Quality of Service (QOS) – Theoretical

Course 1132 – 16 Hours

Overview

The Quality of Service (QOS) course provides students with in-depth knowledge of IP QoS requirements, conceptual models using Differentiated Services (DiffServ), Integrated Services (IntServ) and Best Effort (over provisioning).
The curriculum covers the theory of IP QoS, design issues, and various QoS mechanisms to facilitate the creation of effective administrative policies providing QoS. Case studies included in the course help students to understand the concepts in individual modules to real-life scenarios .
The course also gives students design and usage rules for various advanced IP QoS features with underlying Layer 2 QoS mechanisms, allowing them to design efficient, optimized, and trouble-free multi-service networks

On Completion, Delegates will be able to

- Given a converged network, explain the need to implement Quality of Service (QoS) and explain methods for implementing and managing QoS
- Given a converged network, identify and describe different models used for ensuring QoS in a network and explain key IP QoS mechanisms used to implement the models
- Given a converged network and a policy defining QoS requirements, successfully classify and mark network traffic to implement the policy
- Given a congested network, use QoS queuing mechanisms to manage network congestion
- Given a converged network, use QoS congestion avoidance mechanisms to reduce the effects of congestion on the network
- Given a network, use QoS traffic policing and traffic shaping mechanisms to effectively limit the rate of network traffic

Prerequisites

- Good understanding of networking and OSI model
- Completion of Interconnecting Cisco Networking Devices (ICND) or Cisco Certified Networking Associate (CCNA) – advantage.

Course Contents

- Introduction to IP QoS
- The Building Blocks of IP QoS
- Classification and Marking Module
- Congestion Management
- Congestion Avoidance
- Traffic Policing and Shaping
- Link Efficiency Mechanisms
- QoS Best Practices