



APPENDIX **C**

## Configuration Limits for Cisco MDS SAN-OS Release 3.x

The features supported by Cisco MDS SAN-OS have maximum configuration limits. For some of the features, we have verified configurations that support limits less than the maximum. [Table C-1](#) lists the Cisco verified limits and maximum limits for switches running Cisco MDS SAN-OS Release 3.x.

**Table C-1** Cisco MDS SAN-OS Release 3.x Configuration Limits

Feature	Verified Limit	Maximum Limit
Device alias	8K per fabric.	20K per fabric.
Event Traps - forward via Email	1 destination.	Up to 10 destinations.
ISLB VRRP	20 per switch.	20 per switch.
NPV switches per NPV core switch	100 switches	100 switches
VSANs	80 VSANs per physical fabric.	4000 VSANs per physical fabric.
VSANs per NPV device	16	16
Switches in a single MDS physical fabric or VSAN	55 switches. <sup>1</sup>	239 switches.
Switches in a mixed or open physical fabric or VSAN	32 switches.	239 switches.
Domains per VSAN	40 domains.	239 domains.
Zone members	16,000 zone members per physical fabric (includes all VSANs).	20,000 zone members per Physical Fabric (includes all VSANs).
Zones	8000 zones per switch (includes all VSANs).	8000 zones per switch (includes all VSANs).
Zone sets	500 zone sets per switch (includes all VSANs).	1000 zone sets per switch (includes all VSANs).
Supported hops for all major storage, server, and HBA vendors	7 hops (diameter of the SAN fabric).	12 hops.

**Send documentation comments to [mdsfeedback-doc@cisco.com](mailto:mdsfeedback-doc@cisco.com)**

**Table C-1 Cisco MDS SAN-OS Release 3.x Configuration Limits (continued)**

Feature	Verified Limit	Maximum Limit
IVR zone members	4000 IVR zone members per physical fabric.	20,000 IVR zone members per physical fabric in Cisco SAN-OS Release 3.0(3) and later. 10,000 IVR zone members per physical fabric prior to Cisco SAN-OS Release 3.0(3).
IVR zones	1500 IVR zones per physical fabric.	8000 IVR zones per physical fabric in Cisco SAN-OS Release 3.0(3) and later. 2000 IVR zones per physical fabric prior to Cisco SAN-OS Release 3.0(3).
IVR zone sets	32 IVR zone sets per physical fabric.	32 IVR zone sets per physical fabric.
IVR service groups	16 service groups per physical fabric.	16 service groups per physical fabric.
ISL instances per switch <sup>2</sup>	Up to 200 ISLs, each with 16 VSANs, for a total of 3200 port-VSAN instances. You can configure more than 200 ISLs with fewer than 16 VSANs, or fewer than 200 ISLs with more than 16 VSANs, within the total ports per VSAN instance limit of 3200.	Up to 200 ISLs, each with 16 VSANs, for a total of 3200 port-VSAN instances. You can configure more than 200 ISLs with fewer than 16 VSANs, or fewer than 200 ISLs with more than 16 VSANs, within the total ports per VSAN instance limit of 3200.
IP ports per switch	No limits.	No limits.
Fibre Channel modules vs. IPS modules per switch	No limits.	No limits.
iSCSI and iSLB sessions per IP port	500 sessions.	500 sessions.
iSCSI and iSLB sessions per switch	5000 sessions.	5000 sessions.
iSCSI and iSLB initiators supported in physical fabric	2000 initiators.	2000 initiators.
iSCSI and iSLB targets per physical fabric (virtual and initiator targets)	6000 targets.	6000 targets.
SANTap ITLs per DPP (initiator/target/LUN tuple) <sup>3</sup>	1024	1024
SANTap ITLs per SSM <sup>3</sup>	1024	1024 in Cisco SAN-OS Release 3.0(2j). 2048 in Cisco SAN-OS Release 3.1(2m). 4080 in Cisco SAN-OS Release 3.1(3) and later.

1. Certain design considerations must be met to reach this limit. We recommend that you have the large Fabric design validated by Cisco Advanced Services.
2. This is the number of trunking-enabled ISL ports multiplied by the number of VSANs in the switch.
3. SANTap is not supported in SAN-OS Release 3.3(1).