions of a third-party module
C. It imports a Python module
D. It imports an external reference

Correct Answer: C
Explanation

QUESTION 121
When deploying a Cisco Unified Wireless solution what is a design justification for using a distributed WLC deployment model?

A. It reduces the number of WLCs that network administrators must support by locating them in a

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common location

B. It more evenly distributes MAC ARP and ND processing over multiple switches which helps with scalability

C. The number of wireless clients is low and the size of the physical campus is small

D. There are no latency concerns about LWAPP and CAPWAP tunnels traversing the campus core network

Correct Answer: D
Explanation

QUESTION 122
Refer this content:

Router# show runing-config
! lines omitted for brevity

username cisco passsword 0 cisco
aaa authentication login group1 group radius line
line con 0
password 0 cisco123
login authentication group1
line vty 0 4
password 0 cisco111

Authentication for users must first use RADIUS, and fall back to the local database on the router if the RADIUS server is unavailable

Which two configuration sets are needed to achieve this result? (Choose two.)

A. aaa authentication login group2 group radius none

B. line vty 0 4
login authentication group2

C. aaa authentication login group2 group radius enable

D. aaa authentication login group2 group radius local

E. line con 0
login authentication group2

Correct Answer: BD
Explanation

QUESTION 123
What is a benefit of implementing stateful switchover?

A. modularity

B. resiliency

C. flexibility

D. scalability

Correct Answer: B
Explanation

QUESTION 124
What is two characteristic of Cisco DNA Center and vManage northbound APIs?

A. They exchange XML-formatted content

B. They exchange JSON-kxmatted content.

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C. They implement the RESTCONF protocol.
D. They implement the NETCONF protocol.
E. They exchange protobuf-formatted content.

Correct Answer: BC
Explanation

QUESTION 125
Which framework is used for third-party authorization?

A. API keys
B. custom tokens
C. OAuth
D. SOAP

Correct Answer: C
Explanation

QUESTION 126
An engineer is reviewing a PCAP file that contains a packet capture of a four-way handshake exchange between a client and AP using WPA2 Enterprise.

Which EAPOL message validates and confirms that the client device has successfully Installed the GTK?

A. M2-Message
B. M1-Message
C. M3-Message
D. M4-Message

Correct Answer: D
Explanation

QUESTION 127
Which technology collects location information through data packets received by the APs instead of using mobile device probes?

A. detect and locate
B. FastLocate
C. hyperlocation
D. RF fingerprinting

Correct Answer: D
Explanation

QUESTION 128
What is a characteristic of omnidirectional antennas?

A. It includes dish antennas.
B. It has high gain.
C. It provides the most focused and narrow beamwidth.
D. It includes dipole antennas.

Correct Answer: D
Explanation

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QUESTION 129
Which two operations are valid for RESTCONF? (Choose two)

A. PULL
B. ADD
C. HEAD
D. REMOVE
E. GET
F. PUSH

Correct Answer: CE
Explanation

QUESTION 130
What is a characteristic of an AP that operates in FlexConnect mode?

A. Configuration is done directly on the AP rather than on a controller.
B. Dot1x authentication is not supported for AP clients in this mode.
C. Client authentication is always performed on the A P.
D. FlexConnect groups are required to support 802.11 r fast roaming.

Correct Answer: A
Explanation

QUESTION 131
What is a characteristics of a type 1 hypervisor?

A. It runs on top of the host operating system.
B. It is preferred for supporting nonproduction workloads.
C. It has greater latency than a Type 2 hypervisor.
D. It runs on top of bare metal servers.

Correct Answer: D
Explanation

QUESTION 132
Which language can be used to model configuration and state data?

A. JSON
B. XML
C. XDR
D. YANG

Correct Answer: D
Explanation

QUESTION 133
Refer to the exhibit

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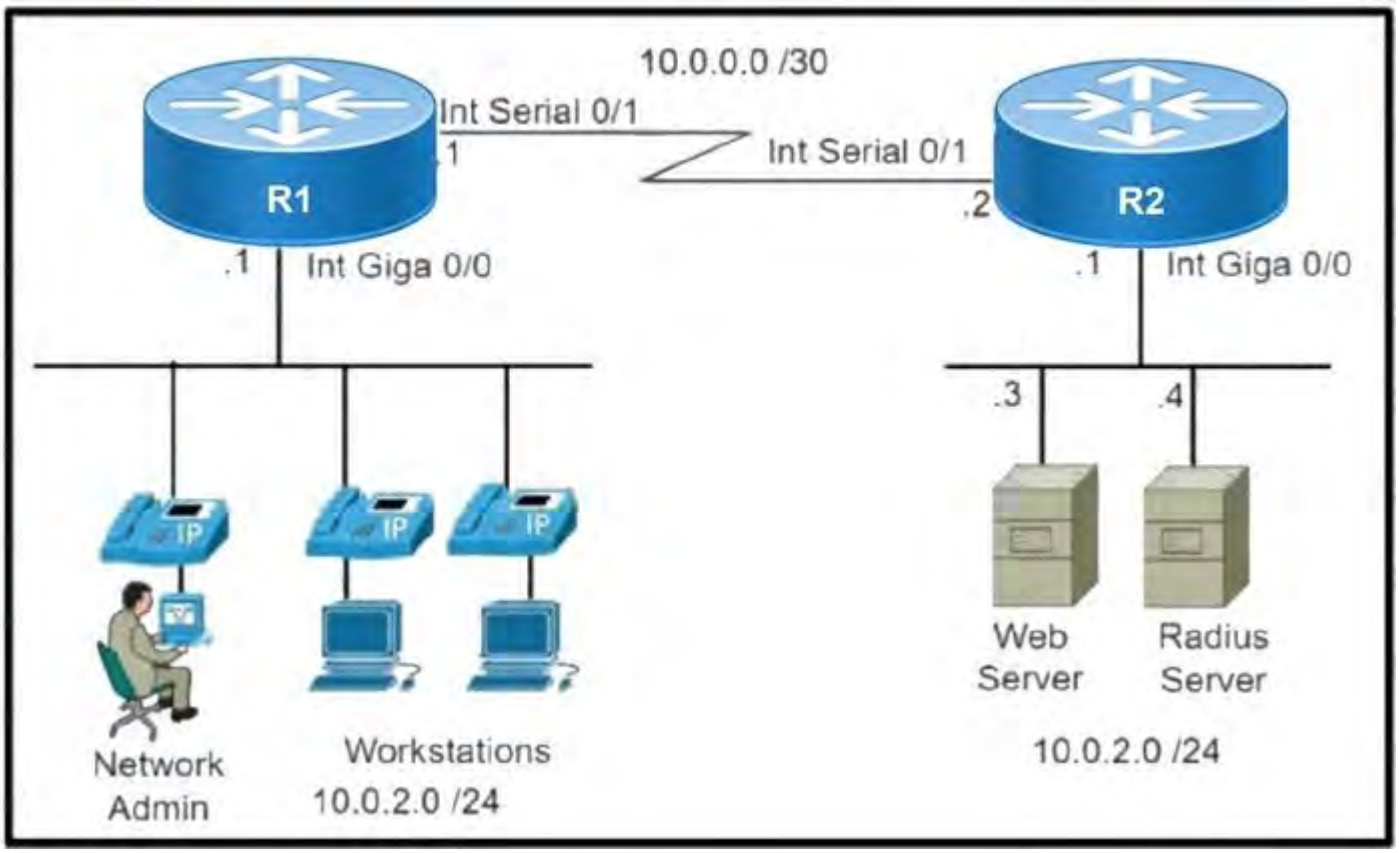

Which command set is required on router R1 to allow the network administrator to authenticate via RADIUS'?

A. aaa new-model
aaa authentication login default group radius
B. aaa new-model
aaa authentication login console
C. aaa new-model
aaa authentication login default
D. aaa new-model
aaa authentization exec default group radius

Correct Answer: A
Explanation

QUESTION 134
Refer to the exhibit. An engineer must adjust the configuration so that Router A becomes the active router. Which commands should be applied to router A? (Choose two)

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```
Router A
Router(config)# interface GigabitEthernet 1/0/0
Router(config-if)# ip address 10.1.0.1 255.0.0.0
Router(config-if)# vrrp 1 priority 100
Router(config-if)# vrrp 1 authentication cisco
Router(config-if)# vrrp 1 timers advertise 3
Router(config-if)# vrrp 1 timers learn
Router(config-if)# vrrp 1 ip 10.1.0.10

Router B
Router(config)# interface GigabitEthernet 1/0/0
Router(config-if)# ip address 10.1.0.2 255.0.0.0
Router(config-if)# vrrp 1 priority 110
Router(config-if)# vrrp 1 authentication cisco
Router(config-if)# vrrp 1 timers advertise 3
Router(config-if)# vrrp 1 timers learn
Router(config-if)# vrrp 1 ip 10.1.0.11
```

A. vrrp 1 priority 90
B. vrrp 1 timers advertise 1
C. vrrp lip 10.1.0.11
D. ip address 10.1.0.11 255.0.0.0
E. vrrp 1 priority 120

Correct Answer: CE
Explanation

QUESTION 135
Why would a network engineer configure an AP in SE-Connect mode?

A. to redirect WLAN traffic to an endpoint for protocol analysis
B. to monitor the VLAN traffic for rogue APs
C. to connect the wired LAN with the wireless infrastructure
D. to analyze the RF spectrum surrounding the AP

Correct Answer: A
Explanation

QUESTION 136
To support new clients in the environment, an engineer must enable Fast Transition on the corporate WLAN. Which command must be applied on a Cisco Catalyst 9800 Series WLC?

A. security ft adaptive
B. security wpa akm dotlx
C. security wpa akm psk
D. security wpa akm ft psk

Correct Answer: D
Explanation

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QUESTION 137
What does a next-generation firewall that is deployed at the data center protect against?

A. signature-based malware
B. DMZ web server vulnerabilities
C. zero-day attacks
D. DDoS

Correct Answer: A
Explanation

QUESTION 138
Refer to the exhibit.

A POST /discovery request spawns an asynchronous task. After querying for more information about the task, the Cisco DNA Center platform returns the REST API response.

What is the status of the discovery task?

A. restarted
B. failed
C. stopped
D. successful

Correct Answer: D
Explanation

QUESTION 139
An engineer must configure a new 6 Ghz only SSID on a cisco catalyst 9800 series WLC, with these requirements:

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1. Provide 802.11ax data rates for supported devices
2. All users authenticate using a certificate

Which wireless layer 2 security mode meets the requirements?

A. WPA2 Enterprise
B. WPA3 Personal
C. WPA2 Personal
D. WPA3 Enterprise

Correct Answer: D
Explanation

QUESTION 140
In a high-density AP environment, which feature can be used to reduce the RF cell size and not demodulate radio packets above a given threshold?

A. RX-SOP
B. FRA
C. 80211k
D. RRM

Correct Answer: A
Explanation

QUESTION 141
Which AP mode allows administrators to generate pcap files to use for troubleshooting?

A. Sniffer
B. Local
C. H-REAP
D. Monitor

Correct Answer: A
Explanation

QUESTION 142
What is the function of an intermediate node in a Cisco SD-Access fabric?

A. to route packets within the fabric based on the Layer 3 information in the header
B. to provide an entry and exit point between the fabric and external resources
C. to encapsulate and de-encapsulate packets with a VXLAN header
D. to provide reachability between fabric clients and nonfabric clients on the same subnet

Correct Answer: A
Explanation

QUESTION 143
Which task Is mandatory when provisioning a device through the plug-and-play workflow in Cisco DNA Center?

A. site assignment
B. slack serial number assignment

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C. golden image upgrade
D. template configuration application

Correct Answer: D
Explanation

QUESTION 144
Which nodes require VXLAN encapsulation support In a Cisco SD-Access deployment?

A. core nodes
B. distribution nodes
C. border nodes
D. aggregation nodes

Correct Answer: C
Explanation

QUESTION 145
Which two conditions occur when the primary route processor fails on a switch that is using dual route processors with stateful switchover? (Choose two.)

A. Data forwarding is stopped until the routing protocols reconverge after the switchover.
B. The standby route processor initialization is started when the primary router processor fails.
C. The standby route processor is fully initialed and state information is maintained.
D. User sessions are immediately recreated on the new active route processor.
E. Data forwarding can continue along known paths until routing protocol information is restored.

Correct Answer: CE
Explanation

QUESTION 146
A corporate policy mandates that a certificate-based authentication system must be implemented on the wireless infrastructure. All corporate clients will contain a certificate that will be used in conjunction with ISE and user credentials to perform authentication before the clients are allowed to connect to the corporate Wi-Fi.

Which authentication key option must be selected to ensure that this authentication can take place?

A. none
B. PSK
C. 802.1x
D. CCKM

Correct Answer: C
Explanation

QUESTION 147
What are two of benefits of using VXLAN? (Choose two.)

A. It allows for an unlimited number of segments.
B. It has fewer devices to manage.
C. It uses all available Layer 3 paths in the underlying network.
D. It allows multi-tenanted segmentation.
E. It uses a MAC in IP/TCP encapsulation technique.

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Correct Answer: AD
Explanation

QUESTION 148
Which two benefits result from a network design mat uses small and repeatable sections? (Choose two.)

A. lower monitoring requirements
B. low latency
C. scalability
D. quick failure isolation
E. improved throughput

Correct Answer: CD
Explanation

QUESTION 149
Which two nodes comprise a collapsed core in a two-tier Cisco SD-Access design? (Choose two.)

A. edge nodes
B. distribution nodes
C. extended nodes
D. core nodes
E. border nodes

Correct Answer: BD
Explanation

QUESTION 150
Which protocol is used by vmanage to push centralized policies to vsmart controllers?

A. NETCONF
B. TLS
C. STUN
D. OMP

Correct Answer: A
Explanation

QUESTION 151
What is a characteristic of VRRP?

A. It inherently balances load amongst the available gateways.
B. It ensures symmetric traffic flow upstream and downstream.
C. It Is a Cisco proprietary protocol.
D. It uses a virtual IP address and a virtual MAC address to achieve redundancy

Correct Answer: D
Explanation

QUESTION 152
An engineer is reviewing a PCAP file that contains a packet capture of a four-way handshake exchange between a client and AP using WPA2 Enterprise Which EAPOL message validates and confirms that the

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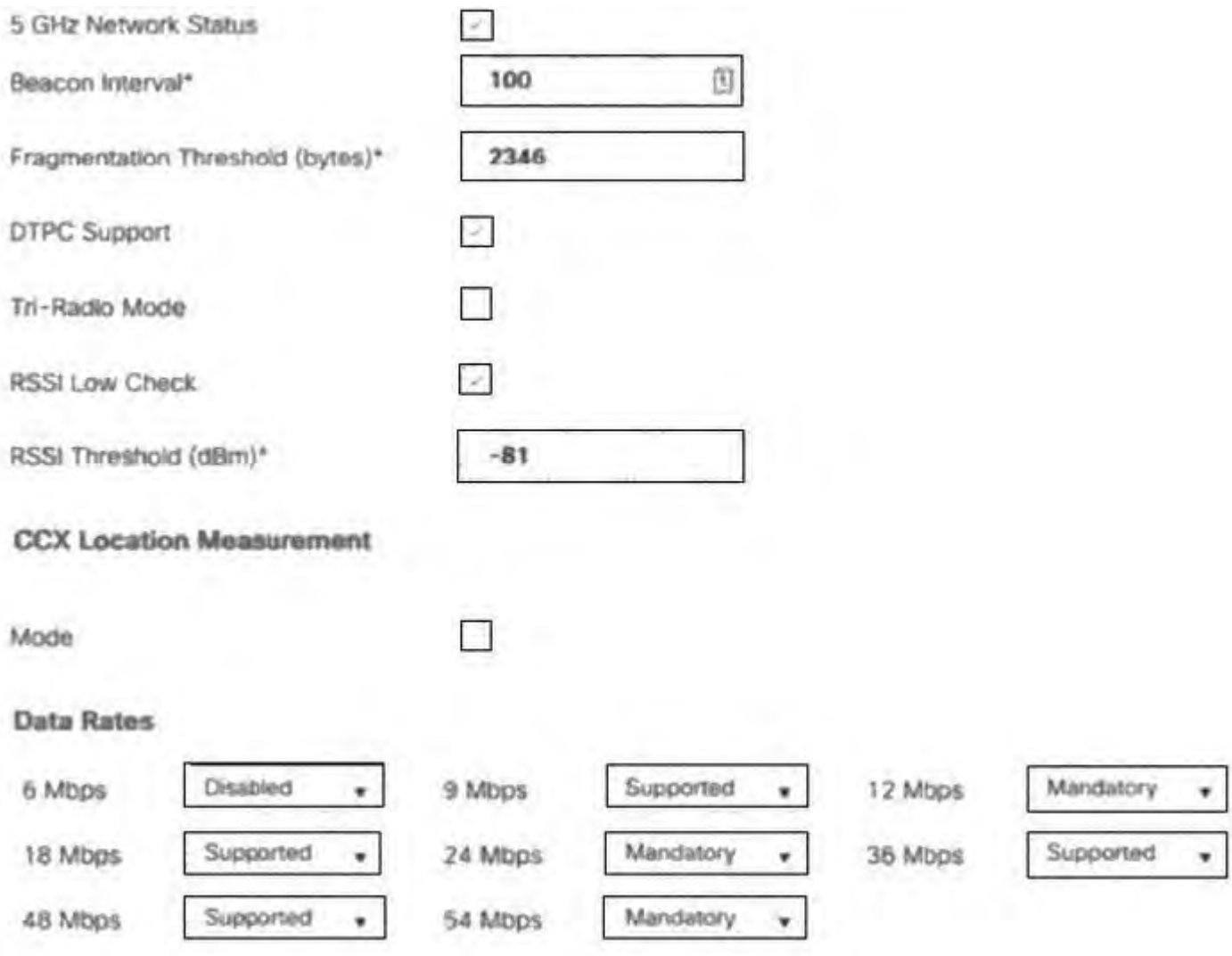
client device has successfully Installed the GTK?

A. M4-Message
B. M3-Message
C. M2-Message
D. M1-Message

Correct Answer: A
Explanation

QUESTION 153
Refer to the exhibit.



A customer reports that many wireless clients cannot reliably receive multicast audio.

Which action resolves this issue?

A. Set the 24 Mbps and 54 Mbps data rates to Supported.
B. Set the RSSI Threshold to -67dBm.
C. Set the Fragmentation Threshold to 1250 bytes
D. Disable RSSI Low Check.

Correct Answer: A

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Explanation

QUESTION 154
Which method does FastLocate use to collect location-based information?

A. RFID
B. client probing
C. beacons
D. data packets

Correct Answer: B
Explanation

QUESTION 155
What is one characteristic of an AP that is operating in Mobility Express mode?

A. It is recommended for large scale deployments.
B. It requires a centralized WLC.
C. At least three APs are needed for WLC redundancy.
D. It requires an AP to act as a WLC.

Correct Answer: D
Explanation

QUESTION 156
Which characteristics applies to Cisco SD-Access?

A. It uses dynamic routing to discover and provision the border and edge switches
B. It uses VXLAN for the control plane
C. It uses PnP to discover and provision border and access switches
D. It uses GRE tor me policy plane

Correct Answer: C
Explanation

QUESTION 157
What is required for a VXLAN tunnel endpoint to operate?

A. a VXLAN tunnel endpoint identifier
B. at least one Layer 2 interface and one Layer 3 interlace
C. at least one IP for the transit network and one IP for endpoint connectivity
D. a VXLAN network identifier

Correct Answer: D
Explanation

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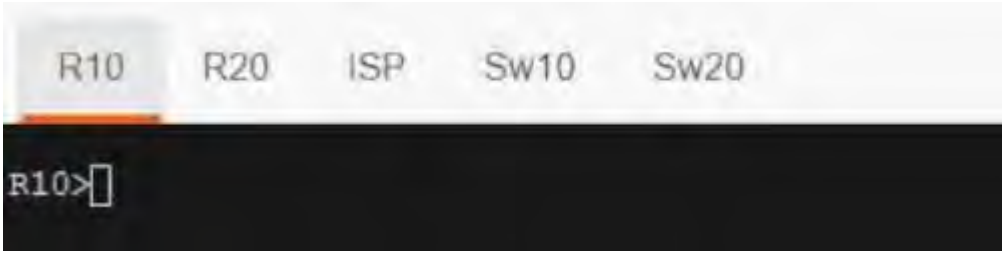
Exam G

QUESTION 1
SIMULATION

Guidelines



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

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

Topology

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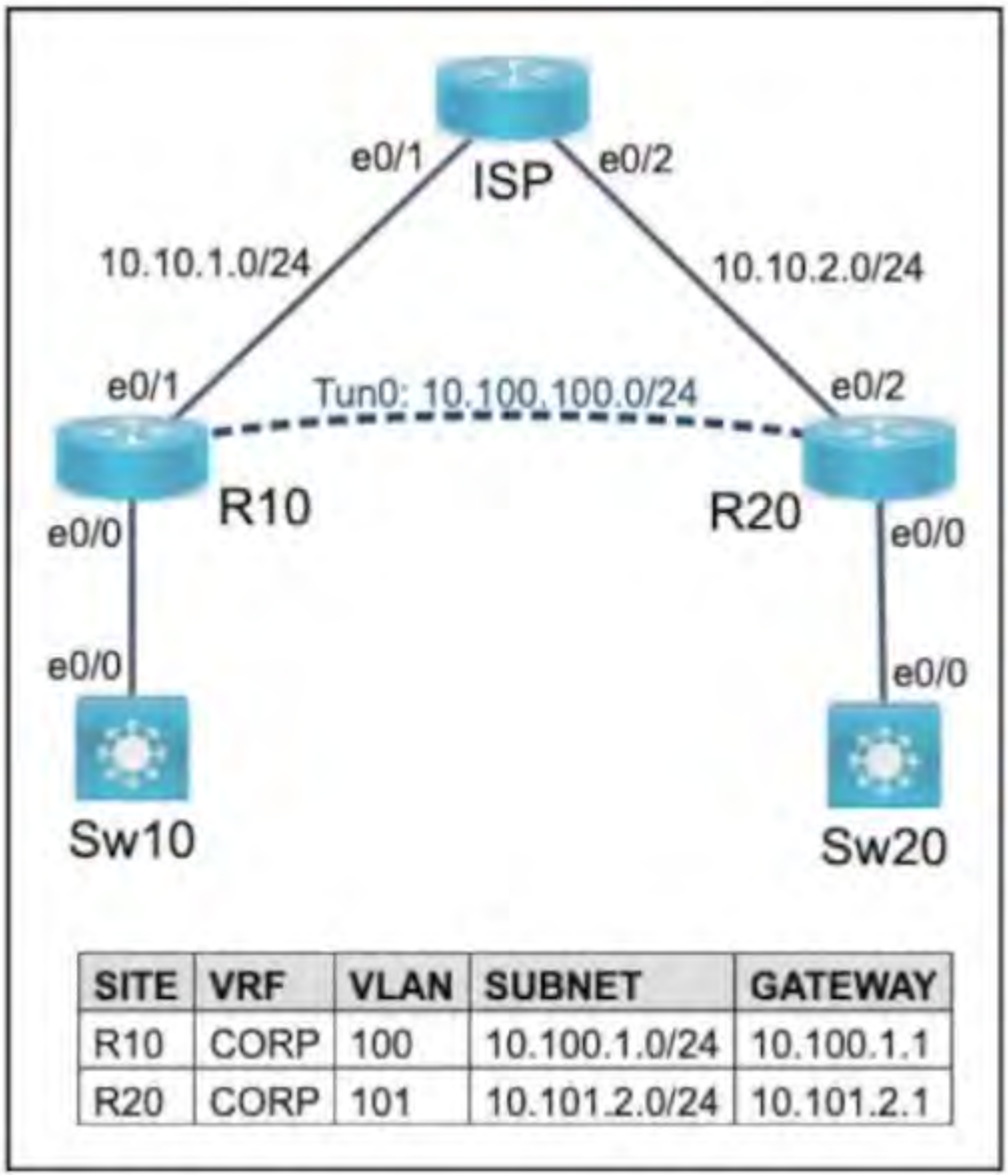

SITE	VRF	VLAN	SUBNET	GATEWAY
R10	CORP	100	10.100.1.0/24	10.100.1.1
R20	CORP	101	10.101.2.0/24	10.101.2.1

Tasks

The operations team started configuring network devices for a new site. R10 and R20 are preconfigured with the CORP VRF. R10 has network connectivity to R20. Complete the configurations to achieve these goals:

1. Extend the CORP VRF between R10 and R20 using Tunnel0.
2. Protect Tunnel0 using the preconfigured profile
3. Configure static routing on R10 and R20 so that users in VLANs100 and 101 that belong to the CORP VRF are able to communicate with each other. Tunnel0 should be the only interface used to route traffic for the CORP VRF

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
We need to find out the IP addresses of e0/1 of R10 and e0/2 of R20 first with the “show ip interface brief”

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command on these two routers. Supposethey are 10.10.1.10 and 10.10.2.20 respectively. We will use them in the “tunnel destination …” commands

R10

interface Tunnel 0
ip vrf forwarding CORP
tunnel source e0/1
tunnel destination 10.10.2.20
tunnel vrf TECH

R20
interface Tunnel 0
ip vrf forwarding CORP
tunnel source e0/2
tunnel destination 10.10.1.10
tunnel vrf TECH

We are not sure if “TECH” is another VRF configured on both routers. If yes then maybe this sim wants us to configure a “front-door VRF”.On a tunnel interface you use the ip vrf forwarding command to place the tunnel interface in that particular routing table.The tunnel vrf command instructs the router to use the specified VRFs routing table for the tunnel source and destination IP addresses.

Static route:
R10:
ip route vrf TECH 10.100.1.0 255.255.255.0 tunnel0

R20:
ip route vrf TECH 10.101.2.0 255.255.255.0 tunnel0

QUESTION 2
SIMULATION

Guidelines

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

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

Topology

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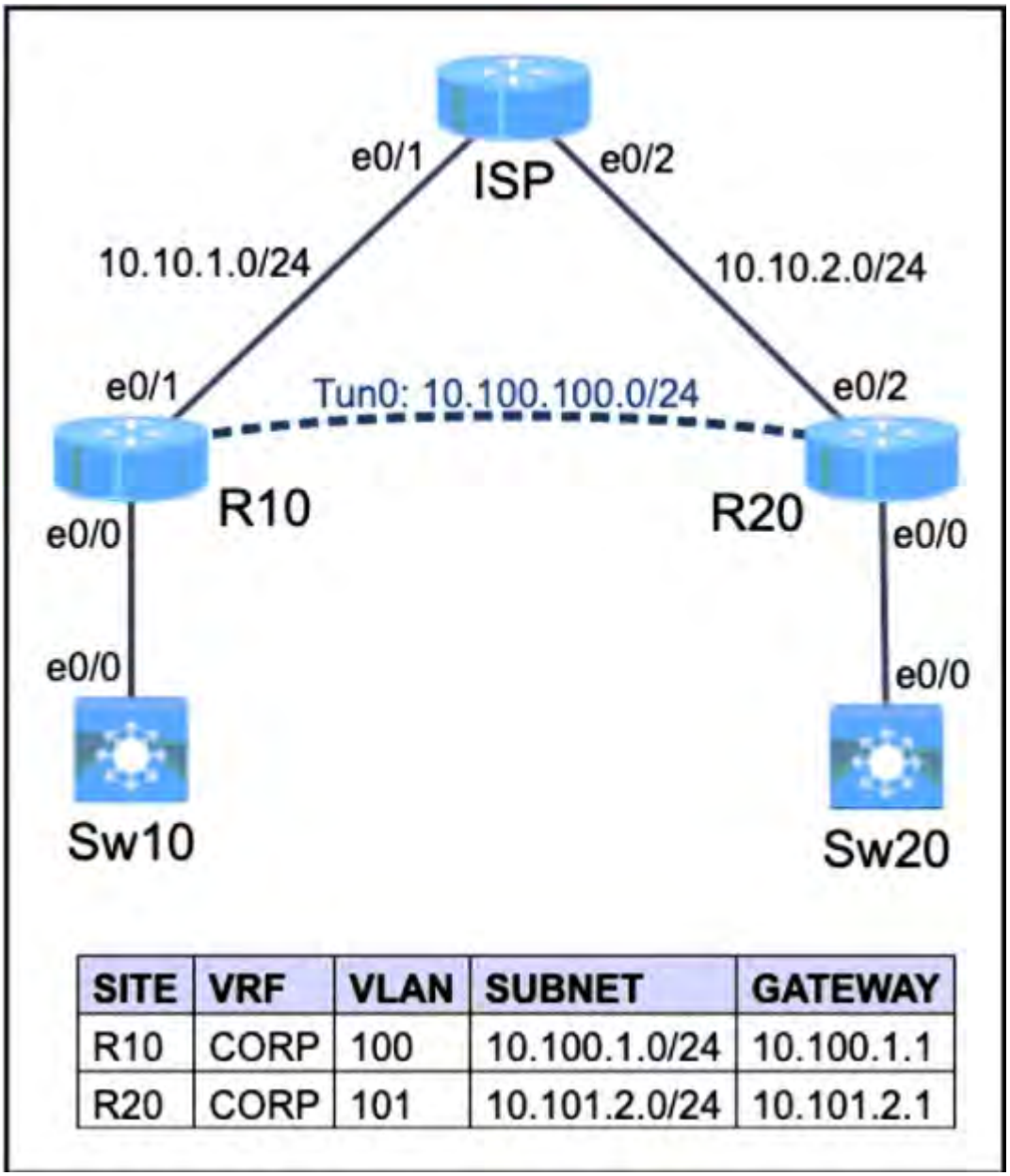

SITE	VRF	VLAN	SUBNET	GATEWAY
R10	CORP	100	10.100.1.0/24	10.100.1.1
R20	CORP	101	10.101.2.0/24	10.101.2.1

Tasks

The operations team started configuring network devices for a new site. R10 and R20 are preconfigured with the CORP VRF. R10 has network connectivity to R20. Complete the configurations to achieve these goals:

1. Extend the CORP VRF between R10 and R20 using Tunnel0.
2. Protect Tunnel0 using the preconfigured profile.

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A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Configuration on R10:

```
interface Tunnel0
 ip tunnel source e0/1
 ip tunnel destination 10.10.2.1
 ip tunnel mode gre
 tunnel protection ipsec profile myprofile
 ip address 10.100.100.1 255.255.255.252
 ip vrf forwarding CORP
```

Configuration on R20:

```
interface Tunnel0
```

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ip tunnel source e0/1
ip tunnel destination 10.10.1.1
ip tunnel mode gre
tunnel protection ipsec profile myprofile
ip address 10.100.100.2 255.255.255.252
ip vrf forwarding CORP

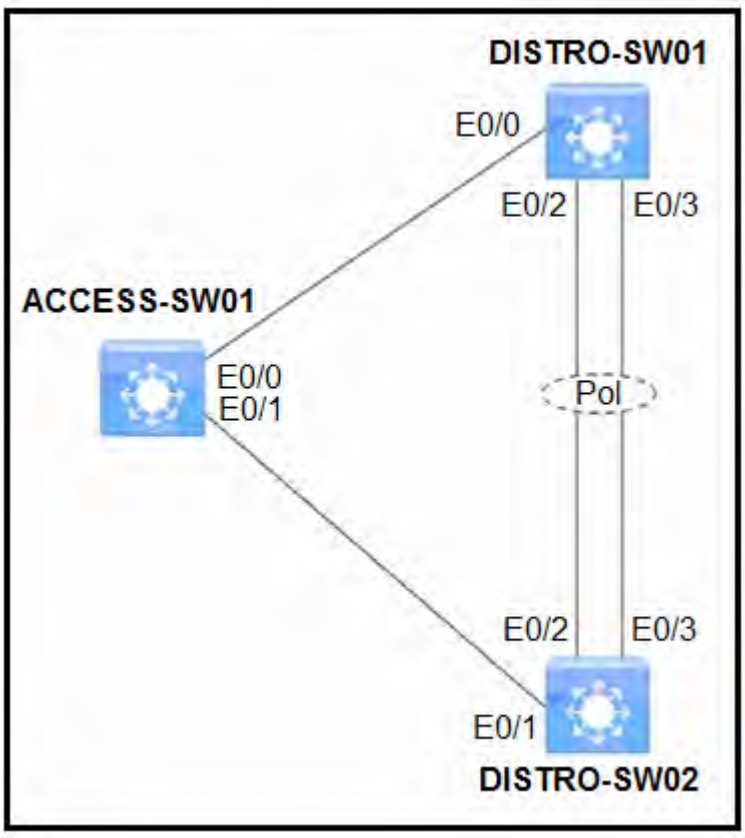
QUESTION 3
SIMULATION

Guidelines

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

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

Topology



Tasks

The operations team started configuring network devices for a new site.
Complete the configurations to achieve these goals:
1. Ensure that port channel Po1 between DISTRO-SW01 and DISTRO-SW02 is operational using the LACP protocol. Configuration changes for this task must be made on DISTRO-SW01.
2. Ensure that traffic on VLAN 10 is carried as untagged traffic between DISTRO-SW01 and DISTRO-SW02.
3. Complete the Rapid-PVST+ configuration on DISTRO-SW2 by ensuring it it the secondary root switch

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for all VLANs in the range of 1 to 1005.

DISTRO-SW01

```
DISTRO-SW01>
DISTRO-SW01>
DISTRO-SW01>en
DISTRO-SW01#config t
Enter configuration commands, one per line. End with CNTL/Z.
DISTRO-SW01(config)# in
DISTRO-SW01(config)# interface e0/0
DISTRO-SW01(config-if)#no cha
DISTRO-SW01(config-if)#no channel-g
DISTRO-SW01(config-if)#no channel-group 1
DISTRO-SW01(config-if)#no channel-group 1 mo
DISTRO-SW01(config-if)#no channel-group 1 mode pas
DISTRO-SW01(config-if)#no channel-group 1 mode passive
DISTRO-SW01(config-if)#
* Jul 10 20:07:53.469: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0,
changed state to up
DISTRO-SW01(config-if)#
DISTRO-SW01(config-if)#exit
DISTRO-SW01(config)#
DISTRO-SW01(config)# in
DISTRO-SW01(config)# interface ran
DISTRO-SW01(config) # interface range e
DISTRO-SW01(config)# interface range ethernet 0/2-3
DISTRO-SW01(config-if-range)#ch
DISTRO-SW01(config-if-range)#channel-gr
DISTRO-SW01(config-if-range)#channel-group 1
DISTRO-SW01(config-if-range)#channel-group 1 mo
DISTRO-SW01(config-if-range)#channel-group 1 mode ac
DISTRO-SW01(config-if-range)#channel-group 1 mode active
DISTRO-SW01(config-if-range)#
* Jul 10 20:08:25.239: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/2,
changed state to up
* Jul 10 20:08:25.239: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3,
changed state to up
DISTRO-SW01(config-if-range)#exit
DISTRO-SW01(config)#
* Jul 10 20:08:31.447: %LINK-3-UPDOWN: Interface Port-channel, changed state to up
* Jul 10 20:08:32.451: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3,
changed state to up
DISTRO-SW01(config)#
DISTRO-SW01(config)#exit
DISTRO-SW01#
* Jul 10 20:08:39.212: %SYS-5-CONFIG_I: Configured from console by console
DISTRO-SW01#sh eth
DISTRO-SW01#sh etherc
DISTRO-SW01#sh etherchannel s
DISTRO-SW01#sh etherchannel summary
```

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```
DISTRO-SW01#sh etherchannel s
DISTRO-SW01#sh etherchannel summary
Flags:  D - down        P - bundled in port-channel
        I - stand-alone s - suspended
        H - Hot-standby (LACP only)
        R - Layer3      S - Layer2
        U - in use      N - not in use, no aggregation
        f - failed to allocate aggregate

        M - not in use, minimum links not met
        m - not in use, port not aggregated due to minimum links not met
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port

      A - formed by Auto LAG

Number of channel-groups in use: 1
Number of aggregators:           1

Group     Port-channel   Protocol  Ports
---------+--------------+---------+-----------
1    Pol(SU)         LACP      Et0/2(P)  Et0/3(P)
```

```
DISTRO-SW01#
DISTRO-SW01# config t
Enter configuration commands, one per line, End with CNTL/Z.
DISTRO-SW01(config)#inte
DISTRO-SW01(config)#interface po
DISTRO-SW01(config)#interface port-
DISTRO-SW01(config)#interface port-channel 1
DISTRO-SW01(config-if)#sw
DISTRO-SW01(config-if)#switchport tr
DISTRO-SW01(config-if)#switchport trunk na
DISTRO-SW01(config-if)#switchport trunk native vl
DISTRO-SW01(config-if)#switchport trunk native vlan 10
DISTRO-SW01(config-if)#
* Jul 10 20:09:27.352: %CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch
discovered on Ethernet0/3 (10), with DISTRO-SW02 Ethernet0/3 (1).
DISTRO-SW01(config-if)#
* Jul 10 20:09:27.857: %SPANTREE-2-RECV_PVID_ERR: Received BPDU with inconsistent
peer vlan id 1 on Port-channel1 VLAN10.
* Jul 10 20:09:27.857: %SPANTREE-2-BLOCK_PVID_PEER: Blocking Port-channel1 on
VLAN0001. Inconsistent peer vlan.
* Jul 10 20:09:27.857: %SPANTREE-2-BLOCK_PVID_LOCAL: Blocking Port-channel1 on
VLAN0010. Inconsistent local vlan.
DISTRO-SW01(config-if)#
```

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```
* Jul 10 20:09:27.857: %SPANTREE-2-RECV_PVID_ERR: Received BPDU with inconsistent peer vlan
id 1 on Port-channel1 VLAN10.
* Jul 10 20:09:27.857: %SPANTREE-2-BLOCK_PVID_PEER: Blocking Port-channel1 on VLAN0001.
Inconsistent peer vlan.
* Jul 10 20:09:27.857: %SPANTREE-2-BLOCK_PVID_LOCAL: Blocking Port-channel1 on VLAN0010.
Inconsistent local vlan.
DISTRO-SW01(config-if)#
* Jul 10 20:09:30.710: %CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch
discovered on Ethernet0/2 (10), with DISTRO-SW02 Ethernet0/2 (1).
DISTRO-SW01(config-if)#
* Jul 10 20:10:03.864: %SPANTREE-2-UNBLOCK_CONSIST_PORT: Unblocking Port-channel on
VLAN0001. Port consistently restored
* Jul 10 20:10:03.864: %SPANTREE-2-UNBLOCK_CONSIST_PORT: Unblocking Port-channel on
VLAN0010. Port consistently restored
DISTRO-SW01(config-if)#
DISTRO-SW01(config-if)#exit
DISTRO-SW01(config)#
DISTRO-SW01(config)#exit
DISTRO-SW01#co
DISTRO-SW01#co
* Jul 10 20:10:35.644: %SYS-5-CONFIG_I: Configured from console by console
DISTRO-SW01#copy ru
DISTRO-SW01#copy running-config st
DISTRO-SW01#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
Compressed configuration from 1447 bytes to 886 bytes[OK]
DISTRO-SW01#
DISTRO-SW01#
```

DISTRO-SW02

```
DISTRO-SW02>
* Jul 10 20:08:25.239: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/2,
changed state to up
* Jul 10 20:08:25.239: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/3,
changed state to up
DISTRO-SW02>
* Jul 10 20:08:31.447: %LINK-3-UPDOWN: Interface Port-channel, changed state to up
* Jul 10 20:08:32.448: %LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel,
changed state to up
DISTRO-SW02>
* Jul 10 20:09:27.848: %SPANTREE-2-RECV_PVID_ERR: Received BPDU with inconsistent peer
vlan id 10 on Port-channel1 VLAN1.
* Jul 10 20:09:27.848: %SPANTREE-2-BLOCK_PVID_PEER: Blocking Port-channel1 on VLAN0010.
Inconsistent peer vlan.
* Jul 10 20:09:27.857: %SPANTREE-2-BLOCK_PVID_LOCAL: Blocking Port-channel1 on VLAN0001.
Inconsistent local vlan.
DISTRO-SW02>
* Jul 10 20:09:31.330: %CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch
discovered on Ethernet0/3 (1), with DISTRO-SW01 Ethernet 0/3 (10).
```

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```
DISTRO-SW02>en
DISTRO-SW02#config t
Enter configuration commands, one per line, End with CNTL/Z.
DISTRO-SW02(config)#
DISTRO-SW02(config)#inter
DISTRO-SW02(config)#interface por
DISTRO-SW02(config)#interface port-ch
DISTRO-SW02(config)#interface port-channel 1
DISTRO-SW02(config)#interface port-channel 1
DISTRO-SW02(config-if)#sw
DISTRO-SW02(config-if)#switchport tr
DISTRO-SW02(config-if)#switchport trunk na
DISTRO-SW02(config-if)#switchport trunk native vl
DISTRO-SW02(config-if)#switchport trunk native vlan 10
DISTRO-SW02(config-if)#exit
DISTRO-SW02(config)#
DISTRO-SW02(config)#sp
DISTRO-SW02(config)#spanning-tree vl
DISTRO-SW02(config)#spanning-tree vlan 1-
* Jul 10 20:10:04.934: %SPANTREE-2-UNBLOCK_CONSIST_PORT: Unblocking
Port-channel1 on VLAN0010. Port consistently restored.
* Jul 10 20:10:04.934: %SPANTREE-2-UNBLOCK_CONSIST_PORT: Unblocking
Port-channel1 on VLAN0001. Port consistently restored.
DISTRO-SW02(config)#spanning-tree vlan 1-1005 ro
DISTRO-SW02(config)#spanning-tree vlan 1-1005 root se
DISTRO-SW02(config)#spanning-tree vlan 1-1005 root secondary
DISTRO-SW02(config)#exit
```

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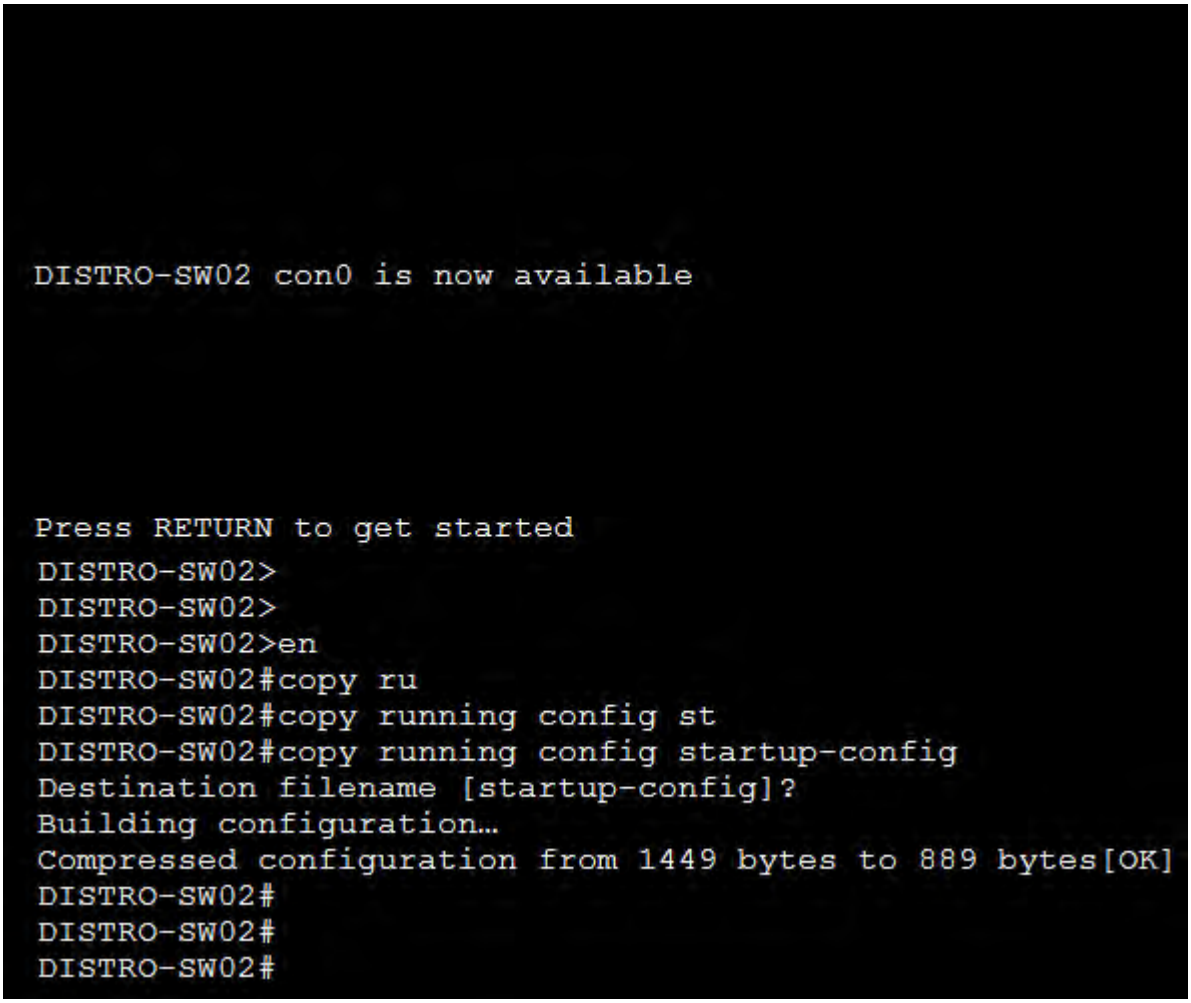

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Task 1. Ensure that port channel Po1 between DISTRO-SW01 and DISTRO-SW02 is operational using the LACP protocol. Configuration changes
for this task must be made on DISTRO-SW01.
The port towards to ACCESS-SW1 was part of port channel 1 which was used towards to DISTRO-SW02, so remove the port channel config pointing to the ACCESS-SW1 first.

DISTRO-SW01(config)#int e0/0
DISTRO-SW01(config-if)#no channel-group 1
Set the LACP mode active on this switch:
DISTRO-SW01(config-if)#int range e0/2 - 3
DISTRO-SW01(config-if)#channel-group 1 mode active

Verification:
We can verify if the Port-channel was formed with the “show etherchannel summary” command
DISTRO-SW01# show etherchannel summary
-- output omitted --
Number of channel-groups in use: 1
Number of aggregators: 1
Group Port-channel Protocol Ports

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------+------------ +-----------+---
1 Po1(SU) LACP Et0/2(P) Et0/3(P)
If we see the “Po1(SU)” means our configuration worked correctly.

Task 2. Ensure that traffic on VLAN 10 is carried as untagged traffic between DISTRO-SW01 and DISTRO-SW02.

DISTRO-SW01,DISTRO-SW02(config)#interface port-channel 1
DISTRO-SW01,DISTRO-SW02(config-if)#switchport trunk native vlan 10

Task 3. Complete the Rapid-PVST+ configuration on DISTRO-SW2 by ensuring it is the secondary root switch for all VLANs in the range of 1 to 1005.

DISTRO-SW02(config)#spanning-tree vlan 1-1005 root secondary
Save the configuration
DSW1,DSW2(config)#copy running-config startup-config

QUESTION 4
SIMULATION

Guidelines

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

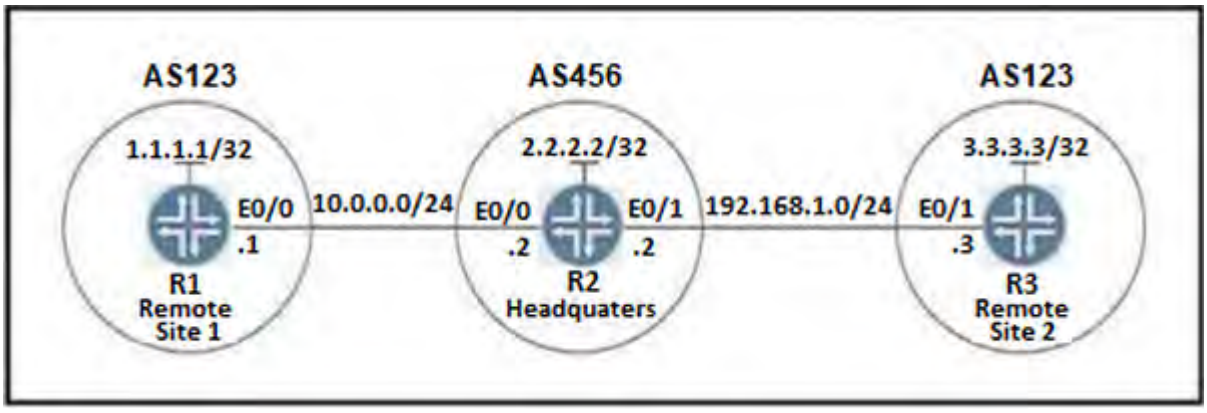
1. Refer to the Tasks tab to view the tasks for this lab item.
2. Refer to the Topology tab to access the device console(s) and perform the tasks.
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary preconfigurations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

Tasks

BGP connectivity exists between Headquarters and both remote sites; however, Remote Site 1 cannot communicate with Remote Site 2. Configure BGP according to the topology to goals:

1. Configure R1 and R3 under the BGP process to provide reachability between Remote Site 1 and Remote Site 2. No configuration changes are permitted on R2.
2. Ensure that the /32 networks at Remote Site 1 and Remote Site 2 can ping each other.

Topology



R1

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```
R1#en
R1#sh run
Building configuration...

Current configuration : 1237 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
 --More--
```

```
!
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
!
interface Ethernet0/0
 ip address 10.0.0.1 255.255.255.0
 duplex auto
!
interface Ethernet0/1
 no ip address
 shutdown
```

DUMPS
通过测试

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```
R1#show ip bgp summ
BGP router identifier 1.1.1.1, local AS number 123
BGP table version is 4, main routing table version 4
3 network entries using 432 bytes of memory
3 path entries using 252 bytes of memory
3/3 BGP path/bestpath attribute entries using 480 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 1188 total bytes of memory
BGP activity 3/0 prefixes, 3/0 paths, scan interval 60 secs

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ U
p/Down  State/PfxRcd
10.0.0.2        4          456      37      34        4    0    0 0
0:26:35         1
R1#
```

```
R1#show ip bgp
BGP table version is 4, local router ID is 1.1.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i
 - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f
 RT-Filter,
              x best-external, a additional-path, c RIB-compressed,

              t secondary path,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
 *>   1.1.1.1/32       0.0.0.0                  0         32768 i
 *>   2.2.2.2/32       10.0.0.2                 0             0 456
 i
 *>   10.0.0.0/24      0.0.0.0                  0         32768 ?
R1#
```

R3

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```
R3>en
R3#sh run
Building configuration...

Current configuration : 1246 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R3
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
 --More--
```

CHINESEDUMPS 通过测试

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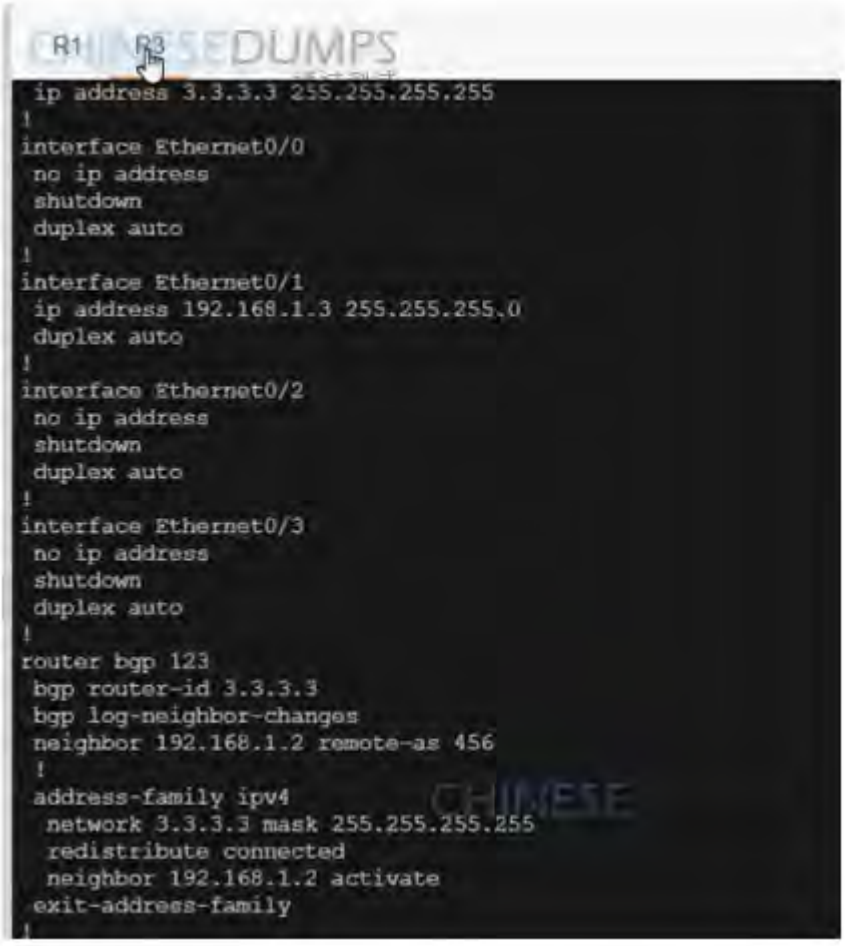

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A. See the solution below in Explanation
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Solution:
On R1:
R1(config)#router bgp 123
R1(config-router)#address-family ipv4
R1(config-router-af)#neighbor 10.0.0.2 allowas-in

On R3:
R3(config)#router bgp 123
R3(config-router)# address-family ipv4
R3(config-router-af)#neighbor 192.168.1.2 allowas-in VERIFICATION:
R3#sh ip route bgp
Gateway of last resort is not set
1.0.0.0/32 is subnetted, 1 subnets
B 1.1.1.1 [20/0] via 192.168.1.2, 00:01:17
2.0.0.0/32 is subnetted, 1 subnets

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B 2.2.2.2 [20/0] via 192.168.1.2, 00:05:06
10.0.0.0/24 is subnetted, 1 subnets
B 10.0.0.0 [20/0] via 192.168.1.2, 00:01:17

Test Ping from R3 to R1:
R3#ping 1.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 1.1.1.1, timeout is 2 seconds:

!!!!!

R3#ping 1.1.1.1 source lo0
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 1.1.1.1, timeout is 2 seconds:
Packet sent with a source address of 3.3.3.3
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms

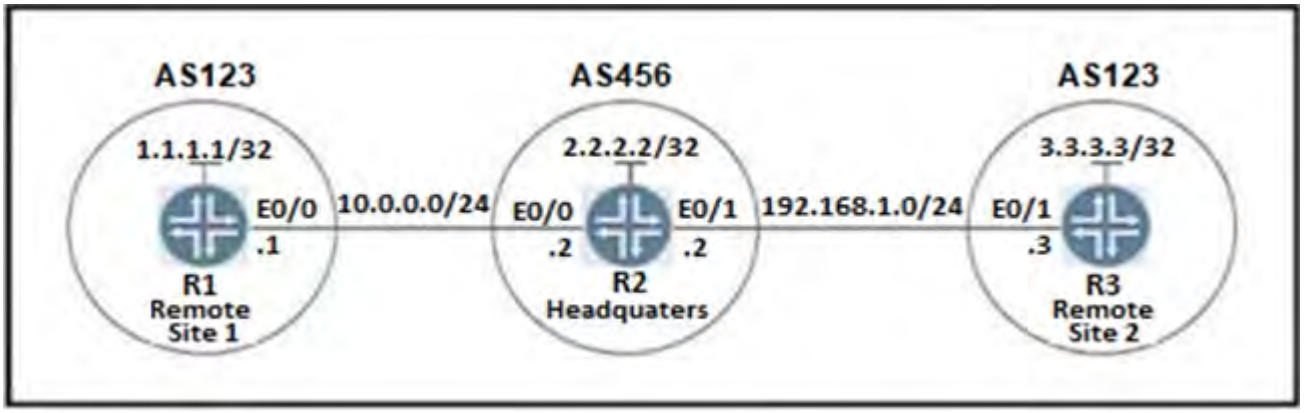
QUESTION 5
SIMULATION

Guidelines

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

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

Topology



Tasks

BGP connectivity exists between Headquarters and both remote sites, however Remote Site 1 cannot communicate with Remote Site 2. Configure BGP according to the topology to achieve these goals:

1. Configure R2 under the BGP process to provide reachability between Remote Site 1 and Remote Site 2. No configuration changes are permitted on R1 or R3.
2. Ensure that the /32 networks at Remote Site 1 and Remote Site 2 can ping each other.

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A. See the solution below in Explanation
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R2

Router BGP 456
Network 10.0.0.0 255.255.255.0
Network 192.168.1.0 255.255.255.0
Network 2.2.2.2 255.255.255.255
Neighbor 10.0.0.1 remote-as 123
Neighbor 192.168.1.3 remote-as 123
Neighbor 10.0.0.1 as-override
Neighbor 192.168.1.3 as-override

QUESTION 6
SIMULATION

Guidelines

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

1. Refer to the Tasks tab to view the tasks for this lab item.
2. Refer to the Topology tab to access the device console(s) and perform the tasks.

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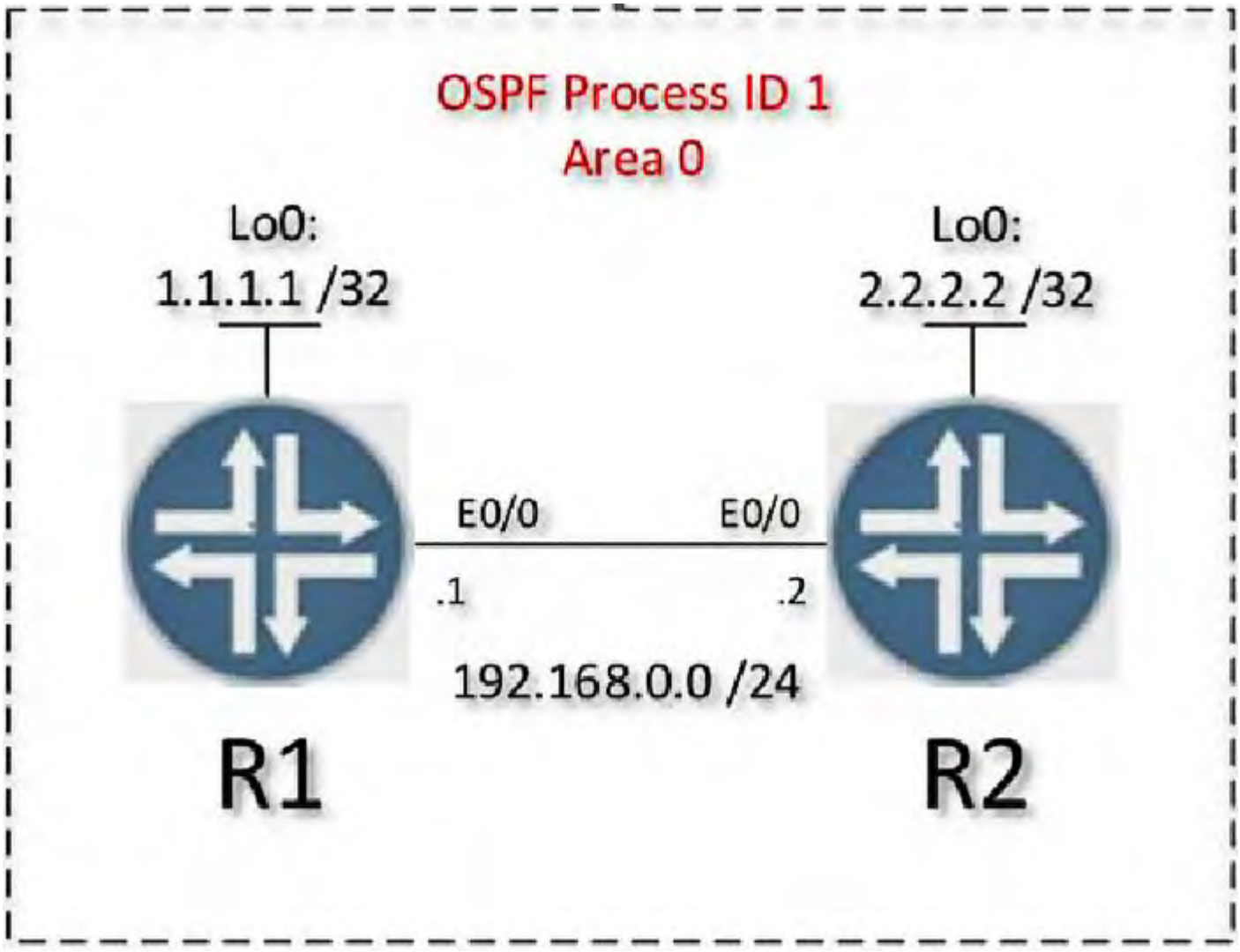
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary preconfigurations have been applied.
5. Do not change the enable password or hostname for any device.
6. Save your configurations to NVRAM before moving to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

Topology



Tasks

Configure OSPF on both routers according to the topology to achieve these goals:

1. Ensure that all networks are advertised between the routers without using the “network” statement under the “router ospf” configuration section.
2. Configure a single command on both routers to ensure:
   The DR/BDR election does not occur on the link between the OSPF neighbors.
   No extra OSPF host routes are generated.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A

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Explanation

Explanation/Reference:
Solution:
R1
Router ospf 1
Int loop0
Ip ospf 1 area 0
Int et0/0
Ip ospf 1 area 0
Ip ospf network point-to-point
Copy run start

R2
Router ospf 1
Int loop0
Ip ospf 1 area 0
Int et0/0
Ip ospf 1 area 0
Ip ospf network point-to-point

Copy run start

Verification:-

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QUESTION 7
SIMULATION

Guidelines

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

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

Tasks

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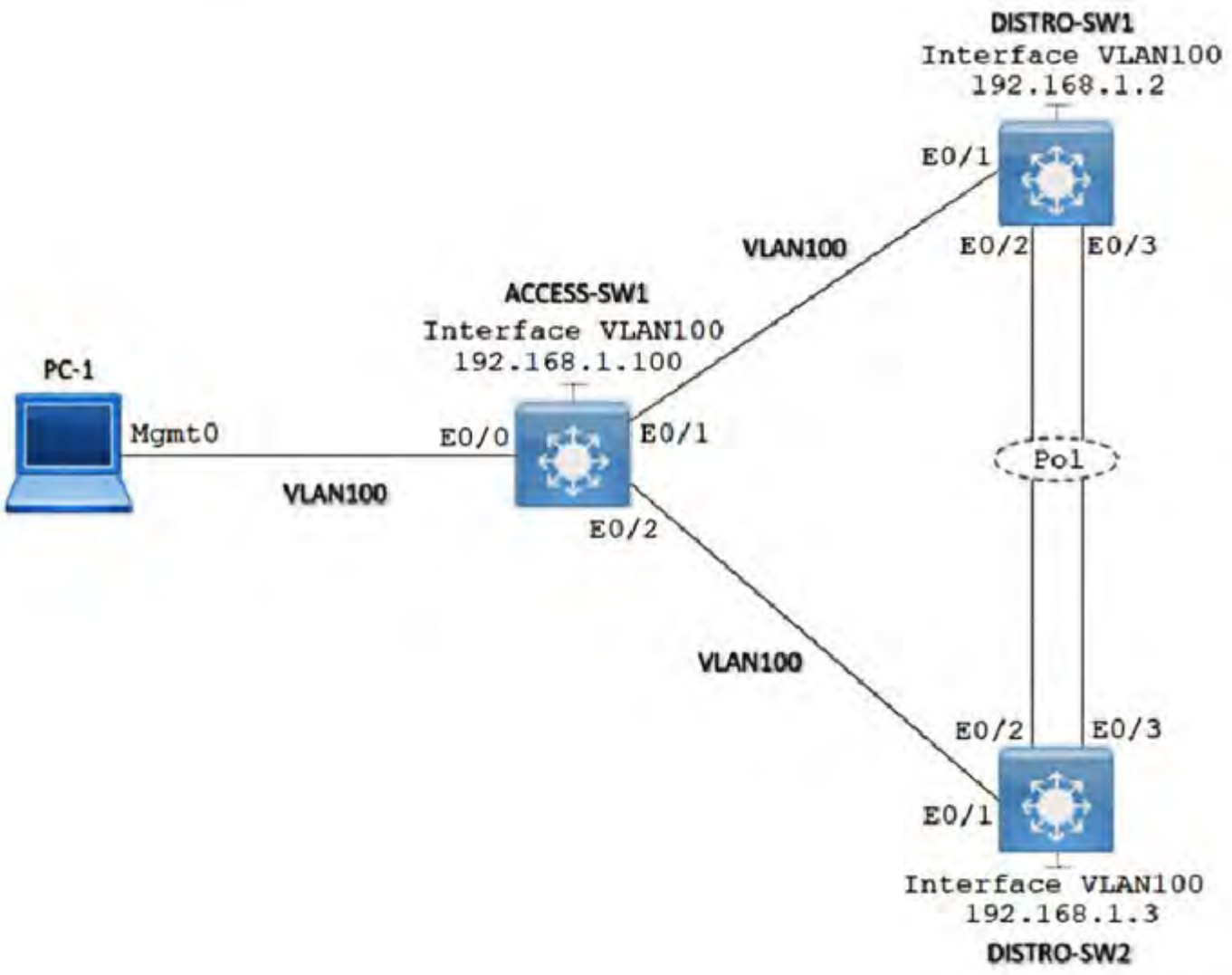
Implement GLBP between DISTRO-SW1 and DISTRO-SW2 on VLAN100 for hosts connected to ACCESS-SW1 to achieve these goals:

1. Configure group 30 using the virtual IP address of 192.168.1.254.
2. Configure DISTRO-SW1 as the AVG using a priority value of 130.
3. If DISTRO-SW1 suffers a failure and recovers, ensure that it automatically resumes the AVG role after waiting for a minimum of 35 seconds.

Topology



A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
DISTRO-SW1
int vlan 100

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glbp 30 ip 192.168.1.254
glbp 30 priority 130
glbp 30 timers 5 35
glbp 30 preempt
copy run start

DISTRO-SW2
int vlan 100
glbp 30 ip 192.168.1.254
glbp 30 timers 5 35
glbp 30 preempt
copy rum start

QUESTION 8
SIMULATION

Guidelines

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

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

Tasks

Configure HSRP between DISTRO-SW1 and DISTRO-SW2 on VLAN 100 for hosts connected to ACCESS-SW1 to achieve these goals:

1. Configure group number 1 using the virtual IP address of 192.168.1.1/24.
2. Configure DISTRO-SW1 as the active router using a priority value of 110 and DISTRO-SW2 as the standby router.
3. Ensure that DISTRO-SW2 will take over the active role when DISTRO-SW1 goes down, and when DISTRO-SW1 recovers, it automatically resumes the active role.

Topology

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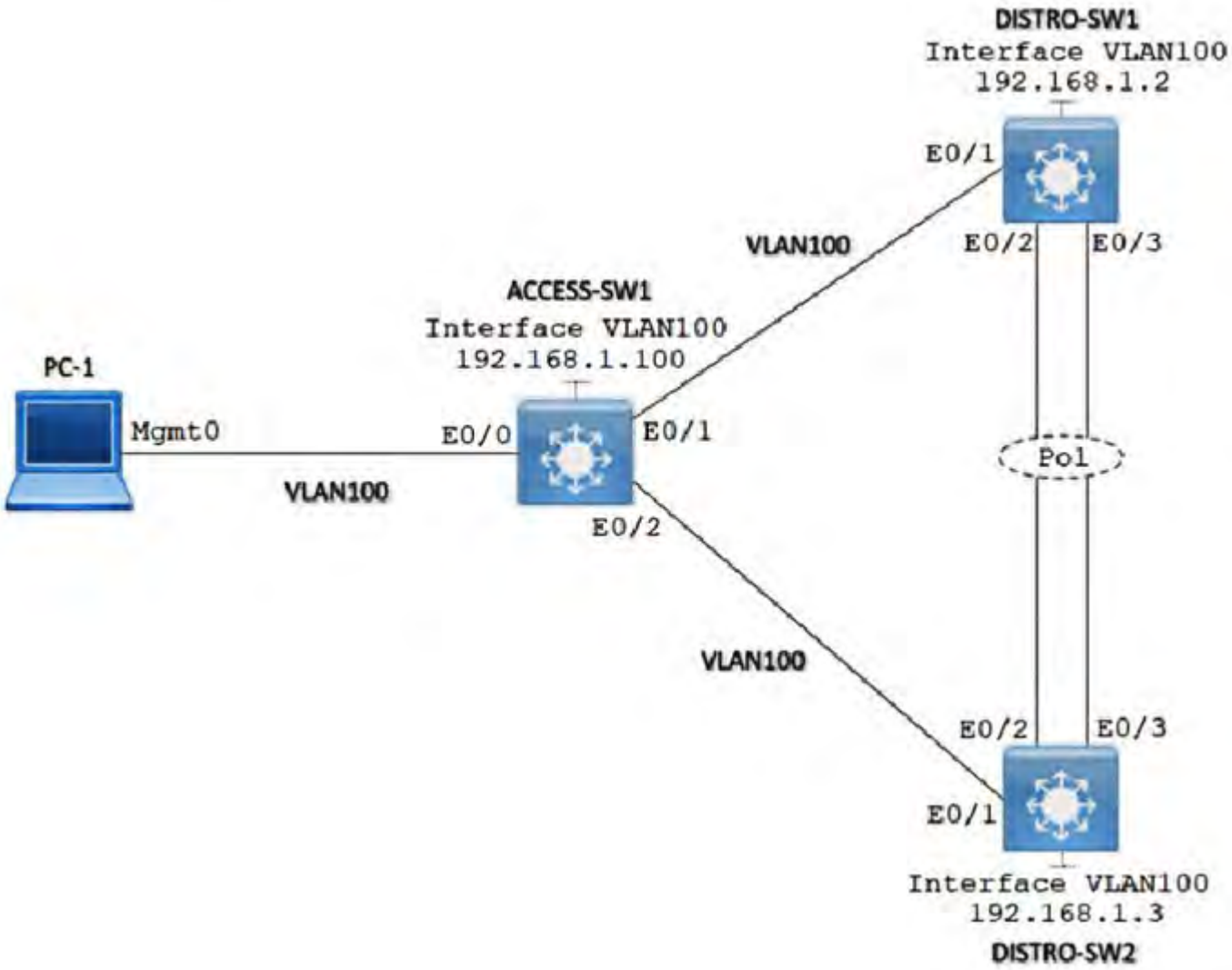

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```
DISTRO-SW1#sh run
DISTRO-SW1#sh running-config
Building configuration...

Current configuration : 1661 bytes
!
! Last configuration change at 02:15:58 PST Fri May 20 2022
!
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service compress-config
!
hostname DISTRO-SW1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
!
```

CHINESEDUMPS 通过测试

```
!
hostname DISTRO-SW1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
clock timezone PST -8 0
!
!
!
!
!
!
ip dhcp excluded-address 192.168.1.1
ip dhcp excluded-address 192.168.1.2
ip dhcp excluded-address 192.168.1.3
ip dhcp excluded-address 192.168.1.100
!
ip dhcp pool CISCO123
 network 192.168.1.0 255.255.255.0
 default-router 192.168.1.1
!
!
ip cef
no ip igmp snooping
no ipv6 cef
!
```

CHINESEDUMPS 通过测试

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DISTRO-SW2

https://t.me/learningnets

https://t.me/learningnets

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
DISTRO-SW1
Sw1
int vlan 100
standby 1 ip 192.168.1.1
standby 1 priority 110
standby 1 preempt
copy run start

DISTRO-SW2
SW2
int vlan 100
standby 1 ip 192.168.1.1
standby 1 preempt
copy run start

OR

MINOR CHANGE IN ABOVE HSRP SCENERIO

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DISTRO-SW1
Sw1

int vlan 100
glbp 1 ip 192.168.1.254
glbp 1 priority 110
glbp 1 timers 5 15
glbp 1 preempt

copy run start

DISTRO-SW2
SW2
int vlan 100
glbp 1 ip 192.168.1.254
glbp 1 timers 5 15
glbp 1 preempt
copy run start

QUESTION 9
SIMULATION

Guidelines

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

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

Topology

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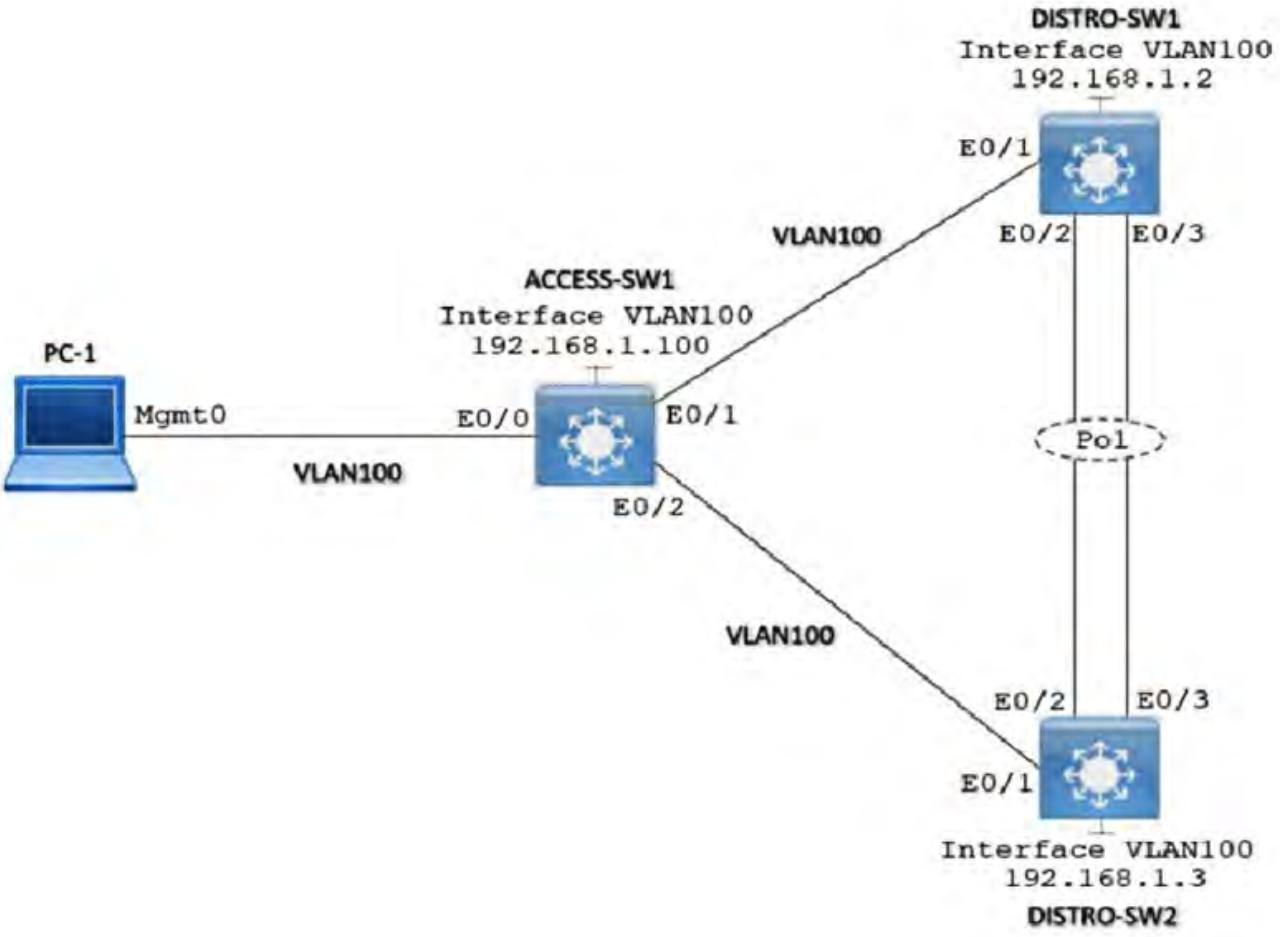

Tasks

Implement VRRP between DISTRO-SW1 and DISTRO-SW2 on VLAN100 for hosts connected to ACCESS-SW1 to achieve these goals:

1. Configure group number 200 using the virtual IP address of 192.168.1.200/24.
2. Configure DISTRO-SW1 as the active router using a priority value of 200 and DISTRO-SW2 as the standby router.
3. DISTRO-SW1 and DISTRO-SW2 should exchange VRRP hello packets every 20 seconds.

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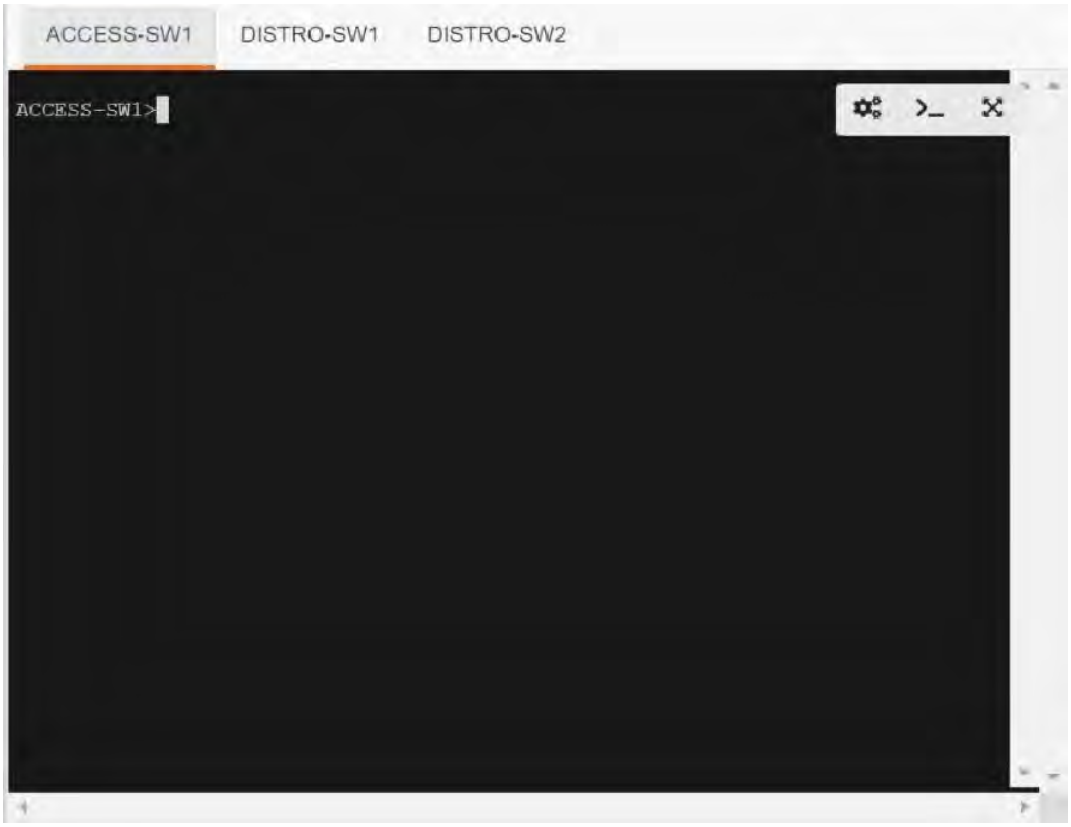

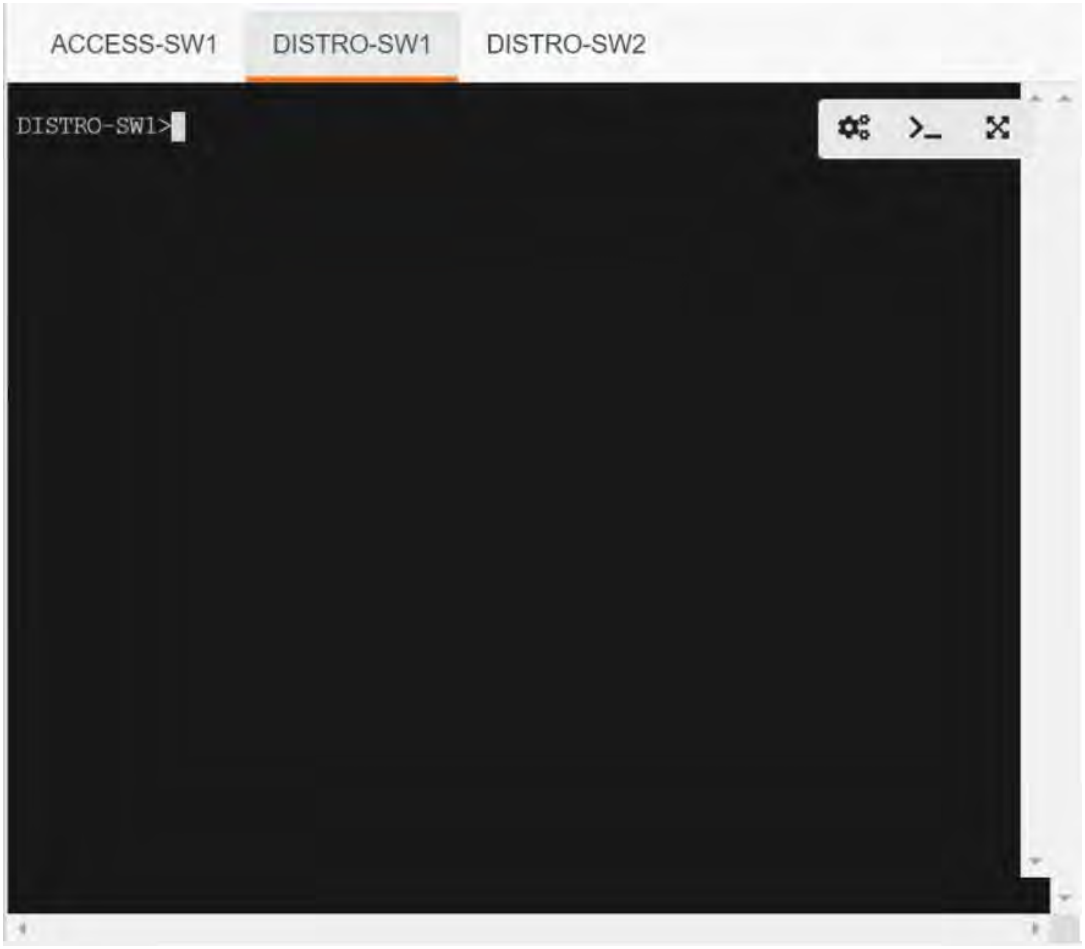

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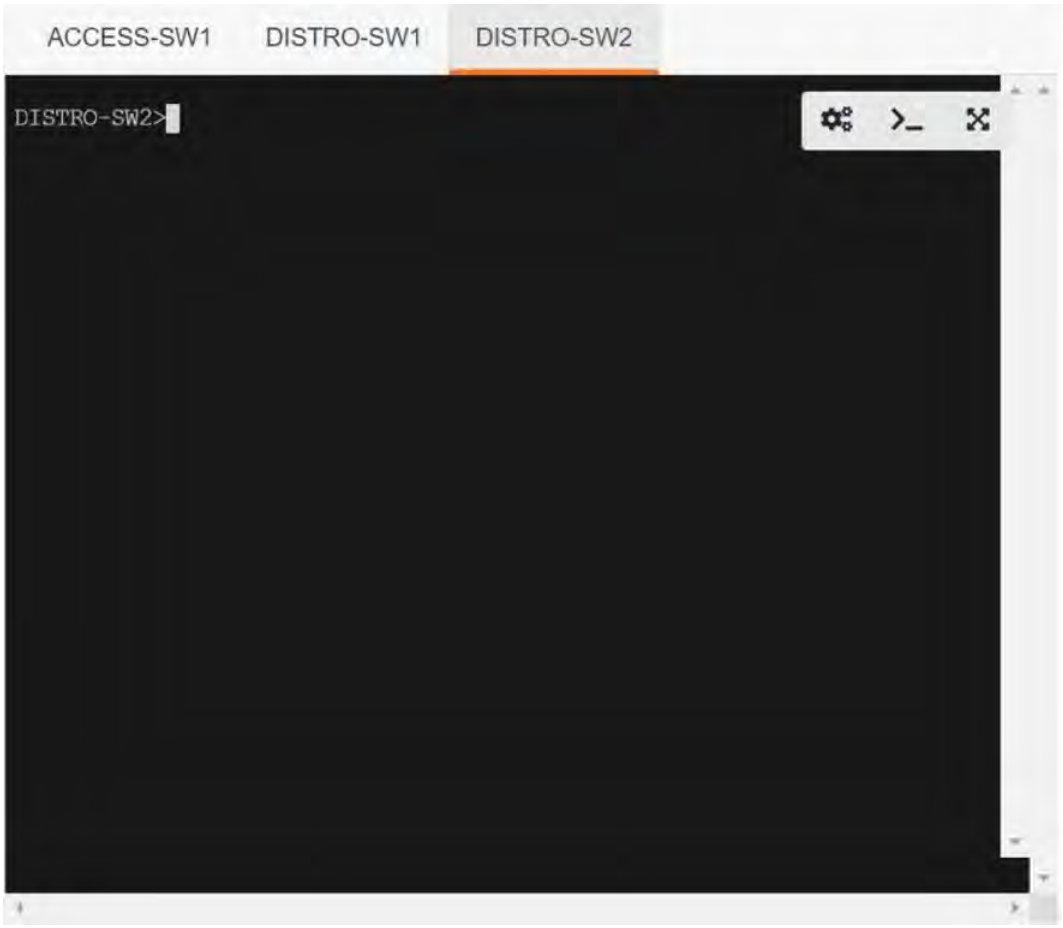

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
DISTRO-SW1
Config t
Interface vlan 100
Ip address 192.168.1.2
255.255.255.0
Vrrp 200 ip 192.168.1.200
Vrrp 200 priority 200
Vrrp 200 advertise 20
Wr mem

DISTRO-SW2
Config t
Interface vlan 100
Ip address 192.168.1.3 255.255.255.0
Vrrp 200 ip 192.168.1.200
Vrrp 200 advertise 20
Wr mem

QUESTION 10
SIMULATION

Guidelines

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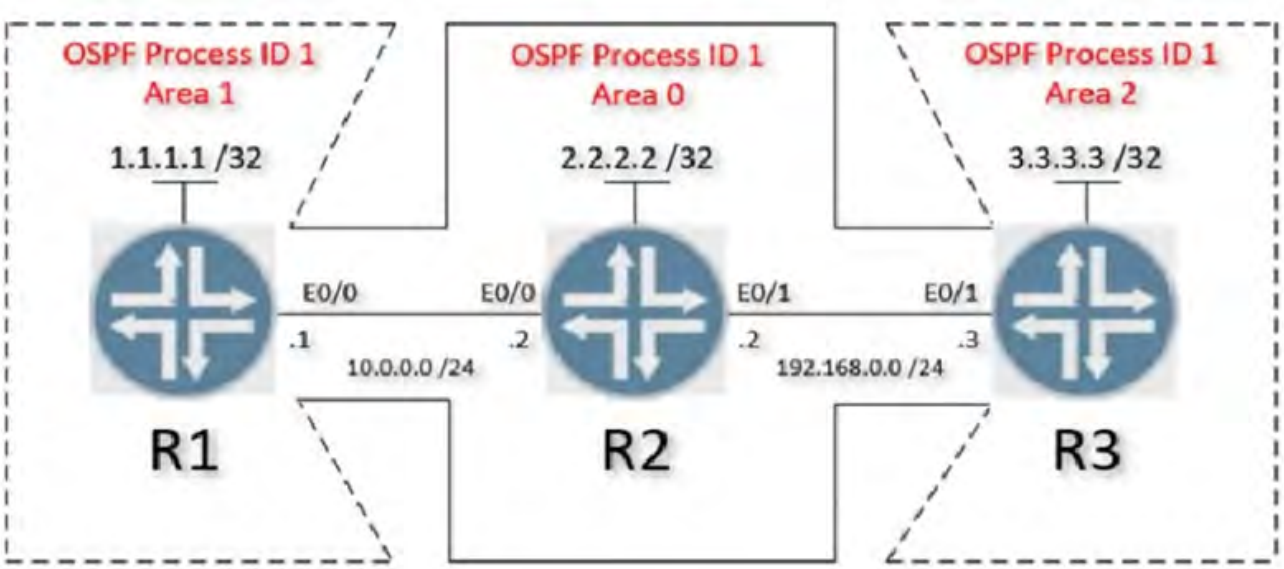
This is a lab item in which tasks will be performed on virtual devices.

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

Topology



Tasks

Configure OSPF on all three routers according to the topology diagram to achieve these goals:

1. Enable OSPF on all interfaces using the network statement and match the network mask of each interface.
2. Ensure that all networks are advertised between the routers.
3. Ensure that all routers use OSPF process ID 1 and that the Lo0 interface is used for the router ID.
4. Configure OSPF MD5 authentication on every physical interface running OSPF using key 1 and the password **ccnp321.**

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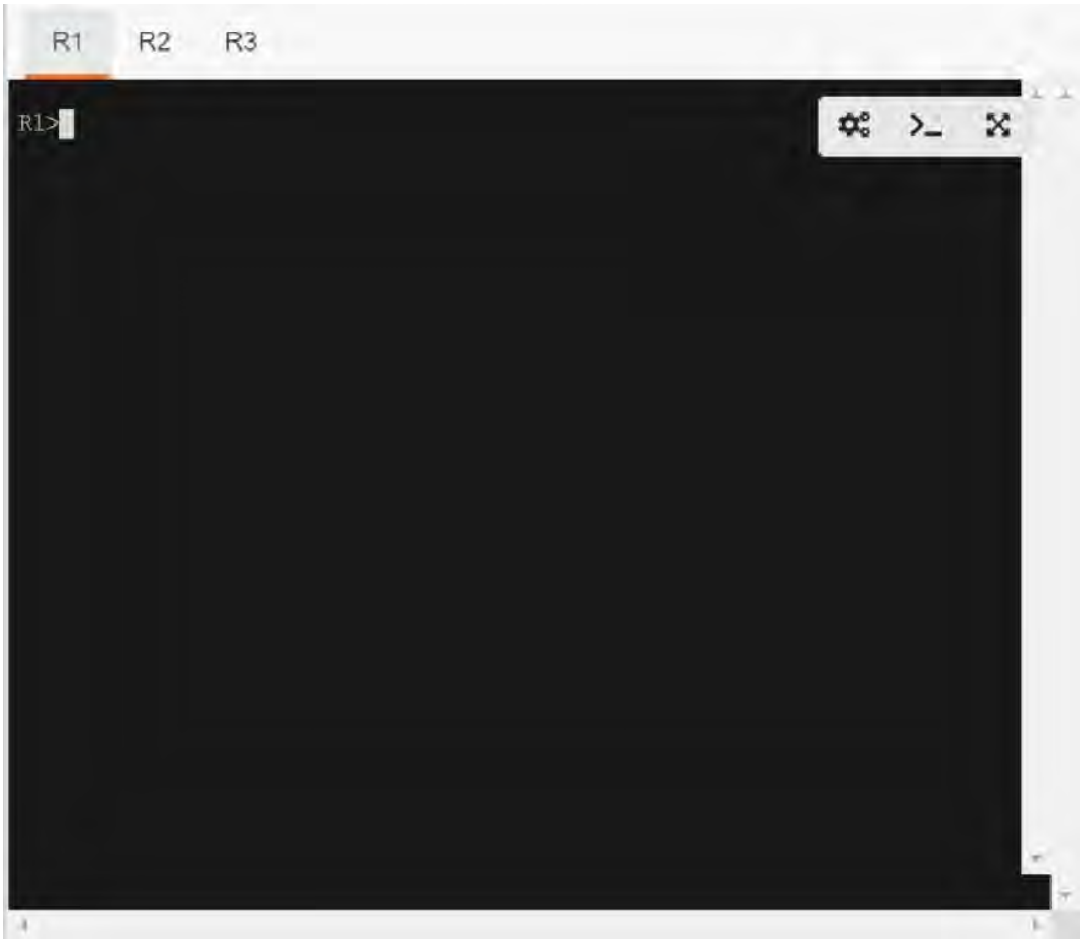

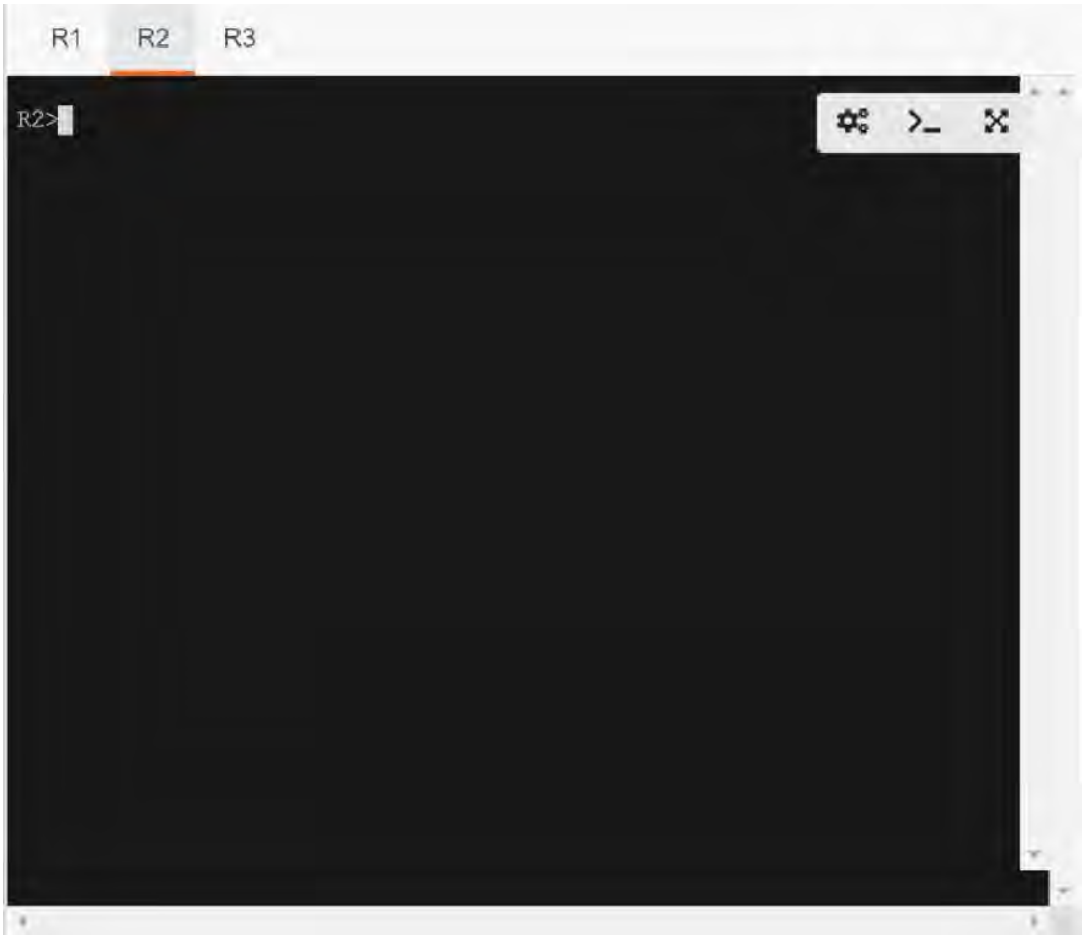

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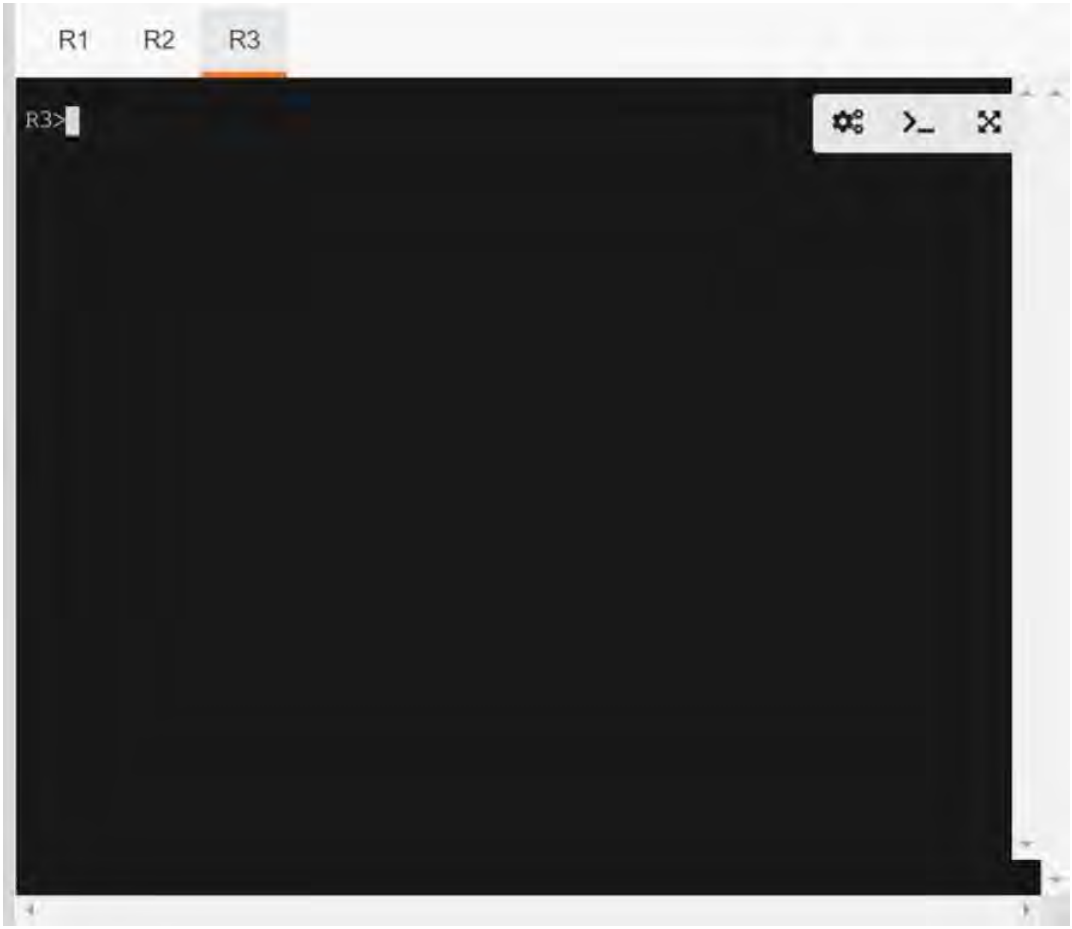

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R1
Router ospf 1
Network 10.0.0.0 0.0.0.255 area 1
Network 1.1.1.1 0.0.0.0 area 1
Router-id 1.1.1.1
area 1 authentication message-digest

Interface E0/0
ip ospf message-digest-key 1 md5 ccnp321

R2
Router ospf 1
Network 10.0.0.0 0.0.0.255 area 1
Network 192.168.0.0 0.0.0.255 area 2
Network 2.2.2.2 0.0.0.0 area 0
Router-id 2.2.2.2
area 1 authentication message-digest
area 2 authentication message-digest

Interface E0/0

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ip ospf message-digest-key 1 ccnp321

Interface E0/1
ip ospf message-digest-key 1 ccnp321

R3
Router ospf 1
Network 192.168.0.0 0.0.0.255 area 2
Network 3.3.3.3 0.0.0.0 area 2
Router-id 3.3.3.3
area 2 authentication message-digest

Interface E0/1
ip ospf message-digest-key 1 ccnp321

QUESTION 11
SIMULATION

Guidelines

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

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

Tasks

Configure OSPF on all three routers according to the topology to achieve these goals:

1. Configure OSPF without using the “network” statement under the “router ospf” configuration section.
2. Ensure that all networks are advertised between the routers.
3. Configure a single command under each Ethernet interface to prevent OSPF neighbors from participating in a DR/BDR election and ensure that no extra host routes are generated.

Topology

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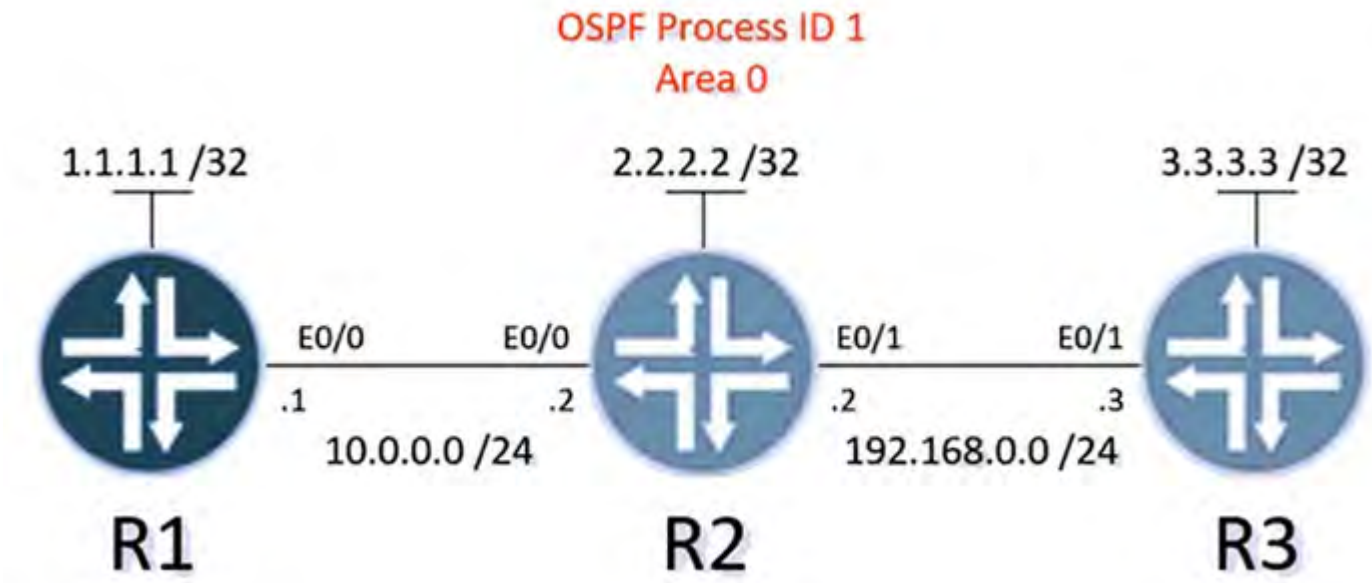

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

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Correct Answer: A
Explanation

Explanation/Reference:
#R1
interface e0/0
ip ospf 1 area 0
ip ospf network point-to-point

interface lo0
ip ospf 1 area 0
ip ospf network point-to-point
copy running-config startup-config

#R2
interface e0/0
ip ospf 1 area 0
ip ospf network point-to-point

interface e0/1
ip ospf 1 area 0
ip ospf network point-to-point

interface lo0
ip ospf 1 area 0
ip ospf network point-to-point
copy running-config startup-config

#R3
interface e0/1
ip ospf 1 area 0
ip ospf network point-to-point

interface lo0
ip ospf 1 area 0
ip ospf network point-to-point
copy running-config startup-config

QUESTION 12
SIMULATION

Guidelines

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

1. Refer to the **Tasks** tab to view the tasks for this lab item.
2. Refer to the **Topology** tab to access the device console(s) and perform the tasks.
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary pre-configurations have been applied.
5. Do not remove any existing configurations from the devices, only those necessary to make the appropriate changes required to fulfill the listed tasks.
6. Do not change the enable password or hostname for any device.
7. **Save your configurations** to NVRAM before moving to the next item.
8. Click **Next** at the bottom of the screen to submit this lab and move to the next question.
9. When **Next** is clicked, the lab closes and cannot be reopened.

