642-887 Q&As

Implementing Cisco Service Provider Next-Generation Core Network Services

Pass Cisco 642-887 Exam with 100% Guarantee

Free Download Real Questions & Answers **PDF** and **VCE** file from:

https://www.certbus.com/642-887.html

100% Passing Guarantee
100% Money Back Assurance

Following Questions and Answers are all new published by Cisco Official Exam Center

QUESTION 1

Which configuration can a network engineer use to establish high availability for LDP in an MPLS setup?

A. mpls ldp graceful-restart graceful-restart graceful-restart forwarding state-holdtime 180 graceful-restart reconnect-timeout 15 interface HundredGigE0/4/0/0

B. mpls ldp graceful-restart graceful-restart forwarding state-holdtime 180 graceful-restart reconnect-timeout 15

C. mpls ldp session protection for peer_acl duration 60 ipv4 access-list peer_acl 10 permit ip host 192.168.10.1 any

D. router ospf 1 mpls ldp sync mpls ldp igp sync delay 30

E. mpls ldp router-id loopback0 discovery hello holdtime 15 discovery hello interval 5

Correct Answer: A

QUESTION 2

Which option shows how a class map is implemented that matches only packets originating from the network 10.0.0.0/8, which are not marked as VoIP on Cisco IOS XE?

A.
```
ip access-list standard 10 permit 10.0.0.0 0.0.0.255
class-map match-all
match access-group 10
match not ip dscp ef
```

B.
```
ip access-list standard 10 permit 10.0.0.0 255.255.255.0
class-map match-any
match access-group 10
match not ip dscp ef
```

C.
```
ip access-list standard 10 permit 10.0.0.0 0.0.0.255
class-map match-all
match access-group 10
match not qos-group 1
```

D.
```
ip access-list standard 10 permit 10.0.0.0 0.255.255.255
class-map match-all
match access-group 10
match not ip dscp ef
```


A. B. C. D.

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: B

QUESTION 3

A network engineer must design a core network routing domain that supports Cisco MPLS TE. Which two interior gateway protocols represent viable solutions? (Choose two.)

A. Routing Information Protocol version 2

B. Open Shortest Path First

C. Enhanced Interior Gateway Routing Protocol

D. Intermediate-System to Intermediate-System

E. Border Gateway Protocol

Correct Answer: BD

QUESTION 4

What are the four fields inside the MPLS shim header? (Choose four.)

A. EXP

B. TTL

C. Version

D. S

E. Length

F. Label

G. Type

H. FCS

Correct Answer: ABDF

QUESTION 5

A service provider runs MPLS in its core. What is the relationship between FIB, LIB, and LFIB in this

environment?

A. Data from the FIB and LIB tables is used to generate the LFIB

B. The FIB, LIB, and LFIB are populated independently

C. The LIB and FIB are populated with labels and next-hop attributes in the control plane and are used to populate the LFIB

D. The LFIB is populated with information from the IP routing table and is shared with the FIB and LIB to assign labels to the path

Correct Answer: A

QUESTION 6

When troubleshooting LDP operations on the Cisco IOS and IOS XE routers, what is one of the first things that should be verified?

A. if running OSPF as the IGP, ensure that OSPFv3 has been enabled

B. check if the ip cef command has been enabled

C. verify in the running configurations that all of the required LDP interfaces are defined under the mpls ldp command configuration mode

D. verify if there are any access lists that are denying TCP and UDP port 464 packets

Correct Answer: B

QUESTION 7

Which two fields are in the traffic engineering topology database? (Choose two.)

A. TE-metric

B. IGP metric

C. link delay

D. LSP setup priority

E. LDP authentication

Correct Answer: AD

QUESTION 8

The Cisco IOS and IOS XE qos pre-classify command allows which kind of packet classification on IP packets that are encapsulated with GRE and IPsec?

