



Juniper AI-driven Campus Fabric User Guide

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Juniper AI-driven Campus Fabric



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Introduction

As campus networks modernize, propriety technologies and complicated L2/L3 architectures start to show their age. Maintaining an agile environment with IoT devices and mobile users are made even more difficult by the lack of scale and mismanagement of configurations. To address these challenges, organizations have adopted EVPN-VXLAN—a common and open standard—but often find its added operational complexity to be a burden on IT teams to maintain configuration consistency across deployments. With the introduction of the AI-driven Campus Fabric Management via the Juniper Mist cloud, Juniper has solved the operation burden by enabling EVPN-VXLAN campus fabrics to be easily managed and deployed. Now, administrators can choose a topology and sit back while the software does the rest.

Design, Day 0

With AI-Driven Campus Fabric, deployment is planned & executed via the Juniper Mist cloud—giving you the added advantage of configuration consistency. Gone are the days of manually deploying your fabric via CLI.



Deploy, Day 1

Simplified ZTP onboarding via the Mist Cloud saves hours of configuration time in both greenfield and brownfield deployment, giving you the time & ability to architect your perfect EVPN-VXLAN fabric.



Operate, Day 2+

Once you have deployed your desired campus fabric architecture, Marvis & Mist AI help to monitor, manage, and remediate any issues that may arise. Wired Assurance gives you invaluable insights into your LAN to help you assure an epic user experience.

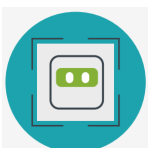


AI-driven Campus Fabric Components



Cloud ZTP

When unboxing your cloud enabled switch, onboarding it to the Mist cloud is as easy as scanning a QR code & claiming it.



Marvis Conversational Assistant

Marvis is your AI-driven problem solver and improves your mean time to resolution with expanded knowledge graphs. Marvis Conversational Assistant simplifies AOLs & takes Mist AI to the next level.



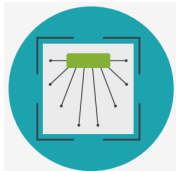
Mist AI

Mist AI is the AI engine born and built in the Juniper Mist cloud. Mist AI gets better with time and helps to assure epic experiences for your users.



Juniper Mist Cloud

Built with a microservices based architecture, the Juniper Mist cloud now gives administrators the ability to configure their campus fabrics based on 3 architectures (EVPN multihoming, core distribution campus fabric, campus fabric IP Clos)



Marvis Actions

Marvis Actions provide you with a 'morning cup of coffee' view containing status updates and problem resolutions in regard to your network.

Marvis Actions adds an extra layer of coverage to help your network stay up while keeping your trouble tickets down.



Wired Assurance

Wired Assurance simplifies the deployment and management of campus fabrics while also providing valuable insights and SLEs about your wired network.

AI-driven Campus Fabric Architecture

Bringing simplicity and automation to campus deployments

1. Choose the topology and determine device roles

Choose EVPN Topology

Choose the topology you want to construct and configure related options

TOPOLOGY TYPE



EVPN Multihoming
Collapsed core with ESI-Lag



Campus Fabric Core-Distribution
EVPN core/distribution with ESI-Lag



Campus Fabric IP Clos
Campus fabric with L3 at the edge

2. Define physical connections

×

EVPN Configuration

1. Topology 2. Nodes 3. Network Settings 4. Ports 5. Confirm

Ports

Select switch ports for EVPN and ESI-Lag connections

Collapsed Core Switches

Switch	Site	Model	Uplink to Core	Downlink to Core	ESI-Lag to Access
<input checked="" type="checkbox"/> SW-0003	Campus-West	EX-4650	ge-0/0/0-1	ge-0/0/4-5	

Uplink to Core

ge-0/0/0

Select 1 port

Downlink to Core

ge-0/0/4

Select 1 port

ESI-Lag to Access

ge-0/0/14-20, ge-

Select 23 ports

☒ SW-0003

Campus-West

EX-4650

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Access Switches

Switch	Site	Model	ESI-Lag to Core
<input checked="" type="checkbox"/> SW-0003	Facility-0001	EX-2300	--
<input checked="" type="checkbox"/> SW-0003	Facility-0001	EX-2300	--
<input checked="" type="checkbox"/> SW-0003	Facility-0001	EX-2300	--
<input checked="" type="checkbox"/> SW-0003	Facility-0001	EX-2300	--

