

Spirent TestCenter

EVPN Emulation

An Ethernet VPN (EVPN) enables you to connect a group of dispersed customer sites using a Layer 2 virtual bridge. As with other types of VPNs, an EVPN is comprised of customer edge (CE) devices (host, router, or switch) connected to provider edge (PE) devices. The PE devices can include an MPLS edge switch (MES) that acts at the edge of the MPLS infrastructure.

Features

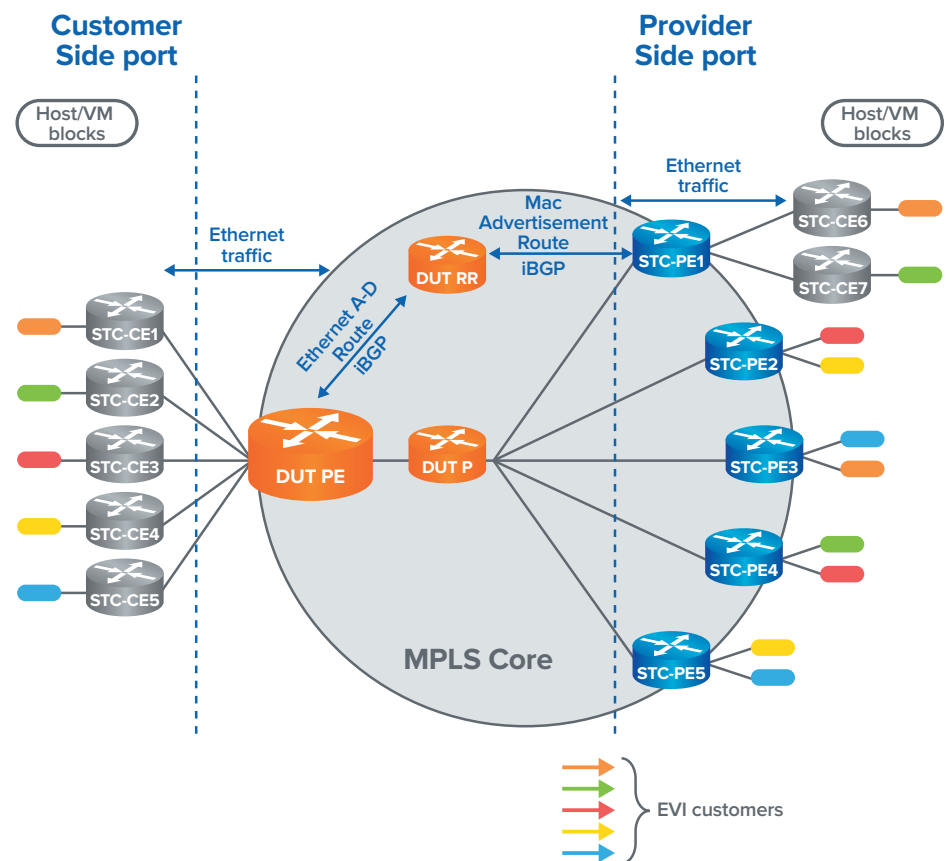
- EVPN capability negotiation with interactive testing
- Ease to use wizards to aide in complex topology configuration
- Supports Type-1 Ethernet A-D route, Type-2 MAC advertisement route, Type-3 inclusive multicast route
- MAC mobility, traffic binding to MPLS MAC labels
- Multi-homing BGP Route Advertisement Support

Benefits

- Quickly assess the performance and scalability of your EVPN design
- Easily build, configure, manage complex topologies and networks behind the EVPN segments
- Comprehensive support for many EVPN instances

Spirent’s EVPN emulation package allows easy configuration and management of complex EVPN topologies. With Spirent’s complete protocol and traffic EVPN wizard, you will be able to emulate vast number of PEs and CEs devices and validate their performance and scalability under various scenarios including unicast and multicast.

EVPN emulation is well integrated with Spirent’s fully supported protocols – BGP and MPLS. It is supported interfaces from 1Gig to 100Gig (with LAG), and Virtual. And includes complete automation support with “Save AS Script” and the “Command Sequencer”.