A. allows for packets to be classified based on the ToS byte values before packet encryption

B. allows for packets to be classified based on the ToS byte values after packet encryption

C. allows for packets to be classified based on the packet payload before packet encryption

D. allows for packets to be classified based on the packet payload after packet encryption

E. allows for packets to be classified based on the packet header parameters other than the ToS byte values after packet encryption

Correct Answer: A

http://www.cisco.com/en/US/tech/tk543/tk545/technologies_tech_note09186a008017405e. shtml The qos pre-classify command When packets are encapsulated by tunnel or encryption headers, QoS features are unable to examine the original packet headers and correctly classify the packets. Packets traveling across the same tunnel have the same tunnel headers, so the packets are treated identically if the physical interface is congested. With the introduction of the Quality of Service for Virtual Private Networks (VPNs) feature, packets can now be classified before tunneling and encryption occur. In this example, tunnel0 is the tunnel name. The qos pre-classify command enables the QoS for VPNs feature on tunnel0: Router(config)# interface tunnel0 Router(config-if)# qos pre-classify

QUESTION 9

When implementing MPLS DS-TE on Cisco IOS XR routers, all aggregate Cisco MPLS TE traffic is mapped to which class type by default?

A. class-type 0 (bandwidth global pool)

B. class-type 1 (bandwidth subpool)

C. class-type 2 (bandwidth priority)

D. class type class-default (bandwidth best-effort)

Correct Answer: A

Differentiated Services Traffic Engineering MPLS Differentiated Services (Diff-Serv) Aware Traffic Engineering (DS-TE) is an extension of the regular MPLS-TE feature. Regular traffic engineering does not provide bandwidth guarantees to different traffic classes. A single bandwidth constraint is used in regular TE that is shared by all traffic. To support various classes of service (CoS), users can configure multiple bandwidth constraints. These bandwidth constraints can be treated differently based on the requirement for the traffic class using that constraint.

MPLS diff-serv traffic engineering provides the ability to configure multiple bandwidth constraints on an MPLSenabled interface. Available bandwidths from all configured bandwidth constraints are advertised using IGP.

TE tunnel is configured with bandwidth value and class-type requirements. Path calculation and admission control take the bandwidth and class-type into consideration. RSVP is used to signal the TE tunnel with bandwidth and class-type requirements.

Diff-Serv TE can be deployed with either Russian Doll Model (RDM) or Maximum Allocation Model (MAM) for bandwidth calculations.

TE Class Mapping

Each of the eight available bandwidth values advertised in the IGP corresponds to a TE Class. Because the IGP advertises only eight bandwidth values, there can be a maximum of only eight TE classes supported in an IETF DS-TE network.

TE class mapping must be exactly the same on all routers in a DS-TE domain. It is the responsibility of the operator configure these settings properly as there is no way to automatically check or enforce consistency.

The operator must configure TE tunnel class types and priority levels to form a valid TE class. When the TE class map configuration is changed, tunnels already up are brought down. Tunnels in the down state, can be set up if a valid TE class map is found.

Table 4 list the default TE class and attributes.

Table 4 TE Classes and Priority

TE Class	Class Type	Priority
0	0	7
1	1	7
2	Unused	
3	Unused	
4	0	0
5	1	0
6	Unused	
7	Unused	

ote The cefault mapping includes four class types.

QUESTION 10

What is a crucial LDP default operating behavior?

A. LDP uses the solicited mode by default. An LDP label request is sent to the FIB next hop LSR. When the egress router receives the request, it returns message with all the label-mapping information for the LSP is generated.

B. LDP establishes a TCP session between the PE routers, thus providing label mapping for the LSP

C. LDP uses downstream unsolicited mode by default. An LSR advertises label mappings to peers without being asked

D. LDP uses UDP-confirmed messages to establish sessions between PE ingress and egress routers. The UDP messages encode the label information for each LSP and sub- LSP link

Correct Answer: C

QUESTION 11

Which field in the MPLS shim header is used to support different QoS markings?

A. IP precedence

B. DSCP

C. EXP

D. ToS

E. S

F. Label

Correct Answer: C

MPLS EXP Marking The three MPLS EXP (experimental) bits in the shim header of an input or output MPLS packet header may be set or changed by a user configured value

QUESTION 12

Which of the following three statements are correct regarding IPv6 QoS? (Choose three.)

