Cisco UCS 6400, 6536, 6664, and UCSX-S9108-100G FI Configuration Limits for Cisco UCS Manager, Release 6.0

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Configuration Limits

The limits in this document indicate the maximum scale capability tested for the corresponding feature individually. This number is the absolute maximum currently supported by Cisco UCS Manager for the corresponding feature. When used in combination, the practical limit for each feature may be lower than the maximum limit cited in this document.

Ethernet Environment Configuration Limits

Feature	Cisco UCS 6454 & 64108	Cisco UCS 6536	Cisco UCSX-S9108-100G	Cisco UCS 6664
Active VLANs per Cisco UCS Domain	3000 This is the combined total of VLANs and VSANs that can be configured on each fabric interconnect. Of that total, no more than 32 can be VSANs.	3000 This is the combined total of VLANs and VSANs that can be configured on each fabric interconnect. Of that total, no more than 32 can be VSANs.	3000 This is the combined total of VLANs and VSANs that can be configured on each fabric interconnect. Of that total, no more than 32 can be VSANs.	3000 This is the combined total of VLANs and VSANs that can be configured on each fabric interconnect. Of that total, no more than 32 can be VSANs.
VLAN/VSAN ID space per Cisco UCS Domain	4030-4047 and 4095 are reserved and fixed	4030-4047 and 4095 are reserved and fixed	4030-4047 and 4095 are reserved and fixed	4030-4047 and 4095 are reserved and fixed
STP logical Interfaces (also referred to as VLAN port count) per fabric interconnect [*]	108000	108000	32000	108000

Note
[*] The only exception is for failover vNICs. These consume resources on a per Cisco UCS Domain basis.

VIFs (virtual interfaces) per fabric interconnect that map through VM-FEX to a vNIC or VM itself [*]	1600	1600	256	1600

Feature	Cisco UCS 6454 & 64108	Cisco UCS 6536	Cisco UCSX-S9108-100G	Cisco UCS 6664
Note *The only exception is for failover vNICs. These consume resources on a per Cisco UCS Domain basis.				
Note **Beginning with Cisco UCS Manager Release 4.1(1), VMware VM-FEX and Hyper-V VM-FEX are no longer supported. VM-FEX is supported only with Linux.				
IGMP groups per Cisco UCS Domain	16000	16000	2000	16000
Uplink port channels per fabric interconnect	12*	12	8	12
Note *When there is a mix of FC SAN port channels and FCoE SAN port channels, then together they cannot exceed a total of 8 port channels in the system. FC SAN port channels + FCoE SAN port channels: 8 (4 +4, 3+ 5, 2+ 6, 1+7, or 0+8)				
Maximum number of uplinks per fabric interconnect (including up to12 port channels)	31	31	8	31
Member interfaces per port channel	16	16	16	16
Interfaces per FCoE SAN port channel	16	16	16	16
Primary VLANs per Cisco UCS Domain*	200	200	42	200
Note *Private VLANs count towards the total number of VLANs.				
Secondary VLANs per Cisco UCS Domain	1000	1000	126	1000
Maximum secondary VLANs per primary VLANs.	200	200	126	200
QOS system classes per Cisco UCS Domain	6 (including the class default)	6 (including the class default)	6 (including the class default)	6 (including the class default)

VIC Environment Configuration Limits

Static Virtual NICs per Host for Cisco UCS 6400, 6500, 6600, and UCSX-S9108-100G Fabric Interconnects

OS	vNICs	vHBAs	Max Combination of vNICs and vHBAs
Windows	20	16	12 Enics and 8 Fnics
Ubuntu	32	N/A	32 Enics
ESXi	26	16	18 Enics and 8 Fnics or 24 Enics and 2 Fnics
Oracle	18	6	18 Enics and 6 Fnics
Linux • Red Hat Enterprise Linux • XenServer • SUSE Linux Enterprise Server • CentOs • Rocky Linux • Red Hat CoreOS	32	16	24 Enics and 8 Fnics

Note For supported Operating System versions, see UCS Hardware and Software Compatibility.

Fibre Channel Environment Configuration Limits

Feature	Cisco UCS 6400 Series	Cisco UCS 6536	Cisco UCSX-S9108-100G	Cisco UCS 6664
VSANs	32	32	32	32
Zones	• Per VSAN—4000 • Across all VSANS—4000 If you implement Cisco UCS Manager-based zoning, the maximum number of targets per service profile is 64.	• Per VSAN—4000 • Across all VSANS—4000 If you implement Cisco UCS Manager-based zoning, the maximum number of targets per service profile is 64.	• Per VSAN—4000 • Across all VSANS—4000 If you implement Cisco UCS Manager-based zoning, the maximum number of targets per service profile is 64.	• Per VSAN—4000 • Across all VSANS—4000 If you implement Cisco UCS Manager-based zoning, the maximum number of targets per service profile is 64.

