

Implementing Cisco Quality of Service v2.5

Course#: QOS
Duration: 5 Days
Price: 0.00

Course Description

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.

Objectives

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

Audience

Prerequisites

Content

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