Topology

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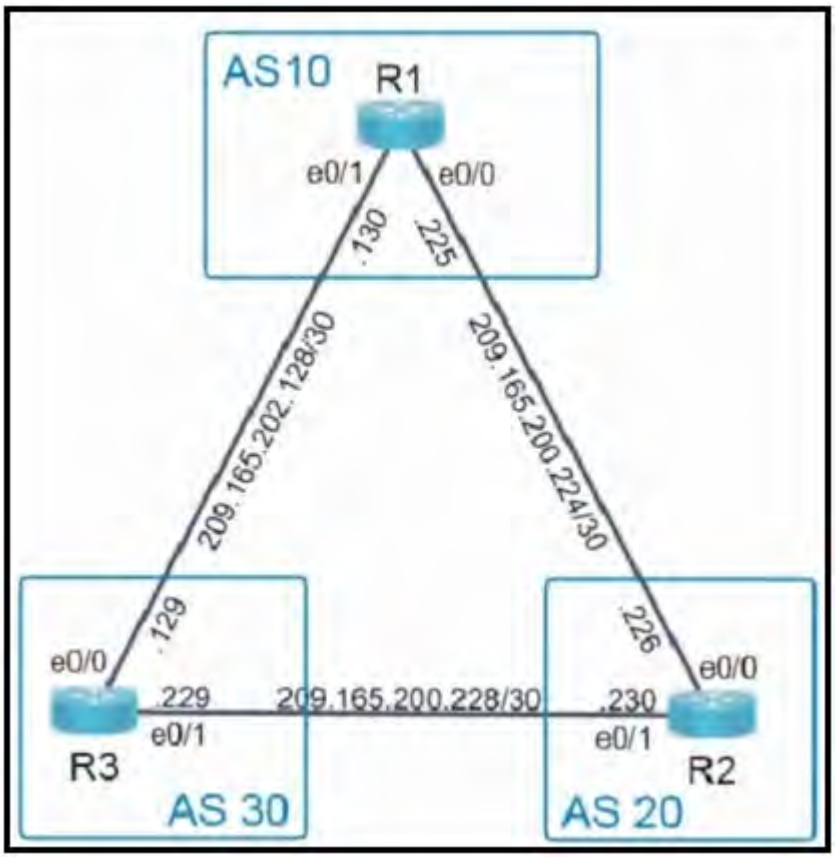

Tasks

Configure R1 according to the topology to achieve these results:

1. Configure eBGP using Loopback 0 for the router-id. Do not use the address-family command to accomplish this.
2. Advertise R1's Loopback 100 and Loopback 200 networks to AS20 and AS30.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:

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```
R1#
R1#show ip in
R1#show ip in
R1#en
R1#show ip in
R1#show ip in
R1#show ip in br
% Ambiguous command: "show ip in br"
R1#
R1#
R1#
R1#en
R1#
R1#
R1#show ip inter
R1#show ip interface br
R1#show ip interface brief
Interface      IP-Address          OK?  Method    Status    Protocol
Ethernet0/0    209.165.200.225     YES  NVRAM     up        up
Ethernet0/1    209.165.202.130     YES  NVRAM     up        up
Ethernet0/2    unassigned          YES  NVRAM     up        up
Ethernet0/3    unassigned          YES  NVRAM     up        up
Ethernet1/0    unassigned          YES  NVRAM     up        up
Ethernet1/1    unassigned          YES  NVRAM     up        up
Ethernet1/2    unassigned          YES  NVRAM     up        up
Ethernet1/3    unassigned          YES  NVRAM     up        up
Loopback0      10.10.10.1          YES  NVRAM     up        up
Loopback100    209.165.201.1       YES  NVRAM     up        up
Loopback200    209.165.201.2       YES  NVRAM     up        up
R1#config t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#
```

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```
R1(config)#ro
R1(config)#route b
% Ambiguous command: "route b"
R1(config)#router bg
R1(config)#router bgp 10
R1(config-router)#bg
R1(config-router)#bgp ro
R1(config-router)#bgp route-
R1(config-router)#bgp route-id
R1(config-router)#bgp route-id 10.10.10.1

% Invalid input detected at '^' marker.

R1(config-router)#bgp roter
R1(config-router)#bgp rou
R1(config-router)#bgp router
R1(config-router)#bgp router-id 10.10.10.1
R1(config-router)#ne
R1(config-router)#nei
R1(config-router)#neighbor 209.165.200.226 remot
R1(config-router)#neighbor 209.165.200.226 remote-as 20
R1(config-router)#neig
R1(config-router)#neighbor 209.
*Apr 15 17:46:36.337: %BGP-5-ADjCHANGE: neighbor 209.165.200.226 Up
R1(config-router)#neighbor 209.165.202.129 re
R1(config-router)#neighbor 209.165.202.129 remom
R1(config-router)#neighbor 209.165.202.129 remot
R1(config-router)#neighbor 209.165.202.129 remote-as 30
R1(config-router)#
R1(config-router)#net
R1(config-router)#network 20
*Apr 15 17:48:32.622: %BGP-5-ADJCHANGE: neighbor 209.165.202.129 Up
R1(config-router)#network 209.165.201.1 mas
R1(config-router)#network 209.165.201.1 mask 255.255.255.255
R1(config-router)#net
R1(config-router)#network 209.165.201.2 mas
R1(config-router)#network 209.165.201.2 mask 255.255.255.255
R1(config-router)#exit
```

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```
R1#show ip b
R1#show ip bgp su
R1#show ip bgp summary
BGP router identifier 10.10.10.1, local AS number 10
BGP table version is 3, main routing table version 3
2 network entries using 288 bytes of memory
2 path entries using 168 bytes of memory
1/1 BGP path/bestpath attribute entries using 160 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 616 total bytes of memory
BGP activity 2/0 prefixes, 2/0 paths, scan interval 60 secs

Neighbor        V    AS MsgRcvd MsgSent  TblVer  InQ  OutQ Up/Down   State/PfxRcd
209.165.200.226 4    20       5       6       2    0    0    00:01:37        0
209.165.202.129 4    30       5       6       2    0    0    00:01:41        0

R1#show
R1#show ro
R1#show route b
R1#show route bgp
Codes:  L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

        E1 - OSPF external type 1, E2 - OSPF external type 2
        i  - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
        ia - IS-IS inter are,* - candidate default, U - per-user static route
        o  - ODR, P - periodic download static route, H - NHRP, l - LISP
        a  - application route
        +  - application route, % - next hop override, p - override from PfR

Gateway of last resort is not set
R1#copy r
R1#copy ru
R1#copy running-config st
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
[OK]
R1#
```

QUESTION 13
SIMULATION

Guidelines

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

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

Topology

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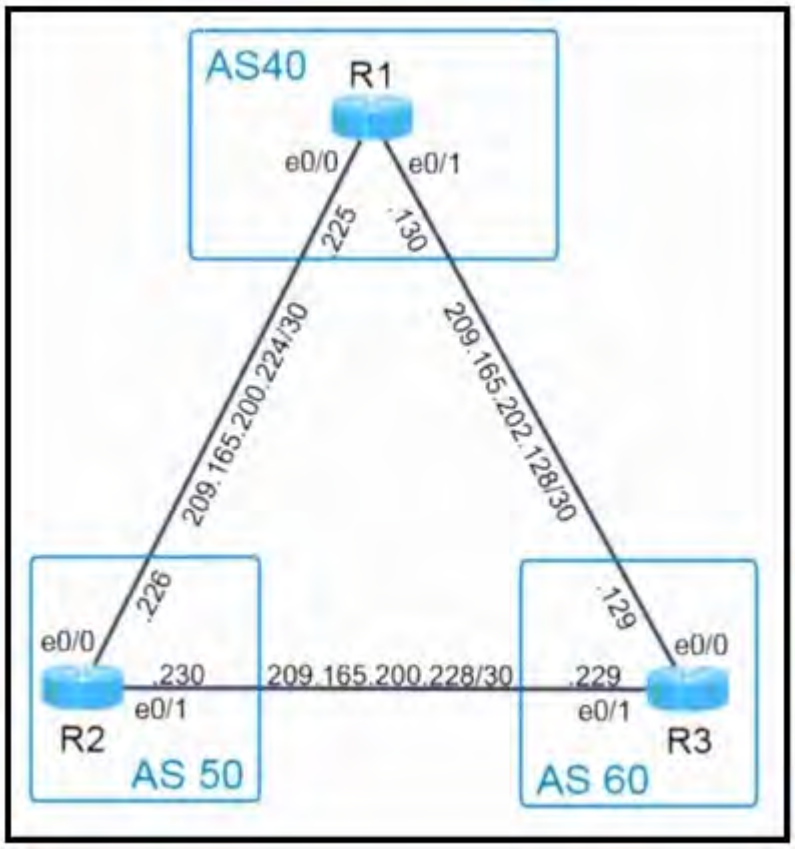

Tasks

Configure R2 according to the topology to achieve these results:

1. Configure eBGP using Loopback 0 for the router-id. Do not use the address-family command to accomplish this.
2. Advertise R2's Loopback 100 and Loopback 200 networks to AS40 and AS60.

R2

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```
R2#sh run
Building configuration…

Current configuration : 1365 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
 mi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
  --More--
```

```
!
redundancy
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface Loopback0
 ip address 10.2.2.2 255.255.255.255
!
interface Loopback100
ip address 209.165.201.11 255.255.255.255
!
interface Loopback200
--More--
```

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```
R1#sh run
Building configuration…

Current configuration : 1496 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
  --More--
```

R1

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```
R1#sh run
Building configuration…

Current configuration : 1496 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
  --More--
```

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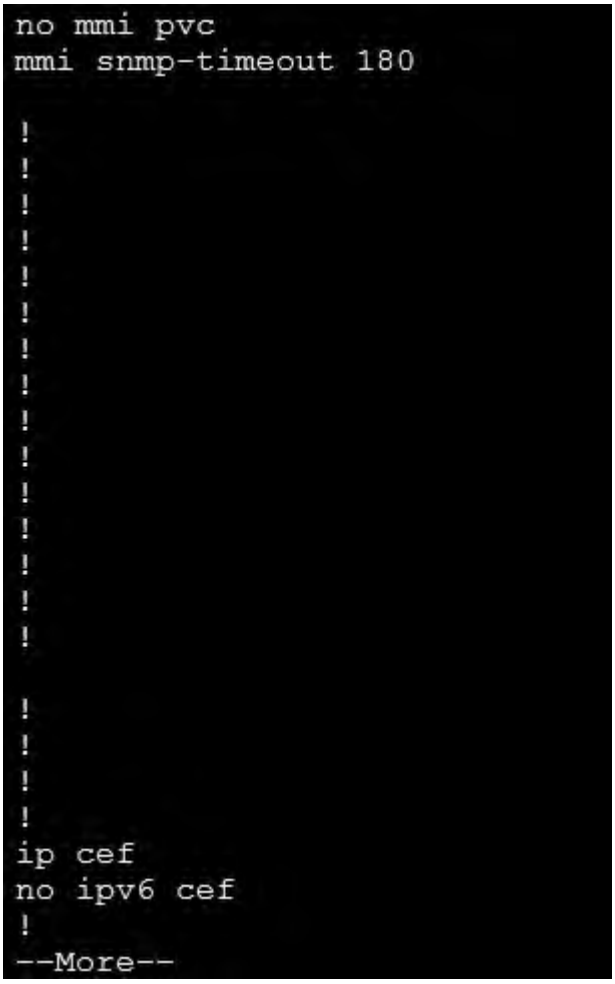

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```
!
redundancy
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface Loopback0
 ip address 10.10.10.1 255.255.255.255
!
interface Ethernet0/0
 ip address 209.165.200.225 255.255.255.252
 duplex auto
!
interface Ethernet0/1
 ip address 209.165.202.130 255.255.255.252
--More--
```

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```
!
!
redundancy
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface Loopback0
 ip address 10.2.2.2 255.255.255.255
!
interface Loopback100
 ip address 209.165.201.11 255.255.255.255
!
interface Loopback200
 ip address 209.165.201.12 255.255.255.255

--More--
```

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```
interface Loopback100
 ip address 209.165.201.11 255.255.255.255
!
interface Loopback200
 ip address 209.165.201.12 255.255.255.255
!
interface Ethernet0/0
 ip address 209.165.200.226 255.255.255.252
 duplex auto
!
interface Ethernet0/1
 ip address 209.165.200.230 255.255.255.252
 duplex auto
!
interface Ethernet0/2
 no ip address
 duplex auto
!
interface Ethernet0/3
 no ip address
 duplex auto
!
interface Ethernet1/0
 no ip address
 duplex auto
!
--More--
```

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```
!
interface Ethernet1/1
 no ip address
 duplex auto
!
interface Ethernet1/2
 no ip address
 duplex auto
!
interface Ethernet1/3
 no ip address
 duplex auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
ipv6 ioam timestamp
!
!
!
control-plane
!
!
!
!
!
!
!
!
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
 --More--
```

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```
!
!
!
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input none
!
!
end

R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
```

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```
R2#
R2#
R2#show ip int brief

% Invalid input detected at '^' marker.
 R2#
Interface      IP-Address          OK? Method Status
     Protocol
Ethernet0/0    209.165.200.226     YES  NVRAM up
     up
Ethernet0/1    209.165.200.230     YES  NVRAM up
     up
Ethernet0/2    unassigned          YES  NVRAM up
     up
Ethernet0/3    unassigned          YES  NVRAM up
     up
Ethernet1/0    unassigned          YES  NVRAM up
     up
Ethernet1/1    unassigned          YES  NVRAM up
     up
Ethernet1/2    unassigned          YES  NVRAM up
     up
Ethernet1/3    unassigned          YES  NVRAM up
     up
Loopback0      10.2.2.2            YES  NVRAM up
     up
Loopback100    209.165.201.11      YES  NVRAM up
     up
Loopback200    209.165.201.12      YES  NVRAM up
R2#
```

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R3

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```
R3#sh config
Using 1496 out of 32768 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R3
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
--More--
```

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```
!
!
!
interface Loopback0
 ip address 10.30.30.3 255.255.255.255
!
interface Ethernet0/0
 ip address 209.165.202.129 255.255.255.252
 duplex auto
!
interface Ethernet0/1
 ip address 209.165.202.229 255.255.255.252
 duplex auto
!
interface Ethernet0/2
 no ip address
 duplex auto
!
interface Ethernet0/3
 no ip address
 duplex auto
!
interface Ethernet1/0
 no ip address
 duplex auto
!
 --More--
```

https://t.me/learningnets

```
!
!
!
!
!
!
redundancy
!
!
!
!
!
!
!
!
!
!
!
!
!
!
interface Loopback0
 ip address 10.30.30.3 255.255.255.255
!
interface Ethernet0/0
```

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```
!
!
!
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input none
!
!
end

R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#
```

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:

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```
R2#show ip bgp
 % BGP not active

R2#show ip bgp
 % BGP not active

R2#router bgp 50

% Invalid input detected at '^' marker.

R2#conf t
Enter configuration commands, one per line, End with CNTL/Z.
R2(config)#router bgp 50
R2(config-router)#bgp router-id 10.2
%Incomplete command.

R2(config-router)#bgp-router-id 10.2.2.2
R2(config-router)#neighbor 209.165.202.130 remote-as 40
R2(config-router)#neighbor 209.165.200.230 remote-as 60
%Cannot configure the local system as neighbor
R2(config-router)#neighbor 209.165.200.230 remote-as 60
```

```
R2(config-router)#neighbor 209.165.200.229 remote-as 60
R2(config-router)#route
*Oct 20 18:33:42.372: %BGP-5-ADJCHANGE: neighbor 209.165.200.229 Up
R2(config-router)#router bgp 50
R2(config-router)#network 209.165.201.11 mask 255.255.255.255
R2(config-router)#network 209.165.201.12 mask 255.255.255.255
R2(config-router)#exit
R2(config)#
```

Verification:

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```
R1#
R1#
R1#
R1#
R1#
R1#show ip roturer bgp
Codes: L - local, C - connected, S - static, R - RIP, M - Mobile, B - BG
P
     D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
     N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
     E1 - OSPF external type 1, E2 - OSPF external type 2
     i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
     ia - IS-IS inter area, *- candidate default,U - per-user static route
     o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
     a - application route
     + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

R1#
R1#show ip bgp summary
BGP router identifier 10.10.10.1, local AS number 40
BGP table version is 1, main routing table version 1

Neighbor        V    AS   MsgRcvd   MsgSent   TblVer    InQ  OutQ Up/Down   State/PfxRcd
209.165.200.226 4    50         0         0        1    0    0    never     Idle
209.165.202.129 4    60        78        77        1    0    0    01:08:50        0
```

```
R1#
R1#
R1#
R1#
R1#show ip bgp
R1#show ip bgp
R1#show ip bgp sum
BGP router identifier 10.10.10.1, local AS number 40
BGP table version is 2, main routing table version 2
1 network entries using 144 bytes of memory
1 path entries using 84 bytes of memory
1/1 BGP path/bestpath attribute entries using 160 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 412 total bytes of memory
BGP activity 1/0 prefexies, 1/0 paths, scan interval 60 secs

Neighbor        V    AS   MsgRcvd   MsgSent   TblVer    InQ  OutQ Up/Down   State/PfxRcd
209.165.200.226 4    50   0         0         1         0    0    never     Idle
209.165.202.129 4    60   86        85        2         0    0    01:16:10          1
```

```
Gateway of last resort is not set

     209.165.201.0/32 is subnetted, 2 subnets
B         209.165.201.11 [20/0] via 209.165.202.129, 00:01:15
B         209.165.201.12 [20/0] via 209.165.202.129, 00:00:44
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
[OK]
```

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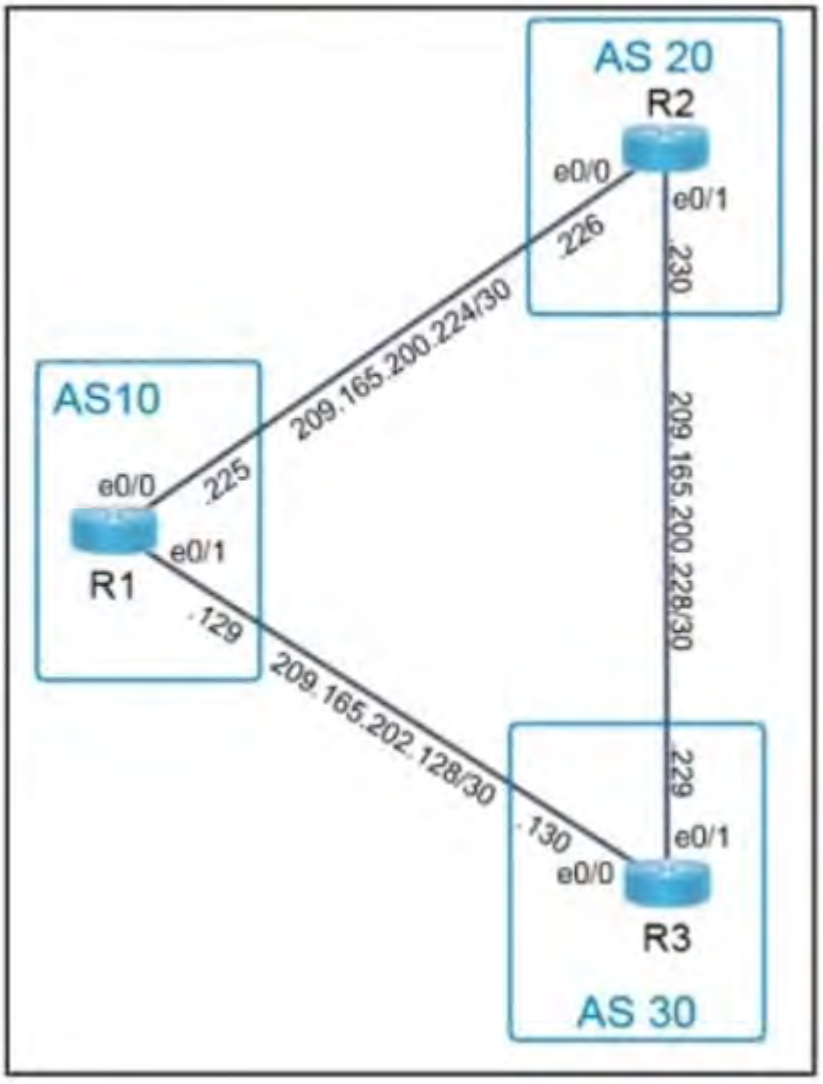
QUESTION 14
SIMULATION

Guidelines

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

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

Topology



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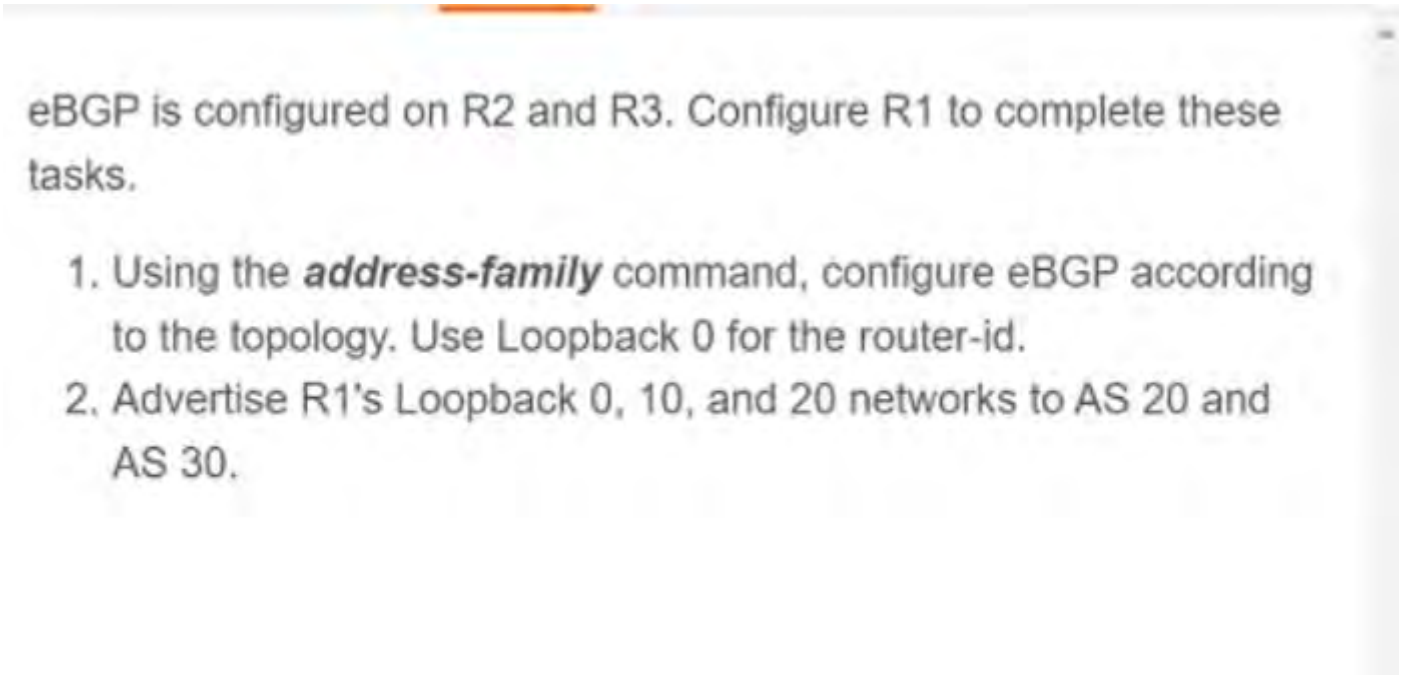

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
```
router bgp 10
 bgp router-id 10.1.1.111
 no bgp default ipv4-unicast
 neighbor 209.165.200.226 remote-as 20
 neighbor 209.165.202.130 remote-as 30

 address-family ipv4
  neighbor 209.165.200.226 activate
  neighbor 209.165.202.130 activate
  network 10.1.1.0 mask 255.255.255.0
  network 209.165.201.0 mask 255.255.255.0
  network 209.165.202.0 mask 255.255.255.0
 exit-address-family
```

QUESTION 15
SIMULATION

Guidelines

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

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

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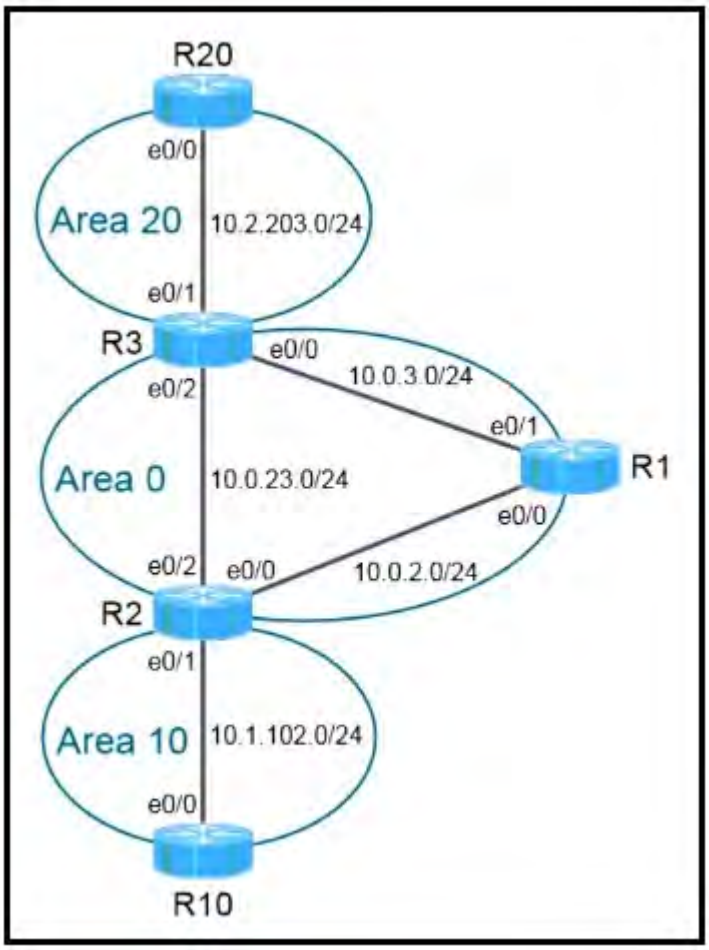
Topology



Tasks

OSPF is partially configured. Complete the OSPF configurations to achieve these goals:

1. Configure R3 and R20 so they do not participate in a DR/BDR election process in Area 20.
2. Configure R10 so it is always the DR for Area 10. Do not change the router ID.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R3

Config t
int e0/1
ip ospf priority 0

R20

Config t
int e0/0
ip ospf priority 0

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R10

Config t
int e0/0
ip ospf priority 255

QUESTION 16
SIMULATION

Guidelines

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

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

Tasks

The operations team started configuring network devices for a new site. Complete the configurations to achieve these goals:

1. The trunk between SW10 and SW30 is not operational. Troubleshoot the issue and ensure PC2 can ping PC1 (10.10.100.10) across the link.
2. Configure SW10 interface E0/0 for aggressive unidirectional link detection.
3. The LACP port-channel between SW10 and SW20 is not operational. Troubleshoot the issue and ensure that PC2 can ping PC3 (10.10.100.30) across the port-channel.

Note: No access is provided to SW20 or SW30. Resolve these issues by making changes only to SW10. Traffic on all trunks should be restricted to only active VLANs.

Topology

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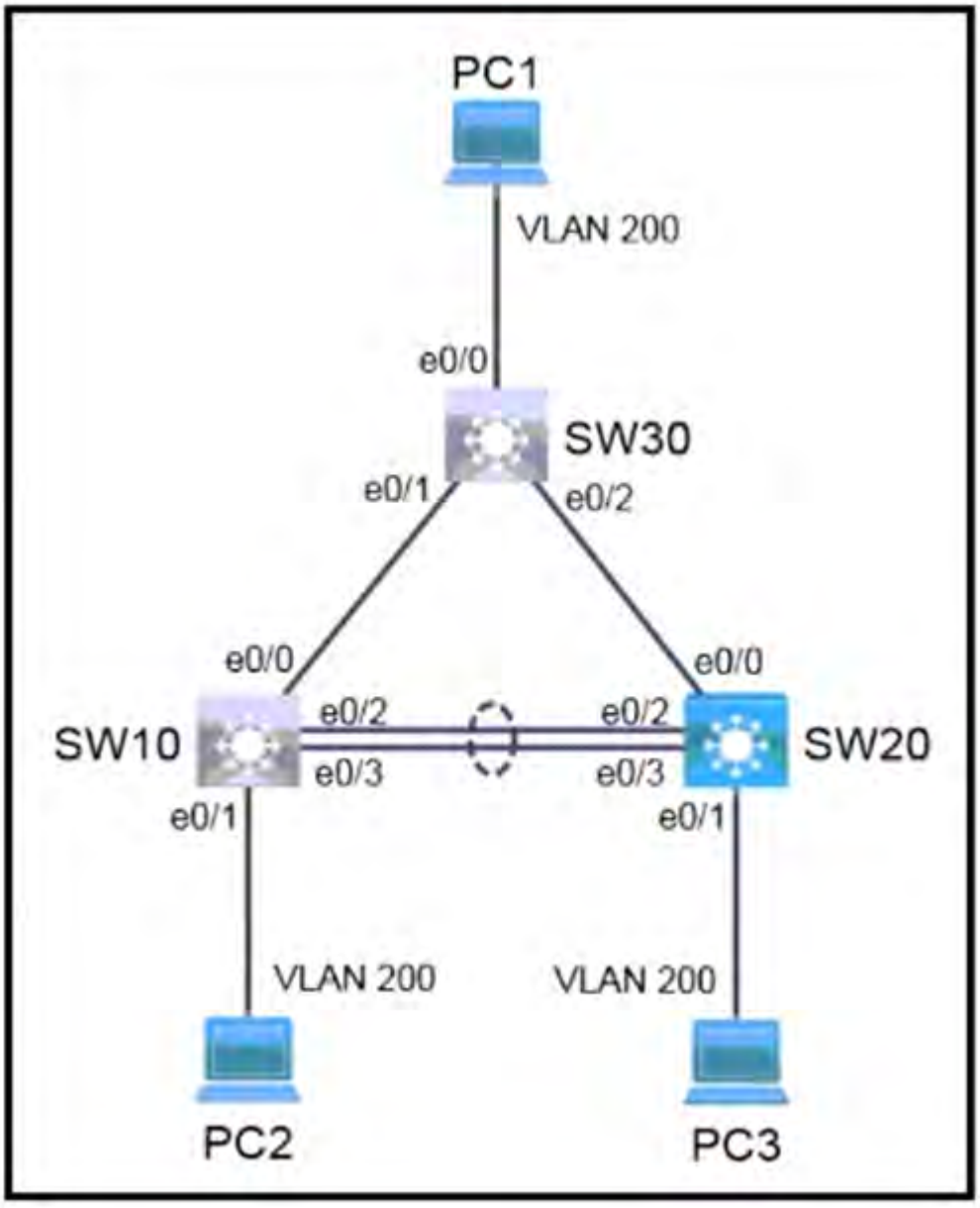

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
SW10

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```
SW
SW10>en
SW10#conf t
Enter configuration commands, one per line, End with CNTL/Z.
SW10(config)#int eth e0/0

%Invalid input detected as '^' marker.

SW10(config)#switchport trunk en
SW10(config)#switchport trunk en dotlq

%Invalid input detected as '^' marker.

SW10(config)#int e0/0
SW10(config-if)#switchport trunk en
SW10(config-if)#switchport trunk encapsulation dotlq
SW10(config-if)#switchport mode trunk
SW10(config-if)# switchport trunk allowed vlan 300
SW10(config-if)#exit
SW10(config)#int e0/0
SW10(config-if)#lldp transmit
SW10(config-if)#lldp receive
SW10(config-if)#lldp tlv-select sys-name sys-desc sys-cap

%Invalid input detected as '^' marker.
```

```
SW10(config-if)#lldp tl
SW10(config-if)#lldp tlv-select s
SW10(config-if)#lldp tlv-select sy
SW10(config-if)#lldp tlv-select sys
SW10(config-if)#lldp tlv-select sys-name sys-desc sys-cap
                ^
%Invalid input detected as '^' marker.

SW10(config-if)#lldp run
SW10(config)#udld aggressive
SW10(config)#exit
SW10#int port
*Nov 1 11:40:03.947: %SYS-5-CONFIG_I: Configured from console by console
SW10#int port-ch
SW10#int port-channell
                ^
%Invalid input detected as '^' marker.

SW10#
```

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```
SW10#int ?
%Unrecognized command
SW10#interface?
%Unrecognized command
SW10#interface
Translating "interface"

Translating "interface"
%Unknown command or computer name, or unable to find computer
address
SW10#sh brief
         ^
%Invalid input detected as '^' marker.

SW10#show ip vlan
         ^
%Invalid input detected as '^' marker.
```

```
SW10#show sta
SW10#show sta
%Ambiguous commands "show sta"
SW10#sho interface
Ethernet0/0 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0100 (bia aabb.cc00.0100)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:00, output 00:00:19, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          9779 packets input, 618373 bytes, 0 no buffer
          Received 9779 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          1874 packets output, 113561 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet0/1 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0110 (bia aabb.cc00.0110)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
    Last input 00:00:06, output 00:00:01, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/0 (size/max)
    5 minute input rate 0 bites/sec, 0 packets/sec
    5 minute output rate 0 bits/sec, 0 packets/sec
         492 packets input, 55037 bytes, 0 no buffer
         Received 9779 broadcasts (0 multicasts)
         0 runts, 0 giants, 0 throttles
         0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
         0 input packets with dribble condition detected
         2258 packets output, 140532 bytes, 0 underruns
         0 output errors, 0 collisions, 0 interface resets
         0 unknown protocol drops
         0 babbles, 0 late collision, 0 deferred
         0 lost carrier, 0 no carrier
         0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet0/2 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0210 (bia aabb.cc00.0120)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
    Last input 00:00:25, output 00:00:00, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/0 (size/max)
    5 minute input rate 0 bites/sec, 0 packets/sec
    5 minute output rate 0 bits/sec, 0 packets/sec
         135 packets input, 6480 bytes, 0 no buffer
         Received 135 broadcasts (0 multicasts)
         0 runts, 0 giants, 0 throttles
         0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
         0 input packets with dribble condition detected
         4111 packets output, 391828 bytes, 0 underruns
         0 output errors, 0 collisions, 0 interface resets
         0 unknown protocol drops
         0 babbles, 0 late collision, 0 deferred
         0 lost carrier, 0 no carrier
         0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet0/3 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0130 (bia aabb.cc00.0130)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:25, output 00:00:00, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          135 packets input, 6480 bytes, 0 no buffer
          Received 135 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          4111 packets output, 391828 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet1/0 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0101 (bia aabb.cc00.0101)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          0 packets input, 0 bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2144 packets output, 133692 bytes, 0 underruns
          0 output errors, 0 collisions, 33 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet1/1 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0111 (bia aabb.cc00.0111)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
   Encapsulation ARPA, loopback not set
   Keepalive set (10 sec)
   Full-duplex, Auto-speed, media type is RJ45
   input flow-control is off, output flow-control is unsupported
   ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          0 packets input, 0 bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2144 packets output, 133692 bytes, 0 underruns
          0 output errors, 0 collisions, 33 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet1/2 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0121 (bia aabb.cc00.0121)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
   Encapsulation ARPA, loopback not set
   Keepalive set (10 sec)
   Full-duplex, Auto-speed, media type is RJ45
   input flow-control is off, output flow-control is unsupported
   ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          0 packets input, 0 bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2144 packets output, 133692 bytes, 0 underruns
          0 output errors, 0 collisions, 33 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet1/3 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0131 (bia aabb.cc00.0131)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          0 packets input, 0 bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2144 packets output, 133692 bytes, 0 underruns
          0 output errors, 0 collisions, 33 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Port-channel110 is down, line protocol is down (notconnect)
     Hardware is EtherChannel, address is 0000.0000.0000 (bia 0000.0000.0000)
     MTU 1500 bytes, BW 1000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bites/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
          0 packets input, 0 bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          0 packets output, 133692 bytes, 0 underruns
          0 output errors, 0 collisions, 33 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Vlan1 is up, line protocol is up
     Hardware is EtherChannel, address is aabb.cc80.0100 (bia aabb.cc80.0100)
     Internet address is 10.10.1.10/24
     MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes): Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bites/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
          0 packets input, 0 bytes, 0 no buffer
          Received 0 broadcasts (0 IP multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          4 packets output, 240 bytes, 0 underruns
          0 output errors, 0 interface resets
          0 unknown protocol drops
          0 output buffer failures, 0 output buffers swapped out
SW10#
SW10#
SW10#
SW10#
```

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```
SW10#
SW10#conf t
Enter configuration commands, one per line, End with CNTL/Z.
SW10(config)#int port-channel110

% Invalid input detected at '^' marker.

SW10(config)#int port-channel10
SW10(config-if)#switchport trunk en
SW10(config-if)#switchport trunk encapsulation dotlq
SW10(config-if)#switchport mode trunk
SW10(config-if)#switchport trunk allowed vlan 300
SW10(config-if)#channel-group 1 mode active

% Invalid input detected at '^' marker.

SW10(config-if)# channel-group 10 mode active

% Invalid input detected at '^' marker.

SW10(config-if)#chan
SW10(config-if)#exit
SW10(config)#int range et0/2 - 3
SW10(config-if-range)#switchport trunk en
SW10(config-if-range)#switchport trunk encapsulation dotlq
SW10(config-if-range)# switchport mode trunk
SW10(config-if-range)#switchport trunk allowed vlan 300
SW10(config-if-range)#exit
SW10(config)#int port-chan
SW10(config)#int port-channel10
SW10(config-if)#channel
SW10(config-if)#channel-g
SW10(config-if)#channel-gr
SW10(config-if)#channel-group 1 mode active

% Invalid input detected at '^' marker.

SW10(config-if)#exit
SW10(config)#exit
SW10# show int
```

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```
SW10#show int
*Nov 1 11:45:54.733: %SYS-6-CONFIG_I: Configured from console by console
SW10#show int
Ethernet0/0 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0100 (bia aabb.cc00.0100)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:00, output 00:00:01, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          10172 packets input, 644340 bytes, 0 no buffer
          Received 9779 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          1892 packets output, 117098 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet0/1 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0110 (bia aabb.cc00.0110)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:03, output 00:00:01, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          522 packets input, 58061 bytes, 0 no buffer
          Received 9779 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2415 packets output, 152696 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet0/2 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0120 (bia aabb.cc00.0120)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:13, output 00:00:00, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          144 packets input, 6912 bytes, 0 no buffer
          Received 144 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          6469 packets output, 417234 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet0/3 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0130 (bia aabb.cc00.0130)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          144 packets input, 6912 bytes, 0 no buffer
          Received 144 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          6470 packets output, 417302 bytes, 0 underruns
          0 output errors, 0 collisions, 33 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet1/0 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0110 (bia aabb.cc00.0110)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
    Last input never, output never, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/0 (size/max)
    5 minute input rate 0 bites/sec, 0 packets/sec
    5 minute output rate 0 bits/sec, 0 packets/sec
         0 packets input, 0 bytes, 0 no buffer
         Received 0 broadcasts (0 multicasts)
         0 runts, 0 giants, 0 throttles
         0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
         0 input packets with dribble condition detected
         2295 packets output, 145479 bytes, 0 underruns
         0 output errors, 0 collisions, 35 interface resets
         0 unknown protocol drops
         0 babbles, 0 late collision, 0 deferred
         0 lost carrier, 0 no carrier
         0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet1/1 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0110 (bia aabb.cc00.0110)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
    Last input never, output never, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/0 (size/max)
    5 minute input rate 0 bites/sec, 0 packets/sec
    5 minute output rate 0 bits/sec, 0 packets/sec
         0 packets input, 0 bytes, 0 no buffer
         Received 0 broadcasts (0 multicasts)
         0 runts, 0 giants, 0 throttles
         0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
         0 input packets with dribble condition detected
         2297 packets output, 145599 bytes, 0 underruns
         0 output errors, 0 collisions, 35 interface resets
         0 unknown protocol drops
         0 babbles, 0 late collision, 0 deferred
         0 lost carrier, 0 no carrier
         0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet1/2 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0121 (bia aabb.cc00.0121)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
    Last input never, output never, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/0 (size/max)
    5 minute input rate 0 bites/sec, 0 packets/sec
    5 minute output rate 0 bits/sec, 0 packets/sec
         0 packets input, 0 bytes, 0 no buffer
         Received 0 broadcasts (0 multicasts)
         0 runts, 0 giants, 0 throttles
         0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
         0 input packets with dribble condition detected
         2298 packets output, 145659 bytes, 0 underruns
         0 output errors, 0 collisions, 35 interface resets
         0 unknown protocol drops
         0 babbles, 0 late collision, 0 deferred
         0 lost carrier, 0 no carrier
         0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet1/3 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0131 (bia aabb.cc00.0131)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
    Last input never, output never, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/0 (size/max)
    5 minute input rate 0 bites/sec, 0 packets/sec
    5 minute output rate 0 bits/sec, 0 packets/sec
         0 packets input, 0 bytes, 0 no buffer
         Received 0 broadcasts (0 multicasts)
         0 runts, 0 giants, 0 throttles
         0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
         0 input packets with dribble condition detected
         2300 packets output, 145779 bytes, 0 underruns
         0 output errors, 0 collisions, 36 interface resets
         0 unknown protocol drops
         0 babbles, 0 late collision, 0 deferred
         0 lost carrier, 0 no carrier
         0 output buffer failures, 0 output buffers swapped out
```

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```
SW10#show etherchannel summary
Flags:    D - down        P - bundled in port-channel
          I - stand-alone s - suspended
          H - Hot-standby (LACP only)
          R - Layer3      S - Layer2
          U - in use      N - not in use, no aggregation
          f - failed to allocate aggregator

          M - not is use, minimum links not met
          m - not in use, port not aggregated due to minimum links not met
          u - unsuitable for bundling
          w - waiting to be aggregated
          d - default port

          A - formed by Auto LAG

Number of channel-groups in use: 1
Number of aggregators:           1

Group     Port-channel   Protocol  Ports
------------------------------------------
10        Po10(SD)       -
```

```
SW10#(config-if-range)#
*Nov 1 11:49:09.488: %LINK-3-UPDOWN: Interface Port-channel, changed state to up
*Nov 1 11:49:10.490: %LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channell, changed
state to up
SW10(config-if-range)#exit
SW10(config)#exit
SW10#show
*Nov 1 11:49:35.800: %SYS-5-CONFIG_I: Configured from console by console
SW10#show int
```

```
Ethernet0/0 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0100 (bia aabb.cc00.0100)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:00, output 00:00:02, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          10520 packets input, 667201 bytes, 0 no buffer
          Received 10518 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          1909 packets output, 120050 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet0/1 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0110 (bia aabb.cc00.0110)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:03, output 00:00:01, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          549 packets input, 60922 bytes, 0 no buffer
          Received 144 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2549 packets output, 162874 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet0/2 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0120 (bia aabb.cc00.0210)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:13, output 00:00:01, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          156 packets input, 7868 bytes, 0 no buffer
          Received 156 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          6602 packets output, 428635 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet0/3 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0130 (bia aabb.cc00.0130)
 MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, Auto-speed, media type is RJ45
  input flow-control is off, output flow-control is unsupported
 ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:14, output 00:00:014, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          159 packets input, 8240 bytes, 0 no buffer
          Received 159 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          6583 packets output, 427455 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet0/1 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0110 (bia aabb.cc00.0110)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input 00:00:03, output 00:00:01, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          549 packets input, 660922 bytes, 0 no buffer
          Received 10518 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2549 packets output, 162874 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet1/0 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0101 (bia aabb.cc00.0101)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 1000 bits/sec, 1 packets/sec
          0 packets input, 0bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2428 packets output, 155883 bytes, 0 underruns
          0 output errors, 0 collisions, 37 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet1/1 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0111 (bia aabb.cc00.0111)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 2/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 1000 bits/sec, 1 packets/sec
          0 packets input, 0bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2428 packets output, 155883 bytes, 0 underruns
          0 output errors, 0 collisions, 38 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Ethernet1/2 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0121 (bia aabb.cc00.0121)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 1000 bits/sec, 1 packets/sec
          0 packets input, 0bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2432 packets output, 156123 bytes, 0 underruns
          0 output errors, 0 collisions, 38 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
Ethernet1/3 is up, line protocol is up (connected)
     Hardware is Ethernet, address is aabb.cc00.0131 (bia aabb.cc00.0131)
     MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
          reliability 255/255, txload 1/255, rxload 1/255
     Encapaulation ARPA, loopback not set
     Keepalive set (10sec)
     Full-duplex, Auto-speed, media type is RJ45
     input flow-control is off, output flow-control is unsupported
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/0 (size/max)
     5 minute input rate 0 bites/sec, 0 packets/sec
     5 minute output rate 1000 bits/sec, 1 packets/sec
          0 packets input, 0bytes, 0 no buffer
          Received 0 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          2435 packets output, 156303 bytes, 0 underruns
          0 output errors, 0 collisions, 38 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

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```
Port-channel1 is up, line protocol is up (connected)
 Hardware is Ethernet, address is aabb.cc00.0120 (bia aabb.cc00.0120)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
   Encapsulation ARPA, loopback not set
   Keepalive set (10 sec)
   Full-duplex, Auto-speed, media type is RJ45
   input flow-control is off, output flow-control is unsupported
     Members in this channel: Et0/2 Et0/3
     ARP type: ARPA, ARP Timeout 04:00:00
     Last input never, output never, output hang never
     Last clearing of "show interface" counters never
     Input queue: 0/2000/0/0 (size/max/drops/flushes): Total output drops: 0
     Queueing strategy: fifo
     Output queue: 0/40 (size/max)
     5 minute input rate 0 bits/sec, 0 packets/sec
     5 minute output rate 0 bits/sec, 0 packets/sec
          71 packets input, 4128 bytes, 0 no buffer
          Received 71 broadcasts (0 multicasts)
          0 runts, 0 giants, 0 throttles
          0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
          0 input packets with dribble condition detected
          51 packets output, 5097 bytes, 0 underruns
          0 output errors, 0 collisions, 0 interface resets
          0 unknown protocol drops
          0 babbles, 0 late collision, 0 deferred
          0 lost carrier, 0 no carrier
          0 output buffer failures, 0 output buffers swapped out
```

```
SW10#copy s r
Destination filename [running-config]?
Failed to generate persistent self-signed certificate
     Secure server will use temporary self-signed certificate

1098 bytes copied in 0.024 secs (45750) bytes/sec)
SW10#
*Nov 1 11:51:58.825: %SPANTREE-7-RECV_1Q_NON_TRUNK: Received 802.1Q
 BPDU on non trunk Ethernet0/0 VLAN1
*Nov 1 11:51:58.825: %SPANTREE-7-BLOCK_PORT_TYPE: Blocking Ethernet
0/0 on VLAN0001.Inconsistent port type.
SW10#
```

PC2

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```
PC2 con0 is now available

Press RETURN to get started

PC2>ping 10.10.100.30
Type escape sequence to abort
Sending 5, 100-byte ICMP Echos to 10.10.100.30, timeout is 2 seconds
:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/2 ms
PC2>ping 10.10.100.10
Type escape sequence to abort
Sending 5, 100-byte ICMP Echos to 10.10.100.10, timeout is 2 seconds
…
Success rate is 0 percent (0/5)
PC2>ping 10.10.100.10
Type escape sequence to abort
Sending 5, 100-byte ICMP Echos to 10.10.100.10, timeout is 2 seconds:
.!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/3 ms
PC2>
```

QUESTION 17
SIMULATION

Guidelines

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

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

Topology

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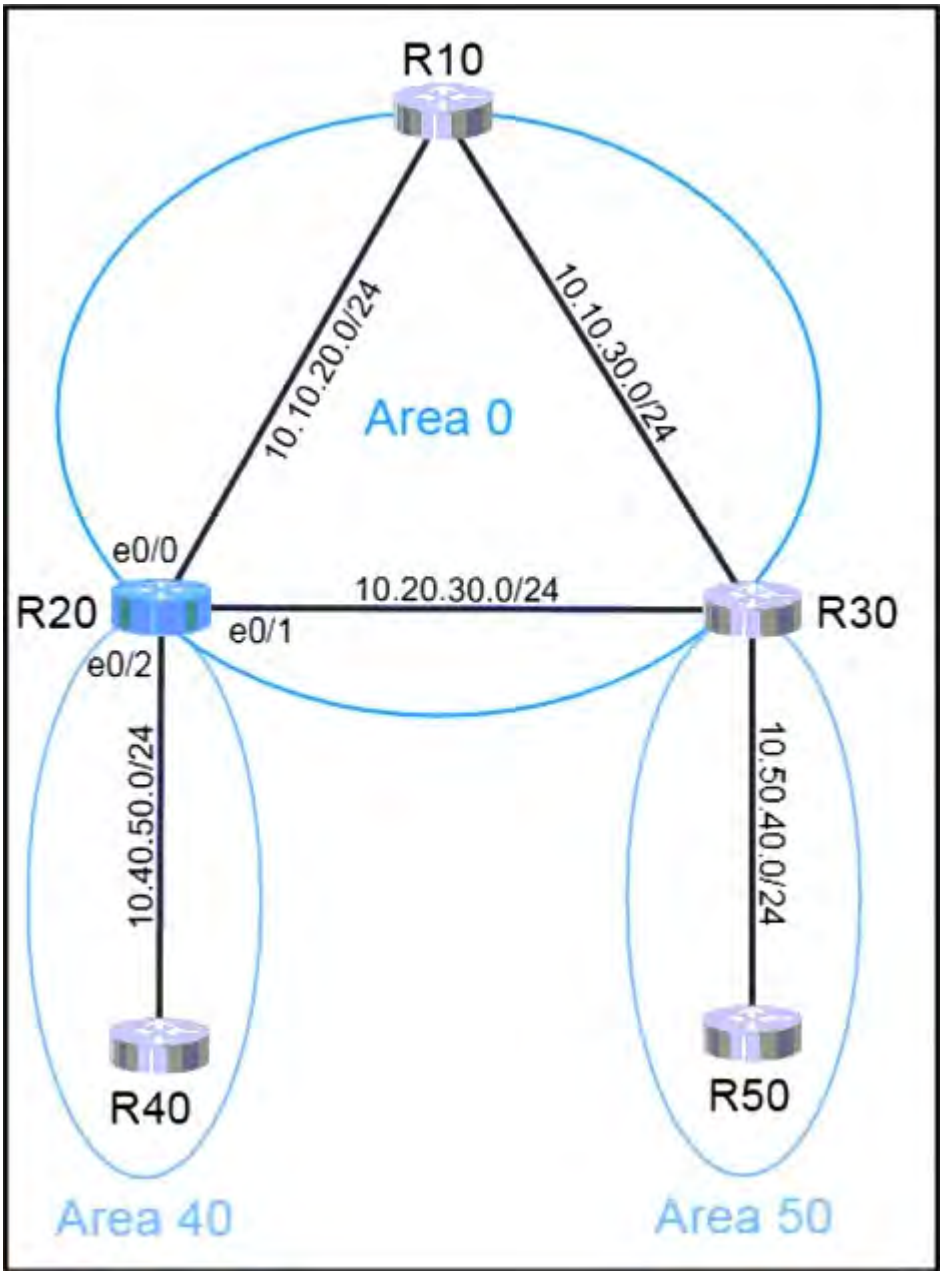

Tasks

OSPF is preconfigured on all devices except R30. Configure R30 to complete these tasks.

Task 1:

Configure OSPF according to the topology using these requirements:

1. Use Process ID 100.
2. Use Loopback0 for the Router ID.
3. Advertise all networks into OSPF.

Use network statements under the OSPF process to accomplish this task.

Task 2:

Configure a/18 summary route for Area 50.

Advertise only Type 3 LSAs into Area0.

R30

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A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R30:

Router#configure terminal
Enter configuration commands, one per line. End with END or Ctrl-Z.
Router(config)#router ospf 100
Router(config-router)#router-id 10.0.0.1
Router(config-router)#network 10.10.30.0 0.0.0.255 area 0
Router(config-router)#network 10.20.30.0 0.0.0.255 area 0
Router(config-router)#network 10.50.40.0 0.0.0.255 area 50
Router(config-router)#exit
Router(config)#interface Loopback0
Router(config-if)#ip address 10.0.0.1 255.255.255.255
Router(config-if)#no shutdown
Router(config-if)#end

Router#configure terminal
Router(config)#router ospf 100
Router(config-router)#summary-address 10.50.0.0 255.255.192.0
Router(config-router)#exit

QUESTION 18
SIMULATION

Guidelines

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

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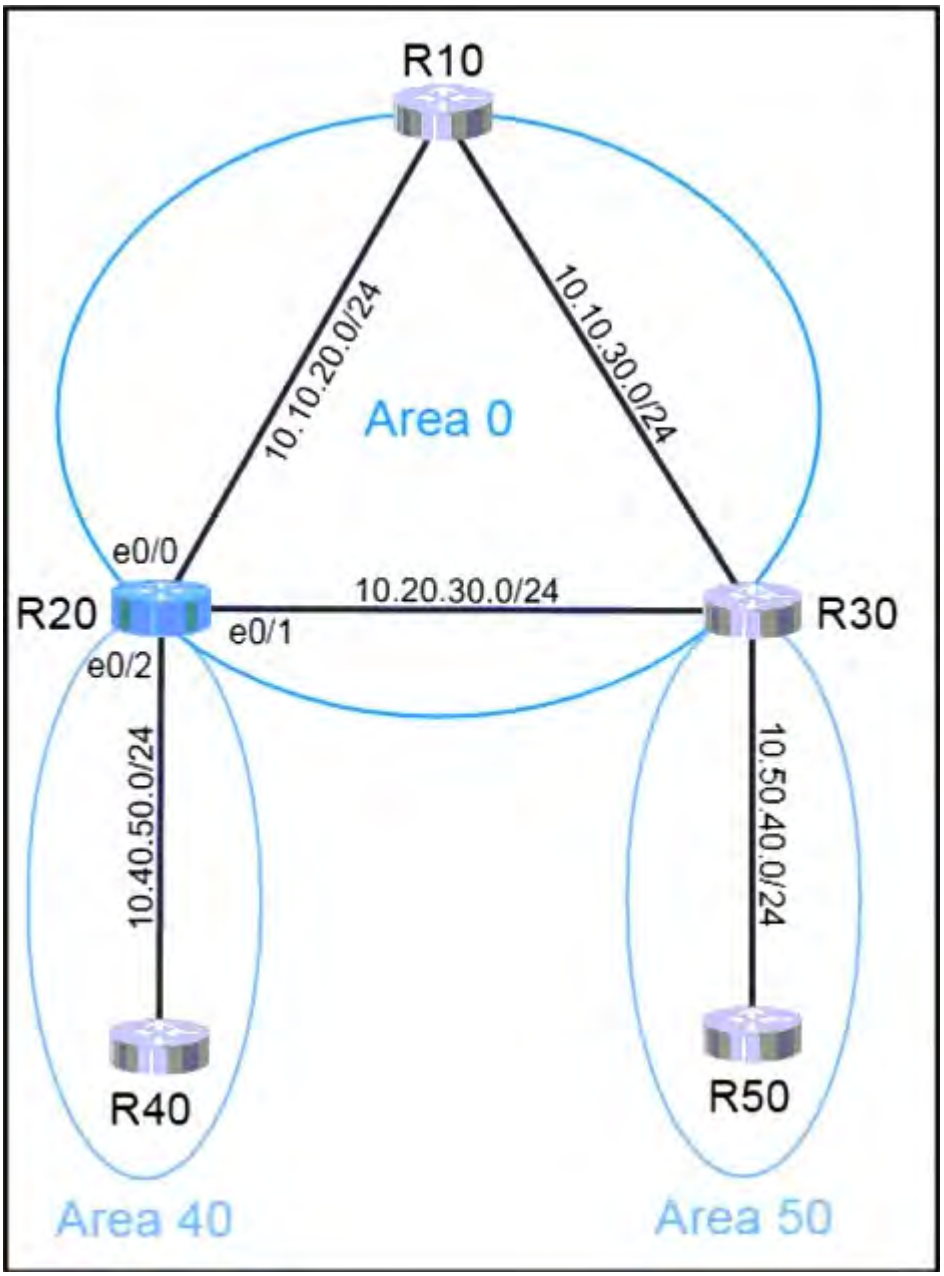
1. Refer to the **Tasks** tab to view the tasks for this lab item.
2. Refer to the **Topology** tab to access the device console(s) and perform the tasks.
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary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

Topology



Tasks

OSPF is preconfigured on all devices except R20. Configure R20 to complete these tasks.

Task 1:

Configure OSPF according to the topology using these requirements:

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1. Use Process ID 20.
2. Use Loopback0 for the Router ID.
3. Advertise all networks into OSPF.

- Do not use network statements under the OSPF process to accomplish this task.

Task 2:

Configure a /18 summary route for Area 40.

Advertise only Type 3 LSAs into Area 0.

R20

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Task 1:
Configure OSPF Process ID and Router ID:

R20(config)# router ospf 20
R20(config-router)# router-id <Loopback0_IP>

Advertise Networks without Using Network Statements:

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```
R20(config)# interface e0/0
R20(config-if)# ip ospf 20 area 0
R20(config-if)# exit
R20(config)# interface e0/1
R20(config-if)# ip ospf 20 area 0
R20(config-if)# exit
R20(config)# interface e0/2
R20(config-if)# ip ospf 20 area 40
R20(config-if)# exit
```

Task 2: Configure a /18 Summary Route for Area 40

```
R20(config)# router ospf 20
R20(config-router)# area 40 range 10.40.0.0 255.255.192.0
```

This summarizes the 10.40.0.0/16 network to a /18 and advertises it into Area 0. By default, summary addresses are advertised as Type 3 LSAs.

QUESTION 19
SIMULATION

Guidelines

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

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

Topology

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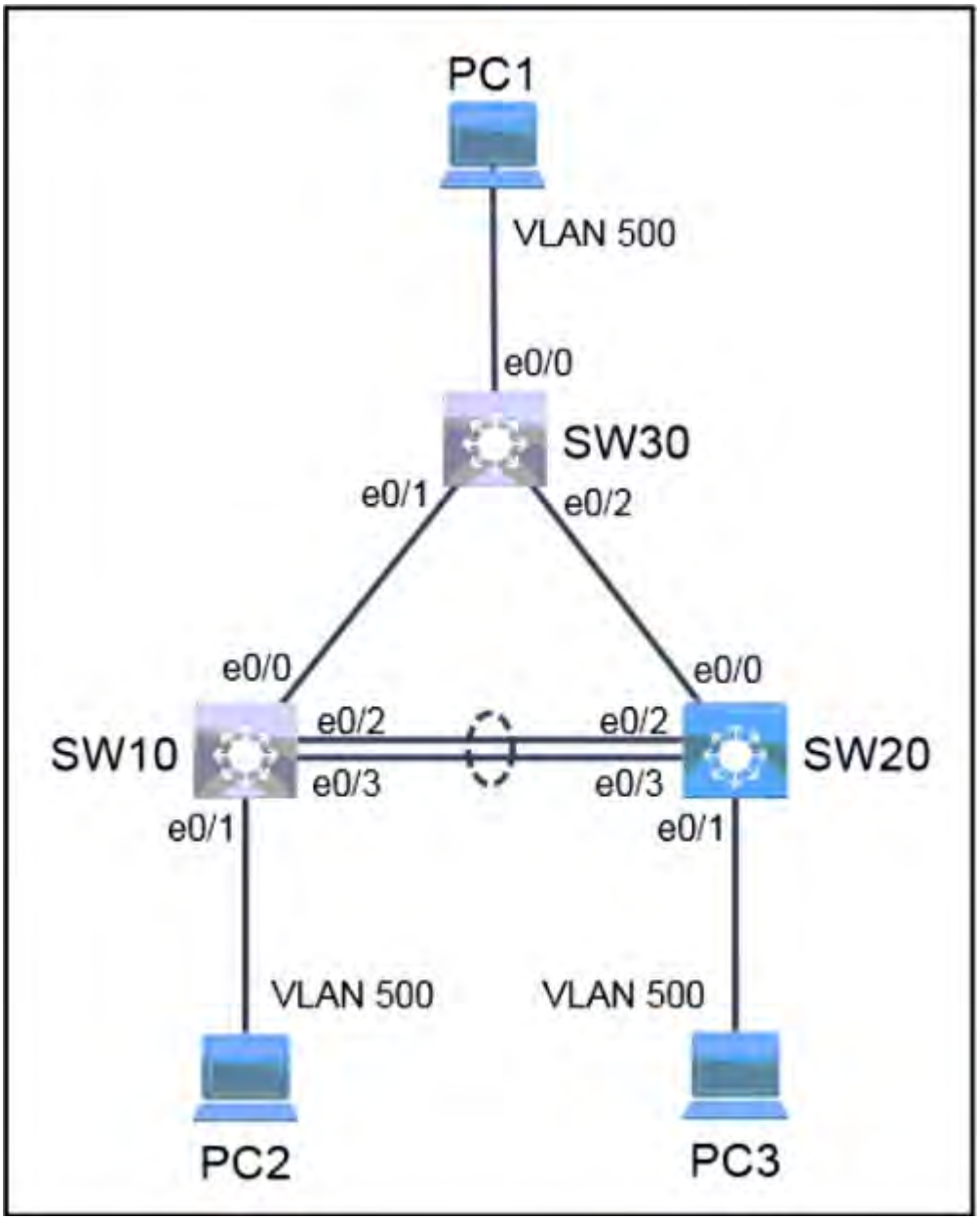

Tasks

The operations team started configuring network devices for a new site. Complete the configurations to achieve these goals:

1. Configure Rapid PVST+ on SW20.
2. The trunk between SW20 and SW30 is not operational. Troubleshoot the issue and ensure PC3 can ping PC1 (10.10.100.10) across the link.
3. The LACP port channel between SW10 and SW20 is not operational. Troubleshoot the issue and ensure PC3 can ping PC2 (10.10.100.20) across the port channel.

Note: No access is provided to SW10 or SW30. Resolve these issues by making changes only to SW20. Traffic on all trunks should be restricted to only active VLANs.

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A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Task 1: Configure Rapid PVST+ on SW20

SW20(config)# spanning-tree mode rapid-pvst

Task 2:

1. Check Interface Configuration:
Make sure that the trunk configuration is correctly set on interface e0/2 on SW20.

SW20(config)# interface e0/2
SW20(config-if)# switchport mode trunk
SW20(config-if)# switchport trunk allowed vlan 500

2. Ensure the Interface is Up:
Check that the interface e0/2 is up:

SW20# show interface e0/2

3. Check and Clear Trunk Issues:
Verify that VLAN 500 is allowed on the trunk and that there are no mismatches:

SW20# show interfaces trunk
SW20# show running-config interface e0/2

4. If VLAN 500 is not listed, manually add it:

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SW20(config)# interface e0/2
SW20(config-if)# switchport trunk allowed vlan add 500

Task 3:

Check LACP Configuration:
Make sure that the interfaces e0/2 and e0/3 are correctly configured for LACP on SW20:

SW20(config)# interface range e0/2 - 3
SW20(config-if-range)# channel-group 1 mode active

Verify Port-Channel Configuration:
Check the port-channel configuration and ensure that it's correctly set up:

SW20# show etherchannel summary

Restrict Trunk to Active VLANs:
Ensure that only VLAN 500 is allowed on the port-channel trunk:

SW20(config)# interface port-channel 1
SW20(config-if)# switchport trunk allowed vlan 500

Verify and Ensure Connectivity:
After making the configurations, verify that PC3 can ping PC2 (10.10.100.20) and PC1 (10.10.100.10):

SW20# ping 10.10.100.20
SW20# ping 10.10.100.10

QUESTION 20
SIMULATION

Guidelines

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

1. Refer to the **Tasks** tab to view the tasks for this lab item.
2. Refer to the **Topology** tab to access the device console(s) and perform the tasks.
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary pre-configurations have been applied.
5. Do not remove any existing configurations from the devices, only those necessary to make the appropriate changes required to fulfill the listed tasks.
6. Do not change the enable password or hostname for any device.
7. **Save your configurations** to NVRAM before moving to the next item.
8. Click **Next** at the bottom of the screen to submit this lab and move to the next question.
9. When **Next** is clicked, the lab closes and cannot be reopened.

Topology

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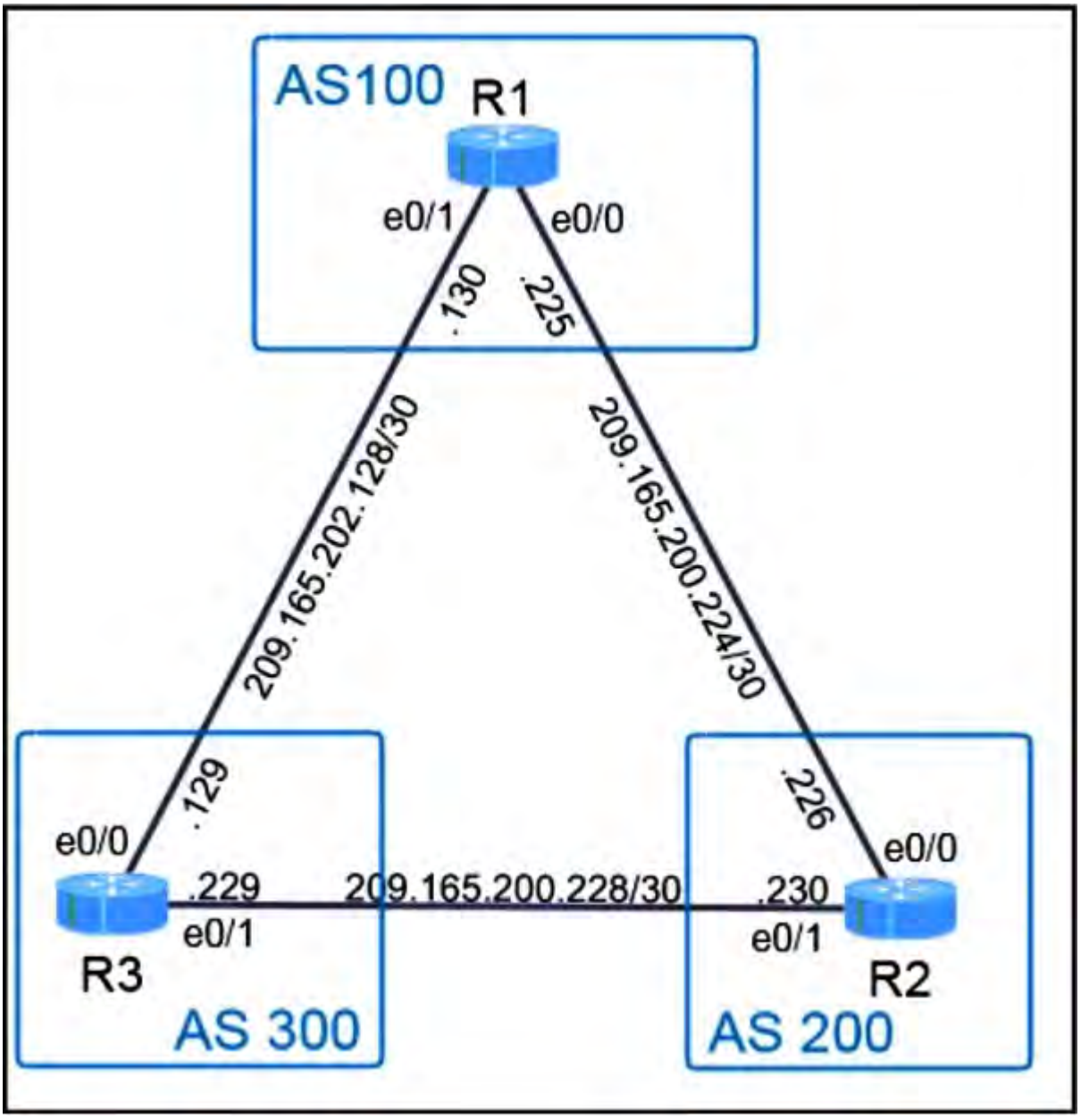

1

Tasks

Configure R1 according to the topology to achieve these results:

1. Configure eBGP using Loopback 0 for the router-id. Do not use the address-family command to accomplish this.
2. Advertise R1's Loopback 100 and Loopback 200 networks to AS200 and AS300.

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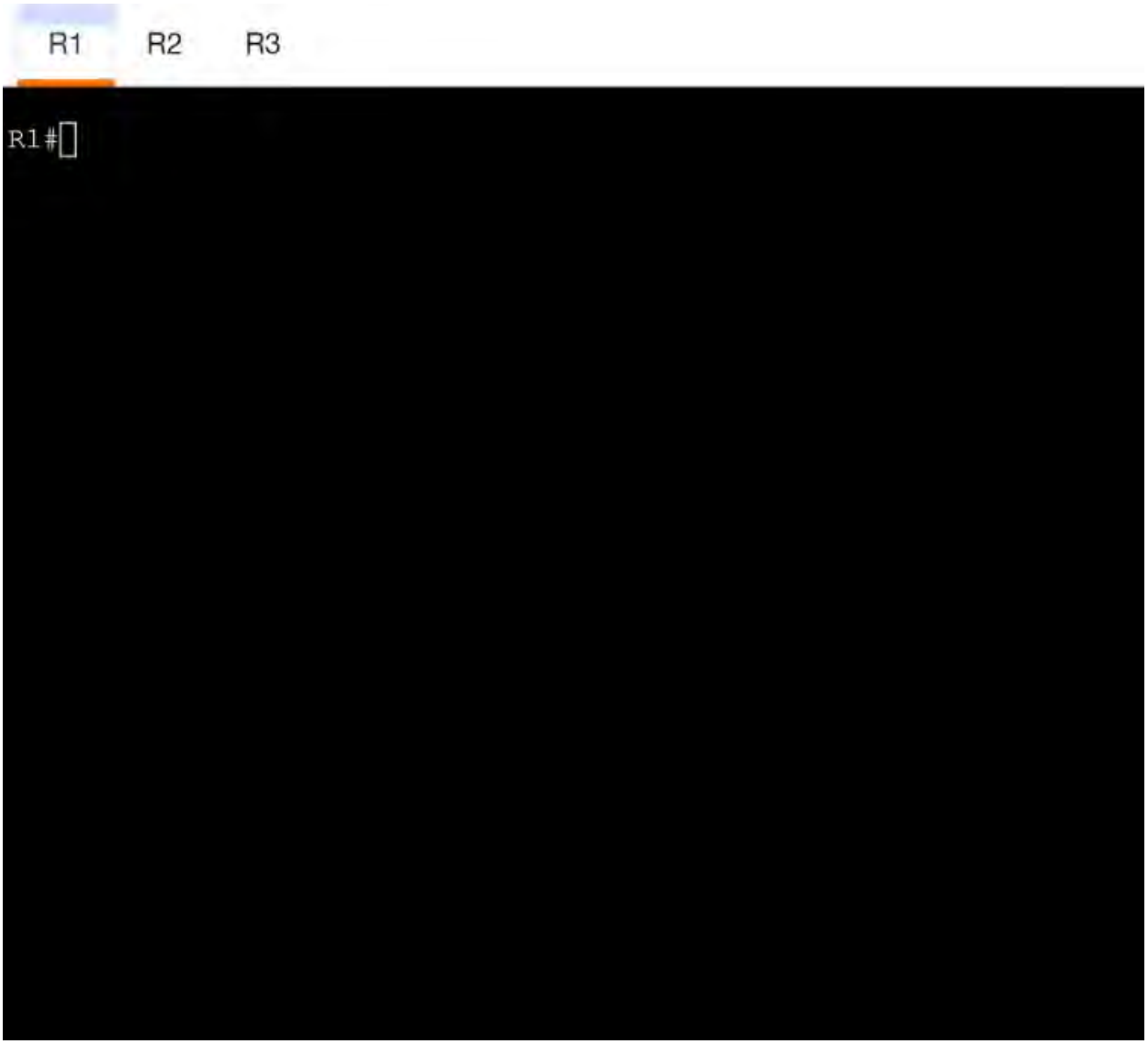

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
First we need to know the IP addresses of loopback100 and 200 by using the “show ip int brief” command. If we assume that the IP address for loopback 100 is 100.100.100.1 and for loopback 200 it is 200.200.200.1, then the answer is below:

```
router bgp 100
 router-id Loopback0
 neighbor 209.165.200.229 remote-as 200
 neighbor 209.165.200.230 remote-as 300
 network 100.100.100.1 mask 255.255.255.255
 network 200.200.200.1 mask 255.255.255.255
```

QUESTION 21
SIMULATION

Guidelines

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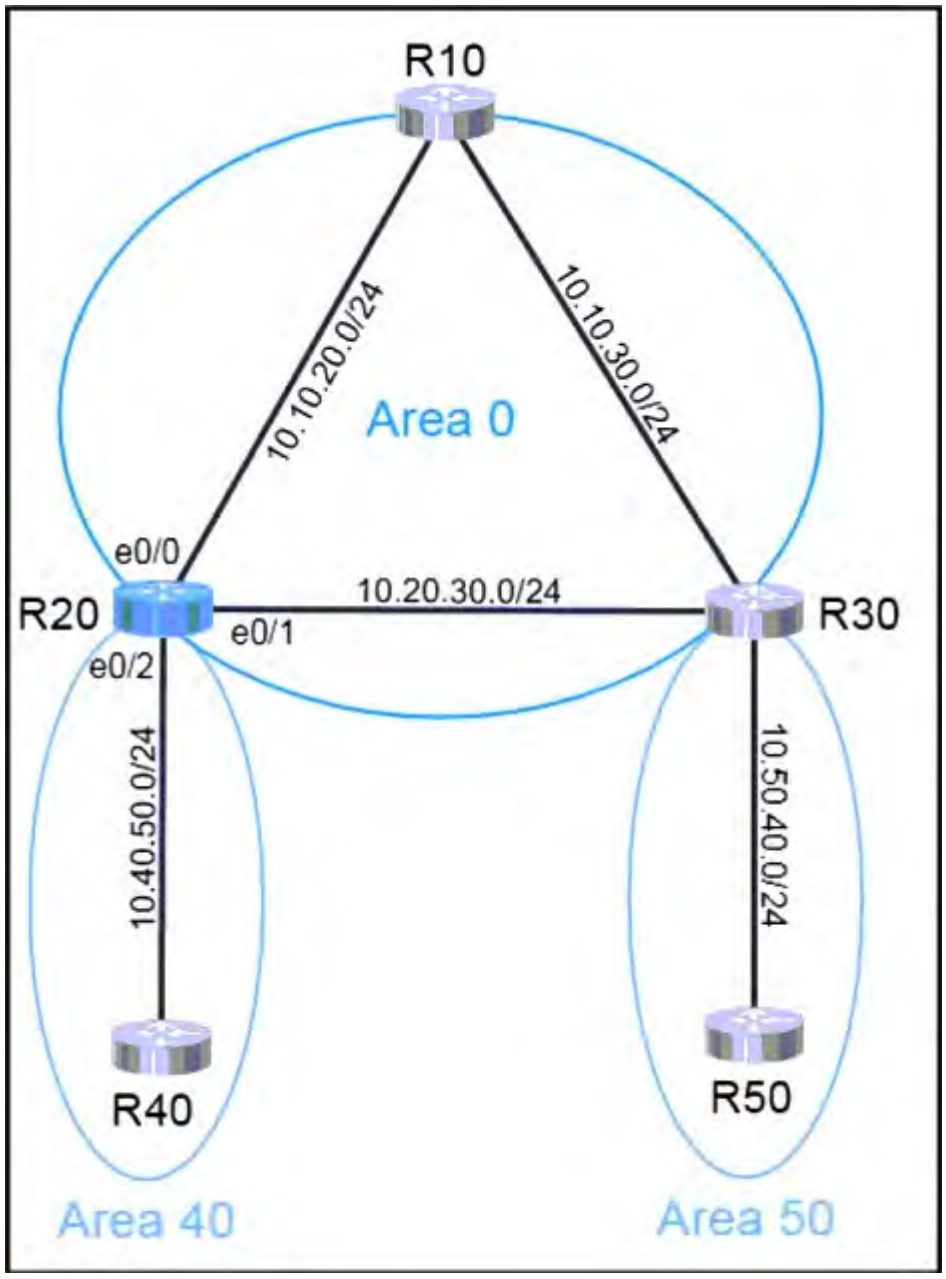
This is a lab item in which tasks will be performed on virtual devices.

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

Topology



Tasks

OSPF is preconfigured on all devices except R20. Configure R20 to complete these tasks.

Task 1:

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Configure OSPF according to the topology using these requirements:

1. Use Process ID 10.
2. Use Loopback1 for the Router ID.
3. Advertise all networks into OSPF.

- Use **network** statements under the OSPF process to accomplish this task.

Task 2:

Configure a /20 summary route for Area 40.

Advertise only Type 3 LSAs into Area 0.

R20

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
router ospf 10
 router-id Loopback1
 network 10.20.30.0 0.0.0.255 area 0
 network 10.10.30.0 0.0.0.255 area 40
 network 10.10.20.0 0.0.0.255 area 40

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area 40 range 10.40.0.0 255.255.240.0
!

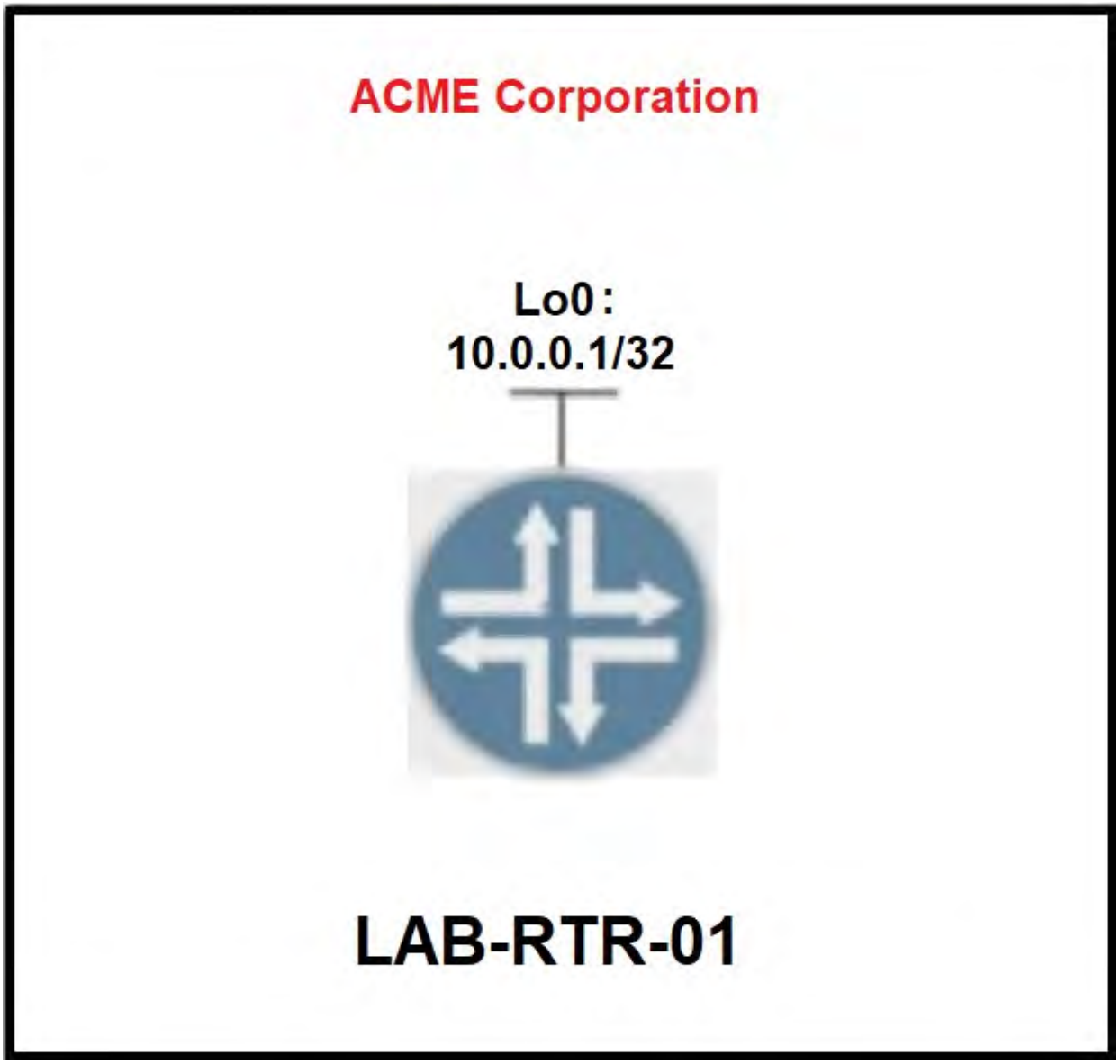
QUESTION 22
SIMULATION

Guidelines

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

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

Topology



Tasks

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Configure an EEM applet on LAB-RTR-01 that will automatically re-enable interface Loopback0 if it is administratively shut down.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
event manager applet LOOP0
event syslog pattern "Interface Loopback0.* down" period 1
action 1.0 syslog msg "Interface Loopback0 DOWN"
action 2.0 cli command "enable"
action 2.1 cli command "config t"
action 2.2 cli command "interface loopback 0"
action 2.3 cli command "no shutdown"
action 3.0 syslog msg "Interface Loopback0 UP"

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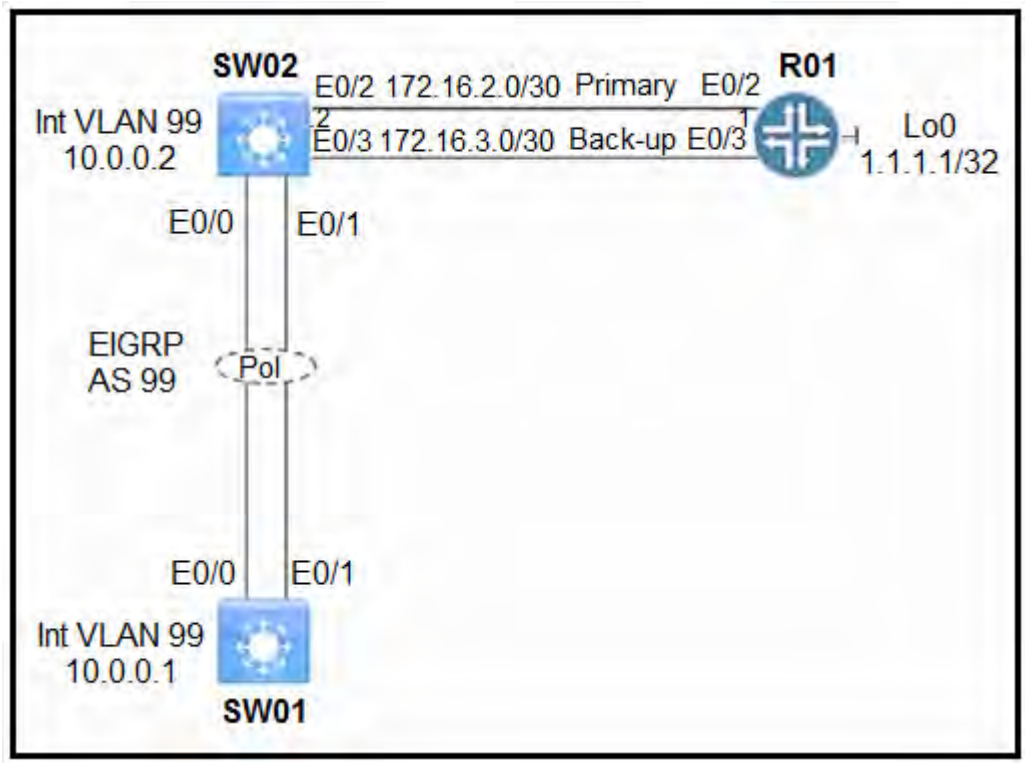
QUESTION 23
SIMULATION

Guidelines

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

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

Topology



Tasks

Configure the devices according to the topology to achieve these goals:
1. Configure a SPAN session on SW01 using these parameters:
Session Number: 20
Source Interface: VLAN 99
Traffic Direction: Transmitted Traffic
Destination Interface: Ethernet0/1
2. Configure the NetFlow Top Talkers feature for outbound traffic on interface E0/2 of R01 with these parameters:
Number of Top Talkers: 50
Sort Type: Packets
Cache Timeout: 30 seconds
3. Configure an IP SLA operation on SW02 and start the ICMP probe with these parameters:
Entry Number: 10
Target IP: 1.1.1.1
Source IP: 172.16.2.2

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Frequency: 5 seconds
Threshold: 250 milliseconds
Timeout: 3000 milliseconds
Lifetime: Forever

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
SW1
Config t
Monitor session 20 source vlan 99 tx
Monitor session 20 destination interface ethernet 0/1
Copy run start

R1
Config t
Ip flow-top-talkers
Top 50
Sort-by packets
Cache time-out 30
Eth 0/2
Ip flow egress
Copy run start

SW02
Config t
Ip sla 10
Icmp-echo 1.1.1.1 source-ip 172.16.2.2
Frequency 5
Threshold 250
Timeout 3000
Ip sla schedule 10 start-time now life forever
Copy run start

QUESTION 24
SIMULATION

Guidelines

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

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

Topology

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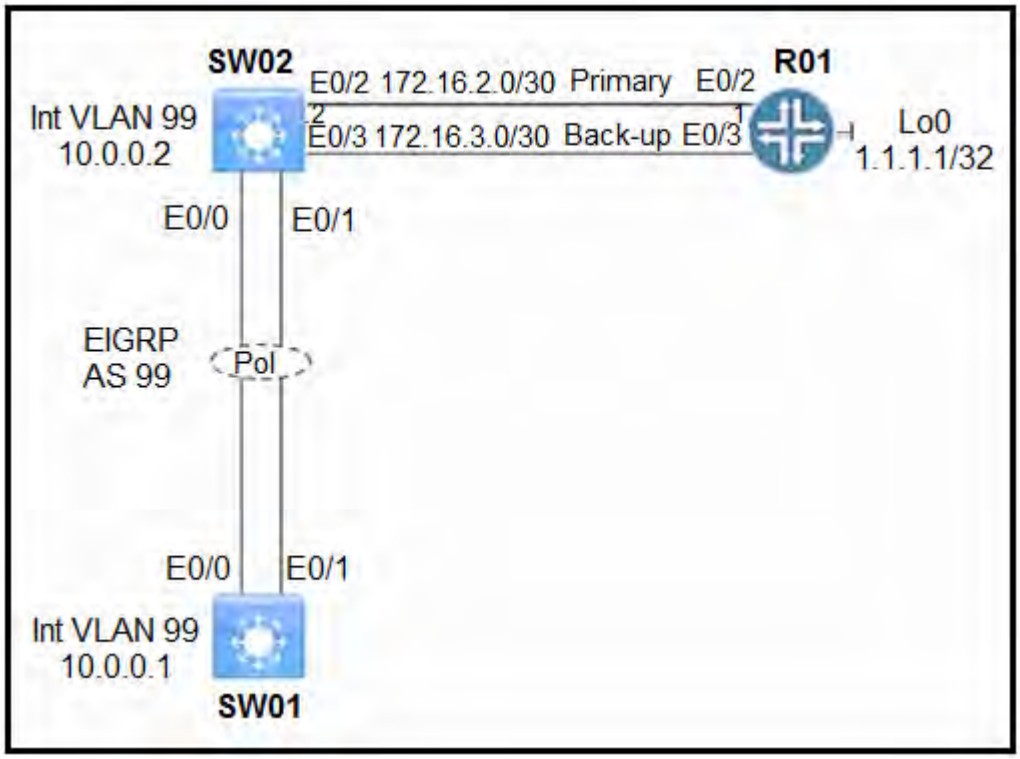

Tasks

Configure logging on SW01 and NetFlow on R01 to achieve these goals:

1. Enable archive logging on SW01 to track each time a change is made to the configuration and the user who made the change.
2. The NetFlow Top Talkers feature has been preconfigured on R01. Enable the feature for all inbound traffic on interface E0/2 of R01.

R01

```
R01>
R01>en
R01#config t
Enter configuration commands, one per line, End with CNTL/Z
R01(config)#inter
R01(config)#interface eh
R01(config)#interface eth
R01(config)#interface ethernet 0/2
R01(config-if)#ip ro
R01(config-if)#ip route-c
R01(config-if)#ip route-cache fl
R01(config-if)#ip route-cache flow
R01(config-if)#exit
R01(config)#exit
R01#sh
R01#show
*Jul 10 19:52:41.513: %SYS-5-CONFIG_I: Configured from console by console
R01#show ip ca
R01#show ip cache fl
R01#show ip cache flow
```

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```
IP packet size distribution (0 total packets):
1-32 64   96   128  160  192  224  256  288  320  352
480
.000 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000
.000

512  544  576  1024 1536 2040 2560 3072 3504 4096 4608
.000 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000

IP Flow Switching Cache, 278544 bytes
     0 active, 4096 inactive, 0 added
     0 ager polls, 0 flow alloc failures
     Active flows timeout in 30 minutes
     Inactive flows timeout in 15 seconds
IP Sub Flow Cache, 34056 bytes
     0 active, 1024 inactive, 0 added, 0 added to flow
     0 alloc failures, 0 force free
     1 chunk, 1 chunk added
     last clearing of statistics never
Protocol  Total     Flows     Packet Bytes   Packets Active(Sec) Idle(Sec
--------       Flows     /Sec /Flow     /Pkt /Sec /Flow          /Flow

SrcIf     SrcIPaddress   DstIf     DstIPaddress   Pr SrcP DstP
  Pkts
R01#
```

```
R01#
R01#sh ip flo
R01#sh ip flow to
R01#sh ip flow top-talkers
% Cache is empty
R01#c
R01#
R01#
R01#
R01#sh ip flow top-talkers
% Cache is empty
R01#
R01#
R01#
R01#
R01#copy ru
R01#copy running-config st
R01#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
[OK]
R01#
R01#
```

SW01

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```
SW01>
SW01>
SW01>en
SW01#config t
Enter configuration commands, one per line. End with CNTL/Z.
SW01(config)#
SW01(config)#arc
SW01(config)#archive
SW01(config-archive)#log
SW01(config-archive)#log con
SW01(config-archive)#log config
SW01(config-archive-log-cfg)# log
SW01(config-archive-log-cfg)# logging en
SW01(config-archive-log-cfg)# logging enable
SW01(config-archive-log-cfg)#exit
SW01(config-archive)#exit
SW01(config)#
SW01(config)#exit
SW01#
*Jul 10 19:53:32.388: %SYS-5-CONFIG_I: Configured from console by console
SW01#copy ru
SW01#copy running-config st
SW01#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
Compressed configuration from 1226 bytes to 803 bytes[OK]
SW01#
SW01#
```

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Task 1.
SW01(config)#archive
SW01(config-archive)# log config
SW01(config-archive-log-config)# logging enable

Task 2.
R01(config)#interface Ethernet 0/2
R01(config-if)#ip route-cache flow

Verification:

R1#show ip cache flow
R1#sh ip flow top-talkers
Save the configuration
SW01,R01#copy running-config startup-con

QUESTION 25
SIMULATION

Guidelines

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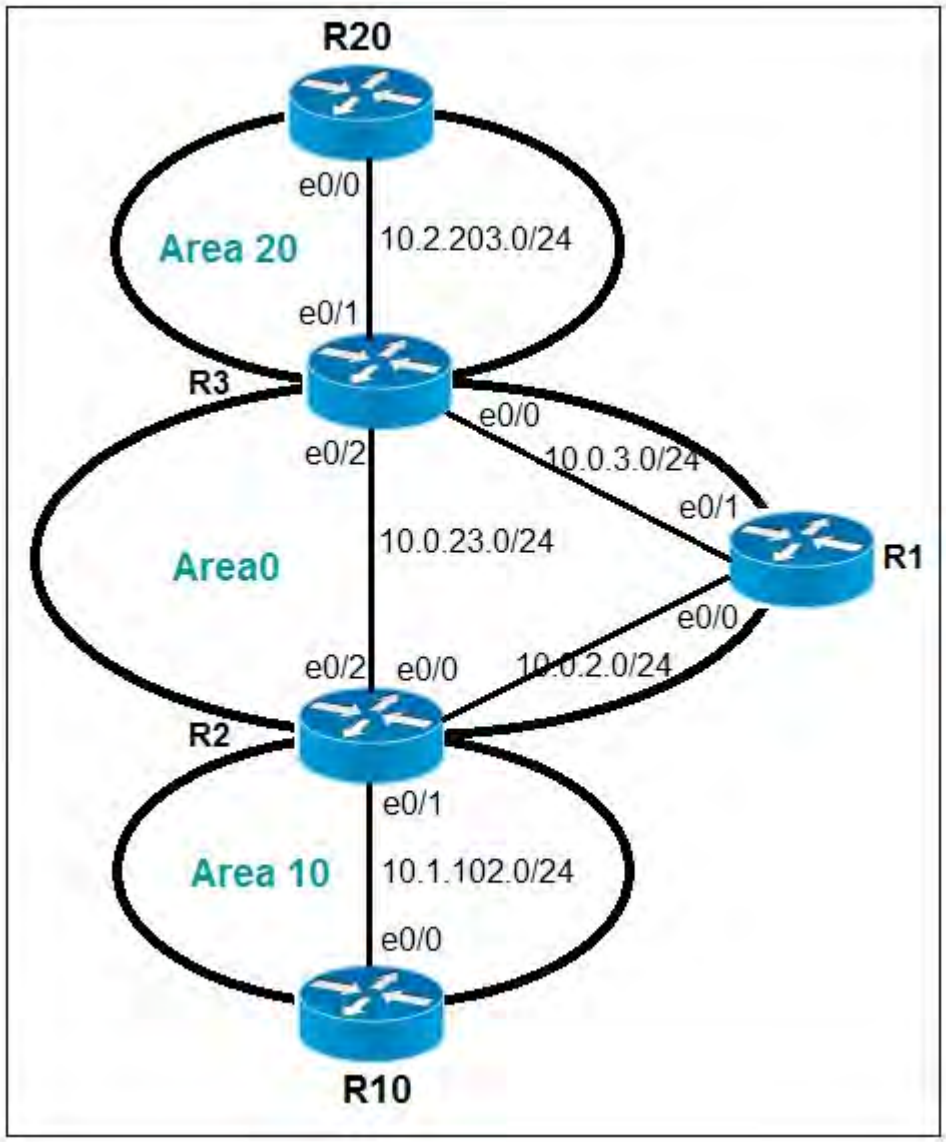
This is a lab item in which tasks will be performed on virtual devices.

1. Refer to the **Tasks** tab to view the tasks for this lab item.
2. Refer to the **Topology** tab to access the device console(s) and perform the tasks.
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary preconfigurations have been applied.
5. Do no remove any existing configurations from the devices, only those necessary to make the appropriate changes required to fulfill the listed tasks.
6. Do not change the enable password or hostname for any device.
7. **Save your configurations** to NVRAM before moving to the next item.
8. Click **Next** at the bottom of the screen to submit this lab and move to the next question
9. When **Next** is clicked, the lab closes and cannot be reopened.

Topology



Tasks

OSPF is partially configured. Complete the OSPF configurations to achieve these goals:

1. Configure OSPF on router R1 according to the topology so that all networks are advertised. Do not use the network statement under the “router ospf” configuration section to accomplish this task.
2. Configure a single command on the ABR routers to ensure only one summary route is advertised to

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area 0.

R1

```
R1#conf t
Enter configuration commands, one per line, End with
R1 (config)#
R1 (config)#exit
R1#
R1#sh run
*Apr 4 17:24:38.908: %SYS-5-CONFIG_I: Configured from console
by console
R1#sh run
Building configuration…

Current configuration : 1084 bytes
!
! Last configuration change at 17:24:38 UTC Thu Apr 4 2024
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
!
 --More--
```

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```
!
!
!
!
no ip domain lookup
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
!
redundancy
!
!
```

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```
interface Loopback0
 ip address 10.0.1.1 255.255.255.0
!
interface Ethernet0/0
 ip address 10.0.2.1 255.255.255.0
 duplex auto
!
interface Ethernet0/1
 ip address 10.0.3.1 255.255.255.0
 duplex auto
!
interface Ethernet0/2
 no ip address
 duplex auto
!
interface Ethernet0/3
 no ip address
 duplex auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
ipv6 ioam timestamp
!
!
!
control-plane
!
!
!
!
!
```

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```
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input none
!
!

R1#
R1#sh ip os
R1#sh ip ospf s
R1#sh ip ospf su
R1#sh ip ospf summary-address
R1#sh ip ospf ?
     <1-65535>               Process ID number
     border-routers          Border and Boundary Router Information
     database                Database summary
     events                  OSPF event information
     flood-list              Link state flood list
     interface               Interface information
     max-metric              Max-metric origination information
     mpls                    MPLS related information
     multi-area              Multi-area interface information
     neighbor                Neighbor list
     nsf                     Non-stop forwarding state information
     request-list            Link state request list
     retransmission-list     Link state retransmission list
     rib                     Routing information Base (RIB)
     sham-links              Sham link information
     statistics              Various OSPF statistics
     summary-address         Summary-address redistribution information
     timers                  OSPF timers information
     topology-info           Topology Info
     traffic                 Traffic related statistics
     virtual-links           Virtual link information
     !                       Output modifiers
```

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```
R1#sh ip ospf
R1#sh ip ospf in
R1#sh ip ospf interface
R1#show
R1#show ip
R1#show ip in
R1#show ip inte
R1#show ip interface
Ethernet0/0 is up, line protocol is up
     Internet address is 10.0.2.1/24
     Broadcast address is 255.255.255.255
     Address determined by non-volatile memory
     MTU is 1500 bytes
     Helper address is not set
     Directed broadcast forwarding is disabled
     Outgoing access list is not set
     Inbound access list is not set
     Proxy ARP is enabled
     Local Proxy ARP is disabled
     Security level is default
     Split horizon is enabled
     ICMP redirects are always sent
     ICMP unreachable are always sent
     ICMP mask replies are never sent
     IP fast switching is enabled
     IP fast switching on the same interface is disabled
     IP Flow switching is disabled
     IP CEF switching is enabled
     IP CEF switching turbo vector
     IP multicast fast switching is enabled
     IP multicast distributed fast switching is disabled
```

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```
IP route-cache flags are Fast, CEF
 Router Discovery is disabled
 IP output packet accounting is disabled
 IP access violation accounting is disabled
 TCP/IP header compression is disabled
 RTP/IP header compression is disabled
 Policy routing is disabled
 Network address translation is disabled
 BGP Policy Mapping is disabled
 Input features: MCI Check
 IPv4 WCCP Redirect outbound is disabled
 IPv4 WCCP Redirect inbound is disabled
 IPv4 WCCP Redirect exclude is disabled
Ethernet0/1 is up, line protocol is up
 Internet address is 10.0.3.1/24
 Broadcast address is 255.255.255.255
 Address determined by non-volatile memory
 MTU is 1500 bytes
 Helper address is not set
 Directed broadcast forwarding is disabled
 Outgoing access list is not set
 Inbound access list is not set
 Proxy ARP is enabled
 Local Proxy ARP is disabled
 Security level is default
 Split horizon is enabled
 ICMP redirects are always sent
 ICMP unreachable are never sent
 IP fast switching is enabled
 IP fast switching on the same interface is disabled
 IP Flow switching is disabled
 IP CEF switching is enabled
 IP CEF switching turbo vector
 IP multicast fast switching is enabled
 IP multicast distributed fast switching is disabled
```

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```
Proxy ARP is enabled
 Local Proxy ARP is disabled
 Security level is default
 Split horizon is enabled
 ICMP redirects are always sent
 ICMP unreachable are always sent
 ICMP mask replies are never sent
 IP fast switching is enabled
 IP fast switching on the same interface is disabled
 IP Flow switching is disabled
 IP CEF switching is enabled
 IP CEF switching turbo vector
 IP multicast fast switching is enabled
 IP multicast distributed fast switching is disabled
 IP route-cache flags are Fast, CEF
 Router Discovery is disabled
 IP output packet accounting is disabled
 IP access violation accounting is disabled
 TCP/IP header compression is disabled
 RTP/IP header compression is disabled
 Policy routing is disabled
 Network address translation is disabled
 BGP Policy Mapping is disabled
 Input features: MCI Check
 IPv4 WCCP Redirect outbound is disabled
 IPv4 WCCP Redirect inbound is disabled
 IPv4 WCCP Redirect exclude is disabled
Ethernet0/2 is up, line protocol is up
 Internet protocol processing disabled
Ethernet0/3 is up, line protocol is up
 Internet protocol processing disabled
Loopback0 is up, line protocol is up
 Internet address is 10.0.1.1/24
 Broadcast address is 255.255.255.255
 Address determined by non-volatile memory
```

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```
IP Null turbo vector
IP multicast fast switching is enabled
 IP multicast distributed fast switching is disabled
 IP route-cache flags are Fast, CEF
 Router Discovery is disabled
 IP output packet accounting is disabled
 IP access violation accounting is disabled
 TCP/IP header compression is disabled
 RTP/IP header compression is disabled
 Policy routing is disabled
 Network address translation is disabled
 BGP Policy Mapping is disabled
 Input features: MCI Check
 IPv4 WCCP Redirect outbound is disabled
 IPv4 WCCP Redirect inbound is disabled
 IPv4 WCCP Redirect exclude is disabled
```

```
R1#sh ip br
R1#show ip inter
R1#show ip interface ?
     Async                Async interface
     Auto-Template        Auto-Template interface
     BDI                  Bridge-Domain interface
     BVI                  Bridge-Group Virutal Interface
     CDMA-Ix              CDMA Ix interface
     CTunnel              CTunnel interface
     Dialer               Dialer interface
     Ethernet             IEEE 802.3
     GMPLS                MPLS interface
     LISP                 Locator/ID Separation Protocol Virtual Interface
     LongReachEthernet    Long-Reach Ethernet interface
     Loopback             Loopback interface
     Lspvif               LSP virtual interface
     MFR                  Multilink Frame Relay bundle interface
     Multilink            Multilink-group interface
     Null                 Null interface
     Tunnel               Tunnel interface
     Vif                  PGM Multicast Host interface
     Virtual-PPP          Virtual PPP interface
     Virtual-Template     Virtual Template interface
     Virtual-TokenRing    Virtual TokenRing
     brief                Brief summary of IP status and configuration
     vmi                  Virtual Multipoint Interface
     |                    Output modifiers
     <cr>
```

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```
R1#
R1#show ip interface br
R1#show ip interface brief s
R1#show ip interface brief
Interface                  IP-Address      OK? Method Status                Protocol
Ethernet0/0                10.0.2.1        YES NVRAM  up                    up
Ethernet0/1                10.0.3.1        YES NVRAM  up                    up
Ethernet0/2                unassigned      YES NVRAM  up                    up
Ethernet0/3                unassigned      YES NVRAM  up                    up
Loopback0                  10.0.1.1        YES NVRAM  up                    up
```

```
R1#config t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#router
R1(config)#router os
R1(config)#router ospf 1
R1(config-router)#pas
R1(config-router)#passive-interface lo
R1(config-router)#passive-interface loob
R1(config-router)#passive-interface loop
R1(config-router)#passive-interface loopback0
R1(config-router)#net
R1(config-router)#network 10.0.1.1 0.0.0.0 area
R1(config-router)#network 10.0.1.1 0.0.0.0 area 0
R1(config-router)#exit
R1(config-router)#exit
R1(config)#ro
R1(config)#router
R1(config)#router os
R1(config)#router ospf 1
R1(config-router)#sum
R1(config-router)#summary-address 10.0.0.0 255.0.0.0
R1(config-router)#exit
R1(config)#exit
R1#co
*Apr 4 17:30:02.677: %SYS-5-CONFIG_I: Configured from console by
console
R1#copy run
R1#copy running-config st
R1#copy running-config startup-config
Destination filename [startup-config]?
Warning: Attempting to overwrite an NVRAM configuration previously
written by a different version of the system image.
Overwrite the previous NVRAM configuration?[confirm]
Building configuration…
[OK]
R1#
```

A. See the solution below in Explanation.

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B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R1:
To advertise all connected networks without using the network statement, we will configure OSPF on each interface:

```
Router#configure terminal
Enter configuration commands, one per line.  End with END or Ctrl-Z.
R1(config)#interface Ethernet0/0
R1(config-if)#ip ospf 1 area 0
R1(config-if)#end
R1(config)#interface Ethernet0/1
R1(config-if)#ip ospf 1 area 0
R1(config-if)#end
R1(config)#interface Ethernet0/2
R1(config-if)#ip ospf 1 area 10
R1(config-if)#end
R1(config)#end
```

To ensure only one summary route is advertised to Area 0, we can use the summary-address command on the ABRs. In this case, we'll summarize the entire Area 10:

R2:

```
R2#configure terminal
Enter configuration commands, one per line.  End with END or Ctrl-Z.
R2(config)#router ospf 1
R2(config-router)#summary-address 10.1.0.0 255.255.0.0
R2(config-router)#exit
R2(config)#end
```

R3:

```
R3#configure terminal
Enter configuration commands, one per line.  End with END or Ctrl-Z.
R3(config)#router ospf 1
R3(config-router)#summary-address 10.2.0.0 255.255.0.0
R3(config-router)#exit
R3(config)#end
```

QUESTION 26
SIMULATION

Guidelines

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

1. Refer to the **Tasks** tab to view the tasks for this lab item.
2. Refer to the **Topology** tab to access the device console(s) and perform the tasks.
3. Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
4. All necessary preconfigurations have been applied.
5. Do no remove any existing configurations from the devices, only those necessary to make the appropriate changes required to fulfill the listed tasks.
6. Do not change the enable password or hostname for any device.
7. **Save your configurations** to NVRAM before moving to the next item.
8. Click **Next** at the bottom of the screen to submit this lab and move to the next question
9. When **Next** is clicked, the lab closes and cannot be reopened.

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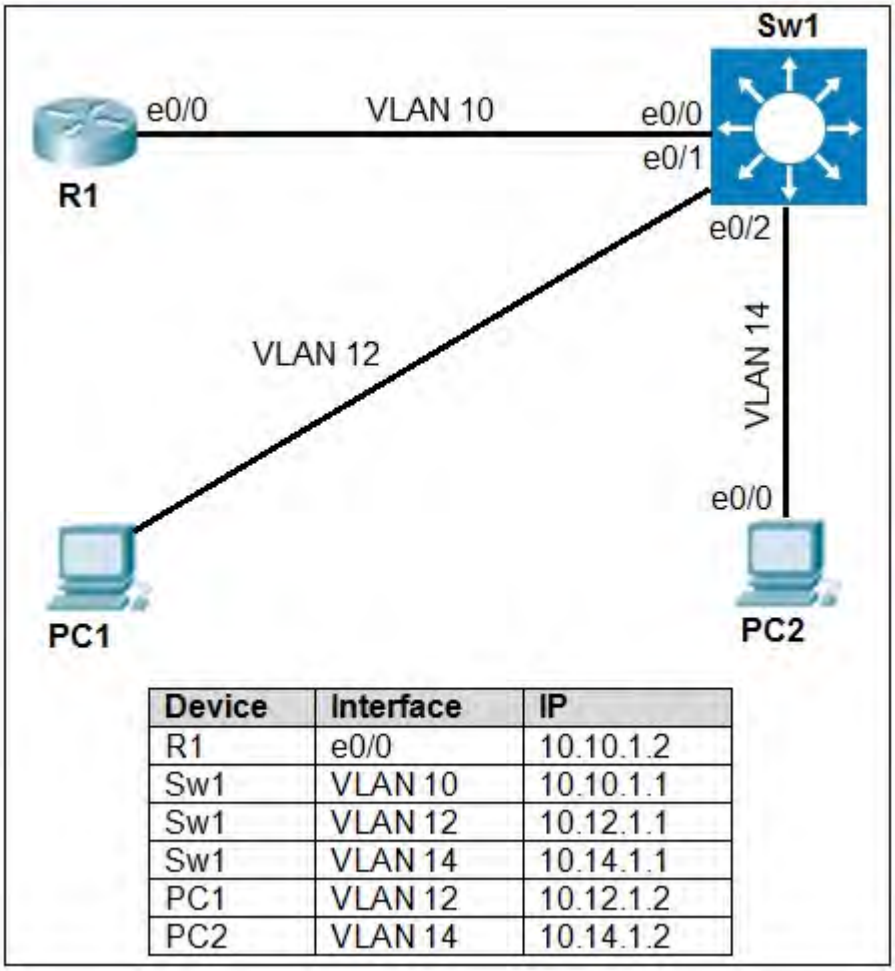
Topology



Device	Interface	IP
R1	e0/0	10.10.1.2
Sw1	VLAN 10	10.10.1.1
Sw1	VLAN 12	10.12.1.1
Sw1	VLAN 14	10.14.1.1
PC1	VLAN 12	10.12.1.2
PC2	VLAN 14	10.14.1.2

Tasks

The Operations team started configuring several monitoring activities. Complete the configurations for the tasks below.

1. Enable Flexible NetFlow on R1 E0/0 in both directions using the pre-configured flow monitor.
2. Configure the switch port analyzer on Sw1 and mirror all VLAN 12 traffic to interface E1/3 using session number 12.
3. Configure a basic IP SLA ICMP echo operation on R1 to ping PC1 every 300 seconds.

