Custom View Settings

Topic 1 - Single Topic

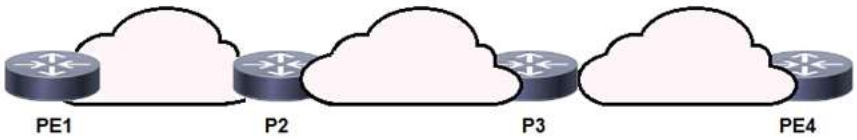
Question #1 *Topic 1*

DRAG DROP -
Drag and drop the OSs from the left onto the correct descriptions on the right.
Select and Place:

Answer Area

IOS XR	It is a monolithic architecture that runs all modules on one memory space.
IOS	It runs over a Linux platform and pulls the system functions out of the main kernel and into separate processes.
IOS XE	It segments ancillary processes into separate memory spaces to prevent system crashes from errant bugs.

Question #2 *Topic 1*



Refer to the exhibit. P3 and PE4 are at the edge of the service provider core and serve as ABR routers. Aggregation areas are on either side of the core.
Which statement about the architecture is true?

A. To support seamless MPLS, the BGP route reflector feature must be disabled.

B. If each area is running its own IGP, BGP must provide an end-to-end MPLS LSP.

C. If each area is running its own IGP, the ABR routers must redistribute the IGP routing table into BGP.

D. To support seamless MPLS, TDP must be used as the label protocol.

Question #3 *Topic 1*

Which component is similar to an EVPN instance?

A. router distinguisher

B. MPLS label

C. IGP router ID

D. VRF

Question #4 *Topic 1*

Why do Cisco MPLS TE tunnels require a link-state routing protocol?

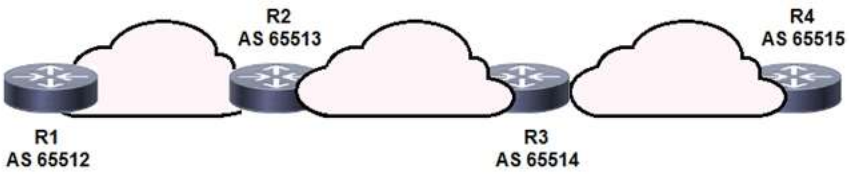
A. The link-state database provides segmentation by area, which improves the path-selection process.

B. The link-state database provides a data repository from which the tunnel endpoints can dynamically select a source ID.

C. Link-state routing protocols use SPF calculations that the tunnel endpoints leverage to implement the tunnel.

D. The tunnel endpoints use the link-state database to evaluate the entire topology and determine the best path.

Question #5 *Topic 1*



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 iBGP peers are appended with a community of local-as.

B. BGP updates from the all BGP peers are appended with a community of no-export.

C. BGP updates from the eBGP peers are appended with an additional AS path value that is statically set by the domain administrator.

D. BGP updates from the eBGP peers are appended with a BGPsec attribute sequence that includes a public key hash and digital signature.

Question #6 *Topic 1*

You are configuring MPLS traffic-engineering tunnels in the core. Which two ways exist for the tunnel path across the core? (Choose two.)

A. The dynamic path option is supported only with IS-IS.

B. Tunnels can be configured with dynamic path or explicitly defined path.

C. A zero bandwidth tunnel is not a valid option.

D. The bandwidth statement creates a ƛ€hardƛ€ reservation on the link.

E. Tunnel links inherit IGP metrics by default unless overridden.

Question #7 *Topic 1*

Which configuration mode do you use to apply the mpls ldp graceful-restart command in IOS XE Software?

A. MPLS LDP neighbor

B. interface

C. MPLS

D. global

Question #8 *Topic 1*

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 EGP and IGP to operate independently.

B. It enables you to choose whether to separate or centralize each individual service.

C. It is easier to manage a system in which services are mixed.

D. It requires only one edge router.

Question #9 *Topic 1*

Which statement about the Cisco MPLS TE forwarding adjacency feature is true?

A. It enables the MPLS core to use EIGRP as the routing protocol.

B. It enables the Cisco MPLS TE tunnel to be advertised into the running IGP.

C. It enables the tailend router to advertise routes to the headend router over the tunnel.

D. It enables the headend and tailend routers to establish a bidirectional tunnel.

Question #10 *Topic 1*

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. to 2.2.2.2, with a TTL of 2 or 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. from 2.2.2.2, with a TTL of 253 or more

Question #11 *Topic 1*

```
ip flow-export destination 192.168.1.2
ip flow-export version 9

interface gigabitethernet0/1
 ip flow ingress
```

Refer to the exhibits. Which information is provided for traceback analysis when this configuration is applied?

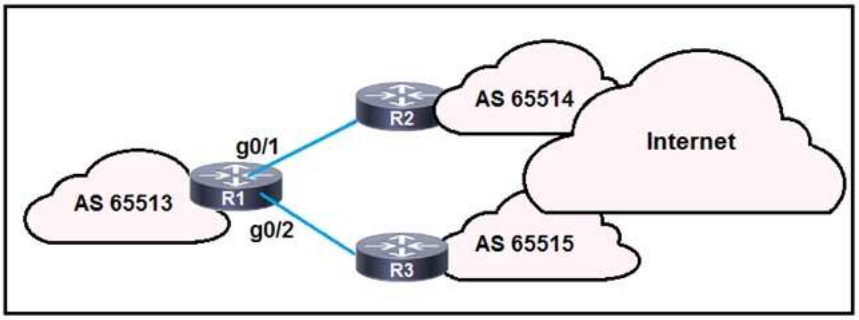
A. source interface

B. packet size distribution

C. IP sub flow cache

D. BGP version

Question #12 *Topic 1*



Refer to the exhibit. R1 is connected to two service providers and is under a DDoS attack.
Which statement about this design is true if URPF in strict mode is configured on both interfaces?

A. R1 drops all traffic that ingresses either interface that has a FIB entry that exits a different interface.

B. R1 drops destination addresses that are routed to a null interface on the router.

C. R1 permits asymmetric routing as long as the AS-PATH attribute entry matches the connected AS.

D. R1 accepts source addresses on interface gigabitethernet0/1 that are private addresses.

Question #13 *Topic 1*

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

Refer to the exhibit. Router 1 was experiencing a DDoS attack that was traced to interface gigabitethernet0/1.
Which statement about this configuration is true?

A. Router 1 accepts all traffic that ingresses and egresses interface gigabitethernet0/1.

B. Router 1 drops all traffic that ingresses interface gigabitethernet0/1 that has a FIB entry that exits a different interface.

C. Router 1 accepts source addresses that have a match in the FIB that indicates it is reachable through a real interface.

D. Router 1 accepts source addresses on interface gigabitethernet0/1 that are private addresses.

```
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
```

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

A. Router 2 is the router receiving the DDoS attack.

B. Router 1 must be configured with uRPF for the RTBH implementation to be effective.

C. Router 1 is the trigger router in a RTBH implementation.

D. Router 2 must configure a route to null 0 for network 192.168.1.0/24 for the RTBH implementation to be complete.

Question #15 *Topic 1*

Which configuration modifies Local Packet Transport Services hardware policies?

A.

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

B.

```
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
 !
```

C.

```
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
 !
```

D.

```
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
```

Question #16 *Topic 1*

Which additional feature does MPLS DiffServ tunneling support?

A. matching EXP and DSCP values

B. PHB layer management

C. using GRE tunnels to hide markings

D. interaction between MPLS and IGP

Question #17 *Topic 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 tailend router?

A. path

B. tear

C. error

D. reservation

Question #18 *Topic 1*

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

A. It provides multivendor configuration capabilities for Layer 3 to Layer 1.

B. It automatically provisions, monitors, and manages traffic across Layer 0 to Layer 3.

C. It supports dynamic wavelength restoration in Layer 0.

D. It minimizes human error configuring converged networks.

Question #19 *Topic 1*

DRAG DROP -
Drag and drop the technologies from the left onto the correct definitions on the right.
Select and Place:

Answer Area

DWDM	required for routes and switches to have DWDM and ITU-T G.709 implemented
ROADM	used to amplify an optical signal
IPoDWDM	used to drop certain lambdas within a DWDM ring at a specific location
EDFA	increases bandwidth over a single fiber by using different wavelengths

Question #20 *Topic 1*

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
    !
```

Question #21 *Topic 1*

```
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
```

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

A. Router 1 and Router 2 advertise the route to 192.0.2.0 to all BGP peers.

B. All traffic to 192.168.1.0/24 is dropped.

C. All traffic is dropped.

D. Router 1 drops all traffic with a local-preference set to 150.

Question #22 *Topic 1*

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

A. The Internet gateway router is connected as a PE router to the MPLS backbone.

B. The CE router supports VRF-Lite and the full BGP routing table.

C. The Internet gateway inserts the full Internet BGP routing table into the Internet access VPN.

D. The customer that needs the Internet access service is assigned to the same RTs as the Internet gateway.

Question #23 *Topic 1*

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

A. flowspec address-family ipv4 local-install interface-all

B. flowspec address-family ipv4 install interface-all local

C. flowspec address-family ipv4 install interface-all

D. flowspec address-family ipv4 local-install all-interface

Question #24 *Topic 1*

```
CE1#
interface FastEthernet/0/0/1
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
```

Refer to the exhibit. 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. OSPF does not work with L2VPN services.

B. The routing protocol network types are not compatible.

C. A loopback with a /32 IP address has not been used.

D. The xconnect statement has not been defined.

Question #25 *Topic 1*

An engineer working for telecommunication company 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 identify the prefix list with a number only.

B. The final entry in a prefix list must be /32.

C. An engineer must include only the prefixes for which he needs to log activity.

D. An engineer must use nonsequential sequence numbers in the prefix list so that he can insert additional entries later.

Question #26 *Topic 1*

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

Refer to the exhibit. Which effect of this configuration is true?

A. It enables MPLS on the interface.

B. It creates a pseudowire class named cisco.

C. It enables AToM on interface gigabitethernet1/0.

D. It enables tagging for VLAN 12 on the interface.

Question #27 *Topic 1*

```
PE-A#show ip bgp vpnv4 vrf Customer-A neighbors 10.10.10.2 routes
  BGP table version is 13148019, local router ID is 10.10.10.10
  Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
                r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
                x best-external, a additional-path, c RIB-compressed,
  Origin codes: i - IGP, e - EGP, ? - incomplete
  RPKI validation codes: V valid, I invalid, N Not found

     Network          Next Hop            Metric LocPrf Weight Path
 Route Distinguisher: 65000:1111 (default for vrf Customer-A)
 *>    192.168.0.0/19    10.10.10.2               0         0 4282 65001 ?
 *>    192.168.0.0/17    10.10.10.2               0         0 4282 65001 ?
 *>    192.168.0.0/16    10.10.10.2               0         0 4282 65001 ?

Total number of prefixes 5

PE-A#config t
  Enter configuration commands, one per line. End with CNTL/Z.
  PE-A(config)#ip prefix-list ALLOW permit 192.168.0.0/16 ge 17 le 19
  PE-A(config)#router bgp 65000
  PE-A(config-router)#address-family ipv4 vrf Customer-A
  PE-A(config-router-af)#neighbor 10.10.10.2 prefix-list ALLOW in
```

Refer to the exhibit. Which three outcomes occur if the prefix list is added to the neighbor? (Choose three.)

A. 192.168.0.0/16 is denied.

B. 192.168.0.0/16 is permitted.

C. 192.168.0.0/19 is permitted

D. 192.168.0.0/19 is denied.

E. 192.168.0.0/17 is permitted

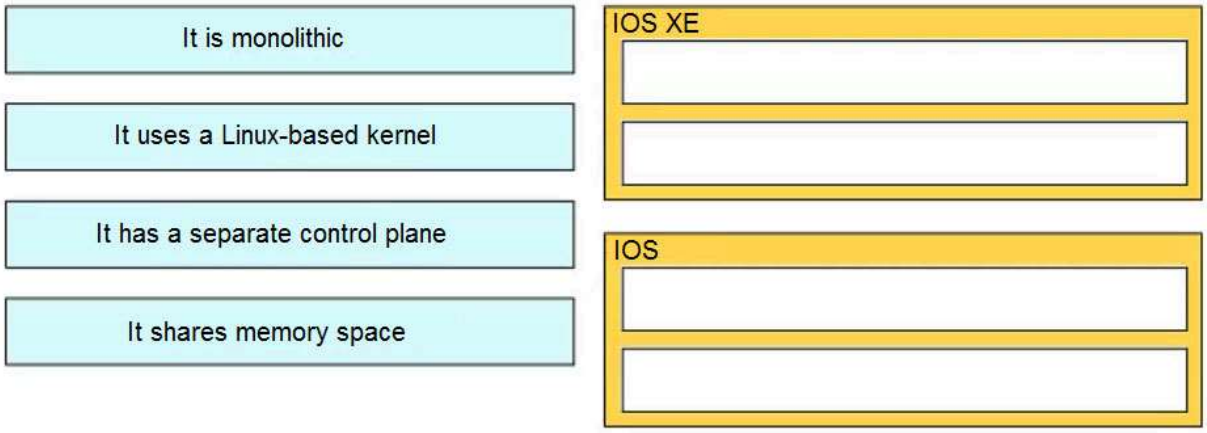
F. 192.168.0.0/17 is denied.

Question #28 *Topic 1*

DRAG DROP -

Drag and drop the descriptions from the left onto the corresponding OS types on the right.

Select and Place:



Question #29 *Topic 1*

What does DWDM use to combine multiple optical signals?

A. IP protocols

B. wavelength

C. time slots

D. frequency

Question #30 *Topic 1*

```
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
```

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

A. The policy is configured locally on CSR1 and drops all traffic for TCP ports 80 and 443

B. The policy is configured locally on CSR1 and currently has no active traffic

C. The policy is learned via BGP FlowSpec and drops all traffic for TCP ports 80 and 443

D. The policy is learned via BGP FlowSpec and has active traffic

Question #31 *Topic 1*

```
interface gigabitethernet 0/2
 no ip directed-broadcast
```

Refer to the exhibit. Which type of DDoS attack will be mitigated by this configuration?

A. teardrop attack

B. smurf attack

C. SYN flood

D. SIP INVITE flood attacks

Question #32 *Topic 1*

```
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
-------------------------------------------------
```

Refer to the exhibit. While troubleshooting the network, a network operator with an employee id: 1234:55:678 is trying to ping XR1. Which result should the operator expect when trying to ping to an XR1 local address?

A. All ICMP traffic is dropped

B. All ICMP traffic responds successfully

C. ICMP traffic works at a policed rate of 19 bytes per second every 100 ms

D. ICMP traffic works at a policed rate of 19 packets every 100 ms

Question #33 *Topic 1*

```
!
configure terminal
ip cef distributed

interface gigabitethernet 1/0
ip verify unicast reverse-path 12

!
```

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

A. show cef interface

B. show ip traffic

C. show ip interface

D. show ip interface brief

Question #34 *Topic 1*

```
Router 1:

tacacs-server host 192.168.1.2 single-connection
tacacs-server key ciscotest
```

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

Question #35 *Topic 1*

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

A. IntServ

B. CB-WFQ

C. DiffServ

D. MQC

Question #36 *Topic 1*

```
Control Plane Interface
Service policy CoPP-normal
Hardware Counters:
class-map: CoPP-normal (match-all)
Match: access-group 100
police :
6000 bps 1000 limit 1000 extended limit
Earl in slot 3:
0 bytes
5 minute offered rate 0 bps
aggregate-forwarded 0 bytes action: transmit
exceeded 0 bytes action: drop
aggregate-forward 0 bps exceed 0 bps
Earl in slot 5 :
0 bytes
5 minute offered rate 0 bps
aggregate-forwarded 0 bytes action: transmit
exceeded 0 bytes action: drop
aggregate-forward 0 bps exceed 0 bps
```

Refer to the exhibit. Which show command shows statistics for the control plane policy and is used to troubleshoot?

A. show control-plane CoPP

B. show policy control-plane

C. show control-plane

D. show policy-map control-plane

Question #37 *Topic 1*

```
line vty 0 4
   access-class 100 in
   transport input ssh
   login local
line vty 5 15
   access-class 100 in
   transport input ssh
   login local
```

Refer to the exhibit. An engineer has started to configure a router for secure remote access as shown. All users who require network access need to be authenticated by the SSH protocol. Which two actions must the engineer implement to complete the SSH configuration? (Choose two.)

A. Configure an IP domain name.

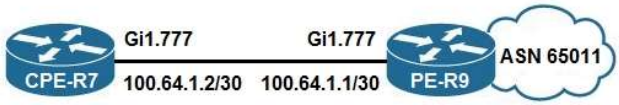
B. Configure ACL 100 to permit access to port 22.

C. Configure a password under the vty lines.

D. Configure crypto keys.

E. Configure service password encryption.

Question #38 *Topic 1*




```
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
```

Refer to the exhibit. 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 range 49152 65535 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 eq 22 100.64.0.0 0.31.255.255 eq 22

Question #39 *Topic 1*

```
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
```

Refer to the exhibit. 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 0.0.0.255

B. R2(config)# access-list 1 permit 172.16.33.0 255.255.0.0

C. R2(config)# access-list 1 permit 172.16.33.0 255.255.255.0

D. R2(config)# access-list 1 permit 172.16.33.0 255.0.0.0

Question #40 *Topic 1*

Which two PHY modes are available to implement an IOS XR 10 Gigabit Ethernet interface? (Choose two.)

A. LAN

B. SONET

C. MAN

D. WAN

E. WDWM

Question #41 *Topic 1*

Which CLI mode must be used to configure the BGP keychain in Cisco IOS XR Software?

A. routing configuration mode

B. BGP neighbor configuration mode

C. global configuration mode

D. BGP address-family configuration mode

Question #42 *Topic 1*

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

A. The I-BGP neighbors are mistyped and HELLO packets cannot be exchanged successfully between routers.

B. The E-BGP neighbors are not allowed to exchange Information due to the customer platform's default policy.

C. A PASS ALL policy has not been implemented for the I-BGP neighbors.

D. The next-hop-self command is not implemented on both E-BGP neighbors.

Question #43 *Topic 1*

```
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)#
```

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

A. neighbor ttl-security

B. ebgp-multihop

C. neighbor ebgp-multihop

D. ttl-security

Question #44 *Topic 1*

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 deep inspection of data payload fields.

C. It allows receivers to correct errors upon data arrival

D. It allows source nodes to discard payload errors before transmitting data on the network.

Question #45 *Topic 1*

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 points for the customer AS?

A. lowest multi-exit discriminator

B. highest local preference outbound

C. lowest local preference inbound

D. highest local preference inbound

Question #46 *Topic 1*

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

A. IP address

B. subnet mask

C. interface cost

D. process ID

E. area number

F. hello timer setting

Question #47 *Topic 1*

```
R1
interface fastethernet1/0
        ip address 192.168.2.14 255.255.255.0
        ip ospf message-digest-key 1 md5 cisco
        ip ospf authentication message-digest
```

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 OSPF peer must use clear-text authentication.

B. The OSPF peer must be configured as an OSPF stub router.

C. The interface on the OSPF peer may have a different key ID, but it must use the same key value as the configured interface.

D. The interface on the OSPF peer must use the same key ID and key value as the configured interface.

Question #48 *Topic 1*

DRAG DROP -

Drag and drop the OSPF area types from the left onto the correct statements on the right.

Select and Place:

Answer Area

backbone	required area that allows interarea communication
not-so-stubby	area that can learn interarea routes and the default route
stub	area that can learn only the default route and routes within its own area
totally stubby	area that can serve as a redistribution point for external routes to enter the OSPF domain

Question #49 *Topic 1*

```
router bgp 1
network 192.168.1.2 mask 255.255.255.255
neighbor 192.168.1.1 remote-as 64512
neighbor 192.168.1.1 update-source Loopback0
neighbor 192.168.1.1 send-label
```

Refer to the exhibit. Which statement about the neighbor statements for 192.168.1.1 is true?

A. The router sends BGP labels for its prefixes to this peer.

B. The router must have TDP configured for the send-label command to operate.

C. The neighbor router receives at least four labels from this router.

D. The router sends only a label for the prefix for Loopback0.

Question #50 *Topic 1*

```
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
```

Refer to the exhibit. 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 areas.

Question #51 *Topic 1*

```
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
 !

R1#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
```

Refer to the exhibit. Which configuration prevents the OSPF neighbor from establishing?

A. default-metric

B. duplex

C. network statement

D. mtu

Question #52 *Topic 1*

```
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
```

Refer to the exhibit. 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 f0/0 interfaces to form OSPF adjacency?

A. ip ospf network point-to-multipoint non-broadcast

B. ip ospf network non-broadcast

C. ip ospf network broadcast

D. ip ospf network point-to-point

Question #53 *Topic 1*

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

A. Enable NSF for BGP.

B. Implement direct connections for LDP peers.

C. Enable NSF for EIGRP.

D. Disable Cisco Express Forwarding.

E. Enable NSF for the link-state routing protocol that is in use on the network.

Question #54 *Topic 1*

```
R2#sh cins 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
```

Refer to the exhibit. 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
R2           L2   Fa0/0       UP    9         R2.01
```

B.

```
Tag TEST:
System Id    Type Interface   IP Address      State Holdtime Circuit Id
R2           L2   Fa0/0       UP    7         R2.01
R2           L2   Fa0/0       UP    9         R2.01
```

C.

```
Tag TEST:
System Id    Type Interface   IP Address      State Holdtime Circuit Id
R2           L2   Fa0/0       UP    9         R2.01
```

D.

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

Question #55 *Topic 1*

```
R1
interface fastethernet1/0
     ip address 192.168.1.3 255.255.255.0
router bgp 65000
     router-id 192.168.1.1
     neighbor 192.168.1.2 remote-as 65012

R2
interface fastethernet1/0
     ip address 192.168.1.2 255.255.255.0
router bgp 65012
     router-id 192.168.1.1
     neighbor 192.168.1.3 remote-as 65000
     neighbor 192.168.1.3 local-as 65112
```

Refer to the exhibit. Assume all other configurations are correct and the network is otherwise operating normally.
Which conclusion can you draw about the neighbor relationship between routers R1 and R2?

A. The neighbor relationship is up.

B. The neighbor relationship will be up only if the two devices have activated the correct neighbor relationships under the IPv4 address family.

C. The neighbor is down because the local-as value for R2 is missing in the R1 neighbor statement.

D. The neighbor relationship is down because R1 believes R2 is in AS 65012.

Question #56 *Topic 1*

```
R1

router bgp 65000
  router-id 192.268.1.1
  neighbor 192.168.1.2 remote-as 65001
  neighbor 192.168.1.2 password cisco
```

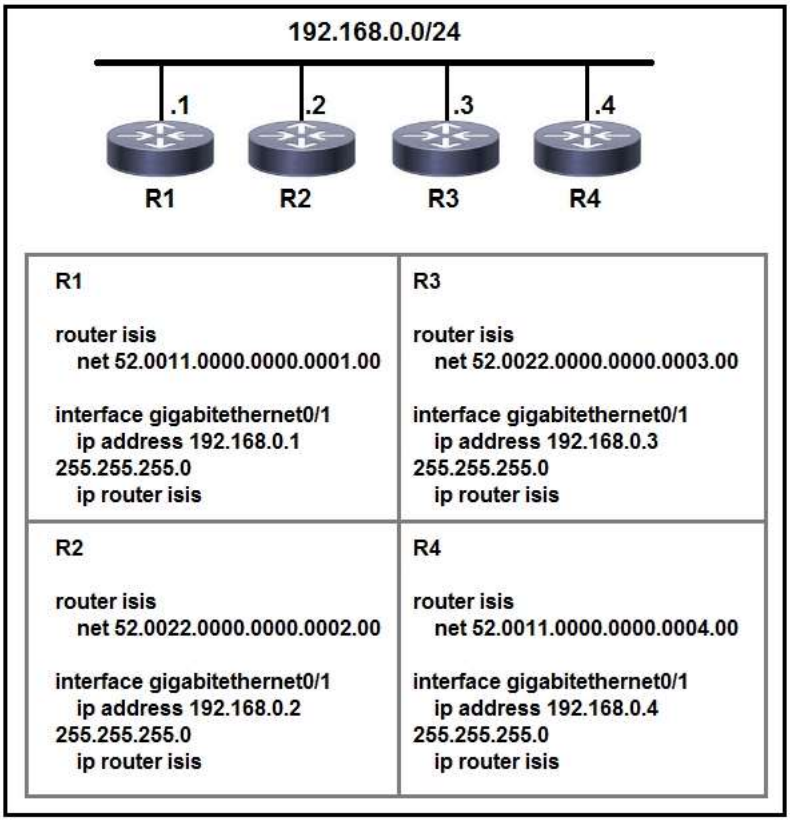
Refer to the exhibit Router R1 and its peer R2 reside on the same subnet in the network. If an engineer implements this configuration to R1, how does it make connections to R2?

A. R1 establishes TCP connections that are authenticated with a clear-text password.

B. R1 establishes UDP connections that are authenticated with an MD5 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.



Refer to the exhibit. Which two statements about the IS-IS topology are true? (Choose two.)

A. R1 and R4 are Level 2 neighbors.

B. All four routers are operating as Level 1-2 routers.

C. All four routers are operating as Level 2 routers only.

D. All four routers are operating as Level 1 routers only.

E. R1 and R2 are Level 2 neighbors.

Question #58 *Topic 1*

```
"*Apr 30 14:33:43.619: %CLNS-4-AUTH_FAIL: ISIS: LAN IIH authentication failed".
```

```
R1#show isis neighbors

Tag TEST:
System Id    Type Interface   IP Address      State Holdtime Circuit Id
R2           L2   Fa0/0       UP    9         R2.01

R2#show isis neighbors

Tag TEST:
System Id    Type Interface   IP Address      State Holdtime Circuit Id
R2           L1   Fa0/0       INIT  22        R2.01
R2           L2   Fa0/0       UP    24        R2.01
```

Refer to the exhibits. R1 and R2 are directly connected and IS-IS routing has been enabled between R1 and R2. R1 generates the above log message periodically.
Based on this output, which statement is true?

A. IS-IS neighbor authentication is failing for Level 2 PDUs only.

B. IS-IS neighbor authentication is failing for Level 2 first and then for Level 1 PDUs.

C. IS-IS neighbor authentication is failing for Level 1 and Level 2 PDUs.

D. IS-IS neighbor authentication is failing for Level 1 PDUs only.

Question #59 *Topic 1*

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

A. origin

B. AS path

C. local preference

D. weight

Question #60 *Topic 1*

```
PE-A#config t
PE-A(config)#interface FastEthernet0/0
PE-A(config-if)#ip ospf message-digest-key 1 md5 44578611
PE-A(config-if)#ip ospf authentication message-digest

PE-B#config t
PE-B(config)#interface FastEthernet0/0
```

Refer to the exhibit. An engineer wants to authenticate the OSPF neighbor between PE-A and PE-B using MD5.
Which command on PE-B successfully completes the configuration?

A. PE-B(config-if)#ip ospf message-digest-key 1 md5 44578611 PE-B(config-if)#ip ospf authentication null

B. PE-B(config-if)#ip ospf message-digest-key 1 md5 44578611 PE-B(config-if)#ip ospf authentication key-chain 44578611

C. PE-B(config-if)#ip ospf message-digest-key 1 md5 44568611 PE-B(config-if)#ip ospf authentication null

D. PE-B(config-if)#ip ospf message-digest-key 1 md5 44578611 PE-B(config-if)#ip ospf authentication message-digest

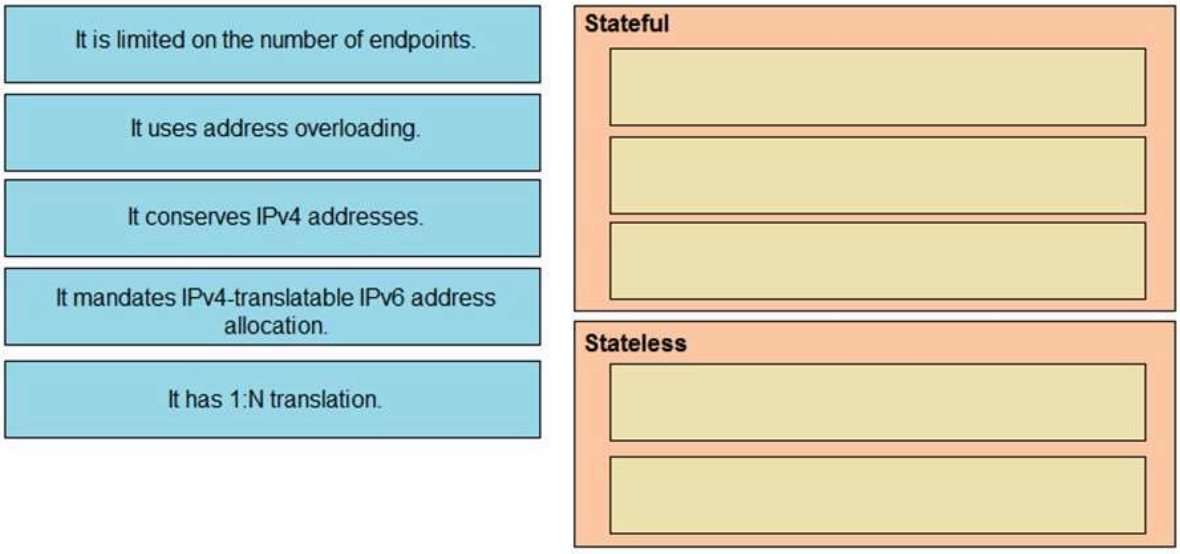
Question #61 *Topic 1*

DRAG DROP -

Drag and drop each NAT64 description from the left onto the correct NAT64 type on the right.

