

Deploying and Managing Juniper Wireless Networks with Mist AI

COURSE OVERVIEW

This four-day course provides students with the knowledge required to work with enterprise wireless technologies and Juniper Driven by Mist AI™ wireless networks. Students will gain in-depth knowledge of wireless technologies, Juniper Mist™ technologies, and how to configure and use them. Through demonstrations and hands-on labs, students will gain experience with the features and functionalities 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
- General networking
- Completion of the [Introduction to Juniper Mist AI](#) course or equivalent knowledge

RELATED JUNIPER PRODUCT

- Juniper Mist AI

RELATED CERTIFICATION

[JNCIS-MistAI-Wireless Certification](#)

RECOMMENDED NEXT COURSES

[Juniper Mist AIOps \(JMA\)](#)

[Deploying and Managing Juniper Wired Networks for Campus and Branch with Mist AI \(JCMA\)](#)

CONTACT EDUCATION SERVICES

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OBJECTIVES

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

- Describe the IEEE 802.11 standard and amendments.
- Describe wireless frequency bands.
- Apply radio frequency (RF) basics in wireless networks.
- Identify how modulation and coding make up wireless networks.
- Describe the interworkings of association and roaming.
- Describe network contention factors.
- Define WLANs.
- Define Juniper Mist.
- Describe Juniper Mist configuration objects for wireless networks.
- Describe Juniper Access Points and their configuration options.
- Describe Juniper Mist's WLAN configuration objects.
- Describe Juniper Mist™ Edge.
- Describe the Juniper Mist guest options.
- Describe WxLAN policies and how apply them to resources.
- Examine wireless intrusion detection and prevention from Juniper Mist.
- Describe WLAN security threats detected by the Juniper Mist WLAN system.
- Interpret wireless service-level expectations (SLEs) in relation to users.
- Gather events and insights from the Mist™ cloud.
- Summarize Juniper Mist's radio resource management (RRM).
- Review additional data to create dashboard and reports.
- Evaluate machine learning and artificial intelligence.
- Summarize Marvis queries.
- Extend Mist's Marvis actions.
- Describe the functions of Marvis Actions and Marvis Minis.
- Compare the concepts and methods of location services.
- Explain Juniper Mist's approach to user engagement and asset visibility.

COURSE CONTENTS

DAY 1

1	Wi-Fi Standards <ul style="list-style-type: none">Describe the purpose of the 802.11 standard and its physical later amendments
2	Wi-Fi Radio Frequency Bands <ul style="list-style-type: none">Describe the 2.4-GHz, 5-GHz, and 6-GHz frequency bands used for WLANs and their channels
3	Applying Radio Frequency Basics to Wi-Fi <ul style="list-style-type: none">Describe the properties of an RF waveConvert dBm to Milliwatts using RF mathExplain factors that contribute to RF signals and how they relate to WLANs
4	Modulation and Coding for Wireless Networks <ul style="list-style-type: none">Explain RF modulation and how it relates to WLAN data ratesDescribe the relationship between SNR and MCS
5	Understanding Client Association and Roaming <ul style="list-style-type: none">Describe the 802.11 state machine and steps required for an 802.11 station to connect to an access pointExplain the protocols used in a client's connection to the network
6	Network Contention Factors <ul style="list-style-type: none">Describe 802.11 contention
7	Wi-Fi Architectures and Life Cycle <ul style="list-style-type: none">Differentiate WLAN architecturesDescribe the stages of the WLAN life cycle
8	Getting Started with Juniper Mist <ul style="list-style-type: none">Examine the Juniper Mist architectureCreate a Juniper Mist accountSummarize Juniper Mist subscriptionsSummarize the MSP dashboard Lab 1: Initial Setup

DAY 2

9	Juniper Mist Configuration Objects <ul style="list-style-type: none">Explain the difference between organization-level and site-level configuration objectsDefine Juniper Mist configuration objects and their uses Lab 2: Remote Site and Site Groups and Variables
10	Juniper Access Points <ul style="list-style-type: none">Summarize access points and connectivityDescribe the boot procedure for a Juniper Access Point, its requirements, and the process of adding a Juniper Access Point to the Juniper Mist cloudDescribe common AP configuration settingsUse the Juniper Access Points dashboard to get information about an Access Point
11	WLANs <ul style="list-style-type: none">Define a SSIDs, BSSIDs, and their functionsReview additional WLAN configuration optionsExplain WLAN security options and how they are configured in a Juniper Mist WLAN configuration objectDescribe data rates and how they are configured in Juniper MistExplain SSID strategies for multiband deployments
12	Juniper Mist Edge <ul style="list-style-type: none">Define the features and benefitsIdentify popular use casesCategorize the product optionsSummarize the installationReview the Edge managementTroubleshoot the device and connectivity

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COURSE CONTENTS (continued)

DAY 3

13	Guest Portals <ul style="list-style-type: none">Describe the Juniper Mist guest options
14	Juniper Mist WxLAN Policies <ul style="list-style-type: none">Explain WLAN policies and how they are configured Lab 3: WLANs and WxLAN
15	Juniper Mist Wi-Fi Security <ul style="list-style-type: none">Describe WLAN security threats detected by the Juniper Mist WLAN system
16	Juniper Mist Service-Level Expectations <ul style="list-style-type: none">List Wi-Fi Assurance SLEs and their classifiers
17	Juniper Mist Events and Insights <ul style="list-style-type: none">Describe site, AP, and client eventsExplain the packet capture functionality of the Juniper Mist systemDescribe the 802.11 MAC header and list 802.11 MAC frame types Lab 4: SLE Troubleshooting
18	Juniper Mist Radio Resource Management <ul style="list-style-type: none">Describe Juniper Mist RRM operations and their purposes

DAY 4

19	Juniper Mist Dashboard and Reports <ul style="list-style-type: none">Explain custom dashboard and report options
20	Juniper Mist Artificial Intelligence and Troubleshooting Options <ul style="list-style-type: none">Assess Juniper Mist's application of artificial intelligenceDescribe the reactive and proactive troubleshooting methodologies
21	Marvis Queries <ul style="list-style-type: none">Explain the difference between Marvis natural language and Marvis query language
22	Marvis Actions <ul style="list-style-type: none">Explain the features of Marvis ActionsExplain the functions of Marvis Minis Lab 5: Marvis
23	Location-Based Services <ul style="list-style-type: none">Describe real-time location servicesExplain Wi-Fi components for location services
24	User Engagement and Asset Visibility <ul style="list-style-type: none">Explain Juniper Mist's approach to user engagementDescribe Juniper Mist's asset visibility capabilities

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