# Cisco 642-845

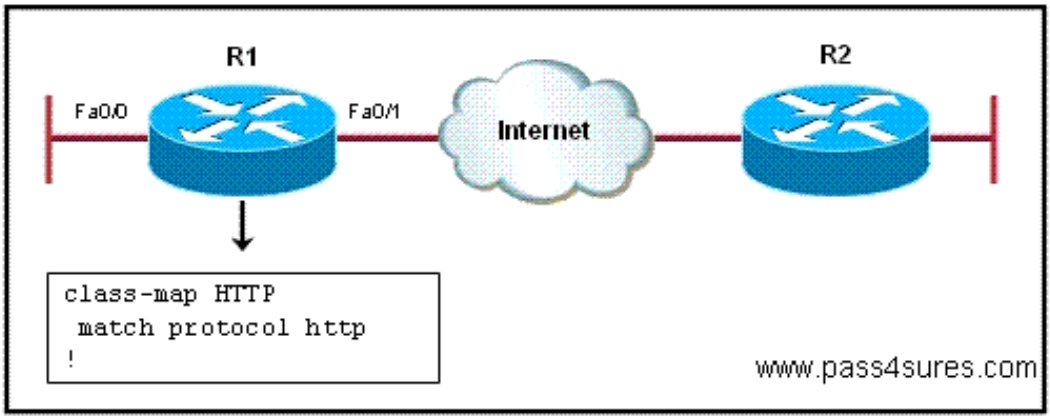
## 642-845 Optimizing Converged Cisco Networks

# Practice Test

**Version 2.6**

**QUESTION NO: 1**

Refer to the exhibit. NBAR is to be configured on router R1 to limit outgoing Web traffic to 1 Mb/s. NBAR must also limit HTTP traffic on TCP ports 80 and 8080. On the basis of the information that is provided, which three configuration options must be configured on Router R1? (Choose three.)




A. R1(config)# policy-map LIMITWEBBW
R1(config-pmap)# class HTTP
R1(config-pmap-c)# bandwidth 1000
B. R1(config)# ip nbar port-map http tcp 80
R1(config)# ip nbar port-map http tcp 8080
C. R1(config)# interface FastEthernet 0/0
R1(config-if)# service-policy output LIMITWEBBW
D. R1(config)# ip nbar port-map http tcp 80 8080
E. R1(config)# policy-map LIMITWEBBW
R1(config-pmap)# class HTTP
R1(config-pmap-c)# bandwidth percent 10
F. R1(config)# interface FastEthernet 0/1
R1(config-if)# service-policy output LIMITWEBBW

**Answer: A,D,F**

**QUESTION NO: 2**

Which two statements describe traffic policing? (Choose two.)