R1

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```
R1#sh run
Building configuration…

Current configuration : 1588 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
```

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```
no ip domain lookup
ip cef
no ipv6 cef
!
!
flow exporter Export-RIFlow
     destination 10.10.1.10
     source Loopback0
     transport udp 2055
!
!
flow monitor Monitor-RIFlow
 exporter Exporter-RIFlow
 cache timeout inactive 30
 record netflow itive 300
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
!
redundancy
!
!
!
!
!
!
interface Loopback0
```

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```
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
!
interface Ethernet0/0
 ip address 10.10.1.2 255.255.255.0
 ip ospf network point-to-point
 duplex auto
!
interface Ethernet0/1
 no ip address
 duplex auto
!
interface Ethernet0/2
 no ip address
 duplex auto
!
interface Ethernet0/3
 no ip address
 duplex auto
!
interface Ethernet1/0
 no ip address
 duplex auto
!
interface Ethernet1/1
 no ip address
 duplex auto
!
interface Ethernet1/2
 no ip address
 duplex auto
!
interface Ethernet1/3
 no ip address
 duplex auto
```

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```
router ospf 10
 router-id 1.1.1.1
 network 1.1.1.1 0.0.0.0 area 0
 network 10.10.1.0 0.0.0.255 area 0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
ipv6 ioam timestamp
!
!
!
control-plane
!
!
!
!
!
!
!
!
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input none
!
!
end
```

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```
R1#
R1#configu t
Enter configuration commands, one per line. End with CNTZ/Z.
R1(config)#
R1(config)#
R1(config)#
R1(config)#flow mo
R1(config)#flow monitor Mon
R1(config)#flow monitor Monitor-R1Flow
R1(config-flow-monitor)#exp
R1(config-flow-monitor)#exporter Export-R1Flow
R1(config-flow-monitor)#cac
R1(config-flow-monitor)#cache time
R1(config-flow-monitor)#cache timeout in
R1(config-flow-monitor)#cache timeout inactive 30
R1(config-flow-monitor)#cac
R1(config-flow-monitor)#cache tim
R1(config-flow-monitor)#cache timeout ac
R1(config-flow-monitor)#cache timeout active 300
R1(config-flow-monitor)#re
R1(config-flow-monitor)#record net
R1(config-flow-monitor)#record netflow ipv
R1(config-flow-monitor)#record netflow ipv4 or
R1(config-flow-monitor)#record netflow ipv4 original-in
R1(config-flow-monitor)#record netflow ipv4 original-input
R1(config-flow-monitor)#exit
R1(config)#inter
R1(config)#interface et
R1(config)#interface ethernet 0/0
R1(config-if)#ip
R1(config-if)#ip fl
R1(config-if)#ip flow mo
R1(config-if)#ip flow monitor mo
R1(config-if)#ip flow monitor Monitor-R1Flow in
R1(config-if)#ip flow monitor Monitor-R1Flow input
R1(config-if)#ip flow monitor Monitor-R1Flow outp
R1(config-if)#ip flow monitor Monitor-R1Flow output
R1(config-if)#end
R1#
*Apr 4 17:43:49.662: %SYS-5-CONFIG_I: Configured from console by console
R1#
```

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```
R1#config t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#ip sl
R1(config)#ip sla 1
R1(config-ip-sla)#ic
R1(config-ip-sla)#icmp-ec
R1(config-ip-sla)#icmp-echo 10.12.1.2 s
R1(config-ip-sla)#icmp-echo 10.12.1.2 source-int
R1(config-ip-sla)#icmp-echo 10.12.1.2 source-interface et
R1(config-ip-sla)#icmp-echo 10.12.1.2 source-interface ethernet 0/0
R1(config-ip-sla-echo)#fre
R1(config-ip-sla-echo)#frequency 300
R1(config-ip-sla-echo)#ip sl
R1(config-ip-sla-echo)#ip sla
R1(config-ip-sla-echo)#ip sla sc
R1(config-ip-sla-echo)#ip sla sch
R1(config-ip-sla-echo)#ip sla sch
R1(config-ip-sla-echo)#ip sla sche
R1(config-ip-sla-echo)#ip sla schedule
R1(config-ip-sla-echo)#ip sla schedule 1
R1(config-ip-sla-echo)#ip sla schedule 1 ?
% Unrecognized command
R1(config-ip-sla-echo)#exit
R1(config)#ip sl
R1(config)#ip sla sc
R1(config)#ip sla schedule 1
R1(config)#ip sla schedule 1 le
R1(config)#ip sla schedule 1 l
R1(config)#ip sla schedule 1 life f
R1(config)#ip sla schedule 1 life forever st
R1(config)#ip sla schedule 1 life forever start-time no
R1(config)#ip sla schedule 1 life forever start-time now
R1(config)#end
R1#
R1#cop
*Apr 4 17:46:05.744: %SYS-5-CONFIG_I: Configured from console by console
R1#copy run
R1#copy running-config st
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
[OK]
R1#
```

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```
Sw1#
Sw1#en
Sw1#config t
Enter configuration commands, one per line, End with CNTL/Z.
Sw1(config)#mo
Sw1(config)#mon
Sw1(config)#monitor s
Sw1(config)#monitor session 12 s
Sw1(config)#monitor session 12 source v
Sw1(config)#monitor session 12 source vlan 12
Sw1(config)#mo
Sw1(config)#moni
Sw1(config)#monitor se
Sw1(config)#monitor session 12
Sw1(config)#monitor session 12de
Sw1(config)#monitor session 12 de
Sw1(config)#monitor session 12 destination in
Sw1(config)#monitor session 12 destination interface eh
Sw1(config)#monitor session 12 destination interface ethe
Sw1(config)#monitor session 12 destination interface ethernet1/3
Sw1(config)#end
Sw1#
*Apr 4 17:44:55.778: %SYS-5-CONFIG_I: Configured from console by console
Sw1#copy run
Sw1#copy running-config st
Sw1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
Compressed configuration from 1756 bytes to 1039 bytes [OK]
Sw1#
```

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R1 Configuration (Enable Flexible NetFlow)
Router#configure terminal
Enter configuration commands, one per line. End with END or Ctrl-Z.
R1(config)#interface Ethernet0/0
R1(config-if)#ip flow ingress
R1(config-if)#ip flow egress
R1(config-if)#ip flow monitor Monitor-R1Flow input interface
R1(config-if)#ip flow monitor Monitor-R1Flow output interface
R1(config-if)#end

Sw1 Configuration (Configure SPAN)
Sw1#configure terminal
Enter configuration commands, one per line. End with END or Ctrl-Z.
Sw1(config)#monitor session 12 source interface VLAN12
Sw1(config)#monitor session 12 destination interface Ethernet1/3

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Sw1(config)#end

R1 Configuration (Configure IP SLA ICMP Echo)
R1#configure terminal
Enter configuration commands, one per line. End with END or Ctrl-Z.
R1(config)#ip sla icmp-echo operation 1
R1(config-ip-sla-icmp)#source-interface Ethernet0/0
R1(config-ip-sla-icmp)#destination 10.12.1.2
R1(config-ip-sla-icmp)#frequency 300
R1(config-ip-sla-icmp)#exit
R1(config)#end

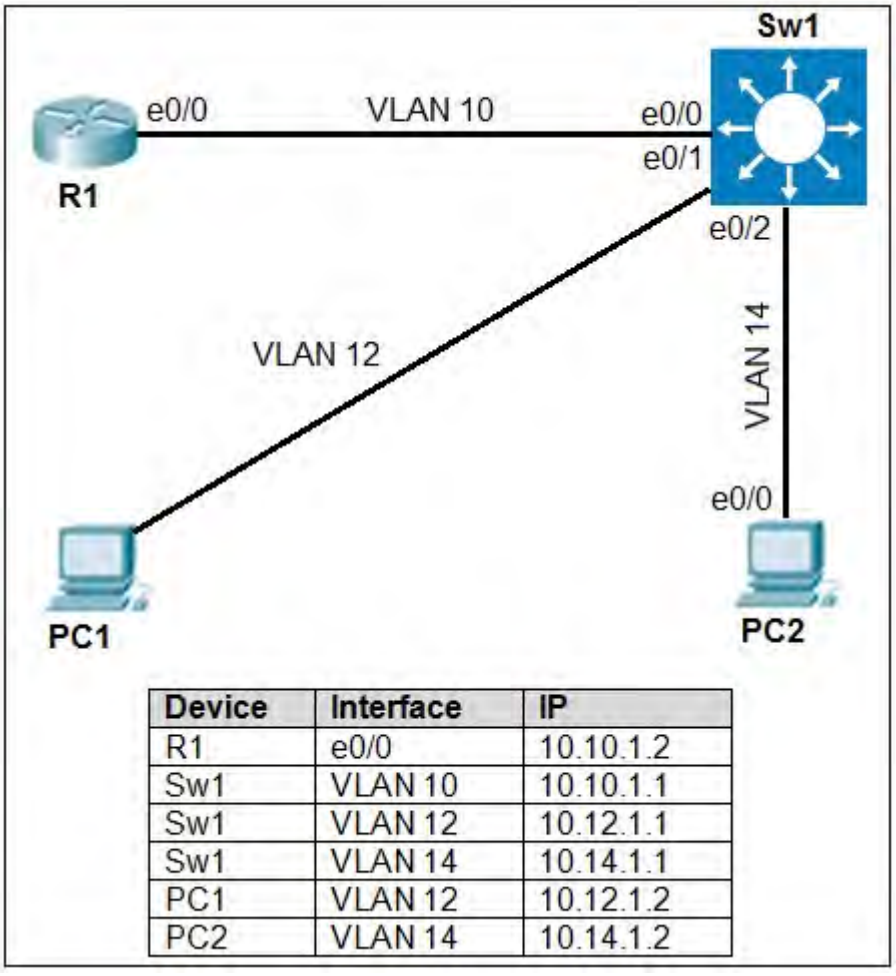
QUESTION 27
SIMULATION

Guidelines

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

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

Topology



Device	Interface	IP
R1	e0/0	10.10.1.2
Sw1	VLAN 10	10.10.1.1
Sw1	VLAN 12	10.12.1.1
Sw1	VLAN 14	10.14.1.1
PC1	VLAN 12	10.12.1.2
PC2	VLAN 14	10.14.1.2

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The Operations team started configuring several monitoring activities. Complete the configurations for the tasks below.

1. Complete the Flexible NetFlow Flow Exporter configuration on R1 to send data to the collector using UDP port 2055.

2. Configure the Switch Port Analyzer (SPAN) on SW1 and mirror all communication to and from PC1 to interface E1/1 using session number 11.

3. Schedule the pre-configured IP SLA operation on R1 to start running immediately and to run indefinitely.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Task 1:

Configure Flexible NetFlow Flow Exporter on R1

Enter global configuration mode on R1:

R1# configure terminal

Define the flow exporter to send data to the collector at UDP port 2055:

R1(config)# flow exporter EXPORTER-1
R1(config-flow-exporter)# destination <Collector_IP> # Replace <Collector_IP> with the actual IP of the collector.
R1(config-flow-exporter)# transport udp 2055
R1(config-flow-exporter)# exit

Define the flow monitor and attach the exporter:

R1(config)# flow monitor MONITOR-1
R1(config-flow-monitor)# exporter EXPORTER-1
R1(config-flow-monitor)# record netflow-original
R1(config-flow-monitor)# exit

Apply the flow monitor to the interface:

R1(config)# interface e0/0
R1(config-if)# ip flow monitor MONITOR-1 input
R1(config-if)# exit

Task 2:

Configure SPAN (Switch Port Analyzer) on SW1 to Monitor PC1 Traffic

Enter global configuration mode on SW1:

SW1# configure terminal

Create SPAN session 11 to mirror traffic from PC1 to interface E1/1:

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SW1(config)# monitor session 11 source interface e0/0
SW1(config)# monitor session 11 destination interface e1/1

Task 3:

Schedule IP SLA Operation on R1

Configure the IP SLA operation on R1:

R1(config)# ip sla 1
R1(config-ip-sla)# icmp-echo <Target_IP> # Replace <Target_IP> with the IP address of the destination (e.g., PC2's IP).
R1(config-ip-sla)# frequency 60 # Set frequency if required.
R1(config-ip-sla)# exit

Schedule the IP SLA operation to start immediately and run indefinitely:

R1(config)# ip sla schedule 1 start-time now life forever

To verify the IP SLA configuration:

R1# show ip sla configuration

QUESTION 28
SIMULATION

Guidelines

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

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

Topology

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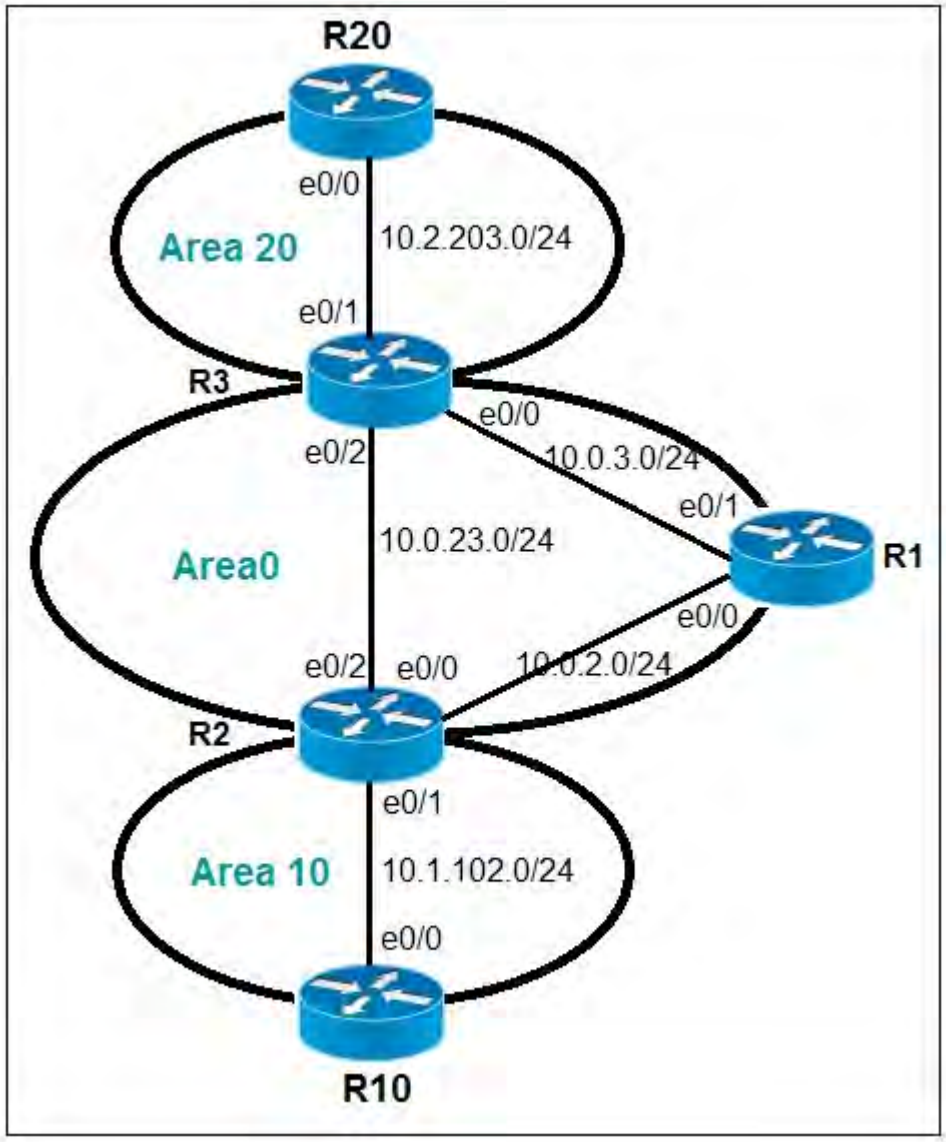

Tasks

OSPF is partially configured on all devices. Complete the configurations to achieve these results:

1. Configure R3 so that R20 is always designated as the BDR.
2. Configure R10 so that it does not participate in the DR/BDR election. Do not use the **ip ospf network point-to-point** command under the **interface** configuration to accomplish this task.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R3

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```
R3#en
R1(config)# t
Enter configuration commands, one per line. End with CNTZ/Z.
R3(config)#
R3(config)#inter
R3(config)#interface e
R3(config)#interface ethernet 0/1
R3(config-if)#ip os
R3(config-if)#ip ospf pr
R3(config-if)#ip ospf pri
R3(config-if)#ip ospf priority 255
R3(config-if)#
R3(config-if)#exit
R3(config)#
R3(config)#cle
R3(config)#clea
R3(config)#clear
R3(config)#clear ip
R3(config)#exit
R3#cl
R3#cl
*Apr 8 17:23:07.898: %SYS-5-CONFIG_I: Configured from console by
console
R3#clea
R3#clear ip o
R3#clear ip ospf pr
R3#clear ip ospf process
RESET ALL OSPF processes? [no]: y
R3#
*Apr 8 17:23:19.178: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.1.2 on
Ethernet0/2 from FULL to DOWN, Neighbor Down: Interface down or
detached
*Apr 8 17:23:19.178: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.1.1 on
Ethernet0/0 from FULL to DOWN, Neighbor Down: Interface down or
detached
*Apr 8 17:23:19.251: %OSPF-5-ADJCHG: Process 10, Nbr 10.2.1.1 on
Ethernet0/1 from FULL to DOWN, Neighbor Down: Interface down or
detached
*Apr 8 17:23:19.254: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.1.2 on
Ethernet0/2 from LOADING to FULL, Loading Done
*Apr 8 17:23:19.254: %OSPF-5-ADJCHG: Process 10, Nbr 10.0.1.1 on
Ethernet0/0 from LOADING to FULL, Loading Done
R3#
*Apr 8 17:23:19.255: %OSPF-5-ADJCHG: Process 10, Nbr 10.2.1.1 on
Ethernet0/1 from LOADING to FULL, Loading Done
R3#
```

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```
R20>en
R20#
*Apr 8 17:23:24.046: %OSPF-5-ADJCHG: Process 10, Nbr
10.0.1.3 on Ethernet0/0 from LOADING to FULL, Loading Done
R20#
R20#
R20#cl
R20#cle
R20#clear ip os
R20#clear ip ospf pr
R20#clear ip ospf process
Reset ALL OSPF processes? [no]: y
R20#
*Apr 8 17:23:37.894: %OSPF-5-ADJCHG: Process 10, Nbr
10.0.1.3 on Ethernet0/0 from FULL to DOWN, Neighbor Down:
Interface down or detached
*Apr 8 17:23:37.895: %OSPF-5-ADJCHG: Process 10, Nbr
10.0.1.3 on Ethernet0/0 from LOADING to FULL, Loading Done
R20#
```

```
R3#
R3#
R3#
R3#show ip
R3#show ip os
R3#show ip ospf ne
R3#show ip ospf neighbor

Neighbor ID     Pri   State           Dead Time   Address         Interface
10.0.1.2          1   FULL/DR         00:00:34    10.0.23.2       Ethernet0/2
10.0.1.1          1   FULL/DR         00:00:30    10.0.3.1        Ethernet0/0
10.2.1.1          1   FULL/DR         00:00:37    10.2.203.20     Ethernet0/1
R3#
R3#show ip ospf neighbor


Neighbor ID     Pri   State           Dead Time   Address         Interface
10.0.1.2          1   FULL/DR         00:00:31    10.0.23.2       Ethernet0/2
10.0.1.1          1   FULL/DR         00:00:37    10.0.3.1        Ethernet0/0
10.2.1.1          1   FULL/DR         00:00:34    10.2.203.20     Ethernet0/1
```

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```
R10>en
R10#
R10#in
R10#config t
Enter configuration commands, one per line. End with
CNTL/Z.
R10(config)#
R10(config)#int
R10(config)#interface e0/0
R10(config-if)#ip os
R10(config-if)#ip ospf pr
R10(config-if)#ip ospf prio
R10(config-if)#ip ospf priority 0
R10(config-if)#
R10(config-if)#exit
R10(config)#
R10(config)#
R10(config)#exit
R10#
R10#
*Apr 8 17:25:42.949: %SYS-5-CONFIG_I: Configured from console by console
R10#copy run
R10#copy running-config st
R10#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
[OK]
R10#
```

```
R2>
*Apr 8 17:23:23.868:%OSPF-5-ADJCHG: Process 10, Nbr 10.0.1.3 on from LOADING to
FULL, Loading Done
R2>
R2>en
R2#
R2#
R2#show ip os
R2#show ip ospf ne
R2#show ip ospf neighbor

Neighbor ID     Pri State           Dead Time Address         Interface
10.0.1.3          1   FULL/BDR      00:00:31  10.0.23.3       Ethernet0/2
10.0.1.1          1   FULL/BDR      00:00:37  10.0.2.1        Ethernet0/0
10.1.1.1          0   FULL/DROTHER  00:00:35  10.1.102.10     Ethernet0/1

R2#
```

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```
R3#
R3#copy run
R3#copy running-config st
R3#copy running-config startup-config
Destination filename [startup-config]?
Building configuration…
[OK]
R3#
R3#
```

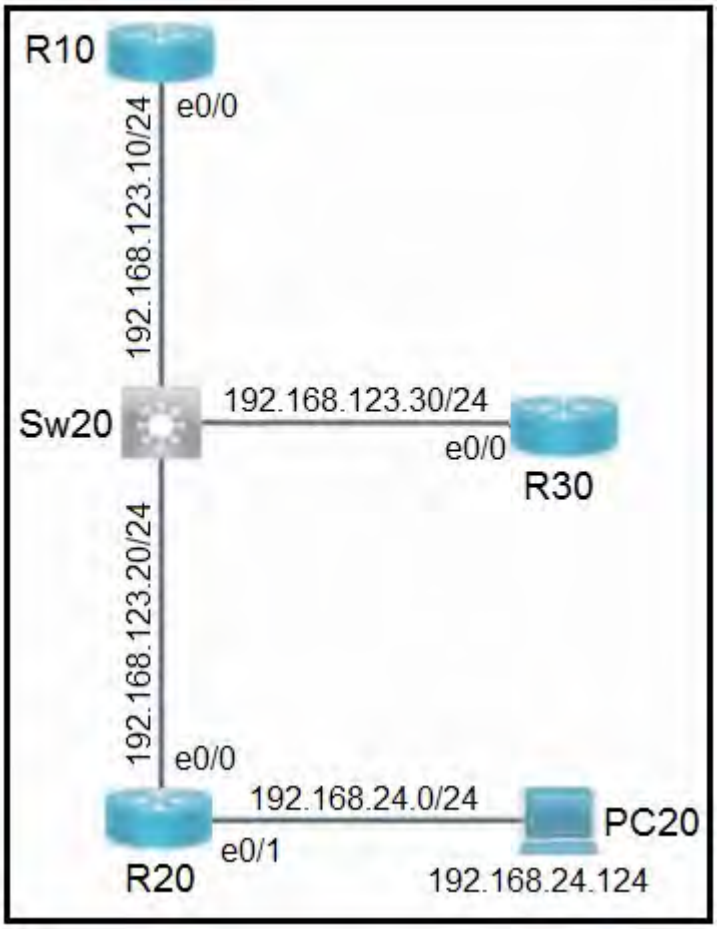
QUESTION 29
SIMULATION

Guidelines

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

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

Topology



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Tasks

EIGRP is preconfigured on all routers. Configure R10 and R20 to complete these tasks.

Task 1:

Modify the existing ACL on R10 so that EIGRP routes are received from R20 and R30.

1. The modification should only allow EIGRP routes to pass.
2. Do not remove any configuration from R10 to achieve this task.

Task 2:

Configure CoPP on R20 to achieve these results:

1. Permit ICMP traffic from 192.168.24.0/24.
2. Limit traffic to 8,000 bps.
3. Discard additional packets.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:

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```
R10#en
R10#sh run
Building configuration…

Current configuration : 1461 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R10
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
```

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```
R10#en
R10#sh run
Building configuration…

Current configuration : 1461 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R10
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
!
no ip domain lookup
ip cef
no ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
redundancy
```

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```
interface Loopback0
 ip address 192.168.1.10 255.255.255.255
!
interface Ethernet0/0
 ip address 192.168.123.10 255.255.255.0
 ip access-group 150 in
 duplex auto
!
interface Ethernet0/1
 no ip address
 duplex auto
!
interface Ethernet0/2
 no ip address
 duplex auto
!
interface Ethernet0/3
 no ip address
 duplex auto
!
interface Ethernet1/0
 no ip address
duplex auto
!
interface Ethernet1/1
 no ip address
duplex auto
!
interface Ethernet1/2
no ip address
duplex auto
!
interface Ethernet1/3
no ip address
duplex auto
!
!
router eigrp 10
 network 192.168.1.10.0.0.0.0
 network 192.168.123.0
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
ipv6 ioam timestamp
!
!
access-list 150 permit tcp any any
access-list 150 permit udp any any
access-list 150 permit icmp any any
access-list 150 deny       ip any any
!
control-plane
!
!
```

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```
R20#
*Apr 15 18:09:02.333: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
*Apr 15 18:09:02.427: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
*Apr 15 18:10:22.023: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20#
*Apr 15 18:10:26.026: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
R20#sh ip ro
R20#sh ip in
R20#sh ip in
*Apr 15 18:13:07.219: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20#sh ip inter
R20#sh ip interface br
R20#sh ip interface brief
```

```
R20#
*Apr 15 18:11:45.607: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20#
*Apr 15 18:11:47.626: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
R20#sh ip ro
R20#sh ip in
R20#sh ip in
*Apr 15 18:13:07.219: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20#sh ip inter
R20#sh ip interface br
R20#sh ip interface brief
Interface      IP-Address     OK?  Method    Status    Protocol
Ethernet0/0    192.168.123.10 YES  NVRAM     up        up
Ethernet0/1    192.168.24.20  YES  NVRAM     up        up
Ethernet0/2    unassigned     YES  NVRAM     up        up
Ethernet0/3    unassigned     YES  NVRAM     up        up
Ethernet1/0    unassigned     YES  NVRAM     up        up
Ethernet1/1    unassigned     YES  NVRAM     up        up
Ethernet1/2    unassigned     YES  NVRAM     up        up
Ethernet1/3    unassigned     YES  NVRAM     up        up
```

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```
R30#
*Apr 15 18:09:02.332: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:09:02.427: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:10:22.023: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:10:26.026: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:11:45.606: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:11:47.626: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:13:07.236: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:13:10.722: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#sh ip inter
R30#sh ip interface br
R30#sh ip interface brief
Interface      IP-Address     OK?  Method    Status    Protocol
Ethernet0/0    192.168.123.30 YES  NVRAM     up        up
Ethernet0/1    unassigned     YES  NVRAM     up        up
Ethernet0/2    unassigned     YES  NVRAM     up        up
Ethernet0/3    unassigned     YES  NVRAM     up        up
Ethernet1/0    unassigned     YES  NVRAM     up        up
Ethernet1/1    unassigned     YES  NVRAM     up        up
Ethernet1/2    unassigned     YES  NVRAM     up        up
Ethernet1/3    unassigned     YES  NVRAM     up        up
Loopback0      192.168.1.30   YES  NVRAM     up        up
R30#
```

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```
R10#show ro
R10#showei
R10#show ei
R10#show eigrp s
R10#show eigrp sum
R10#show eigrp ?
     address-family EIGRP address-family show commands
     plugins        EIGRP feature plugin installed
     protocols      Show EIGRP protocol info
     service-family EIGRP service-family show commands
     tech-support   Show EIGRP internal tech support information


R10#show eigrp?
     address-family EIGRP address-family show commands
     plugins        EIGRP feature plugin installed
     protocols      Show EIGRP protocol info
     service-family EIGRP service-family show commands
     tech-support   Show EIGRP internal tech support information

R10#show eigrp pr
R10#show eigrp protocols
EIGRP-IPv4 Protocol for AS(10)
     Metric weight K1=1, K2=0, K3=1, K4=0, K5=0
     Soft SIA disabled
     NSF-aware route hold timer is 240
     Router-ID: 192.168.1.10
     Topology : 0 (base)
               Active Timer: 3 min
               Distance: internal 90 external 170
               Maximum path: 4
               Maximum hopcount 100
               Maximum metric variance 1
```

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```
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
line vty 0 4
 login
 transport input none
!
!
end

R10#
R10#config t
Enter configuration commands, one per line. End with CNTL/Z.
R10(config)#
R10(config)#ac
R10(config)#access-list 150 per
R10(config)#access-list 150 permit 88 ho
R10(config)#access-list 150 permit 88 host 192.168.123.20 a
R10(config)#access-list 150 permit 88 host 192.168.123.20 any
R10(config)#ac
R10(config)#access-list 150 pe
R10(config)#access-list 150 permit 88 host
R10(config)#access-list 150 permit 88 host 192.168.123.30 an
R10(config)#access-list 150 permit 88 host 192.168.123.30 any
R10(config)#exit
R10#sh
*Apr 15 18:16:49.460: %SYS-5-CONFIG_I: Configured from console by
console
R10#show ac
R10#show acc
R10#show access-
R10#show access-l
R10#show access-lists
Extended IP access list 150
     10 permit tcp any any
     20 permit tcp any any
     30 permit icmp any any
     40 dny ip any any (6082 matches)
     50 permit eigrp host 192.168.123.20 any
     60 permit eigrp host 192.168.123.20 any
R10#sh run
Building configuration…

Current configuration : 1629 bytes
!
! Last configuration change at 18:16:49 UTC Mon Apr 15 2024
```

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```
R20#
*Apr 15 18:14:30.282: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10:
Neighbor 192.168.123.10 (Ethernet0/0) is down: retry limit
exceeded
R20#
*Apr 15 18:14:33.661: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10:
Neighbor 192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
*Apr 15 18:15:53.265: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10:
Neighbor 192.168.123.10 (Ethernet0/0) is down: retry limit
exceeded
R20#
*Apr 15 18:15:57.081: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10:
Neighbor 192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
*Apr 15 18:17:16.662: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10:
Neighbor 192.168.123.10 (Ethernet0/0) is down: retry limit
exceeded
R20#
*Apr 15 18:17:20.357: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10:
Neighbor 192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
R20#
R20#
```

```
R30#
*Apr 15 18:14:30.307: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:14:33.661: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:15:53.249: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:15:57.081: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:17:16.662: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:17:20.357: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
```

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```
R20#
R20#
*Apr 15 18:18:39.945: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20#
*Apr 15 18:18:44.069: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R20#
R20#config t
Enter configuration commands, one per line. End with CNTL/Z.
R20(config)#
R20(config)#
R20(config)#
R20(config)#
R20(config)#
R20(config)#
R20(config)#ip ac
R20(config)#ip acce
R20(config)#ip access-list e
R20(config)#ip access-list extended ACL-CoPP-ICMP
R20(config-ext-nacl)#per
R20(config-ext-nacl)#permit ic
R20(config-ext-nacl)#permit icmp 192.168.24.0 0.0.0.255 any
R20(config-ext-nacl)#clas
R20(config-ext-nacl)#clas-m
R20(config-ext-nacl)#clas-map
R20(config-ext-nacl)#clas-map
R20(config-ext-nacl)#clas-map
R20(config-ext-nacl)#clas-map m
R20(config-ext-nacl)#exit
R20(config)#cl
R20(config)#cla
R20(config)#class-map ma
R20(config)#class-map match-an
R20(config)#class-map match-any
*Apr 15 18:20:03.678: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20(config)#class-map match-any CLASS-C
*Apr 15 18:20:07.114: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R20(config)#class-map match-any CLASS-CoPP-
R20(config)#class-map match-any CLASS-CoPP-ICMP
```

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```
R20(config-cmap)#ma
R20(config-cmap)#match ac
R20(config-cmap)#match access-group na
R20(config-cmap)#match access-group name ACL-CoPP-ICMP
R20(config-cmap)#exit
R20(config)#pol
R20(config)#policy-map po
R20(config)#policy-map POLICY-CoPP
R20(config-pmap)#cl
R20(config-pmap)#class CLASS-CoPP-ICMP
R20(config-pmap-c)#po
R20(config-pmap-c)#police 8000 c
R20(config-pmap-c)#police 8000 conform-action tr
R20(config-pmap-c)#police 8000 conform-action transmit ex
R20(config-pmap-c)#police 8000 conform-action transmit exceed-action d
R20(config-pmap-c)#police 8000 conform-action transmit exceed-action
drop
R20(config-pmap-c-police)#exit
R20(config-pmap-c)#con
R20(config-pmap-c)#contr
R20(config-pmap-c)#exit
R20(config-pmap)#exit
R20(config)#con
R20(config)#cont
R20(config)#control-plane
R20(config-cp)#ser
R20(config-cp)#service-policy in
R20(config-cp)#service-policy input
*Apr 15 18:21:26.682: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R20(config-cp)#service-policy input p
R20(config-cp)#service-policy input po
R20(config-cp)#service-policy input po
*Apr 15 18:21:29.622: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R20(config-cp)#service-policy input POLICY-CoPP
R20(config-cp)#
R20(config-cp)#e
*Apr 15 18:21:39.765: %CP-5-FEATURE: Control-plan Policing feature
enabled on Control plane aggregate path

R20(config-cp)#exit
R20(config)#exit
R20#
*Apr 15 18:21:45.121: %SYS-5-CONFIG_I: Configured from console by
console
```

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```
R30#
*Apr 15 18:18:39.945: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:18:44.069: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:20:03.653: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:20:07.114: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
*Apr 15 18:21:26.699: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is down: retry limit exceeded
R30#
*Apr 15 18:21:29.622: %DUAL-5-NBRCHANGE: EIGRP-IPv4 10: Neighbor
192.168.123.10 (Ethernet0/0) is up: new adjacency
R30#
```

QUESTION 30
SIMULATION

Guidelines

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

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

Topology

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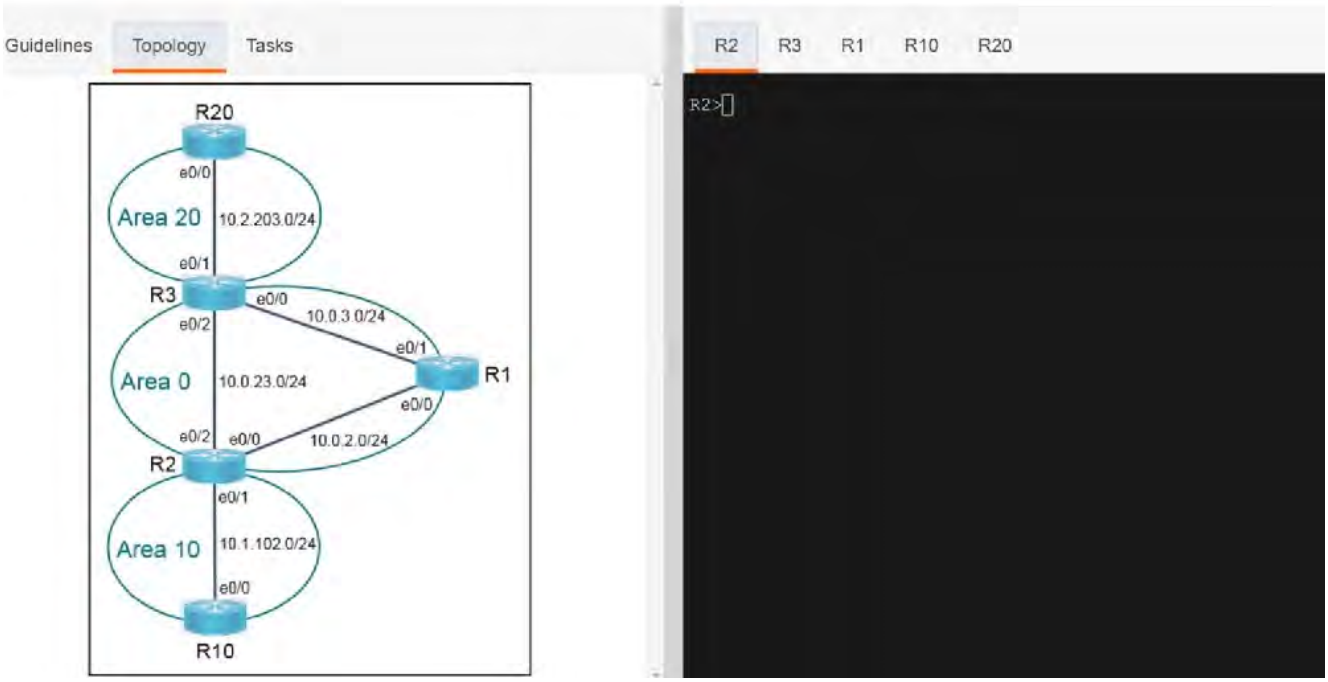

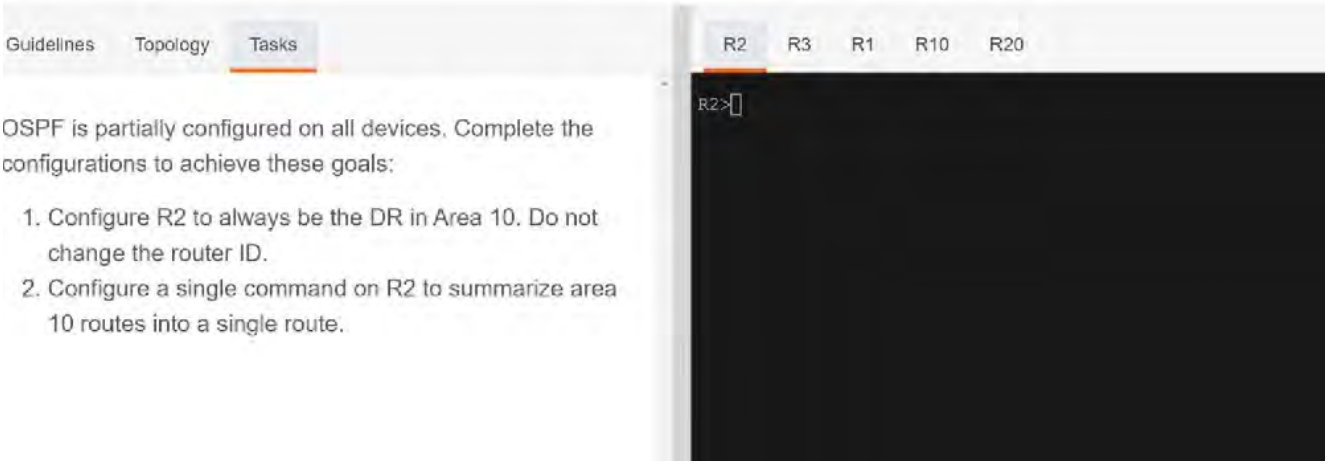

A. See the solution below in Explanation.
B. Place Holder

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C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:

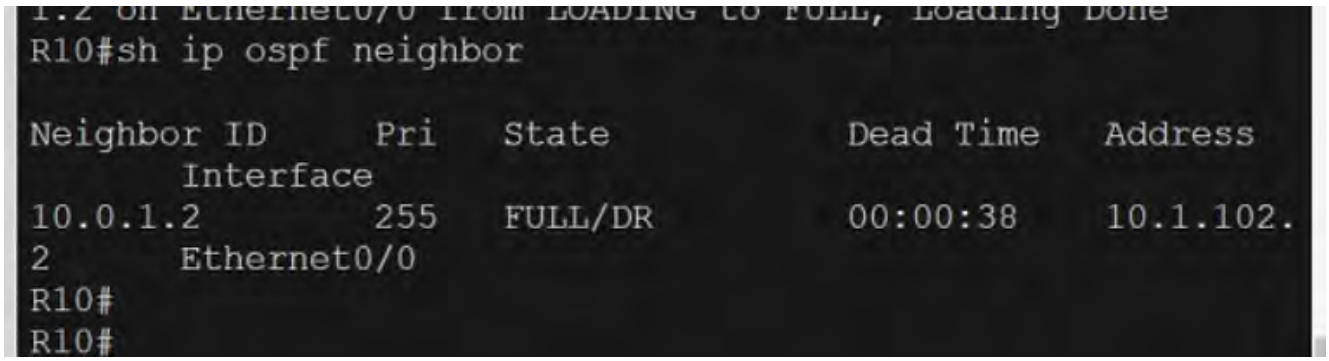
```
2.
R2(config)#int et0/1
R2(config-if)#ip ospf pro
R2(config-if)#ip ospf pri
R2(config-if)#ip ospf priority 255
R2(config-if)#
```

```
R2(config)#router ospf 10
R2(config-router)#area 10 ran
R2(config-router)#area 10 range 10.1.0.0 255.255.0.0
R2(config-router)#
R2(config-router)#
```

```
2.
R3(config)#int et0/1
R3(config-if)#ip ospf net
R3(config-if)#ip ospf network po
R3(config-if)#ip ospf network point-to-po
R3(config-if)#ip ospf network point-to-point
R3(config-if)#
*Nov 15 13:23:04.026: %OSPF-5-ADJCHG: Process 10, Nbr 10.
1.1 on Ethernet0/1 from FULL to DOWN, Neighbor Down: Inte
ace down or detached
*Nov 15 13:23:04.027: %OSPF-4-NET_TYPE_MISMATCH: Received
ello from 10.2.1.1 on Ethernet0/1 indicating a  potential
            network type mismatch
R3(config-if)#
*Nov 15 13:23:04.027: %OSPF-5-ADJCHG: Process 10, Nbr 10.
1.1 on Ethernet0/1 from LOADING to FULL, Loading Done
R3(config-if)#exit
R3(config)#int et0/1
R3(config-if)#ip ospf net
R3(config-if)#ip ospf network po
R3(config-if)#ip ospf network point-to-po
R3(config-if)#ip ospf network point-to-point
R3(config-if)#
```

https://t.me/learningnets

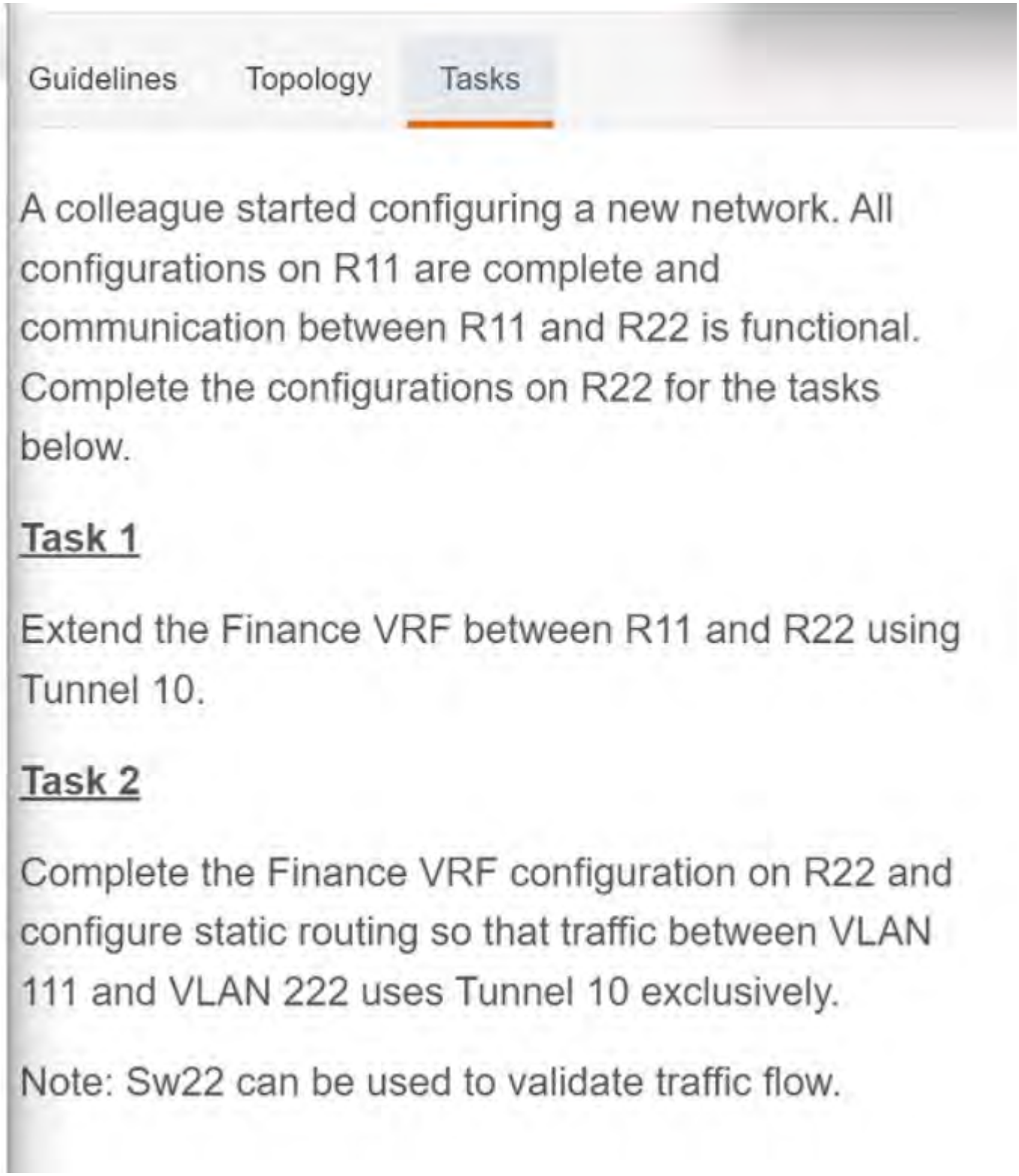
VERIFICATION:



QUESTION 31
SIMULATION

https://t.me/learningnets

https://t.me/learningnets



A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

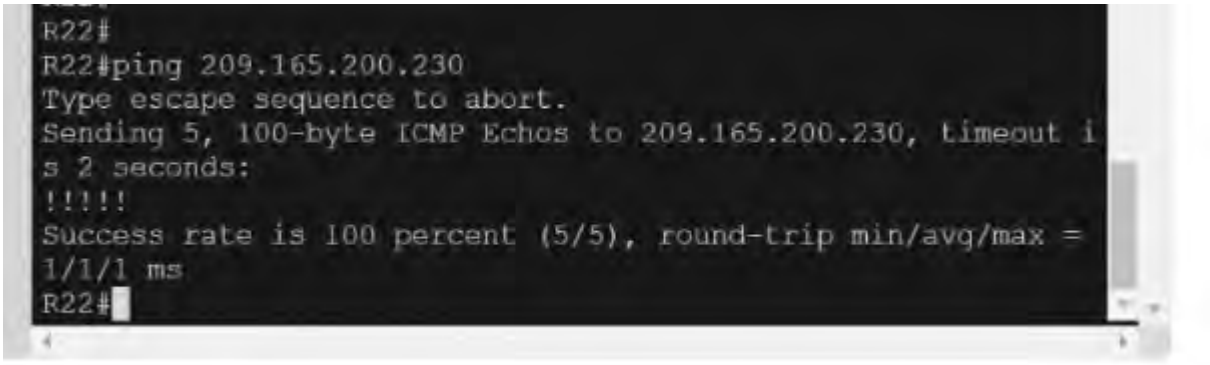
Explanation/Reference:
R22

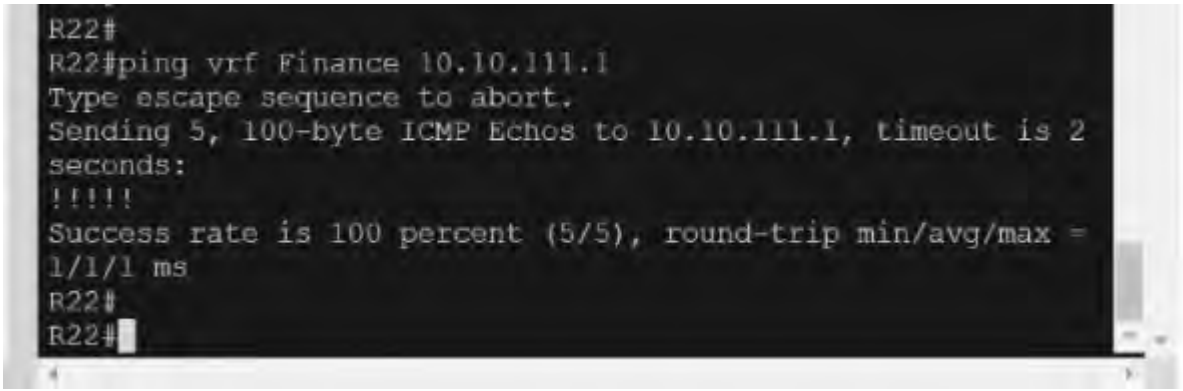
https://t.me/learningnets

int tun0
vrf forwarding FINANCE
ip add 10.10.10.2 255.255.255.0
tunn source e0/0
tunnel dest 209.165.200.230
no shut

ip route vrf FINANCE 10.10.111.0 255.255.255.0 tunn0 int et0/1
vrf forwarding FINANCE
ip address 10.22.22.1 255.255.255.252

wr
Verification:

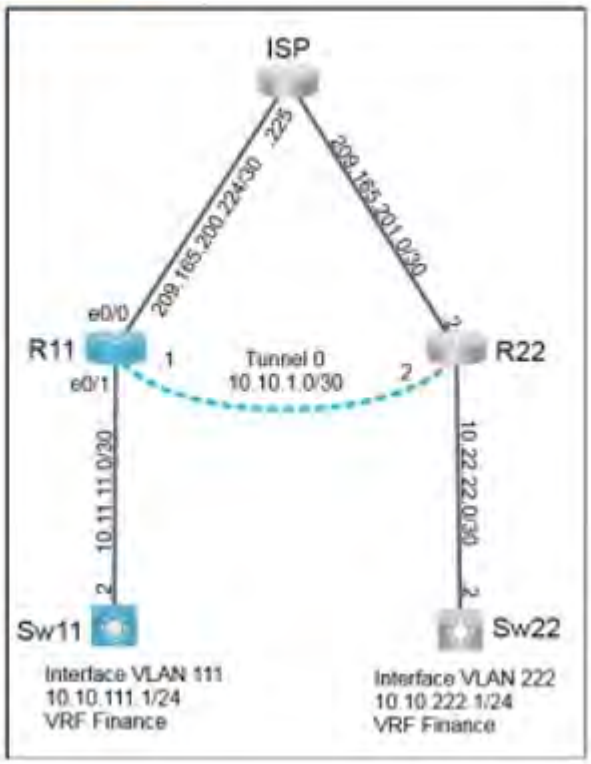




OR

https://t.me/learningnets

Guidelines | Topology | Tasks



Guidelines | Topology | Tasks

A colleague started configuring a new network. All configurations on R22 are complete and communication between R11 and R22 is functional. Complete the configurations on R11 for the tasks below.

Task 1

Extend the Finance VRF between R11 and R22 using Tunnel 0.

Task 2

Complete the Finance VRF configuration on R11 and configure static routing so that traffic between VLAN 111 and VLAN 222 uses Tunnel 0 exclusively.

Note: Sw11 can be used to validate traffic flow.

R11 | Sw11

```
R11#
```

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QUESTION 32
SIMULATION

Guidelines

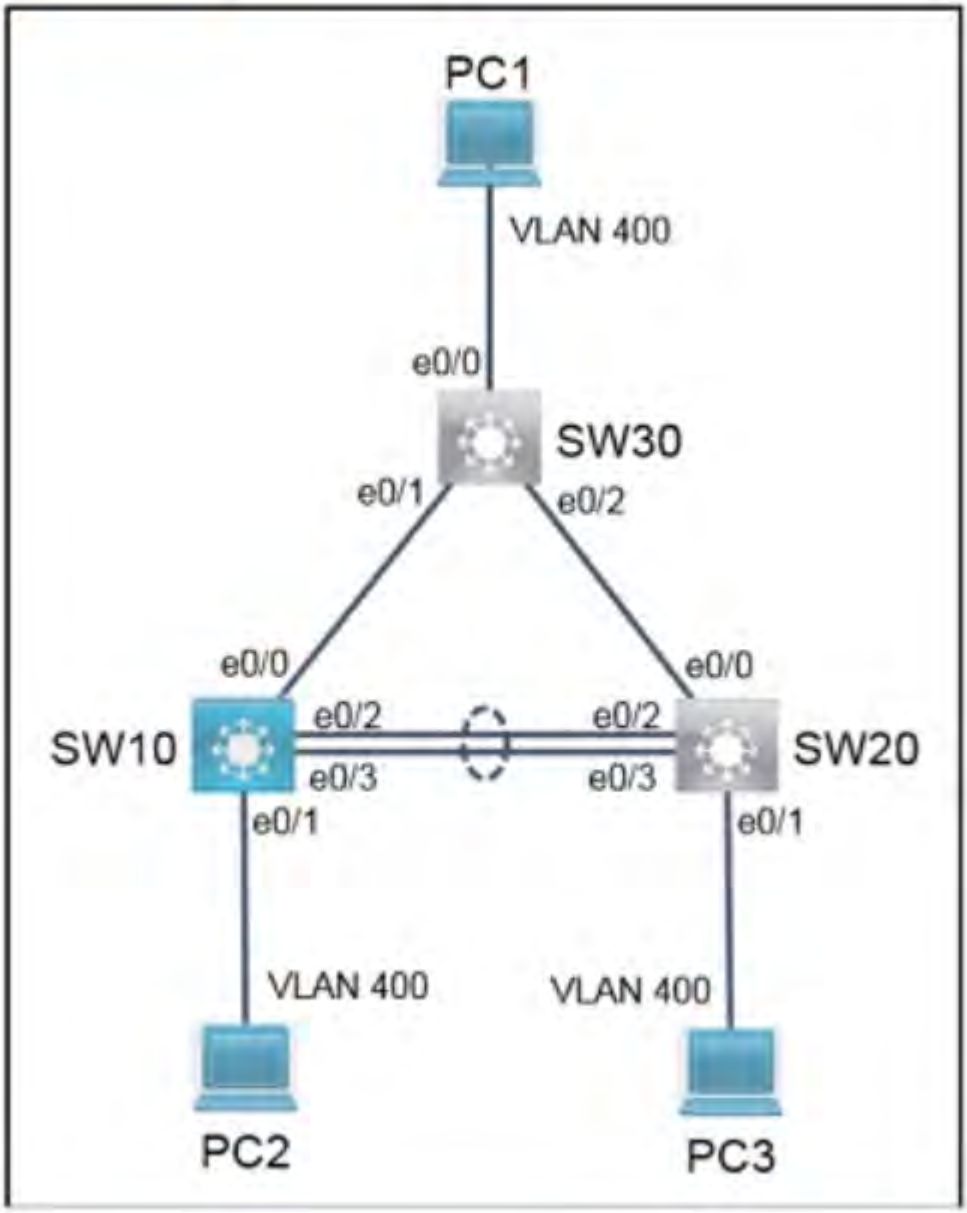
This is a lab item in which tasks will be performed on virtual devices.

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

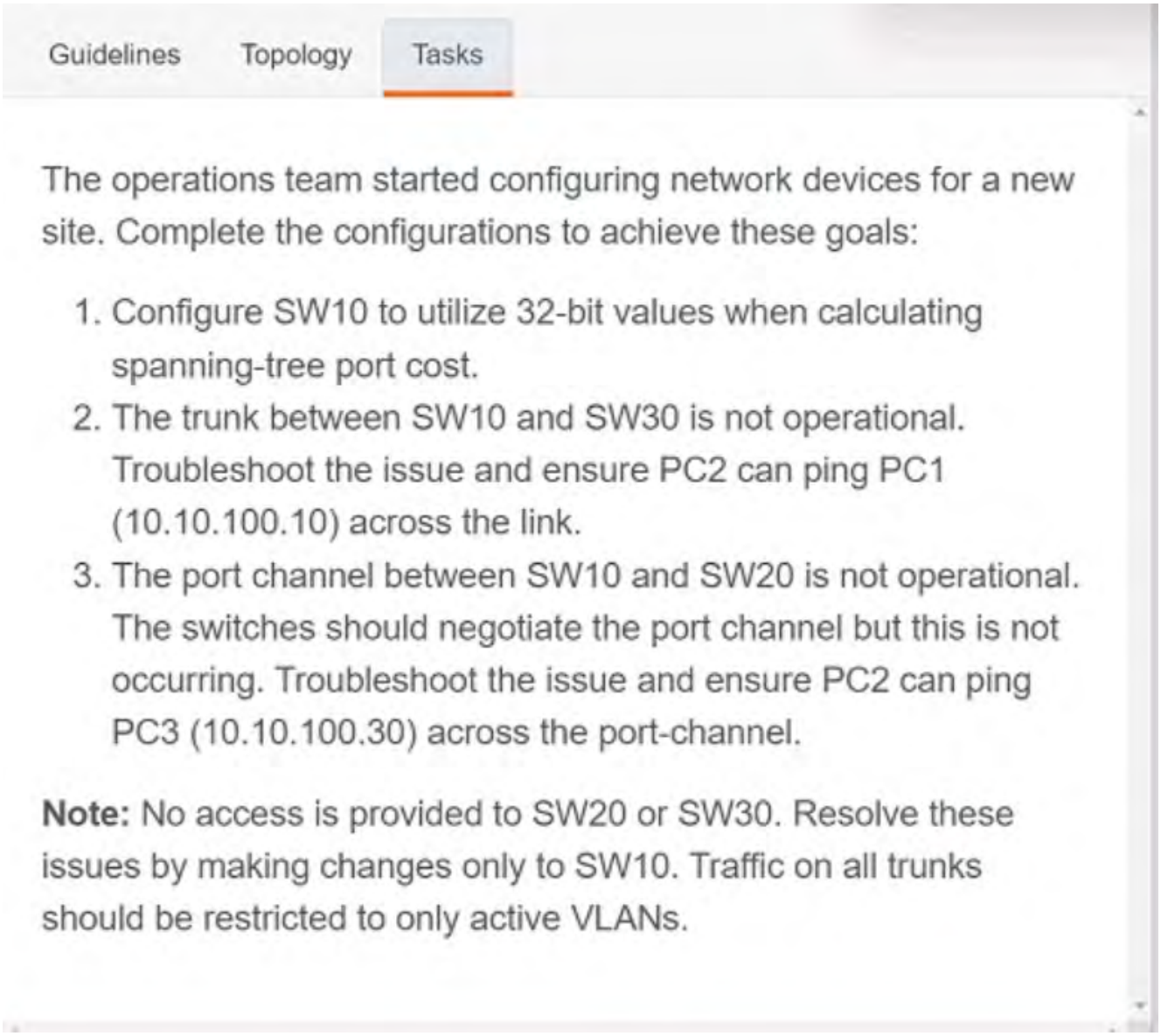
Topology

https://t.me/learningnets

Guidelines | Topology | Tasks



https://t.me/learningnets



A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
SW10
Conf t

https://t.me/learningnets

Default int e0/0
Int e0/0
No sh

```
interface Ethernet0/0
 switchport trunk allowed vlan 400
 switchport trunk encapsulation dot1q
 switchport mode trunk
end
```

Conf t

```
Enter configuration commands, one per line.  End with CNTL/Z.
SW10(config)#no int port 10
SW10(config)#
*Nov 17 09:59:50.402: %EC-5-CANNOT_BUNDLE1: Port-channel Po10 is
own, port Et0/3 will remain stand-alone.
SW10(config)#
*Nov 17 09:59:52.403: %LINK-5-CHANGED: Interface Ethernet0/2, cha
ged state to administratively down
*Nov 17 09:59:52.403: %LINK-5-CHANGED: Interface Ethernet0/3, cha
ged state to administratively down
SW10(config)#int ran
SW10(config)#int range et
SW10(config)#int range ethernet 0/2 - 3
SW10(config-if-range)#chan
SW10(config-if-range)#channel-gr
SW10(config-if-range)#channel-group 10 mo
SW10(config-if-range)#channel-group 10 mode ac
SW10(config-if-range)#channel-group 10 mode active
Creating a port-channel interface Port-channel 10

SW10(config-if-range)#no shut
SW10(config-if-range)#
```

https://t.me/learningnets

```
interface Ethernet0/2
 switchport trunk encapsulation dot1q
 switchport mode trunk
 channel-group 10 mode active
end

SW10#sh run int e0/3
Building configuration...

Current configuration : 120 bytes
!
interface Ethernet0/3
 switchport trunk encapsulation dot1q
 switchport mode trunk
 channel-group 10 mode active
end
```

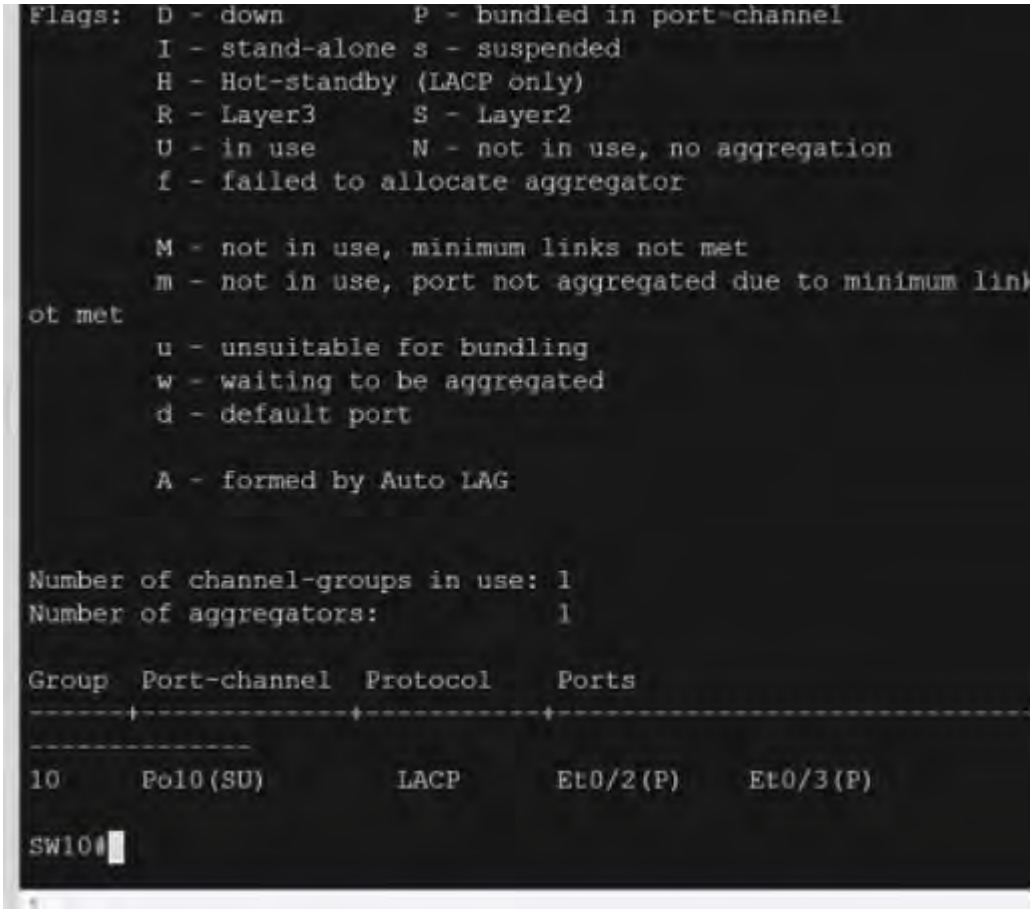
Copy run start

Verification from PC2

```
PC2#ping 10.10.100.10
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.10.100.10, timeout is 2 secon
ds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/1 m
s
PC2#
PC2#ping 10.10.100.30
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.10.100.30, timeout is 2 secon
ds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 1/1/1 m
s
PC2#
```

Show etherchannel summary

https://t.me/learningnets



QUESTION 33
SIMULATION

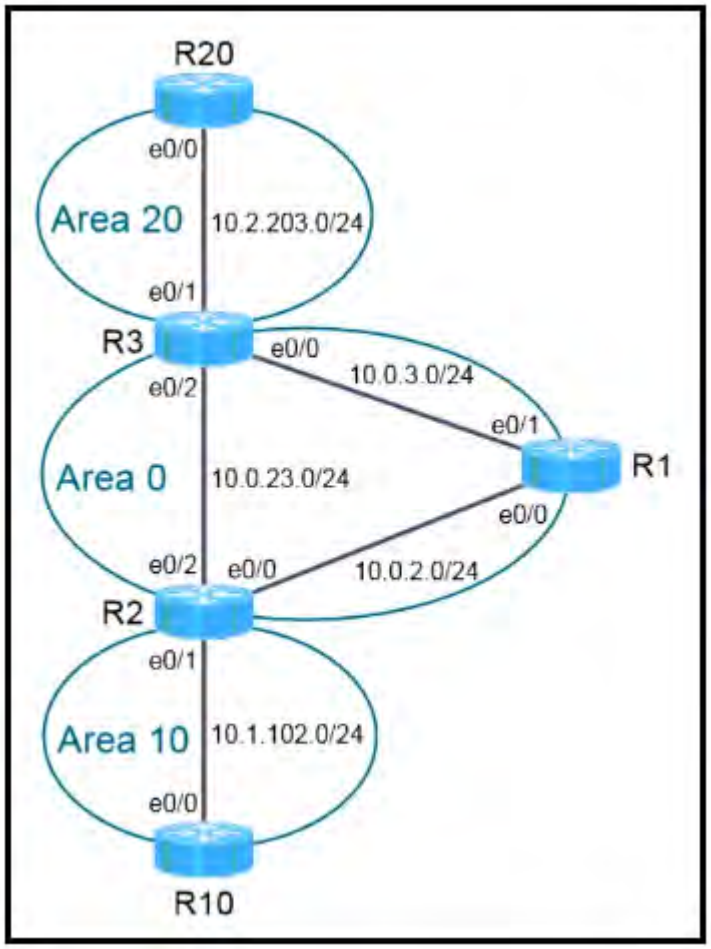
Guidelines

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

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

Topology

https://t.me/learningnets



OSPF is partially configured. Complete the OSPF configurations on the ABR routers to achieve the following goals:

1. The route for R1's Loopback0 should not be advertised into Area 10. Use the partially configured prefix list to accomplish this task. Do not use the area 0 command under the router OSPF configuration section to achieve this task.
2. The route for R2's Loopback0 should not be advertised out of Area 20. Use the partially configured prefix list to accomplish this task. Do not use the area 0 command under the router OSPF configuration section to achieve this task.

A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R2

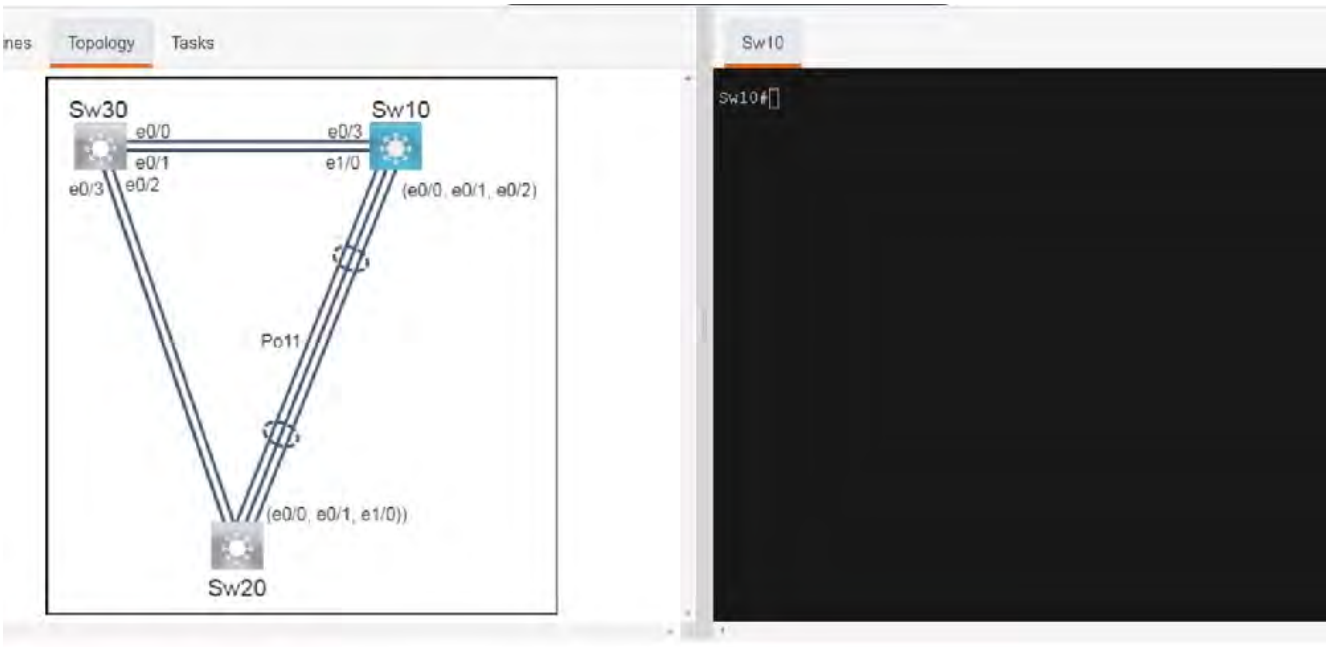
https://t.me/learningnets

```
R2#sh run | s route|pref
router ospf 10
 router-id 10.0.1.2
 area 10 filter-list prefix deny_R1_Lo0 in
 network 10.0.1.0 0.0.0.255 area 0
 network 10.0.2.0 0.0.0.255 area 0
 network 10.0.23.0 0.0.0.255 area 0
 network 10.1.102.0 0.0.0.255 area 10
ip prefix-list deny_R1_Lo0 seq 1 deny 10.0.1.1/32
ip prefix-list deny_R1_Lo0 seq 2 permit 0.0.0.0/0 le 32
R2#
R2#
R2#wr
Building configuration...
```

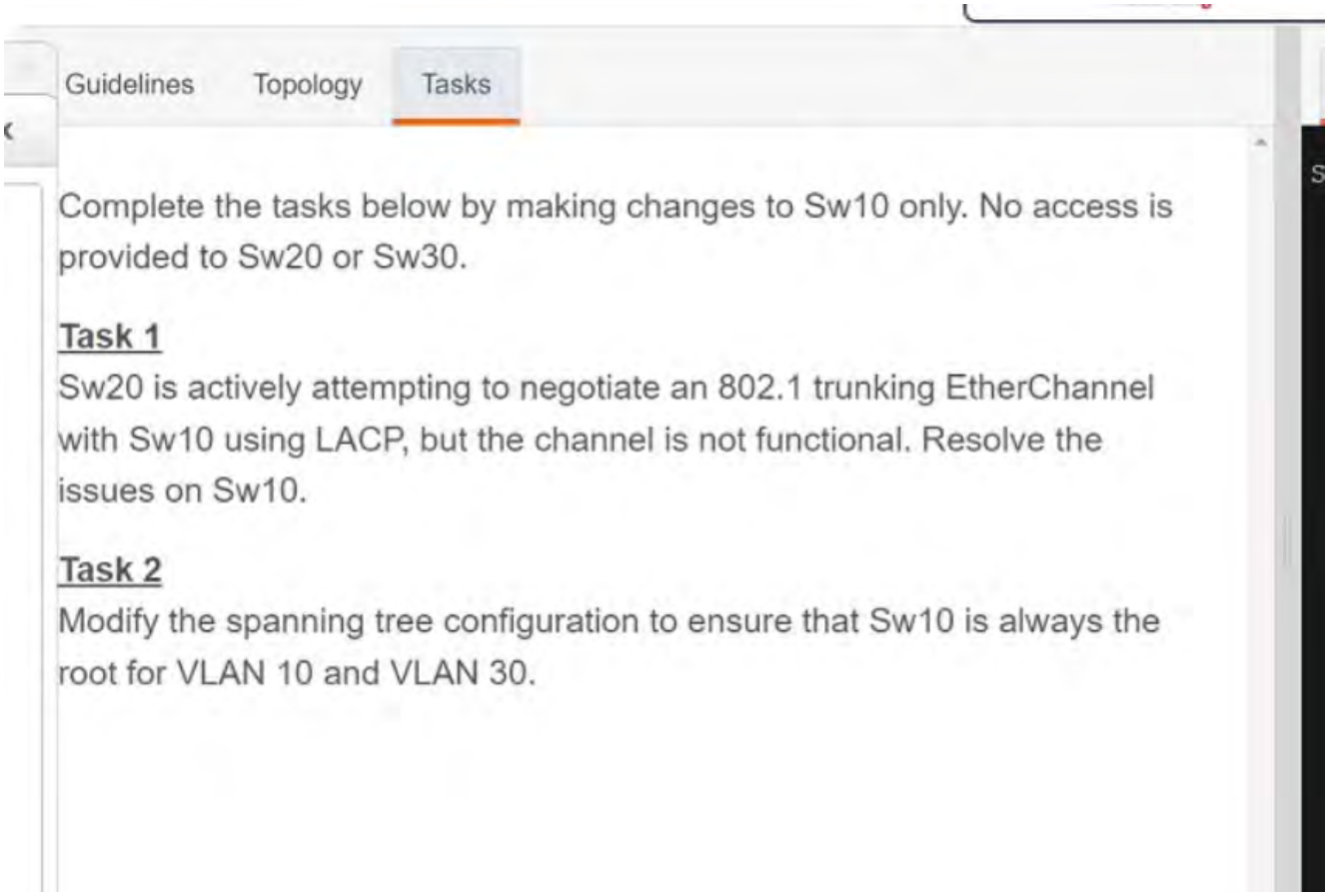
R3

```
R3# sh run | s route|pref
router ospf 10
 router-id 10.0.1.3
 area 20 filter-list prefix deny_R20_Lo0 out
 network 10.0.1.0 0.0.0.255 area 0
 network 10.0.3.0 0.0.0.255 area 0
 network 10.0.23.0 0.0.0.255 area 0
 network 10.2.203.0 0.0.0.255 area 20
ip prefix-list deny_R20_Lo0 seq 1 deny 10.2.1.1/32
ip prefix-list deny_R20_Lo0 seq 2 permit 0.0.0.0/0 le 32
R3#
R3#
R3#
R3#
R3#
R3#
R3#wr
Building configuration...
```

QUESTION 34
SIMULATION



https://t.me/learningnets



A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
Solution:
Default int range et0/0-1
Int range e0/0 ?1
Sw trunk encap dot1
Switch mode trunk
Channel-group 2 mode passive
No shut

Spanning-tree vlan 10 priority 0
Spanning-tree vlan 30 priority 0

QUESTION 35
SIMULATION

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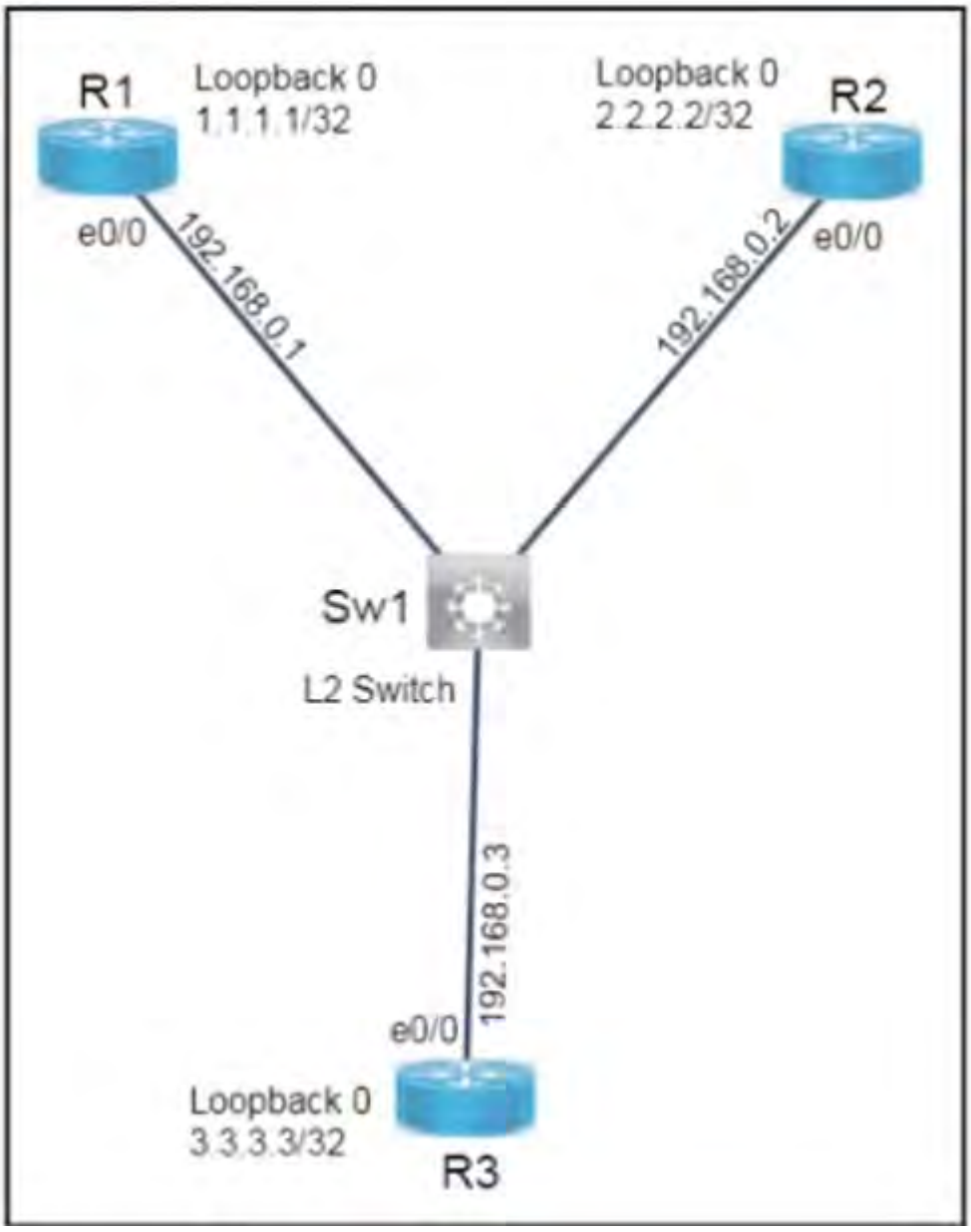

Guidelines Topology Tasks

Protect access to R2 by completing the configuration to achieve these results:

- The local user database is configured for the user "NetworkAdmin" to use the password "CiscoENCOR" and to have the highest level of privileges.
- The virtual terminal interfaces utilize the local user database for access and allow Telnet and Rlogin.
- Exec sessions on the auxiliary port should timeout after 20 minutes of inactivity.

R1 R2 R3

R1#

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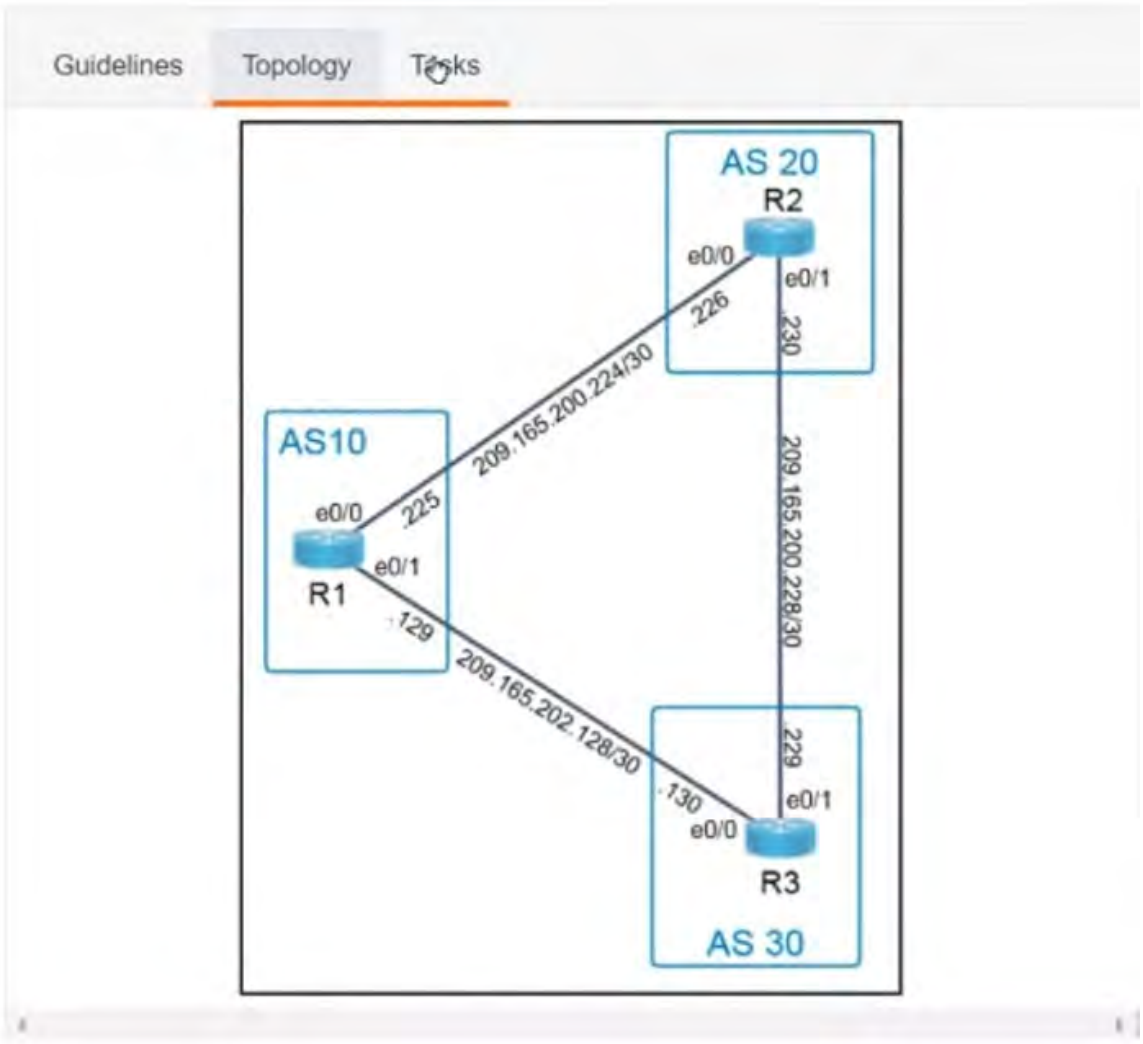
A. See the solution below in Explanation.
B. Place Holder
C. Place Holder
D. Place Holder

Correct Answer: A
Explanation

Explanation/Reference:
R2

config t
username NetworkAdmin privilege 15 password CiscoENCOR

line vty 0 4
login local
transport input telnet rlogin
exec-timeout 1200 0



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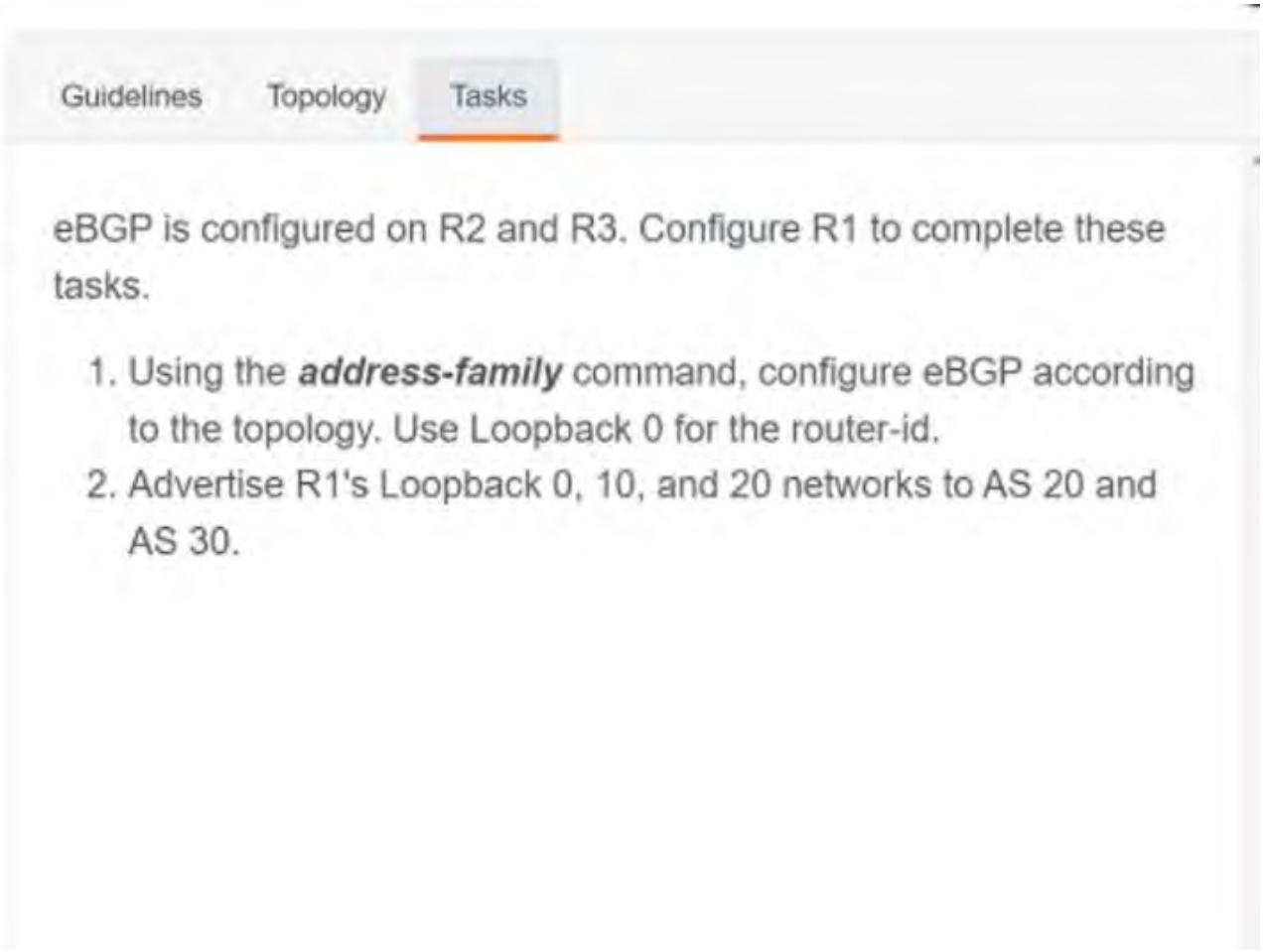

R1

```
router bgp 10
no bgp default ipv4-unicast
bgp router-id 10.1.1.111
neigh 209.165.200.226 remote-as 20
neigh 209.165.202.130 remote-as 30
address-family ipv4
network 10.1.1.10 mask 255.255.255.255
network 209.165.201.20 mask 255.255.255.255
network 209.165.201.10 mask 255.255.255.255
neigh 209.165.200.226 activate
neigh 209.165.202.130 activate
```

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Exam H

QUESTION 1
DRAG DROP

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

Select and Place:

Correct Answer:

Explanation

Explanation/Reference:
The cool thing about shaping is that all traffic will be sent since we are buffering it. The downside of buffering traffic is that it introduces delay and jitter. Let me show you an example:

Reference: https://networklessons.com/quality-of-service/qos-traffic-shaping-explained

QUESTION 2
DRAG DROP

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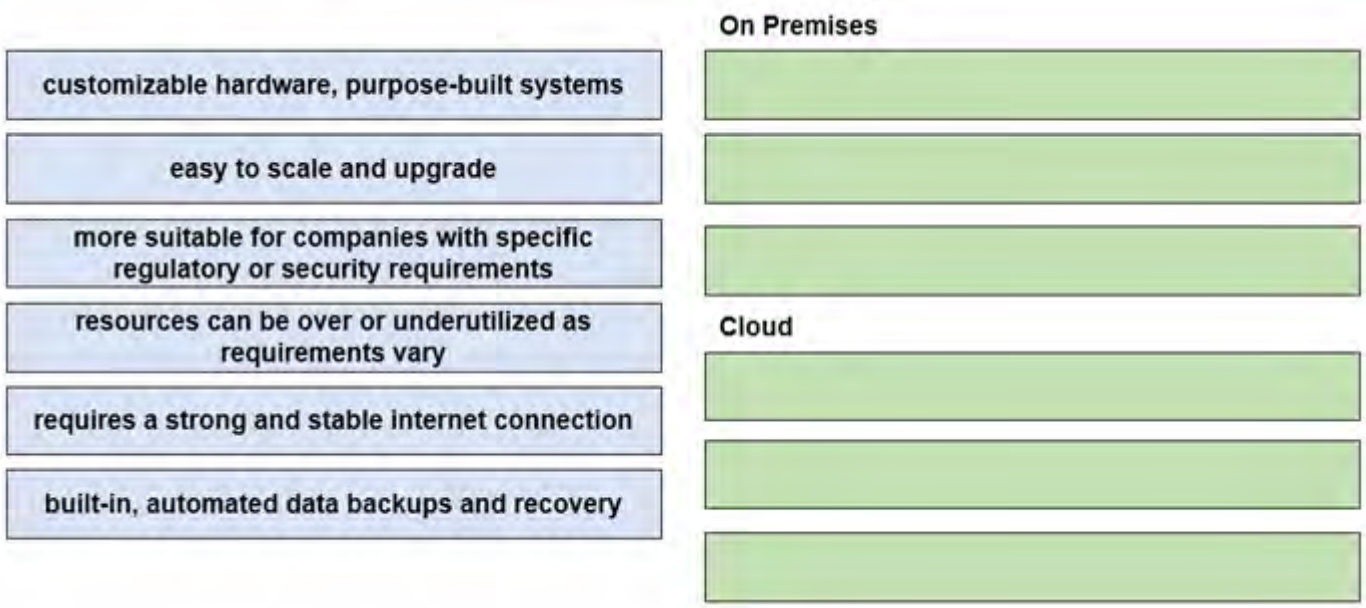
Drag and drop the characteristics from the left onto the correct infrastructure deployment types on the right.

Select and Place:



Correct Answer:

Explanation

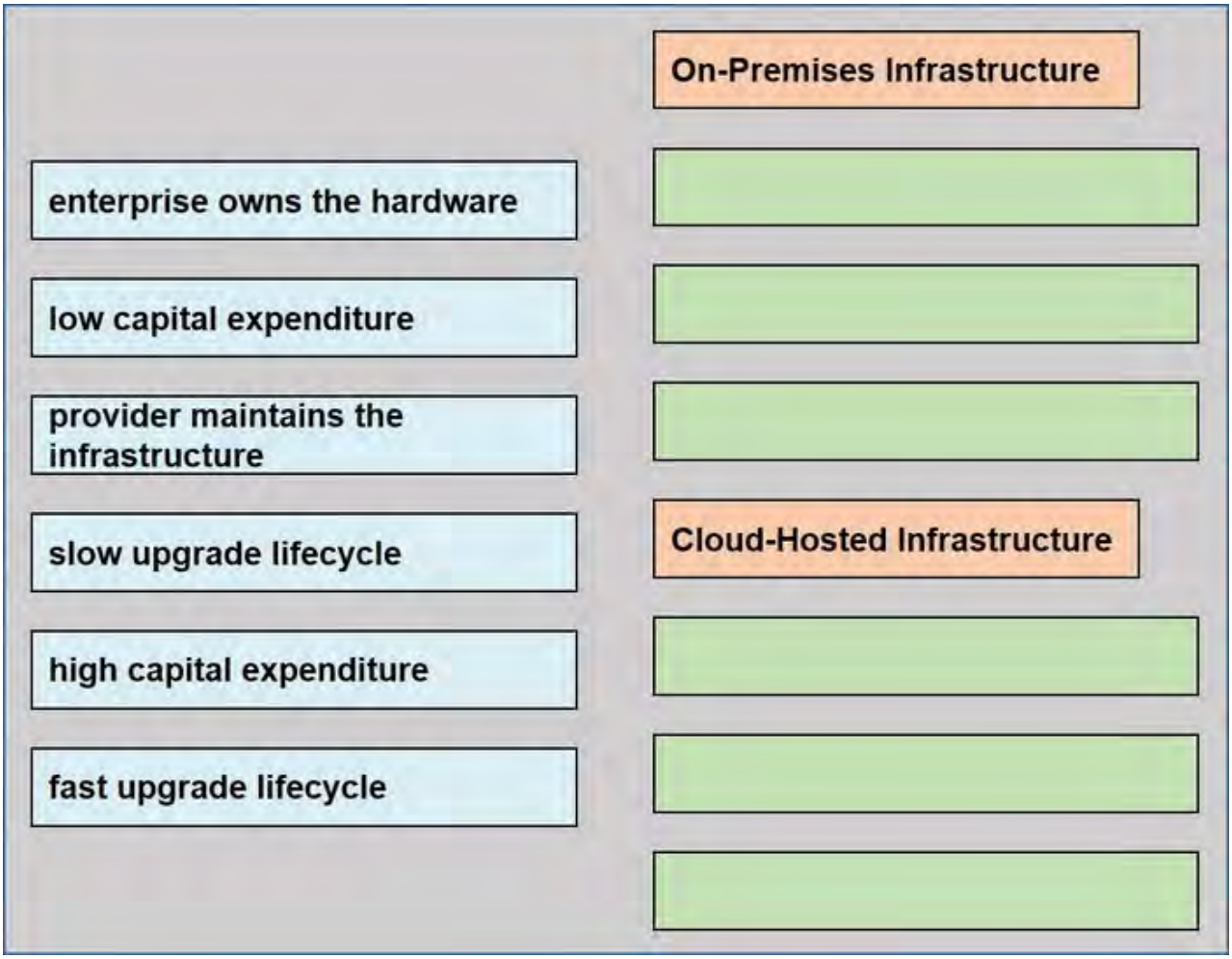
Explanation/Reference:

QUESTION 3
DRAG DROP

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

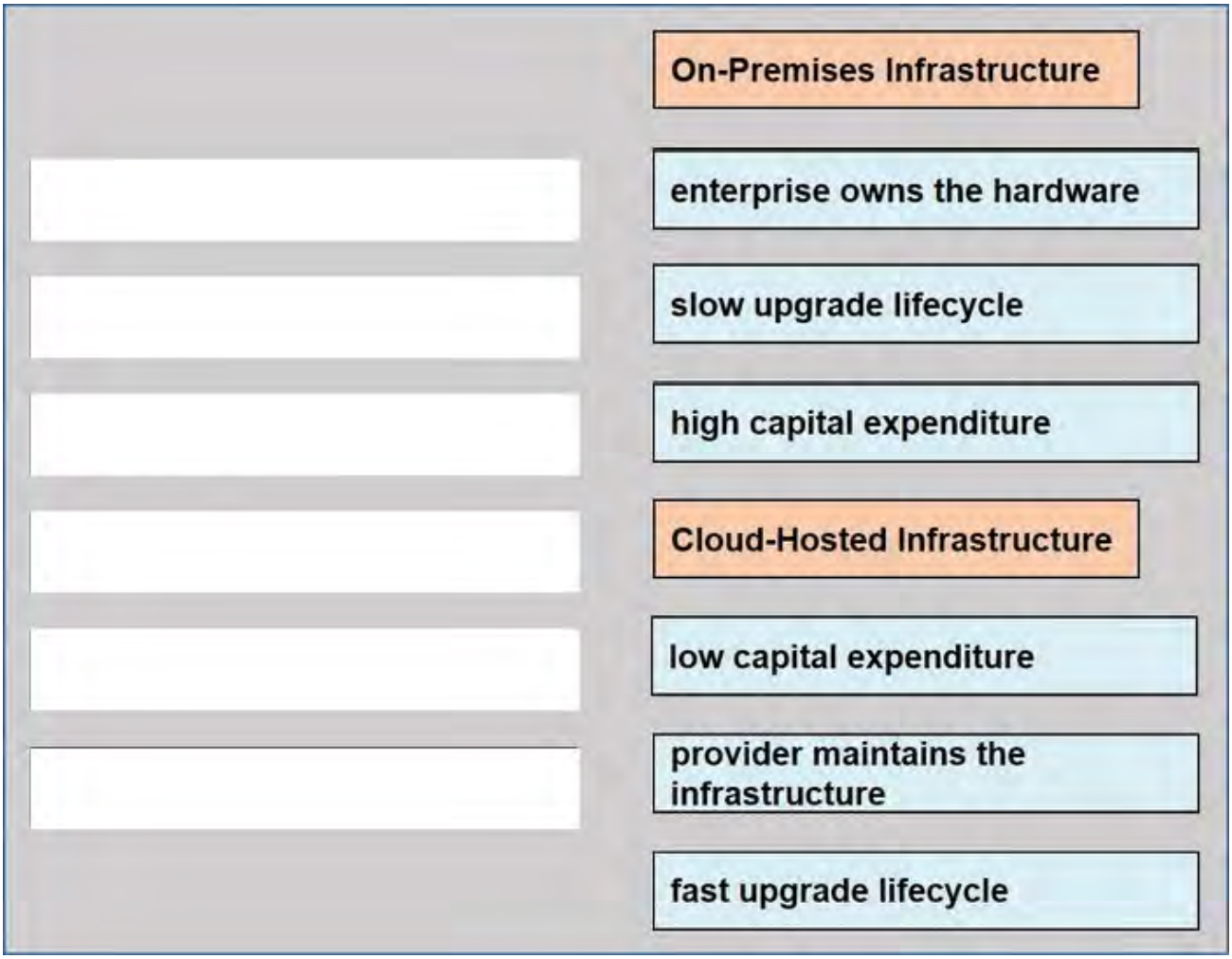
Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets



Explanation

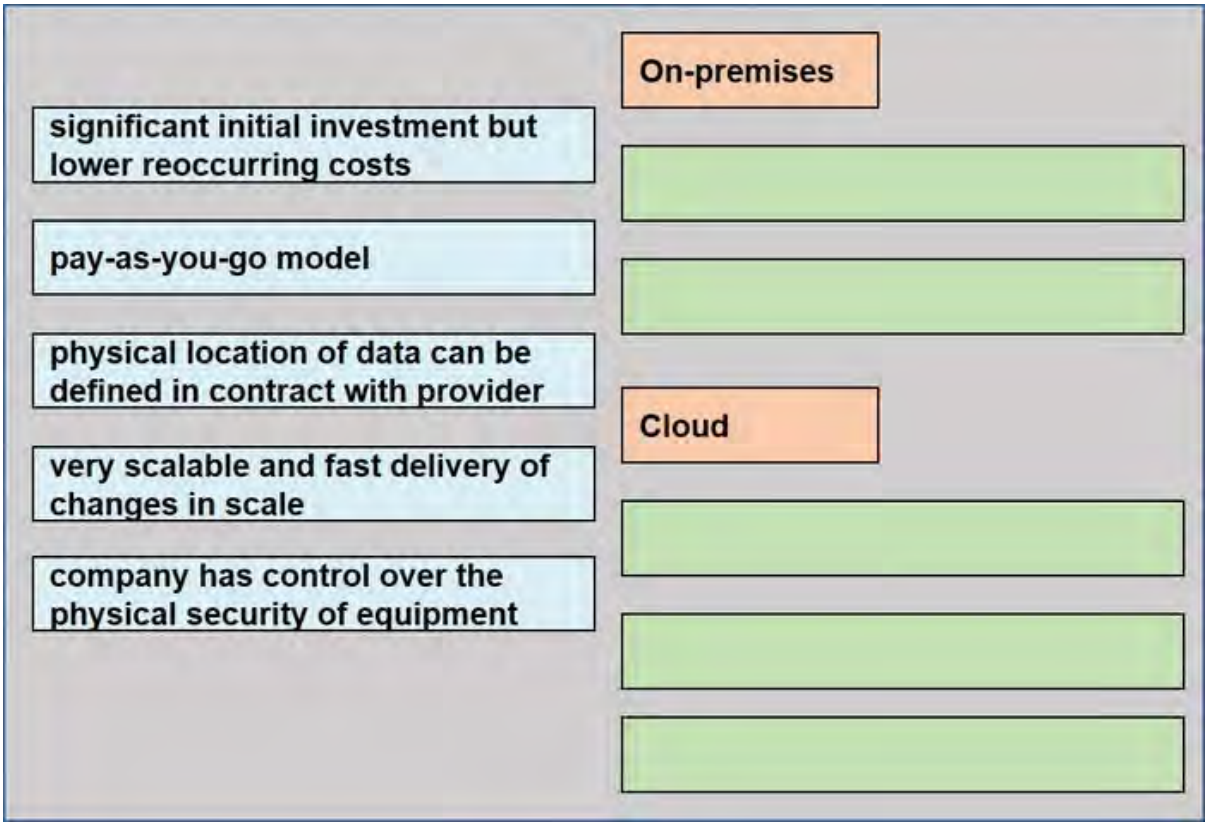
Explanation/Reference:

QUESTION 4
DRAG DROP

Drag and drop the characteristics from the left onto the correct infrastructure deployment types on the right.

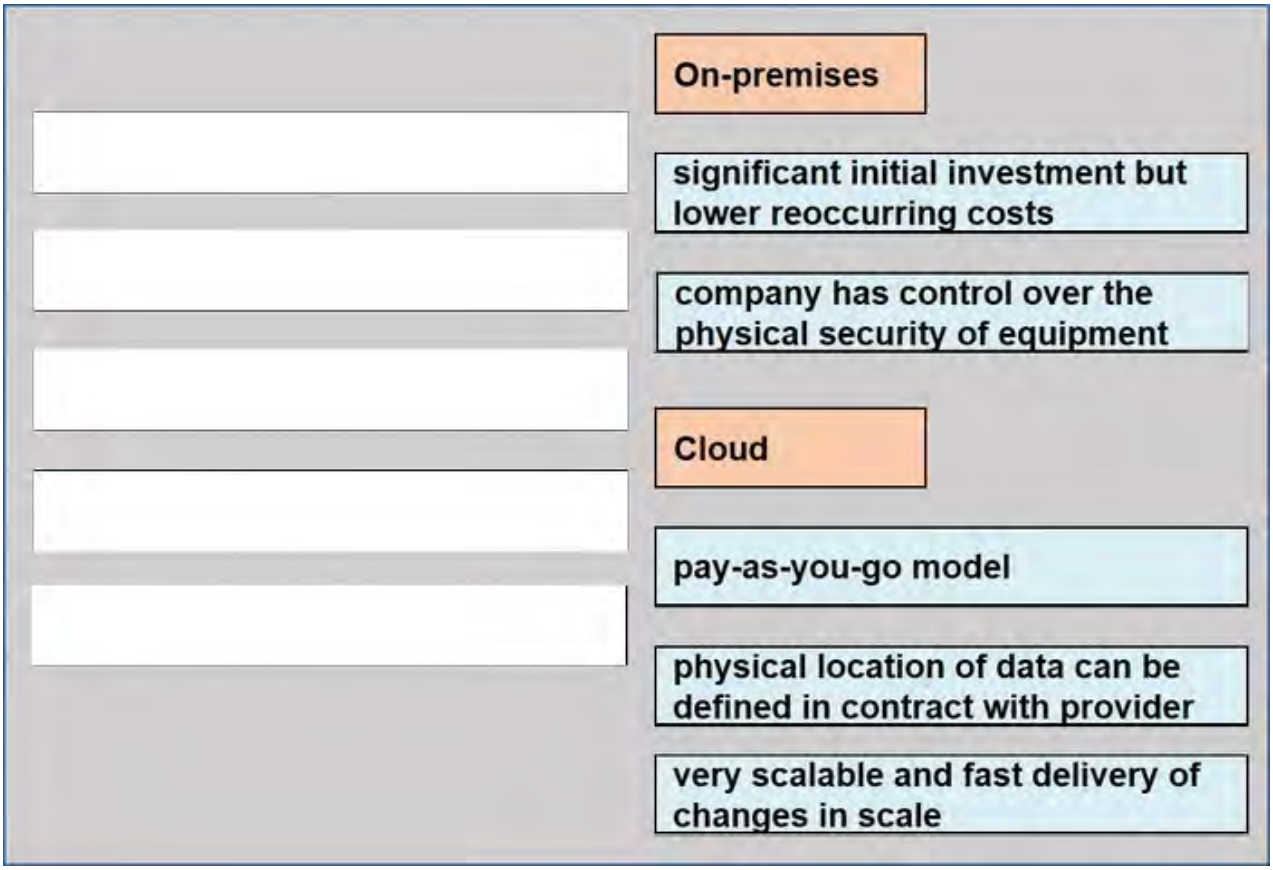
Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets



Explanation

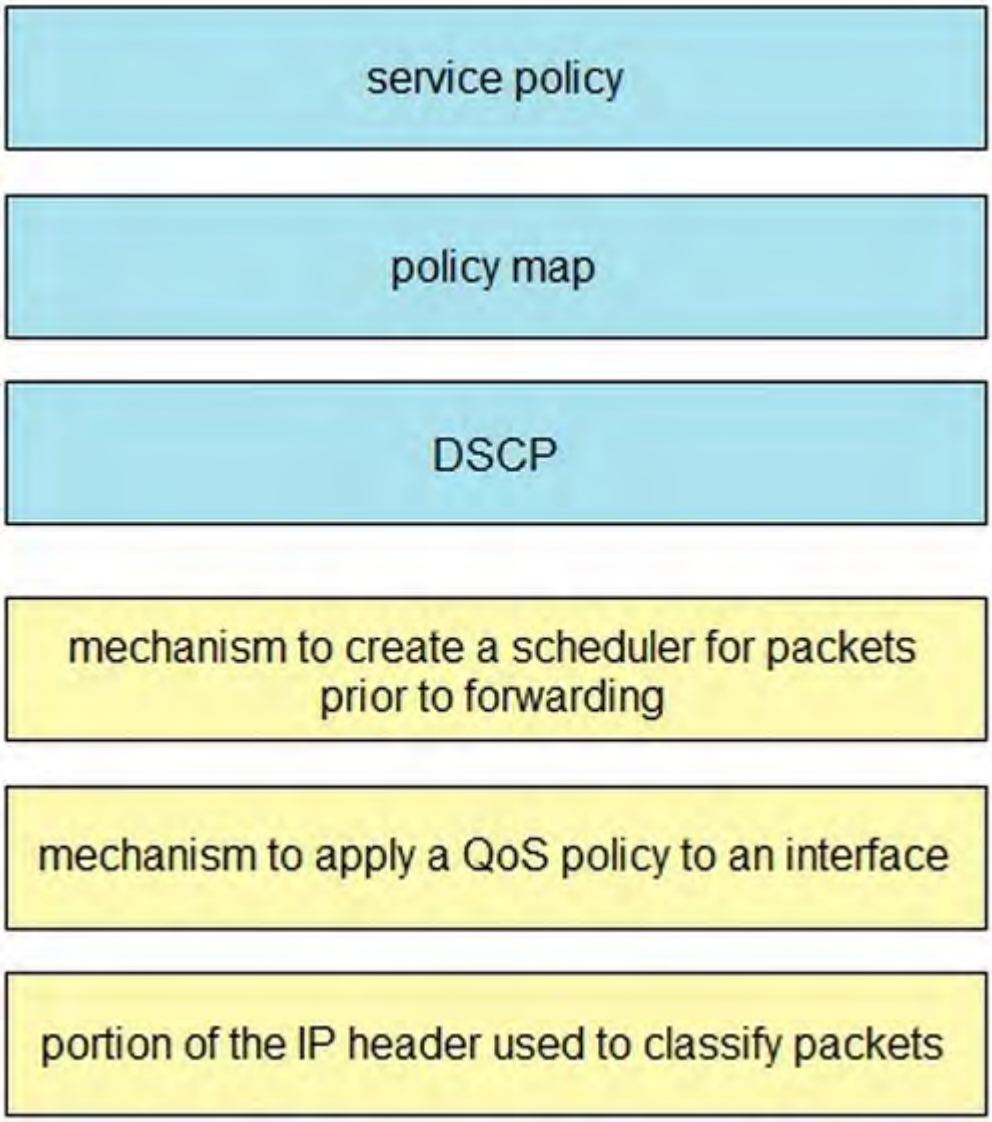
Explanation/Reference:

QUESTION 5
DRAG DROP

Drag and drop the QoS mechanisms from the left onto the deployment models on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets

Explanation

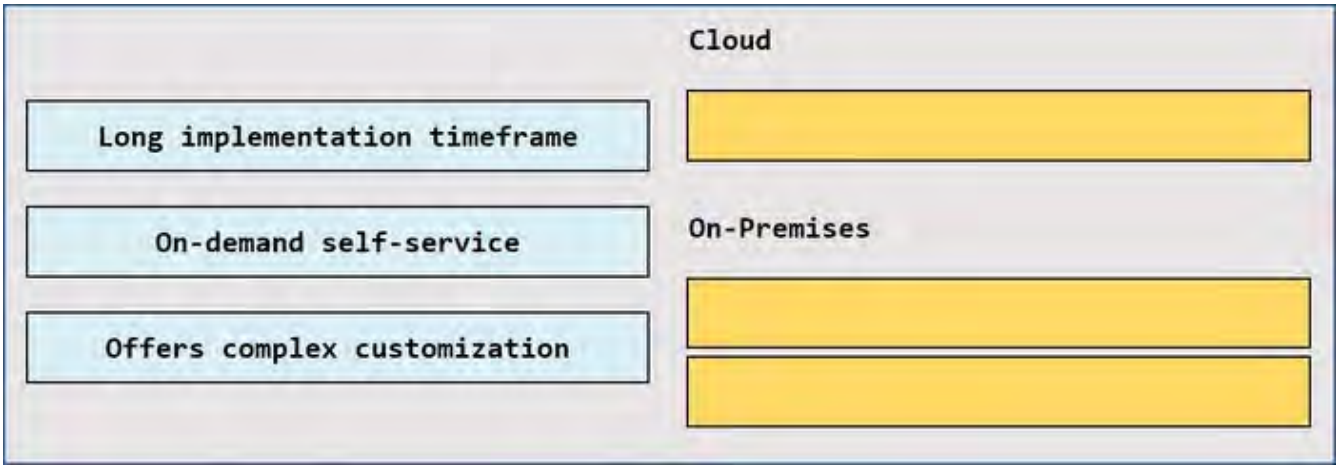
Explanation/Reference:

QUESTION 6
DRAG DROP

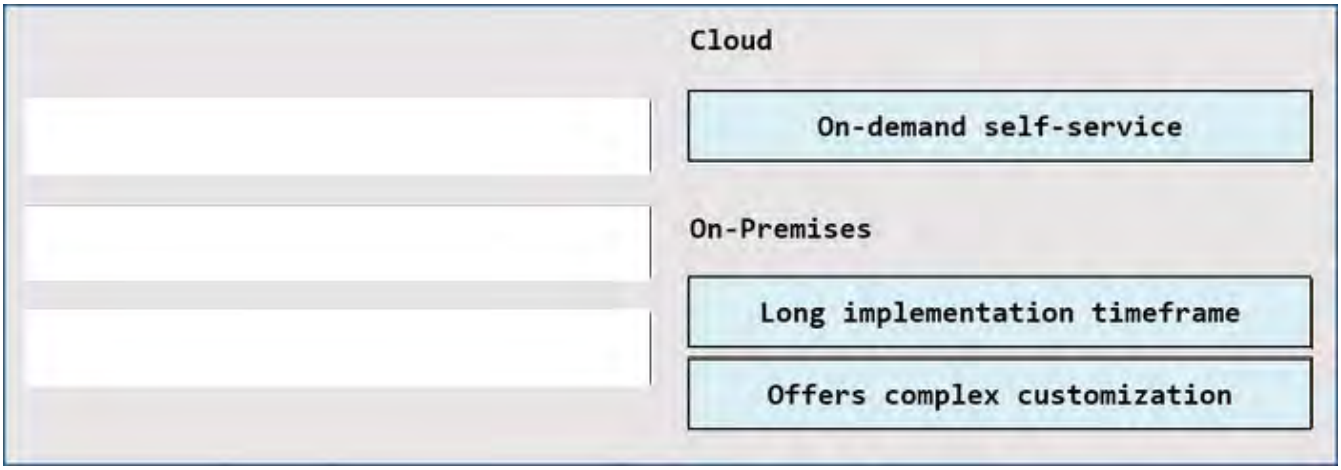
Drag and drop the characteristics from the left onto the deployment models on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

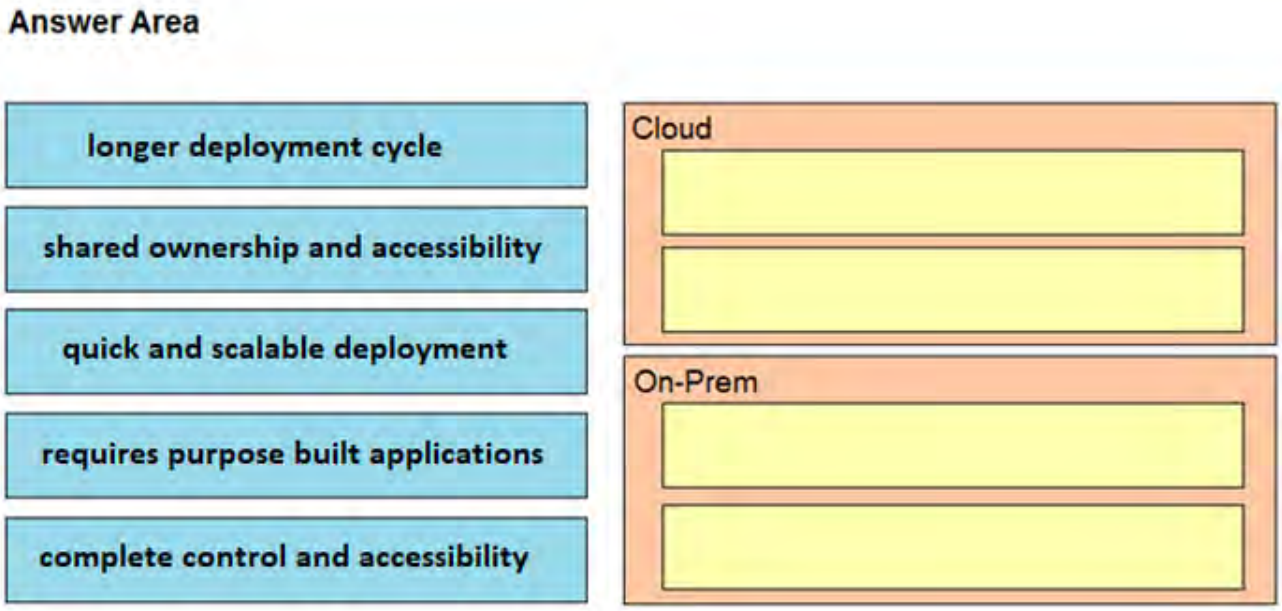
Explanation/Reference:

QUESTION 7
DRAG DROP

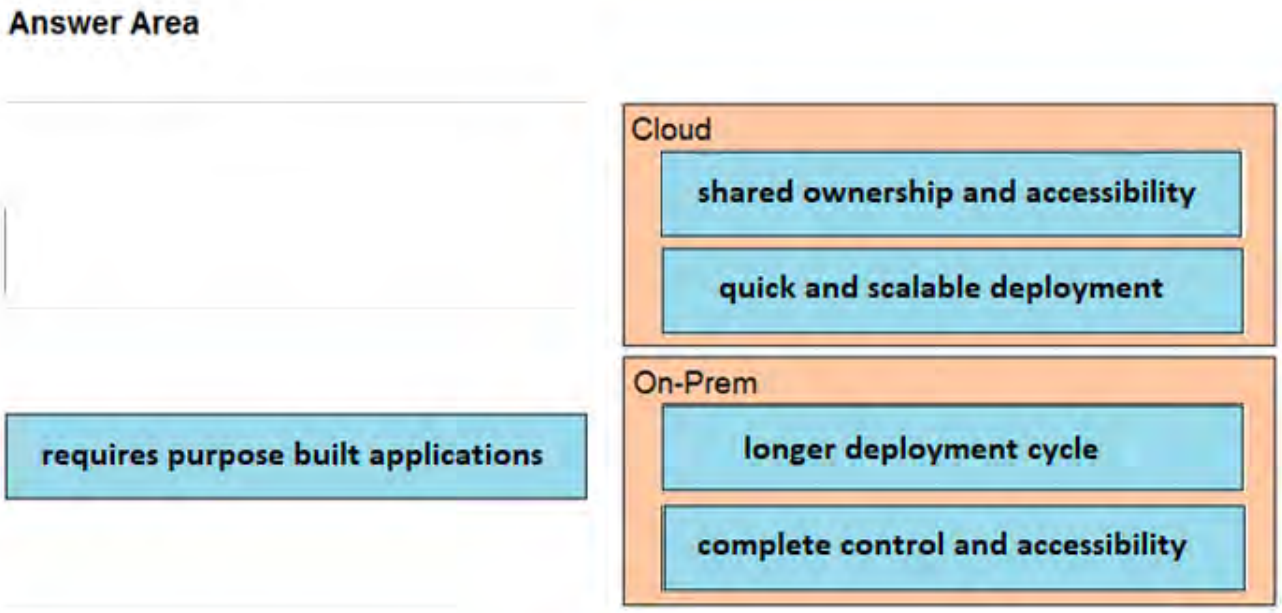
Drag and drop the characteristics from the left onto the deployment models on the right Not all options are used.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

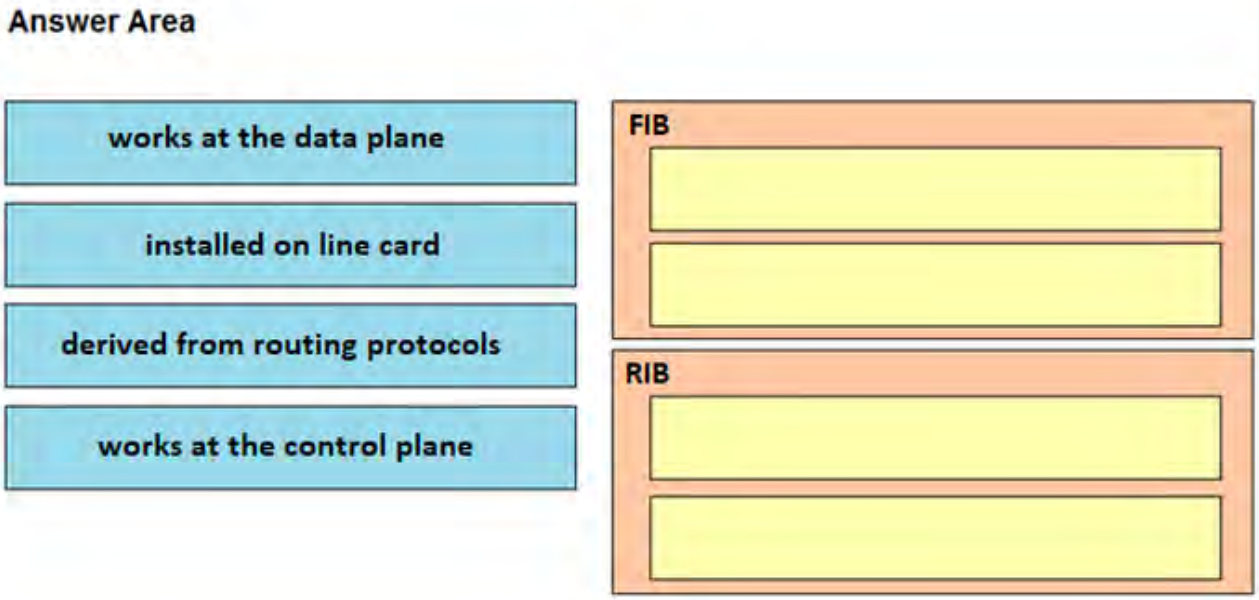
Explanation/Reference:

QUESTION 8
DRAG DROP

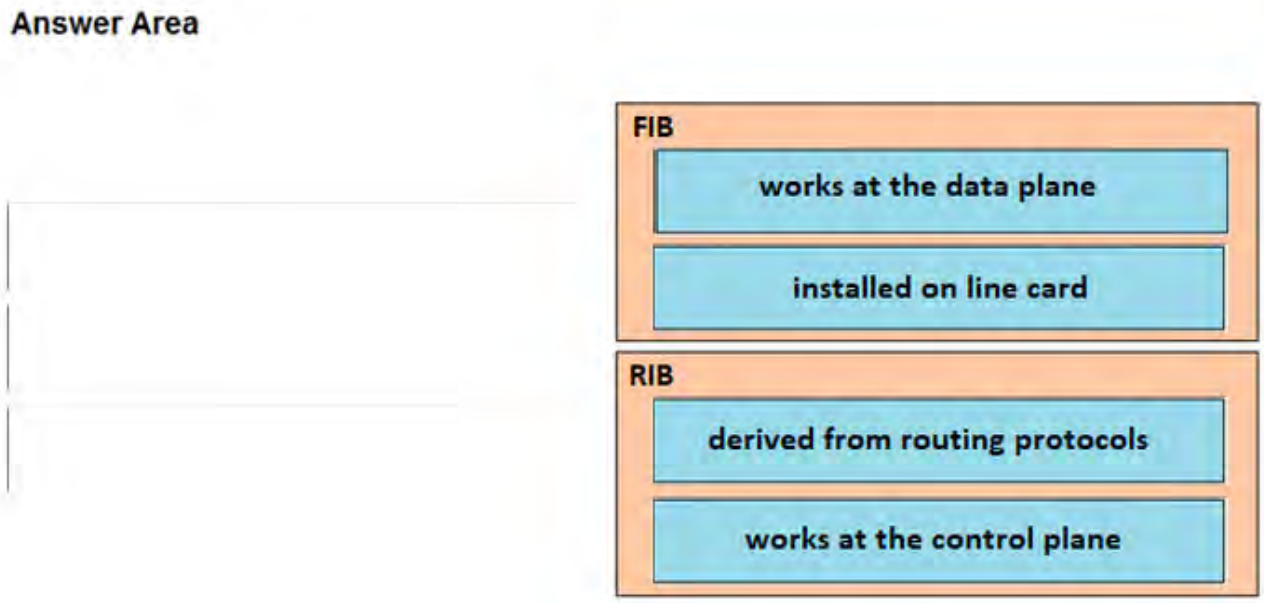
Drag and drop the characteristics from the left onto the architectures on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:

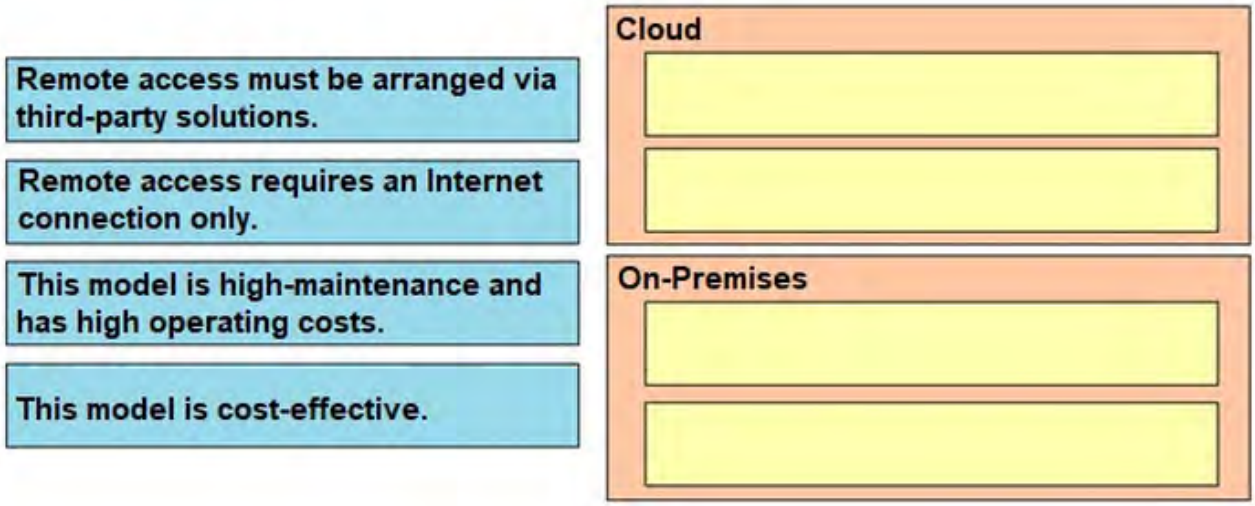
QUESTION 9
DRAG DROP

Drag and drop the characteristics from the left onto the deployment models on the right.

