

COURSE OVERVIEW

This three-day course explores both the available resource-based Juniper Driven by Mist AI™ data and real-time event-based Mist AI™ data. The class examines how the data can be accessed and searched through the Mist UI through Marvis® Virtual Network Assistant. The class also explores automation and integration using the Juniper Mist™ APIs. Through demonstrations and hands-on labs, students will gain experience with features of Juniper Mist AI.

COURSE LEVEL

Intermediate

INTENDED AUDIENCE

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

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 [Deploying and Managing Juniper Wireless Networks with Mist AI](#) course or equivalent knowledge

RELATED JUNIPER PRODUCT

- Mist AI

CONTACT EDUCATION SERVICES

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

OBJECTIVES

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

- Describe the data available in the Juniper Mist™ cloud.
- Describe the components and operations of Marvis.
- Use Marvis to access Juniper Mist AI data.
- Explain the built-in integration options.
- Describe the features and limitations of Juniper Mist RESTful API.
- Describe the features and limitations of Juniper Mist WebSocket API.
- Describe the features and limitations of Juniper Mist Webhook API.
- Perform Juniper Mist AI operations using Postman.
- Perform Juniper Mist AI operations using Node-RED.
- Describe Juniper Mist API using Python.
- Perform advanced Juniper 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 Juniper 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

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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

COURSE CONTENTS

DAY 1 (continued)

- 5 Postman**
- Define Postman
 - Explain how Postman interacts with the Mist API
- Lab 1: Automating Juniper Mist AI Operations using Postman**
- Describe how to use Postman to automate tasks
 - Set up your own Postman environment
 - Use the Juniper Mist Collection within your own Postman environment
- Lab 2: Juniper 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 Juniper Mist data

- 8 Mist WebSocket API**
- Define WebSocket API
 - Describe how to use the Mist WebSocket API
 - Describe the set of features available via the WebSocket API used by Juniper Mist
 - Describe the limitations of the Mist WebSocket API

- 9 Webhook 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

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

DAY 2 (continued)

- 11 Python and Mist API**
- Define Python
 - Explain why we use Python to perform network automation
 - Describe how to interact with the Juniper Mist API using Python
 - Build Python scripts to interact with the Mist APIs
- Lab 3: Python and Juniper Mist API**

DAY 3

- 12 Built-In Integration**
- Explain Ekahau and iBwave Import
 - Explain CloudShark integration
 - Describe how to integrate external captive portals

- 13 Python Automation**
- 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**

- 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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