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Exam Code: 350-501
Exam Name: Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR)

Exam A

QUESTION 1
You are creating new Cisco MPLS TE tunnels. Which type of RSVP message does the headend router send to reserve bandwidth on the path to the tunnel's router?

A. error
B. reservation
C. path
D. tear

Correct Answer: C
Section:

QUESTION 2
An engineer is setting up overlapping VPNs to allow VRF ABC and XYZ to communicate with VRF CENTRAL but wants to make sure that VRF ABC and XYZ cannot communicate. Which configuration accomplishes these objectives?

A.

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
      65000:4444
    !
    export route-target
      65000:1111
      65000:3333
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
      65000:4444
    !
    export route-target
      65000:2222
      65000:3333
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
    !
    export route-target
      65000:4444
    !
```

B.

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
    !
    export route-target
      65000:1111
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
    !
    export route-target
      65000:2222
      65000:1111
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
      65000:1111
      65000:2222
    !
    export route-target
      65000:3333
      65000:1111
      65000:2222
```

C.

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
      65000:4444
    !
    export route-target
      65000:1111
      65000:3333
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
      65000:3333
    !
    export route-target
      65000:2222
      65000:4444
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
    !
    export route-target
      65000:4444
    !
```

D.

```
vrf ABC
  address-family ipv4 unicast
    import route-target
      65000:1111
      65000:3333
    !
    export route-target
      65000:1111
      65000:3333
    !
vrf XYZ
  address-family ipv4 unicast
    import route-target
      65000:2222
      65000:3333
    !
    export route-target
      65000:2222
      65000:3333
    !
vrf CENTRAL
  address-family ipv4 unicast
    import route-target
      65000:3333
    !
    export route-target
      65000:3333
    !
```

Correct Answer: A
Section:

QUESTION 3
In an MPLS network, which protocol can be used to distribute a Segment Prefix?

A. OSPF
B. LDP
C. RSVP-TE
D. EIGRP

Correct Answer: A
Section:

QUESTION 4
Which statement about Network Services Orchestrator (NSO) is true?

A. It is used only in service provider environments
B. It can be used only with XML coding
C. It uses YANG modeling language to automate devices
D. It must use SDN as an overlay for addressing

Correct Answer: C
Section:

QUESTION 5

Which task must be performed first to Implement BFD in an IS-IS environment?

A. Disable Cisco Express Forward.ng on all interfaces running routing protocols other than IS-IS
B. Configure BFD under the IS-IS process
C. Configure all ISIS routers as Level 2 devices
D. Configure BFD in an interface configuration mode

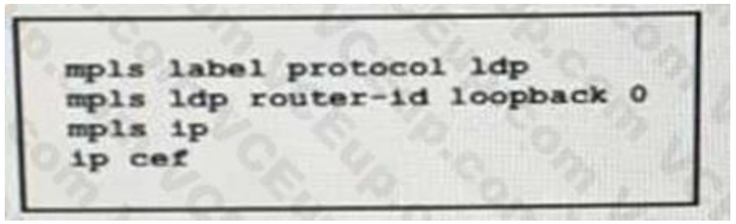
Correct Answer: D
Section:

QUESTION 6
An engineer working for telecommunication company with an employee id: 3715 15 021 needs to secure the LAN network using a prefix list Which best practice should the engineer follow when he implements a prefix list?

A. An engineer must use non sequential sequence numbers in the prefix list so that he can insert additional entries later.
B. The final entry in a prefix list must be /32
C. An engineer must identity the prefix list with a number only
D. An engineer must include only the prefixes for which he needs to log activity.

Correct Answer: A
Section:

QUESTION 7
Refer to the exhibit:



A network operator working for service provider with an employee id 3715 15:021 applied this configuration to a router.
Which additional step should the engineer use to enable LDP?

A. Disable Cisco Express Forwarding globally
B. Delete the static router ID
C. Enable MPLS LDP on the interface
D. Configure the both keyword to enable LDP globally

Correct Answer: C
Section:

QUESTION 8
Which configuration mode do you use to apply the mpls Idp graceful-restart command in IOS XE Software? MPLS

A. MPLS
B. LDP neighbor
C. global

D. interface

Correct Answer: C
Section:

QUESTION 9
Which statement describes the advantage of a Multi-Layer control plane?

A. It automatically provisions monitors, and manages traffic across Layer 0 to Layer 3
B. It minimizes human error configuring converged networks
C. It supports dynamic wavelength restoration in Layer 0
D. It provides multivendor configuration capabilities for Layer 3 to Layer 1

Correct Answer: C
Section:

QUESTION 10
Refer to the exhibit:

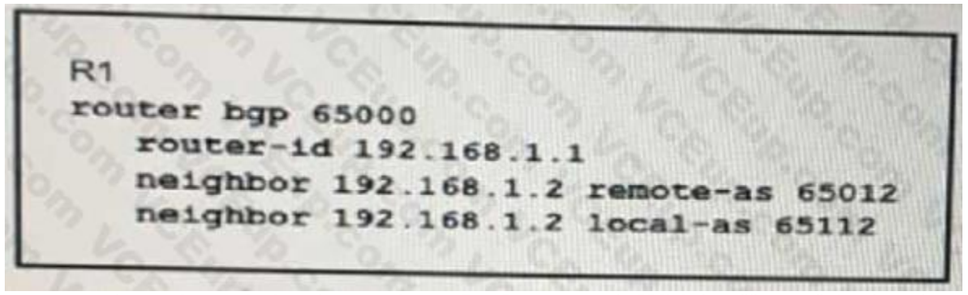
```
R1
router isis
   net 52.0011.0000.0000.0001.00
   is-type level-2

interface gigabitethernet0/1
   ip address 192.168.0.1 255.255.255.0
   ip router isis

R2
router isis
   net 52.0022.0000.0000.0002.00
   is-type level-1

interface gigabitethernet0/1
   ip address 192.168.0.2 255.255.255.0
   ip router isis
```

Which statement about the status of the neighbor relationship between R1 and R2 is true?

A. The neighbor relationship is down because the two routers are configured with different area types
B. The neighbor relationship is down because the two routers are in the same subnet.
C. The neighbor relationship is up because R2 is level 1 and level 2 router.
D. The neighbor relationship is down because R2 is operating as a Level 1 router and the two routers are in different area

Correct Answer: D
Section:

QUESTION 11
Refer to the exhibit:

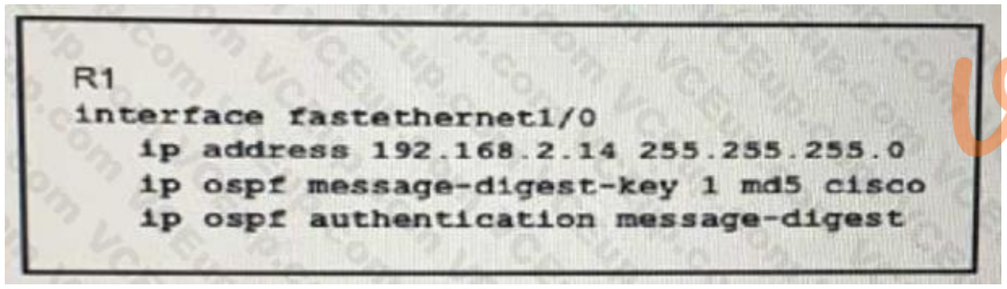


A network engineer is implementing a BGP protocol. Which effect of the local-as keyword in this configuration is true?

A. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65012 and the VPNv4 address family
B. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65012 without additional configuration
C. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65112 and the VPNv4 address family
D. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65112 without additional configuration.

Correct Answer: D
Section:

QUESTION 12
Refer to the exhibit:

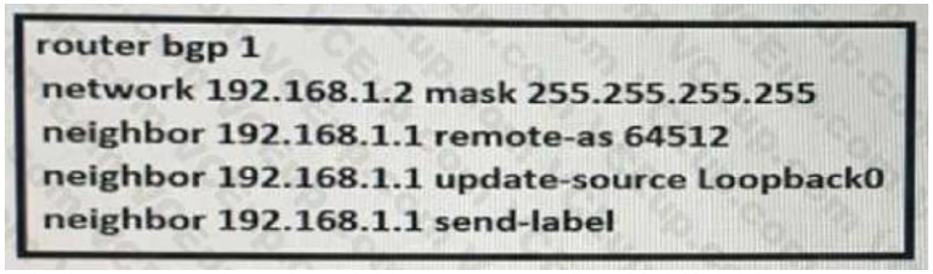


Which condition must be met by the OSPF peer of router R1 before the two devices can establish communication?

A. The interface on the OSPF peer must use the same key ID and key value as the configured interface
B. The interface on the OSPF peer may have a different key ID, but it must use the same key value as the configured interface
C. The OSPF peer must be configured as an OSPF stub router
D. The OSPF peer must use clear-text authentication

Correct Answer: A
Section:

QUESTION 13
Refer to the exhibit:



Which statement about the neighbor statements for 192.168.1.1 is true?

A. The router must have TDP configured for the send-label command to operate
B. The neighbor router receives at least four labels from this router
C. The router sends BGP labels for its prefixes to this peer
D. The router sends only a label for the prefix for LoopbackO.

Correct Answer: C
Section:

QUESTION 14

Which regular expression query modifier function indicates the start of a string?

A. ^
B. [^]
C. +
D. $

Correct Answer: A
Section:

QUESTION 15
Refer to the exhibit:

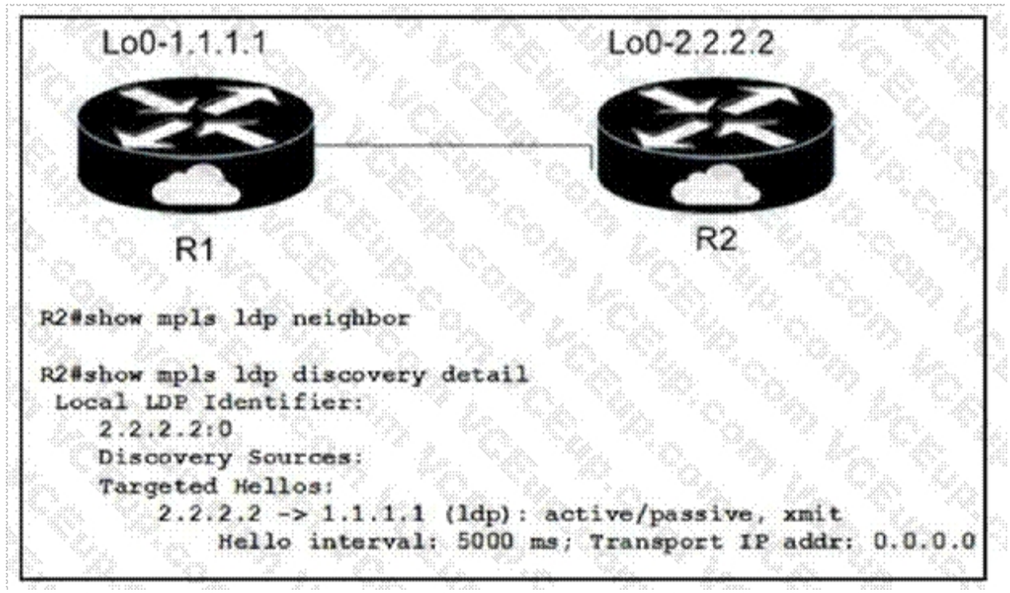
```
RP/0/0/CPU0:iosxrv-1#show mpls ldp discovery brief
Sat Apr  2 22:43:11.362 UTC

Local LDP Identifier: 192.168.0.2:0

Discovery Source     VRF Name            Peer LDP Id          Holdtime
Session
-------------------- ------------------- -------------------- -------- -----
--
Gi0/0/1              default             192.168.0.3:0          15       Y
Gi0/0/2              default             192.168.0.4:0          15       Y
Gi0/0/3              default             192.168.0.5:0          15       Y
Tgt:192.168.0.1      default             192.168.0.1:0          90       Y
Tgt:192.168.0.3      default             192.168.0.3:0          90       Y
Tgt:192.168.0.5      default             -                      -        N
```

With which router does IOSXRV-1 have LDP session protection capability enabled but session hold up is not active?

A. 192.168.0.1
B. 192.168.0.3
C. 192.168.0.4
D. 192.168.0.5

Correct Answer: D
Section:

QUESTION 16
Refer to the exhibit:



When implementing an LDP protocol, an engineer experienced an issue between two directly connected routers and noticed that no LDP neighbor exists for 1.1.1.1.
Which factor should be the reason for this situation?

A. LDP needs to be enabled on the R2 physical interface
B. R2 does not see any hellos from R1
C. LDP needs to be enabled on the R2 loopback interface
D. R2 sees the wrong type of hellos from R1

Correct Answer: A
Section:

QUESTION 17
What are the two uses of the YANG data modeling language? (Choose two.)

A. It is used to access a device by HTTP.
B. It Is used to model the configuration used by NETCONF operations.
C. It is used to shape state data of network elements.
D. It Is used to replace RESTCONF as a mechanism to install and manipulate configuration.
E. It is used to replace the OSI model for troubleshooting.

Correct Answer: B, C
Section:

QUESTION 18
How can shared services in an MPLS Layer 3 VPN provide Internet access to the customers of a central service provider?

A. The CE router can establish a BGP peering to a PE router and use the PE device to reach the Internet
B. Route distinguishes are used to identify the routes that CEs can use to reach the Internet
C. The customer VRF uses route targets to import and export routes to and from a shared services VRF

D. Static routes on CE routers allow route leakage from a PE global routing table

Correct Answer: C
Section:

QUESTION 19
How can a network administrator secure rest APIs?

A. They can allow read and write privileges to all users
B. They can ensure that user sessions are authenticated using TACACS+ only
C. They can have a general administrator login for multiple users to access that has command entries logged
D. They can authenticate user sessions and provide the appropriate privilege level

Correct Answer: D
Section:

QUESTION 20
Refer to the exhibit.

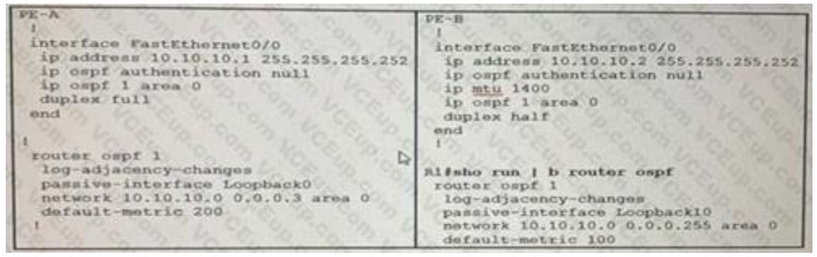
```
CE1#
interface FastEthernet0/0/1
description **** HUB CE router ****
ip address 10.0.12.1 255.255.255.0

router ospf 100
log-adjacency-changes
network 10.0.12.0 0.0.255.255 area 0

CE2#
interface Serial0/0/9
description **** SPOKE CE router ****
encapsulation ppp
ip address 10.0.12.12 255.255.255.0

router ospf 100
log-adjacency-changes
network 10.0.12.0 0.0.255.255 area 0
```

A network engineer is configuring customer edge routers to finalize a L2VPN over MPLS deployment Assume that the AToM L2VPN service that connects the two CEs is configured correctly on the service provider network Which action causes the solution to fail?

A. A loopback with a /32 IP address has not been used
B. OSPF does not work with L2VPN services
C. The xconnect statement has not been defined
D. The routing protocol network types are not compatible

Correct Answer: D
Section:

QUESTION 21
Refer to the exhibit:



```
PE-A
!
interface FastEthernet0/0
 ip address 10.10.10.1 255.255.255.252
 ip ospf authentication null
 ip ospf 1 area 0
 duplex full
end
!
router ospf 1
 log-adjacency-changes
 passive-interface Loopback0
 network 10.10.10.0 0.0.0.3 area 0
 default-metric 200
!
```

```
PE-B
!
interface FastEthernet0/0
 ip address 10.10.10.2 255.255.255.252
 ip ospf authentication null
 ip mtu 1400
 ip ospf 1 area 0
 duplex half
end
!
A1#sho run | b router ospf
router ospf 1
 log-adjacency-changes
 passive-interface Loopback10
 network 10.10.10.0 0.0.0.255 area 0
 default-metric 100
```

Which configuration prevents the OSPF neighbor from establishing?

A. mtu
B. duplex
C. network statement
D. default-metric

Correct Answer: A
Section:

QUESTION 22
After you analyze your network environment, you decide to implement a full separation model for Internet access and MPLS L3VPN services For which reason do you make this decision?

A. It enables you to choose whether to separate or centralize each individual service.
B. It is easier to manage a system in which services are mixed
C. It requires only one edge router
D. It enables EGP and IGP to operate independently

Correct Answer: A
Section:

QUESTION 23
Which configuration modifies Local Packet Transport Services hardware policies?

A.

B.

```
configure
 lpts pifib hardware police
 flow ospf unicast default rate 200
 flow bgp configured rate 200
 flow bgp default rate 100
 !
 lpts pifib hardware police location 0/2/CPU0
 flow ospf unicast default rate 100
 flow bgp configured rate 300
 flow icmp application rate 100
 flow icmp default rate 100
 !
```

```
configure
lpts punt police location 0/0/CPU0
exception invalid rate 400
protocol cdp rate 50
protocol arp rate 5000
protocol ipv4 options rate 100
exception icmp rate 200
```

C.

```
configure
 lpts pifib police hardware
 flow ospf unicast default rate 200
 flow bgp configured rate 200
 flow bgp default rate 100
 !
 lpts pifib police hardware location 0/2
 flow ospf unicast default rate 100
 flow bgp configured rate 300
 flow icmp application rate 100
 flow icmp default rate 100
 !
```

D.

```
configure
lpts police
exception invalid rate 400
protocol cdp rate 50
protocol arp rate 5000
```

Correct Answer: C
Section:

QUESTION 24
Which two IS-IS parameters must match before two Level 2 peers can form an adjacency? (Choose two)

A. authentication settings
B. area ID
C. system ID
D. MTU
E. hello timer setting

Correct Answer: A, D
Section:

QUESTION 25
Which three OSPF parameters must match before two devices can establish an OSPF adjacency?
(Choose three.)

A. IP address
B. interface cost
C. subnet mask
D. process ID
E. hello timer setting
F. area number

Correct Answer: C, E, F
Section:

QUESTION 26
Refer to the exhibit:

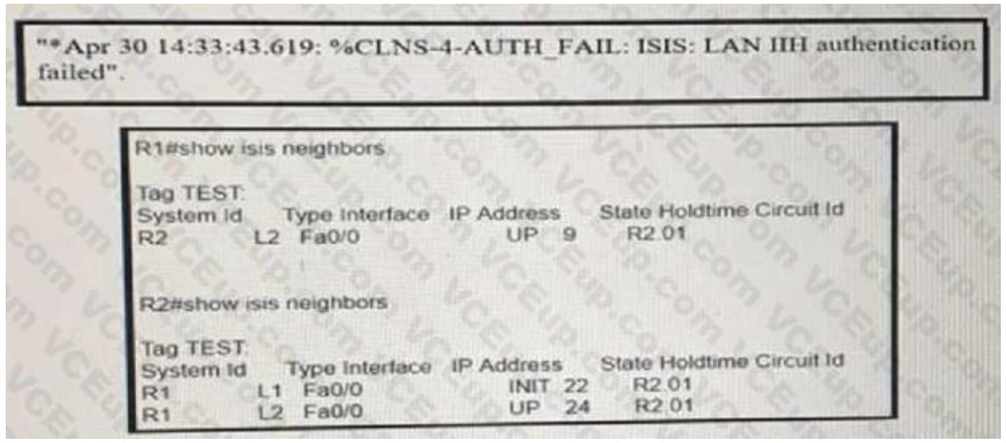
```
Router 1:

ip route 192.168.1.0 255.255.255.0 null 0 tag 1

route-map ddos
 match tag 1
 set local preference 150
 set community no export

route-map ddos permit 20

router bgp 65513
 redistribute static route-map ddos

Router 2:

Interface gigabitethernet0/1
 ip verify unicast reverse-path
```

An engineer is preparing to implement data plane security configuration.
Which statement about this configuration is true?

A. Router 2 must configure a route to null 0 for network 192 168.1 0/24 for the RTBH implementation to be complete.
B. Router 1 is the trigger router in a RTBH implementation.
C. Router 1 must be configured with uRPF for the RTBH implementation to be effective.
D. Router 2 is the router receiving the DDoS attack

Correct Answer: B
Section:

QUESTION 27
Refer to the exhibits:



R1 and R2 are directly connected and IS-IS routing has been enabled between R1 and R2 R1 message periodically Based on this output, which statement is true?

A. IS-IS neighbor authentication is failing for Level 2 first and then for Level 1 PDUs
B. 1S-1S neighbor authentication is failing for Level 1 and Level 2 PDUs .
C. IS-IS neighbor authentication is failing for Level 1 PDUs only
D. IS-IS neighbor authentication is failing for Level 2 PDUs only.

Correct Answer: C
Section:

QUESTION 28
Which BGP attribute is used first when determining the best path?

A. origin
B. AS path
C. local preference
D. weight

Correct Answer: D
Section:

QUESTION 29
While implementing TTL security, you issue the PE(config-router-af)#neighbor 2.2.2.2 ttl-security hops 2 command.
After you issue this command, which BGP packets does the PE accept?

A. from 2.2.2.2, with a TTL ol 253 Of more
B. from 2.2.2.2, with a TTL of less than 2
C. to 2.2.2.2, with a TTL of less than 253
D. to 2.2.2.2, with a TTL of 2 or more

Correct Answer: A
Section:

QUESTION 30

Refer to the exhibit:

