

## Advanced Junos Enterprise Routing (AJER)

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

### Who should attend

This course benefits individuals responsible for configuring and monitoring devices running the Junos OS.

### This course is part of the following Certifications

Juniper Networks Certified Internet Professional Enterprise Routing & Switching (JNCIP-ENT)

### Prerequisites

Students should have basic networking knowledge and an understanding of the Open Systems Interconnection (OSI) model and the TCP/IP protocol suite. Students should also have working experience with basic routing principles.

Students should also attend the [Introduction to the Junos Operating System \(IJSO\)](#) 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.
- Describe OSPF area types and operations.
- Configure various OSPF area types.
- List useful common commands to troubleshoot and verify OSPF.
- Isolate different OSPF issues.
- Summarize and restrict routes.
- Identify scenarios that require routing policy or specific configuration options.
- Use routing policy and specific configuration options to implement solutions for various scenarios.
- Describe basic BGP operation and 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.
- List common commands used to troubleshoot and verify BGP.
- Isolate different issues with BGP communication and configuration.
- Describe common routing policies used in the enterprise environment.
- Explain how attribute modifications affect routing decisions.
- Implement a routing policy for inbound and outbound traffic using BGP.
- Isolate problems relating to routing policy structure and configuration.
- Identify common commands for troubleshooting routing policy.
- Identify environments that may require a modified CoS implementation.
- Describe the various CoS components and their respective functions.
- Explain the CoS processing along with CoS defaults on SRX Series Services Gateways.
- Describe situations when some CoS features are used in the enterprise.
- Implement some CoS features in an enterprise environment.
- Verify and troubleshoot CoS.
- Describe IP multicast traffic flow.
- Identify the components of IP multicast.
- Explain how IP multicast addressing works.
- Describe the need for reverse path forwarding (RPF) in multicast.
- Explain the role of Internet Group Management Protocol (IGMP) and describe the available IGMP versions.
- Configure and monitor IGMP.
- Identify common multicast routing protocols.
- Describe rendezvous point (RP) discovery options.
- Configure and monitor Physical Interface Module (PIM) sparse modes.
- Configure and monitor RP discovery mechanisms.
- Describe the basic requirements, benefits, and caveats of source-specific multicast (SSM).
- List the address ranges used for SSM.
- Illustrate the role of Internet Group Management Protocol version 3 (IGMPv3) and PIM sparse mode (PIM-SM) in an SSM implementation.

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- Configure and monitor SSM.
- Verify and troubleshoot multicast.
- List command commands used to troubleshoot and verify IS-IS.
- Isolate different IS-IS issues.

## Course Content

- Course Introduction
- OSPF
- OSPF Areas
- OSPF Case Studies and Solutions
- Troubleshooting OSPF
- BGP
- BGP Attributes and Policy
- Troubleshooting BGP
- Enterprise Routing Policies
- Troubleshooting Policies
- Introduction to Multicast
- Multicast Routing Protocols and SSM
- Troubleshooting Multicast
- Class of Service
- Troubleshooting Class of Service

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## Training Centres worldwide



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