Feature	Cisco UCS 6400 Series	Cisco UCS 6536	Cisco UCSX-S9108-100G	Cisco UCS 6664
Native FC links	16 Ports 1 to 16 support native FC[*]	16 Ports 1/33/1 to 1/36/4 support native FC	8 Ports 1/1/1 to 1/2/4 support native FC	16 Ports 1/25 to 1/40 support native FC

Note
[*]For UCS 6454, the number of FC links was increased from 8 to 16 in Cisco UCS Manager Release 4.0(4a)

Feature	Cisco UCS 6400 Series	Cisco UCS 6536	Cisco UCSX-S9108-100G	Cisco UCS 6664
Virtual Fibre Channel interfaces per fabric interconnect	320	320	64	320
Virtual Fibre Channel interfaces per blade	16	16	16	16
FC-NVMe initiators per blade	4	4	4	4
Flogis per fabric interconnect	320	320	64	320
Maximum number of FC SAN port channels	4	4	4	4
Maximum port channel members per port channel	16	16	8	16
Port channel mode in NPV	Active	Active	Active	Active
Port channel mode in FC switching	On	On	On	On

General Network Configuration Limits

Feature	Cisco UCS 6400 Series	Cisco UCS 6500 Series	Cisco UCSX-S9108-100G	Cisco UCS 6600 Series
Unicast MAC addresses per fabric interconnect	96000 entries	96000 entries	24000 entries	96000 entries
Multicast MAC addresses per fabric interconnect	7000	7000	2000	7000
Secured interfaces per Cisco UCS domain	1000 1000 out of the 2000 VIFs can be port-secured.	1000 1000 out of the 2000 VIFs can be port-secured.	256	1000 1000 out of the 2000 VIFs can be port-secured.
Secured MAC addresses per Cisco UCS domain	8000 MAC addresses secured using the port-security feature.	8000 MAC addresses secured using the port-security feature.	8000 MAC addresses secured using the port-security feature.	8000 MAC addresses secured using the port-security feature.

Feature	Cisco UCS 6400 Series	Cisco UCS 6500 Series	Cisco UCSX-S9108-100G	Cisco UCS 6600 Series
Maximum MTU (Driven by the QoS Configuration)	9216	9216	9216	9216
1G ports	6454 - 4 (45-48) 64108 - 8 Ports (89-96)	6536 - 2 unified ports (Ports 9 and to 10)	Cisco UCSX-S9108-100G (Ports 7 and 8)	-
SPAN active sessions per fabric interconnect	4	4	4	4
Appliance ports per fabric interconnect	16	16	8	16

General Management Configuration Limits

Feature	Cisco UCS 6400 Series	Cisco UCS 6500 Series	Cisco UCSX-S9108-100G	Cisco UCS 6600 Series
Chassis per Cisco UCS domain	20	20	2	20
Maximum combined number of blade and rack servers per Cisco UCS domain	160	160	20	160
Maximum number of Fabric Extenders per Cisco UCS domain [1]	20 (10 per fabric interconnect)	20 (10 per fabric interconnect)	N/A	20 (10 per fabric interconnect)
Local user accounts per Cisco UCS domain	48	48	48	48
Concurrent logins per user account	64 This total includes a maximum of 32 concurrent GUI logins and 32 concurrent CLI logins per user account. This value is the same for both local and remote user accounts.	64 This total includes a maximum of 32 concurrent GUI logins and 32 concurrent CLI logins per user account. This value is the same for both local and remote user accounts.	64 This total includes a maximum of 32 concurrent GUI logins and 32 concurrent CLI logins per user account. This value is the same for both local and remote user accounts.	64 This total includes a maximum of 32 concurrent GUI logins and 32 concurrent CLI logins per user account. This value is the same for both local and remote user accounts.
Active KVM sessions per individual CIMC	4	4	4	4
Concurrent CLI logins per Cisco UCS Manager	32	32	32 (Default & Recommended - 16)	32
Concurrent GUI logins per Cisco UCS Manager	256	256	256	256

Feature	Cisco UCS 6400 Series	Cisco UCS 6500 Series	Cisco UCSX-S9108-100G	Cisco UCS 6600 Series
Number of LDAP groups per Cisco UCS Manager	160	160	160	160
Number of adapter end points per Cisco UCS Manager	320	320	16	320

[1] There is a limit of twenty FEX for each UCS domain. For example, you can either have ten 93180YC-FX3 FEX for each FI or a combination of ten chassis and ten FEX.