TRAINING OFFERING

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Juniper Networks Design - Data Center (JND-DC)

CODE:	LENGTH:	PRICE:
JUN_JND-DC	40 Hours (5 days)	€4,750.00

Description

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.

Objectives

After successfully completing this course, you should be able to:

•State high-level concepts about different data center architectures.
•Identify features used to interconnect data centers.
•Identify key high-level considerations about securing and monitoring a data center deployment.
•Outline key high-level concepts when implementing different data center approaches.
•Recommend 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 a QFabric System.
•Summarize and discuss key concepts and components of Junos Fusion.
•List the reasons for the shift to IP fabrics.
•Summarize how to scale an IP fabric.
•State the design considerations of a VXLAN overlay.
•Define the term Data Center Interconnect.
•List differences between the different Layer 2 and Layer 3 DCIs.
•Summarize and discuss the benefits and use cases for EVPN.
•Discuss the security requirements and design principles of the data center.
•Identify the security elements of the data center.
•Explain how to simplify security in the data center.
•Discuss the security enforcement layers in the data center.
•Summarize and discuss the purpose of SDN.
•Explain the function of Contrail.
•Summarize and discuss the purpose of NFV.
•Discuss the purpose and function of vSRX and vMX.
•Discuss the importance of understanding the baseline behaviors in your data center.
•List the characteristics of the Junos Space Network Management Platform and describe its deployment options.
•Describe the importance of analytics.
•Discuss automation in the data center.
•Discuss the benefits of QoS and CoS.
•State the benefits of a converged network.
•Identify general aspects of data center migration.
•Summarize and discuss best practices for migration planning.
•Outline some common migration scenarios.
•Summarize high availability design considerations in the data center.
•Provide an overview of high availability offerings and solutions in the data center.

Audience

This course is 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.

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.
•Completion of the Juniper Networks Design Fundamentals (JNDF) course.

Programme

Chapter 2: Overview of Data Center Design
•Initial Considerations   Chapter 3: Initial Design Considerations
•Architectures and Design Considerations •Physical Layout and Placement
•Connecting Data Centers   •Environmental Conditions
•Security and Operation   •Cabling Options
Day 1Chapter 1: Course Introduction•Implementation Considerations •Data Center Use Cases

Chapter 5: Ethernet Fabric Architectures
•Virtual Chassis
Chapter 4: Traditional Data Center Architecture   •Virtual Chassis Fabric
•Traditional Multitier Architecture   •QFabric
•Link Aggregation and Redundant Trunk Groups   •Junos Fusion
•Multichassis Link Aggregation   •Ethernet Fabric Design Considerations
•Lab: Designing a Multitier Architecture   Day 2•Lab: Ethernet Fabric Architecture   Day 3
Chapter 6: IP Fabric ArchitectureChapter 7: Data Center Interconnect   Chapter 8: Securing the Data Center
•The Shift To IP Fabrics   •DCI Overview   •Overview of Data Center Security
•IP Fabric Routing Design   •Layer 2 DCI   •Security Elements
•IP Fabric Scaling   •EVPN Use Cases   •Simplifying Security in the Data Center
•VXLAN   •Layer 3 DCI   •Advanced Data Center Security
•Lab: IP Fabric Architecture   •Lab: Data Center Interconnect   Day 4•Lab: Securing the Data Center
Chapter 9: SDN and Virtualization in the Data Center
•Designing SDN in the Data Center   Chapter 10: Data Center Operation
•Using Contrail in the Data Center   •Understanding Baseline Behaviors
•Using NFV in the Data Center   •Deploying Junos Space and JSA
•Understanding How Contrail Works in the Data Center•Understanding Analytics
•Working in Virtual Environments in the Data Center •Deploying Automation in the Data Center
•Lab: SDN and Virtualization   •Lab: Operating a Data Center   Day 5
Chapter 12: Migration Strategies
Chapter 11: Traffic Prioritization for Converged Networks•Migration Overview
•Understanding QoS and CoS   •Common Scenarios
•Converging Networks   •Migration Case Study
•Lab: Prioritizing Data in the Data Center   •Lab: Data Center Migration
Chapter 13: High Availability
•Data Center High Availability Overview
•Link Level and Physical Device Redundancy
•Device-Level Redundancy

Options

JND-DC is an intermediate-level course.

Session Dates

Aikataulutamme kiinnostuksen mukaan. Ota yhteyttä

Additional Information

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