Deploying Junos Subscriber Management (JSM)

ID JSM **Prix** US $ 4 000,– (Hors Taxe) **Durée** 4 jours

A qui s'adresse cette formation

This course is intended for network administrators who configure and administer subscriber management features on MX routers running the Junos OS.

Pré-requis

You should have the following prerequisite skills:

- A strong base of networking fundamentals;
- A high-level understanding of broadband access concepts;
- Experience and familiarity with the Junos OS;
- Familiarity with the Junos command-line interface (CLI); and
- Completion of the Introduction to the Junos Operating System (IJOS) course.

Objectifs

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

- Describe the various WAN domains.
- Describe the use cases for NorthStar.
- Describe the use cases for NorthStar Planner.
- Describe the usage of PCEP.
- Describe RSVP signaling using the CSPF algorithm.
- Describe the NorthStar VMs and their processes.
- Describe the post installation setup process.
- Describe the behavior of topology discovery.
- Describe the configuration of IGP topology discovery.
- Describe the configuration of BGP-LS topology discovery.
- Describe how to access the NorthStar Controller Operator and Planner user interfaces.
- Describe the basic features of the NorthStar Controller Operator user interface.
- Describe the various LSP types.
- Configure PCC controlled LSPs.
- Configure PCE delegated LSPs.
- Configure PCE initiated LSPs.
- Monitor LSPs from the NorthStar Operator user interface.
- Describe primary, secondary, and standby LSPs.
- Describe symmetric pairs of LSPs.
- Describe diversity groups.
- Describe using Junos MPLS LSP templates.
- Describe LSP calendaring.
- Describe Inter-AS LSPs.
- Describe how to provision multiple LSPs.
- Describe LSP optimization.
- Configure Segment Routing
- Manage NorthStar using the REST API
- Troubleshoot NorthStar Controller
- Create P2MP LSPs
- Explain the features, capabilities, and benefits of NorthStar Planner and how they work to optimize WAN design.
- Access NorthStar Planner and navigate and customize the NorthStar Planner administrative interface.
- Explain different methods of creating a network model.
- Manage different files that make up a network model and understand how these files are organized.
- Modify a network model by performing tasks such as adding links, nodes, and sites and save these changes to a modeled network.
- Optimize network demand paths, design diverse paths, and perform what-if scenarios to see how demands are routed.
- Simulate link and node failures and view the effects of these failures on demand routing across the WAN.
- Analyze and manage network information using the Report Manager interface.
- Perform hardware inventory using the NorthStar Planner interface.

Contenu

Day 1

1 Course Introduction

2 Introduction to Subscriber Management

- Overview and Terminology
- Broadband Access Network Design and Concepts
- Configuration and Operational Flow
- Software Licensing

3 Access Management

- Access Management Overview
- AAA Services
- Extended DHCP Local Server
- Extended DHCP Relay
- Subscriber Addressing
- L2TP Subscriber Access

LAB 1: Configuring Subscriber Access

4 Subscriber Interfaces and Dynamic Profiles

- Junos Interfaces Overview
- VLAN Types
- Dynamic Profiles
- Subscriber Interfaces
- Monitoring and Troubleshooting Tools

LAB 2: Configuring Interfaces and Dynamic Profiles

Day 2

5 Dynamic PPPoE for Subscriber Access

- PPPoE Overview
- Dynamic PPPoE Overview and Operational Flow
- Dynamic PPPoE Interface Configuration
- PPPoE Service Table Names

LAB 3: Configuring Dynamic PPPoE Subscriber Access

6 Layer 3 and Layer 2 Wholesale Services

- Wholesale Services Overview
- Layer 3 DHCP Wholesale
- Layer 3 PPPoE Wholesale
- Layer 2 Wholesale

LAB 4: Configuring Layer 3 Wholesale Services

7 Layer 2 Tunneling Protocol (L2TP)

- L2TP Overview
- LAC and LNS Functions
- LAC Tunnel Selection
- L2TP Configuration

LAB 5: Configuring L2TP for Subscriber Access

Day 3

8 Pseudowire Head-End Termination (PHT)

- MPLS Pseudowire for Subscribers
- Pseudowire Subscriber Interfaces
- Configuring Hierarchical CoS Pseudowire Subscriber Interfaces

LAB 6: Configuring MPLS Pseudowire for Subscribers

9 Subscriber Class of Service

- Class of Service Overview
- Traffic Classification, Queuing, and Scheduling
- Implementing Subscriber Class of Service
- Monitoring and Troubleshooting Tools

LAB 7: Configuring Subscriber Class of Service

10 Dynamic Firewall Services

- Firewall Filters Overview
- Implementing Dynamic Firewall Services
- Monitoring Firewall Filters and Counters

LAB 8: Configuring Dynamic Firewall Services

Day 4

11 Dynamic Multicast Services

- IGMP Overview
- Implementing Dynamic Multicast Services
- Monitoring Multicast and IGMP

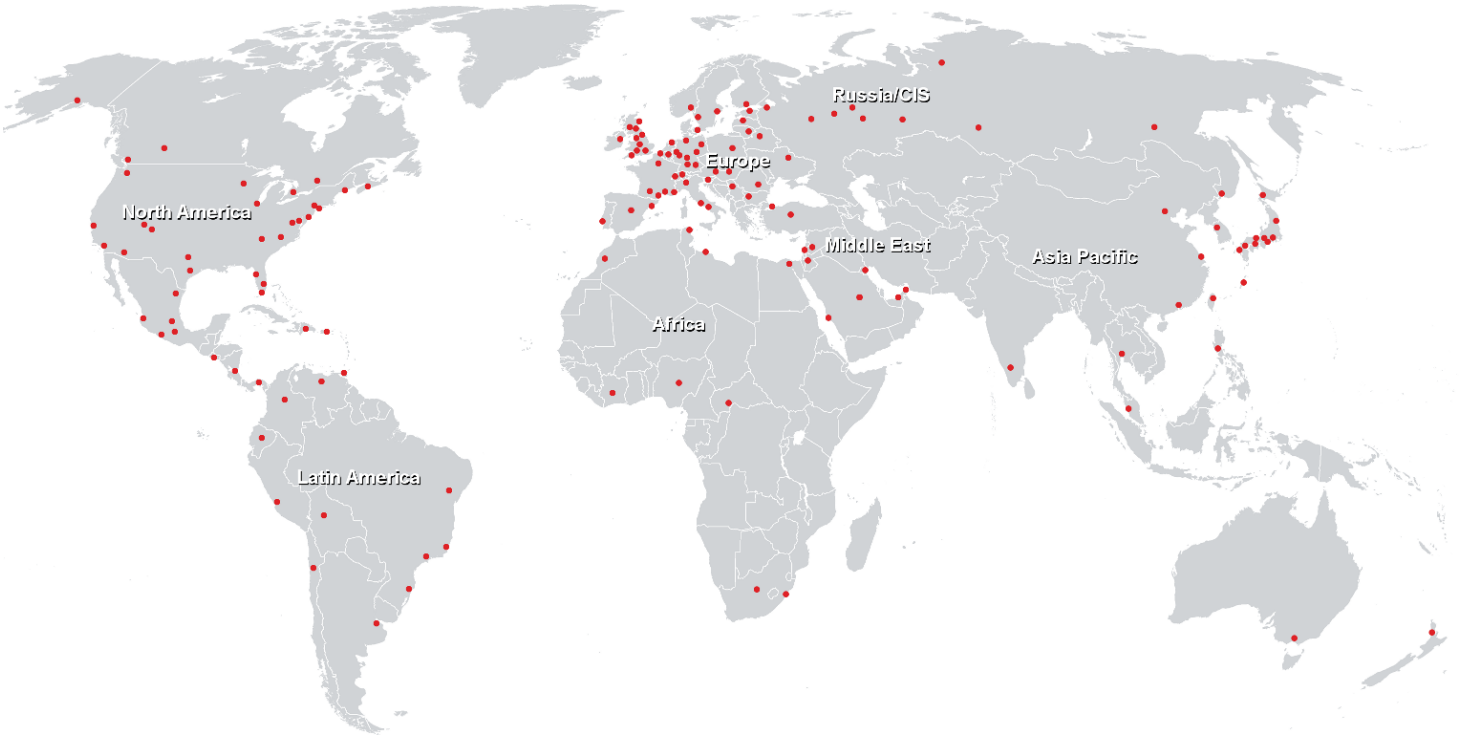
LAB 9: Configuring Dynamic Multicast Services

12 Carrier Services

- NAT and CGNAT Services
- Subscriber Secure Policy (Lawful Intercept)

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