



Hardware Compatibility List (HCL) for Veritas Storage Foundation and High Availability Solutions 5.0 RU1 for Linux SLES 11.0

HCL date 08/13/09

Category	Manufacturer	Models	V X V M	D M P	B O T	O A N	V C S	S F H A	S F C S	N O T E S
Server	Generic	x86 (Intel Architecture 32-bit) Server	X	X	X	X	X	X	X	
Server	Generic	EM64T/Opteron (32/64-bit) Server	X	X	X	X	X	X	X	
Disk Array	EMC	CLARiiON CX Series	X	ALUA	X	X	X	X	X	B, E
Disk Array	EMC	CLARiiON CX/CX3/CX4 Series	X	A/P-F	X	X	X	X	X	B
Disk Array	EMC	Symmetrix 8000 Series	X	A/A	X	X	X	X	X	B
Disk Array	EMC	Symmetrix DMX Series	X	A/A	X	X	X	X	X	B
Disk Array	EMC	CLARiiON CX4 Series iSCSI	X	ALUA			X	X	X	D, E
Disk Array	Generic	FC JBOD	X	A/A			X	X		B
Disk Array	Generic	SCSI JBOD	X	A/A			X	X		B
Disk Array	Hitachi	AMS/WMS Series	X	A/A-A			X	X		B
Disk Array	Hitachi	Lightning 9900V Series	X	A/A			X	X	X	B
Disk Array	Hitachi	SMS/AMS 2000 Series	X	A/A			X	X	X	B
Disk Array	Hitachi	Thunder 9500v Series	X	A/A-A			X	X		B
Disk Array	Hitachi	USP/NSC Series	X	A/A			X	X	X	B
Disk Array	Hitachi	USP-V/USP-VM Series	X	A/A	X		X	X	X	B
Disk Array	Fujitsu	ETERNUS 2000 series	X	A/A			X	X	X	A, B
Disk Array	HP	MSA 1500	X	ALUA			X	X	X	B
Disk Array	HP	StorageWorks EVA GL 3000/5000	X	ALUA	X		X	X	X	B
Disk Array	HP	StorageWorks EVA 4100/6100/8100	X	ALUA	X		X	X	X	B
Disk Array	HP	StorageWorks XP10000/12000	X	A/A	X		X	X	X	B
Disk Array	HP	StorageWorks XP128/1024	X	A/A			X	X	X	B
Disk Array	HP	StorageWorks XP20000/240000	X	A/A	X		X	X	X	B
Disk Array	HP	StorageWorks EVA 4000/6000/8000	X	ALUA	X		X	X	X	B
Disk Array	HP	StorageWorks EVA 4400/6400/8400	X	ALUA	X		X	X	X	A, B
Disk Array	IBM	TotalStorage DS4000 Series	X	A/P			X	X	X	B, C
Disk Array	IBM	TotalStorage DS4000 Series	X	A/P-F			X	X	X	A, B, C
Disk Array	IBM	TotalStorage DS4000 Series	X	A/P-C			X	X	X	B, C
Disk Array	IBM	System Storage 5000 Series	X	A/P-F			X	X	X	A, B, C
Disk Array	IBM	TotalStorage DS3400	X	A/P-F			X	X	X	A, B, C
Disk Array	IBM	System Storage DS8000 Series	X	A/A			X	X	X	B, C
Disk Array	IBM	XIV	X	A/A			X	X	X	A, B
Disk Array	IBM	Total Storage DS6000 Series	X	A/P-C			X	X	X	B
Disk Array	IBM	SANVC(2145)	X	A/A-A			X	X	X	A, B
Disk Array	SUN	Storage Tek 6140	X	A/P-C			X	X	X	A, B
Disk Array	SUN	Storage Tek 6540	X	A/P			X	X		A, B
Disk Array	SUN	Storage Tek 9900 Series	X	A/A			X	X	X	B
Disk Array	SUN	Storage Tek 9985/9990 Series	X	A/A	X		X	X	X	B
Disk Array	SUN	Storage Tek 9985V	X	A/A			X	X	X	B
Disk Array	SUN	Storage Tek 9990V	X	A/A			X	X	X	B
Disk Array	SUN	Storage Tek 2500FC Series	X	A/P-F			X	X	X	A, B
HBA	QLogic		X	X	X		X		X	All QLogic FC HBAs that are supported by OS and Storage Array Manufacturer's listed on this HCL, are supported unless otherwise explicitly stated. Please check with Storage Array Manufacturer's Hardware Compatibility Support Matrices for required Bios/Firmware and driver versions for the HBAs.

Comments:

All single-path-only SCSI- and FC-based storage supported by the Operating System vendor is automatically supported by Volume Manager, with the following exceptions:

- * Any storage that requires two or more paths (Dynamic Multipathing)
- * Any storage used together with Veritas Cluster Server
- * Any storage used together with Veritas Storage Foundation CFS

Veritas File System and Volume Replicator have no hardware dependencies, and are only supported when used together with Volume Manager.

