

BGP EVPN Configuration Guide

Note



EVPN feature is currently supported on X86 platforms only.

Introduction to Ethernet Virtual Private Network (EVPN)

Ethernet Virtual Private Network or EVPN is a technology designed to carry Layer 2 traffic over wide area network protocols. EVPN is a multi-tenant BGP-based control plane for layer-2 (bridging) and layer-3 (routing) VPNs. It's the unifying L2+L3 equivalent of the traditional L3-only MPLS/VPN control plane. PICOS EVPN implementation leverages VXLAN technology as described in RFC7348.

VXLAN has been the predominant technology used in the enterprise and data center domains to achieve Layer 2 level scalability over an IP overlay backbone. VXLAN has become the technology of choice for separating the virtual network from underlying physical network and has greatly enhanced the network virtualization, easier network management and orchestration. VXLANs provides network segmentation but also helps solve the scalability issue normally associated with VLANs.

The following list describes the list of features that PiCOS BGP EVPN implementation supports.

1. Exchange of VNI membership between VTEPs using EVPN type 3 routes.
2. Exchange of host MAC and IP addresses using EVPN type 2 routes.
3. Exchange of MAC Mobility Extended Community to support host/VM mobility.
4. Dual attached host via VXLAN active-active mode. MAC synchronization between switches is achieved via MLAG.
5. Inter Subnet routing for IPv4. Distributed symmetric and asymmetric routing between different subnets and centralized routing.
6. Prefix-based routing using EVPN type-5 routes (EVPN IP prefix route).
7. Multi-tenancy over layer 3.

Both eBGP and iBGP peerings can be used for the EVPN address family.

- [BGP EVPN Route Types](#)
- [EVPN Symmetric Routing Configuration Example](#)
- [EVPN Enhancements](#)
- [EVPN Asymmetric Routing Example](#)