

Implementing Cisco Quality of Service (QoS)

Varighet: 5 Days Kurskode: QOS Version: 2.5

Beskrivelse:

This Implementing Cisco Quality of Service (QoS) course provides learners with an in-depth knowledge of QoS requirements, conceptual QoS models such as best effort, IntServ, and DiffServ are all reviewed along with the best practices for a QoS implementation 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.

Case studies and lab exercises included in the course help learners to apply the concepts from the individual modules to real-life scenarios. Learners are provided with design and usage rule for advanced QoS features, giving them the opportunity to design and implement efficient, optimal, and trouble-free multiservice networks.

This course is worth 40 Credits on the Continuing Education Program

Målgruppe:

This course is aimed at pre-and post-sales technical engineers responsible for designing, implementing, or troubleshooting networks and network architects responsible for designing multiservice networks to carry voice, video, and data traffic in enterprise or service provider environments.

Agenda:

■ After you complete this course you will be able to:

- Explain the need for QoS, describe the fundamentals of QoS policy, identify and describe the different models that are used for ensuring QoS in a network.



- Explain the use of MQC and AutoQoS to implement QoS on the network and describe some of the mechanisms used to monitor QoS implementations.



- Given a converged network and a policy defining QoS requirements, classify and mark network traffic in order to implement the policy.



- Use Cisco 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 low-speed WAN links



- Describe the recommended best practices and methods used for end-to-end QoS deployment in the enterprise.

Forkunnskaper:

Attendees should meet the following prerequisites:

- Valid CCNA (ICND1 and ICND2 or CCNAX)
- CCNA - Implementing and Administering Cisco Solutions

Test og sertifisering

Recommended preparation for exam(s):

- 642-642-QoS - Implementing Cisco QoS

Innhold:

Introduction to QoS

■ Review Converged Networks

■ Understand QoS

- Describe Best-Effort and Integrated Services Models
- Describe the Differentiated Services Model
- Monitor QoS
- Define Campus AutoQoS
- Define WAN AutoQoS
- MQC for Classification and Marking
- NBAR for Classification
- Use of QoS Preclassify
- Campus Classification and Marking
- Configure WFQ
- Configure CBWFQ and LLQ
- Configure Campus Congestion Management
- Configure Class-Based WRED
- Configure ECN
- Describe Campus-Based Congestion Avoidance
- 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
- Configure Class-Based Header Compression
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- Case Study 5-1: WRED Traffic Profiles
- Lab 5-2: Configuring DSCP-Based WRED

■ Understand QoS

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Deploying End-to-End QoS

■ Apply Best Practices for QoS Policy Design

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Labs

- Lab 2-1: IP SLA Setup and QoS Baseline Measurement

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Implement and Monitor QoS

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Traffic Policing and Shaping

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Congestion Management

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Link Efficiency Mechanisms

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Ytterligere informasjon:

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