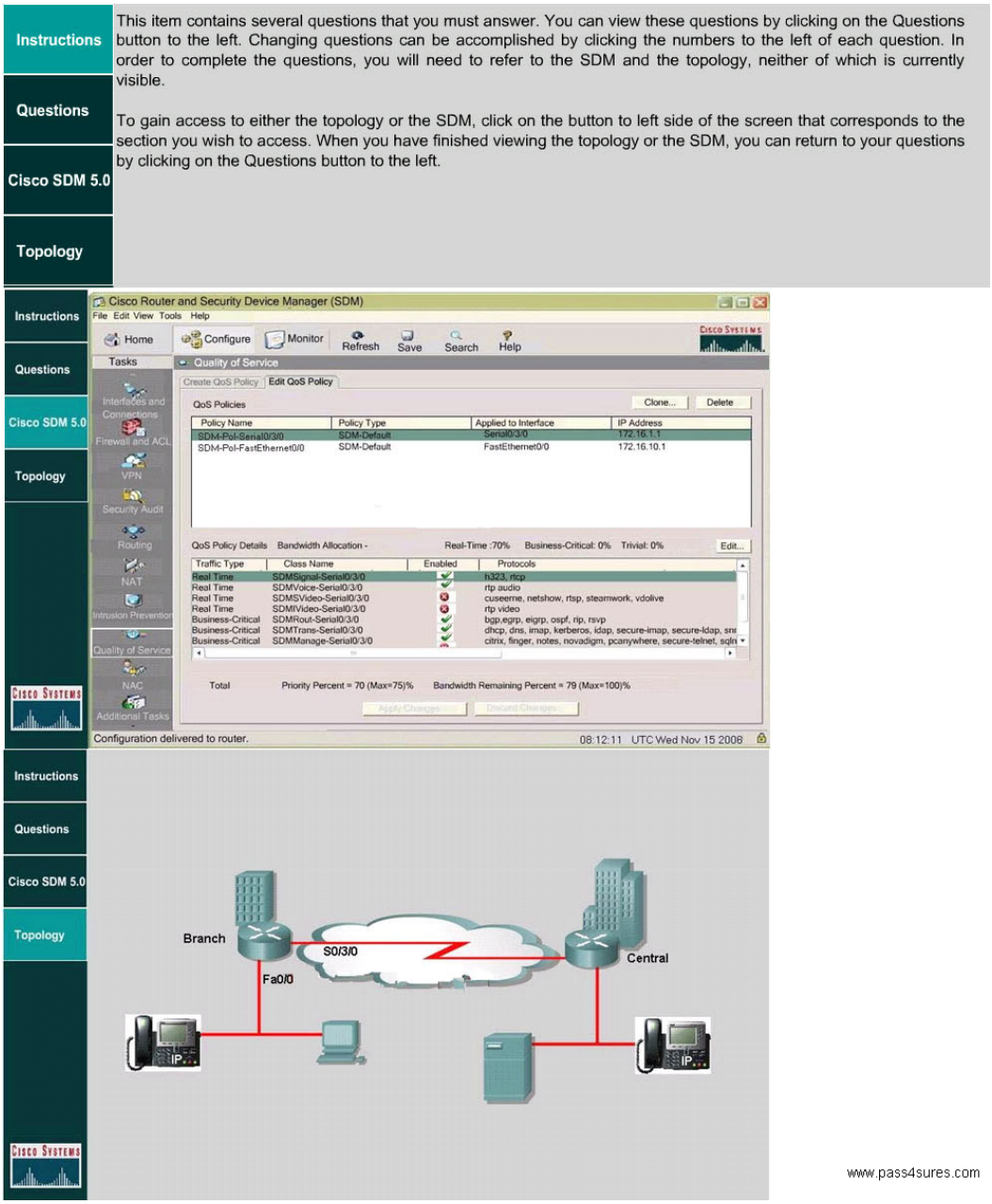
A. Excess traffic is buffered so that the traffic remains within the desired rate.
B. Packets that conform to traffic policies are not delayed.
C. Traffic bursts are smoothed out by queuing the excess traffic to produce a steadier flow of data.
D. Packet marking is available and allows excess packets to be re-marked with a lower priority.

**Answer: B,D**

**QUESTION NO: 3**

This item contains several questions that you must answer. You can view these questions by clicking on the Questions button to the left. Changing questions can be accomplished by clicking the numbers to the left each question. In order to complete the question, you will need to refer to the SDM and the topology, neither of which is currently visible.

To gain access to either the topology or the SDM, click on the button to left side of the screen that corresponds to the section you wish to access. When you have finished viewing the topology or the SDM, you can return to your questions by clicking on the Questions button to the left.




Your Money, Inc.is a large worldwide investment firm. Using the SDM QoS wizard, the company has recently implemented QoS policies at one of their Branch locations. As a recent addition to the network engineering team, you have been tasked with documenting the active QoS configuration at the branch router using the Cisco Router and Security Device Manager (SDM) utility. Using the SDM output from the Edit QoS Policy Tab in the Quality of Service Tasks under the Configure

button, answer the following questions:

