

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



COURSE OVERVIEW

This four-day course provides students with detailed exposure to the Juniper Mist Wired Assurance solution. This includes the three stages associated with switch installations: Day Zero—Provisioning, Day One—Deployment, and Day Two—Operations. This course explores the supporting technologies, software, and hardware that make up traditional campus LANs and campus fabrics. This course has six modules discussing Day One configuration, wired clients, managing site variables and dynamic port configurations, deploying campus fabrics, and lastly, discussing and implementing group-based policies (GBPs) and microsegmentation.

Through demonstrations and hands-on labs, students will gain experience with provisioning, deploying, and managing Juniper EX Series and 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. The course is based on the latest version of Mist prior to the course release. Mist is a SaaS that updates in a biweekly cadence. The labs are focused on implementing and managing switches using the Mist UI in both a traditional campus architecture and a modern Campus Fabric architecture.

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 Mist; and
- Individuals who want an introduction to network fabrics and their application in a campus LAN environment.

PREREQUISITES

- Completion of the [Juniper Wireless Networks with Mist AI \(JWMA\)](#) 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 CERTIFICATION

[JNCIS-MistAI-Wired](#)

RELEVANT JUNIPER PRODUCTS

- EX Series switch
- Juniper Mist AI
- QFX Series switch
- SRX Series firewall

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 Mist UI.
- Correlate switch configurations and template options available in the Mist UI.
- Explain traditional and modern campus architectures.
- Install a Juniper enterprise switch with the Mist UI.
- Deploy switches in a traditional campus LAN.
- Deploy an EVPN-multihomed campus fabric using Mist.
- Deploy a 3-stage IP Clos campus fabric using Mist.

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COURSE CONTENTS

DAY 1

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| 1 | Course Introduction |
| 2 | Mist Wired Assurance Overview <ul style="list-style-type: none">Describe Mist overviewDefine the Wired Assurance solutions and supported devicesAdminister a Mist Account |
| 3 | Mist Wired Assurance, Day Zero—Provision <ul style="list-style-type: none">Describe the integration workflowExplain greenfield provisioning and review the ZTP processesExplain brownfield provisioningDescribe telemetry collection Lab 1: Onboarding Switches |
| 4 | Mist Wired Assurance—Virtual Chassis <ul style="list-style-type: none">Describe the Virtual ChassisDescribe forming a Virtual Chassis using Mist's VC wizardDescribe forming a Virtual Chassis manuallyDescribe modifying a Virtual ChassisDescribe monitoring a Virtual Chassis |
| 5 | Mist Wired Assurance, Day One—Deployment <ul style="list-style-type: none">Describe the configuration options available from Mist to manage all, some, or single switches Lab 2: Managing Switches and Templates |

DAY 2

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| 6 | Mist Wired Assurance, Day One—Configuration <ul style="list-style-type: none">Define the Mist configuration and template options |
| 7 | Configuration Scalability Use Cases <ul style="list-style-type: none">Describe the site variables use caseDescribe the dynamic port configuration use caseDescribe the select switches use caseDescribe the bulk upload of switch configurations |
| 8 | Mist Wired Assurance, Day Two—Operations <ul style="list-style-type: none">Describe Wired Assurance SLEs and their classifiersDescribe Alerts and EventsDescribe Switch InsightsDescribe Switch UtilitiesLab 3: Mist Utilities |

DAY 2 (continued)

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| 9 | Wired Clients <ul style="list-style-type: none">Explain the operation of Mist Wired ClientsDiscuss Wired Client Insights |
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DAY 3

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| 10 | 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 |
| 11 | VXLAN Overview <ul style="list-style-type: none">Describe Layer 2 tunnelingExplain VXLAN functionalityDescribe VXLAN gateways |
| 12 | EVPN-VXLAN <ul style="list-style-type: none">Describe EVPN featuresExplain EVPN operationsDescribe EVPN and VXLAN for data plane encapsulation |
| 13 | Mist Campus Fabric Deployment—EVPN Multihoming <ul style="list-style-type: none">Describe the campus fabric deployments available in MistDeploy an EVPN-multihoming fabric using Mist Lab 4: EVPN Multihoming Fabric |

DAY 4

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| 14 | Mist Campus Fabric Deployment—Core Distribution <ul style="list-style-type: none">Deploy a Mist campus fabric-core distribution |
| 15 | Group-Based Policy and Microsegmentation <ul style="list-style-type: none">Explain network segmentationExplain GBP and MicrosegmentationConfigure GBP in Mist |
| 16 | Mist Campus Fabric Deployment—IP Clos <ul style="list-style-type: none">Deploy a Mist campus fabric-IP Clos Lab 5: Campus Fabric IP Clos – 3-Stage |

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