

Cisco

Exam Questions 350-501

Implementing and Operating Cisco Service Provider Network Core Technologies



NEW QUESTION 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.

Answer: B

NEW QUESTION 2

Which component is similar to an EVPN instance?

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

Answer: D

NEW QUESTION 3

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.

Answer: A

NEW QUESTION 4

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.

Answer: B

NEW QUESTION 5

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

Answer: D

NEW QUESTION 6

```
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.

Answer: C

NEW QUESTION 7

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

Answer: B

NEW QUESTION 8

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

Answer: A

NEW QUESTION 9

```
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.

Answer: A

NEW QUESTION 10

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.

Answer: D

NEW QUESTION 10

```
CE1#
interface FastEthernet/0/0/1
description **** HUB CE non 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.

Answer: B

NEW QUESTION 11

```
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 advertise any routes to the neighbor 192.168.2.2, but it accepts any routes from 192.168.2.2.

Answer: C

NEW QUESTION 15

```
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.

Answer: B

NEW QUESTION 19

| | |
|--|---|
| <pre> 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 ! </pre> | <pre> 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 </pre> |
|--|---|

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

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

Answer: D

NEW QUESTION 20

| |
|--|
| <pre> 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 </pre> |
|--|

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:

| |
|--|
| <pre> *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 </pre> |
|--|

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

Answer: D

NEW QUESTION 25

“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.

Answer: D

NEW QUESTION 27

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

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

Answer: D

NEW QUESTION 32

DRAG DROP

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

Answer Area

It is limited on the number of endpoints.

It uses address overloading.

It conserves IPv4 addresses.

It mandates IPv4-translatable IPv6 address allocation.

It has 1:N translation.

Stateful

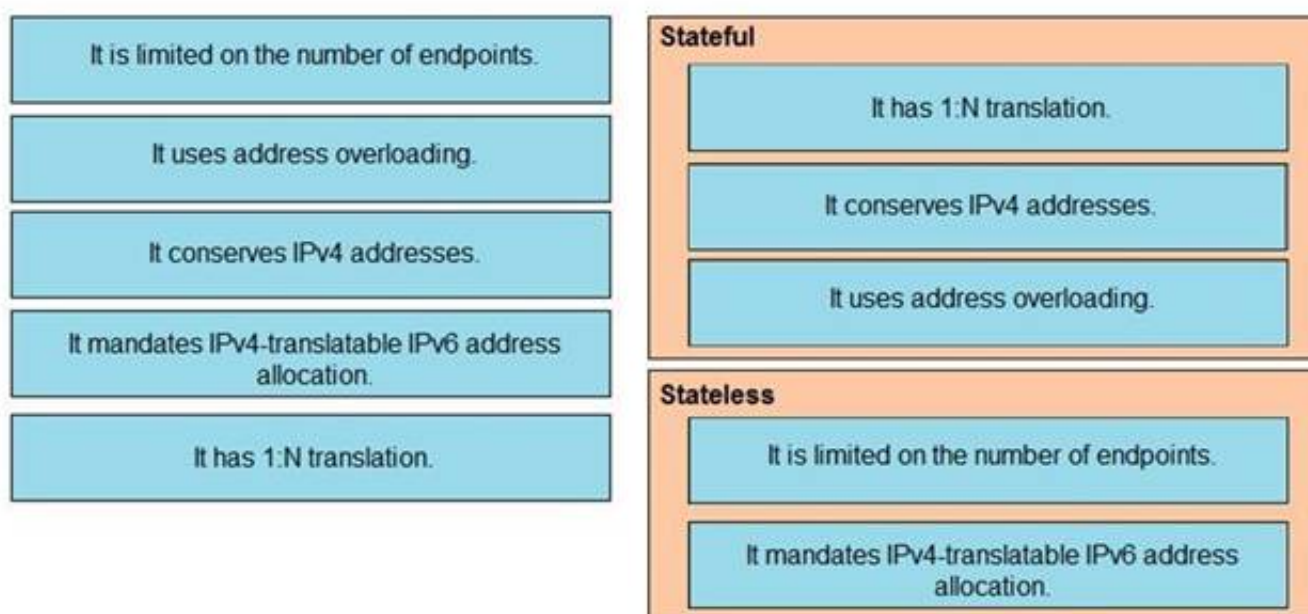
Stateless

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer Area



NEW QUESTION 35

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

Answer: B

NEW QUESTION 40

```
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.