Select and Place:

Answer Area



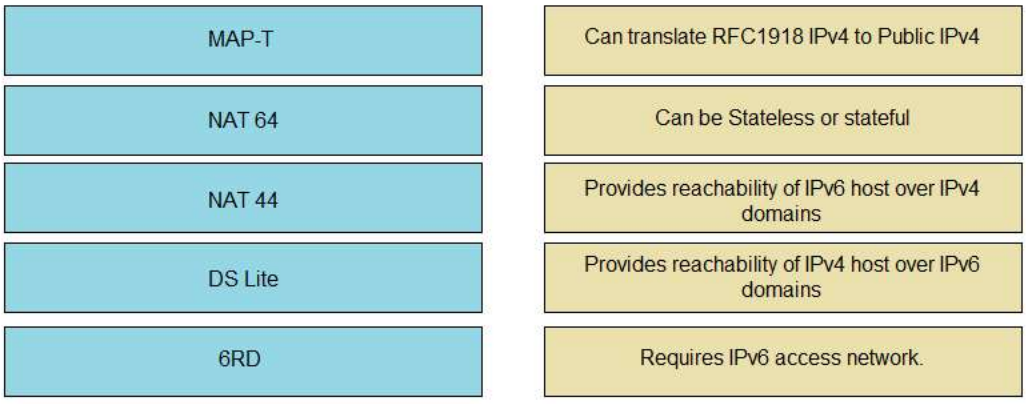
Question #62 *Topic 1*

DRAG DROP -

Drag and drop the functionalities from the left onto the correct target fields on the right.

Select and Place:

Answer Area



Question #63 *Topic 1*

How much must the MTU be increased when configuring the 802.1q VLAN tag?

A. 2 bytes

B. 4 bytes

C. 8 bytes

D. 12 bytes

Question #64 *Topic 1*

Egress PE NAT is being used via a single centralized router to provide Internet access to L3VPN customers.
Which description of the NAT operation is true?

A. The NAT table contains a field to identify the inside VRF of a translation.

B. Multiple address pools are needed for the same L3VPN because each site has a separate NAT.

C. The different L3VPNs using the Internet access must not have IP overlaps internally.

D. Users in different VRFs cannot share the same outside global IP address.

Question #65 *Topic 1*

```
interface gigabitethernet1/0/1
  switchport mode access
  switchport access vlan 5
  channel-group 1 mode desirable
```

Refer to the exhibit. An engineer is preparing to implement link aggregation configuration.
Which statement about this configuration is true?

A. The switch port negotiates an EtherChannel if it receives LACP packets from a connected peer running passive mode.

B. The switch port actively sends packets to negotiate an EtherChannel using PAgP.

C. The switch port passively negotiates an EtherChannel if it receives PAgP packets from a connected peer.

D. The switch port accepts LACP and PAgP packets from a connected peer and negotiate an EtherChannel using the common EtherChannel mode.

Question #66 *Topic 1*

You are writing an RPL script to accept routes only from certain autonomous systems. Consider this code:
RP/0/RP0/CPU0:router(config-rpl)# if as-path in (ios-regex '.*77$')
RP/0/RP0/CPU0:router(config-rpl-if)# pass
RP/0/RP0/CPU0:router(config-rpl-if)# endif
If you apply this code to BGP filters, which effect does the code have on your router?

A. denies routes from AS 7070

B. allows routes from AS 7077

C. denies routes from AS 7007

D. allows routes from AS 770

Question #67 *Topic 1*

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

A. +

B. ^

C. $

D. [^]

Question #68 *Topic 1*

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?

A.

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

B.

```
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
```

C.

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

D.

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

```
router bgp 100
no synchronization
bgp log-neighbor-changes
neighbor 1.1.1.1 remote-as 100
neighbor 1.1.1.1 update-source Loopback0
no auto-summary

ip vrf Internet_Shared_Service
rd 111:111
route-target export 111:111
route-target import 111:111
route-target import 1:11

ip route vrf Internet_Shared_Service 0.0.0.0  0.0.0.0  10.1.1.1
```

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

A.

```
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
```

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
```

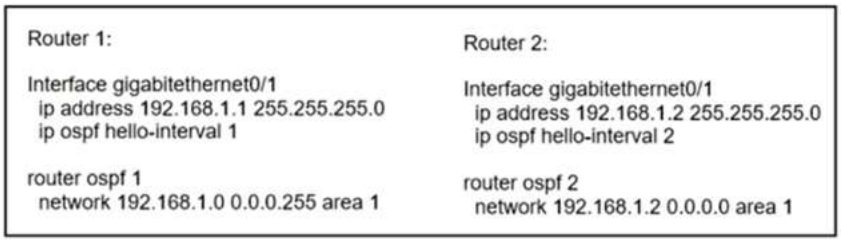
C.

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

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

D.

```
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
```

Question #70 *Topic 1*



Refer to the exhibit. What reestablishes the OSPF neighbor relationship between Router 1 and Router 2?

A. OSPF process IDs match

B. authentication is added to the configuration

C. correct wildcard mask is used on Router 2

D. hello intervals match

Question #71 *Topic 1*

A 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)# ip ospf 1 area 0
```

B.

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

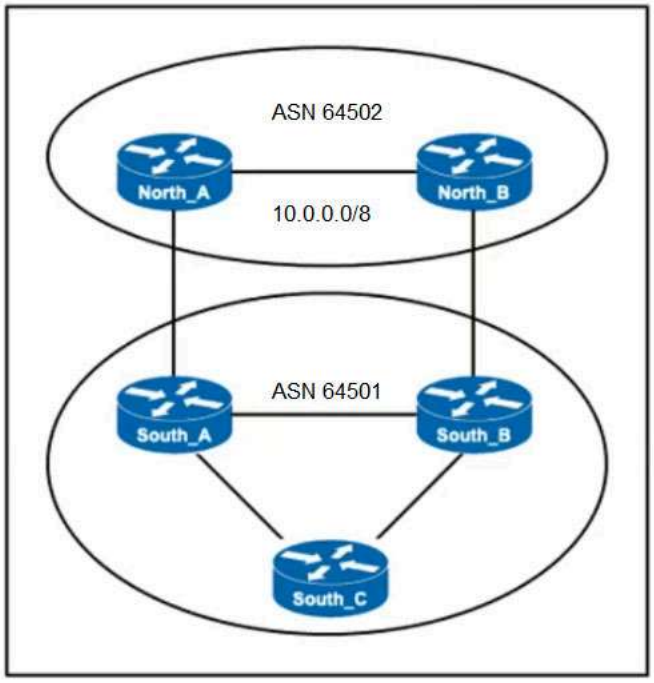
C.

```
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
```

D.

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

Question #72 *Topic 1*



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?

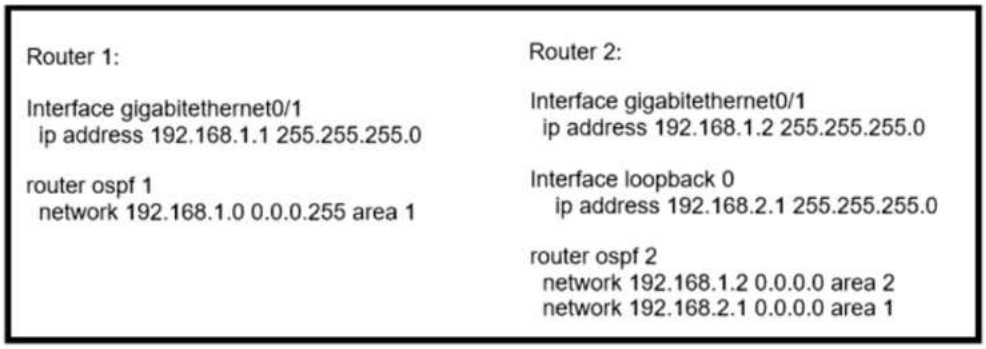
A. Set a higher local preference between North_A and South-A

B. Set a lower MED between North_B and South_B

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

Question #73 *Topic 1*



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?

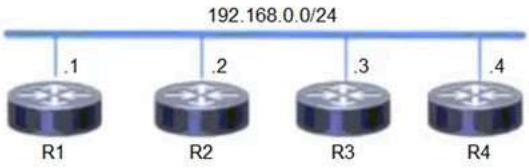
A. Router 1 to be an ABR

B. the wildcard mask network statement in OSPF of Router 2

C. the hello timers on Router 1 and Router 2 to be different

D. the area numbers on Router 1 and Router 2 to be similar

Question #74 *Topic 1*



R1 **router isis** **net 52.0011.0000.0000.0001.00** **interface gigabitethernet0/1** **ip address 192.168.0.1** **255.255.255.0** **ip router isis**	**R3** **router isis** **net 52.0022.0000.0000.0003.00** **interface gigabitethernet0/1** **ip address 192.168.0.3** **255.255.255.0** **ip router isis**
R2 **router isis** **net 52.0022.0000.0000.0002.00** **interface gigabitethernet0/1** **ip address 192.168.0.2** **255.255.255.0** **ip router isis**	**R4** **router isis** **net 52.0011.0000.0000.0004.00** **interface gigabitethernet0/1** **ip address 192.168.0.4** **255.255.255.0** **ip router isis**

Refer to the exhibit. Which two topology changes happen to the IS-IS routers? (Choose two.)

A. R1 and R4 are Level 2 neighbors

B. All four routers are operating as Level 1-2 routers

C. All four routers are operating as Level 2 routers only

D. R1 and R2 are Level 2 neighbors

E. All four routers are operating as Level 1 routers only

Question #75 *Topic 1*

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

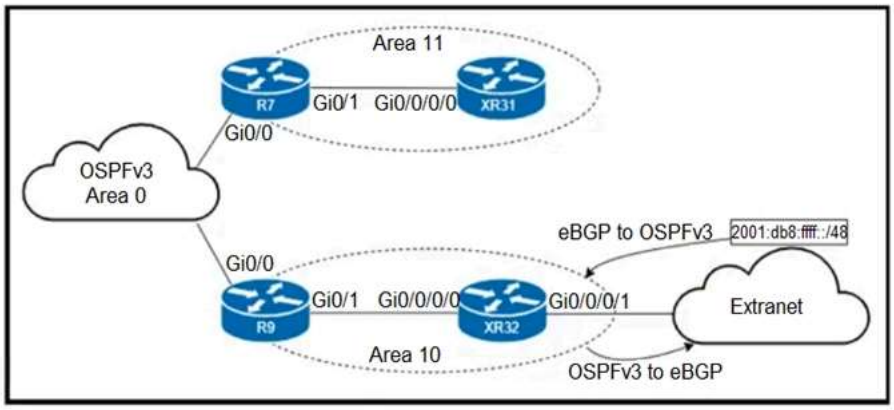
A. A route map with AS-PATH attribute to control the inbound traffic

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 WEIGHT attribute to control the inbound traffic

Question #76 *Topic 1*



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 10 as nssa on R9 and XR32

B. Configure area 11 as stub no-summary on R7 and as stub on XR31

C. Configure area 11 as nssa no-summary on R7 and as nssa on XR31

D. Configure area 11 as nssa default-information-originate on R7 and as nssa on XR31

E. Configure area 10 as stub on R9 and XR32

Question #77 *Topic 1*

A network team has failed to implement IS-IS multitopology. What is the reason for it?

A. The routing process supported Level 1 only

B. The router did not support VRFs

C. The routing process did not support extended metrics

D. The router did not have Cisco Discovery Protocol and Cisco Express Forwarding disabled

Question #78 *Topic 1*

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 be engineer apply to the ASN 65001 border router?

A.

```
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
```

B.

```
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
```

C.

```
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
```

D.

```
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
```

Question #79 *Topic 1*

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

Refer to the exhibit. 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 ciscopolicy class map will be remarked from IP precedence 1 to DSCP AF11 when it exits the pos0/2/0/0 interface

B. Traffic that is identified in the ciscotest class map will be marked with IP precedence 1 when it exits the pos0/2/0/0 interface

C. 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

D. 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

Question #80 *Topic 1*

```
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
```

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

A. 49.0111.0000.0000.0001.00

B. 49.0001.0000.0000.0004.00

C. 49.0011.0000.0000.0002.00

D. 49.0011.0000.0000.0003.00

Question #81 *Topic 1*

```
R1

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

Refer to the exhibit. Which task completes the configuration?

A. Specify the local-as value in the neighbor statement

B. Specify the source interface in the neighbor statement

C. Specify the maximum number of prefixes that R1 receives from neighbor 192.168.1.2

D. Specify the activate neighbor 192.168.1.2 under the IPv4 address family

Question #82 *Topic 1*

```
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
```

Refer to the exhibit. A network engineer is implementing OSPF multiarea. Which command on interface G0/1 resolves adjacency issues in the new area?

A. ip ospf network point-to-point

B. ip ospf network broadcast

C. ip ospf network non-broadcast

D. ip ospf network point-to-multipoint

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

Refer to the exhibit. 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)# ip ospf hello-interval 1

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

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

B.

```
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
```

C.

```
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
```

D.

```
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
```

```
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
```

Refer to the exhibit. While troubleshooting a connectivity issue on router R2, a network engineer with an employee id: 1234:44:876 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 subnet masks on the serial interfaces are mismatched

D. The R2 Serial1/0 interface is configured with an IP address, but the R1 Serial1/0 interface is unnumbered

DRAG DROP -

```
R1#show ip bgp
BGP table version is 3, local router ID is 50.50.50.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

     Network          Next Hop          Metric LocPrf Weight Path
*> 22.22.22.22/32     50.50.50.2             0             100  500 ?
*                     40.40.40.2             0   200         0  400 ?
*                     30.30.30.2             0               0  300 300 ?
*                     20.20.20.2             0               0  200 ?
R1#show ip bgp 22.22.22.22
BGP routing table entry for 22.22.22.22/32, version 3
Paths: (4 available, best #1, table Default-IP-Routing-Table)
Flag: 0x820
  Advertised to update-groups:
     1
  500
     50.50.50.2 from 50.50.50.2 (50.50.50.2)
       Origin incomplete, metric 0, localpref 100, weight 100, valid, external, best
  400
     40.40.40.2 from 40.40.40.2 (40.40.40.2)
       Origin incomplete, metric 0, localpref 200, valid, external
  300 300
     30.30.30.2 from 30.30.30.2 (30.30.30.2)
       Origin incomplete, metric 0, localpref 100, valid, external
  200
     20.20.20.2 from 20.20.20.2 (20.20.20.2)
       Origin incomplete, metric 0, localpref 100, valid, external
```

Refer to the exhibit. An engineer wants to determine which paths are best, second best, third best, and fourth best. Drag and drop the peer addresses on the left to the corresponding BGP best-path selection order on the right.

Select and Place:

20.20.20.2	Best Path
30.30.30.2	2nd Best Path
40.40.40.2	3rd Best Path
50.50.50.2	4th Best Path

```
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
```

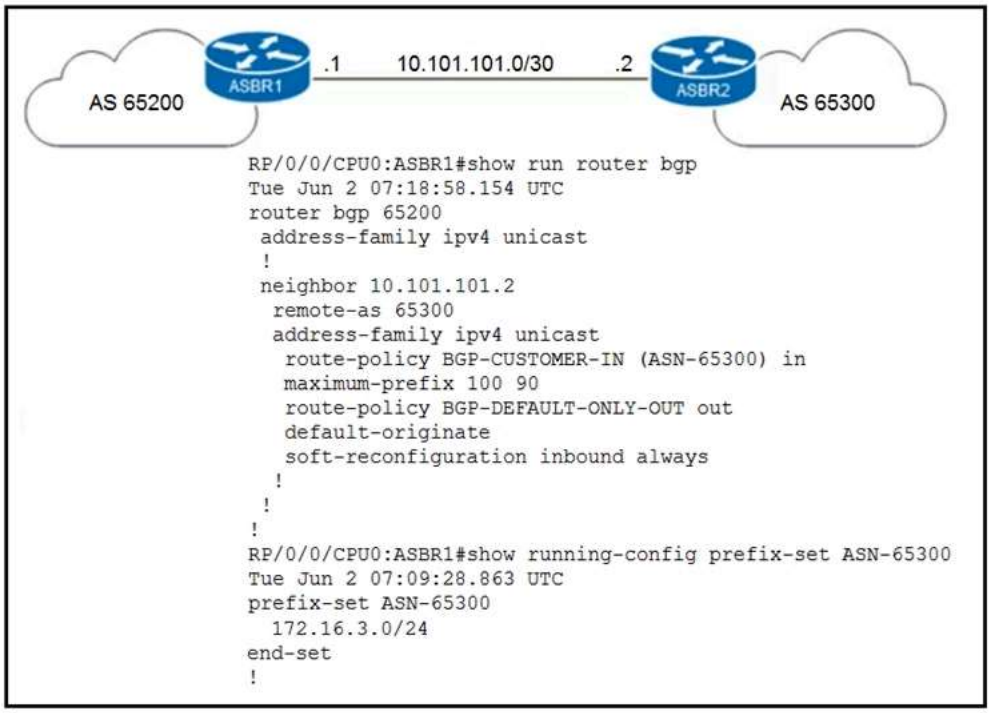
Refer to the exhibit. While troubleshooting the OSPF adjacency between routers R1 and R2, an engineer noticed that both routers are stuck in the EXCHANGE/
EXSTART state. What should the engineer fix to solve the ongoing issue?

A. match OSPF network types

B. match IPv4 addresses

C. match MTU values

D. match OSPF areas



Refer to the exhibit. A network engineer is implementing a standard customer route-policy on router 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
```

Question #88 *Topic 1*

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

A. It requires all PE-CE sessions to support NSR

B. It requires routing protocol extensions

C. It consumes more memory and CPU resources than NSF

D. It operates normally without NSR support on the PE peers

E. It cannot sync state information across redundant RPs

```
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
```

Refer to the exhibit. 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 Gi0/0/0/0 remain standby

C. Gi0/0/0/0 becomes active; Gi0/0/0/1 remains standby

D. Gi0/0/0/1 becomes active; Gi0/0/0/0 remains standby

```
!
interface Bundle-Ether1
description link-aggregation
mtu 9216
bundle minimum-active links 2
load interval 30
!
```

Refer to the exhibit. When 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
```

Question #91 *Topic 1*

A network engineer must enable the helper router to terminate the OSPF graceful restart process if it detects any changes in the LSA. Which command enables this feature?

A. nsf ietf helper disable

B. nsf cisco helper disable

C. nsf ietf helper strict-lsa-checking

D. nsf cisco enforce global

Question #92 *Topic 1*

```
R1:
interface FastEthernet0/0
ip address 10.1.12.1 255.255.255.0
duplex full
end
!
!
!
R1(config)#interface FastEthernet0/0
R1(config-if)#ospfv3 1 area 1 ipv4
% IPv6 routing not enabled
```

Refer to the exhibit. A network engineer is implementing an OSPF configuration. Based on the output, which statement is true?

A. OSPFv3 does not run for IPv4 on FastEthernet0/0 until IPv6 routing is enabled on the router and IPv6 is enabled on interface FastEthernet0/0.

B. In the ospfv3 1 area 1 ipv4 command, area 0 must be configured instead of area 1.

C. OSPFv3 cannot be configured for IPv4; OSPFv3 works only for IPv6.

D. ג€IPv6 routing not enabledג€ is just an informational message and OSPFv3 runs for IPv4 on interface FastEthernet0/0 anyway.

Question #93 *Topic 1*

```
R1
router bgp 65000
 router-id 192.168.1.1
 neighbor 192.168.1.2 remote-as 65012
 neighbor 192.168.1.2 local-as 65112
```

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 without additional configuration.

B. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65112 and the VPNv4 address family.

C. It enables peer 192.168.1.2 to establish a BGP relationship with R1 using AS 65012 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.

Question #94 *Topic 1*

```
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 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.
```

Refer to the exhibit. Based on the show command output, which result is true after BGP session is established?

A. The IOS XR router advertises and accepts all routes to and from eBGP neighbor 192.168.2.2.

B. 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.

C. No routes are accepted from the neighbor 192.168.2.2, nor are any routes advertised to it.

D. The IOS XR router does not advertises any routes to the neighbor 192.168.2.2, but it accepts any routes from 192.168.2.2.

Question #95 *Topic 1*

```
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
```

Refer to the exhibit Which effect of this configuration is true?

A. The two routers fail to form a neighbor relationship because they have different IS-IS area types.

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 their system IDs are different.

Question #96 *Topic 1*

```
R1
router ospf 1
        area 2 stub no-summary

R2
router ospf 1
        area 3 nssa
```

Refer to the exhibit. In which way does router R1 operate differently than router R2?

A. R1 sends LSA types 5 and 7, while R2 sends type 1, 2, and 7 LSAs.

B. R1 sends LSA type 2 only, while R2 sends type 1 and type 7 LSAs.

C. R1 sends LSA type 2 only and R2 sends LSA type 1 only.

D. R1 sends LSA types 1 and 2, while R2 sends type 1,2, and 7 LSAs.

Question #97 *Topic 1*

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

Refer to the exhibit. Which purpose of implementing NSF with this configuration is true?

A. The router uses NSF to handle RP switchover while allowing neighbor relationships to remain up.

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 load balance traffic between two links, with the primary link alternating every 90 seconds.

Question #98 *Topic 1*

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

A. Configure BFD in an interface configuration mode.

B. Disable Cisco Express Forwarding on all interfaces running routing protocols other than IS-IS.

C. Configure all IS-IS routers as Level 2 devices.

D. Configure BFD under the IS-IS process.

Question #99 *Topic 1*

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

A. hello timer setting

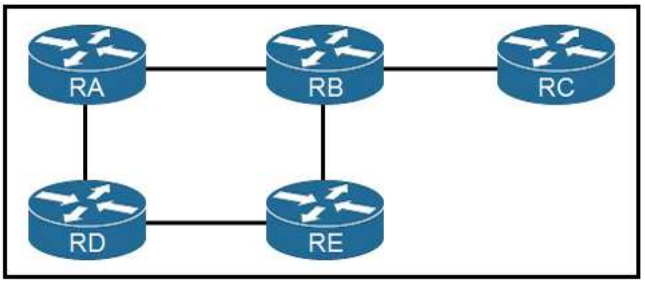
B. authentication settings

C. area ID

D. system ID

E. MTU

Question #100 *Topic 1*



Refer to the exhibit. If RC is a stub router, which entry must be injected so that it will send traffic outside the OSPF domain?

A. more specific route

B. virtual link between RB and RC

C. sham link

D. default route

Question #101 *Topic 1*

DRAG DROP -

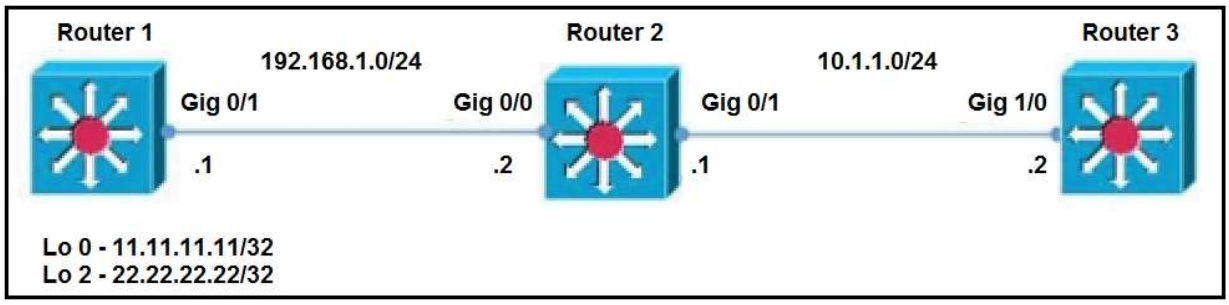
A network engineer is adding an additional 10Gbps link to an existing 2x10Gbps LACP-based LAG to augment its capacity. Network standards require a bundle interface to be taken out of service if one of its member links goes down, and the new link must be added with minimal impact to the production network. Drag and drop the tasks that the engineer must perform from the left into the sequence on the right. Not all options are used.

Select and Place:

Answer Area

Execute the channel-group number mode active command to add the 10Gbps link to the existing bundle.	step 1
Execute the channel-group number mode on command add the 10Gbps link to the existing bundle.	step 2
Execute the lacp min-bundle 3 command to set the minimum number of ports threshold.	step 3
Validate the network layer of the 10Gbps link.	step 4
Execute the channel-group number mode auto command to add the 10Gbps link to the existing bundle.	
Validate the physical and data link layers of the 10Gbps link.	

Question #102 *Topic 1*



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 interfaces Lo 0 and Lo 2, 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?

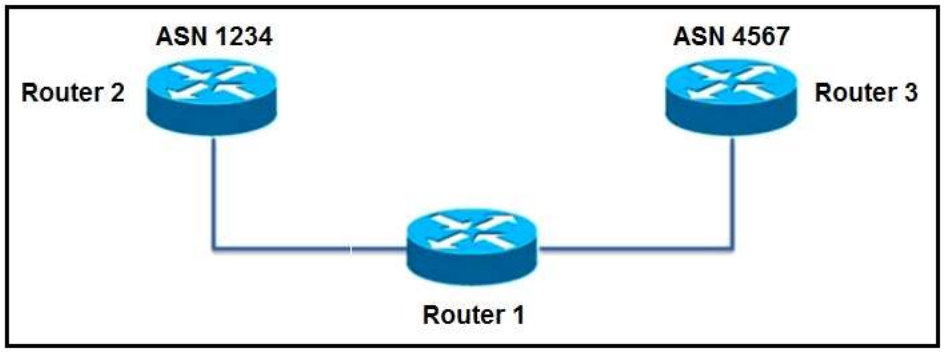
A. ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.22/32 router bgp 100 bgp redistribute-internal route-map BGP-To-OSPF permit 10 match ip address prefix-list BGP-to-ospf router ospf 1 redistribute bgp 100 metric 100 metric-type 1 subnets route-map BGP-To-OSPF

B. 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

C. ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.0/24 router 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 subnet route-map BGP-To-OSPF

D. ip prefix-list BGP-to-ospf seq 5 permit 22.22.22.0/24 router 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

Question #103 *Topic 1*



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 weight 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.

```
RP/0/0/CPU0:BRDR-1#show route ipv4 0.0.0.0
Routing entry for 0.0.0.0/0
   Known via "bgp 65001", distance 20, metric 0, candidate default path
   Tag 65002, type external
   Installed Jan 2 08:40:59.889 for 00:01:18
   Routing Descriptor Blocks
      100.65.19.1, from 100.65.19.1, BGP external
         Route metric is 0
   No advertising protos.

