



HP 3PAR F200/F400 T400/T800 FC Microsoft Windows Server 2003 IA32/x64

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Overview

This document contains information regarding compatibility and interoperability for a "configuration set" of Storage Area Network (SAN) components. A configuration set is a collection of components that are compatible in a particular context. For example, configuration sets of type "array-os" contain components that are compatible from an array-os perspective. An example of an array-os config set is the "EVA4400 Microsoft Windows Server 2008 IA64" config set. It describes the components that are currently supported for the EVA4400 array in a Windows 2008 IA64 environment.

It is very important that you note the details of the components listed in these tables, as they describe the specific attributes of supported component versions. It is also very important to examine the notes in each section, because they may further limit or clarify supported configurations.

The contents of this document were generated from the SPOCK website, located at: <http://spock.corp.hp.com> (HP Employees) or <http://www.hp.com/storage/spock> (HP Customers and Partners) .

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General notes about this configuration set

For specific configuration guidelines and coexistence information, refer to the SAN Design Reference Guide at <http://h18000.www1.hp.com/products/storage/san/documentation.html>.

Links

[Solution Software: Application Notes](http://h20272.www2.hp.com/utility/document.aspx?docurl=Shared%20Documents/Solution_Software/All/SolSW_Application_Notes.pdf) -(http://h20272.www2.hp.com/utility/document.aspx?docurl=Shared%20Documents/Solution_Software/All/SolSW_Application_Notes.pdf)

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Disk Array (12)				
Name	Vendor	Family	Firmware	Host Mode
HP 3PAR F200 Storage System	HP	3PAR	3PAR OS 3.1.1	1 (Generic)
HP 3PAR F200 Storage System	HP	3PAR	3PAR OS 3.1.2	1 (Generic)
HP 3PAR F200 Storage System	HP	3PAR	3PAR OS 3.1.3	1 (Generic)
HP 3PAR F400 Storage System	HP	3PAR	3PAR OS 3.1.3	1 (Generic)
HP 3PAR F400 Storage System	HP	3PAR	3PAR OS 3.1.2	1 (Generic)
HP 3PAR F400 Storage System	HP	3PAR	3PAR OS 3.1.1	1 (Generic)
HP 3PAR T400 Storage System	HP	3PAR	3PAR OS 3.1.1	1 (Generic)
HP 3PAR T400 Storage System	HP	3PAR	3PAR OS 3.1.2	1 (Generic)
HP 3PAR T400 Storage System	HP	3PAR	3PAR OS 3.1.3	1 (Generic)
HP 3PAR T800 Storage System	HP	3PAR	3PAR OS 3.1.3	1 (Generic)
HP 3PAR T800 Storage System	HP	3PAR	3PAR OS 3.1.2	1 (Generic)
HP 3PAR T800 Storage System	HP	3PAR	3PAR OS 3.1.1	1 (Generic)

Operating System (8)					
Name	OS Family	OS Version	Service Pack	Vendor	Architecture
Windows Server 2003 R2 IA32	Windows Server 2003	All Editions	R2	Microsoft	IA32
Windows Server 2003 R2 IA32	Windows Server 2003	All Editions	SP2	Microsoft	IA32
Windows Server 2003 R2 x64	Windows Server 2003	All Editions	SP2	Microsoft	x64
Windows Server 2003 R2 x64	Windows Server 2003	All Editions	R2	Microsoft	x64

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Name	OS Family	OS Version	Service Pack	Vendor	Architecture
Windows Server 2003 SP1 IA32	Windows Server 2003	All Editions	SP1	Microsoft	IA32
Windows Server 2003 SP1 x64	Windows Server 2003	All Editions	SP1	Microsoft	x64
Windows Server 2003 SP2 IA32	Windows Server 2003	All Editions	SP2	Microsoft	IA32
Windows Server 2003 SP2 x64	Windows Server 2003	All Editions	SP2	Microsoft	x64

Notes:

General Operating System (8) Notes:

1) SAN Boot is supported

Cluster Management-High Availability (5)			
Name	Vendor	Software Version	Package
Microsoft Cluster Server(MSCS)	Microsoft	Windows Server 2003	
Veritas Cluster Server	Symantec	5.0	
Veritas Cluster Server	Symantec	5.1	
Veritas Cluster Server	Symantec	5.1 SP1	
Veritas Cluster Server	Symantec	5.1 SP2	

Notes:

General Cluster Management-High Availability (5) Notes:

1) For Symantec Storage Foundation 5.1 SP1, VxDMP Load balancing policies "Weighted Path" and "Round-Robin with Subset" are not supported at this time.

