Enterprise Computing Solutions - Education Services

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Advanced Data Center Switching (ADCX)

CODE:	LENGTH:	PRICE:
JUN_ADCX	16 Hours (2 dage)	kr 35,400.00

Description

This five-day course provides a comprehensive focus on Juniper Networks data center switching technologies. The first three days are designed to introduce the data center features including zero touch provisioning (ZTP), unified in-service software upgrade (ISSU), multichassis link aggregation (MC-LAG), Mixed Virtual Fabric, and Virtual Chassis Fabric (VCF) and provide students with knowledge of troubleshooting some of the key data center features including MC-LAG, Virtual Chassis, and VCF deployments. The last two days of the course are designed to introduce data center features that are more advanced including IP Fabric, Virtual eXtensible Local Area Network (VXLAN) Layer 2 and Layer 3 Gateways, VXLAN with Ethernet VPN (EVPN) signaling and Data Center Interconnect (DCI) for a VXLAN overlay. Students will learn to configure and monitor these features on the Junos operating system running on the QFX5100, EX4300, and vMX Series platforms. Through demonstrations and hands-on labs, students will gain experience configuring, monitoring, troubleshooting, and analyzing the mentioned features of the Junos OS. This content is based on Junos OS Release 17.1R1.8.

Objectives

- List the various models of QFX5100 Series switches and explain how they solve current challenges.
- List some data center architecture options.
- Explain the purpose, components, and operations of ZTP.
- Deploy a QFX5100 Series switch using ZTP.
- Explain the purpose, components, and operations of ISSU.
- Upgrade a QFX5100 Series switch using ISSU.
- Explain the purpose, components, and operations of MC-LAG.
- Implement an MC-LAG on QFX5100 Series switches.
- Describe key concepts, components, and operation of a mixed Virtual Chassis.
- Implement a mixed Virtual Chassis and verify its operations.
- Describe Virtual Chassis Fabric concepts and components.
- Describe how to provision a Virtual Chassis Fabric using different methods.
- Describe the requirements and upgrade procedure of Virtual Chassis Fabric.
- Describe how to manage a Virtual Chassis Fabric with Junos Space.
- List and use available troubleshooting tools.
- Identify and resolve potential issues with MC LAG.
- Identify and resolve potential issues with Virtual Chassis.
- Identify and resolve potential issues with VCF.
- Describe the various data center fabric architectures.
- Explain and configure routing in an IP Fabric.
- Explain, configure, and monitor VXLAN when using multicast signaling.
- Describe configure, and monitor EVPN signaling for VXLAN.
- Describe the control and data plane of an MPLS VPN.
- Describe the DCI options when using a VXLAN overlay with EVPN signaling.

Audience

This course benefits individuals responsible for configuring, monitoring, and troubleshooting data center features that exist on the Junos OS running on data center-oriented platforms such as EX Series, QFX Series, MX Series, and vMX Series devices. This includes individuals in professional services, sales and support organizations, and the end users.

Prerequisites

- Understanding of the OSI model;
- Advanced routing knowledge—the Advanced Junos Enterprise Routing (AJER) course or equivalent knowledge; and
- Intermediate switching knowledge—the Junos Enterprise Switching (JEX) or equivalent.

Programme

Day 1
Module 1 – Course Introduction
Module 2 - System Overview

- Traditional Multitier Architecture Challenges
- Next Generation data Center Fabrics
- QFX5100 Series Switches
- Additional Features

Module 3 - Zero Touch Provisioning

- Understanding Zero Touch Provisioning
- ZTP in Action: A Working Example

LAB 1: Zero Touch Provisioning
Module 4 - In-Service Software Upgrade

- Understanding ISSU on QFX5100 Series Switches
- ISSU in Action: A Working Example

LAB 2: In-Service Software Upgrade
Day 2
Module 5 - MC-LAG

- MC-LAG Overview
- MC-LAG Operations
- Deploying MC-LAGs

LAB 3: MC-LAG
Module 6 - Troubleshooting Multichassis LAG

- MC-LAG: An Operational Review
- Connections and Communications
- Troubleshooting Example

LAB 4: Troubleshooting Multichassis LAG
Module 7 - Mixed Virtual Chassis

- Overview of Mixed Virtual Chassis
- Provisioning a Mixed Virtual Chassis
- Software Requirements and Upgrades
- Configuring and Monitoring a mixed Virtual Chassis

LAB 5: Mixed Virtual Chassis
Day 3
Module 8 – Virtual Chassis Fabric

- Overview of Virtual Chassis Fabric
- VCF Control and Forwarding Plane

Module 9 – Virtual Chassis Fabric Management

- Managing a Virtual Chassis Fabric using the CLI
- Dynamically Provisioning a Virtual Chassis Fabric
- Preprovisioning and Autoprovisioning a Virtual Chassis Fabric
- Software Requirements and Upgrades
- Managing a Virtual Chassis Fabric with Space

LAB 6: Virtual Chassis Fabric
Module 10 – Troubleshooting Virtual Chassis Technologies

- Virtual Chassis Technology Review
- Processes and Components

- Troubleshooting Case Study

LAB 7: Troubleshooting Virtual Chassis Technologies
Day 4
Module 11 – IP Fabric

- IP Fabric Overview
- IP Fabric Routing
- IP Fabric Scaling
- Configure an IP Fabric

LAB 8: IP Fabric
Module 12 – VXLAN

- Layer 2 Connectivity over a Layer 3 Network
- VXLAN using Multicast Control Plane
- VXLAN Configuration

LAB 9: VXLAN
Day 5
Module 13 – EVPN

- The Benefits of EVPN
- VXLAN using EVPN Control Plane
- EVPN/VXLAN Configuration

LAB 10: VXLAN and EVPN Signaling
Module 14 – Data Center Interconnect

- DCI Overview
- MPLS VPN Review
- DCI Options for a VXLAN Overlay

LAB 11: DCI

Session Dates

På anmodning. Kontakt os venligst

Yderligere Information

Denne træning er også tilgængelig som træning på stedet. Kontakt os for at finde ud af mere.