RP/0/0/CPU0:BRDR-1#show run router ospf
router ospf 1
   redistribute bgp 65001 route-policy BGP-TO-OSPF
   area 0
      mpls traffic-eng
      interface Loopback0
      interface GigabitEthernet0/0/0/0.92
      interface GigabitEthernet0/0/0/0.3132
   mpls traffic-eng router-id Loopback0

RP/0/0/CPU0:BRDR-1#show rpl route-policy BGP-TO-OSPF
route-policy BGP-TO-OSPF
   if destination in (0.0.0.0/0) then
      set metric-type type-1
   endif
   set metric-type type-2
   set ospf-metric 100
end-policy
```

Refer to the exhibit. Router BRDR-1 is configured to receive the 0.0.0.0/0 and 172.17.1.0/24 networks via BGP and advertise them into OSPF area 0. An engineer has noticed that the OSPF domain is receiving only the 172.17.1.0/24 route and default route 0.0.0.0/0 is still missing. Which configuration must an engineer apply to resolve the problem?

A. router ospf 1 redistribute bgp 65001 metric 100 route-policy BGP-TO-OSPF end

B. router ospf 1 default-information originate end

C. router ospf 1 default-metric 100 end

D. router ospf 1 default-information originate always end

Question #105 *Topic 1*

```
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
```

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

A. 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

B. 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

C. R1 router bgp 5400 neighbor 2.2.2.2 remote-as 5400 R2 router bgp 5400 neighbor 1.1.1.1 remote-as 5400

D. 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

Question #106 *Topic 1*

```
RP/0/0/CPU0:R2#debug isis adjacencies
RP/0/0/CPU0:Apr 2 20:57:00.421 : isis[1010]: RECV P2P IIH (L2)
from GigabitEthernet0/0/0/0 SNPA fal6.3ebe.a7bc: System ID R2,
Holdtime 30, length 1429
RP/0/0/CPU0:Apr 2 20:57:01.761 : isis[1010]: SEND P2P IIH (Ll)
on GigabitEthernet0/0/0/0: Holdtime 30s, Length 41
```

Refer to the exhibit. A network operator is attempting to configure an IS-IS adjacency between two routers, but the adjacency cannot be established. To troubleshoot the problem, the operator collects this debugging output.
Which interfaces are misconfigured on these routers?

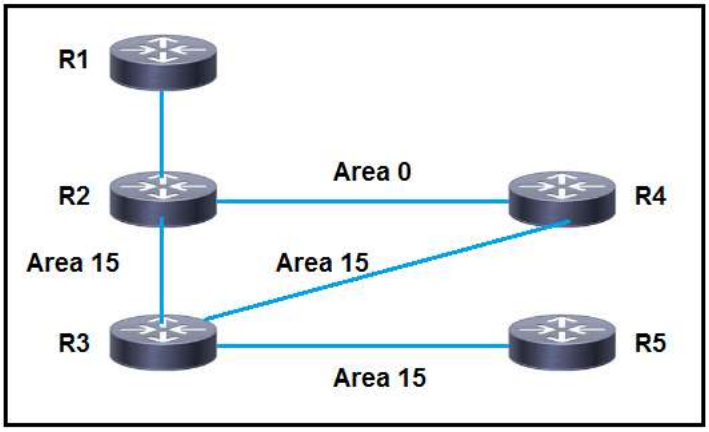
A. The R2 interface is configured as point-to-point, and the peer router interface is configured as multipoint.

B. The R2 interface is configured as Level 1 only, and the peer router interface is configured as Level 2 only.

C. The peer router interface is configured as point-to-point, and the R2 interface is configured as multipoint.

D. The peer router interface is configured as Level 1 only, and the R2 interface is configured as Level 2 only.

Question #107 *Topic 1*



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. Implement a sham link on the link between R3 and R2 to extend area 0 over area 15.

B. Implement a multiarea adjacency on the link between R2 and R4, with the cost manipulated to make the path through R4 preferred.

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

D. Increase the cost on the link between R2 and R3 to a value higher than the link between R2 and R4, to influence the path over R3 and R4.

Question #108 *Topic 1*

An engineer working for a private service provider with employee Id: 1234:56:789 is configuring a Cisco device to redistribute OSPF into BGP. Which task enables the device to filter routes?

A. Configure an access list and reference it with the redistribute command.

B. Configure a route map and reference it with the redistribute command.

C. Configure a prefix list and associate it to the BGP peer interface.

D. Configure a distribute list and associate it to the BGP peer interface.

Question #109 *Topic 1*

```
R1# configure terminal
R1(config)# router isis area2
R1(config-router)# metric-style wide level-1
```

Refer to the exhibit. An engineer is configuring multitopology IS-IS for IPv6 on router R1. Which additional configuration must be applied to the router to complete the task?

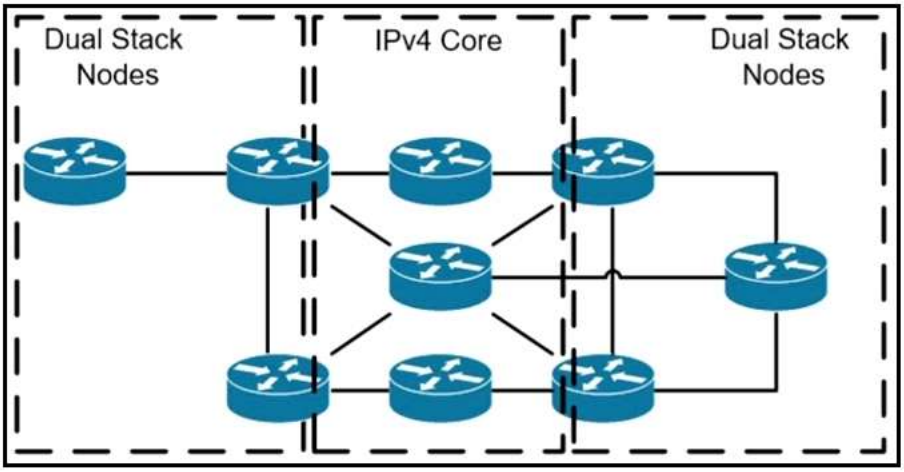
A. R1# configure terminal R1(config)# router isis area2 R1(config-router)# address-family ipv6 R1(config-router-af)# multi-topology

B. R1# configure terminal R1(config)# router isis area1 R1(config-router)# metric-style wide level-2 R1(config-router)# address-family ipv6 R1(config-router-af)# multi-topology

C. R1# configure terminal R1(config)# router isis area2 R1(config-router)# metric-style wide R1(config-router)# address-family ipv6 R1(config-router-af)# multi topology

D. R1# configure terminal R1(config)# router isis area1 R1(config-router)# metric-style wide level-1 R1(config-router)# address-family ipv6 R1(config-router-af)# multi topology

Question #110 *Topic 1*



Refer to the exhibit. A network operator has two IPv4 and IPv6 dual-stacked networks on each side of the IPv4 core network. The operator must be able to provide connectivity between them while using specific assigned IPv6 space provided from the company IP administrator team. Which technology should the network operator use to accomplish this goal?

A. 6rd

B. DS-Lite

C. NAT44

D. NAT46

Question #111 *Topic 1*

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

Refer to the exhibit. 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 TCP session parameters are not specified.

C. The VPNv4 address family interferes with the BGP IPv4 address family negotiations.

D. The IPv4 address family configuration under neighbor configuration-mode must be removed.

Question #112 *Topic 1*

```
!
router bgp 65001
 no synchronization
 bgp log-neighbor-changes
 neighbor 10.10.10.1 remote-as 4282
 neighbor 10.10.10.1 distribute-list 1 out
 no auto-summary
!
ip as-path access-list 1 permit ^$
!
```

Refer to the exhibit. An engineer is reviewing the BGP configuration. Which routes must be advertised to 10.10.10.1?

A. Local routes are permitted, and routes from other ASNs are denied.

B. All routes whether local or from other ASNs are denied.

C. Local routes are denied, and routes from other ASNs are permitted.

D. All routes whether local or from other ASNs are permitted.

Question #113 *Topic 1*

```
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
```

Refer to the exhibit. 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?

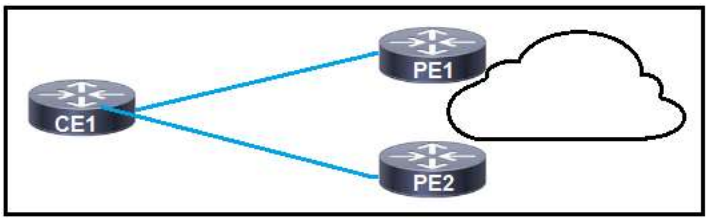
A. Router (config)# router bgp 300 Router(config-router)# aggregate-address 10.16.6.0 255.255.252.0 as-set suppress-map SuppressMap

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

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

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

Question #114 *Topic 1*



Refer to the exhibit. Which BGP attribute should be manipulated to have CE1 use PE1 as the primary path to the internet?

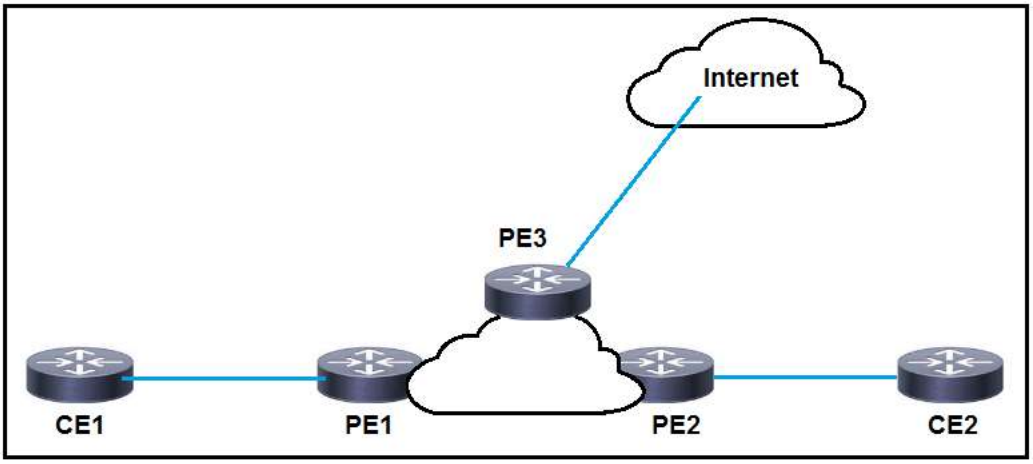
A. The local preference attribute should be manipulated on PE2 on inbound and outbound routes advertised to CE1.

B. The origin of all routes should be modified on each router on inbound and outbound routes advertised to CE1.

C. The MED attribute should be manipulated on CE1 on inbound routes from PE1.

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

Question #115 *Topic 1*



Refer to the exhibit. CE1 and CE2 require connectivity to the internet through the ISP connected to PE3. What should an engineer configure to complete this task?

A. CE1 and CE2 must be configured with a route distinguisher in the PE1 VRF that dynamically imports the route from the internet.

B. CE1 and CE2 must be configured to use a static default route with a next-hop of PE3 to reach internet routes.

C. PE1 must be configured with an import route target in the CE1 VRF that matches the export route target for the internet VRF on PE3.

D. PE2 must be configured to serve as a route reflector for PE3 routes learned from the internet. PE2 then shares the routes with CE1 and CE2.

Question #116 *Topic 1*

An engineer is implementing a route map to support redistribution within BGP. The route map must be configured to permit all unmatched routes. Which action must the engineer perform to complete this task?

A. Include a permit statement as the first entry.

B. Remove the implicit deny entry.

C. Include at least one explicit deny statement.

D. Include a permit statement as the last entry.

Question #117 *Topic 1*

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

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

B. The CE router can establish a BGP peering to a PE router and use the PE device to reach the Internet.

C. The customer VRF uses route targets to import and export routes to and from a shared services VRF.

D. Route distinguishers are used to identify the routes that CEs can use to reach the Internet.

Question #118 *Topic 1*

```
R1

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

Refer to the exhibit Which effect of this configuration is true?

A. R1 can support a peer that is configured for LDP SSO/NSF as the peer recovers from an outage.

B. R1can support a graceful restart operation on the peer, even if graceful restart is disabled on the peer.

C. R1 can failover to any peer.

D. R1 can failover only to a peer that is configured for LDF SSO/NSF.

Question #119 *Topic 1*

You are testing the capabilities of MPLS OAM ping. Which statement is true?

A. An LSP is not required for the reply to reach the ingress MPLS router.

B. An LSP breakage results in the ingress MPLS router never receiving any reply.

C. MPLS OAM ping works solely with P2P LSPs.

D. MPLS OAM ping works solely with Cisco MPLS TE.

Question #120 *Topic 1*

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

A. LDP

B. EIGRP

C. OSPF

D. RSVP-TE

Question #121 *Topic 1*

```
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
```

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

A. 192.168.0.4

B. 192.168.0.5

C. 192.168.0.1

D. 192.168.0.3

Question #122 *Topic 1*

```
mpls label protocol ldp
mpls ldp router-id loopback 0
mpls ip
ip cef
```

Refer to the exhibit. A network operator working for service provider with an employee id: 1234:56:789 applied this configuration to a router. Which additional step should the engineer use to enable LDP?

A. Enable MPLS LDP on the interface.

B. Disable Cisco Express Forwarding globally.

C. Delete the static router ID.

D. Configure the both keyword to enable LDP globally.

Question #123 *Topic 1*

Which utility can you use to locate MPLS faults?

A. MPLS LSP ping

B. QoS

C. MPLS traceroute

D. EEM

Question #124 *Topic 1*

When configuring traffic engineering tunnels in Cisco MPLS core network, you see the traffic is not tacking the expected path in the core.
Which command do you use to quickly check path of a TE tunnel?

A. traceroute <tunnel destination IP>

B. show mpls traffic-engineering tunnels

C. Ping <tunnel destination IP>

D. traceroute mpls ipv4 <tunnel destination>

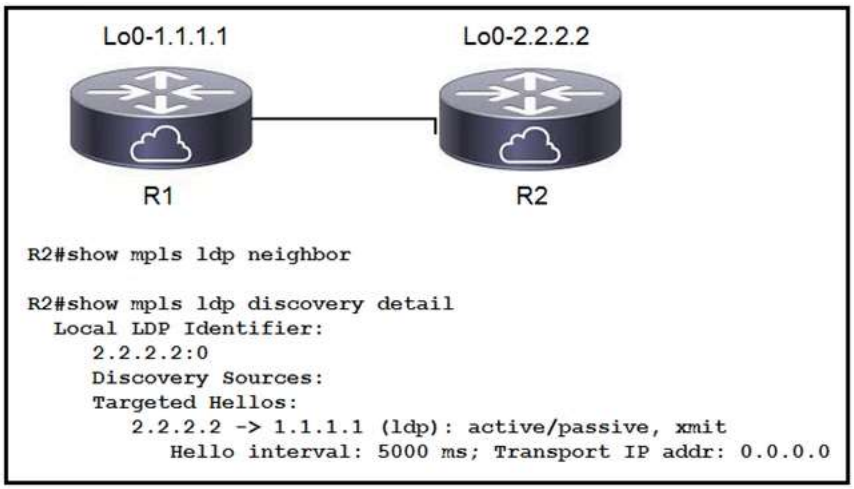
Question #125 *Topic 1*

DRAG DROP -
Drag and drop the LDP features from the left onto the correct usages on the right.
Select and Place:

Answer Area

session protection	It prevents valid routes from being overwritten with new ones until labels are assigned.
IGP synchronization	It allows stale label bindings to be used for a period of time while an LDP neighbor is unreachable.
targeted-hello accept	It uses LDP Targeted hellos to protect LDP sessions.
graceful restart	It uses LDP to form neighborship between non-directly connected routers.

Question #126 *Topic 1*



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?

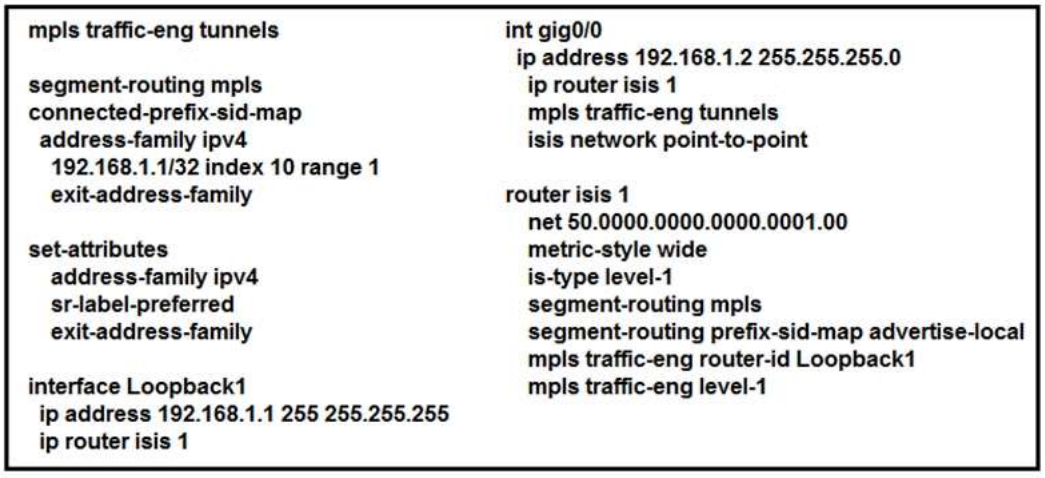
A. LDP needs to be enabled on the R2 loopback interface.

B. LDP needs to be enabled on the R2 physical interface.

C. R2 does not see any hellos from R1.

D. R2 sees the wrong type of hellos from R1.

Question #127 *Topic 1*



Refer to the exhibit. Which statement about this configuration is true?

A. It requires a dynamic Cisco MPLS TE path to be configured for the tunnel to run.

B. It requires OSPF to also be running to have optimized Cisco MPLS TE tunnels.

C. It is the configuration for the head-end router of a Cisco MPLS TE tunnel with segment routing.

D. It requires an explicit Cisco MPLS TE path to be configured for the tunnel to run.

Question #128 *Topic 1*

Which statement about segment routing prefix segments is true?

A. It is the longest path to a node.

B. It is linked to an adjacency SID that is globally unique within the router.

C. It is linked to a prefix SID that is globally unique within segment routing domain.

D. It requires using EIGRP to operate.

Question #129 *Topic 1*

```
RP/0/RSP0/CPU0:JFK-PE#show mpls ldp bindings 192.168.10.10/32
Fri Nov 11 21:02:33.124 UTC
192.168.10.10/32, rev 2
     Local bindings: label: ImpNull
     Remote bindings: (2 peers)
          Peer                Label
          ---------------     ------------
          10.10.10.2:0        562656
          10.10.10.5:0        378337
```

Refer to the exhibit. After implementing a new design for the network, a technician reviews the pictures CLI output as part of the MOP.
Which two elements describe what the technician can ascertain from the ImpNull output? (Choose two.)

A. Ultimate Hop Popping is in use for the prefix displayed.

B. Penultimate Hop Popping is in use for the prefix displayed.

C. Label 0 is used for the prefix displayed, but will not be part of the MPLS label stack for packets destined for 192.168.10.10.

D. Label 3 is in use for the prefix displayed and will be part of the MPLS label stack for packets destined for 192.168.10.10.

E. Label 0 is used for the prefix displayed and will be part of the MPLS label stack for packets destined for 192.168.10.10.

Question #130 *Topic 1*

A router RP is configured to perform MPLS LDP graceful restart.
Which three steps are included when the RP sends an LDP initialization message to a neighbor to establish an LDP session? (Choose three.)

A. Learn from Neighbor (N) flag, set to 1

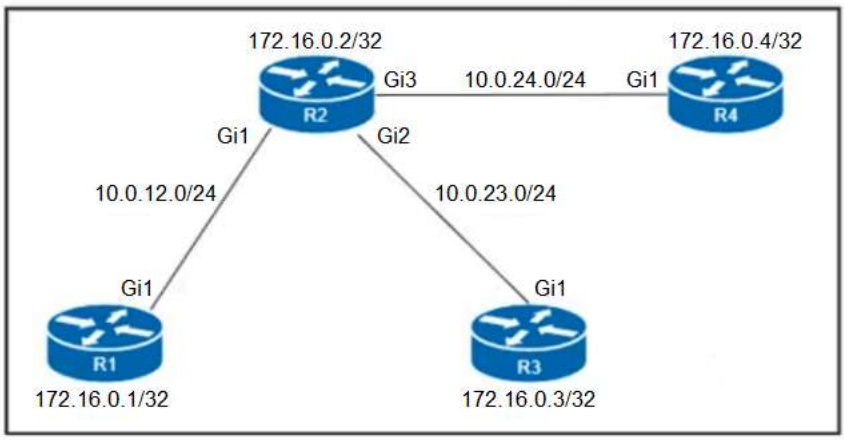
B. Recovery Time field

C. Type-9 LSA

D. Reconnect Timeout field

E. Graceful restart capability in OPEN message

F. Learn from Network (L) flag, set to 1



Refer to the exhibit. Which configuration must be applied to each of the four routers on the network to reduce LDP LIB size and advertise label bindings for the /32 loopback IP space only?

A.

```
config t
access-list 10 permit 172.16.0.0 0.0.0.7
access-list 20 permit 172.16.0.0 0.0.0.7
no mpls ldp advertise-labels
mpls ldp advertise-labels for 10 to 20
end
```

B.

```
config t
access-list 10 permit 172.16.0.0 0.0.0.7
access-list 20 permit 10.0.0.0 0.0.31.255
no mpls ldp advertise-labels
mpls ldp advertise-labels for 10 to 20
end
```

C.

```
config t
mpls ldp label
allocate global host-routes
end
```

D.

```
config t
ip prefix-list LOOPBACKS seq 5 permit 0.0.0.0/0 le 32
mpls ldp label
allocate global prefix-list LOOPBACKS
end
```

Question #132 *Topic 1*

DRAG DROP -

Drag and drop the OSPF and IS-IS Cisco MPLS TE extensions from the left to their functional descriptions on the right.

Select and Place:

TLV Type 2	includes an 8-bit default metric
TLV Type 22	supports a 32-bit metric and an up/down bit
TLV Type 134	carries a 32-bit router ID for traffic engineering
TLV Type 135	advertisements are flooded throughout the entire area network
Type 10 Opaque LSA	contains information about the link and includes other sub-TLVs

Question #133 *Topic 1*

DRAG DROP -

Drag and drop the methods of Cisco MPLS TE tunnel traffic assignment from the left onto their characteristics on the right.

Select and Place:

autoroute	It assigns traffic to the tunnel dynamically
CBTS	It optimizes streaming services
PBTS	It requires the administrator to manually assign traffic to the tunnel
static routing	It uses CoS values to assign traffic to the tunnel

```
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
```

Refer to the exhibit. 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.

```
R1(config)# router ospf 1
R1(config-router)# mpls ldp autoconfig
```

B.

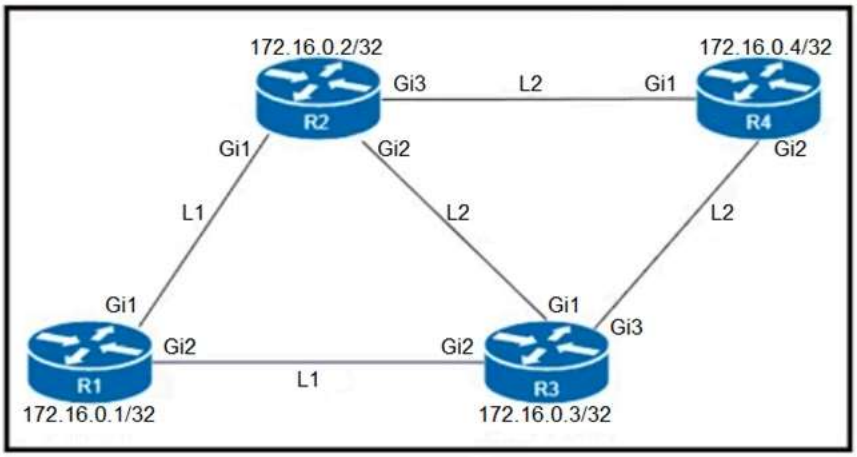
```
R1(config)# router ospf 1
R1(config-router)# mpls ldp sync
```

C.

```
R1(config)# router ospf 1
R1(config-router)# mpls ldp igp sync holddown 60
```

D.

```
R1(config)# router ospf 1
R1(config-router)# no mpls ldp igp sync/strong>
R1(config-router)# bfd all-interfaces
```



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.

```
config t
router isis 1
mpls ldp sync
```

B.

```
config t
router isis 1
mpls ldp sync
interface GigabitEthernet1
no mpls ldp igp sync
```

C.

```
config t
router isis 1
mpls ldp igp sync
interface GigabitEthernet1
mpls ldp igp sync delay 5
```

D.

```
config t
interface range GigabitEthernet 1-3
mpls ldp igp sync delay 5
```

Question #136 *Topic 1*

```
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
```

Refer to the exhibit. What type of configuration is it?

A. It is configuration that requires OSPF to also be running to have optimized Cisco MPLS TE tunnels

B. It is configuration that requires a dynamic Cisco MPLS TE path to be configured for the tunnel to run

C. It is configuration for the head-end router of a Cisco MPLS TE tunnel with segment routing

D. It is configuration that requires an explicit Cisco MPLS TE path to be configured for the tunnel to run

Question #137 *Topic 1*

```
R2# configure terminal
R2 (config) # interface Ethernet1/0
R2 (config-if) # ip address 10.1.1.1 255.255.255.0
```

Refer to the exhibit. 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?

A.

```
R2(config)# mpls label protocol ldp
R2(config)# interface Ethernet1/0
R2(config-if)# mpls bgp forwarding
```

B.

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

C.

```
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
```

D.

```
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
```

Question #138 *Topic 1*

What are two characteristics of MPLS TE tunnels? (Choose two.)

A. They are unidirectional

B. The headend and tailend routers of the tunnel must have a BGP relationship

C. They are run over Ethernet cores only

D. They use RSVP to provide bandwidth for the tunnel

E. They require EIGRP to be running in the core

Question #139 *Topic 1*

What is the characteristic of the TI-LFA?

A. It guarantees a loop-free path for all areas configured in OSPF

B. It guarantees a loop-free path for all interfaces in the OSPF super backbone

C. It applies only on the instance and makes all the interfaces inherit the configuration

D. It applies on the area and instance and makes all the interfaces inherit the configuration

Question #140 *Topic 1*

Which two actions describe LSP delegation to PCE servers? (Choose two.)

A. removing TE re-optimization timer timeouts

B. changing the precedence of any of the PCE servers

C. entering the mpls traffic-eng reoptimize command

D. adding a new PCE server with lower precedence than the primary PCE

E. adding a new PCE server with higher precedence than the primary PCE

Question #141 *Topic 1*

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

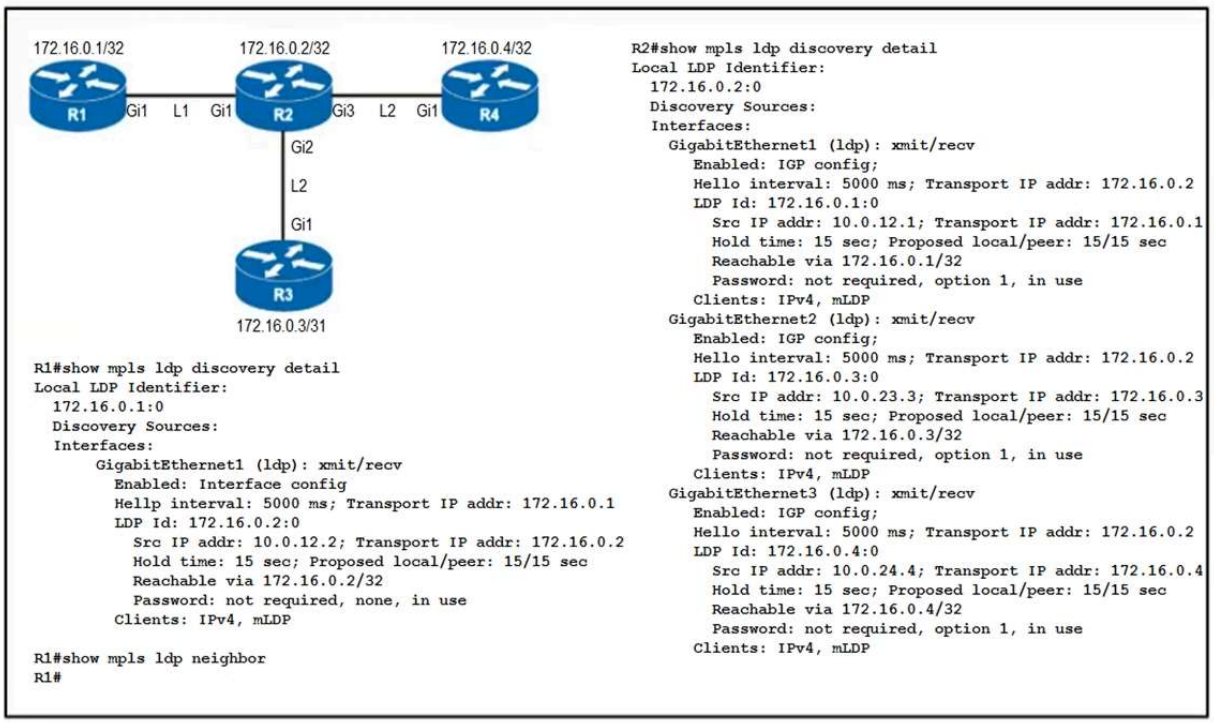
A. bandwidth

B. SLRG

C. explicit path

D. affinity

Question #142 *Topic 1*



Refer to the exhibit. 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 ldp neighbor 10.0.12.1 password command on R1

B. Configure the mpls ldp neighbor 172.16.0.1 password command on R1

C. Configure the no mpls ldp password option 1 command on R1

D. Configure the no mpls ldp password option 1 command on R2

Question #143 *Topic 1*

After implementing MPLS protocol for multiple VRFs on a single Cisco device, the engineer notices all VRFs on the router still do not have the 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 within the individual VRFs.

