# Juniper Paragon Automation for the WAN

**Category:** Networking & Security | **Vendor:** Juniper

**Duration:** 32.00 hours (4 days) **26.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

## Course Information

**Delivery Format:** Instructor Led - Online

## Course Overview

This 4-day course introduces Paragon Automation applications including Paragon Pathfinder, Paragon Planner, and Paragon Insights. Through demonstrations and hands-on labs, students will learn the capabilities of these applications including WAN topology discovery, Segment Routed (SRTE) and RSVP signaled LSP management, Path Computation Element Protocol (PCEP) LSP discovery and provisioning, LSP optimization, LSP calendaring, maintenance scheduling, P2MP LSP management, failure simulation, reporting, network modeling, path demand placement, hardware inventory collection, network telemetry collection, and closed-loop automation. Students learn to configure and monitor these features on a WAN consisting of vMX Series devices. This course is based on Junos version 21.2R1.10 and Paragon Automation version 21.2.

## About This Course

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

- 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

## Who Should Attend

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

### Prerequisites & Entry Requirements

**General Prerequisites:**

The prerequities for this course are:

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

## Learning Outcomes

**Upon successful completion of this course, participants will be able to:**

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

## Detailed Course Outline

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Lab 4: Basic LSP Management

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Lab 5: Advanced LSP management

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- Improve network traffic demand forwarding

- Simulate network failure

Lab 12: Network Demands and Failure Simulation

**Skills You Will Learn:**

After successfully completing this course, you should be able to:<br><br><br><br>- Describe various WAN domains<br>- Describe and configure Paragon Pathfinder for initial use<br>- Describe and configure Paragon Pathfinder topology discovery<br>- Describe and configure various Label Switched Path (LSP) types<br>- Describe primary, secondary, and standby LSPs<br>- Describe Point-to-Multipoint use cases<br>- NETCONF configuration and maintenance scheduling with Paragon Pathfinder<br>- Network analytics with Paragon Insights<br>- Describe and configure Paragon Automation Planner<br>- Model a network with Paragon Planner<br>- Simulate and optimize network demands with Paragon Planner

# Frequently Asked Questions

### Q: What delivery options are available for Juniper Paragon Automation for the WAN?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

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### Q: How many CPD hours does this course provide?

The 4-day Juniper Paragon Automation for the WAN course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

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### Q: What is the duration of the Juniper Paragon Automation for the WAN training?

The training takes place over 4 day(s), with each day lasting approximately 32.00 hours including breaks for lunch and refreshments.

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### Q: Do you provide corporate training for Juniper Paragon Automation for the WAN?

Yes, we provide corporate training, dedicated training, and closed classes for Juniper Paragon Automation for the WAN. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

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### Q: What related terms do people search for?

Popular related searches include: Juniper Paragon Automation for the WAN, Enterprise Routing & Switching, JPAW

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### Q: Why choose Nexus Human for Juniper Paragon Automation for the WAN?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

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### Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Juniper Paragon Automation for the WAN training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.


## Nexus Human

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