Deploying and Managing SD-WAN with Juniper Mist AI

Course overview

This three-day, intermediate-level course provides students with the foundational knowledge required to work with HPE Mist Networking WAN Assurance. The course summarizes how WAN Assurance streamlines the deployment, configuration, and management of HPE Mist WAN Edge devices in a full hub-and-spoke software-defined WAN (SD-WAN) deployment.

Key topics include a review of fundamental HPE Mist Agentic AIOps platform concepts; the onboarding options for WAN Edge devices; an overview of the supported security features; design principles and steps for implementing basic standalone, multisite standalone, and SD-WAN topologies; the best way to leverage variables and the automation available in HPE Mist for deploying and scaling the network; how HPE Mist translates intent into configurations on the SRX firewalls and session smart routers; how to create custom application and filtering for unique traffic flows; establishing HPE and third-party secure services edge (SSE) connections; design principles for highly available WAN Edges; and monitoring and troubleshooting WAN Edges in the HPE Mist Networking.

The labs in this course follow a sequential structure, requiring participants to complete each lab in the specified order. Each lab builds upon concepts and configurations established in the preceding labs, culminating in the creation of an overlay within an SD-WAN deployment. The session smart routers run version 6.3.3-40.r2 to align with the published validated design, “WAN Edge with the Session Smart Router.”

Course level

Intermediate-level course

Audience

This course benefits individuals responsible for implementing, configuring, and maintaining SSR Series routers and SRX firewalls deployed as HPE Mist WAN Edge devices.

Prerequisites

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

Related products

- HPE Networking Session Smart Routers
- HPE Networking SRX Firewalls
- HPE Self-Driving Network

Recommended next course

Automating Juniper Mist AI Enterprise

Objectives

- Describe SD-WAN with HPE Mist.
- Explain the key concepts and terminology in SD-WAN with HPE Mist.
- Effectively onboard a WAN Edge device and perform basic configurations.
- Articulate the HPE Mist intent-driven model.
- Explain how Application Policy influences resource access.
- Explain how HPE Mist translates intent into configurations for WAN Edge.
- Define and apply SD-WAN with HPE Mist scaling and variable features.
- Describe how HPE Mist enables site-to-site connectivity through the overlay.
- Deploy application steering using application identification.
- Effectively onboard a hub and deploy a full hub-and-spoke SD-WAN.
- Configure and deploy a highly available, clustered WAN Edge.
- Define the SD-WAN with HPE Mist integration workflow for a secure services edge.
- Monitor and troubleshoot your WAN Edge devices.

Course contents

DAY 1

Module 01: Introduction to HPE Mist Networking WAN Assurance

- Describe SD-WAN with the HPE Mist solution
- Define the WAN Edge and its role in SD-WAN connectivity
- Outline deployment considerations for SD-WAN with HPE Mist Networking WAN Assurance

Module 02: WAN Assurance Configuration Hierarchy

- Describe the HPE Mist Networking intent model
- Outline WAN Assurance Networks and Applications
- Summarize the Hub Profile workflow and the WAN Edge Template use cases

Module 03: Networks in SD-WAN with HPE Mist

- Assess Network as part of the intent-driven model to prioritize deployment patterns and workflow
- Examine Network elements, including users and indirectly attached network subnets

Module 04: Applications in SD-WAN with HPE Mist

- Describe Applications
- Explain Traffic Steering in HPE Mist
- Connect Application Policy to HPE Mist intent-based networking elements

Module 05: SD-WAN with HPE Mist—Quick Start

- Explain the onboarding options for a WAN Edge in HPE Mist
- Explain the basic SD-WAN with HPE Mist workflow
- Outline device-specific templates
- **Lab 01: SD-WAN with HPE Mist Quick Start**

Module 06: Application Identification and Discovery

- Outline application identification and discovery in SD-WAN with HPE Mist
- Describe application identification on HPE Networking SRX Firewalls and HPE Mist Networking Premium Analytics
- Describe application identification on HPE Networking Session Smart Router and HPE Mist Networking Premium Analytics

Module 07: Application Policy and Application Steering

- Define Application steering in SD-WAN with HPE Mist
- Explain how to use AppID to implement Application Steering
- Define Application Steering considerations
- **Lab 02: Application Policy in SD-WAN with HPE Mist**

DAY 2

Module 08: Configuration with WAN Edge Templates

- Outline WAN Edge workflow, design, and settings
- Summarize WAN Edge Template interface configuration
- Compare traffic steering policies for WAN Edge Templates
- Describe WAN Edge application policy

Module 09: Automating and Scaling the Network

- Review WAN Edge Templates
- Explain site variables
- Explain how to import, export, and apply templates
- Explain organization-level application policy
- **Lab 03: Scaling with Templates and Site Variables**

Module 10: Traditional Routing Configuration in WAN Assurance

- Outline BGP configuration
- Summarize OSPF configuration
- Outline BGP monitoring workflow
- Describe virtual routing for routes from the default instance
- Explain how to use application policies to route from the default instance

Module 11: SD-WAN with HPE Mist

- Define SD-WAN
- Explain the SD-WAN overlay for HPE Networking SRX firewalls
- Explain the SD-WAN overlay for HPE Networking Session Smart Routers
- Outline WAN Assurance SD-WAN design guide
- Explain SD-WAN deployment considerations

Module 12: Hub Profile Configuration

- Outline Hub Profiles
- Summarize interface configuration in Hub Profiles
- Relate traffic steering configuration in Hub Profiles
- Analyze organization-level application policies
- Explain creating OSPF areas for Hub Profiles
- Explain configuring traditional routing policies
- **Lab 04: SD-WAN with HPE Mist WAN Assurance**

DAY 3

Module 13: Monitoring SD-WAN with HPE Mist

- Describe how to monitor using WAN Edge details
- Explain how to monitor using WAN Edge Insights
- **Lab 05: Monitoring SD-WAN with HPE Mist**

Module 14: Troubleshooting SD-WAN with HPE Mist

- Describe Marvis, Marvis Actions, and Marvis Minis
- Outline troubleshooting with SLEs in SD-WAN with HPE Mist
- Explain Alerts in HPE Mist
- Review testing tools for troubleshooting in SD-WAN with HPE Mist
- Explain other tools for troubleshooting in SD-WAN with HPE Mist
- **Lab 06: Troubleshooting SD-WAN with HPE Mist**

Module 15: SD-WAN with HPE Mist with Secure Services Edge

- Describe the HPE Secure Services Edge Solution
- Explain SD-WAN with HPE Mist and HPE Secure Edge integration
- Explain SD-WAN with HPE Mist and SSE Zscaler integration
- Explain SD-WAN with HPE Mist and Palo Alto Prisma Access integration

Module 16: Cradlepoint Cellular Edges

- Describe Cradlepoint and its integration with HPE Mist
- Explain how to plan, on-board, and provision the Cellular Edge
- Explain how to manage and monitor Cellular Edges in HPE Mist

Module 17: SD-WAN with HPE Mist High Availability Design

- Explain the concepts of Session Smart high availability
- Outline the high availability deployment workflow
- Describe the WAN Assurance HA Design Guide
- **Lab 07: High Availability with the Session Smart Router**

Resources

All-Access Training Pass

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Courses

Schedule

Learning Paths

Certification

Key contacts

Americas: networking.training.ams@hpe.com

Europe, Middle East, Africa: networking.training.emea@hpe.com

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