C. Configure LDP session authentication on the device to enable LDP session protection on each VRF automatically.

D. Configure LDP session protection globally on the device and on each neighbor that requires session protection.

Question #144 *Topic 1*

What is a constraint of Cisco MPLS TE tunnel configurations?

A. QoS-aware tunneling is not supported.

B. Tunnels cannot be configured over IP unnumbered links.

C. With ISIS as an IGP, only older-style metrics are used.

D. Tunnels cannot span multiple OSPF areas.

Question #145 *Topic 1*

An engineer is implementing MPLS OAM to monitor traffic within the MPLS domain. Which action must the engineer perform to prevent packets from being forwarded beyond the service provider domain when the LSP is down?

A. Configure a private IP address as the destination address of the headend router of Cisco MPLS TE.

B. Disable IP redirects only on outbound interfaces.

C. Disable IP redirects on all ingress interfaces.

D. Implement the destination address for the LSP echo request packet in the 127.x.y.z/8 network.

Question #146 *Topic 1*

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

A. ECMP between tunnels allows RSVP to function correctly.

B. The IGP metric of a tunnel is configured to prefer a certain path.

C. A tunnel weight is configured in SPF database the same way as a native link.

D. Static route is the only option for directing traffic into a tunnel.

E. Forwarding adjacency feature allows a tunnel to be installed in the IGP table as a link.

Question #147 *Topic 1*

An engineer is implementing a Cisco MPLS TE tunnel to improve the streaming experience for the clients of a video-on-demand server. Which action must the engineer perform to configure extended discovery to support the MPLS LDP session between the headend and tailend routers?

A. Configure a targeted neighbor session.

B. Configure an access list on the interface to permit TCP and UDP traffic.

C. Configure a Cisco MPLS TE tunnel on both ends of the session.

D. Configure the interface bandwidth to handle TCP and UDP traffic between the LDP peers.

Question #148 *Topic 1*

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 configuration must the engineer implement so that the IGP routing protocol will wait until LDP convergence is completed?

A. Disable MPLS LDP IGP synchronization on the network.

B. Configure LDP sessions protection on the network.

C. Disable IP CEF on routers running LDP and enable LDP protocol.

D. Configure MPLS LDP IGP synchronization on the network.

Question #149 *Topic 1*

What is a characteristic of prefix segment identifier?

A. It contains the interface address of the device per each link.

B. It contains a router to a neighbor.

C. It is locally unique.

D. It is globally unique.

Question #150 *Topic 1*

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

A. RIP

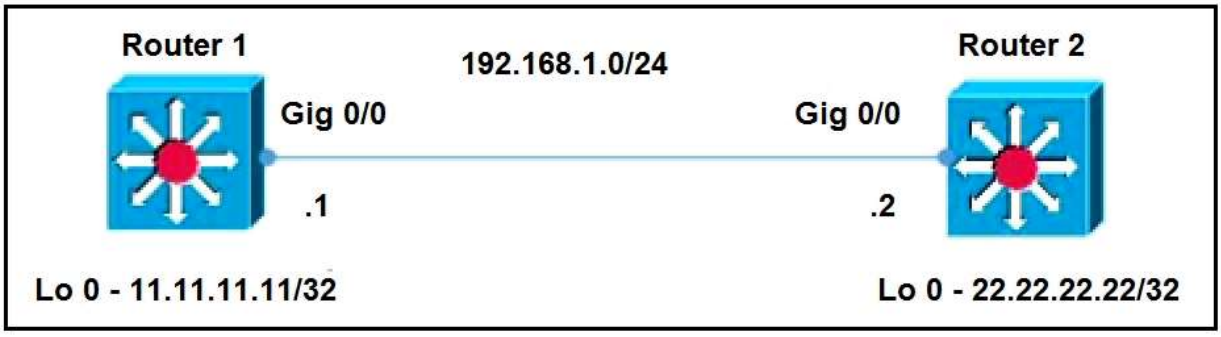
B. EIGRP

C. BGP

D. IS-IS

E. OSPF

Question #151 *Topic 1*



Refer to the exhibit. Router 1 and router 2 are running OSPF Area 0. The router logs on both routers show that the LDP link has flapped. Which configuration must the engineer apply to the two routers to implement session protection on the link?

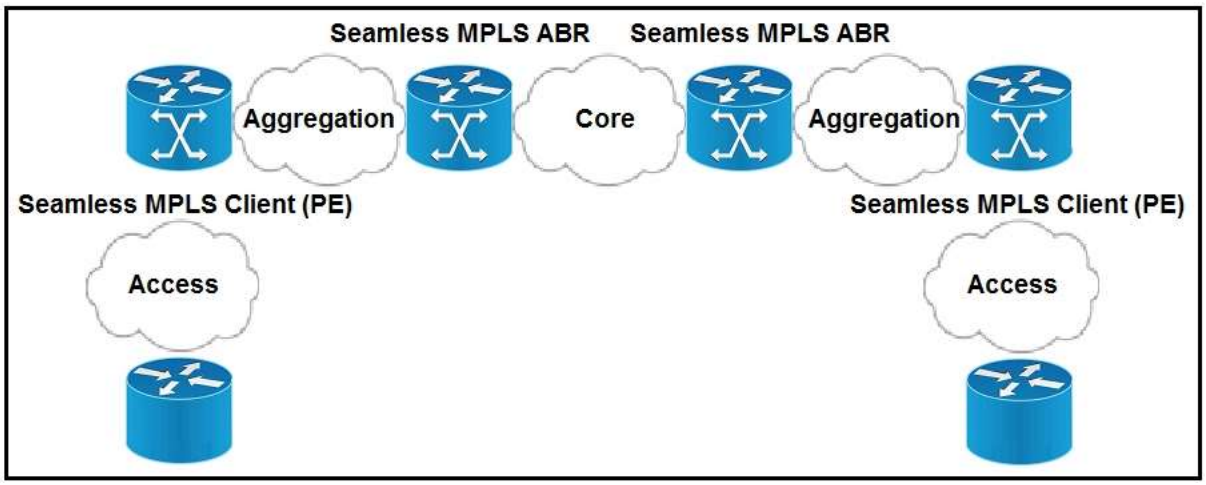
A. Router 1(config)# ip cef distributed Router 1(config)# mpls ldp session protection global Router 2(config)# ip cef distributed Router 2(config)# mpls ldp session protection global

B. Router 1(config)# ip cef distributed Router 1(config)# interface gigabitethernet 0/0 Router 1(config-if)# ip address 192.168.1.1 255.255.255.0 Router 1(config)# mpls ldp session protection Router 2(config)# interface gigabitethernet 0/0 Router 2(config-if)# ip address 192.168.1.2 255.255.255.0 Router 2(config)# mpls ldp session protection

C. Router 1(config)# ip cef distributed Router 1(config)# interface gigabitethernet 0/0 Router 1(config-if)# ip address 192.168.1.1 255.255.255.255 Router 1(config-if)# exit Router 1(config)# mpls ldp session protection Router 2(config)# ip cef distributed Router 2(config)# interface gigabitethernet 0/0 Router 2(config-if)# ip address 192.168.1.2 255.255.255.255 Router 2(config-if)# exit Router 2(config)# mpls ldp session protection

D. Router 1(config)# ip cef distributed Router 1(config)# interface gigabitethernet 0/0 Router 1(config-if)# ip address 192.168.1.1 255.255.255.0 Router 1(config-if)# mpls label protocol ldp Router 1(config-if)# mpls ip Router 1(config-if)# exit Router 1(config)# mpls ldp session protection Router 2(config)# ip cef distributed Router 2(config)# interface gigabitethernet 0/0 Router 2(config-if)# ip address 192.168.1.2 255.255.255.0 Router 2(config-if)# mpls label protocol ldp Router 2(config-if)# mpls ip Router 2(config-if)# exit Router 2(config)# mpls ldp session protection

Question #152 *Topic 1*



Refer to the exhibit. A network operator working for a telecommunication company with an employee id: 1234:56:789 is implementing a Cisco Unified MPLS solution. What is the effect of this implementation?

A. BGP is deployed between the PEs and ABRs with RFC 9107.

B. EIGRP is deployed between the PEs and ABRs with RFC 9107.

C. OSPF is deployed between the PEs and ABRs with RFC 3107.

D. IS-IS is deployed between the PEs and ABRs with RFC 3107.

Question #153 *Topic 1*

A network engineer is configuring a newly installed PE router at the regional gateway location. The new PE router must use MPLS core routing protocols with the existing P router, and LDP sessions between the two routers must be protected to provide faster MPLS convergence. Which configuration must the engineer perform on the network so that LDP sessions are established?

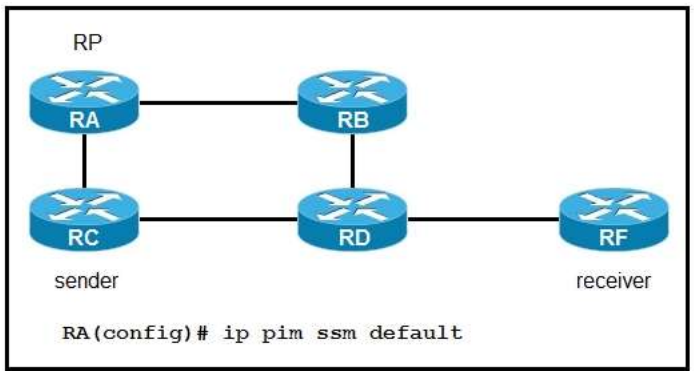
A. Enable RSVP-TE FRR on the LDP interface to protect the LDP session between routers.

B. Enable communication over TCP port 646 T-LDP hello messages.

C. Set the LDP session protection timer on each router to the same value.

D. Enable LDP session protection on either one of the routers, which allows them to autonegotiate.

Question #154 *Topic 1*



Refer to the exhibit. If router RA is configured as shown, which IPv4 multicast address space does it use?

A. 224.0.0.0/8

B. 225.0.0.0/8

C. 232.0.0.0/8

D. 239.0.0.0/8

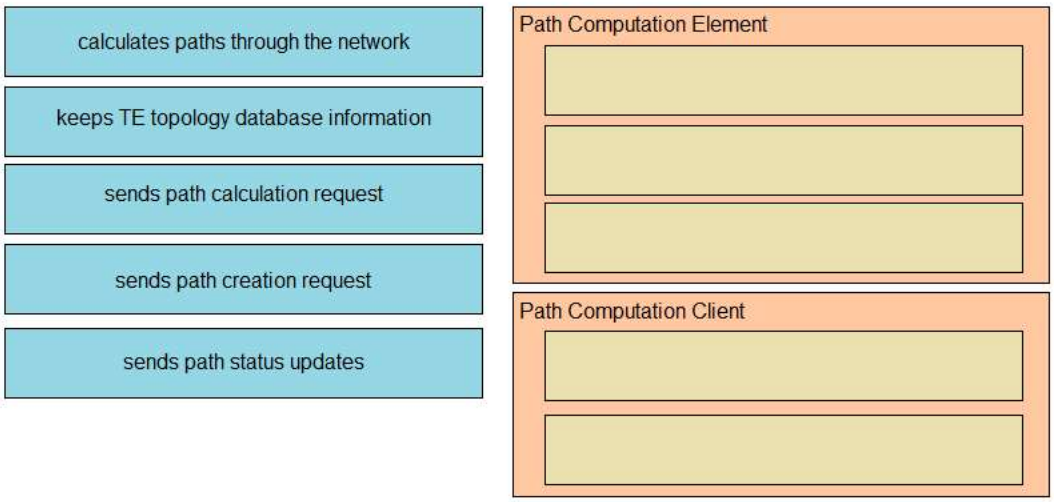
Question #155 *Topic 1*

DRAG DROP -

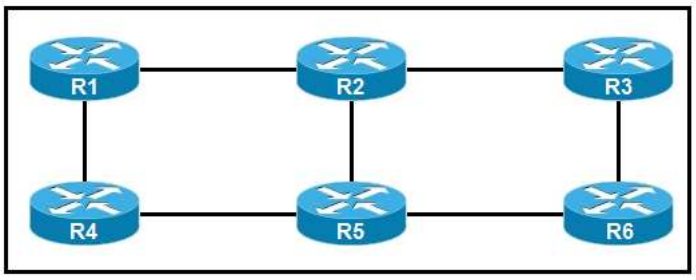
Drag and drop the functions from the left onto the correct Path Computation Element Protocol roles on the right.

Select and Place:

Answer Area



Question #156 *Topic 1*



Refer to the exhibit. You are configuring an administrative domain in the given multi-vendor environment with PIM-SM.
Which feature can you implement so that devices can dynamically learn the RP?

A. BSR

B. BIDIR-PIM

C. Auto-RP

D. SSM

Question #157 *Topic 1*

DRAG DROP -
Drag and drop the multicast concepts from the left onto the correct descriptions on the right.
Select and Place:

Answer Area

IGMP	multicast routing protocol that floods traffic to all peers
PIM-DM	technology that manages the process of joining and leaving multicast groups
PIM-SM	technology that requires an RP
shared tree	technology that uses the RP as the single common root
source tree	shortest-path tree

Question #158 *Topic 1*

Refer to the exhibit. Which command is used to complete this configuration for QoS class-based marking?

A. PE-A(config-pmap-c)#set dscp ef

B. PE-A(config-pmap-c)#priority

C. PE-A(config-pmap-c)#random-detect

D. PE-A(config-pmap-c)#fair-queue

Question #159 *Topic 1*

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

A. SSM range is being used

B. The RP announcements are being filtered

C. The SPT threshold is set to infinity

D. The RP IP address is configured incorrectly

Question #160 *Topic 1*

```
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
```

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

A. R2 is unable to share information because the ip pim autorp listener command is missing

B. R1 floods information about R2 throughout the multicast domain

C. R2 floods information about R1 throughout the multicast domain

D. R2 is elected as the RP for this domain

Question #161 *Topic 1*

A network engineer is configuring a router to send multicast traffic for the 239.10.10.10 group. Which configuration must an engineer apply to the router to implement IGMP and 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
```

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
```

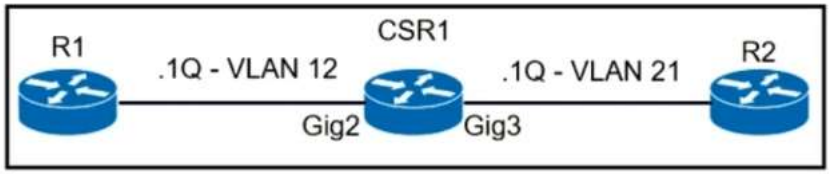
Refer to the exhibit. An engineer is implementing Auto-RP and reviewing the configuration of the PE-A. Which configuration permits Auto-RP messages to be forwarded over this interface?

A. PE-A(config-if)#no ip pim bsr-border

B. PE-A(config-if)#ip igmp version 3

C. PE-A(config-if)#ip pim sparse-mode

D. PE-A(config-if)#ip pim sparse-dense-mode



Refer to the exhibit. A network operator must configure CSR1 interfaces GigabitEthernet2 and GigabitEthernet3 to rewrite VLAN tags 12 and 21 for traffic between
R1 and R2, respectively. Which configuration accomplishes this task?

A.

```
#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
```

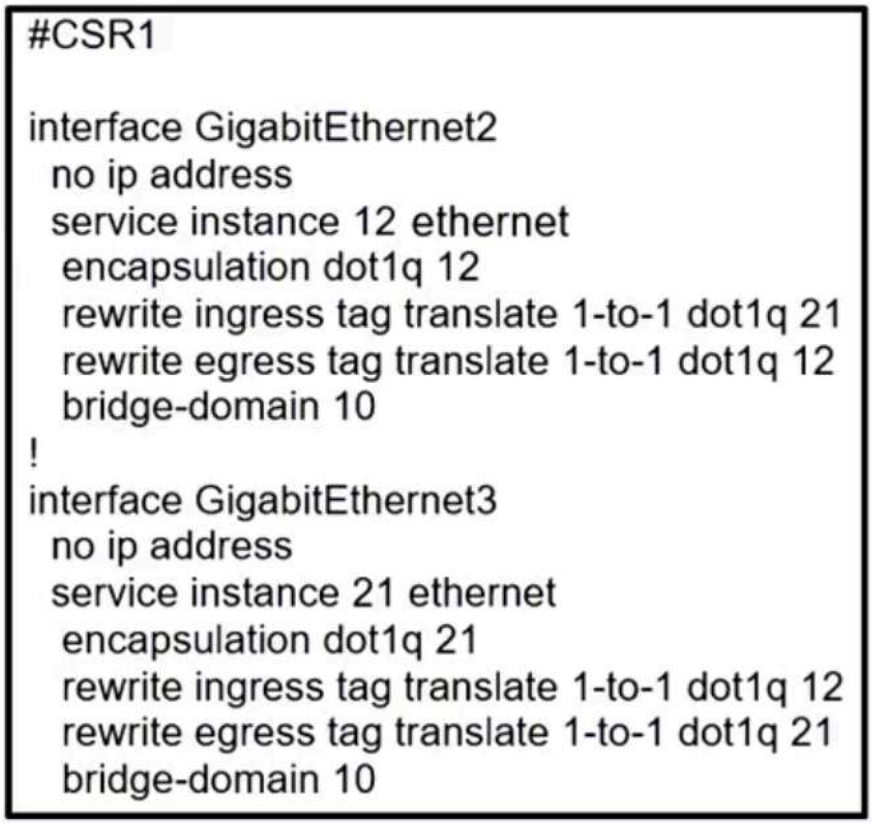
B.

```
#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
```

C.

```
#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 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
  bridge-domain 21
```

D.



Question #164

Topic 1

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.)

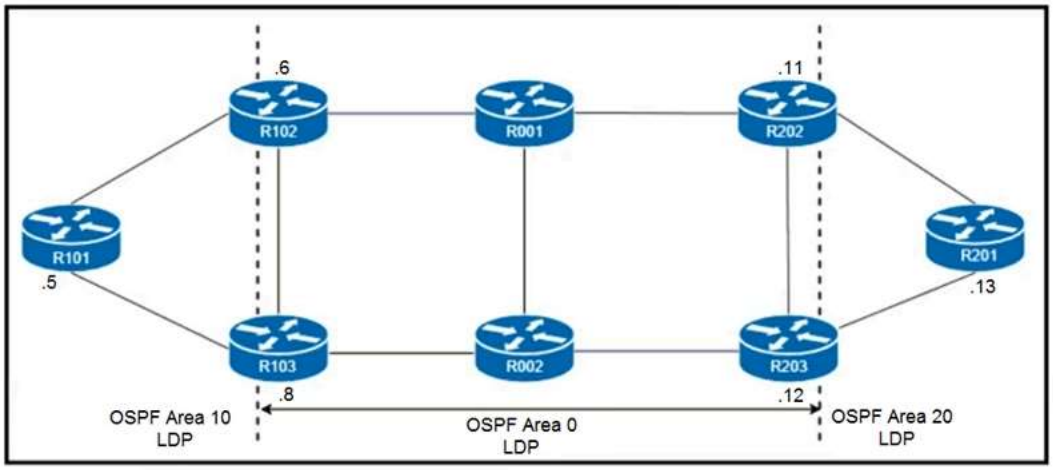
A. Implement packet remarking for excess traffic

B. Configure a queue with sufficient memory to buffer excess packets

C. Implement a scheduling function to handle delayed packets

D. Configure the token values in bytes

E. Configure a threshold over which excess packets are discarded



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 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
```

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 172.16.0.11 next-hop-self all
neighbor 172.16.0.12 next-hop-self all
```

C.

```
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
neighbor 172.16.0.12 send-label
```

D.

```
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
```

Question #166 *Topic 1*

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

A.

```
router bgp 65515
  no bgp default ipv4-unicast
```

B.

```
router bgp 65515
  address-family ipv4 unicast
   neighbor 172.16.70.23 send-community
```

C.

```
router bgp 65515 neighbor 172.16.70.23
  address-family ipv4 labeled-unicast
```

D.

```
router bgp 65515
  address-family ipv4 unicast
   neighbor 172.16.70.23 send-community extended
```

Question #167 *Topic 1*

Refer to the exhibit. Which statement describes the effect of this configuration?

A. It matches HTTP traffic for use in a policy map.

B. It applies a service policy to all interfaces remarking HTTP traffic.

C. It creates an ACL named WEB that filters HTTP traffic.

D. It modifies the default policy map to allow all HTTP traffic through the router.

Question #168 *Topic 1*

A regional MPLS VPN provider operates in two regions and wants to provide MPLS L3VPN 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, MP-eBGP 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 BGP is used for both route and label exchange, the neighbor a.b.c.d send-label command is used under the address-family VPNv4 command mode.

D. When IGP is used for route exchange and LDP for label exchange, MPLS is enabled only on the VRF interface on the backbone-carrier PE side.

Question #169 *Topic 1*

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

Refer to the exhibit. 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 300 regardless of its destination.

Question #170 *Topic 1*

```
class-map match-any class1
match-protocol ipv4
match qos-group 4
```

Refer to the exhibit. A network engineer is implementing QoS services. Which two statements about the qos-group keyword on Cisco IOS XR are true? (Choose two.)

A. It marks packets for end-to-end QoS policy enforcement across the network.

B. QoS group marking occurs on the ingress.

C. The QoS group numbering corresponds to priority level.

D. QoS group can be used in fabric QoS policy as match criteria.

E. It cannot be used with priority traffic class.

Question #171 *Topic 1*

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. BIDIR-PIM

C. PIM-SSM

D. PIM-DM

Question #172 *Topic 1*

Refer to the exhibit. Which statement supports QPPB implementation?

A. QPPB policies affect only egress traffic.

B. QoS policies rely exclusively on BGP attributes to manipulate traffic.

C. QoS policies are identified in the MPLS forwarding table.

D. QoS policies use BGP to gain full coverage on the network.

Question #173 *Topic 1*

Why do packet loops occur during the configuration of BIDIR-PIM?

A. The network does not support BIDIR-PIM.

B. The network is partially upgraded to support BIDIR-PIM.

C. The router has not been configured to advertise itself.

D. No interface for carrying traffic for multicast groups has been configured.

Question #174 *Topic 1*

The engineering team at a large ISP has been alerted that 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?

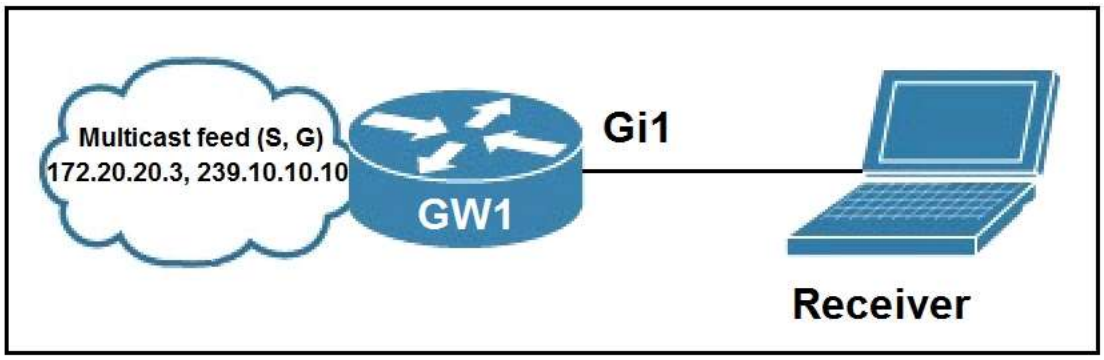
A. Configure RSVP to reserve bandwidth on all interfaces when a path is congested.

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.

Question #175 *Topic 1*



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 deny igmp any any interface GigabitEthernet1 ip igmp access-group 100 ip igmp version 2 end

C. 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

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

Question #176 *Topic 1*

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 with 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 default end

B. 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

C. 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

D. 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

Question #177 *Topic 1*

What occurs when a high bandwidth multicast stream is sent over an MVPN using Cisco hardware?

A. The traffic uses the default MDT to transmit the data only if it is a (S, G) multicast route entry.

B. A data MDT is created to if it is a (*, G) multicast route entries.

C. A data and default MDT are created to flood the multicast stream out of all PIM-SM neighbors.

D. A data MDT is created to allow for the best transmission through the core for (S, G) multicast route entries.

Question #178 *Topic 1*

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 an RP that uses static assignments only.

B. Configure the network to use the PIM bsr-candidate.

C. Configure the network to use bidirectional PIM.

D. Configure the network to use IGMPv3.

Question #179 *Topic 1*

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 QoS for MPLS and E-ACCESS.

B. Configure a EtherChannel for E-LAN.

C. Configure a pseudowire for E-LINE.

D. Configure Cisco MPLS TE for use with E-TREE.

Question #180 *Topic 1*

A network operator needs to implement PIM-SSM multicast configuration on a 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. Enable IGMP version 3 at the interface level.

B. Enable PIM dense mode on the device.

C. Enable PIM sparse mode on the device.

D. Enable IGMP version 2 at the interface level.

E. Configure at least one MSDP peer on the network.

Question #181 *Topic 1*

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

A. POP

B. CEF

C. PCEP

D. ICMP

Question #182 *Topic 1*

A network engineer is configuring RIP as the routing protocol between multiple PEs and CEs. The engineer must avoid advertising the same routes back to their sources. Which action should be performed on the routers to accomplish this task?

A. Define the site of origin on each interface.

B. Configure a different route distinguisher for each prefix.

C. Define VRFs on each device to separate the traffic.

D. Enable bidirectional forwarding detection on each device.

Question #183 *Topic 1*

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

B. interface GigEthernet 1/1 switchport mode trunk switchport trunk encap dot1q switchport trunk allow vlan 2-10

C. interface Vlan 5 xconnect vfi ciscotest

D. interface Vlan 100 xconnect vfi ciscotest ip address 192.168.1.1 255.255.255

Question #184 *Topic 1*

The network-engineering team of a service provider is integrating several recently acquired networks into a more scalable common Unified MPLS architecture.
The new network architecture will support end-to-end VPNv4 and VPNv6 services with these requirements:
☞ The IGP of the core layer is IS-IS in Area 0.
☞ The IGP of the aggregation layers is OSPF in Area 0.
☞ The LDP protocol is used to distribute label bindings within each IGP domain.
Which task must the network engineer perform when implementing this new architecture?

A. Configure a BGP session between the ABR routers of each IGP domain to exchange VPNv4 or VPNv6 prefixes.

B. Configure mutual redistribution of each IGP domain's loopback prefix to provide end-to-end LDP LSP.

C. Configure the ABR in each IGP domain to preserve next-hop information on all VPNv4 and VPNv6 prefixes advertised by the PE.

D. Configure BGP-LU between ABR routers of each IGP domain to carry MPLS label information in NLRI.

Question #185 *Topic 1*

How is a telemetry session established for data analytics?

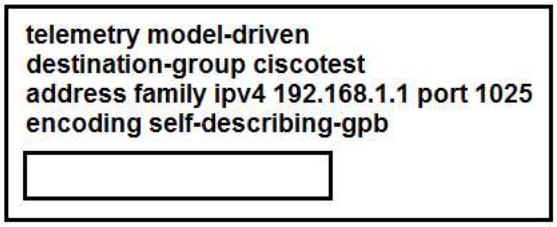
A. A router initiates a session using the dial-out mode to a destination.

