



## **Cisco Nexus 3000 Series NX-OS Verified Scalability Guide, Release 9.3(13)**

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# 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(13).

These limits are validated with a unidimensional configuration. 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**
1. Verified limits are provided only for supported platforms.
  2. If a feature is not supported for a particular platform, the verified limit is not provided.
  3. 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.
  4. For Verified Maximum, 16 path ECMP is tested with 40K IPv4 and 40K IPv6.
  5. 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                 | Nexus 34180YC                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------|
| 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      | Nexus 34180YC |           |
|--------------|---------------|-----------|
| Routing Mode | Default       | LPM Heavy |

| Feature    | Nexus 34180YC                                         |                                                   |
|------------|-------------------------------------------------------|---------------------------------------------------|
| 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) |
| 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                   | Nexus 3000     | Nexus 3100 (ALPM Mode) | Nexus 3100 (NEM Mode) | Nexus 3132Q                | Nexus 3132Q-V              | Nexus 3132Q-X              | Nexus 3172PQ                                      | Nexus 3108PCV                                     | Nexus 3108TC-V                | Nexus 3132C-Z              | Nexus 3232C                 | Nexus 3264C-E              | Nexus 3264Q-S              |
|---------------------------|----------------|------------------------|-----------------------|----------------------------|----------------------------|----------------------------|---------------------------------------------------|---------------------------------------------------|-------------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|
| 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 (RPVSI) 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                        |

| Feature                 | Nexus 3000                                                             | Nexus 3100 (ALPM Mode)                                                 | Nexus 3100 (NBM Mode) | Nexus 3132Q              | Nexus 3132Q-V            | Nexus 3132Q-X            | Nexus 3172PQ             | Nexus 3108PCV            | Nexus 31108TC-V                                     | Nexus 3132C-Z           | Nexus 3232C              | Nexus 3264CE                                                        | Nexus 3264QS   |
|-------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------------------------------------|-------------------------|--------------------------|---------------------------------------------------------------------|----------------|
| BGPv6 (non-vPC)         | 128                                                                    | Not applicable                                                         | Not applicable        | 128                      | 128                      | 128                      | 128                      | 128                      | 128                                                 | 512                     | 512                      | 128                                                                 | 128            |
| 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              |
| HaChand 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)<br>16,000 (All other Nexus 3000 Series platforms) | 8,000 (Nexus 3064PQ)<br>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.)<br>16384 (Multicast is 0.) | 16384 (Multicast is 0.) | 16,384 (Multicast is 0.) | 200000 (default system routing mode);<br>138200 (ALPM routing mode) | Not applicable |

| Feature                           | Nexus 3000                                                          | Nexus 3100 (ALPM Mode)                                              | Nexus 3100 (NIM Mode)                                             | Nexus 3132Q                                                            | Nexus 3132Q-V                                                          | Nexus 3132Q-X                                                          | Nexus 3172PQ                           | Nexus 3108FC-V                         | Nexus 3108TC-V                         | Nexus 3132C-Z                                              | Nexus 3232C                            | Nexus 3264CE                                                       | Nexus 3264QS                      |
|-----------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------|-----------------------------------|
| 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.) | 100000 (default system routing mode);<br>13596 (ALPM routing mode) | Not applicable                    |
| 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) | 12,000 (with system urpf disabled)     | 28000 (default system routing mode);<br>130000 (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)      | 13000 (default system routing mode);<br>10200 (ALPM routing mode)  | 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)     | 12000 (default system routing mode);<br>9000 (ALPM routing mode)   | 6,144 (with system urpf disabled) |