Select and Place:

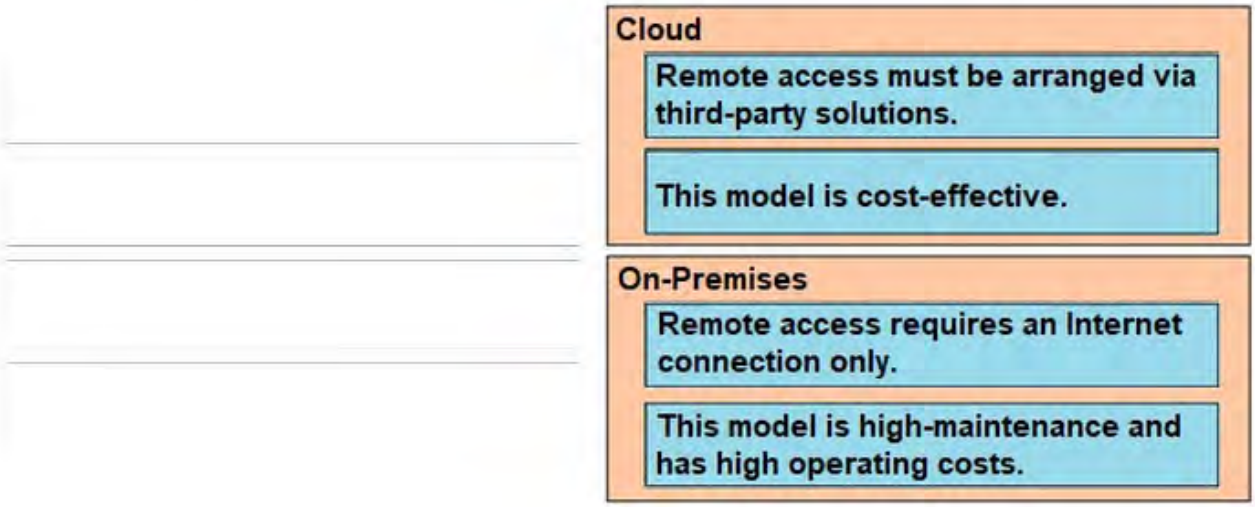
https://t.me/learningnets

Answer Area



Correct Answer:

Answer Area



Explanation

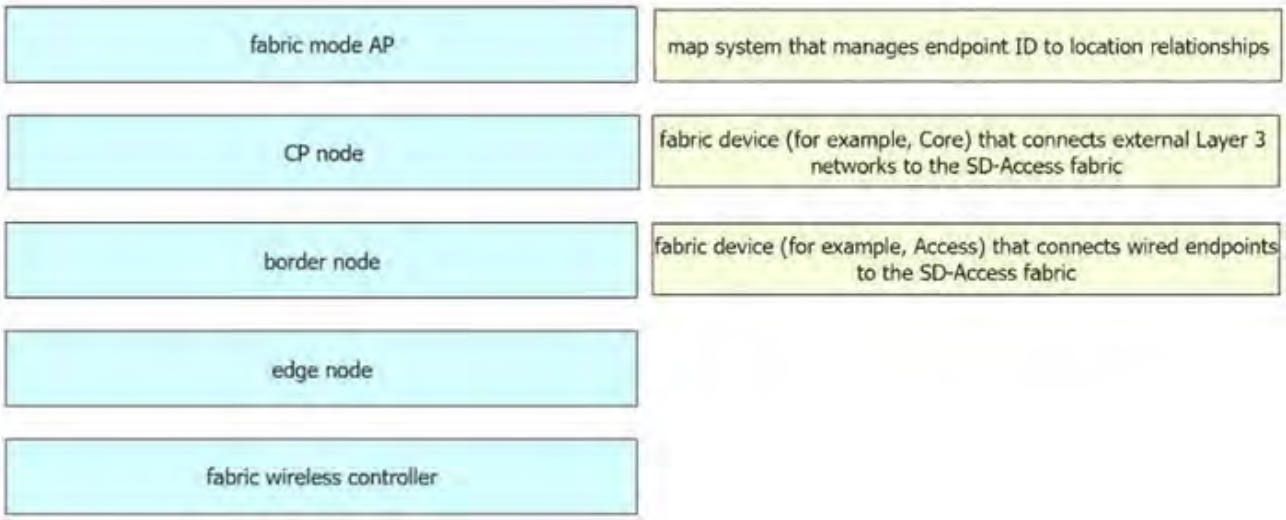
Explanation/Reference:

QUESTION 10
DRAG DROP

Drag and drop the components of the Cisco SD-Access fabric architecture from the left onto the correct descriptions on the right. Not all options are used.

Select and Place:

https://t.me/learningnets



Correct Answer:

Explanation

Explanation/Reference:

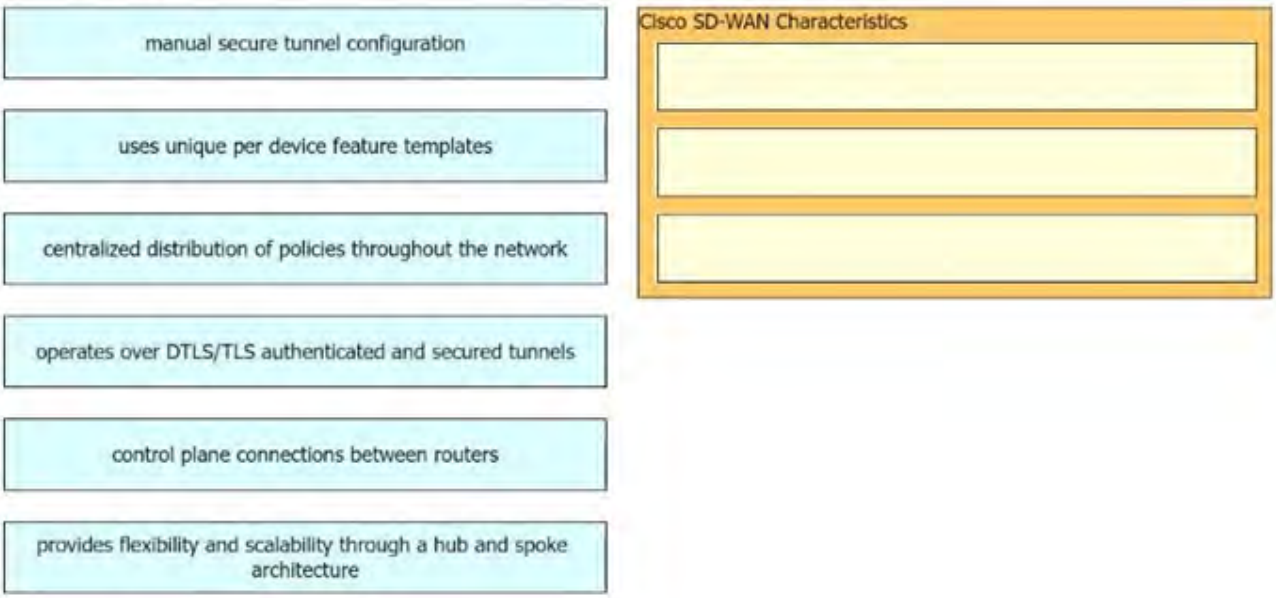
QUESTION 11
DRAG DROP

Drag and drop the characteristics of Cisco SD-WAN from the left onto the right. Not all options are used.

Select and Place:

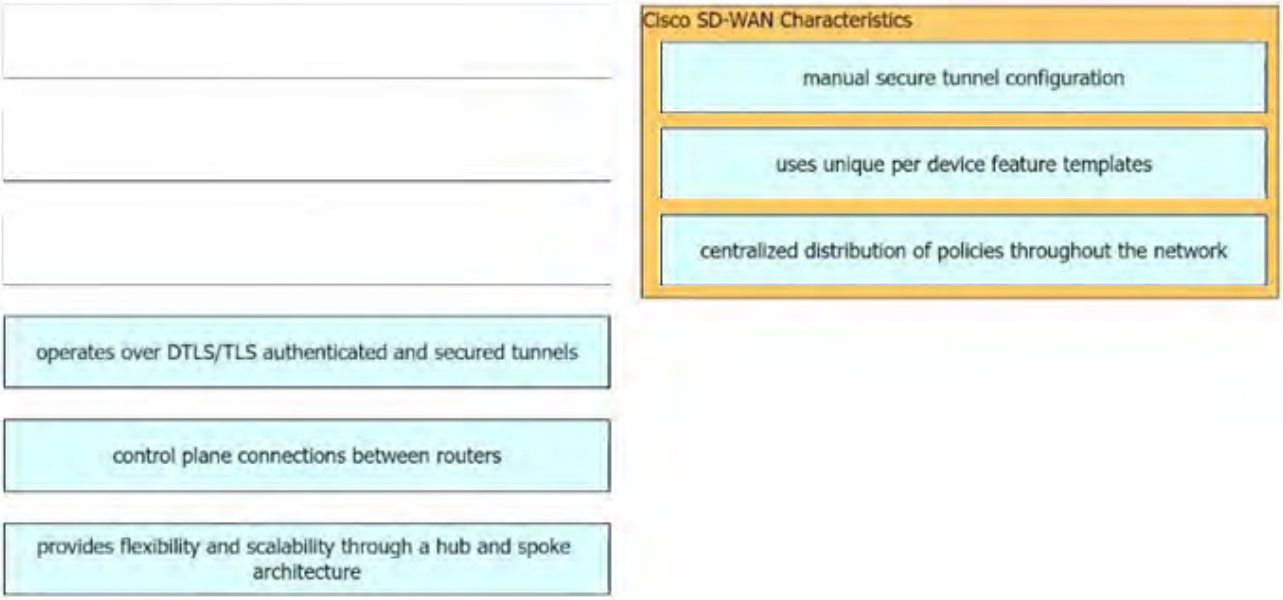
https://t.me/learningnets

Answer Area



Correct Answer:

Answer Area



Explanation

Explanation/Reference:

QUESTION 12
DRAG DROP

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

Select and Place:

https://t.me/learningnets

Answer Area

CoS	tool to enforce rate-limiting on ingress/egress
shaping	bandwidth management technique which delays datagrams
policing	portion of the 802.1Q header used to classify packets

Correct Answer:

Answer Area

	policing
	shaping
	CoS

Explanation

Explanation/Reference:

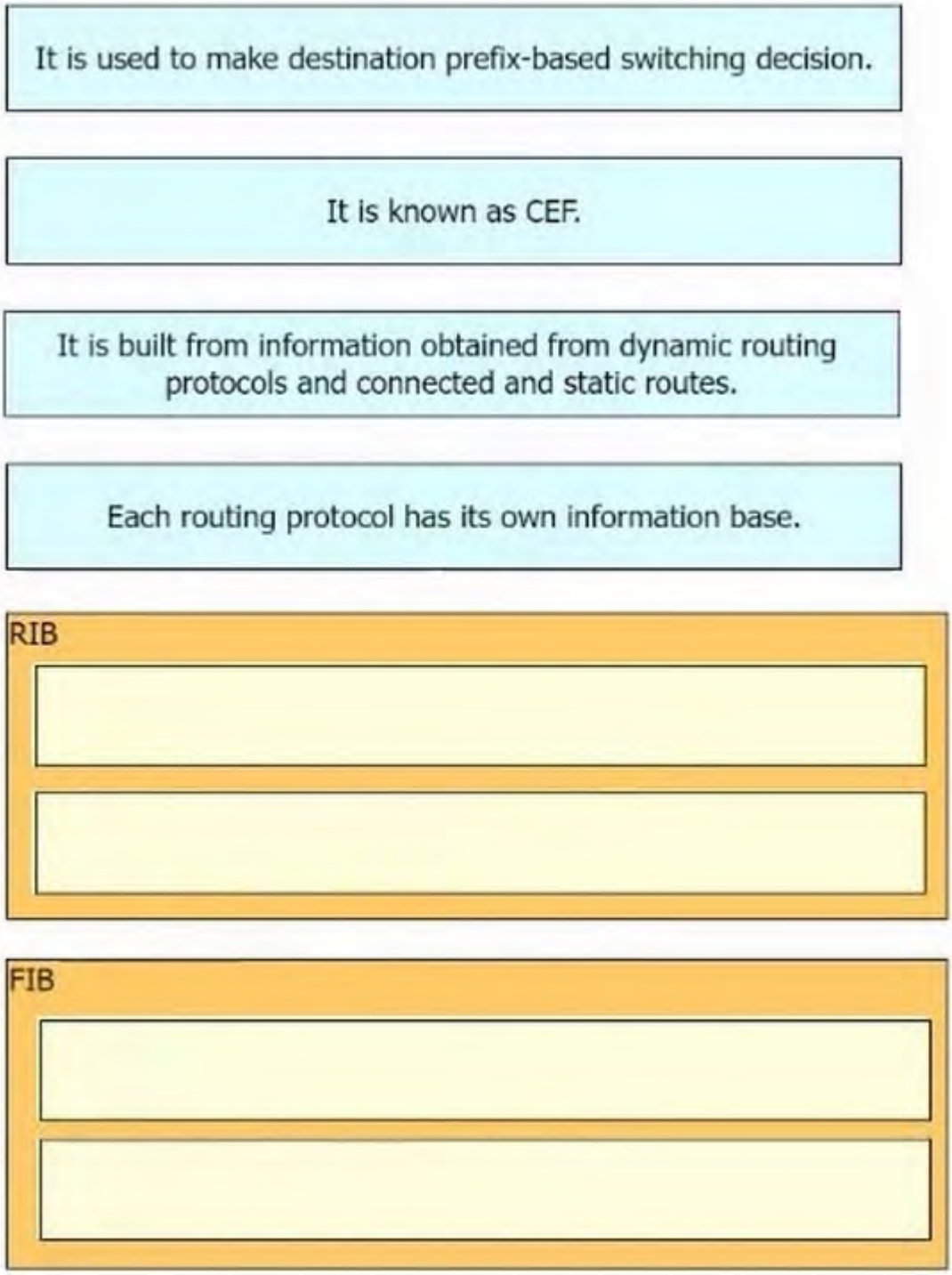
QUESTION 13
DRAG DROP

Drag and drop the characteristics from the left onto the corresponding switching architectures on the right.

Select and Place:

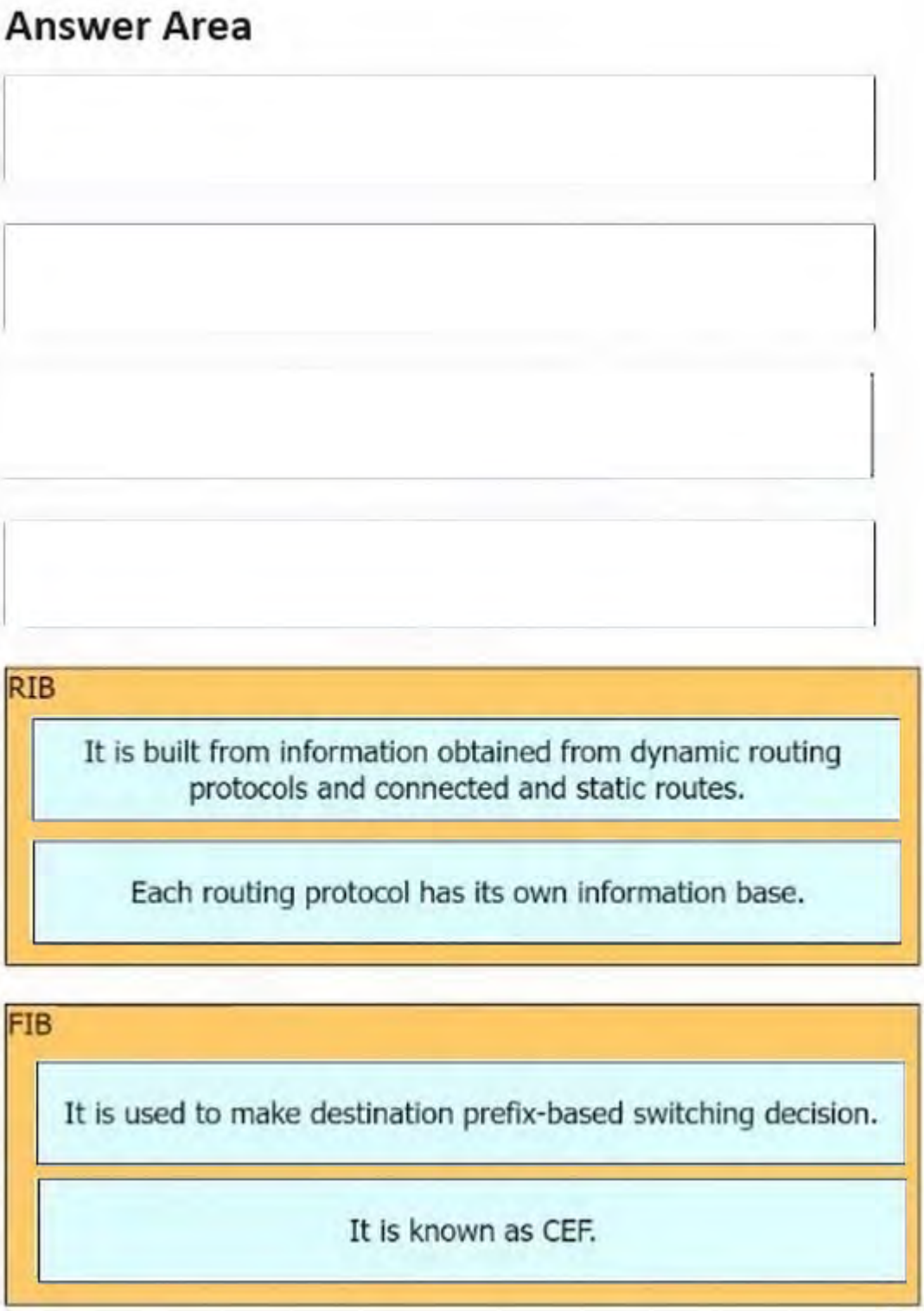
https://t.me/learningnets

Answer Area



Correct Answer:

https://t.me/learningnets



Explanation

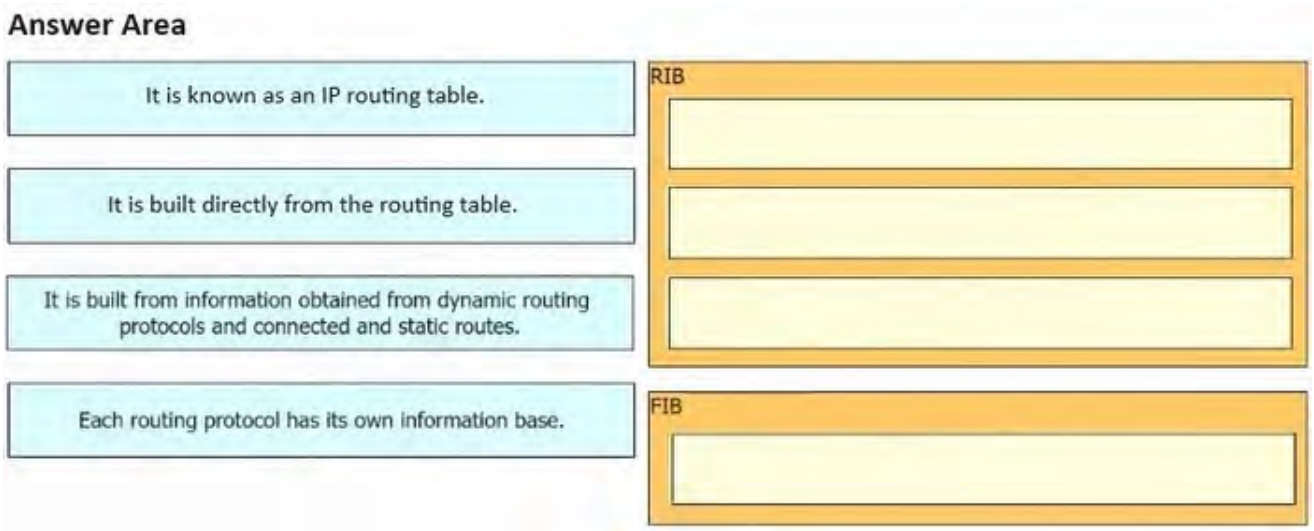
Explanation/Reference:

QUESTION 14
DRAG DROP

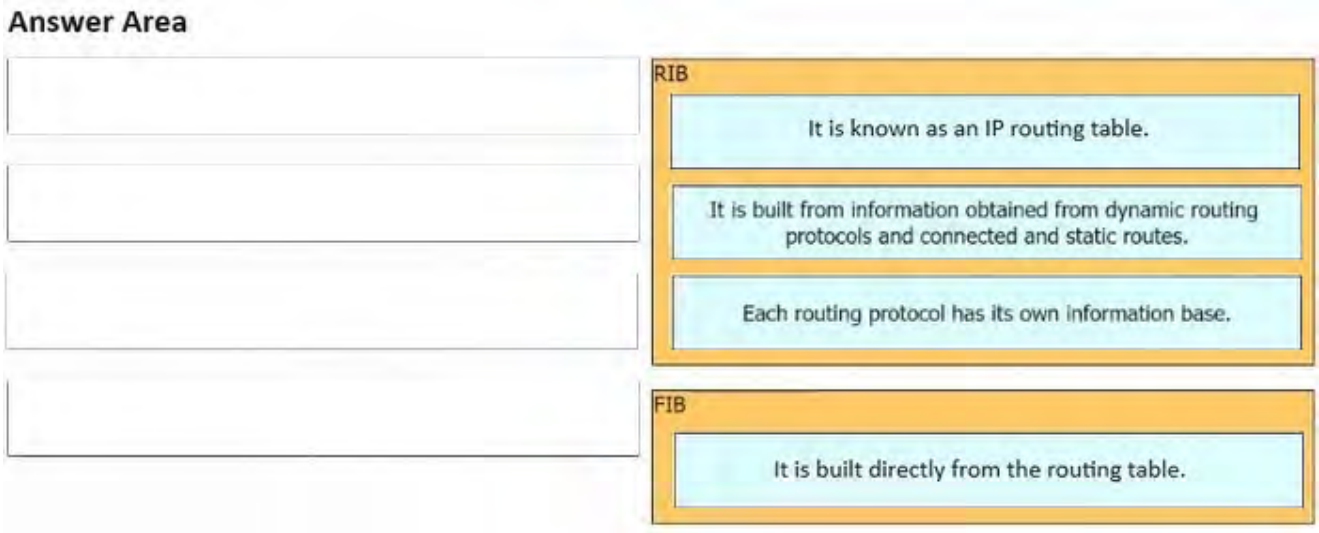
Drag and drop the characteristics from the left onto the corresponding switching architectures on the right.

https://t.me/learningnets

Select and Place:



Correct Answer:



Explanation

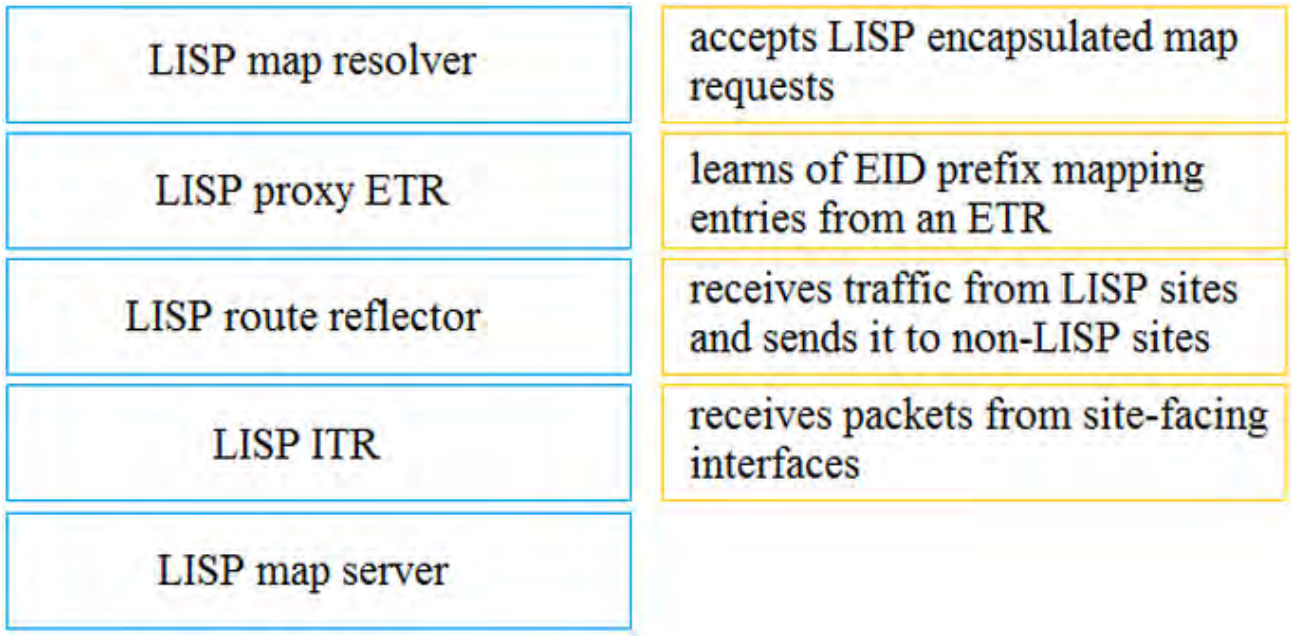
Explanation/Reference:

QUESTION 15
DRAG DROP

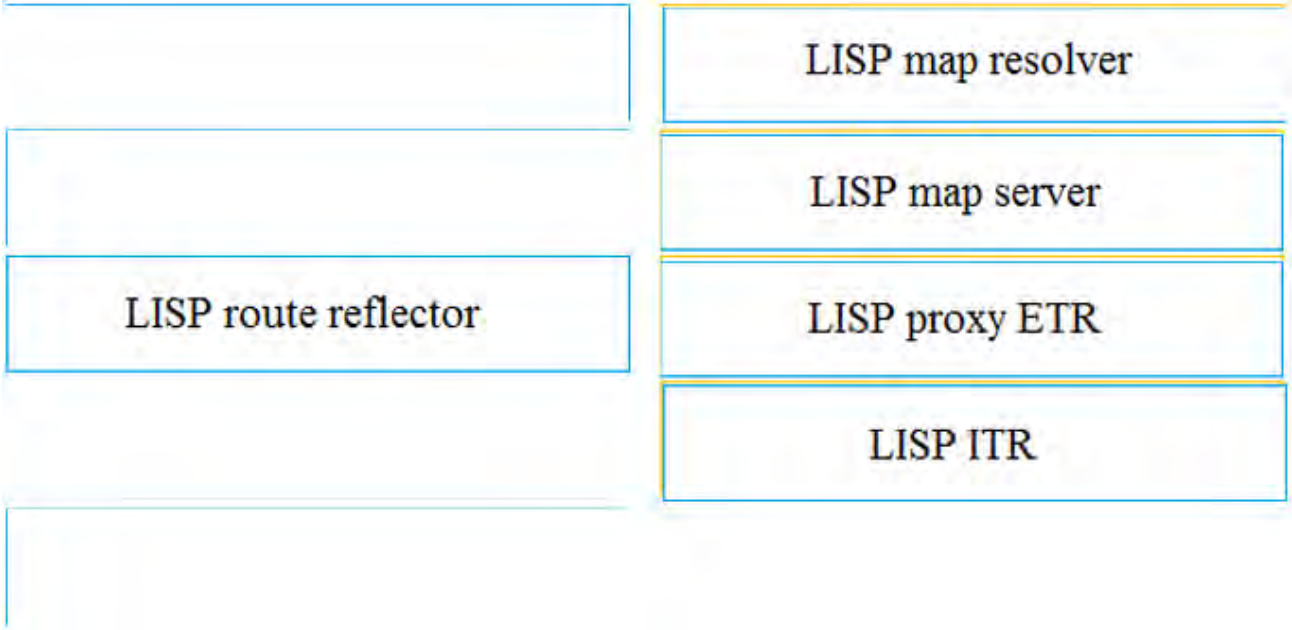
Drag and drop the LISP components from the left onto the function they perform on the right. Not all options are used.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:
+ accepts LISP encapsulated map requests: LISP map resolver + learns of EID prefix mapping entries from an ETR: LISP map server + receives traffic from LISP sites and sends it to non-LISP sites: LISP proxy ETR
+ receives packets from site-facing interfaces: LISP ITR ITR is the function that maps the destination EID to a destination RLOC and then encapsulates the original packet with an additional header that has the source IP address of the ITR RLOC and the destination IP address of the RLOC of an Egress Tunnel Router (ETR). After the encapsulation, the original packet become a LISP packet. ETR is the function that receives LISP encapsulated packets, decapsulates them and forwards to its local EIDs. This function also requires EID-to-RLOC mappings so we need to point out an "map-server" IP address and the key (password) for authentication. A LISP proxy ETR (PETR) implements ETR functions on behalf of non-LISP sites. A PETR is typically used when a LISP site needs to send traffic to non-LISP sites but the LISP site is connected through a service provider that does not accept no routable EIDs as packet sources. PETRs act just like ETRs but for EIDs that send traffic to destinations at non-LISP sites.

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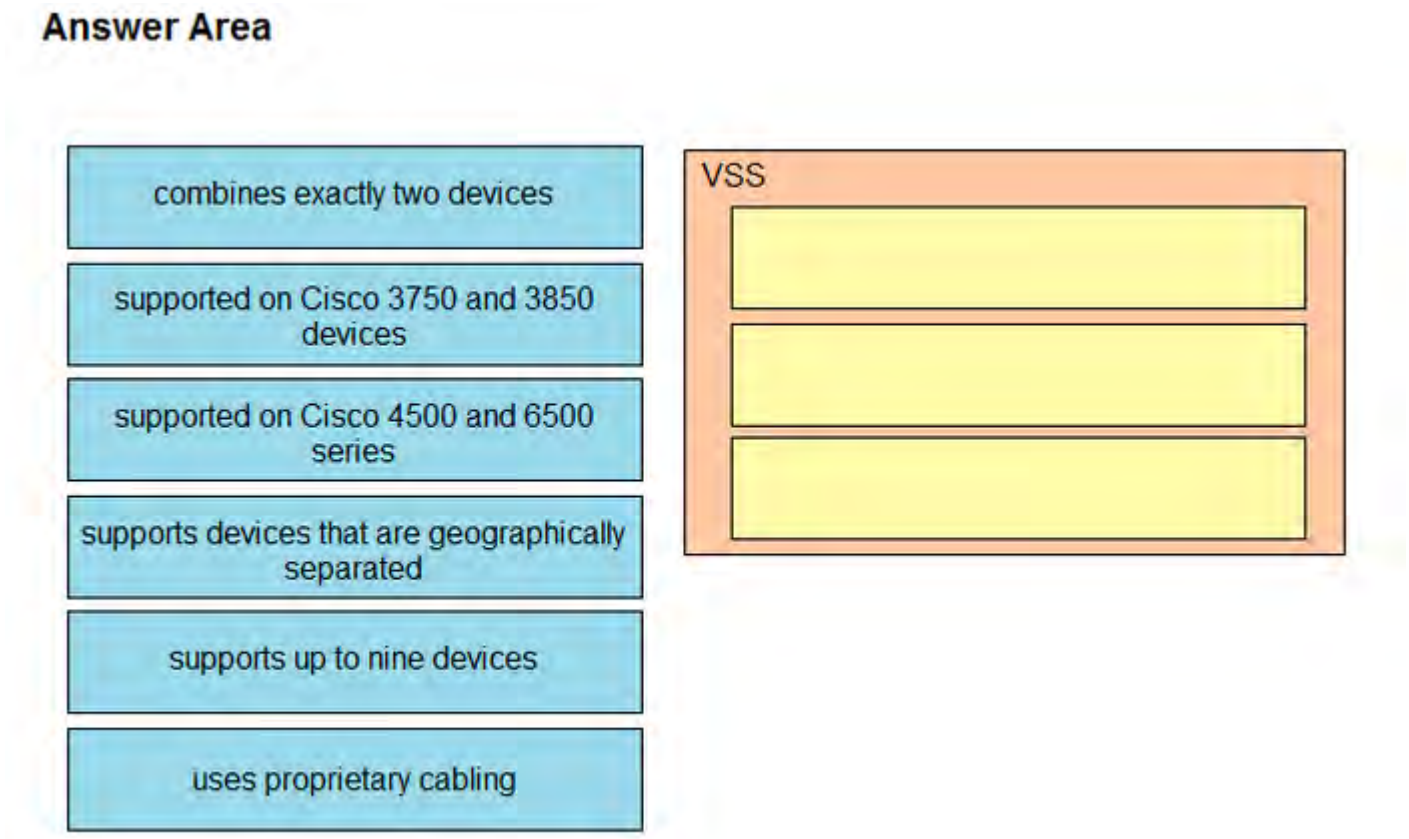
Map Server (MS) processes the registration of authentication keys and EID-to-RLOC mappings. ETRs sends periodic Map-Register messages to all its configured Map Servers. Map Resolver (MR): a LISP component which accepts LISP Encapsulated Map Requests, typically from an ITR, quickly determines whether or not the destination IP address is part of the EID namespace

Reference: https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/DCI/5-0/LISPmobility/DCI_LISP_Host_Mobility/LISPmobile_2.html#:~:text=%E2%80%93%20Proxy%20ITR%20(PITR)%3A%20A,devices%20deployed%20at%20LISP%20sites.

QUESTION 16
DRAG DROP

Drag and drop the descriptions of the VSS technology from the left to the right. Not all options are used.

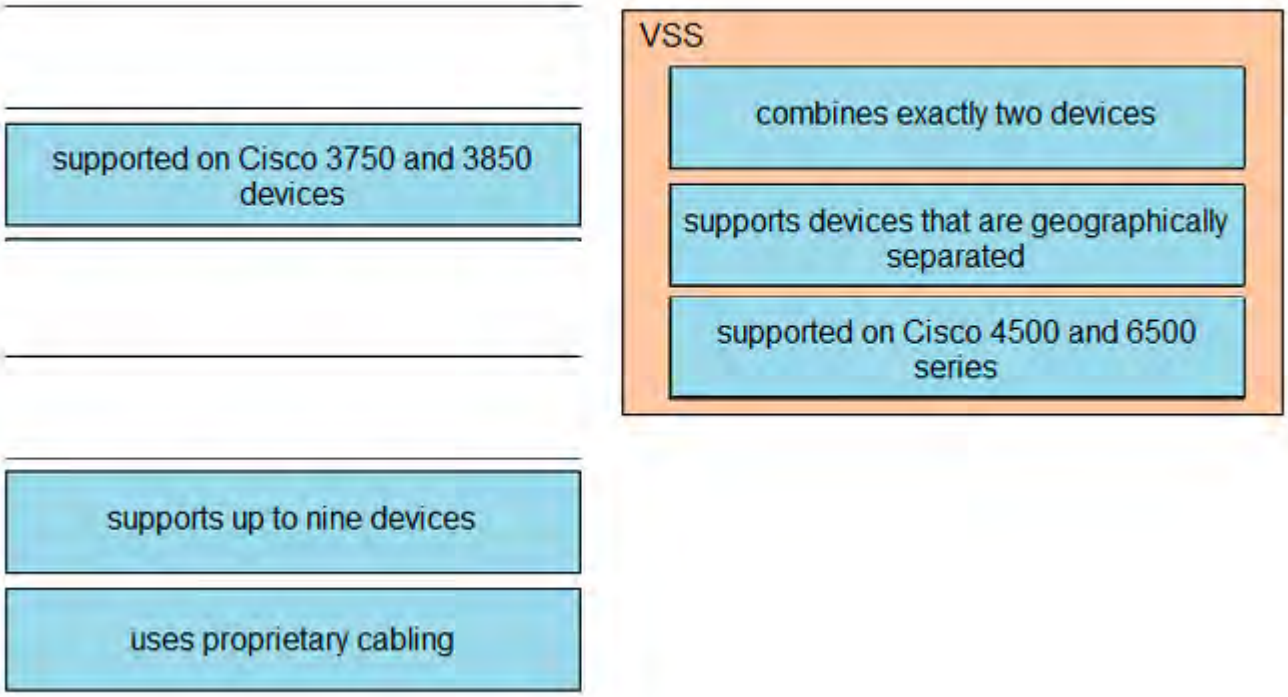
Select and Place:



Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

Explanation/Reference:
Switch Stacking uses proprietary cabling and is limited in distance while in the case of Cisco VSS, It uses 10 GE interfaces and so it can be geographically separated
In the case of stacking, no configuration required if switch supports stacking while in the case of Cisco VSS concept, you need to configure about the VSS and VSL on the switches.
You can have stack upto 9 switches via stack cabling, while in the Cisco VSS, only two switches can be the part of VSS.
For Cisco portfolio, Cisco switches like 2960 or 3750,3850 will be the part of the cisco stack switching while Cisco 4500 catalysts, Cisco 6500 and Cisco 6800 catalysts are using the concept of Cisco VSS.
Another thing like Cisco stack switching generally used at Access layer while Cisco VSS can be used at distribution or core layers.

QUESTION 17
DRAG DROP

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

Select and Place:

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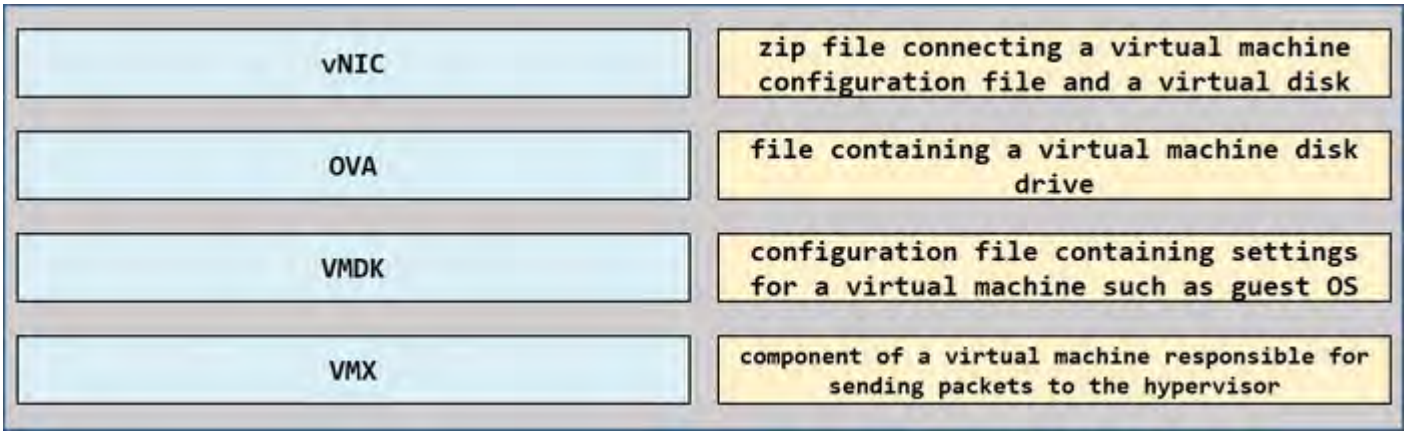
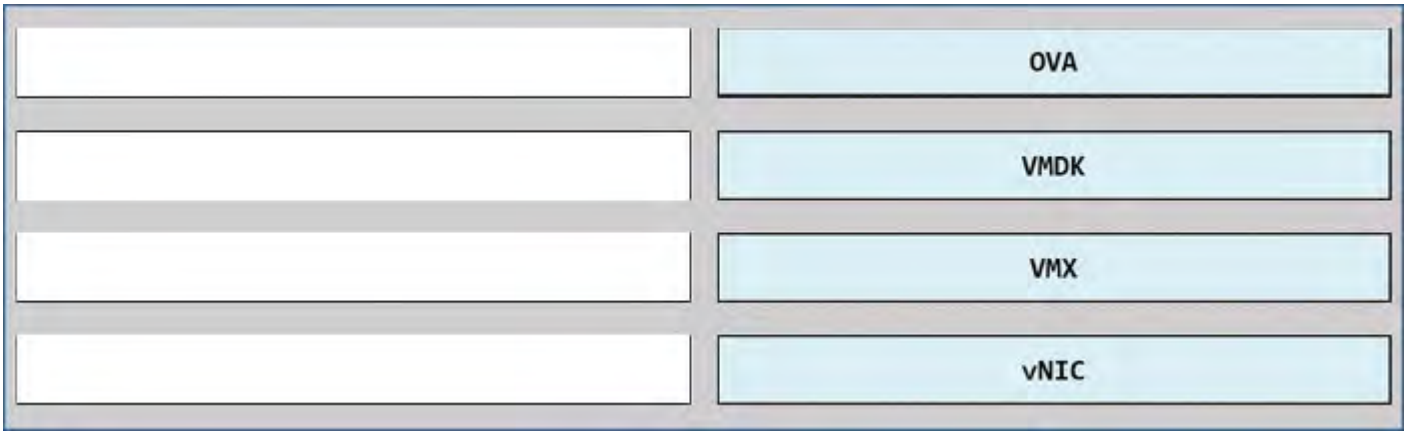


Correct Answer:



Explanation

Explanation/Reference:
+ configuration file containing settings for a virtual machine such as guest OS: VMX
+ component of a virtual machine responsible for sending packets to the hypervisor: vNIC
+ zip file containing a virtual machine configuration file and a virtual disk: OVA
+ file containing a virtual machine disk drive: VMDK
The VMX file simply holds the virtual machine configuration.

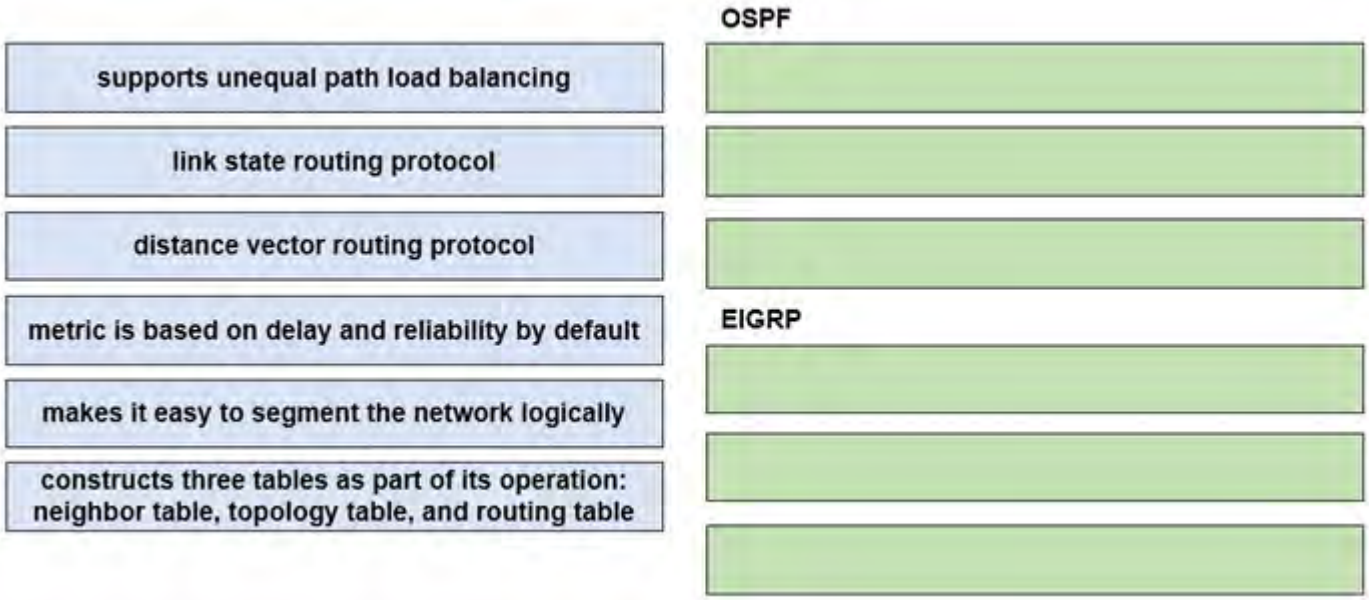
VMDK (short for Virtual Machine Disk) is a file format that describes containers for virtual hard disk drives to be used in virtual machines like VMware Workstation or VirtualBox.
An OVA file is an Open Virtualization Appliance that contains a compressed, “installable” version of a virtual machine. When you open an OVA file it extracts the VM and imports it into whatever virtualization software you have installed on your computer.

QUESTION 18
DRAG DROP

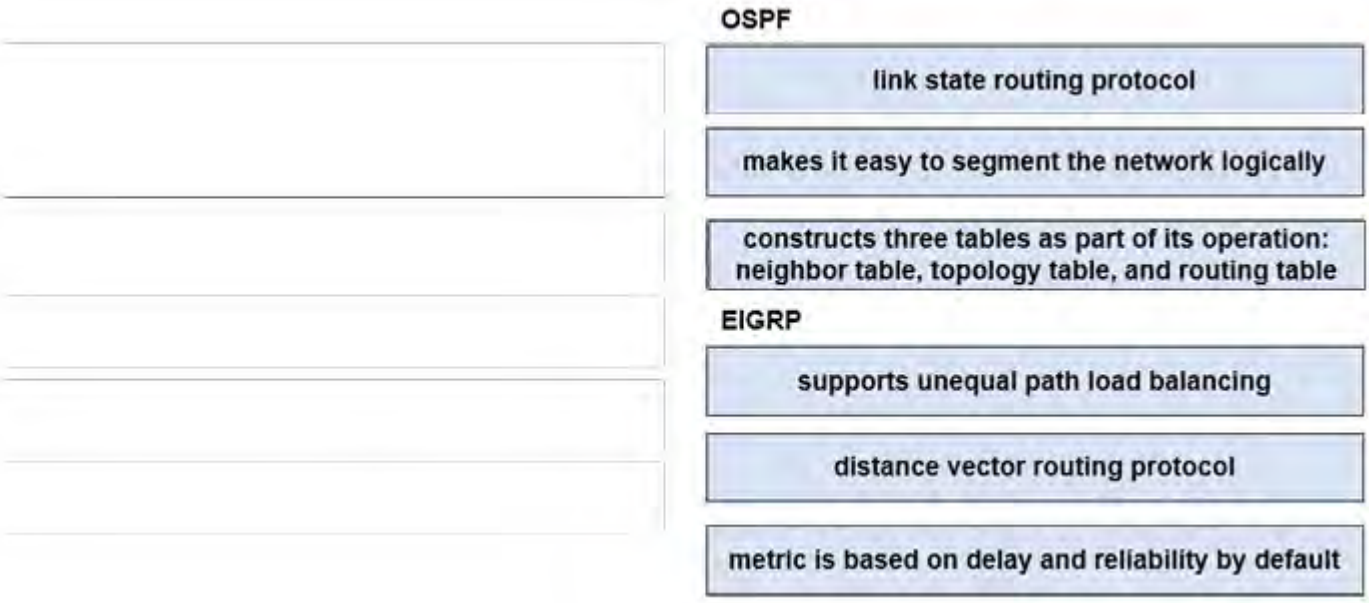
Drag and drop the characteristics from the left onto the correct routing protocol types on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 19
DRAG DROP

Drag and drop the descriptions from the left onto the routing protocol they describe on the right.

Select and Place:

https://t.me/learningnets

Answer Area

summaries can be created anywhere in the IGP topology	OSPF
uses areas to segment a network	
DUAL algorithm	EIGRP
summaries can be created in specific parts of the IGP topology	

Correct Answer:

Answer Area

	OSPF
	uses areas to segment a network
	summaries can be created in specific parts of the IGP topology
	EIGRP
	summaries can be created anywhere in the IGP topology
	DUAL algorithm

Explanation

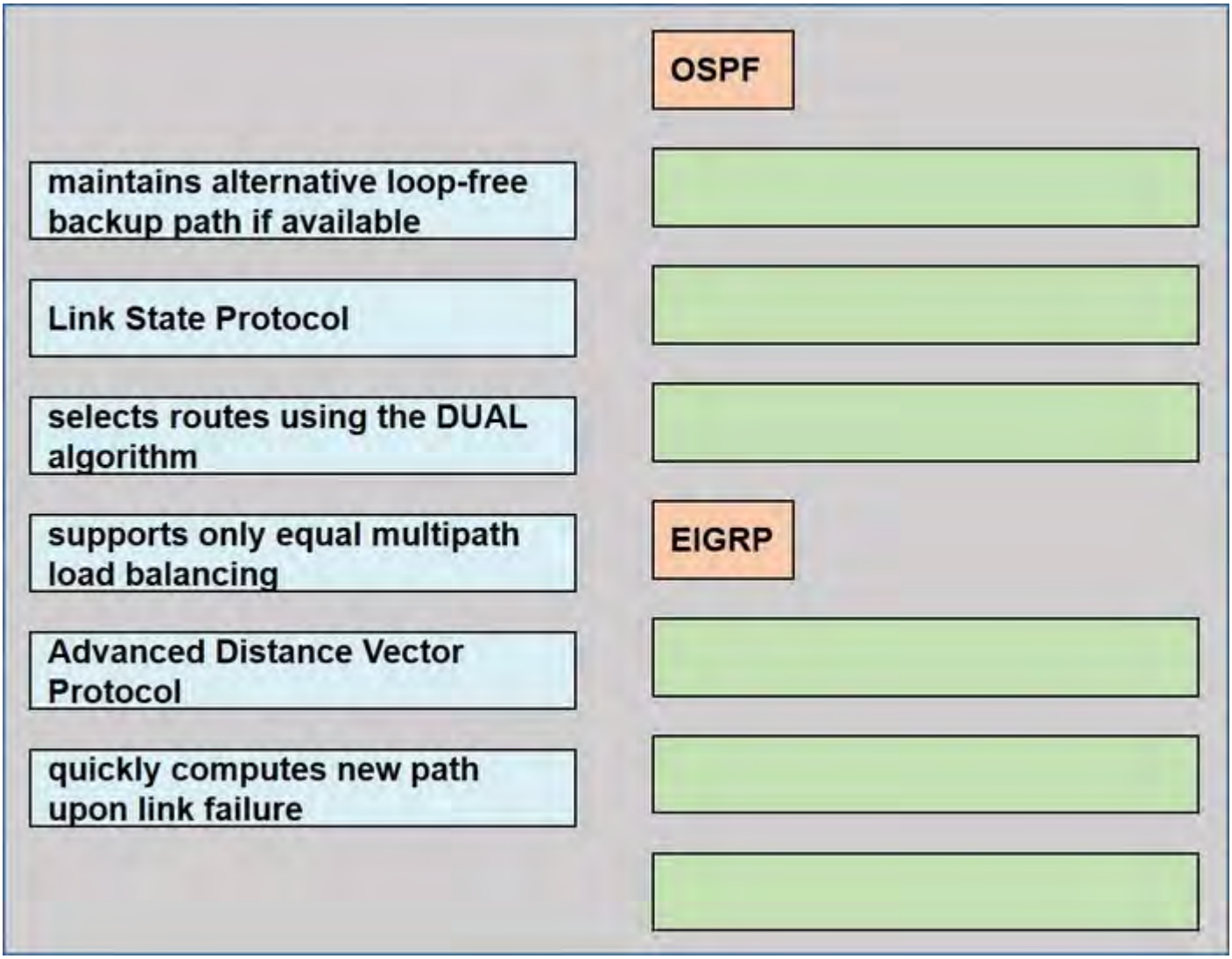
Explanation/Reference:

QUESTION 20
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocols they describe on the right.

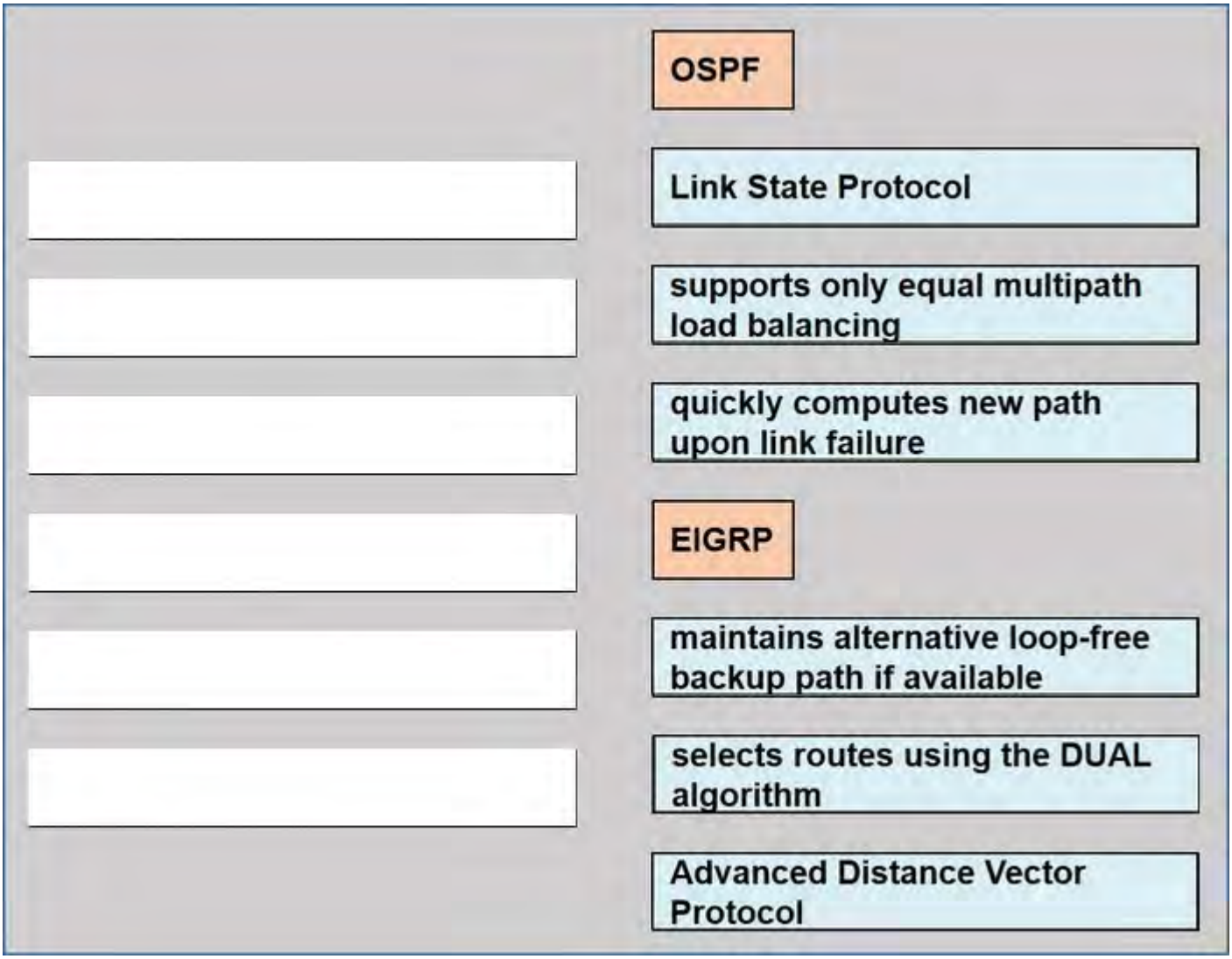
Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:
EIGRP maintains alternative loop-free backup via the feasible successors. To qualify as a feasible successor, a router must have an Advertised Distance (AD) less than the Feasible distance (FD) of the current successor route.
Advertised distance (AD): the cost from the neighbor to the destination. Feasible distance (FD): The sum of the AD plus the cost between the local router and the next-hop router

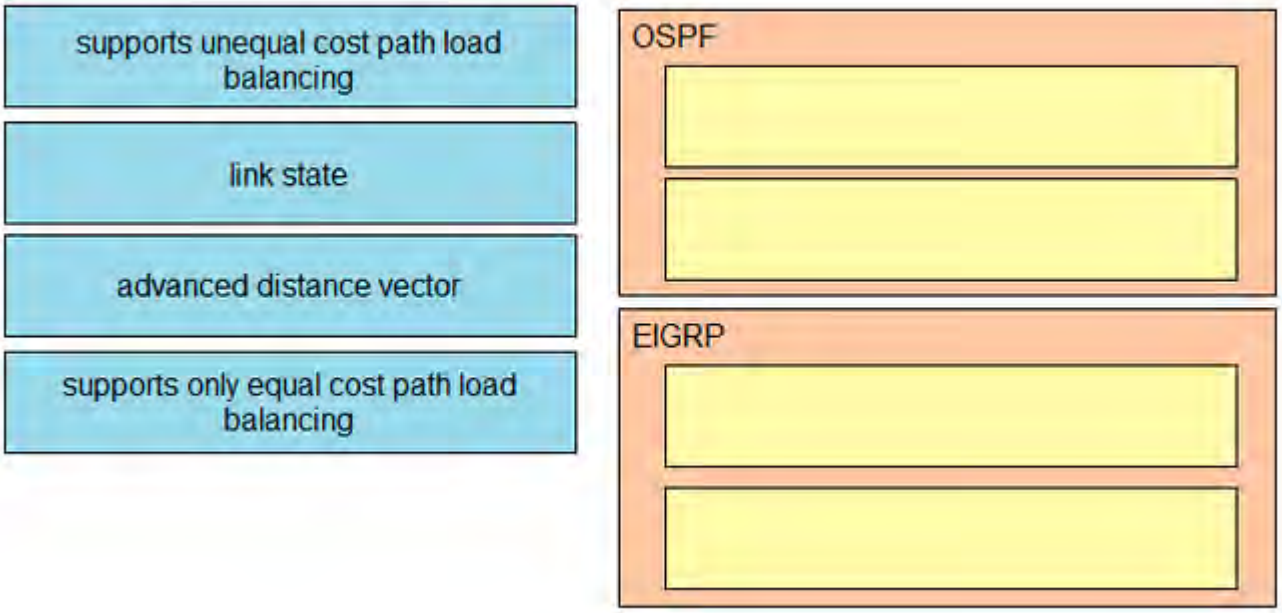
QUESTION 21
DRAG DROP

Drag and drop the descriptions from the left onto the routing protocol they describe on the right.

Select and Place:

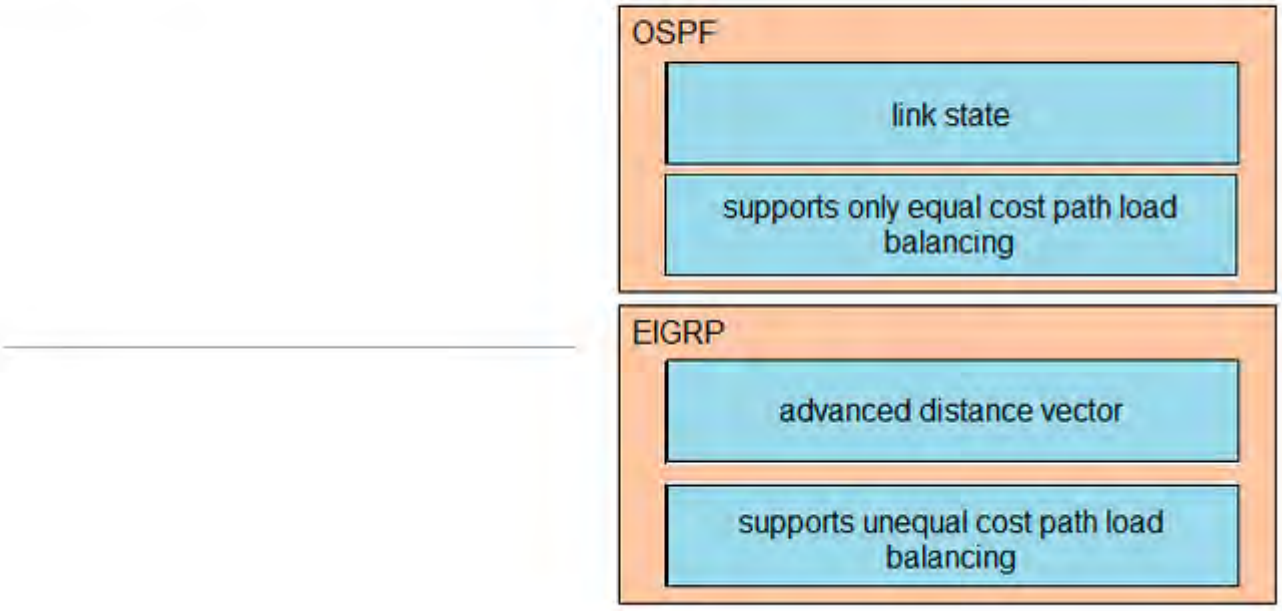
https://t.me/learningnets

Answer Area



Correct Answer:

Answer Area



Explanation

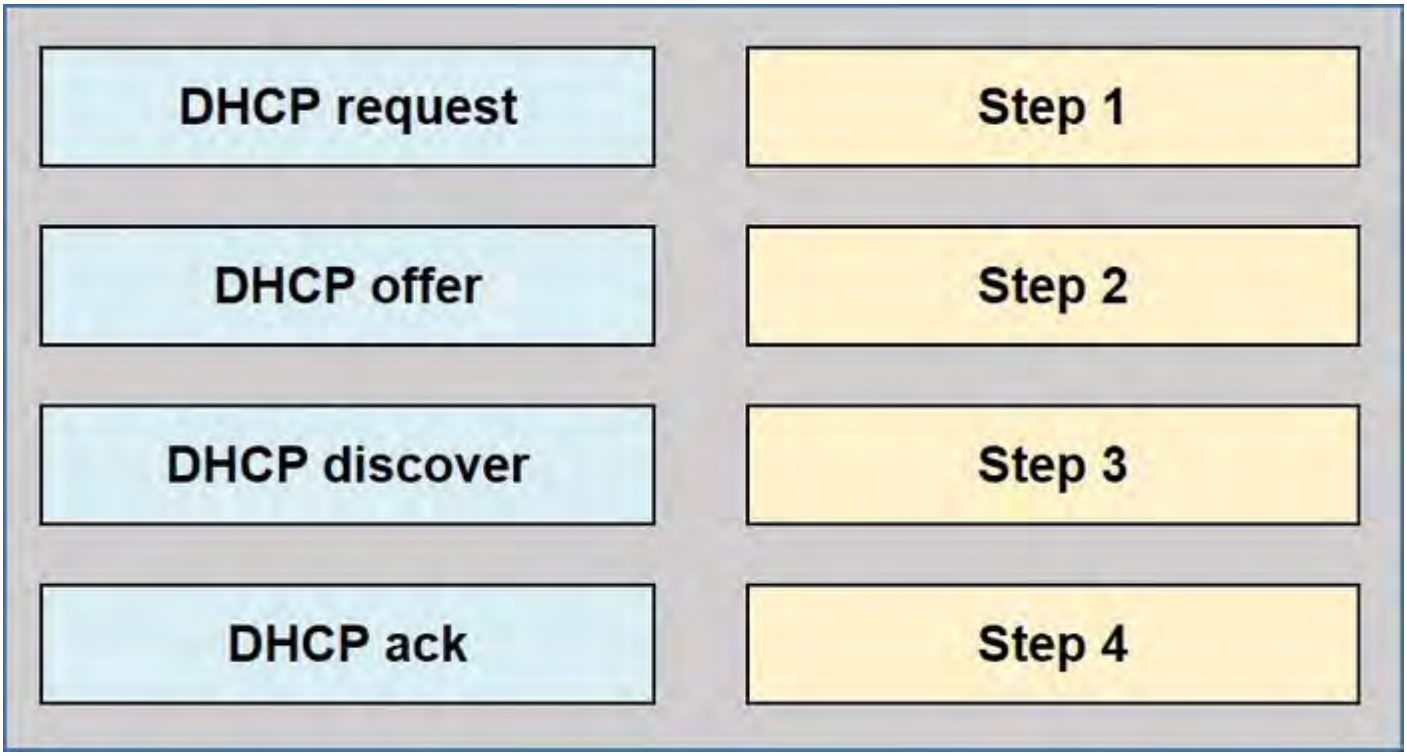
Explanation/Reference:

QUESTION 22
DRAG DROP

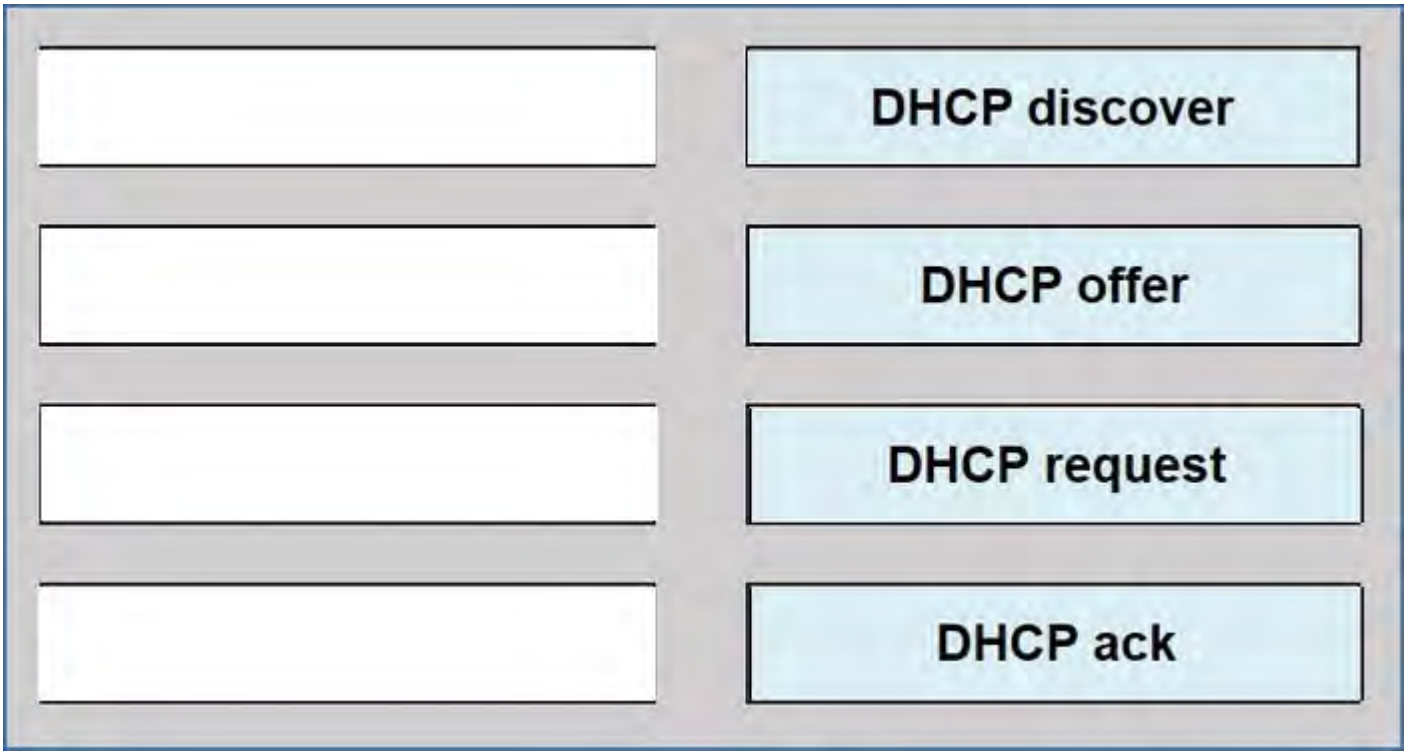
https://t.me/learningnets

Drag and drop the DHCP messages that are exchanged between a client and an AP into the order they are exchanged on the right.

Select and Place:



Correct Answer:



Explanation

Explanation/Reference:
There are four messages sent between the DHCP Client and DHCP Server: DHCPDISCOVER, DHCPOFFER, DHCPREQUEST and DHCPACKNOWLEDGEMENT.
This process is often abbreviated as DORA (for Discover, Offer, Request, Acknowledgement).

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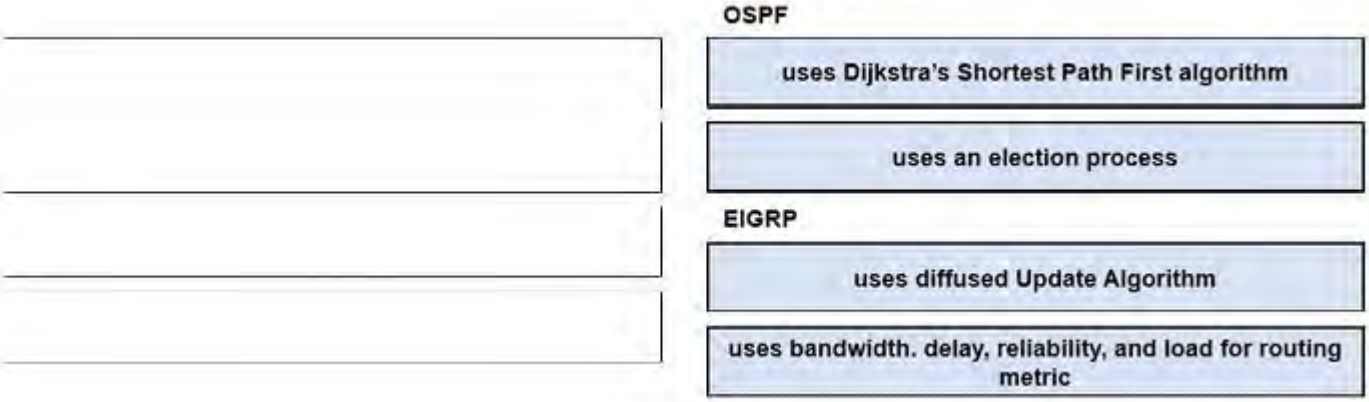
QUESTION 23
DRAG DROP

Drag and drop the characteristics from the left onto the protocols they apply to on the right?

Select and Place:

Correct Answer:



Explanation

Explanation/Reference:

QUESTION 24
DRAG DROP

Drag and drop characteristics of PIM dense mode from the left to the right

Select and Place:

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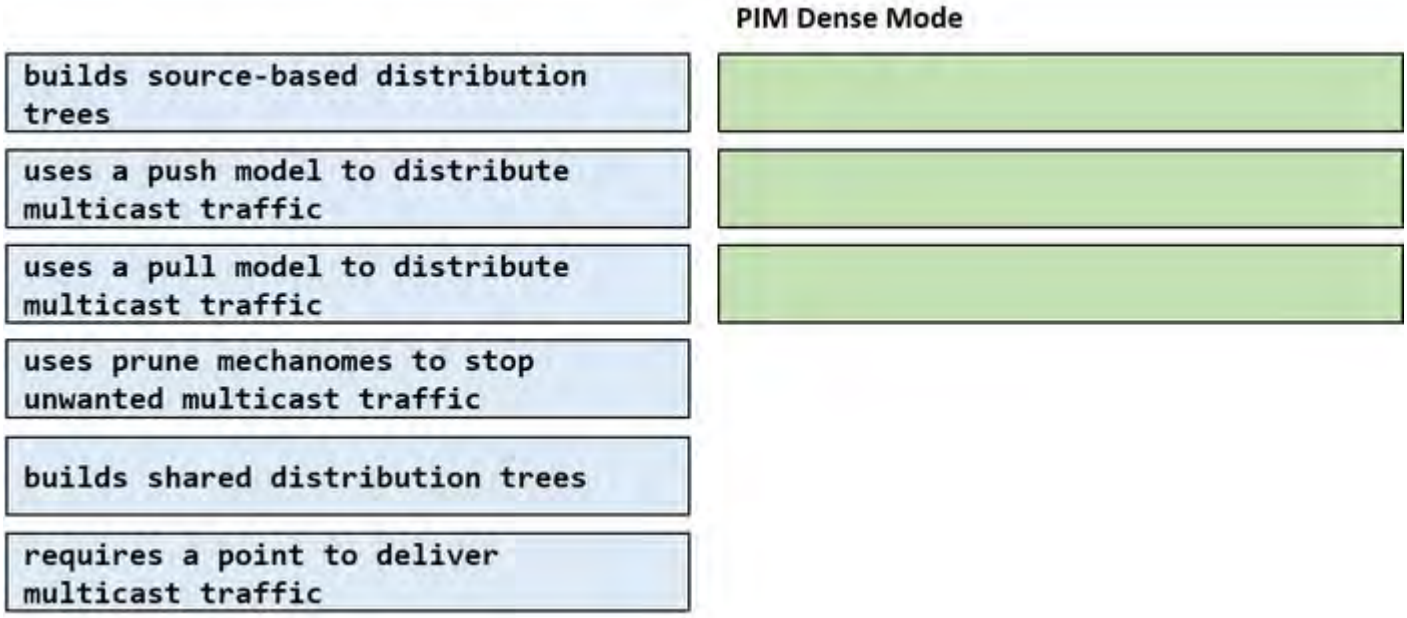
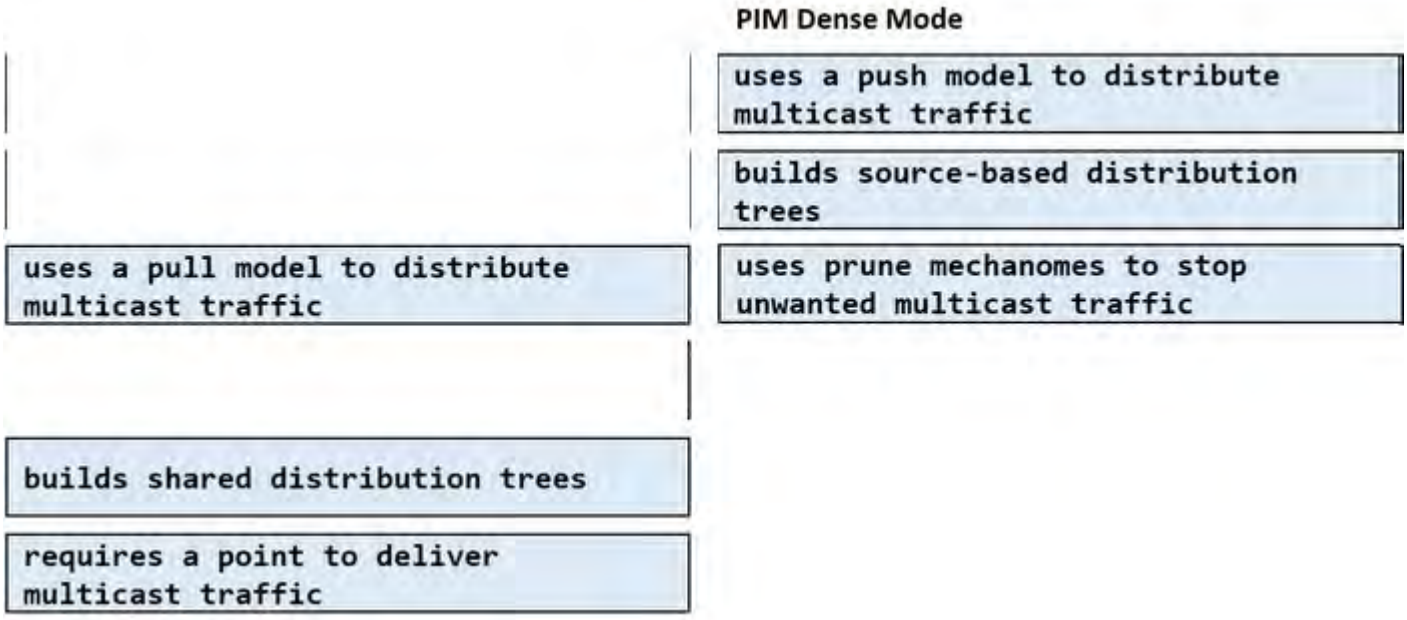


Correct Answer:



Explanation

Explanation/Reference:
PIM-DM supports only source trees ?that is, (S,G) entries瑗nd cannot be used to build a shared distribution tree.

QUESTION 25
DRAG DROP

Drag and drop the wireless elements on the left to their definitions on the right.

Select and Place:

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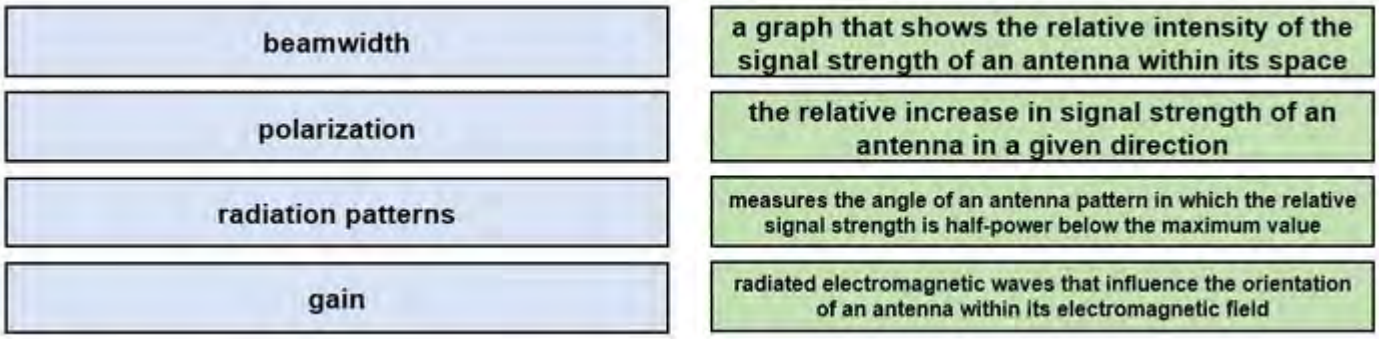
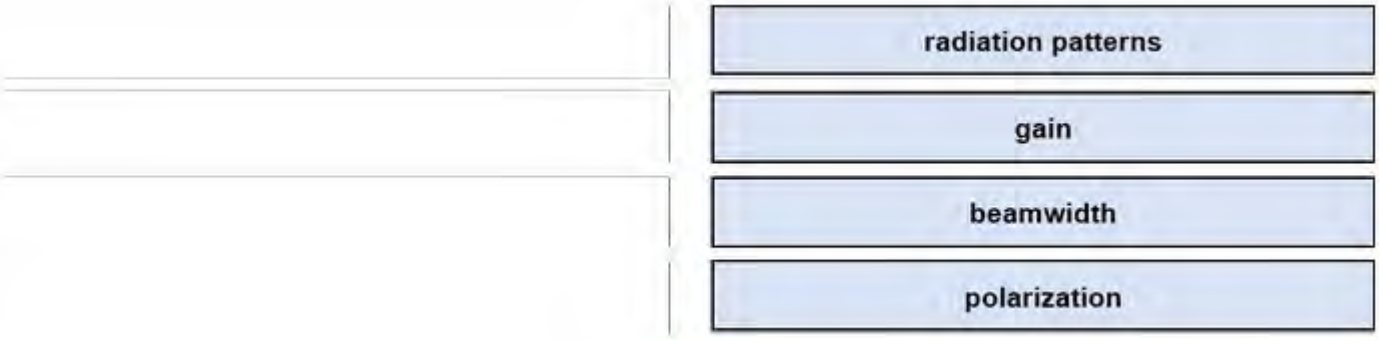


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 26
DRAG DROP

Drag the characteristics from the left onto the routing protocols they describe on the right.

Select and Place:

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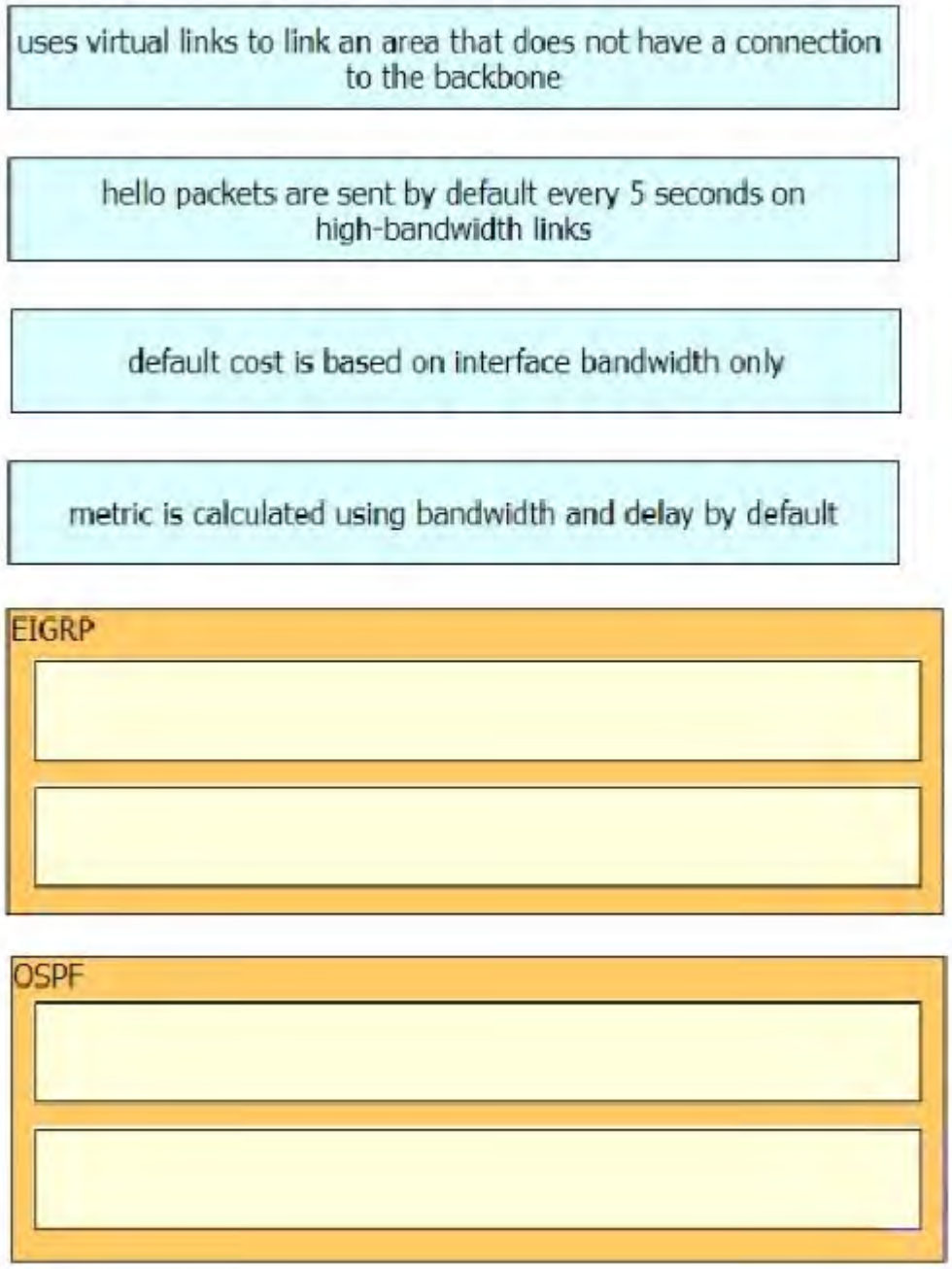
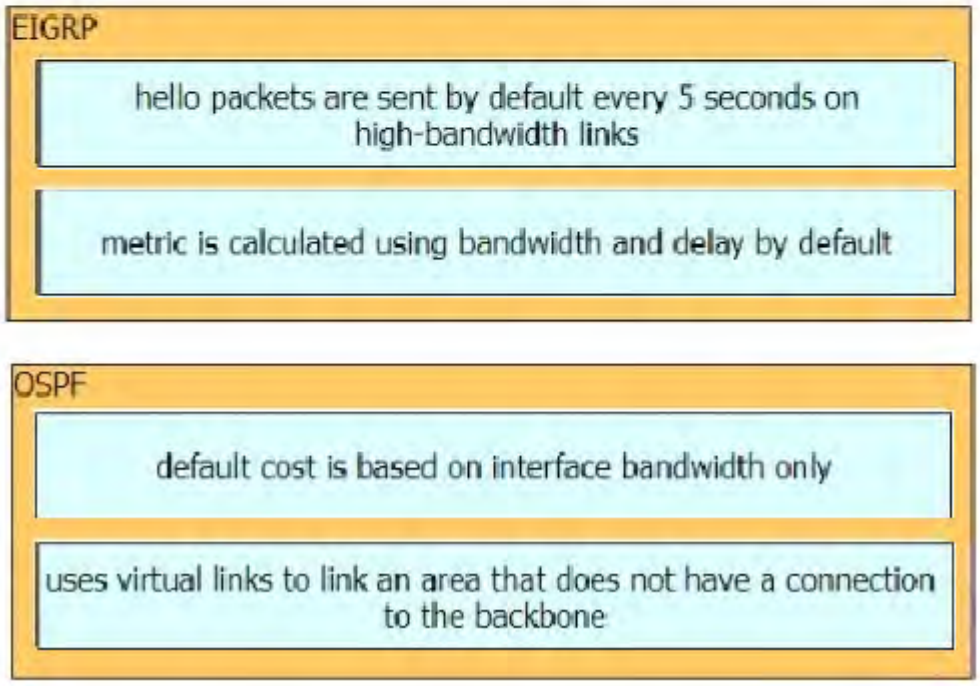
Answer Area



Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

Explanation/Reference:

QUESTION 27
DRAG DROP

Drag and drop the NTP elements from the left onto the correct descriptions on the right.

Select and Place:

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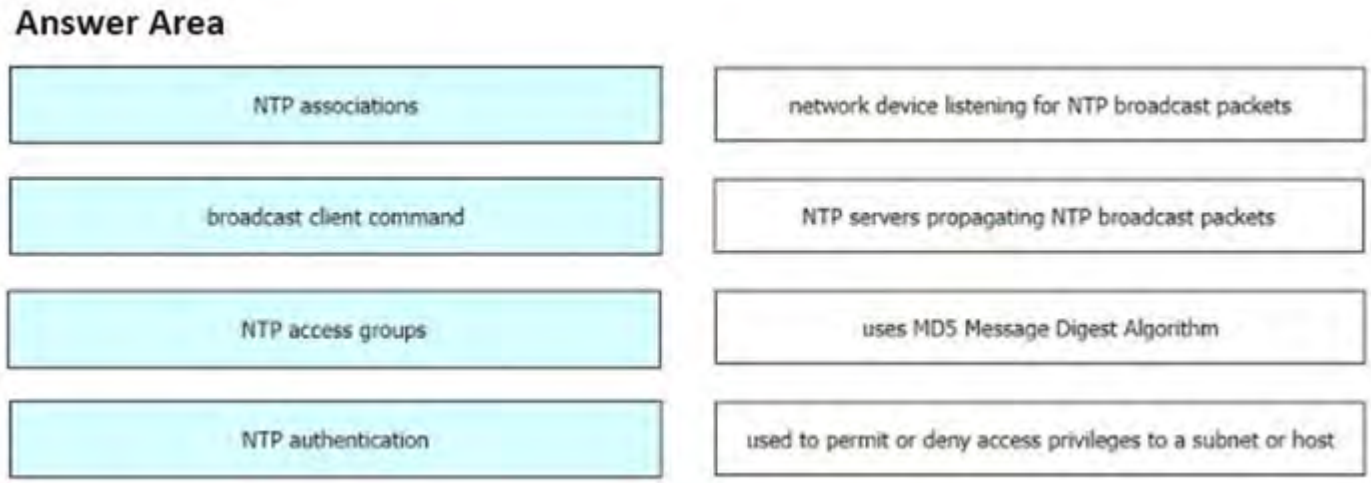
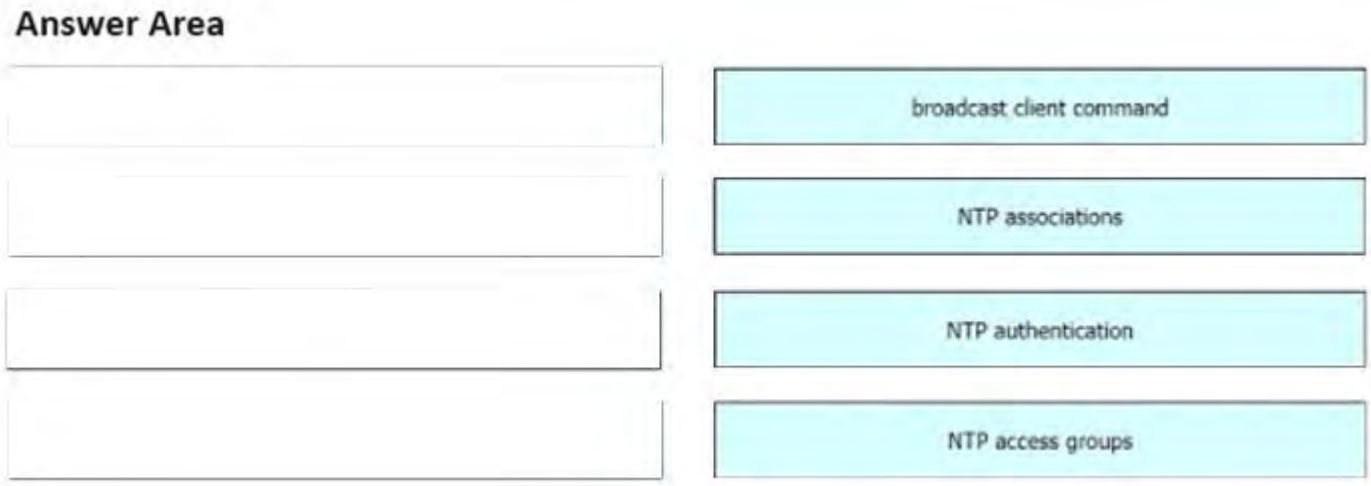


Correct Answer:



Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/dam/en/us/td/docs/ios-xml/ios/bsm/configuration/xe-3se/3650/bsm-xe-3se-3650-book.html#GUID-854A5AE9-8672-42DB-8DDE-08B32B87070E

QUESTION 28
DRAG DROP

Drag and drop the threat defense solutions from the left onto their descriptions on the right.

Select and Place:

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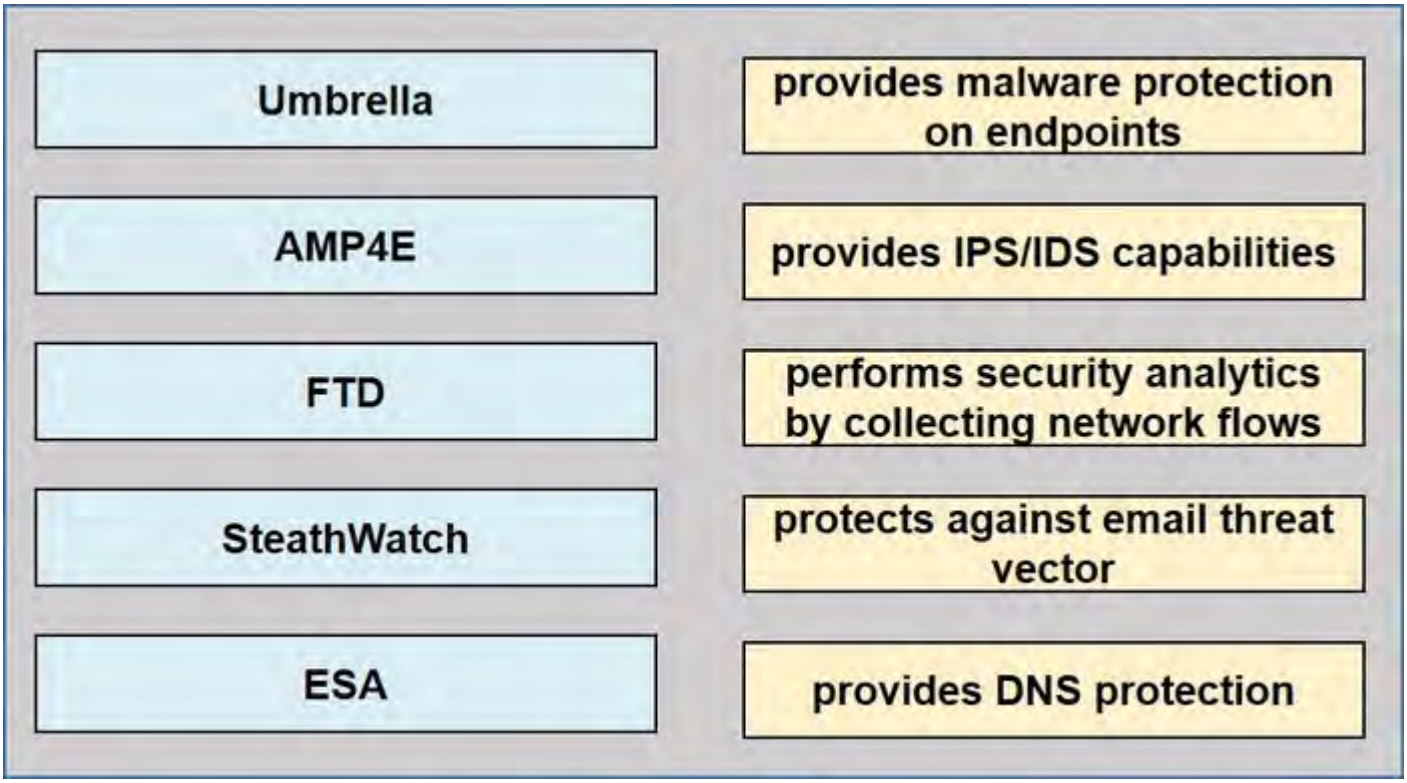
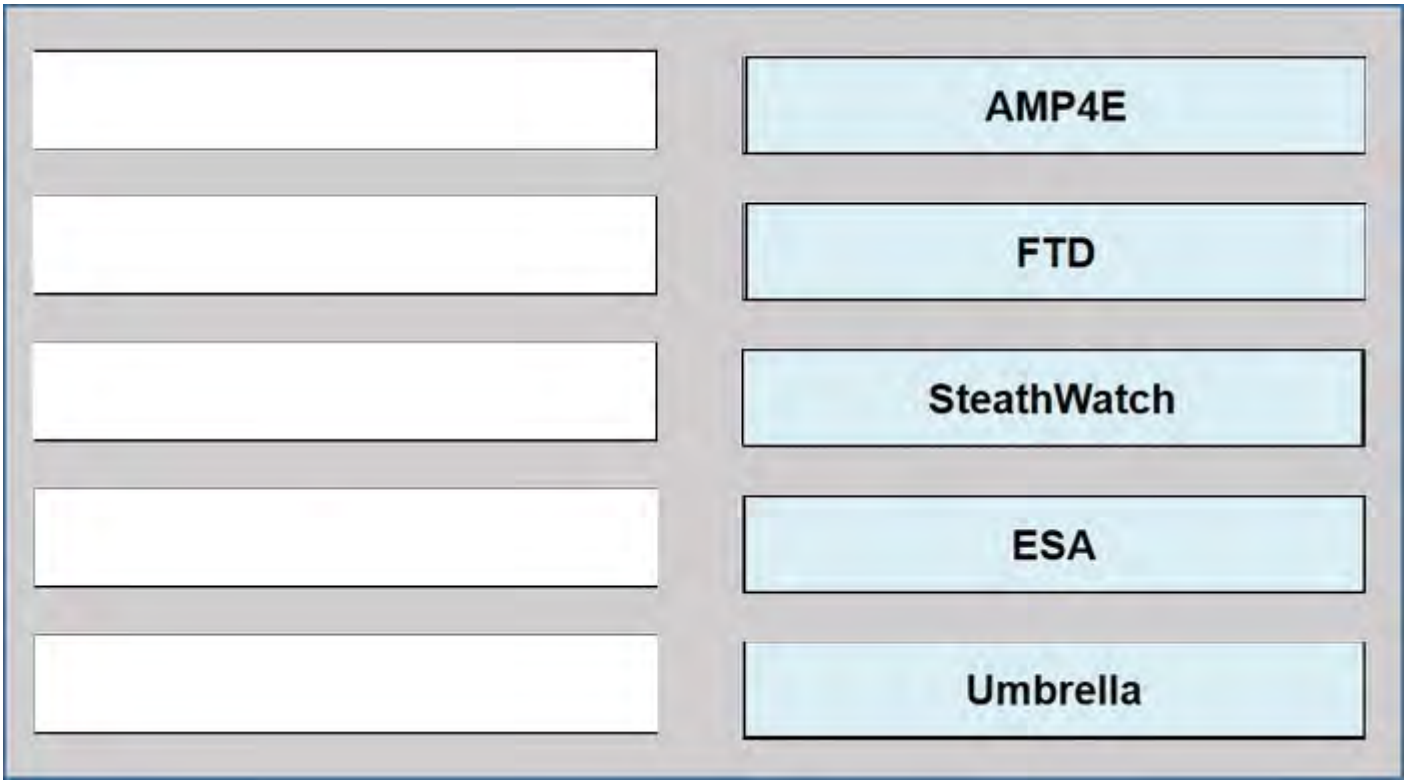


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 29
DRAG DROP

Drag and drop the REST API authentication methods from the left onto their descriptions on the right.

