Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Introduction to Juniper Data Center Networking (IJDC)

CODE:	LENGTH:	PRICE:
JUN_IJDC	24 Hours (3 days)	£2,395.00

Description

This introductory three-day course covers Ethernet switching, VLANs, Layer 2 security features, routing policies, link aggregation, load balancing, filter-based forwarding (FBF), routing instances, OSPF, BGP, graceful restart, and Bidirectional Forwarding Detection (BFD). This course also addresses the Ethernet VPN–Virtual Extensible LAN (EVPN-VXLAN) architecture.
This course is based on the virtual EX network device running Junos OS 24.2R1.15.

Objectives

• Identify and describe how to configure a typical data center layout, including spine-and-leaf placements.
• Describe an IP fabric architecture.
• Explain and configure basic Ethernet switching.
• Explain and configure virtual networks (VLANs).
• Describe Layer 2 security.
• Configure load balancing within Junos OS.
• Implement link aggregation.
• Describe and implement protocol-independent routing.
• Create routing instances with Junos OS.
• Implement FBF using Junos OS.
• Explain load balancing.
• Describe and configure OSPF.
• Describe and deploy BGP.
• Implement graceful restart and BFD using Junos OS.

Audience

Individuals responsible for configuring and managing network equipment in data centers

Prerequisites

• Knowledge of basic TCP/IP networking
• Understanding of basic layer 2 concepts
• Moderate Junos CLI experience
• Familiarity with data center technologies
• Introduction to the Junos Operating System course, or equivalent knowledge

Programme

DAY 1
1 Traditional Data Centers Versus Modern Data Centers
• Explain the traditional multitier architecture
• Describe an IP fabric environment
• Explain routing in an IP fabric environment
• Discuss Juniper Apstra as a turnkey solution
2 Ethernet Switching Overview
• Explain the basics of Ethernet switching
• Provide an overview of enterprise switching platforms
3 Configuring Ethernet Switching

• Manage and interpret the Ethernet switching table
4 Virtual Networks Overview
• Describe access port mode and trunk port mode
• Discuss alternate VLAN and data VLAN concepts
• Explain native VLAN routing operations
5 Configuring Virtual Networks
• Configure and monitor VLANs
• Configure and monitor inter-VLAN routing
Lab 1: Configuring Ethernet Switching and VLANs
DAY 2
6 High Availability
• Explain the purpose of high availability
• Identify link aggregation groups
• Review graceful Routing Engine switchover
• Explain nonstop active routing
• Review nonstop bridging
• Explain system-id and multihoming
Lab 2: Configuring High Availability and Link Aggregation
7 Protocol-Independent Routing
• Describe and configure static routes
• Explain and configure aggregate routes
• Explain and configure generated routes
8 Routing Instances
• Describe routing instances
• Configure and share routes between routing instances
Lab 3: Configuring Protocol-Independent Routing and Routing Instances
9 Filter-Based Forwarding
• Explain the benefits of filter-based forwarding
• Configure and monitor filter-based forwarding
10 Load Balancing
• Describe load-balancing concepts and operations
• Implement and monitor Layer 3 load balancing
Lab 4: Configuring Filter-Based Forwarding and Load Balancing
DAY 3
11 Fundamentals of OSPF
• Provide an overview of OSPF
• Explain OSPF scalability
• Describe adjacency formation and designated router election
• Configure and monitor OSPF
• Perform OSPF troubleshooting
Lab 5: Configuring OSPF
12 Fundamentals of BGP
• Describe the basics of BGP
• Explain BGP attributes
• Identify route distinguishers and route targets
13 Deploying BGP
• Compare IBGP versus EBGP
• Configure and monitor BGP
Lab 6: Deploying BGP
14 Graceful Restart and Bidirectional Forwarding Detection
• Configure graceful restart
• Configure BFD
Lab 7: Configuring Graceful Restart and BFD
SELF-STUDY MODULE
15 Port Security
• Identify MAC limiting
• Review the basics of persistent MAC learning
• Review the operational parameters of storm control

Follow on courses

RECOMMENDED NEXT COURSE
Data Center Automation using Juniper Apstra Implementing Data Center Fabric with EVPN and VXLAN

Test and Certification

RELATED CERTIFICATION

JNCIA-DC

Session Dates

On request. Please Contact Us

Additional Information

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