QOS - IMPLEMENTING CISCO QUALITY OF SERVICE V3.0

Course Code: 2078

Learn how to design and implement efficient, optimal, and trouble-free multiservice networks.

This course includes Cisco Training Exclusives

EXCLUSIVE TO GLOBAL KNOWLEDGE - Enhance your Cisco learning experience with complimentary access to our Introduction to Cybersecurity On-Demand course, course recordings, IT Resource Library, and digital courseware.

Learn more

In this course, you will learn about QoS requirements, conceptual models such as best effort, IntServ, and DiffServ, and the implementation of QoS on Cisco platforms. The curriculum covers the theory of QoS, design issues, and configuration of various QoS mechanisms to facilitate the creation of effective administrative policies providing QoS.

This course is eligible for 40 Continuing Education Credits (ILT Modality).

What You'll Learn

- Implement the appropriate QoS mechanisms required to create an effective administrative policy providing QoS

Who Needs to Attend

- 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 enterprise or service provider environments
- Advanced Unified Communications (UC) Specialization
- Master UC Specialization
- Master Telepresence Authorized Technology Provider (ATP)

Prerequisites

- Cisco Certified Networking Associate
- CCNA Routing and Switching

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CLASSROOM LIVE	$5,195 CAD	5 Day

Classroom Live Outline

1. Introduction to QoS
   - Review Converged Networks
   - Understand QoS
   - Describe Best-Effort and Integrated Services Models
   - Describe the Differentiated Services Model
   - Module Summary
   - Module Self-Check
2. Implement and Monitor QoS
   - MQC Introduction
   - Monitor QoS
   - Define Campus AutoQoS
   - Define WAN AutoQoS
   - Module Summary
   - Module Self-Check
3. Classification and Marking
   - Classification and Marking Overview
   - MQC for Classification and Marking
   - NBAR for Classification
   - Use of QoS Preclassify
   - Campus Classification and Marking
   - Module Summary
   - Module Self-Check
4. Congestion Management
   - Queuing Introduction
   - Configure WFQ

- Configure CBWFQ and LLQ
- Configure Campus Congestion Management
- Module Summary
- Module Self-Check

5. Congestion Avoidance
    - Congestion Avoidance Introduction
    - Configure Class-Based WRED
    - Configure ECN
    - Describe Campus-Based Congestion Avoidance
    - Module Summary
    - Module Self-Check
6. Traffic Policing and Shaping
    - Traffic Policing and Shaping Overview
    - Configure Class-Based Policing
    - Campus Policing
    - Configure Class-Based Shaping
    - Configure Class-Based Shaping on Frame Relay Interfaces
    - Configure Frame Relay Voice-Adaptive Traffic Shaping and Fragmentation
    - Module Summary
    - Module Self-Check
7. Link Efficiency Mechanisms
    - Link Efficiency Mechanisms Overview
    - Configure Class-Based Header Compression
    - Configure LFI
    - Module Summary
    - Module Self-Check
8. Deploying End-to-End QoS
    - Apply Best Practices for QoS Policy Design
    - End-to-End QoS Deployments
    - Module Summary
    - Module Self-Check

Classroom Live Labs

Lab 1: Connection and Orientation to the Voice Lab Environment

Lab 2: Implementing Basic CUCM configurations and Cisco IP Phones

Lab 3: Implementing Cisco Unified Border Element (CUBE) for calls to and from the Actual PSTN

Lab 4: Case Study: QoS Mechanisms

Lab 5: Packet Generator Configuration

Lab 6: Lab 5: IP SLA Setup and QoS Baseline Measurement

Lab 7: Configuring QoS with Cisco AutoQoS

Lab 8: Case Study: Classification and Marking

Lab 9: Classification and Marking Using MQC

Lab 10: Using NBAR for Classification

Lab 11: Configuring QoS Pre-classify

Lab 12: Configuring Fair Queuing

Lab 13: Configuring LLQ-CBWFQ

Lab 14: Case Study: WRED Traffic Profiles

Lab 15 Configuring DSCP-Based WRED

Lab 16: Configuring Class-Based Policing

Lab 17 Configuring Class-Based Shaping

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VIRTUAL CLASSROOM LIVE	$5,195 CAD	5 Day

Virtual Classroom Live Outline

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   - Module Summary
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   - MQC for Classification and Marking
   - NBAR for Classification
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   - Campus Classification and Marking
   - Module Summary
   - Module Self-Check
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Jan 19 - 23, 2026 | 8:30 AM - 4:30 PM EST

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PRIVATE GROUP TRAINING	5 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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