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 (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.
- 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.

- 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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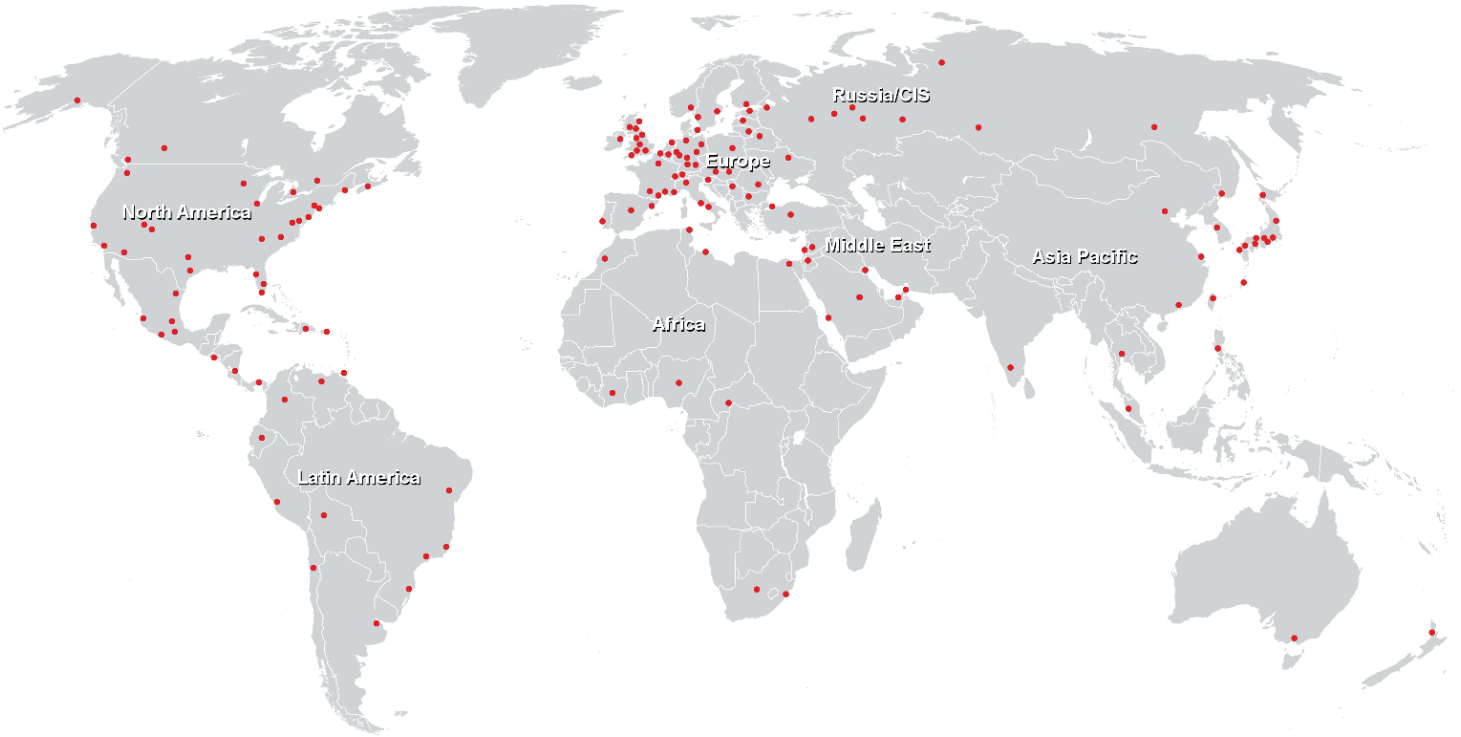
Training Centres worldwide



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