```
telemetry model-driven
subscription cisco
sensor-group-id ciscotest sample-interval 60000
commit
```

This configuration is being applied on an IOS XR router.
Which statement about this configuration is true?

A. It is used to set up configuration to poll network data
B. It is used to enable gRPC
C. It is used to create a streaming subscription with a 60-second interval
D. It is used to create a streaming subscription with a 600-second interval

Correct Answer: C
Section:

QUESTION 31
What do Ansible and Salt Stack have in common?

A. They both use DSL configuration language
B. They both use YAML configuration language
C. They both have agents running on the client machine
D. They both can be designed with more than one master server

Correct Answer: D
Section:

QUESTION 32
Refer to the exhibit:

```
R1
router isis
   net 49.0012.1111.1111.1111.00
   is-type level-1
   area-password cisco
R2
router isis
   net 49.0022.1111.1111.1112.00
   is-type level-1-2
   area-password cisco
```

What is the effect of this configuration?

A. The two routers fail to form a neighbor relationship because their system IDs are different.
B. The two routers successfully form a neighbor relationship
C. The two routers fail to form a neighbor relationship because the authentication configuration is missing
D. The two routers fail to form a neighbor relationship because they have different ISIS area types.

Correct Answer: D
Section:

QUESTION 33
Refer to the exhibit:

```
<tag/>
```

What does this value mean when it is received in XML?

A. It shows the ending of the script
B. It indicates a break in a sequence
C. It indicates a value assigned by a network administrator to tag a route
D. It means a data field is blank

Correct Answer: D
Section:

QUESTION 34
Refer to the exhibit:

```
interface gigabitethernet1/0
xconnect 192.168.0.1 12 encapsulation mpls pw-class cisco
```

Which effect of this configuration is true?

A. it creates a pseudowire class named Cisco
B. It enables tagging for VLAN 12 on the interface
C. It enables MPLS on the interface
D. It enables AToM on interface gigabitethemet1/0

Correct Answer: D
Section:

QUESTION 35
A customer of an ISP requests support to setup a BGP routing policy. Which BGP attribute should be configured to choose specific BGP speakers as preferred exit points for the customer AS?

A. highest local preference outbound
B. lowest local preference inbound
C. highest local preference inbound
D. lowest multi-exit discriminator

Correct Answer: B
Section:

QUESTION 36
Refer to the exhibit:

```
ip cef
interface gigabitethernet0/1
  ip verify unicast source reachable-via any
```

Router 1 was experiencing a DDoS attack that was traced to interface gjgabitethernet0/1.
Which statement about this configuration is true?

A. Router 1 drops all traffic that ingresses interface gigabitethernet0/1 that has a FIB entry that exits a different interface
B. Router 1 accepts source addresses on interface gigabitethemet0/1 that are private addresses
C. Router 1 accepts all traffic that ingresses and egresses interface gigabitethernet0/1
D. Router 1 accepts source addresses that have a match in the FIB that indicates it is reachable through a real interface

Correct Answer: D
Section:

QUESTION 37
Refer to the exhibit:

```
snmp-server community ciscotest ro 2
```

What is significant about the number 2 in the configuration?

A. It is the numeric name of the ACL that contains the list of SNMP managers with access to the agent

B. It dictates the number of sessions that can be open with the SNMP manager
C. It indicates two SNMP managers can read and write with the agent using community string cisco test
D. It represents the version of SNMP running

Correct Answer: A
Section:

QUESTION 38
A regional MPLS VPN provider operates m two regions and wants to provide MPLS L 3VPN service for a customer with two sites in these separate locations. The VPN provider approaches another organization to provide backbone carrier services so that the provider can connect to these two locations.
Which statement about this scenario is true?

A. When edge routers at different regional sites are connected over the global carrier backbone, MPeBGP must run between the routers to exchange the customer VPNv4 routes
B. When eBGP is used for label exchange using the send label option, MPLS-BGP forwarding is configured under the global ABC CSC PE-to CE interface
C. When IGP is used for route exchange and LDP for label exchange, MPLS is enabled only on the VRF interface on the backbone-earner PE side.
D. When BGP is used for both route and label exchange, the neighbor a.b.c.d send-lable command is used under the address family VPNv4 command mode.

Correct Answer: B
Section:

QUESTION 39
What is the difference between SNMP and model-driven telemetry?

A. Telemetry allows for modeled network data to be pushed to the network administrator on an asneeded basis
B. Telemetry uses traps and inform messages to deliver data to a network administrator on a polling basis
C. SNMP uses the YANG data modeling language
D. SNMP pushes network data to the network administrator whenever it is queried

Correct Answer: A
Section:

QUESTION 40
Refer To the exhibit:

```
R2#sh clns neighbors detail
Tag TEST:
System Id      Interface   SNPA            State  Holdtime  Type Protocol
R1             Fa0/0       ca01.2178.0008  Up     89        L1L2 IS-IS
  Area Address(es): 49
  Uptime: 00:03:29
  NSF capable
  Interface name: FastEthernet0/0
```

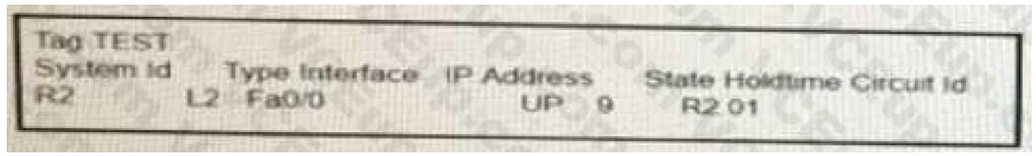
On R1, which output does the show isis neighbors command generate?

A.

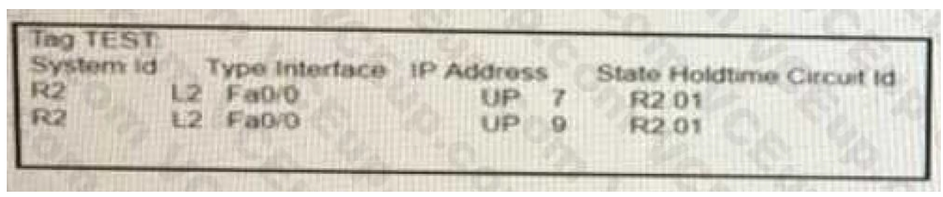
```
Tag TEST:
System Id      Type Interface   IP Address      State Holdtime Circuit Id
R2             L1   Fa0/0                      UP    7        R2.01
```

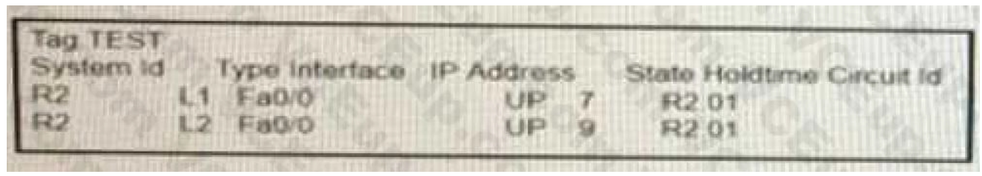
B.

C.



D.

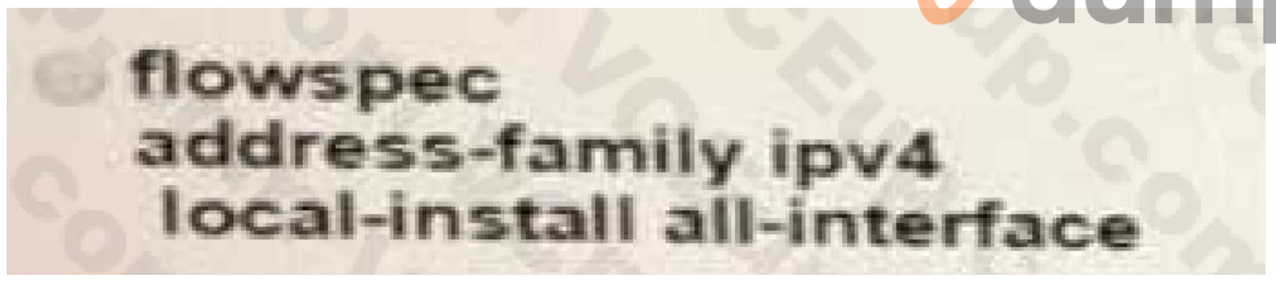




Correct Answer: D
Section:

QUESTION 41
Which configuration enables BGP FlowSpec client function and installation of policies on all local interfaces?

A.



B.

C.

```
flowspec
address-family ipv4
 local-install interface-all
```

D.

```
flowspec
address-family ipv4
install interface-all local
```

Correct Answer: C
Section:

QUESTION 42
Refer to the exhibit:

```
Router 1:

ip route 192.0.2.0 255.255.255.0 null 0
ip route 192.168.1.0 255.255.255.0 null 0 tag 1

route-map ddos
 match tag 1
 set ip next-hop 192.0.2.1
 set local-preference 150
 set community no export

route-map ddos permit 20

router bgp 65513
 redistribute static route-map ddos

Router 2:

ip route 192.0.2.0 255.255.255.0 null 0
```

An engineer is preparing to implement data plane security configuration.
Which statement about this configuration is true?

A. Router 1 drops all traffic with a local-preference set to 150
B. All traffic is dropped
C. All traffic to 192.168.1.0/24 is dropped
D. Router 1 and Router 2 advertise the route to 192.0.2.0/24 to all BGFD peers.

Correct Answer: C
Section:

QUESTION 43
Refer to the exhibit:

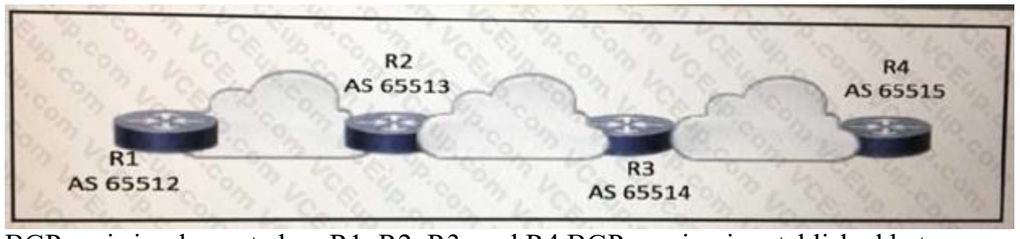
```
telemetry model-driven
sensor-group cisco
sensor-path Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters
commit
```

This configuration is being applied on an IOS XR router.
Which statement about this configuration is true?

A. It is used to create a subscription to specify the streaming interval
B. It is used to identify traps for SNMP polling
C. It is used to identify MIB entries and has a list of YANG models
D. It is used to create a sensor-group and has a list of YANG models for streaming

Correct Answer: D
Section:

QUESTION 44
Refer to the exhibit:



BGPsec is implemented on R1. R2. R3. and R4 BGP peering is established between neighboring autonomous systems Which statement about implementation is true?

A. BGP updates from the eBGP peers are appended with an additional AS path value that is statically set by the domain administrator
B. BGP updates from the iBGP peers are appended with a community of local-as
C. BGP updates from the all BGP peers are appended with a community of no export
D. BGP updates from the eBGP peers are appended with a BGPsec attribute sequence that includes a public key hash and digital signature

Correct Answer: D
Section:

QUESTION 45
Refer to the exhibit:

```
R1:
!
interface FastEthernet0/0
 ip address 10.1.12.1 255.255.255.0
 duplex full
!
router ospf 1
 network 0.0.0.0 255.255.255.255 area 0
R2:
!
interface FastEthernet0/0
 ip address 10.1.12.2 255.255.255.252
 duplex full
!
router ospf 1
 network 0.0.0.0 255.255.255.255 area 0
```

R1 and R2 are directly connected with Fast Ethernet interfaces and have the above configuration applied OSPF adjacency is not formed. When the debug ip ospf hello command is issued on R1. these log messages are seen.

```
*Mar  6 21:57:33.051: OSPF-1 HELLO Fa0/0: Mismatched hello parameters from 10.1.12.2
*Mar  6 21:57:33.051: OSPF-1 HELLO Fa0/0: Dead R 40 C 40, Hello R 10 C 10 Mask R 255.255.255.252 C 255.255.255.0
```

Which command can be configured on routers R1 and R2 on fO/O interfaces to form OSPF adjacency?

A. ip ospf network non-broadcast
B. ip ospf network point-to- multipoint non-broadcast
C. ip ospf network point-to-point
D. ip ospf network broadcast

Correct Answer: C
Section:

QUESTION 46
Refer to the exhibit:

```
RP/0/0/CPU0:router# show bgp neighbors 192.168.2.2

 BGP neighbor is 192.168.2.2, remote AS 1, local AS 140, external link
  Remote router ID 0.0.0.0
   BGP state = Idle
   Last read 00:00:00, hold time is 180, keepalive interval is 60 seconds
   Received 0 messages, 0 notifications, 0 in queue
   Sent 0 messages, 0 notifications, 0 in queue
   Minimum time between advertisement runs is 15 seconds

  For Address Family: IPv4 Unicast
   BGP neighbor version 0
   Update group: 0.1
   eBGP neighbor with no inbound or outbound policy; defaults to 'drop'
   Route refresh request: received 0, sent 0
   0 accepted prefixes
   Prefix advertised 0, suppressed 0, withdrawn 0, maximum limit 524288
   Threshold for warning message 75%

   Connections established 0; dropped 0
   Last reset 00:02:03, due to BGP neighbor initialized
   External BGP neighbor not directly connected.
```

Based on the show/ command output, which result m true after BGP session is established?

A. The IOS XR router advertises all routes to the neighbor 192.168.2.2, but it does not accept any routes from 192.168.2.2
B. The IOS XR router advertises and accepts all routes to and from eBGP neighbor 192.168.2.2 C. No routes are accepted from the neighbor 192.168.2.2, nor are any routes advertised to it
C. The IOS XR router does not advertise any routes to the neighbor 192.168.2.2,but it accepts all routes from 192.168.2.2.

Correct Answer: B
Section:

QUESTION 47
Refer to the exhibit:

```
Router 1:

netconf-yang
netconf-yang feature candidate-datastore
```

Which statement describes this configuration?

A. Router 1 has its running configuration locked so changes can be made only when the administrator issues a kill session
B. Router 1 can be remotely managed by the CLI using Telnet
C. Router 1 has a new data store to collect SNMP information, but configuration must still be done at the CLI only
D. Router 1 has a temporary data store where a copy of the running configuration can be manipulated and verified before committing the configuration

Correct Answer: D
Section:

QUESTION 48

Refer to the exhibit:

```
route-policy ciscotest
   if destination in acl10 then
      pass
   else
      set local-preference 300
   endif
end-policy end
```

A network engineer is implementing a BGP routing policy.

Which effect of this configuration is true?

A. All traffic that matches acl10 is allowed without any change to its local-preference
B. All traffic that matches acl10 is dropped without any change to its local-preference
C. If traffic matches acl10, it is allowed and its local-preference is set to 300
D. All traffic is assigned a local-preference of 30O regardless of its destination

Correct Answer: A
Section:

QUESTION 49
Which component is similar to an EVPN instance?

A. MPLS label
B. IGP router ID
C. VRF
D. router distinguisher

Correct Answer: C
Section:

QUESTION 50
Refer to the exhibit:

```
R1
router bgp 65000
   router-id 192.168.1.1
   neighbor 192.168.1.2 remote-as 65001
   neighbor 192.168.1.2 password cisco
```

Router R1 and its peer R2 reside on the same subnet in the network, If does it make connections to R27

A. R1 establishes UDP connections that are authenticated with an MD5 password
B. R1 establishes TCP connections that are authenticated with a clear-text password
C. R1 establishes UDP connections that are authenticated with a clear-text password
D. R1 establishes TCP connections that are authenticated with an MD5 password

Correct Answer: D
Section:

QUESTION 51
Which MPLS design attribute can you use to provide Internet access to a major customer through a separate dedicated VPN?

A. The customer that needs the Internet access service is assigned to the same RTs as the Internet gateway
B. The Internet gateway inserts the full Internet BGP routing table into the Internet access VPN
C. The Internet gateway router is connected as a PE router to the MPLS backbone.

D. The CE router supports VRF-Ute and the full BGP routing table.

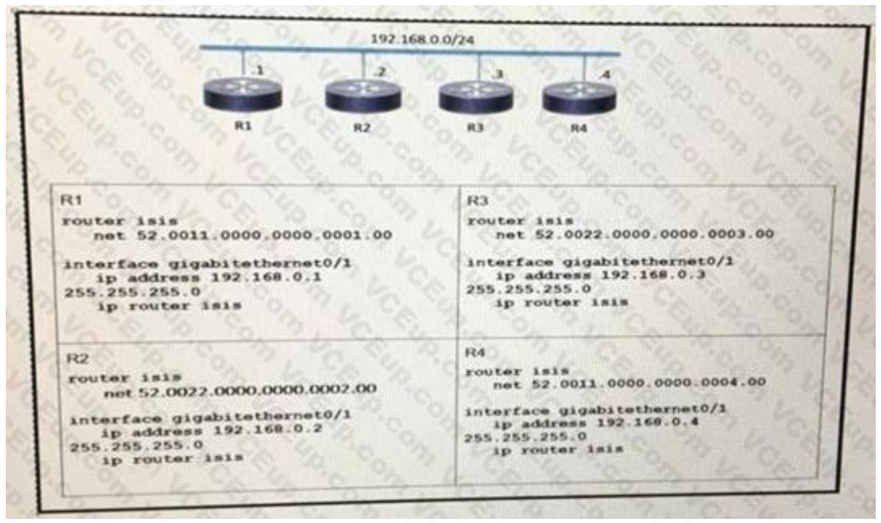
Correct Answer: A
Section:

QUESTION 52
Which two tasks must you perform when you implement LDP NSF on your network? (Choose two.)

A. Enable NSF for EIGRP
B. Enable NSF for the link-state routing protocol that is in use on the network.
C. Disable Cisco Express Forwarding
D. Implement direct connections for LDP peers
E. Enable NSF for BGP

Correct Answer: B, E
Section:

QUESTION 53
Refer to the exhibit:

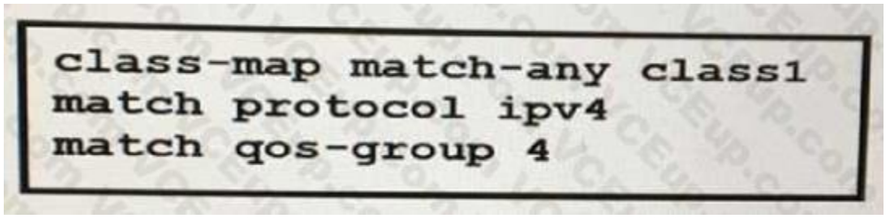


Which two statements about the ISIS topology are true? (Choose two.)

A. All four routers are operating as Level 1 routers only.
B. All four routers are operating as Level 2 routers only.
C. All four routers are operating as Level 1-2 routers.
D. R1 and R2 are Level 2 neighbors.
E. R1 and R4 are Level 2 neighbors

Correct Answer: C, D
Section:

QUESTION 54
Refer to the exhibit:

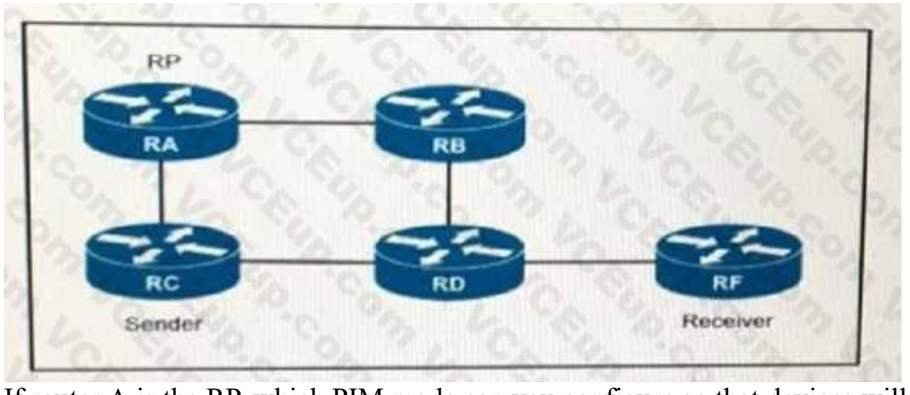


A network engineer is implementing QoS services. Which two statements about the QoS-group keyword on Cisco IOS XR 3re true? (Choose two)

A. The QoS group numbering corresponds to priority level
B. QoS group marking occurs on the ingress
C. It marks packets for end to end QoS pokey enforcement across the network
D. QoS group can be used in fabric QoS policy as a match criteria
E. It cannot be used with priority traffic class

Correct Answer: B, D
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/routers/ncs6000/software/ncs6k_r6-1/qos/configuration/guide/b-qos-cg-ncs6k-61x/b-qos-cg-ncs6k-61x_chapter_0110.htmlFabric QoS policy class maps are restricted to matching a subset of these classification options:precedencedscpqos-groupdiscard-class mpls experimental topmost

QUESTION 55
Refer to the exhibit:



If router A is the RP, which PIM mode can you configure so that devices will send multicast traffic toward the RP?

A. PIM-SM
B. PI MM-DM
C. BIDIR-PIM
D. PIM-SSM

Correct Answer: C
Section:

QUESTION 56
Refer to the exhibit:

```
router ospf 1
  nsf ietf restart interval 90
```

Which purpose of implementing NSF with this configuration is true?

A. The router uses NSF to load balance traffic between two links, with the primary link alternating every 90 seconds
B. The router uses NSF to reduce neighbor-relationship downtime during RP switchover
C. The router uses NSF to load balance traffic on a routed EtherChannel
D. The router uses NSF to handle RP switchover while allowing neighbor relationships to remain up

Correct Answer: D
Section:

QUESTION 57
ASN 65001 is peering with ASN 65002 to exchange IPv6 BGP routes. All routes that originate in ASN 65001 have a standard community value of 65001:100, and ASN 65002 is allowed to advertise only 2001 :db8:aaaa::/48.
An engineer needs to update the ASN 65001 route-filtering configuration to meet these conditions:
* Looped routes into ASN 65001 and routes that have traversed 10 or more ASNs must be denied.
* Routes accepted into ASN 65001 must be assigned a community value of 65001:200.
Which configuration must the engineer apply to the ASN 65001 border router?