A. The traffic class field in the IPv6 header can be used to set specific precedence or DSCP values.

B. A 20-bit flow label field enables per-flow processing.

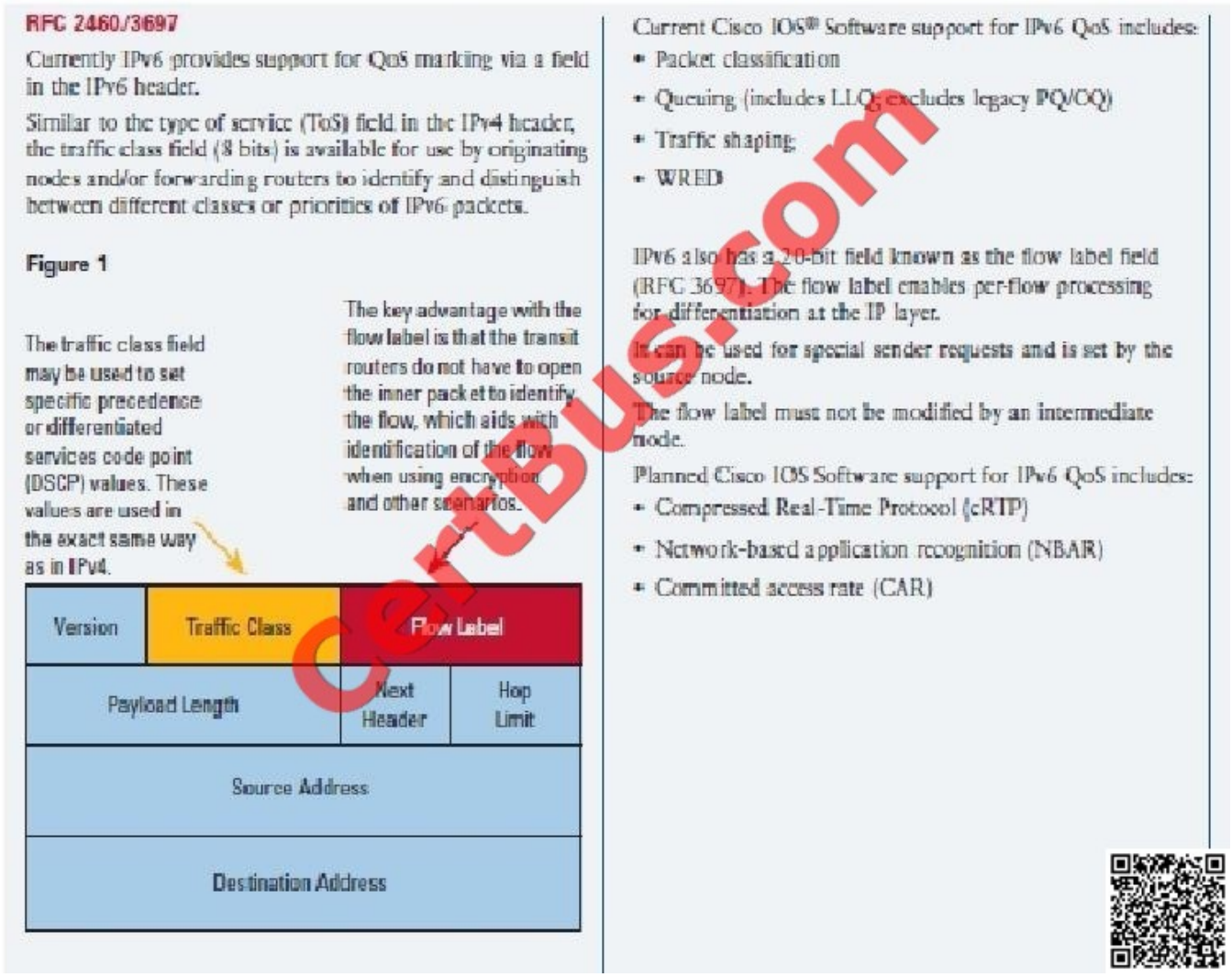
C. DS-TE is not supported by IPv6.

D. Per-hop behavior in IPv6 networks is based on EXP bits.

E. IPv6 QoS features are configured using the modular QoS CLI on Cisco routers.

Correct Answer: ABE

http://www.cisco.com/en/US/technologies/tk648/tk872/technologies_white_paper0900aecd 8026004d.pdf



QUESTION 13

Which class-map configuration selects the following traffic?

All incoming traffic from interface GigabitEthernet 0/1 that is marked with dscp ef

A.
```
class-map TEST
     match dscp ef
     match input-interface GigabitEthernet 0/1
```

B.
```
class-map TEST1
     match dscp ef
class-map TEST2
     match input-interface GigabitEthernet 0/1
class-map match-all PARENT
     match class-map TEST1 TEST2
```

C.
```
class-map match-any TEST
     match dscp ef
     match input-interface GigabitEthernet 0/1
```

D.
```
class-map match-any TEST
     match dscp ef match input-interface GigabitEtherr
```


A. B. C. D.

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: A

QUESTION 14

An engineer is setting up a routing instance to route the traffic across the back-up tunnel on a deployed Cisco MPLS TE next-hop protection. Which option describes the result?

