

XMPLS-VPN Training

Training delivered by Xperts – Whether at the training center or at your own premises, whether it is training-on-the-job as part of a project or special training tailored to your requirements.

Course description:

The topic of the XMPLS-VPN training is the conception and troubleshooting of MPLS-based services of Juniper routers. It covers the operation of Multiprotocol Label Switching (MPLS) and associated applications like Layer-3 VPNs, Layer-2 VPNs and Virtual Private LAN Services (VPLS).

The 5-day course contains lab exercises where theory can be put into practice. Each participant works on his own router and can carry out a multitude of configuration steps, from basic configuration through to complex network topologies.

To take part in the XMPLS-VPN training participants should have some basic knowledge of the configuration of Juniper routers and should be familiar with how routing protocols work – in particular BGP.

Details:

MPLS Fundamentals

- MPLS Terminology and Labels
- Label Switched Paths and Routing Table Integration

Label Distribution Protocol (LDP)

- Purpose and Operation
- Neighbor Discovery and Session Establishment
- LDP Configuration

Resource Reservation Protocol (RSVP)

- RSVP Signaling
- Path and Neighbor Maintenance
- Configuring and Monitoring RSVP Signaling
- Explicit Route Objects and Routing Constraints

VPN Introduction

- Overview of CPE-based VPNs and Provider-provisioned VPNs
- IETF Standards Update
- Routing Instances, Virtual Routers and Logical Routers

BGP/MPLS Layer 3 VPNs

- RFC 4364 Terminology
- VPN-IPv4 Address Structure
- PE Configuration and Troubleshooting

Advanced Layer 3 VPN Technologies

- Advanced MPLS VPN Topologies
- Route Reflection and Internet Access
- Interprovider VPN and Carrier of Carriers
- Multicast VPNs

BGP-Based Layer 2 VPNs (Kompella)

- Layer 2 Operation: Control and Data Plane Mechanism
- Layer 2 VPN Configuration and Troubleshooting

LDP-Based Layer 2 VPNs (Martini)

- Draft-Martini Configuration
- I2circuit Configuration, Monitoring and Troubleshooting

Virtual Private LAN Service (VPLS)

- LDP- and BGP-based VPLS
- VPLS Configuration and Troubleshooting

Advanced MPLS Application

- MPLS Fast Reroute
- Traffic Engineering