B. A router requests the data using Telnet.

C. The destination initiates a session using the dial-out mode to the router.

D. A destination initiates a session to a router.

Question #186 *Topic 1*



Refer to the exhibit. A Cisco engineer is implementing gRPC dial-out on an ASR. Receiver 192.168.1.1 will be assigned one of the subscriptions, and it will manage the ASR. Which command is needed to complete the router configuration?

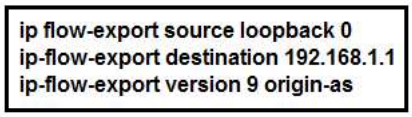
A. protocol tcp

B. protocol any

C. protocol grpc

D. protocol all

Question #187 *Topic 1*



Refer to the exhibit. Export statistics received do not include the BGP next hop.
Which statement about the NetFlow export statistics is true?

A. Loopback 0 must be participating in BGP for it to be included in the export statistics.

B. To include the BGP next hop in the export statistics, those keywords must be included with the version 9 entry.

C. The origin AS and the peer-as will be included in the export statistics.

D. Only the origin AS of the source router will be included in the export statistics.

Question #188 *Topic 1*

Refer to the exhibit. What is significant about the number 2 in the configuration?

A. It indicates two SNMP managers can read and write with the agent using community string ciscotest.

B. It dictates the number of sessions that can be open with the SNMP manager.

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

D. It represents the version of SNMP running.

Question #189 *Topic 1*

How can a network administrator secure rest APIs?

A. They can have a general administrator login for multiple users to access that has command entries logged.

B. They can authenticate user sessions and provide the appropriate privilege level.

C. They can ensure that user sessions are authenticated using TACACS+ only.

D. They can allow read and write privileges to all users.

Question #190 *Topic 1*

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

A. SNMP uses the YANG data modeling language.

B. Telemetry uses traps and inform messages to deliver data to a network administrator on a polling basis.

C. Telemetry allows for modeled network data to be pushed to the network administrator on an as-needed basis.

D. SNMP pushes network data to the network administrator whenever it is queried.

Question #191 *Topic 1*

```
snmp-server host 192.168.1.1 version 2c public
```

Refer to the exhibit. A network administrator wants to enhance the security for SNMP for this configuration.
Which action can the network administrator implement?

A. Add a community string to the existing entry.

B. Maintain the configuration but switch to an encrypted password for device access through SSH.

C. Re-configure to use SNMPv2 with MD5 authentication.

D. Re-configure to use SNMPv3.

Question #192 *Topic 1*

```
ip flow-export source loopback 0
ip flow-export destination 192.168.1.1
ip flow-export version 5 origin-as
```

Refer to the exhibit. If the NetFlow configuration is updated to version 9, which additional piece of information can be reported?

A. IPv4 flow information

B. BGP AS information

C. IPv6 flow information

D. flow sequence numbers

Question #193 *Topic 1*

Which service is a VNF role?

A. Network

B. Firewall

C. Storage

D. Compute

Question #194 *Topic 1*

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

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

A. It is used to enable gRPC.

B. It is used to create a streaming subscription with a 600-second interval.

C. It is used to set up configuration to poll network data.

D. It is used to create a streaming subscription with a 60-Second interval.

Question #195 *Topic 1*

```
POST https://router1:8000/api/mo/uni/Descriptions.xml
```

Refer to the exhibit. What does the REST API command do?

A. It removes the information identified by Descriptions.xml.

B. It executes the information specified in Descriptions.xml.

C. It retrieves the information requested by Descriptions.xml.

D. It displays the information identified by Descriptions.xml.

Question #196 *Topic 1*

```
https://192.168.1.100/api/mo/uni/tn-ciscotest.xml
```

Refer to the exhibit. What is the URL used for with REST API?

A. It is used to initiate an FTP session to save a running configuration of a device.

B. It is used to send a message to the APIC to perform an operation on a managed object or class operator.

C. It is used to contact a URL filter to determine the efficacy of a web address.

D. It is used to send a TACACS + authentication request to a server.

Question #197 *Topic 1*

Which two uses of the YANG data modeling language are true? (Choose two.)

A. It can be used to model the configuration used by NETCONF operations.

B. It can be used to access a device by HTTP.

C. It can be used to replace the OSI model for troubleshooting.

D. It can be used to shape state data of network elements.

E. It can be used to replace RESTCONF as a mechanism to install and manipulate configuration.

Question #198 *Topic 1*

Refer to the exhibit. What does this value mean when it is received in XML?

A. It indicates a value assigned by a network administrator to tag a route.

B. It indicates a break in a sequence.

C. It means a data field is blank.

D. It shows the ending of the script.

Question #199 *Topic 1*

What do Ansible and SaltStack have in common?

A. They both have agents running on the client machine.

B. They both can be designed with more than one master server.

C. They both use DSL configuration language.

D. They both use YAML configuration language.

Question #200 *Topic 1*

Refer to the exhibit. This output is included at the end of an output that was provided by a device using NETCONF.
What does the code show?

A. It shows that the full configuration is being modeled by YANG.

B. It shows NETCONF uses remote procedure calls.

C. It shows the hostname of the device as rpc-reply.

D. It shows that the running configuration is blank.

Question #201 *Topic 1*

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

A. It must use SDN as an overlay for addressing.

B. It uses YANG modeling language to automate devices.

C. It is used only in service provider environments.

D. It can be used only with XML coding.

Question #202 *Topic 1*

```
Router 1:

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

Refer to the exhibit. Which statement describes this configuration?

A. Router 1 has a new data store to collect SNMP information, but configuration must still be done at the CLI only.

B. Router 1 can be remotely managed by the CLI using Telnet.

C. Router 1 has its running configuration locked so changes can be made only when the administrator issues a kill session.

D. Router 1 has a temporary data store where a copy of the running configuration can be manipulated and verified before committing the configuration.

Question #203 *Topic 1*

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

Refer to the exhibit. This configuration is being applied on an IOS XR route.
Which statement about this configuration is true?

A. It is used to create a sensor-group and has a list of YANG models for streaming.

B. It is used to create a subscription to specify the streaming interval.

C. It is used to identify MIB entries and has a list of YANG models.

D. It is used to identify traps for SNMP polling.

Question #204 *Topic 1*

```
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>
```

Refer to the exhibit. What does the script configure?

A. a VLAN namespace

B. a physical domain

C. selectors for the in-band management

D. a static VLAN

Question #205 *Topic 1*

How does model-driven telemetry use YANG?

A. to poll network devices on a 30-minute interval

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 reset network devices that malfunction

Question #206 *Topic 1*

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

Refer to the exhibit. What is the effect of this configuration applied on the IOS XR router?

A. It is used to enable gRPC

B. It is used to create a streaming subscription with a 600-second interval

C. It is used to set up configuration to poll network data

D. It is used to create a streaming subscription with a 60-second interval

Question #207 *Topic 1*

Which module refers to the network automation using Ansible?

A. the iosxr_system module to collect facts from remote devices

B. the iosxr_command module to issue run commands on remote devices

C. the iosxr_user module to manage banners for users in the local database

D. the iosxr_logging module to run debugging for severity levels 2 to 5

Question #208 *Topic 1*

```
encoding = gpbkv
```

Refer to the exhibit. 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 used for encoding with the default protocol buffers

B. It is the encoding requested by the gRPC server

C. It is the encoding requested by the gRPC client

D. It is the encoding that is used for dial-in and dial-out

Question #209 *Topic 1*

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 enable traps snmp

B. snmp-server enable traps bgp snmp-server host 192.168.2.1 informs

C. snmp-server host test.cisco.com public snmp-server community ciscotest rw 10

D. snmp-server community ciscotest rw 10

Question #210 *Topic 1*

```
Router 1:

snmp-server group group1 v3 noauth
snmp-server user testuser group1 remote 192.168.0.254
snmp-server host 192.168.0.254 informs version 3 noauth testuser config
```

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 confidentiality. Which action should the engineer perform on the routers to accomplish this task?

A. snmp-server community public

B. snmp-server group group1 v3 auth

C. snmp-server host 192.168.0.254 informs version 3 auth testuser config

D. snmp-server user testuser group1 remote 192.168.0.254 v3 auth md5 testpassword

Question #211 *Topic 1*

What is a role of NSO?

A. It resides on a hypervisor that runs the Windows OS

B. It automates the deployment of access points with its built-in wireless LAN controller

C. It manages WAN infrastructure using a virtual switch

D. It provides full lifecycle management of a device

Question #212 *Topic 1*

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 sessions

C. show netconf-yang datastores

D. show platform software yang-management process

Question #213 *Topic 1*

An engineer is developing a configuration script to enable dial-out telemetry streams using gRPC on several new devices. TLS must be disabled on the devices.
Which configuration must the engineer apply on the network?

A. telemetry model-driven destination-group ciscotest address-family ipv4 192.168.1.0 port 57500 encoding self-describing-gpb protocol grpc tls-hostname ciscotest.com commit

B. telemetry model-driven destination-group DGroup1 address-family ipv4 172.0.0.0 port 5432 encoding self-describing-gpb protocol tcp commit

C. telemetry model-driven destination-group ciscotest address-family ipv4 192.168.1.0 port 57500 encoding self-describing-gpb protocol grpc no-tls commit

D. telemetry model-driven destination-group ciscotest address-family ipv4 192.168.1.0 port 57500 encoding self-describing-gpb protocol grpc commit

Question #214 *Topic 1*

Which additional configuration is required for NetFlow to provide traceback information?

A. A classification ACL must be configured to identity which type of traffic will be analyzed.

B. The BGP routing process must be started for any ingress or egress data to be reported when using NetFlow Version 5.

C. Cisco Express Forwarding must be configured for traffic that is egressing from the router to be property reported.

D. LLDP must be configured or the device will be unable to locate a NetFlow analyzer.

Question #215 *Topic 1*

What is the role of NSO in network automation?

A. It is a tool used to bridge automation to the physical network infrastructure.

B. It is a GUI used to manage wireless devices in a campus infrastructure.

C. It is a type of REST API used to configure an APIC.

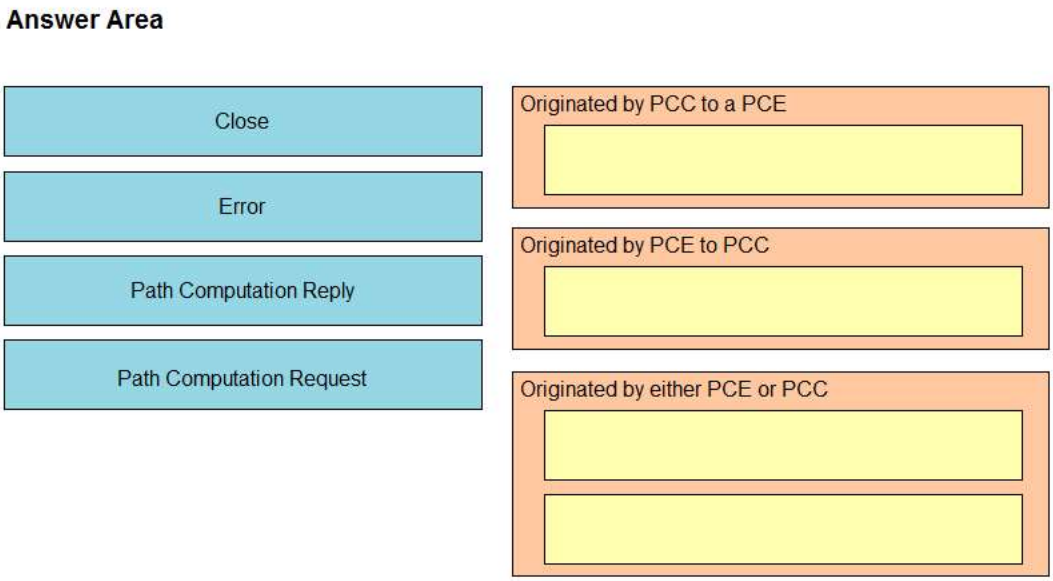
D. It is a tool that uses CLI only to configure virtual network devices.

Question #216 *Topic 1*

DRAG DROP -

Drag and drop the message types from the left onto the target field of the message originator on the right.

Select and Place:



Question #217 *Topic 1*

What do Chef and Puppet have in common?

A. use Ruby

B. require modules to be created from scratch

C. use a master server

D. manage agents referred to as minions

Question #218 *Topic 1*

How do intent APIs make it easier for network engineers to deploy and manage networks?

A. They pull stored SNMP data from a single network location to multiple monitoring tools.

B. They allow the engineer to use a single interface as the entry point for control access to the entire device.

C. They streamline repetitive workflows and support more efficient implementation.

D. They extend the Layer 2 infrastructure and reduce the necessary number of virtual connections to Layer 3 devices.

Question #219 *Topic 1*

```
<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>
```

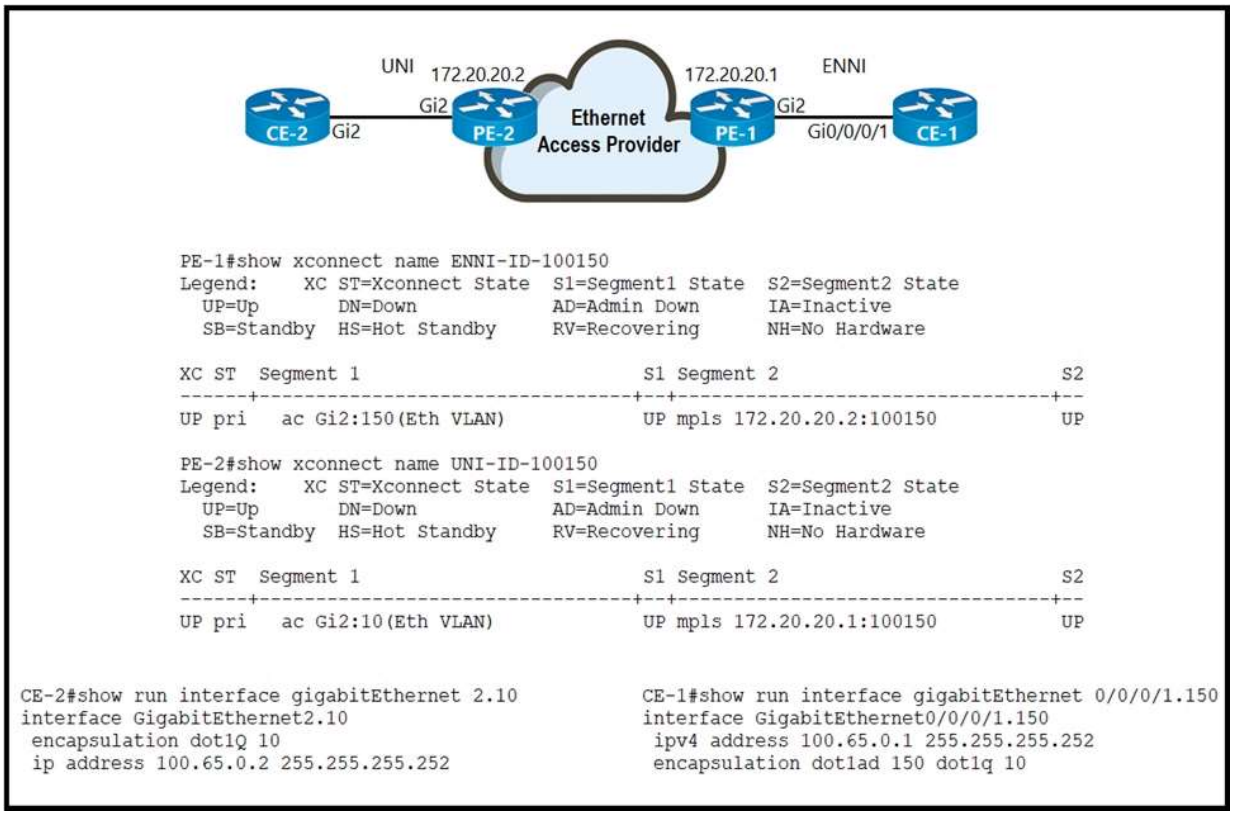
Refer to the exhibit. What does this REST API script configure?

A. VRF

B. interface with IP address 192.168.0.1

C. application profile

D. public community string for SNMP



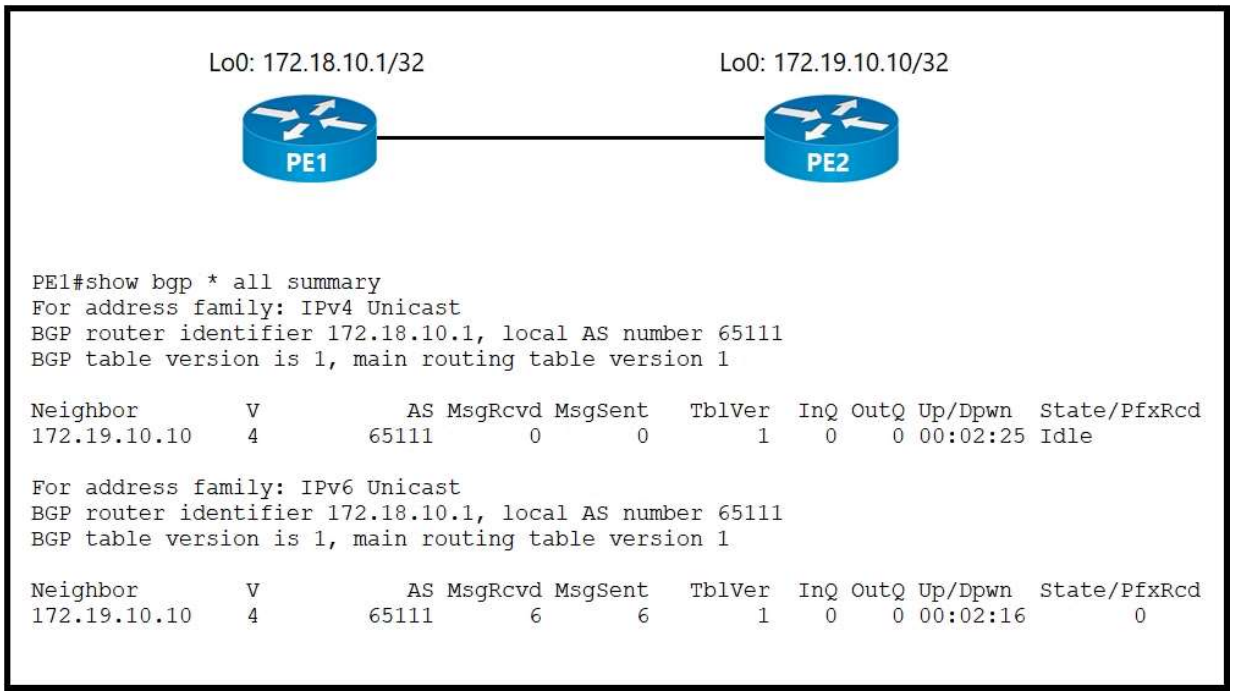
Refer to the exhibit. An Ethernet access provider is configuring routers PE-1 and PE-2 to provide E-Access EVPL service between UNI and ENNI. ENNI service multiplexing is based on 802.1ad tag 150, and service-multiplexed UNI is based on 802.1q tag 10. Which EFP configurations must the provider implement on PE-1 and PE-2 to establish end-to-end connectivity between CE-1 and CE-2?

A. On PE-1: interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1ad 150 rewrite ingress tag pop 1 symmetric On PE-2: interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10

B. On PE-1: interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1q 150 rewrite ingress tag pop 1 symmetric On PE-2: interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10

C. On PE-1: interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1ad 150 dot1q 10 rewrite ingress tag pop 2 symmetric On PE-2: interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10

D. On PE-1: interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1ad 150 rewrite ingress tag pop 1 symmetric On PE-2: interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10 rewrite ingress tag pop 1 symmetric




```
PE1#show bgp * all summary
For address family: IPv4 Unicast
BGP router identifier 172.18.10.1, local AS number 65111
BGP table version is 1, main routing table version 1

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Dpwn  State/PfxRcd
172.19.10.10    4        65111       0       0        1    0    0 00:02:25 Idle

For address family: IPv6 Unicast
BGP router identifier 172.18.10.1, local AS number 65111
BGP table version is 1, main routing table version 1

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Dpwn  State/PfxRcd
172.19.10.10    4        65111       6       6        1    0    0 00:02:16        0
```

Refer to the exhibit. An administrator working for large ISP must connect its two POP sites to provide internet connectivity to its customers. Which configuration must the administrator perform to establish an iBGP session between routers PE1 on POP site 1 and PE2 on POP site 2?

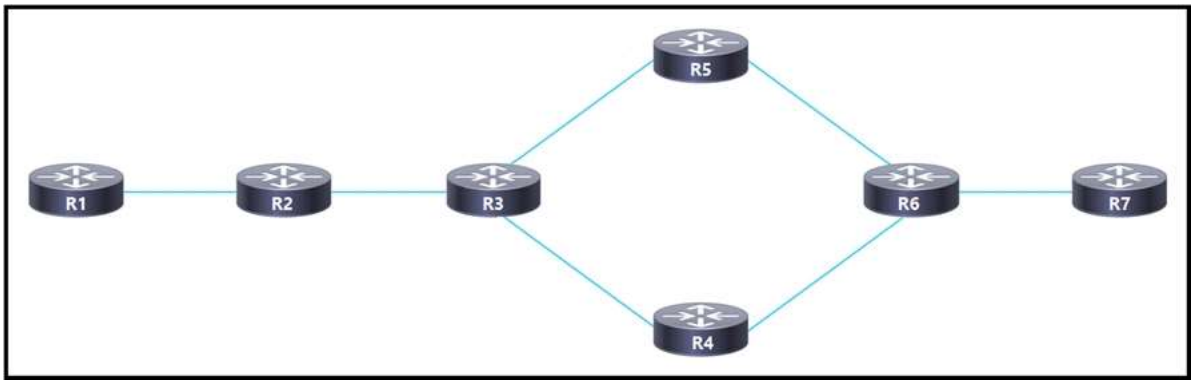
A. PE2#configure terminal PE2(config)#router bgp 65111 PE2(config-router)#no neighbor 172.18.10.1 shutdown PE2(config-router)#end

B. PE1#configure terminal PE1(config)#router bgp 65111 PE1(config-router)#no neighbor 172.19.10.10 shutdown PE1(config-router)#end

C. PE1#configure terminal PE1(config)#router bgp 65111 PE1(config-router)#address-family ipv4 unicast PE1(config-router-af)#neighbor 172.19.10.10 activate PE1(config-router-af)#end

D. PE2#configure terminal PE2(config)#router bgp 65111 PE2(config-router)#address-family ipv4 unicast PE2(config-router-af)#neighbor 172.18.10.1 activate PE2(config-router-af)#end

Question #222 *Topic 1*



Refer to the exhibit. After a networking team configured this MPLS topology, the supervisor wants to view MPLS labels to verify the path that packets take from router R1 to router R7. The team already issued an ICMP ping to verify connectivity between the devices. Which task must the team perform to allow the supervisor to view the label switch path?

A. Implement MPLS OAM to display the labels for each hop along the path.

B. Configure MPLS TE to display the labels in the stack between the head and tail-end routers.

C. Configure MPLS LDP Sync to sync labels from the routing table to the MPLS forwarding table.

D. Implement MPLS LDP to assign labels to all the routes in the transit path.

Question #223 *Topic 1*

What are two features of stateful NAT64? (Choose two.)

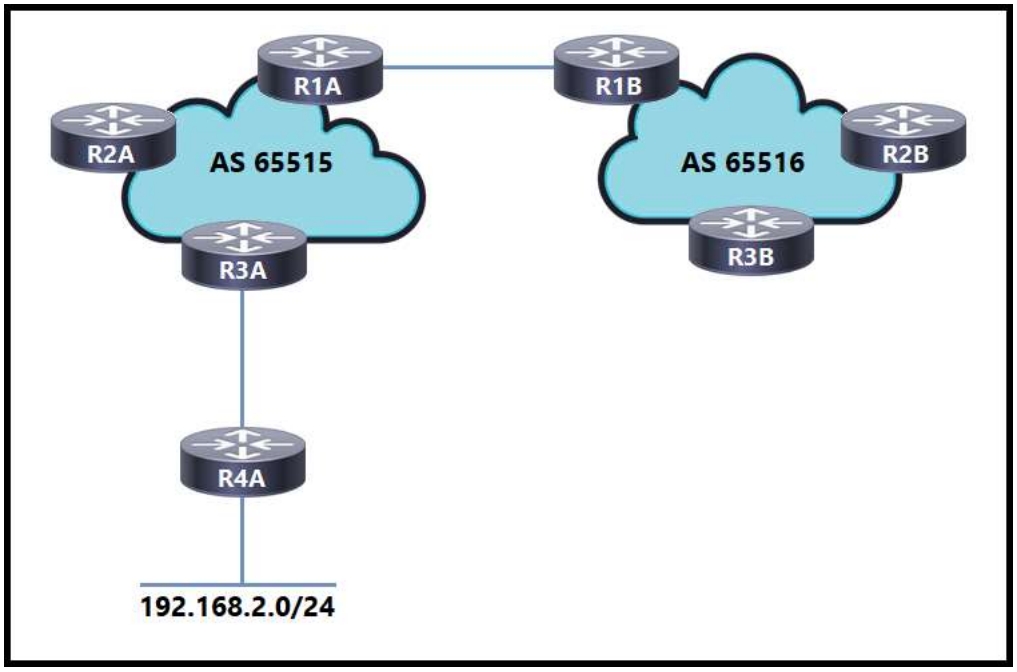
A. It uses address overloading.

B. It provides 1:N translations, so it supports an unlimited number of endpoints.

C. It requires IPv4-translatable IPv6 address assignments.

D. It requires the IPv6 hosts to use either DHCPv6-based address assignments or manual address assignments.

E. It provides 1:1 translation, so it supports a limited number of endpoints.



Refer to the exhibit. An engineer working for a private telecommunication company with an employee id: 3414:81:713 is implementing this network, in which:

- Routers R1A and R1B are eBGP neighbors.
- iBGP is configured within AS 65515 and AS 65516.
- Network 192.168.2.0/24 is shared with AS 65516.
- Router R3A has an iBGP relationship with router R2A only.
- Router R2A has an iBGP relationship with routers R1A and R3A.

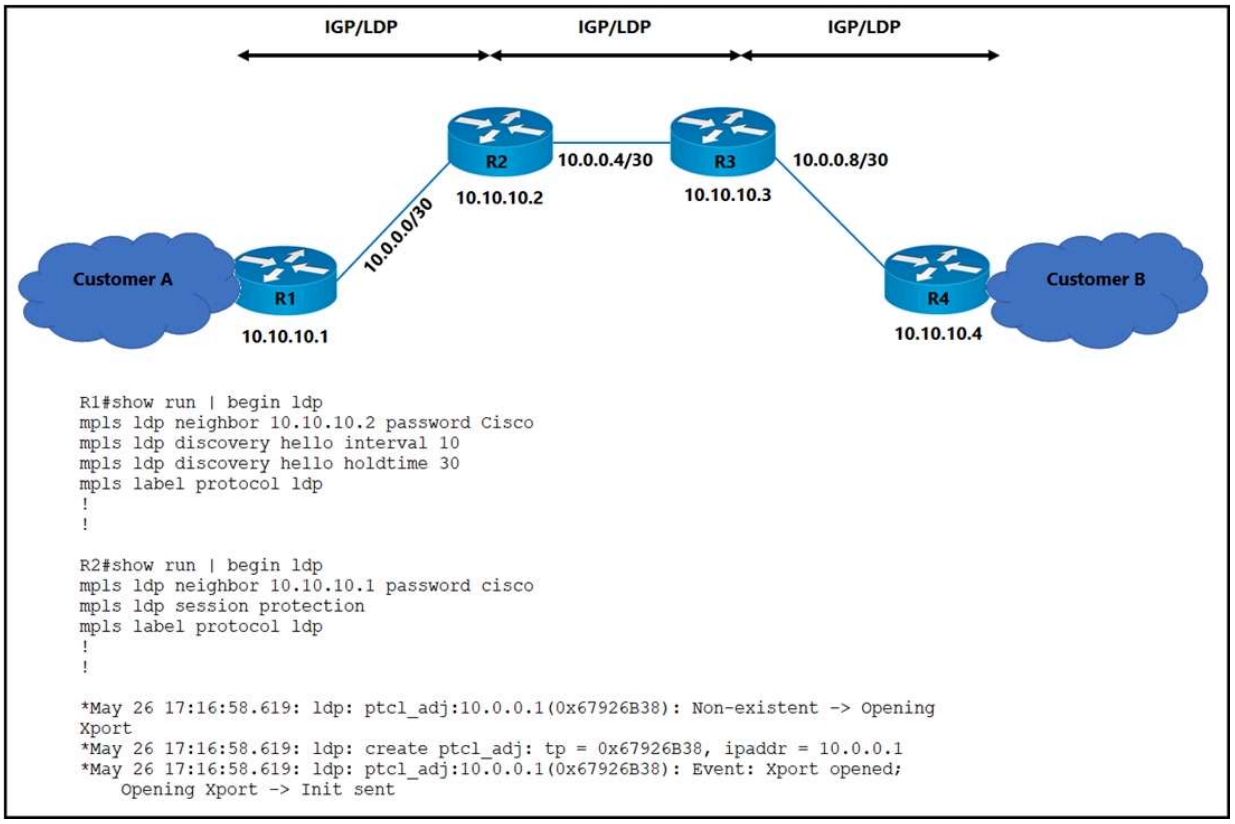
Which additional task must the engineer perform to complete the configuration?

A. Configure router R2A to use the next-hop-self attribute when advertising the learned route to router R1A.

B. Configure router R3A to redistribute route 192.168.2.0/24 into the configured IGP to advertise the prefix to router R1A.

C. Configure router R2A as a route reflector to advertise the iBGP learned prefix from router R3A to R1A.

D. Configure router R1A with a static route to 192.168.2.0/24 that is redistributed into BGP.