3. Define networks of interest

X
EVPN Configuration
1. Topology
2. Nodes
3. Network Settings
4. Ports
5. Confirm

Configure Networks and Port Profiles

Define networks, routing options, and port configuration

Networks

Virtual Routing and Forwarding options

vlan101	101	>
vlan102	102	>
vlan103	103	>
vlan104	104	>

Add Network

VRF

Virtual Routing and Forwarding options

☒ Enable ☐ Disable

internal_vrf	2 networks	>
internal_vrf_2	1 network	>

Add VRF Entry

Core → Access Port Profile

Profile for Collapsed Core switch ports that connect to Access switches

Port Enabled
☒ Enabled ☐ Disabled

Mode
☒ Trunk ☐ Access

Port Network (Untagged/Native VLAN)
None

Voice Network
None

Trunk Networks
☐ All networks
vlan101 (101) × vlan102 (102) × vlan103 (103) × +

Speed
Auto

Duplex
Auto

Mac Limit
0 (0 - 16383, 0 => unlimited)

Access → Core Port Profile

Profile for Access switch ports that connect to Collapsed Core switches

Port Enabled
☒ Enabled ☐ Disabled

Mode
☒ Trunk ☐ Access

Port Network (Untagged/Native VLAN)
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Voice Network
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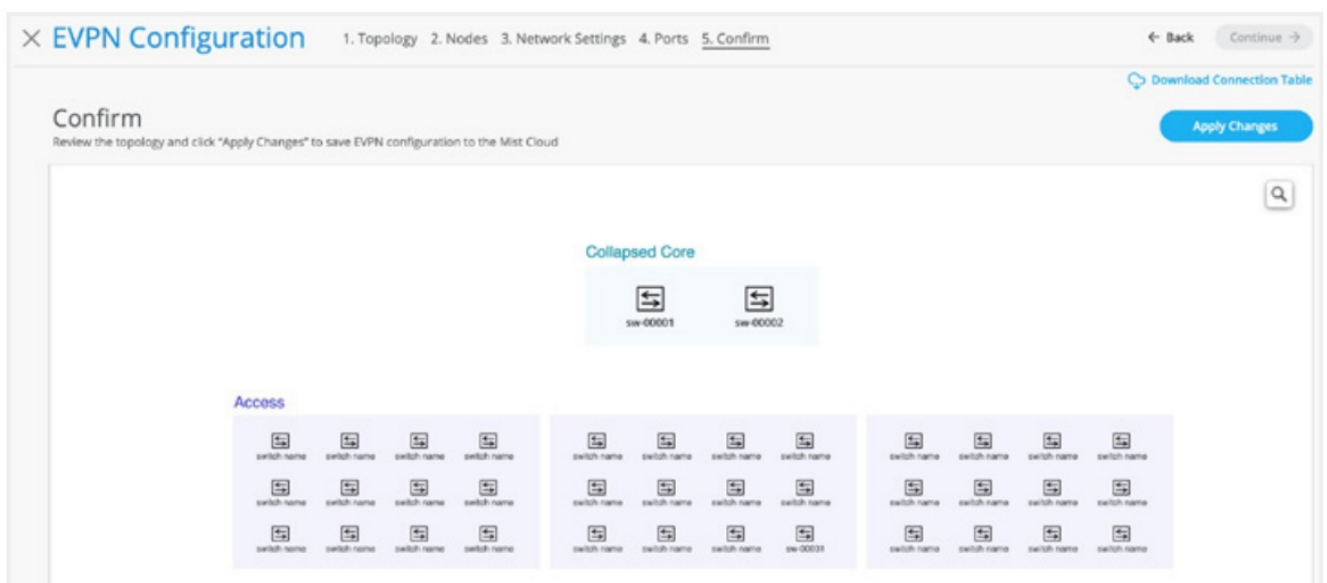
Trunk Networks
☐ All networks
vlan101 (101) × vlan102 (102) × vlan103 (103) × +

