Advanced Junos Service Provider Routing

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

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This is an advanced-level course that will provide you with detailed knowledge of OSPF, IS-IS, BGP, and routing policy. After completion of this course, you will gain experience in monitoring and configuring the Junos operating system and in device and protocol operations. This course includes hands-on labs and demonstrations and is based on the Junos OS Release 10.3R1.9.

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Who Should Attend

- Individuals responsible for implementing, monitoring, and troubleshooting Layer 3 components of a service provider’s network.

Prerequisites & Entry Requirements

General Prerequisites:

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

Learning Outcomes

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

- Describe the various OSPF link-state advertisement (LSA) types.
- Explain the flooding of LSAs in an OSPF network.
- Describe the shortest-path-first (SPF) algorithm.
- List key differences between OSPFv2 and OSPFv3.
- Describe and configure OSPF area types and operations.
- Summarize and restrict routes.
- Identify scenarios in a service provider network that can be solved using routing policy or specific configuration options.
- Configure, monitor, and explain the concepts and operation of IS-IS.
- Describe various IS-IS link-state protocol data unit (LSP) types.
- List IS-IS adjacency rules and troubleshoot common adjacency issues.
- Display and interpret the link-state database (LSDB).
- Perform advanced IS-IS configuration options.
- Implement IS-IS routing policy.
- Explain the default operation in multiarea IS-IS.
- Describe IS-IS address summarization methods.
- Configure and monitor a multiarea IS-IS network.
- Describe basic BGP operation and list common BGP attributes.
- Explain the route selection process for BGP and how to alter it.
- Configure some advanced options for BGP peers.
- Manipulate BGP attributes using routing policy.
- Explain the causes for route instability.
- Describe the effect of damping on BGP routing.
- Explain the default behavior of damping on links.
- Control damping using routing policy.
- View damped routes using command-line interface (CLI) commands.
- Describe the operation of BGP route reflection.
- Configure a route reflector.
- Describe the operation of a BGP confederation.
- Configure confederations.
- Describe peering relationships in a confederation.

Detailed Course Outline

1. OSPF

- OSPFv2 Review
- Link-State Advertisements
- Protocol Operations
- OSPF Authentication

2. OSPF Areas

- Review of OSPF Areas
- Stub Area Operation
- Stub Area Configuration
- NSSA Operation
- NSSA Configuration
- Route Summarization

3. OSPF Case Studies and Solutions

- Virtual Links
- OSPF Multiarea Adjacency
- External Reachability

4. IS-IS

- Overview of IS-IS
- IS-IS PDUs
- Neighbors and Adjacencies
- Configuring and Monitoring IS-IS

5. Advanced IS-IS Operations and Configuration Options

- IS-IS Operations
- IS-IS Configuration Options

- IS-IS Routing Policy

6. Multilevel IS-IS Networks

- Level 1 and Level 2 Operations
- Multilevel Configuration

7. BGP

- Review of BGP
- BGP Operations
- BGP Path Selection and Options
- Configuration Options

8. BGP Attributes and Policy—Part 1

- BGP Policy
- Next Hop
- Origin and MED
- AS Path

9. BGP Attributes and Policy—Part 2

- Local Preference
- Communities

10. Route Reflection and Confederations

- Route Reflection Operation
- Configuration and Routing Knowledge
- BGP Confederations

11. BGP Route Damping

- Route Flap and Damping Overview
- Route Damping Parameters
- Configuring and Monitoring Route Damping

Skills You Will Learn:

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Frequently Asked Questions

Q: What delivery options are available for Advanced Junos Service Provider Routing?

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 5-day Advanced Junos Service Provider Routing course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Advanced Junos Service Provider Routing training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Advanced Junos Service Provider Routing?

Yes, we provide corporate training, dedicated training, and closed classes for Advanced Junos Service Provider Routing. 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: Advanced Junos Service Provider Routing, Service Provider Routing and Switching, AJSPR

Q: Why choose Nexus Human for Advanced Junos Service Provider Routing?

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 Advanced Junos Service Provider Routing training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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