Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Implementing Data Center Fabric with EVPN and VXLAN (ADCX)

CODE:	LENGTH:	PRICE:
JUN_ADCX	40 Hours (5 days)	£3,995.00

Description

This five-day course provides in-depth instructions on IP fabric and Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) data center design and
configuration. The course covers other data center concepts, including basic and advanced data center design options that include collapsed spine
and super spine architectures, Data Center Interconnect (DCI), EVPN multicast enhancements, and seamless EVPN-VXLAN stitching. Through
demonstrations and hands-on labs, students will gain experience with these features. This content is based on vEX9214s running Junos OS Release
23.4R1.10.
Note: This course does not cover Juniper Apstra. For Juniper Apstra coverage, see Data Center Automation Using Juniper Apstra

Objectives

• Describe basic and advanced data center design concepts.
• Describe and configure an IP fabric.
• Describe and configure an EVPN-VXLAN data center.
• Describe and configure enhanced loop protection.
• Describe and configure centrally routed bridging (CRB) EVPNVXLAN.
• Describe and configure edge-routed bridging (ERB) EVPN-VXLAN.
• Describe and configure symmetric EVPN Type 2 routing.
• Describe and configure DCI.
• Describe and configure seamless EVPN-VXLAN stitching.
• Describe and configure filter-based forwarding.
• Describe enhancements to multicast functionality in an EVPNVXLAN

Audience

Individuals responsible for this course includes data center implementation engineers and data center design engineers

Prerequisites

• Understanding of the OSI model
• Advanced routing knowledge—the Advanced Junos Enterprise Routing (AJER) course or equivalent knowledge strongly recommended
• Intermediate switching knowledge—the Junos Enterprise Switching Using Enhanced Layer 2 Software (JEX) or equivalent knowledge
• Intermediate to advanced Junos CLI experience

Programme

DAY 1
1 Modern Architectures
• Describe traditional multitier architecture challenges
• Explain next-generation data center architectures
2 IP Fabric Underlay Routing
• Describe what an IP fabric is

• Explain routing in an IP fabric
3 IP Fabric Underlay Scaling
• Explain how to properly scale an IP fabric
4 IP Fabric Underlay Configuration
• Explain how to configure an OSPF-based IP fabric
underlay network
• Describe how to configure an EBGP-based IP fabric underlay network
Lab 1: IP Fabric
5 VXLAN Overview
• Explain Layer 2 connectivity over a Layer 3 network
• Describe VXLAN Fundamentals
6 VXLAN Gateways
• Describe the purpose and function of VXLAN gateways
7 EVPN Overview
• Describe EVPN functionality
• Describe EVPN control in a VXLAN deployment
DAY 2
8 EVPN Protocol
• Describe EVPN routing and bridging
9 Configuring EVPN-VXLAN Networks
• Discuss how to configure EVPN-controlled VXLAN
Lab 2: Configuring EVPN-VXLAN Networks
10 Enhanced Ethernet Segment Loop Protection
• Describe the loop potential
• Describe and configure the ES loop-detect protocol
11 Basic Data Center Architectures
• Describe basic architectures and deployment scenarios
12 Configuring a Collapsed Spine
• Describe a collapsed spine architecture
• Configure an underlay network
• Configure an overlay network
• Configure Layer 2 to Layer 3 gateways
• Verify the VXLAN communications
13 Super Spine Configuration
• Describe a super spine architecture
• Configure a super spine
DAY 3
14 Configuring Centrally Routed Bridging
• Describe EVPN-VXLAN reference architectures
• Describe centrally routed and bridging
• Configure centrally routed and bridging
Lab 3: Configure Centrally Routed Bridging
15 Configuring Edge-Routed Bridging
• Describe edge-routed bridging
• Explain how to configure edge-routed bridging
• Explain how to verify edge-routed bridging operations
Lab 4: Configuring Edge-Routed Bridging
16 MAC-VRF Overview
• Describe the benefits of deploying MAC-VRFs
• Identify data center architectures for MAC-VRF use
• Describe the MAC-VRF design options
17 MAC-VRF Configuration
• Describe the requirements of deploying MAC-VRFs
• Describe the MAC-VRF use case
• Configure common parameters
• Configure a VLAN-based MAC-VRF
• Configure a VLAN-aware MAC-VRF
• Configure a VLAN-bundle MAC-VRF
Lab 5: MAC-VRF Configuration
18 Symmetric Routing Using Type 2 EVPN
• Describe asymmetric routing
• Describe symmetric routing
• Implement symmetric routing
Lab 6: Symmetric Routing Configuration
DAY 4
19 DCI with EVPN–VXLAN Network
• Discuss DCI with EVPN-VXLAN Network
20 Configuring DCI
• Discuss how to configure DCI in the data center

Lab 7: Data Center Interconnect
21 Seamless EVPN-VXLAN Stitching
• Explain the purpose of seamless EVPN-VXLAN stitching
• Discuss seamless EVPN-VXLAN design options
• Describe a packet walkthrough for seamless EVPNVXLAN stitching
22 Configuring Seamless EVPN-VXLAN Stitching
• Explain how to configure seamless EVPN-VXLAN stitching
• Describe how to verify EVPN-VXLAN stitching operations
Lab 8: Implementing Seamless EVPN-VXLAN Stitching
DAY 5
23 Filter-Based Forwarding
• Discuss the purpose of filter-based forwarding in a data center
• Explain how to configure filter-based forwarding in a data center
• Describe how to verify filter-based forwarding in a data center
Lab 9: Implementing Filter-Based Forwarding
24 EVPN Multicast Extensions
• Describe the multicast extensions to EVPN
25 EVPN Multicast Configuration
• Explain how to configure EVPN multicast
26 EVPN Multicast Assisted Replication
• Describe the potential problem with EVPN multicast
• Illustrate a use case
• Describe assisted replication
• Configure assisted replication
• Describe assisted replication with SMET
SELF-STUDY MODULES
27 VXLAN Group-Based Policy—Introduction
• Describe an overview of VXLAN group-based policies
• Describe the benefits of VXLAN group-based policies
• Configure a VXLAN group-based policy filter
28 Zero-Touch Provisioning
• Explain zero-touch provisioning
• Configure a QFX5100 Series switch using ZTP
29 Troubleshooting Basics
• Describe troubleshooting tools
• Explain a basic troubleshooting approach
30 Data Center Devices
• Describe fixed format platforms
• Describe modular platforms
• Describe virtual platforms

Test and Certification

RELATED CERTIFICATION
JNCIE-DC, JNCIP-DC

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
18 Jan 2027	Virtual Training Class - TP	GMT	English	Instructor Led Online		£3,995.00

Additional Information

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