```
R1#show run | begin ldp
mpls ldp neighbor 10.10.10.2 password Cisco
mpls ldp discovery hello interval 10
mpls ldp discovery hello holdtime 30
mpls label protocol ldp
!
!

R2#show run | begin ldp
mpls ldp neighbor 10.10.10.1 password cisco
mpls ldp session protection
mpls label protocol ldp
!
!

*May 26 17:16:58.619: ldp: ptcl_adj:10.0.0.1(0x67926B38): Non-existent -> Opening
Xport
*May 26 17:16:58.619: ldp: create ptcl_adj: tp = 0x67926B38, ipaddr = 10.0.0.1
*May 26 17:16:58.619: ldp: ptcl_adj:10.0.0.1(0x67926B38): Event: Xport opened;
    Opening Xport -> Init sent
```

Refer to the exhibit. The operations team is implementing an LDP-based configuration in the service provider core network with these requirements:

- R1 must establish LDP peering with the loopback IP address as its Router-ID.
- Session protection must be enabled on R2.

How must the team update the network configuration to successfully enable LDP peering between R1 and R2?

A. Change the LDP password on R2 to Cisco.

B. Configure mpls ldp router-id loopback0 on R1 and R2.

C. Configure LDP session protection on R1.

D. Change the discover hello hold time and interval to their default values.

Question #226 *Topic 1*

A network engineer is testing an automation platform that interacts with Cisco networking devices via NETCONF over SSH. In accordance with internal security requirements:

- NETCONF sessions are permitted only from trusted sources in the 172.16.20.0/24 subnet.
- CLI SSH access is permitted from any source.

Which configuration must the engineer apply on R1?

A. configure terminal hostname R1 ip domain-name mydomain.com crypto key generate rsa ip ssh version 1 access-list 1 permit 172.16.20.0 0.0.0.255 netconf ssh acl 1 line vty 0 4 transport input ssh end

B. configure terminal hostname R1 ip domain-name mydomain.com crypto key generate rsa ip ssh version 2 access-list 1 permit 172.16.20.0 0.0.0.255 access-list 1 permit any netconf ssh line vty 0 4 access-class 1 in transport input ssh end

C. configure terminal hostname R1 ip domain-name mydomain.com crypto key generate rsa ip ssh version 1 access-list 1 permit 172.16.20.0 0.0.0.255 access-list 2 permit any netconf ssh line vty 0 4 access-class 2 in transport input ssh end

D. configure terminal hostname R1 ip domain-name mydomain.com crypto key generate rsa ip ssh version 2 access-list 1 permit 172.16.20.0 0.0.0.255 netconf ssh acl 1 line vty 0 4 transport input ssh end

Question #227 *Topic 1*

A network architect decides to expand the scope of the multicast deployment within the company network. The network is already using PIM-SM with a static RP that supports a high-bandwidth, video-based training application that is heavily used by the employees, but excessive bandwidth usage is a concern. How must the engineer update the network to provide a more efficient multicast implementation?

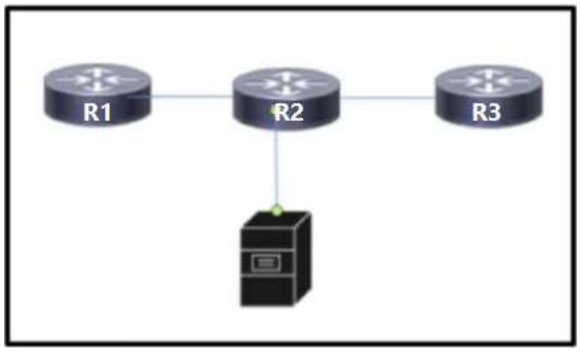
A. Configure IGMP to manage the multicast hosts on each LAN.

B. Deploy ICMP to improve multicast reachability across the network using static RP.

C. Implement BSR to support dynamic RP notification.

D. Implement STP to improve switching performance for multicast data.

Question #228 *Topic 1*



Refer to the exhibit. Users on a network connected to router R3 report slow speeds when they connect to the server connected to R2. After analyzing traffic on the network, a network engineer identified congestion on the link between R2 and R3 as the cause. Which QoS service must the engineer implement to drop traffic on the link when it exceeds a configured threshold?

A. traffic shaping

B. class-based weighted fair queueing

C. first-in, first-out

D. traffic policing

Question #229 *Topic 1*

What is the role of NSO?

A. Provides public cloud services for customers that need Internet access.

B. Controls the turn-up of a device.

C. Provides network monitoring services for Layer 3 devices.

D. Maintains data storage.

Question #230 *Topic 1*

An engineer is moving all of an organization's Cisco IOS XE BGP routers to the address-family identifier format. Which command should be used to perform this upgrade quickly with the minimum service disruption?

A. vrf upgrade-cli

B. bgp upgrade-cli

C. address-family ipv4

D. ip bgp-community new-format

Question #231 *Topic 1*

What is the role of NFVI?

A. domain name service

B. intrusion detection

C. monitor

D. network address translation

Question #232 *Topic 1*

A network engineer is implementing NetFlow to observe traffic patterns on the network. The engineer is planning to review the patterns to help plan future strategies for monitoring and preventing congestion as the network grows. If the captures must include BGP next-hop flows, which configuration must the engineer apply to the router?

A. ip cef ip flow-export version 5 bgp-nexthop ip flow-export destination 192.168.1.1 9995 interface gigabitethernet 1/0/1 ip flow egress

B. ip cef ip flow-export version 9 bgp-nexthop ip flow-export destination 192.168.1.1 9996 interface gigabitethernet 1/0/1 ip flow ingress

C. ip cef ip flow-export version 5 ip flow-export destination 192.168.1.1 9995 interface gigabitethernet 1/0/1 ip flow ingress cdp enable

D. no ip cef ip flow-export version 9 ip flow-export destination 192.168.1.1 9996 interface gigabitethernet 1/0/1 ip flow ingress ip flow egress

```
username cisco privilege 15 password 0 cisco
!
ip http server
ip http authentication local
ip http secure-server
!
snmp-server community private RW
!
netconf-yang
netconf-yang cisco-ia snmp-community-string cisco
restconf
```

Refer to the exhibit. A network engineer is trying to retrieve SNMP MIBs with RESTCONF on the Cisco switch but fails. End-to-end routing is in place. Which configuration must the engineer implement on the switch to complete the task?

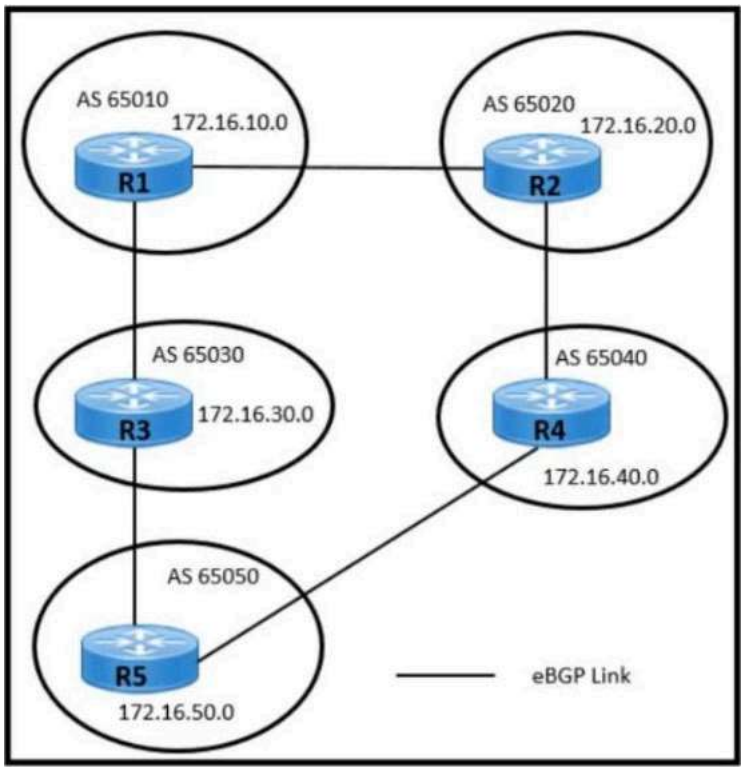
A. snmp-server community public RO

B. snmp-server community cisco RW

C. netconf-yang cisco-ia snmp-community-string Public

D. netconf-yang cisco-ia snmp-community-string Private

Question #234 *Topic 1*



Refer to the exhibit. Users in AS 65010 are connected with the application server in AS 65050 with these requirements:
AS 65010 users are experiencing latency and congestion to connect with application server 172.16.50.10.

▪

☞ AS 65030 must be restricted to become Transient Autonomous System for traffic flow.
☞ Links connected to AS 65020 and AS 65040 are underutilized and must be used efficiently for traffic.
Which two configurations must be implemented to meet these requirements? (Choose two.)

A. Apply the AS-Path route-map policy for traffic received from R3.

B. Configure the route map to prepend the AS-Path attribute for R5-R3 BGP peering.

C. Apply the MED route-map policy for traffic received from R4.

D. Configure a higher Local preference for R5-R4 BGP peering.

E. Configure the route map to set the MED 50 attribute for R5-R4 BGP peering.

Question #235 *Topic 1*

What is a characteristic of MVPN?

A. It bypasses the use of MPLS in the service provider core and transmits packets using IP only.

B. It uses pseudowires to route unicast and broadcast traffic over either a service provider MPLS or IP core.

C. It allows VRF traffic to use the service provider MPLS VPN to route multicast traffic.

D. It creates GRE tunnels to route multicast traffic over a service provider IP core.

Question #236 *Topic 1*

Which action does the ingress VTEP perform on traffic between EVPN VXLAN overlays?

A. routing and bridging when doing asymmetric IRB

B. bridging when doing symmetric IRB

C. routing and tunneling when doing symmetric IRB

D. routing when doing asymmetric IRB

Question #237 *Topic 1*

```
router(config)# router ospf 11
router(config-if)# passive-interface default
```

Refer to the exhibit. An engineer started to configure a router for OSPF. Which configuration must the engineer perform on the router without changing any interface configuration so that the router establishes an OSPF neighbor relationship with its peer?

A. router(config)# router ospf 11router(config-if)# no passive-interface ethernet 1/1

B. router(config)# interface ethernet 1/1router(config-if)# no shutdown

C. router(config)# interface ethernet 1/1router(config-if)# ip ospf hello-interval

D. router(config)# interface ethernet 1/1router(config-if)# ip ospf priority 0

Question #238 *Topic 1*

```
POST http://192.168.1.1 api/changeSelfPassword.json

{
  "aaaChangePassword" : {
    "attributes" : {
      "userName" : "ciscotest",
      "oldPassword" : "s@nfr@nc1sc0",
      "newPassword" : "s@nfr@nc1sco"
    }
  }
}
```

Refer to the exhibit. What is the purpose of this JSON script?

A. It changes the existing password.

B. It updates a user authentication record.

C. It deletes a user's authentication record.

D. It confirms a user's login credentials.

Question #239 *Topic 1*

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 ospfIfEntry and ospfNbrEntry.

Which configuration must the engineer apply?

A. 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

B. 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

C. 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

D. 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

Question #240 *Topic 1*

A network administrator must monitor network usage to provide optimal performance to the network end users when the network is under heavy load. The administrator asked the engineer to install a new server to receive SNMP traps at destination 192.168.1.2. Which configuration must the engineer apply so that all traps are sent to the new server?

A. snmp-server enable traps entity snmp-server host 192.168.1.2 public

B. snmp-server enable traps bgp snmp-server host 192.168.1.2 public

C. snmp-server enable traps isdn snmp-server host 192.168.1.2 public

D. snmp-server enable traps snmp-server host 192.168.1.2 public

Question #241 *Topic 1*

What must a network engineer consider when designing a Cisco MPLS TE solution with OSPF?

A. The OSPF extensions and RSVP-TE must be enabled on all routers in the network.

B. OSPF extensions for RSVP-TE are supported in Area 1.

C. The OSPF extensions and RSVP-TE must be enabled on the egress routers.

D. OSPF extensions for RSVP-TE are implemented in Type 6, 7, and 8 LSAs.

Question #242 *Topic 1*

Which feature describes the adjacency SID?

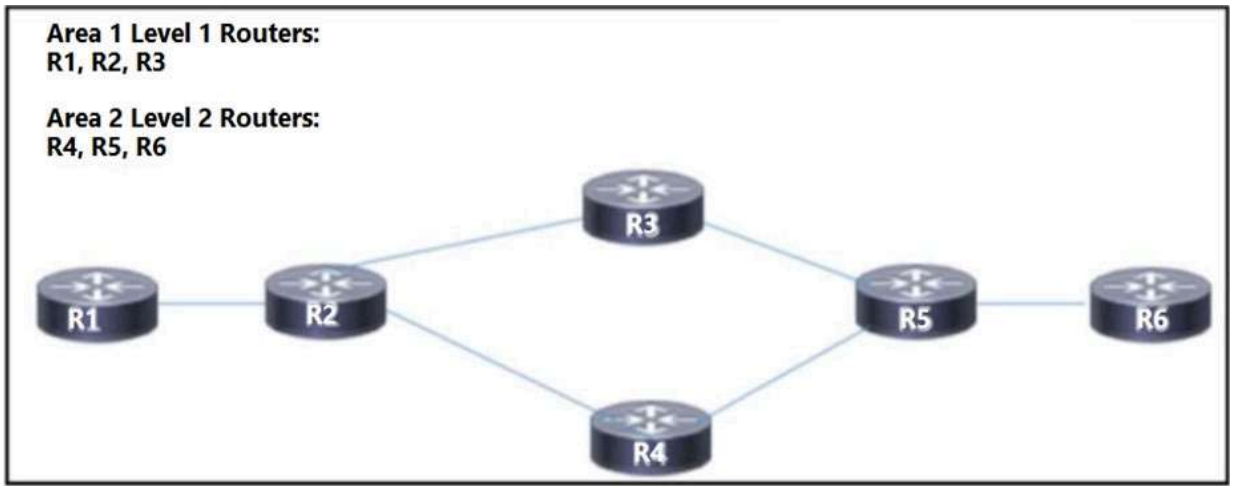
A. It applies only to multipoint links.

B. It is globally unique.

C. It applies only to point-to-point links.

D. It is locally unique.

Question #243 *Topic 1*



Refer to the exhibit. A network engineer is in the process of implementing IS -IS Area 1 and Area 2 on this network to segregate traffic between different segments of the network. The hosts in the two new areas must maintain the ability to communicate with one another in both directions. Which additional change must be applied?

A. Reconfigure routers R2 and R5 as Level 1/Level 2 routers.

B. Reconfigure routers R1, R2, R5, and R6 as Level 1/Level 2 routers.

C. Reconfigure routers R4, R5, and R6 as Level 1 routers.

D. Reconfigure either R3 or R4 as a Level 1/Level 2 router.

Question #244 *Topic 1*

The network team is planning to implement IPv6 on the company's existing IPv4 network infrastructure. The network currently uses IS-IS to share routes between peers. Which task must the team perform so that IS-IS will run in multitopology mode on the updated IPv6 network?

A. Configure the links between the network routers as point-to-point.

B. Configure the network routers to use metric-style wide.

C. Configure the network routers as Level 2 routers.

D. Configure the IS-IS IPv6 metric on the dual-stack links.

Question #245 *Topic 1*

After a series of unexpected device failures on the network, a Cisco engineer is deploying NSF on the network devices so that packets continue to be forwarded during switchovers. The network devices reside in the same building, but they are physically separated into two different data centers. Which task must the engineer perform as part of the deployment?

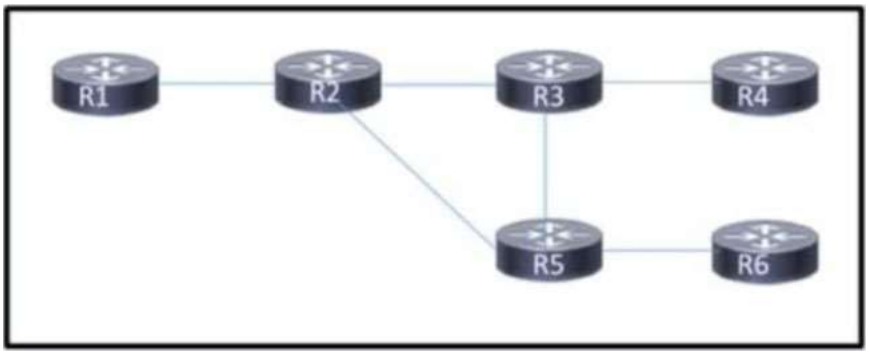
A. Implement an L2VPN with the failover peer to share state information between the active and standby devices.

B. Implement OSPF to maintain the link-state database during failover.

C. Implement VRFs and specify the forwarding instances that must remain active during failover.

D. Implement Cisco Express Forwarding to provide forwarding during failover.

Question #246 *Topic 1*



Refer to the exhibit. Customers report occasional forwarding issues from hosts connected to R6 to hosts connected to R1. A network engineer has just updated the MPLS configuration on the network, and a targeted LDP session has been established between R1 and R5. Which additional task must the engineer perform so that the team can identify the path from R6 to R1 in case the forwarding issues continue?

A. Configure an MPLS TE from R4 to R1 that routes through R5.

B. Implement MPLS OAM within the network.

C. Implement MPLS VPLS within the network.

D. Configure MPLS LDP Sync on each router.

Question #247 *Topic 1*

Which benefit is provided by FRR?

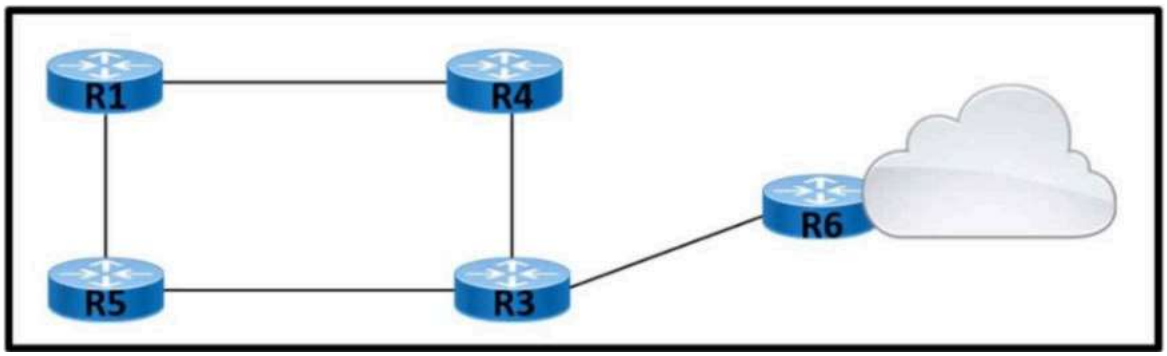
A. It provides fast forwarding path failure detection times for all media.

B. It provides rapid failure detection between forwarding engines.

C. It provides performance data for the service provider network.

D. It protects Cisco MPLS TE LSPs from link and node failures.

Question #248 *Topic 1*



Refer to the exhibit. An organization's network recently experienced several significant outages due to device failures. The network administrator just moved the network devices to a new central data center, and packets are switched using labels. The administrator is now implementing NSF on the network to reduce potential risk factors in the event of another outage. Which task must the administrator perform on each router as part of the process?

A. Implement Graceful Restart to mitigate the delay in MPLS LDP synchronization when the IGP starts up.

B. Implement MPLS to forward packets while the RIB updates after a failover.

C. Remove route filtering to speed repopulation of the link-state database.

D. Copy the router's existing state information and share the file with its peers to enable BGP soft resets.

Question #249 *Topic 1*

An engineer must implement QoS to prioritize traffic that requires better service throughout the network. The engineer started by configuring a class map to identify the high-priority traffic. Which additional tasks must the engineer perform to implement the new QoS policy?

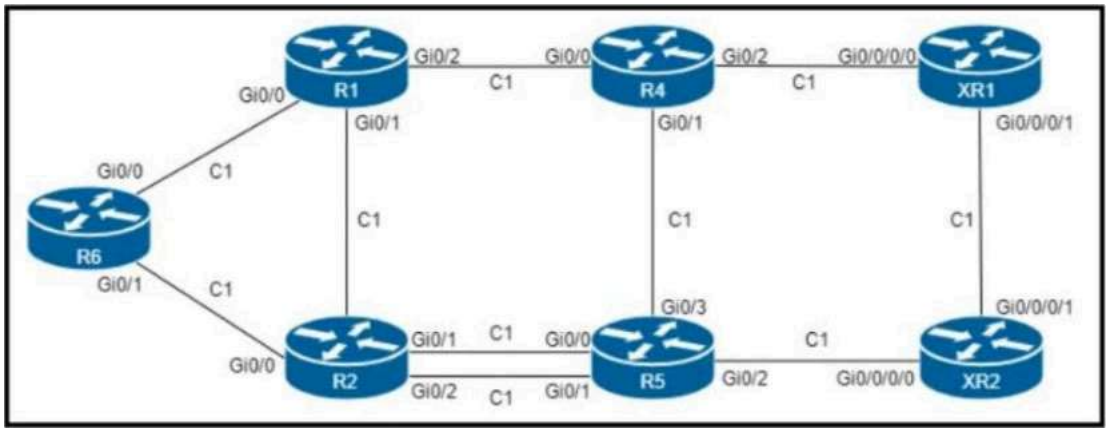
A. Attach the class map to a policy map that sets the minimum bandwidth allocated to the classified traffic and designates the action to be taken on the traffic.

B. Attach the class map to a policy map that designates the action to be taken on the classified traffic and then attach the policy map to an interface using a service policy.

C. Attach the class map to a policy map within a VRF to segregate the high-priority traffic and then attach the policy map to an interface in another VRF.

D. Create a route map to manipulate the routes that are entered into the routing table and then attach the route map to an interface using a service policy.

Question #250 *Topic 1*



Refer to the exhibit. An engineer configured R6 as the headend LSR of an RSVP-TE LSP to router XR2, with the dynamic path signaled as R6-R2-R5-XR2, and set the OSPF cost of all links to 1. MPLS autotunnel backup is enabled on all routers to protect the LSP. Which two NNHOP backup tunnels should the engineer use to complete the implementation? (Choose two.)

A. The R2 backup tunnel path R2-R1-R4-XR1-XR2.

B. The R2 backup tunnel path R2-R5 across the alternate link.

C. The R6 backup tunnel path R6-R2-R5.

D. The R6 backup tunnel path R6-R1-R4-R5.

E. The R6 backup tunnel path R6-R1-R2.

Question #251 *Topic 1*

An engineer is implementing NSR with OSPF on a large campus that requires high availability. Which task must an engineer perform to complete the process with minimal disruption to traffic?

A. Increase the keepalive interval on the OSPF neighbors so that traffic continues to pass during the switchover.

B. Ensure that the dual RP has synchronized their state information before performing the switchover operation.

C. Reset OSPF neighbor sessions to maintain state information during router switchover.

D. Configure the device to repopulate state information using routing updates received from the BDR.

Question #252 *Topic 1*

A service provider requires continuous real-time network monitoring to provide reliable SLAs to its customers. To satisfy this requirement, a network administrator is implementing gRPC dial out on an ASR with TLS. Receiver 192.168.10.2 will be assigned one of the subscriptions, and it will manage the ASR. Which configuration must the engineer apply to the router as part of the configuration process?

A. snmp-server community public snmp-server enable traps snmp-server host 192.168.10.2 version 2c public.

B. telemetry model-driven destination-group DGroup1 address family ipv4 192.168.10.2 1 port 10 encoding self-describing-gpb

C. snmp-server community public snmp-server enable traps snmp-server enable traps snmp authentication snmp-server manager snmp-server manager session-timeout 1000

D. telemetry model-driven destination-group ciscotest address family ipv4 192.168.10.2 port 10 encoding self-describing-gpb protocol grpc tis-hostname ciscotest.com

Question #253 *Topic 1*

An engineer must apply an 802.1ad-compliant configuration to a new switchport with these requirements:
☞ The switchport must tag all traffic when it enters the port.
☞ The switchport is expected to provide the same level of service to traffic from any customer VLAN.
Which configuration must the engineer use?

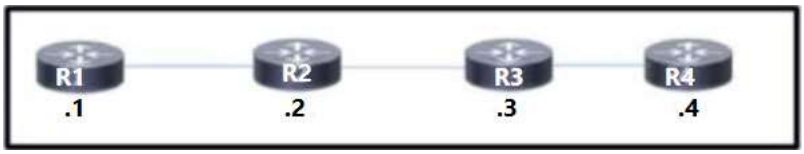
A. interface GigabitEthernet1/0/1 switchport mode trunk switchport trunk encapsulation dot1q encapsulation ISL bridge-domain 12

B. interface GigabitEthernet1/0/1 ethernet dot1ad uni c-port service instance 12 encapsulation dot1q rewrite ingress tag push dot1ad 21 symmetric bridge-domain 12

C. interface GigabitEthernet1/0/1 ethernet dot1ad uni s-port service instance 12 encapsulation default rewrite ingress tag push dot1ad 21 symmetric bridge-domain 12

D. interface GigabitEthernet1/0/1 ethernet dot1ad nni service instance 12 encapsulation dot1ad bridge-domain 12

Question #254 *Topic 1*



Refer to the exhibit. A network operator working for a private telecommunication company with an employee id: 7138: 13:414 just added new users to the network, which resides in VLANs connected to routers R1 and R4. The engineer now must configure the network so that routers R1 and R4 share routes to the VLANs, but routers R2 and R3 are prevented from including the routes in their routing tables. Which configuration must the engineer apply to R4 to begin implementing the request?

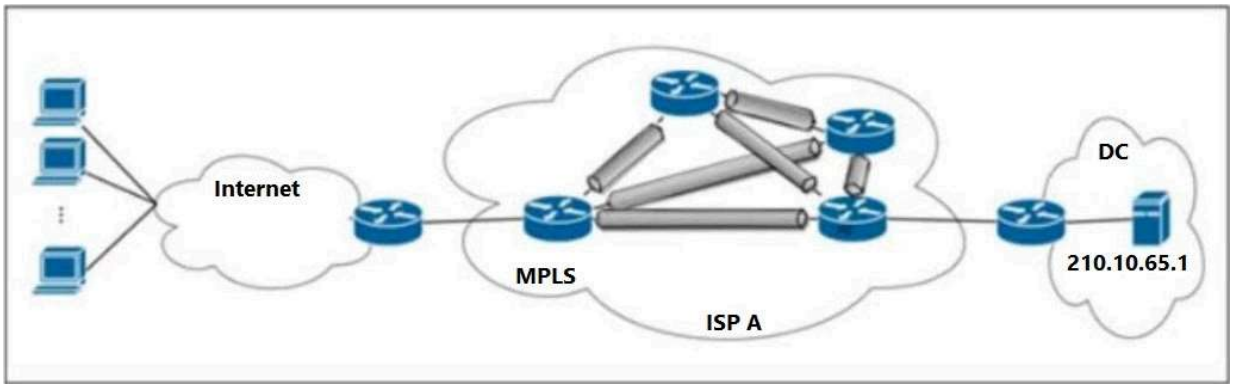
A. pseudowire -class ciscotest encapsulation mpls interface gigabitethernet 1/0/1 connect neighbor 192.168.1.1 101 pw-class cisco

B. pseudowire -class ciscotest encapsulation mpls interface gigabitethernet 1/0/1 xconnect 192.168.1.1 101 pw-class ciscotest

C. pseudowire-class ciscotest encapsulation mpls service-policy output ciscotest

D. interface serial 2/0/0 frame-relay encapsulation ip address 192.168.1.4 255.255.255.0 service-policy output ciscotest

Question #255 *Topic 1*



Refer to the exhibit. ISP A provides VPLS services and DDoS protection to Company XYZ to connect their branches across the North America and Europe regions. The uplink from the data center to the ISP is 100 Mbps. The Company XYZ security team asked the ISP to redirect ICMP echo requests, which are currently going to the web server, to a new local security appliance. Which configuration must an ISP engineer apply to router R2 to redirect the ICMP traffic?

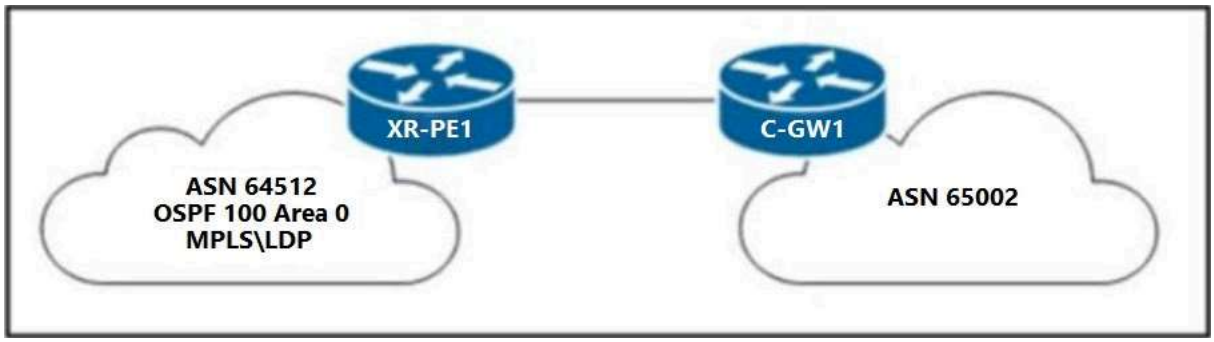
A. class-map type traffic match-all B_210.10.65.1 match destination-address ipv4 210.10.65.1 match protocol 7 match ipv4 icmp-type 3

B. class-map type traffic match-all B_210.10.65.1 match destination-address ipv4 210.10.65.1 match protocol 1 match ipv4 icmp-type 8

C. class-map type traffic match-all B_210.10.65.1 match destination-address ipv4 210.10.65.1 match protocol 3 match ipv4 icmp-type 5

D. class-map type traffic match-all B_210.10.65.1 match destination-address ipv4 210.10.65.1 match protocol 6 match ipv4 icmp-type 9

Question #256 *Topic 1*



Refer to the exhibit. A network engineer must configure XR-PE1 for uninterruptible failover from the active RP to the standby RP. Neither peer device C-GW1 nor the core network of ASN 64512 support grateful restart extensions. Which configuration must the engineer apply to XR-PE1 to complete the task?

A. nsr process-failures switchover router ospf 100 nsf cisco

B. router bgp 64512 nsr router ospf 100 nsr mpls ldp nsr

C. nsr process-failures switchover router bgp 64512 nsr router ospf 100 nsr mpls ldp nsr

D. nsr process-failures switchover router ospf 100 nsf ietf

Question #257 *Topic 1*

A customer has requested that the service provider use a Cisco MPLS TE tunnel to force the E-Line service to take a specific route. What is used to send the traffic over the tunnel?

A. forwarding adjacency

B. autoroute destination

C. preferred path

D. static route

Question #258 *Topic 1*

When Cisco IOS XE REST API uses HTTP request methods, what is the purpose of a PUT request?

A. updates the specified resource with new information

B. creates a new resource

C. submits data to be processed to the specified resource

D. retrieves the specified resource or representation

Question #259 *Topic 1*

