

# Cisco UCS 6100 and 6200 Series Configuration Limits for Cisco UCS Manager, Release 2.0

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## Configuration Limits

The following tables list the Cisco verified limits for Cisco UCS 6100 and 6200 series fabric interconnects running Cisco UCS Manager release 2.0(x).

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.



**Note** For additional VMware ESX configuration information, see the *Cisco VM-FEX Best Practices for VMware ESX Environment Deployment Guide* available at the following URL: [http://www.cisco.com/en/US/solutions/collateral/ns340/ns517/ns224/ns944/vm\\_fex\\_best\\_practices\\_deployment\\_guide\\_ns1124\\_Networking\\_Solutions\\_White\\_Paper.html](http://www.cisco.com/en/US/solutions/collateral/ns340/ns517/ns224/ns944/vm_fex_best_practices_deployment_guide_ns1124_Networking_Solutions_White_Paper.html)

## Ethernet Environment Configuration Limits

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Active VLANs per Cisco UCS domain	982  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.	982  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	4013 unreserved space	4013 unreserved space

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
STP logical Interfaces (also referred to as VLAN port count) per fabric interconnect <b>Note</b> The only exception is for failover vNICs. These consume resources on a per Cisco UCS domain basis.	14000	32000
VIFs (virtual interfaces) per fabric interconnect that map through VM-FEX to a vNIC or VM itself <b>Note</b> The only exception is for failover vNICs. These consume resources on a per Cisco UCS domain basis.	2000	2000
IGMP groups per Cisco UCS domain	1000	1000
Uplink port channels per fabric interconnect	12	12
Member interfaces per port channel	8	8
Primary VLANs per Cisco UCS domain <b>Note</b> Private VLANs count towards the total number of VLANs.	30	30
Secondary VLANs per Cisco UCS domain	30	30
QOS system classes per Cisco UCS domain	6 (including the class default)	6 (including the class default)

Feature	Cisco UCS 6100 Series			Cisco UCS 6200 Series		
	OS	Max vNICs for PTS	Max vNICs for UPT	Same as 6100 series		
Dynamic virtual NICs per VIC	ESX 4.0	56	N/A			
	ESX 4.1	56	N/A			
	ESX 5.0	116 114 with 2 vHBAs 116 without vHBAs	56 with default configuration 54 with 2 vHBAs 56 without vHBAs			
	KVM 6.1	116 114 with 2 vHBAs 116 without vHBAs	N/A			
Static virtual NICs per VIC	OS	VNICs	vHBAs	OS	VNICs	vHBAs
	Win 2003	10	2	Win 2003	10	2
	Win 2008 Total maximum combination of vNICs and vHBAs is limited to 20.	20	16	Win 2008 Total maximum combination of vNICs and vHBAs is limited to 20.	20	16
	RHEL 5.4 Total maximum combination of vNICs and vHBAs is limited to 32.	32	16	RHEL 5.4 Total maximum combination of vNICs and vHBAs is limited to 32.	32	16

Feature	Cisco UCS 6100 Series			Cisco UCS 6200 Series		
	ESX 4UI Total maximum combination of vNICs and vHBAs is limited to 26.	26	16	ESX 4UI Total maximum combination of vNICs and vHBAs is limited to 26.	26	16
	Xenserver 5.6FP1 Total maximum combination of vNICs and vHBAs is limited to 20.	20	2	Xenserver 5.6FP1 Total maximum combination of vNICs and vHBAs is limited to 20.	20	2
	Xenserver 6.0 Total maximum combination of vNICs and vHBAs is limited to 32.	32	2	Xenserver 6.0 Total maximum combination of vNICs and vHBAs is limited to 32.	32	2

## Fibre Channel Environment Configuration Limits

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
VSANs	32 <b>Note</b> This is the combined total of 982 VLANs and VSANs that can be configured on each fabric interconnect. Of that total, no more than 32 can be VSANs.	32 <b>Note</b> A combined total of 2000 VLANs and VSANs can be configured on each fabric interconnect.

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Zones	<ul style="list-style-type: none"> <li>• Per VSAN—8000</li> <li>• Across all VSANS—8000</li> </ul> <p><b>Note</b> If you implement Cisco UCS Manager-based zoning, the maximum number of targets per service profile is 64.</p>	<ul style="list-style-type: none"> <li>• Per VSAN—8000</li> <li>• Across all VSANS—8000</li> </ul> <p><b>Note</b> If you implement Cisco UCS Manager-based zoning, the maximum number of targets per service profile is 64.</p>
Native FC links	Native 4G links: <ul style="list-style-type: none"> <li>• 6120—8</li> <li>• 6140—16</li> </ul> Native 8G links: <ul style="list-style-type: none"> <li>• 6120—6</li> <li>• 6140—12</li> </ul>	6248—Up to 48 6296—Up to 96
Virtual Fibre Channel interfaces per fabric interconnect	160	240
Virtual Fibre Channel interfaces per blade	16	16
Flogis per fabric interconnect	256	256
Maximum number of SAN port channels	4	4
Maximum port channel members per port channel	8	16
Port channel mode in NPV	Active	Active
Port channel mode in FC switching	On	On

## VM-FEX Environment Configuration Limits

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Hosts per DVS	52	52

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
DVSs per Cisco UCS domain	1	1
vCenters per Cisco UCS domain	1	4
Port profiles per Cisco UCS domain	512	512
Dynamic ports per port profile	4096	4096
Dynamic ports per DVS	4096	4096

## General Network Configuration Limits

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Unicast MAC addresses per fabric interconnect	13800 entries	20000 entries
Multicast MAC addresses per fabric interconnect	6000	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.
Secured MAC addresses per Cisco UCS domain	2000 MAC addresses secured using the port-security feature.	2000 MAC addresses secured using the port-security feature.
Maximum MTU	9000	9000
1G ports	6120—First 8 fixed ports 6140—First 16 fixed ports	6248—Up to 48 6296—Up to 96
SPAN active sessions per fabric interconnect	2	2

## General Management Configuration Limits

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Chassis per Cisco UCS domain	20	20
Maximum combined number of blade and rack servers per Cisco UCS domain	160	160
Maximum number of 2232PP Fabric Extenders per Cisco UCS domain	20 (10 per fabric interconnect)	20 (10 per fabric interconnect)
Local user accounts per Cisco UCS domain	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.
Active KVM sessions per individual CIMC	4	4
Concurrent CLI logins per Cisco UCS Manager	32	32
Concurrent GUI logins per Cisco UCS Manager	256	256
Number of LDAP groups per Cisco UCS Manager	28	28





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