Introduction to Juniper Mist AI

COURSE OVERVIEW

This three-day, introductory-level course serves as the springboard to understanding the Mist AI™ Full Stack offerings. This course provides students with a comprehensive understanding of a fully deployed, driven by Mist AI wired, wireless, and software-defined WAN (SD-WAN) network. In their lab environments, students will explore each Mist AI offering at a high level, focusing on wireless and Edge products, switching and campus design, SD-WAN connectivity, enterprise routing capabilities, deploying Juniper Mist Access Assurance and Juniper® Location Service, driven by Mist AI™.

This course outlines Mist AI and how the full stack combines for complete AI-native networking. After completing this course, students can articulate the benefits and essential functions of the flexible, scalable, and distributed Mist AI architecture across their wired, wireless, and SD-WAN networks.

The course is based on the Juniper Mist cloud, which updates on a biweekly basis. The labs use the Virtual SSR version 6.2.4-14.r2. The Juniper Networks® EX4400 line of Switches run the 23.4R2-S4.11 version of Junos. The Juniper Access Points are cloud updated.

COURSE LEVEL

Introduction to Juniper Mist AI is an introductory-level course.

AUDIENCE

- Individuals with a high-level understanding of the Mist AI Full Stack and Mist AI-Native Networking solutions.

PREREQUISITES

- Basic Junos OS knowledge.
- Basic understanding of the OSI model and IP networking.
- Basic understanding of wireless technology.
- Basic understanding of SD-WAN.
- Completion of *Networking Technology Foundations* and *Getting Started with Wi-Fi* e-learning courses.

RELATED JUNIPER PRODUCTS

SRX Series Firewalls, QFX Series Switches, EX Series Switches, Mist AI

RELATED CERTIFICATION

JNCIA-Mist AI

RECOMMENDED NEXT COUSE

Deploying and Managing Juniper Wireless Networks with Mist AI
Deploying and Managing Wired Networks for Campus and Branch with Juniper Mist AI

OBJECTIVES

- Describe the Juniper Mist™ cloud.
- Explain the key concepts, terminology, and configuration for the Juniper Mist Full Stack, including:
  - Juniper Mist Wireless Assurance.
  - Juniper Mist Wired Assurance.
  - Juniper Mist WAN Assurance.
- Articulate key features in the Juniper Mist solutions, including:
  - Marvis® Virtual Network Assistant, Marvis Actions, Marvis® Minis
  - Juniper Mist Network Analytics.
  - Juniper Mist Premium Analytics.
  - Juniper Mist Access Assurance (NAC).
  - Juniper® Routing Assurance
  - Location Service, driven by Mist AI.
  - Juniper Mist Edge.
  - Juniper® Secure Edge integrations.
  - Juniper Apstra™ Cloud Services integration with Mist AI.

Course Outline

COURSE CONTENTS

DAY 1

Module 01: Introduction to Juniper Mist

- Describe the Juniper Mist platform
- Describe Marvis VNA and Marvis Minis
- Define the Juniper Mist platform full stack
- Outline the services and solutions of the Juniper Mist platform

Module 02: Introduction to Artificial Intelligence and the Juniper Mist AI-Native Network

- Describe the evolution of artificial intelligence
- Describe machine learning
- Describe Mist AI
- Describe Juniper Mist cloud

Module 03: Introduction to Marvis

- Describe Marvis
- Describe Marvis Actions
- Provide an overview of the Marvis Conversational Assistant and the Marvis Query Language
- Describe Marvis Minis

Module 04: Juniper Mist—Accounts and Management

- Describe how to create and manage a Juniper Mist account
- Provide an overview of Juniper Mist management and administration
- Describe Juniper Mist alerts and e-mail notifications
- Outline the subscription options for Juniper Mist

Lab 01: Juniper Mist Portal and Initial Configuration

Module 05: Juniper Mist Wireless Assurance—Day 0 Expectations

- Define Day 0 expectations
- Outline the configuration of sites, WLAN templates, WLANs, and VLANs
- Describe RF templates and device profiles
- Explain SSID strategies for 802.1X, portals, and BYOD