```
route-policy PEER-AS65002-IN
>  if as-path length ge 10 or as-path passes-through '65001' or community matches-any (65001:100) then
    drop
  endif
  if destination in (2001:db8:aaaa::/48) then
   done
  else
    drop
  endif
  set community (65001:200)
end-policy

route-policy PEER-AS65002-IN
  if as-path length ge 10 and as-path passes-through '65001'  or community matches-any (65001:100) then
    drop
  endif
  if destination in (2001:db8:aaaa::/48) then
    pass
  endif
  set community (65001:200)
end-policy
```

```
route-policy PEER-AS65002-IN
  if as-path length ge 10 then
    drop
  endif
  if as-path passes-through '65001' or community matches-any (65001:100) then
    drop
  endif
  if destination in (2001:db8:aaaa::/48) then
    pass
  endif
  set community (65001:200)
end-policy
```

```
route-policy PEER-AS65002-IN
  if as-path length ge 10 then
    drop
  endif
  if as-path passes-through '65001' or community matches-any (65001:100) then
    drop
  endif
  if destination in (2001:db8:aaaa::/48) then
    set community (65001:200)
```

```
route-policy PEER-AS65002-IN
  if as-path length ge 10 then
    drop
  endif
  if as-path passes-through '65001' or community matches-any (65001:100) then
    drop
  endif
  if destination in (2001:db8:aaaa::/48) then
    set community (65001:200)
  else
    drop
  endif
end-policy
```

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

Correct Answer: D
Section:

QUESTION 58
Refer to the exhibit.

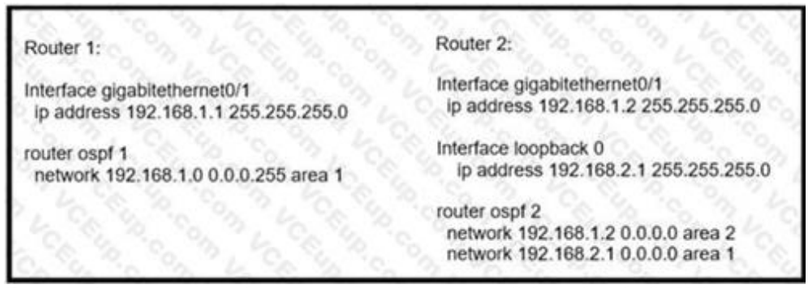
```
R1
router bgp 65000
   router-id 192.168.1.1
   no bgp default ipv4-unicast
   neighbor 192.168.1.2 remote-as 65001
```

Which task completes the configuration?

A. Specify the maximum number of prefixes that R1 receives from neighbor 192.168.1.2.
B. Specify the source interface in the neighbor statement.
C. Specify the activate neighbor 192.168.1.2 under the IPv4 address family.
D. Specify the local-as value in the neighbor statement.

Correct Answer: C
Section:

QUESTION 59
Refer to the exhibit.



Router 1 is missing the route for the router 2 loopback 0. What should the engineer change to fix the problem?

A. the area numbers on Router 1 and Router 2 to be similar
B. the wildcard mask network statement in OSPF of Router 2
C. Router 1 to be an ABR
D. the hello timers on Router 1 and Router 2 to be different

Correct Answer: A
Section:

QUESTION 60
What is a role of NSO?

A. It automates the deployment of access points with its built-in wireless LAN controller.
B. It manages WAN infrastructure using a virtual switch.
C. It provides full lifecycle management of a device.
D. It resides on a hypervisor that runs the Windows OS.

Correct Answer: C
Section:

QUESTION 61
Which utility must be used to locate MPLS faults?

A. QoS
B. MPLS LSP ping
C. MPLStraceroute
D. EEM

Correct Answer: C
Section:

QUESTION 62
Refer to the exhibit.

```
R1(config)# router isis area1
R1(config-router)# net 49.0001.0000.0000.000b.00

R1(config-router)# interface loopback 0
R1(config-if)# ipv6 address 2001:0000:1001:1000::1/128
R1(config-if)# exit

R1(config)# interface Ethernet 1/2
R1(config-if)# ipv6 address 2001:0000:1001:100A::1/64
R1(config-if)# ipv6 router isis area1
R1(config-if)# exit
```

A network engineer with an employee id: 3812:12:993 has started to configure router R1 for IS-IS as shown. Which additional configuration must be applied to configure the IS-IS instance to advertise only network prefixes associated to passive interfaces?

```
R1(config)# router isis area1
R1(config-router)# passive-interface loopback 0
R1(config-router)# address-family ipv6
R1(config-router-af)# advertise passive-only

R1(config-router)# address-family ipv6
R1(config-router-af)# advertise passive-only

R1(config)# router isis area1
R1(config-router)# loopback 0 passive-interface
R1(config-router)# address-family ipv6
R1(config-router-af)# prc-interval 20

R1(config)# router isis area1
R1(config-router)# passive-interface loopback 0
```

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

Correct Answer: A
Section:

QUESTION 63
What does DWDM use to combine multiple optical signals?

A. frequency
B. IP protocols
C. time slots
D. wavelength

Correct Answer: D
Section:

QUESTION 64
Refer to the exhibit.

```
PE-A

vrf definition Customer-A
 rd 65000:1111
 route-target export 65000:1111
 route-target import 65000:1111
 !
 address-family ipv4
 mdt default 233.15.38.120
 mdt data 233.15.38.121 0.0.0.0 threshold 100
 mdt mtu 5000
!
interface GigabitEthernet0/0
 vrf forwarding Customer-A
 ip address 10.10.10.1 255.255.255.252
!
ip multicast-routing vrf Customer-A
```

An engineer is implementing Auto-RP and reviewing the configuration of the PEA.
Which configuration permits Auto-RP messages to be forwarded over this interface?

A. PE-A(config-if)#ip pim sparse-mode
B. PE-A(config-if)#no ip pim bsr-border
C. PE-A(config-if)#ip igmp version 3
D. PE-A(config-if)#ip pim sparse-dense-mode

Correct Answer: D
Section:

QUESTION 65
Which protocol does a Cisco MPLS TE tunnel use to maintain paths within the core?

A. RSVP
B. VTP
C. STP
D. RPF

Correct Answer: A
Section:

QUESTION 66
Refer to the exhibit.

```
R1
ip cef distributed
mpls ldp graceful-restart
interface GigabitEthernet 0/0/1
   mpls ip
   mpls label protocol ldp
```

What is the effect of this configuration?

A. R1 supports a graceful restart operation on the peer, even if graceful restart is disabled on the peer.
B. R1 supports a peer that is configured for LDP SSO/NSF as the peer recovers from an outage.
C. R1 failovers only to a peer that is configured for LDP SSO/NSF.
D. R1 failovers to any peer.

Correct Answer: B
Section:

QUESTION 67
Refer to the exhibit.

```
Router 1:                                   Router 2:

Interface gigabitethernet0/1                Interface gigabitethernet0/1
 ip address 192.168.1.1 255.255.255.0        ip address 192.168.1.2 255.255.255.0
 ip ospf hello-interval 1                    ip ospf hello-interval 2

router ospf 1                               router ospf 2
 network 192.168.1.0 0.0.0.255 area 1        network 192.168.1.2 0.0.0.0 area 1
```

What reestablishes the OSPF neighbor relationship between Router 1 and Router 2?

A. authentication is added to the configuration
B. correct wildcard mask is used on Router 2
C. OSPF process IDs match
D. hello intervals match

Correct Answer: D
Section:

QUESTION 68
Refer to the exhibit.

```
RP/0/RP0/CPU0:XR1#sh lpts pifib hardware entry location 0/0/CPU0
-------------------------------------------------
L4 Protocol       : ICMP
VRF ID            : any
Destination IP    : any
Source IP/BFD Disc: any
Port/Type         : Port:8
Source Port       : any
Is Fragment       : 0
Is SYN            : any
Is Bundle         : na
Is Virtual        : na
Interface         : any
Slice             : 0
V/L/T/F           : 0/IPv4_STACK/0/ICMP-local
DestNode          : Local
DestAddr          : Punt
Accepted/Dropped  : 16810/14
Po/Ar/Bu          : 19/0pps/100ms
State             : pl_pifib_state_complete
-------------------------------------------------
```

While troubleshooting the network, a network operator with an employee id: 3812:12:993 is trying to ping XR1. Which result should the operator expect when trying to ping to an XR1 local address?

A. ICMP traffic works at a policed rate of 19 bytes per second every 100 ms
B. All ICMP traffic responds successfully.
C. All ICMP traffic is dropped.
D. ICMP traffic works at a policed rate of 19 packets every 100 ms.

Correct Answer: B
Section:

QUESTION 69
A network engineer is configuring a BGP route policy for the SUBNET prefix set. Matching traffic must be dropped, and other traffic must have its MED value set to 400 and community 4:400 added to the route. Which configuration must an engineer apply?

```
route-policy CISCO
  if destination in SUBNET then
    drop
  else
    set med 400
    set community (4:400) additive
  endif
end-policy
end

route-policy CISCO
  if destination in SUBNET then
    drop
  endif
  set med 400
  if community matches-any SUBNET then
    set local-preference 400
    set med 500
    set community (4:400) additive
  endif
end-policy
end

route-policy SUBNET
  if destination in SUBNET then
    drop
  endif
  set med 400
  if community matches-any SUBNET then
    set community (4:400)
  endif
end-policy
end

route-policy SUBNET
  if destination in BGP then
    drop
  else
    set med 400
    set community (4:400)
  endif
end-policy
end
```

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

Correct Answer: A
Section:

QUESTION 70
Refer to the exhibit.

```
snmp-server community ciscotest ro 2
```

What does the number 2 mean in the configuration?

A. It dictates the number of sessions that will be open with the SNMP manager
B. It represents the version of SNMP running.
C. It indicates two SNMP managers are able to read and write with the agent using community string ciscotest.
D. It is the numeric name of the ACL that contains the list of SNMP managers with access to the agent.

Correct Answer: D
Section:

QUESTION 71
Refer to the exhibit.

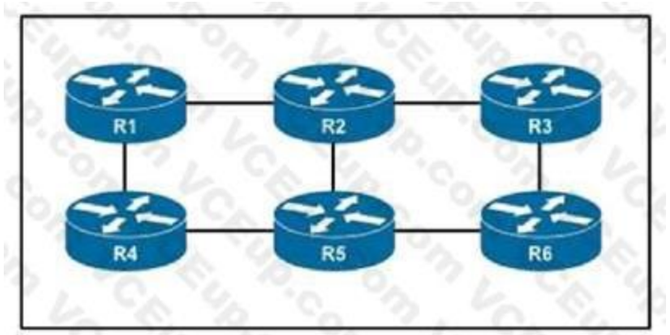
```
Router 1:

router isis
 net 49.0011.0000.0000.0001.00

Router 2:

router isis
 net 49.0001.0000.0000.0001.00

Router 3:

router isis
 net 49.0011.0000.0000.0002.00
```

Router 4 is added to the network and must be in the same area as router 1. Which NET should the engineer assign?

A. 49.0001.0000.0000.0004.00
B. 49.0111.0000.0000.0001.00
C. 49.0011.0000.0000.0003.00
D. 49.0011.0000.0000.0002.00

Correct Answer: C
Section:

QUESTION 72
Refer to the exhibit.



An engineer is configuring an administrative domain in the given multi-vendor environment with PIM-SM. Which feature must the engineer implement so that devices will dynamically learn the RP?

A. Auto-RP
B. BIDIR-PIM
C. SSM
D. BSR

Correct Answer: D
Section:

QUESTION 73
What causes multicast traffic to permanently stay on the shared tree and not switch to the source tree?

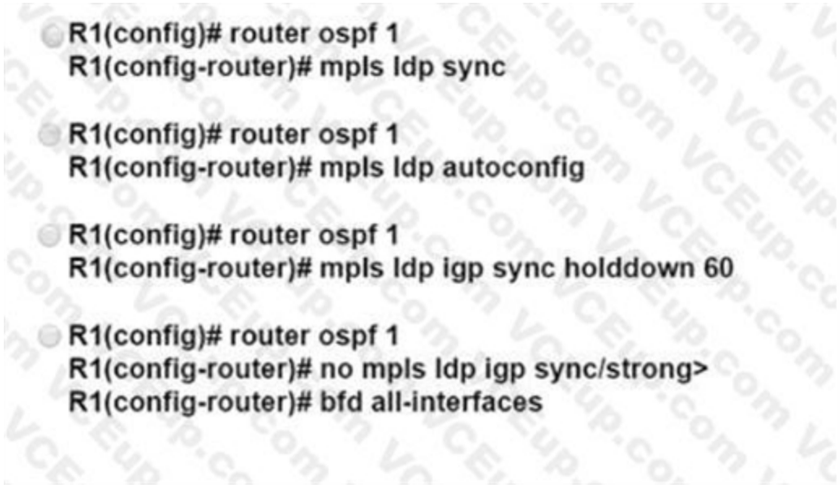
A. The SPT threshold is set to infinity.
B. The RP IP address is configured incorrectly.
C. The RP announcements are being filtered.
D. SSM range is being used.

Correct Answer: C
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/ios/solutions_docs/ip_multicast/White_papers/mcst_ovr.html

QUESTION 74
Refer to the exhibit.

```
R1#configure terminal
R1(config)# mpls ip
R1(config)# mpls label protocol ldp

R1(config)# interface Ethernet1/0
R1(config-if)# ip address 10.1.1.1 255.255.255.255
R1(config-if)# mpls ip

R1(config)# router ospf 1
R1(config-router)# network 10.0.0.0 0.255.255.255 area 3
```

A network engineer is configuring MPLS LDP synchronization on router R1. Which additional configuration must an engineer apply to R1 so that it will synchronize to OSPF process 1?



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

Correct Answer: A
Section:

QUESTION 75
What is a primary benefit of IPoATM or MPLS over ATM backbone service provider networks?

A. dedicated circuits
B. variable-length packets
C. isochronous system
D. fixed-length cells

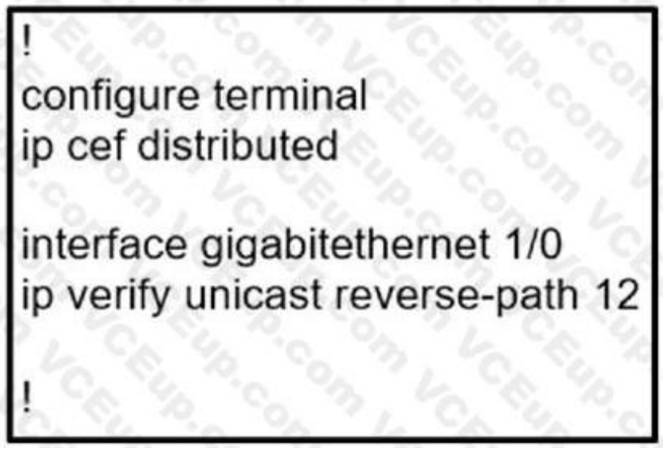
Correct Answer: A
Section:

QUESTION 76
How does model-driven telemetry use YANG?

A. to reset network devices that malfunction
B. to set informs and traps on clients to report back to a centralized server
C. to subscribe to data that is streamed from a device
D. to poll network devices on a 30-minute interval

Correct Answer: C
Section:

QUESTION 77
Refer to the exhibit.

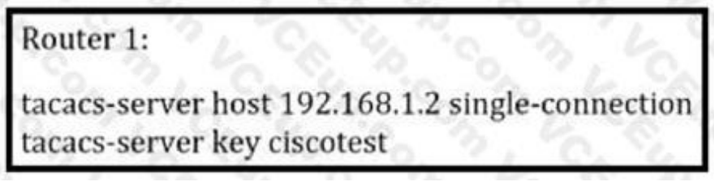


Which show command should be implemented to display per-interface statistics about uRPF drops and suppressed drops?

A. show ip traffic
B. showip interface
C. show cef interface
D. show ip interface brief

Correct Answer: B
Section:

QUESTION 78
Refer to the exhibit.



What is the result of this configuration?

A. Router 1 opens and closes a TCP connection to the TACACS+ server every time a user requires authorization.
B. Router 1 and the TACACS+ server maintain one open connection between them only when network administrator is accessing the router with password ciscotest.
C. Router 1 and the TACACS+ server maintain one open connection between them.
D. Router 1 opens and closes a TCP connection to the TACACS+ server every time a user requires authentication.

Correct Answer: C
Section:
Explanation:
https://www.ccexpert.us/cisco-secure/configuring-tacacs-on-cisco-ios.htmlsingle-connection (Optional) Used to specify a single connection. Rather than have the router openand close a TCP connection to the daemon each time it must communicate, the single-connectionoption maintains a single open connection between the router and the daemon. This is moreefficient because it allows the daemon to handle a higher number of TACACS operations.

QUESTION 79
Which OoS model allows hosts to report their QoS needs to the network?

A. DiffServ
B. CB-WFQ
C. IntServ
D. MQC

Correct Answer: A
Section:
Explanation:

To facilitate true end-to-end QoS on an IP-network, the Internet Engineering Task Force (IETF) has defined two models: Integrated Services (IntServ) and Differentiated Services (DiffServ). IntServ follows the signaled-QoS model, where the end-hosts signal their QoS needs to the network, while DiffServ works on the provisioned-QoS model, where network elements are set up to service

QUESTION 80
Refer to the exhibit.

```
R2# configure terminal
R2(config)# interface Ethernet1/0
R2(config-if)# ip address 10.1.1.1 255.255.255.255
```

An engineer is configuring two routers to support MPLS LDP sessions between them. The R1 configuration is complete, and work has started on R2 as shown. Which additional configuration must the engineer apply to R2 to complete the task?

