Enterprise Computing Solutions - Education Services

TRAINING OFFERING

You can reach us at:

Arrow Enterprise Computing Solutions Ltd, Part 1st Floor, Suite 1D/1, Central House, Otley Road, Harrogate, HG3 1UG

Email: educationteam.ecs.uk@arrow.com
Phone: 0870 251 1000

Implementing Juniper Paragon Pathfinder and Planner Applications (JPAW)

CODE:	LENGTH:	PRICE:
JUN_JPAW	32 Hours (4 days)	£3,195.00

Description

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 routingtraffic 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.
COURSE LEVEL
Advanced

Objectives

• 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.

Audience

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

Prerequisites

• Understanding of the OSI Model
• Junos OS configuration experience—Introduction to the Junos Operating System course or equivalent
• Advanced MPLS knowledge—Junos MPLS Fundamentals course or equivalent

Programme

DAY 1 1 Course 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 Configuration

4 Network Topology Discovery
• Describe how Paragon Pathfinder discovers network topology
• Configure Paragon Pathfinder network topology discovery
Lab 2: Network Topology Discovery

5 Using Paragon Automation
• Examine the Paragon Automation interface
• Examine the Paragon Planner Desktop interface

DAY 2

Lab 3: Using Paragon Automation

6 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

7 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

DAY 3

8 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

9 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

10 Maintenance Scheduling and NETCONF LSP Provisioning
• Automate rerouting of LSPs
• Configure NETCONF LSP provisioning
Lab 7: Maintenance Scheduling and NETCONF Provisioning

11 Paragon Insights
• Describe Paragon Insights capabilities
• Configure Paragon Insights monitoring
Lab 8: Paragon Insights

DAY 4

12 Paragon Automation Troubleshooting
• Troubleshoot Paragon Automation components
• Troubleshoot network topology acquisition
• Troubleshoot the Path Computation Element Protocol
Lab 9: Paragon Automation Troubleshooting

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
• Create a network model
• Analyze network model data files
• Modify network models
Lab 11: Network Modeling

15 Network Demands and Failure Simulation
• Calculate network demand forwarding
• Simulate network failure
Lab 12: Network Demands and Failure Simulation
SELF-STUDY MODULE

16 Paragon Active Assurance Solution Components
• Passive versus active
• PAA solution overview
• Overview of use case topologies

Follow on courses

Juniper SD-WAN with Mist AI

Test and Certification

RELATED CERTIFICATION: JNCIA-SEC

Session Dates

On request. Please Contact Us

Additional Information

This training is also available as onsite training. Please contact us to find out more.