

Juniper Mist AIOps (JMA)

COURSE OVERVIEW

This three-day course explores both the available resource-based Mist AI data and real-time event-based Mist AI data. The class looks at how the data can be accessed and searched through the Mist UI via Marvis. The class also explores automation and integration using the Mist APIs. Through demonstrations and hands-on labs, students will gain experience with features of Mist AIOps.

COURSE LEVEL

Intermediate

INTENDED AUDIENCE

Individuals responsible for accessing and using Mist AI data for business intelligent operation

PREREQUISITES

- Basic networking (wired and wireless) knowledge
- Understanding of the Open Systems Interconnection (OSI) reference model and the TCP/IP protocol suite
- Basic scripting knowledge; Python knowledge recommended
- Completion of the *Juniper Mist AI Networks (MIST)* course, or equivalent experience

RELATED JUNIPER PRODUCTS

- Mist AI

CONTACT YOUR REGIONAL EDUCATION SERVICES TEAM:

- Americas: training-amer@juniper.net
- EMEA: training-emea@juniper.net
- APAC: training-apac@juniper.net

OBJECTIVES

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

- Describe the data available in the Mist Cloud
- Describe Marvis components and operations
- Leverage Marvis to access Mist AI data
- Explain the built-in integration options
- Describe Mist RESTful API features and limitations
- Describe Mist WebSockets API features and limitations
- Describe Mist Webhook API features and limitations
- Perform Mist AI Operations using Postman
- Perform Mist AI Operations using Node-RED
- Explore Mist API using Python
- Perform advanced Mist AI automation using Python
- Describe 802.1X Authentication and operations
- Perform RADIUS server integration and role-based policy configuration

COURSE CONTENTS

DAY 1

1

Course Introduction

2

What Is AIOps?

- Define AI and ML terminology
- Define AIOps
- Explain the goals of AIOps
- Discuss the importance of data
- Explain Mist Cloud components

3

Mist AI Data

- Describe Access Point (AP) Data
- Describe LLDP Data
- Describe Switch Data
- Describe Config Data—JSON
- Describe Event Data
- Describe Insight Data
- Describe Client Stats
- Describe AP Stats

4

RESTful API

- Define RESTful API
- Describe how to build RESTful API requests
- Describe features available using the RESTful API
- Describe the limitations of the Mist RESTful API

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COURSE CONTENTS

DAY 1 (contd.)

5 Postman

- Define Postman
- Explain how Postman interacts with the Mist API
- Describe how to use Postman to automate tasks
- Set up your own Postman's environment
- Use the Juniper Mist Collection within your own Postman's environment

Lab 1: Automating Mist AI Operations using Postman

Lab 2: Mist Runner Collection

DAY 2

6 Marvis

- Describe Marvis natural language queries
- Describe Marvis query language queries
- Describe the Marvis Conversational Interface
- Explain Marvis Actions

7 Marvis Data

- Describe Marvis Client and Roaming data
- Describe how to access and query Mist data
- Explain how Marvis uses Mist data

8 Mist WebSocket API

- Define Webhook API
- Describe how to use the Mist Webhook API
- Describe the set of features available via the Webhook API used by Mist
- Describe the limitations of the Mist Webhook API

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10 Node-RED

- Define Node-RED
- Describe how to use Node-RED to interact with the Mist API
- Describe how to use Node-RED and the Mist API to solve use cases
- Use Node-RED in the lab to interact with the Mist API

DAY 2

11 Python and Mist API

- Define Python
- Explain why we use Python to perform network automation
- Describe how to interact with the Mist API using Python
- Build Python scripts to interact with the Mist APIs

Lab 3: Mist Operations Using Python

DAY 3

12 Built-In Integration

- Explain how to leverage Python to perform automation
- Describe what type of automation is possible with Python
- Review automation use cases and examples
- Build Python scripts to interact with the Mist APIs

Lab 4: Python Automation

13 Python Automation

- Explain Ekahau and iBwave Import
- Explain CloudShark integration
- Describe how to integrate external captive portals

Demo: Building In Integration

14 802.1X Authentication

- List the components of AAA
- Explain 802.1X operations
- Describe EAP operations
- Explain the different EAP types and how they differ
- Describe the RADIUS protocol and server
- Describe RADIUS attributes and how they are used

15 RADIUS Integration

- Explain how to integrate a third-party RADIUS server into Mist
- Explore the steps required to integrate ClearPass with Mist
- Describe how to map RADIUS attributes to Mist labels
- Explain how to use RADIUS attribute labels in WxLAN policies
- Explain how SMAL can be used to integrate third-party identity providers for administrator logins

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