Deploying and Managing SD-WAN with Juniper Mist AI

COURSE OVERVIEW

This two-day course teaches students to configure, deploy, monitor, and troubleshoot Juniper Mist™ AI WAN Edge devices deployed in a hub-and-spoke topology. The course summarizes the Juniper Mist AI full-stack solution and how it aligns with enterprise architectures. It is followed by detailed information and lab exercises regarding the operation, configuration, deployment, monitoring, and troubleshooting of Juniper Mist AI WAN Edge devices in software-defined WANs (SD-WAN). This course is based on Juniper Mist™ Cloud, which updates bi-weekly. The labs use the virtual SSR version 6.2.4-14r2 and Junos Release 21.3R3.10.

Key topics include Enterprise WAN Edge design principles, device onboarding, basic configuration in the Juniper Mist UI, common configuration tasks, and workflows, operational monitoring with application identification, and device maintenance and troubleshooting within Juniper Mist. Although the course covers the theory of both platforms, the hands-on labs, basic configuration in the Juniper Mist UI, and the common configuration tasks and workflows are performed with Juniper Networks® SSR Series Routers. Juniper Networks® SRX Series Firewalls are covered in lectures only.

COURSE LEVEL

Intermediate

AUDIENCE

Individuals responsible for implementing, configuring, and maintaining SSR Series Routers and SRX Series Firewall devices deployed as Juniper Mist WAN Edge devices

PREREQUISITES

- Intermediate cloud and networking knowledge
- Understanding of the OSI reference model and the TCP/IP protocol suite
- Strong familiarity with Juniper Networks® SSR Series Routers and Secure Vector Routing
- An understanding of Juniper Networks® SRX Series Firewalls
- Attendees should have taken the *Introduction to Juniper Mist AI* course

RELATED JUNIPER PRODUCTS

- Junos OS
- Juniper Mist AI
- SRX Series
- Juniper Session Smart Routers

CONTACT YOUR REGIONAL EDUCATION SERVICES TEAM:

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OBJECTIVES

- Describe Juniper Mist™ WAN Assurance.
- Explain the key concepts and terminology in SD-WAN with Juniper Mist AI.
- Onboard a WAN Edge device effectively and perform basic configurations.
- Explain how Application Policy influences resource access.
- Explain how Juniper Mist translates intent into configurations for WAN Edge.
- Define and apply SD-WAN with Juniper Mist AI scaling features.
- Describe how Juniper Mist AI enables site-to-site connectivity with the overlay.
- Explain how Juniper Mist AI translates intent into configurations for SD-WAN.
- Deploy application steering using application identification.
- Describe the SD-WAN with Juniper Mist AI integration workflow for a Secure Service Edge.
- Monitor and troubleshoot your WAN Edge devices.

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COURSE CONTENTS

DAY 1

1	**Introduction to SD-WAN with Juniper Mist AI**

- Describe the SD-WAN with Juniper Mist AI Solution
- Define the WAN Edge
- Define the terminology used in Juniper SD-WAN with Mist AI
- Outline deployment considerations for Juniper SD-WAN with Mist AI

2	**SD-WAN with Juniper Mist AI Quick Start**

- Explain the onboarding options for a WAN Edge in Juniper Mist
- Explain the basic SD-WAN with Juniper Mist AI workflow
- Outline device-specific templates

Lab 1: Quick Start

3	**Networks in SD-WAN with Juniper Mist AI**

- Assess `Network` as an element to prioritize deployment patterns and workflow
- Summarize `Network` elements, including `Users` and indirectly attached network subsets
- Contrast platform implementation deployment considerations for the SRX and SSR

4	**Applications in SD-WAN with Juniper Mist AI**

- Explain Applications
- Explain Traffic Steering
- Explain Application Policy

5	**Application Identification and Discovery**

- Outline application identification in SD-WAN with Juniper Mist AI
- Describe application identification on SRX Series Firewalls and
- Premium Analytics
- Describe application identification on Juniper Session Smart Router and Premium Analytics

6	**Application Policy and Application Steering**

- Define application steering in SD-WAN for Juniper Mist AI
- Explain how to use AppID to implement application steering
- Define application steering considerations

Lab 2: Application Policy

DAY 2

7	**Juniper Mist AI WAN Edge Intent Model**

- Explain intent-based networking
- Explain the intent-based model for SRX
- Explain the intent-based model for SSR

8	**Automating and Scaling the Network**

- Explain WAN Edge Templates
- Explain Site Variables
- Explain Importing, Exporting, and Applying Templates
- Explain Organization Level Application Policy

Lab 3: Scaling with Templates and Site Variables

9	**SD-WAN and Intersite Connectivity**

- Explain the SD-WAN model for SRX
- Explain the SD-WAN model for SSR
- Explain SD-WAN deployment considerations

Lab 4: SD-WAN

10	**SD-WAN with Juniper Mist AI High Availability Design**

- Explain concepts of Session Smart® high availability
- Outline HA deployment workflow
- Explain SRX cluster caveats

11	**SD-WAN with Juniper Mist AI with Secure Services Edge**

- Describe the Juniper Secure Services Edge Solution
- Describe SD-WAN with Juniper Mist AI and Juniper Secure Edge integration
- Describe SD-WAN with Juniper Mist AI and SSE Zscaler integration

12	**Monitoring SD-WAN with Juniper Mist AI**

- Describe monitoring with WAN Edge details
- Explain monitoring with WAN Edge Insights

Lab 5: Monitoring SD-WAN with Juniper Mist AI

13	**Troubleshooting SD-WAN with Juniper Mist AI**

- Outline troubleshooting with Marvis and SLEs in SD-WAN with Juniper Mist AI
- Review tools for troubleshooting

Lab 6: Troubleshooting SD-WAN with Juniper Mist AI

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