



DATASHEET

IMPLEMENTING CISCO QUALITY OF SERVICE

This authorized Cisco Systems® course gives you the knowledge and skills required to design, implement, and troubleshoot quality of service (QoS) on a network. The course combines the primary elements of the previous DQoS v1.0 and QoS v1.0 Cisco® courses to address the essential QoS technologies and applications for both service provider and enterprise networks. Successful implementation of the techniques taught in this course will have a dramatic positive effect on critical network application performance.

COURSE NUMBER

5643

DURATION

Five days

OBJECTIVES

Upon completion of this course, students will be able to perform the following tasks:

- Understand the building blocks of IP QoS
- Configure AutoQoS on WAN routers and on Cisco Catalyst® access switches and monitor the results
- Configure FIFO and Weighted Fair Queuing (WFQ) queuing on WAN routers and measure and analyze network performance
- Configure Class-Based Weighted Fair Queuing (CBWFQ) and Low-Latency Queuing (LLQ) on WAN routers to provide bandwidth and latency guarantees
- Configure class of service (CoS)-to-queue mapping and Weighted Round Robin (WRR) queuing on Cisco Catalyst 2950 Series Switches

TARGET AUDIENCE

Network professionals interested in deploying state-of-the-art QoS techniques to support multimedia traffic would benefit from this course.

PREREQUISITES

CCNA® equivalent experience

COURSE OUTLINE

1. Introduction to IP QoS

- The Need for QoS
- Understanding QoS
- Implementing QoS

2. The Building Blocks of IP QoS

- Models for Implementing QoS
- The Differentiated Services Module
- IP QoS Mechanisms
- Case Study: QoS Mechanisms
- Case Study: The Life of a Packet

3. Introduction to the Modular QoS Command-Line Interface (CLI) and AutoQoS

- Introducing the Modular QoS CLI (MQC)
- Introducing AutoQoS

4. Classification and Marking

- Classification and Marking Overview
- Case Study: Classification and Marking
- Using the MQC for Classification
- Using the MQC for Class-Based Marking
- Using Network-Based Application Recognition (NBAR) for Classification
- Configuring QoS Preclassify
- Configuring QoS Policy Propagation Through Border Gateway Protocol (BGP)
- Configuring LAN Classification and Marking

5. Congestion Management

- Introduction to Queuing
- Queuing Implementations
- FIFO and WFQ
- CBWFQ and LLQ
- LAN Congestion Management

6. Congestion Avoidance

- Introduction to Congestion Avoidance
- Introduction to Random Early Detection (RED)
- Configuring Class-Based Weighted RED
- Case Study: WRED Traffic Profiles
- Configuring Explicit Congestion Notification

7. Traffic Policing and Shaping

- Traffic Policing and Shaping Overview
- Configuring Class-Based Policing
- Configuring Class-Based Shaping
- Configuring Class-Based Shaping on Frame Relay Interfaces

8. Link Efficiency Mechanisms

- Link Efficiency Mechanisms Overview
- Class-Based Header Compression
- Link Fragmentation and Interleaving

9. QoS Best Practices

- Traffic Classification Best Practices
- Case Study: Deploying End-to-End QoS

INCLUDED MATERIALS

- Student guide

REGISTRATION INFORMATION

For more information about schedules and registration for this course, send e-mail to aeskt_registration@cisco.com.

For more information about Advanced Services Education course offerings, as well as Curriculum Planning Services and custom training options, refer to the Advanced Services Education Website: www.cisco.com/go/ase.

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