| Feature                                 | Nexus 3000                                                       | Nexus 3100 (ALPM Mode)                                           | Nexus 3100 (NBM Mode)                                             | Nexus 3132Q                                                        | Nexus 3132Q-V                                                      | Nexus 3132Q-X                                                      | Nexus 3172PQ   | Nexus 3108PCV  | Nexus 31108TC-V | Nexus 3132C-Z  | Nexus 3232C    | Nexus 3264CE                                                 | Nexus 3264QS   |
|-----------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|----------------|----------------|-----------------|----------------|----------------|--------------------------------------------------------------|----------------|
| 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           | 1000 (default system routing mode); 1200 (ALPM routing mode) | 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                                 | Nexus 3000     | Nexus 3100 (ALPM Mode)                                            | Nexus 3100 (NEM Mode)                                               | Nexus 3132Q    | Nexus 3132Q-V  | Nexus 3132Q-X  | Nexus 3172PQ   | Nexus 3108PC-V | Nexus 3108TC-V | Nexus 3132C-Z  | Nexus 3232C    | Nexus 3264C-E  | Nexus 3264Q-S  |
|-----------------------------------------|----------------|-------------------------------------------------------------------|---------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 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)<br>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)<br>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                                 | Nexus 3000     | Nexus 3100 (ALPM Mode)          | Nexus 3100 (NBM Mode)                                            | Nexus 3132Q    | Nexus 3132Q-V  | Nexus 3132Q-X  | Nexus 3172PQ   | Nexus 3108PCV  | Nexus 31108TC-V | Nexus 3132C-Z  | Nexus 3232C    | Nexus 3264CE   | Nexus 3264QS   |
|-----------------------------------------|----------------|---------------------------------|------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| 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                                 | Nexus 3000     | Nexus 3100 (ALPM Mode) | Nexus 3100 (NIM Mode)                                                | Nexus 3132Q    | Nexus 3132Q-V  | Nexus 3132Q-X  | Nexus 3172PQ   | Nexus 3108PC-V | Nexus 3108TC-V | Nexus 3132C-Z  | Nexus 3232C    | Nexus 3264CE   | Nexus 3264QS   |
|-----------------------------------------|----------------|------------------------|----------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 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 |
| Layer 3 SVI, subinterfaces, EthChannels | 1024           | 1024                   | 1024                                                                 | 1024           | 1024           | 1024           | 1024           | 1024           | 1024           | 255            | 1024           | 1024           | 1024           |

| Feature                  | Nexus 3000     | Nexus 3100 (ALPM Mode) | Nexus 3100 (NIM Mode) | Nexus 3132Q | Nexus 3132Q-V | Nexus 3132Q-X | Nexus 3172PQ | Nexus 3108PCV | Nexus 3108TC-V | Nexus 3132C-Z  | Nexus 3232C    | Nexus 3264CE                                                                           | Nexus 3264QS   |
|--------------------------|----------------|------------------------|-----------------------|-------------|---------------|---------------|--------------|---------------|----------------|----------------|----------------|----------------------------------------------------------------------------------------|----------------|
| MAC table size (non-vPC) | 128,000        | 294912                 | Not applicable        | 131,072     | 131,072       | 131,072       | 98000        | 98000         | 98000          | 98000          | Not applicable | 40000 (default system routing mode);<br>40000 (ALPM routing mode);<br>195000 (L2 mode) | 30000          |
| MAC table size (vPC)     | 128,000        | Not applicable         | Not applicable        | 131,072     | 131,072       | 131,072       | 98000        | 98000         | 98000          | 98000          | Not applicable | 40000 (default system routing mode);<br>40000 (ALPM routing mode);<br>195000 (L2 mode) | 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 |

| Feature                                    | Nexus 3000                                                                                                                     | Nexus 3100 (ALPM Mode)                                                                                                         | Nexus 3100 (NIM Mode) | Nexus 3132Q                                                          | Nexus 3132Q-V                                                        | Nexus 3132Q-X                                                        | Nexus 3172PQ                                                         | Nexus 3108FCV                                                        | Nexus 3108TCV                                                        | Nexus 3132CZ                                                         | Nexus 3232C                                                                              | Nexus 3264CE                                                                             | Nexus 3264QS                                                                             |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Multicast routes                           | 4,000 (Nexus 3064PQ)<br>8,000 (All other Nexus 3000 Series platforms) (hash table and there will be more collisions after 80%) | 4,000 (Nexus 3064PQ)<br>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%)<br>4000 (ALPM mode) | 8000 routes (hash table and there will be more collisions after 80%)<br>4000 (ALPM mode) | 8000 routes (hash table and there will be more collisions after 80%)<br>4000 (ALPM mode) |
| 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                                                                        |

| Feature                | Nexus 3000                   | Nexus 3100 (ALPM Mode) | Nexus 3100 (NBM Mode) | Nexus 3132Q                 | Nexus 3132Q-V               | Nexus 3132Q-X               | Nexus 3172PQ                | Nexus 31108PCV              | Nexus 31108TC-V             | Nexus 3132C-Z  | Nexus 3232C                 | Nexus 3264CE               | Nexus 3264QS               |
|------------------------|------------------------------|------------------------|-----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|-----------------------------|----------------------------|----------------------------|
| 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                       |
| 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 up to 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                   | Nexus 3132C-Z | Nexus 3132Q | Nexus 3132Q-V | Nexus 3172Q | Nexus 31108PC-V / 31108TC-V | Nexus 3264C-E |
|---------------------------|---------------|-------------|---------------|-------------|-----------------------------|---------------|
| Layer 2 VNI               | 640           | 640         | 640           | 640         | 640                         | 640           |
| Underlay multicast groups | 128           | 128         | 128           | 128         | 128                         | 128           |
| Overlay MAC addresses     | 64,000        | 64,000      | 64,000        | 64,000      | 64,000                      | 64,000        |

