Junos IP version 6

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

Duration: 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This two-day course provides detailed coverage of IP version 6 (IPv6) operations including Neighbor Discovery, ICMPv6, IPv6 protocol independent routing, OSPFv3, IS-IS, BGP, RIPng, transitions methods, and troubleshooting methodology and commands supported by the Junos operating system.

Through demonstrations and hands-on labs, you will gain experience in configuring and monitoring the Junos operating system and in monitoring device and IPv6 protocol operations. This course uses Juniper Networks SRX Series Services Gateways for the hands-on component, but the lab environment does not preclude the course from being applicable to other Juniper hardware platforms running the Junos OS. This course is based on Junos OS Release 12.1R1.9.

About This Course

This two-day course provides detailed coverage of IP version 6 (IPv6) operations including Neighbor Discovery, ICMPv6, IPv6 protocol independent routing, OSPFv3, IS-IS, BGP, RIPng, transitions methods, and troubleshooting methodology and commands supported by the Junos operating system.

Through demonstrations and hands-on labs, you will gain experience in configuring and monitoring the Junos operating system and in monitoring device and IPv6 protocol operations. This course uses Juniper Networks SRX Series Services Gateways for the hands-on component, but the lab environment does not preclude the course from being applicable to other Juniper hardware platforms running the Junos OS. This course is based on Junos OS Release 12.1R1.9.

Who Should Attend

This course benefits individuals responsible for configuring and monitoring IPv6 in the Junos OS.

Prerequisites & Entry Requirements

General Prerequisites:

- Intermediate-level of networking knowledge and an understanding of the Open Systems Interconnection (OSI) reference model and the TCP/IP protocol suite.
- Attend the Introduction to the Junos Operating System (IJOS), the (!) , and the Junos Intermediate Routing (JIR) courses prior to attending this class.

Learning Outcomes

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

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

- Describe the similarities and differences between IP version 4 (IPv4) and IPv6.
- Explain the different extension headers and their uses.
- Identify the different IPv6 address types.
- Explain the IPv6 neighbor discovery process.
- Describe the maximum transmission unit (MTU) discovery process.
- Configure and monitor the Virtual Router Redundancy Protocol (VRRP).
- Define the routing tables used for IPv6 routing.
- Explain and configure static, aggregated, and generated IPv6 routes.
- Identify and explain IPv6 firewall filters.
- Describe and implement OSPFv3 routing.
- Explain and configure IPv6 networks using IS-IS.
- Describe and implement BGP peering sessions using IPv6.
- Identify the different transition methods.
- Explain concepts for using dual stack.
- Explain and identify the different methods for tunneling IPv6 traffic.
- Describe a basic troubleshooting method.
- Identify and explain common operational mode commands used for troubleshooting IPv6 problems.
- Explain protocol enhancements in Routing Information Protocol next generation (RIPng).
- Describe and configure RIPng.

Detailed Course Outline

Day 1

Chapter 1: Course Introduction

Chapter 2: Introduction to IPv6 Addressing

- Comparing IPv4 and IPv6
- Extension Headers
- IPv6 Address
- Subnetting
- Interface Configuration
- Lab 1: Configuring IPv6 Interfaces

Chapter 3: IPv6 Protocol and Services

- ICMPv6 Overview
- Neighbor Discovery
- MTU Discovery
- VRRP
- DHCPv6
- DNS
- Lab 2: Configuring IPv6 Services

Chapter 4: Protocol Independent Routing and Filters

- IPv6 Routing Tables
- Protocol Independent Routing
- Firewall Filters
- Lab 3: Configuring Protocol Independent Routing

Chapter 5: OSPFv3

- OSPFv3 Overview
- OSPFv3 Configuration
- Lab 4: Configuring OSPFv3

Day 2

Chapter 6: IS-IS

- IS-IS Overview
- IS-IS Configuration
- Lab 5: Configuring IS-IS

Chapter 7: BGP

- BGP Overview
- BGP Configuration
- Lab 6: Configuring BGP

Chapter 8: Transition Methods

- Transition Plans
- Dual Stack
- Tunneling
- Lab 7: Configuring GRE Tunneling

Chapter 9: Troubleshooting

- Basic Troubleshooting Guide
- IPv6 Show Commands
- Lab 8: Troubleshooting

Appendix A: RIPng

- Introduction to RIPng
- Configuring RIPng
- Lab 9: Configuring RIPng (Optional)

Skills You Will Learn:

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

- Describe the similarities and differences between IP version 4 (IPv4) and IPv6.
- Explain the different extension headers and their uses.
- Identify the different IPv6 address types.
- Explain the IPv6 neighbor discovery process.
- Describe the maximum transmission unit (MTU) discovery process.
- Configure and monitor the Virtual Router Redundancy Protocol (VRRP).
- Define the routing tables used for IPv6 routing.
- Explain and configure static, aggregated, and generated IPv6 routes.
- Identify and explain IPv6 firewall filters.
- Describe and implement OSPFv3 routing.
- Explain and configure IPv6 networks using IS-IS.
- Describe and implement BGP peering sessions using IPv6.
- Identify the different transition methods.
- Explain concepts for using dual stack.
- Explain and identify the different methods for tunneling IPv6 traffic.
- Describe a basic troubleshooting method.
- Identify and explain common operational mode commands used for troubleshooting IPv6 problems.
- Explain protocol enhancements in Routing Information Protocol next generation (RIPng).
- Describe and configure RIPng.

Frequently Asked Questions

Q: What delivery options are available for Junos IP version 6?

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 2-day Junos IP version 6 course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Junos IP version 6 training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Junos IP version 6?

Yes, we provide corporate training, dedicated training, and closed classes for Junos IP version 6. 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: Junos IP version 6, Service Provider Routing and Switching, J-IPV6

Q: Why choose Nexus Human for Junos IP version 6?

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 Junos IP version 6 training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

Email: info@nexushuman.com

Website: www.nexushuman.com

Phone: +353 1 889 8700 (Ireland) | +44 20 8142 8961 (UK)

© 2026 Nexus Human. All rights reserved. This brochure was generated on 13/11/2026.