Cisco

Exam Questions 642-887

SPCORE Implementing Cisco Service Provider Next-Generation Core Network Services (SPCORE)
NEW QUESTION 1
What is a crucial LDP default operating behavior?

A. LDP uses the solicited mode by default
B. An LDP label request is sent to the FIB next hop LS
C. When the egress router receives the request, it returns message with all the label-mapping information for the LSP is generated.
D. LDP establishes a TCP session between the PE routers, thus providing label mapping for the LSP
E. LDP uses downstream unsolicited mode by default
F. An LSR advertises label mappings to peers without being asked
G. LDP uses UDP-confirmed messages to establish sessions between PE ingress and egress router
H. The UDP messages encode the label information for each LSP and sub- LSP link

Answer: C

NEW QUESTION 2
Refer to the exhibit. Which configuration error prevents this traffic-shaping policy from working?

```
policy-map WAN
  class class_A
  shape average 512000 32000
  !
  interface serial 4/0
  service-policy input WAN
```

A. The WAN interface is starting to drop packets because no queuing mechanism is implemented.
B. Traffic-shaping policies are applied only in the outbound direction.
C. The class_A configuration shape peak is used to maximize the serial interface performances.
D. The service-policy command is applied only on logical or channeled interfaces.

Answer: B

NEW QUESTION 3
Which two features are used to provide Cisco MPLS TE node and link protection? (Choose two.)

A. autoroute
B. fast reroute
C. backup tunnels
D. BFD

Answer: BC

NEW QUESTION 4
On Cisco routers, which QoS marker is only locally significant?

A. DSCP
B. MPLS EXP
C. IP precedence
D. QoS group
E. discard eligible (DE)

Answer: D

NEW QUESTION 5
When defining an explicit MPLS TE tunnel path, which two command options are available under the explicit-path configuration mode? (Choose two.)

A. exclude-address
B. include-address
C. next-address
D. dynamic-address

Answer: AC

NEW QUESTION 6
Which QoS mechanism is used for congestion avoidance?

A. LLQ
B. CBWFQ
C. WRED
D. LFI
E. traffic policing

Answer: C
NEW QUESTION 7
What is the correct formula for determining the CIR?

A. CIR = Bc/Tc  
B. CIR = Bc x Tc  
C. CIR = Tc/Bc  
D. CIR = Bc + Be  
E. CIR = Tc/(Bc+Be)  
F. CIR = (Bc+Be)/Tc

Answer: A

Explanation:
Committed Information Rate (CIR) – the rate the device will send at (on average) over a one second period. The default CIR when traffic-shaping is enabled on the interface is 56K. CIR is also referred to as the “target rate”. Since the device is forced to send at the AR, it does not send all of the time (within one second) in order to send an average amount of data that equals the CIR.

Minimum CIR (mincir) – the rate the service provider guarantees to accept. Theoretically, the provider will set the DE bit for all traffic above this rate. Mincir is designed to be used in conjunction with adaptive shaping. With adaptive shaping, the router will throttle down in the event of congestion. The router will not throttle down below this value.

Committed Burst (Bc) – the number of committed bits allows to be sent during a given interval. The device sends an average amount of traffic to achieve the CIR. The Bc value defaults to 1/8 of the configured CIR for speeds below 650K. For speeds above that, it is roughly 1/16 of CIR.

Excess Burst (Be) – the number of non-committed bits the router is allowed to send above Bc during the first interval (Tc). The amount of Be “credits” is derived from unused Bc credits in previous intervals. There is no limit to how long Be can “store” unused Bc credits. It is a common misconception that Be can only store credits from the previous interval or the previous second. There is no default Be value.

Committed Rate Measurement Interval (Tc) – the time interval over which Bc or Bc+Be can be transmitted. The max value is 125 ms and the minimum value is 10 ms.

