Introduction to Juniper Data Center Networking (IJDC)

ID IJDC **Prix** US$ 3 000,– (Hors Taxe) **Durée** 3 jours

A qui s'adresse cette formation

This course benefits individuals responsible for configuring and managing network equipment in data centers.

Pré-requis

The following are the prerequisites for this course:

- Knowledge of basic TCP/IP networking
- Understanding basic layer 2
- Familiarity with Data Center technologies
- Completion of the Introduction to the Junos Operating System (IJOS) course or equivalent Junos OS configuration experience

Objectifs

- 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
- Implement link aggregation
- Describe and implement protocol independent routing and routing instances with Junos OS
- Configure load balancing within Junos OS
- Implement FBF using Junos OS
- Describe and deploy OSPF
- Describe and deploy BGP
- Implement graceful restart and BFD using Junos OS

Contenu

Day 1

Chapter 1: Course Introduction

Chapter 2: Traditional Data Center Architectures

- Explain traditional multitier architecture, its benefits, and challenges

- Describe a traditional data center-based scenario

Chapter 3: Juniper's Modern Data Center Architectures

- Describe an IP fabric environment
- Explain routing in an IP fabric environment
- Explain using Juniper Apstra as a turnkey solution

Chapter 4: Ethernet Switching Overview

- Explain the basics of Ethernet switching
- Provide an overview of enterprise switching platforms

Chapter 5: Configuring Ethernet Switching

- Manage and interpret the Ethernet switching table
- Lab 1: Implementing Ethernet Switching

Chapter 6: Virtual Networks Overview

- Describe access and trunk port modes
- Describe alternate VLAN and data VLAN concepts
- Explain native VLAN routing operations

Chapter 7: Configuring Virtual Networks

- Configure and monitor VLANs
- Configure and monitor inter-VLAN routing
- Lab 2: Implementing Virtual Networks

Day 2

Chapter 8: Port Security

- Identify MAC limiting
- Review the basics of persistent MAC learning
- Implement MACsec (QFX-centric)
- Review storm control operational parameters
- Lab 3: Implement Port Security

Chapter 9: Link Aggregation

- Describe and implement link aggregation
- Identify link aggregation groups

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- Review graceful Routing Engine switchover
- Explain nonstop active routing
- Review nonstop bridging
- Lab 4: Configuring and Monitoring Link Aggregation

Chapter 10: Protocol-Independent Routing

- Describe and configure static routes
- Explain and configure aggregate routes
- Explain and configure generated routes

Chapter 11: Routing Instances

- Describe routing instances
- Configure and share routes between routing instances
- Lab 5: Configuring Protocol-Independent Routing and Routing Instances

Chapter 12: Load Balancing

- Describe load-balancing concepts and operations
- Implement and monitor Layer 3 load balancing

Day 3

Chapter 13: Filter-Based Forwarding

- Explain the benefits of filter-based forwarding
- Configure and monitor filter-based forwarding
- Lab 6: Load Balancing and FBF

Chapter 14: 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 7: Configuring OSPF (Optional)

Chapter 15: Fundamentals of BGP

- Describe the basics of BGP
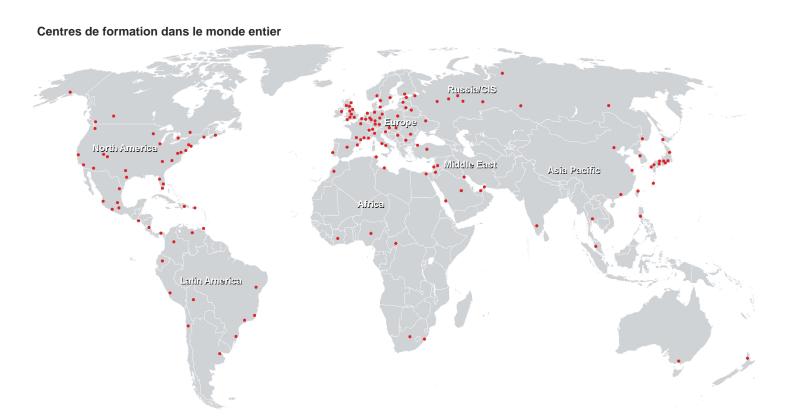- Explain BGP attributes

Chapter 16: Deploying BGP.

- Compare IBGP versus EBGP
- Configure and monitor BGP
- Lab 8: Deploying BGP

Chapter 17: Graceful Restart and Bidirectional Forwarding Detection

- Configure graceful restart
- Configure bidirectional forwarding detection (BFD)
- Lab 9: Configuring Graceful Restart and BFD

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Centres de formation dans le monde entier

Fast Lane Institute for Knowledge Transfer GmbH

Husacherstrasse 3
CH-8304 Wallisellen
Tel. +41 44 832 50 80

info@flane.ch, https://www.flane.ch