Juniper Mist AI-Driven Networks (MIST)

COURSE OVERVIEW

This four-day course is designed to provide students with the knowledge required to work with enterprise wireless technologies and Mist AI-driven Wi-Fi networks. Students will gain in-depth knowledge of Wi-Fi technologies, Mist technologies, and how to use and configure them. Through demonstrations and hands-on labs, students will gain experience with the features and functionality of Mist AI-driven Wi-Fi.

COURSE LEVEL

Intermediate

AUDIENCE

Individuals working with enterprise wireless networks and applying artificial intelligence to their activities

PREREQUISITES

- Basic TCP/IP skills
- Basic knowledge of wireless (Wi-Fi) technologies is recommended

ASSOCIATED CERTIFICATION

JNCIS-MIST

RELEVANT JUNIPER PRODUCT

- CSO
- EX Series
- SRX Series
- Mist

CONTACT INFORMATION

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OBJECTIVES

- Describe WLAN association and roaming.
- Explain the wireless LAN life cycle.
- Explain and configure Mist architecture.
- Describe a wireless enterprise network.
- Explain the purpose of Mist and key differentiators.
- Describe wireless fundamentals.
- Describe the basic features Mist.
- Describe how to add new organizations and sites.
- Navigate the Mist portal.
- Describe the Mist AP deployment model.
- Provide an overview of the Mist onboarding workflow.
- Implement RF and configuration templates.
- Configure wireless access policies.
- Describe the EX Series switch deployment model.
- Describe the workflow for onboarding an EX Series switch to a Wired Assurance deployment.
- Describe labels and their use with Mist.
- Use Mist intelligent analytics and Marvis.
- Describe Real Time Location Sensor (RTLS) concepts and methods.
- Describe Mist automation and scripting.
- Instantiate a standalone NGFW site using CSO and SRX Series devices.
- Describe Service Level Experience and its place in wireless networks.
- Describe the client location service and use cases.
- Describe the components of an enterprise WLAN.
- Configure an enterprise grade WLAN.
- Describe a sitemap, site survey, and their critical components.
- Describe the subscriptions available for Mist.
- Describe the monitoring features.
- Generate reports.

COURSE CONTENT

DAY 1

1 Course Introduction

2 Wi-Fi Basics

- What is Wi-Fi?
- 802.11 PHYs
- Frequency Bands
- RF Basics
- Modulation and Coding
- Network Arbitration and Contention
- WLAN Architectures
- WLAN Association and Roaming
- Network Contention
- Wireless LAN Life Cycle

LAB 1: WLAN Testing

DAY 2

3 Mist Architecture and Initial Setup

- Mist Architecture
- Mist Account Organizations and Subscriptions
- Configuration Objects
- Organization Objects Versus Site Objects
- Access Points Overview, Configuration, and Troublehshooting

LAB 2: Initial Setup

LAB 3: Remote Site

4 WLANs

- WLAN Concepts
- Security Concepts
- Mist WLANs
- Policy (WxLAN)
- Wireless Intrusion Detection and Prevention

LAB 4: WLANs

LAB 5: Multiple PSK

Continued on the next column.

DAY 3

5 Network Operations

- Wireless Assurance
- Events and Insights
- Radio Resources Management (RRM)
- Wired Assurance

LAB 6: SLE Troubleshooting

6 AI and Marvis

- Artificial Intelligence (AI) Reactive and Proactive Troubleshooting
- Reactive and Proactive Troubleshooting
- Marvis Language and Actions

LAB 7: Marvis

DAY 4

7 Location-Based Services

- Concepts and Methods
- Wi-Fi Location
- Virtual BLE
- User Engagement
- Asset Visibility

8 Automation and Scripting Overview

- Mist API Overview
- Automation and Scripting Overview

LAB 8: RESTful API

LAB 9: WebSocket API

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