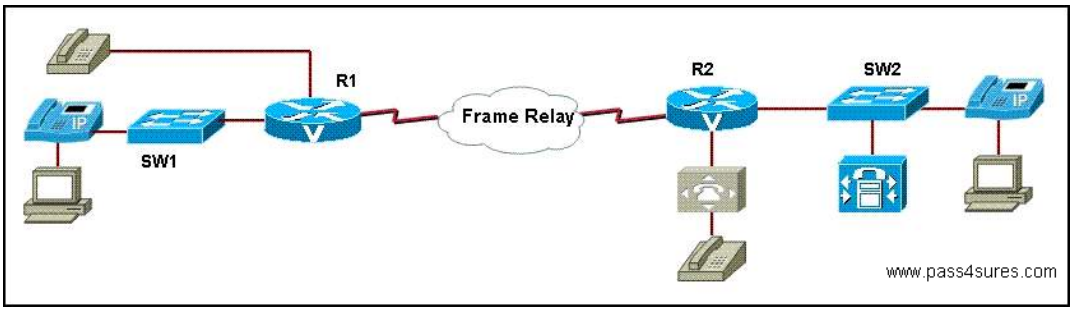
During periods of congestion which queuing method will be applied to outbound traffic on the Serial0/3/0 interface?

A. No queuing is applied to outbound traffic on this interface.
B. Class-based Weighted Fair Queuing
C. Low Latency Queuing
D. Weighted Round Robin
E. Round Robin

**Answer: C**

**QUESTION NO: 4**

Refer to the exhibit. The serial link that connects the two offices has a bandwidth of 128 kbps. What could be done to set aside 64 kbps of bandwidth to transport VoIP traffic over the WAN link?




A. Apply the auto-cost reference-bandwidth 64 command on both sides of the serial link.
B. Apply the bandwidth 64 command on both serial interfaces connected to the WAN link.
C. Apply the ip bandwidth-percent eigrp 1 64 command on both sides of the serial link.
D. Apply the frame-relay voice-bandwidth 64000 command to enable the QoS Call Admission Control feature on the serial link.
E. Apply the max-conn 64 command on a perial peer basis on both sides of the serial link.
F. Apply the clock rate 64000 command on both serial interfaces connected to the WAN link.

**Answer: D**

**QUESTION NO: 5**

Refer to the exhibit. Which statement is true?
Exhibit:

```
Router(config)# access-list 140 deny tcp host 10.1.1.1 any eq telnet
Router(config)# access-list 140 deny tcp host 10.1.1.2 any eq telnet
Router(config)# access-list 140 permit tcp any any eq telnet
Router(config)# class-map telnet-class
Router(config-cmap)# match access-group 140
Router(config-cmap)# exit
Router(config)# policy-map control-plane-in
Router(config-pmap)# class telnet-class
Router(config-pmap-c)# police 80000 conform transmit exceed drop
Router(config-pmap-c)# exit
Router(config-pmap)# exit
Router(config)# control-plane
Router(config-cp)# service-policy input control-plane-in
Router(config-cp)# exit
```



A. Telnet traffic from hosts 10.1.1.1 and 10.1.1.2 destined for the router will not be rate limited.
B. The configuration will not rate limit any Telnet traffic until it is applied to a router interface.
C. Telnet traffic originating from the router will be rate limited unless it is destined for hosts 10.1.1.1 or 10.1.1.2.
D. All Telnet traffic destined for the router will be rate limited.

**Answer: A**

**Explanation:**
In this configuration all traffic that matches access list 140 will be rate limited. However, in this case the telnet traffic from these two hosts will not be rate limited because of the deny statements. Only telnet traffic from the hosts 10.1.1.1 and 10.1.1.2 will be processed normally, while all other telnet traffic will be rate limited.

**QUESTION NO: 6**

Which two statements about the Wireless Location Appliance are true? (Choose two.)

A. The Wireless Location Appliance visually displays the location information of WLAN devices and forwards this information to third-party applications using the Simple Network Management Protocol (SNMP).
B. The Wireless Location Appliance visually tracks up to 15,000 WLAN devices and can store this information for 90 days.
C. A Wireless Location Appliance acts as a server to one or more Cisco WCSs. It collects, stores, and passes on data from its associated Cisco WLAN controllers.
D. Before using the Web interface, the initial configuration of the Wireless Location appliance must be done using the command-line interface (CLI).
E. The Cisco 2000, 2700, 4100, and 4400 are examples of Wireless Location Appliances.

