Juniper Networks Design-Service Provider (JND-SP)

ID JND-SP **Preis** US$ 4.750,– (exkl. MwSt.) **Dauer** 5 Tage

Kursüberblick

This five-day course is designed to cover best practices, theory, and design principles for Wide Area Network (WAN) design including WAN interconnects, security considerations, virtualization, and management/operations. This course covers both service provider and enterprise WAN design.

Zielgruppe

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 WAN design.

Voraussetzungen

- Knowledge of routing and switching architectures and protocols.
- Knowledge of Juniper Networks products and solutions.
- Understanding of infrastructure security principles.
- Completion of the Juniper Networks Design Fundamentals (JNDF) course.

Kursziele

- Describe high level concepts about the different WAN architectures.
- Identify key features used to interconnect WANs.
- Describe key high level considerations about securing and monitoring a WAN deployment.
- Outline high level concepts for implementing WANs.
- Explain various methods of WAN connectivity.
- Describe basic MPLS concepts as they are related to WANs.
- Identify basic Ethernet concepts as they are related to WANs.
- Describe key concepts of network availability.
- Explain high availability features and protocols.
- Describe the key aspects of class of service.
- Describe how core WAN technologies are used to solve specific problems facing network designers.
- Discuss core routing requirements.
- Explain how to design a high performance MPLS WAN core.
- Define CoS requirements for the WAN core.
- Discuss BGP peering and path selection.
- Design MPLS Layer 2 and Layer 3 services.
- Design metro Ethernet networks.
- Understand role of class of service in provider edge.
- Describe Next-generation MVPNs.
- Explain how enterprise WAN technologies are used to solve specific problems facing network designers.
- Outline various solutions regarding campus and branch WANs.
- Explain how data centers are interconnected through WANs.
- Identify various solutions regarding data center WAN interconnection.
- Describe the benefits and use cases for EVPN.
- Describe security concepts regarding WANs.
- Explain the differences between LAN security concepts and WAN security concepts.
- Explain VPN-related concepts regarding WANs.
- Describe methods to manage WANs.
- Discuss key concepts related to WAN management.
- Explain how virtualization and SDN can be leveraged in the WAN.

- Describe various SDN products and how they are used in the WAN.
- Describe MX, SRX, T, PTX, ACX, QFX, EX, and NFX Series devices and the basics of how they relate to WAN solutions

Kursinhalt

- Course Introduction
- Overview of WAN Design
- WAN Connectivity
- Network Availability and Traffic Prioritization
- Service Provider Core WAN
- Service Provider Edge WAN
- Enterprise WAN
- Data Center WAN
- WAN Security
- WAN Management
- WAN Virtualization and SDN
- WAN Device Portfolio

Detaillierter Kursinhalt

Course Introduction

Overview of WAN Design

- WAN Design Overview
- WAN Domains
- Management, Operations, and Security
- Implementation Considerations

WAN Connectivity

- Public and Private
- Service Provider
- Enterprise

Network Availability and Traffic Prioritization

- Network Availability
- Class of Service

LAB: Network Availability and CoS Design

Service Provider Core WAN

- WAN Core Overview
- Core Routing
- MPLS Design
- CoS Considerations

Lab: WAN Core Design

Service Provider Edge WAN

- Provider Edge
- Lab: Service Provider Edge—VPN Design
- Access and Aggregation Edge
- Services
- CoS Considerations
- Multicast

Lab: Service Provider Edge—Services Design

Enterprise WAN

- Enterprise WAN Overview
- WAN Topologies
- Campus and Branch
- CoS Considerations
- Large Enterprise Designs

LAB: Enterprise WAN Design

Data Center WAN

- WAN Overview
- EVPN

LAB: Data Center WAN Design

WAN Security

- Security Overview
- WAN Versus LAN
- Service Provider Core WAN Security
- Service Provider Edge WAN Security
- Enterprise WAN Security

LAB: Security Design

WAN Management

- Best Practices and Considerations
- OoB Management Design
- Junos Space
- Juniper WAN Automation

LAB: WAN Management Design

WAN Virtualization and SDN

- SDN Overview
- NorthStar
- Contrail
- SD-WAN

LAB: SDN Design

WAN Device Portfolio

- Platform and Junos Overview
- MX Series
- SRX Series
- PTX and T Series
- ACX Series
- QFX Series
- EX Series
- NFX Series

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Trainingsmethoden

- ✓ Klassenraumtraining
- ✓ Instructor-Led Online Training
- ✓ FLEX Classroom – Klassenraum und ILO kombiniert
- ✓ Onsite & Customized Training
- ✓ E-Learning
- ✓ Blended & Hybrid Learning
- ✓ Mobiles Lernen

Technologien und Lösungen

- ✓ Digitale Transformation
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- ✓ Cloud
- ✓ Networking
- ✓ Cyber Security
- ✓ Wireless & Mobility
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- ✓ Data Center

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