```
interface Gigabitethernet 1/0/1
   ip address 192.168.1.1 255.255.255.0
   ip router isis
   isis tag 15

route-map match-tag permit 10
   match tag 15
```

Refer to the exhibit. A large organization is merging the network assets of a recently acquired competitor with one of its own satellite offices in the same geographic area. The newly acquired network is running a different routing protocol than the company's primary network. As part of the merger, a network engineer implemented this route map. Which task must the engineer perform to complete the implementation?

A. Attach the route map to the redistribution command to manipulate the routes as they are shared.

B. Enable metric-style wide to allow the use of extended metrics from the protocols.

C. Configure an additional route map sequence to override the implicit deny at the end of the route map.

D. Attach the route map to an IS-IS network statement to advertise the routes learned on this interface to IS-IS.

Question #260 *Topic 1*

A network engineer must configure a router for Flexible NetFlow IPFIX export. The IP address of the destination server is 172.17.12.1. The source address must be set to the Loopback0 IPv4 address and exported packets must be set to DSCP CS3. The TTL must be 64 and the transport protocol must be set to UDP with destination port 4739. Which configuration must the engineer apply to the router?

A. configure terminal flow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0 dscp 3 ttl 64 export-protocol netflow-v9 transport udp 4739 end

B. configure terminal flow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0 dscp 24 ttl 64 export-protocol ipfix end

C. configure terminal flow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0 dscp 24 ttl 64 export-protocol netflow-v9 transport udp 4739 end

D. configure terminal flow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0 dscp 3 ttl 64 export-protocol ipfix end

Question #261 *Topic 1*

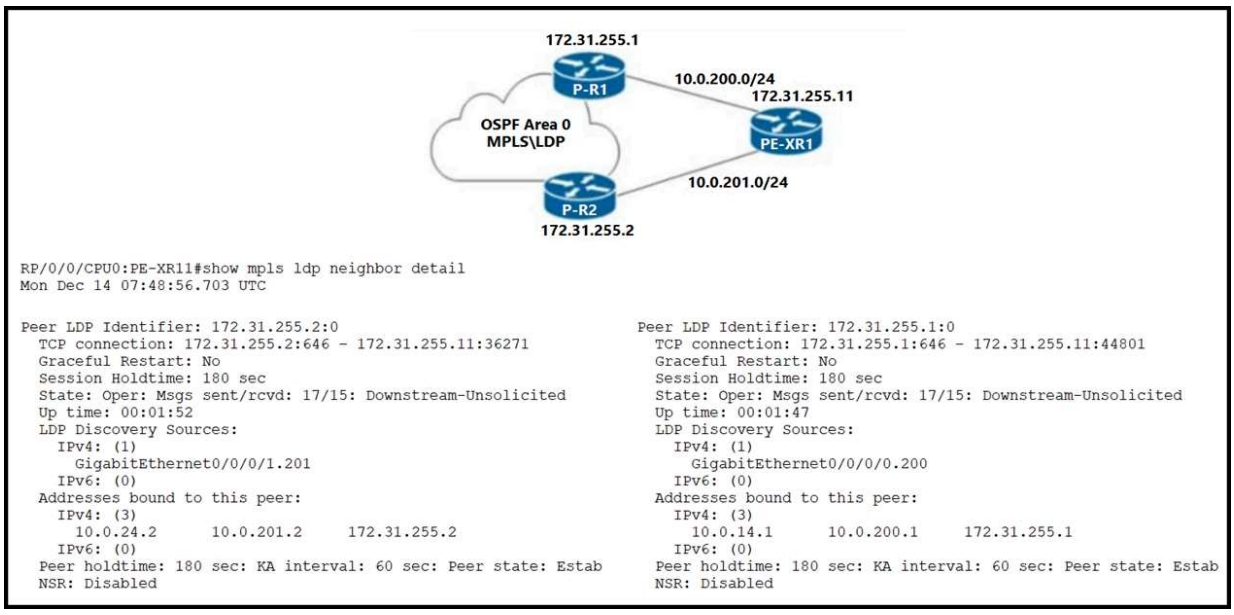
A network administrator is planning a new network with a segment-routing architecture using a distributed control plane. How is routing information distributed on such a network?

A. Each segment is signaled by a compatible routing protocol, and each segment makes its own steering decisions based on SR policy.

B. Each segment is signaled by MPLS, and each segment makes steering decisions based on the routing policy pushed by BGP.

C. Each segment is signaled by an SR controller, but each segment makes its own steering decisions based on SR policy.

D. Each segment is signaled by an SR controller that makes the steering decisions for each node.




```
RP/0/0/CPU0:PE-XR11#show mpls ldp neighbor detail
Mon Dec 14 07:48:56.703 UTC

Peer LDP Identifier: 172.31.255.2:0
  TCP connection: 172.31.255.2:646 - 172.31.255.11:36271
  Graceful Restart: No
  Session Holdtime: 180 sec
  State: Oper: Msgs sent/rcvd: 17/15: Downstream-Unsolicited
  Up time: 00:01:52
  LDP Discovery Sources:
    IPv4: (1)
      GigabitEthernet0/0/0/1.201
    IPv6: (0)
  Addresses bound to this peer:
    IPv4: (3)
      10.0.24.2      10.0.201.2     172.31.255.2
    IPv6: (0)
  Peer holdtime: 180 sec: KA interval: 60 sec: Peer state: Estab
  NSR: Disabled

Peer LDP Identifier: 172.31.255.1:0
  TCP connection: 172.31.255.1:646 - 172.31.255.11:44801
  Graceful Restart: No
  Session Holdtime: 180 sec
  State: Oper: Msgs sent/rcvd: 17/15: Downstream-Unsolicited
  Up time: 00:01:47
  LDP Discovery Sources:
    IPv4: (1)
      GigabitEthernet0/0/0/0.200
    IPv6: (0)
  Addresses bound to this peer:
    IPv4: (3)
      10.0.14.1      10.0.200.1     172.31.255.1
    IPv6: (0)
  Peer holdtime: 180 sec: KA interval: 60 sec: Peer state: Estab
  NSR: Disabled
```

Refer to the exhibit. The network team must implement MPLS LDP session protection with two requirements:

☞ Session protection is provided for core loopback IP addresses only.

☞ The LDP session must remain operational for one hour when the WAN link on PE-XR1 fails.

Which configuration must the team implement on PE-XR1?

A. configure terminal ipv4 access-list LDP-SESSION-PROTECTION permit ipv4 172.31.255.0 0.0.0.255 any ! mpls ldp session protection for LDP-SESSION-PROTECTION duration 60 end

B. configure terminal ipv4 access-list LDP-SESSION-PROTECTION permit ipv4 172.31.255.0 0.0.0.255 any ! mpls ldp session protection for LDP-SESSION-PROTECTION duration 3600 end

C. configure terminal ipv4 access-list LDP-SESSION-PROTECTION permit ipv4 172.31.255.0 0.0.0.255 any permit ipv4 10.0.0.0 0.0.255.255 any ! mpls ldp session protection for LDP-SESSION-PROTECTION duration 60 end

D. configure terminal ipv4 access-list LDP-SESSION-PROTECTION permit ipv4 172.31.255.0 0.0.0.255 any permit ipv4 10.0.0.0 0.0.255.255 any ! mpls ldp session protection for LDP-SESSION-PROTECTION duration 3600 end

```
EDGE-GW-1#show bgp ipv4 unicast summary
BGP router identifier 198.19.45.6, local AS number 65502
BGP table version is 19, main routing table version 19

Neighbor        V           AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
192.168.26.2    4        65503       0       0        1    0    0 00:0956  Idle

EDGE-GW-1#show log
Log Buffer (4096 bytes):
BGP Notification sent
Dec  7 08:02:29.619: %BGP-5-ADJCHANGE: neighbor 192.168.26.2 passive Down BGP Notification sent
Dec  7 08:02:32.695: %BGP-3-NOTIFICATION: sent to neighbor 192.168.26.2 active 2/2 (peer in wrong AS) 2 bytes FE63
Dec  7 08:02:32.695: %BGP-4-MSGDUMP: unsupported or mal-formatted message received from 192.168.26.2:
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF 0039 0104 FE63 00B4 0AFF FF02 1C02 0601
0400 0100 0102 0280 0002 0202 0002 0246 0002 0641 0400 00FE 63
Dec  7 08:02:36.558: %BGP-3-NOTIFICATION: sent to neighbor 192.168.26.2 passive 2/2 (peer in wrong AS) 2 bytes FE63
Dec  7 08:02:36.558: %BGP-4-MSGDUMP: unsupported or mal-formatted message received from 192.168.26.2:
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF 0039 0104 FE63 00B4 0AFF FF02 1C02 0601
0400 0100 0102 0280 0002 0202 0002 0246 0002 0641 0400 00FE 63
Dec  7 08:02:37.812: %BGP-5-NRB_RESET: Neighbor 192.168.26.2 active reset (BGP Notification sent)
Dec  7 08:02:37.812: %BGP-5-ADJCHANG: neighbor 192.168.26.2 active Down BGP Notification sent
Dec  7 08:02:37.812: %BGP_SESSION-5-ADJCHANGE: neighbor 192.168.26.2 IPv4 Unicast topology base removed from session
BGP Notification sent
Dec  7 08:02:40.883: %BGP-5-NBR_RESET: Neighbor 192.168.26.2 passive reset (BGP Notification sent)
Dec  7 08:02:40.884: %BGP-5-ADJCHANGE: neighbor 192.168.26.2 passive Down BGP Notification sent
Dec  7 08:02:47.822: %BGP-3-NOTIFICATION: sent to neighbor 192.168.26.2 passive 2/2 (peer in wrong AS) 2 bytes FE63
Dec  7 08:02:77.822: %BGP-4-MSGDUMP: unsupported or mal-formatted message received from 192.168.26.2:
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF 0039 0104 FE63 00B4 0AFF FF02 1C02 0601
0400 0100 0102 0280 0002 0202 0002 0246 0002 0641 0400 00FE 63
```

Refer to the exhibit. A network support engineer for ASN 65502 receives a technical support ticket from a customer in ASN 65503 who reports that an eBGP session is down. The engineer determines that the peering failed after a recent change to the device at 192.168.26.2. EDGE-GW-1 must establish an eBGP session with the peering router 192.168.26.2. Which configuration establishes this session?

A. configure terminal no router bgp 65502 router bgp 65503 neighbor 192.168.26.2 remote-as 65503 address-family ipv4 neighbor 192.168.26.2 activate end

B. configure terminal router bgp 65502 address-family ipv4 neighbor 192.168.26.2 activate end

C. configure terminal no router bgp 65502 router bgp 65503 neighbor 192.168.26.2 remote-as 65123 address-family ipv4 neighbor 192.168.26.2 activate end

D. configure terminal router bgp 65502 no neighbor 192.168.26.2 remote-as 65503 neighbor 192.168.26.2 remote-as 65123 address-family ipv4 neighbor 192.168.26.2 activate end

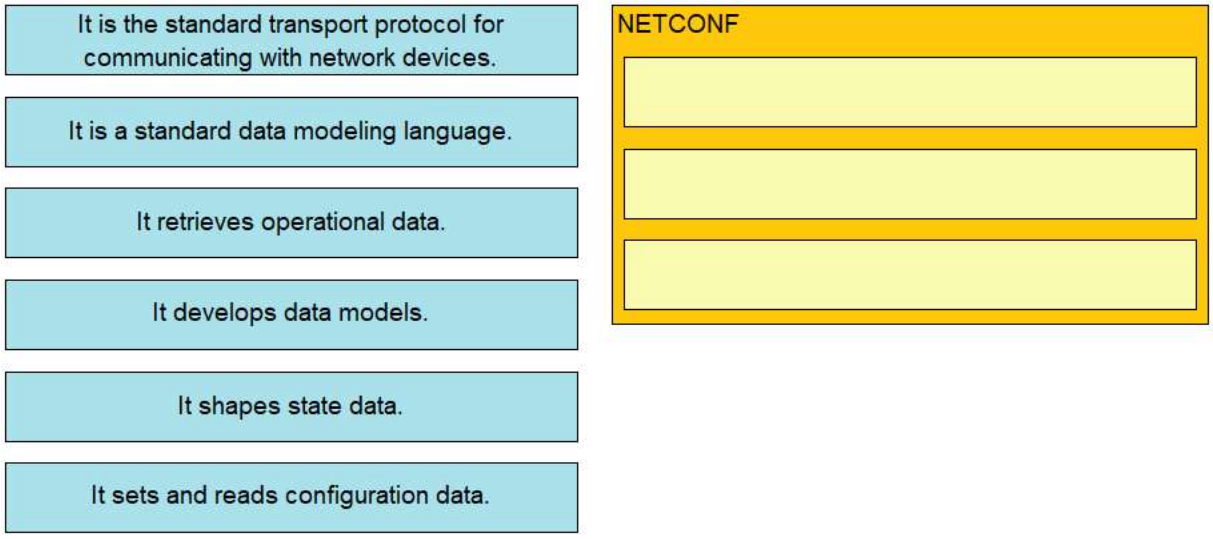
Question #264 *Topic 1*

DRAG DROP -

Drag and drop the characteristics from the left onto the automation tool on the right.

Select and Place:

Answer Area



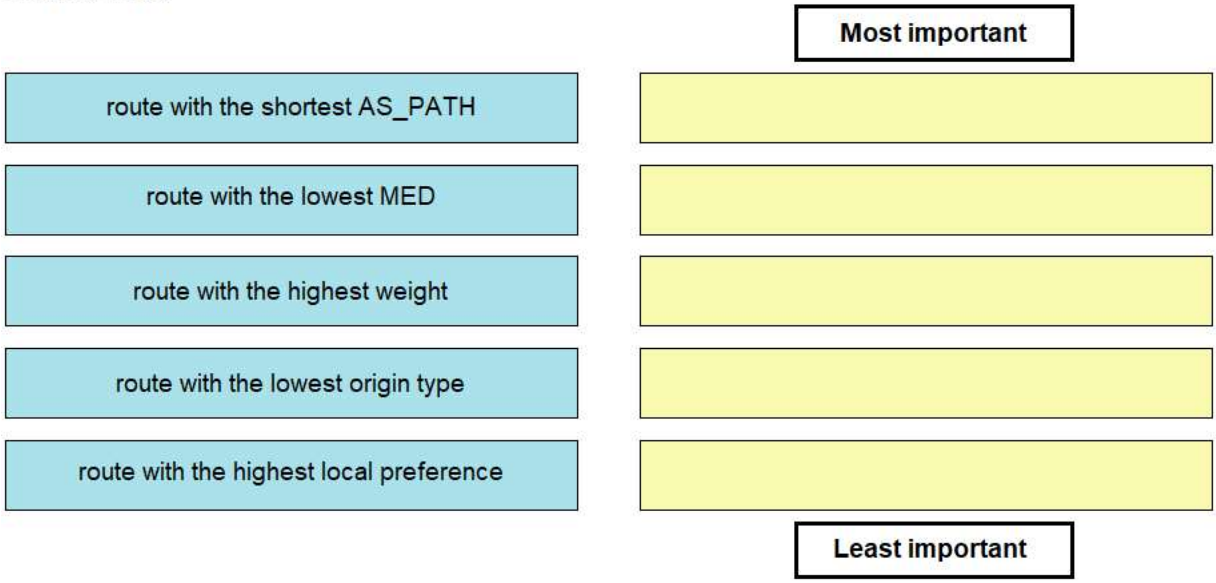
Question #265 *Topic 1*

DRAG DROP -

Drag and drop the BGP Best Path Algorithm rules from the left into the corresponding order of importance on the right.

Select and Place:

Answer Area




```
CPE-1#show run int gig 0/0
interface GigabitEthernet0/0
 ip address 100.65.15.2 255.255.255.252
 negotiation auto
 ipv6 address 2001:DB8:0:A000:100:65:15:2/126
 service-policy output WAN-OUTPUT
end

CPE-1#show run int gig 0/1
interface GigabitEthernet0/1
 ip address 192.168.2.1 255.255.255.0
 negotiation auto
 ipv6 address 2001:DB8:0:A001:192:168:2:1/120
 service-policy input LAN-INPUT
end

CPE-1#show access-list
Standard IP access list SELF_V4
    10 permit 100.65.15.2
IPv6 access list SELF_V6
    permit ipv6 host 2001 :DB8:0:A000:100:65:15:2 any sequence 10

CPE-1#show policy-nap
  Policy Map WAN-OUTPUT

  Policy Map LAN-INPUT
```

Refer to the exhibit. A network engineer configures CPE-1 for QoS with these requirements:

- IPv4 and IPv6 traffic originated by the CPE-1 WAN IP address must be marked with DSCP CS3.
- IPv4 LAN traffic must be marked with DSCP CS1.

IPv6 LAN traffic must be marked with DSCP default.

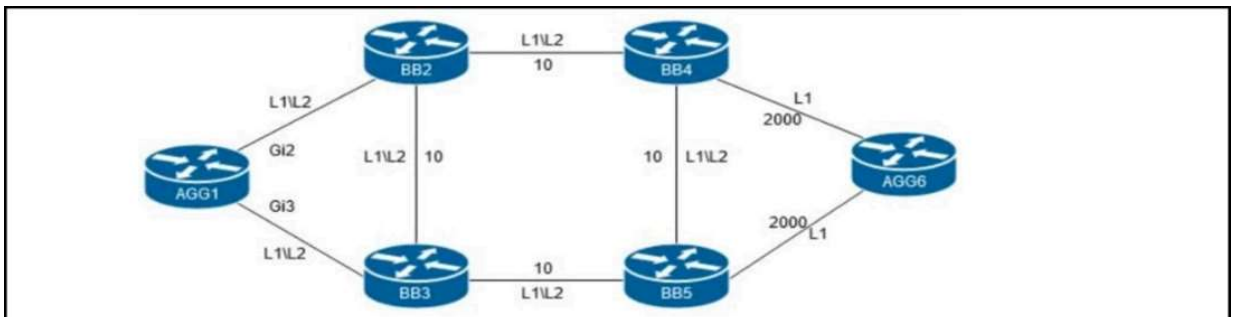
Which configuration must the engineer implement on CPE-1?

A. class-map match-any SELF_TRAFFIC match access-group name SELF_V4 match access-group name SELF_V6 class-map match-all V4_ TRAFFIC match protocol ip class-map match-all V6_TRAFFIC match protocol ipv6 class-map match-all QG_4 match qos-group 4 class-map match-all QG_6 match qos-group 6 ! policy-map LAN-INPUT class V4_TRAFFIC set qos-group 4 class V6_TRAFFIC set qos-group 6 ! policy-map WAN-OUTPUT class SELF_TRAFFIC set ip dscp cs3 class QG_4 set ip dscp cs1 class QG_6 set ip dscp default

B. class-map match-all SELF_TRAFFIC match access-group name SELF_V4 match access-group name SELF_V6 class-map match-all V4_ TRAFFIC match protocol ip class-map match-all V6_TRAFFIC match protocol ipv6 class-map match-all QG_4 match qos-group 4 class-map match-all QG_6 match qos-group 6 ! policy-map LAN-INPUT class V4_TRAFFIC set qos-group 4 class V6_TRAFFIC set qos-group 6 ! policy-map WAN-OUTPUT class SELF_TRAFFIC set dscp cs3 class QG_4 set ip dscp cs1 class QG_6 set dscp default

C. class-map match-all SELF_TRAFFIC match access-group name SELF_V4 match access-group name SELF_V6 class-map match-all V4_ TRAFFIC match protocol ip class-map match-all V6_TRAFFIC match protocol ipv6 class-map match-all QG_4 match qos-group 4 class-map match-all QG_6 match qos-group 6 ! policy-map LAN-INPUT class V4_TRAFFIC set qos-group 4 class V6_TRAFFIC set qos-group 6 ! policy-map WAN-OUTPUT class SELF_TRAFFIC set ip dscp cs3 class QG_4 set ip dscp cs1 class QG_6 set ip dscp default

D. class-map match-any SELF_TRAFFIC match access-group name SELF_V4 match access-group name SELF_V6 class-map match-all V4_ TRAFFIC match protocol ip class-map match-all V6_TRAFFIC match protocol ipv6 class-map match-all QG_4 match qos-group 4 class-map match-all QG_6 match qos-group 6 ! policy-map LAN-INPUT class V4_TRAFFIC set qos-group 4 class V6_TRAFFIC set qos-group 6 ! policy-map WAN-OUTPUT class SELF_TRAFFIC set dscp cs3 class QG_4 set ip dscp cs1 class QG_6 set dscp default




```
AGG1#show clns protocol

IS-IS Router: 100
  System Id: 1720.2002.0001.00   IS-Type: level-1-2
  Manual area address(es):
        49.0100
  Routing for area address(es):
        49.0100
  Interfaces supported by IS-IS:
        GigabitEthernet3 - IP
        GigabitEthernet2 - IP
  Passive interface:
        Loopback0
  Redistribute:
    static (on by default)
  Distance for L2 CLNS routes: 110
  RRR level: none
  Generate narrow metrics: level-1-2
  Accept narrow metrics:   level-1-2
  Generate wide metrics:   none
  Accept wide metrics:     none
```

