



Juniper Junos Class of Service (JCOS)

Code: ACBE-JUN-JCOS

Days: 2

Course Description:

This two-day course provides students with advanced class-of-service (CoS) knowledge and configuration examples. The course begins with an overview of CoS before going into classification, policing, scheduling, and rewriting. The course then covers class-based forwarding and finishes with a case study. This course is based on the Junos operating system Release 10.3R1.9.

Through demonstrations and hands-on labs, students will gain experience in configuring and verifying Junos CoS features.

Course Summarize:

Chapter 1: Course Introduction

Chapter 2: CoS Overview

- CoS History and Evolution
- CoS and DiffServe
- CoS Fields in Packet Headers
- CoS Processing

Chapter 3: Packet Classification

- Classification Overview
- Forwarding Classes and Packet Loss Priority
- Fixed Classification
- Multifield Classification
- Behavior Aggregate Classification
- Lab 1: Configuring Packet Classification

Chapter 4: Policing

- Policing Overview
- Single-Rate Two-Color Policer
- Tricolor Marking Policers
- Application—Directly on an Interface
- Application—Within a Firewall Filter
- Lab 2: Configuring Policers

Chapter 5: Scheduling

- Scheduling Overview
- Transmission Rate
- Queue Priority
- Delay Buffers
- Drop Profiles and Drop Profile Maps
- Scheduling Configuration
- Lab 3: Configuring Schedulers

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Chapter 6: Hierarchical Scheduling

- Hierarchical Scheduling Overview
- Scheduler Modes
- Hierarchical Scheduling Levels
- Throughput Example
- Remaining Traffic
- Queue Properties in a Hierarchical Scheduling Context
- Putting It All Together
- Lab 4: Configuring Hierarchical Schedulers

Chapter 7: Rewrite Rules

- Packet Header Rewrite Overview
- Rewrite Rules and Tables
- Rewrite Combinations
- Lab 5: Configuring Rewrite Rules

Chapter 8: CoS-Based Forwarding

- CBF Overview
- CBF Configuration
- Lab 6: Configuring CBF

Chapter 9: Case Study

- VOIP Case Study Overview
- VOIP Case Study: Ingress Node
- VOIP Case Study: Transit and Egress Nodes

Appendix A: CoS Processing on M Series, T Series, and MX Series Devices

- M Series and T Series Architecture
- M Series and T Series CoS Packet Handling
- IQ2 PIC CoS Packet Handling
- MX Series (DPC and MPC/MIC) Architecture and CoS Packet Handling