

## Juniper Networks Design - Data Center

**Duración: 5 Días      Código del Curso: JND-DC**

### Temario:

This five-day course is designed to cover best practices, theory, and design principles for data center design including data center architectures, data center interconnects, security considerations, virtualization, and data center operations.

### Dirigido a:

Targeted specifically for those who have a solid understanding of operation and configuration and are looking to enhance their skill sets by learning the principles of design for the data center.

### Objetivos:

- **After you complete this course you will be able to:**
- Describe high-level concepts about different data center architectures
- Identify features used to interconnect data centers
- Describe key high-level considerations about securing and monitoring a data center deployment
- Outline key high-level concepts when implementing different data center approaches
- Describe data center cooling designs and considerations
- Explain device placement and cabling requirements
- Outline different data center use cases with basic architectures
- Describe a traditional multitier data center architecture
- Explain link aggregation and redundant trunk groups
- Explain multichassis link aggregation
- Summarize and discuss key concepts and components of a Virtual Chassis
- Summarize and discuss key concepts and components of a VCF
- Summarize and discuss key concepts and components of Junos Fusion
- Describe the reasons for the shift to IP fabrics
- Describe the design considerations for routing in an IP Fabric
- Describe how to scale an IP fabric
- Describe the design considerations for an Overlay network
- Define the term Data Center Interconnect
- Discuss the security requirements and design principles of the data center
- Identify the security elements of the data center
- Describe network security implementation options in the data center
- Discuss network security functionality in the data center
- Explain the purpose of SDN
- Explain the function of Contrail
- Describe the purpose of NFV
- Discuss the purpose and function of vSRX and vMX
- Explain how to collect analytics in the SDN data center
- Discuss the importance of understanding the baseline behaviors in our data center
- Describe the Junos Space Network Management Platform and its deployment options
- Describe the importance of analytics
- Discuss automation in the data center
- Discuss the benefits of QoS and CoS
- Describe the benefits of a converged network
- Identify general aspects of data center migration
- Describe some best practices for migration planning
- Outline some common migration scenarios
- Describe high availability design considerations in the data center
- Provide an overview of high availability offerings and solutions in the data center

- List differences between the different Layer 2 and Layer 3 DCIs
- Summarize and discuss the benefits and use cases for EVPN

## Prerequisites:

### Attendees should meet the following prerequisites:

- Knowledge of routing and switching architectures and protocols
- Knowledge of Juniper Networks products and solutions
- Understanding of infrastructure security principles
- Basic knowledge of hypervisors and load balancers
- Juniper Networks Design Fundamentals (JNDF)
- JNDF - Juniper Networks Design Fundamentals

## Exámenes y certificación

- This course is recommended training for the Juniper Networks Certified Design Specialist, Data Center (JNCDS-DC) exam

## Contenido:

### Course Introduction

### Overview of Data Center Design

- Initial Considerations
- Architectures and Design considerations
- Connecting Data Centers
- Security and Operation
- Implementation Considerations

### Initial Design Considerations

- Physical Layout and Placement
- Environmental Conditions
- Cabling Options
- Data Center Use Cases

### Traditional Data Center Architecture

- Traditional Multi-tier Architecture
- Link Aggregation and Redundant Trunk Groups
- Multichassis Link Aggregation
- Lab: Designing a Multi-tier Architecture

### Ethernet Fabric Architectures

- Virtual Chassis
- Virtual Chassis Fabric
- QFabric
- Junos Fusion
- Ethernet Fabric Design Considerations
- Lab: Ethernet Fabric Architecture

### IP Fabric Architecture

- The Shift To IP Fabrics
- IP Fabric Routing Design
- IP Fabric Scaling
- VXLAN
- Lab: IP Fabric Architecture

### Data Center Interconnect

- DCI Overview
- Layer 2 DCI
- EVPN Use Cases
- Layer 3 DCI
- Lab: Interconnecting Data Centers

### Securing the Data Center

- Overview of Data Center Security
- Security Elements
- Simplifying Security in the Data Center
- Advanced Data Center Security
- Lab: Securing the Data Center

### SDN and Virtualization in the Data Center

- SDN Overview
- Using Contrail in the Data Center
- Using NFV in the Data Center
- Understanding Contrail in the Data Center
- Virtual Environments in the Data Center
- Collecting Analytics with AppFormix
- Lab: SDN and Virtualization

### Data Center Operation

- Understanding Baseline Behaviors
- Deploying Junos Space and JSA
- Understanding Logging and Analytics
- Deploying Automation in the Data Center
- Lab: Operating a Data Center

### Traffic Prioritization for Converged Networks

- Understanding QoS, and CoS
- Converging Networks
- Lab: Prioritizing Data in the Data Center

### Migration Strategies

- Migration Overview
- Common Scenarios
- Migration Case Study

### High Availability

- Data Center High Availability Overview
- Link Level and Physical Device Redundancy
- Device-Level Redundancy

### Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

[info.cursos@globalknowledge.es](mailto:info.cursos@globalknowledge.es)

[www.globalknowledge.com/es-es/](http://www.globalknowledge.com/es-es/)

Global Knowledge Network Spain, C/ Retama 7, 6ª planta, 28045 Madrid