```
R2(config)# mpls label protocol ldp
R2(config)# interface Ethernet1/1
R2(config-if)# ip vrf forwarding CISCO
R2(config-if)#ip ospf network point-to-point

R2(config)# mpls ip
R2(config)# mpls label protocol ldp
R2(config)# interface Ethernet1/0
R2(config-if)# mpls ip

R2(config)# mpls label protocol ldp
R2(config)# interface Ethernet1/0
R2(config-if)# ip vrf forwarding CISCO
R2(config-if)# ip ospf 1 area 0
```

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

Correct Answer: C
Section:

QUESTION 81
An engineer is trying to implement BGP in a multihomed architecture. What must the engineer configure to influence inbound path selection?

A. A route map with WEIGHT attribute to control the inbound traffic.
B. An offset list to set the metric for routes received from neighboring autonomous systems.

C. An access list to identify traffic and enable it on both of the provider-facing interfaces.
D. A route map with AS_PATH attribute to control the inbound traffic.

Correct Answer: D
Section:

QUESTION 82
Refer to the exhibit.

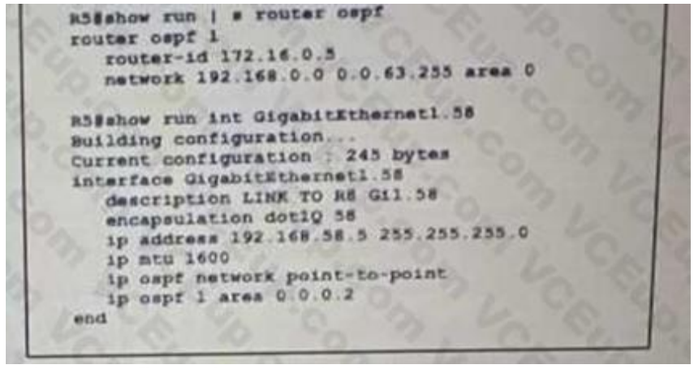
```
R1#show ip ospf interface gig 2
GigabitEthernet2 is up, line protocol is up
  Internet Address 172.20.1.12/31, Area 0.0.1.255, Attached via Interface Enable
  Process ID 1, Router ID 10.255.255.1, Network Type POINT_TO_POINT, Cost: 1
  Topology-MTID   Cost  Disabled    Shutdown    Topology Name
      0           1     no          no          Base
  Enabled by interface config, including secondary ip addresses
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

R1#show ip interface gig 2
GigabitEthernet2 is up, line protocol is up
  Internet address is 172.20.1.12/31
  MTU is 9216 bytes

R2#show ip ospf interface gig 2
GigabitEthernet2 is up, line protocol is up
  Internet Address 172.20.1.13/31, Area 511, Attached via Interface Enable
  Process ID 1, Router ID 10.255.255.2, Network Type POINT_TO_MULTIPOINT, 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 POINT_TO_MULTIPOINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

R2#show ip interface gig2
GigabitEthernet2 is up, line protocol is up
  Internet address is 172.20.1.13/31
  MTU is 1500 bytes
```

While troubleshooting the OSPF adjacency between routers R1 and R2 an engineer noticed that both routers are stuck in the EXCHANGE/EXSTART state. What should the engineer fix to solve the ongoing issue?

A. match IPv4 addresses
B. match OSPF areas
C. match OSPF network types
D. match MTU values

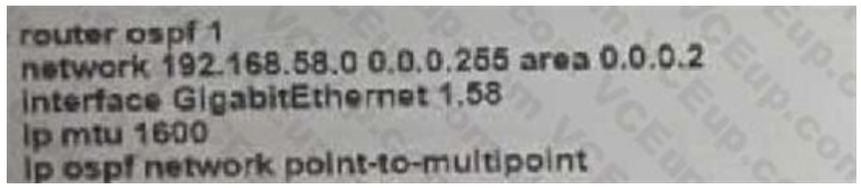
Correct Answer: D
Section:

QUESTION 83
Refer to the exhibit.

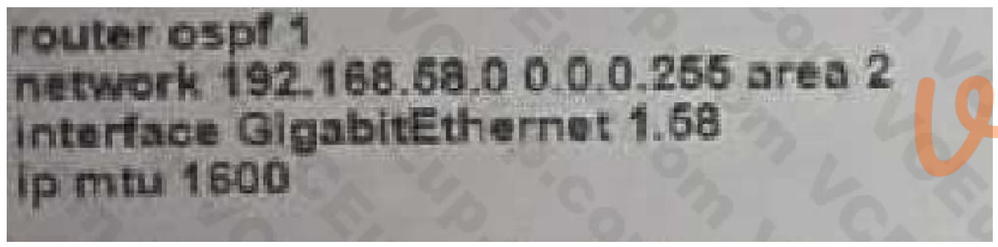


Which configuration must be implemented on router R8 so that it will establish OSPF adjacency with R5?

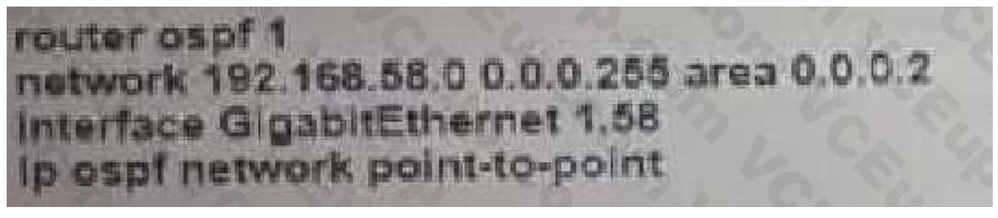
A.



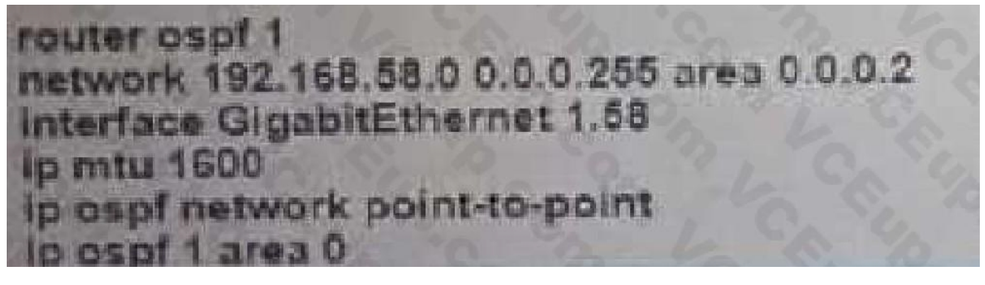
B.



C.



D.



Correct Answer: A
Section:

QUESTION 84

Refer to the exhibit. Which additional configuration must an engineer to the adge router to inject a default router into the MP-BGP address family for the internet_Shared_Services dedicated VRF?

A.

```
router bgp 100
address-family vpnv4
neighbor 1.1.1.1 activate

neighbor 1.1.1.1 send-community extended
neighbor 1.1.1.1 next-hop-self
address-family ipv4 vrf internet_Shared_Service
network 1.1.1.1
```

B.

```
router bgp 100
address-family vpnv4
neighbor 1.1.1.1 send-community both
exit-address-family

address-family ipv4 vrf internet
no synchronization
network 0.0.0.0
```

C.

```
router bgp 100
address-family vpnv4
neighbor 1.1.1.1 activate
neighbor 1.1.1.1 send-community extended
exit-address-family

address-family ipv4 vrf internet
no synchronization
network 0.0.0.0
```

D.

```
router bgp 100
address-family vpnv4
neighbor 1.1.1.1 activate
neighbor 1.1.1.1 send-community both
exit-address-family

address-family ipv4 vrf internet_Shared_Service
no synchronization
network 0.0.0.0
```

Correct Answer: D
Section:

QUESTION 85
Refer to the exhibit.

```
mpls traffic-eng tunnels

segment-routing mpls
connected-prefix-sid-map
 address-family ipv4
  192.168.1.1/32 index 10 range 1
  exit-address-family

set-attributes
 address-family ipv4
  sr-label-preferred
  exit-address-family

interface Loopback1
 ip address 192.168.1.1 255.255.255.255
 ip router isis 1

int gig0/0
 ip address 192.168.1.2 255.255.255.0
 ip router isis 1
 mpls traffic-eng tunnels
 isis network point-to-point

router isis 1
 net 50.0000.0000.0000.0001.00
 metric-style wide
 is-type level-1
 segment-routing mpls
 segment-routing prefix-sid-map advertise-
local
 mpls traffic-eng router-id Loopback1
 mpls traffic-eng level-1
```

What type of configuration is it?

A. It is configuration that requires an explicit Cisco MPLS TE path to be configured for the tunnel to run.
B. It is configuration that requires OSPF to also be running to have optimized Cisco MPLS TE tunnels.
C. It is configuration for the head-end router of a Cisco MPLS TE tunnel with segment routing.
D. It is configuration that requires a dynamic Cisco MPLS TE path to be configured for the tunnel to run.

Correct Answer: C
Section:

QUESTION 86
Refer to the exhibit.

```
R1
ip multicast-routing
ip pim rp-candidate GigabitEthernet1/0/0

interface g1/0/0
   ip pim sparse-mode

R2
ip multicast-routing
ip pim bsr-candidate GigabitEthernet1/0/0

interface g1/0/0
   ip pim sparse-mode
```

An engineer configured multicast routing on client's network. What is the effect of this multicast implementation?

A. R2 floods information about R1 throughout the multicast domain.
B. R2 is unable to share information because the ip pirn autorp listener command is missing.
C. R1 floods information about R2 throughout the multicast domain.
D. R2 is elected as the RP for this domain.

Correct Answer: B
Section:

QUESTION 87
Refer to the exhibit.

```
R1(config)# ipv6 unicast-routing
R1(config)# ipv6 router ospf 100
R1(config-rtr)# router-id 1.1.1.1
```

An engineer is configuring router R1 for OSPFv3 as shown. Which additional configuration must be performed so that the three active interfaces on the router will advertise routes and participate in OSPF IPv6 processes?

A.

```
R1(config)# interface Ethernet1/1
R1(config-if)# ipv6 ospf 100 area 0

R1(config)# interface Ethernet1/2
R1(config-if)# ipv6 ospf 100 area 10

R1(config)# interface Ethernet1/3
R1(config-if)# ipv6 ospf 100 area 20
```

B.

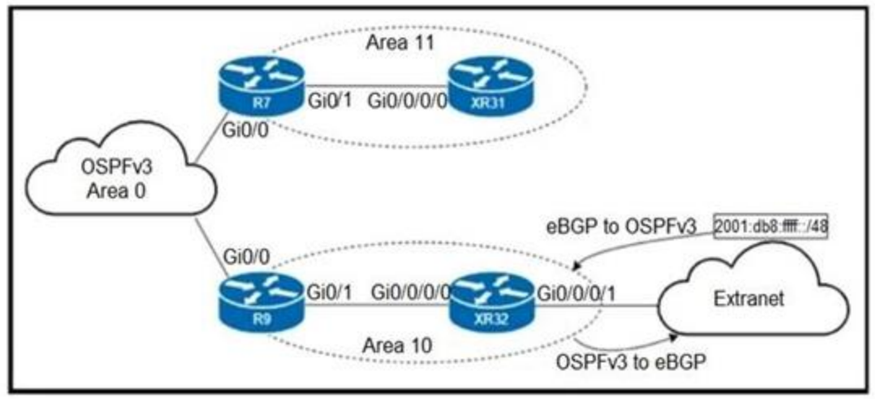
```
R1(config)# interface Ethernet1/1
R1(config-if)# ip ospf hello-interval 1
R1(config-if)# ip ospf 1 area 0

R1(config)# interface Ethernet1/2
R1(config-if)# ip ospf hello-interval 1
R1(config-if)# ip ospf 1 area 10

R1(config)# interface Ethernet1/3
R1(config-if)# ip ospf hello-interval 1
R1(config-if)# ip ospf 1 area 20
```

C.

```
R1(config)# interface Ethernet1/1
R1(config-if)# ip ospf 1 area 0

R1(config)# interface Ethernet1/2
R1(config-if)# ip ospf 1 area 10

R1(config)# interface Ethernet1/3
R1(config-if)# ip ospf 1 area 20
```

Correct Answer: A
Section:

QUESTION 88
Refer to the exhibit.



An engineer is updating this network to meet these conditions:
• Area 10 will receive inter-area routes and support mutual redistribution of external routes with the extranet.
• The ::/0 route is prohibited in Area 10.
• Area 11 will receive only the ::/0 route from the ABR.
• External route redistribution is not supported in Area 11.
• The ABR in Area 11 will advertise no interarea routes.
Which two configurations must be performed to meet the requirements? (Choose two.)

A. Configure area 11 as nssa no-summary on R7 and as nssa on XR31.
B. Configure area 10 as stub on R9 and XR32.
C. Configure area 11 as stub no-summary on R7 and as stub on XR31.
D. Configure area 11 as nssa default-information-originate on R7 and as nssa on XR31.
E. Configure area 10 as nssa on R9 and XR32.

Correct Answer: C, E
Section:

QUESTION 89
Refer to the exhibit.

```
configure
policy-map ciscopolicy
   class ciscotest
      set precedence 1
      exit
   exit
interface pos 0/2/0/0
   service-policy output ciscopolicy
commit
```

An engineer needs to implement this QoS policy on customer's network due to ongoing slow network issues. What will be the effect on the network when the engineer implements this configuration?

A. Traffic that is identified in the ciscotest class map will be remarked from IP precedence 1 to DSCP AF11 when it enters the pos0/2/0/0 interface.
B. Traffic that is identified in the ciscopolicy class map will be marked with IP precedence 1 when it enters the pos0/2/0/0 interface.
C. Traffic that is identified in the ciscopolicy class map will be remarked from IP precedence 1 to DSCP AF11 when it exits the pos0/2/0/0 interface.
D. Traffic that is identified in the ciscotest class map will be marked with IP precedence 1 when it exits the poso/2/0/0 interface.

Correct Answer: D

Section:

QUESTION 90
While implementing TTL security, an engineer issues the PE(config-router-af)#neighbor 2.2.2.2 ttlsecurity hops 2 command. After issuing this command, which BGP packets does the PE accept?

A. from 2.2.2.2, with a TTL of less than 2
B. to 2.2.2.2, with a TTL of less than 253
C. from 2.2.2.2, with a TTL of 253 or more
D. to 2.2.2.2, with a TTL of 2 or more

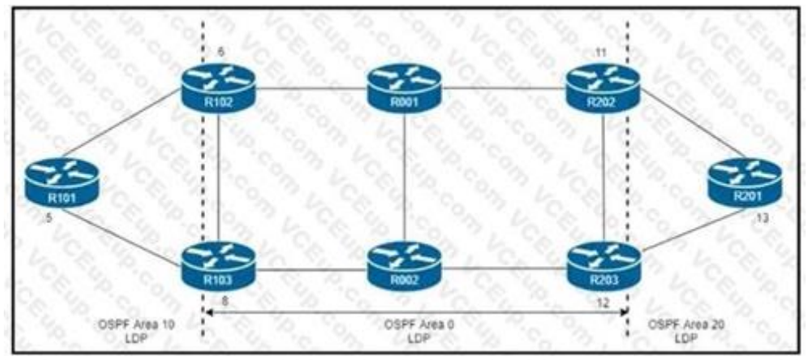
Correct Answer: C
Section:

QUESTION 91
A network engineer is configuring a router to send multicast traffic for the 239.10.10.10 group.
Which configuration must an .... forward the traffic?

A. Cisco(config)# interface ethernet 1/0 Cisco(config-if)# ip igmp max-groups action replace
B. Cisco(config)# interface ethernet 1/0 Cisco(config-if)# ip igmp filter
C. Cisco(config)# interface ethernet 1/0 Cisco(config-if)# ip igmp access-group 239.10.10.10
D. Cisco(config)# interface ethernet 1/0 Cisco(config-if)# ip igmp join-group 239.10.10.10

Correct Answer: D
Section:

QUESTION 92
Refer to the exhibit.



R101 is peering with R102 and R103, and R201 is peering with R202 and R203 using iBGP Labeled Unicast address families. The OSPF area 0 border routers are in a full iBGP Labeled Unicast mesh, and VPNv4 routes are exchanged directly between PE routers R101 and R201 through iBGP Which address family-level configuration must be applied on ABR R102 on ABR R102 to support a Unified MPLS routing architecture with partitioned IGP domains?

A.

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 send-label
neighbor 172.16.0.11 route-reflector-client
neighbor 172.16.0.11 send-label
neighbor 172.16.0.12 route-reflector-client
```

B.

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 next-hop-self all
neighbor 172.16.0.5 send-label
neighbor 172.16.0.11 next-hop-self all
neighbor 172.16.0.11 send-label
neighbor 172.16.0.12 next-hop-self all
neighbor 172.16.0.12 send-label
```

C.

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 next-hop-self all
neighbor 172.16.0.11 next-hop-self all
neighbor 172.16.0.12 next-hop-self all
```

D.

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 next-hop-self
neighbor 172.16.0.5 send-label
neighbor 172.16.0.11 next-hop-self
neighbor 172.16.0.11 send-label
neighbor 172.16.0.12 next-hop-self
neighbor 172.16.0.12 send-label
```

Correct Answer: B
Section:

QUESTION 93
BGP has been implemented on a IOS XR router. Which configuration sends BGP IPv4 labels to build inter-domain LSPs?

A. router bgp 65515 address-family ipv4 unicast neighbor 172.16.70.23 send-community extended
B. router bgp 65515 no bgp default ipv4-unicast
C. router bgp 65515 address-family ipv4 unicast neighbor 172.16.70.23 send-community
D. router bgp 65515 neighbor 172.16.70.23 address-family ipv4 labeled-unicast

Correct Answer: D
Section:

QUESTION 94
Which module refers to the network automation using Ansible?

A. the iosxr_system module to collect facts from remote devices
B. the iosxr_user module to manage banners for users in the local database
C. the losxr_logging module to run debugging for seventy levels 2 to 5
D. the iosxr_command module to issue run commands on remote devices

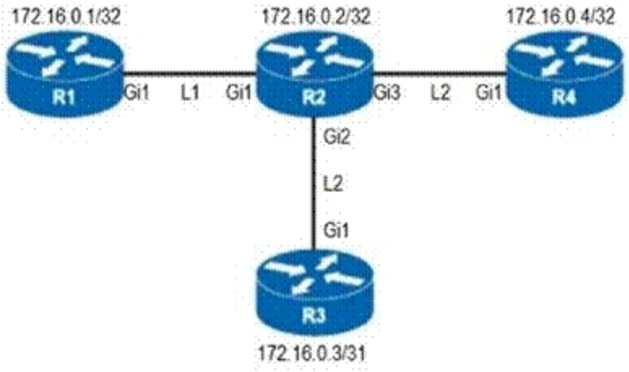
Correct Answer: D
Section:
Explanation:
https://docs.ansible.com/ansible/latest/collections/cisco/iosxr/iosxr_command_module.html#ansible-collections-cisco-iosxr-iosxr-command-module

QUESTION 95
What is the characteristic of the Tl-LFA?

A. It guarantees a loop-free path for all interfaces in the OSPf- super backbone .
B. It applies on each area and instance and makes all the interfaces inherit the configuration
C. It guarantees a loop-free path for all areas configured m OSPF
D. It applies only on the instance and makes at the interfaces inherit the configuration

Correct Answer: A
Section:

QUESTION 96
Refer to the exhibit.




```
R1#show mpls ldp discovery detail
Local LDP Identifier:
  172.16.0.1:0
  Discovery Sources:
  Interfaces:
      GigabitEthernet1 (ldp): xmit/recv
        Enabled: Interface config
        Hellp interval: 5000 ms; Transport IP addr: 172.16.0.1
        LDP Id: 172.16.0.2:0
          Src IP addr: 10.0.12.2; Transport IP addr: 172.16.0.2
          Hold time: 15 sec; Proposed local/peer: 15/15 sec
          Reachable via 172.16.0.2/32
          Password: not required, none, in use
        Clients: IPv4, mLDP

R1#show mpls ldp neighbor
R1#
```

```
R2#show mpls ldp discovery detail
Local LDP Identifier:
  172.16.0.2:0
  Discovery Sources:
  Interfaces:
    GigabitEthernet1 (ldp): xmit/recv
       Enabled: IGP config;
       Hello interval: 5000 ms; Transport IP addr: 172.16.0.2
       LDP Id: 172.16.0.1:0
         Src IP addr: 10.0.12.1; Transport IP addr: 172.16.0.1
         Hold time: 15 sec; Proposed local/peer: 15/15 sec
         Reachable via 172.16.0.1/32
         Password: not required, option 1, in use
       Clients: IPv4, mLDP
    GigabitEthernet2 (ldp): xmit/recv
       Enabled: IGP config;
       Hello interval: 5000 ms; Transport IP addr: 172.16.0.2
       LDP Id: 172.16.0.3:0
         Src IP addr: 10.0.23.3; Transport IP addr: 172.16.0.3
         Hold time: 15 sec; Proposed local/peer: 15/15 sec
         Reachable via 172.16.0.3/32
         Password: not required, option 1, in use
       Clients: IPv4, mLDP
    GigabitEthernet3 (ldp): xmit/recv
       Enabled: IGP config;
       Hello interval: 5000 ms; Transport IP addr: 172.16.0.2
       LDP Id: 172.16.0.4:0
         Src IP addr: 10.0.24.4; Transport IP addr: 172.16.0.4
         Hold time: 15 sec; Proposed local/peer: 15/15 sec
         Reachable via 172.16.0.4/32
         Password: not required, option 1, in use
       Clients: IPv4, mLDP
```


An engineer began to configure LDP between R1 and R2, but R1 and R2 cannot yet establish an LDP TCP connection. Which additional task must be completed to finish the implementation?

A. Configure the mpls Idp neighbor 172.16.0.1 password command on R1
B. Configure the mpls Idp neighbor 10.0.12.1 password command on R1
C. Configure the no mpls Idp password option 1 command on R2
D. Configure the no mpls Idp password option 1 command on R1

Correct Answer: A
Section:

QUESTION 97
Refer to me exhibit.