Number of STC-PEs = 5
 Number of EVIs = 5
 Number of EVIs/PE = 2

Figure: EVPN configuration

Technical specifications

EVPN MAC Route

Configuration:

- EVPN Mac route block name
- Ability to activate / deactivate
- Atomic Aggregate present
- Aggregator AS, IP
- Community
- Origin
- Originator ID
- AS Path
- AS Path increment
- Next Hop
- VRF route target, step
- VRF route distinguisher, step
- Ethernet segment identifier
- Ethernet Tag ID
- Number of routes
- Start, End MAC address, Increment
- Network count
- Prefix length
- Route label assignment
- Associated IP: IPv4 or IPv6
- IP address: Start, End, Prefix, Inc

EVPN AD Routes

Configuration:

- EVPN AD block name
- Ability to activate / deactivate
- Atomic Aggregate present
- Aggregator AS, IP
- Community
- Origin
- Originator ID
- AS Path
- AS Path Increment
- Next Hop
- VRF route target, step
- VRF route distinguisher, step
- Ethernet segment identifier
- Ethernet Tag ID
- Active standby mode: All active Multi-homing, single active Multi-homing
- EVI count

EVPN Inclusive Multicast Routes

Configuration:

- EVPN AD block name
- Ability to activate / deactivate
- Atomic aggregate present
- Aggregator AS, IP,
- Community
- Origin
- Originator ID
- AS Path
- AS Path increment
- Next Hop
- VRF route target, step
- VRF route distinguisher, step
- Ethernet Tag ID
- PMSI tunnel type
- EVI count

EVPN VRF

Configuration:

- Name
- MAC address
- IP address
- Protocol
- Network
- Port side
- Attached PE/DUT Address, prefix
- Route distinguisher

Spirent Services

Spirent Global Services provides a variety of professional services, support services and education services—all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at www.spirent.com or contact your Spirent sales representative.

Technical specifications

EVPN results	<ul style="list-style-type: none"> ■ Tx open count ■ Rx open count ■ Tx Advertised route count ■ Rx Advertised route count ■ Tx Withdrawn route count ■ Rx Withdrawn route count ■ Tx Advertised EVPN AD route count ■ Rx Advertised EVPN AD route count ■ Tx Advertised EVPN MAC route count ■ Rx Advertised EVPN MAC route count ■ Tx Advertised EVPN Inclusive Multicast route count ■ Rx Advertised EVPN Inclusive Multicast route count ■ Tx Withdrawn EVPN AD route count ■ Rx Withdrawn EVPN AD route count ■ Tx Withdrawn EVPN MAC route count ■ Rx Withdrawn EVPN MAC route count ■ Tx Withdrawn EVPN Inclusive Multicast route count ■ Rx Withdrawn EVPN Inclusive Multicast route count 	
Supported platforms	<ul style="list-style-type: none"> ■ Supported on the Spirent MX, MX2, FX, and FX2 Family modules ■ Supported on Spirent TestCenter Virtual ■ Supported on Spirent TestCenter C1 and 50 	
Requirements	<ul style="list-style-type: none"> ■ Standard Spirent TestCenter with Traffic Generator and Analyzer ■ Routing package requirements <ul style="list-style-type: none"> ▪ Unicast Routing BPK-1004A/B ▪ MPLS BPK-1006A/B 	
Ordering information	<ul style="list-style-type: none"> ■ EVPN Emulation 	BPK-1311A
Related	<ul style="list-style-type: none"> ■ FCoE/DCBX Emulation ■ LISP Emulation ■ OpenFlow Compliance Test Suite ■ OpenFlow Controller Emulation ■ OpenFlow Switch Emulation ■ SPB Emulation ■ TRILL Emulation ■ VXLAN Emulation 	<p>BPK-1081A</p> <p>BPK-1181A</p> <p>VCS-KIT-01-1Y</p> <p>BPK-1193A</p> <p>BPK-1195A</p> <p>BPK-1182A</p> <p>BPK-1187A</p> <p>BPK-1310A</p>

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