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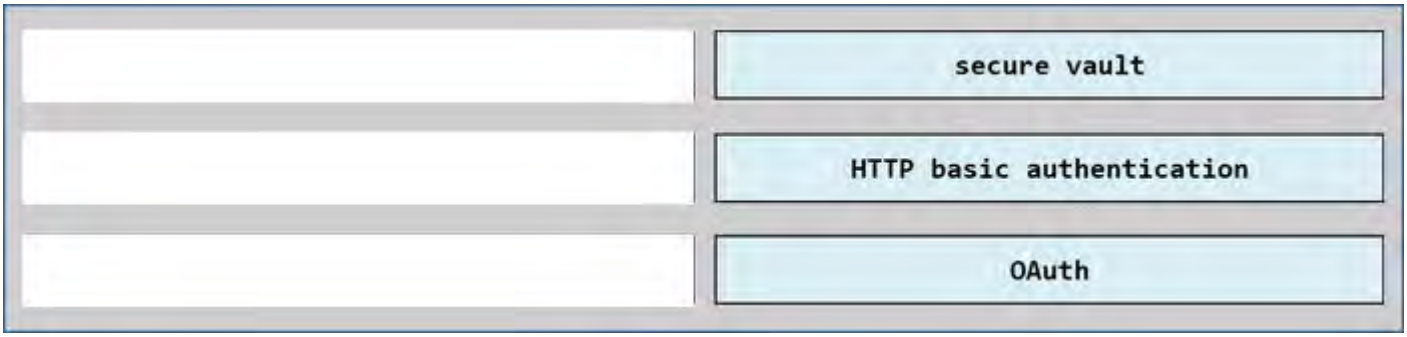
Select and Place:

Correct Answer:



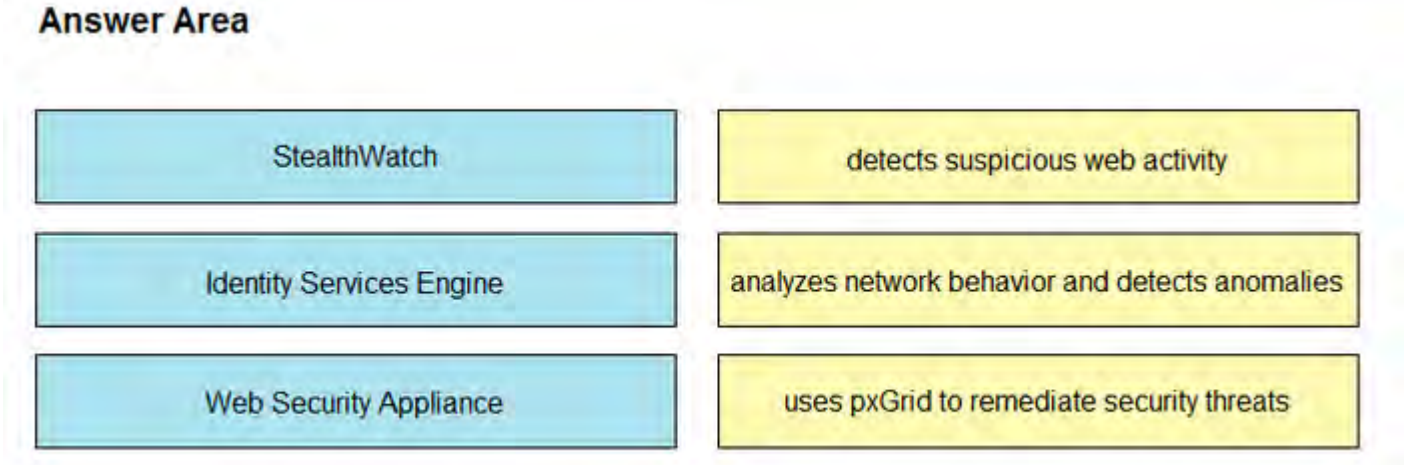
Explanation

Explanation/Reference:

QUESTION 30
DRAG DROP

Drag and drop the solutions that comprise Cisco Cyber Threat Defense from the left onto the objectives they accomplish on the right.

Select and Place:



Correct Answer:

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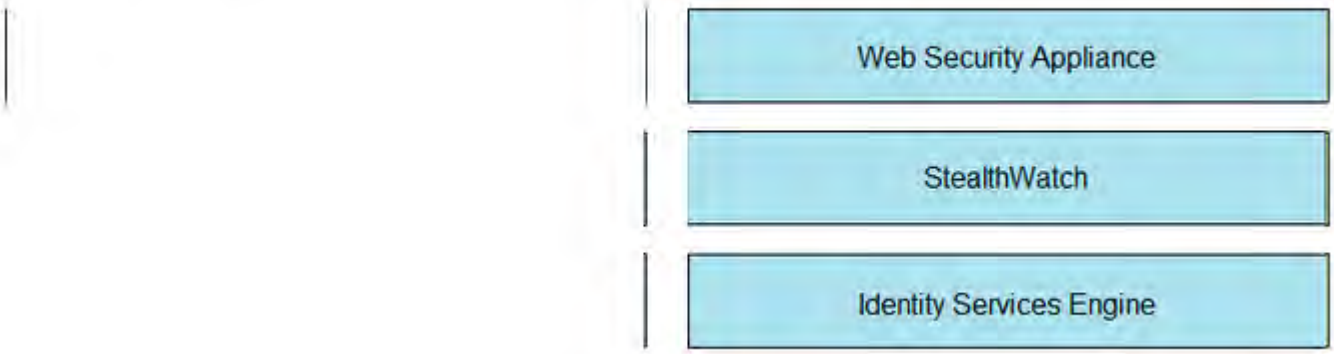
Answer Area



Explanation

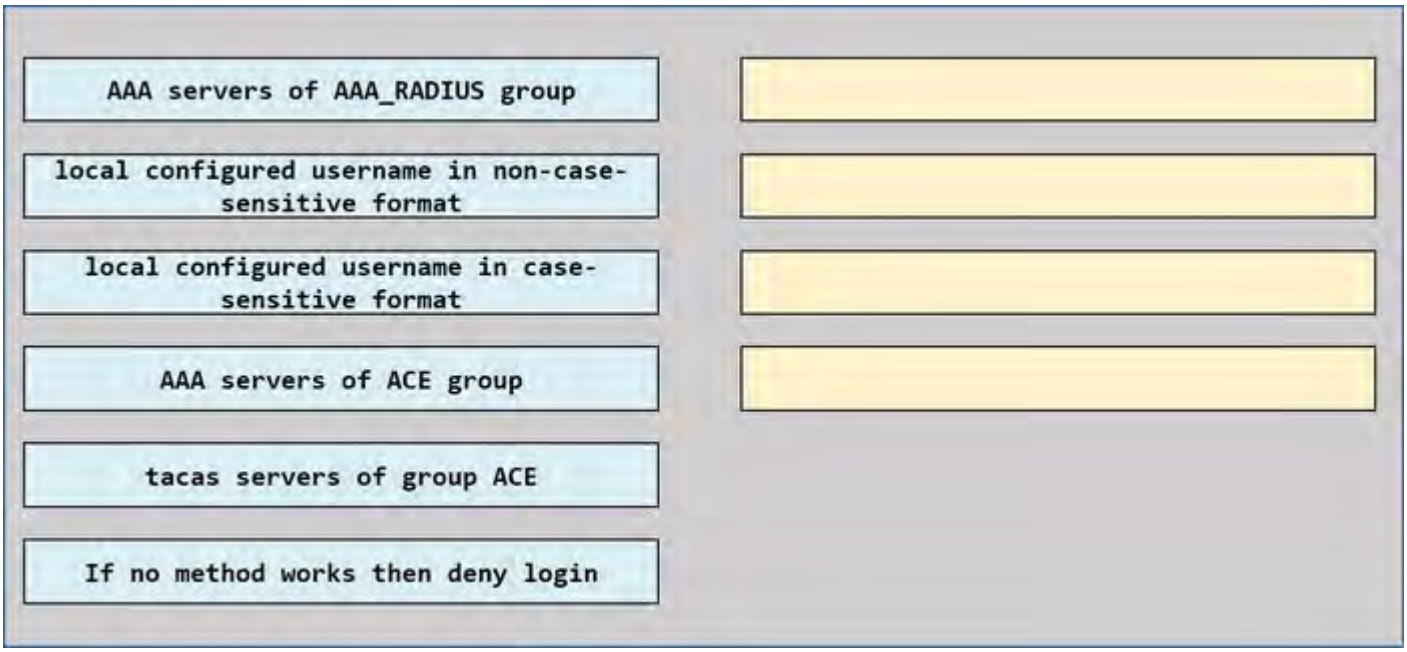
Explanation/Reference:

QUESTION 31
DRAG DROP

An engineer creates the configuration below. Drag and drop the authentication methods from the left into the order of priority on the right. Not all options are used.

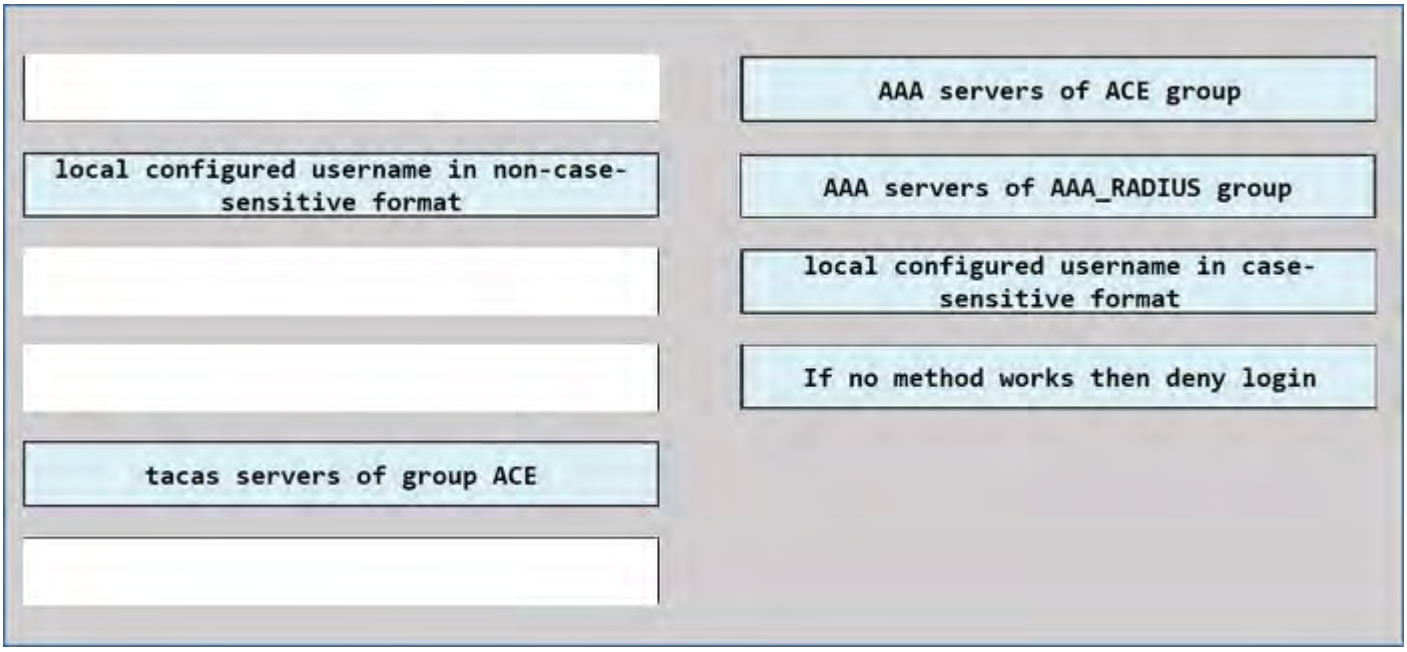
```
R1#sh run | i aaa
 aaa new-model
 aaa authentication login default group ACE group AAA_RADIUS local-case
 aaa session-id common
R1#
```

Select and Place:



Correct Answer:

https://t.me/learningnets

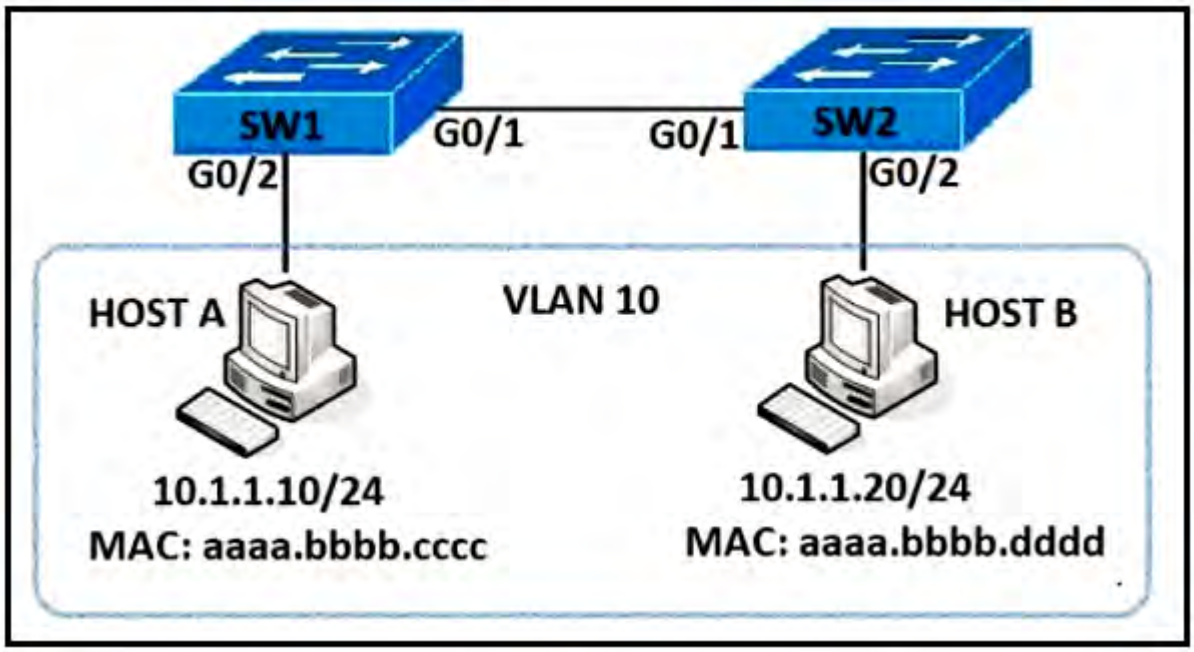


Explanation

Explanation/Reference:

QUESTION 32
Drag and drop

Refer to the exhibit.



An engineer must deny HTTP traffic from host A to host B while allowing all other communication between the hosts.

Drag and drop the commands into the configuration to achieve these results. Some commands may be used more than once. Not all commands are used.

Select and Place:

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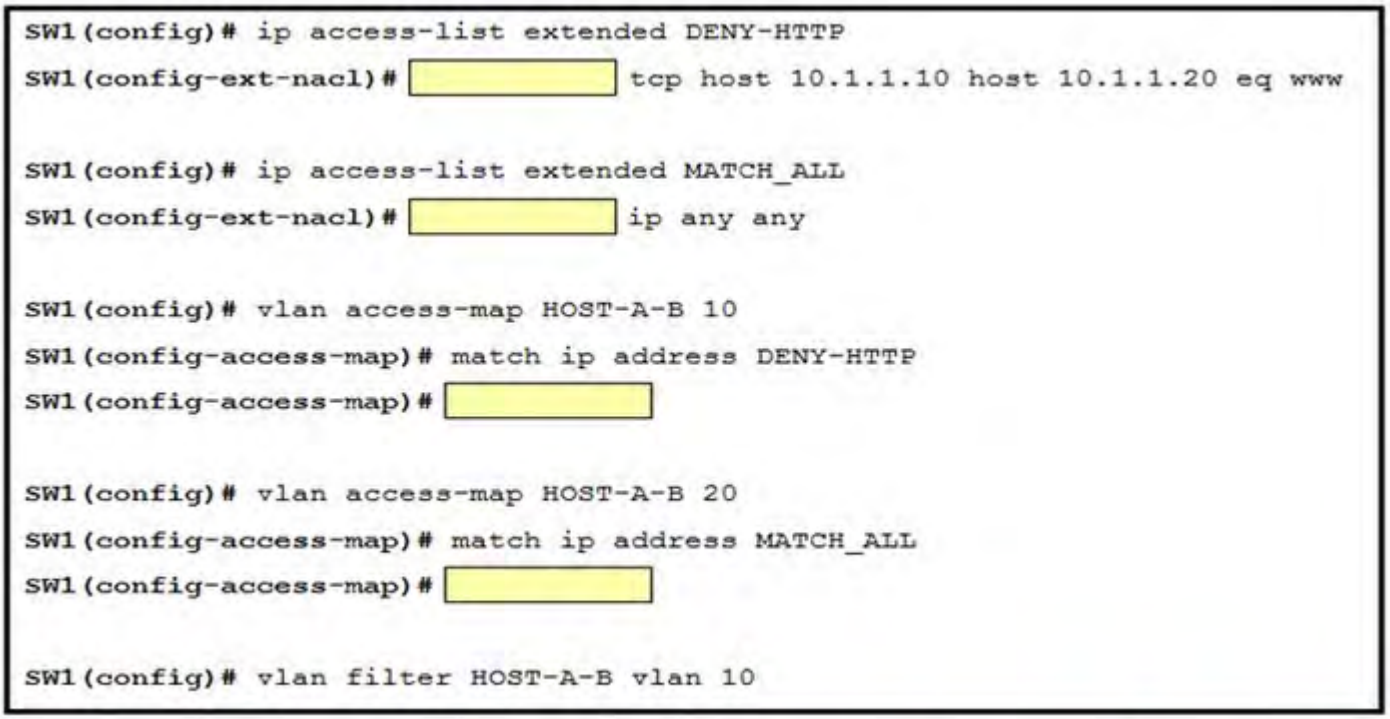
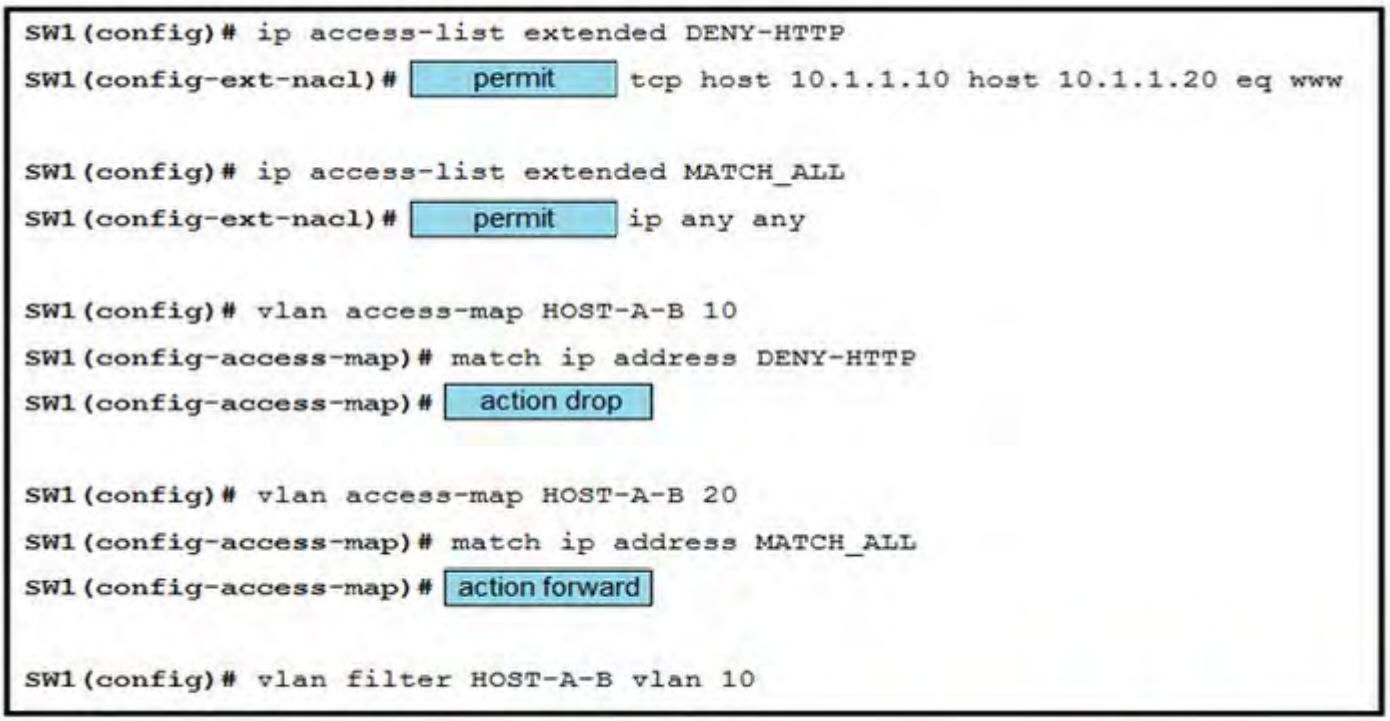
Answer Area



action drop | action forward | filter | permit | deny | match

Correct Answer:

Answer Area



action drop | action forward | filter | permit | deny | match

Explanation

Explanation/Reference:

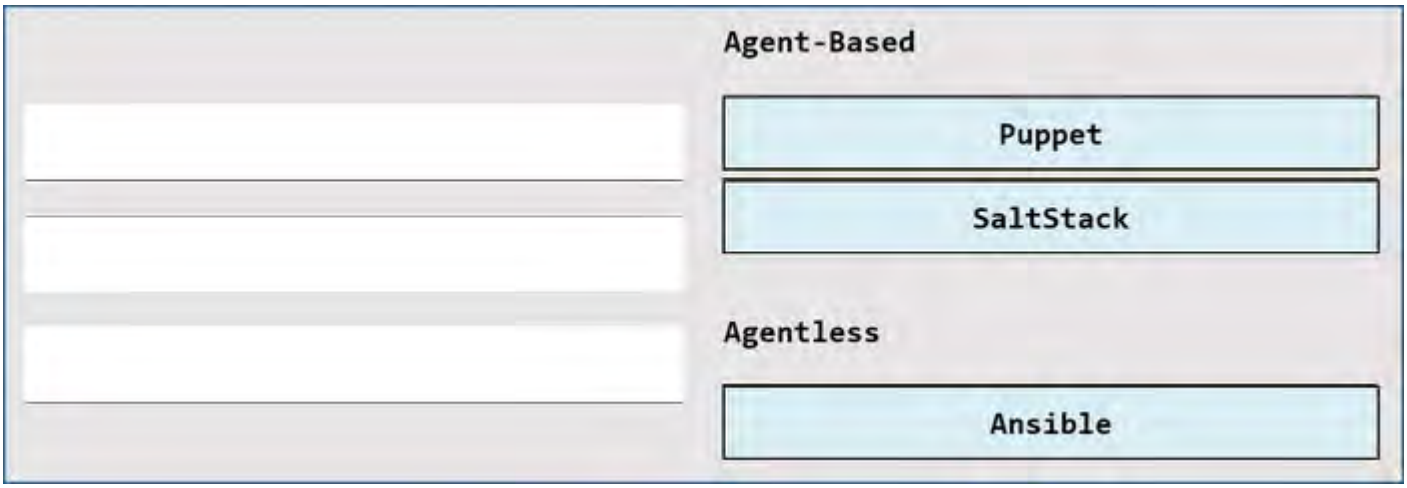
https://t.me/learningnets

QUESTION 33
DRAG DROP

Drag and drop the tools from the left onto the agent types on the right.

Select and Place:

Correct Answer:



Explanation

Explanation/Reference:

QUESTION 34
DRAG DROP

Drag and drop the characteristics from the left onto the infrastructure deployment models on the right.

Select and Place:

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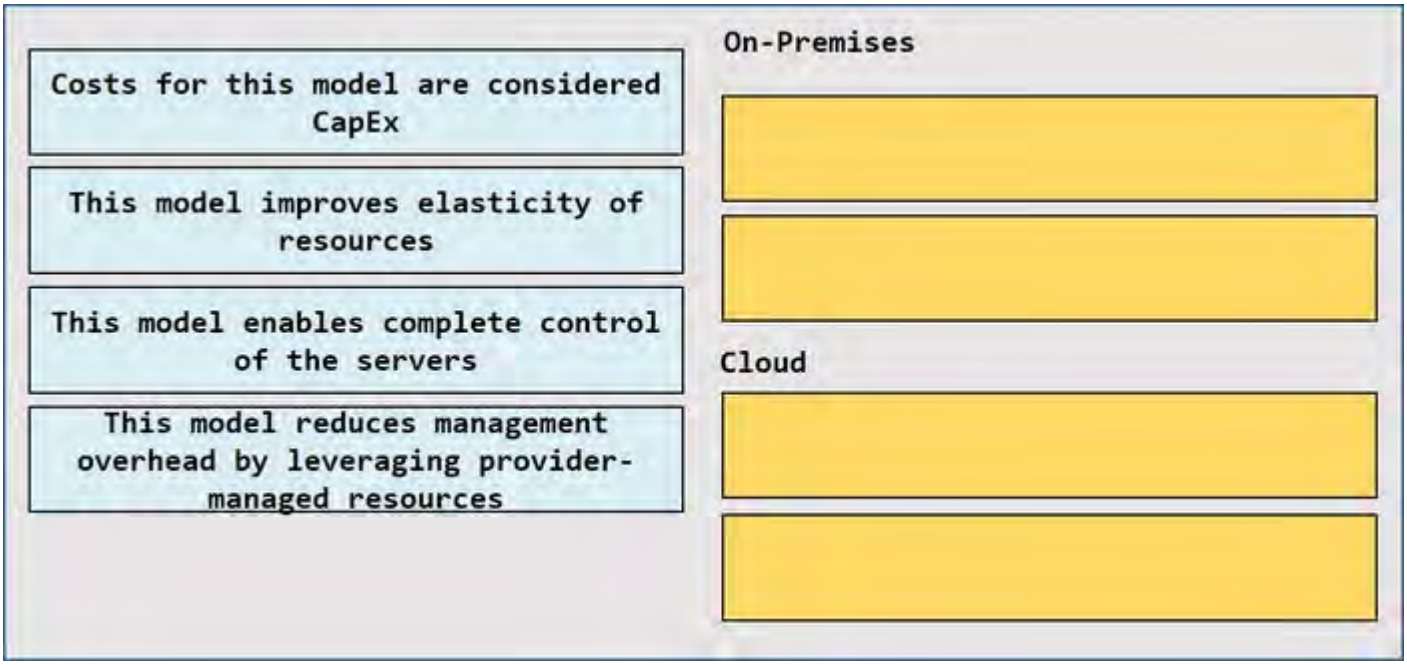
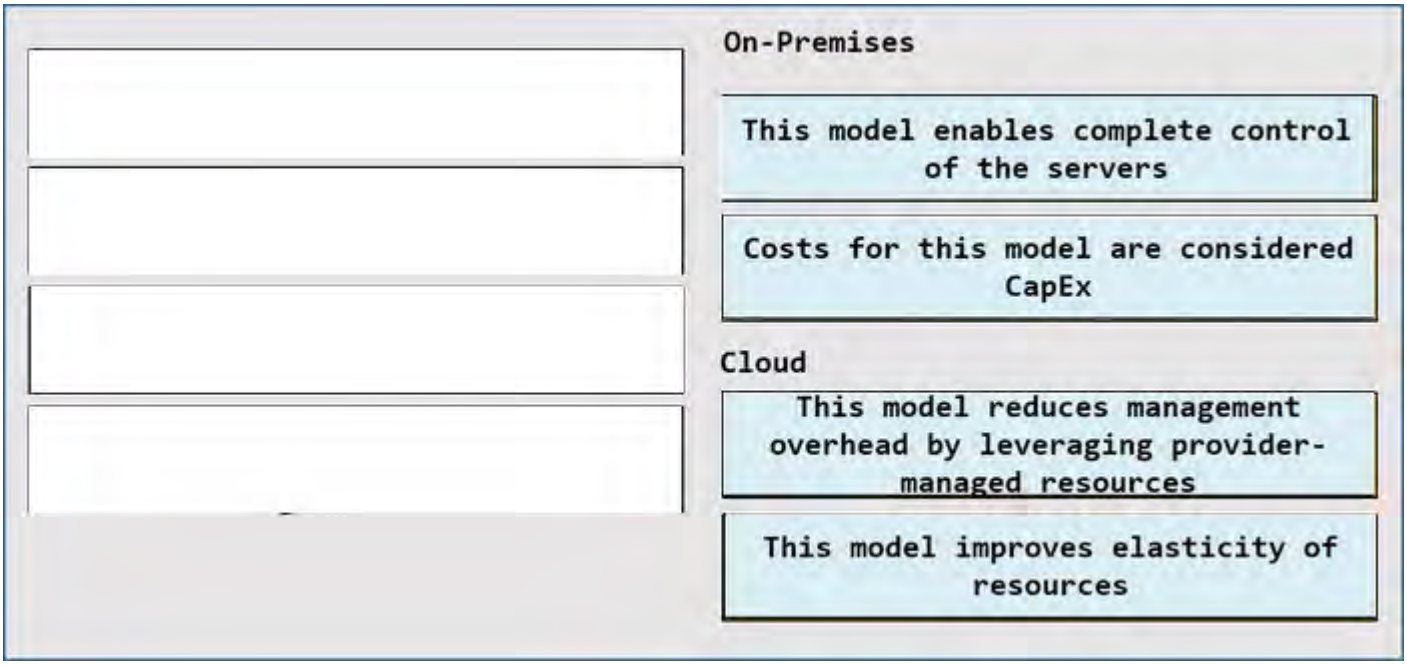


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 35
DRAG DROP

Drag and drop the LISP components on the left to their descriptions on the right. Not all options are used.

Select and Place:

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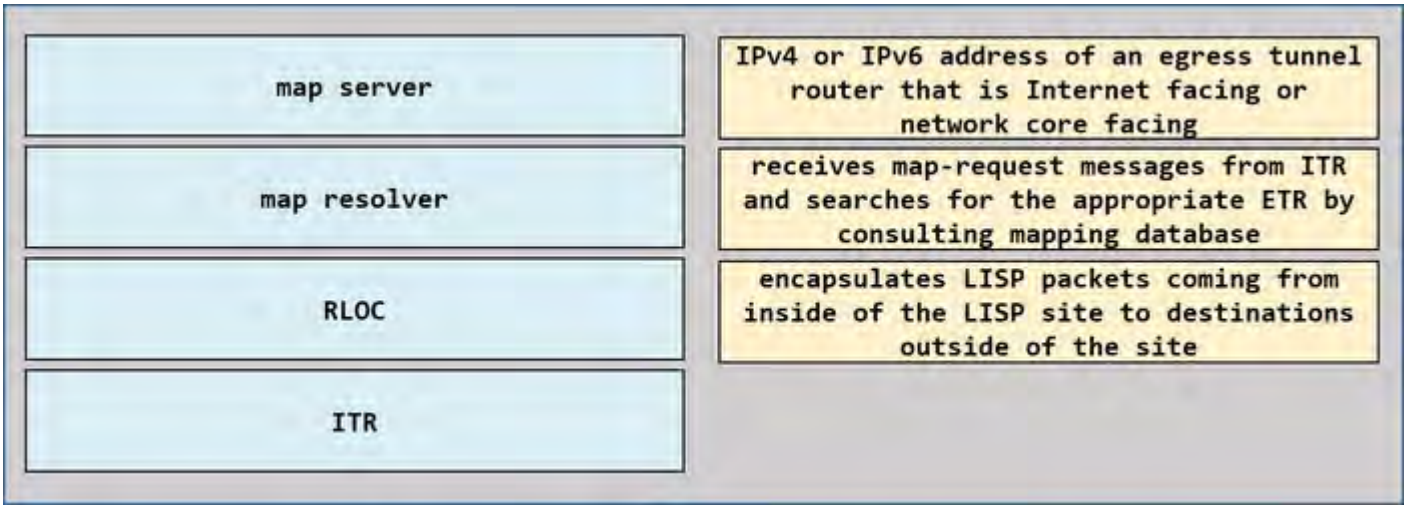

Correct Answer:

Explanation

Explanation/Reference:

QUESTION 36
DRAG DROP

An engineer plans to use Python to convert text files that contain device information to JSON Drag and drop the code snippets from the bottom onto the blanks in the code to construct the request. Not all options are used.

Select and Place:

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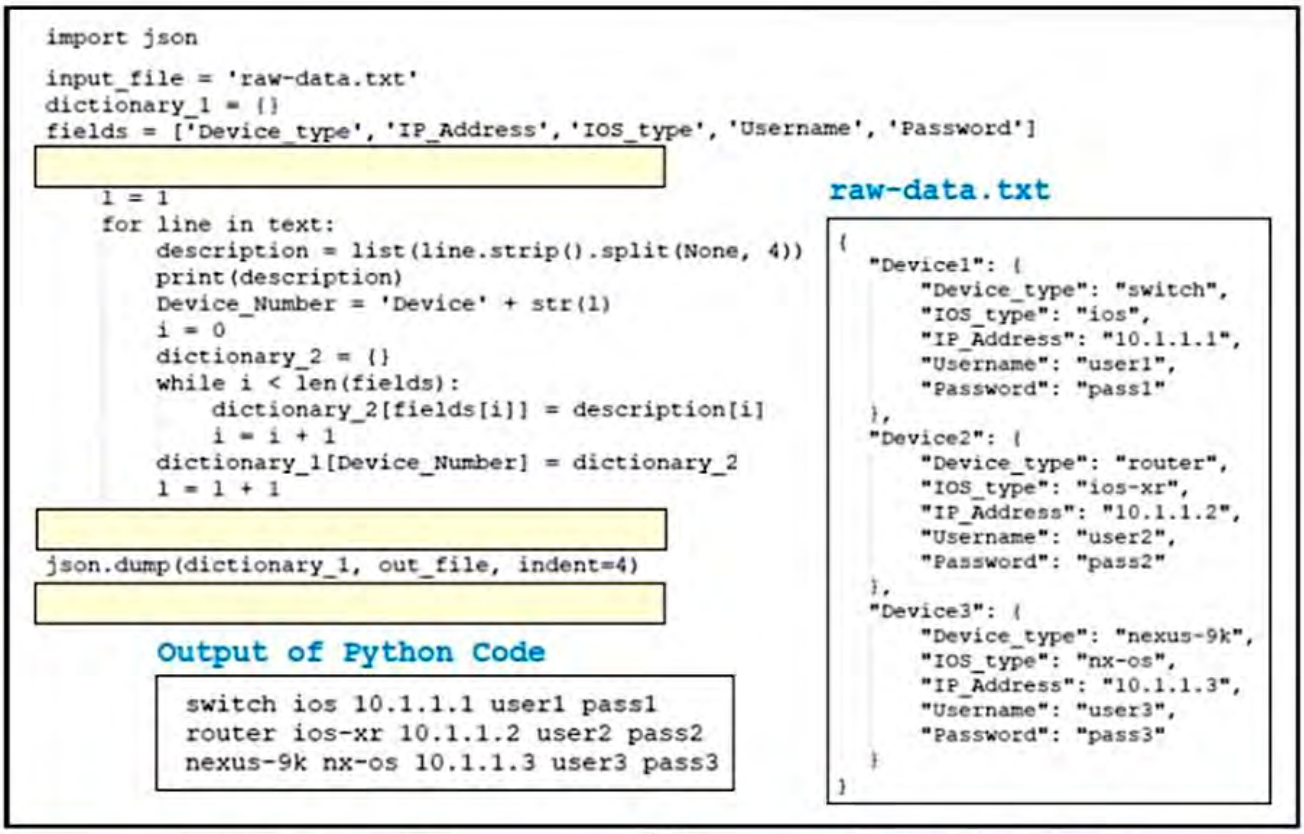
Answer Area



```
import json

input_file = 'raw-data.txt'
dictionary_1 = {}
fields = ['Device_type', 'IP_Address', 'IOS_type', 'Username', 'Password']

    1 = 1
    for line in text:
        description = list(line.strip().split(None, 4))
        print(description)
        Device_Number = 'Device' + str(1)
        i = 0
        dictionary_2 = {}
        while i < len(fields):
            dictionary_2[fields[i]] = description[i]
            i = i + 1
        dictionary_1[Device_Number] = dictionary_2
        1 = 1 + 1

json.dump(dictionary_1, out_file, indent=4)
```

raw-data.txt

```
{
  "Device1": {
      "Device_type": "switch",
      "IOS_type": "ios",
      "IP_Address": "10.1.1.1",
      "Username": "user1",
      "Password": "pass1"
  },
  "Device2": {
      "Device_type": "router",
      "IOS_type": "ios-xr",
      "IP_Address": "10.1.1.2",
      "Username": "user2",
      "Password": "pass2"
  },
  "Device3": {
      "Device_type": "nexus-9k",
      "IOS_type": "nx-os",
      "IP_Address": "10.1.1.3",
      "Username": "user3",
      "Password": "pass3"
  }
}
```

Output of Python Code

```
switch ios 10.1.1.1 user1 pass1
router ios-xr 10.1.1.2 user2 pass2
nexus-9k nx-os 10.1.1.3 user3 pass3
```

out_file.close(out_file)	with open(input_file) as text:
with open(raw-data) as text:	out_file.close()
out_file = open ("Json-Output.json", "w")	out_file = open ("Json-Output.json", "r")

Correct Answer:

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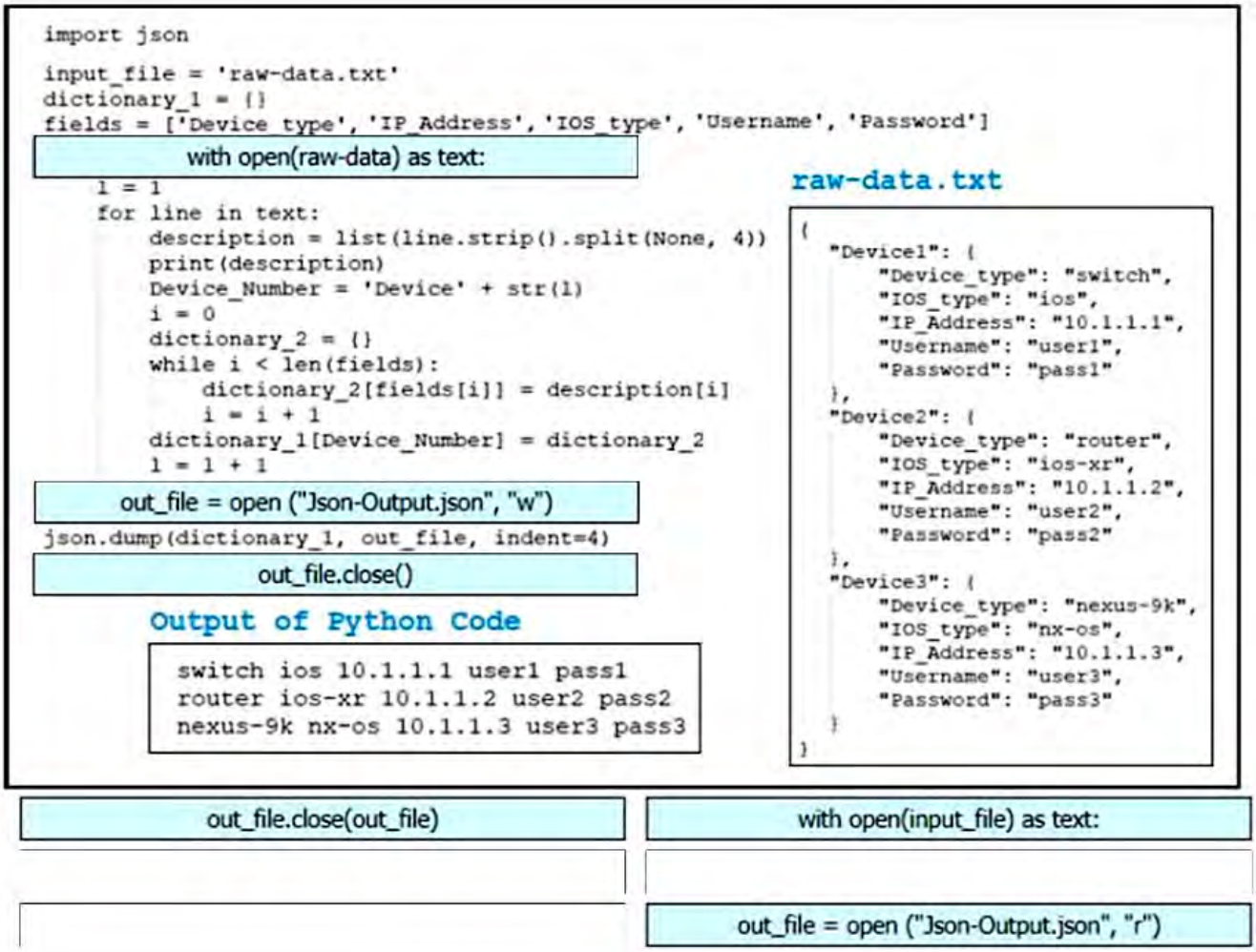
Answer Area



out_file.close(out_file)

with open(input_file) as text:

out_file = open ("Json-Output.json", "r")

Explanation

Explanation/Reference:

QUESTION 37
DRAG DROP

Refer to the exhibit Drag and drop the snippets into the RESTCONF request to form the request that returns this response. Not all options are used

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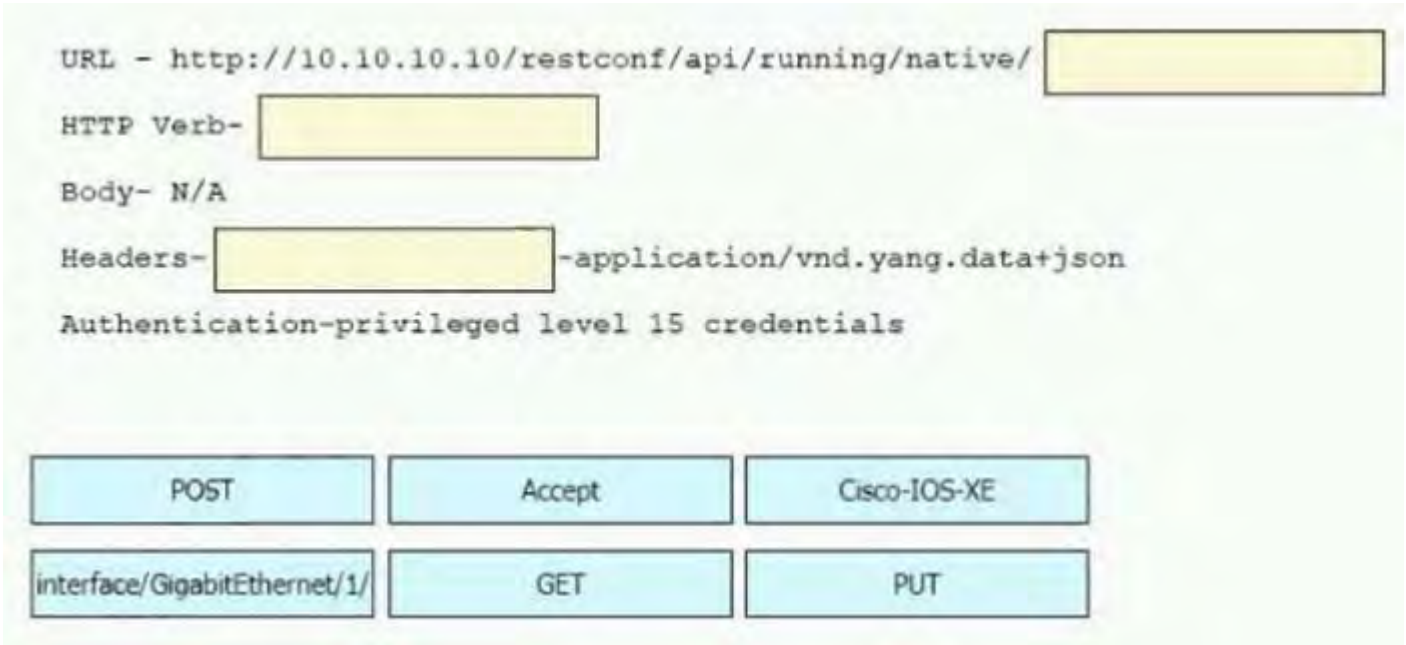
```
{
Cisco-IOS-XE-native:GigabitEthernet": {
"name": "1",
"vrf": {
"forwarding": "MANAGEMENT"
},
"ip": {
"address": {
"primary": {
"address": "10.0.0.151",
"mask". "255.255 255.0"
}
}
},
"mop": {
"enabled": false
},
"Cisco-IOS-XE-ethernet:negotiation": {
"auto": true
}
}
}
```

Select and Place:



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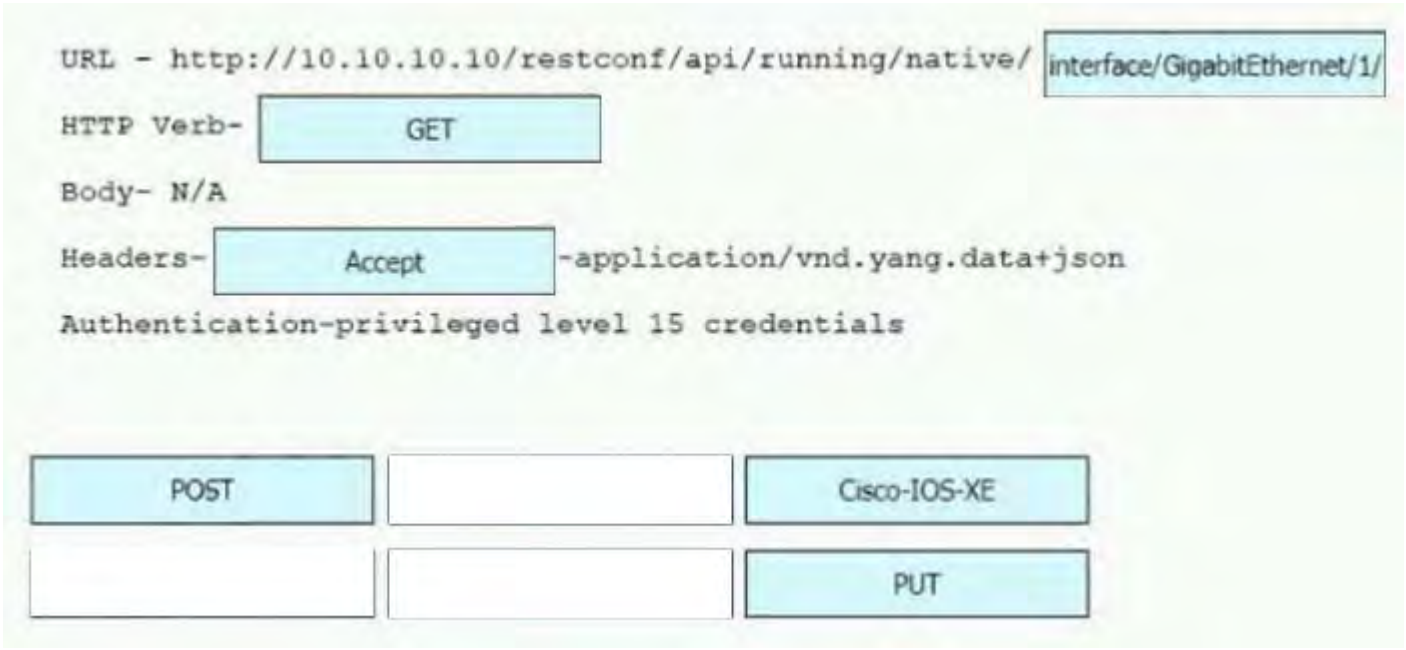
Correct Answer:



Explanation

Explanation/Reference:

QUESTION 38
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that adds a prefix list to a route map and sets the local preference. Not all options are used

Select and Place:

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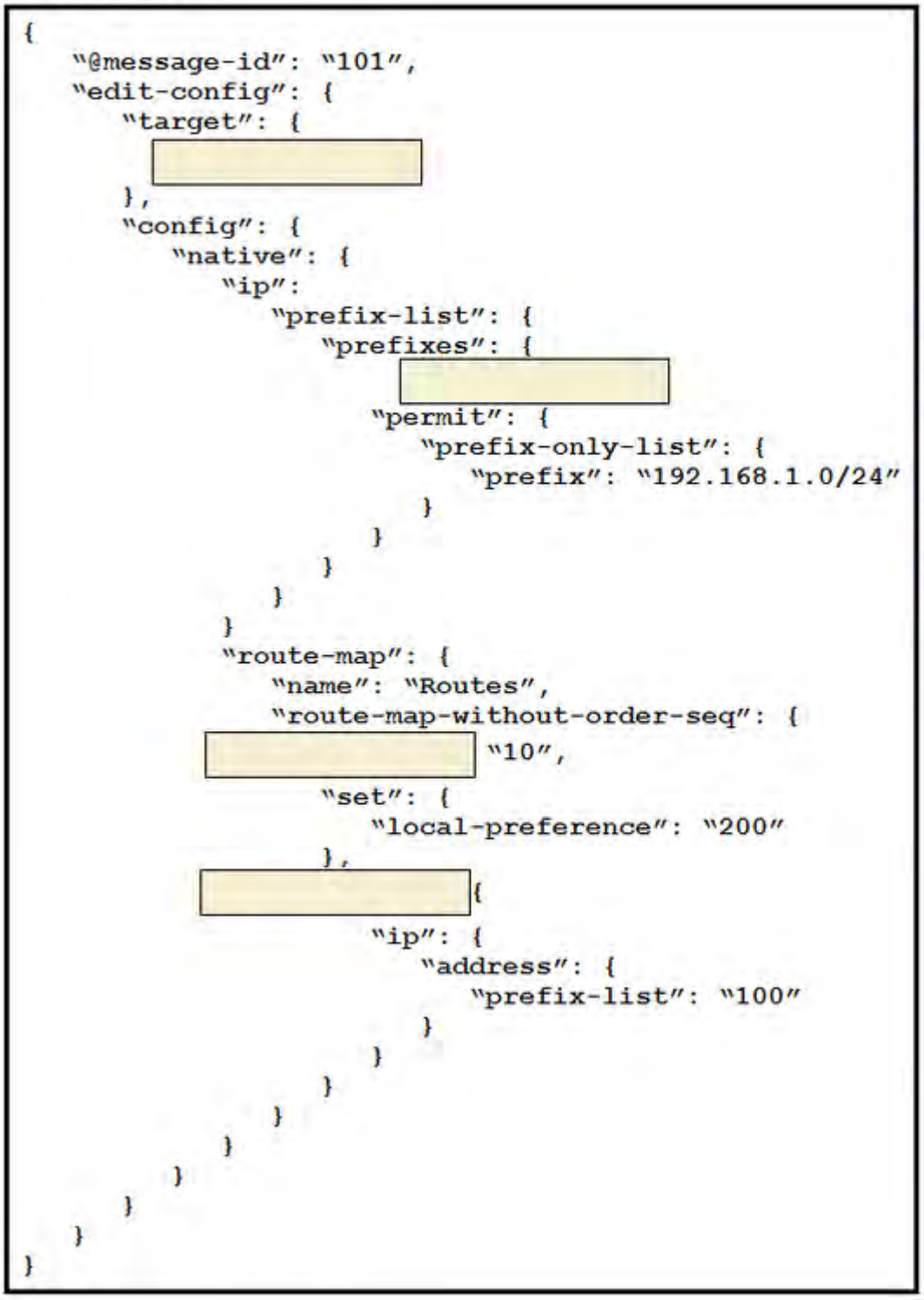
Answer Area



"running": null

"seq_no":

"config": null

"permit":

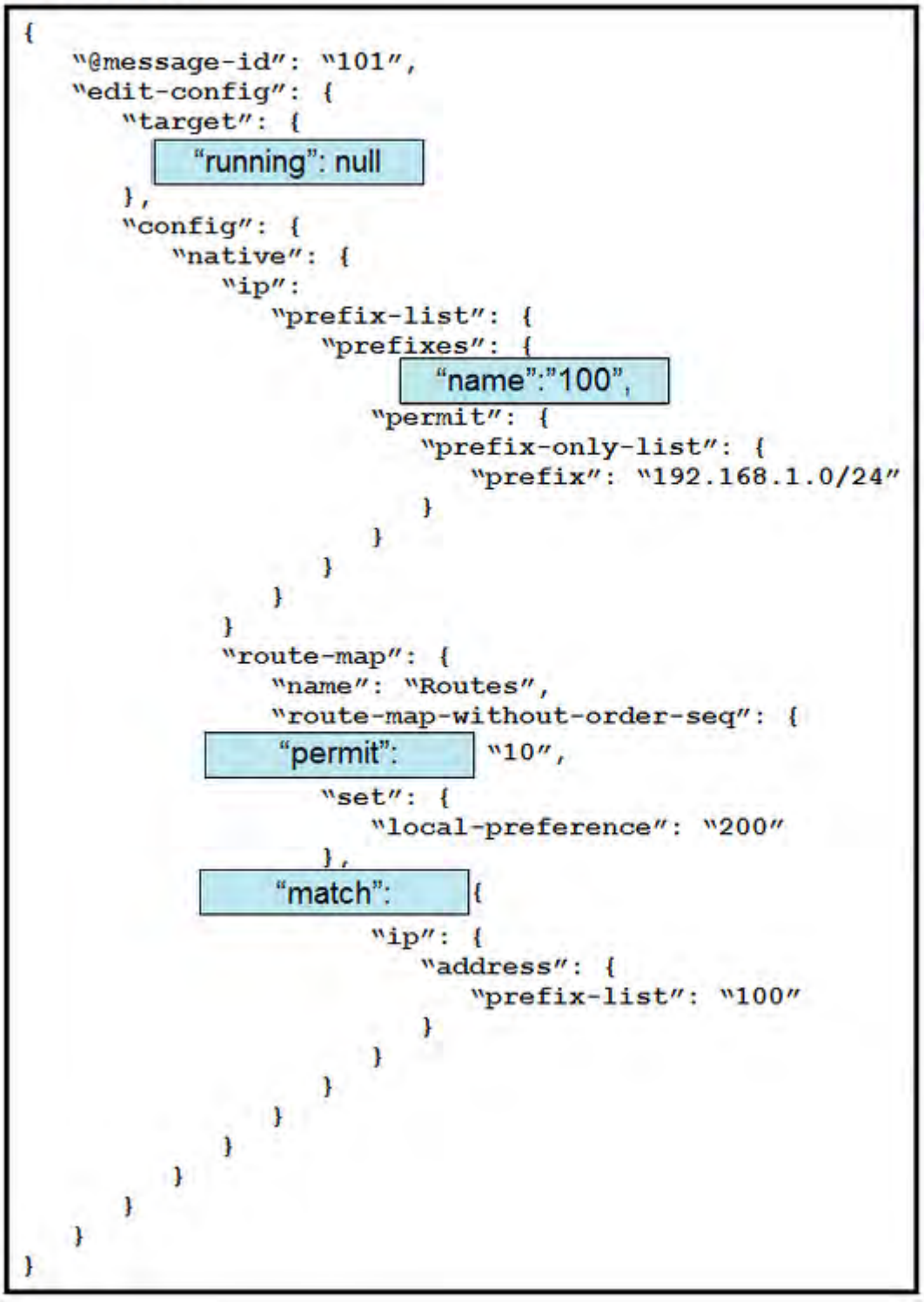
"match":

"name":"100",

Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

Explanation/Reference:

QUESTION 39
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that advertises the network prefox 192.168.5.0 session. Not all options are used.

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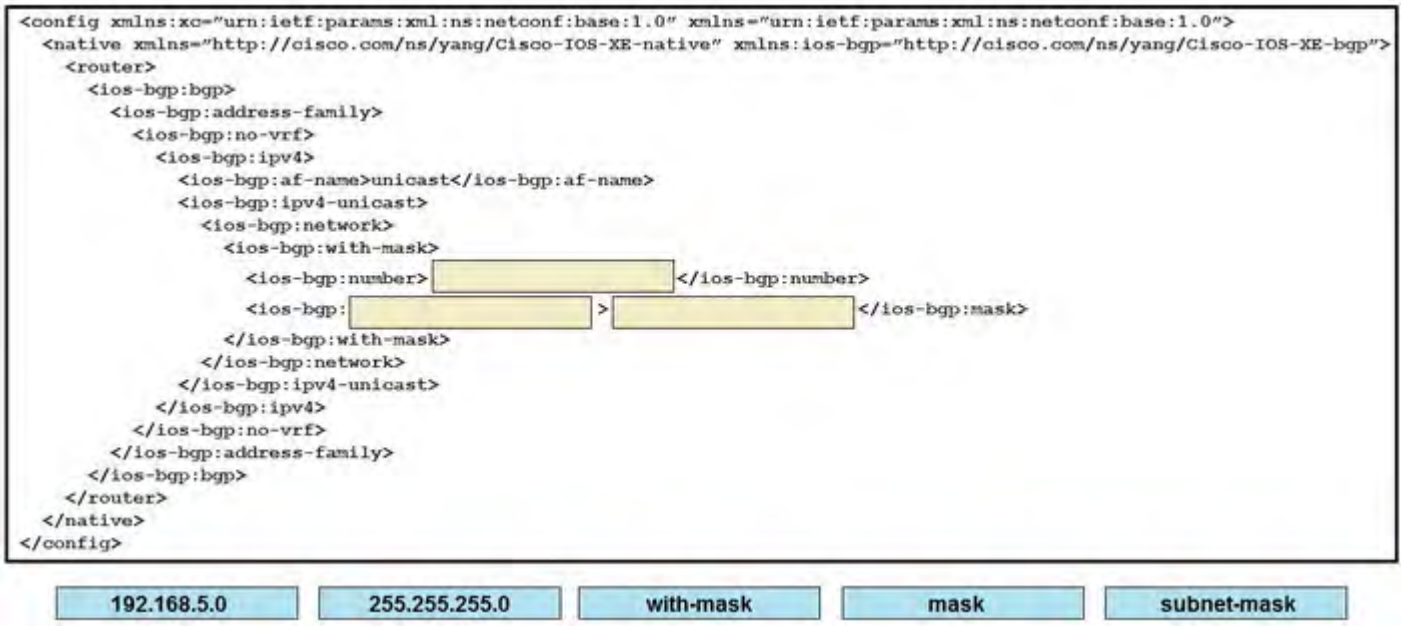
Select and Place:

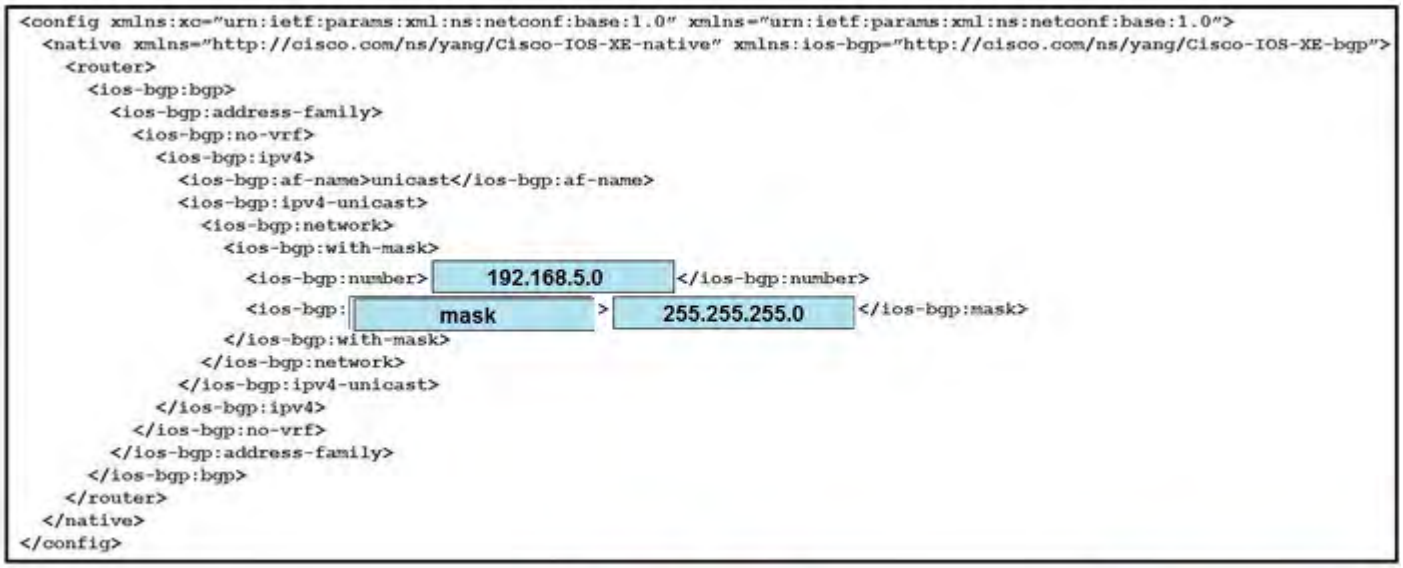
Answer Area



192.168.5.0 | 255.255.255.0 | with-mask | mask | subnet-mask

Correct Answer:

Answer Area



with-mask | subnet-mask

Explanation

Explanation/Reference:

QUESTION 40
DRAG DROP

Drag and drop the characteristics from the left onto the switching mechanisms they describe on the right.

Select and Place:

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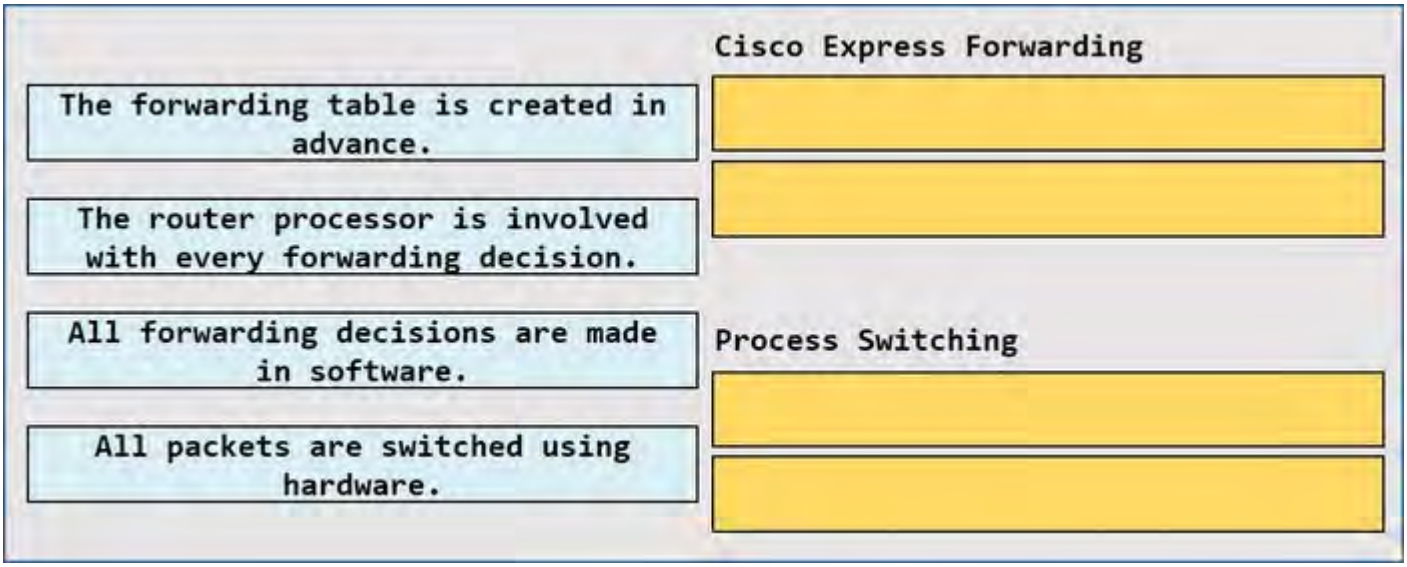
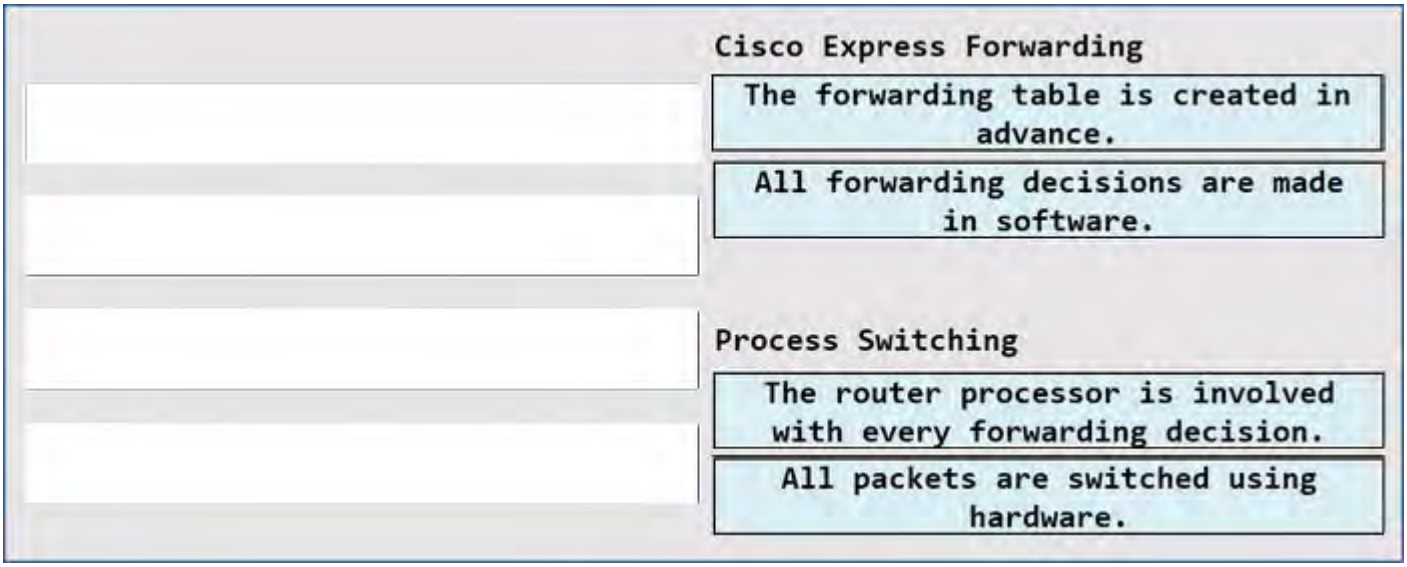


Correct Answer:



Explanation

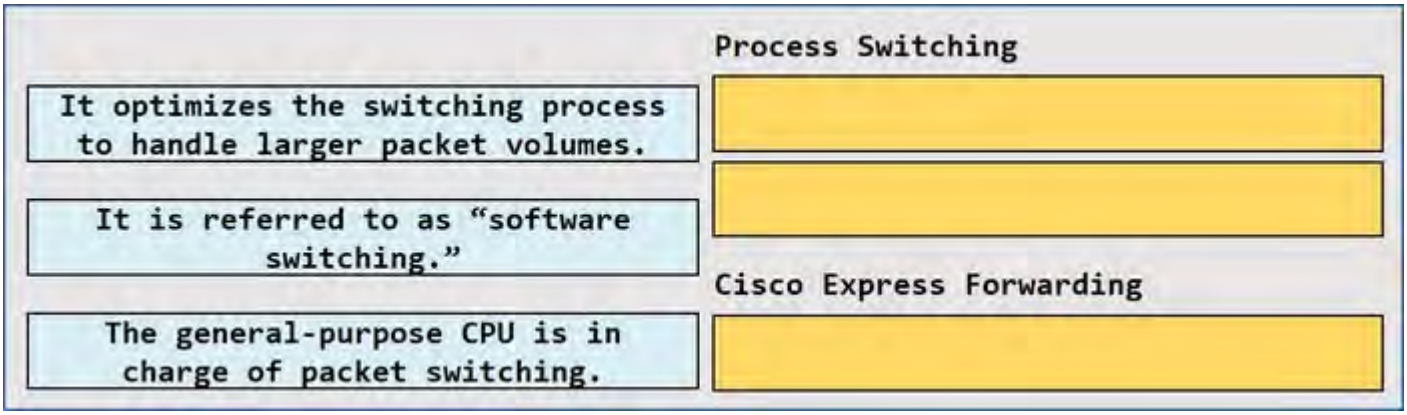
Explanation/Reference:

QUESTION 41
DRAG DROP

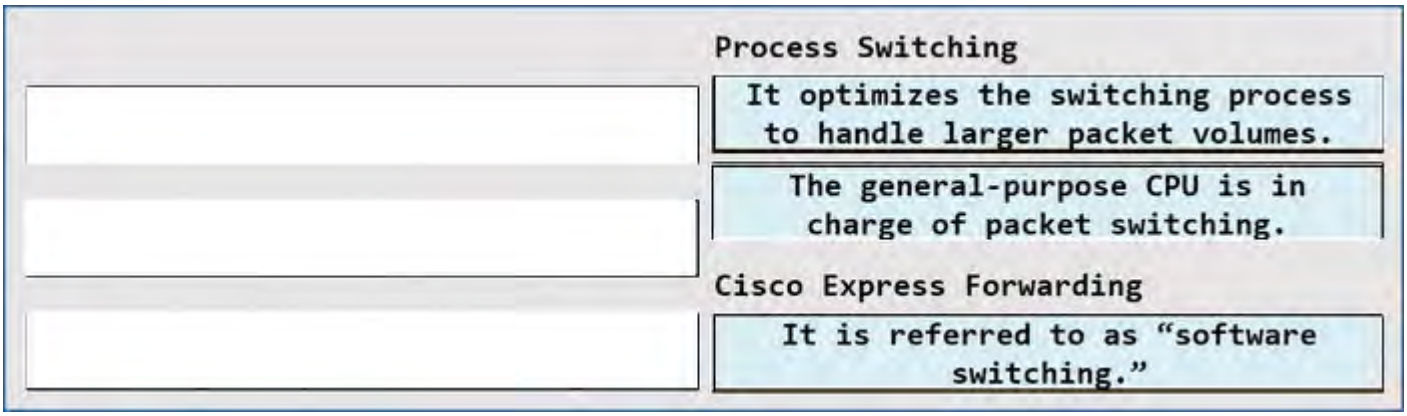
Drag and drop the characteristics from the left onto the switching architectures on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



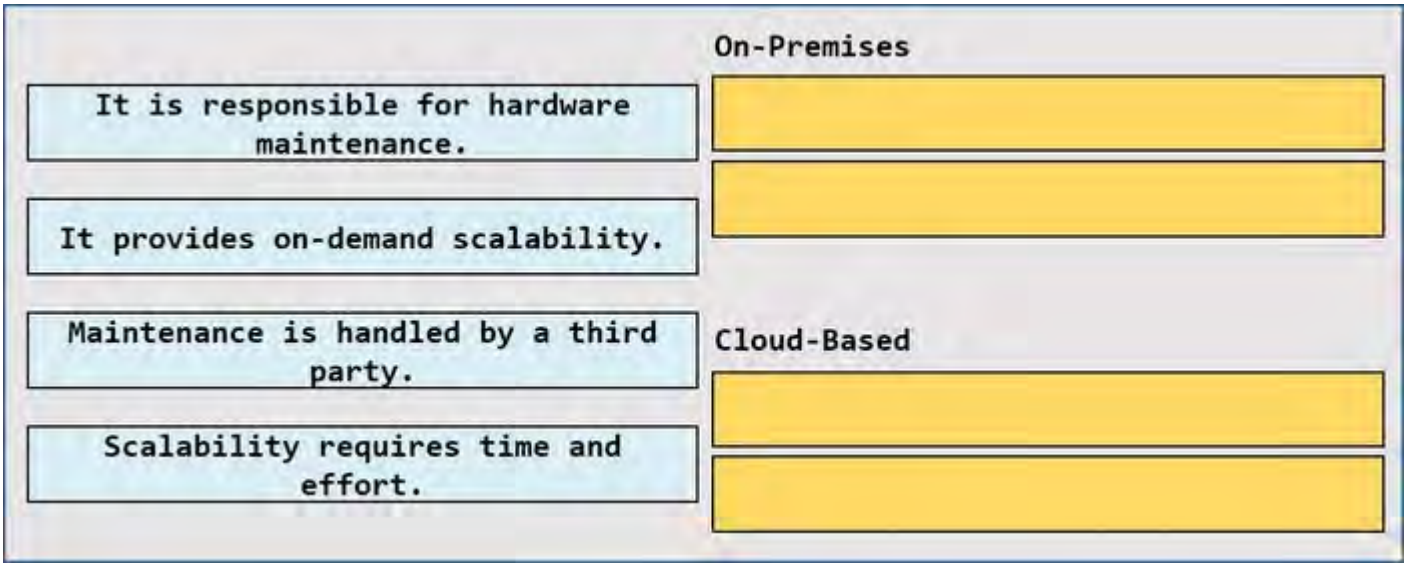
Explanation

Explanation/Reference:

QUESTION 42
DRAG DROP

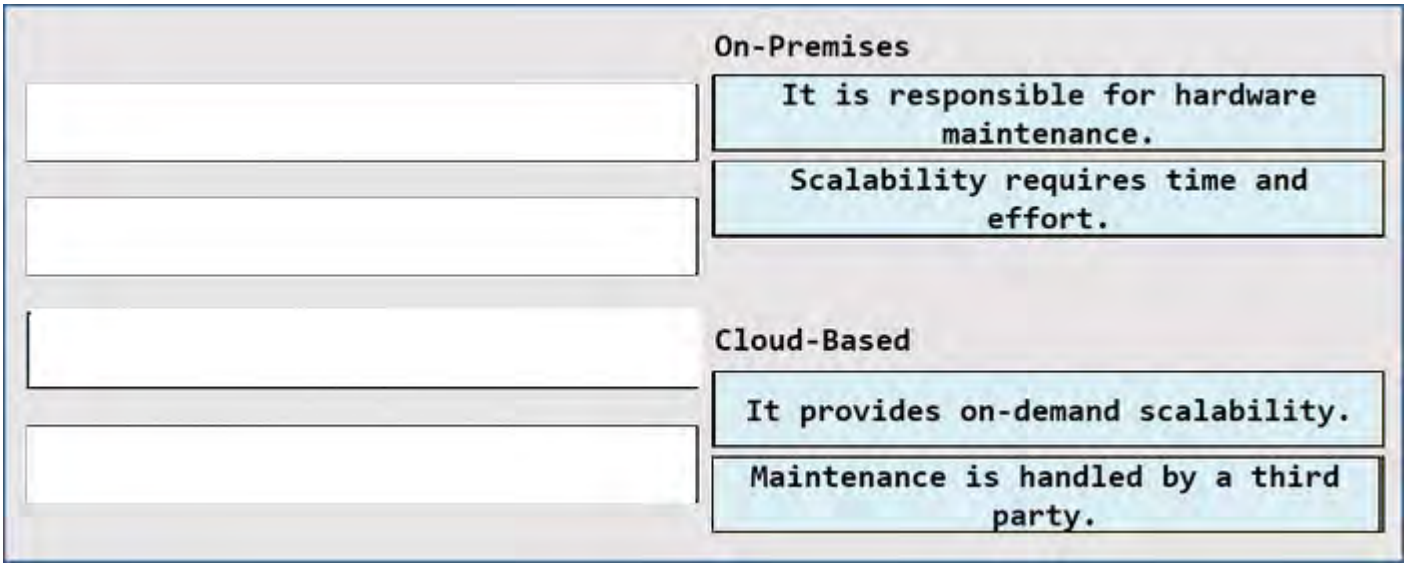
Drag and drop the characteristics from the left onto the deployment types on the right.

Select and Place:



Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:

QUESTION 43
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocols they describes on the right.

Select and Place:

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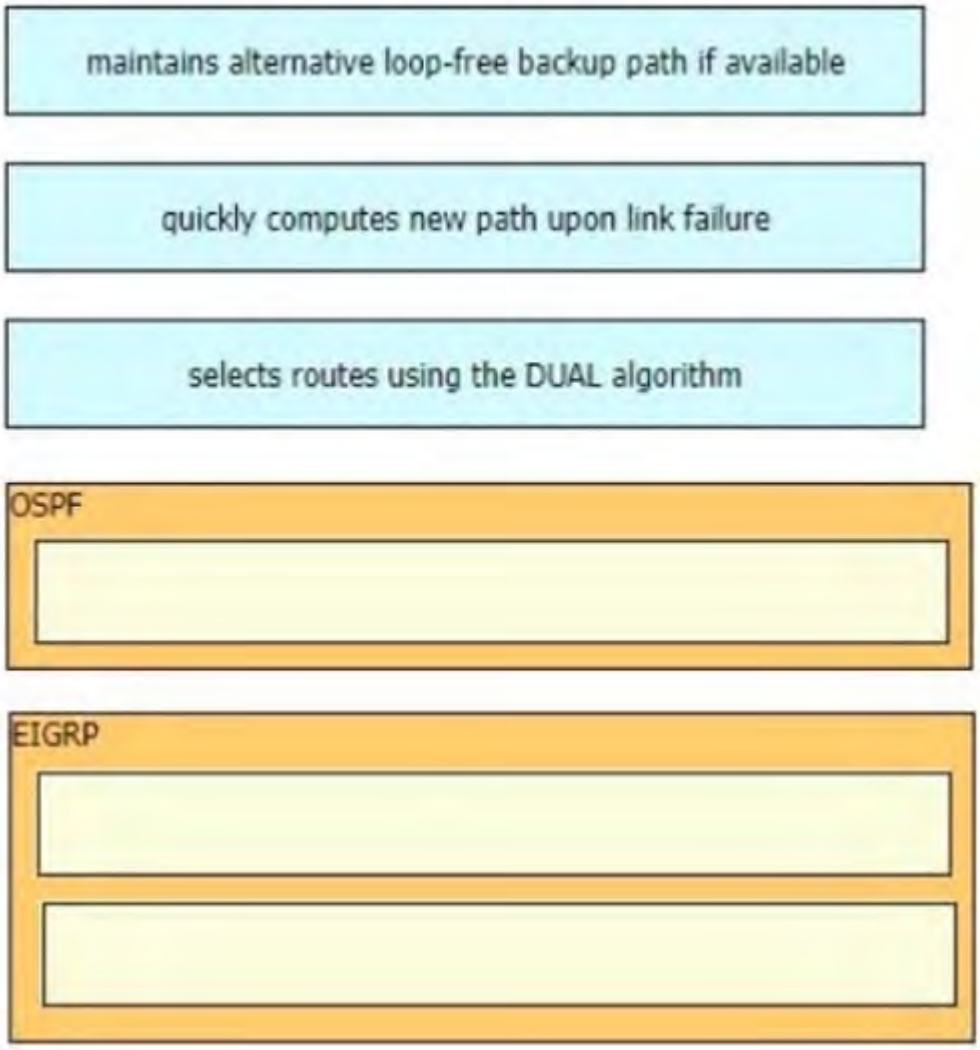


Correct Answer:

https://t.me/learningnets

Explanation

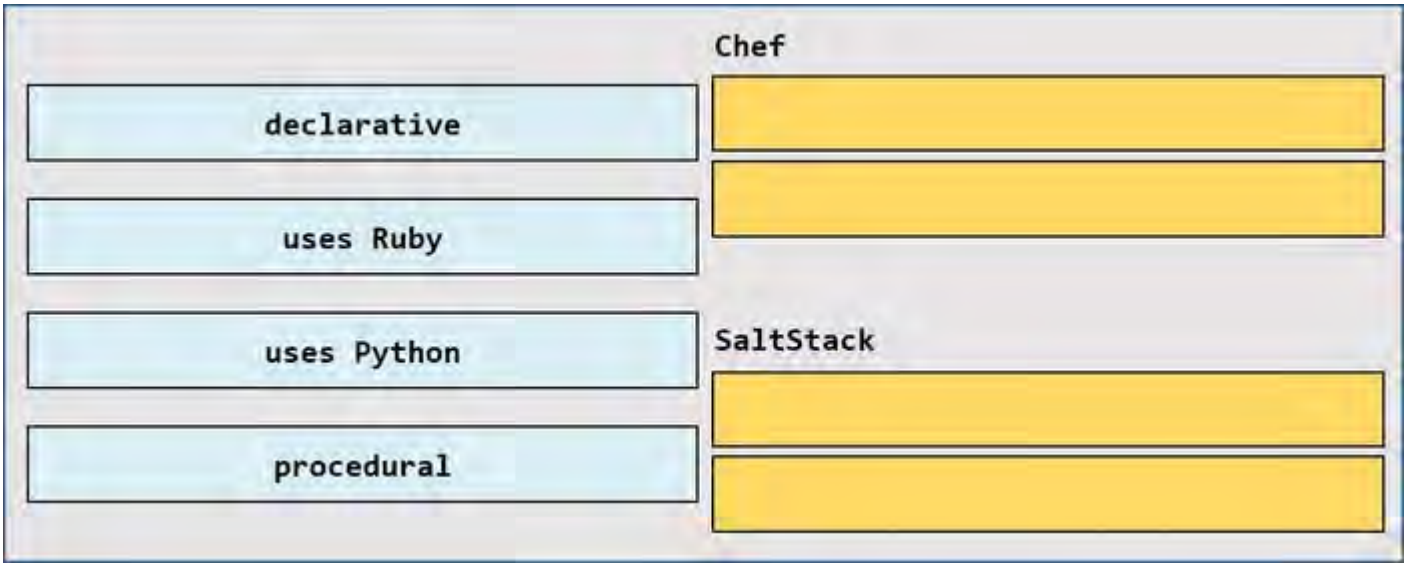
Explanation/Reference:

QUESTION 44
DRAG DROP

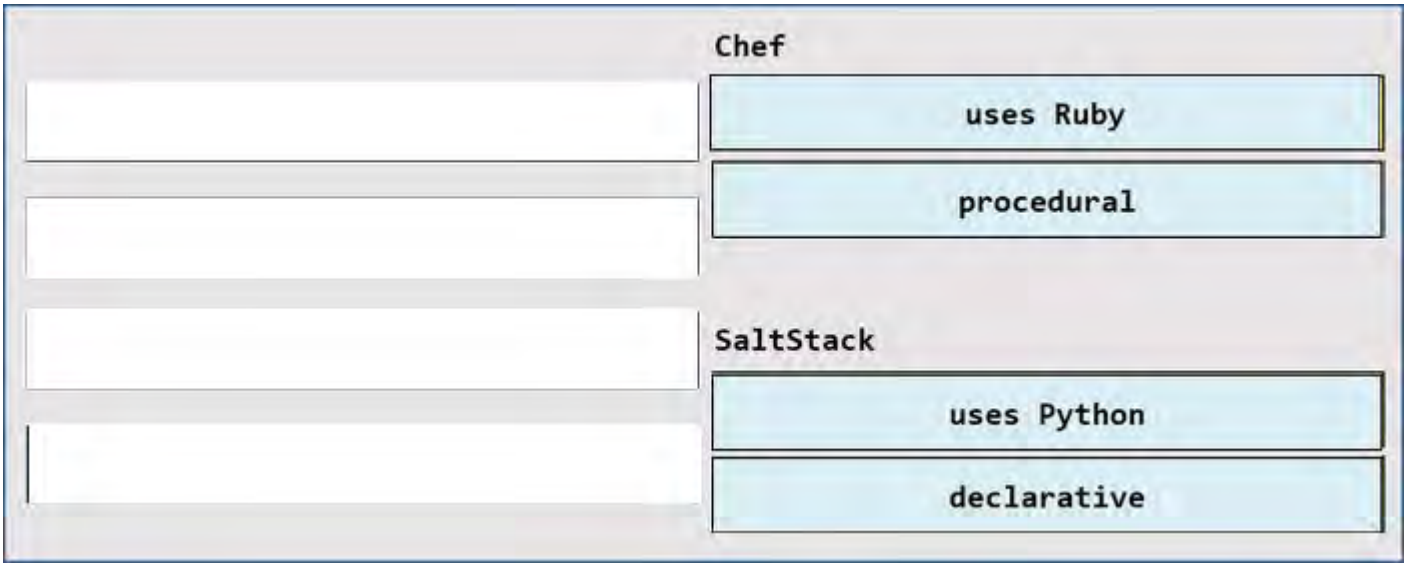
Drag and drop the characteristics from the left onto the orchestration tools that they describe on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 45
DRAG DROP

An engineer must create a script to append and modify device entries in a JSON-formatted file. The script must work as follows:

1. Until interrupted from the keyboard, the script reads in the hostname of a device, its management IP address, operating system type, and CLI remote access protocol.
2. After being interrupted, the script displays the entered entries and adds them to the JSON-formatted file,replacing existing entries whose hostname matches.

The contents of the JSON-formatted file are as follows:

```
{
  "examplerouter":{
  "ip":"203.0.113.1",
  "os":"ios-xe",
  "protocol":"ssh"
      },
```

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...
}

Drag and drop the statements onto the blanks within the code to complete the script. Not all options are used.

Select and Place:

Correct Answer:

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Explanation

Explanation/Reference:

QUESTION 46
DRAG DROP

Drag and drop the LISP components on the left to the correct description on the right.

Select and Place:

ETR	network infrastructure component that learns of EID+prefix mapping entries from an ETR
map server	IPv4 or IPv6 address of an endpoint within a LISP site.
EID	de-encapsulates LISP packets coming from outside of the LISP site to destinations inside of the site

Correct Answer:

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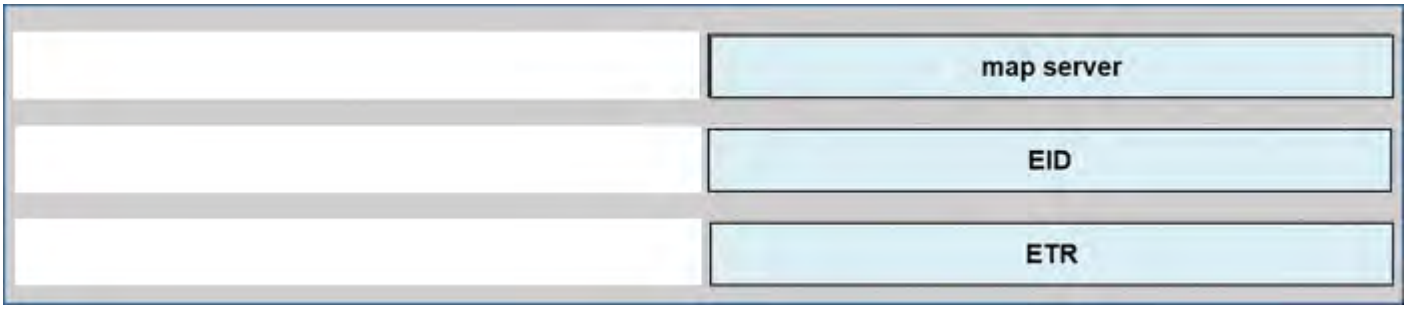


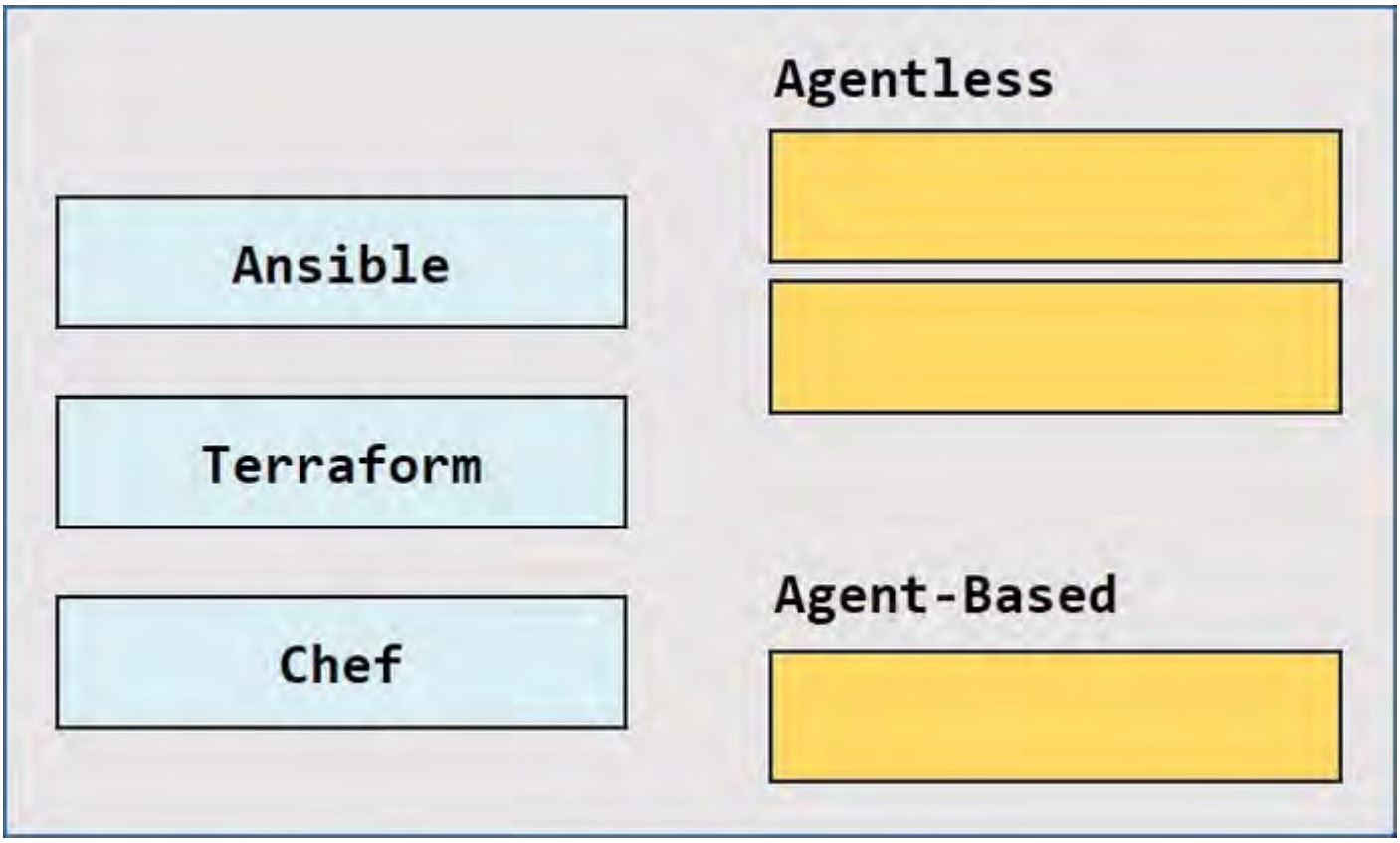
Explanation

Explanation/Reference:

QUESTION 47
DRAG DROP

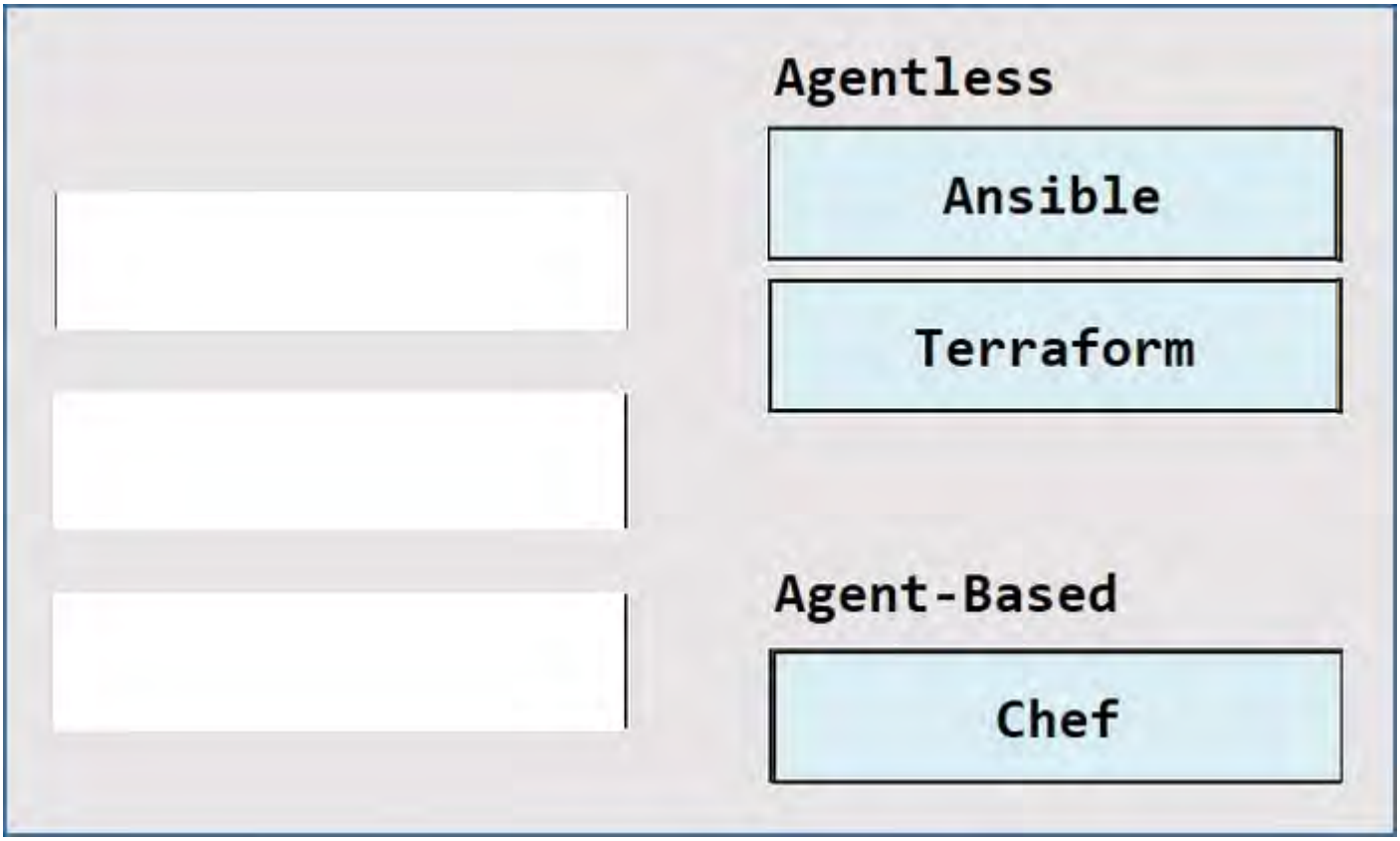
Drag and drop the tools from the left onto the agent types on the right.

Select and Place:



Correct Answer:

https://t.me/learningnets



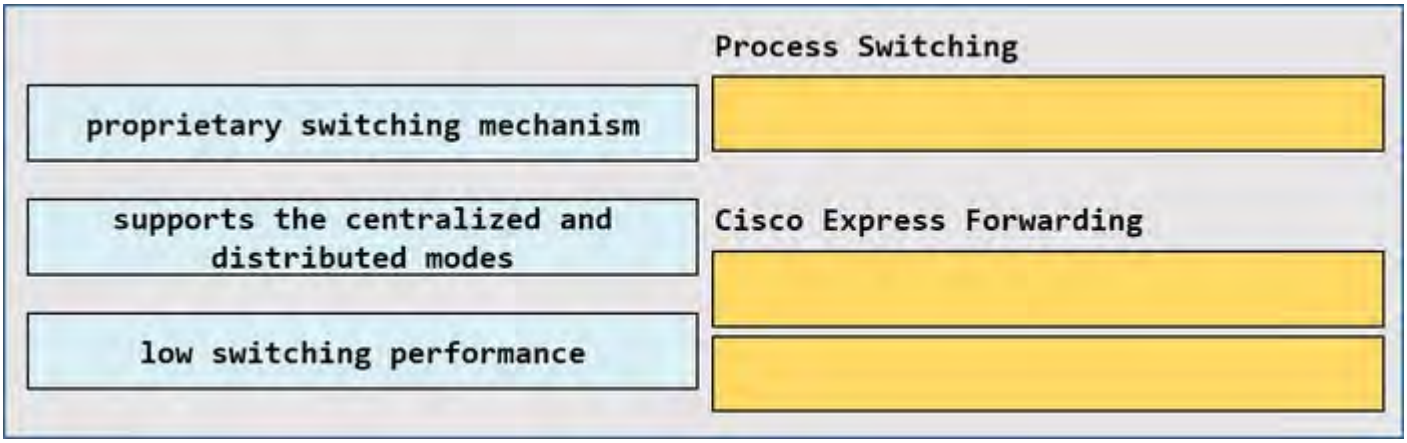
Explanation

Explanation/Reference:

QUESTION 48
DRAG DROP

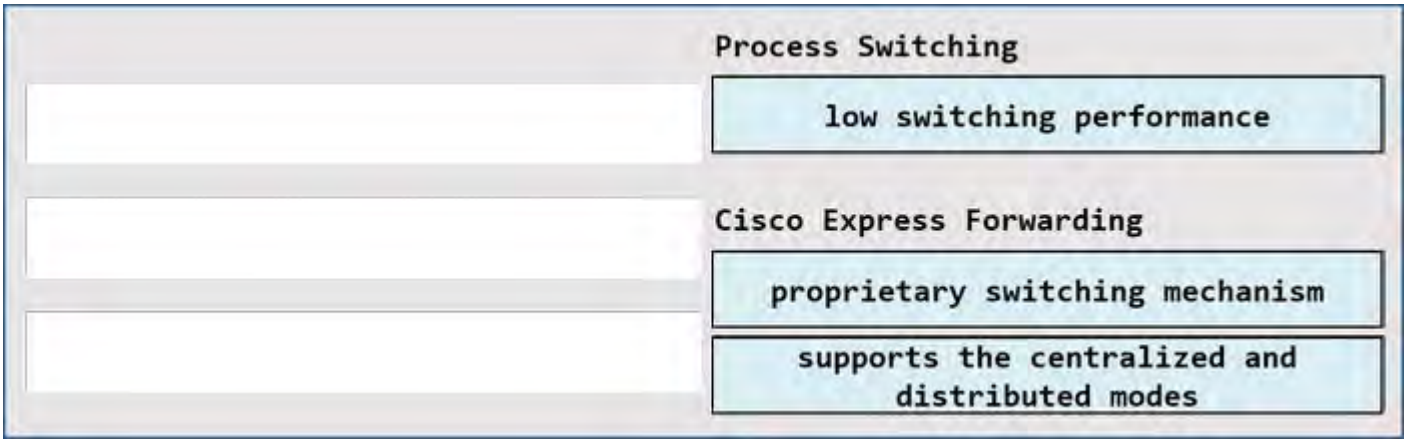
Drag and drop the characteristics from the left onto the switching architectures on the right.

Select and Place:



Correct Answer:

https://t.me/learningnets



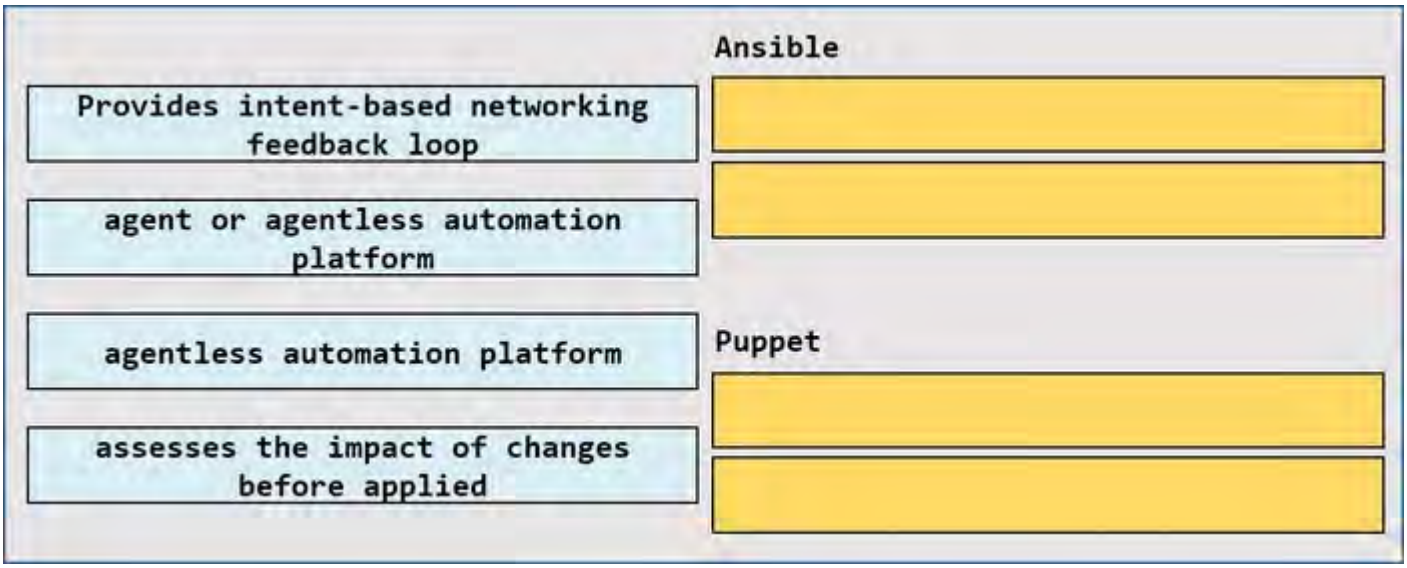
Explanation

Explanation/Reference:

QUESTION 49
DRAG DROP

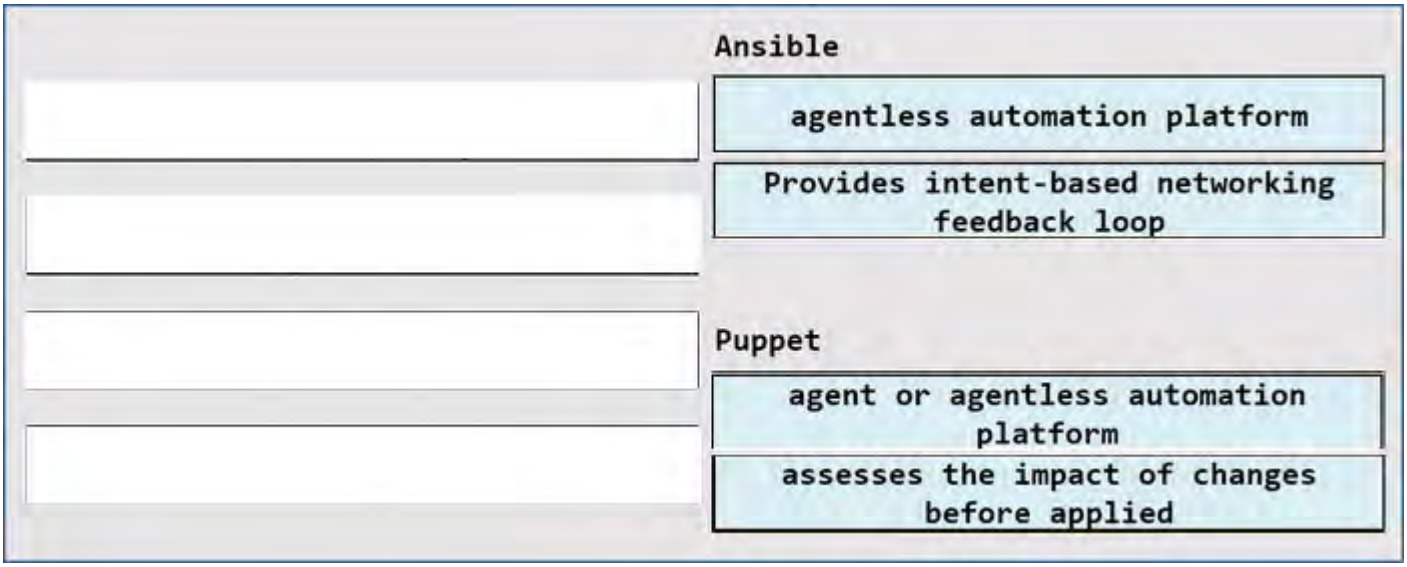
Drag and drop the automation characteristics from the left onto the appropriate tools on the right.

Select and Place:



Correct Answer:

https://t.me/learningnets



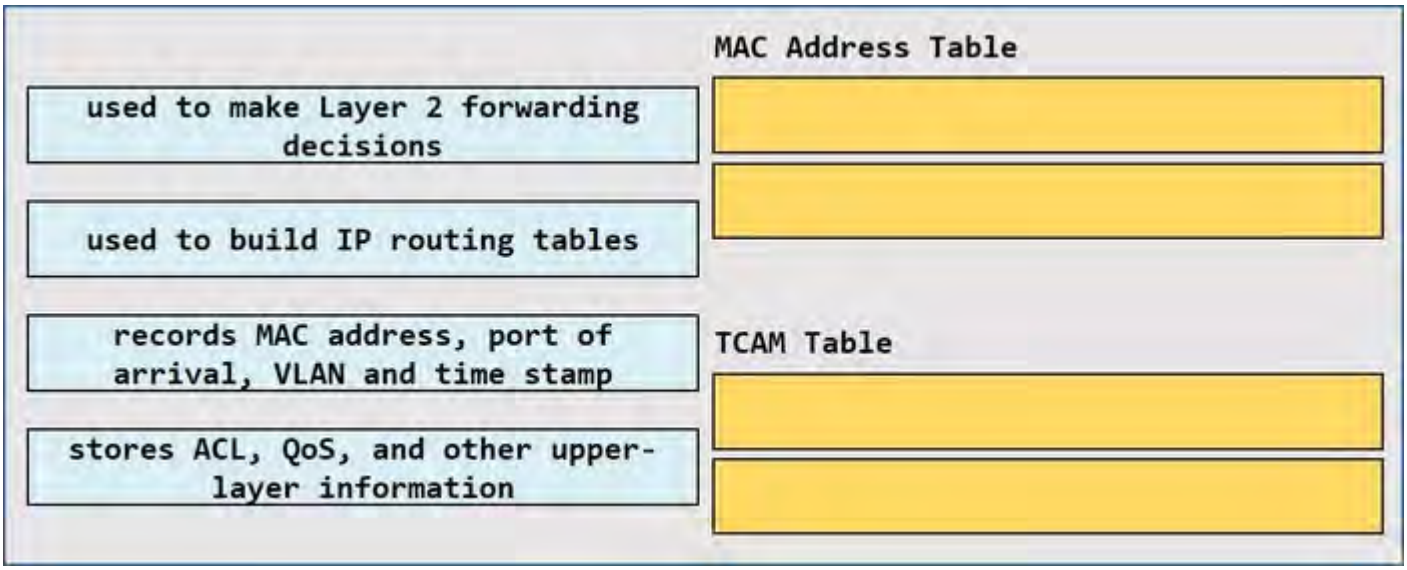
Explanation

Explanation/Reference:

QUESTION 50
DRAG DROP

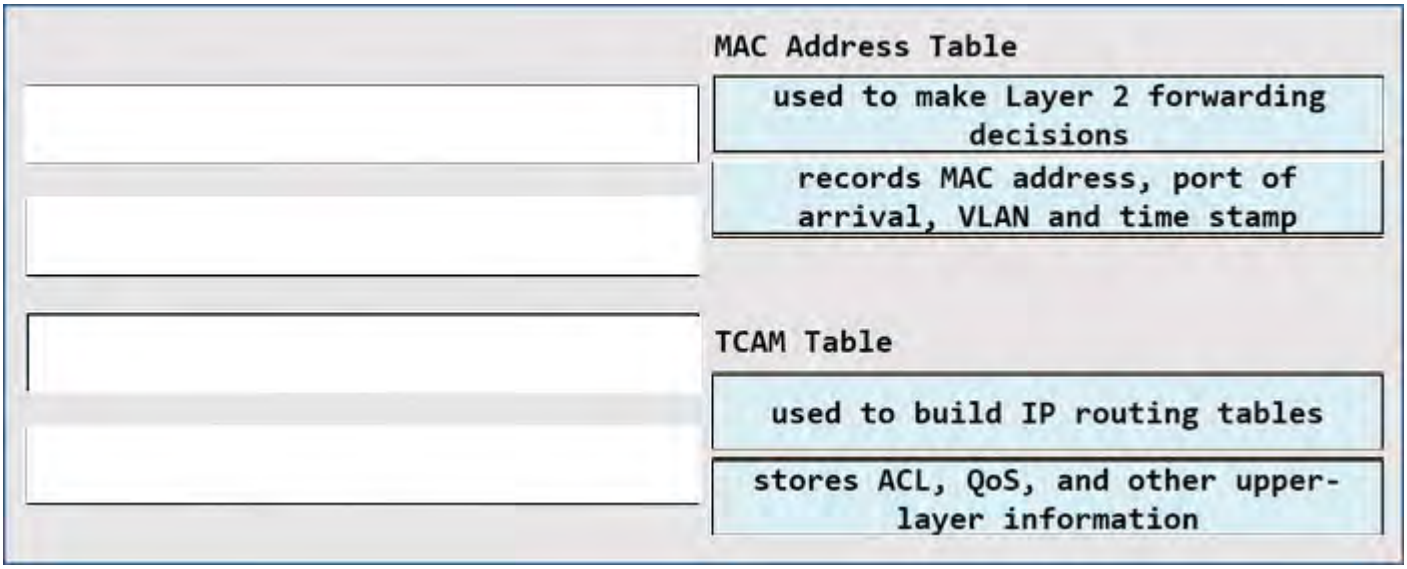
Drag and drop the characteristics from the left to the table types on the right.