A. a static route that points to the link

B. BGP routes that points to the link

C. an OSPF or IS-IS instance that explicitly advertises the back-up tunnel

D. rerouted traffic by the back-up tunnel in the event of link failure

Correct Answer: D

QUESTION 15

The Cisco IOS and IOS XE qos pre-classify command allows which kind of packet classification on IP packets that are encapsulated with GRE and IPsec?

A. allows for packets to be classified based on the ToS byte values before packet encryption

B. allows for packets to be classified based on the ToS byte values after packet encryption

C. allows for packets to be classified based on the packet payload before packet encryption

D. allows for packets to be classified based on the packet payload after packet encryption

E. allows for packets to be classified based on the packet header parameters other than the ToS byte values after packet encryption

Correct Answer: E

QUESTION 16

Which option describes what happens when a labelled packet with a TTL of 1 is received by an LSR?

A. The packet is forwarded on to the next router where its TTL expires and from where an ICMP "time exceeded" message is generated and routed back to the source.

B. The packet is dropped and an ICMP "time exceeded" message is IP routed back to the sender.

C. The packet is dropped and an ICMP "time exceeded" message is label-switched from the expiring router back on a new path toward the source.

D. The packet is dropped and an ICMP "time exceeded" message is label-switched from the expiring router on the same label switched path toward the destination and then back to the originating source.

E. The packet is forwarded on to the next router where its TTL expires and from where an ICMP "time exceeded" message is generated and label switched back to the source.

Correct Answer: D

QUESTION 17

On a Cisco router, when will the router actually reserve the bandwidth for the MPLS traffic engineering tunnel?

A. during the autoroute process

B. during constraint-based routing calculations

C. on the receipt of the RSVP Path message

D. on the receipt of the RSVP Resv message

Correct Answer: D

QUESTION 18

An engineer is allocating a determined amount of bandwidth to a customer Cisco MPLS TE tunnel to guarantee its availability on a 24/7 SLA type. Which option must be configured to make sure the customer is able to use the

bandwidth agreed on the SLA?

A. RSVP that guarantees bandwidth availability end-to-end

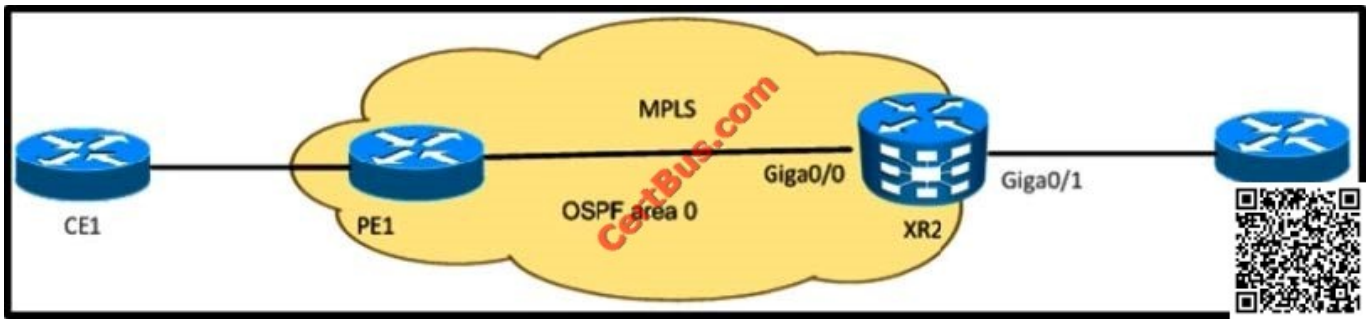
B. Cisco MPLS TE tunnel to signal the bandwidth required

C. a QoS policy to reinforce the RSVP bandwidth reservation

D. overprovisioning to guarantee bandwidth

Correct Answer: C

QUESTION 19



Refer to the exhibit. XR2 needs to have LDP configured with PE1. Which configuration achieves this goal?

A. interface giga 0/0 Mpls ip exit commit

B. router ospf 1 mpls ldp auto config area 0 exit commit

C. router ospf 1 area 0 mpls ldp auto config exit commit

D. interface giga 0/1 mpls ldp exit commit

Correct Answer: C

QUESTION 20

A service provider recently defined new SLA services that provide QoS transparency over MPLS DiffServ-TE services. Which two tunneling modes provide QoS transparency? (Choose two.)