Speed
Auto

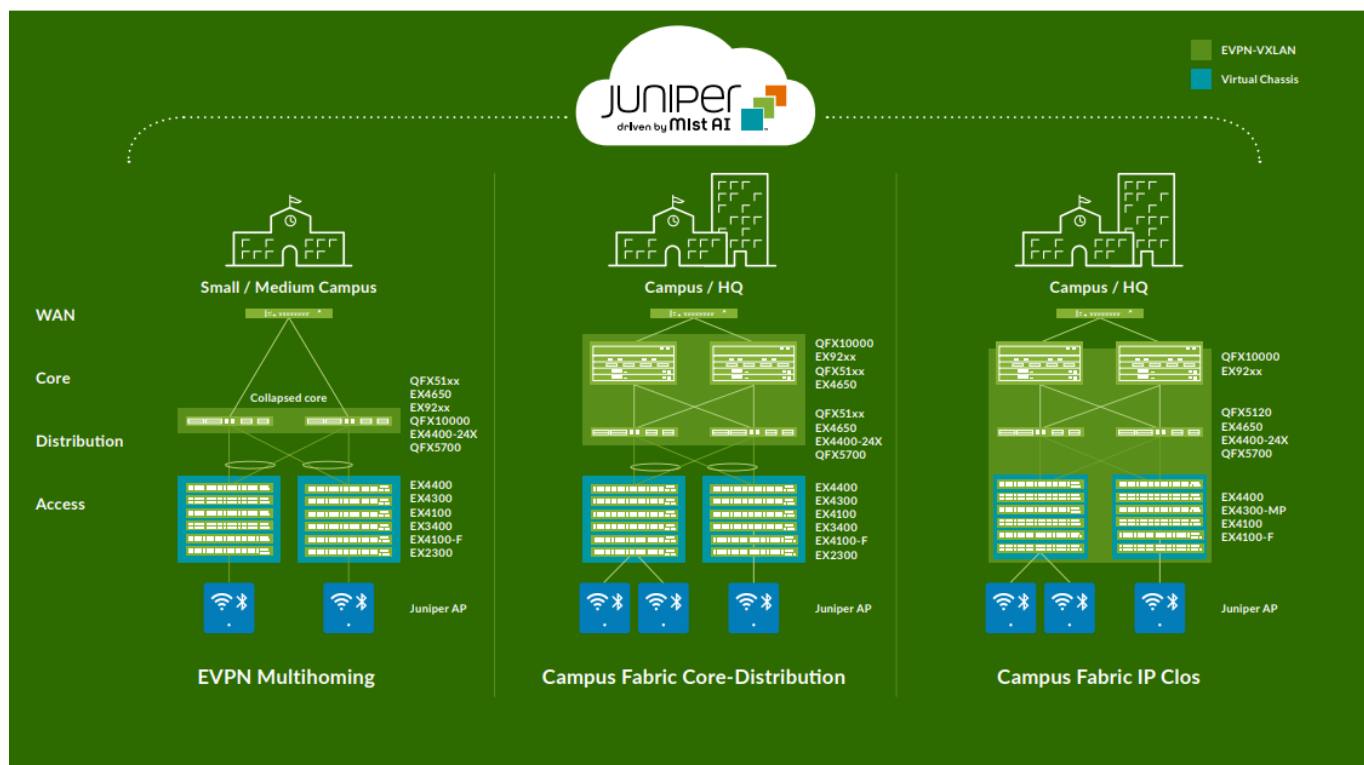
Duplex
Auto

Mac Limit
0 (0 - 16383, 0 => unlimited)

4. Apply the intent



To find out more, [click here](#)



Corporate and Sales Headquarters

Juniper Networks, Inc.
 1133 Innovation Way
 Sunnyvale, CA 94089 USA
 Phone: 888.JUNIPER (888.586.4737)
 or +1.408.745.2000
 Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.
 Boeing Avenue 240
 1119 PZ Schiphol-Rijk
 Amsterdam, The Netherlands
 Phone: +31.207.125.700
 Fax: +31.207.125.701

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NETWORKS

Documents / Resources

 The image shows the cover page of the 'Juniper AI-driven Campus Fabric' User Guide. It features the Juniper logo at the top right and a green header with the title. Below the title, there is a brief introduction and three icons representing different aspects of the fabric. At the bottom, there is a section titled 'AI-driven Campus Fabric Components' with a list of items.	<p>Juniper AI-driven Campus Fabric [pdf] User Guide</p> <p>AI-driven Campus Fabric, AI-driven, Campus Fabric, Fabric</p>
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References

-  [Juniper Networks – Leader in AI Networking, Cloud, & Connected Security Solutions](#)