Answer: B

NEW QUESTION 45

```
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. R1 can 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.

Answer: A

NEW QUESTION 49

Which utility can you use to locate MPLS faults?

- A. MPLS LSP ping
- B. QoS
- C. MPLS traceroute
- D. EEM

Answer: C

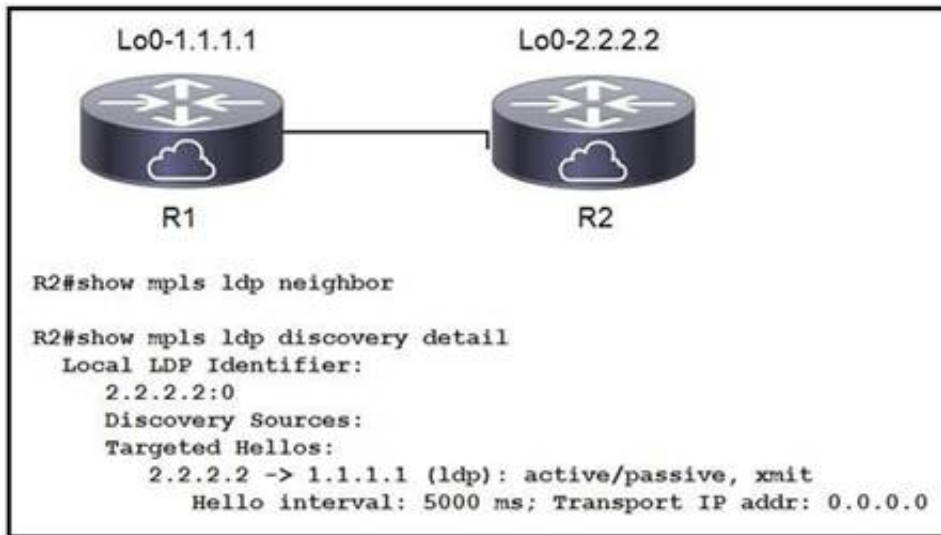
NEW QUESTION 54

When configuring traffic engineering tunnels in Cisco MPLS core network, you see the traffic is not taking 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>

Answer: D

NEW QUESTION 55

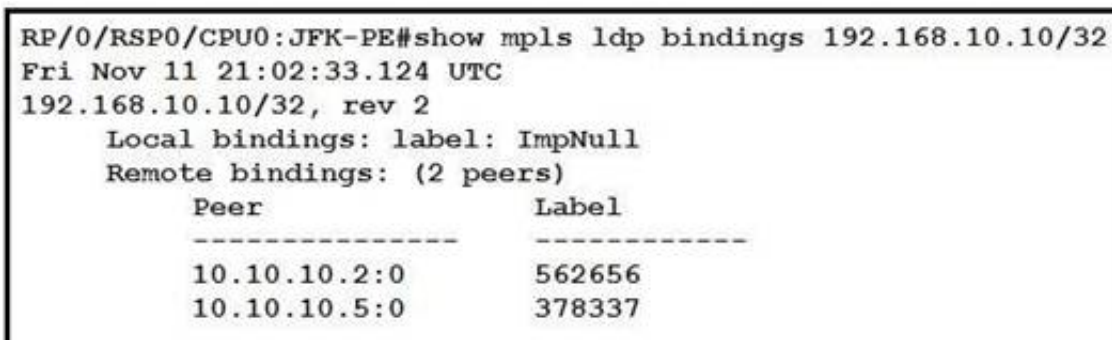


Refer to the exhibit. When implementing an LDP protocol, an engineer experienced an issue between two directly connected routers and noticed that no LDP neighbor exists for 1.1.1.1. Which factor should be the reason for this situation?

- 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.

Answer: B

NEW QUESTION 59



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.

Answer: BE

NEW QUESTION 62

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.

Answer: B

NEW QUESTION 65

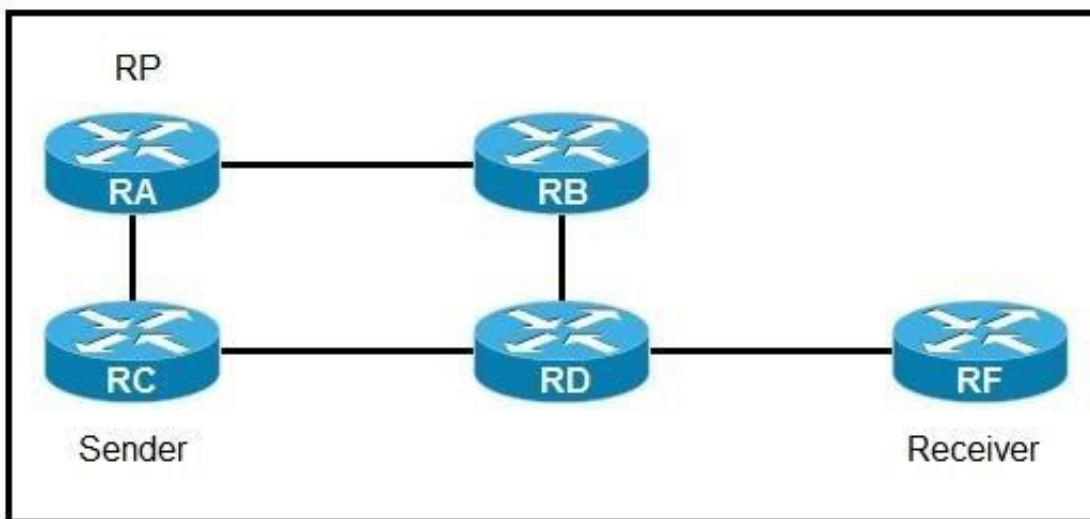

```
route-policy ciscotest
  if destination in acl10 then
    pass
  else
    set local-preference 300
  endif
end-policy end
```

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.

Answer: A

NEW QUESTION 69



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

Answer: A

NEW QUESTION 71

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.

Answer: B

NEW QUESTION 75

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. BIDIP-PIM
- C. Auto-RP
- D. SSM

Answer: C

NEW QUESTION 79

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

Answer: A

NEW QUESTION 83

```
ip flow-export source loopback 0
ip-flow-export destination 192.168.1.1
ip-flow-export version 9 origin-as
```

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.

Answer: B

NEW QUESTION 84

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

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.

Answer: C

NEW QUESTION 87

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.

Answer: B

NEW QUESTION 89

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.

Answer: C

NEW QUESTION 92

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.

Answer: D

NEW QUESTION 94

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

Answer: C

NEW QUESTION 99

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.

Answer: B

NEW QUESTION 104

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