



## **Cisco Nexus 3000 Series NX-OS Verified Scalability Guide, Release 9.3(2)**

<b>Introduction</b>	<b>2</b>
Verified Scalability Limits	2
Verified Topology Limits	14

Revised: February 6, 2024,

# Introduction

The values provided in this guide should not be interpreted as theoretical system limits for Cisco Nexus 3000 Series hardware or Cisco NX-OS software. These limits refer to values that have been validated by Cisco. They can increase over time as more testing and validation is done.

## Verified Scalability Limits

The tables in this section list the Cisco verified scalability limits for Cisco NX-OS Release 9.3(2). The values provided in these tables focus on the scalability of one particular feature at a time.

Each number is the absolute maximum currently supported by this Cisco NX-OS release for the corresponding feature. If the hardware is capable of a higher scale, future software releases might increase this verified maximum limit. Results might differ from the values listed here when trying to achieve maximum scalability with multiple features enabled.



**Note**

- If the verified maximum values are exceeded in an ALPM or a non-ALPM mode, you get a table full syslog even in the hash collision scenario.
- For Verified Maximum, 16 path ECMP is tested with 40K IPv4 and 40K IPv6.
- If your scale requirements exceed either the Verified Topology or the Verified Maximum limit, please contact your Cisco representative. Based on your requirements, it may be possible to validate support for your requirement, as long as the scale capability of the hardware is not exceeded.

**Table 1: Layer 2 Switching Verified Scalability Limits (Unidimensional)**

Feature	34180YC Platform Verified Limit
Port VLAN combinations	4K MSTP, 4K RSTP (Generic Profile Mode) ; 4K MSTP, 1K RSTP ( L3 Heavy Profile Mode )
Active VLANS per switch	507 RSTP and 4K MSTP ( Generic Profile Mode) ; 507 RSTP and 2K MSTP ( L3 Heavy Profile Mode )
MAC Address Table	32K ( Generic Profile Mode ) ; 4K ( L3 Heavy Profile Mode

**Table 2: Layer 3 Switching Verified Scalability Limits (Unidimensional)**

Feature	34180YC Platform Verified Limit	
	Default	LPM Heavy
ARP	Maximum: 32,768; Verified 32,000	Maximum: 4,096; Verified 4,000
IPv4 LPM	Maximum: 17,408; Verified 15,500 (90% hash collision)	Max: 65,536; Verified 55,700 (85% hash collision)

Feature	34180YC Platform Verified Limit	
IPv4 hosts	Maximum: 32,768; Verified 32,000	Maximum: 65,536; Verified 60,000 (hash collision)
Nhop	Maximum: 32,768; Verified 32,000	Maximum: 4,096; Verified 4,000
ECMP	Maximum: 256; Verified 255	Maximum: 256; Verified 255

**Table 3: Unicast Routing Verified Scalability Limits (Unidimensional)**

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (Non-ALPM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PC-V Platform Verified Limit	3108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
Active VLANs per switch	4000	Not applicable	Not applicable	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 3831 (MSTP)	507 (RPVST) and 3967 (MSTP)	507 (RSTP) and 4013 (MSTP)	507 (RSTP) and 4013 (MSTP)
BFD neighbors	64	64	Not applicable	104	104	104	104	104	104	104	104	104	104
BFDv6 neighbors	64	64	Not applicable	104	104	104	104 (with TCAM carving of redirect region to 512)	104 (with TCAM carving of redirect region to 512)	84 (without any TCAM carving)	85 (without TCAM carving)	85 (without TCAM carving)	85 (without TCAM carving)	85 (without TCAM carving)
BGP neighbors	Not applicable	Not applicable	Not applicable	140	140	140	140	140	140	140	140	140	140
BGPv4 neighbors (vPC)	141	Not applicable	Not applicable	128	128	128	128	128	128	128	256	128	128
BGPv4 neighbors (non-vPC)	141	Not applicable	Not applicable	141	141	141	141	141	141	141	141	141	141
BGPv6 (vPC)	128	128	Not applicable	128	128	128	128	128	128	512	512	128	128
BGPv6 (non-vPC)	128	Not applicable	Not applicable	128	128	128	128	128	128	512	512	128	128

