



Cisco Nexus 3000 Verified Scalability for NX-OS Release 5.0(3)U5(1)

[Cisco Nexus 3000 Series Verified Scalability](#) 2

[Cisco Nexus 3000 Verified Scalability for NX-OS Release 5.0\(3\)U5\(1\)](#) 2

Revised: October 25, 2012,

Cisco Nexus 3000 Series Verified Scalability

Cisco Nexus 3000 Verified Scalability for NX-OS Release 5.0(3)U5(1)

The following table lists the Cisco verified limits for topologies that include Layer 2 and Layer 3 feature configurations.



Note 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: Cisco NX-OS Release 5.0(3)U5(1) Layer 2 and Layer 3 Topology Configuration Limits

Feature	Verified Topology ¹	Verified Maximum ²
Active VLANs per switch	4,000 ³	4,000 ⁴
MTU	9,216	9,216
STP logical interfaces	9,000	9,000
MST instances	64	64
MAC table size (non-vPC) ⁵	128,000	128,000
MAC table size (vPC)	40,000	40,000
EtherChannel Members	32	32
Number of switch port EtherChannels	64	64
Number of system logging destination ports	8	8
SPAN sessions	2 active sessions 6	2 active sessions ⁷
Layer 3 physical interfaces	64	64
Layer 3 SVI, subinterfaces, EtherChannels	1,024	1,024
VRF	200	1,000 ⁸

Feature	Verified Topology ¹	Verified Maximum ²
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)
IPv6 hosts	4,000 ⁹	8,000
IPv4 routes (LPM)	8,192 ¹⁰	16,000 ¹¹
IPv6 routes (LPM less than or equal to 64 bits) ¹²	8,000 (with system urpf disabled) 4,000 (with system urpf enabled)	8,000 (with system urpf disabled) 4,000 (with system urpf enabled)
IPv6 routes (LPM greater than 64 bits and less than or equal to 127 bits) ¹³	256 (with system urpf disabled) 128 (with system urpf enabled)	256 (with system urpf disabled) 128 (with system urpf enabled)
Multicast routes	3,000 (Nexus 3064PQ) 7,500 (All other Nexus 3000 Series platforms)	4,000 (Nexus 3064PQ) 8,000 (All other Nexus 3000 Series platforms)
IGMP Snooping groups	8,000	8,000
ECMP	32-way	64-way
TCAM entries for ACL	1,664 ingress, 1,024 egress	1,664 ingress, 1,024 egress
HSRP	500	500
VRRP	255 ¹⁴	255 ¹⁵
Configurable QoS groups	8	8
HSR Pv6	250	500
BFD neighbors	64	64

- ¹ Verified Topology-- Indicates the verified scaling capabilities with all listed features enabled at the same time. The numbers listed here exceed those used by most customers in their topologies. The scale numbers listed here are not the maximum verified values if each feature is viewed in isolation.
- ² Indicates the maximum scale capability tested for the corresponding feature individually. this number is the absolute maximum currently supported by Cisco NX-OS Release 5.0(3)U5(1) software for the corresponding feature. If the hardware is capable of a higher scale, future software releases may increase this verified maximum limit.
- ³ 507 VLANs in PVRST mode. 512 VLANs in RPVST mode where 507 are user-defined VLANs, and 4,000 VLANs in MST mode.
- ⁴ 507 VLANs in PVRST mode. 512 VLANs in RPVST mode where 507 are user-defined VLANs, and 4,000 VLANs in MST mode.
- ⁵ The probability of MAC collisions increases with scale.
- ⁶ Allows same SPAN source in a single direction in 2 SPAN sessions with difference destinations.
- ⁷ 4 active SPAN sessions with the SPAN source in a single direction (RX only or TX only in each SPAN session. 2 active SPAN sessions with the SPAN source in both RX and TX directions.)
- ⁸ This number includes the management and default VRF.
- ⁹ With uRPF enabled.
- ¹⁰ 8,192 when URPF is enabled globally.

- 11 Increase to 16,000 when URPF is disabled globally. Use the `system urpf disable` command to disable URPF.
- 12 IPv6 will use up 2 entries for every route in the hardware.
- 13 IPv6 will use up 2 entries for every route in the hardware.
- 14 A combination of HSRP and VRRP groups, where the total is 500.
- 15 A combination of HSRP and VRRP groups, where the total is 500.



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

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

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.