**Answer: C,D**

**Explanation:**
Cisco 2700 Series Wireless Location Appliances are servers that enhance the high-accuracy built-in Cisco WCS:

- Computing historical location data
- Collecting historical location data
- Storing historical location data

Configuration and operation uses Cisco WCS, which has an easy-to-use GUI.
Initial configuration using a CLI console session is required before you use the GUI.

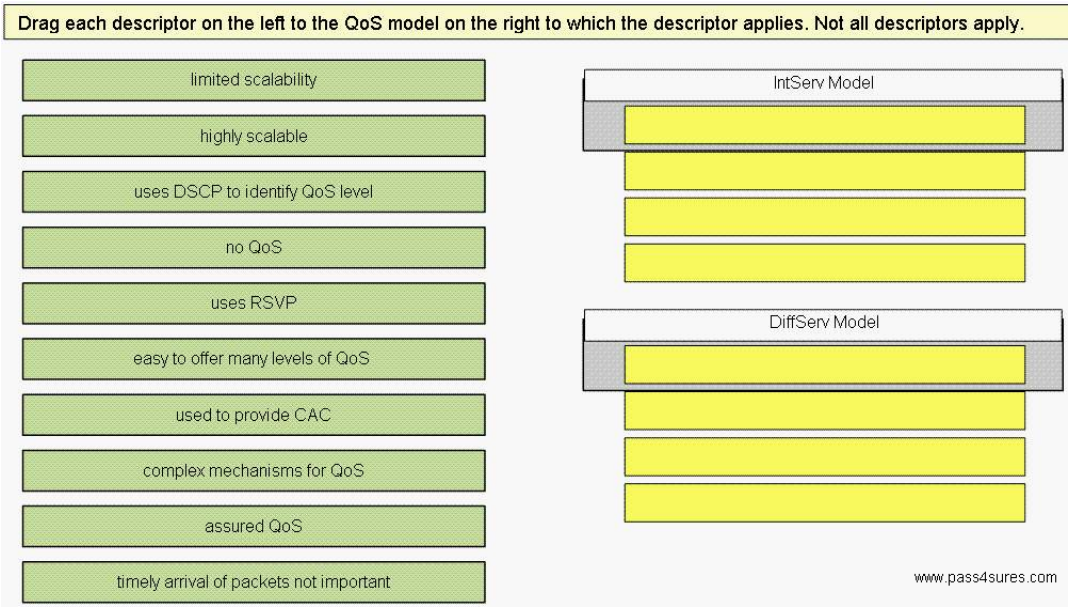
The Cisco Wireless Location Appliance is an innovative, easy-to-deploy solution that uses advanced RF fingerprinting technology to simultaneously track thousands of 802.11 wireless devices from directly within a WLAN infrastructure, increasing asset visibility and control of the airspace.

Cisco 2700 Series Wireless Location Appliances are servers that enhance the high-accuracy built-in Cisco WCS location abilities by computing, collecting, and storing historical location data for up to 1500 laptop clients, palmtop clients, VoIP telephone clients, radio frequency identifier (RFID) asset tags, rogue access points, and rogue access point clients.