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NBM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	31108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit	
BGP6	128	128	Not applicable	128	128	128	128	128	128	128	512	512	128	
Configurable QoS groups	8	Not applicable	Not applicable	8	8	8	8	8	8	8	8	8	8	
Hardware Members	32	Not applicable	Not applicable	32	32	32	32	24	24	32	32	32	32	
ECMP paths	16	16	16	16	16	16	16	16	16	16	24	16	16	
ECMP	64-way	64-way	Not applicable	64-way	64-way	64-way	64-way	64-way	64-way	64-way	64-way	64-way	64-way	
HSRP	500	500	Not applicable	500	500	500	500	500	500	500	400	500	500	
HSRPv6	500	500	Not applicable	500	500	500	490	490	490	490	490	400	400	
IGMP Snooping groups	8000	Not applicable	Not applicable	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	
IPv4 hosts	8,000 (Nexus 3064PQ) 16,000 (All other Nexus 3000 Series platforms)	8,000 (Nexus 3064PQ) 16,000 (All other Nexus 3000 Series platforms)	Not applicable	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.) 16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	16,384 (Multicast is 0.)	Not applicable
IPv6 host routes	8,000	8,000	Not applicable	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	4096 (4096 is reserved for multicast.)	Not applicable

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NEM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
IPv4 LPM routes (No IPv6 carving)	16K (with system urpf disabled) and 8192 (with system urpf enabled)	128K (with system urpf disabled) and 64K (with system urpf enabled)	16K (with system urpf disabled) and 8K (with system urpf enabled)	15,360 (with system urpf disabled) and 7680 (with system urpf enabled)	15,360 (with system urpf disabled) and 7680 (with system urpf enabled)	15,360 (with system urpf disabled) and 7680 (with system urpf enabled)	15,360 (with system urpf disabled)	15,360 (with system urpf disabled)	4000 (with system urpf disabled)	14,327 (with URPF enabled) and 28,660 (with URPF disabled)	4,000 (with system urpf disabled)	12,000 (default system routing mode) and 128,000 (ALPM routing mode)	Not applicable
IPv6 LPM routes (No IPv6 carving)	80K (with system urpf disabled) and 20K (with system urpf enabled)	80K (with system urpf disabled) and 20K (with system urpf enabled)	0 (with both, system urpf disabled and enabled)	Not applicable	Not applicable	Not applicable	Not applicable	6,144 (with system urpf disabled)	6,144 (with system urpf disabled)	12288 (with URPF disabled)	4,000 (with system urpf disabled)	6,000 (with system urpf disabled)	6,144 (with system urpf disabled)
IPv6 LPM <=64 (no IPv6 carving)	8K (with system urpf disabled) and 4K (with system urpf enabled)	8K (with system urpf disabled) and 4K (with system urpf enabled)	8K (with system urpf disabled) and 4K (with system urpf enabled)	6144 (with system urpf disabled) and 2048 (with system urpf enabled)	6144 (with system urpf disabled) and 2048 (with system urpf enabled)	6144 (with system urpf disabled) and 2048 (with system urpf enabled)	6144 (with system urpf disabled)	6144 (with system urpf disabled)	6144 (with system urpf disabled)	12,288 (with system urpf disabled)	12,288 (with system urpf disabled)	6,144 (with system urpf disabled)	6,144 (with system urpf disabled)

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NATM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	31108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
IPv6 LPM >64 and <=127	8K (with system urpf disabled) and 4K (with system urpf enabled)	8K (with system urpf disabled) and 4K (with system urpf enabled)	Not applicable	256 (with system urpf disabled) and 128(with system urpf enabled)	256 (with system urpf disabled) and 128(with system urpf enabled)	256 (with system urpf disabled) and 128(with system urpf enabled)	Not applicable	1024	1024	1024	1024	1024	1024
IPv4 LPM routes (IPv6 carve value 1024)	Not applicable	96K (with system urpf disabled)	12K (with system urpf disabled) and 6K (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM routes (IPv6 carve value 1024)	Not applicable	5K (with system urpf disabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM <=64 (IPv6 carve value 1024)	Not applicable	Not applicable	6K (with system urpf disabled) and 2K (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NIM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	31108TCV Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
IPv6 LPM >64 (IPv6 carve value 1024)	Not applicable	Not applicable	1024 (with system urpf disabled) and 512 (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv4 LPM routes (IPv6 carve value 2048)	Not applicable	64K (with system urpf disabled) 32K (with system urpf enabled)	8K (with system urpf disabled) and 4K (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM routes (IPv6 carve value 2048)	Not applicable	5K (with system urpf disabled) 2K (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM <=64 (IPv6 carve value 2048)	Not applicable	Not applicable	4K (with system urpf disabled) and 2K (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NATM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	31108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
IPv6 LPM >64 (IPv6 carve value 2048)	Not applicable	Not applicable	2K (with system urpf disabled) and 1K (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv4 LPM routes (IPv6 carve value 3072)	Not applicable	32K (with system urpf disabled)	4K(with system urpf disabled) and 2K(with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM routes (IPv6 carve value 3072)	Not applicable	15K (with system urpf disabled)		Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM <=64 (IPv6 carve value 3072)	Not applicable	Not applicable	2K (with system urpf disabled) and 0 (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable



Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NIM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	31108TCV Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
IPv6 LPM >64 (IPv6 carve value 3072)	Not applicable	Not applicable	3072 (with system urpf disabled) and 0 (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv4 LPM Routes (IPv6 carve value 4096)	Not applicable	Not applicable	0 (with both, system urpf disabled and enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM ≤64 (IPv6 carve value 4096)	Not applicable	Not applicable	0 (with both, system urpf disabled and enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IPv6 LPM >64 (IPv6 carve value 4096)	Not applicable	Not applicable	4096 (with system urpf disabled) and 2048 (with system urpf enabled)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Layer 3 physical interfaces	Not applicable	Not applicable	Not applicable	64	64	64	24	24	24	Not applicable	Not applicable	24	Not applicable

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NvM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	31108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
Layer 3 SVI, subinterfaces, HaChans	1024	1024	1024	1024	1024	1024	1024	1024	1024	255	1024	1024	1024
MAC table size (non-vPC)	128,000	294912	Not applicable	131,072	131,072	131,072	98000	98000	98000	98000	Not applicable	30000	30000
MAC table size (vPC)	128,000	Not applicable	Not applicable	131,072	131,072	131,072	98000	98000	98000	98000	Not applicable	30000	30000
MST instances	65	Not applicable	Not applicable	65	65	65	65	65	65	65	65	65	65
MTU	Not applicable	Not applicable	Not applicable	9216	9216	9216	9216	9216	9216	Not applicable	Not applicable	Not applicable	Not applicable
Multicast routes	4,000 (Nexus 3064PQ) 8,000 (All other Nexus 3000 Series platforms) (hash table and there will be more collisions after 80%)	4,000 (Nexus 3064PQ) 8,000 (All other Nexus 3000 Series platforms) (hash table and there will be more collisions after 80%)	Not applicable	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)	8000 routes (hash table and there will be more collisions after 80%)

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NIM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	3108PCV Platform Verified Limit	3108TCV Platform Verified Limit	3132CZ Platform Verified Limit	3232C Platform Verified Limit	3264CE Platform Verified Limit	3264QS Platform Verified Limit
Number of switch port Channels	64	Not applicable	Not applicable	32	32	32	32	32	32	Not applicable	32	32	32
Number of system logging destination ports	8	Not applicable	Not applicable	8	8	8	8	8	8	Not applicable	8	8	8
OSPF neighbors	128	Not applicable	128	128	128	128	Not applicable	128	128	128	128	128	128
OSPFv3	128	Not applicable	128	128	128	128	Not applicable	128	128	128	128	128	128
sFlow	64	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
SNMP Servers	Not applicable	Not applicable	Not applicable	8	8	8	8	8	8	8	8	10	10
SPAN sessions	2 active sessions	Not applicable	Not applicable	2 active sessions	2 active sessions	2 active sessions	2 active sessions	2 active sessions	2 active sessions	Not applicable	2 active sessions	2 active sessions	2 active sessions
SSH	Not applicable	Not applicable	Not applicable	32	32	32	32	32	32	Not applicable	32	32	32
STP logical interfaces	9000	Not applicable	Not applicable	9000	9000	9000	9000	9000	9000	9000	9000	12000	12000
TCAM entries for ACL	1664 ingress and 1024 egress	Not applicable	Not applicable	2048 ingress and 512 egress	2048 ingress and 512 egress	2048 ingress and 512 egress	2048 ingress and 512 egress	2048 ingress and 512 egress	2048 ingress and 512 egress	Not applicable	2048 ingress and 512 egress	768 ingress and 768 egress	768 ingress and 768 egress
Telnet session	Not applicable	Not applicable	Not applicable	64	64	64	64	64	64	Not applicable	64	32	32
VRF	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Feature	3000 Platform Verified Limit	3100 Platform Verified Limit (ALPM Mode)	3100 Platform Verified Limit (NBM Mode)	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172Q Platform Verified Limit	3108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit	3132C-Z Platform Verified Limit	3232C Platform Verified Limit	3264C-E Platform Verified Limit	3264Q-S Platform Verified Limit
VRRP	255	255	Not applicable	255	255	255	255	255	255	255	255	255	255



**Note**

- The IPv4/IPv6 host routes and the IPv4 multicast routes share the same hardware table. Limits are provided for both the default line card mode and the max host line card mode.
- You can configure upto 2034 Layer 2 VNIs with 32 static ingress replication peers on the following Cisco Nexus 3000 Series platforms:
  - C3132Q-V
  - C31108TC-V
  - C31108PC-V

