Implementing Juniper Paragon Pathfinder and Planner Applications

Category: Software Development & Programming | **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 four-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 routing-traffic engineering (SR-TE) and RSVP- signaled label-switched path (LSP) management, Path Computation Element Protocol (PCEP) LSP discovery and provisioning, label-switched path (LSP) optimization, LSP calendaring, maintenance scheduling, point-to-multipoint (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 22.4R1.10 and Paragon Automation version 23.1.

About This Course

- Course Introduction
- WAN Automation
- Paragon Pathfinder Architecture
- Network Topology Discovery
- Using Paragon Automation
- Basic LSP Management
- Advanced LSP Management
- Segment Routing
- P2MP LSPs
- Maintenance Scheduling and NETCONF LSP Provisioning
- Paragon Insights
- Paragon Automation Troubleshooting
- Paragon Planner
- Network Modeling
- Network Demands and Failure Simulation
- Paragon Active Assurance Solution Components

Who Should Attend

This course benefits individuals using Paragon Automation to automate the management of service provider or large enterprise MPLS networks

Prerequisites & Entry Requirements

General Prerequisites:

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

Learning Outcomes

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

- Describe various WAN domains.
- Configure Paragon Pathfinder for initial use.
- Configure Paragon Pathfinder topology discovery.
- Provision various LSP types.
- Describe P2MP use cases.
- Perform LSP provisioning using Network Configuration Protocol (NETCONF).
- Schedule network maintenance events.
- Use Paragon Insights to analyze network performance.
- Launch and use Paragon Planner.
- Perform network modeling.
- Perform network component failure simulation.
- Manage and optimize network demands.

Detailed Course Outline

Course Introduction

WAN Automation

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

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 Configuration

Network Topology Discovery

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

Lab 2: Network Topology Discovery

Using Paragon Automation

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

Lab 3: Using Paragon Automation

Basic LSP Management

- Describe various LSP types
- Configure PCC-controlled LSPs
- Configure PCE-delegated LSPs
- Configure PCE-initiated LSPs
- Monitor LSPs from the Paragon pathfinder UI

Lab 4: Basic LSP Management

Advanced LSP Management

- Describe primary, secondary, and standby LSPs
- Describe symmetric pairs of LSPs

- Discuss diversity groups
- Describe using JUNOS MPLS LSP templates
- Explain LSP calendaring
- Describe inter-AS LSPs
- Explain how to provision multiple LSPs
- Define LSP optimization

Lab 5: Advanced LSP management

Segment Routing

- Describe segment routing
- Configure and verify segment routing on routers running Junos OS
- Use Paragon Pathfinder to provision SR-MPLS LSPs

Lab 6: Segment Routing

P2MP LSPs

- Describe the basic functionality of P2MP and its use cases
- Manage P2MP LSPs with Paragon Pathfinder
- Monitor P2MP PSPs with Paragon Pathfinder
- Describe point to-multipoint LSPs

Maintenance Scheduling and NETCONF LSP Provisioning

- Automate rerouting of LSPs
- Configure NETCONF LSP provisioning

Lab 7: Maintenance Scheduling and NETCONF Provisioning

Paragon Insights

- Describe Paragon Insights capabilities

- Configure Paragon Insights monitoring

Lab 8: Paragon Insights

Paragon Automation Troubleshooting

- Troubleshoot Paragon Automation components

- Troubleshoot network topology acquisition

- Troubleshoot the Path Computation Element Protocol

Lab 9: Paragon Automation Troubleshooting

Paragon Planner

- Explain the features and capabilities of Paragon Planner

- Launch Paragon Planner Desktop and explore the interface

Lab 10: Paragon Planner

Network Modeling

- Create a network model

- Analyze network model data files

- Modify network models

Lab 11: Network Modeling

Network Demands and Failure Simulation

- Calculate network demand forwarding

- Simulate network failure

Lab 12: Network Demands and Failure Simulation

Paragon Active Assurance Solution Components

- Passive versus active
- PAA solution overview
- Overview of use case topologies

Skills You Will Learn:

- Describe various WAN domains.
- Configure Paragon Pathfinder for initial use.
- Configure Paragon Pathfinder topology discovery.
- Provision various LSP types.
- Describe P2MP use cases.
- Perform LSP provisioning using Network Configuration Protocol (NETCONF).
- Schedule network maintenance events.
- Use Paragon Insights to analyze network performance.
- Launch and use Paragon Planner.
- Perform network modeling.
- Perform network component failure simulation.
- Manage and optimize network demands.

Frequently Asked Questions

Q: What delivery options are available for Implementing Juniper Paragon Pathfinder and Planner Applications?

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

Q: How many CPD hours does this course provide?

The 4-day Implementing Juniper Paragon Pathfinder and Planner Applications course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Implementing Juniper Paragon Pathfinder and Planner Applications training?

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

Q: Do you provide corporate training for Implementing Juniper Paragon Pathfinder and Planner Applications?

Yes, we provide corporate training, dedicated training, and closed classes for Implementing Juniper Paragon Pathfinder and Planner Applications. 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.

Q: What related terms do people search for?

Popular related searches include: Implementing Juniper Paragon Pathfinder and Planner Applications, Automation and DevOps, IJPPPA

Q: Why choose Nexus Human for Implementing Juniper Paragon Pathfinder and Planner Applications?

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

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Implementing Juniper Paragon Pathfinder and Planner Applications training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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