

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

COURSE OVERVIEW

This four-day course provides students with detailed exposure to the Juniper Mist™ Wired Assurance solution. This four-day course provides students with detailed exposure to the Juniper Mist Wired Assurance solution, covering its three installation stages: Day Zero—Provisioning, Day One—Deployment, and Day Two+—Operations. It explores the supporting technologies, software, and hardware that make up traditional campus LANs and fabrics. The course includes Juniper Mist Wired Assurance Day One configuration, Virtual Chassis configuration through Juniper Mist, wired client management, site variable and dynamic port configuration management, campus fabric deployment, and lastly, the discussion and implementation of group-based policies (GBPs) and microsegmentation. Through demonstrations and hands-on labs, students will gain experience with provisioning, deploying, and managing Juniper Networks® EX Series Switches and Juniper Networks® QFX Series Switches. Students will also deploy switches to create an Ethernet VPN—Virtual Extensible LAN (EVPN-VXLAN) campus fabric. The students will complete all these tasks in a dedicated lab through the Juniper Mist portal. Juniper Mist is a Software as a Service (SaaS) platform that updates in a monthly cadence. The labs focus on implementing and managing switches using the Juniper Mist GUI in both a traditional campus architecture and a modern Campus Fabric architecture.

This course is based on the latest update of Juniper Mist prior to the course release. It is also based on Junos OS Release 23.4R2.13.

COURSE LEVEL

Intermediate

AUDIENCE

- Individuals who want an understanding of Juniper Mist Wired Assurance and Juniper switches
- Individuals who want to learn how to deploy campus networks using Juniper Mist
- Individuals who want an introduction to network fabrics and their application in a campus LAN environment

PREREQUISITES

- Completion of the [Introduction to Juniper Mist AI](#) course or equivalent knowledge
- General understanding of campus and enterprise networks
- Advanced networking knowledge of routing and switching and supporting technologies
- Basic knowledge of Juniper switching devices
- Strong understanding of the BGP routing protocol

RELATED JUNIPER PRODUCTS

- EX Series Switch
- SRX Series Firewall
- QFX Series Switch
- Mist AI

RELATED CERTIFICATION

[JNCIS-MistAI-Wired](#)

CONTACT EDUCATION SERVICES:

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OBJECTIVES

- Describe the benefits of Juniper Mist Wired Assurance (switch installation and campus fabrics).
- Explain each of the three processes that make up switch installation.
- Summarize the management of standalone and Virtual Chassis switches in the Juniper Mist GUI.
- Correlate switch configurations and template options available in the Juniper Mist GUI.
- Explain traditional and modern campus architectures.
- Install a Juniper enterprise switch with the Juniper Mist GUI.
- Deploy switches in a traditional campus LAN.
- Deploy an EVPN-multihomed campus fabric using Juniper Mist.
- Deploy a three-stage IP Clos campus fabric using Juniper Mist.
- Demonstrate how to configure and verify VLANs, access ports, and trunk ports on a switch running Junos OS.
- Explain the advantages of Juniper Networks EX Series Switches and QFX Series Switches, and the wireless, wired, and WAN solutions offered by Mist AI.
- Describe and configure Juniper Apstra Cloud Services.
- Describe the administration and requirements of Juniper Apstra Cloud Services.

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COURSE CONTENTS

DAY 1

1	Juniper Mist Wired Assurance—Overview <ul style="list-style-type: none">• Provide an overview of Juniper Mist• Define the Juniper Mist Wired Assurance solutions and supported devices• Create a Juniper Mist account• Describe the Juniper Mist Edge Switch Proxy Service
2	Juniper Mist Wired Assurance, Day Zero—Provision <ul style="list-style-type: none">• Describe the integration workflow• Explain greenfield provisioning and review the ZTP processes• Explain brownfield provisioning• Describe telemetry collection Lab 1: Onboarding Switches
3	Juniper Mist Wired Assurance—Virtual Chassis <ul style="list-style-type: none">• Define Virtual Chassis• Describe how to form a Virtual Chassis using Juniper Mist's VC wizard• Describe how to form a Virtual Chassis manually• Describe how to modify a Virtual Chassis• Describe how to monitor a Virtual Chassis
4	Juniper Mist Wired Assurance, Day One—Deployment <ul style="list-style-type: none">• Describe the configuration options available from Juniper Mist to manage all, some, or single switches Lab 2: Managing Switches and Templates

DAY 2

5	Juniper Mist Wired Assurance, Day One—Configuration <ul style="list-style-type: none">• Define the Juniper Mist configuration and template options
6	Configuration Scalability Use Cases <ul style="list-style-type: none">• Describe the site variables use case• Describe the dynamic port configuration use case• Describe the select switches use case• Describe the bulk upload of switch configurations
7	Juniper Mist Wired Assurance, Day Two+—Operations <ul style="list-style-type: none">• Describe Juniper Mist Wired Assurance SLEs and their classifiers• Describe Alerts and Events• Describe Switch Insights• Describe Switch Utilities Lab 3: Juniper Mist Utilities
8	Juniper Mist Wired Clients <ul style="list-style-type: none">• Explain the operations of Juniper Mist Wired Clients

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COURSE CONTENTS (continued)

DAY 3

9	Campus Fabric Architectures <ul style="list-style-type: none">Describe a traditional campus network designExplain the need for a new architectural designDescribe Layer 3-based campus network designs
10	VXLAN Overview <ul style="list-style-type: none">Describe Layer 2 tunnelingExplain VXLAN functionalityDescribe VXLAN gateways
11	EVPN-VXLAN <ul style="list-style-type: none">Describe EVPN featuresDescribe EVPN operationsDescribe EVPN with VXLAN for data plane encapsulationDescribe IPv6 underlay
12	Juniper Mist Campus Fabric Deployment—EVPN Multihoming <ul style="list-style-type: none">Deploy Juniper Mist campus fabric EVPN multihoming Lab 4: EVPN Multihoming Fabric

DAY 4

13	Juniper Mist Campus Fabric Deployment—Core-Distribution <ul style="list-style-type: none">Deploy Juniper Mist Campus Fabric core-distribution
14	Group-Based Policy and Microsegmentation <ul style="list-style-type: none">Explain network segmentationExplain GBP and microsegmentationConfigure GBP in Juniper Mist
15	Juniper Mist Campus Fabric Deployment—IP Clos <ul style="list-style-type: none">Deploy Juniper Mist Campus Fabric IP Clos Lab 5: Campus Fabric IP Clos

SELF-STUDY MODULES

16	Junos OS Switches, Part 1—VLANs, MAC Tables, and Access Ports <ul style="list-style-type: none">Demonstrate how to configure and verify VLANs on a switch running Junos OSDescribe how to configure access ports and verify MAC tables
17	Junos OS Switches, Part 2—Trunk Ports <ul style="list-style-type: none">Describe how to deploy trunk ports on Junos OS switchesDemonstrate how to configure multiple logical units on IP interfacesExplain the advantages of Juniper Networks EX Series and QFX Series Switches, and the wireless, wired, and WAN solutions offered by Mist AI
18	Juniper Apstra Cloud Services—Overview <ul style="list-style-type: none">Define Juniper Apstra Cloud ServicesDescribe the administration of Juniper Apstra Cloud ServicesDescribe Marvis VNADescribe the requirements of Juniper Apstra Cloud Services
19	Implementing Juniper Apstra Cloud Services <ul style="list-style-type: none">Configure Juniper Apstra Cloud ServicesInstall Juniper Apstra Edge

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