All storage configurations shown in this HCL were tested with Qlogic QLA2342 or QLE2462 and SLES 11.0 inbox Qlogic drivers. And the Driver version is 8.02.01.03.11.0-k9. For QLA2342: Firmware version is 3.03.27 IPX; and Firmware version 4.04.05 [IP] [Multi-ID] [84XX] is for QLE2462.

5.0RU1 supports arrays of mode A/A, A/A-A, ALUA and A/P-F. Please consult any array documentation and set the array setting: appropriately to conform to the modes of operation.

Symantec supports hardware products on this HCL that include virtualization capability, but does not support compatibility issues that can be ascribed to the virtualization feature. Symantec requires any compatibility issue to be reproduced in a non-virtualization environment. If the issue is confirmed to be related to Symantec products, Symantec will support its software at the same level as when that software is not running in conjunction with hardware virtualization products.

Symantec will, of course, cooperate with virtualization vendors, and attempt to assist in the diagnosis of problems found between the virtualization and Symantec products.

For SFCFS on Linux, a minimum of 2GB of memory, and two CPUs running at a minimum of 2GHz, are required.

Notes:

A

ASL Download Required:

IBM XIV <http://support.veritas.com/docs/325473>
HP StorageWorks
EVA4400/6400/8400 <http://support.veritas.com/docs/326681>
Fujitsu ETERNUS
2000 series <http://support.veritas.com/docs/323774>

ASL/APM Download Required:

IBM TotalStorage
DS3000/DS4000/DS5
000 Series <http://support.veritas.com/docs/326858>

SUN Storage Tek
6140/6540/2500 series <http://support.veritas.com/docs/326858>
IBM SANVC(2145) <http://support.veritas.com/docs/328964>

All the qualifications passed with dev_loss_tmo set to 8000000, and fast_io_fail_tmo set to 20. this workaround is to Prevent SLES 11.0 remove the disk device files once the switch port is disabled.

B

C

After reboot, the OS may not finish the os device discovery, manually vxdisk scandisks is needed to claim all disks

D

Software iSCSI initiator, and NDU not support with EMC CLARiiON CX4 iSCSI setup

E

CX, CX3, CX4 with flare code xx.26.zz and above support ALUA

Equivalents:

Brocade Silkworm 24000 Switch = IBM 2109-M14
Brocade Silkworm 12000 Switch = EMC ED12000-B = HP StorageWorks Core Switch 2/64 = IBM 2109-M12
Brocade Silkworm 3900 Switch = EMC DS32-B2 = HP StorageWorks SAN Switch 2/32 = IBM 2109-F32
Brocade Silkworm 3850 Switch = IBM 2005-H16
Brocade Silkworm 3800 Switch = EMC DS16-B2 = HP StorageWorks SAN Switch 2/16EL = IBM 2109-F16
Brocade Silkworm 3250 Switch = IBM 2005-H08
Brocade Silkworm 3200 Switch = EMC DS8-B2 = HP StorageWorks SAN Switch 2/08EL = IBM 3534-F08
Brocade Silkworm 2800 Switch = EMC DS16-B = HP StorageWorks SAN Switch 16 = IBM 2109-S16

Historys:

LxRT 5.0RU1 07/06/09 changes from 05/31/09 version

- 1) Added supports for EMC CLARiiON CX4 Series iSCSI
- 2) Added Note D for EMC CLARiiON CX4 Series iSCSI
- 3) Added Note E for EMC CLARiiON CX/CX3/CX4 ALUA
- 4) Added supports for Total Storage DS6000 Series
- 5) Added supports for StorageWorks EVA 4400/6400/8400
- 6) Added asl technote for StorageWorks EVA4400/6400/8400 <http://support.veritas.com/docs/326681>
- 7) Added supports for Storage Tek 2500FC Series and its ASL/APM
- 8) Changed ASL/APM technote from <http://support.veritas.com/docs/324049> to <http://support.veritas.com/docs/326858>
- 9) Added SANboot supports for CLARiiON CX/CX3/CX4(A/P-F) Series
- 10) Combined CX(A/P-F), CX3(A/P-F), CX4(A/P-F) support items to one CX/CX3/CX4(A/P-F) item

LxRT 5.0RU1 08/13/09 changes from 07/06/09 version

- 1) Added supports for Fujitsu ETERNUS 2000 series
- 2) Added asl technote for Fujitsu ETERNUS 2000 series <http://support.veritas.com/docs/323774>
- 3) Added supports for IBM SANVC(2145)
- 4) Added asl technote for IBM SANVC(2145) <http://support.veritas.com/docs/328964>