Select and Place:



Correct Answer:

https://t.me/learningnets



Explanation

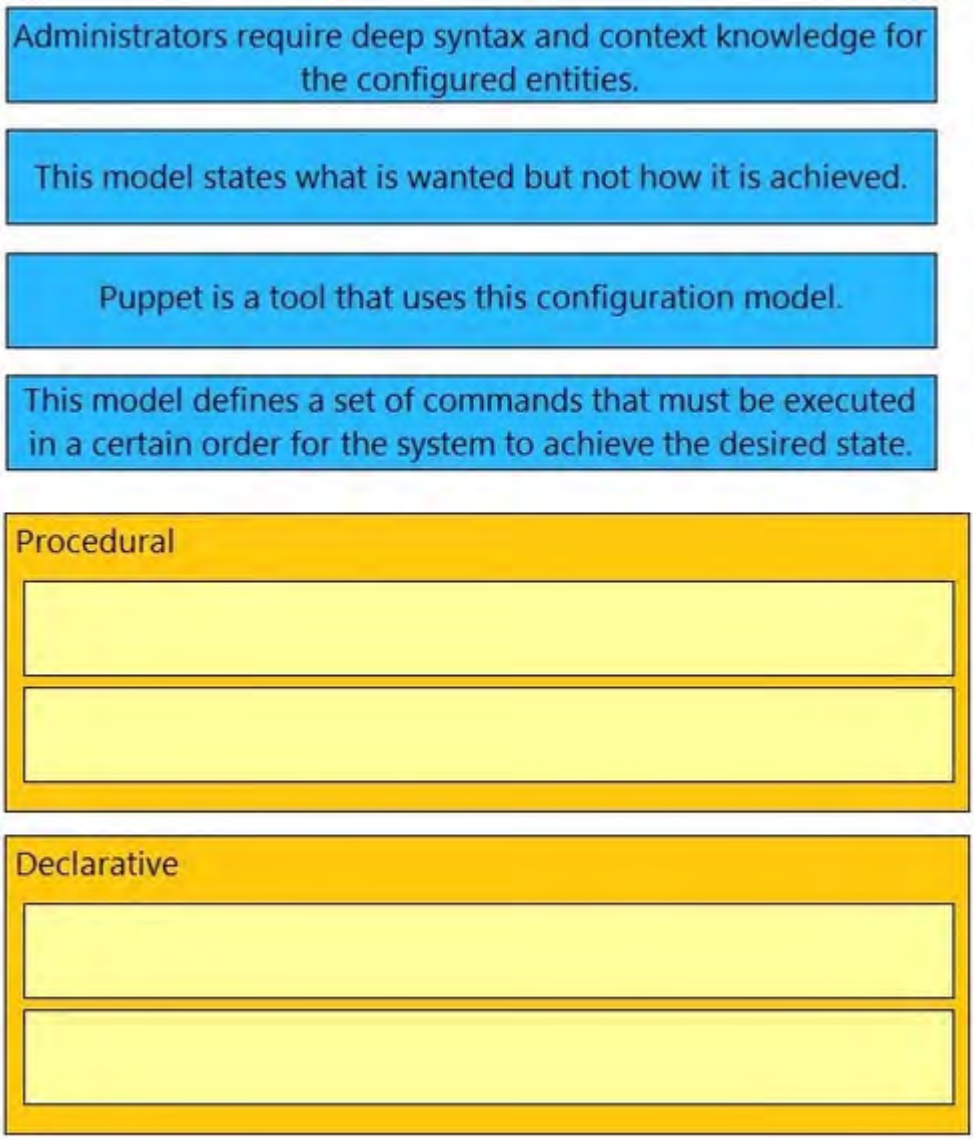
Explanation/Reference:

QUESTION 51
DRAG DROP

Drag and drop the characteristics from the left onto the configuration models on the right.

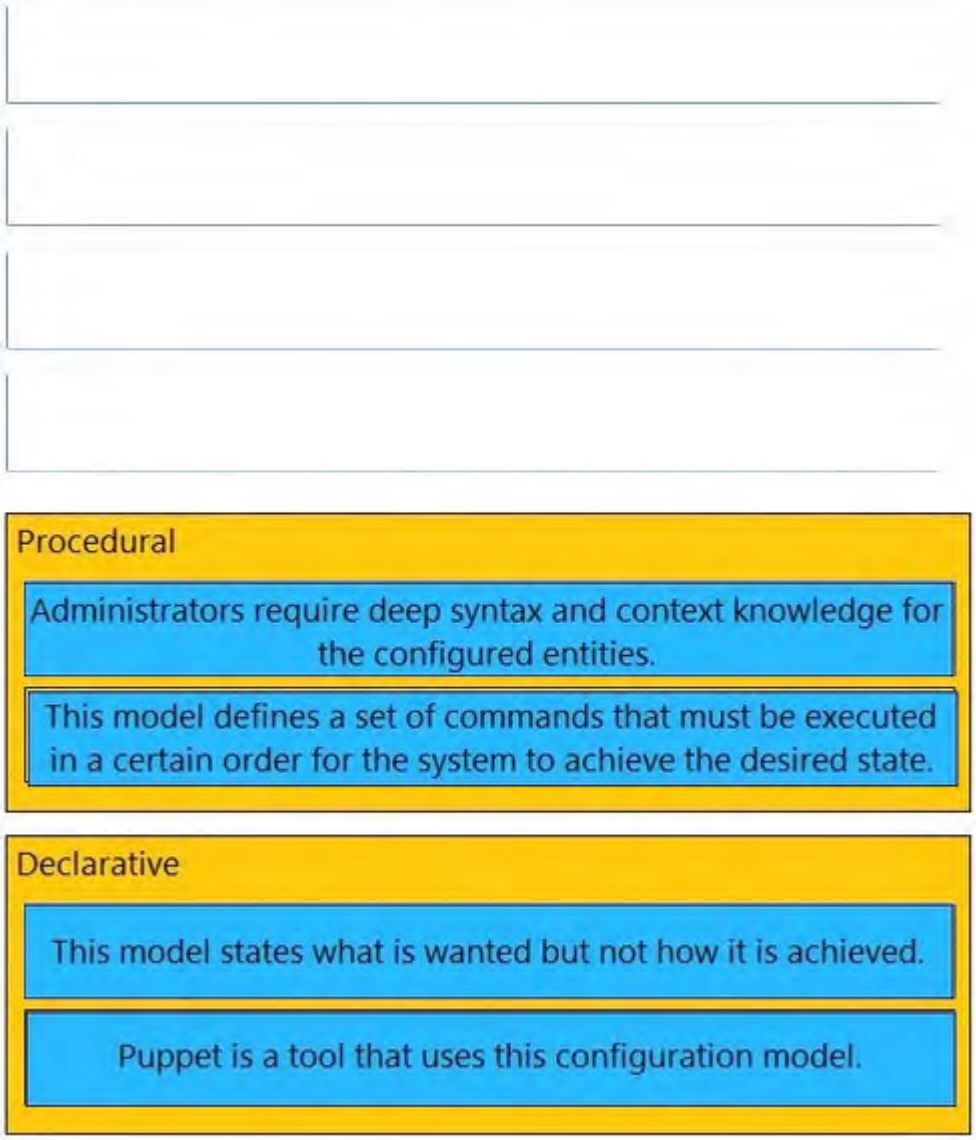
Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:

QUESTION 52
DRAG DROP

Drag and drop the Cisco SD-Access solution areas from the left onto the protocols they use on the right.

Select and Place:

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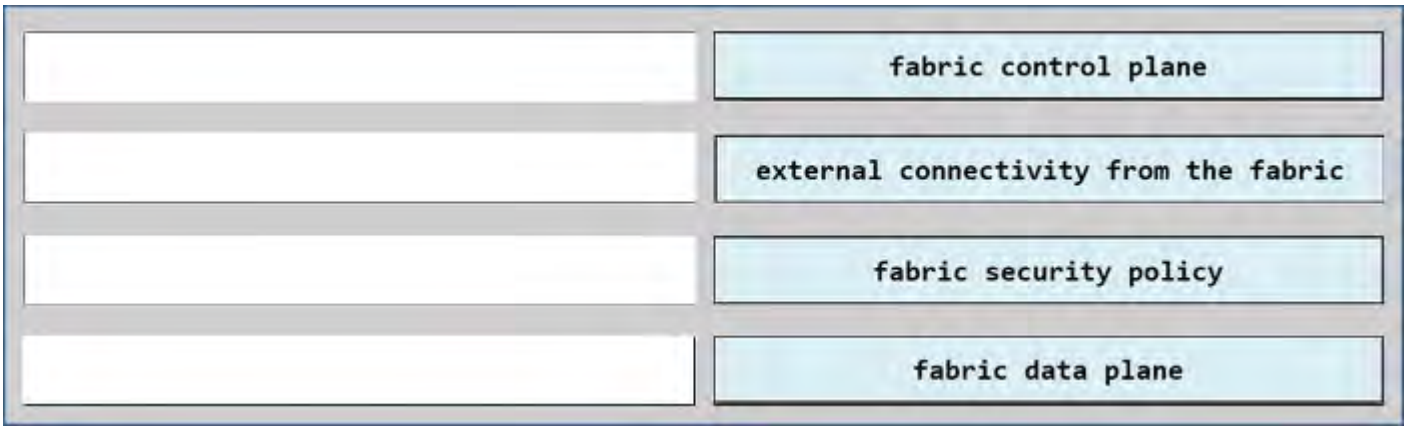
Correct Answer:



Explanation

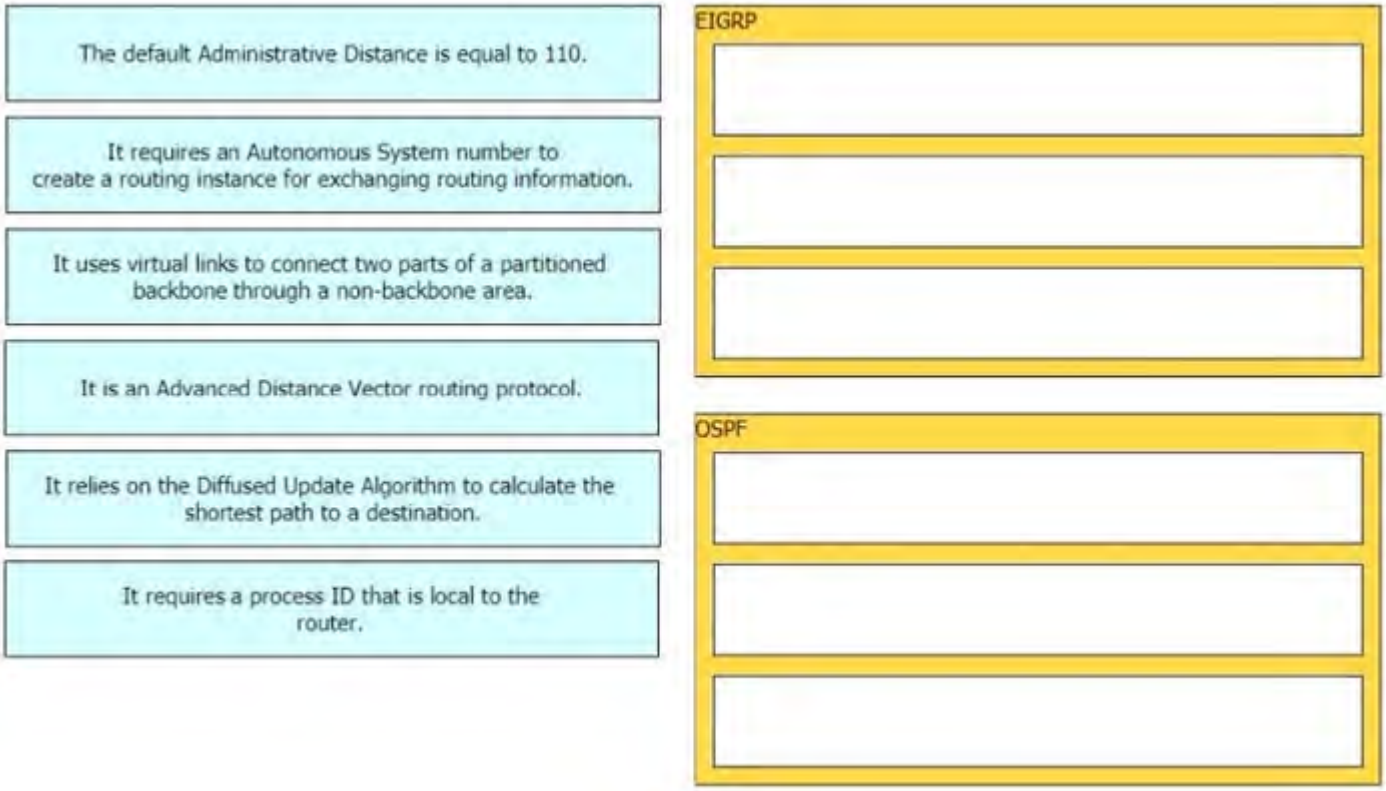
Explanation/Reference:

QUESTION 53
DRAG DROP

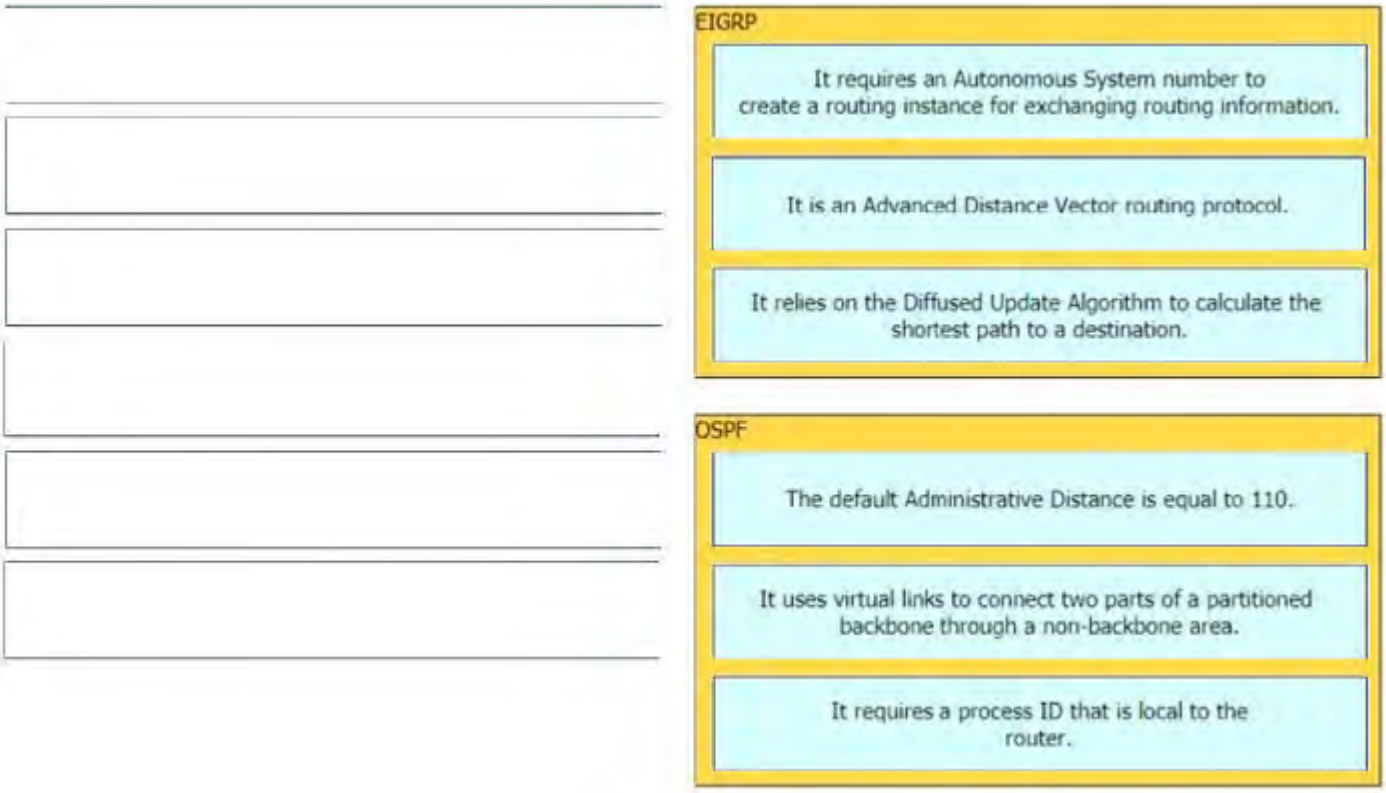
Drag and drop the characteristics from the left onto the routing protocols they describe on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 54
DRAG DROP

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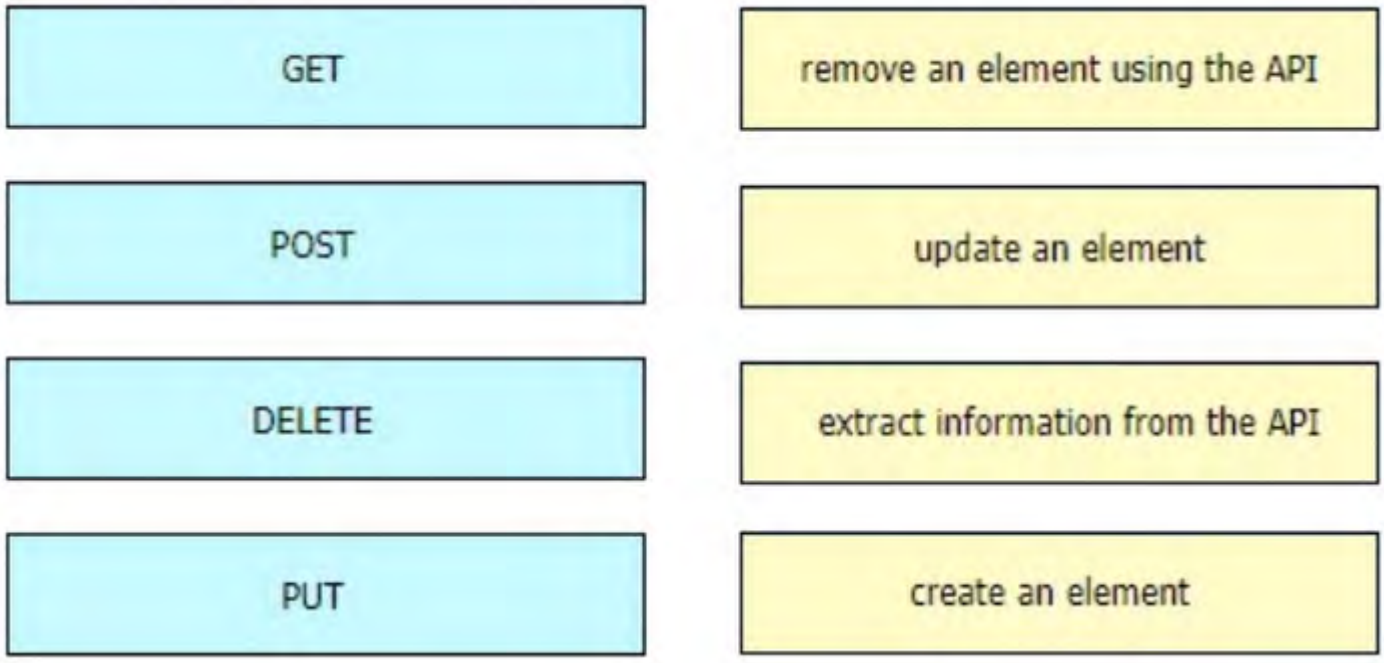
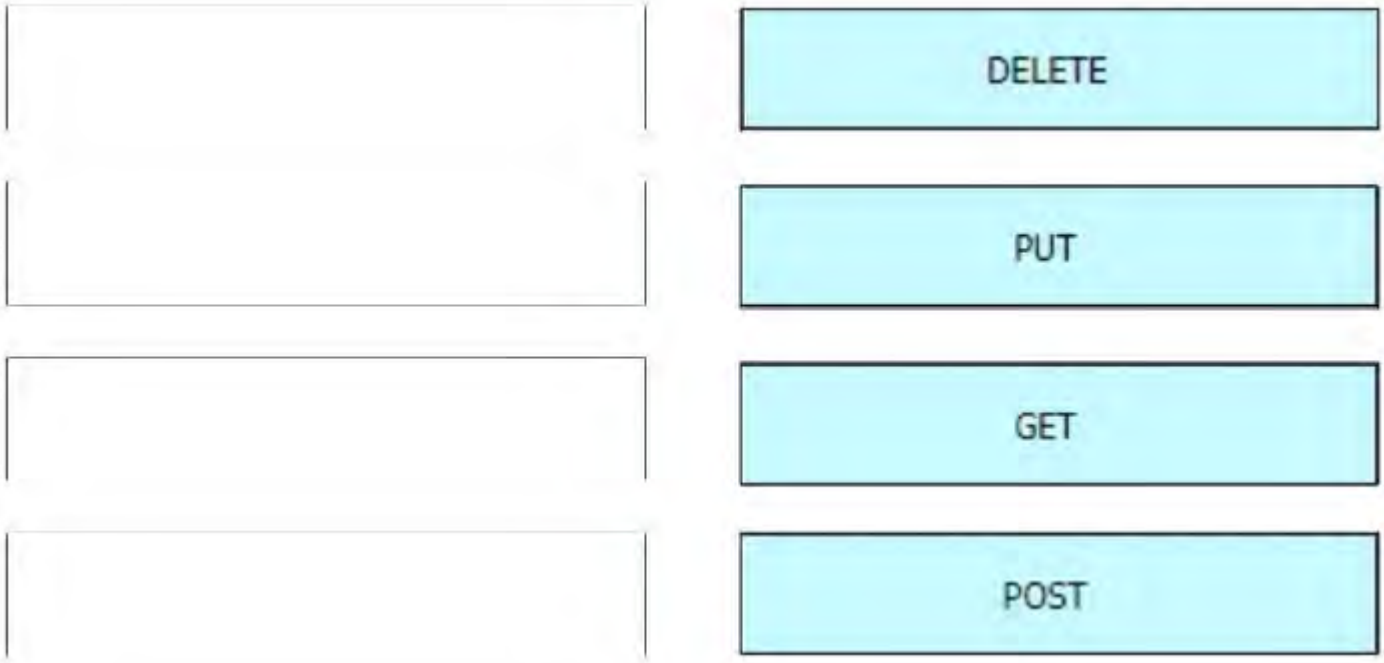
An engineer is working with the Cisco DNA Center API. Drag and drop the methods from the left onto the actions that they are used for on the right.

Select and Place:



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 55
DRAG DROP

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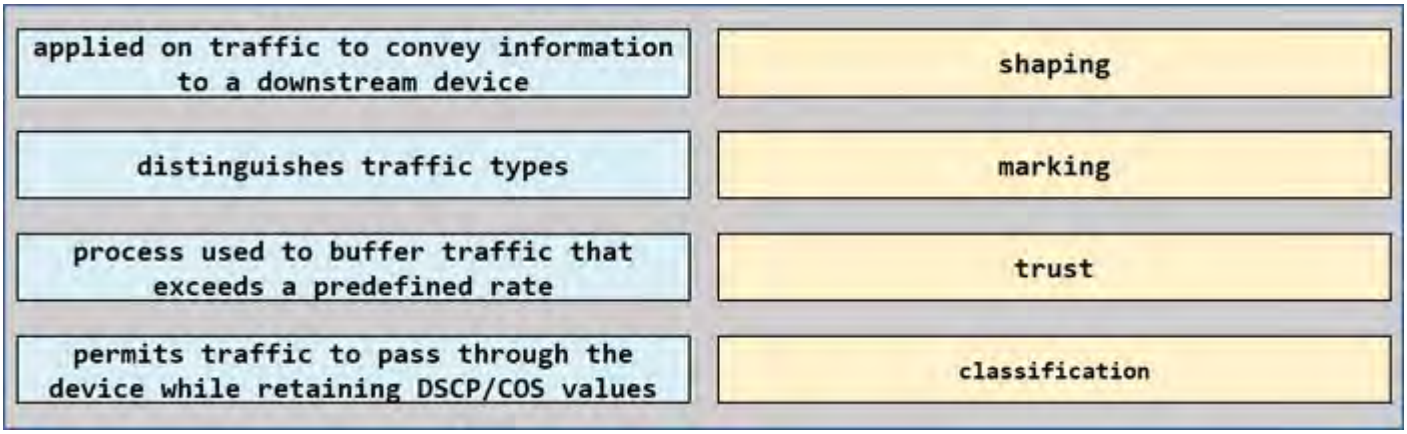
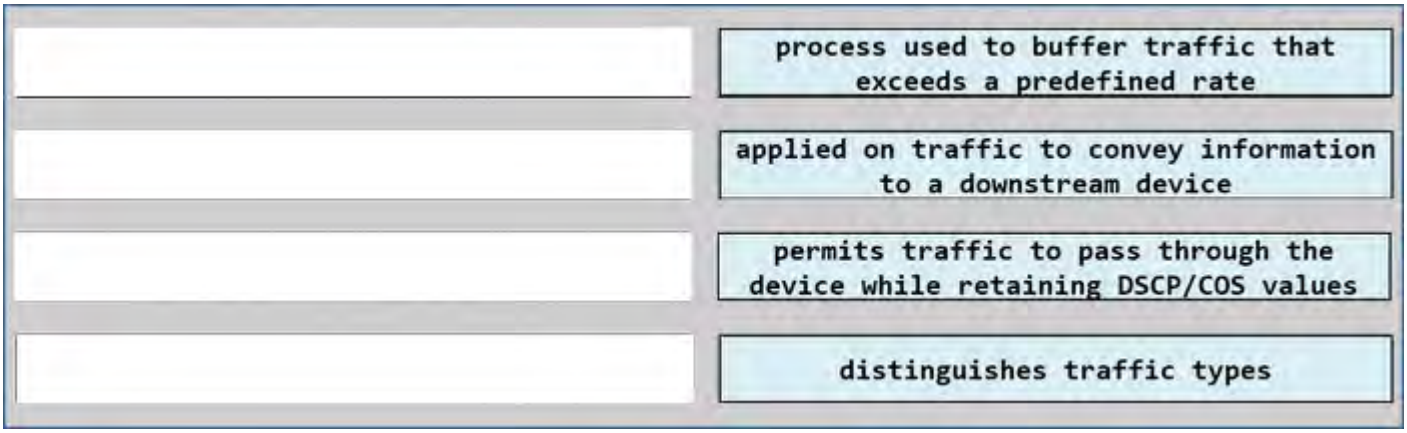
Drag and drop the characteristics from the left onto the QoS components they describe on the right.

Select and Place:



Correct Answer:



Explanation

Explanation/Reference:
Marking = applied on traffic to convey Information to a downstream device
Classification = distinguish traffic types
Trust = Permits traffic to pass through the device while retaining DSCP/COS values
shaping = process used to buffer traffic that exceeds a predefined rate

QUESTION 56
DRAG DROP

Drag and drop the snippets onto the blanks within the code to create an EEM script that adds an entry to a locally stored text file with a timestamp when a configuration change is made. Not all options are used.

Select and Place:

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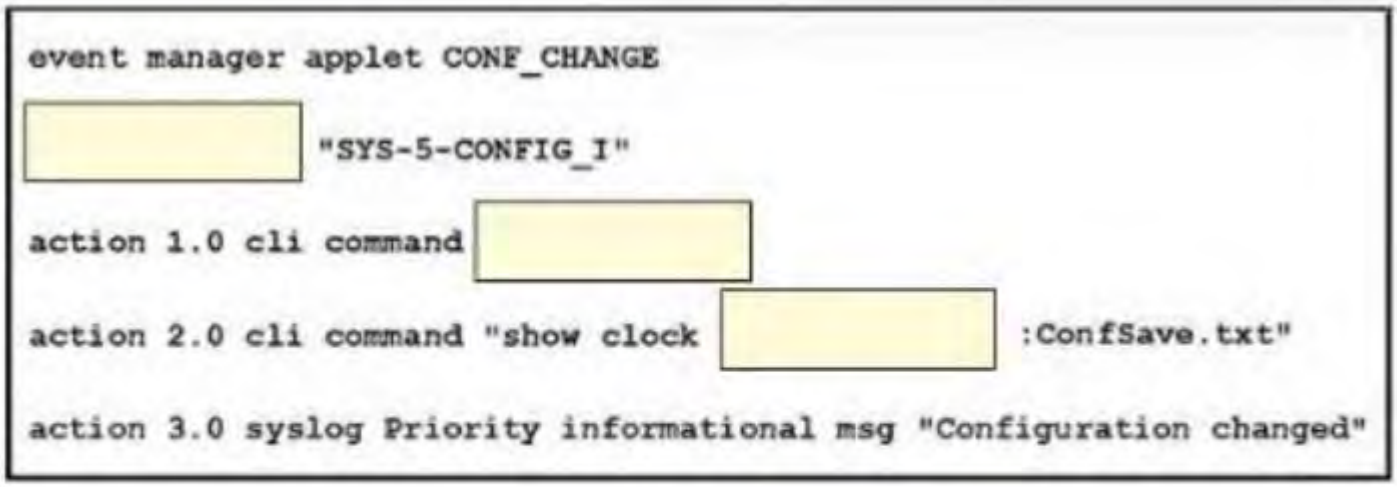
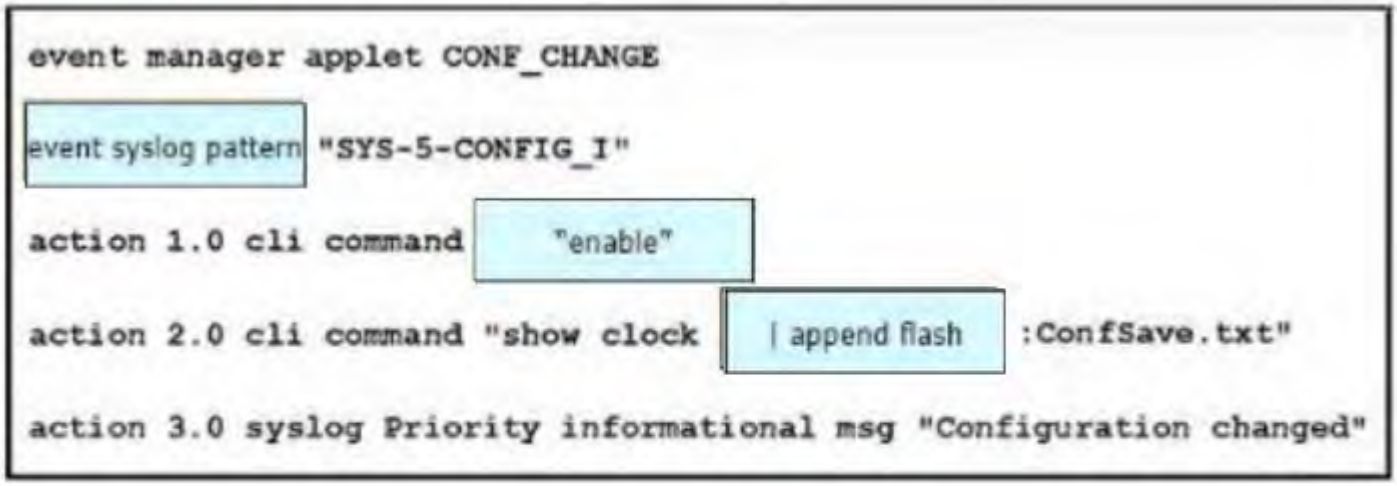


event cli pattern | append flash "enable"

"config t" event syslog pattern flash

Correct Answer:



event cli pattern

"config t" flash

Explanation

Explanation/Reference:

QUESTION 57
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that configures a loopback interface with an IP address. Not all options are used.

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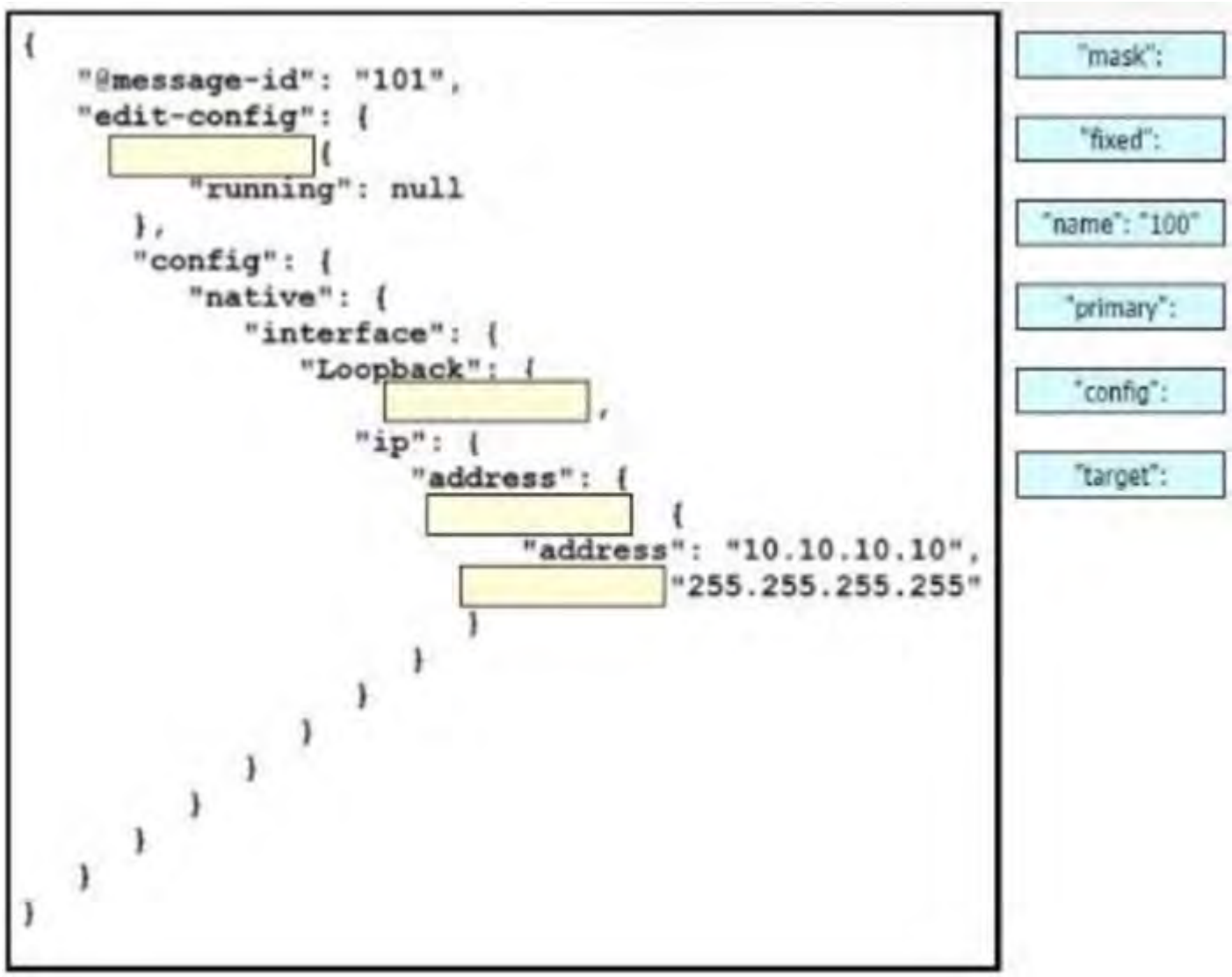
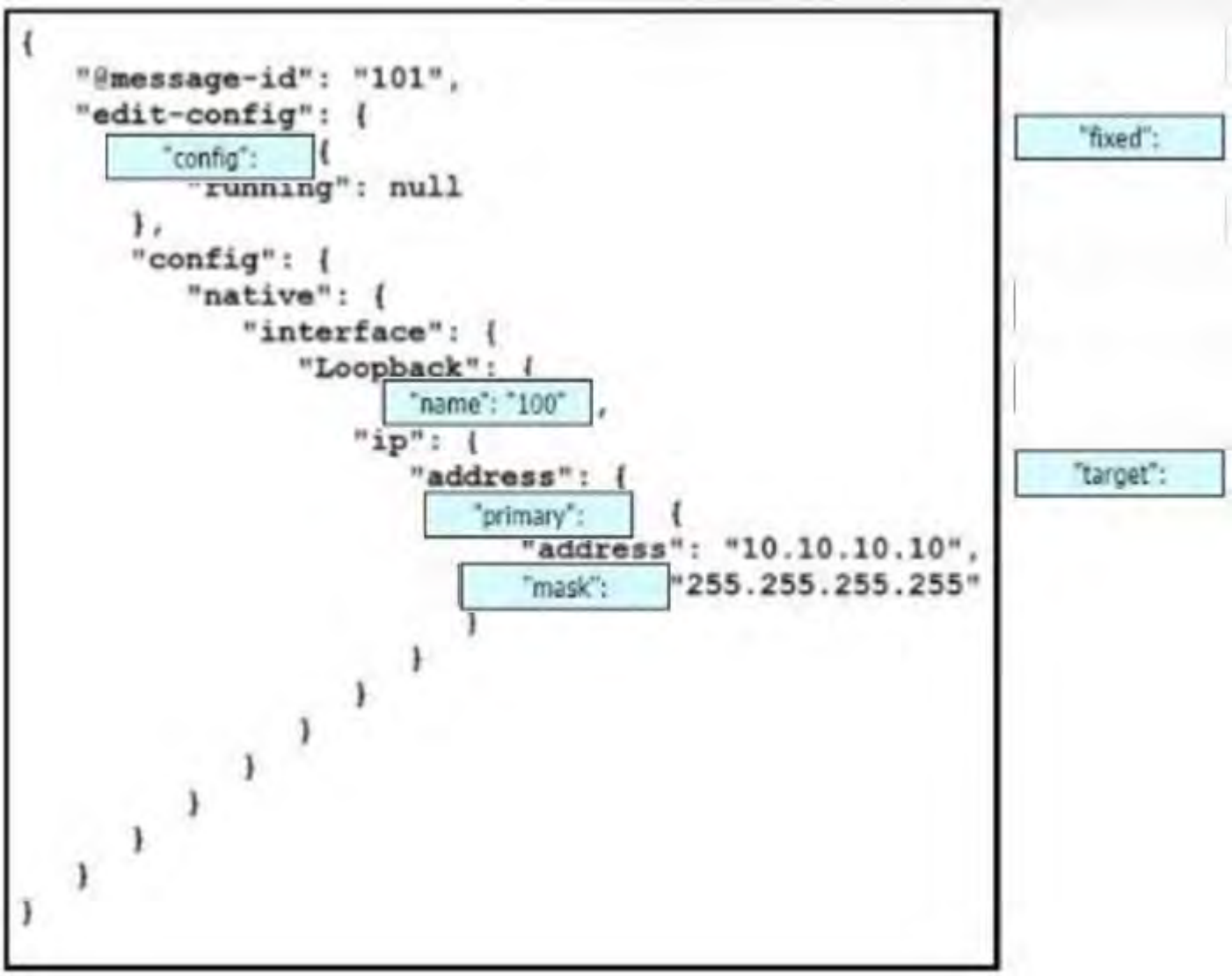
Select and Place:



Correct Answer:

https://t.me/learningnets



Explanation

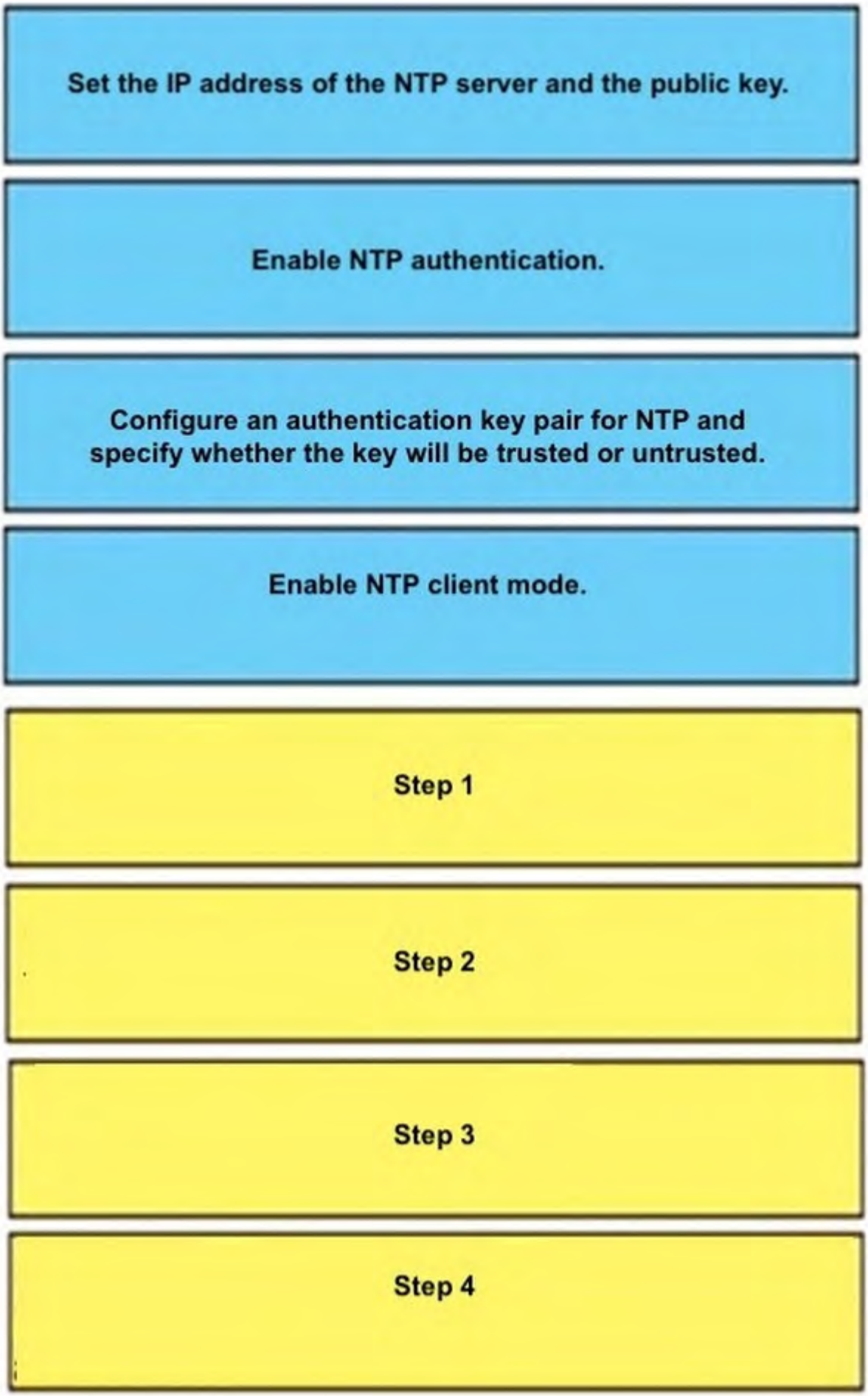
Explanation/Reference:

QUESTION 58
DRAG DROP

Please drag and drop the options provided in the left to configure NTP in client mode.

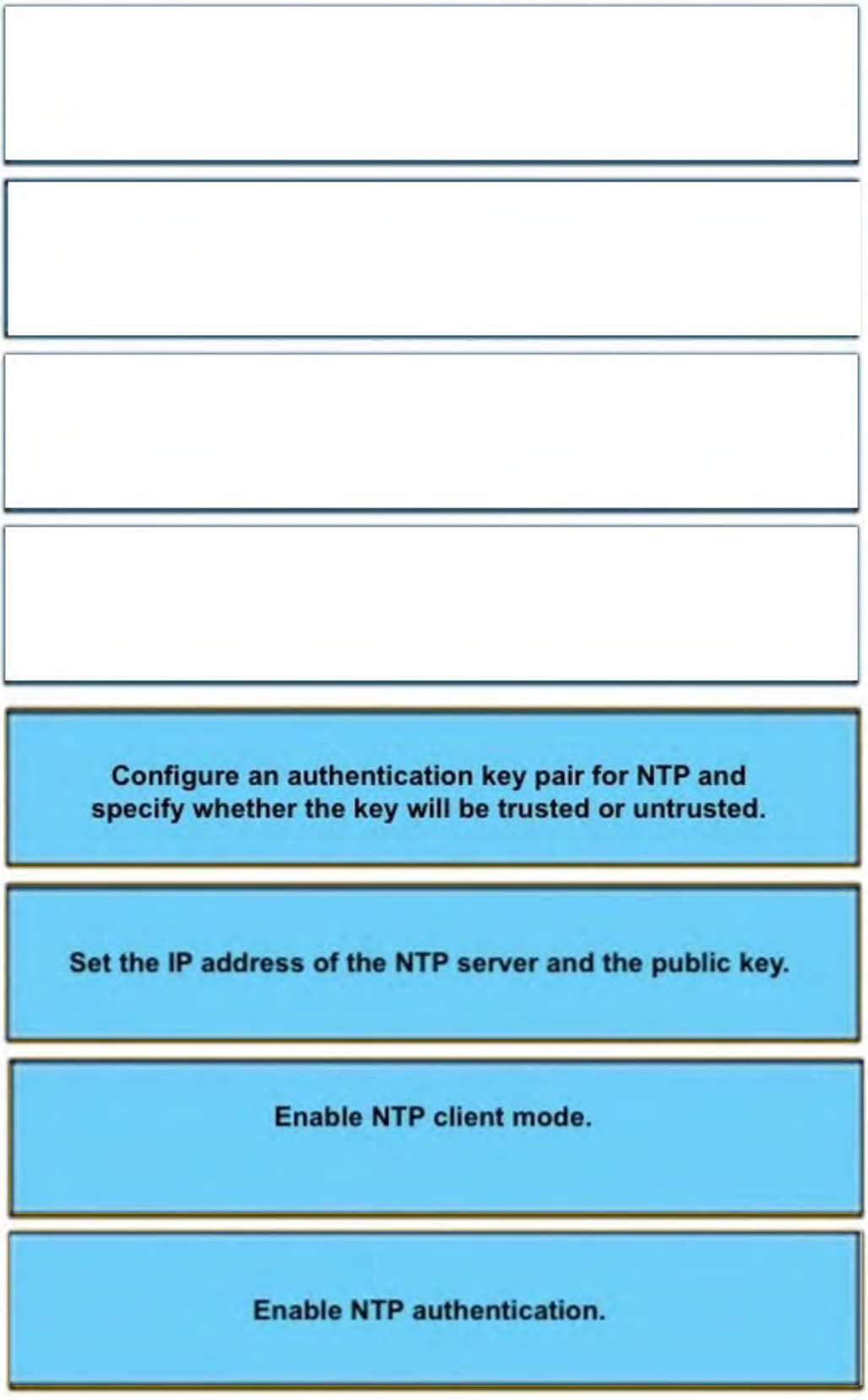
Select and Place:

https://t.me/learningnets



https://t.me/learningnets

Correct Answer:



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Explanation

Explanation/Reference:

QUESTION 59
DRAG DROP

Drag and drop the definitions on the left to their respective technological names on the right.

Select and Place:

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one of many values depending on which wireless standard you are connecting with	RSSI
measurement of power in an RF signal	SNR
how much power a WLAN device is using to maintain the connection	Data Rate
how much stronger the wireless signal is compared to the noise floor surrounding the WLAN client	Power level

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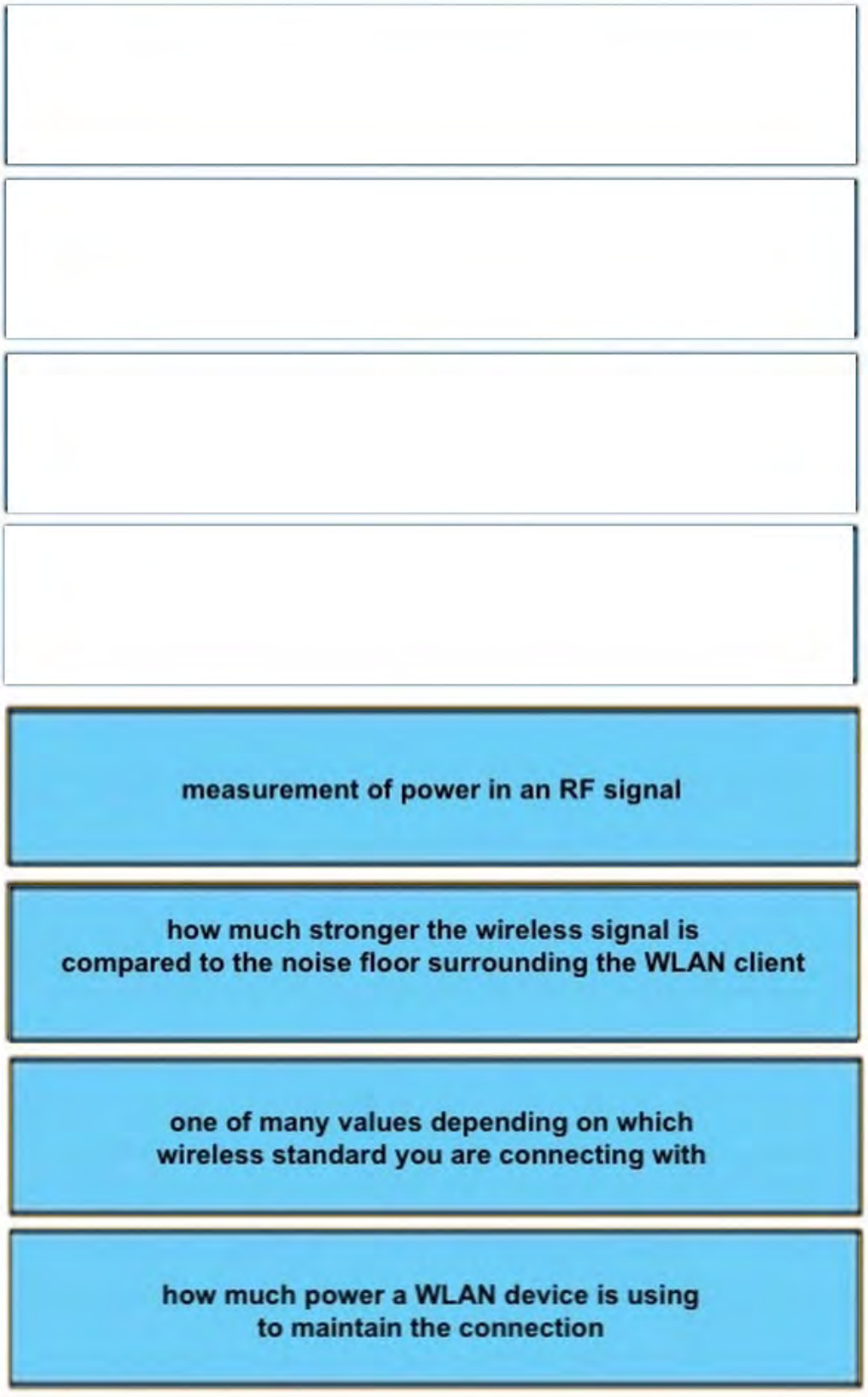
Correct Answer:



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Explanation

Explanation/Reference:

QUESTION 60
DRAG DROP

Drag and drop the definitions in the left to their respective Terminology in the right.

Select and Place:

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provides the same Ethernet Layer 2 network services as VLAN does today, but with greater extensibility and flexibility.

does the encapsulation and de-encapsulation

Logical interface where the encapsulation and de-encapsulation occur

24 bit segment ID that defines the broadcast domain.

VNID

VXLAN

VTEP

NVE

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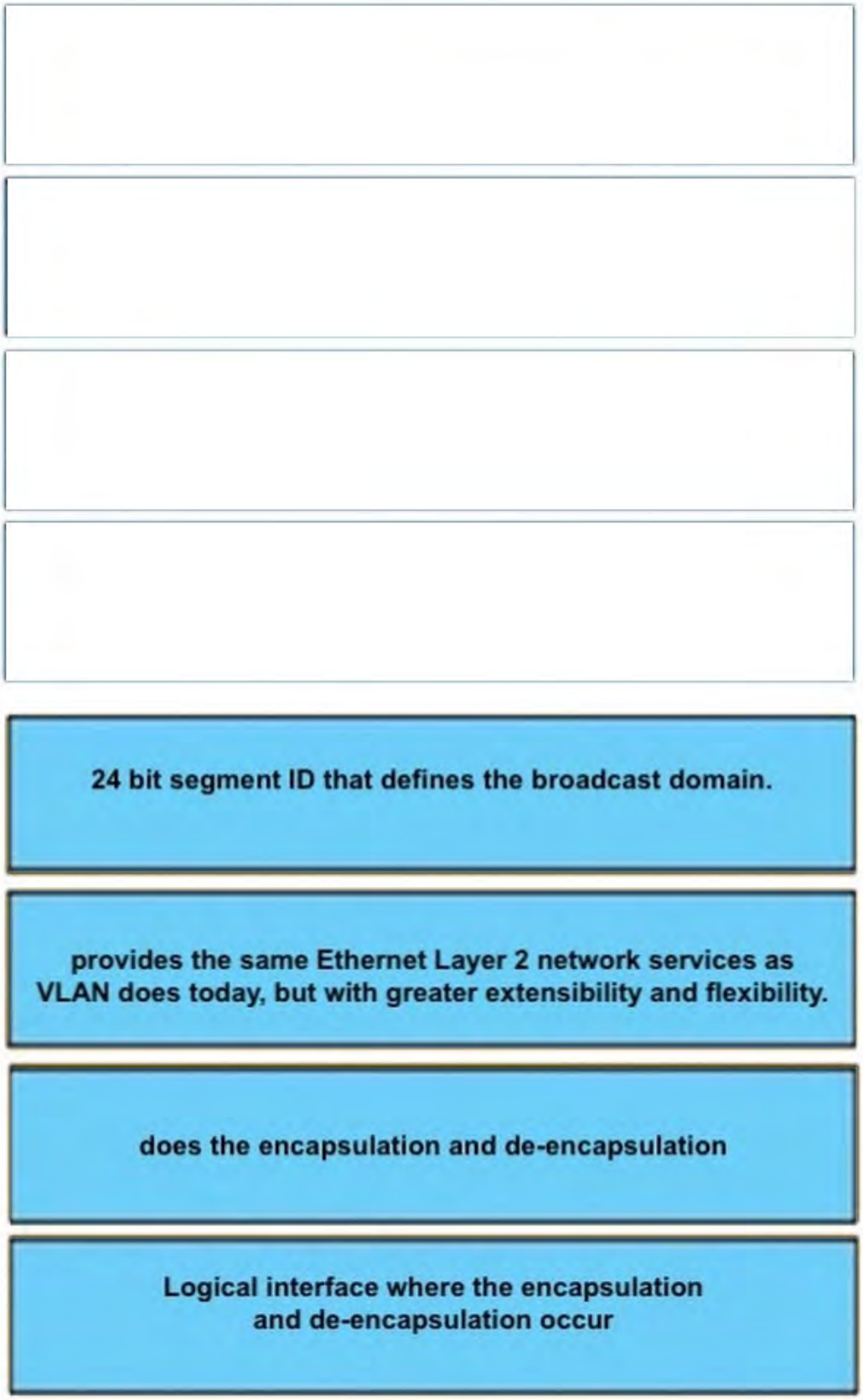
Correct Answer:



https://t.me/learningnets

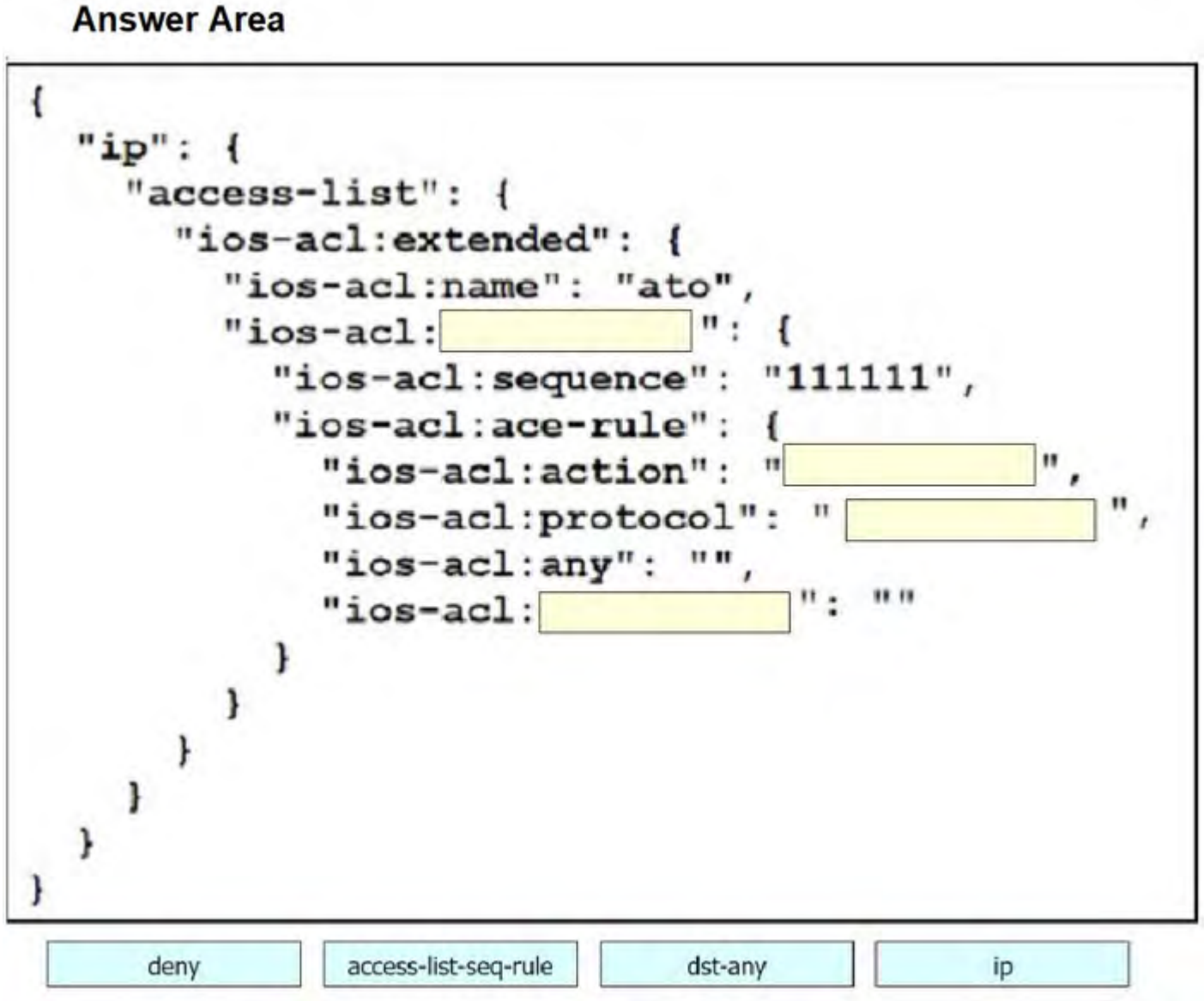
Explanation

Explanation/Reference:

QUESTION 61
DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the code to construct a request that configures a deny rule on an access list.

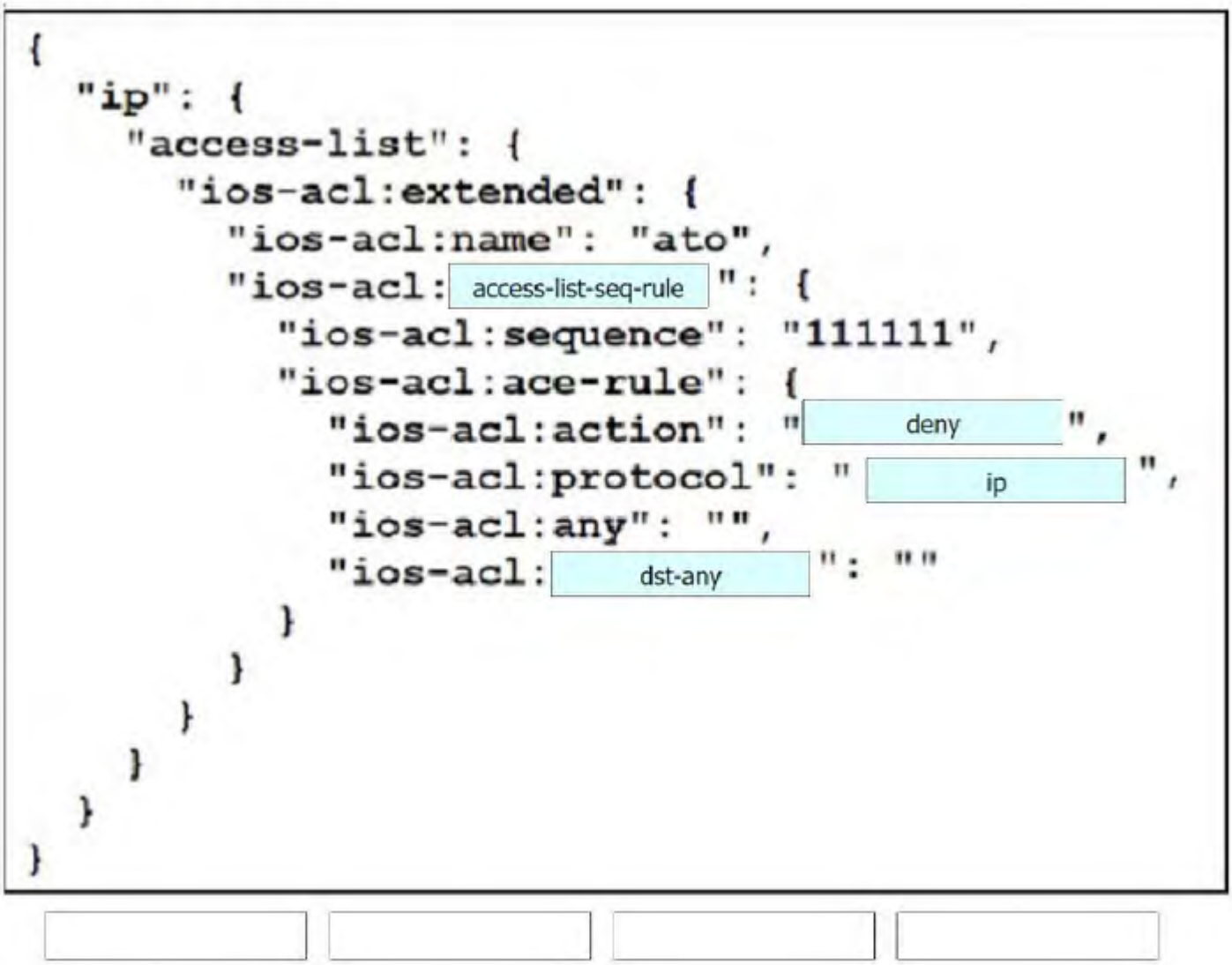
Select and Place:



Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

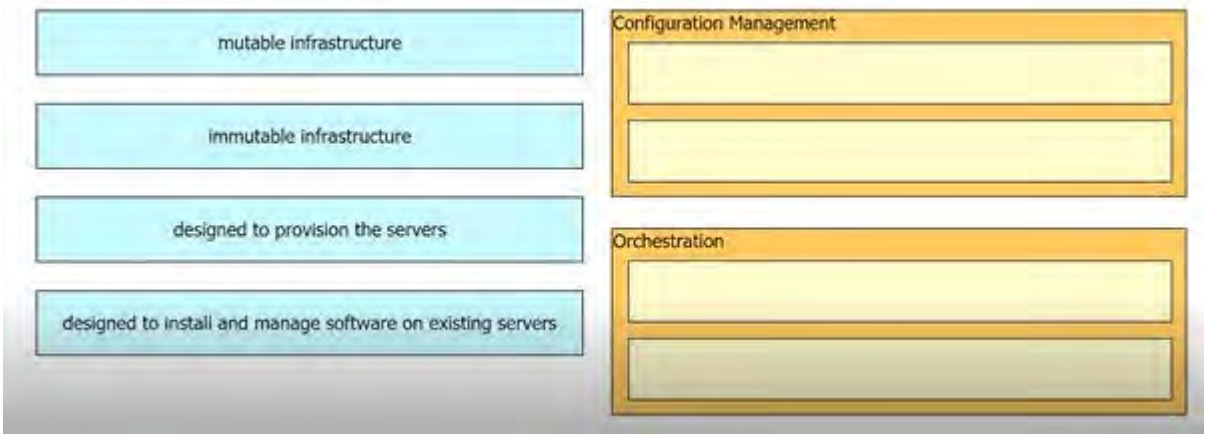
Explanation/Reference:

QUESTION 62
DRAG DROP

Drag and drop the characteristics from the left onto the orchestration tool classifications on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:

Explanation

Explanation/Reference:

QUESTION 63
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that brings up the failover Ethernet port if the primary port goes down and also shuts down the failover port when the primary returns to service. Not all options are used.

Select and Place:

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Answer Area

```
event manager applet SRV-1-Up
 event syslog pattern "Line protocol on Interface GigabitEthernet4/0/9,
                                        changed state to [          ]"
 action 1.0 cli command "enable"
 action 2.0 cli command "configure terminal"
 action 3.0 cli command "Interface GigabitEthernet3/0/10"
 action 4.0 cli command "no shutdown"
action 5.0 cli command "end"
event manager applet SRV-1-Down
 event syslog pattern "Line protocol on Interface [          ],
                                        changed state to up"
 action 1.0 cli command "enable"
 action 2.0 cli command "configure terminal"
 action 3.0 cli command "Interface GigabitEthernet3/0/10"
 action 4.0 cli command "[          ]"
action 5.0 cli command "end"
```

Shutdown	Up	GigabitEthernet3/0/10
No shutdown	Down	GigabitEthernet4/0/9

Correct Answer:

https://t.me/learningnets

Answer Area

```
event manager applet SRV-1-Up
 event syslog pattern "Line protocol on Interface GigabitEthernet4/0/9,
                                        changed state to [Down] "
 action 1.0 cli command "enable"
 action 2.0 cli command "configure terminal"
 action 3.0 cli command "Interface GigabitEthernet3/0/10"
 action 4.0 cli command "no shutdown"
action 5.0 cli command "end"
event manager applet SRV-1-Down
 event syslog pattern "Line protocol on Interface [GigabitEthernet4/0/9] ,
                                        changed state to up"
 action 1.0 cli command "enable"
 action 2.0 cli command "configure terminal"
 action 3.0 cli command "Interface GigabitEthernet3/0/10"
 action 4.0 cli command "[Shutdown] "
action 5.0 cli command "end"
```

	Up	GigabitEthernet3/0/10
No shutdown		

Explanation

Explanation/Reference:

QUESTION 64
DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the code to construct a request that configures policy-based routing.

Select and Place:

https://t.me/learningnets

```
"route-map": {
  "name": "auto",
  "ios-route-map:route-map-without-order-seq": {
   "ios-route-map:seq_no": "100",
   "ios-route-map:operation": "[          ]",
   "ios-route-map:[          ]": {
     "ios-route-map:ip": {
      "ios-route-map:[          ]":{"ios-route-map:address":
        "\"\"\" + isp2iprmt + \"\"\""}
     }
   },
   "ios-route-map:match": {
     "ios-route-map:ip": {
       "ios-route-map:[          ]":{"ios-route-map:access-list": "auto"}
     }
   }
  }
}
```

address | permit | next-hop | set

Correct Answer:

```
"route-map": {
  "name": "auto",
  "ios-route-map:route-map-without-order-seq": {
   "ios-route-map:seq_no": "100",
   "ios-route-map:operation": "[ permit ]",
   "ios-route-map:[ set ]": {
     "ios-route-map:ip": {
      "ios-route-map:[ next-hop ]":{"ios-route-map:address":
        "\"\"\" + isp2iprmt + \"\"\""}
     }
   },
   "ios-route-map:match": {
     "ios-route-map:ip": {
       "ios-route-map:[ address ]":{"ios-route-map:access-list": "auto"}
     }
   }
  }
}
```

Explanation

Explanation/Reference:

https://t.me/learningnets

QUESTION 65
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that configures BGP according to the topology. Not all options are used, and some options may be used twice.

Select and Place:

```
<config xmlns:xc="urn:ietf:params:xml:ns:netconf:base:1.0"
      xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native"
      xmlns:ios-bgp="http://cisco.com/ns/yang/Cisco-IOS-XE-bgp">
    <router>
      <ios-bgp:bgp>
        <ios-bgp:id> [          ] </ios-bgp:id>
        <ios-bgp:neighbor>
          <ios-bgp:id> [          ] </ios-bgp:id>
          <ios-bgp:remote-as> [          ] </ios-bgp:remote-as>
        </ios-bgp:neighbor>
        <ios-bgp:address-family>
          <ios-bgp:no-vrf>
            <ios-bgp:ipv4>
              <ios-bgp:af-name>unicast</ios-bgp:af-name>
              <ios-bgp:ipv4-unicast>
                <ios-bgp:neighbor>
                  <ios-bgp:id> [          ] </ios-bgp:id>
                  <ios-bgp:soft-reconfiguration>inbound</ios-bgp:soft-reconfiguration>
                </ios-bgp:neighbor>
              </ios-bgp:ipv4-unicast>
            </ios-bgp:ipv4>
          </ios-bgp:no-vrf>
        </ios-bgp:address-family>
      </ios-bgp:bgp>
    </router>
  </native>
</config>
```

192.168.1.1 | 192.168.1.2 | 65000 | 65001

Correct Answer:

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```
<config xmlns:xc="urn:ietf:params:xml:ns:netconf:base:1.0"
      xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <native xmlns="http://cisco.com/ns/yang/Cisco-IOS-XE-native"
      xmlns:ios-bgp="http://cisco.com/ns/yang/Cisco-IOS-XE-bgp">
    <router>
      <ios-bgp:bgp>
        <ios-bgp:id> 65001 </ios-bgp:id>
        <ios-bgp:neighbor>
          <ios-bgp:id> 192.168.1.1 </ios-bgp:id>
          <ios-bgp:remote-as> 65000 </ios-bgp:remote-as>
        </ios-bgp:neighbor>
        <ios-bgp:address-family>
          <ios-bgp:no-vrf>
            <ios-bgp:ipv4>
              <ios-bgp:af-name>unicast</ios-bgp:af-name>
              <ios-bgp:ipv4-unicast>
                <ios-bgp:neighbor>
                  <ios-bgp:id> 192.168.1.1 </ios-bgp:id>
                  <ios-bgp:soft-reconfiguration>inbound</ios-bgp:soft-reconfiguration>
                </ios-bgp:neighbor>
              </ios-bgp:ipv4-unicast>
            </ios-bgp:ipv4>
          </ios-bgp:no-vrf>
        </ios-bgp:address-family>
      </ios-bgp:bgp>
    </router>
  </native>
</config>
```

192.168.1.1 | 192.168.1.2 | 65000 | 65001

Explanation

Explanation/Reference:

QUESTION 66
DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the PHP script to convert a PHP array into JSON format. Not all options are used.

Select and Place:

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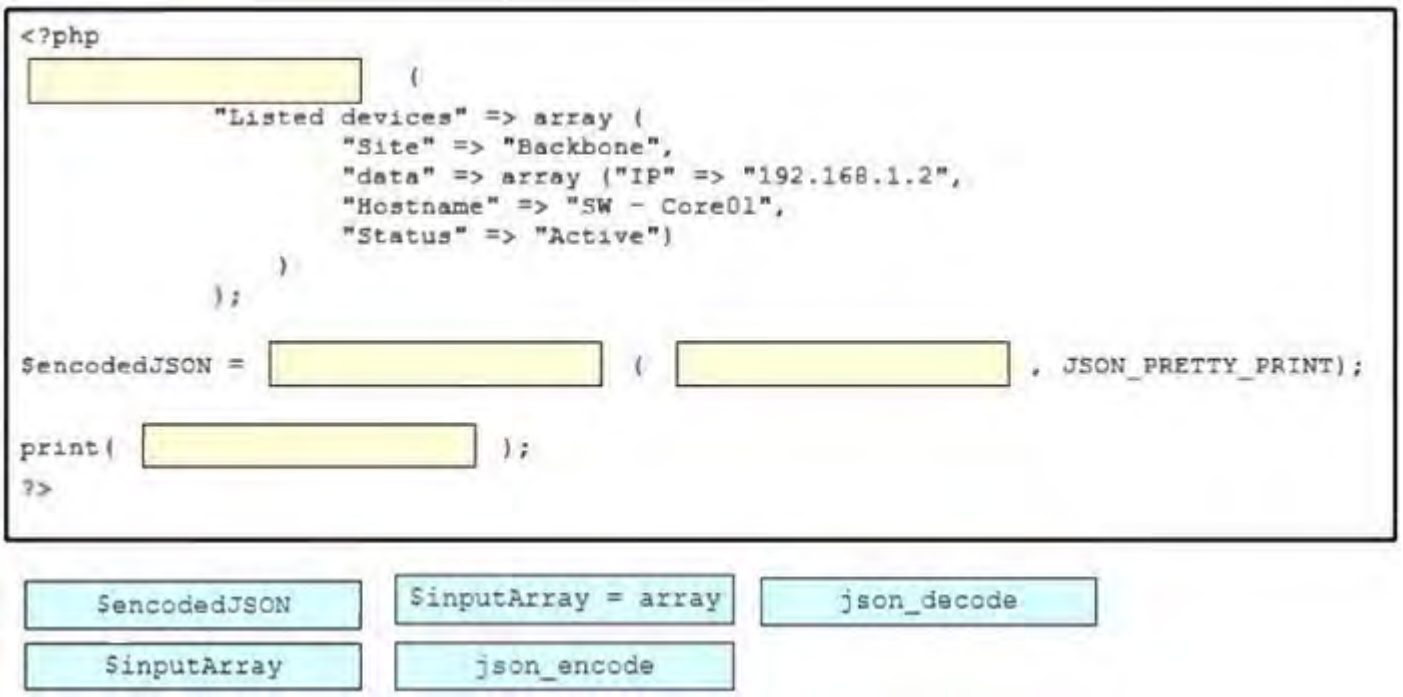
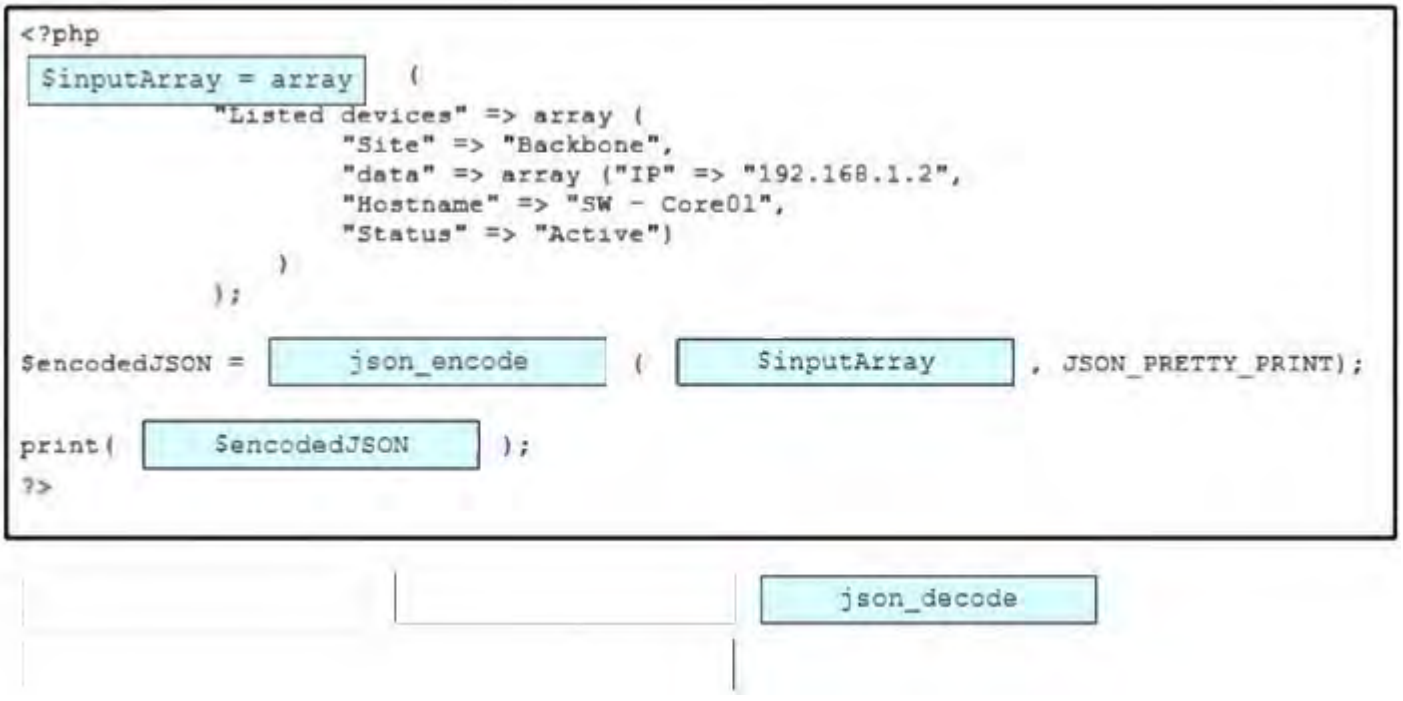


Correct Answer:



Explanation

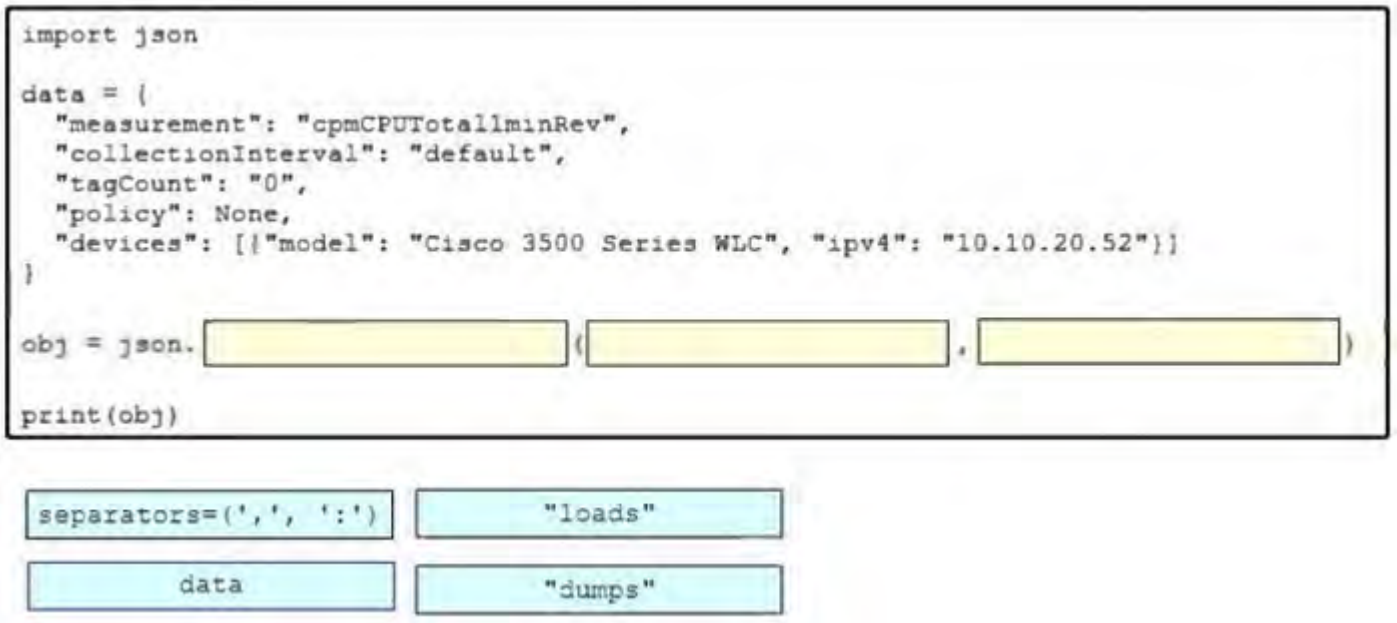
Explanation/Reference:

QUESTION 67
DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the script to convert a Python object into a compact JSON object by removing space characters. Not all options are used.

Select and Place:

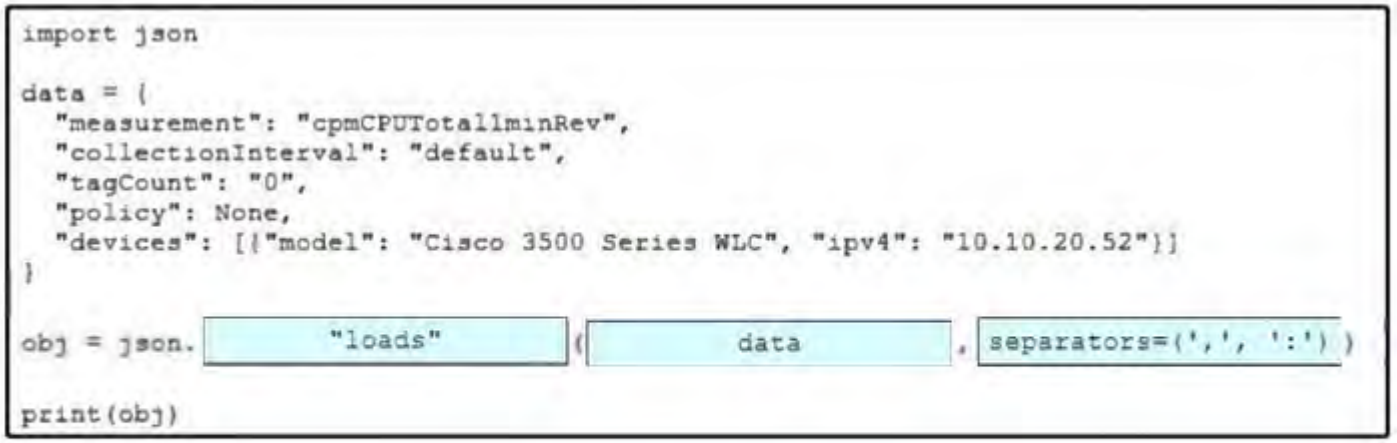
https://t.me/learningnets



separators=(',', ':') | "loads"

data | "dumps"

Correct Answer:



"dumps"

Explanation

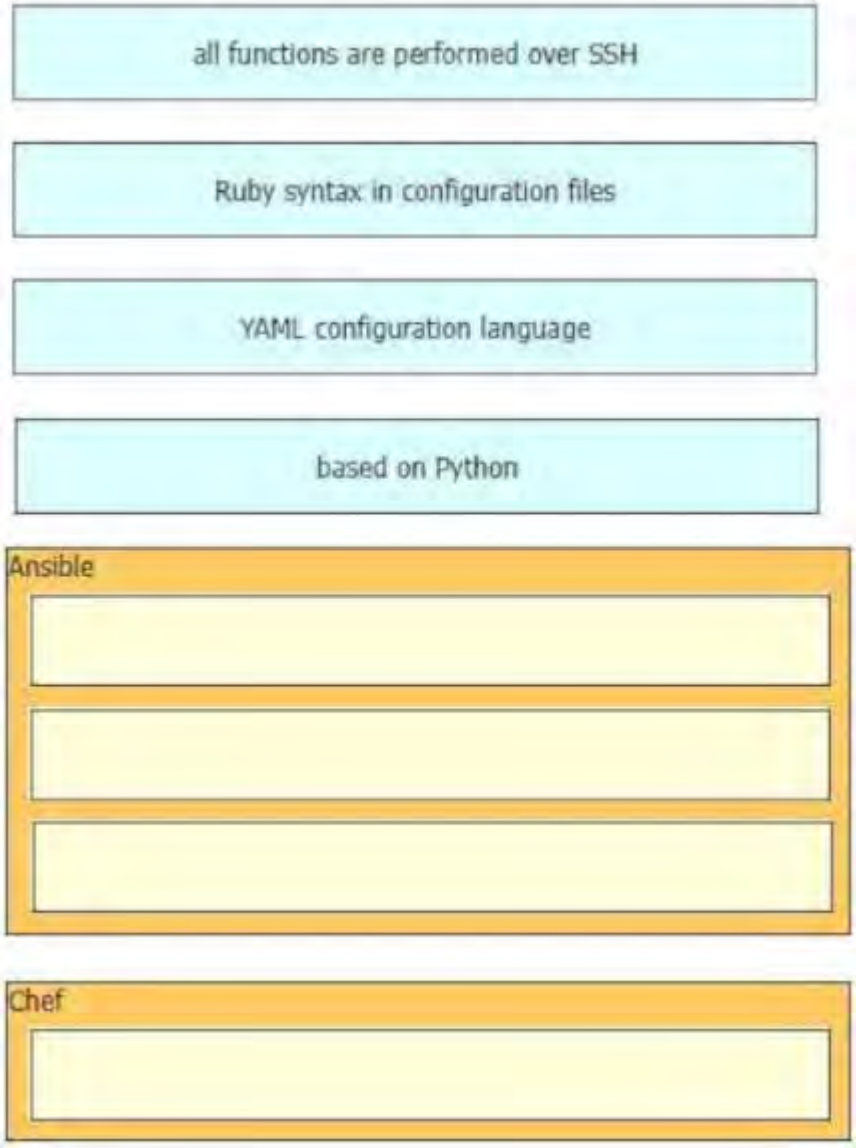
Explanation/Reference:

QUESTION 68
DRAG DROP

Drag and drop the automation characteristics from the left onto the corresponding tools on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets

Explanation

Explanation/Reference:

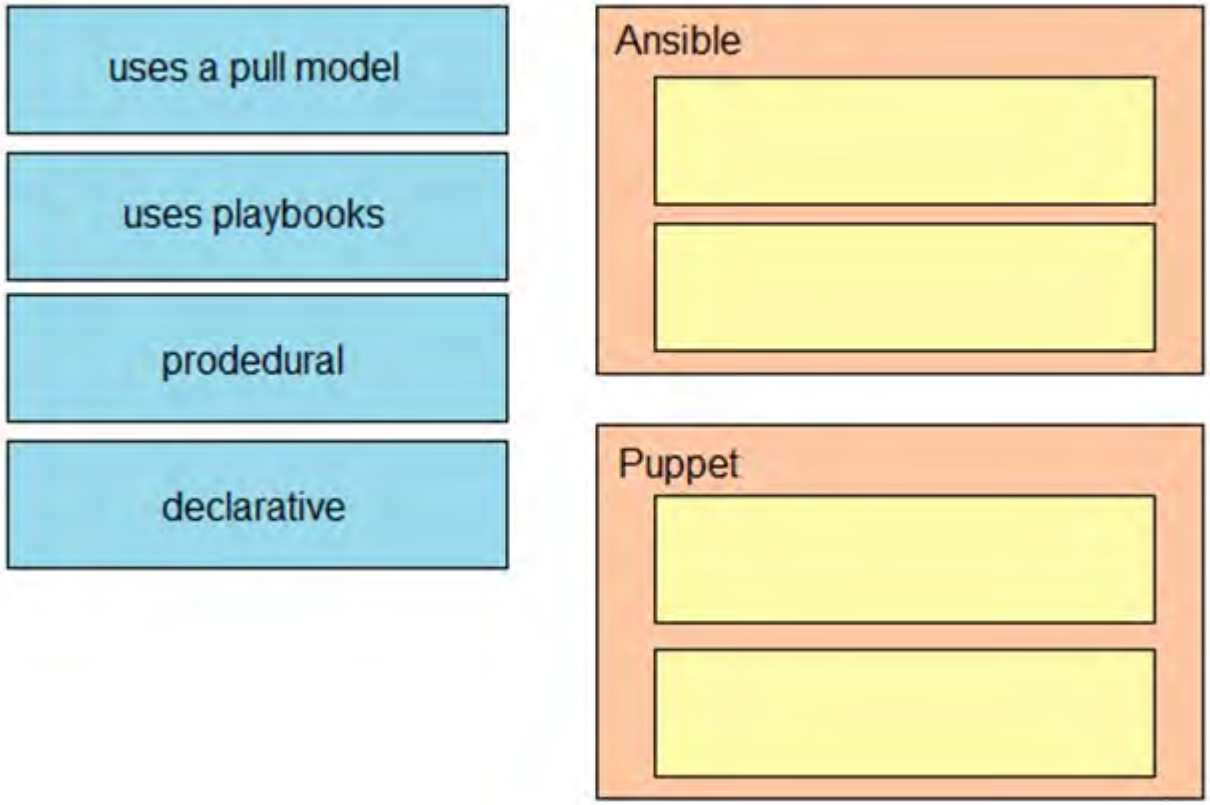
QUESTION 69
DRAG DROP

Drag and drop the characteristics from the left onto the orchestration tools that they describe on the right.

Select and Place:

https://t.me/learningnets

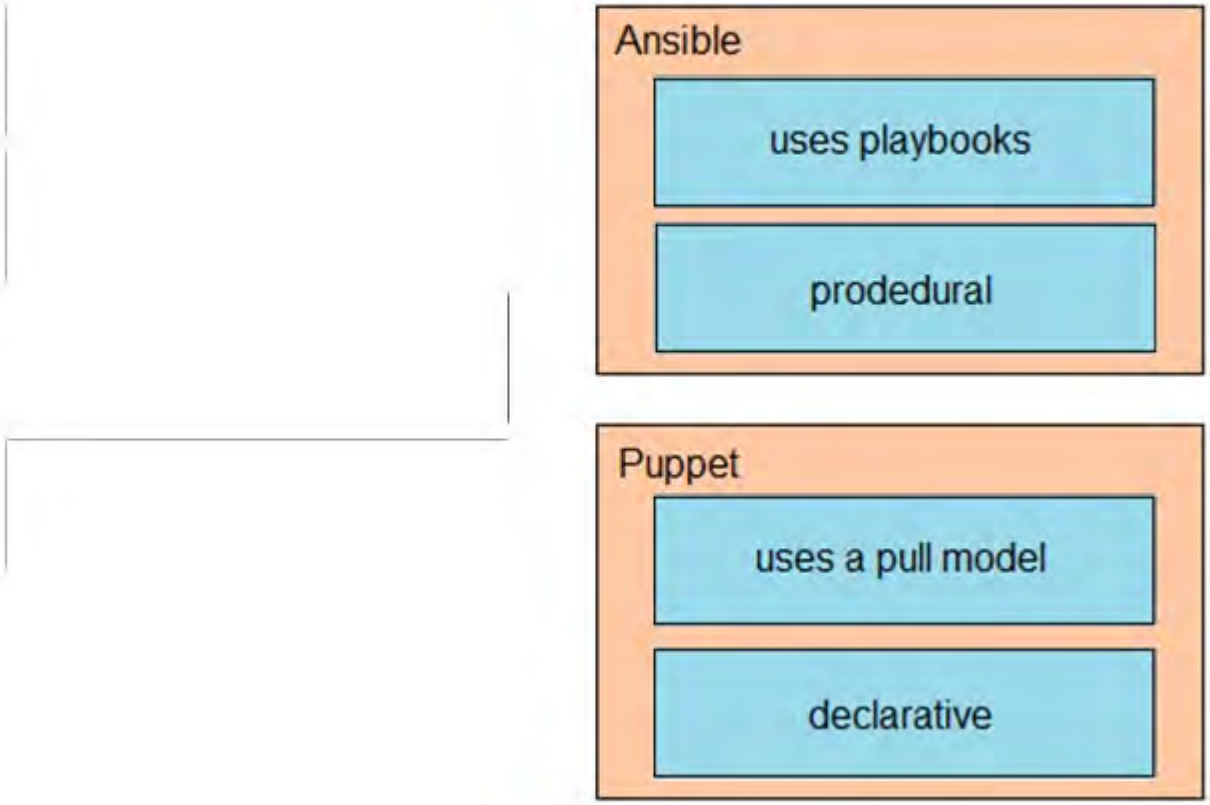
Answer Area



Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

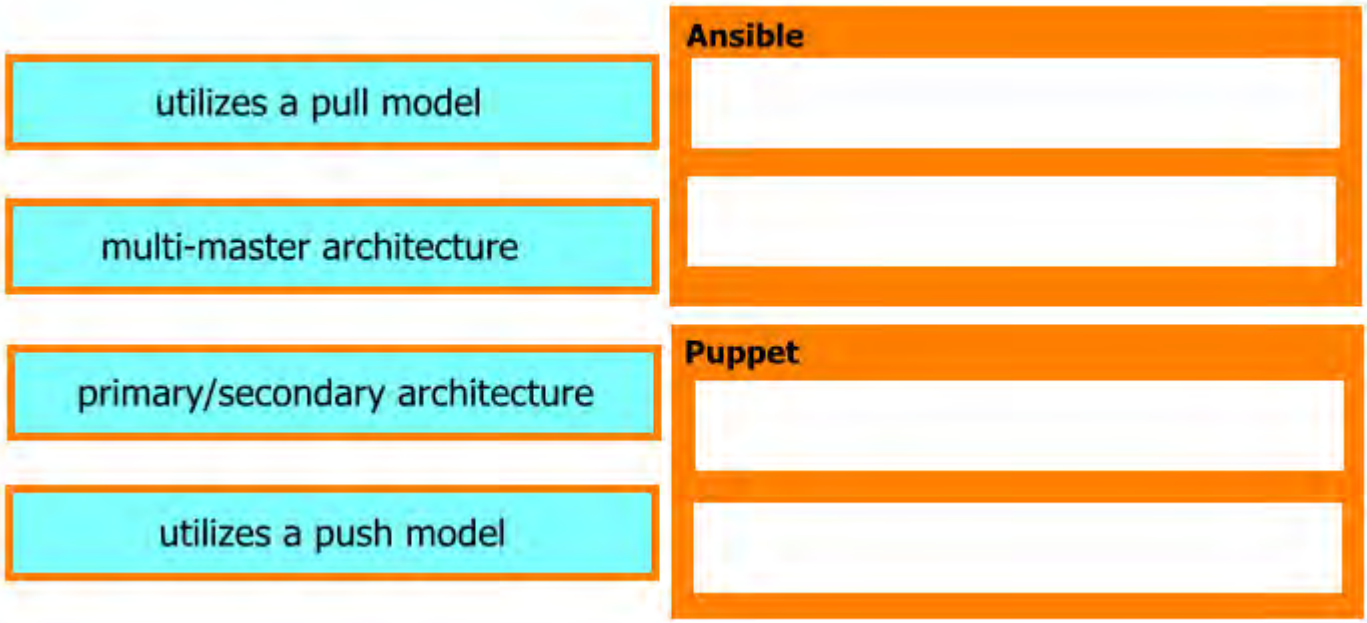
Explanation/Reference:

QUESTION 70
DRAG DROP

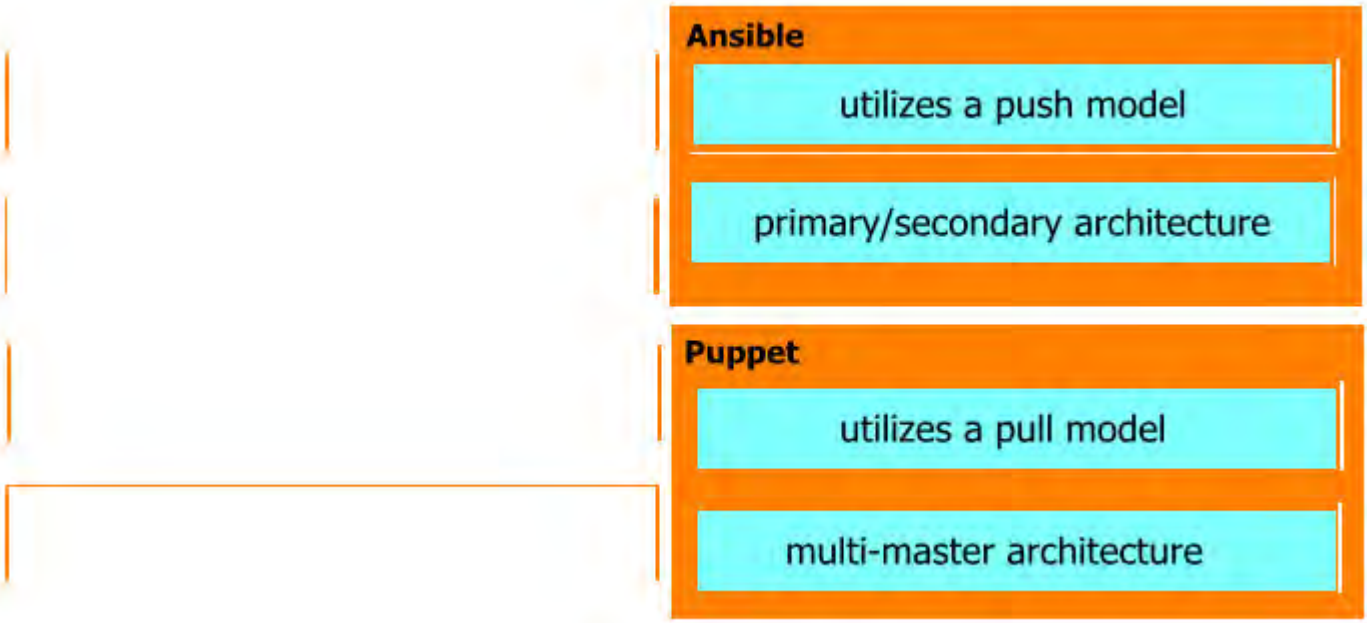
Drag and drop the characteristics from the left onto the orchestration tools they describe on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:
Ansible runs with a single active node, called the Primary instance. If the primary goes down, there is a Secondary instance to take its place.

Puppet has multi-master architecture. If the active master goes down, then the other master takes the active master place.

https://www.javatpoint.com/ansible-vs-puppet

QUESTION 71
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that changes the routing from gateway 1 to gateway 2 from 11:00 p.m. to 12:00 a.m. (2300 to 2400) only, daily. Not all options are

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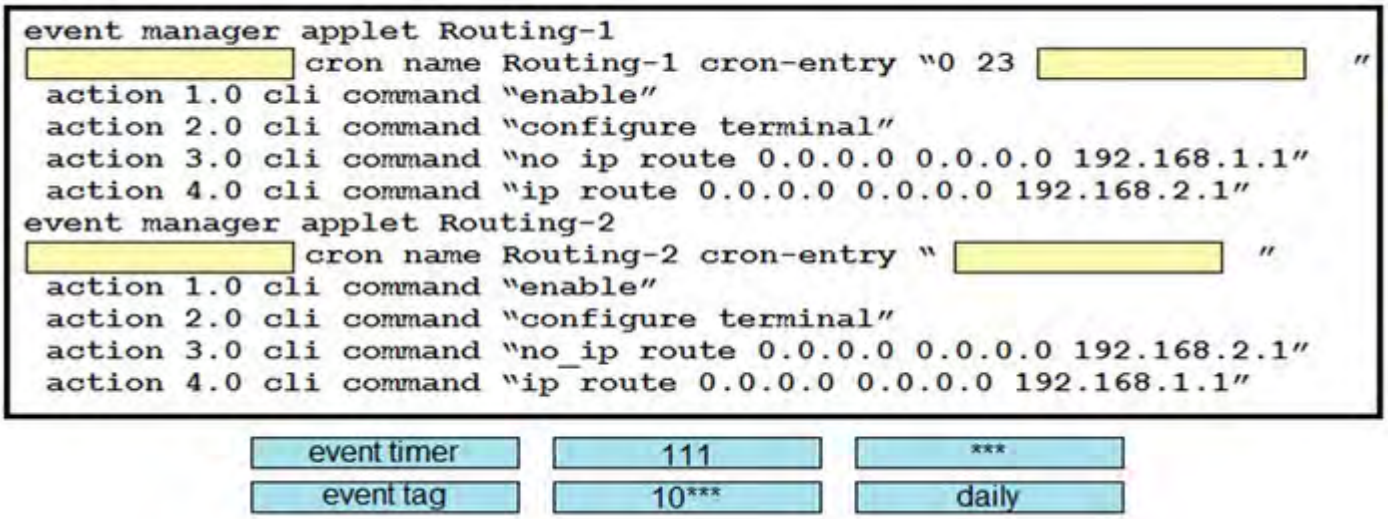
used, and some options may be used twice.

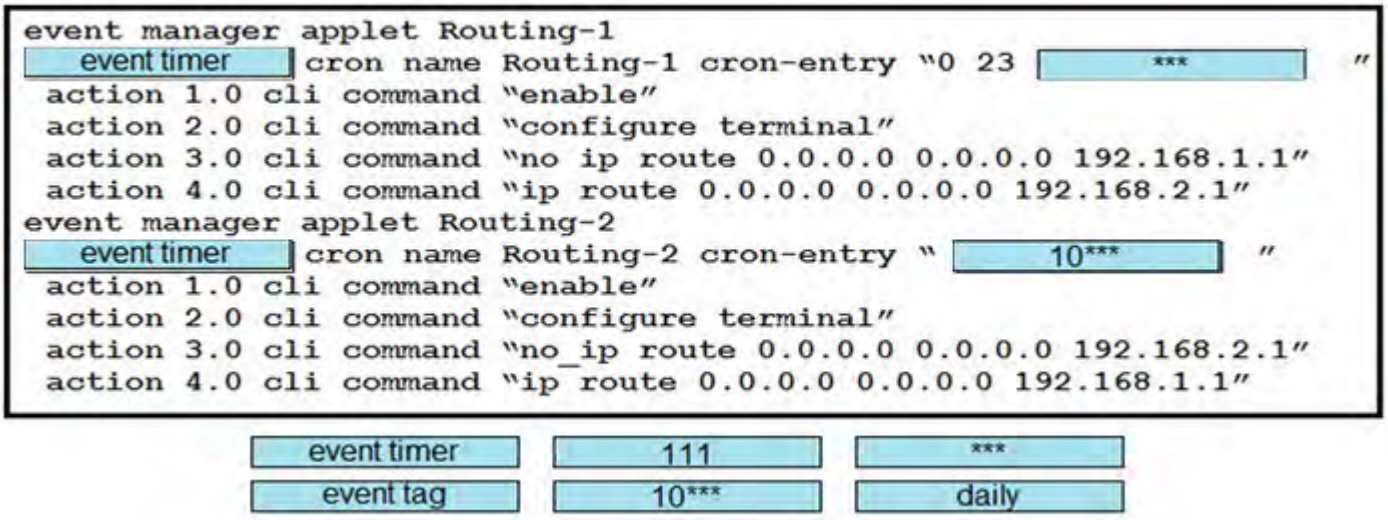
Select and Place:

Answer Area



Correct Answer:

Answer Area



Explanation

Explanation/Reference:

QUESTION 72
DRAG DROP

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

Select and Place:

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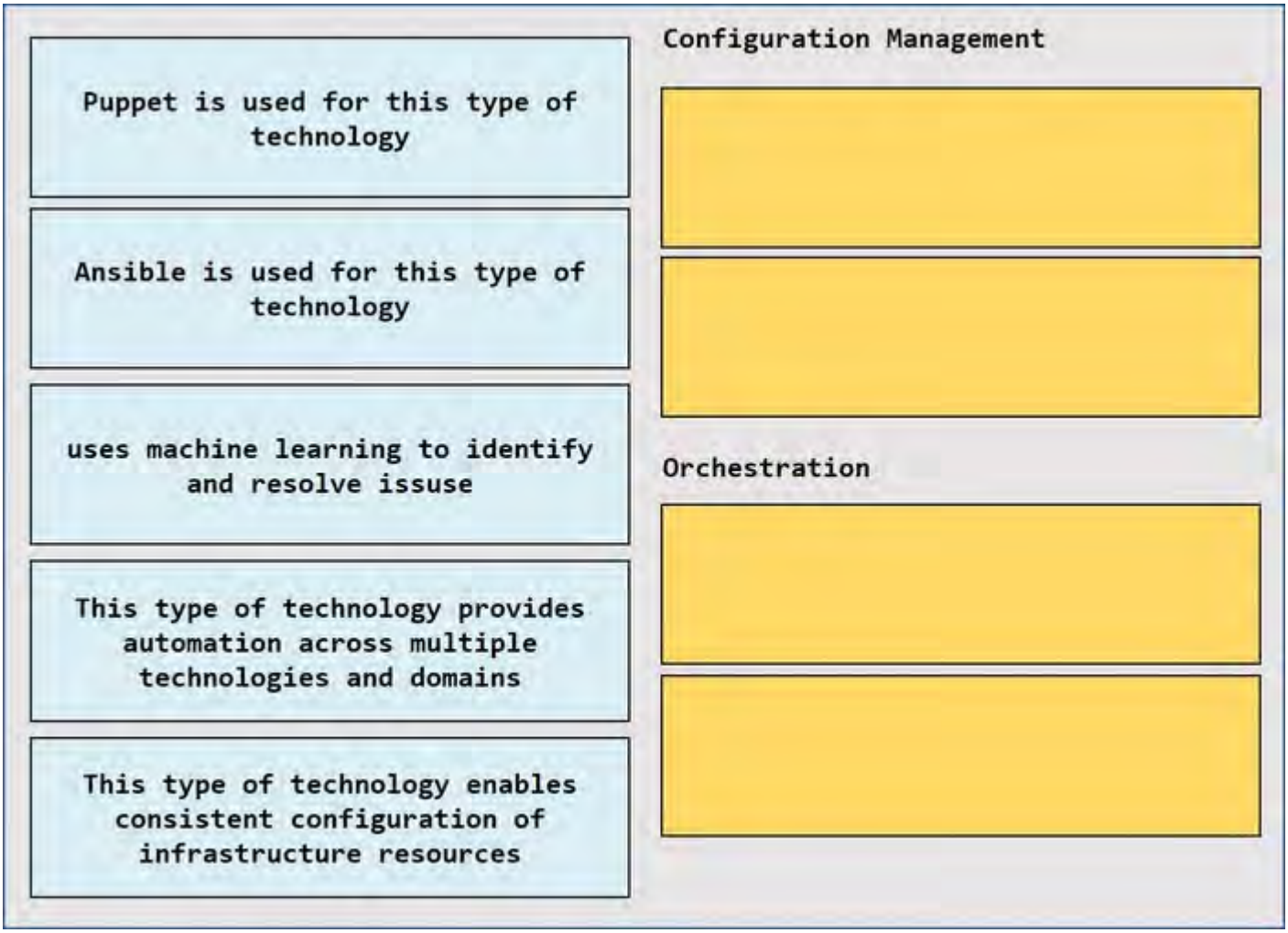
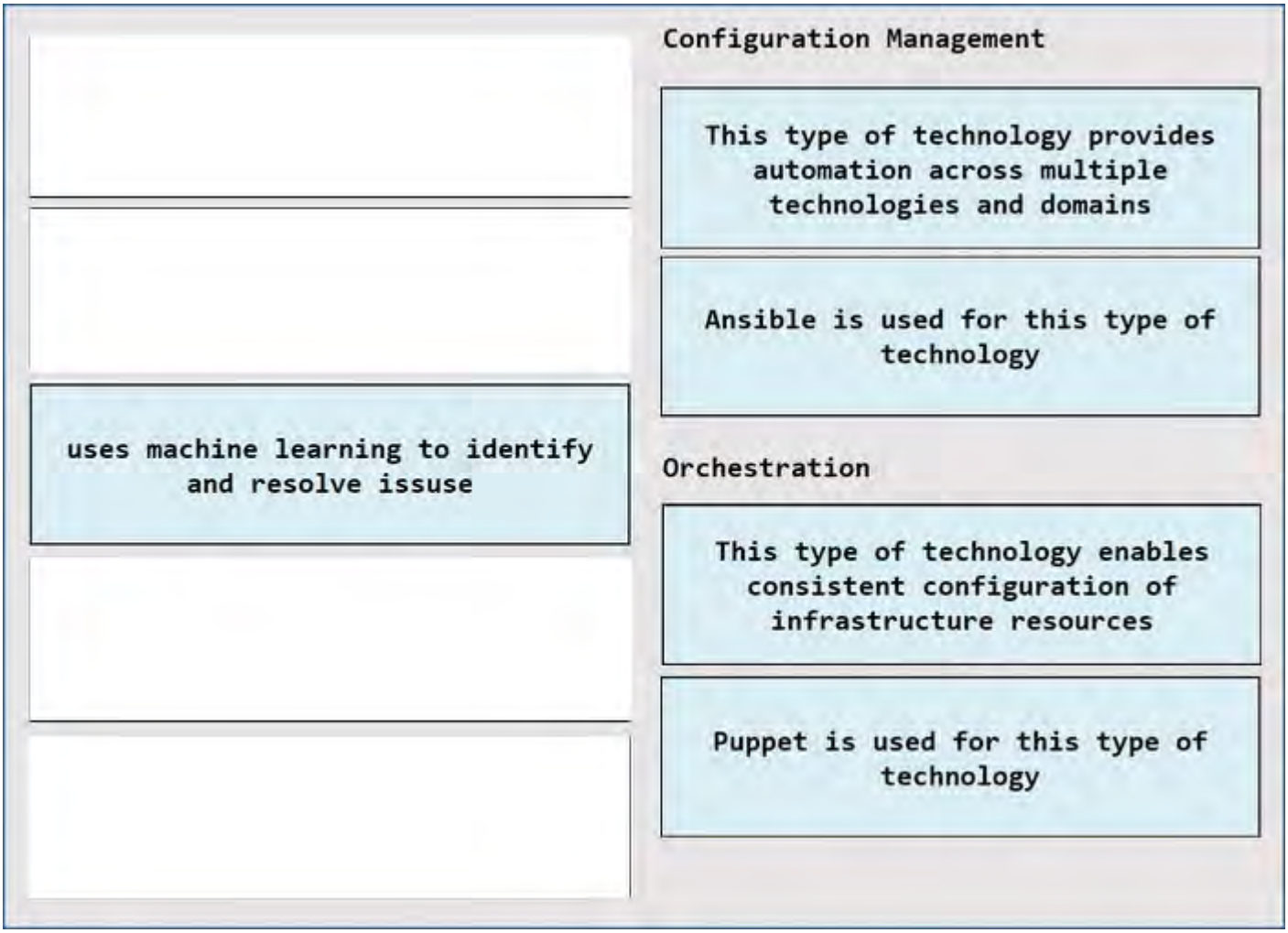


Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:
https://www.ansible.com/

Ansible Automation Platform has grown over the past years to provide powerful automation solutions that work for operators, administrators and IT decision makers across a variety of technology domains. It's a leading enterprise automation solution from Red Hat®, a thriving open source community, and the de facto standard technology of IT automation.

BOOK: ccnp-and-ccie-enterprise-core-encor-350-401-official-cert-guide

Chapter 29. Introduction to Automation Tools

Puppet Bolt connects to devices by using SSH or WinRM connections. Puppet Bolt is an open source tool that is based on the Ruby language and can be installed as a single package.

"Orchestrator-driven tasks: Orchestrator-driven" tasks can leverage the Puppet architecture to use services to connect to devices. This design is meant for large-scale environments.

QUESTION 73
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocols they describe on the right.

Select and Place:

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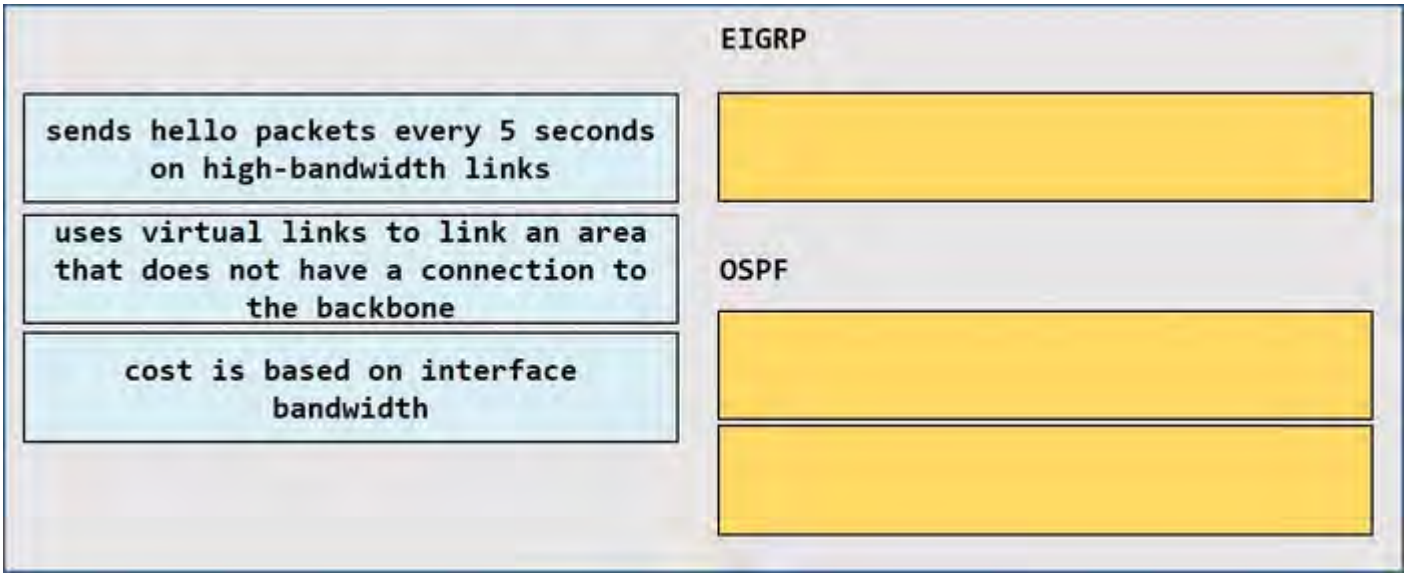
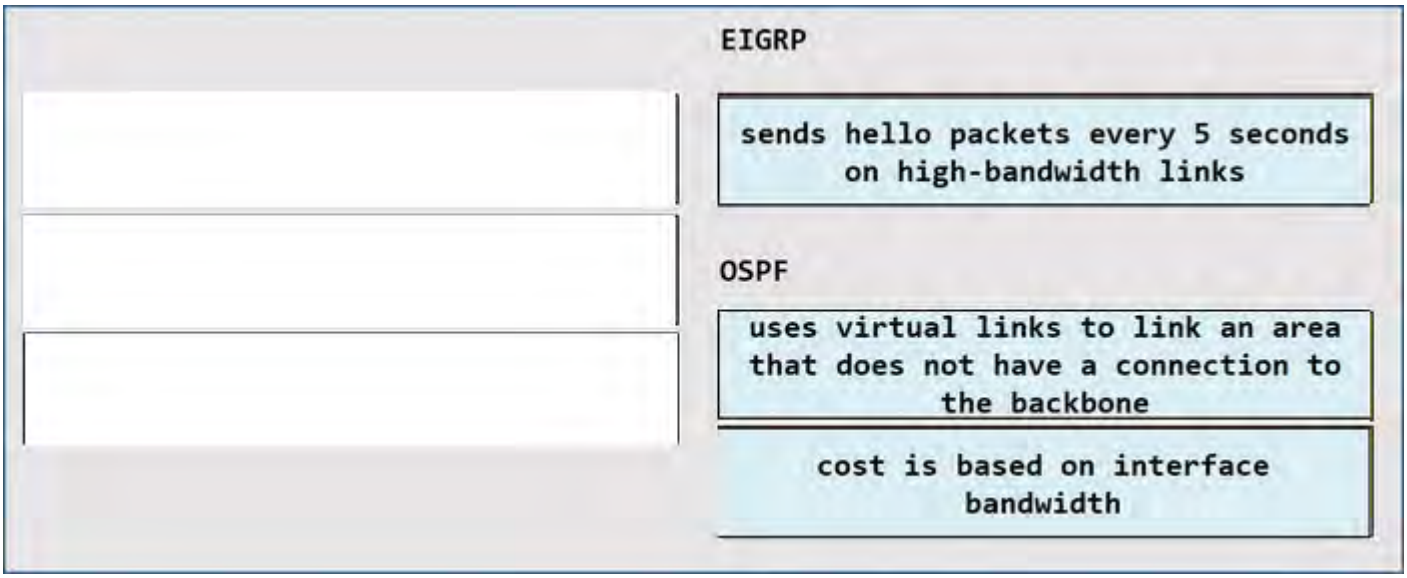


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 74
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that shows all logging that occurred on the appliance from Sunday until 9:00 p.m Thursday Not all options are used.

Select and Place:

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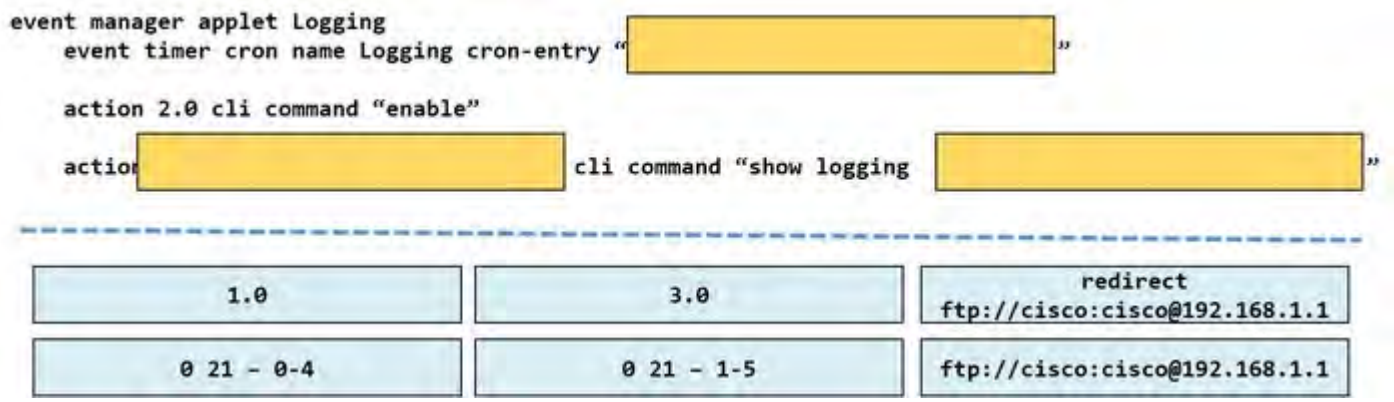
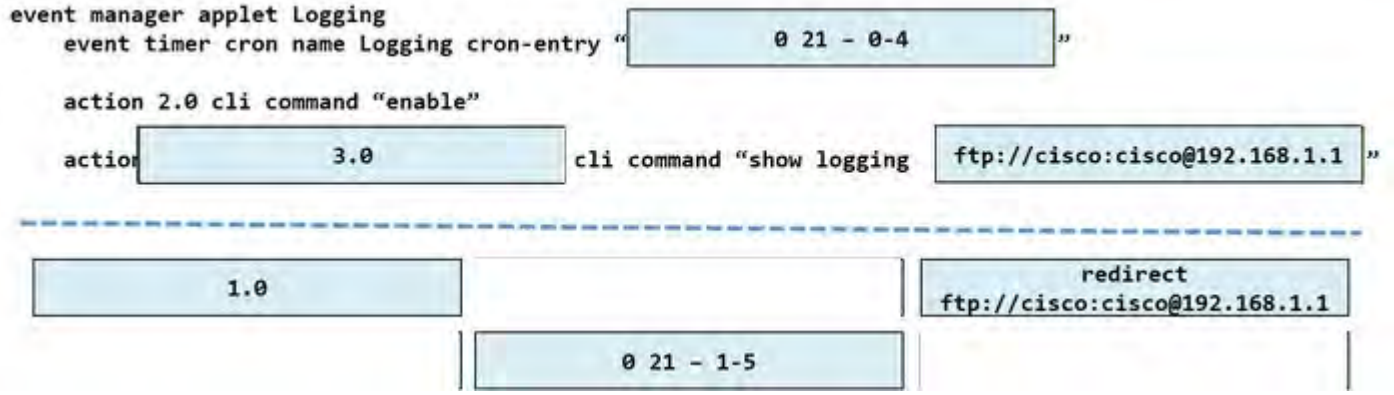


Correct Answer:



Explanation

Explanation/Reference:
event timer cron name Logging cron-entry "0 21 * * 0-4"
action 2.0 cli command "enable"
action 3.0 cli command "show logging | redirect ftp://cisco:cisco@192.168.1.1

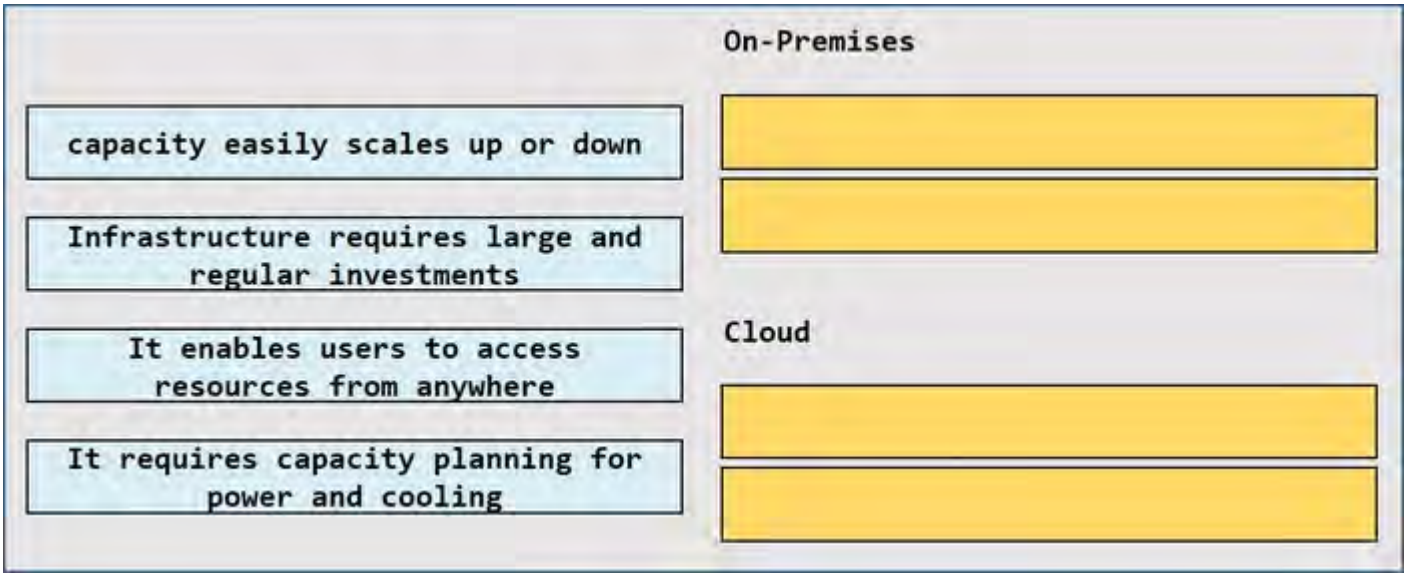
If you need to learn cron, check this site: https://crontab.guru
0 21 * * 0-4 translates to:
'At 21:00 on every day-of-week from Sunday through Thursday.'

QUESTION 75
DRAG DROP

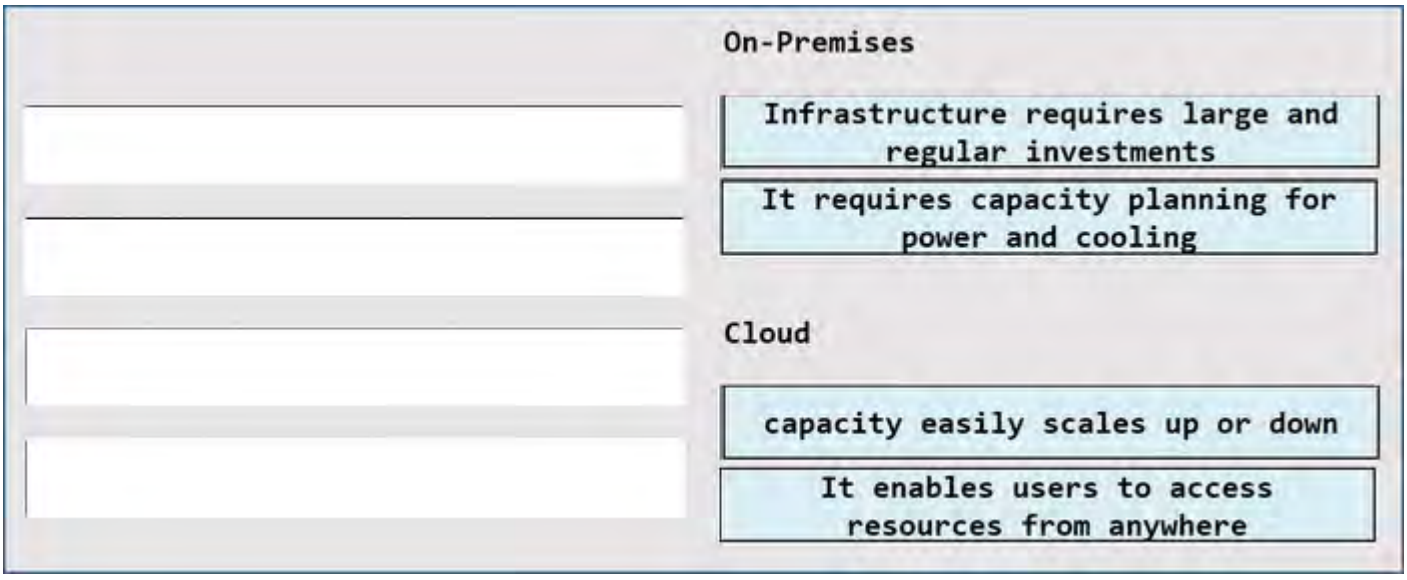
Drag and drop the characteristics from the left onto the infrastructure deployment models on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

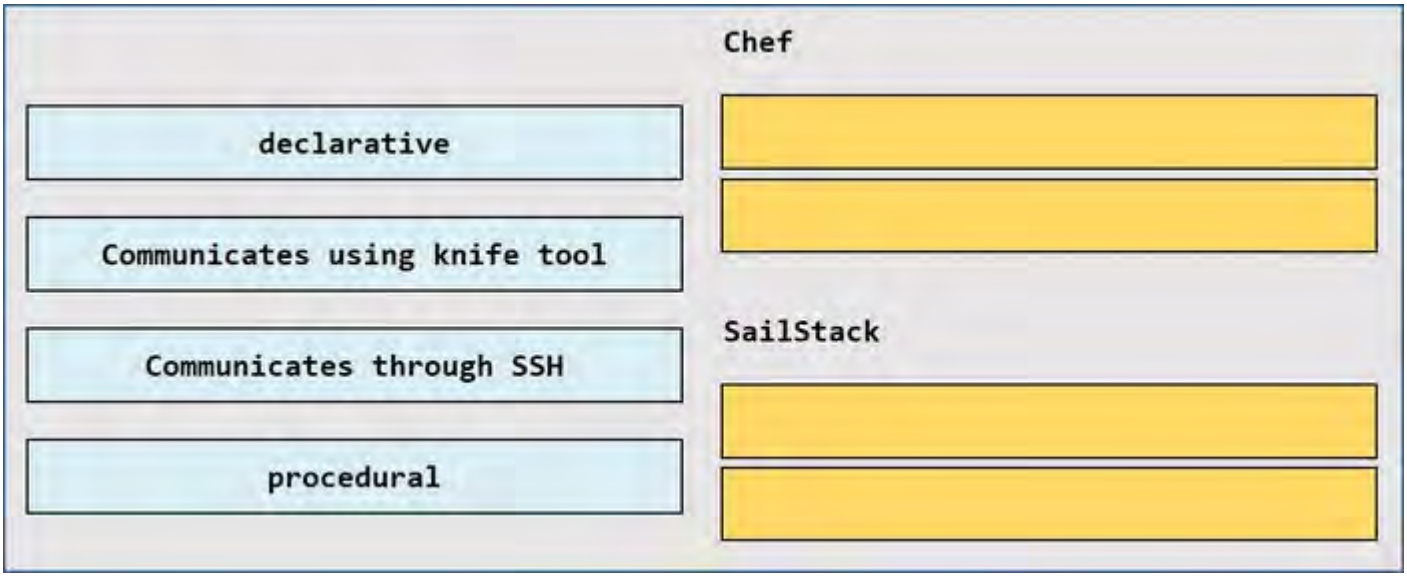
Explanation/Reference:

QUESTION 76
DRAG DROP

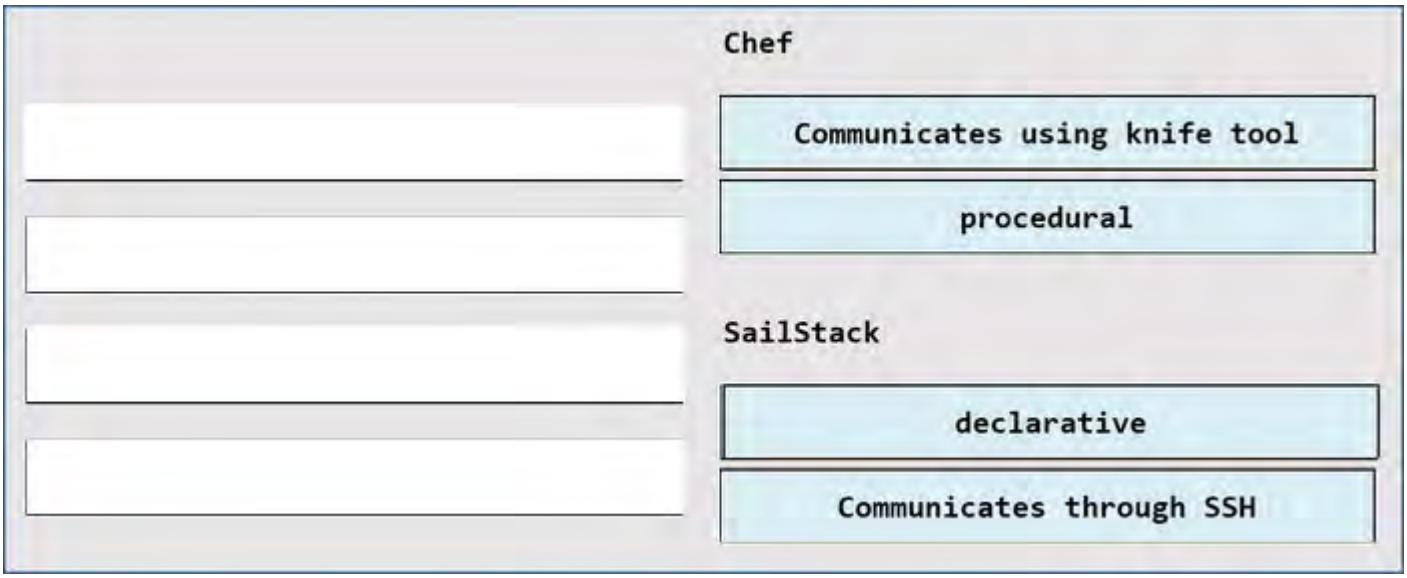
Drag and drop the characteristics from the left onto the orchestration tools that they describe on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

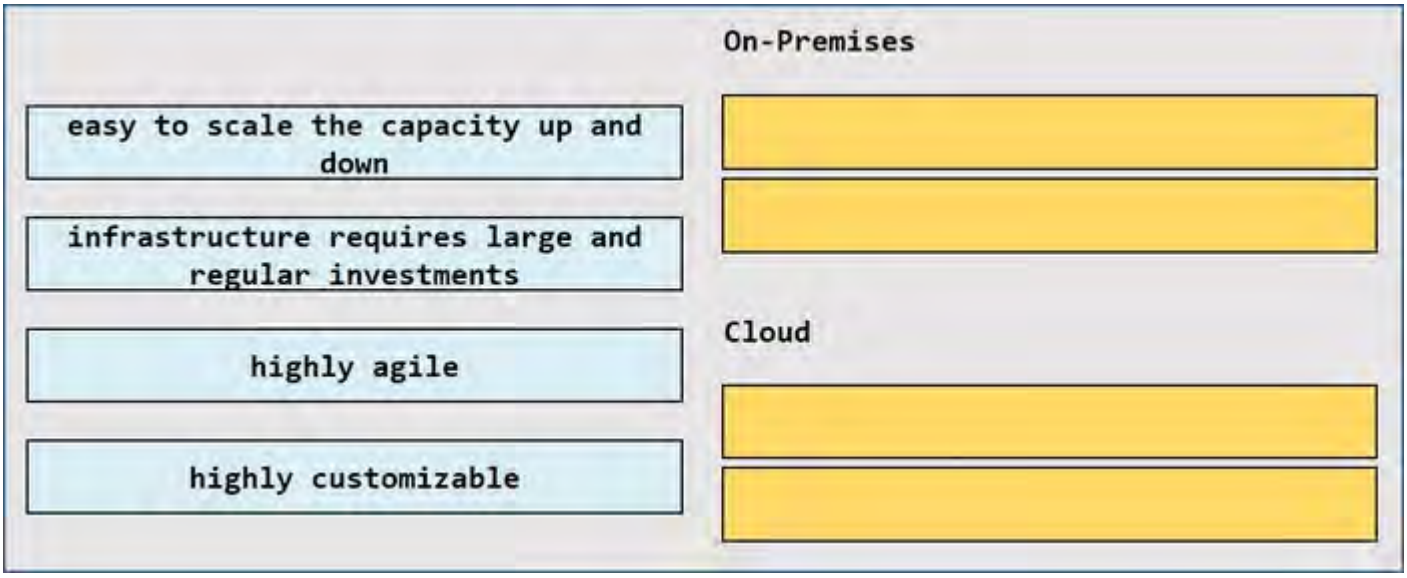
Explanation/Reference:
Chef = procedural and utilizes the knife tool
SaltStack = declarative and utilizes SSH

QUESTION 77
DRAG DROP

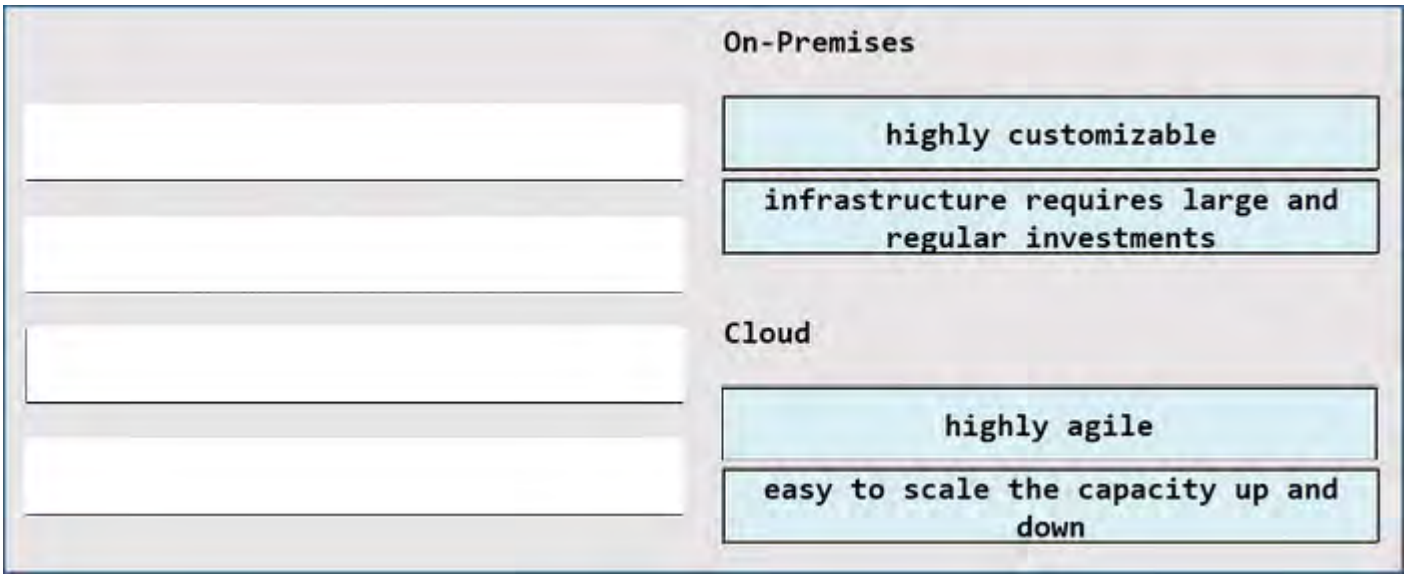
Drag and drop the characteristics from the left onto the infrastructure deployment models they describe on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

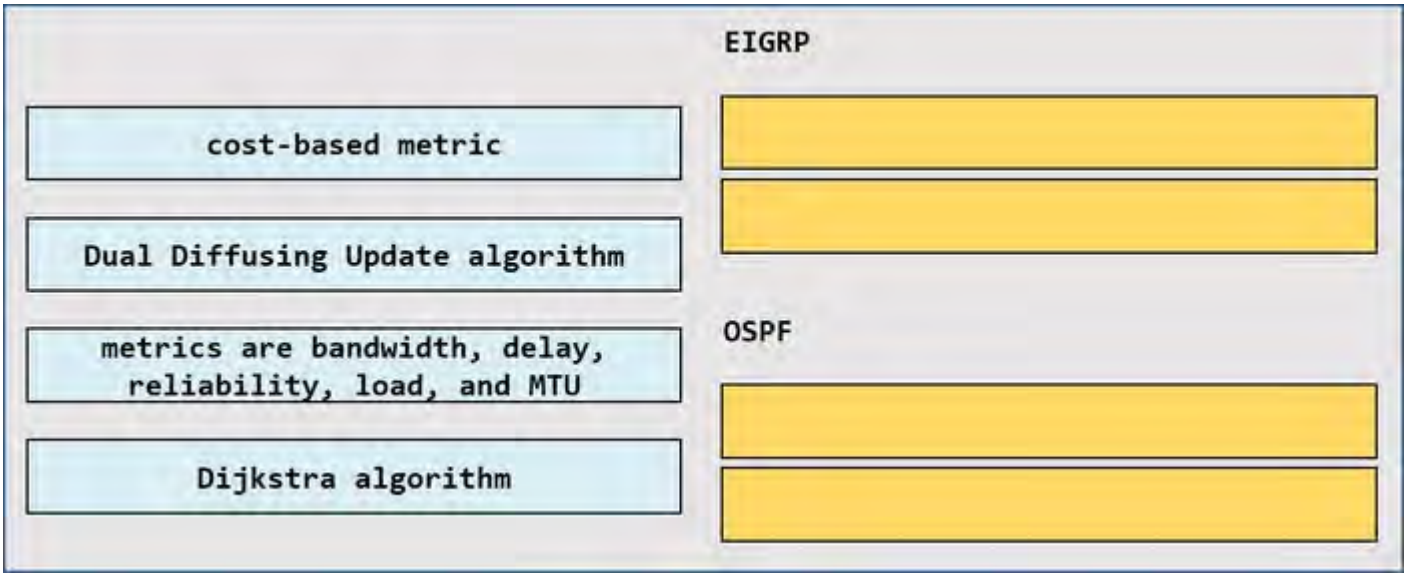
Explanation/Reference:

QUESTION 78
DRAG DROP

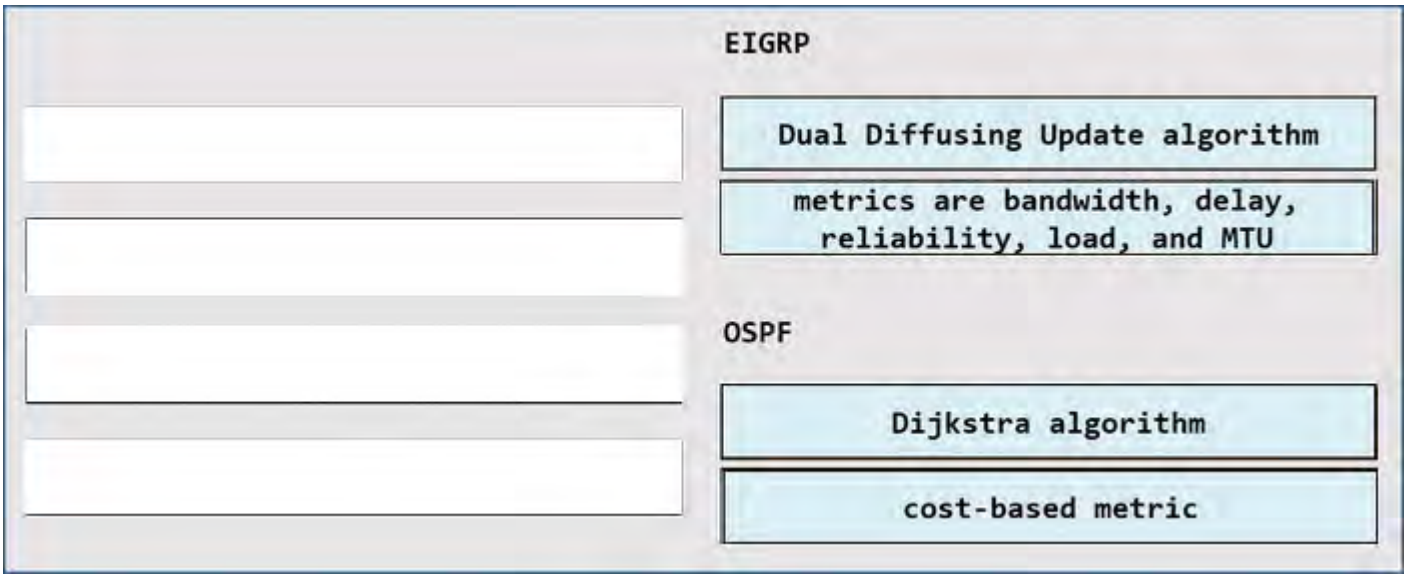
Drag and drop the characteristics from the left onto the routing protocols they describe on the right

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

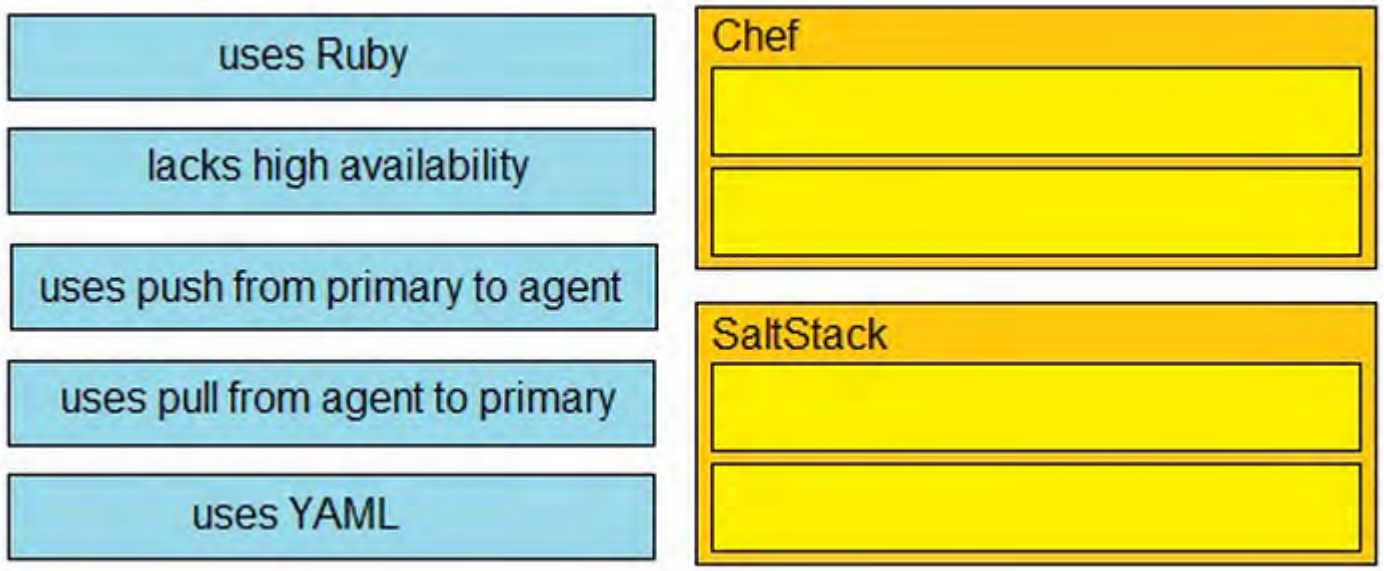
Explanation/Reference:

QUESTION 79
DRAG DROP

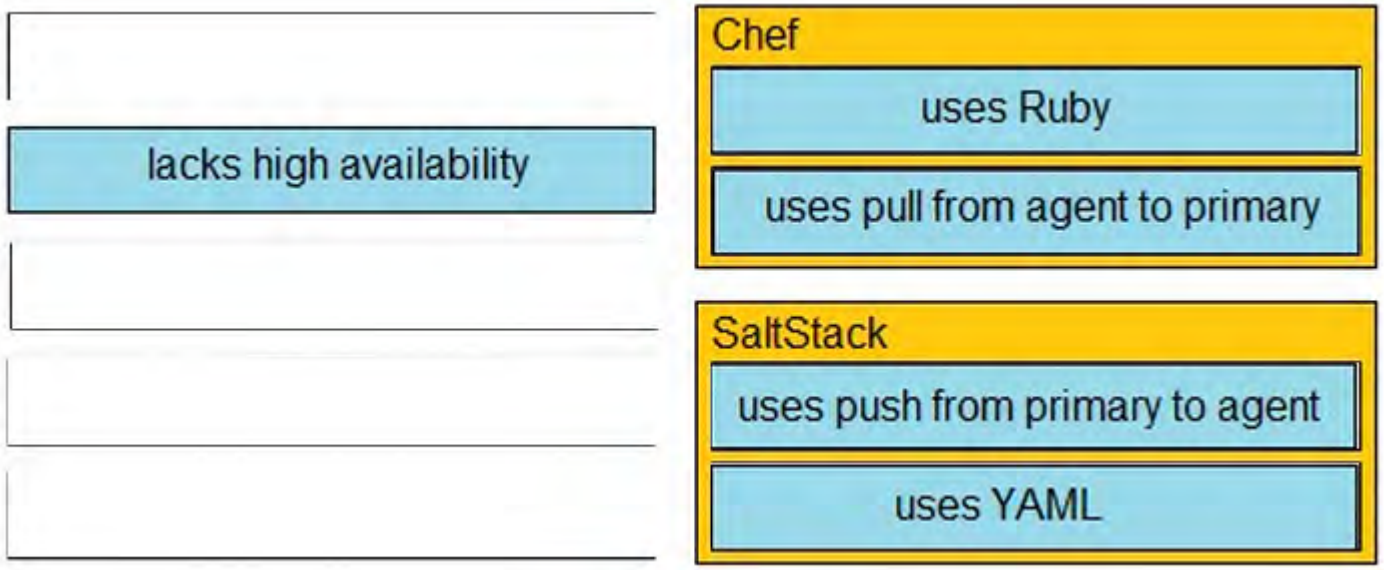
Drag and drop the automation characteristics from the left onto the appropriate tools on the right. Not all options are used.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 80
DRAG DROP

Drag and drop the code snippets from the bottom onto blanks in the Python script so that the program changes the IP address and saves it as a new JSON file on the disk. Not all options are used.

Select and Place:

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Answer Area

