Configuration Limits

Cisco UCS 6100 and 6200 Series Configuration Limits for Cisco UCS Manager, Release 2.1

Configuration Limits 2

Ethernet Environment Configuration Limits 2

Fibre Channel Environment Configuration Limits 4

VM-FEX Environment Configuration Limits 5

General Network Configuration Limits 6

General Management Configuration Limits 7

Revised: December 11, 2012, OL-28625-01

Configuration Limits

The following tables list the Cisco verified limits for Cisco UCS 6100 and 6200 series fabric interconnects running Cisco UCS Manager release 2.1(x).

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

Ethernet Environment Configuration Limits

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Active VLANs per Cisco UCS domain	1024 **Note** 32 VLANS are set aside for VSANs and the remaining are the VLANs.	1024 **Note** 32 VLANS are set aside for VSANs and the remaining are the VLANs.
VLAN/VSAN ID space per Cisco UCS domain	4013 unreserved space	4013 unreserved space
STP logical Interfaces (also referred to as VLAN port count) per fabric interconnect **Note** The only exception is for failover vNICs. These consume resources on a per Cisco UCS domain basis.	14000	64000 (with VLAN Port Count Optimization enabled)
VIFs (virtual interfaces) per fabric interconnect that map through VM-FEX to a vNIC or VM itself **Note** The only exception is for failover vNICs. These consume resources on a per Cisco UCS domain basis.	2000	2000

Feature	Cisco UCS 6100 Series			Cisco UCS 6200 Series		
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 **Note** 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)		
Dynamic virtual NICs per VIC	**OS**	**Max vNICs for PTS**	**Max vNICs for UPT**	Same as 6100 series		
	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

Feature	Cisco UCS 6100 Series			Cisco UCS 6200 Series		
	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
	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	32

Feature	Cisco UCS 6100 Series	Cisco UCS 6200 Series
Zones	Default zoning is disabled on a per VSAN basis. **Note** Zoning is not natively supported on 6100 series fabric interconnects. Zones can be uploaded from MDS or Nexus 5000.	Default zoning is disabled on a per VSAN basis. **Note** Zoning is not natively supported on 6200 series fabric interconnects. Zones can be uploaded from MDS or Nexus 5000.
Native FC links	Native 4G links: • 6120—8 • 6140—16 Native 8G links: • 6120—6 • 6140—12	6248—Up to 48 6296—Up to 96
Virtual Fibre Channel interfaces per fabric interconnect	160	160
Virtual Fibre Channel interfaces per blade	16	16
Flogis per Fibre Channel module	256	256
Maximum number of SAN port channels	4	4
Maximum port channel members per port channel	16	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
IP storage appliances per fabric interconnect	2	2
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	32 This value is the same for both local and remote user accounts.	32 This value is the same for both local and remote user accounts.
Active KVM sessions per individual CIMC	4	4
Concurrent logins per Cisco UCS Manager	256 There can be any combination of GUI, CLI, or API logins as long as the total number of logins does not exceed 256.	256 There can be any combination of GUI, CLI, or API logins as long as the total number of logins does not exceed 256.

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