

training code: QoS / ENG DL 5d / EN

Implementing Cisco Quality of Service

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Taking part in authorised training allows you to obtain extra points necessary to maintain certification.

QoS: 40 points CE



Purpose of the training

The training is intended for technical engineers responsible for designing, implementing and solving problems in networks with applied QoS mechanisms.



Benefits of completing the training

Acquiring the ability to implement advanced configuration of traffic prioritization in computer networks.
The ability to diagnose and remove failures related to QoS mechanisms in networks.



Expected Listener Preparation

Knowledge at CCNA level



Training Language

- Training: English
- Materials: English



Duration

5 days / 35 hours

Training agenda

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

Labs

1. IP SLA Setup and QoS Baseline Measurement
2. Configuring QoS with Cisco AutoQoS
3. Classification and Marking Using MQC
4. Using NBAR for Classification
5. Configuring QoS Preclassify
6. Campus Classification and Marking Using MQC
7. Configuring Fair Queuing

8. Configuring LLQ-CBWFQ
9. Configuring Campus-Based Queuing Mechanisms
10. Configuring DSCP-Based WRED
11. Configuring WTD Thresholds
12. Configuring Class-Based Policing
13. Configuring Class-Based Shaping
14. Configuring Class-Based Header Compression
15. Configuring LFI
16. Mapping Enterprise QoS Policy to the Service Provider Policy