```
AGG1#show clns interface gig 2 | include Metric
    Level-1 Metric: 2000, Priority: 64, Circuit ID: BB2.03
    Level-1 IPv6 Metric: 10
    Level-2 Metric: 2000, Priority: 64, Circuit ID: BB2.03
    Level-2 IPv6 Metric: 10
AGG1#show clns interface gig 3 | include Metric
    Level-1 Metric: 2000, Priority: 64, Circuit ID: BB3.03
    Level-1 IPv6 Metric: 10
    Level-2 Metric: 2000, Priority: 64, Circuit ID: BB3.03
    Level-2 IPv6 Metric: 10
```

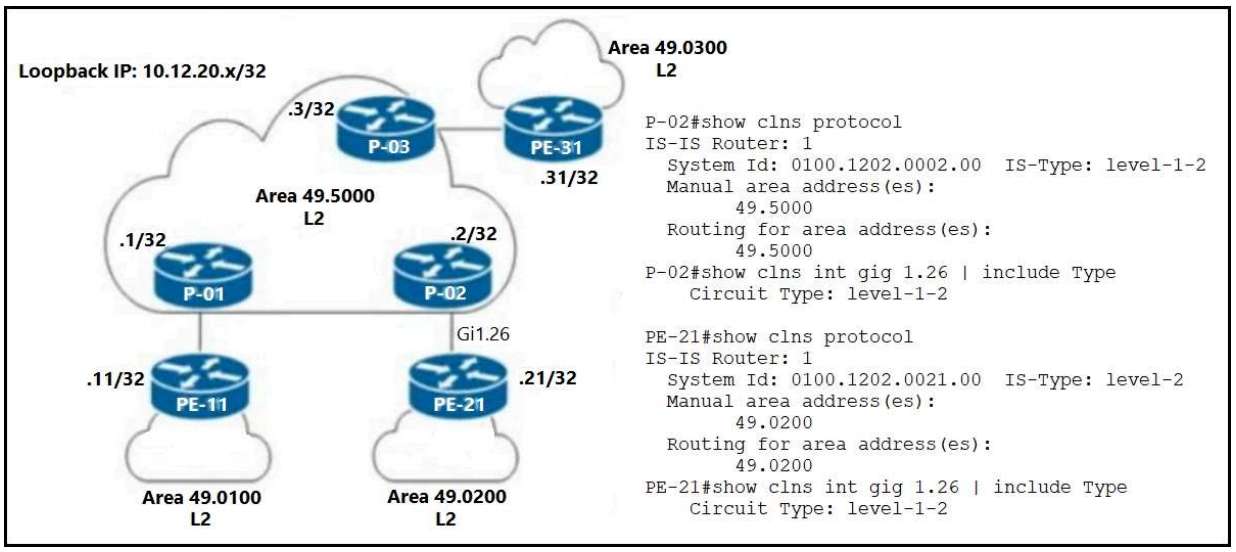
Refer to the exhibit. An engineer is configuring IS-IS on ISP network. Which IS-IS configuration must an engineer implement on router AGG1 so that it establishes connectivity to router AGG6 via the BB3 core router?

A. router isis 100 metric-style narrow interface GigabitEthernet 3 isis metric 10 level-2

B. router isis 100 metric-style wide interface GigabitEthernet 3 isis metric 1500 level-2

C. router isis 100 metric-style narrow interface GigabitEthernet 3 isis metric 10 level-1

D. router isis 100 metric-style wide interface GigabitEthernet 3 isis metric 1500 level-1



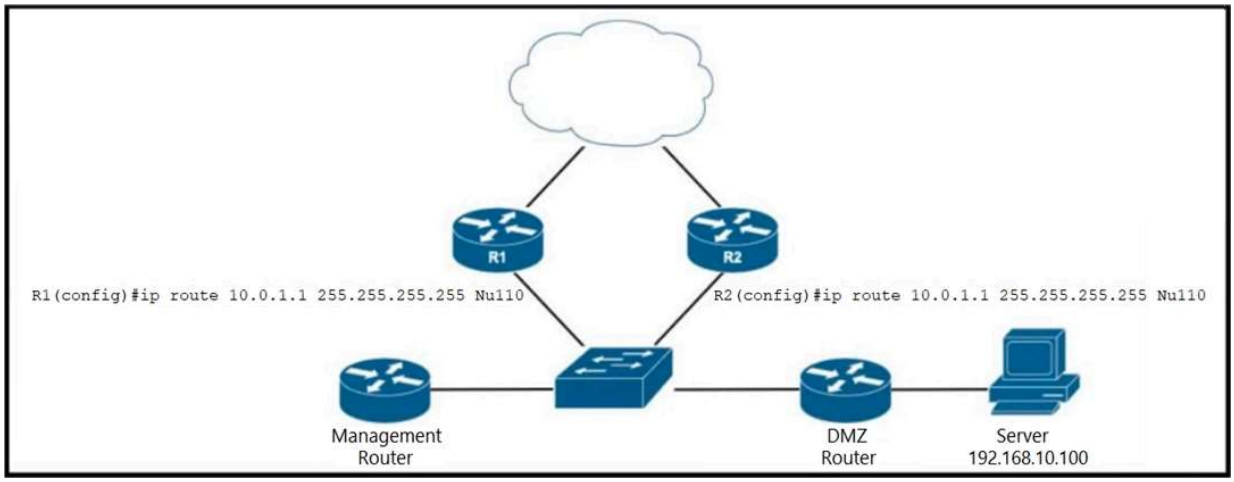
Refer to the exhibit. A network engineer notices PE-21 convergence degradation due to the growing LSDB size of Level 2 areas in the network. The engineer decides to migrate router PE-21 from an inter-area design to an intra-area implementation. Inter-area routing must be accomplished via an ATT-bit set by the
Level 1/Level 2 router. Which configuration must the engineer implement on PE-21 to complete the migration?

A. configure terminal router isis 1 no net 49.0200 net 49.5000 is-type level-1-2 end

B. configure terminal router isis 1 net 49.5000.0100.1202.0021.00 is-type level-1-2 end

C. configure terminal router isis 1 net 49.5000.0100.1222.0022.00 is-type level-1 end

D. configure terminal router isis 1 no net 49.0200.0100.1202.0021.00 net 49.5000.0100.1202.0021.00 is-type level-1 end



router(config)# route-map blackhole-trigger router(config-route-map)# match tag 777 router(config-route-map)# set ip next-hop 10.0.1.1 router(config-route-map)# set origin igp router{config-route-map)# set community no-export

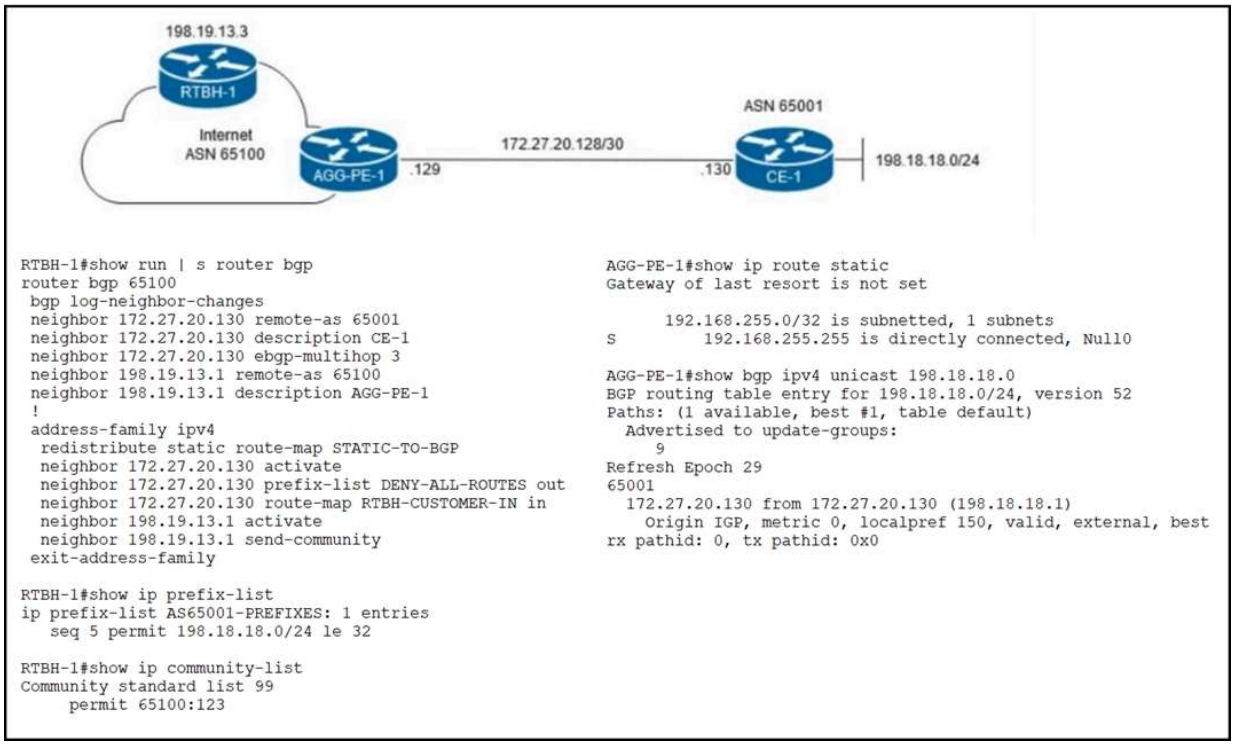
Refer to the exhibit. EIGRP is running across the core to exchange internal routes, and each router maintains iBGP adjacency with the other routers on the network. An operator has configured static routes on the edge routers R1 and R2 for IP address 10.0.1.1, which is used as a black hole route as shown. Which configuration should the operator implement to the management router to create a route map that will redistribute tagged static routes into BGP and create a static route to blackhole traffic with tag 777 that is destined to the server at 192.168.10.100?

A. router(config)# router bgp 55100 router(config-router)# redistribute static route-map blackhole-trigger router(config)# ip route 10.0.1.1 255.255.255.255 Null0 tag 777

B. router(config)# router bgp 55100 router(config-router)# redistribute static route-map blackhole-trigger router(config)# ip route 192.168.10.100 255.255.255.255 Null0 tag 777

C. router(config)# router bgp 55100 router(config-router)# redistribute connected router(config)# ip route 192.168.10.100 255.255.255.255 tag 777

D. router(config)# router bgp 55100 router(config-router)# redistribute connected route-map blackhole-trigger router(config)# ip route 192.168.10.100 255.255.255.255 Null0 tag 777




```
RTBH-1#show run | s router bgp
router bgp 65100
 bgp log-neighbor-changes
 neighbor 172.27.20.130 remote-as 65001
 neighbor 172.27.20.130 description CE-1
 neighbor 172.27.20.130 ebgp-multihop 3
 neighbor 198.19.13.1 remote-as 65100
 neighbor 198.19.13.1 description AGG-PE-1
 !
 address-family ipv4
  redistribute static route-map STATIC-TO-BGP
  neighbor 172.27.20.130 activate
  neighbor 172.27.20.130 prefix-list DENY-ALL-ROUTES out
  neighbor 172.27.20.130 route-map RTBH-CUSTOMER-IN in
  neighbor 198.19.13.1 activate
  neighbor 198.19.13.1 send-community
 exit-address-family

RTBH-1#show ip prefix-list
ip prefix-list AS65001-PREFIXES: 1 entries
   seq 5 permit 198.18.18.0/24 le 32

RTBH-1#show ip community-list
Community standard list 99
     permit 65100:123
```

```
AGG-PE-1#show ip route static
Gateway of last resort is not set

      192.168.255.0/32 is subnetted, 1 subnets
S        192.168.255.255 is directly connected, Null0

AGG-PE-1#show bgp ipv4 unicast 198.18.18.0
BGP routing table entry for 198.18.18.0/24, version 52
Paths: (1 available, best #1, table default)
  Advertised to update-groups:
     9
Refresh Epoch 29
65001
  172.27.20.130 from 172.27.20.130 (198.18.18.1)
    Origin IGP, metric 0, localpref 150, valid, external, best
rx pathid: 0, tx pathid: 0x0
```

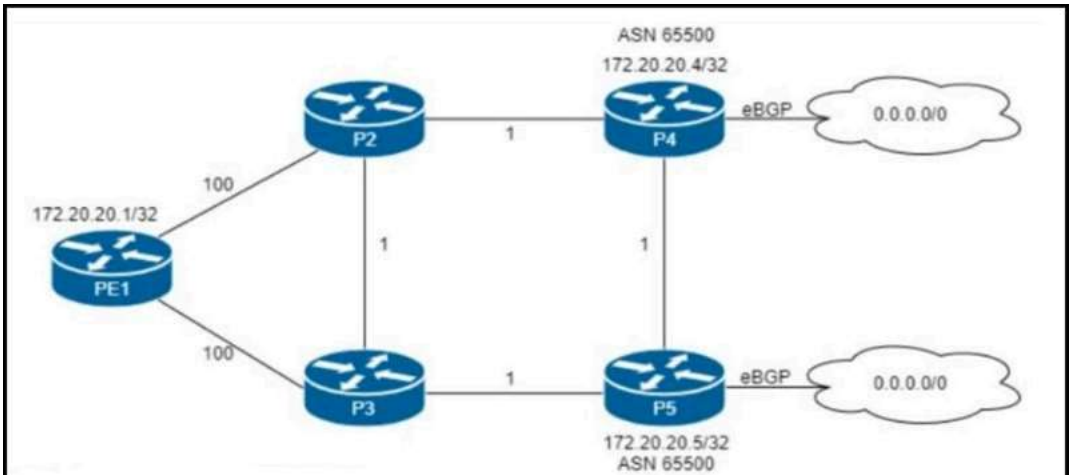
Refer to the exhibit. ISP ASN 65100 provides Internet services to router CE-1 and receives customer prefix 198.18.18.0/24 via eBGP. An administrator for the ISP is now provisioning RTBH services to provide on-demand data-plane security for the customer's IP space. Which route-map configuration must the administrator apply to router RTBH-1 to complete the implementation of RTBH services to CE-1?

A. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefix-list AS65001-PREFIXES match community 99 set local-preference 200 set community no-export additive set ip next-hop 192.168.255.255 route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY

B. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefix-list AS65001-PREFIXES match community 99 set local-preference 200 set community local-as additive set ip next-hop 192.168.255.255 route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY

C. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefixlist AS65001-PREFIXES match community 99 set local-preference 200 set community no-advertise additive set ip next-hop local-address route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY

D. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefix-list AS65001-PREFIXES match community 99 set local-preference 200 set community no-advertise additive set ip next-hop 192.168.255.255 route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY




```
PE1#show ospfv3 database external 0.0.0.0

          OSPFv3 100 address-family ipv4 (router-id 172.20.20.1)

                Type-5 AS External Link States

  LS age: 6
  LS Type: AS External Link
  Link State ID: 0
  Advertising Router: 172.20.20.5
  LS Seq Number: 80000006
  Checksum: 0xF7AA
  Length: 32
  Prefix Address: 0.0.0.0
  Prefix Length: 0, Options: None
  Metric Type: 1 (Comparable directly to link state metric)
  Metric: 50
  External Route Tag: 100
```

Refer to the exhibit. Routers P4 and P5 receive the 0.0.0.0/0 route from the ISP via eBGP peering. P4 is the primary Internet gateway router, and P5 is its backup.

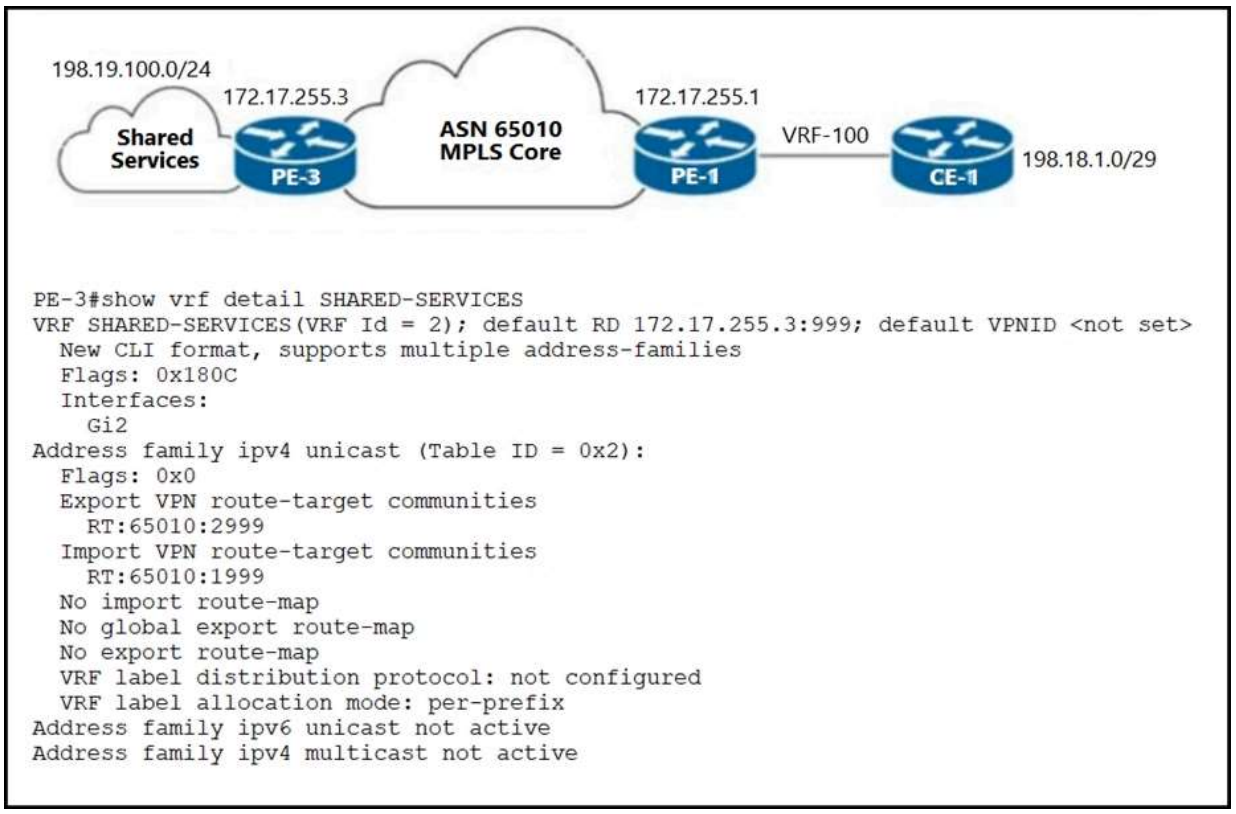
P5 is already advertising a default route into the OSPF domain. Which configuration must be applied to P4 so that it advertises a default route into OSPF and becomes the primary Internet gateway for the network?

A. configure terminal router ospfv3 100 address-family ipv4 unicast default-information originate metric 40 metric-type 2 end

B. configure terminal router ospfv3 100 address-family ipv4 unicast default-information originate metric 40 metric-type 1 end

C. configure terminal router ospfv3 100 address-family ipv4 unicast redistribute bgp 65500 metric 40 metric-type 1 end

D. configure terminal router ospfv3 100 address-family ipv4 unicast default-information originate always metric 40 metric-type 1 end




```
PE-3#show vrf detail SHARED-SERVICES
VRF SHARED-SERVICES(VRF Id = 2); default RD 172.17.255.3:999; default VPNID <not set>
  New CLI format, supports multiple address-families
  Flags: 0x180C
  Interfaces:
    Gi2
Address family ipv4 unicast (Table ID = 0x2):
  Flags: 0x0
  Export VPN route-target communities
    RT:65010:2999
  Import VPN route-target communities
    RT:65010:1999
  No import route-map
  No global export route-map
  No export route-map
  VRF label distribution protocol: not configured
  VRF label allocation mode: per-prefix
Address family ipv6 unicast not active
Address family ipv4 multicast not active
```

Refer to the exhibit. An ISP provides shared VoIP Extranet services to a customer in VRF-100 with these settings:

- The VoIP services are hosted in the 198.19.100.0/24 space.
- The customer has been assigned the 198.18.1.0/29 IP address block.
- VRF-100 is assigned import and export route target 65010:100.

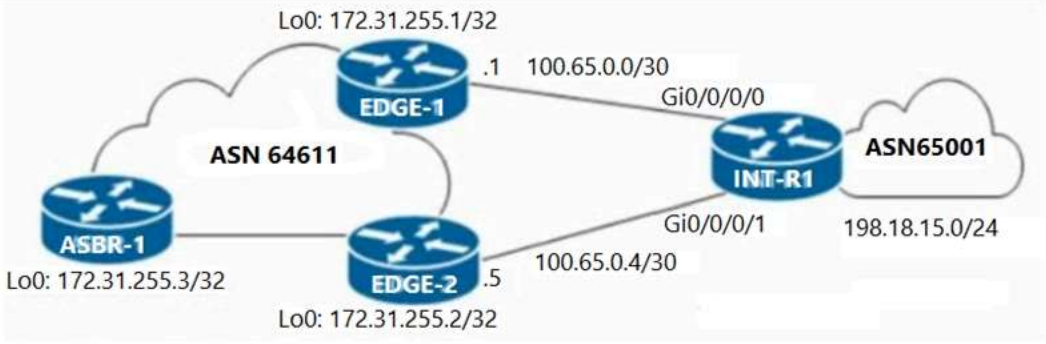
Which configuration must the engineer apply to PE-1 to provision VRF-100 and provide access to the shared services?

A. vrf definition VRF-100 rd 172.17.255.1:100 ! address-family ipv4 export map VRF-100-EXPORT import map VRF-100-IMPORT exit-address-family ! route-map VRF-100-EXPORT permit 10 match ip address prefix-list VRF-100-ALLOWED-EXPORT set extcommunity rt 65010:100 65010:2999 route-map VRF-100-EXPORT permit 20 set extcommunity rt 65010:100 ! route-map VRF-100-IMPORT permit 10 match extcommunity VRF-100-RT SHARED-SERVICES ! ip extcommunity-list standard SHARED-SERVICES permit rt 65010:1999 ip extcommunity-list standard VRF-100-RT permit rt 65010:100 ip prefix-list VRF-100-ALLOWED-EXPORT seq 5 permit 198.18.1.0/29

B. vrf definition VRF-100 rd 172.17.255.1:100 ! address-family ipv4 export map VRF-100-EXPORT route-target import 65010:100 route-target import 65010:2999 exit-address-family ! route-map VRF-100-EXPORT permit 10 match ip address prefix-list VRF-100-ALLOWED-EXPORT set extcommunity rt 65010:100 65010:1999 route-map VRF-100-EXPORT permit 20 set extcommunity rt 65010:100 ! ip prefix-list VRF-100-ALLOWED-EXPORT seq 5 permit 198.18.1.0/29

C. vrf definition VRF-100 rd 172.17.255.1:100 ! address-family ipv4 export map VRF-100-EXPORT route-target import 65010:100 route-target import 65010:1999 exit address-family ! route-map VRF-100-EXPORT permit 10 match ip address prefix-list VRF-100-ALLOWED-EXPORT set extcommunity rt 65010:100 65010:2999 route-map VRF-100-EXPORT permit 20 set extcommunity r 65010:100 ! ip prefix-list VRF-100-ALLOWED-EXPORT seq 5 permit 198.18.1.0/29

D. vrf definition VRF-100 rd 172.17.255.1:100 ! address-family ipv4 route-target export 65010:100 route-target export 65010:1999 route-target import 65010:100 route-target import 65010:2999 exit-address-family




```
ASBR-1#show bgp ipv4 unic | begin Network
     Network          Next Hop            Metric LocPrf Weight Path
 *>i 198.18.15.0      172.31.255.1             0    100      0 65001 ?
 * i                  172.31.255.2             0    100      0 65001 ?

EDGE-1#show bgp ipv4 un | begin Netowrk
     Network          Next Hop            Metric LocPrf Weight Path
 *>  198.18.15.0/25   100.65.0.2               0             0 65001 ?
 *>  198.18.15.0      100.65.0.2               0             0 65001 ?
 * i                  172.31.255.2             0    100      0 65001 ?

EDGE-1#show bgp ipv4 un 198.18.15.0
BGP routing table entry for 198.18.15.0/25, version 9
Paths: (1 available, best #1, table default, not advertised to any peer)
 Not advertised to any peer
 Refresh Epoch 1
 65001
   100.65.0.2 from 100.65.0.2 (198.18.100.1)
     Origin incomplete, metric 0, localpref 100, valid, external, best
     Community: 64611:65001 no-advertise

  RP/0/0/CPU0:INT-R1#show bgp ipv4 unicast | begin Network
     Network          Next Hop            Metric LocPrf Weight Path
  *> 198.18.15.0/24   0.0.0.0                  0         32768 ?
  *> 198.18.15.0/25   0.0.0.0                  0         32768 ?
```

Refer to the exhibit. The network engineer who manages ASN 65001 is troubleshooting suboptimal routing to the 198.18.15.0/24 prefix. According to the network requirements:

- Routing to IP destinations in the 198.18.15.0/25 block must be preferred via the EDGE-1 PE.
- Routing to IP destinations in the 198.18.15.128/25 block must be preferred via the EDGE-2 PE.
- More specific prefixes of the 198.18.15.0/24 block must not be advertised beyond the boundaries of ASN 64611.
- Routing to 198.18.15.0/24 must be redundant in case one of the uplinks on INT-R1 fails.

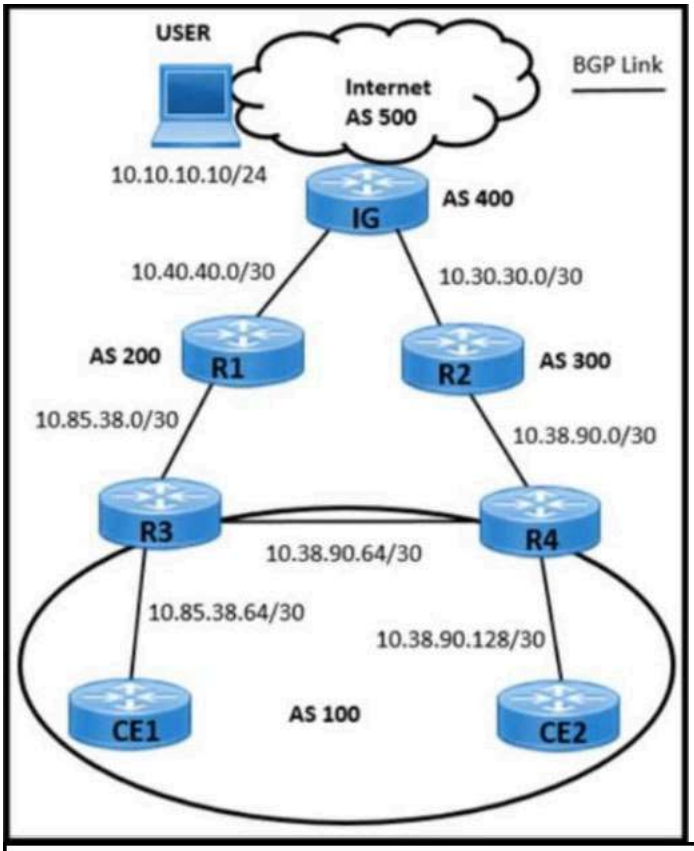
Which configuration must the network engineer implement on INT-R1 to correct the suboptimal routing and fix the issue?

A. configure terminal route-policy ASN65001-SPECIFIC-OUT if destination in (198.18.15.0/25) then set community (no-export, peeras:65001) done endif if destination in (198.18.15.0/24) then prepend as-path 65001 3 done endif drop end-policy ! router bgp 65001 neighbor 100.65.0.1 address-family ipv4 unicast route-policy ASN65001-SPECIFIC-OUT out end

B. configure terminal route-policy ASN65001-SPECIFIC-OUT if destination in (198.18.15.0/25) then set community (internal, peeras:65001) done endif if destination in (198.18.15.0/24) then done endif drop end-policy ! router bgp 65001 neighbor 100.65.0.1 address-family ipv4 unicast route-policy ASN65001-SPECIFIC-OUT out end

C. configure terminal route-policy ASN65001-SPECIFIC-OUT if destination in (198.18.15.0/25) then set community (no-advertise, peeras:65001) done endif if destination in (198.18.15.128/25) then prepend as-path 65001 3 done endif drop end-policy ! router bgp 65001 neighbor 100.65.0.1 address-family ipv4 unicast route-policy ASN65001-SPECIFIC-OUT out end

D. configure terminal route-policy ASN65001-SPECIFIC-OUT if destination in (198.18.15.0/25) then set community (no-export, peeras:65001) done endif if destination in (198.18.15.128/25) then prepend as-path 65001 3 done endif drop end-policy ! router bgp 65001 neighbor 100.65.0.1 address-family ipv4 unicast route-policy ASN65001-SPECIFIC-OUT in end



R3#

```
router bgp 100
no synchronization
bgp log-neighbor-changes
network 10.38.90.0 mask 255.255.255.252
network 10.38.90.64 mask 255.255.255.252
network 10.38.90.128 mask 255.255.255.252
network 10.85.38.0 mask 255.255.255.252
network 10.85.38.64 mask 255.255.255.252
neighbor 24.38.90.65 remote-as 100
neighbor 24.38.90.65 next-hop-self
neighbor 10.85.38.1 remote-as 400
neighbor 10.85.38.1 ebgp-multihop 10
neighbor 10.85.38.66 remote-as 100
neighbor 10.85.38.66 next-hop-self
no auto-summary
```

R4#

```
router bgp 100
no synchronization
bgp log-neighbor-changes
network 10.38.90.0 mask 255.255.255.252
network 10.38.90.64 mask 255.255.255.252
network 10.38.90.128 mask 255.255.255.252
network 10.85.38.0 mask 255.255.255.252
network 10.85.38.64 mask 255.255.255.252
neighbor 10.38.90.1 remote-as 300
neighbor 10.38.90.1 ebgp-multihop 10
neighbor 10.38.90.66 remote-as 100
neighbor 10.38.90.66 next-hop-self
neighbor 10.38.90.130 remote-as 100
neighbor 10.38.90.130 next-hop-self
no auto-summary
```

Refer to the exhibit. The USER that is connecting an application on an Internet connection in AS 100 is facing these issues:

- The USER lost the connection to the application during a failure between IG and R2.
- Router R2 configuration is lost due to a power outage.
- The application the USER is connecting to is hosted behind CE2.

What action resolves the issues on R3 and R4 routers?

A. Apply low Local Preference on R4 toward R2.

B. Apply high Local Preference on R3 toward R1.

C. Set R4 as a route reflector for R3 and CE2.

D. Set R3 as a route reflector for R4 and CE1.

```
PE1

vrf ciscotest
   rd 202:101
      address-family ipv4 unicast
      label mode per-vrf
      redistribute connected
```

Refer to the exhibit. An ISP engineer configured a VRF to isolate traffic for the customer ciscotest as shown. Now, the engineer must implement the Intra-AS VPN feature on PE1 to pass traffic between customer sites. Which additional configuration must the engineer apply to PE1 to meet this requirement?

A. router bgp 64525 address-family ipv4 unicast neighbor 192.168.1.1 remote-as 64520 update-source Loopback0 address-family ipv4 unicast

B. router bgp 64525 address-family vpnv4 unicast neighbor 192.168.1.1 remote-as 64525 update-source Loopback0 address-family vpnv4 unicast

C. router bgp 64525 address-family ipv4 unicast neighbor 192.168.1.1 remote-as 64526 address-family ipv4 unicast

D. router bgp 64525 address-family vpnv4 unicast neighbor 192.168.1.1 remote-as 64516 update-source Loopback0 address-family vpnv4 unicast