```
CSR1#show flowspec ipv4 detail
AFI: IPv4
  Flow      :Dest:10.6.5.0/24,DPort:=80|=443
    Actions     :Traffic-rate: 0 bps  (bgp.1)
    Statistics                (packets/bytes)
      Matched           :              12/696
      Dropped           :              12/696
```

A network operator recently configured BGP FlowSpec for me internal IT network What will be inferred from the configuration deployed on me network?

A. The policy is configured locally on CSRl and drops all traffic for TCP ports 80 and 443
B. The policy is learned via BGP FlowSpec and drops all traffic for TCP ports 80 and 443

C. The policy is warned via BC FlowSpec aid has active traffic
D. The policy is configured locally on CSR1 and currently has no active traffic

Correct Answer: A
Section:

QUESTION 98
An network engineer is deploying VRF on ASBR router R1. The interface must have connectivity over an MPLS VPN inter-AS Option AB network. Which configuration must the engineer apply on the router to accomplish this task?

A.
```
R1(config)# interface ethernet 1/0
R1(config-if)# ip vrf forwarding CISCO
R1(config-if)# mpls ip
```

B.
```
R1(config)# interface ethernet 1/0
R1(config-if)# ip address 192.168.1.254 255.255.255.0
R1(config-if)# ip vrf forwarding CISCO
R1(config-if)# shutdown
```

C.
```
R1(config)# interface ethernet 1/0
R1(config-if)# ip vrf forwarding CISCO
R1 (config-if)# ip ospf 1 area 0
```

D.
```
R1(config)# interface ethernet 1/0
R1(config-if)# ip vrf forwarding CISCO
R1(config-if)# mpls bgp forwarding
```

Correct Answer: D
Section:

QUESTION 99
Refer to the exhibit.

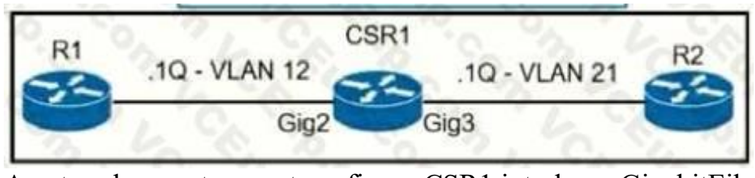
```
RP/0/RP0/CPU0:XR1#do sh bundle

Bundle-Ether11
  Status:                                  Up
  Local links <active/standby/configured>: 1 / 2 / 3
  Local bandwidth <effective/available>:   1000000 (1000000) kbps
  MAC address (source):                    0007.ec14.cc2b (Chassis pool)
  Inter-chassis link:                      No
  Minimum active links / bandwidth:        1 / 1 kbps
  Maximum active links:                    1
  Wait while timer:                        2000 ms
  Load balancing:
    Link order signaling:                  Not configured
    Hash type:                             Default
    Locality threshold:                    None
  LACP:                                    Operational
    Flap suppression timer:                Off
    Cisco extensions:                      Disabled
    Non-revertive:                         Disabled
  mLACP:                                   Not configured
  IPv4 BFD:                                Not configured
  IPv6 BFD:                                Not configured

  Port                Device           State        Port ID         B/W, kbps
  ------------------  ---------------  -----------  --------------  ----------
  Gi0/0/0/0           Local            Standby      0x8000, 0x0003     1000000
      Link is Standby due to maximum-active links configuration
  Gi0/0/0/1           Local            Standby      0x8000, 0x0002     1000000
      Link is Standby due to maximum-active links configuration
  Gi0/0/0/2           Local            Active       0x8000, 0x0001     1000000
      Link is Active
```

A network operator needs to shut down interface Gi0/0/0/2 for maintenance. What occurs to the interface states of Gi0/0/0/0 and Gi0/0/0/1?

A. Gi0/0/0/1 and Gi0/0/0/0 become active
B. Gi0/0/0/1 and Gi0//0/0 remains standby
C. Gi0/0/0/0 becomes active. Gi0/00/1 remains standby
D. Gi0/0/0/1 becomes active Gi0/0/0/0 remains standby

Correct Answer: D
Section:

QUESTION 100
Refer to the exhibit.



A network operator must configure CSR1 interlaces GigabitEihernet2 and GigabitEthemet to rewrite VLAN tags 12 and 21 for traffic between R1 and R2 respectively. Which configurator accomplishes this task?

A.

```
#CSR1

interface GigabitEthernet2
 no ip address
 service instance 21 ethernet
  encapsulation dot1q 21
  rewrite ingress tag translate 1-to-1 dot1q 12
  rewrite egress tag translate 1-to-1 dot1q 21
  bridge-domain 10
!
interface GigabitEthernet3
 no ip address
 service instance 12 ethernet
  encapsulation dot1q 12
  rewrite ingress tag translate 1-to-1 dot1q 21
  rewrite egress tag translate 1-to-1 dot1q 12
  bridge-domain 10
```

B.

```
#CSR1

interface GigabitEthernet2
 no ip address
 service instance 12 ethernet
  encapsulation dot1q 12
  rewrite ingress tag translate 1-to-1 dot1q 21
  rewrite egress tag translate 1-to-1 dot1q 12
  bridge-domain 10
!
interface GigabitEthernet3
 no ip address
 service instance 21 ethernet
  encapsulation dot1q 21
  rewrite ingress tag translate 1-to-1 dot1q 12
  rewrite egress tag translate 1-to-1 dot1q 21
  bridge-domain 10
```

C.

```
#CSR1
interface GigabitEthernet2
!
interface GigabitEthernet3
 no ip address
 service instance 21 ethernet
  encapsulation dot1q 21
  rewrite ingress tag translate 1-to-1 dot1q 12
  rewrite egress tag translate 1-to-1 dot1q 21
  bridge-domain 21
```

D.

```
#CSR1
interface GigabitEthernet2
 no ip address
 service instance 12 ethernet
  encapsulation dot1q 12
  rewrite ingress tag translate 1-to-1 dot1q 21
  rewrite egress tag translate 1-to-1 dot1q 12
!
interface GigabitEthernet3
 no ip address
 service instance 21 ethernet
  encapsulation dot1q 21
  rewrite ingress tag translate 1-to-1 dot1q 12
  rewrite egress tag translate 1-to-1 dot1q 21
```

Correct Answer: B
Section:

QUESTION 101
The administrator of a small company network notices that intermittent network issues occasionally cause inbound notifications to its SNMP servers to be lost. Which configuration must the administrator apply so that the SNMP servers acknowledge the notifications that they receive?

A. snmp-server community ciscotest rw 10
B. snmp-server host tests.cisco.com public snmp-server community ciscotest rw 10
C. snmp-server enable traps bgp snmp-server host 192.169.2.1 Informs
D. snmp-server enable traps snmp

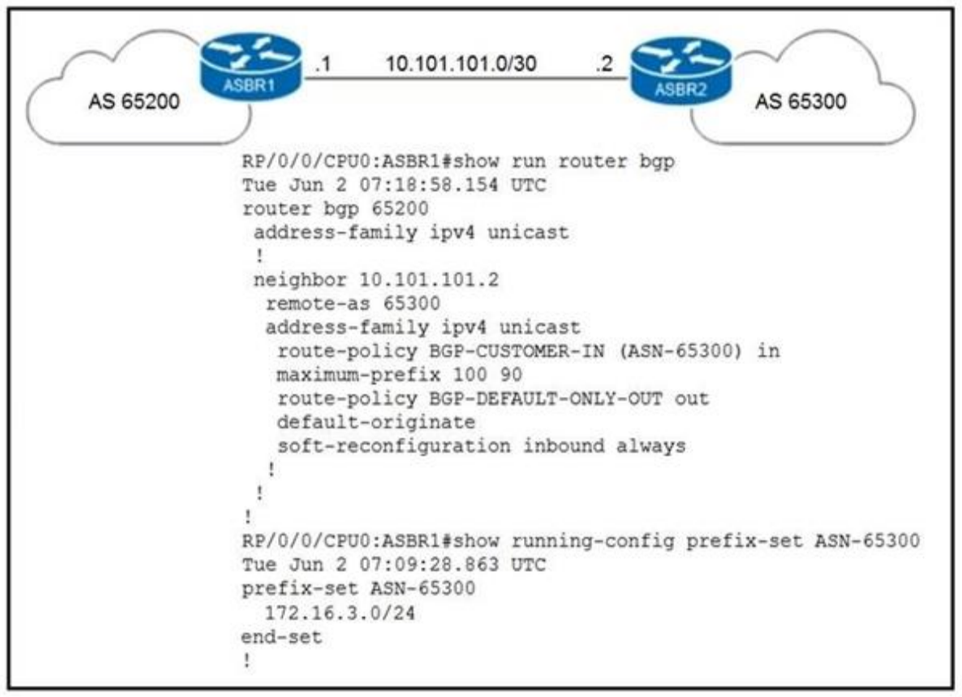
Correct Answer: C
Section:

QUESTION 102
What are two characteristics of MPLS TE turrets? (Choose two)

A. They require EIGRP to be running in the core.
B. They use RSVP to provide bandwidth for the tunnel.
C. They are run over Ethernet cores only.
D. The headend and tailend routes of the tunnel must have a BGP relationship
E. They are unidirectional

Correct Answer: B, E
Section:

QUESTION 103
Refer to the exhibit.



A network engineer is implementing a standard customer route-policy on ASBR1 with these requirements:

- It must accept only customer-assigned prefixes
- It must preserve customer advertised BGP communities
- It must set the local-preference to 110 for all prefixes
- It must attach the ORIGINATION-PE and LOCAL-CITY communities to all accepted prefixes.

Which route policy must the engineer implement on ASBR1 to satisfy the requirements?

A.

```
route-policy BGP-CUSTOMER-IN($CUSTOMER_PREFIX)
 if destination in $CUSTOMER_PREFIX then
  done
 else
  drop
 endif
 set local-preference 110
 set community ORIGINATION-PE additive
 set community LOCAL-CITY additive
end-policy
```

B.

```
route-policy BGP-CUSTOMER-IN($CUSTOMER_PREFIX)
 if destination in $CUSTOMER_PREFIX then
  pass
 else
  drop
 endif
 set local-preference 110
 set community ORIGINATION-PE
 set community LOCAL-CITY additive
end-policy
```

C.

```
route-policy BGP-CUSTOMER-IN($CUSTOMER_PREFIX)
 if destination in $CUSTOMER_PREFIX then
  done
 else
  drop
 endif
 set local-preference 110
 set community ORIGINATION-PE
 set community LOCAL-CITY additive
end-policy
```

D.

```
route-policy BGP-CUSTOMER-IN($CUSTOMER_PREFIX)
 if destination in $CUSTOMER_PREFIX then
  pass
 else
  drop
 endif
 set local-preference 110
 set community ORIGINATION-PE additive
 set community LOCAL-CITY additive
end-policy
```

Correct Answer: D
Section:

QUESTION 104
Refer to the exhibit.

```
encoding = gpbkv
```

An engineer applied a gRPC dial-in configuration on customer's router to provide connection multiplexing and two-way streaming. What does this configuration accomplish in a gRPC?

A. It is the encoding requested by the gRPC server.
B. IT is the encoding that is used for dial-in and dial-out.
C. It is used for encoding with the default protocol buffers
D. It is the encoding requested by the gRPC client.

Correct Answer: A
Section:
Explanation:
https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2019/pdf/BRKNMS-3537.pdf
https://xrdocs.io/telemetry/tutorials/2018-03-01-everything-you-need-to-know-about-pipeline/
https://community.cisco.com/t5/service-providers-documents/implementing-grpc-telemetry-on-xrdevices/ta-p/3393966

QUESTION 105
What are two factors to consider when implementing NSR High Availability on an MPLS PE router?
(Choose two.)

A. It consumes more memory and CPU resources than NSF
B. It operates normally without NSR support on the PE peers.
C. It requires all PE-CE sessions to support NSR

D. It requires routing protocol extensions
E. It cannot sync state information across redundant RPs

Correct Answer: A, B
Section:

QUESTION 106
Which feature will an operator use while implementing MPLS TE on customer's network, to prevent an LSP from using any overseas inks?

A. bandwidth
B. affinity
C. explicit path
D. SLRG

Correct Answer: C
Section:

QUESTION 107
Refer to the exhibit.

A network engineer is deploying SNMP configuration on client's routers. Encrypted authentication must be included on router 1 to provide security and protect message confidentially. Which action should the engineer perform on the routers to accomplish this task?

A. snmp-server host 192.168.0.254 informs version 3 auth testuser config.
B. snmp-server user testuser group 1 remote 192.168.0.254 v3 auth md5 testpassword
C. snmp-server group group 1 v3 auth.
D. snmp-server community public

Correct Answer: B
Section:

QUESTION 108
An engineer needs to implement QOS mechanism on customer's network as some applications going over the internet are slower than others. Which two actions must the engineer perform when implementing traffic shaping on the network in order to accomplish this task? (Choose two)

A. Configure a queue with sufficient memory to buffer excess packets.
B. Configure the token values in bytes.
C. Implement packet remarking for excess traffic.
D. Implement a scheduling function to handle delayed packets.
E. Configure a threshold over which excess packets are discarded.

Correct Answer: A, D
Section:

QUESTION 109
Refer to the exhibit.

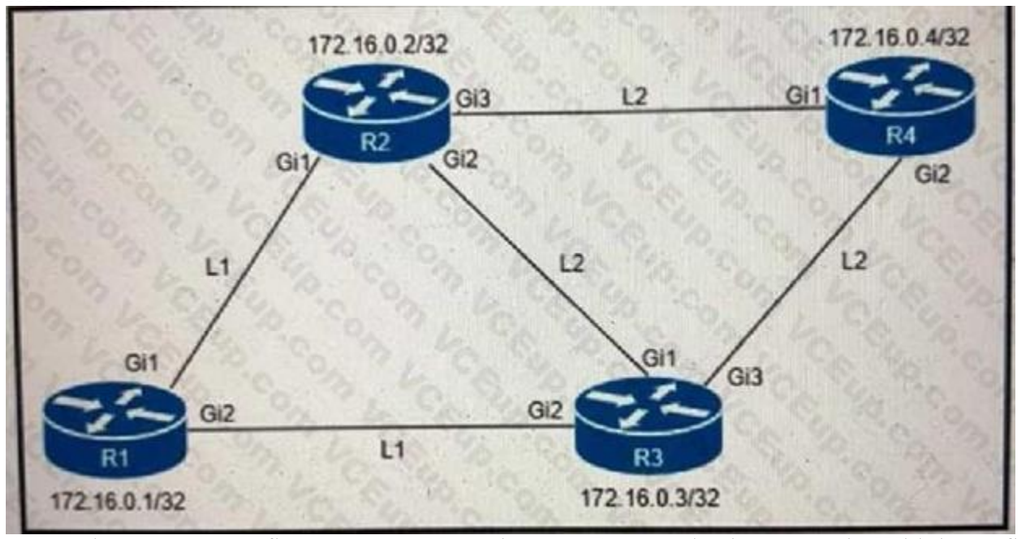
```
POST
https://apic-ip-address/api/mo/uni.xml
<?xml version="1.0" encoding="UTF-8"?>
<!-- api/policymgr/mo/uni.xml -->
<polUni>
  <infraInfra>
    <!-- Static VLAN range -->
    <fvnsVlanInstP name="inband" allocMode="static">
      <fvnsEncapBlk name="encap" from="vlan-5" to="vlan-10"/>
    </fvnsVlanInstP>
  </infraInfra>
</polUni>
```

What does the script configure?

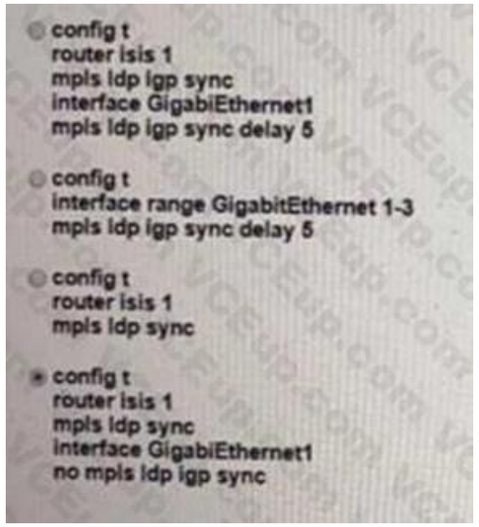
A. a VLAN namespace
B. selectors for the in-band management
C. a physical domain
D. a static VLAN

Correct Answer: A
Section:

QUESTION 110
Refer to the exhibit.



An engineer must configure router R2 as the new P router in the network. Which configuration must be applied to R2 to enable LDP-IGP Sync on its L2 IS-IS adjacencies?



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

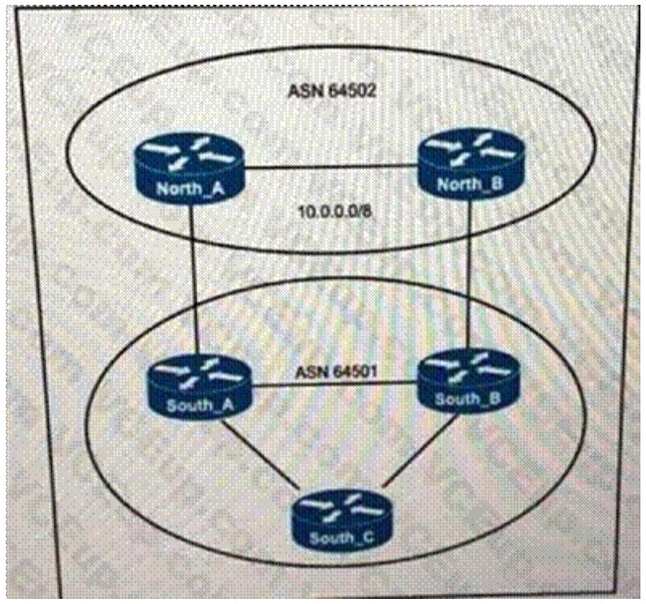
Correct Answer: D
Section:

QUESTION 111
Which two actions describe ISP delegation to PCE servers? (Choose two)

A. adding a new PCE server with lower precedence than the primary PCE
B. changing the precedence of any of the PCE servers
C. removing TE re-optimization timer timeouts
D. entering the mpls traffic-eng reoptimize command
E. adding a new PCE server with higher precedence than the primary PCE

Correct Answer: A, C
Section:

QUESTION 112
Refer to the exhibit.

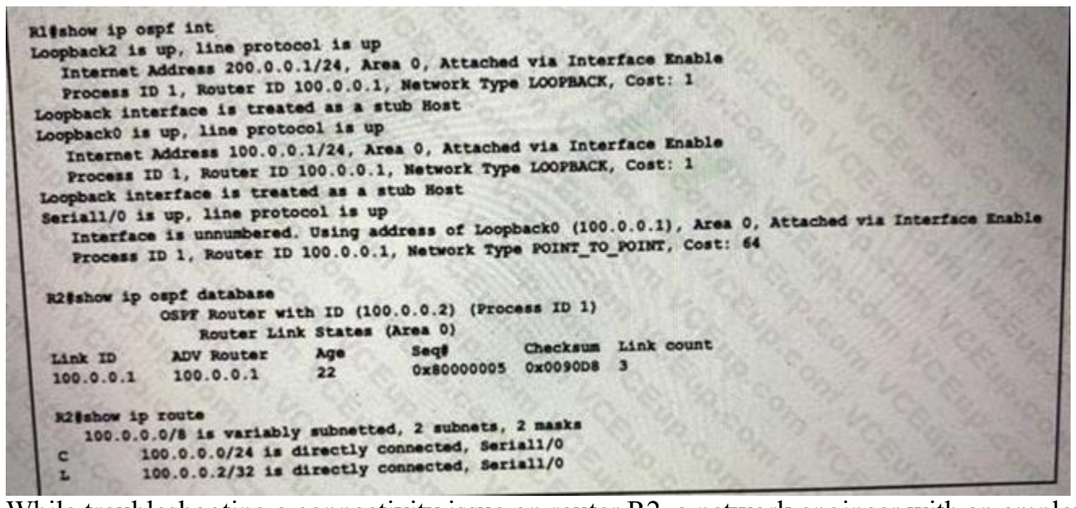


ASN 64501 currently reaches the networks under the 10.0.0.0/8 prefix via the North_B router, which is a slow backup link. The administrator of ASN 64502 wants traffic from ASN 64501 to 10.0.0.0/8 to travel via the primary link North_

A. Which change to the network configuration accomplishes this task?
B. Set a higher local preference between North_A and South_A
C. Advertise the 10.0.0.0/8 prefix through North_B and specific subnets through North_A
D. Set a Lower Weight value for incoming traffic on North_A
E. Set a lower MED between North_B and South_B

Correct Answer: D
Section:

QUESTION 113
Refer to the exhibit.



