Deploying and Managing Juniper Wireless Networks with Mist AI (JWMA)

Duration: 4 Days **Course Code: JUN_JWMA** **Delivery Method: Virtual Learning**

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
RELATED JUNIPER PRODUCT
• Juniper Mist AI

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

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

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.

Prerequisites:

• Basic TCP/IP skills

• General networking

• Completion of the Introduction to Juniper Mist AI course or equivalent knowledge

Testing and Certification

JNCIS-MistAI-Wireless Certification

Follow-on-Courses:

Juniper Mist AIOps (JMA)

Deploying and Managing Juniper Wired Networks for Campus and Branch with Mist AI (JCMA)

Content:

DAY 1

1 Wi-Fi Standards

• Describe the purpose of the 802.11 standard and its physical later amendments

2 Wi-Fi Radio Frequency Bands

• 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

• Describe the properties of an RF wave

• Convert dBm to Milliwatts using RF math

• Explain factors that contribute to RF signals and how they relate to WLANs

4 Modulation and Coding for Wireless Networks

• Explain RF modulation and how it relates to WLAN data rates

• Describe the relationship between SNR and MCS

5 Understanding Client Association and Roaming

• Describe the 802.11 state machine and steps required for an 802.11 station to connect to an access point

• Explain the protocols used in a client's connection to the network

6 Network Contention Factors

• Describe 802.11 contention

7 Wi-Fi Architectures and Life Cycle

• Explain the difference between organization-level and site-level configuration objects

• Define Juniper Mist configuration objects and their uses

Lab 2: Remote Site and Site Groups and Variables

10 Juniper Access Points

• Summarize access points and connectivity

• Describe the boot procedure for a Juniper Access Point, its requirements, and the process of adding a Juniper Access Point to the Juniper Mist cloud

• Describe common AP configuration settings

• Use the Juniper Access Points dashboard to get information about an Access Point

11 WLANs

• Define a SSIDs, BSSIDs, and their functions

• Review additional WLAN configuration options

• Explain WLAN security options and how they are configured in a Juniper Mist WLAN configuration object

• Describe data rates and how they are configured in Juniper Mist

• Explain SSID strategies for multiband deployments

12 Juniper Mist Edge

• Define the features and benefits

• Identify popular use cases

• Describe WLAN security threats detected by the Juniper Mist WLAN system

16 Juniper Mist Service-Level Expectations

• List Wi-Fi Assurance SLEs and their classifiers

17 Juniper Mist Events and Insights

• Describe site, AP, and client events

• Explain the packet capture functionality of the Juniper Mist system

• Describe the 802.11 MAC header and list 802.11 MAC frame types

Lab 4: SLE Troubleshooting

18 Juniper Mist Radio Resource Management

• Describe Juniper Mist RRM operations and their purposes

DAY 4

19 Juniper Mist Dashboard and Reports

• Explain custom dashboard and report options

20 Juniper Mist Artificial Intelligence and Troubleshooting Options

• Assess Juniper Mist's application of artificial intelligence

• Describe the reactive and proactive troubleshooting methodologies

21 Marvis Queries

• Explain the difference between Marvis natural language and Marvis query language

• Differentiate WLAN architectures

• Describe the stages of the WLAN life cycle

8 Getting Started with Juniper Mist

• Examine the Juniper Mist architecture

• Create a Juniper Mist account

• Summarize Juniper Mist subscriptions

• Summarize the MSP dashboard

Lab 1: Initial Setup

DAY 2

9 Juniper Mist Configuration Objects

• Categorize the product options

• Summarize the installation

• Review the Edge management

• Troubleshoot the device and connectivity

DAY 3

13 Guest Portals

• Describe the Juniper Mist guest options

14 Juniper Mist WxLAN Policies

• Explain WLAN policies and how they are configured

Lab 3: WLANs and WxLAN

15 Juniper Mist Wi-Fi Security

22 Marvis Actions

• Explain the features of Marvis Actions

• Explain the functions of Marvis Minis

Lab 5: Marvis

23 Location-Based Services

• Describe real-time location services

• Explain Wi-Fi components for location services

24 User Engagement and Asset Visibility

• Explain Juniper Mist's approach to user engagement

• Describe Juniper Mist's asset visibility capabilities

Additional Information:

Delegates will receive e-kit courseware.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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