
Juniper Networks Design-Service Provider

Duration: 5 Days Course Code: JND-SP

Overview:

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.

Target 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 WAN design.

Objectives:

- 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
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Prerequisites:

- Knowledge of routing and switching architectures and protocols.
 - Knowledge of Juniper Networks products and solutions.
 - Understanding of infrastructure security principles.
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Content:

Day 1	Day 3	LAB: Data Center WAN Design
COURSE INTRODUCTION	Service Provider Edge WAN	WAN Security
Overview of WAN Design	■ Provider Edge	■ Security Overview
■ WAN Design Overview	Lab: Service Provider Edge—VPN Design	■ WAN Versus LAN
■ WAN Domains		■ Service Provider Core WAN Security
■ Management, Operations, and Security	Access and Aggregation Edge	■ Service Provider Edge WAN Security
■ Implementation Considerations		■ Enterprise WAN Security
WAN Connectivity		LAB: Security Design
■ Public and Private	■ Services	Day 5
■ Service Provider	■ CoS Considerations	WAN Management
■ Enterprise	■ Multicast	■ Best Practices and Considerations
Network Availability and Traffic Prioritization	Lab : Service Provider Edge—Services Design	■ OoB Management Design
■ Network Availability	Day 4	■ Junos Space
■ Class of Service	Enterprise WAN	■ Juniper WAN Automation
LAB: Network Availability and CoS Design	■ Enterprise WAN Overview	LAB: WAN Management Design
Day 2	■ WAN Topologies	WAN Virtualization and SDN
Service Provider Core WAN	■ Campus and Branch	■ SDN Overview
■ WAN Core Overview	■ CoS Considerations	■ NorthStar
■ Core Routing	■ Large Enterprise Designs	■ Contrail
■ MPLS Design	LAB: Enterprise WAN Design	■ SD-WAN
■ CoS Considerations	Data Center WAN	LAB: SDN Design
Lab : WAN Core Design	■ WAN Overview	WAN Device Portfolio
	■ EVPN	■ Platform and Junos Overview
		■ MX Series
		■ SRX Series
		■ PTX and T Series
		■ ACX Series
		■ QFX Series
		■ EX Series
		■ NFX Series

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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