

Junos IP version 6 (J-IPV6)

ID J-IPV6 **Price** 1,350.— €(excl. tax) **Duration** 2 days

Who should attend

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

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 \(IJOS\)](#) and the [Junos Intermediate Routing \(JIR\)](#) courses prior to attending this class.

Course Objectives

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.

Course Content

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.

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)

About Fast Lane



Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

Fast Lane Services

- ✓ High End Technology Training
- ✓ Business & Soft Skill Training
- ✓ Consulting Services
- ✓ Managed Training Services
- ✓ Digital Learning Solutions
- ✓ Content Development
- ✓ Remote Labs
- ✓ Talent Programs
- ✓ Event Management Services

Training Methods

- ✓ Classroom Training
- ✓ Instructor-Led Online Training
- ✓ FLEX Classroom – Classroom & Online Hybrid
- ✓ Onsite & Customized Training
- ✓ E-Learning
- ✓ Blended & Hybrid Learning
- ✓ Mobile Learning

Technologies & Solutions

- ✓ Digital Transformation
- ✓ Artificial Intelligence
- ✓ Cloud
- ✓ Networking
- ✓ Cyber Security
- ✓ Wireless & Mobility
- ✓ Modern Workplace
- ✓ Data Center



Worldwide Presence
with high-end training centers
around the globe



Multiple Awards
from vendors such as AWS,
Microsoft, Cisco, Google, NetApp,
VMware



Experienced SMEs
with over 19.000 combined
certifications

Germany

Fast Lane Institute for Knowledge
Transfer GmbH

Tel. +49 40 25334610

info@flane.de / www.flane.de

Austria

ITLS GmbH

(Partner of Fast Lane)

Tel. +43 1 6000 8800

info@itls.at / www.itls.at

Switzerland

Fast Lane Institute for Knowledge
Transfer (Switzerland) AG

Tel. +41 44 8325080

info@flane.ch / www.flane.ch