Juniper Networks Design - Data Center (JND-DC)

COURSE LEVEL
JND-DC is an intermediate-level course.

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.

ASSOCIATED CERTIFICATION
JNCDS-DC

RELEVANT JUNIPER PRODUCT
- Design
- Network Design
- Contrail
- EX Series
- Junos OS
- Junos Space
- Junos Space Network Director
- Junosphere / VJX
- MX Series
- QFabric
- QFX Series
- SRX Series
- Design Track
- Instructor-Led Training

RECOMMENDED NEXT COURSE
N/A

CONTACT INFORMATION
training@juniper.net

COURSE OVERVIEW
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
- 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.
- 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.
- 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.
- 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 NPV.
- 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 vSRX and vMX.
- 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.

Course content subject to change. See www.juniper.net/courses for the latest details.

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## COURSE CONTENT

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