```
R1#show ip ospf int
Loopback2 is up, line protocol is up
   Internet Address 200.0.0.1/24, Area 0, Attached via Interface Enable
   Process ID 1, Router ID 100.0.0.1, Network Type LOOPBACK, Cost: 1
Loopback interface is treated as a stub Host
Loopback0 is up, line protocol is up
   Internet Address 100.0.0.1/24, Area 0, Attached via Interface Enable
   Process ID 1, Router ID 100.0.0.1, Network Type LOOPBACK, Cost: 1
Loopback interface is treated as a stub Host
Serial1/0 is up, line protocol is up
   Interface is unnumbered. Using address of Loopback0 (100.0.0.1), Area 0, Attached via Interface Enable
   Process ID 1, Router ID 100.0.0.1, Network Type POINT_TO_POINT, Cost: 64

R2#show ip ospf database
            OSPF Router with ID (100.0.0.2) (Process ID 1)
                Router Link States (Area 0)
Link ID      ADV Router      Age         Seq#       Checksum  Link count
100.0.0.1    100.0.0.1       22          0x80000005 0x0090D8  3

R2#show ip route
   100.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       100.0.0.0/24 is directly connected, Serial1/0
L       100.0.0.2/32 is directly connected, Serial1/0
```

While troubleshooting a connectivity issue on router R2, a network engineer with an employee id:3876.13.497 notices that although it detects three OSPF links from R1, the OSPF prefixes are missing

from the routing table. What is the reason for the problem?

A. The serial interfaces have different MTUs
B. Both loopback interfaces on R1 are configured as stub
C. The R2 Serial 1/0 interface is configured with an IP address, but the R1 Serial R1 Serial 1/0 interface in unnumbered.
D. The subnet masks on the serial interfaces are mismatched.

Correct Answer: C
Section:

QUESTION 114
Which control plane protocol is used between Cisco SD-WAN routers and vSmart controllers?

A. OTCP
B. OMP
C. UDP
D. BGP

Correct Answer: B
Section:

QUESTION 115
Which statement about TLS is accurate when using RESTCONF to write configurations on network devices'?

A. It requires certificates for authentication.
B. It is provided using NGINX acting as a proxy web server
C. It is used for HTTP and HTTPS requests.
D. It is not supported on Cisco devices

Correct Answer: A
Section:

QUESTION 116
A network engineer is configuring Flexible NetFlow and enters these commands

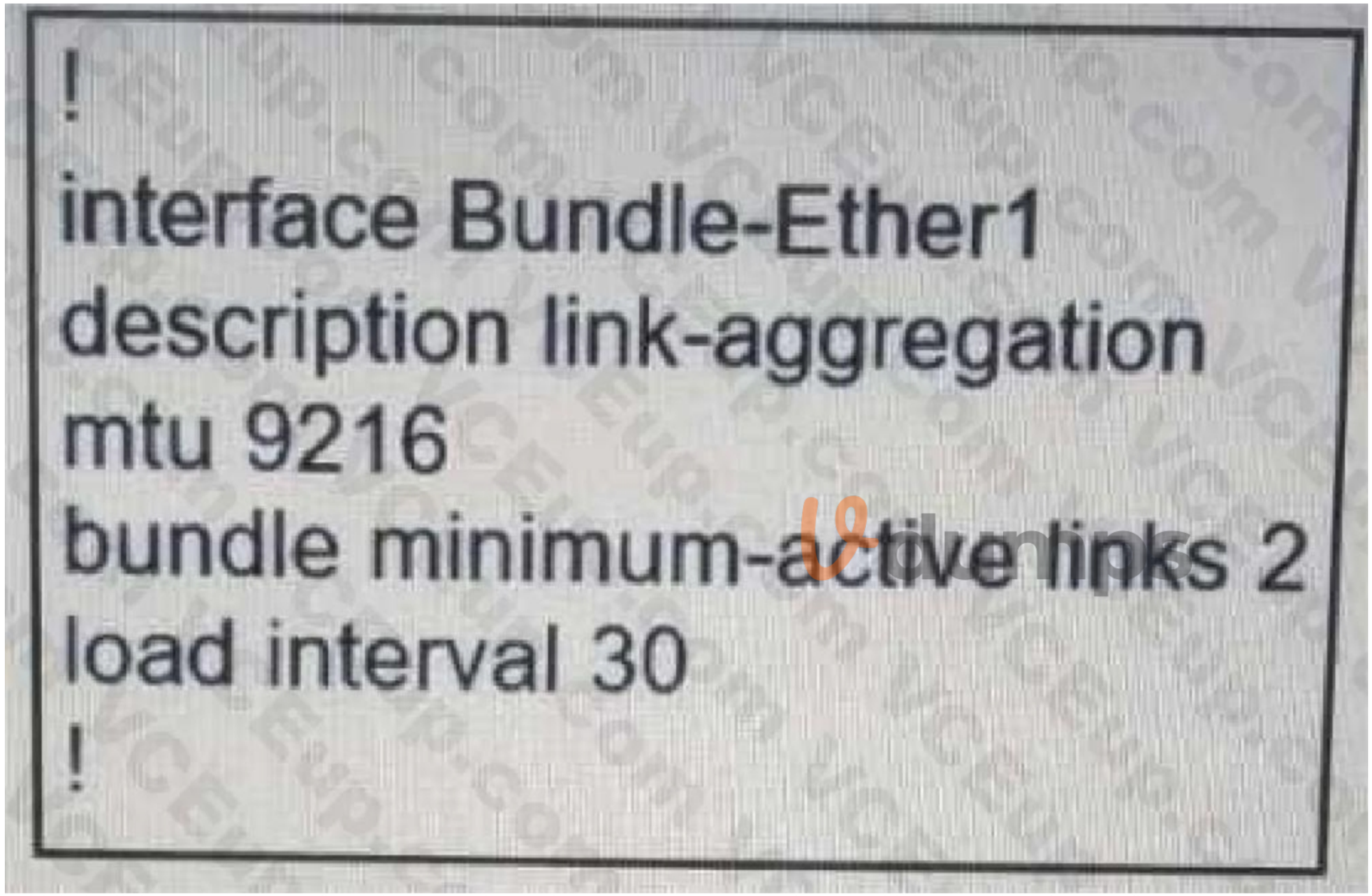
```
sampler NetFlow1
mode random one-out-of 100

interface fastethernet 1/0
flow-sampler NetFlow1
```

What 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: A, D
Section:

QUESTION 117
Refer to the exhibit.



Which the link aggregation configuration router is running on Cisco IOS XR software, which LACP interface configuration is needed to add the interface to the bundle?

A.

```
interface TenGigE0/1/0/5
description bundle_1_link
bundle mode active
load interval 30


interface TenGigE0/1/0/6
description bundle_1_link
bundle mode active
load interval 30
```

B.

```
interface TenGigE0/1/0/5
description bundle_1_link
bundle id 1 mode active
load interval 30


interface TenGigE0/1/0/6
description bundle_1_link
bundle id 1 mode active
load interval 30
```

C.

```
interface TenGigE0/1/0/5
description bundle_1_link
id 1 mode active
load interval 30


interface TenGigE0/1/0/6
description bundle_1_link
id 1 mode active
load interval 30
```

D.

```
interface TenGigE0/1/0/5
description bundle_1_link
bundle id 1
load interval 30


interface TenGigE0/1/0/6
description bundle_1_link
bundle id 1
load interval 30
```

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

Correct Answer: B
Section:

QUESTION 118
Which type of attack is a Protocol attack?

A. HTTP flood
B. TFTP flood
C. SYN flood
D. Slowlorls

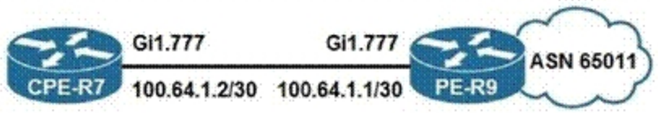
Correct Answer: C
Section:
Explanation:
Protocol Attacks
Includes SYN floods, fragmented packet attacks, Ping of Death, Smurf DDoS and more. This type of attack consumes actual server resources,

QUESTION 119
A company needs to improve the use of the network resources that is used to deploy internet access service to customers on separate backbone and internet access network. Which two major design models should be used to configure MPLS L3VPNs and internet service in the same MPLS backbone?
(Choose two.)

A. Carriage of full internet routes in a VPN, in the case of internet access VPNS
B. Internet routing through global routing on a PE router.
C. Internet access routing as another VPN in the ISP network.
D. Internet access through leaking of internet routed from the global table into the L3VPN VRF
E. Internet access for global routing via a separate interface in a VRF

Correct Answer: C, E
Section:
Explanation:
http://etutorials.org/Networking/MPLS+VPN+security/Part+II+Advanced+MPLS+VPN+Security+Issue s/Chapter+4.+Secure+MPLS+VPN+Designs/Internet+Access/

QUESTION 120
Refer to the exhibit.




```
PE-R9#show run interface GigabitEthernet1.777
Building configuration...
Current configuration : 133 bytes
interface GigabitEthernet1.777
   encapsulation dot1Q 777
   ip address 100.64.1.1 255.255.255.252
   ip access-group INFRA-ACL out
end

PE-R9#show access-list INFRA-ACL
Extended IP access list INFRA-ACL
   10 permit tcp 192.168.0.0 0.0.255.255 100.64.0.0 0.31.255.255 eq telnet
   20 permit icmp any 100.64.0.0 0.31.255.255 echo
   30 permit icmp any 100.64.0.0 0.31.255.255 echo-reply
   40 permit udp host 172.29.100.2 100.64.0.0 0.31.255.255 eq snmp
   50 permit udp host 172.29.200.2 100.64.0.0 0.31.255.255 eq snmp
   60 permit tcp 192.168.0.0 0.0.255.255 range ftp-data ftp 100.64.0.0 0.31.255.255 established
   70 permit tcp 192.168.0.0 0.0.255.255 eq 22 100.64.0.0 0.31.255.255 established
   80 permit tcp 172.16.0.0 0.0.0.255 eq 22 100.64.0.0 0.31.255.255 established
   100 deny ip any any
```

To protect in-band management access to CPE-R7, an engineer wants to allow only SSH management and provisioning traffic from management network 192.168.0.0/16. Which infrastructure ACL change must be applied to router PE-R9 to complete this task?

A.

```
ip access-list extended INFRA-ACL
15 permit tcp 192.168.0.0 0.0.255.255 range 49152 65535 100.64.0.0 0.31.255.255 eq 443
```

B.

```
ip access-list extended INFRA-ACL
no 10
15 permit tcp 192.168.0.0 0.0.255.255 eq 22 100.64.0.0 0.31.255.255 eq 22
```

C.

```
ip access-list extended INFRA-ACL
15 permit tcp 192.168.0.0 0.0.255.255 range 49152 65535 100.64.0.0 0.31.255.255 eq 22
```

D.

```
ip access-list extended INFRA-ACL
no 10
15 permit tcp 192.168.0.0 0.0.255.255 range 49152 65535 100.64.0.0 0.31.255.255 eq 22
```

Correct Answer: B
Section:

QUESTION 121
An engineer implemented LDP protocol on the ISP network. The engineer must ensure that there are no packet loss issues when IGP and LDP protocols are not synchronized. Which configuring must the engineer implement so that the IGP routing protocol will wait until LDP convergence is completed?

A. Disable IP CEF routers running LDP and enable LDP protocol.
B. Configure MPLS LDP IGP synchronization on the network.
C. Configure LDP sessions protection on the network.
D. Disable MPLS LDP IGP synchronization on the network.

Correct Answer: B
Section:

QUESTION 122
What is the function of the FEC field within the OTN signal structure?

A. It allows the sending devices to apply QoS within the OTN forwarding structure.
B. It allows source nodes to discard payload errors before transmitting data on the network.
C. It allows receivers to correct errors upon data arrival.
D. It allows deep inspection of data payload fields.

Correct Answer: C
Section:

QUESTION 123
Which two routing protocols support Cisco MPLS TE tunnels? (Choose two.)

A. IS-IS
B. RIP
C. BGP
D. OSPF
E. EIGRP

Correct Answer: A, D
Section:

QUESTION 124
Which protocol is used for communication between the PCE and PCC?

A. ICMP
B. PCEP
C. CEF
D. POP

Correct Answer: B

Section:

QUESTION 125
Refer to the exhibit.

```
mpls label range 16 100000 static 100002 1048570
mpls label protocol ldp

mpls ldp graceful-restart
!
interface Loopback0
!
ip address 10.20.20.20 255.255.255.255
no ip directed-broadcast
no ip mroute-cache
!
interface Gi1/1/0
ip address 10.12.0.2 255.255.0.0
no ip directed-broadcast
mpls label protocol ldp
mpls ip
!
router ospf 100
log-adjacency-changes
nsf cisco enforce global
redistribute connected subnets
network 10.20.20.20 0.0.0.0 area 0
network 10.12.0.0 0.0.255.255 area 0

!
mpls ldp router-id Loopback0 force
```

A network administrator implemented MPLS LDP changes on PE-A LSR device. The engineer must ensure there are no LDP peer are fully operational. Which LDP feature must the engineer apply to the existing configuration to eliminate the problem?

A. Configure MPLS LDP IGP synchronization on the network.
B. Configure MPLS LDP NSR for all LDP sessions.
C. Enable LDP session protection under the routing protocol.
D. Disable IP CEF on routers running LDP and enable LDP.

Correct Answer: B
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/msp/configuration/xe-3s/mp-ha-xe-3sbook/mp-nsr-ldp-supp.pdf

QUESTION 126
After implement MPLS protocol for multiple VRFs on a single Cisco device, the engineer notices all VRFs on the router still do to not LDP session protection feature enabled. Which configuration must the engineer apply to enable the LDP session protection feature FOR LDP neighbors within each VRF?

A. Configure LDP session protection globally on the device only.
B. Configure LDP session protection globally on the device and on each neighbor that requires session protection.
C. Configure LDP session authentication on the device to enable LDP session protection on each VRF automatically.
D. Configure LDP session protection within the individual VRFs.

Correct Answer: D
Section:

QUESTION 127
Refer to the exhibit.

```
RP/0/RP0/CPU0:router(config)# router bgp 65534
RP/0/RP0/CPU0:router(config-bgp)# neighbor 192.168.223.7
RP/0/RP0/CPU0:router(config-bgp-nbr)# remote-as 65507
RP/0/RP0/CPU0:router(config-bgp-nbr)#
```

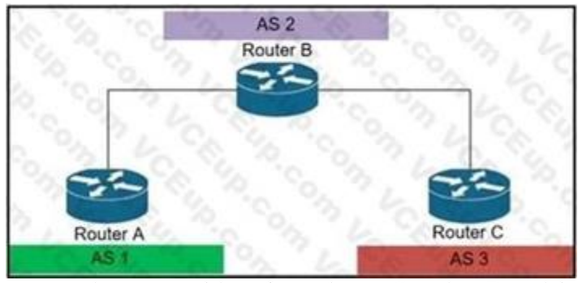
An engineer is securing a customer's network. Which command completes this configuration and the engineer must use to prevent a DoS attack?

A. neighbor ebgp-multihop

B. ebgp-multihop
C. ttl-security
D. neighbor-ttl-security

Correct Answer: C
Section:

QUESTION 128
Refer to the exhibit.



An engineer working for private Service Provider with employee id: 3948:11:613 is configuring the BGPsec framework. Which two conditions must the engineer take into account? (Choose two.)

A. BGPsec uses IPsec tunnel for security.
B. The BGPsec framework secures the AS path.
C. In BGPsec. all route advertisements are given an expiry time by the originator of the route.
D. Private keys are part of the router key pair used to sign route updates.
E. In BGPsec. route advertisements are not given an expiration time by the originator of the route.

Correct Answer: B, C
Section:
Explanation:
https://tools.ietf.org/html/rfc8374#section-3.2

QUESTION 129
Which characteristic describes prefix segment identifier?

A. It contains the interface address of the device per each link.
B. It Is globally unique.
C. It is locally unique.
D. It contains a router to a neighbor.

Correct Answer: B
Section:

QUESTION 130
Refer to the exhibit.

```
router bgp 65515
  aggregate-address 192.168.0.0 255.255.0.0 summary-only as-set
```

An engineer configured BGP summarization on a customer's network. Which route is advertised to BGP peers?

A. 192.0.0.0/16
B. 192168.0.0/16
C. 192.168.1.0/24
D. 192168.0.5/30

Correct Answer: B
Section:

QUESTION 131
Refer to the exhibit.

```
router bgp 100
 address-family ipv4 unicast
 address-family vpnv4 unicast
 !
  neighbor 10.19.20.20
   remote-as 1
   address-family ipv4 unicast
   !
  !
 !
!
commit
!
```

An engineer is trying to implement BGP configuration on a router Which configuration error prevents the ASBR from establishing a BGP neighborship to a directly connected BGP speaker?

A. The routing policy is absent for this Cisco IOS XR eBGP instance.
B. The IPv4 address family configuration under neighbor configuration-mode must be removed.
C. The VPNv4 address family interferes with the 8GP IPv4 address family negotiations.
D. The TCP session parameters are not specified.

Correct Answer: D
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/routers/xr12000/software/xr12k_r41/routing/configuration/guide/routing_cg41xr12k_chapter1.html

QUESTION 132
Refer to the exhibit.

```
R1
interface gigabitethernet1/0/0
   ipv6 enable ipv6 ospf 1 area 1
interface gigabitethernet2/0/0
   ipv6 enable ipv6 ospf 1 area 2
```

An engineer implemented OSPF neighbor relationship on an IOS device. Which configuration must be applied to get the OR/BOR election removed from interfaces running OSPF?

A. ip ospf network broadcast on interfaces running OSPF

B. ip ospf network point-to-point on interfaces running OSPF
C. ip ospf network multipoint-point on interfaces running OSPF
D. ip ospf network non-broadcast on n:erfaces running OSPF

Correct Answer: B
Section:

QUESTION 133
After a possible security breach, the network administrator of an ISP must verify the times that several different users logged into the network. Which command must the administrator enter to display the login time of each user that activated a session?

A. show netconf-yang sessions detail
B. show netconf-yang datastores
C. show platform software yang-management process
D. show netconf-yang sessions

Correct Answer: A
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/iosxml/ios/prog/configuration/167/b_167_programmability_cg/configuring_yang_datamodel.html

```
Device# show netconf-yang sessions detail
R: Global-lock on running datastore
C: Global-lock on candidate datastore
S: Global-lock on startup datastore

Number of sessions     : 1

session-id             : 19
transport              : netconf-ssh
username               : admin
source-host            : 2001:db8::1
login-time             : 2018-10-26T12:37:22+00:00
in-rpcs                : 0
in-bad-rpcs            : 0
out-rpc-errors         : 0
out-notifications      : 0
global-lock            : None
```

QUESTION 134
Refer to the exhibit.

```
R1# show ip bgp summary
Neighbor        V  AS    MsgRcvd  MsgSent  TblVer  InQ  OutQ  Up/Down  State/PfxRcd
11.11.11.11     4  5400  0        0        0       0    0     never    Active

R1
interface Loopback0
   ip address 2.2.2.2 255.255.255.255
interface Ethernet1/0
   ip address 11.11.11.11 255.255.255.0
router bgp 5400
   neighbor 11.11.11.12 remote-as 5400
   neighbor 11.11.11.12 update-source Loopback0
ip route 1.1.1.1 255.255.255.255 11.11.11.12

R2
interface Loopback0
   ip address 1.1.1.1 255.255.255.255
interface Ethernet1/0
   ip address 11.11.11.12 255.255.255.0
router bgp 5400
   neighbor 11.11.11.11 remote-as 5400
   neighbor 11.11.11.11 update-source Loopback0
ip route 2.2.2.2 255.255.255.255 11.11.11.11
```

Router R1 is reporting that its BGP neighbor adjacency to router R2 is down, but its state is Active as shown. Which configuration must be applied to routers R1 and R2 to fix the problem?

A.

```
R1
router bgp 5400
neighbor 2.2.2.2 remote-as 5400

R2
router bgp 5400
neighbor 1.1.1.1 remote-as 5400
```

B.

```
R1
router bgp 5400
  neighbor 11.11.11.11 remote-as 5400
  neighbor 11.11.11.11 update-source Loopback0

R2
router bgp 5400
  neighbor 11.11.11.12 remote-as 5400
  neighbor 11.11.11.12 update-source Loopback0
```

C.

```
R1
router bgp 5400
  neighbor 1.1.1.1 remote-as 5400
  neighbor 1.1.1.1 update-source Loopback0

R2
router bgp 5400
  neighbor 2.2.2.2 remote-as 5400
  neighbor 2.2.2.2 update-source Loopback0
```

D.

```
R1
router bgp 5400
  neighbor 2.2.2.2 remote-as 5400
  neighbor 2.2.2.2 update-source Loopback0

R2
router bgp 5400
  neighbor 1.1.1.1 remote-as 5400
  neighbor 1.1.1.1  update-source Loopback0
```

Correct Answer: C
Section:

QUESTION 135
Refer to the exhibit.

An engineer is configuring path selection on router R1 for two ASNs as shown. Which additional task must the engineer perform on Router 1 so that all outbound traffic utilizes the link between R1 and R3 to reach ASN 4567?

A. Configure a low weigh! on the peer to ASN 4567.
B. Configure a high weight on the peer to ASN 4567.

C. Configure an AS path prepend on the peer to ASN 4567.
D. Configure a high med on the peer to ASN 4567.

Correct Answer: B
Section:

QUESTION 136
A network engineer is deploying VPLS configuration between multiple PE routers so that customer's remote offices have end-to-end LAN connectivity. Which additional configuration should the engineer perform on the PE routers to enable the virtual switch instance?

A.

```
interface Vlan 5
xconnect vfi ciscotest
```

B.

```
l2 vfi ciscotest manual
vpn id 100
neighbor 192.168.2.2 encapsulation mpls
neighbor 192.168.3.3 encapsulation mpls
```

C.

D.