The Formula
CIR, Tc, and Bc are related mathematically by the following formula:
CIR = Bc/(Tc/1000)
Notice the division of Tc by 1000 is used to convert milliseconds into seconds – the common measurement of CIR and Bc.

NEW QUESTION 8
Which driver uses an IntServ QoS model in an MPLS TE enabled service provider network?

A. DSCP, which requires signaling across the provider network  
B. RSVP, which enables bandwidth guarantees across a provider network  
C. RSVP, which enables per-hop behavior across a provider network  
D. DSCP, which enables bandwidth guarantees across a provider network

Answer: B

NEW QUESTION 9
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

Answer: B

NEW QUESTION 10
A network operations center requests support to configure a Cisco MPLS TE tunnel on a Cisco IOS XR router. Which command sets a specific bandwidth required to the corresponding Cisco MPLS TE tunnel?

A. rsvpinterface interface-path-id bandwidth bandwidth  
B. interface tunnel-te tunnel_id!bandwidth bandwidth  
C. interface tunnel-te tunnel_id!signaled-bandwidth bandwidth  
D. mpls traffic-engauto-bw collect frequency value!

Answer: C

NEW QUESTION 11
DS-TE implementations on Cisco routers support which bandwidth pool(s) and class type(s)? (Choose two.)

A. global pool only  
B. subpool only  
C. global pool and subpool  
D. class-type 0 only  
E. class-type 1 only  
F. class-type 0 and class-type 1

Answer: CF

Explanation:
Differential Service Tunnels
Differential Service Traffic Engineering (TE) is an extension of the regular MPLS Traffic Engineering (MPLSTE) feature. Regular TE does not provide bandwidth...
guarantees to different traffic classes. A single bandwidth pool (global pool) is used in regular TE that is shared by all traffic. In order to support various class of service (CoS), the ability to provide multiple bandwidth pools is required. These bandwidth pools then can be treated differently based on the requirement for the traffic class using that pool.

In RSVP global and subpools reservable bandwidths are configured on a per interface basis to accommodate TE tunnels on the node. Available bandwidth from all configured bandwidth pools is advertised using Interior Gateway Protocol (IGP). RSVP is used to signal the TE tunnel with appropriate bandwidth pool requirements.

**NEW QUESTION 12**
An engineer has been tasked to configure a guaranteed 2 Mbps of bandwidth for outgoing FTP traffic on interface FastEthernet 1/1/1 on Cisco IOS XR. Which method accomplishes this configuration?

A. configure terminal class-map FTP_CLASS match protocol ftp exit-policy-map POLICY_1 class FTP_CLASS bandwidth 2000 exit interface FastEthernet 1/1/1 service-policy output POLICY_1 end commit
B. configure terminal class-map FTP_CLASS match protocol ftp exit-policy-map POLICY_1 class FTP_CLASS bandwidth 2000000 exit interface FastEthernet 1/1/1 service-policy input POLICY_1 end commit
C. configure terminal access-list 100 permit ip any any eq 21 policy-map POLICY_1 match ip access-list 100 bandwidth 2000 exit interface FastEthernet 1/1/1 service-policy output POLICY_1 end commit
D. configure terminal policy-map POLICY_1 class FTP_CLASS match protocol ftp bandwidth 2000000 exit interface FastEthernet 1/1/1 service-policy input POLICY_1 end commit

**Answer:** A

**NEW QUESTION 13**
A recent analysis of a service provider network infrastructure revealed the necessity to reinforce bandwidth control over all the 5 Mbps residential customer contracts. Which option is a viable solution to rate limit customer’s bandwidth both upstream and downstream?

A. class-based policing
B. committed access rate on a per interface basis
C. reserving 5 Mbps on Cisco MPLS TE tunnels that connect customers
D. setting customer Ethernet links to 10 Mbps half-duplex

**Answer:** C

**NEW QUESTION 14**
Scenario:

Instructions:
Enter the proper CLI commands and analysis the outputs on the Cisco routers to answer the multiple-choice questions.

