
Juniper Networks Design - Data Center

Varighed: 5 Days Kursus Kode: JND-DC

Beskrivelse:

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. This course will serve as the prerequisite course for other data center design related courses.

Målgruppe:

This course is targeted for Juniper Networks system engineers, partner sales engineers (including Champions), and services partners. However, the course is also applicable to a general audience of Juniper customers with a desire to learn more about data center design.

Agenda:

- **After successfully completing this course, you should be able to:**
- Describe high-level concepts about the 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 multi-tier data center architecture.
- Explain link aggregation and redundant trunk groups.
- Explain multichassis link aggregation.
- Describe the reasons for the shift to IP fabrics.
- Describe the design considerations of a controller-less overlay.
- Describe the design considerations of an SDN-controlled overlay.
- Describe the design considerations for routing in an IP fabric.
- Describe how to scale an IP fabric.
- Describe the need for DCI.
- Describe the various options for providing DCI.
- Describe a potential DCI design using VXLAN and EVPN.
- Discuss the security requirements and design principles of the data center.
- Describe 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.
- Describe the purpose of SDN.
- Explain the function of Contrail.
- Describe the purpose of NFV.
- Discuss the purpose and function of vSRX and vMX.
- Explain basic strategies for managing all types of data center deployments.
- Provide details about different network management strategies.
- Explain key concepts of network monitoring solutions.
- Explain automation options and solutions.
- Discuss the importance of understanding the baseline behaviors in your data center.
- Describe the Junos Space Network Management Platform and its deployment options.
- Describe the importance of analytics.
- Discuss automation in the data center.
- Describe the HA features available when using Junos.
- Describe the different methods used to protect data in the data center.

Forudsætninger:

The following are the prerequisites for this course:

- 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.
 - JNDF - Juniper Networks Design Fundamentals
-

Indhold:

Chapter 1: Course Introduction

Chapter 2: Overview of Data Center Design

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

Chapter 3: Initial Design Considerations

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

Chapter 4: Traditional Data Center Architecture

- Traditional Multi-tier Architecture
- Link Aggregation and Redundant Trunk Groups
- Multichassis Link Aggregation
- Designing a Multi-tier Architecture Lab
- Day 2

Chapter 5: Ethernet Fabric Architectures

- Virtual Chassis
- Virtual Chassis Fabric
- QFabric
- Fusion
- Ethernet Fabric Design Considerations
- Ethernet Fabric Architecture Lab
- Day 3

Chapter 6: IP Fabric Architecture

- The Shift To IP Fabrics
- VXLAN
- Design Considerations with a Controller-less Overlay
- Design Considerations with an SDN-controlled Overlay
- IP Fabric Routing Design
- IP Fabric Scaling
- IP Fabric Architecture Lab

Chapter 7: Data Center Interconnect

- IP DCI Overview
- DCI Options
- Example Design using VXLAN and EVPNs
- Interconnecting Data Centers Lab
- Day 4

Chapter 8: Securing the Data Center

- Overview of Data Center Security
- Security Elements
- Simplifying Security in the Data Center
- Security Enforcement Layers
- Securing the Data Center Lab

Chapter 9: SDN and Virtualization in the Data Center

- SDN Overview
- Contrail Overview
- NFV Overview
- Working in Virtual Environments
- SDN and Virtualization Lab

Chapter 10: Data Center Operation

- Understanding baseline behaviors
- Deploying Junos Space and JSA
- Understanding analytics
- Deploying automation in the data center
- Data Center Operations Lab
- Day 5

Chapter 11: Traffic Engineering and Prioritization

- QOS, COS, and Traffic Engineering Explained
- COS features
- Traffic Engineering Features
- CoS handling in Fabric Links
- CoS PFC for FCoE Traffic
- Examples
- Prioritizing Data in the Data Center

Chapter 12: Migration Strategies

- Asset Migration
- Plan the Migration
- Migration Execution
- Possible Migration Lab

Chapter 13: High Availability

- Business Continuity
- Device/HW/Infrastructure
- Intra DC HA
- Inter DC HA

High Availability Lab

Flere Informationer:

For yderligere informationer eller booking af kursus, kontakt os på tlf.nr.: 44 88 18 00

training@globalknowledge.dk

www.globalknowledge.com/da-dk/

Global Knowledge, Stamholmen 110, 2650 Hvidovre