```
interface GigEthernet1/1
switchport mode trunk
switchport trunk encap dot1q
switchport trunk allow vlan 2-10
```

```
interface Vlan 100
xconnect vfi ciscotest
ip address 192.168.1.1 255.255.255
```

Correct Answer: B
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_l2_vpns/configuration/xe-3s/mp-l2-vpnsxe-3s-book/mp-vpls.html#GUID-D5B09E97-F785-4BCD-91F7-8E7C7E5F5A04

QUESTION 137
A network operator needs to implement PIM-SSM multicast configuration on customer's network so that users in different domains are able to access and stream live traffic. Which two actions must the engineer perform on the network to make the streaming work? (Choose two.)

A. Configure at least one MSDP peer on the network
B. Enable IGMP version 2 at the interface lever.
C. Enable PIM sparse mode on the device.
D. Enable IGMP version 3 at the interface level.
E. Enable PM dense mode on the device.

Correct Answer: A, D
Section:

QUESTION 138
Refer to the exhibit.

```
Router(config)# ip access-list standard Suppressed
Router(config-std-nacl)# permit 10.16.6.0 0.0.0.255
Router(config)# route-map SuppressMap
Router(config-route-map)# match ip address Suppressed
```

An engineer is implementing BGP selective prefix suppression. The router must advertise only 10.16.4.0/24,10.16.5.0/24. and summarized route 10.16.0.0/21. and suppress 10.16.6.0/24. Which configuration must the engineer apply to the router?

A.

```
Router (config)# router bgp 300
Router(config-router)# aggregate-address 10.16.6.0 255.255.252.0 as-set suppress-map SuppressMap
```

B.

```
Router (config)# router bgp 300
Router(config-router)# aggregate-address 10.16.0.0 255.255.248.0 as-set suppress-map SuppressMap
```

C.

```
Router (config)# router bgp 300
Router(config-router)# aggregate-address 10.16.6.0 255.255.255.0 as-set suppress-map SuppressMap
```

D.

```
Router (config)# router bgp 300
Router(config-router)# aggregate-address 10.16.0.0 255.255.255.0 as-set suppress-map unSuppressMap
```

Correct Answer: B
Section:

QUESTION 139
Refer to the exhibit.

```
<fvTenant  name="customer">
   <fvCtx name="customervrf"/>
   <fvBD name="bd1">
      <fvRsCtx tnFvCtxName=" customervrf "/>
      <fvSubnet ip="192.168.0.1/24" scope="public"/>
       <fvRsBDToOut tnL3extOutName="l3out1"/>
    </fvBD>/>
</fvTenant>
```

What does this REST API script configure?

A. application profile
B. VRF

C. public community string for SNMP
D. interface with IP address 192.168.0.1

Correct Answer: D
Section:

QUESTION 140
What is the role of NSO in network automation?

A. It is GUI used to manage wireless devices in a campus infrastructure.
B. It Is a type of REST API used to configure an APIC.
C. It is a tool that uses CLl only to configure virtual network devices.
D. It is a tool used to bridge automation to the physical network infrastructure.

Correct Answer: D
Section:
Explanation:
https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/network-servicesorchestrator/datasheet-c78-734576.html
NSO provides a robust bridge linking network automation and orchestration tools with the underlying physical and virtual infrastructure.

QUESTION 141
Which two tasks must an engineer perform when implementing LDP NSF on the network? (Choose two.)

A. Disable Cisco Express Forwarding.
B. Enable NSF for EIGRP.
C. Enable NSF for the link-state routing protocol that is in use on the network.
D. Implement direct connections for LDP peers.
E. Enable NSF for BGP.

Correct Answer: C, E
Section:
Explanation:
LDP NSF works with LDP sessions between directly connected peers and with peers that are not directly connected (targeted sessions).
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_ha/configuration/15-sy/mp-ha-15-sybook/mp-ldp-grace-nsfsso.html

QUESTION 142
Refer to the exhibit.

```
R1
interface Ethernet1/1
   ip address 172.16.33.1 255.255.255.255
interface Ethernet1/0
   ip address 172.16.32.1 255.255.255.0
router ospf 20
   network 172.16.0.0 0.0.255.255 area 0

R2
interface Ethernet1/1
   ip address 172.16.30.1 255.255.255.255
interface Ethernet1/0
   ip address 172.16.32.2 255.255.255.0
router ospf 20
   network 172.16.0.0 0.0.255.255 area 0
   distribute-list 1 in
access-list 1 permit 172.16.32.0. 0.0.0.255

R2# show ip route
172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
C       172.16.32.0/24 is directly connected, Ethernet1/0
C       172.16.30.1/32 is directly connected, Ethernet1/1
```

A network engineer notices that router R2 is failing to install network 172.16.33.1/32 in the routing table. Which configuration must the engineer apply to R2 to fix the problem?

A. R2(config)# access-list 1 permit 172.16.33.0 255.0.0.0
B. R2(config)# access-list 1 permit 172,16,33.0 255,255,255,0
C. R2(config)# access-list 1 permit 172.16.33.0 0.0.0.255
D. R2(config)# access-list 1 permit 172,16,33.0 255.255,0,0

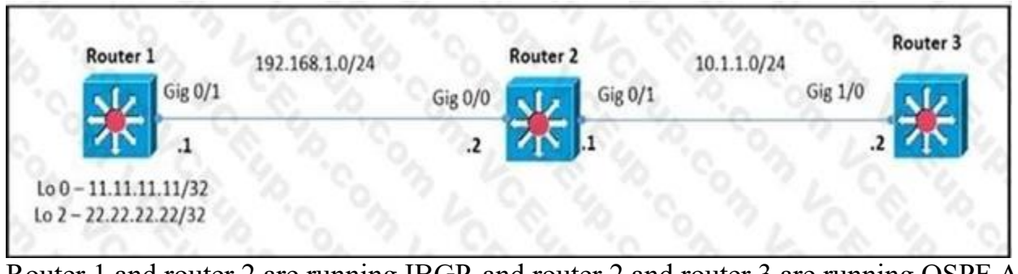
Correct Answer: C
Section:

QUESTION 143
A network engineer has configured TE tunnels in the MPLS provider core. Which two steps ensure traffic traverse? (Choose two.)

A. Static routes is the only option for directing traffic into a tunnel.
B. ECMP between tunnels allows RSVP to function correctly.
C. Forwarding adjacency features allows a tunnel to be Installed in the IGP table as a link.
D. The IGP metric of a tunnel is configured to prefer a certain path
E. A tunnel weight is configured in SPF database the same way as a native link.

Correct Answer: C, D
Section:

QUESTION 144
Refer to the exhibit.



Router 1 and router 2 are running IBGP. and router 2 and router 3 are running OSPF Area 0. Router 1 is advertising loopback interlaces Lo0 and Lo2 and router 2 is redistributing BGP into OSPF Area 0.
Which configuration must an administrator apply so that router 2 uses a route map to redistribute only the internal route from Lo 2?

A.

```
ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.0/24

route-map BGP-To-OSPF permit 10
match ip address prefix-list BGP-to-ospf

router ospf 1
redistribute bgp 100 metric 100 metric-type 1 subnets route-map BGP-To-OSPF
```

B.

```
ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.0/24

route-map BGP-To-OSPF permit 10
match ip address prefix-list BGP-to-ospf

router ospf 1
redistribute bgp 100 route-map BGP-To-OSPF
```

C.

```
ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.22/32

router bgp 100
bgp redistribute-internal

route-map BGP-To-OSPF permit 10
match ip address prefix-list BGP-to-ospf

router ospf 1
redistribute bgp 100 metric 100 metric-type 1 subnets route-map BGP-To-OSPF
```

D.

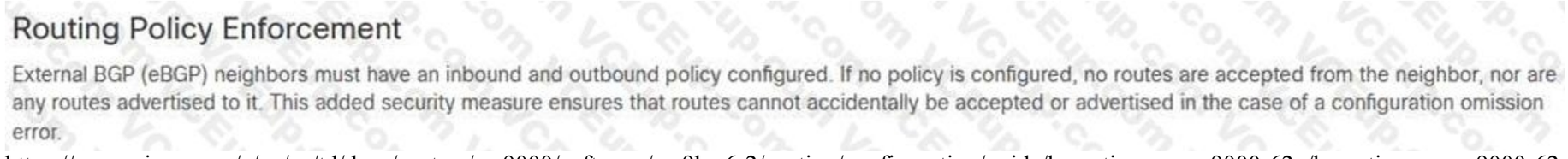
```
ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.0/24

router bgp 100
bgp redistribute-static

route-map BGP-To-OSPF permit 10
match ip address prefix-list BGP-to-ospf

router ospf 1
redistribute bgp 100 metric-type 2 route-map BGP-To-OSPF
```

Correct Answer: C
Section:

QUESTION 145
A remote operation center is deploying a set of l-BGP and E-BGP connections for multiple IOS-XR platforms using the same template. The l-BGP sessions exchange prefixes with no apparent issues, but the E-BGP sessions do not exchange routes. What causes this issue?

A. A PASS ALL policy has no! been implemented for the l-BGP neighbors.
B. The next-hop-self command is not implemented on both E-BGP neighbors.
C. The E-BGP neighbors are not allowed to exchange information doe to the customer platforms default policy.
D. The l-BGP neighbors are mistyped and HELLO packets cannot be exchanged successfully between routers.

Correct Answer: C
Section:
Explanation:



https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/routing/configuration/guide/b-routing-cg-asr9000-62x/b-routing-cg-asr9000-62x_chapter_010.html

QUESTION 146
An engineer working for a private telecommunication company with an employe id:3948:613 needs to limit the malicious traffic on their network. Which configuration must the engineer use to implement URPF loose mode on the GigabitEthernet0/1 interface?

A.

```
router(config)# interface gigabitethernet0/1
router(config-if)# ip address 192.168.200.1 255.255.255.0
router(config-if)# ip verify unicast source reachable-via any
router(config-if)# ipv6 address 2001:DB8:1::1/96
router(config-if)# ipv6 verify unicast source reachable-via any
```

B.

```
router(config)# interface gigabitethernet0/1
router(config-if)# ip address 192.168.200.1 255.255.255.0
router(config-if)# ip verify unicast source reachable-via any
router(config-if)# ipv6 address 2001:DB8:1::1/96
router(config-if)# ipv6 verify unicast source reachable-via rx
```

C.

```
router(config)# interface gigabitethernet0/1
router(config-if)# ip address 192.168.200.1 255.255.255.0
router(config-if)# ip verify unicast source reachable-via rx
router(config-if)# ipv6 address 2001:DB8:1::1/96
router(config-if)# ipv6 verify unicast source reachable-via any
```

D.

```
router(config)# interface gigabitethernet0/1
router(config-if)# ip address 192.168.200.1 255.255.255.0
router(config-if)# ip verify unicast source reachable-via rx
router(config-if)# ipv6 address 2001:DB8:1::1/96
router(config-if)# ipv6 verify unicast source reachable-via rx
```

Correct Answer: A
Section:
Explanation:
"reachable-via any" must be configured for Loose mode on both IPv4 & IPv6.
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec_data_urpf/configuration/xe-3s/sec-dataurpf-xe-3s-book/sec-unicast-rpf-loose-mode.html

QUESTION 147
Refer to the exhibit.

```
R10(config)#interface G0/1
R10(config-if)#ip address 172.16.0.1 255.255.255.0
R10(config-if)#ip ospf 1 area 0
R10(config-if)#ip ospf multi-area 10
R10(config-if)#ip ospf multi-area 10 cost 5
```

A network engineer Is implementing OSPF multiare a. Which command on interface G0/1 resolves adjacency Issues in the new area?

A. Ip ospf network broadcast
B. Ip ospf network non-broadcast
C. Ip ospf network polnt-to-multlpoint
D. Ip ospf network point-to-point

Correct Answer: D
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/xe-16/iro-xe-16-book/iro-multi-area-adj-xe.html

QUESTION 148
What is a constraint of Cisco MPLS TE tunnel configurations?

A. Tunnels cannot span multiple OSPF areas.
B. With ISIS as an IGP. only older-style metrics are used.
C. Tunnels cannot be configured over IP unnumbered links.

D. QoS-aware tunneling is not supported.

Correct Answer: C
Section:
Explanation:

Restrictions for MPLS Traffic Engineering and Enhancements

- MPLS traffic engineering supports only a single IGP process/instance. Multiple IGP processes/instances are not supported and MPLS traffic engineering should not be configured in more than one IGP process/instance.
- MPLS traffic engineering does not support ATM MPLS-controlled subinterfaces.
- The MPLS traffic engineering feature does not support routing and signaling of LSPs over unnumbered IP links. Therefore, do not configure the feature over those links.

QUESTION 149
Refer to the exhibit.

A network administrator is implementing IGMP to enable multicast feed transmission to the receiver.
Which configuration must the administrator deploy on GW1 to permit IGMP Joins only to the assigned (S, G) feed?

A.

```
config t
access-list 100 permit igmp host 0.0.0.0 host 239.10.10.10
access-list 100 deny igmp any any
interface GigabitEthernet1
ip igmp access-group 100
ip igmp version 3
end
```

B.

```
config t
access-list 100 permit igmp host 0.0.0.0 host 239.10.10.10
access-list 100 permit igmp host 172.20.20.3 host 239.10.10.10
access-list 100 deny igmp any any
interface GigabitEthernet1
ip igmp access-group 100
ip igmp version 3
end
```

C.

```
config t
access-list 100 permit igmp host 0.0.0.0 host 239.10.10.10
access-list 100 deny igmp any any
interface GigabitEthernet1
ip igmp access-group 100
ip igmp version 2
end
```

D.

```
config t
access-list 100 permit igmp host 0.0.0.0 host 239.10.10.10
access-list 100 permit igmp host 172.20.20.3 host 239.10.10.10
access-list 100 deny igmp any any
interface GigabitEthernet1
ip igmp access-group 100
ip igmp version 2
end
```

Correct Answer: B
Section:
Explanation:

How IGMP Checks an Extended Access List

When an IGMP extended access list is referenced in the **ip igmp access-group** command on an interface, the (S, G) pairs in the **permit** and **deny** statements of the extended access list are matched against the (S, G) pair of the IGMP reports received on the interface. For example, if an IGMP report with (S1, S2...Sn, G) is received, first the group (0.0.0.0, G) is checked against the access list statements. The convention (0.0.0.0, G) means (*, G), which is a wildcard source with a multicast group number. If the group is denied, the entire IGMP report is denied. If the group is permitted, each individual (S, G) pair is checked against the access list. Denied sources are taken out of the IGMP report, thereby denying the sources access to the multicast traffic.

QUESTION 150
A network engineer Is implementing a QoS policy for outbound management traffic classification and marking on a CPE device with these requirements:
• Management protocols must be marked with DSCP AF class 2 w4h low drop probability.
• Monitoring protocols must be marked with DSCP AF class 1 with low drop probability.
• All remaining traffic must be marked with a DSCP value of 0.
Which configuration must the engineer implement to satisfy the requirements?

A.

```
policy-map cpe-mgmt-policy
  class management
    set ip dscp af21
  class monitoring
    set ip dscp af11
  class class-default
    set ip dscp af0
end
```

B.

```
policy-map cpe-mgmt-policy
  class management
    set ip dscp af23
  class monitoring
    set ip dscp af13
  class class-default
    set ip dscp af0
end
```

C.

```
policy-map cpe-mgmt-policy
  class management
    set ip dscp af21
  class monitoring
    set ip dscp af11
  class class-default
    set ip dscp default
end
```

D.

```
policy-map cpe-mgmt-policy
  class management
    set ip dscp af23
  class monitoring
    set ip dscp af13
  class class-default
    set ip dscp default
end
```

Correct Answer: C
Section:
Explanation:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/4_0/qos/configuration/guide/nexus1000v_qos/qos_6dscp_val.pdf

QUESTION 151
Refer To the exhibit.

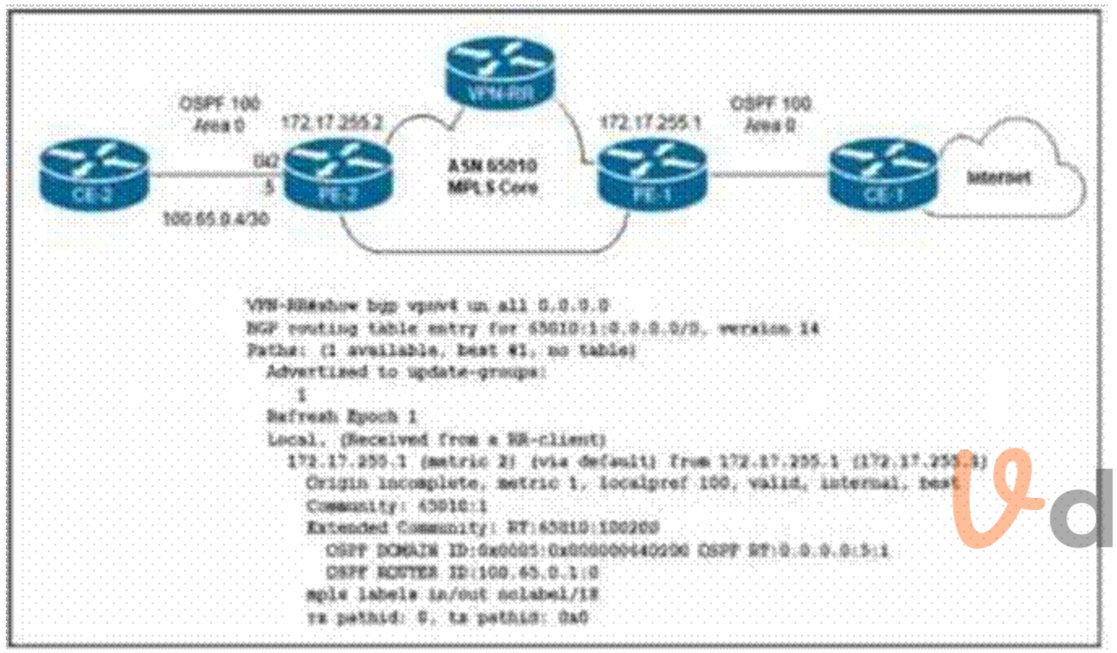
Which BGP attribute should be manipulated to have CE1 use PE1 as the primary path to the Internet?

A. The weight attribute should be manipulated on PE1 on outbound routes advertised to CE1.

B. The MED should be manipulated on CE1 on inbound routes from PE1.
C. The local preference attribute should be manipulated on PE2 on inbound routes advertised to CE1.
D. The origin of all routes should be modified on each router on inbound and outbound routes advertised to CE1.

Correct Answer: B
Section:

QUESTION 152
Refer to the exhibit.



The network engineer who manages ASN 65010 is provisioning a customer VRF named CUSTOMERABC on PE-2. The PE-CE routing protocol is OSPF Internet reachability is available via the OSPF 0 0 0.0/0 route advertised by CE-1 to PE-1 In the customer VRF Which configuration must the network engineer Implement on PE-2 so that CE-2 has connectivity to the Internet?

A.

```
vrf definition CUSTOMER-ABC
rd 65010:1
address-family ipv4
route-target both 65010:1
!
router ospf 100 vrf CUSTOMER-ABC
network 100.65.0.4 0.0.0.3 area 0
redistribute bgp 65010 subnets
default-information originate
!
router bgp 65010
address-family ipv4 unicast vrf CUSTOMER-ABC
redistribute ospf 100 match internal external
```

B.

```
vrf definition CUSTOMER-ABC
rd 65010:2
address-family ipv4
route-target both 65010:100200
!
router ospf 100 vrf CUSTOMER-ABC
network 100.65.0.4 0.0.0.3 area 0
redistribute bgp 65010 subnets
!
router bgp 65010
address-family ipv4 unicast vrf CUSTOMER-ABC
redistribute ospf 100 match internal external
```

C.

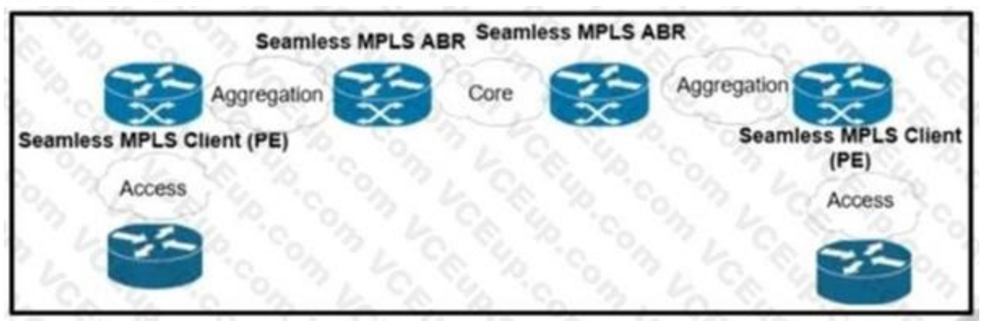
```
vrf definition CUSTOMER-ABC
rd 65010:1
address-family ipv4
route-target both 65010:100200
!
router ospf 100 vrf CUSTOMER-ABC
network 100.65.0.4 0.0.0.3 area 0
redistribute bgp 65010 subnets
default-information originate
!
router bgp 65010
address-family ipv4 unicast vrf CUSTOMER-ABC
redistribute ospf 100 match internal external
```

D.