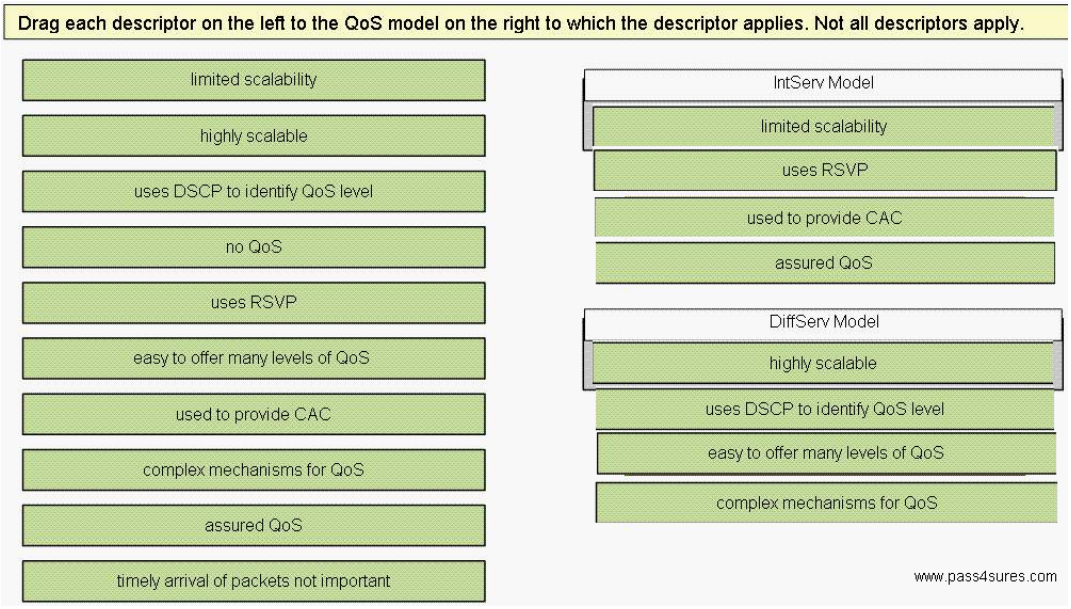
A Cisco 2700 Series Wireless Location Appliance acts as a server to one or more Cisco WCS devices, collecting, storing, and passing on data from its associated Cisco Wireless LAN Controllers. Additionally, the appliance provides location-based alerts for business policy enforcement and records rich historical location information that can be used for location trending, rapid problem resolution and RF capacity management.

**QUESTION NO: 7 DRAG DROP**

Drop




**Answer:**




**QUESTION NO: 8**

What are two major sources of delay that can be managed by QoS in voice-enabled networks? (Choose two.)

A. packets dropped because of CRC errors
B. propagation delay
C. voice packet serialization delay
D. header overhead
E. congested egress queues

**Answer: D,E**

**Explanation:**
1. Header Overhead:
The combined overhead of IP, UDP, and RTP headers is enormously high, especially because voice is sent in relatively small packets and at high packet rates. When G.729 is used, the headers are twice the size of the voice payload. The pure voice bandwidth of the G.729 codec (8 kbps) has to be tripled for the whole IP packet. This total, however, is still not the final bandwidth requirement, because Layer 2 overhead must also be included. Without the Layer 2 overhead, a G.729 call requires 24 kbps. When G.711 is being used, the ratio of header to payload is smaller because of the larger voice payload. Forty bytes of headers are added to 160 bytes of payload, so one-fourth of the G.711 codec bandwidth (64 kbps) has to be added. Without Layer 2 overhead, a G.711 call requires 80 kbps.

**QUESTION NO: 9**

AutoQoS takes the interface type and bandwidth into consideration when implementing what three QoS features? (Choose three.)

A. FECN
B. LLQ
C. cRTP
D. CBWFQ
E. WRED
F. LFI

**Answer: B,C,F**

**Explanation:**
AutoQoS takes the interface type and bandwidth into consideration when implementing these QoS features:
LLQ: The LLQ (specifically, PQ) is applied to the voice packets to meet the latency requirements.
cRTP: With cRTP, the 40-byte IP header of the voice packet is reduced to 2 or 4 bytes (without or with cyclic redundancy check [CRC]), reducing voice bandwidth requirements. cRTP must be applied at both ends of a network link.
LFI: LFI is used to reduce the jitter of voice packets by preventing voice packets from being delayed behind large data packets in a queue. LFI must be applied at both ends of a network link.

**QUESTION NO: 10**

Which two statements about queuing mechanisms are true? (Choose two.)