A. short pipe mode

B. uniform mode

C. pipe mode with an explicit NULL LSP

D. pipe mode without a explicit NULL LSP

E. best effort mode

Correct Answer: AC

QUESTION 21

A service provider experiences routing issues in a customer MPLS network. The customer has two sites that are connected over its core. Which feature can be used for troubleshooting?

A. disabling of Cisco Express Forwarding, to enable the use of LSP Ping and LSP Traceroute to verify the IP routing path

B. redistribution between the BGP IPv4 and VPNv4 address families, to use labels to forward the customer packets

C. LSP Ping, to confirm that the label-switched path is used for transport

D. traceroute, to verify the label-switched path that is used for point-to-multipoint

Correct Answer: C

QUESTION 22

A network engineer must make a reservable maximum bandwidth of 75 Mbps on a Cisco ASR 9000 series router. Which configuration satisfies this requirement in Cisco IOS XR?

A. 2802_FY14Q4_CORE_Q33_o1

B. 2813_FY14Q4_CORE_Q33_o2

C. 2824_FY14Q4_CORE_Q33_o3

D. 2835_FY14Q4_CORE_Q33_o4

Correct Answer: C

QUESTION 23

Which QoS technique can be used to protect customer traffic from being dropped by traffic rate limiting performed by the service provider?

A. LLQ

B. policing

C. fair-queue

D. shaping

Correct Answer: D

QUESTION 24

Which configuration fulfills the requirement of configuring LDP with Cisco Nonstop Forwarding on a router with 5

minutes time to hold the forwarding table information and 1 minute retry timer value for an LDP connection?

A. mpls ldp graceful-restart graceful-restart forwarding state-holdtime 5 graceful-restart reconnect-timeout 1 interface GigabitEthernet0/0/0/0 !

B. mpls ldp graceful-restart graceful-restart forwarding state-holdtime 300 graceful-restart reconnect-timeout 60 interface GigabitEthernet0/0/0/0 !

C. mpls ldp nsr graceful-restart graceful-restart forwarding state-holdtime 300 graceful-restart reconnect-timeout 60 interface GigabitEthernet0/0/0/0 !

D. mpls ldp nsr graceful-restart graceful-restart forwarding state-holdtime 5 graceful-restart reconnect-timeout 1 interface GigabitEthernet0/0/0/0 !

Correct Answer: B

QUESTION 25

A company asks an engineer to provide an explanation for implementing MPLS DiffServ- TE services. Which option is a DiffServ-TE fundamental concept that should be highlighted?

A. expedited forwarding

B. assured forwarding

C. class of service

D. class types

E. fast reroute

Correct Answer: D

QUESTION 26

A network operations center analyzes a Wireshark capture and tries to verify which QoS policy is effective over a customer router. How many bits define the DSCP values?

A. 3

B. 6

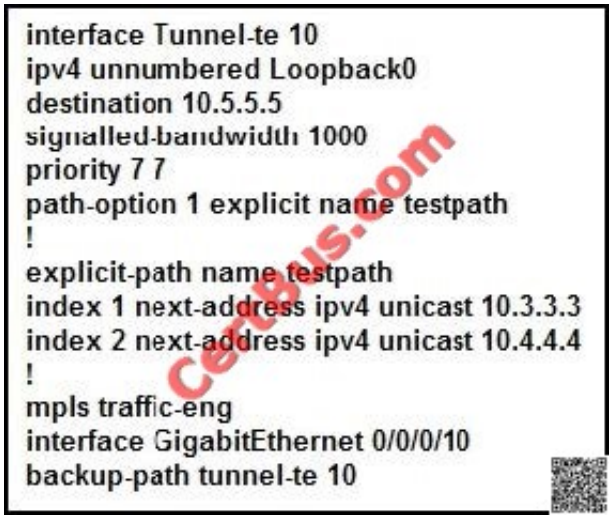
C. 8

D. 16

Correct Answer: B

QUESTION 27

Refer to the Cisco IOS XR configuration exhibit.



Which statement is correct?

A. The backup tunnel-te 10 tunnel is using the highest setup and hold priority settings of 7.

B. The backup tunnel path is learned dynamically.

C. The fast-reroute command is missing under the (config-mpls-te-if)# configuration mode.

D. Interface gi0/0/0/10 is the protected link.

Correct Answer: D

QUESTION 28

A network engineer wants to implement QoS in an environment in which GRE tunnels are used. The engineer creates a policy map to classify the traffic and applies the map to the physical interface. Despite a successful ping to the end of the tunnel, the counter of the class-map ICMP does not register a hit. How can the engineer fix this problem?

