Juniper Networks Design Fundamentals

Category: Networking & Security | **Vendor:** Juniper

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This three-day course is designed to cover best practices, theory, and design principles for overall network design and will serve as the prerequisite course for other design subject areas — data center, security, and WAN.

About This Course

This three-day course is designed to cover best practices, theory, and design principles for overall network design and will serve as the prerequisite course for other design subject areas — data center, security, and WAN.

Who Should Attend

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 network design.

Prerequisites & Entry Requirements

General Prerequisites:

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.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

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

- Provide an overview of network design needs and common business requirements.
- Describe key product groups related to campus, WAN, data center, and security including both Juniper Networks product groups and some key competing solutions.
- Analyze and interpret common RFP requirements.
- Scope a network design by gathering data and working with key stakeholders.
- Organize the data that has been collected from the customer.
- Define boundaries so they can properly structure the design scope.
- Provide an overview of network security and common vulnerabilities.
- List high-level design considerations and best practices for securing the network.
- Formulate Campus design proposals using industry and organizational best practices.
- Describe design considerations and best practices for design in the campus network.
- Formulate WAN design proposals using industry and organizational best practices.
- Describe design considerations and best practices for WAN design in the network.
- Formulate data center design proposals using industry and organizational best practices.
- Describe design considerations and best practices for design in the data center.
- Define business continuity and its importance in a network.
- Describe high availability design considerations and best practices.
- Provide an overview of high availability solutions.
- Provide an overview of environmental considerations in network design.
- List design considerations and best practices for managing the network.
- Provide an overview of Juniper Networks and third party options for network management.
- List design considerations and best practices for network automation.
- Describe the foundational topics that have been taught throughout the course.
- Create a network design proposal that satisfies customer requirements and business needs.
- Provide an overview of the steps involved in migrating a network.
- Describe best practices used in network migration.

Detailed Course Outline

Day 1

Chapter 1: Course Introduction

Chapter 2: Network Design Fundamentals

- A Need for Design
- Knowledge is King
- A Proposed Design Methodology
- A Reference Network

Chapter 3: Understanding Customer Requirements

- RFP Requirements
- Scoping the Design Project
- Analyzing the Data
- Understanding Customer Requirements Lab

Day 2

Chapter 4: Organizing the Data

- Analyze the Data
- Understanding Boundaries

Chapter 5: Securing the Network

- Why Secure the Network?

- Where to Secure the Network

- Security Design Considerations

Chapter 6: Building the Design: Campus

- Following Design Best Practices

- Campus Design

- Building the Design: Campus Lab

Chapter 7: Building the Design: Wide Area Networks

- Following Design Best Practices

- WAN Design and Applications

- Building the Design: WAN Lab

Chapter 8: Building the Design: Data Center

- Following Data Center Design Best Practices

- Data Center Design

- Building the Design: Data Center Lab

Chapter 9: Business Continuity and Network Enhancements

- Business Continuity Planning

- High Availability Design Considerations and Best Practices

- Offerings and Solutions

- CoS and Traffic Engineering Considerations

- Environmental Design

Day 3

Chapter 10: Network Management and Automation

- Designing for Network Management
- Designing for Network Automation
- Enhancing the Design Lab

Chapter 11: Putting it to Practice

- Foundational Elements Review
- Executive Summary
- Capstone Lab: Putting it into Practice

Appendix A: Network Migration Strategies

- Migration Overview
- Migration Approaches
- Migration Scenarios
- Workflow
- Best Practices

Appendix B: Job Aids

Course Level

JNDF is an associate-level course.

Skills You Will Learn:

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- Provide an overview of network design needs and common business requirements.
- Describe key product groups related to campus, WAN, data center, and security including both Juniper Networks product groups and some key competing solutions.
- Analyze and interpret common RFP requirements.
- Scope a network design by gathering data and working with key stakeholders.
- Organize the data that has been collected from the customer.
- Define boundaries so they can properly structure the design scope.
- Provide an overview of network security and common vulnerabilities.
- List high-level design considerations and best practices for securing the network.
- Formulate Campus design proposals using industry and organizational best practices.
- Describe design considerations and best practices for design in the campus network.
- Formulate WAN design proposals using industry and organizational best practices.
- Describe design considerations and best practices for WAN design in the network.
- Formulate data center design proposals using industry and organizational best practices.
- Describe design considerations and best practices for design in the data center.
- Define business continuity and its importance in a network.
- Describe high availability design considerations and best practices.
- Provide an overview of high availability solutions.
- Provide an overview of environmental considerations in network design.
- List design considerations and best practices for managing the network.
- Provide an overview of Juniper Networks and third party options for network management.
- List design considerations and best practices for network automation.
- Describe the foundational topics that have been taught throughout the course.
- Create a network design proposal that satisfies customer requirements and business needs.
- Provide an overview of the steps involved in migrating a network.
- Describe best practices used in network migration.

Frequently Asked Questions

Q: What delivery options are available for Juniper Networks Design Fundamentals?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Juniper Networks Design Fundamentals course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Juniper Networks Design Fundamentals training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Juniper Networks Design Fundamentals?

Yes, we provide corporate training, dedicated training, and closed classes for Juniper Networks Design Fundamentals. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Juniper Networks Design Fundamentals, Enterprise Routing & Switching, JNDF

Q: Why choose Nexus Human for Juniper Networks Design Fundamentals?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Juniper Networks Design Fundamentals training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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