| Feature                               | Nexus 3132C-Z | Nexus 3132Q | Nexus 3132Q-V | Nexus 3172Q | Nexus 31108PC-V / 31108TC-V | Nexus 3264C-E |
|---------------------------------------|---------------|-------------|---------------|-------------|-----------------------------|---------------|
| VTEPS                                 | 128           | 128         | 128           | 128         | 128                         | 128           |
| Ingress replication peers             | 128           | 128         | 128           | 128         | 128                         | 128           |
| Ingress replication Layer 2 VNIs      | 384           | 384         | 384           | 384         | 384                         | 384           |
| MAC addresses for ingress replication | 64,000        | 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                      | 64,000        |
| Port VLAN translations in a port      | 100           | 100         | 100           | 100         | 100                         | 100           |

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

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

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

| Feature                   | Nexus 3132C-Z  | Nexus 3132Q    | Nexus 3132Q-V  | Nexus 3172Q    | Nexus 31108PC-V / 31108TC-V | Nexus 3264C-E  |
|---------------------------|----------------|----------------|----------------|----------------|-----------------------------|----------------|
| Layer 2 VNI               | 640            | Not applicable | 640            | Not applicable | 640                         | Not applicable |
| Layer 3 VNI vrf           | 160            | Not applicable | 160            | Not applicable | 160                         | Not applicable |
| Underlay multicast groups | Not applicable | Not applicable | Not applicable | Not applicable | Not applicable              | Not applicable |
| Overlay MAC addresses     | 64,000         | Not applicable | 64,000         | Not applicable | 64,000                      | Not applicable |
| VTEPs                     | 32             | Not applicable | 32             | Not applicable | 32                          | Not applicable |
| Local MAC addresses       | 64,000         | Not applicable | 64,000         | Not applicable | 64,000                      | Not applicable |
| IPv4 host routes          | 8000           | Not applicable | 8000           | Not applicable | 8000                        | Not applicable |
| IPv6 host routes          | 4000           | Not applicable | 4000           | Not applicable | 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                 | Nexus 3064 | Nexus 3132Q-V | Nexus 3132Q-X | Nexus 3172PQ | Nexus 31108PC-V | Nexus 31108TC-V | Nexus 3548P |
|-------------------------|------------|---------------|---------------|--------------|-----------------|-----------------|-------------|
| 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           |

| Feature                                                       | Nexus 3064                       | Nexus 3132Q-V                      | Nexus 3132Q-X                      | Nexus 3172PQ | Nexus 31108PC-V | Nexus 31108TC-V | Nexus 3548P    |
|---------------------------------------------------------------|----------------------------------|------------------------------------|------------------------------------|--------------|-----------------|-----------------|----------------|
| BGPv4 neighbors<br><b>Note</b> These values are for vPC only. | 97                               | 97                                 | 128                                | 97           | 97              | 97              | 13             |
| BGPv6<br><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           |

| Feature                             | Nexus 3064     | Nexus 3132Q-V  | Nexus 3132Q-X  | Nexus 3172PQ   | Nexus 31108PC-V | Nexus 31108TC-V | Nexus 3548P    |
|-------------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|----------------|
| 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              |
| 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                           | Nexus 3064     | Nexus 3132Q-V  | Nexus 3132Q-X  | Nexus 3172PQ   | Nexus 31108PC-V | Nexus 31108TC-V | Nexus 3548P    |
|-----------------------------------|----------------|----------------|----------------|----------------|-----------------|-----------------|----------------|
| 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                      | Nexus 3064     | Nexus 3132Q-V  | Nexus 3132Q-X | Nexus 3172PQ   | Nexus 31108PC-V | Nexus 31108TC-V |
|------------------------------|----------------|----------------|---------------|----------------|-----------------|-----------------|
| <b>VXLAN Flood and Learn</b> |                |                |               |                |                 |                 |
| Overlay MAC addresses        | Not applicable | Not applicable | 2000          | Not applicable | Not applicable  | Not applicable  |



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

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