**Table 4: VXLAN Flood and Learn Verified Scalability Limits**

Feature	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3172Q Platform Verified Limit	31108PC-V / 31108TC-V Platform Verified Limit	3264C-E Platform Verified Limit
Layer 2 VNI	640	640	640	640	640
Underlay multicast groups	128	128	128	128	128
Overlay MAC addresses	64,000	64,000	64,000	64,000	64,000
VTEPS	128	128	128	128	128
Ingress replication peers	128	128	128	128	128
Ingress replication Layer 2 VNIs	384	384	384	384	384
MAC addresses for ingress replication	64,000	64,000	64,000	64,000	64,000
Local MAC (MAC on vpc leg)	64,000	64,000	64,000	64,000	64,000

Feature	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3172Q Platform Verified Limit	31108PC-V / 31108TC-V Platform Verified Limit	3264C-E Platform Verified Limit
Port VLAN translations in a port	100	100	100	100	100

**Table 5: VXLAN BGP eVPN Multicast Replication with Routing Verified Scalability Limits**

Feature	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3172Q Platform Verified Limit	31108PC-V / 31108TC-V Platform Verified Limit	N3K-C3132C-Z	3264C-E Platform Verified Limit
Layer 2VNI	Not applicable	640	Not applicable	640	640	Not applicable
Layer 3 VNI/VRFs	Not applicable	160	Not applicable	160	160	Not applicable
Underlay multicast groups	Not applicable	320	Not applicable	320	320	Not applicable
Overlay MAC addresses	Not applicable	64,000	Not applicable	64,000	64,000	Not applicable
VTEPs	Not applicable	32	Not applicable	32	32	Not applicable
Local MAC (MAC on vpc /access leg)	Not applicable	64,000	Not applicable	64,000	64,000	Not applicable
IPv4 host routes	Not applicable	8000	Not applicable	8000	8,000	Not applicable
IPv6 host routes	Not applicable	4000	Not applicable	4000	4,000	Not applicable

**Table 6: VXLAN BGP eVPN BGP Ingress Replication with Routing Verified Scalability Limits**

Feature	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3172Q Platform Verified Limit	31108PC-V / 31108TC-V Platform Verified Limit	N3K-C3132C-Z	3264C-E Platform Verified Limit
Layer 2 VNI	Not applicable	640	Not applicable	640	640	Not applicable
Layer 3 VNI vrf	Not applicable	160	Not applicable	160	160	Not applicable
Underlay multicast groups	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Overlay MAC addresses	Not applicable	64,000	Not applicable	64,000	64,000	Not applicable

Feature	3132Q Platform Verified Limit	3132Q-V Platform Verified Limit	3172Q Platform Verified Limit	31108PC-V / 31108TC-V Platform Verified Limit	N3K-C3132C-Z	3264C-E Platform Verified Limit
VTEPs	Not applicable	32	Not applicable	32	32	Not applicable
Local MAC addresses	Not applicable	64,000	Not applicable	64,000	64,000	Not applicable
IPv4 host routes	Not applicable	8000	Not applicable	8000	8000	Not applicable
IPv6 host routes	Not applicable	4000	Not applicable	4000	4000	Not applicable

## Verified Topology Limits

The tables in this section list the verified scaling capabilities with all listed features enabled at the same time. The scale numbers listed here exceed those used by most customers in their topologies. These numbers are not the maximum verified values if each feature is viewed in isolation.



### Note

- The scale numbers in the Verified Topology Limits tables are for the Non-ALPM mode and the default IPv6 LPM carve value is 256 for all the platforms.
- For the verified topology scale numbers for 3132Q platform, refer to the scale numbers for 3132Q-X platform since they are identical for both these platforms.
- All the scale numbers are with Unicast RPF disabled.

**Table 7: Verified Topology Limits**

Feature	3064 Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	31108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit	3548P Platform Verified Limit
Active VLANs per switch	507 (MSTP)	507 (MSTP)	507 (MSTP)	507 (MSTP)	507 (MSTP)	507 (MSTP)	205(RSTP)
BFD neighbors	64	64	64	64	64	64	2
BGPv4 neighbors	97	97	128	97	97	97	13
<b>Note</b>	These values are for vPC only.						