A. When no other queuing strategies are configured, all interfaces except serial interfaces at E1 speed (2.048 Mbps) and below use FIFO by default.
B. Serial interfaces at E1 speed (2.048 Mbps) and below use weighted fair queuing (WFQ) by default.
C. An advantage of the round-robin queuing algorithm is its ability to prioritize traffic.
D. Weighted fair queuing (WFQ) is the simplest of queuing method.
E. Priority queuing (PQ) uses a dynamic configuration and quickly adapts to changing network conditions.
F. Custom queuing (CQ) uses a dynamic configuration and quickly adapts to changing network conditions.

**Answer: A,B**

**Explanation:**
WFQ is one of the premier Cisco queuing techniques. It is a flow-based queuing algorithm that does two things simultaneously: It schedules interactive traffic to the front of the queue to reduce response time, and it fairly shares the remaining bandwidth among the various flows to prevent

high-volume flows from monopolizing the outgoing interface.

The idea of WFQ is to have a dedicated queue for each flow without starvation, delay, or jitter within the queue. Furthermore, WFQ allows fair and accurate bandwidth allocation among all flows with minimum scheduling delay. WFQ makes use of the IP precedence bits as a weight when allocating bandwidth.
WFQ was introduced as a solution to the problems of the following queuing mechanisms: FIFO queuing causes starvation, delay, and jitter. Priority queuing (PQ) causes starvation of lower-priority classes and suffers from the FIFO problems within each of the four queues that it uses for prioritization.
The WFQ method is used as the default queuing mode on serial interfaces configured to run at or below E1 speeds (2.048 Mbps).

**QUESTION NO: 11**

Refer to the exhibit. Which three options are available when the Cisco Wireless Control System (WCS) discovers points on the LAN? (Choose three.)


A. The WCS reconfigures the rouge access point with proper authentication credentials.
B. The WCS contains rouge access points by sending their clients deauthenticate and disassociate messages.
C. The WCS locates and monitors rouge access points until they are eliminated or acknowledged.
D. The WCS sends deauthenticate and disassociate messages to all wireless clients on the network.
E. The WCS sends new rouge access point notifications.
F. The WCS sends deauthenticate and disassociate messages to the rouge access point.

**Answer: B,C,E**

**QUESTION NO: 12**

What type of services are provided by the Cisco IOS gateways in a VoIP network with Cisco CallManger functionality?

A. Cisco IOS gateways provide services such as address translation and network access control for the devices on the network.
B. Cisco IOS gateways provide zone management for all registered endpoints in the network.
C. Cisco IOS gateways provide media termination and signal translation between the public switched telephone network (PSTN) and IP networks.
D. Cisco IOS gateways provide services such as bandwidth management and accounting.

**Answer: C**

**Explanation:**
Cisco IOS gateways provide media termination and signal translation between the public switched telephone network (PSTN) and IP networks. As a result, they provide broader interoperability, increased investment protection, and such features as:
QoS and call admission control--including Differentiated Services Code Point (DSCP) packet marking, IP Precedence, Low Latency Queuing (LLQ), Class-Based Weighted Fair Queuing (CBWFQ), Service Assurance Agent, Response Time Reporter, Resource Availability Checks, and Resource Reservation Protocol (RSVP).
Survivability and resiliency--failover capabilities support PSTN telephony interfaces on branch office routers in the event of a connection failure to the primary SIP proxy or back-to-back user agent.
Multiprotocol support--MGCP and H.323 protocols provide flexibility in network design and simplify protocol migrations.
Simplified configuration and management--configuration using the familiar Cisco command-line interface and a variety of management tools, including CiscoWorks products, help simplify configuration and management.
Reference: http://www.cisco.com/en/US/products/ps6831/index.html

**QUESTION NO: 13**

What is the best description of serialization delay?

A. the time it takes for a Layer 3 switch or a router to switch a packet from an inbound interface to the queue of the outbound interface
B. the time it takes to place a frame on the physical medium for transport
C. the time a packet resides in the outbound queue of a router