

## 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.

#### Cette formation prépare à la/aux certifications

Juniper Networks Certified Internet Associate Data Center (JNCIA-DC)

#### 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

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#### **Chapter 9: Link Aggregation**

- Describe and implement link aggregation
- Identify link aggregation groups
- 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

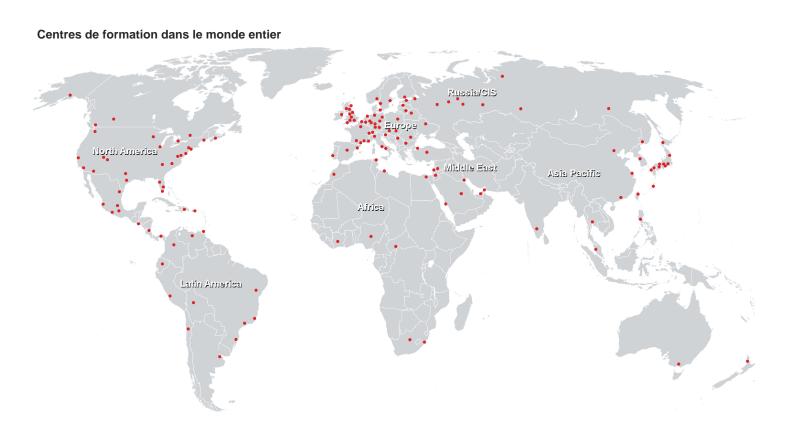
#### Chapter 16: Deploying BGP.

- · 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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