```
vrf definition CUSTOMER-ABC
rd 65010:2
address-family ipv4
route-target both 65010:1
!
router ospf 100 vrf CUSTOMER-ABC
network 100.65.0.4 0.0.0.3 area 0
redistribute bgp 65010 subnets
!
router bgp 65010
address-family ipv4 unicast vrf CUSTOMER-ABC
redistribute ospf 100 match internal external
```

Correct Answer: C
Section:

QUESTION 153
Refer to the exhibit.



A network operator working for a telecommunication company with an employee 3994:37:650 is implementing a cisco Unified MPLS solution. What is the effect of this implementation?

A. EIGRP is deployed between the PEs and ABRs with RFC 3107.
B. OSPF is deployed between the PEs and ABRs with RFC 3107.
C. IS-IS is deployed between the PEs and ABRs with RFC 3107.
D. BGP is deployed between the PEs and ABRs with RFC 3107.

Correct Answer: D
Section:
Explanation:

QUESTION 154
A network engineer must implement SNMPv2 with these parameters
Enable SNMP community string C1sc0 with read-only permissions.
Enable interface index persistence.
Restrict the SNMP community to only the monitoring server with IP address 198.18 19 100/32.
Provide view-only access to ospflfEntry and ospfNbrEntry.
Which configuration must the engineer apply?

```
configure terminal
access-list 5 permit 198.18.19.100 0.0.0.0
snmp-server view BLOCKED_VIEW internet excluded
snmp-server view BLOCKED_VIEW ospfIfEntry included
snmp-server view BLOCKED_VIEW ospfNbrEntry included
snmp-server community c1sc0 view BLOCKED_VIEW RO 5
snmp ifmib ifindex persist
end
```

```
configure terminal
access-list 5 permit 198.18.19.100 0.0.0.0
snmp-server view BLOCKED_VIEW internet excluded
snmp-server view BLOCKED_VIEW ospfIfEntry included
snmp-server view BLOCKED_VIEW ospfNbrEntry included
snmp-server community c1sc0 view BLOCKED_VIEW RW 5
snmp ifmib ifindex persist
end
```

```
configure terminal
access-list 5 permit 198.18.19.100 0.0.0.0
snmp-server view BLOCKED_VIEW internet included
snmp-server view BLOCKED_VIEW ospfIfEntry included
snmp-server view BLOCKED_VIEW ospfNbrEntry included
snmp-server community c1sc0 view BLOCKED_VIEW RO
snmp ifmib ifindex persist
end
```

```
configure terminal
access-list 5 permit 198.18.19.100 0.0.0.0
snmp-server view BLOCKED_VIEW internet excluded
snmp-server view BLOCKED_VIEW ospfIfEntry included
snmp-server view BLOCKED_VIEW ospfNbrEntry included
snmp-server community c1sc0 view BLOCKED_VIEW RO
snmp ifmib ifindex persist
end
```

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

Correct Answer: A
Section:

QUESTION 155
An engineer must extend Layer 2 Between two campus sites connected through an MPLS backbone that encapsulates Layer 2 and Layer 3 data Which action must the engineer perform on the routers to accomplish this task?

A. Configure a EtherChannel for E-LAN.

B. Configure a pseudowire for E-LINE.
C. Configure Cisco MPLS TE for use with E-TREE.
D. Configure QoS for MPLS and E-ACCESS

Correct Answer: B
Section:

QUESTION 156
The engineering team at a large ISP has been alerted a customer network is experiencing high traffic congestion. After a discussion between the ISP and technical personnel at the customer site, the team agrees that traffic to the customer network that exceeds a specific threshold will be dropped.
Which task must the engineer perform on the network to implement traffic policing changes?

A. Configure RSVP to reserve bandwidth on all interfaces when a path is congested.
B. Enable Cisco Discovery Protocol on the interface sending the packets.
C. Enable Cisco Express Forwarding on the interfaces sending and receiving the packets.
D. Set IP precedence values to take effect when traffic exceeds a given threshold.

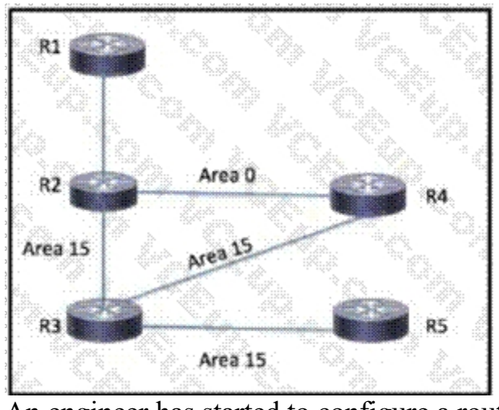
Correct Answer: D
Section:

QUESTION 157
An engineer is implementing IGMP with SSM on a multicampus network that supports video streaming. Which task must the engineer perform as part of the process?

A. Configure the network to use IGMPv3.
B. Configure the network to use bidirectional PIM.
C. Configure an RP that uses static assignments only.
D. Configure the network to use the PIM bsr-candidate

Correct Answer: A
Section:

QUESTION 158
Refer to the exhibit.



An engineer has started to configure a router for OSPF, as shown Which configuration must an engineer apply on the network so that area 15 traffic from R5 to R1 will prefer the route through R4?

A. Place the link between R3 and R5 in a stub area to force traffic to use the route through R4.

B. Increase the cost on the link between R2 and R4, to influence the path over R3 and R4.
C. Implement a multiarea adjacency on the link between R2 and R4, with the cost manipulated to make the path through R4 preferred.
D. Implement a sham link on the between R3 and R2 to extend area 0 area 15.

Correct Answer: B
Section:

QUESTION 159
What is a characteristics of the Pipe model for MPLS QoS?

A. The same QoS policy is applied to all customer traffic on the egress PE.
B. If the outer EXP is changed, it is copied to the DSCP value.
C. The MPLS EXP bits are set by the CE.
D. The DSCP value determines how the packet is forwarded

Correct Answer: A
Section:

QUESTION 160
Refer to the exhibit.

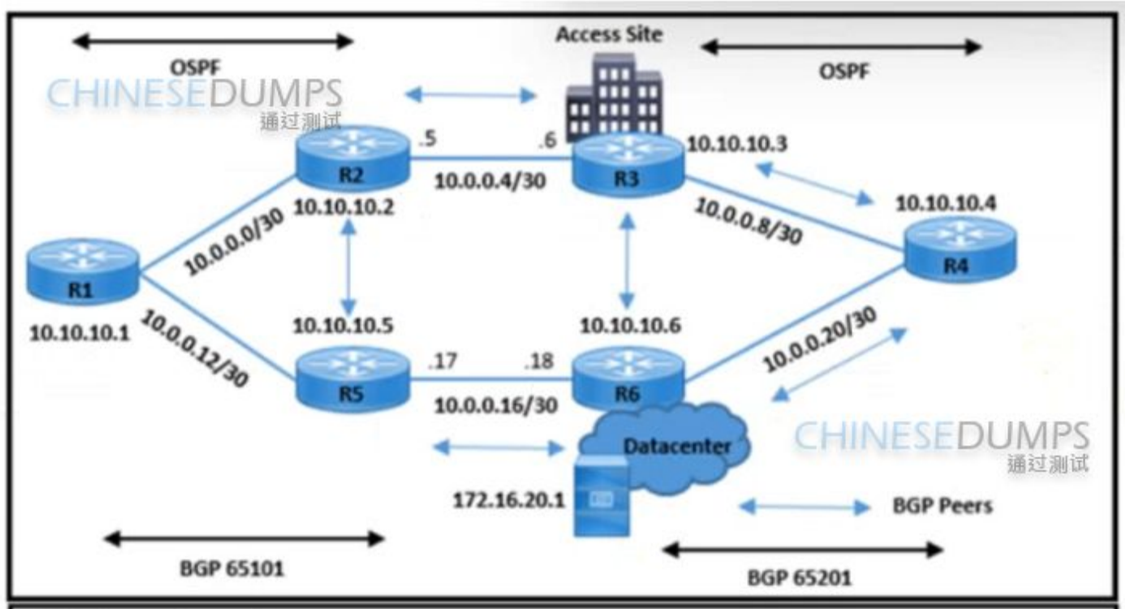
```
GET https://192.168.201.10/api/class/aaaUser.json?
      query-target-filter=eq(aaaUser.lastName,"CiscoTest")
```

Refer to the exhibit. An engineer configured several network devices to run REST APIs. After testing, the organization plans to use REST APIs throughout the network to manage the network more efficiently. What is the effect if this script?

A. It returns an AAA users with the last name CiscoTest.
B. It creates a class map named aaauser with traffic tagged from AAA.
C. It queries the local database to find a user named aaaUser.Json
D. It adds the user CiscoTest to the AAA database located at 192.168.201.10.

Correct Answer: A
Section:

QUESTION 161
Refer to the exhibit.




```
R3#show  ip route
      192.168.30.0/32 is subnetted, 1 subnets
B        192.168.30.1 [200/0] via 10.10.10.4, 00:39:23
      172.16.0.0/32 is subnetted, 2 subnets
O        172.16.20.1 [110/3] via 10.0.0.10, 00:05:39, GigabitEthernet2/0
B        172.16.10.10 [200/0] via 10.10.10.1, 00:39:23
     10.0.0.0/8 is variably subnetted, 15 subnets, 3 masks
C        10.0.0.8/30 is directly connected, GigabitEthernet2/0
O        10.0.0.12/30 [110/3] via 10.0.0.5, 00:41:16, FastEthernet0/0
S        10.10.10.2/32 [1/0] via 10.0.0.5
C        10.10.10.3/32 is directly connected, Loopback0
O        10.0.0.0/30 [110/2] via 10.0.0.5, 00:41:16, FastEthernet0/0

O        10.10.10.1/32 [110/3] via 10.0.0.5, 00:41:16, FastEthernet0/0
O        10.10.10.6/32 [110/2] via 10.0.0.29, 00:41:16, FastEthernet1/0
O        10.10.10.4/32 [110/2] via 10.0.0.10, 00:41:16, GigabitEthernet2/0
C        10.0.0.4/30 is directly connected, FastEthernet0/0
```

```
O       10.10.10.1/32 [110/3] via 10.0.0.5, 00:41:16, FastEthernet0/0
O       10.10.10.6/32 [110/2] via 10.0.0.29, 00:41:16, FastEthernet1/0
O       10.10.10.4/32 [110/2] via 10.0.0.10, 00:41:16, GigabitEthernet2/0
C       10.0.0.4/30 is directly connected, FastEthernet0/0
O       10.10.10.5/32 [110/12] via 10.0.0.5, 00:41:16, FastEthernet0/0
O       10.0.0.24/30 [110/11] via 10.0.0.5, 00:41:16, FastEthernet0/0
C       10.0.0.28/30 is directly connected, FastEthernet1/0
B       10.0.0.16/30 [200/0] via 10.10.10.5, 00:39:23
O       10.0.0.20/30 [110/2] via 10.0.0.10, 00:41:16, GigabitEthernet2/0
     192.168.1.0/32 is subnetted, 1 subnets

R4#show ip route 172.16.20.1
Routing entry for 172.16.20.1/32
  Known via "ospf 10", distance 110, metric 2, type intra area
  Last update from 10.0.0.21 on FastEthernet1/0, 00:06:51 ago
  Routing Descriptor Blocks:
  * 10.0.0.21, from 172.16.20.1, 00:06:51 ago, via FastEthernet1/0
      Route metric is 2, traffic share count is 1
```

Refer to the exhibit. The network operations team reported that the access site that is connected to R3 is not connecting to the application server in the data center and that all packets that are sent from the application server to the access site are dropped. The team verified that OSPF and BGP peerings are up in BGP AS 65101 and BGP AS 65201. R4 is expected to receive traffic from the application server route via OSPF. Which action resolves this issue?

A. Remove the route-map on R4 when advertising 172.16.20.1 in BGP to R3.
B. Advertise application server 172.16.20.1 in the OSPF routing table on R6.
C. Allow 172.16.20.1 in the BGP advertisement on R3 in the route-map.
D. Add the next-hop-self command on R6 to enable R3 iBGP peering.

Correct Answer: D
Section:

QUESTION 162
Refer to the exhibit.

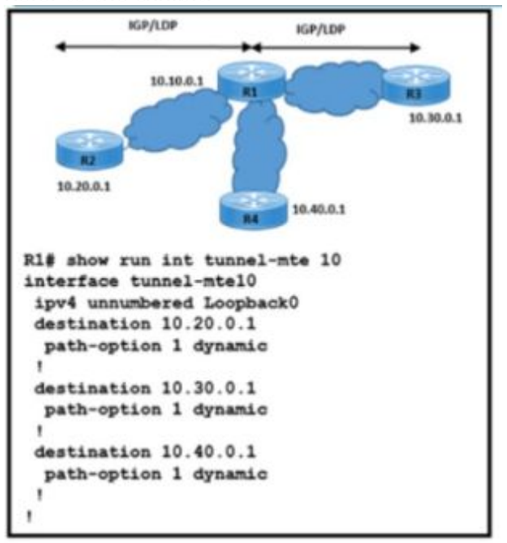
```
<l3extOut name="l3out1">
   <l3extLNodeP name="cisconode1">
      <bgpPeerP addr="192.168.1.2">
         <bgpAsP asn="65514"/>
      </bgpPeerP>
   </l3extLNodeP>
   <bgpExtP/>
</l3extOut>
```

Refer to the exhibit. A global company plans to implement BGP at its newest location to provide connectivity to other offices. The global infrastructure of the company is a multivendor environment. An engineer must review the BGP core configurations at headquarters to determine if they can be repurposed at the new location. The engineer copied this JSON script for review. What is the effect of the script?

A. It configures BGP with neighbor 192.168.1.2 residing in AS 65514.
B. It sets the BGP router-ID to 192.168.1.2 and sets the AS of the router to 65514.
C. It configures BGP on the device and inserts 192.168.1.0/24 into the BGP table using the origin AS 65514.
D. It configures a VRF named cisconode1 and a BGP instance using the VPNv4 address family.

Correct Answer: A
Section:

QUESTION 163
Refer to the exhibit.

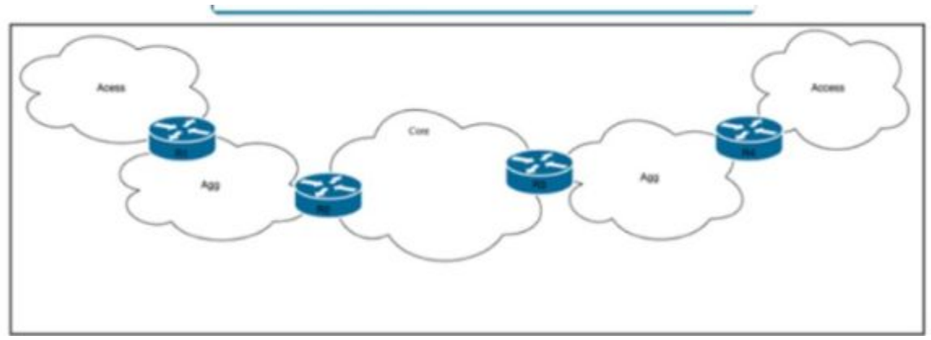


Refer to the exhibit. An engineer must Implement a traceroute operation to verity the R1 point-to-multipoint LSP connections. The traceroute operation must return all labels and hop-by-hop IP addresses for destinations 10.20.0.1. 10.30.0.1, and 10.40.0.1. and the maximum number of hops is 4. Which command must be executed to meet the requirements?

A. traceroute mpls traffic-eng tunnel-mte 10 ttl 4
B. traceroute mpls traffic-eng tunnel-mte 10 responder-id 10.40.0.1
C. traceroute mpls ipv4 10.30.0.1/32 fee-type generic
D. traceroute mpls ipv4 10.20.0.1/32 ttl 4

Correct Answer: A
Section:

QUESTION 164
Refer to the exhibit.



Refer to the exhibit. Tier 1 ISP A purchased several Tier 2 ISPs to increase their customer base and provide more regional coverage. ISP A plans to implement MPLS services in the access layer, with scalability up to 100.000 devices In one packet network and service recovery up to 50 ms. The network architect decided to use different independent IGP and LDP domains and interconnect LSPs that are based on RFC 3107. Which two actions must the network engineer perform to meet the requirements? (Choose two.)

A. Implement BGP PIC core functionality on routers R2 and R3.
B. Configure three OSPF areas, with Area 0 In the core domain, and Areas 2 and 3 in the aggregation domain.
C. Implement BGP connectivity between routers R1 and R4 with VPNv4 address family enabled.
D. Implement BGP inline RR functionality with next-hop-self capabilities on routers R2 and R3.
E. Implement the IS-IS routing protocol on the access domain.

Correct Answer: A, D
Section:

QUESTION 165
Refer to the exhibit.

```
import  import
from requests. auth import HTTPBasicAuth
auth = HTTPBasicAuth('cisco_device', 'cisco_device')
headers = { 'Accept': 'application/yang-data+json', 'Content-Type': 'application/yang-data+json' }
url = "https://172.168.211.65/restconf/data/Cisco-IOS-XE-native:native/interface/GigabitEthernet=0/1
payload = """
{
  "Cisco-IOS-XE-native:GigabitEthernet": {
    "ip": {
      "address": {
        "primary": {
          "address": "10.1.131.112",
          "mask": "255.255.255.252"
        }
      }
    }
  }
}
"""
response = requests.patch(url, verify=False)
print ("Done" + response.status)
```

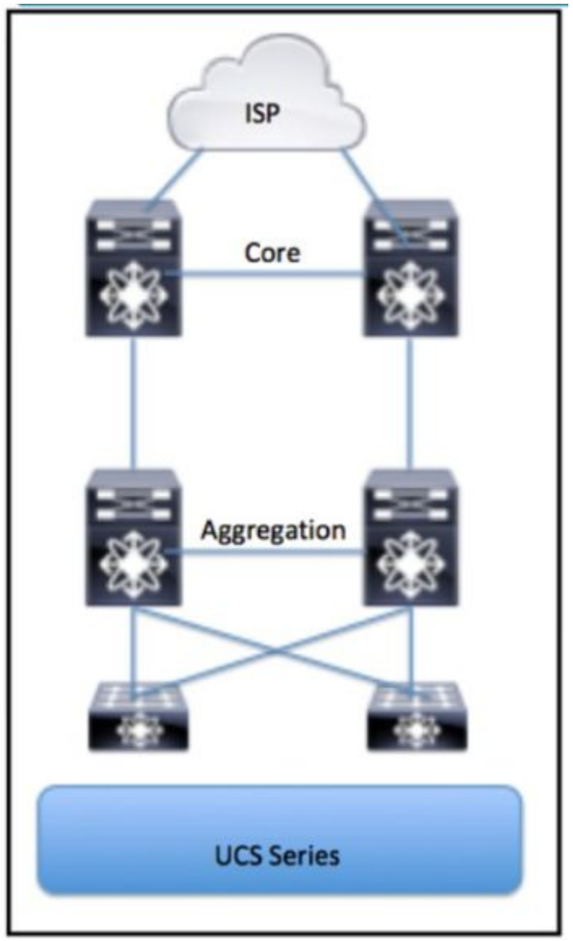
Refer for the exhibit. To optimize network operations, the senior architect created this Python 3.9 script for network automation tasks and to leverage Ansible 4.0 playbooks. Devices In the network support only RFC 2617-based authentication What does the script do?

A. The script logs in via SSH and configures interface GigabitEthernetO/1 with IP address 10.1.131.112/30.
B. The script leverages REST API calls and configures Interface GlgabilEthemet0/1 with IP address 10.1.131.112/30.

C. The script performs a configuration sanity check on the device with IP address 172.168.211.65 via HTTP and returns an alert If the payload field falls to match.
D. The script parses the JSON response from the router at IP address 172 168.211.65 and checks If the interface GigaWtEthernet0/1 with IP address 10.1.131.112 exists on the router.

Correct Answer: D
Section:

QUESTION 166
Refer to the exhibit.



Refer to the exhibit. Which part of the diagram will host OpenStack components?

A. Aggregation
B. UCS Series
C. Access
D. Core

Correct Answer: C
Section:

QUESTION 167
Refer to the exhibit.

```
Notification host: 192.168.101.1   udp-port: 162  type: trap
user: community1    security model: v1
```

Refer to the exhibit. Over the last few months. ISP A has doubled Its user base. The IT Director asked the engineering team to monitor memory consumption and buffer statistics on all P and PE devices In the MPLS core. Most devices have CPU usage of 70% or more, so the solution must be targeted and secure. Which two commands must the engineering team implement on P and PE devices to meet these requirements? (Choose two.)

A. snmp-server host 192.168.101.1 version 3 auth community1 memory
B. snmp-server enable traps memory bufferpeak
C. snmp-server host 192.168.101.1 version 2c community1 memory
D. snmp-server host 192.168.101.1 version 1 community1 auth memory
E. snmp-server enable snmp-traps community1 bufferpeak

Correct Answer: A, B
Section: