

XenServer Configuration Limits

Citrix® XenServer 6.2.0

Citrix recommends using the following configuration limits as a guideline when selecting and configuring your virtual and physical environment for XenServer. The following information represents tested and recommended configuration limits that are fully supported by Citrix for XenServer.

- [Virtual Machine Limits](#)
- [XenServer Host Limits](#)
- [Resource Pool Limits](#)

Factors such as hardware and environment can affect the limitations listed below. More information about supported hardware can be found on the Citrix [XenServer Hardware Compatibility List](#). Consult your hardware manufacturers' documented limits to ensure you do not exceed the supported configuration limits for your environment. Refer to the [XenServer Technical Specifications](#) and [XenServer White Papers](#) for the latest technical specifications, platform requirements and white papers on capacity planning and performance testing completed for XenServer.

Virtual Machine (VM) Limits

Item	Limit
Compute	
Virtual CPUs per VM	16
Memory	
RAM per VM	128GB ¹
Storage	
Virtual Disk Images (VDI) (including CD-ROM) per VM	16
Virtual CD-ROM drives per VM	1
Virtual Disk Size (NFS)	2TB minus 4GB
Virtual Disk Size (LVM)	2TB minus 4GB
Networking	
Virtual NICs per VM	7 ²

¹ The maximum amount of physical memory addressable by your operating system varies. Setting the memory to a level greater than the operating system supported limit, may lead to performance issues within your guest. Some 32-bit Windows operating systems can support more than 4 GB of RAM through use of the physical address extension (PAE) mode. The limit for 32-bit PV Virtual Machines is 64GB. Please consult your guest operating system Administrators Guide and the XenServer Virtual Machine User's Guide for more details.

² Several guest OS have a lower limits, other guests require installation of the XenServer Tools in order to achieve this limit.

XenServer Host Limits

Item	Limit
Compute	
Logical processors per host	160 ³
Virtual CPUs per host (Windows VMs)	4000 ⁴
Concurrent VMs per host (Windows VMs)	500 ⁵
Concurrent VMs per host (Linux VMs)	650 ⁵
Concurrent protected VMs per host with HA enabled	500
Memory	
RAM per host	1 TB ⁶
Storage	
Concurrent active virtual disks per host	512
Networking	
Physical NICs per host	16
Physical NICs per network bond	4
Virtual NICs per host	512
VLANs per host	800
VLANs per physical NIC	1019 ⁷
Network Bonds per host	4
Graphics Capability	
GPUs per host	12 ⁸

³ The maximum amount of logical physical processors supported differs by CPU. Please consult the XenServer [Hardware Compatibility List](#) for more details on the maximum amount of logical cores supported per vendor and CPU.

⁴ Each plugged VBD or plugged VIF or Windows VM reduces this number by 1.

⁵ The maximum number of VMs/host supported is dependent on VM workload, system load, and certain environmental factors. Citrix reserves the right to determine what specific environmental factors affect the maximum limit at which a system can function. For systems running 500 HVM VMs, Citrix recommends allocating 8GB RAM and 8 exclusively pinned vCPUs to dom0, and setting the OVS flow-eviction-threshold to 8192.

⁶ If a host has one or more 32-bit paravirtualized guests (Linux VMs) running a maximum of 128GB RAM is supported on the host.

⁷ Each virtual NIC (VIF) on the physical NIC's (PIF) network, reduces this number by 1.

⁸ This figure may change, refer to the XenServer Hardware Compatibility List for current supported limit: <http://hcl.xensource.com/GPUPass-throughDeviceList.aspx>

Resource Pool Limits

Item	Limit
Compute	
Hosts per resource pool	16
Networking	
VLANs per resource pool	800
Active hosts per cross-server private network	16
Cross-server private networks per resource pool	16
Virtual NICs per cross-server private network	16
Cross-server private network virtual NICs per resource pool	256
Hosts per vSwitch controller	64
Virtual NICs per vSwitch controller	1024
VMs per vSwitch controller	1024
Disaster Recovery	
Integrated Site Recovery storage repositories per resource pool	8
Storage	
Paths to a LUN	8
Multipathed LUNs per host	150
Multipathed LUNs per host (used by storage repositories)	75
VDIs per SR	600
Storage XenMotion	
(non-CDROM) VDIs per VM	6
Snapshots per VM	1
Concurrent transfers	3
XenCenter	
Concurrent operations per pool	25

If you have any comments about this documentation, submit your feedback to: xenserverlimits@citrix.com.

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