```
import json

with open("json ios xe.json", "r") as json file:
    json_file_content = json_file. [          ]

decoded_json = json. [          ] (json_file_content)

decoded_json['Cisco-IOS-XE-native:interface']['GigabitEthernet'][0]['ip']
            ['address']['primary']['address'] = \ "192.168.1.2"

encoded_json_compact = json. [          ] (decoded_json)
encoded_json indented = json.dumps(decoded json, indent = 4)

with open("json ios xe compact.json", "w") as json file:
    json_file. [          ] (encoded_json_compact)

with open("json ios xe indented.json", "w") as json file:
    json file.write(encoded json indented)
```

write() | loads() | dumps() | open() | read()

Correct Answer:

Answer Area

```
import json

with open("json ios xe.json", "r") as json file:
    json_file_content = json_file. [ read() ]

decoded_json = json. [ loads() ] (json_file_content)

decoded_json['Cisco-IOS-XE-native:interface']['GigabitEthernet'][0]['ip']
            ['address']['primary']['address'] = \ "192.168.1.2"

encoded_json_compact = json. [ dumps() ] (decoded_json)
encoded_json indented = json.dumps(decoded json, indent = 4)

with open("json ios xe compact.json", "w") as json file:
    json_file. [ write() ] (encoded_json_compact)

with open("json ios xe indented.json", "w") as json file:
    json file.write(encoded json indented)
```

open()

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Explanation

Explanation/Reference:

QUESTION 81
DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the Python script to print the device model to the screen and write JSON data to a file. Not all options are used.

Select and Place:

Correct Answer:

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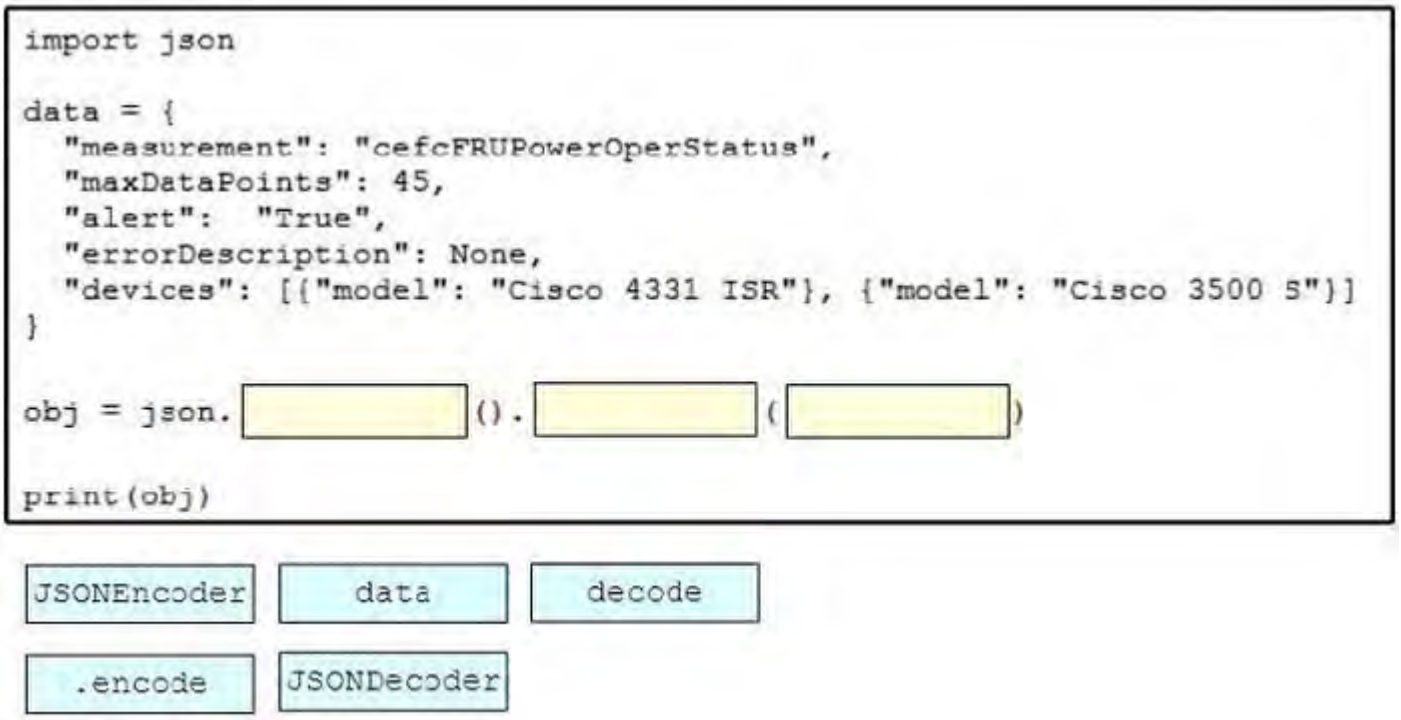
Explanation

Explanation/Reference:

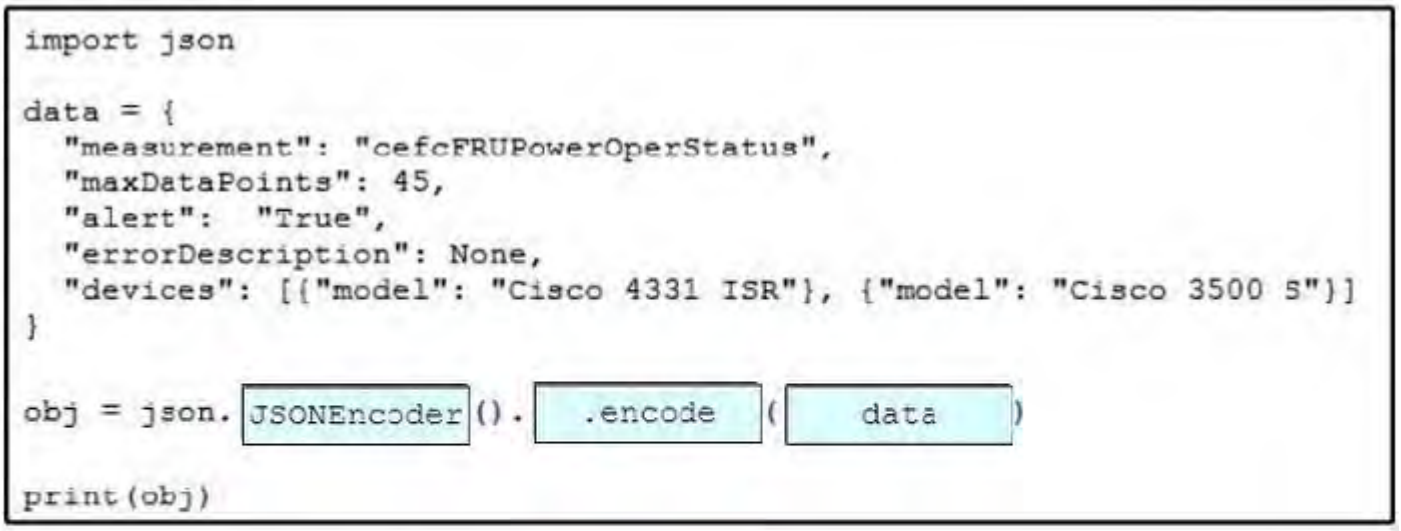
QUESTION 82
DRAG DROP

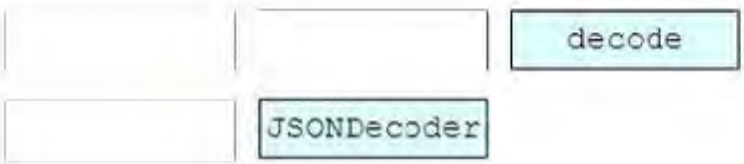
Drag and drop the code snippets from the bottom onto the blanks in the script to convert a Python object into a JSON string. Not all options are used.

Select and Place:



Correct Answer:





https://t.me/learningnets

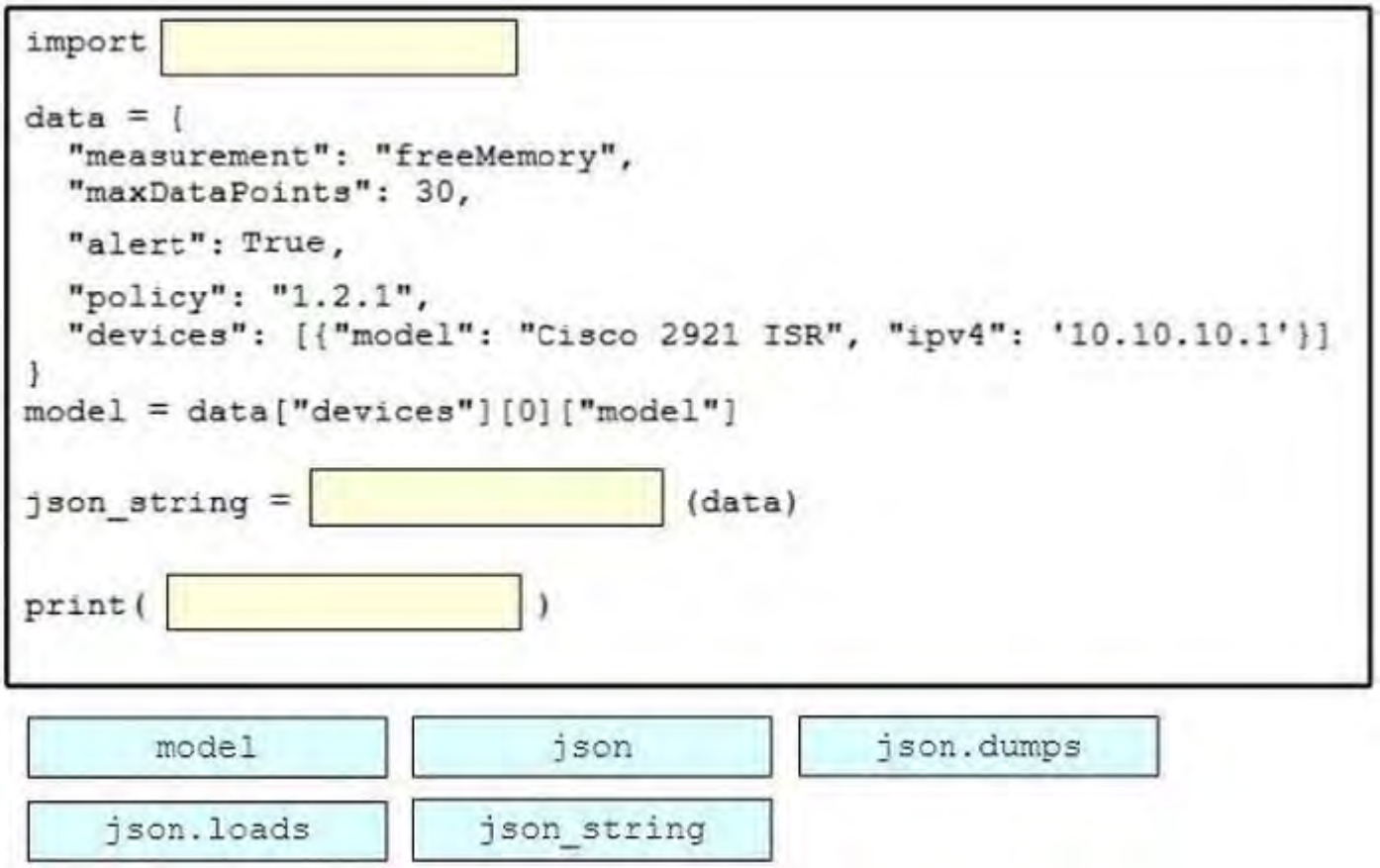
Explanation

Explanation/Reference:

QUESTION 83
DRAG DROP

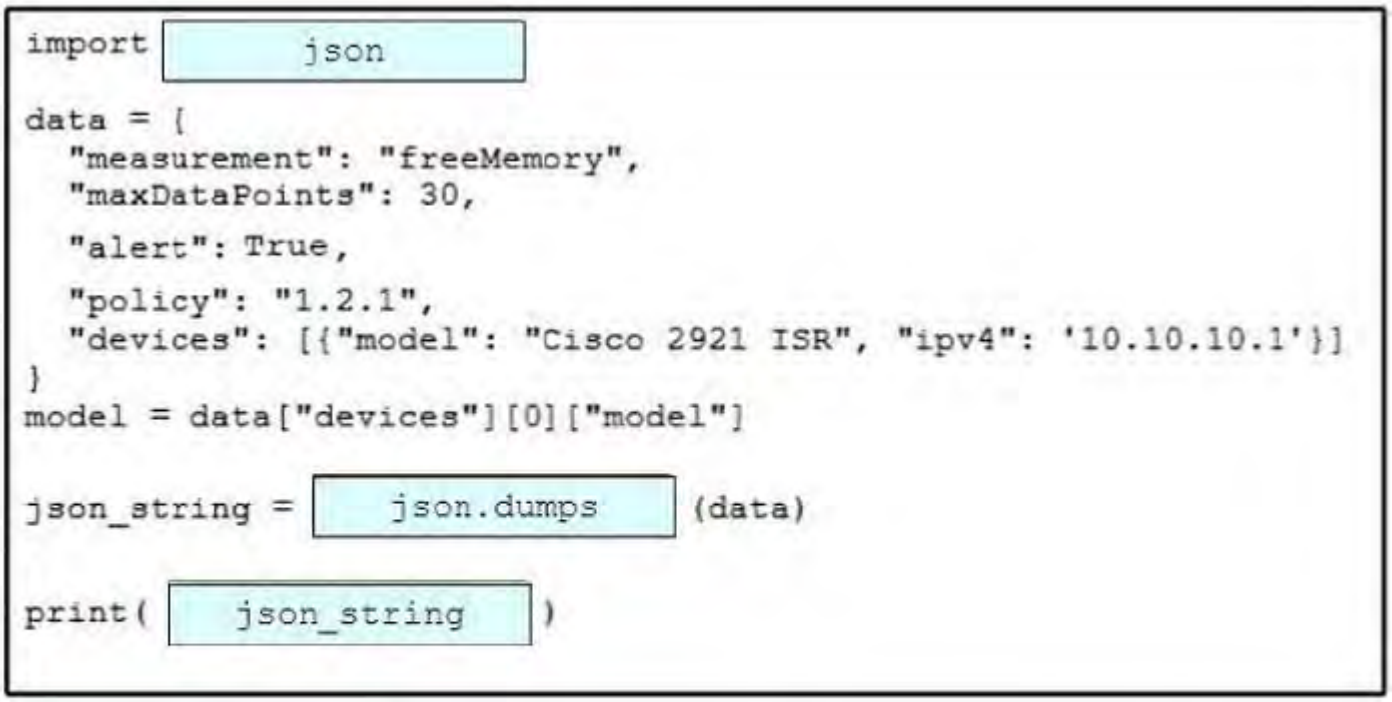
Drag and drop the code snippets from the bottom onto the blanks in the script to convert a Python object into a JSON string. Not all options are used.

Select and Place:



Correct Answer:

https://t.me/learningnets



model

json.loads

Explanation

Explanation/Reference:

QUESTION 84
DRAG DROP

Drag and drop the characteristics from the left onto the orchestration tools that they describe on the right.

Select and Place:

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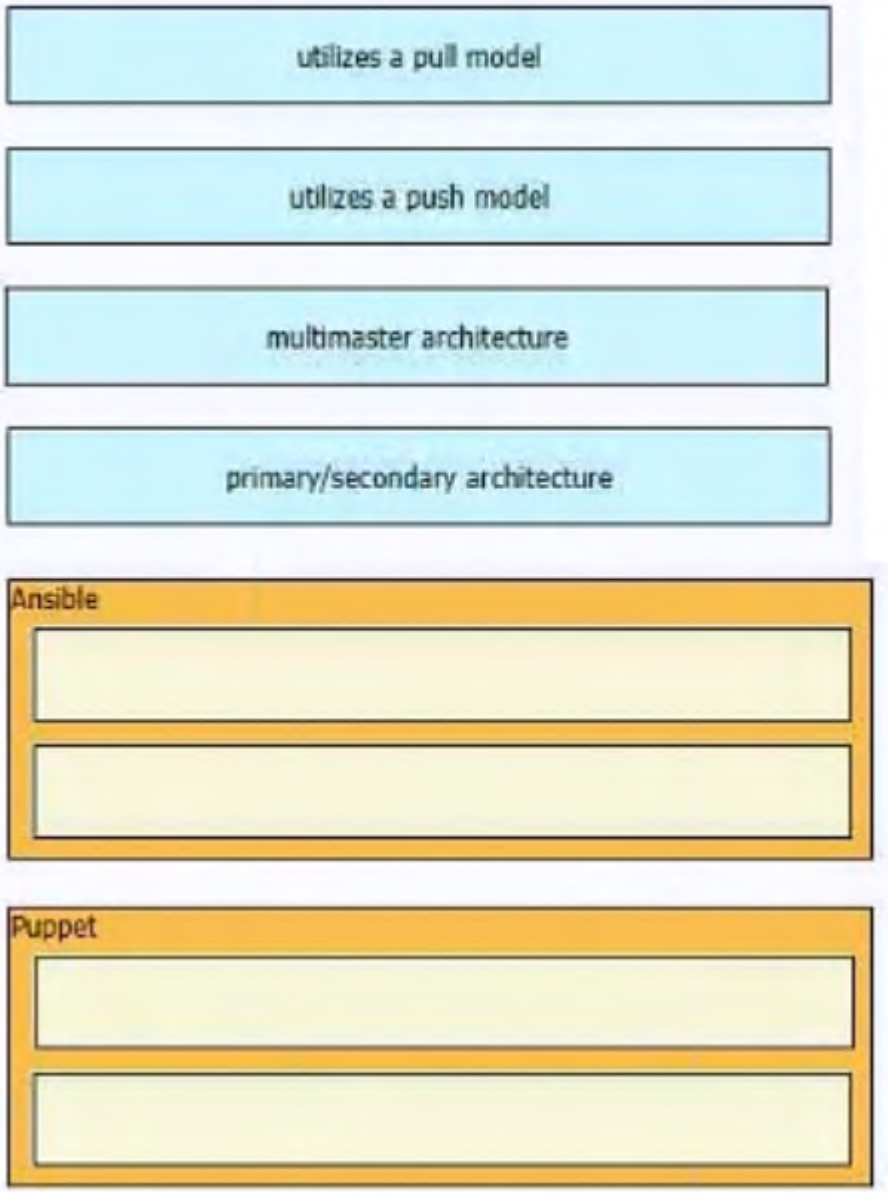
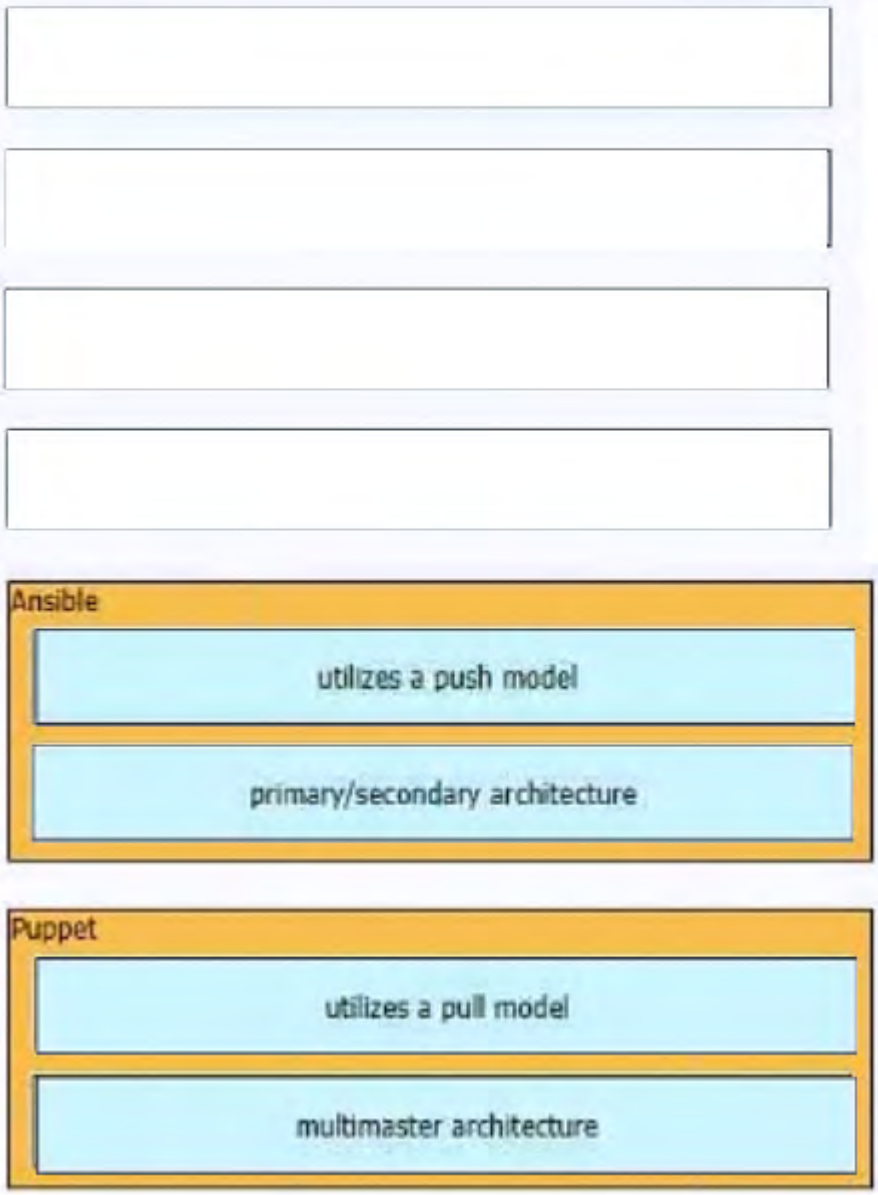
Answer Area



Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

Explanation/Reference:

QUESTION 85
DRAG DROP

Drag and drop the snippets onto the blanks within the code to construct a script that blocks a MAC address.

Select and Place:

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Answer Area

```
event manager applet mac_block
event timer [          ] time 10
action 01 cli command "enable"
action 02 cli command "terminal length 0"
action 03 cli command "show mac address-table address 0050.7966.6800"
action 04 regexp " [          ] "            t match
action 05 if $_regexp_result eq [          ]
action 06 cli command "configure terminal"
action 07 cli command "interface $Ports"
action 08 cli command "shutdown"
action 09 end
```

watchdog | (Gi...) | 1

Correct Answer:

Answer Area

```
event manager applet mac_block
event timer [ watchdog ] time 10
action 01 cli command "enable"
action 02 cli command "terminal length 0"
action 03 cli command "show mac address-table address 0050.7966.6800"
action 04 regexp " [ (Gi...) ] "            t match
action 05 if $_regexp_result eq [ 1 ]
action 06 cli command "configure terminal"
action 07 cli command "interface $Ports"
action 08 cli command "shutdown"
action 09 end
```

Explanation

Explanation/Reference:

QUESTION 86
DRAG DROP

Drag and drop the Cisco DNA Center northbound API characteristics from the left to the right. Not all options are used.

Select and Place:

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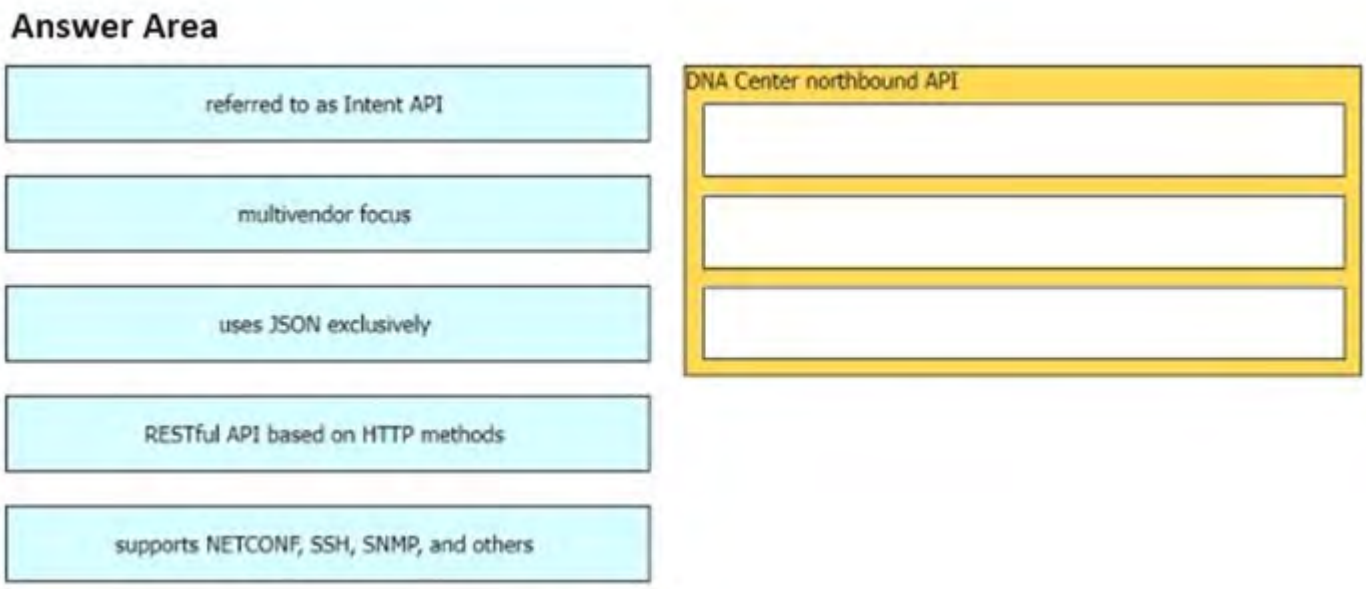
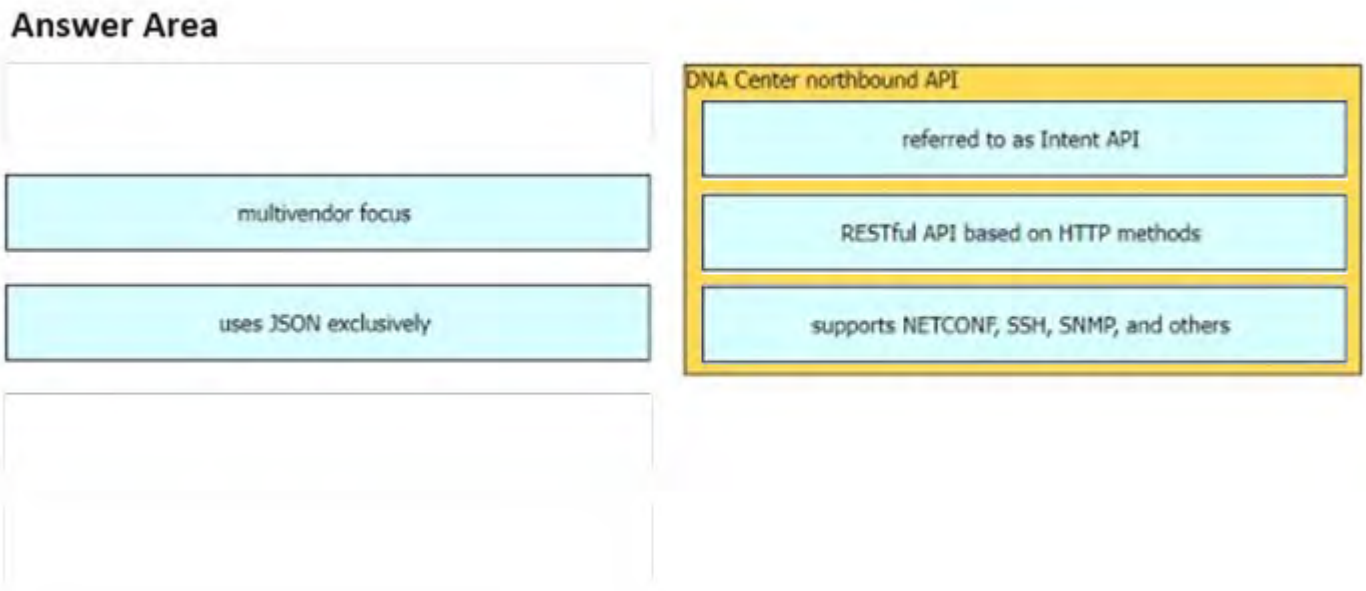


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 87
DRAG DROP

Drag the drop the description from the left onto the routing protocol they describe on the right.

Select and Place:

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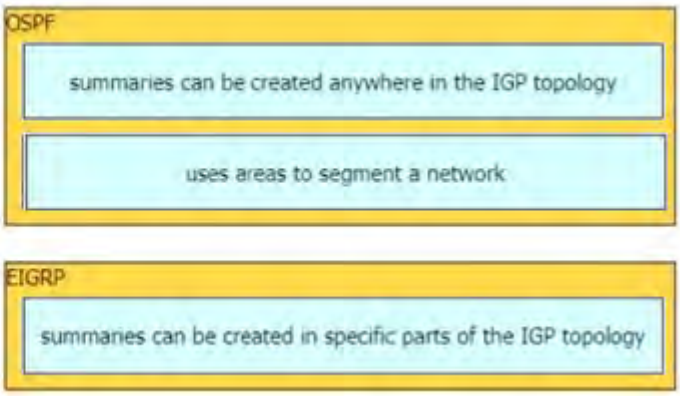
Correct Answer:



Explanation

Explanation/Reference:

QUESTION 88
DRAG DROP

Drag and drop the Qos mechanisms from the left to the correct descriptions on the right.

Select and Place:

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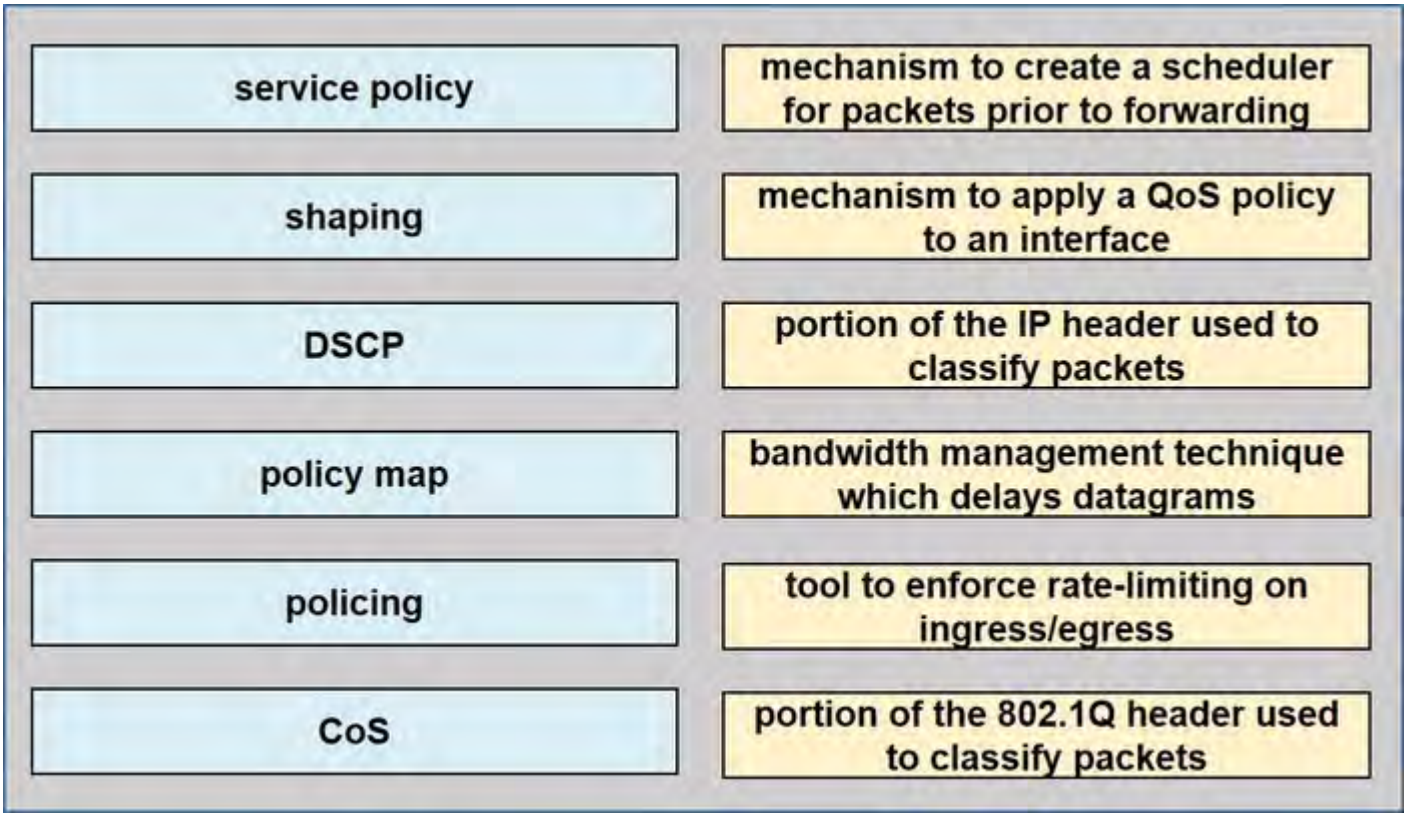
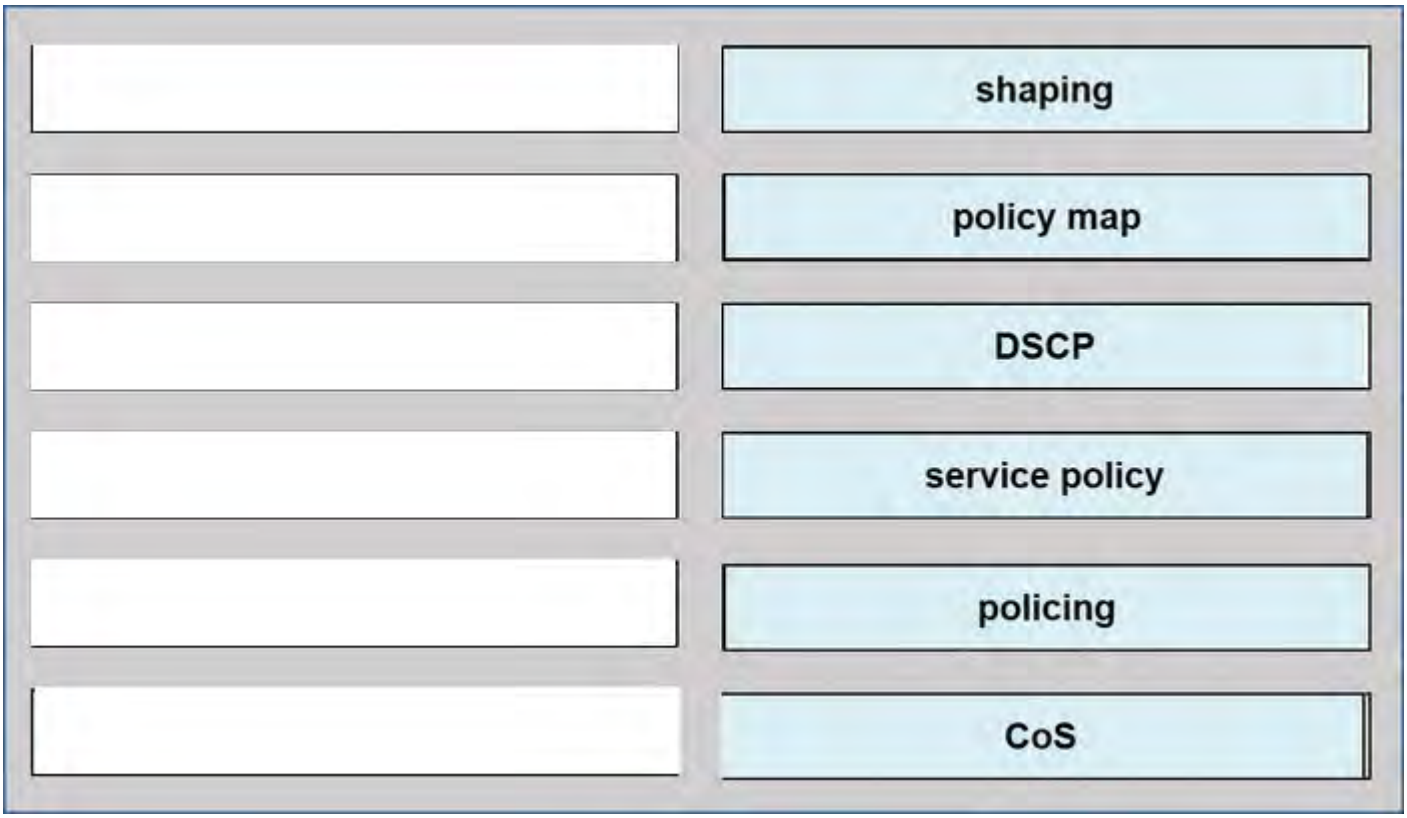


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 89

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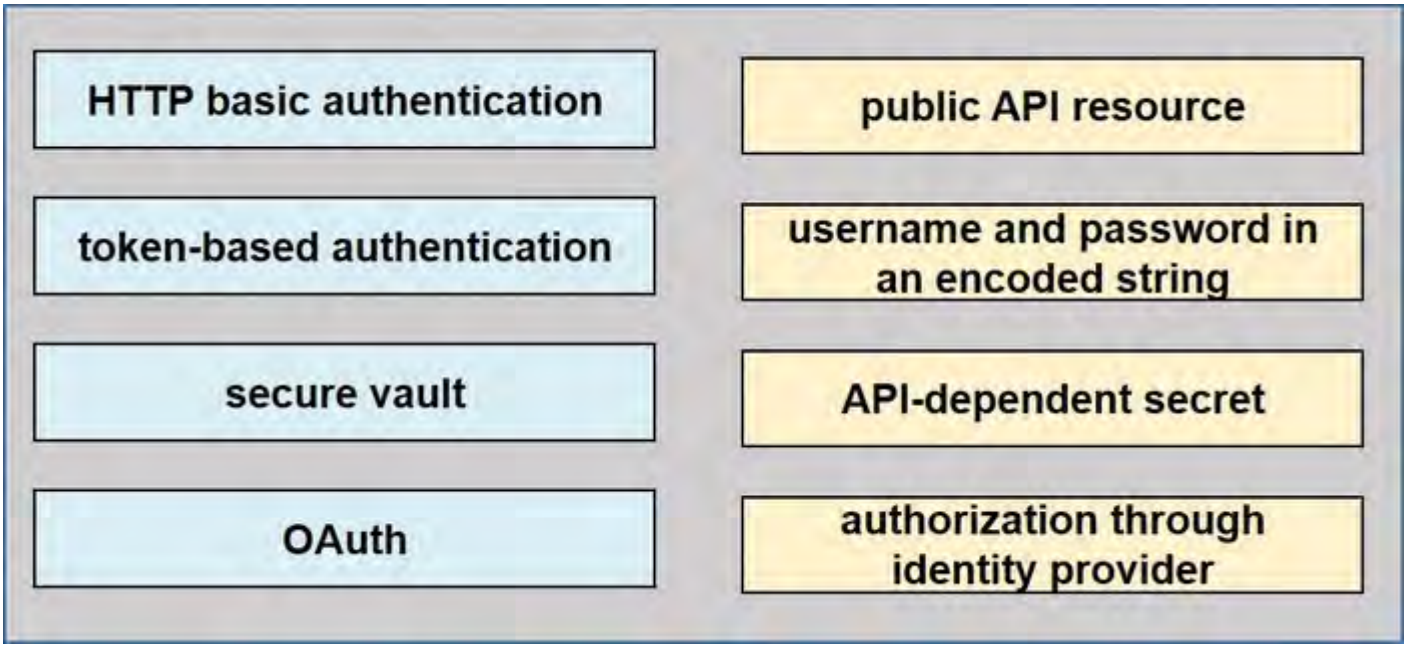
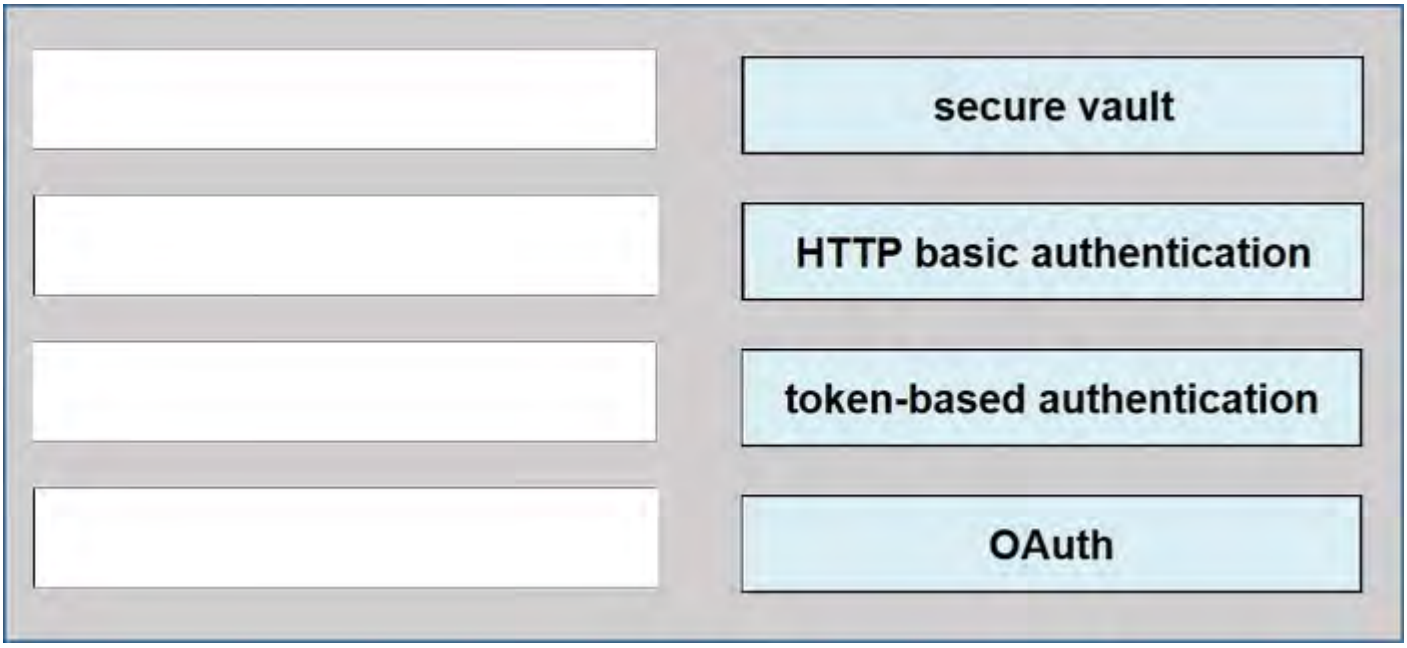
DRAG DROP

Drag and drop the REST API authentication method from the left to the description on the right.

Select and Place:



Correct Answer:



Explanation

Explanation/Reference:
HTTP basic authentication : username and password in an encoded string
token-based authentication : API-dependent secret
secure vault : public API resource
OAuth : authorization through identity provider

When Secure Vault is not in use, all information stored in its container is encrypted.
When a user wants to use the files and notes stored within the app, they have to first decrypt the database. This happens by filling in a previously determined Security Lock - which could be a PIN or a password of the user's choosing.When a user leaves the app, it automatically encrypts everything again. This way all data stored in Secure Vault is decrypted only while a user is actively using the app. In all other instances, it

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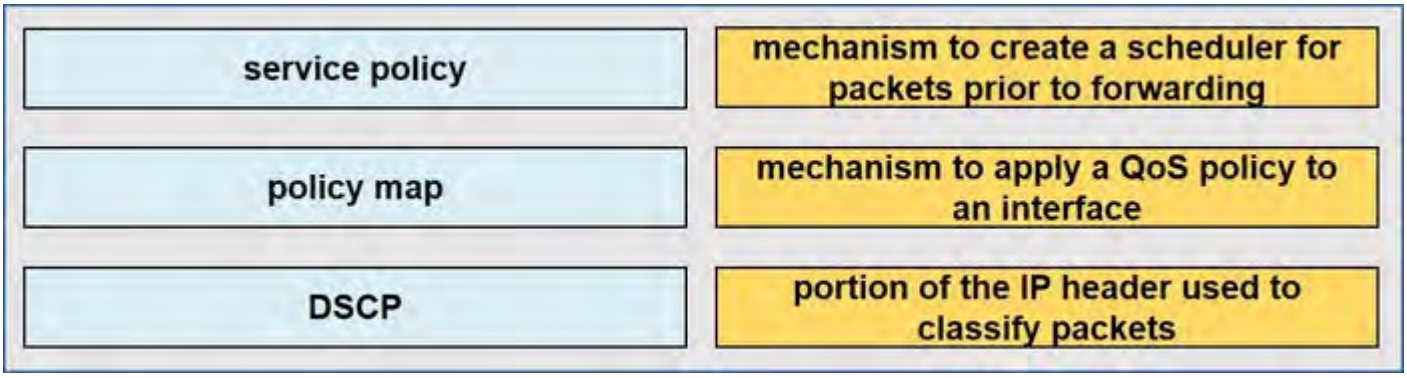
remains locked to any attacker, malware or spyware trying to access the data.
How token-based authentication works: Users log in to a system and - once authenticated - are provided with a token to access other services without having to enter their username and password multiple times. In short, token-based authentication adds a second layer of security to application, network, or service access.
OAuth is an open standard for authorization used by many APIs and modern applications. The simplest example of OAuth is when you go to log onto a website and it offers one or more opportunities to log on using another website's/service's logon. You then click on the button linked to the other website, the other website authenticates you, and the website you were originally connecting to logs you on itself afterward using permission gained from the second website.

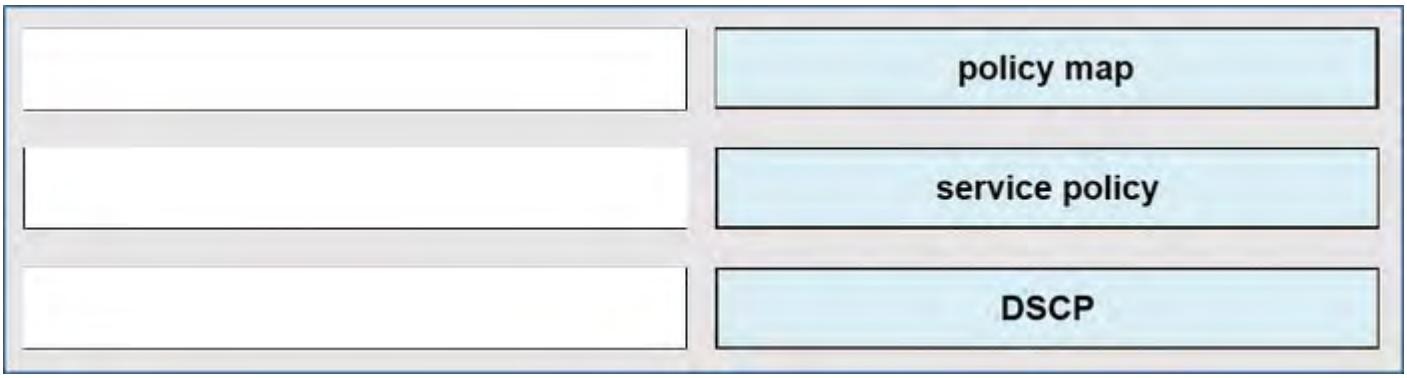
QUESTION 90
DRAG DROP

Drag and drop the Qos mechanisms from the left to the correct descriptions on the right

Select and Place:



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 91
DRAG DROP

Drag and drop the characteristic from the left onto the orchestration tools that they describe on the right.

Select and Place:

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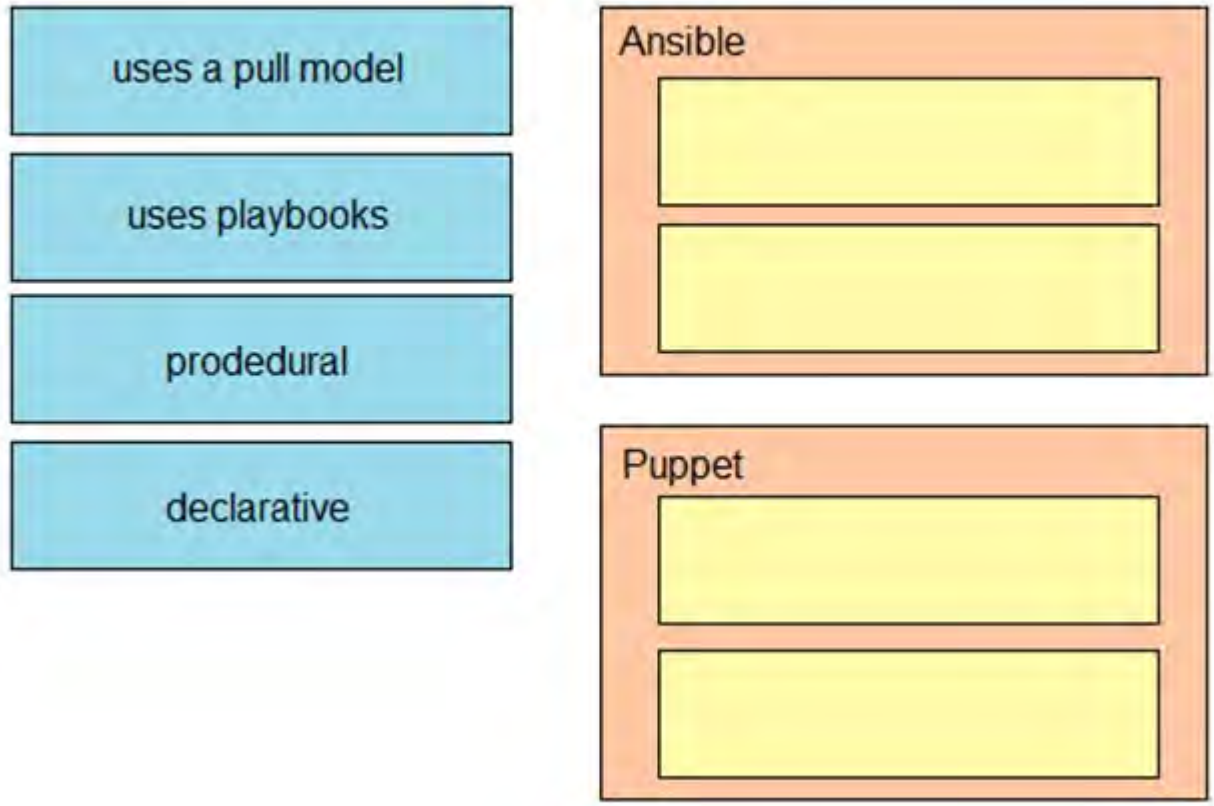
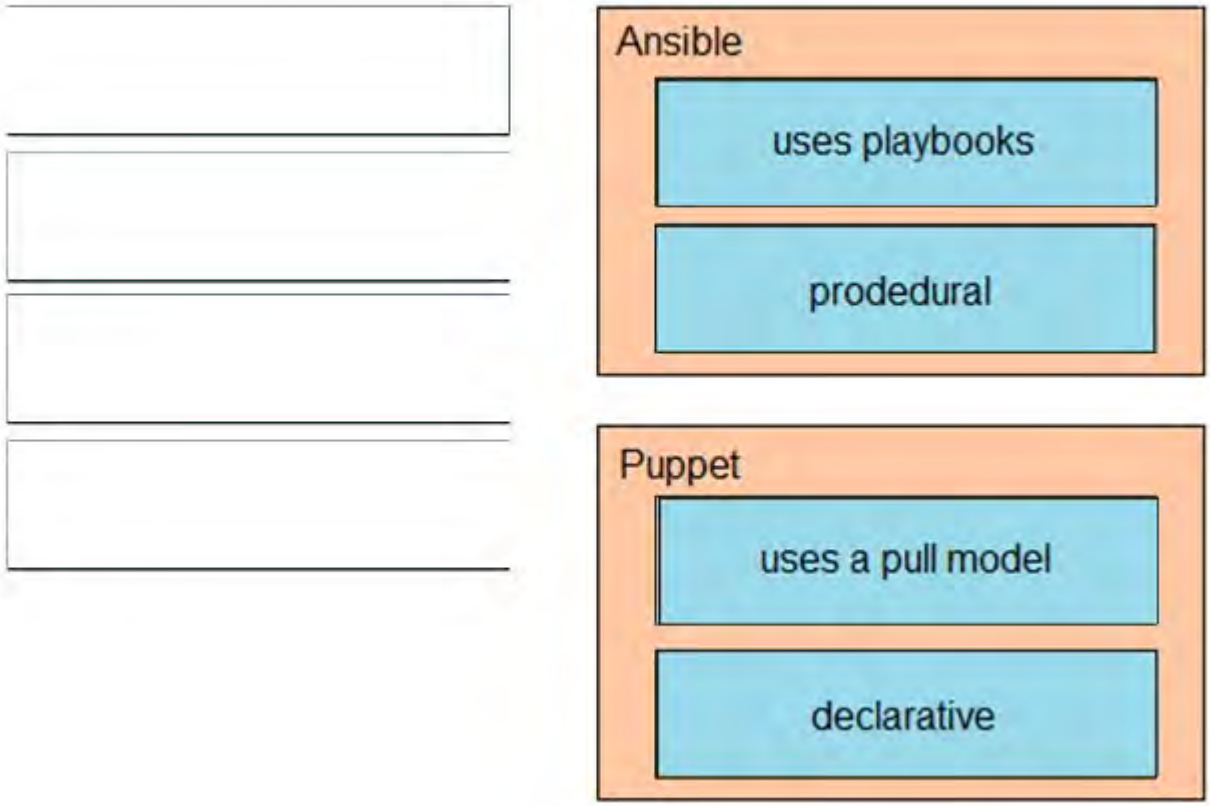
Answer Area



Correct Answer:

https://t.me/learningnets

Answer Area



Explanation

Explanation/Reference:
Ansible
uses playbooks
procedural

Puppet
uses a pull model
declarative

QUESTION 92
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocols they describe on the right.

Select and Place:

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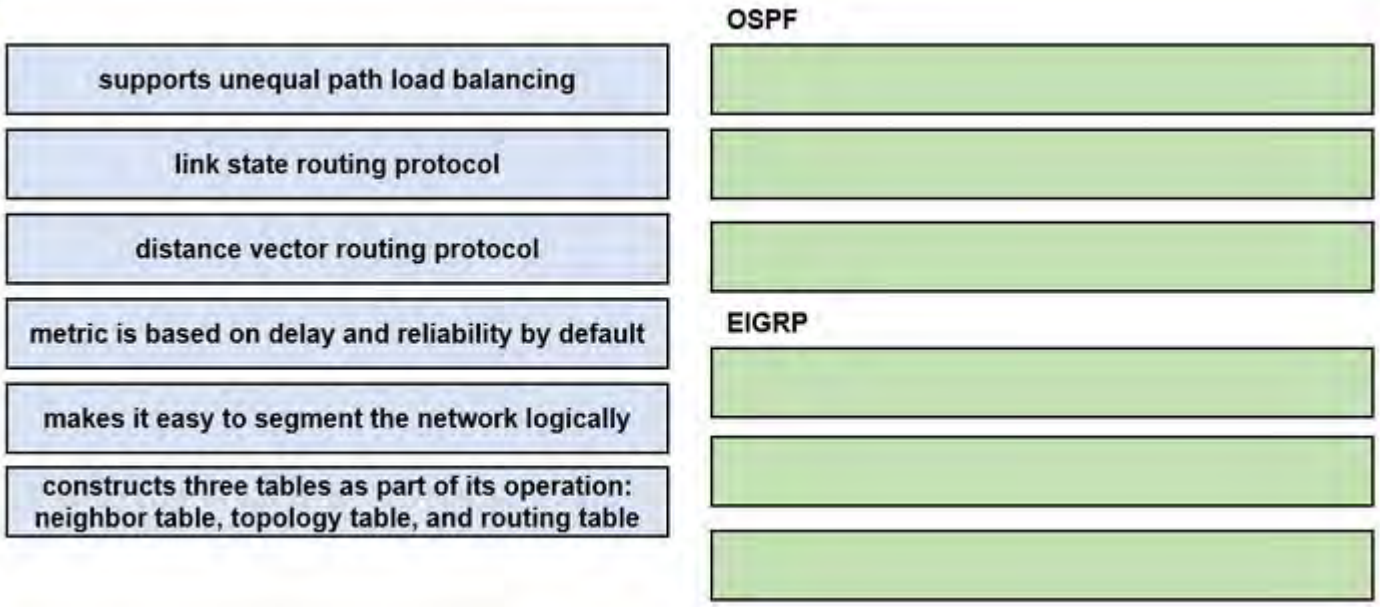
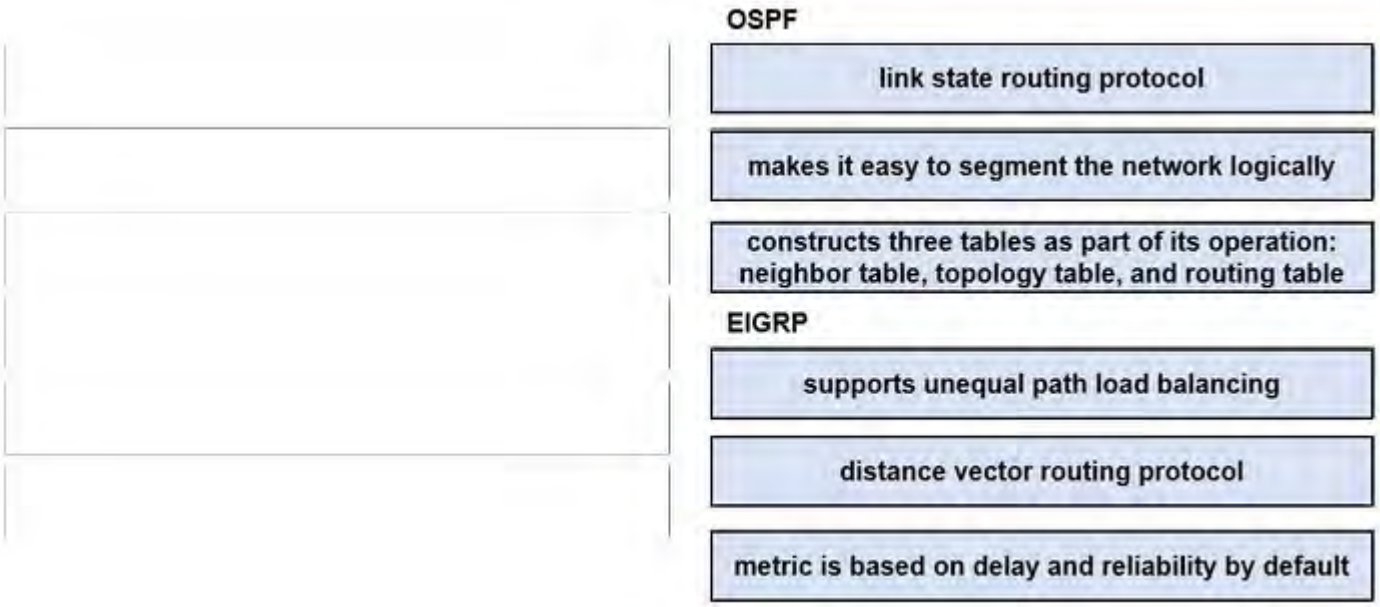


Correct Answer:



Explanation

Explanation/Reference:

QUESTION 93
DRAG DROP

Drag and drop the snippets onto the blanks within the code construct a script that configure a loopback interface with an IP address (not all options are used)?

Select and Place:

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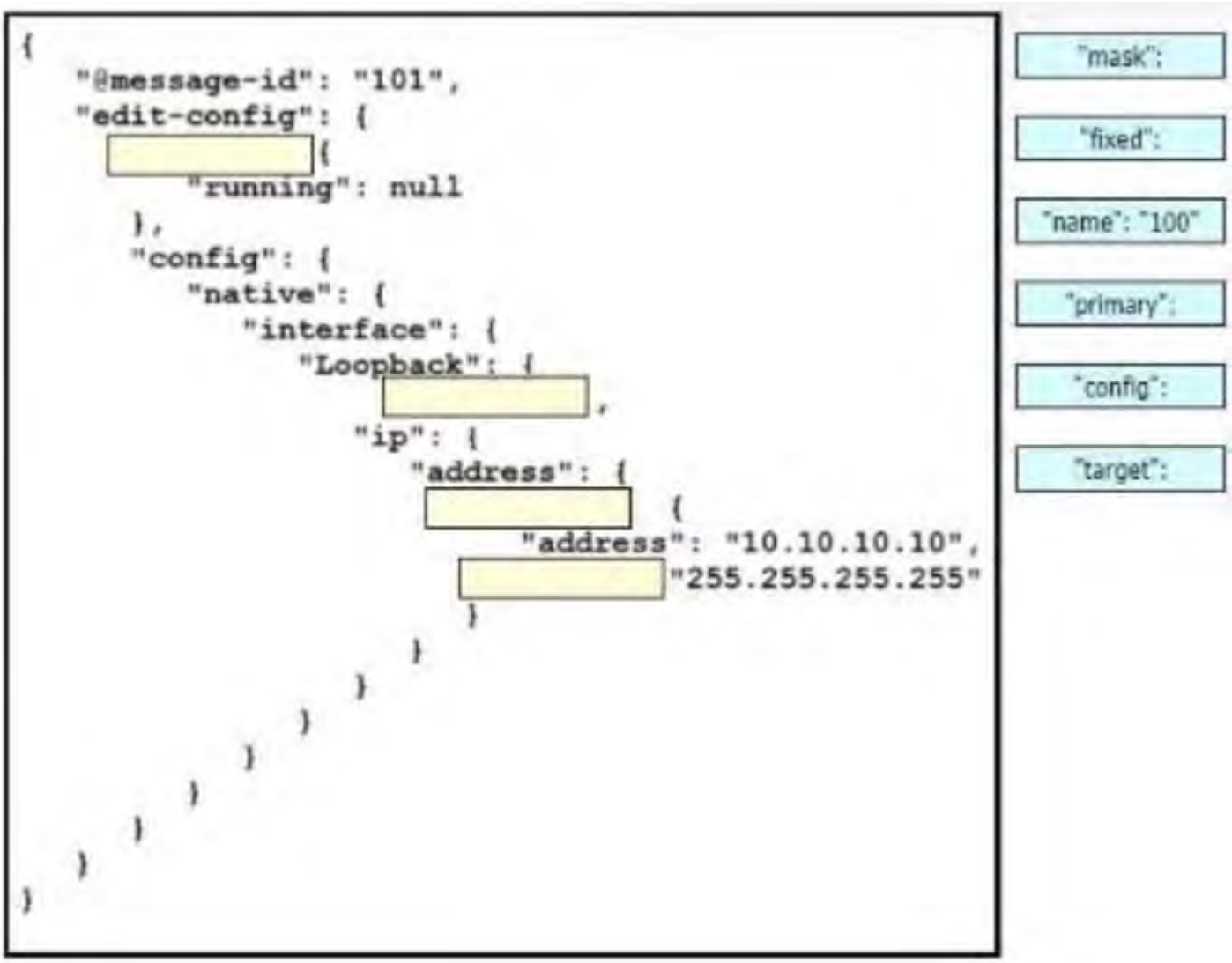
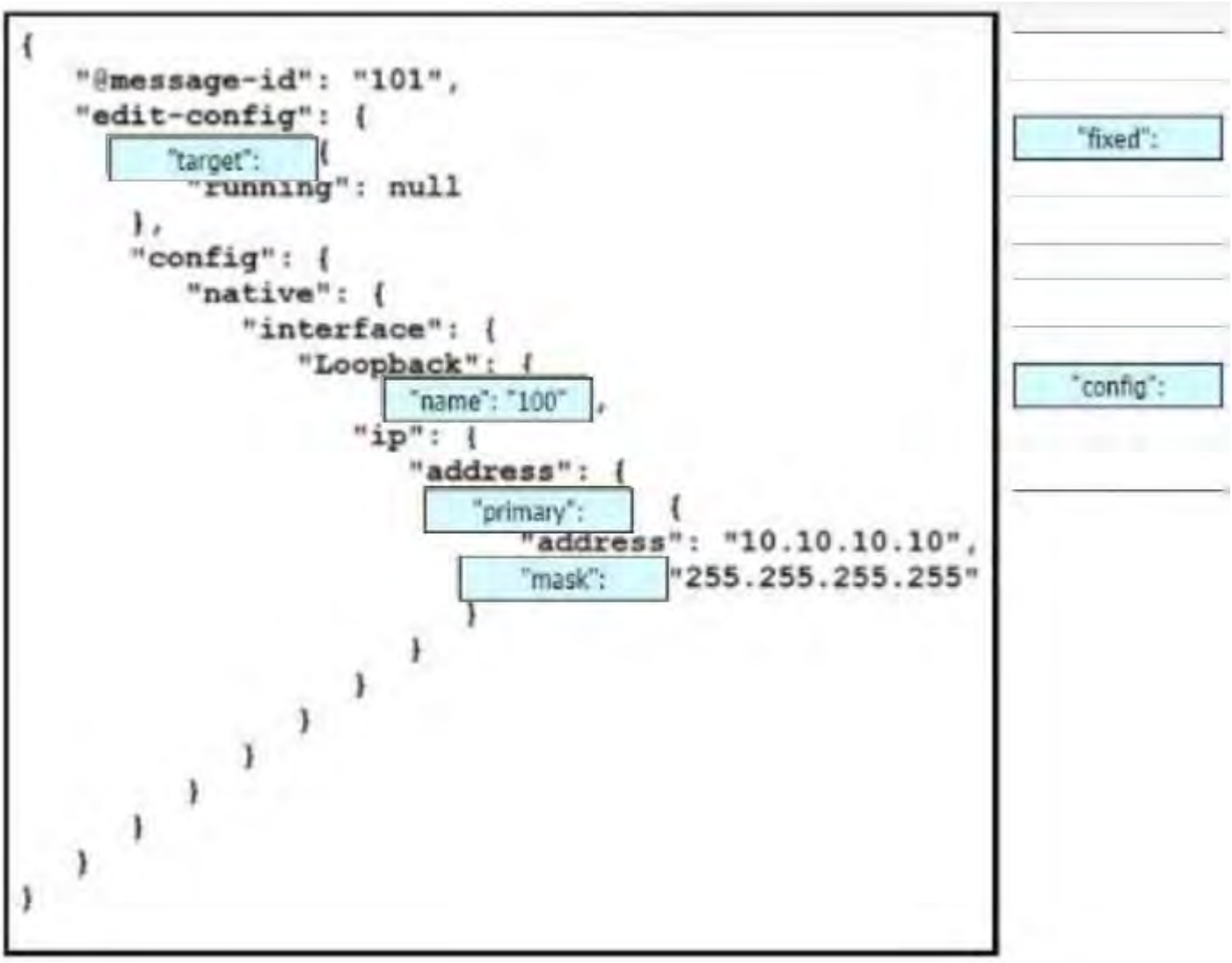


Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:

QUESTION 94
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocols they describe on the right.

Select and Place:

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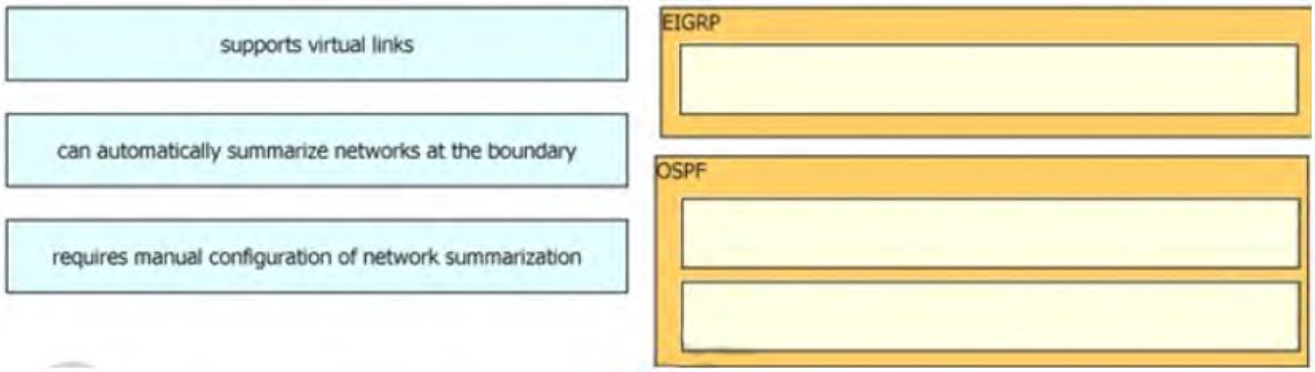

Correct Answer:

Explanation

Explanation/Reference:

QUESTION 95
DRAG DROP

Refer to the exhibit. An engineer must deny HTTP traffic from host A to host V while allowing all other communication between the hosts, drag and drop the commands into the configuration to achieve these results.

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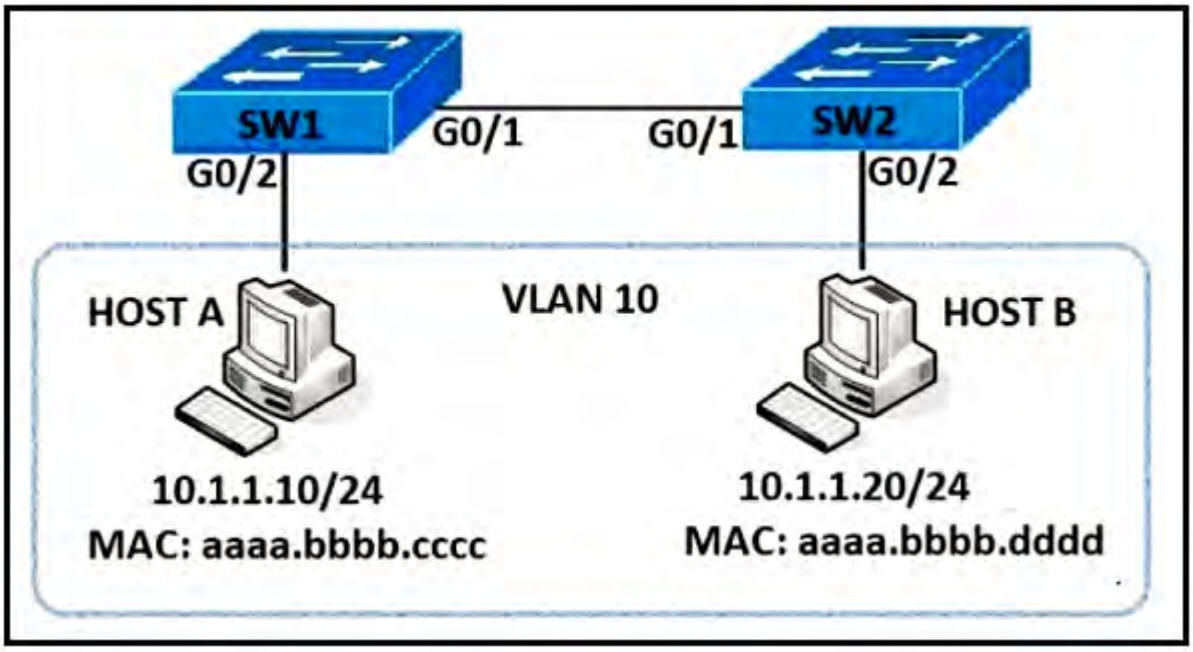

Some commands may be used more than once. Not all commands are used.

Select and Place:

Answer Area