A. enable QoS preclassify in the tunnel interface

B. send the ping with source tunnel 0

C. send the ping with source F0/0

D. enable QoS preclassify in the physical interface

Correct Answer: A

QUESTION 29

Which four options describe the functions of the control world in an AToM environment? (Choose four.)

A. It carries generic and Layer 2 payload-specific information.

B. It prevents fragmentation and reassembly.

C. It preserves the sequence of the transported frames.

D. It is responsible for padding all packets.

E. It is responsible for padding the small packets.

F. It enables proper load balancing without packet desequencing independent of L2VPN packet content.

G. It enables an optimal path for the L2VPN packet content to follow through the MPLS backbone.

H. It carries Layer 2 payload-specific information.

Correct Answer: ACEF

QUESTION 30

Which option shows how a network engineer implements QPPB marking of incoming traffic on a router that is connected to a VoIP SP (AS62000, BGP community 60000:1) and to a data services service provider (AS61000, BGP community 61000:1) on Cisco IOS XE?

```
ip bgp-community new-format
 ip community-list 1 permit 60000:1
 ip as-path access-list 1 permit ^(61000_)+$
route-map mark-voip-data 10
  match community 1
  set ip precedence 5
route-map mark-voip-data 20
  match as-path 1
  set ip precedence 0
router bgp 300
  table-map mark-voip-data
interface GigabitEthernet 0/1
  description Link-to-VOIP-SP
  bgp-policy source ip-prec-map
interface GigabitEthernet 0/2
  description Link-to-Data-SP
  bgp-policy source ip-prec-map
```


A.

B.
```
ip cef
 ip bgp-community new-format
 ip community-list 1 permit 60000:1
 ip as-path access-list 1 permit ^(61000_)+$
route-map mark-voip-data 10
  match community 1
  set ip precedence 5
route-map mark-voip-data 20
  match as-path 1
  set ip precedence 0
router bgp 300
  table-map mark-voip-data
interface GigabitEthernet 0/1
  description Link-to-VOIP-SP
  bgp-policy source ip-prec-map
interface GigabitEthernet 0/2
  description Link-to-Data-SP
  bgp-policy source ip-prec-map
```

C.
```
ip cef
 ip bgp-community new-format
 ip community-list 1 permit 60000:1
 ip as-path access-list 1 permit ^(61000_)+$
route-map mark-voip-data 10
  match community 1
  set ip precedence 5
route-map mark-voip-data 20
  match as-path 1
  set ip precedence 0
router bgp 300
  table-map mark-voip-data
interface GigabitEthernet 0/1
  description Link-to-VOIP-SP
  bgp-policy source ip-prec-map
interface GigabitEthernet 0/2
  description Link-to-Data-SP
  bgp-policy destination ip-prec-map
```

D.
```
ip cef
ip community-list 1 permit 61000:1
 ip as-path access-list 1 permit ^(60000_)+$
route-map mark-voip-data 10
  match community 1
  set ip precedence 5
route-map mark-voip-data 20
  match as-path 1
  set ip precedence 0
router bgp 300
  table-map mark-voip-data
interface GigabitEthernet 0/1
  description Link-to-VOIP-SP
  bgp-policy source ip-prec-map
interface GigabitEthernet 0/2
  description Link-to-Data-SP
  bgp-policy source ip-prec-map
```

B. C. D.

A. Option A

B. Option B

C. Option C

D. Option D

Correct Answer: C

To Read the Whole Q&As, please purchase the Complete Version from Our website.

Try our product !

100% Guaranteed Success
100% Money Back Guarantee
365 Days Free Update
Instant Download After Purchase
24x7 Customer Support
Average 99.9% Success Rate
More than 800,000 Satisfied Customers Worldwide
Multi-Platform capabilities - Windows, Mac, Android, iPhone, iPod, iPad, Kindle

We provide exam PDF and VCE of Cisco, Microsoft, IBM, CompTIA, Oracle and other IT Certifications.
You can view Vendor list of All Certification Exams offered:

https://www.certbus.com/allproducts

Need Help

Please provide as much detail as possible so we can best assist you.
To update a previously submitted ticket: