

# Juniper Paragon Automation for the WAN (JPAW)

ID JPAW Prix US\$ 4 000,- (Hors Taxe) Durée 4 jours

## A qui s'adresse cette formation

This course benefits individuals who want to automate the management of service provider or large enterprise MPLS networks with Paragon Automation.

## Pré-requis

The prerequisites for this course are:

- Understanding of the OSI Model;
- Junos OS configuration experience—the Introduction to the Junos Operating System (IJS) course or equivalent; and
- Advanced MPLS knowledge—the Junos MPLS Fundamentals (JMF) course or equivalent.

## Objectifs

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

- Describe various WAN domains
- Describe and configure Paragon Pathfinder for initial use
- Describe and configure Paragon Pathfinder topology discovery
- Describe and configure various Label Switched Path (LSP) types
- Describe primary, secondary, and standby LSPs
- Describe Point-to-Multipoint use cases
- NETCONF configuration and maintenance scheduling with Paragon Pathfinder
- Network analytics with Paragon Insights
- Describe and configure Paragon Automation Planner
- Model a network with Paragon Planner
- Simulate and optimize network demands with Paragon Planner

## Contenu

### DAY 1

#### 1 Introduction

#### 2 WAN Automation

- Describe WAN domains
- Describe Paragon Pathfinder capabilities
- Describe Paragon Planner capabilities

#### 3 Paragon Pathfinder Architecture

- Explain the Path Computation Element Protocol
- Explain LSP Signaling and the CSPF Algorithm
- Describe Paragon Pathfinder Architecture
- Configure the Network

Lab 1: Initial Setup

#### 4 Network Topology Discovery

- Describe Paragon Pathfinder network topology discovery
- Configure Paragon Pathfinder network topology discovery

Lab 2: Topology Discovery

### DAY 2

#### 5 Using Paragon Automation

- Examine the Paragon Automation interface
- Examine the Paragon Planner Desktop interface

Lab 3: Using Paragon Automation

#### 6 Basic LSP Management

- Describe and configure various Label Switched Path (LSP) types
- Configure PCC-controlled LSPs
- Configure PCE-controlled LSPs
- Configure PCE-initiated LSPs
- Verify LSP status

Lab 4: Basic LSP Management

#### 7 Advanced LSP Management

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- Describe and configure primary, secondary, and standby LSPs
- Describe and configure symmetric pairs of LSPs
- Describe and configure diversity groups
- Describe and configure MPLS LSP templates
- Describe and configure LSP calendaring
- Describe and configure inter-AS LSPs
- Describe and provision multiple LSPs
- Describe and configure LSP optimization

Lab 5: Advanced LSP management

## DAY 3

### 8 Segment Routing

- Describe Segment Routing
- Configure Segment Routing
- Manage Segment Routed LSPs using Paragon Pathfinder

Lab 6: Segment Routing

### 9 P2MP LSPs

- Describe Point-to-Multipoint use cases
- P2MP management with Paragon Pathfinder
- P2MP monitoring with Paragon Pathfinder
- Describe Point to-Multipoint LSPs

### 10 Maintenance Scheduling and NETCONF LSP Provisioning

- Configure scheduled maintenance events
- Provision NETCONF LSPs

Lab 7: Maintenance Scheduling and NETCONF Provisioning

### 11 Paragon Insights

- Describe Paragon Insights capabilities
- Enable Paragon Insights monitoring
- Integrate Paragon Insights and Paragon Pathfinder

Lab 8: Paragon Insights

## DAY 4

### 12 Troubleshooting Paragon Insights

- Identify Paragon Automation services and processes

- Log analysis with Paragon Insights
- Debugging with Paragon Insights

Lab 9: Troubleshooting Paragon Insights

### 13 Paragon Planner

- Explain the features and capabilities of Paragon Planner
- Launch Paragon Planner Desktop and explore the interface

Lab 10: Paragon Planner

### 14 Network Modeling

- Load Paragon Planner network models
- Explain network model data storage
- Modify network models

Lab 11: Network Modeling

### 15 Network Demands and Failure Simulation

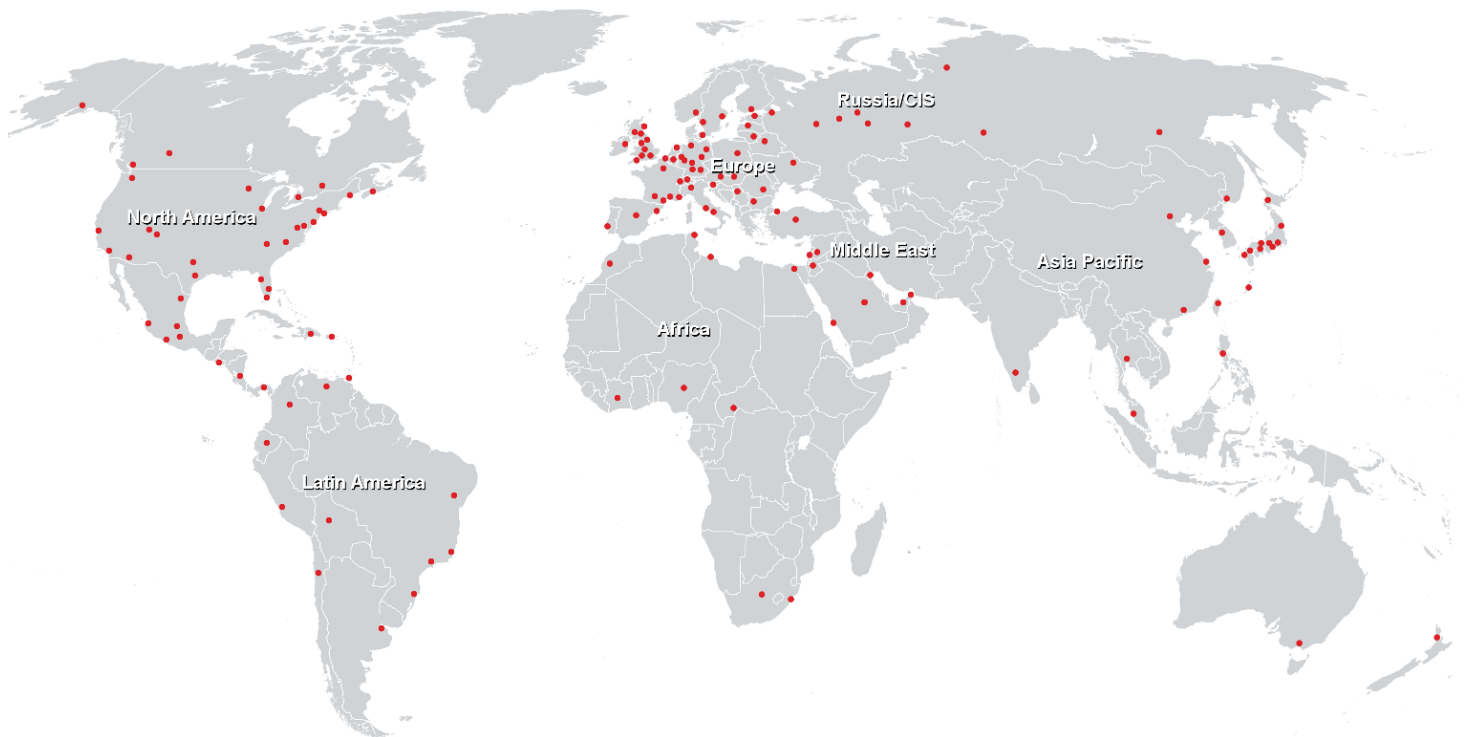
- Improve network traffic demand forwarding
- Simulate network failure

Lab 12: Network Demands and Failure Simulation

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