Junos Multicast Routing (JMR)

ID JMR **Price** CHF 2,100.—(excl. VAT) **Duration** 2 days

Who should attend

This course benefits individuals responsible for implementing, monitoring, and troubleshooting multicast components in a service provider's network.

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 knowledge of security policies.

Students should also attend the Introduction to the Junos Operating System (IJOS), !Junos Routing Essentials (JRE), and Junos Intermediate Routing (JIR) courses prior to attending this class.

Course Objectives

After successfully completing this course, you should be able to:

- 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 IGMP and describe the available IGMP versions.
- Configure and monitor IGMP.
- Identify common multicast routing protocols.
- Explain the differences between dense-mode and sparse-mode protocols.
- Describe rendezvous point (RP) discovery options.
- Configure and monitor PIM dense mode and PIM sparse mode.
- Configure and monitor rendezvous point discovery mechanisms.
- Explain the purpose and operation of MSDP.
- Describe the usage of MSDP within a single PIM domain with anycast-RP.
- Describe the usage of MSDP across multiple PIM domains.
- Configure and monitor MSDP.
- Compare the any-source multicast (ASM) and source-specific multicast (SSM) service models.
- Describe the basic requirements, benefits, and caveats of SSM.
- List the address ranges used for SSM.
- Illustrate the role of IGMPv3 and PIM-SM in an SSM implementation.
- Configure and monitor SSM.
- Describe the default PIM sparse mode information distribution.
- Explain how routing policies control IGMP joins.
- Explain how routing policies alter PIM protocol message flow.
- Identify the role of a policy in controlling MSDP message advertisement.
- Explain how you can use a policy to scope multicast groups.
- Describe IPv6 multicast addresses.
- Describe IPv6 multicast scoping.
- Compare IPv6 Multicast Listener Discovery (MLD) versions with IPv4's IGMP protocol versions.
- Describe IPv6 SSM.

Course Content

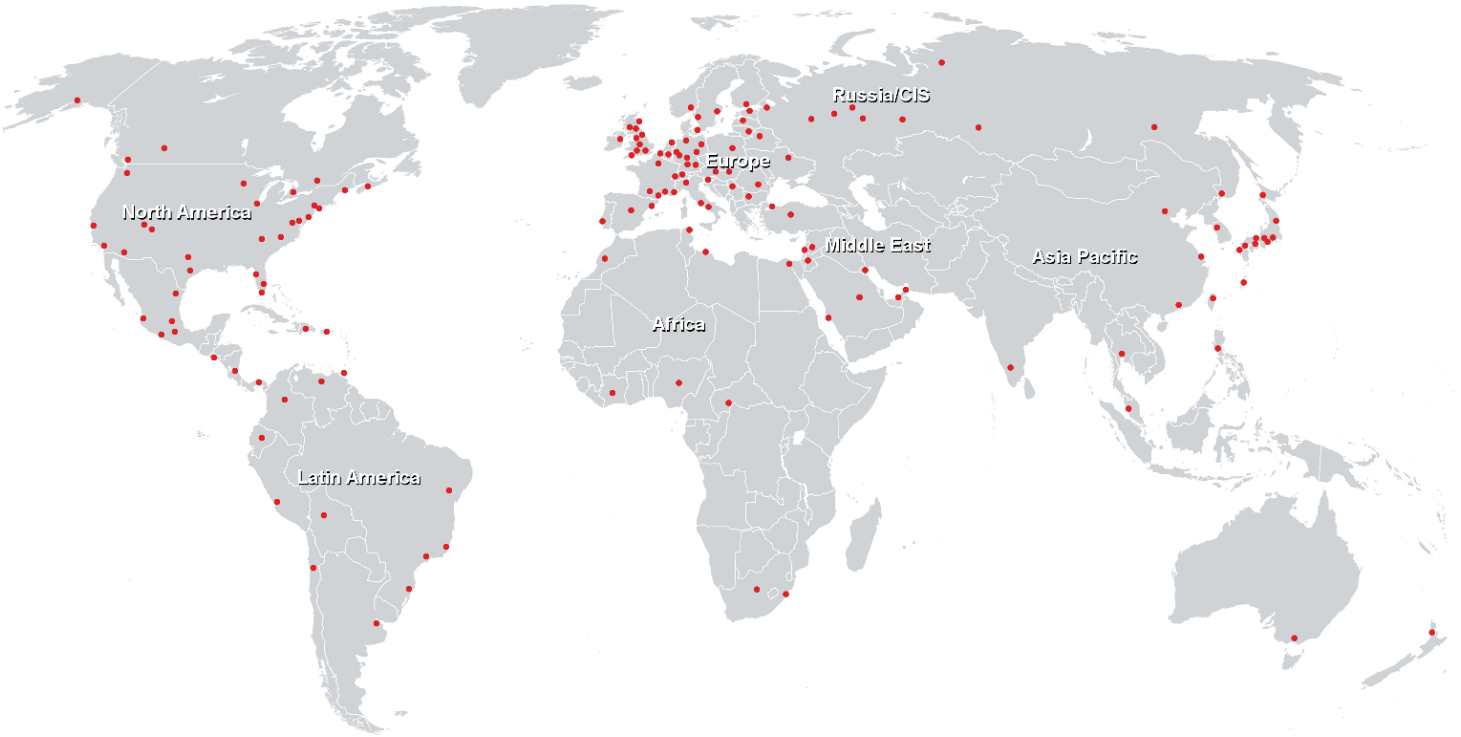
This two-day course is designed to provide students with detailed coverage of multicast protocols including Internet Group Management Protocol (IGMP), Protocol Independent Multicast–Dense Mode (PIM-DM), Protocol Independent Multicast–Sparse Mode (PIM-SM), and Multicast Source Discovery Protocol (MSDP).

Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos operating system and monitoring device and protocol operations. This course uses Juniper Networks MX Series 3D Universal Edge Routers 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 the Junos OS Release 11.4R1.14.

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Training Centres worldwide





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