



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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CODE:	LENGTH:	PRICE:
JUN_AJEX	16 Hours (2 days)	£1,495.00

Description

This two-day course provides detailed coverage of VLAN operations, Multiple Spanning Tree Protocol (MSTP) and VLAN Spanning Tree Protocol (VSTP), authentication and access control for Layer 2 networks, IP telephony features, class of service (CoS), monitoring and troubleshooting tools and features supported on Juniper Networks® EX Series Switches. Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos operating system (OS) and monitoring device and protocol operations. This course uses Juniper Networks® EX4300 Switches for the hands-on component, but the lab environment does not preclude the course from being applicable to other Juniper hardware platforms running Junos OS. This course is based on Junos OS Release 21.4R3.

Objectives

- Modify traffic flows within a VLAN.
- Manage dynamic VLAN registration.
- Implement Layer 2 tunnel traffic through Ethernet networks.
- Review the purpose and operations of a spanning tree.
- Implement multiple spanning-tree instances in a network.
- Implement one or more spanning-tree instances for a VLAN.
- List the benefits of implementing end-user authentication.
- Explain the operations of various access control features.
- Configure and monitor various access control features.
- Describe processing considerations after enabling multiple authentication and access control features.
- Describe some common IP telephony deployment scenarios.
- Describe features that facilitate IP telephony deployments.
- Configure and monitor features used in IP telephony deployments.
- Explain the purpose and basic operations of CoS.
- Describe CoS features used in Layer 2 networks.
- Configure and monitor CoS in a Layer 2 network.
- List common issues that disrupt network operations.
- Identify tools used in network troubleshooting.
- Use available tools to resolve network issues.

Audience

Individuals responsible for configuring and monitoring EX Series Switches using Junos OS.

Prerequisites

- Basic networking knowledge and an understanding of the OSI reference model and the TCP/IP protocol suite
- Completion of the Introduction to the Junos Operating System course prior to attending this class
- Completion of the Junos Enterprise Switching course prior to attending this class

Programme

DAY 1

Implementing VLAN Traffic Management

- Explain how to add user traffic to VLANs
- Describe how to restrict traffic flows within a VLAN Module 22 Advanced Ethernet Switching
- Configure dynamic VLAN registration using MVRP
- Implement Layer 2 tunnel traffic through Ethernet networks

Lab 1: Advanced Ethernet Switching Module 32 MSTP

- Review the Spanning Tree Protocol
- Describe the purpose and operations of spanning tree
- Implement multiple spanning-tree instances Module 42 VSTP
- Explain how to configure an OSPF-based IP fabric underlay network
- Describe how to configure an EIGRP-based IP fabric underlay network

Lab 2: Implementing MSTP and VSTP Module 52 Authentication and Access Control

- Identify the benefits of implementing end-user authentication
- Describe the operations of the 802.1X access control features Module 62 Access Control Features—MAC RADIUS and Captive Portal
- Configure and monitor MAC RADIUS access control features
- Configure and monitor the captive portal access control features
- Describe processing considerations after enabling multiple authentication and access control features

Lab 3: Authentication and Access Control

IP Telephony Features—Power over Ethernet, Neighbor Discovery Using LLDP

- Describe common IP telephony deployment scenarios
- Explain the Power over Ethernet feature of IP telephony
- Describe the neighbor discovery feature of IP telephony Module 82 IP Telephony Features—Voice VLAN
- Describe IP telephony's voice VLAN feature
- Implement IP telephony features

Lab 4: Deploying IP Telephony Features Module 92 Class of Service—Overview

- Identify network traffic challenges
- Implement class-of-service Module 102 Implementing Class of Service
- Configure and monitor class of service in a Layer 2 network
- Perform class-of-service troubleshooting

DAY 2 Lab 5: Implementing Class of Service

Introduction to Monitoring and Troubleshooting Layer 2 Enterprise Networks

- Explain the basic troubleshooting flow
- Evaluate troubleshooting steps Module 122 Monitoring and Troubleshooting Layer 2 Enterprise Networks
- Identify tools used in network troubleshooting
- Use available tools to resolve network issues

Lab 6: Monitoring and Troubleshooting Layer 2 Networks

SELF-STUDY MODULES

Juniper Mist Wired Assurance—Overview

- Provide an overview of Juniper Mist Wired Assurance
- Describe the provisioning options and how they work Module 142 Juniper Mist Wired Assurance, Day One—Deployment and Configuration
- Describe the deployment options and how they work
- Describe the configuration process
- List Wired Assurance SLEs

Test and Certification

RELATED JUNIPER PRODUCTS

- EX Series

RELATED CERTIFICATION

- JNCIP-ENT

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
29 May 2025	Virtual Classroom	BST	English	Instructor Led Online		£1,495.00 £1,270.75
17 Nov 2025	Virtual Classroom	GMT	English	Instructor Led Online		£1,495.00

Additional Information

This training is also available as onsite training. Please contact us to find out more.