```
SW1(config)# ip access-list extended DENY-HTTP
SW1(config-ext-nacl)# [          ] tcp host 10.1.1.10 host 10.1.1.20 eq www

SW1(config)# ip access-list extended MATCH_ALL
SW1(config-ext-nacl)# [          ] ip any any

SW1(config)# vlan access-map HOST-A-B 10
SW1(config-access-map)# match ip address DENY-HTTP
SW1(config-access-map)# [          ]

SW1(config)# vlan access-map HOST-A-B 20
SW1(config-access-map)# match ip address MATCH_ALL
SW1(config-access-map)# [          ]

SW1(config)# vlan filter HOST-A-B vlan 10
```

action drop | action forward | filter | permit | deny | match

Correct Answer:

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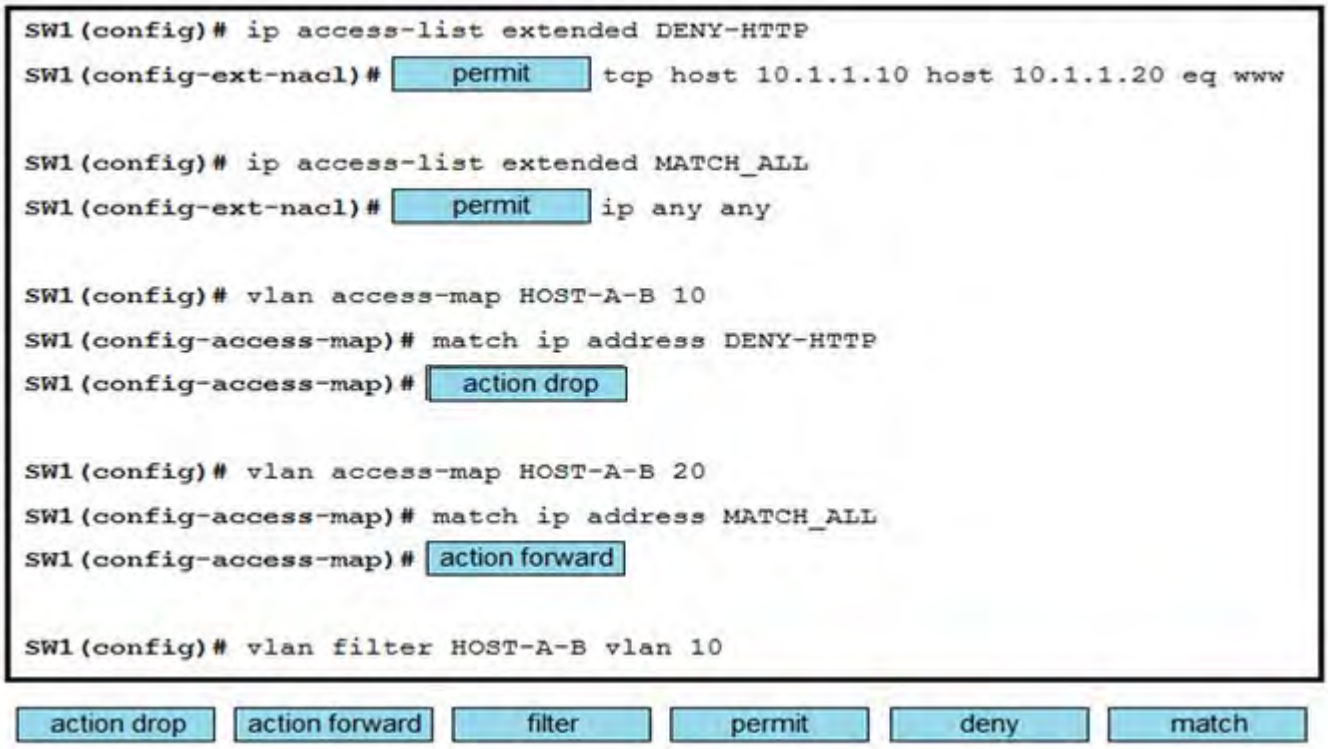
Answer Area



Explanation

Explanation/Reference:
When talking about access-lists or prefix-lists associated with *-maps, Permit and Deny take on new meanings.
As we all know, a *-list processes each entry until a match is found.
Once a match is found, processing of the *-list stops.
*-maps operate the same way.

- If the matched statement is 'permit,' the *-list reports back to the *-map with a match success, which allows the *-map to process the associated action. No further *-map sequences are processed.
- If the matched statement is 'deny,' the *-list reports back to the *-map with NO MATCH; wherein the *-map will proceed to the next *-map sequence until a *-map match IS found.
- If NO statement is matched in the *-list, the implicit 'deny any any' is ALWAYS matched. In This case, the *-list will report to the *-map with NO MATCH, and the *-map will proceed to the next sequence until a match IS found.

QUESTION 96
DRAG DROP

An engineer is working with the Cisco DNA Center API Drag and drop the methods from the left onto the actions that they are used for on the right.

Select and Place:

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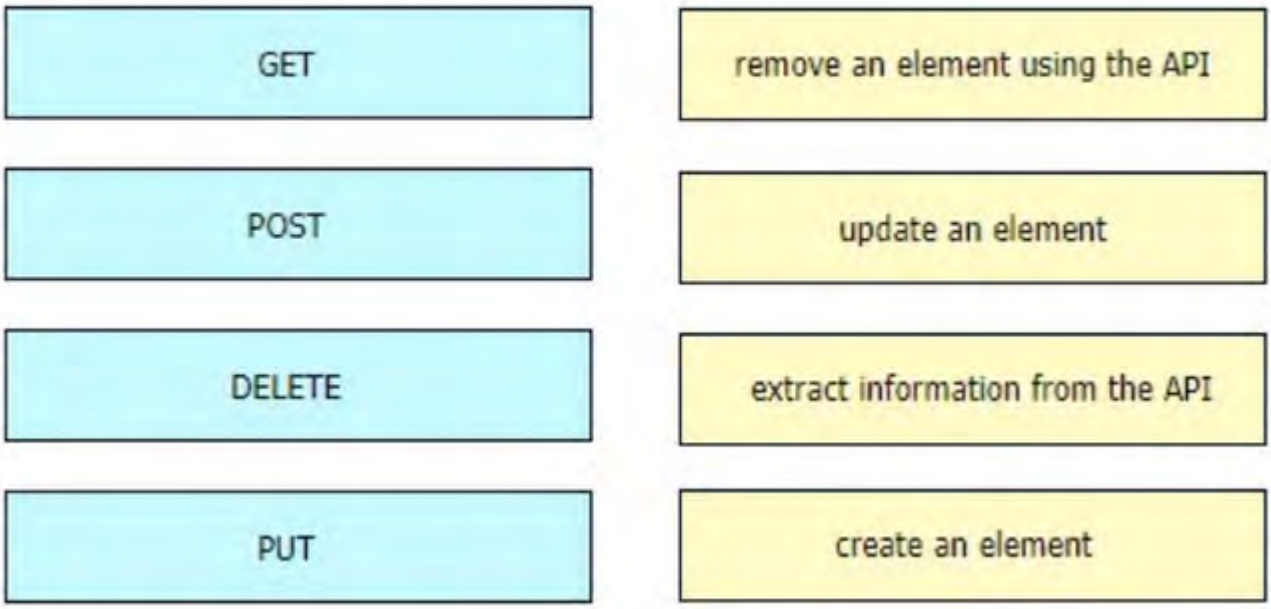
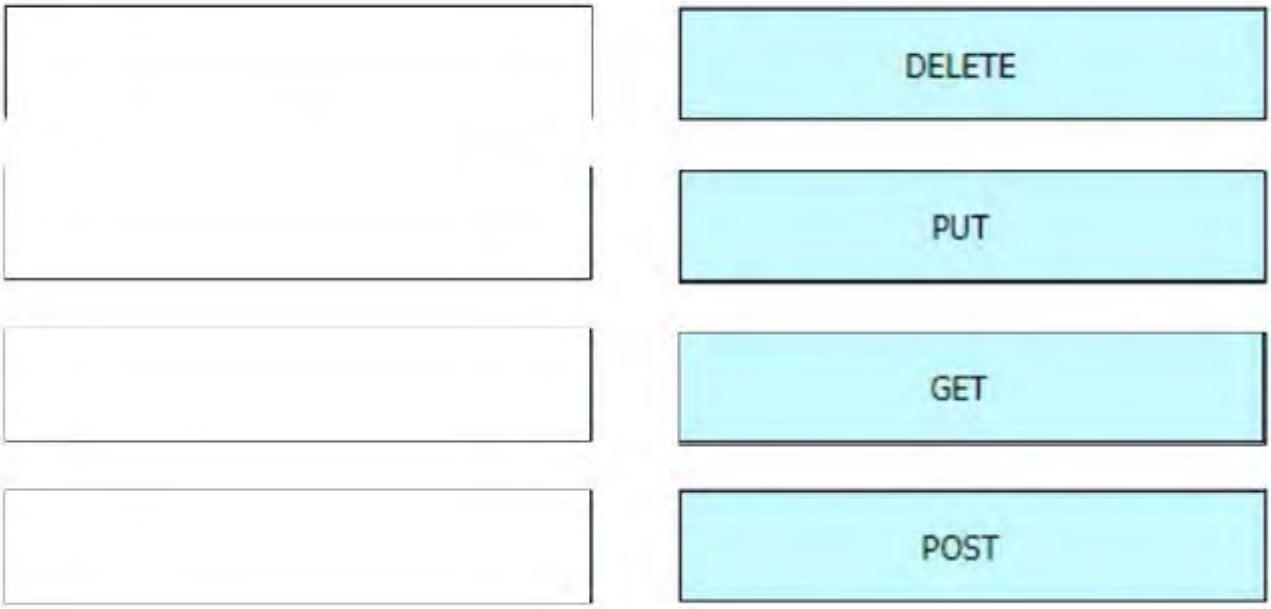
Answer Area



Correct Answer:

Answer Area



Explanation

Explanation/Reference:

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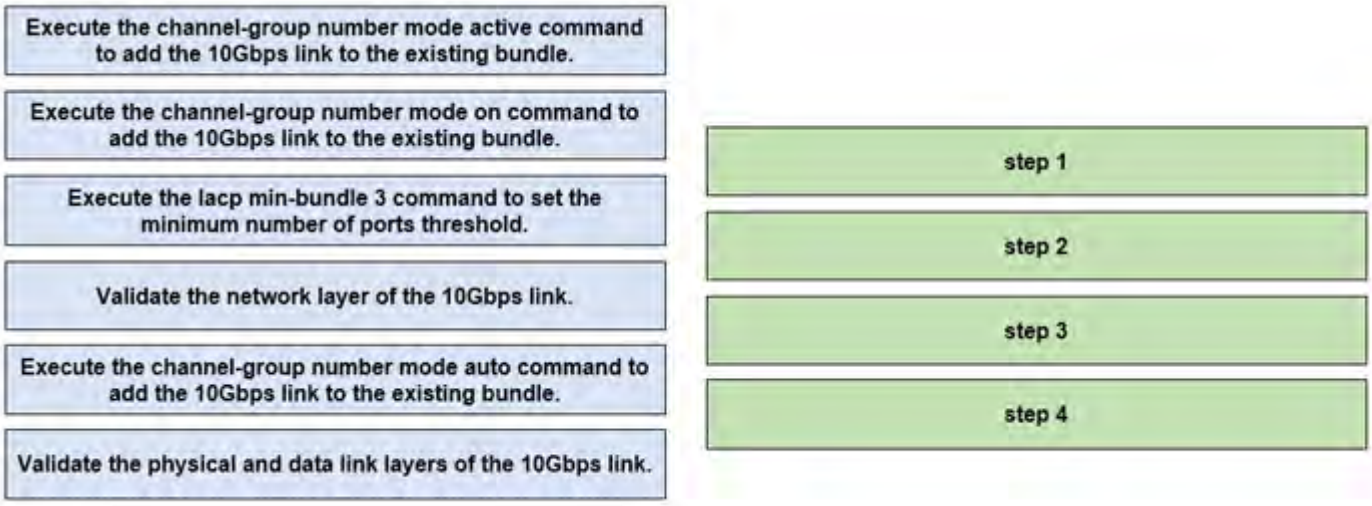
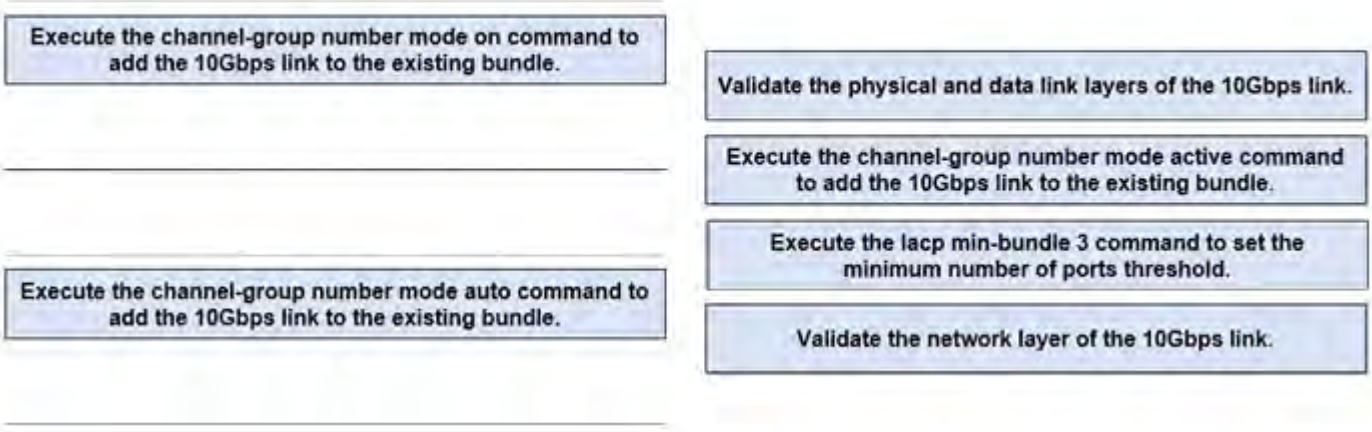
QUESTION 97
DRAG DROP

A network engineer is adding an additional 10Gps link to an exiting 2x10Gps LACP-based LAG to augment its capacity. Network standards require a bundle interface to be taken out of service if one of its member links goes down, and the new link must be added with minimal impact to the production network. Drag and drop the tasks that the engineer must perform from the left into the sequence on the right. Not all options are used.

Select and Place:



Correct Answer:



Explanation

Explanation/Reference:

QUESTION 98
DRAG DROP

Drag and drop the virtual components from the left onto their deceptions on the right.

Select and Place:

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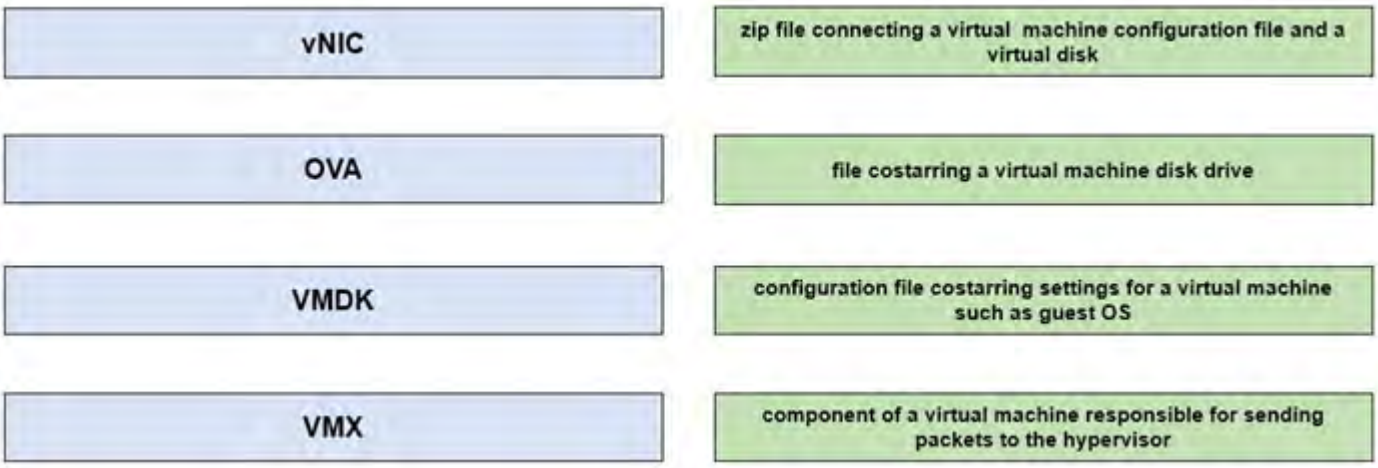
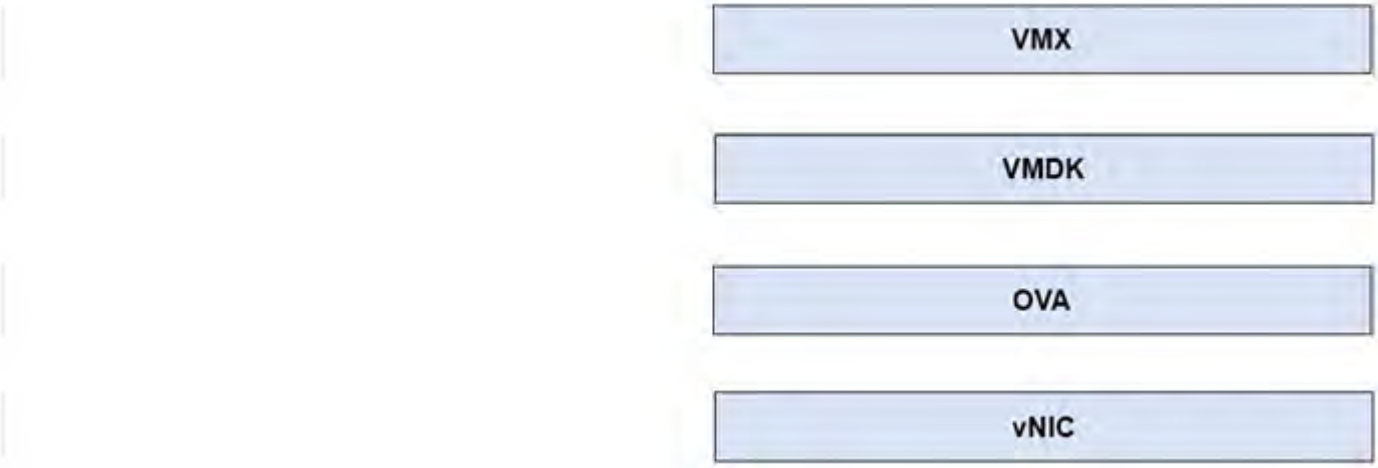


Correct Answer:



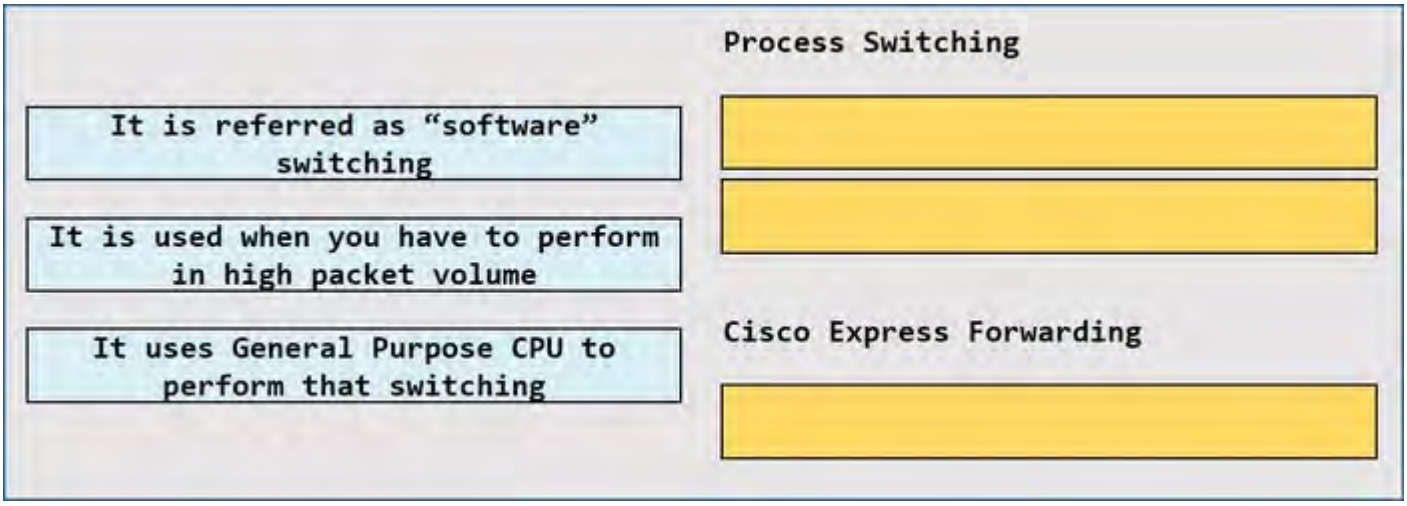
Explanation

Explanation/Reference:

QUESTION 99
DRAG DROP

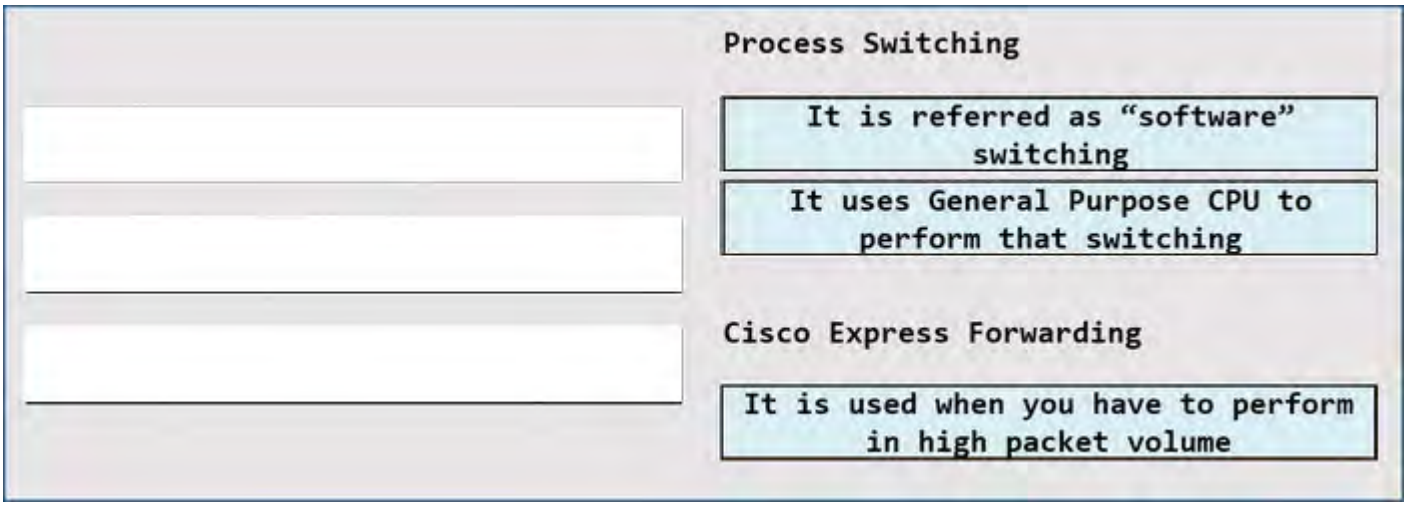
Drag and drop packet switching architecture from the left onto the correct positions on the right.

Select and Place:



https://t.me/learningnets

Correct Answer:



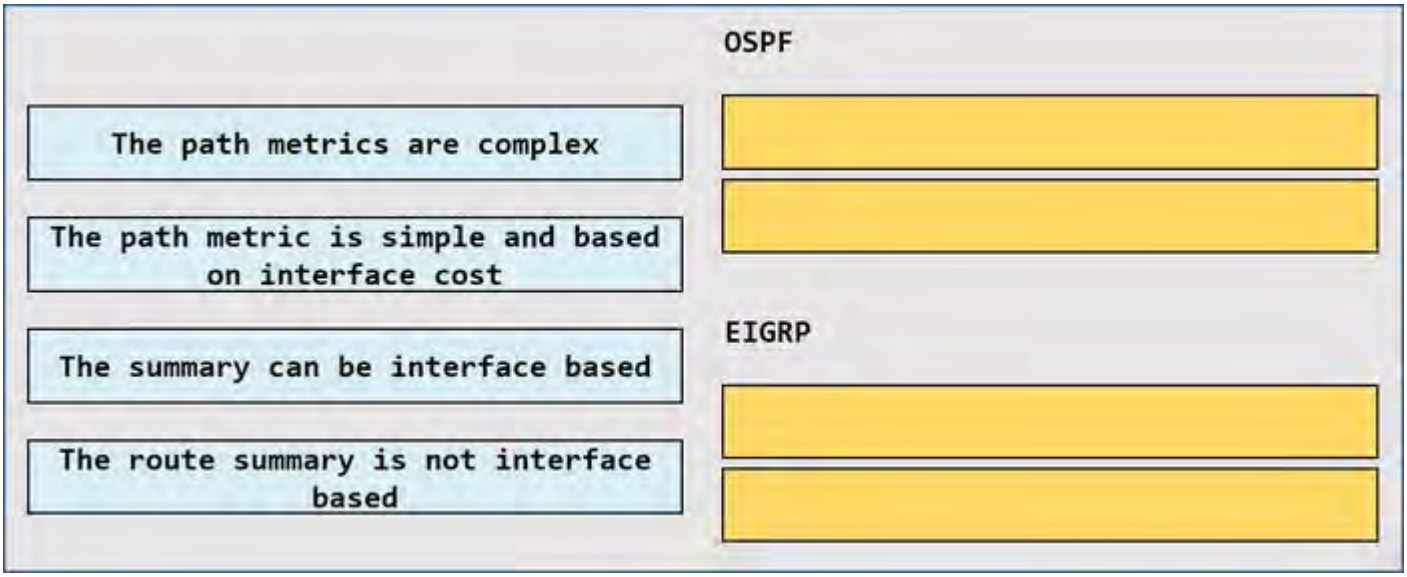
Explanation

Explanation/Reference:

QUESTION 100
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocol types on the right.

Select and Place:



Correct Answer:

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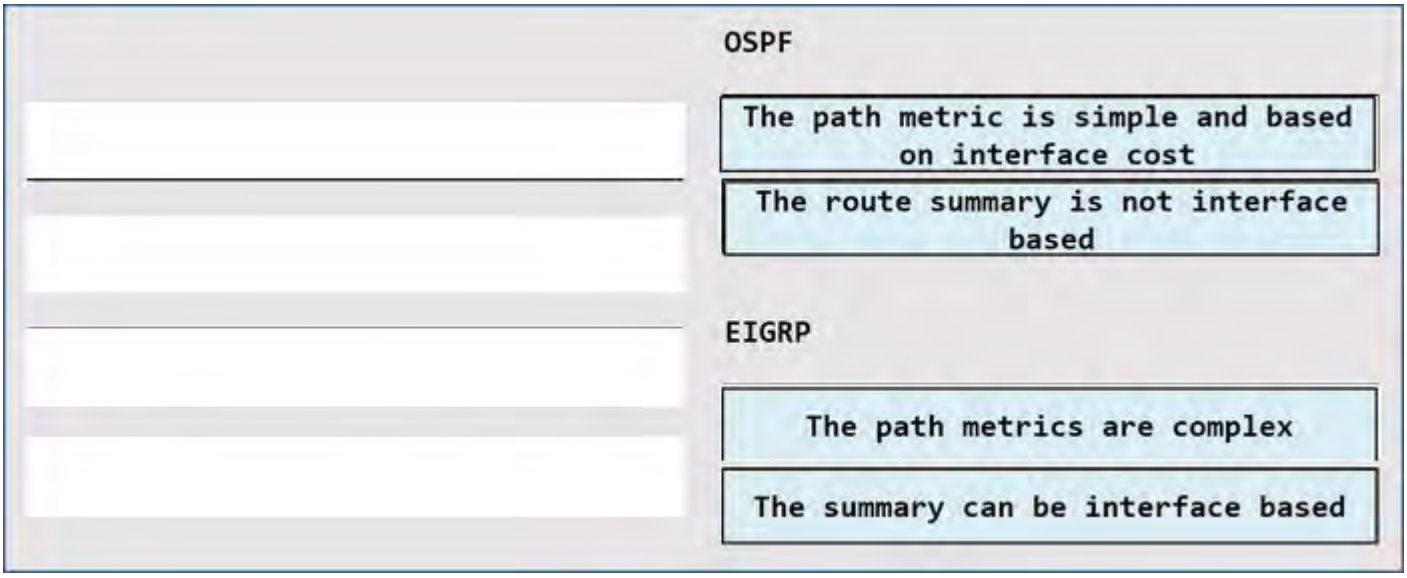


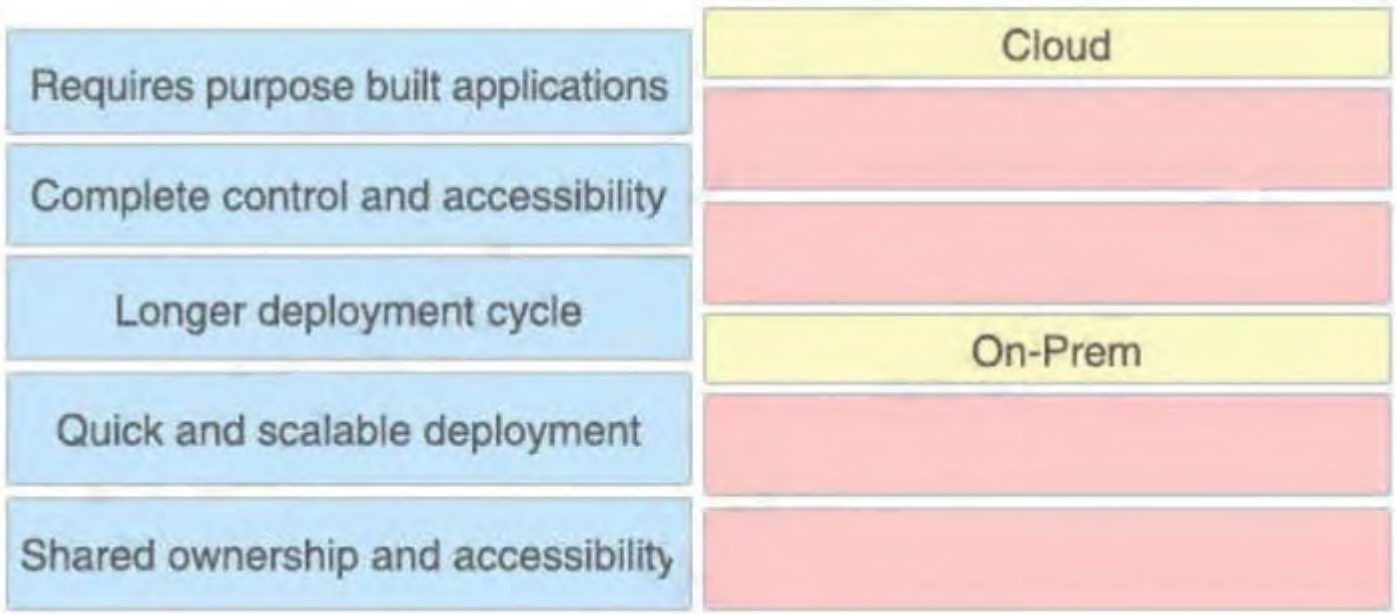
Explanation

Explanation/Reference:
OSPF offers two methods of route summarization:
1) Summarization of internal routes performed on the ABRs
2) Summarization of external routes performed on the ASBRs
Unlike OSPF where we can summarize only on ABR or ASBR, in EIGRP we can summarize anywhere.
Manual summarization can be applied anywhere in EIGRP domain, on every router, on every interface via the ip summary-address eigrp as-number address mask [administrativedistance] command (for example: ip summary-address eigrp 1 192.168.16.0 255.255.248.0).

QUESTION 101
DRAG DROP

Drag and drop the characteristics from the left onto the routing protocol types on the right.

Select and Place:



Correct Answer:

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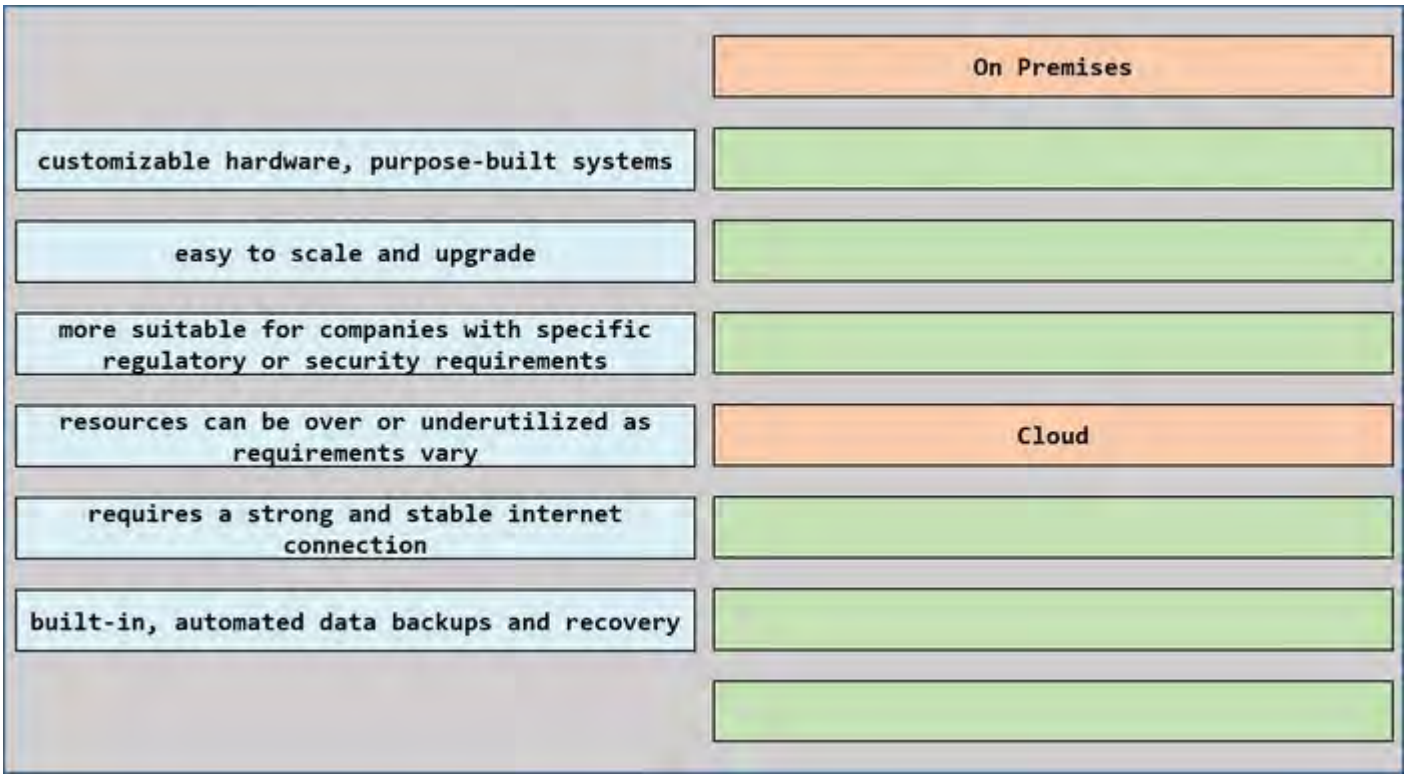
Explanation

Explanation/Reference:

QUESTION 102
DRAG DROP

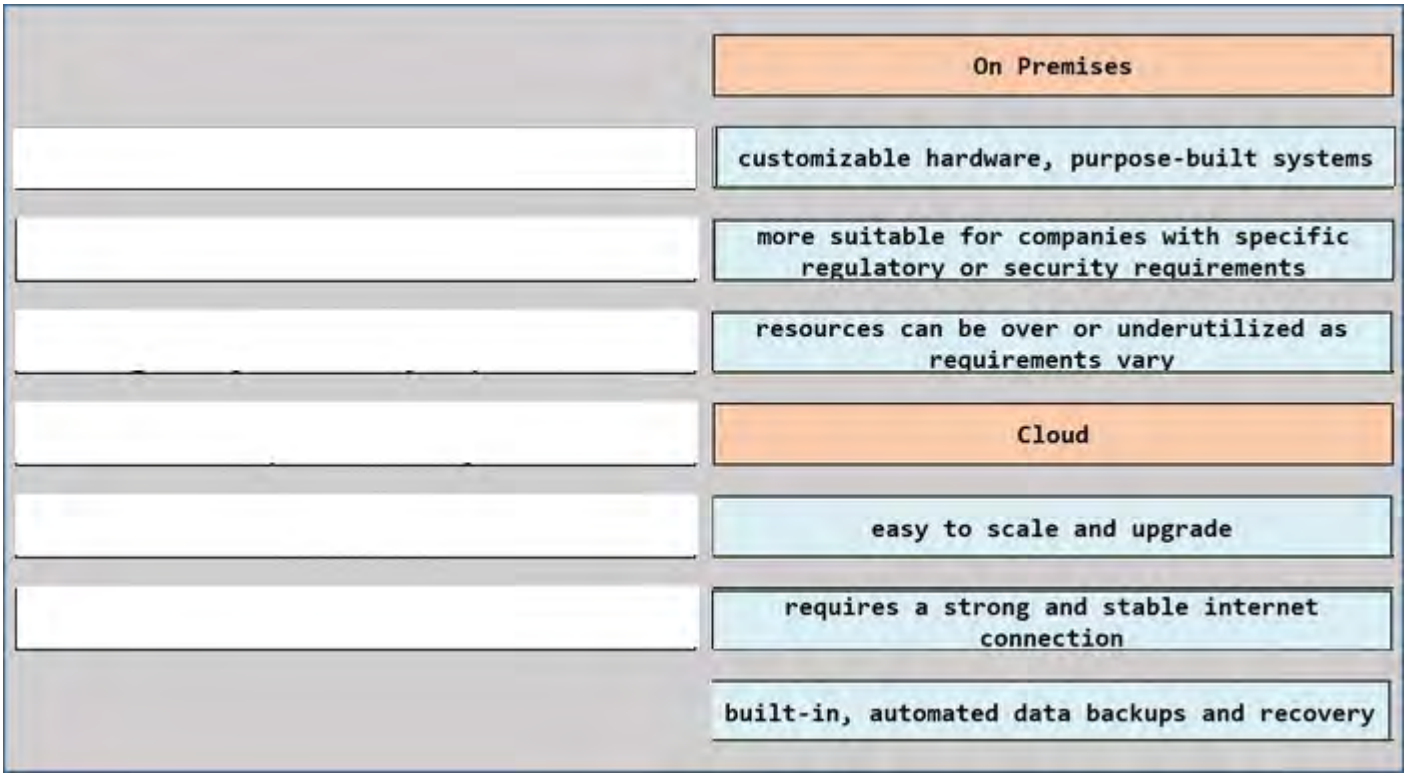
Drag and drop the characteristics from the left onto the appropriate infrastructure deployment types on the right.

Select and Place:



Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:

QUESTION 103
DRAG DROP

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

Select and Place:

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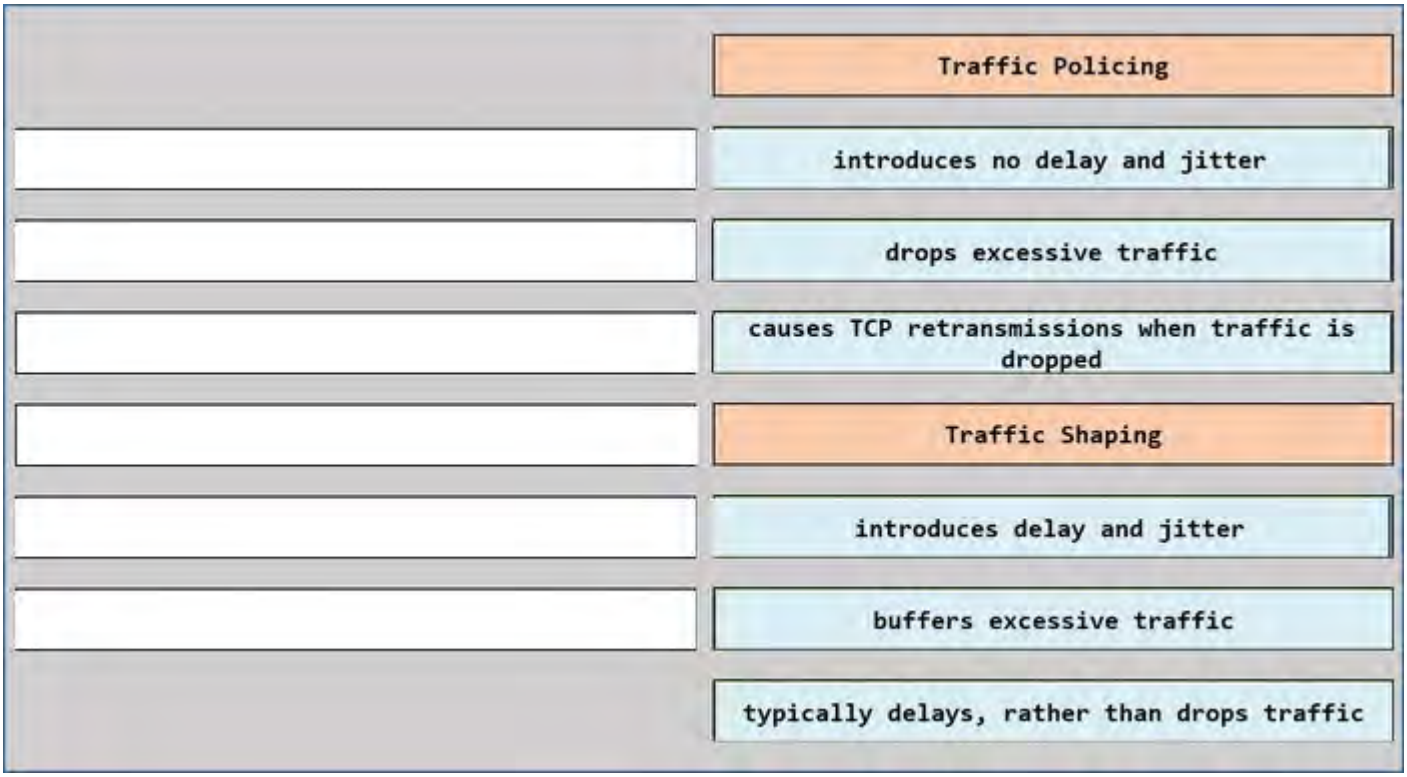
Correct Answer:



Explanation

Explanation/Reference:

QUESTION 104
DRAG DROP

Drag anti drop the characteristics from the ten onto the configuration models on the right.

Select and Place:

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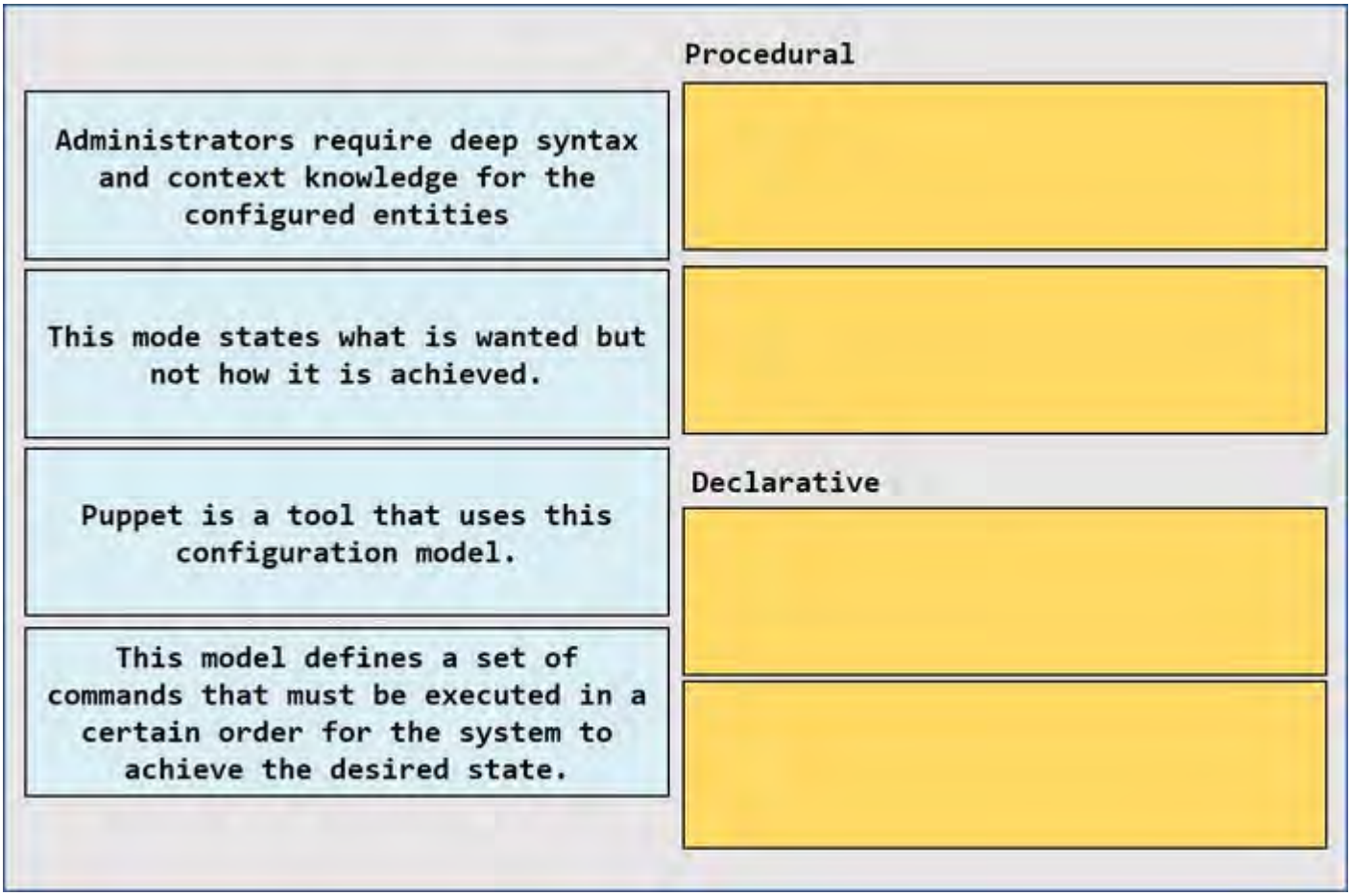
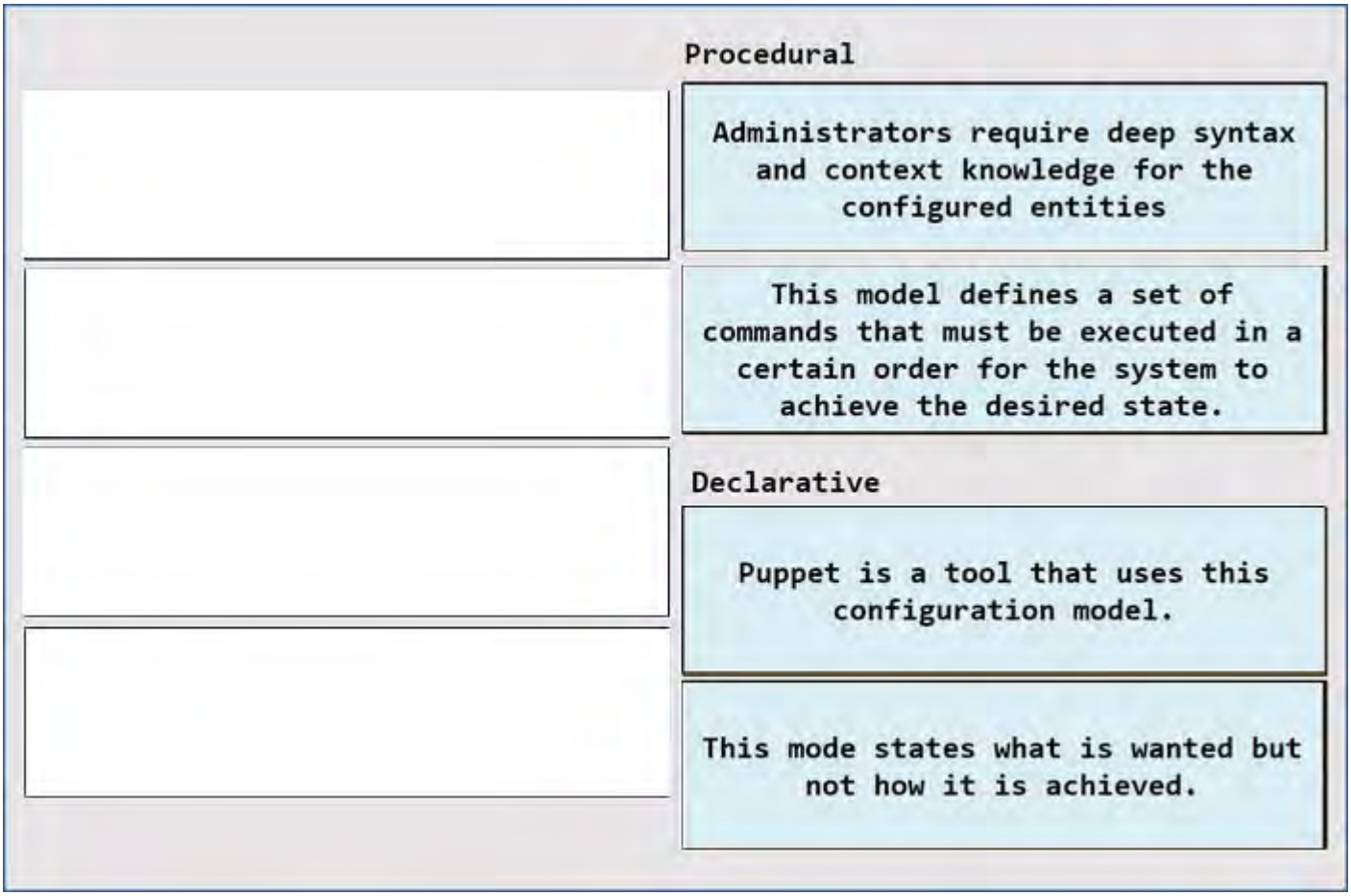


Correct Answer:



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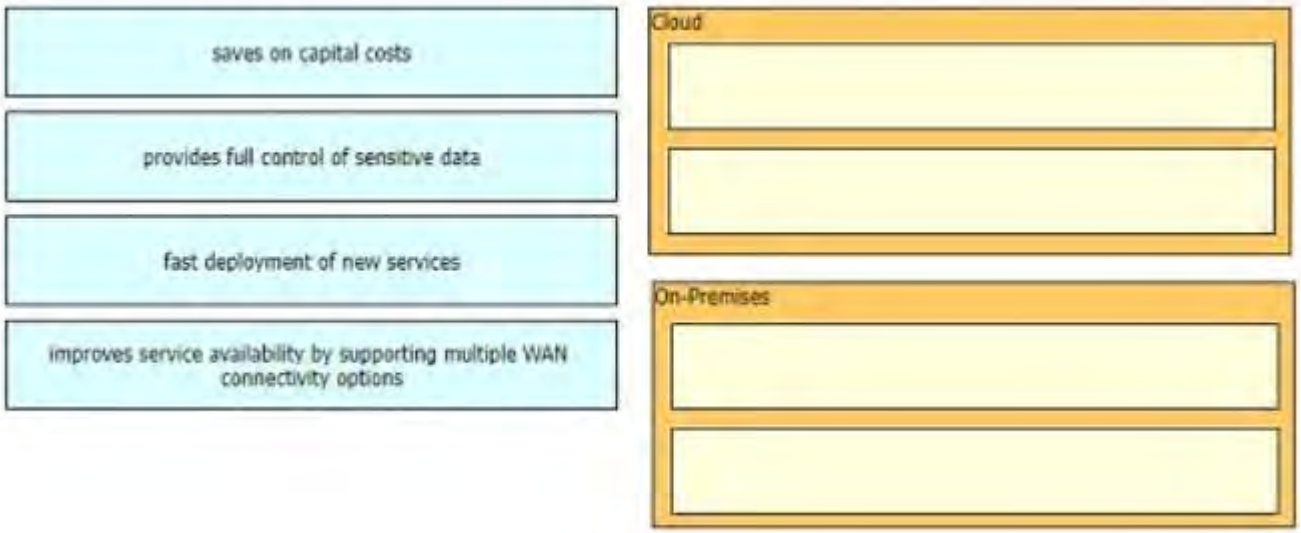
Explanation

Explanation/Reference:

QUESTION 105
DRAG DROP

Drag and drop the characteristics from the left onto the deployment model on the right.

Select and Place:



Correct Answer:

Explanation

Explanation/Reference:

QUESTION 106
DRAG DROP

Drag and drop the characteristics from the left onto the corresponding infrastructure deployment models on the right.

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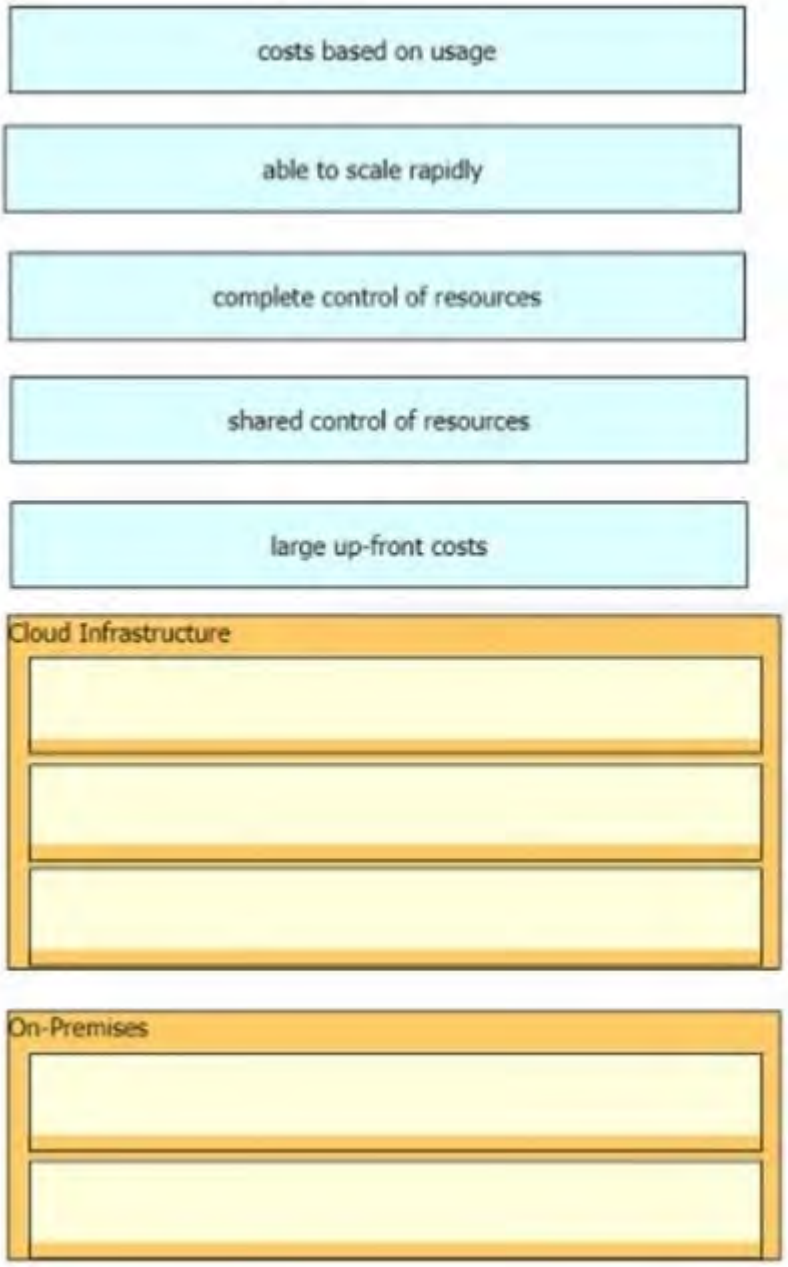
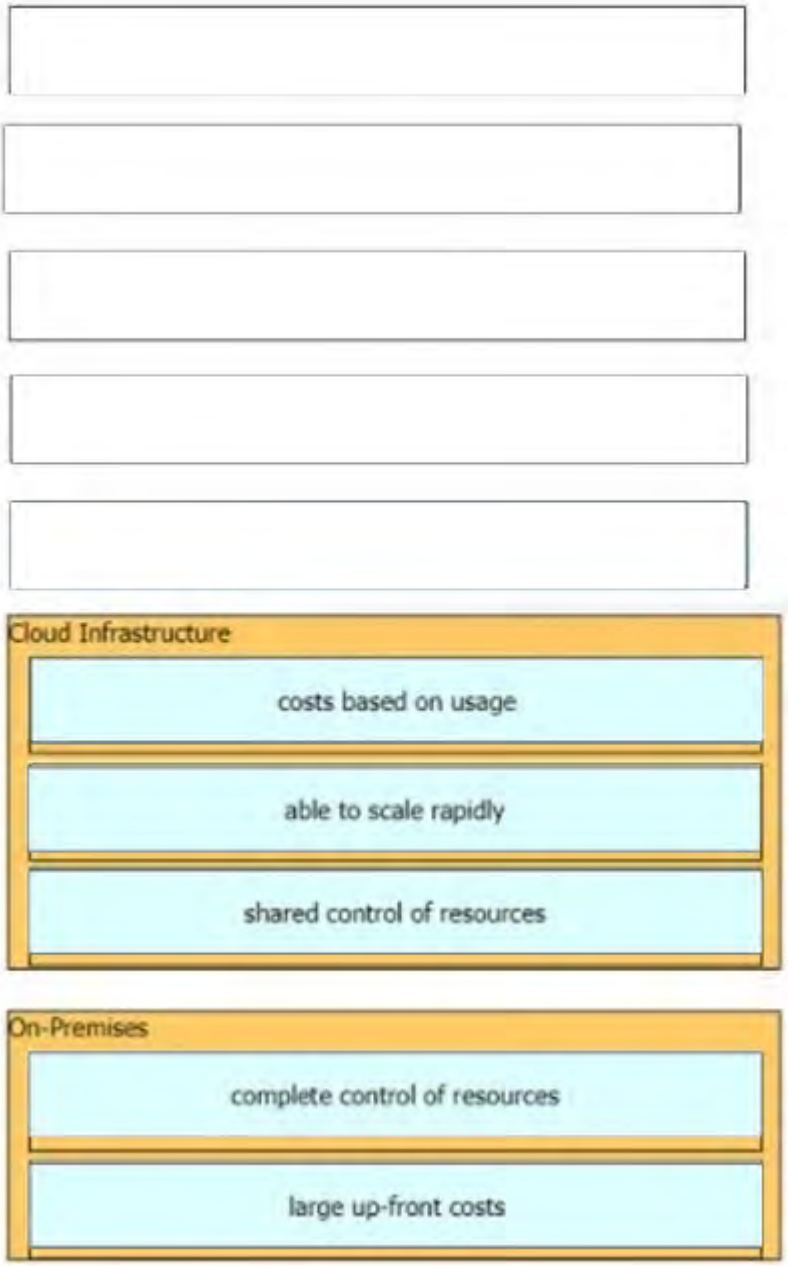
Select and Place:



Correct Answer:

https://t.me/learningnets



Explanation

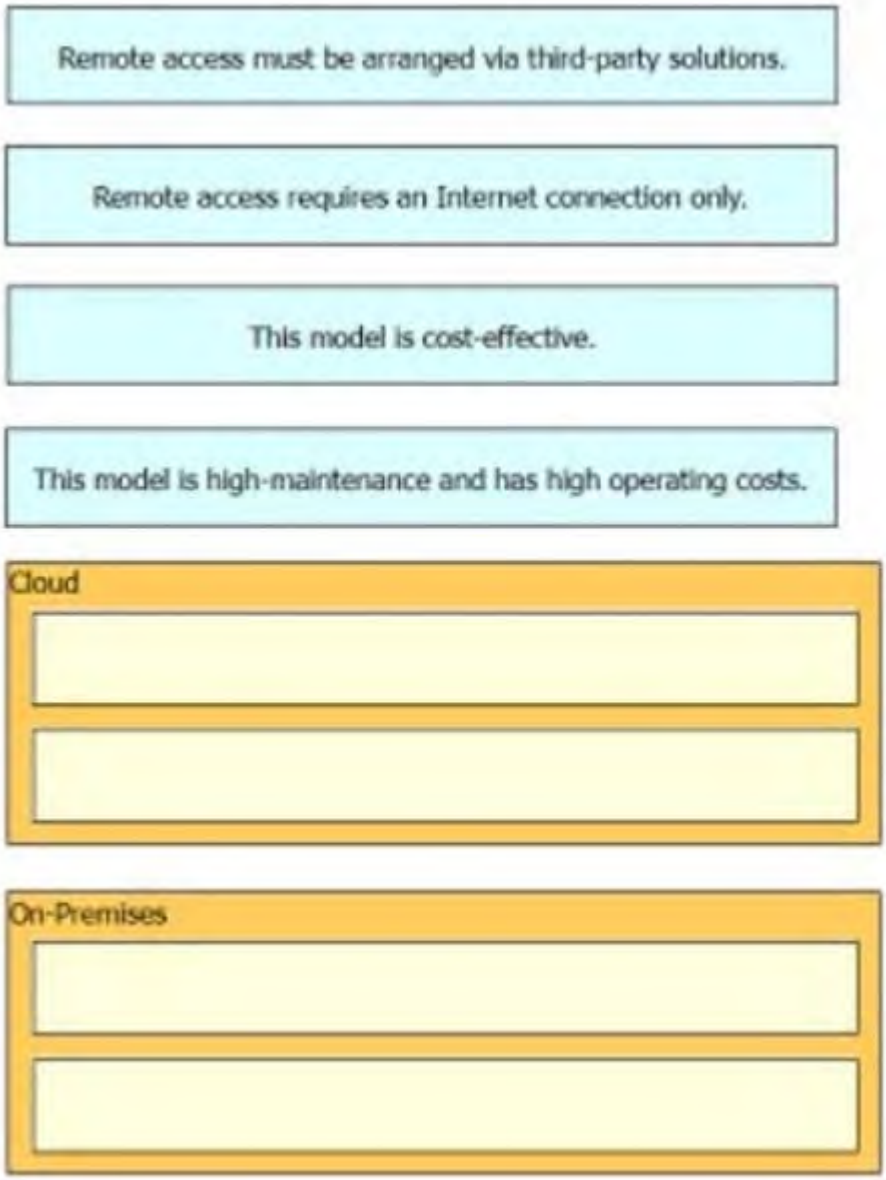
Explanation/Reference:

QUESTION 107
DRAG DROP

Drag and drop the characteristics from the left onto the deployment models on the right.

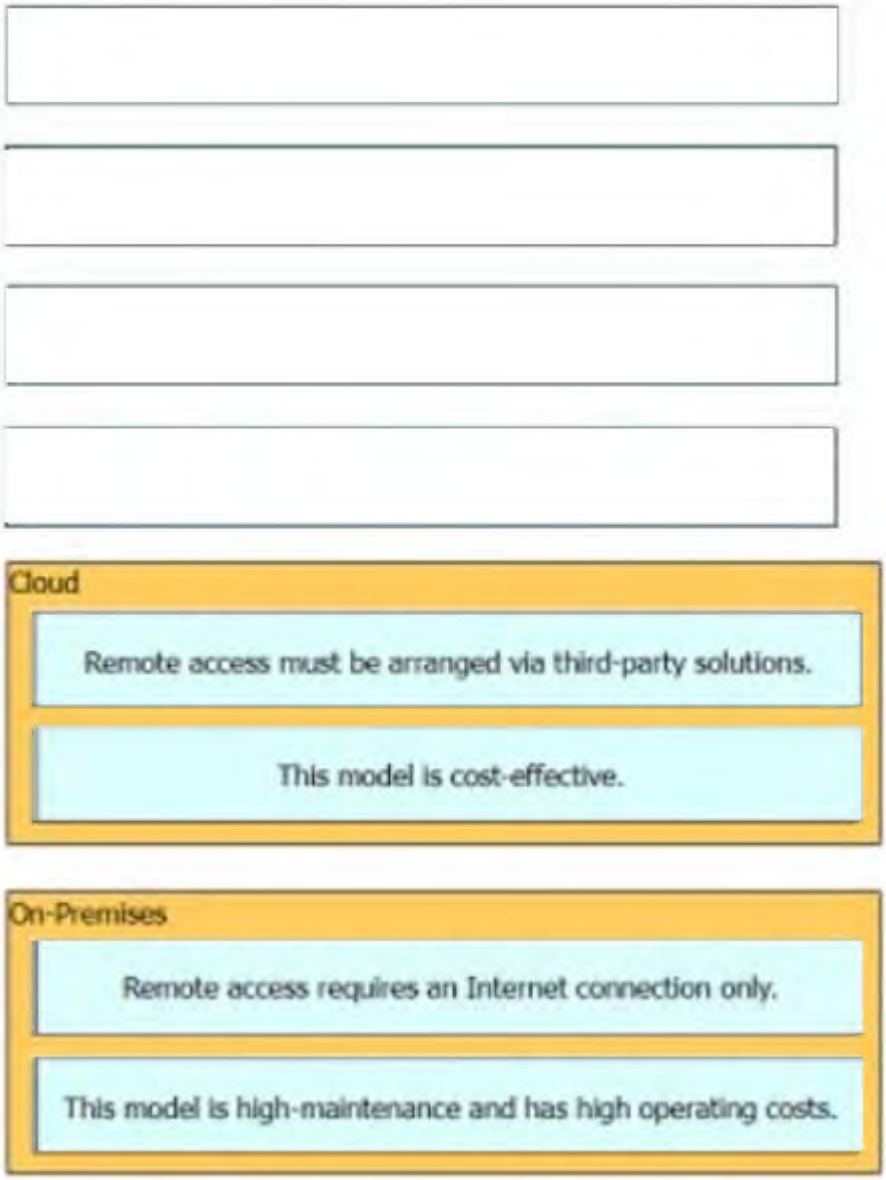
Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:

QUESTION 108
DRAG DROP

Drag the drop the description from the left onto the routing protocol they describe on the right.

Select and Place:

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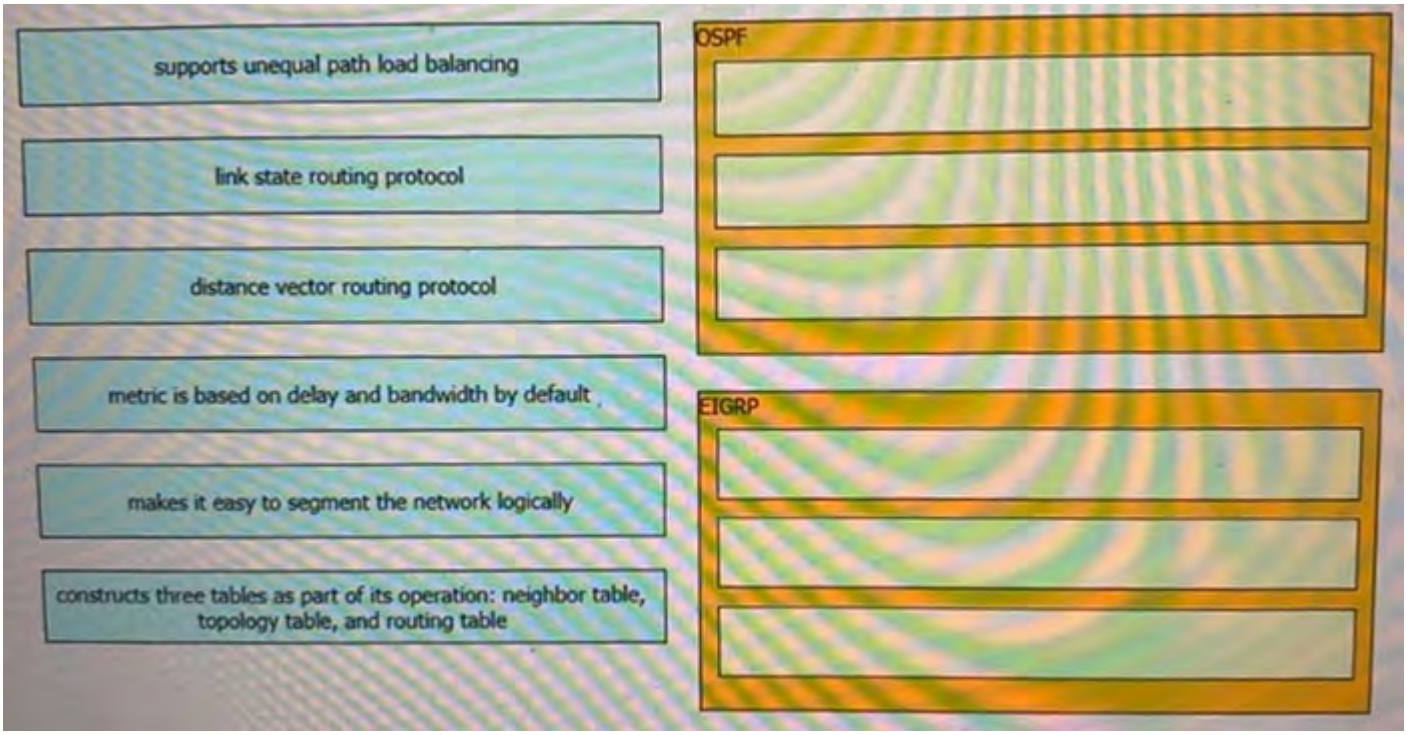
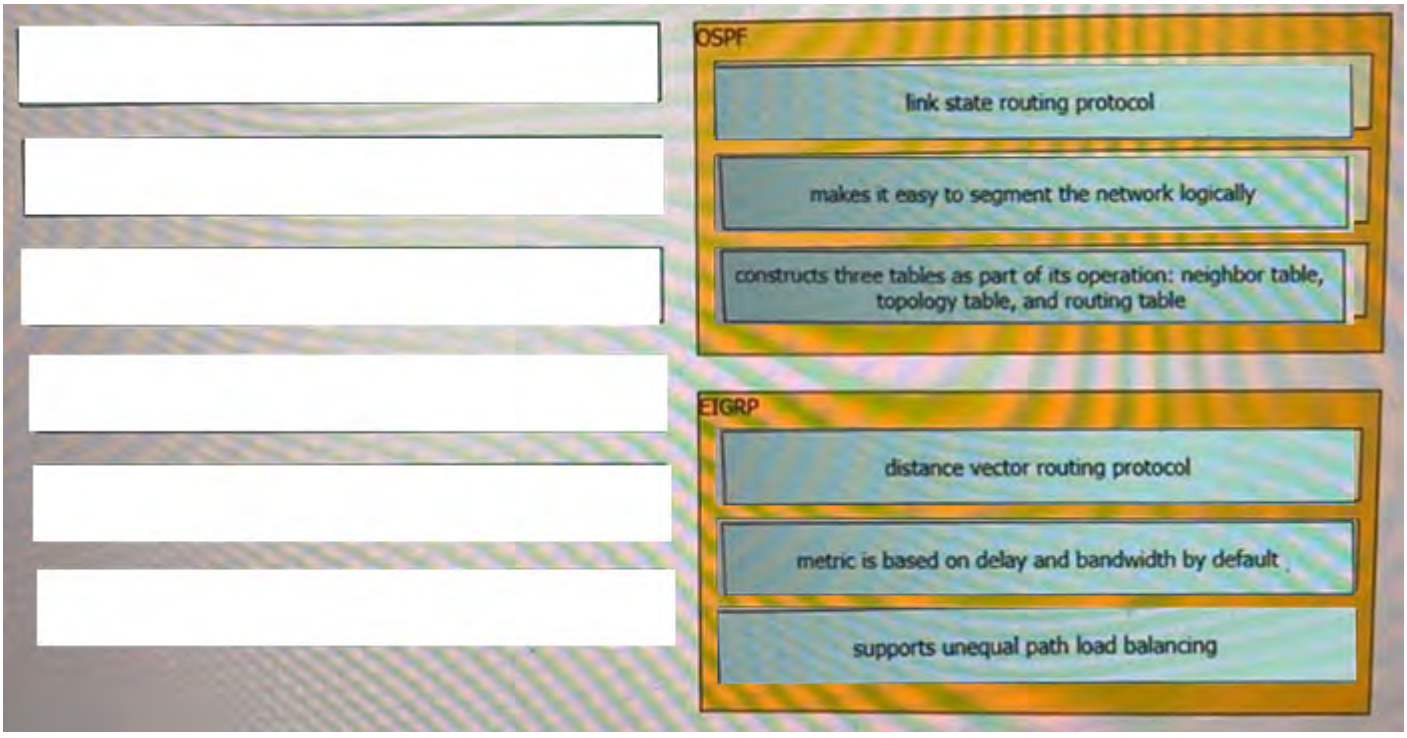


Correct Answer:



Explanation

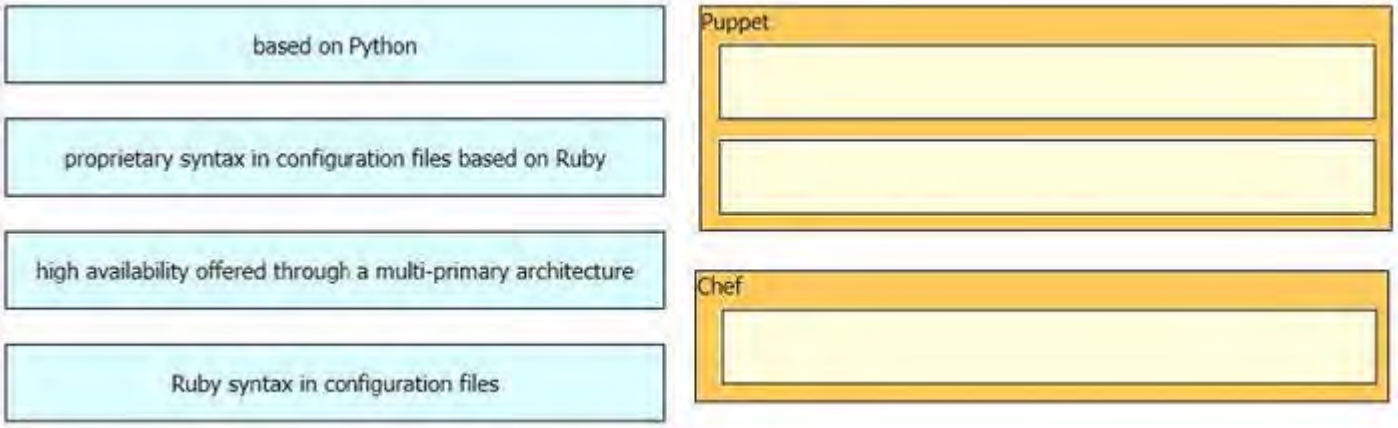
Explanation/Reference:

QUESTION 109
DRAG DROP

Drag and drop the automation characteristics from the left onto the corresponding tools on the right. Not all options are used.

Select and Place:

https://t.me/learningnets



Correct Answer:

Explanation

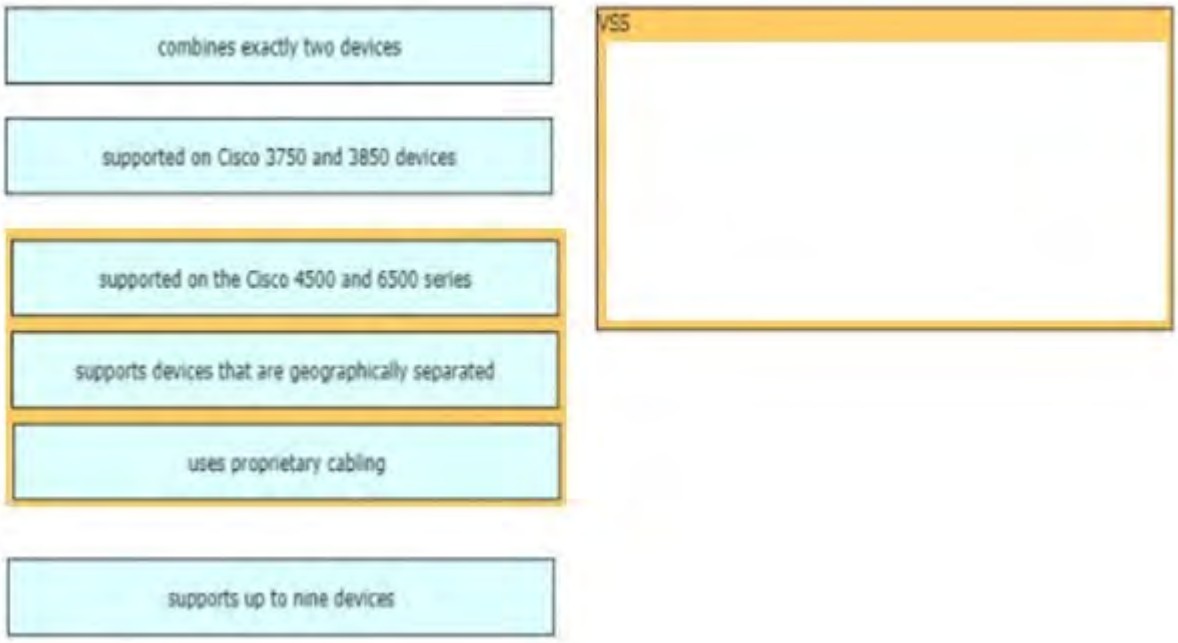
Explanation/Reference:

QUESTION 110
DRAG DROP

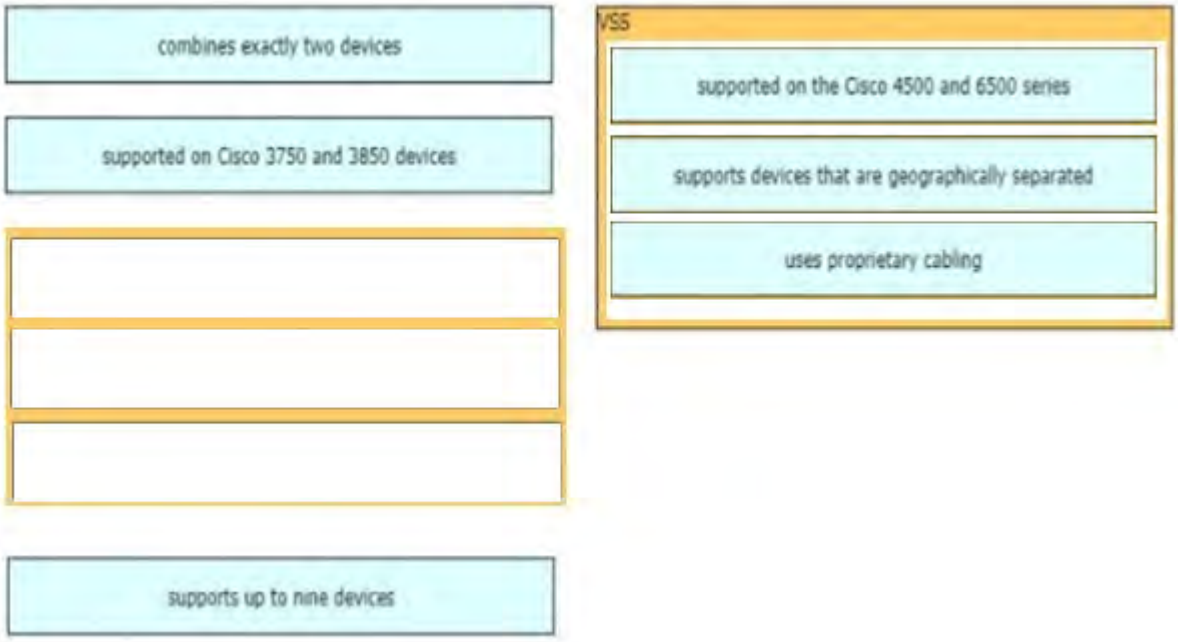
Drag and drop the description of the VSS technology from the left to the right. NOT all options are used.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

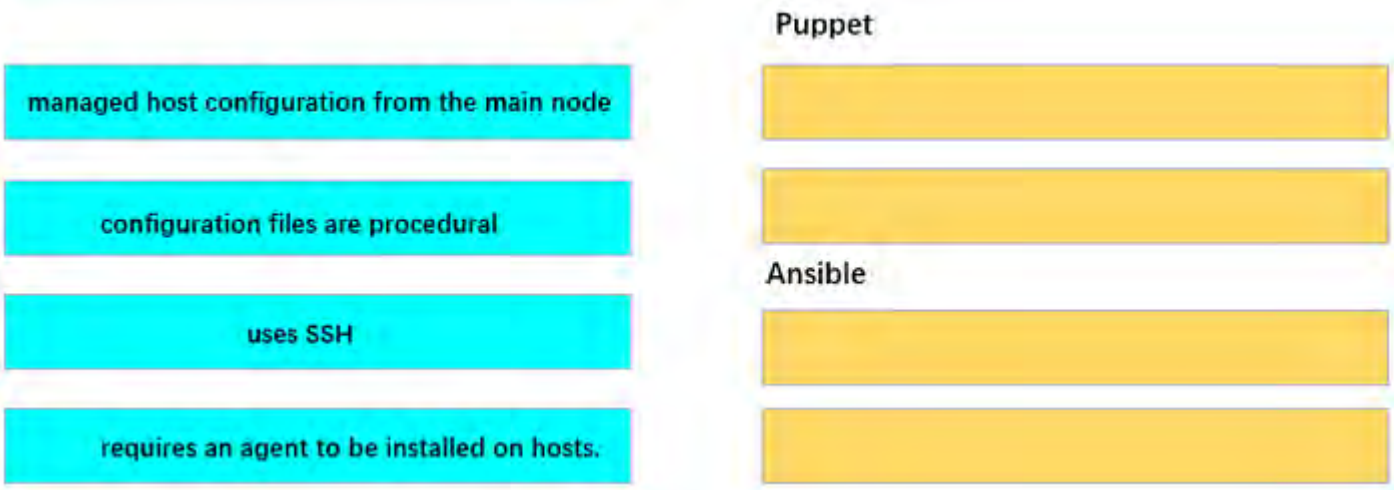
Explanation/Reference:

QUESTION 111
DRAG DROP

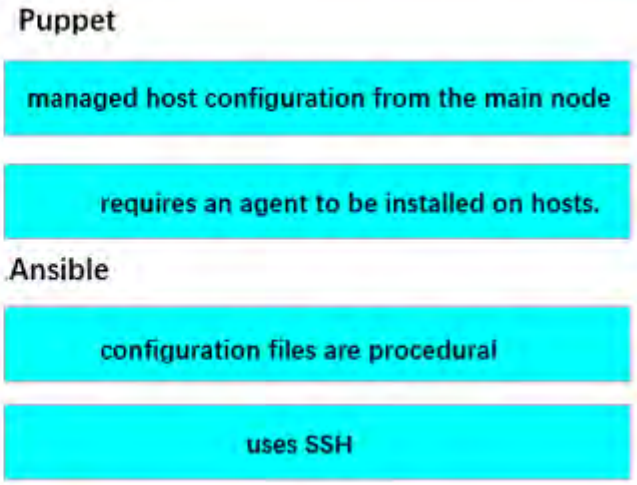
Drag and drop the characteristics from the left onto the corresponding orchestration tool on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

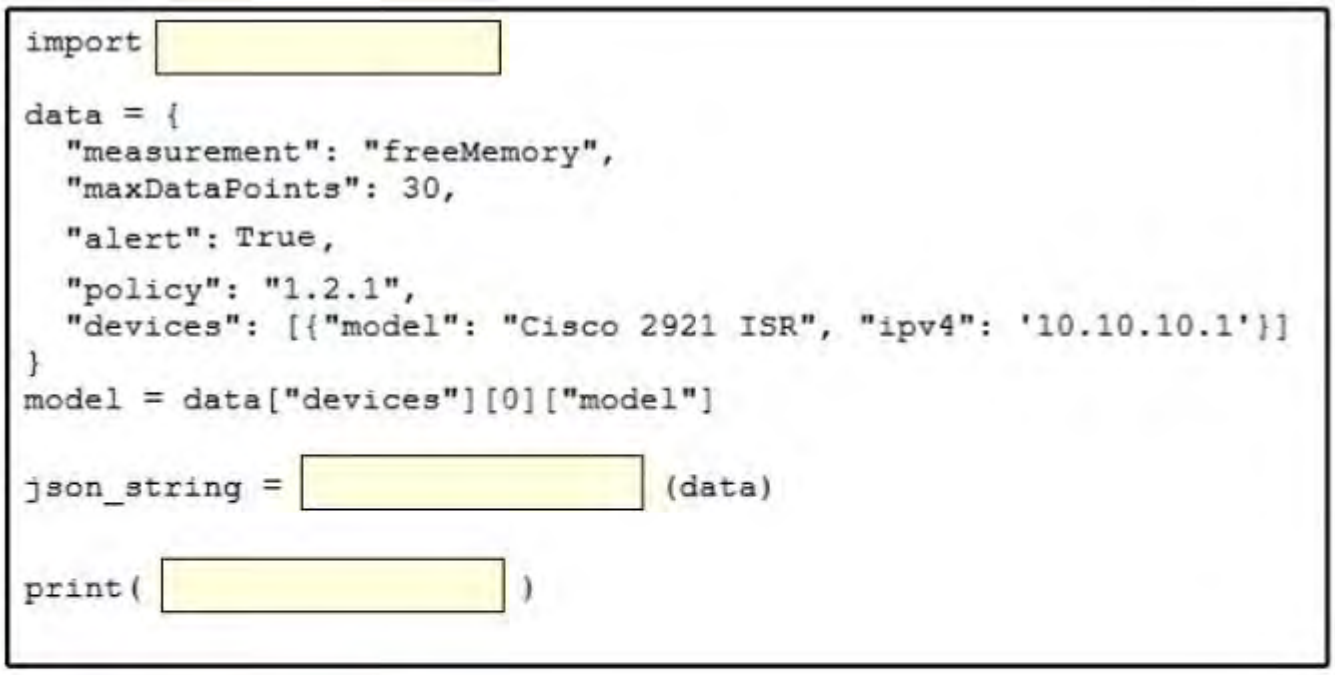
Explanation/Reference:

QUESTION 112
DRAG DROP

Drag and drop the code snippets from the bottom onto the blanks in the Python script to convert a Python object into a JSON string. Not all options are used.

Select and Place:

https://t.me/learningnets



model

json.loads

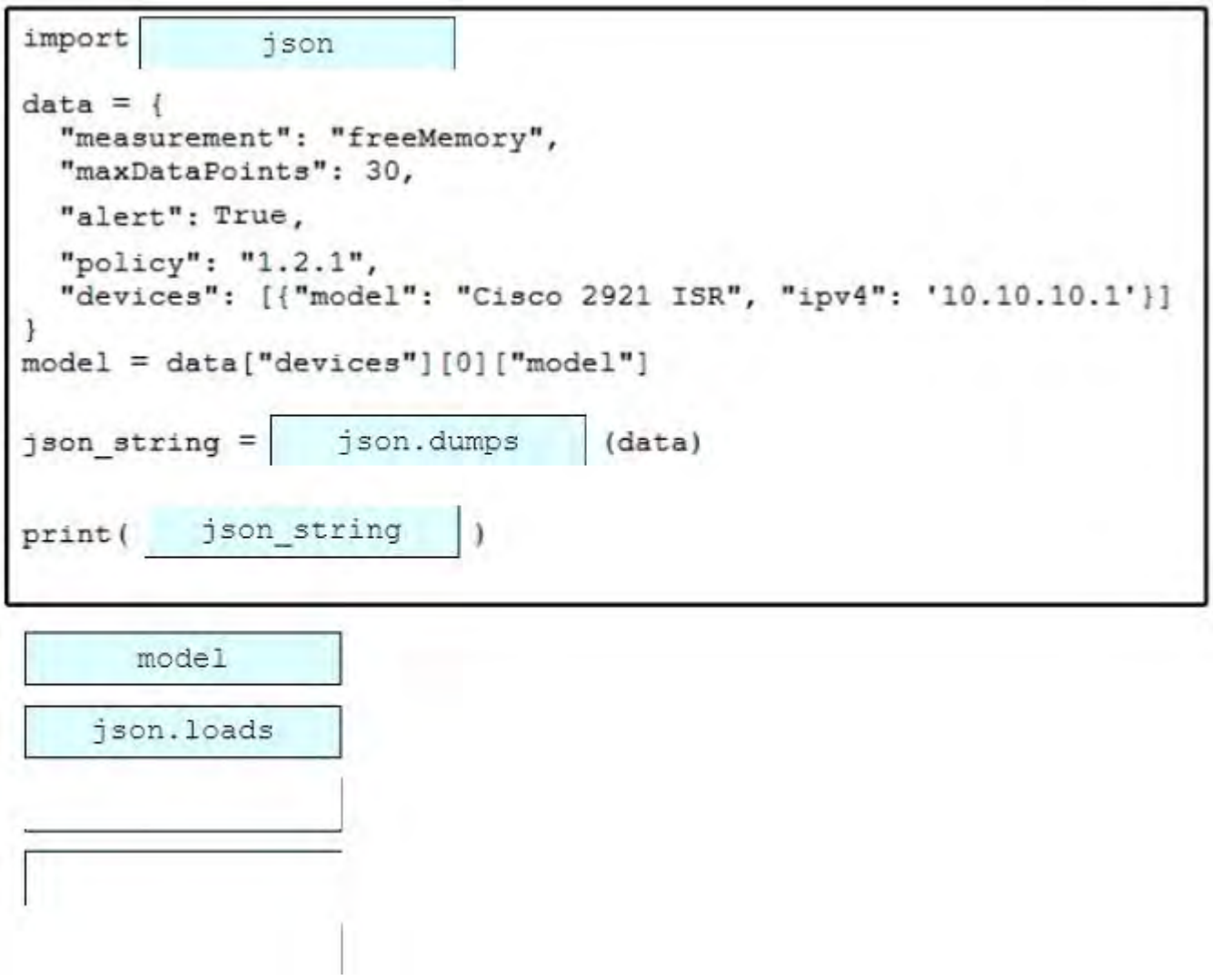
json

json_string

json.dumps

Correct Answer:

https://t.me/learningnets



Explanation

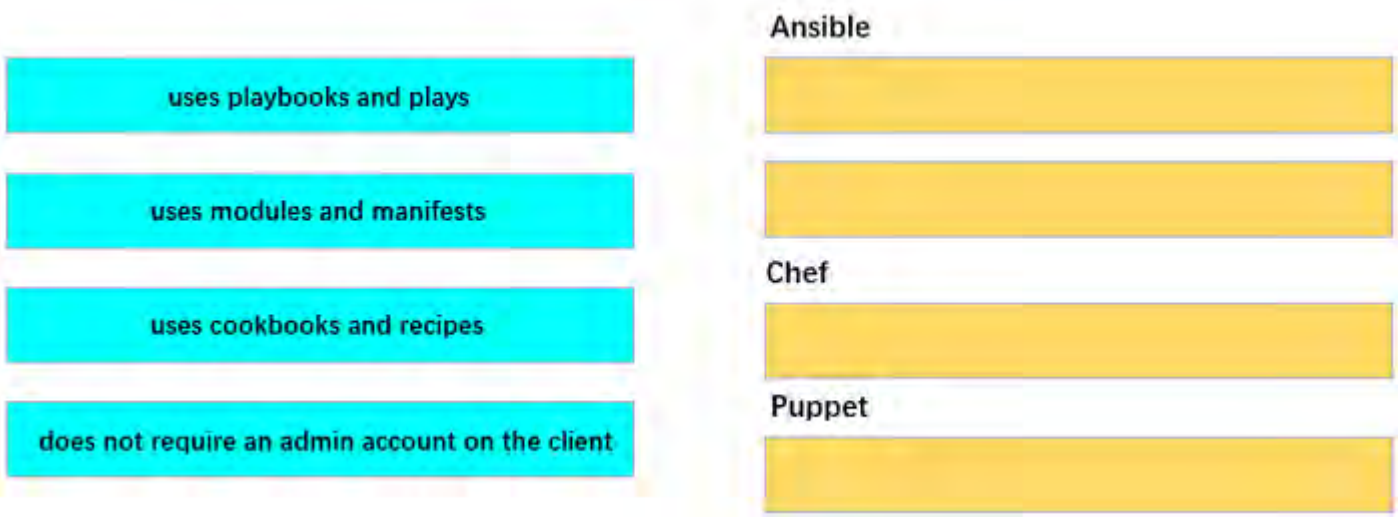
Explanation/Reference:

QUESTION 113
DRAG DROP

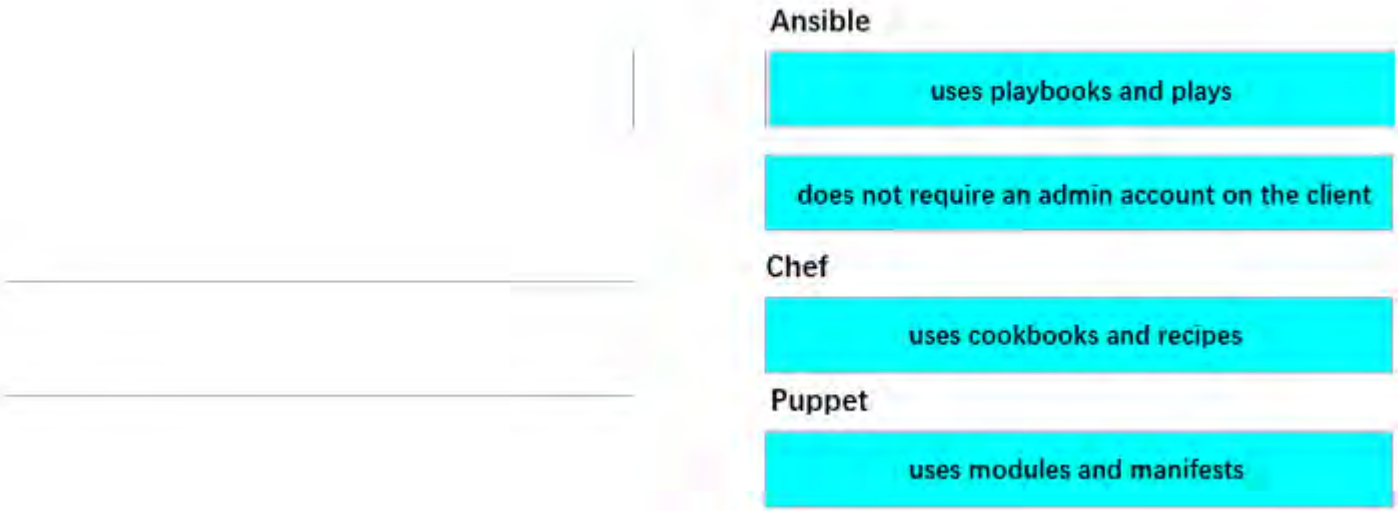
Drag and drop the automation characteristics from the left to the corresponding tools on the right.

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

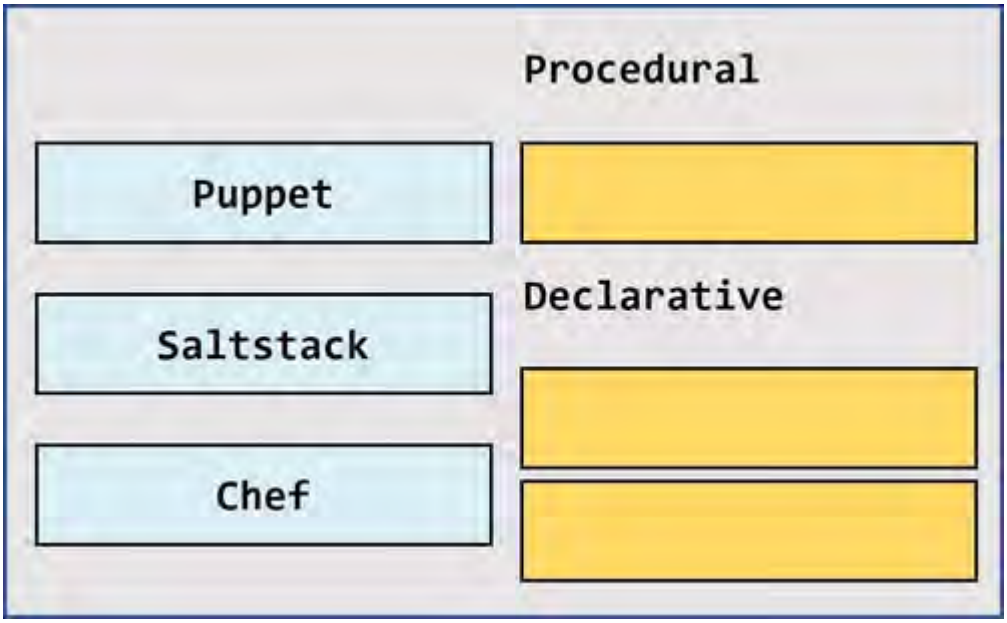
Explanation/Reference:

QUESTION 114
DRAG DROP

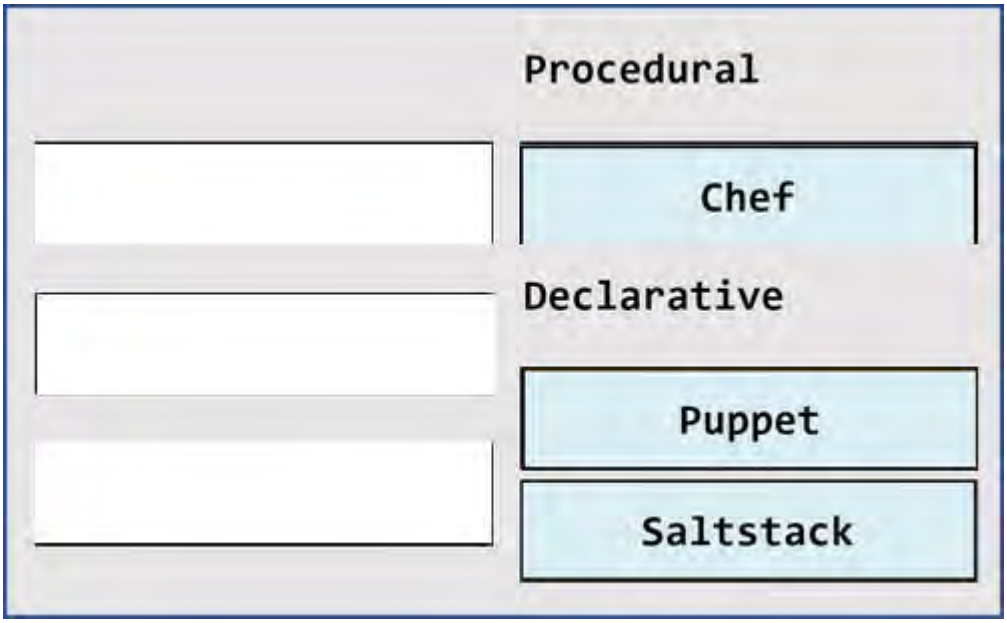
Drag and drop the configuration management tools from the left onto the configuration styles they use on the right

Select and Place:

https://t.me/learningnets



Correct Answer:



Explanation

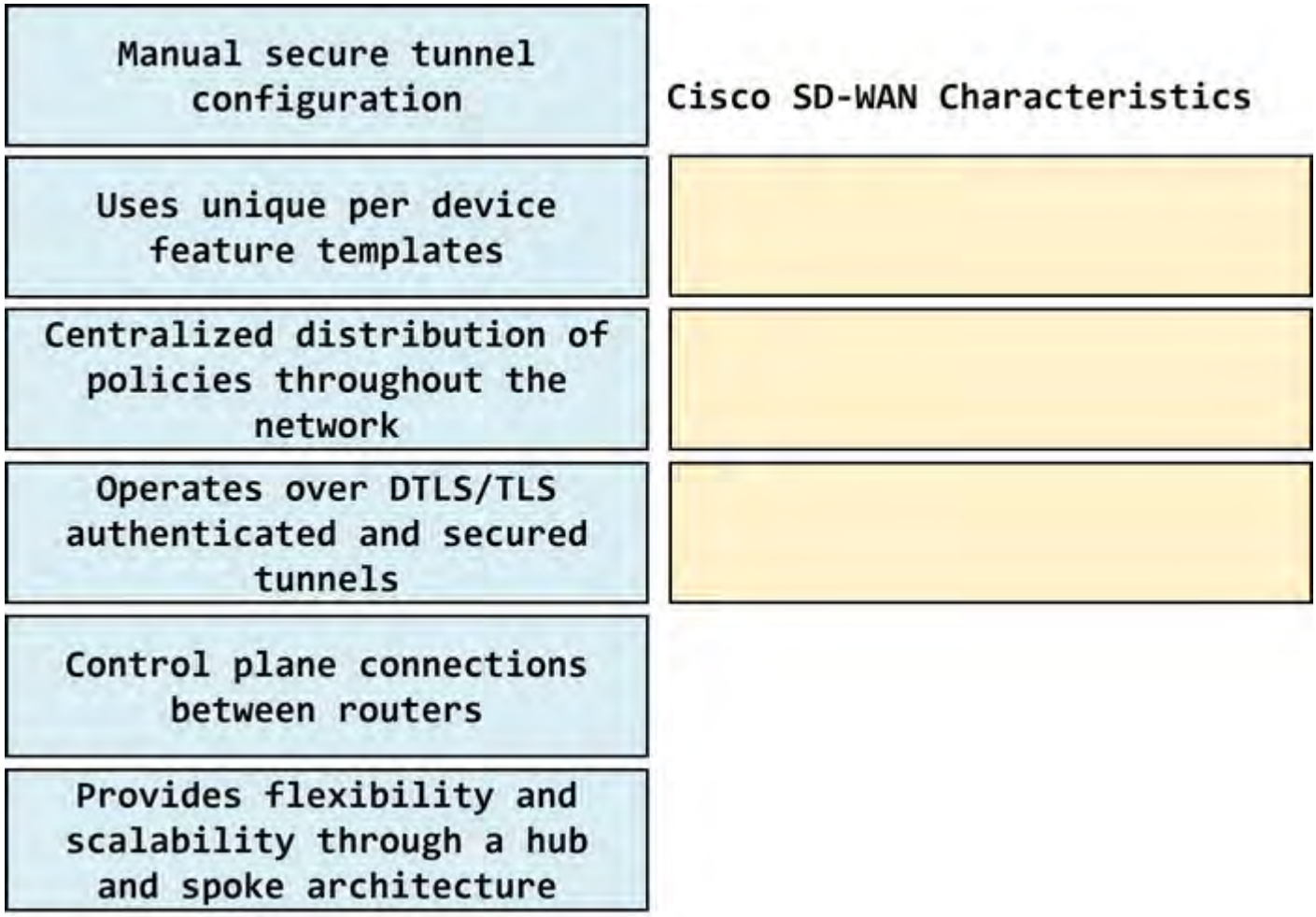
Explanation/Reference:

QUESTION 115
DRAG DROP

Drag and drop the characteristics of Cisco Catalyst SD-WAN from the left onto the right. Not all options are used.

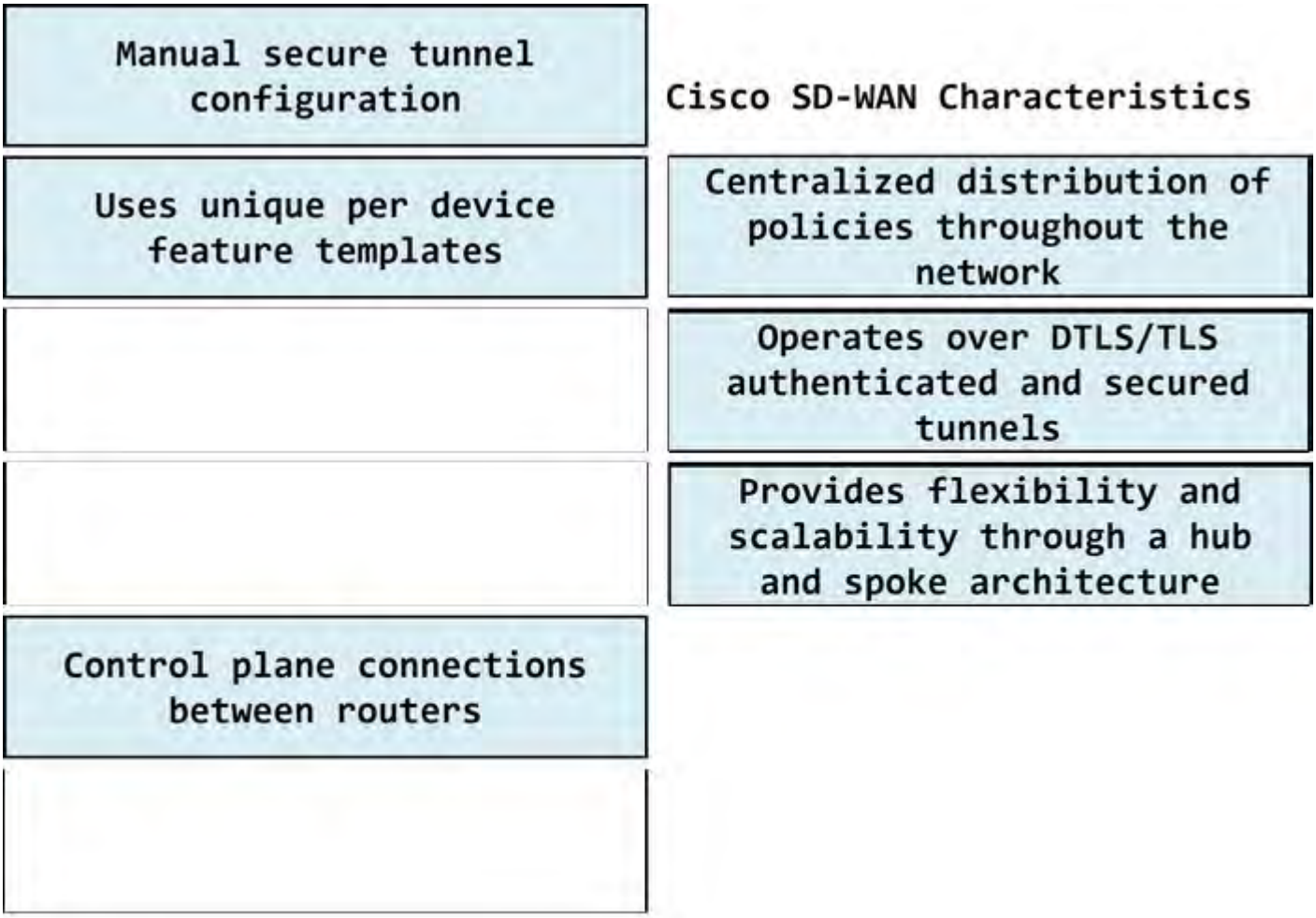
Select and Place:

https://t.me/learningnets



Correct Answer:

https://t.me/learningnets



Explanation

Explanation/Reference:

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