Feature	3064 Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	31108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit	3548P Platform Verified Limit
BGPv6  <b>Note</b> These values are for vPC only.	33	33	64	33	33	33	Not applicable
EtherChannel Members	18	16	16	18	10	16	12
ECMP	32-way	32-way	32-way	32-way	32-way	32-way	Not applicable
HSRP	100	100	100	100	100	100	50
HSRPv6	100	100	100	100	100	100	Not applicable
IGMP Snooping groups	1000	1000	1000	1000	1000	1000	1500
IPv4 hosts	4000	4000	4000	4000	4000	4000	4000
IPv6 host routes	1500 (with system urpf disabled)	1400	1400	1400	1400	1300	Not applicable
Layer 3 SVI, subinterfaces EtherChannels	360	355	355	355	355	355	100
MAC table size (vPC)	40,000	40,960	40,960	40,000	40,000	40,000	4600
MST instances	65	65	65	65	65	65	Not applicable
Multicast routes	2000	2000 routes (without TCAM carving)	2200 routes (without TCAM carving)	2000 routes	2000 routes	2000 routes	3200
Multicast NAT translations	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	400
Number of switch port EtherChannels	8	7	7	8	8	7	5
OSPF neighbors	8	9	9	9	9	9	3

Feature	3064 Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	31108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit	3548P Platform Verified Limit
OSPFv3	8	9	9	9	9	9	Not applicable
PBR entries	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	50
STP logical interfaces	395 (MST mode)	329 (MST mode)	329 (MST mode)	395 (MSTP)	395 (MSTP)	200 (MSTP)	415 (RSTP)
Unicast NAT translations	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	250
VRF	2	2	2	2	2	2	13
VRRP	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	50
VRRPv3	200	200	200	200	200	200	Not applicable

**Table 8: Verified Topology Limits**

Feature	3064 Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	31108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit	3548P Platform Verified Limit
IPv4 LPM routes (No IPv6 carving)	4000	4000	4000	4000	4000	4000	2000
IPv6 LPM <=64	4000	4000	4000	4000	4000	4000	Not applicable
IPv6 LPM >64 and <=127	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**Table 9: Verified Topology Limits**

Feature	3064 Platform Verified Limit	3132Q-V Platform Verified Limit	3132Q-X Platform Verified Limit	3172PQ Platform Verified Limit	31108PC-V Platform Verified Limit	31108TC-V Platform Verified Limit
<b>VXLAN Flood and Learn</b>						
Overlay MAC addresses	Not applicable	Not applicable	2000	Not applicable	Not applicable	Not applicable
Layer 2 VNI	Not applicable	Not applicable	200	Not applicable	Not applicable	Not applicable
Underlay multicast groups	Not applicable	Not applicable	100	Not applicable	Not applicable	Not applicable
Ingress replication peers	Not applicable	Not applicable	100	Not applicable	Not applicable	Not applicable



<b>Feature</b>	<b>3064 Platform Verified Limit</b>	<b>3132Q-V Platform Verified Limit</b>	<b>3132Q-X Platform Verified Limit</b>	<b>3172PQ Platform Verified Limit</b>	<b>31108PC-V Platform Verified Limit</b>	<b>31108TC-V Platform Verified Limit</b>
Ingress replication Layer 2 VNIs	Not applicable	Not applicable	100	Not applicable	Not applicable	Not applicable

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS REFERENCED IN THIS DOCUMENTATION ARE SUBJECT TO CHANGE WITHOUT NOTICE. EXCEPT AS MAY OTHERWISE BE AGREED BY CISCO IN WRITING, ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS DOCUMENTATION ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED.

The Cisco End User License Agreement and any supplemental license terms govern your use of any Cisco software, including this product documentation, and are located at: <http://www.cisco.com/go/softwareterms>. Cisco product warranty information is available at <http://www.cisco.com/go/warranty>. US Federal Communications Commission Notices are found here <http://www.cisco.com/c/en/us/products/us-fcc-notice.html>.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Any products and features described herein as in development or available at a future date remain in varying stages of development and will be offered on a when-and if-available basis. Any such product or feature roadmaps are subject to change at the sole discretion of Cisco and Cisco will have no liability for delay in the delivery or failure to deliver any products or feature roadmap items that may be set forth in this document.

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

The documentation set for this product strives to use bias-free language. For the purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: [www.cisco.com go trademarks](http://www.cisco.com/go/trademarks). Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1721R)

© 2019–2020 Cisco Systems, Inc. All rights reserved.



**Americas Headquarters**  
Cisco Systems, Inc.  
San Jose, CA 95134-1706  
USA

**Asia Pacific Headquarters**  
CiscoSystems(USA)Pte.Ltd.  
Singapore

**Europe Headquarters**  
CiscoSystemsInternationalBV  
Amsterdam,TheNetherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at [www.cisco.com/go/offices](http://www.cisco.com/go/offices).