

## Juniper® Validated Design

# JVD Test Report Brief: Campus Fabric WAN Router Integration

## Introduction

This test report brief contains qualification test report data for the Campus Fabric WAN Router Integration Juniper Validated Design Extension (JVDE). This qualification includes validation of the following scenarios:

- Core switch as service block function and stretched VLAN Layer 2 (L2) exit.
- Core switch as service block function and transport VLAN L2 exit.
- Core switch as service block function and eBGP Layer 3 (L3) exit.
- Core switch as service block function and OSPF L3 exit.
- Dedicated service block with eBGP L3 exit.
- Dedicated service block with transport VLAN L2 exit.

If you have questions about this JVDE, contact your Juniper representative.

## Test Topology

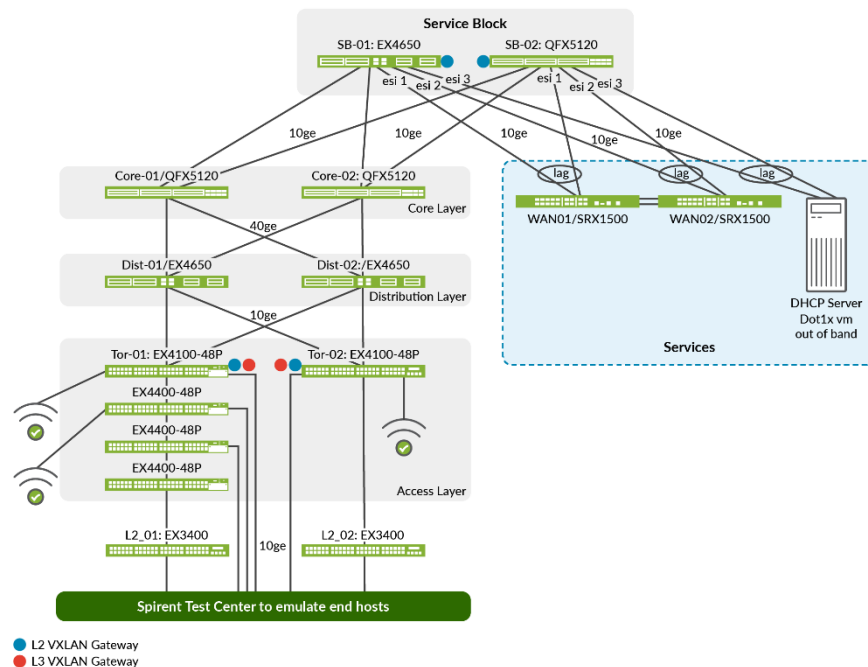


Figure 1: Dedicated Service Block Switches with SRX Cluster

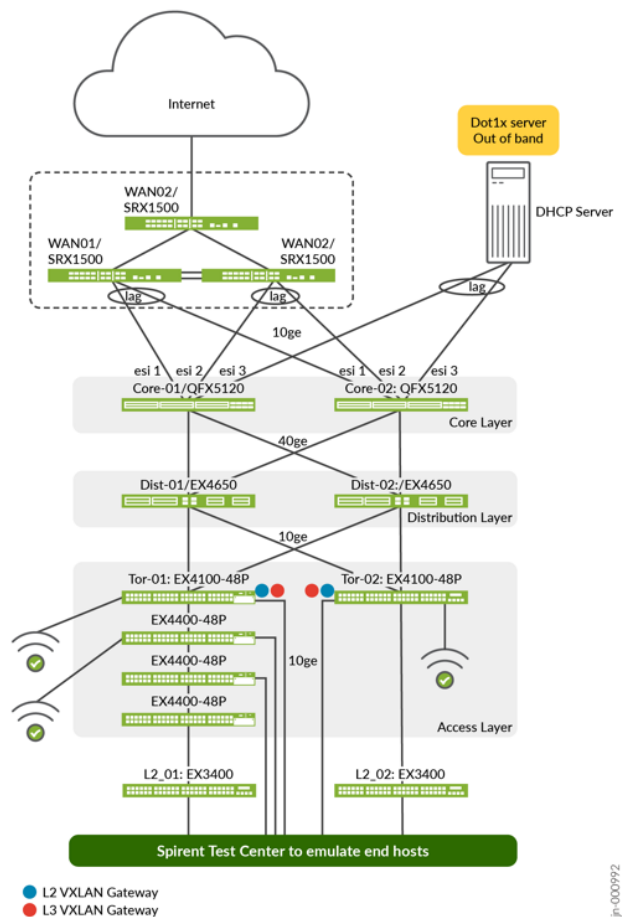


Figure 2: Service Block Function Part of Core Switch with MX Routers

## Platforms Tested

Table 1: Tested Platforms

Role	Platform	OS
Service Block - Switch	QFX5120-48YM-8C	Junos OS Release 22.4R3
Service Block - Switch	EX4650-48Y-8C	Junos OS Release 22.4R3
Core - Switch	QFX5120-48Y-8C	Junos OS Release 22.4R3
Distribution - Switch	EX4650-48Y-8C	Junos OS Release 22.4R3
Access – Switch (4 member VC)	EX4400-48P	Junos OS Release 22.4R3
Access – Switch (standalone)	EX4100-48P	Junos OS Release 22.4R3
RADIUS Server VM	Linux	Ubuntu 16.04.3 LTS
DHCP Server	EX4100-48P	Junos OS Release 22.4R3

Role	Platform	OS
WAN Router	SRX1500	Junos OS Release 21.2R3
WAN Router	MX80	Junos OS Release 20.3X75-D40

## Version Qualification History

This JVDE has been qualified in Junos OS Release 22.4R3.

## Scale and Performance Data

Table 2: Scale Data

Services	Scale	Role
Max BGP adjacency	8	Distribution
ARP entries	1200	Access
MAC addresses learned	1200	Access
DHCP relay IRBs	5	Access
EVPN Type 5 VRFs	5	Access
VLANs	20	Access
IRBs	20	Access
Remote VTEPs	3	Core Access
BFD sessions	4	Access Distribution Core

## Performance

Traffic rate: 5000 FPS per stream block.

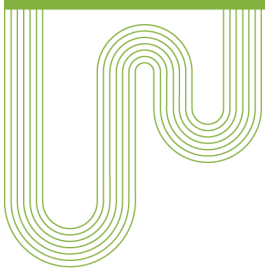
## High Level Features Tested

- The access layer switches have client VLANs distributed across EVPN VRFs.
- All access layer switches act as L2 and L3 VXLAN gateways.
- Each client VLAN has ANYCAST gateway IRB on each access switch.
- BFD is used to provide faster convergence to both the underlay as well as overlay eBGP adjacency.
- WAN devices (MX Series and SRX Series) are connected to service block function devices through ESI-LAG in case of fabric exit through L2 (stretched VLAN and transport VLAN).
- WAN devices (MX Series, and SRX Series) are connected to service block function devices through point-to-point links in case of fabric exit through L3 (OSPF and eBGP).
- Stateless DHCP relay helps the clients get IP addresses from the DHCP server across the IP fabric.
- DHCP server is multihomed to service block function devices.

# Event Testing

Failover events:

- Node reboot—service block and access switch.
- Interface flaps—Between service block and WAN device.



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Send feedback to: [design-center-comments@juniper.net](mailto:design-center-comments@juniper.net) V1.0/240724/test-report-brief-campus-fabric-wan-router-integration