Implementing Cisco Quality of Service QoS
Course Summary

Description
Implementing Cisco Quality of Service (QoS) v2.3 provides learners with in-depth knowledge of quality of service (QoS) requirements, conceptual models such as Best Effort, Integrated Services (IntServ) and Differentiated Services (DiffServ), and the implementation of QoS on Cisco IOS platforms. This course covers the theory of QoS, design issues, and configuration of various QoS mechanisms to facilitate the creation of effective administrative policies providing QoS.Case studies and lab exercises included in the course help learners to apply the concepts mastered in individual modules to real-life scenarios. The course also gives learners design and usage rules for various advanced QoS features and the integration of QoS with underlying Layer 2 QoS mechanisms. This gives learners the opportunity to design and implement efficient, optimal, and trouble-free multiservice networks.

Upon completion of this course, the learner will be able to identify, describe, and correctly implement the appropriate QoS mechanisms that are required to create an effective administrative policy providing QoS. This course helps students prepare for QoS Exam #642-642.

Objectives
At the end of this course, students will be able to:

- Explain the need to implement QoS and explain methods for implementing and managing QoS.
- Identify and describe different models used for ensuring QoS in a network and explain key QoS mechanisms used to implement the models.
- Explain the use of MQC and AutoQoS to implement QoS on the network.
- Classify and mark network traffic to implement a policy defining QoS requirements.
- Use Cisco QoS queuing mechanisms to manage network congestion.
- Use Cisco QoS congestion avoidance mechanisms to reduce the effects of congestion on the network.
- Use Cisco QoS traffic policing and traffic shaping mechanisms to effectively limit the rate of network traffic.
- Use Cisco link efficiency mechanisms to improve the bandwidth efficiency of a low-speed WAN links.
- Select the most appropriate QoS mechanisms for providing QoS using Cisco best practices in service provider and enterprise networks.

Topics
- Introduction to IP QoS
- The Building Blocks of IP QoS
- Introduction to Modular QoS CLI and Auto-QoS
- Classification and MarkingModule
- Congestion Management
- Congestion Avoidance
- Traffic Policing and Shaping
- Link Efficiency Mechanisms
- QoS Best Practices

Audience
Pre- and post-sales technical engineers responsible for designing, implementing, or troubleshooting networks, network architects responsible for designing multiservice networks to carry voice, video, and data traffic in an enterprise or service provider environment, and CCIP & CCVP candidates will benefit from this course.

Prerequisites
- Completion of ICND1 and ICND2 or Cisco CCNA certification
- BGP or equivalent is recommended because some BGP background is assumed

Duration
Five days

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