From the network topology diagram, click on the router icon to gain access to the console of the router.

No console or enable passwords are required.

There are four multiple-choice questions with this task. Be sure to answer all four questions before selecting the Next button.

Not all the CLI commands or commands options are supported or required for this simulation.

All the devices in this simulation have been pre-configured and you are not required to enter in any configurations.

Scenario:
Referring to the network topology diagram shown in the exhibit, use the proper CLI commands on the CE7 and PE7 routers and interpret the supported CLI commands outputs to answer the four multiple choice questions.
On CE7 which statement is correct regarding Traffic the QoS policy applied to the gi0/0 interface in the input direction?

In this simulation, you will have access to the PE7 and CE7 consoles. Click on the PE7 and CE7 router icon to access the respective console. PE7 is an ASR9K and CE7 is an ISR-G2.
A. Traffic matching the "MARKING2" class-map will be marked with qos-group 5
B. Traffic matching the "MARKING1" class-map will be marked with MPLS EXP 5
C. All incoming packets not matched by the "MARKING1" class-map will be dropped
D. All incoming packets with the DSCP EF marking will be marked with MPLS EXP 0

Answer: B

Explanation:
Issue: `show policy-map interface gi0/0`
First find out which policy-map is applied (it called something like QOSPOLICY1)
A is wrong. Class MARKING2 is indeed defined but not applied to that policy-map. There are two class-maps applied MARKING1 and class-default. Both will mark the traffic with MPLS EXP values.
default:
set mpls experimental imposition 0 MARKING1
set mpls experimental imposition 5

NEW QUESTION 15
An engineer wants to implement constraint-based routing. Which MPLS application should the engineer use?

A. unicast IP routing
B. MPLS VPN
C. MPLS TE
D. RSVP

Answer: C

NEW QUESTION 16
A DSCP value of 41 in decimal corresponds to which IP precedence value?

A. 3 – Flash
B. 4 – Flash Override
C. 5 – Critical
D. 6 – Internet Control
E. 7 – Network Control

Answer: C

Explanation:

= INT(41/8)
The AF behavior group defines four separate AF classes with Class 4 having the highest priority. Within each class, packets are given a drop precedence (high, medium or low). The combination of classes and drop precedence yields twelve separate DSCP encodings from AF11 through AF43 (see table)

NEW QUESTION 17
Which four options are methods by which labels can be assigned in the label stack to an IP prefix? (Choose four.)

A. LDP
B. CEF
C. BGP
D. RSVP
E. static
F. IGP
G. route recursion
H. manual tagging

Answer: ACDG

NEW QUESTION 18
An engineer is working in a service provider environment to troubleshoot a MPLS VPN. The engineer determines that LDP neighborship is flapping between two routers and causing disruption to the traffic. Which LDP feature can help to solve the issue?

A. LDP Discovery
B. LDP auto-configuration
C. LDP graceful-restart
D. LDP NSF
NEW QUESTION 19
LDP session protection uses which one to maintain the LDP session between LDP neighbors?
A. LDP NSF
B. LDP NSR
C. backup-targeted LDP hellos
D. BFD
E. LDP-IGP synchronization

Answer: C

NEW QUESTION 20
Refer to the exhibit.

ip explicit-path name LSP1 enable
next-address 10.1.1.1

interface Tunnel100
  ip unnumbered Loopback0
tunnel destination 192.168.1.2
tunnel mode mpls traffic-eng
tunnel mpls traffic-eng bandwidth 65000
tunnel mpls traffic-eng path-option 1 explicit name LSP1

Which result occurs from this configuration?
A. The tunnel comes up because of the explicit path configuration and disregards all CSPF calculations
B. If the explicit path becomes unavailable, the tunnel falls back to dynamic routing paths
C. If the explicit path becomes unavailable, the tunnel fails
D. The traffic through the tunnel is limited to 65,000 Kbps of bandwidth

Answer: B

NEW QUESTION 21
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