

# Advanced Junos Service Provider Routing (AJSPR)

ID AJSPR Price CHF 5,250.—(excl. VAT) Duration 5 days

## Who should attend

This course benefits individuals responsible for implementing, monitoring, and troubleshooting Layer 3 components of a service provider's network.

## This course is part of the following Certifications

Juniper Networks Certified Internet Professional Service Provider Routing & Switching (JNCIP-SP)

## Prerequisites

Students should have intermediate-level networking knowledge and an understanding of the Open Systems Interconnection (OSI) model and the TCP/IP protocol suite. Students should also attend the [Introduction to the Junos Operating System \(IJOS\)](#) and [Junos Intermediate Routing \(JIR\)](#) courses prior to attending this class.

## Course Objectives

After successfully completing this course, you should 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 OSPF area types and operations.
- Configure various OSPF area types.
- Summarize and restrict routes.
- Identify some scenarios in a service provider network that can be solved using routing policy or specific configuration options.
- Use routing policy and specific configuration options to implement solutions for various scenarios.
- Describe how to troubleshoot OSPF.
- 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.
- Configure and monitor IS-IS.

- 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 how to troubleshoot IS-IS.
- Describe basic BGP operation.
- List common BGP attributes.
- Explain the route selection process for BGP.
- Describe how to alter the route selection process.
- Configure some advanced options for BGP peers.
- Describe various BGP attributes in detail and explain the operation of those attributes.
- 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.
- Describe how to troubleshoot BGP.
- Describe how to troubleshoot routing policy.

## Course Content

- Course Introduction
- OSPF
- OSPF Areas
- OSPF Case Studies and Solutions
- Troubleshooting OSPF
- IS-IS
- Advanced IS-IS Operations and Configuration Options
- Multilevel IS-IS Networks
- Troubleshooting IS-IS
- BGP
- BGP Attributes and Policy—Part 1
- BGP Attributes and Policy—Part 2
- Route Reflection and Confederations
- BGP Route Damping
- Troubleshooting BGP

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- Troubleshooting Policy

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## Training Centres worldwide



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