BGP EVPN VXLAN Scalability Guide

- Scale and Performance Capabilities for BGP EVPN VXLAN on Cisco Catalyst 9300 Series Switches, on page 1

Scale and Performance Capabilities for BGP EVPN VXLAN on Cisco Catalyst 9300 Series Switches

This section provides information about the platform capabilities and the scale values for various components of a BGP EVPN VXLAN fabric. The numbers in the following table depend on the ternary content addressable memory (TCAM) scale. Use the SDM configuration templates to adjust the Layer 2 and Layer 3 TCAM forwarding table sizes based on the platform positioning. For more information, see *Configuring SDM Templates* module of the *System Management Configuration Guide* for the applicable release.

The scale values listed here are validated with a unidimensional configuration. The values provided in these tables focus on the scalability of one particular feature at a time.

The scale values are applicable to all the models, unless otherwise stated.

Product Specification							
Switch Model	**C9300-L Series**		**C9300 Series**	**C9300 - UB/UBX Series**		**C9300-X Series**	
BGP EVPN / VXLAN -- Leaf Scale							
SDM Template	Access	NAT	Access	Access	NAT	Access	NAT
VXLAN Leaf Node (Per Fabric Domain)	500	500	500	500	500	500	500
VRF	256	256	256	256	256	256	256
Layer 2 Virtual Network Instances (VNIs)	1024	1024	1024	1024	1024	750	750
Layer 3 VNIs	256	256	256	256	256	256	256
Layer 3 VRF SVI Interface	4094	4094	4094	4094	4094	4094	4094

Product Specification							
Switch Model	**C9300-L Series**		**C9300 Series**	**C9300 - UB/UBX Series**		**C9300-X Series**	
MAC Entries (Local L2 Network)	32000	32000	32000	64000	64000	32000	32000
MAC Entries (Remote EVPN VXLAN Network)	32000	32000	32000	32000	64000	32000	32000
Overlay IPv4 routes (LPM or Indirect Routes)	8000	8000	8000	8000	64000	64000	15000
Overlay IPv4 Host routes	32000	32000	32000	32000	48000	48000	39000
Overlay IPv6 routes (LPM or Indirect Routes)	4000	4000	4000	4000	32000	32000	7500
Overlay IPv6 Host routes	16000	16000	16000	16000	24000	24000	19500
Tenant Routed Multicast (TRM) IPv4	8000	8000	8000	8000	16000	16000	8000
TRM IPv6	4000	4000	4000	4000	8000	8000	4000
TRMv4: Overlay Multicast Routes (*,G and S,G)	8000	8000	8000	8000	16000	16000	8000
TRMv6: Overlay Multicast Routes (*,G and S,G)	4000	4000	4000	4000	8000	8000	4000
EVPN VXLAN Aware Flexible NetFlow - IPv4 Ingress Cache Entries	32000	32000	64000	64000	32000	32000	32000
EVPN VXLAN Overlay IPv4 Egress NetFlow Cache Entries (Per ASIC)	32000	32000	64000	64000	32000	32000	32000
EVPN VXLAN Overlay IPv6 Ingress NF Cache Entries (Per ASIC)	32000	32000	64000	64000	32000	32000	32000

Product Specification							
Switch Model	**C9300-L Series**		**C9300 Series**	**C9300 - UB/UBX Series**		**C9300-X Series**	
EVPN VXLAN Overlay IPv6 Egress NF Cache Entries (Per ASIC)	32000	32000	64000	64000	32000	32000	32000
Layer 2 VNI (L2VNI) Multicast Replication BUM Rate-Limiter	512	512	512	512	512	512	512
MicroSegmentation - Community VLAN to L2VNI	2000	2000	2000	2000	2000	2000	2000
NanoSegmentation - Isolated VLAN to L2VNI	384	384	384	384	384	384	384
Wide Area Bonjour (mDNS) over VXLAN Service Instance Count	15000	15000	15000	15000	15000	15000	15000
BGP EVPN / VXLAN -- Spine Scale							
SDM Template	Access	NAT	Access	Access	NAT	Access	NAT
BGP IPv4 Peer Scale	250	250	250	250	250	250	250
BGP IPv6 Peer Scale	250	250	250	250	250	250	250
BGP L2VPN EVPN Peer Scale	250	250	250	250	250	250	250
Overlay IPv4 routes (LPM or Indirect Routes)	8000	8000	8000	8000	64000	64000	15000
Overlay IPv4 Host routes	32000	32000	32000	32000	48000	48000	39000
Overlay IPv6 routes (LPM or Indirect Routes)	4000	4000	4000	4000	32000	32000	7500
Overlay IPv6 Host routes	16000	16000	16000	16000	24000	24000	19500
BGP EVPN / VXLAN -- Border Scale							
SDM Template	Access	NAT	Access	Access	NAT	Access	NAT

Product Specification							
Switch Model	**C9300-L Series**		**C9300 Series**	**C9300 - UB/UBX Series**		**C9300-X Series**	
EVPN to Layer 2 Handoff: IEEE 802.1Q	512	512	512	512	512	512	512
EVPN to Layer 2 Handoff: IEEE 802.1ad (QinQ)	512	512	512	512	512	512	512
EVPN to VRF Handoff: IP VRF (IPv4 and IPv6)	256	256	256	256	256	256	256
EVPN to MPLS Layer 3 VRF Unicast Handoff: VPNv4	256	256	256	256	256	256	256
EVPN to MPLS Layer 3 VRF Unicast Handoff: VPNv6	256	256	256	256	256	256	256
EVPN to MPLS Layer 3 VRF Multicast Handoff: mVPNv4	256	256	256	256	256	256	256
EVPN to MPLS Layer 3 VRF Multicast Handoff: mVPNv6	256	256	256	256	256	256	256
EVPN to VPLS Layer 2 Handoff: Virtual Forwarding Instances (VFIs)	512	512	512	512	512	512	512
EVPN to VPLS Layer 2 Handoff: Neighbors Per VFI	128	128	128	128	128	128	128
EVPN to VPLS Layer 2 Handoff: Pseudowire	512	512	512	512	512	512	512