Module 06: Juniper Mist Wireless Assurance—Day 1 Expectations

- Describe Day 1 expectations
- Describe Juniper Access Points
- Describe how to onboard Juniper Access Points
- Outline the use cases of Juniper Mist Wireless Assurance

Module 07: Juniper Mist Wireless Assurance—Management and Monitoring

- Define Day 2+ expectations
- Define Juniper Mist Wireless Assurance
- Describe wireless insights, SLEs, and monitoring
- Describe how to view clients
- Describe Marvis Actions for Juniper APs

Lab 02: Wireless Assurance

DAY 2

Module 08: Juniper Mist Location Services—Capabilities and Use Cases

- Describe the use cases for Location Services
- Outline the devices used in Juniper Mist Location Services
- Explain BLE
- Describe vBLE Engagement and virtual beacons
- Outline the features of Asset Visibility
- Explain Juniper Mist User Engagement cloud service

Module 09: Juniper Mist Wired Assurance—Day 0 Expectations

- Define Day 0 expectations
- Describe the configuration hierarchy of Juniper Mist Wired Assurance
- Outline the wired configuration elements
- Describe how to configure and implement the VLANs and port profiles
- Describe dynamic port profiles

Module 10: Juniper Mist Wired Assurance—Deployment Workflow

- Define Day 1 expectations
- Explain Juniper Mist Wired Assurance and Wired Visibility
- Describe Juniper Mist Wired devices and Virtual Chassis
- Describe how to onboard switches
- Describe distributed enterprise deployments
- Compare traditional campus networks to EVPN-VXLAN campus fabrics
- Explain micro segmentation
- Describe the Juniper Mist EVPN Campus Fabric Wizard

Module 11: Juniper Mist Wired Assurance—Management and Monitoring

- Define Day 2+ expectations
- Describe wired insights, SLEs, and monitoring
- Describe Marvis Actions for Juniper switches

Lab 03: Wired Assurance

Module 12: Juniper Mist Access Assurance—Capabilities and Use Cases

- Describe the components of network access control
- Explain the features of Juniper Mist Access Assurance
- Describe the Juniper Mist Access Assurance use cases
- Describe authentication policies
- Describe posture compliance

Lab 04: Wireless Assurance (802.1X Auth)

Module 13: Juniper Routing Assurance—Capabilities and Use Cases

- Outline the features of Juniper Routing Assurance
- Describe the use cases of Juniper Routing Assurance
- Describe the onboarding and configuration workflows for Day 0 and Day 1
- Explain WAN Monitoring SLEs and Day 2 Experiences

DAY 3

Module 14: Juniper Mist SD-WAN—Capabilities and Use Cases

- Define SD-WAN
- Describe WAN Edge and Overlay
- Explain tunnel-free routing
- Outline platform considerations and deployment patterns

Module 15: Juniper Mist WAN Assurance—Deployment Workflow

- Outline the Juniper SD-WAN Intent Model
- Outline WAN Edge templates and hub profiles
- Describe Application Steering and SD-WAN configuration
- Outline secure services edge integrations

Module 16: Juniper Mist WAN Assurance—Management and Monitoring

- Explain Session Smart SD-WAN SLEs
- Describe Marvis Actions and WAN Edge Monitoring and Insights
- Outline WAN user experiences and application-based context
- Outline the customer deployment journey

Lab 05: WAN Assurance

Module 17: Juniper Mist Templatization, Variables, and Automation

- Define Juniper Mist templates
- Configure Wireless, Wired, and SD-WAN templating
- Describe Juniper Mist template deployment
- Describe Juniper Mist variables

Module 18: Juniper Mist API

- Explain API concepts
- Describe the Juniper Mist RESTful API
- Describe the Juniper Mist WebSocket API
- Describe the Juniper Mist Webhooks API

Module 19: Juniper Mist Documentation and Support

- Explain Juniper Mist documentation
- Outline the steps to create support tickets
- Explain feature requests

Lab 06: Juniper Mist Help

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