2) For Symantec Veritas Cluster Server, 3PAR MPIO DSM is not supported.

3) For Microsoft MSCS, 3PAR MPIO DSM and VxDMP multipath are supported.

4) Symantec/Veritas Storage Foundation (VxDMP/VCS) is only supported in a FC-Fabric attach (FC-switched) configuration.

5) Symantec Storage Foundation 5.1 does not support volumes with 16-byte WWN's implemented on 3PAR OS 3.1.2. For further information, refer to HP 3PAR Windows Server 2003 Implementation Guide

Server (3)		
Name	Vendor	Architecture
Link for ProLiant AMD Opteron servers	HP	ProLiant
Link for ProLiant x86 servers	HP	ProLiant
Link to ProLiant EM64T servers	HP	ProLiant

Notes:**General Server (3) Notes:**

- 1) Link to ProLiant x86 servers Notes: ProLiant Server Information for Windows-(<http://h18004.www1.hp.com/products/servers/windows/index.html>)
- 2) Link to ProLiant AMD64 Notes: ProLiant Server Information for Windows-(<http://h18004.www1.hp.com/products/servers/windows/index.html>)
- 3) Link to ProLiant EM64T servers Notes: ProLiant Server Information for Windows-(<http://h18004.www1.hp.com/products/servers/windows/index.html>)
- 4) For Virtual Connect support information, refer to the Virtual Connect support streams on SPOCK

Host Bus Adapter (HBA) (57)													
Name	Vendor	Bus	Speed	HP Part Number	Firmware Version	BIOS	Vendor Part Number	Old HP Part Number	EFI	Boot Image	Driver Version	Boot Support	Direct Connect Support
403619-B2 1	QLogic	PCle	4Gb	403619-B2 1	Loaded By Driver	2.15	QMH2462		2.20	1.89AF	9.1.9.25	Y	N
403619-B2 1	QLogic	PCle	4Gb	403619-B2 1	Loaded By Driver	2.16	QMH2462		2.22	1.96AF	9.1.9.26	Y	N
403621-B2 1	Emulex	PCle	4Gb	403621-B2 1	2.82a4	3.11a5	LPe1105			6.03a11	2.33.008	Y	N
403621-B2 1	Emulex	PCle	4Gb	403621-B2 1	2.82x4	3.11a5	LPe1105			6.03a11	2.43.004	Y	N
403621-B2 1	Emulex	PCle	4Gb	403621-B2 1	2.82x4	3.11a5	LPe1105			6.03a11	2.50.007	Y	N
403621-B2 1	Emulex	PCle	4Gb	403621-B2 1	2.82x4	3.11a5	LPe1105			6.03a11	2.33.008	Y	N

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Name	Vendor	Bus	Speed	HP Part Number	Firmware Version	BIOS	Vendor Part Number	Old HP Part Number	EFI	Boot Image	Driver Version	Boot Support	Direct Connect Support
403621-B2 1	Emulex	PCle	4Gb	403621-B2 1	2.82x4	3.11a5	LPe1105			6.03a11	2.70.018	Y	N
451871-B2 1	QLogic	PCle	8Gb	451871-B2 1	Loaded By Driver	2.16	QMH2562		NA	2.39AF	9.1.9.26	Y	N
451871-B2 1	QLogic	PCle	8Gb	451871-B2 1	Loaded By Driver	2.15	QMH2562		2.20	2.27AF	9.1.9.25	Y	N
456972-B2 1	Emulex	PCle	8Gb	456972-B2 1	2.00a4	3.11a5	LPe1205			6.03a11	2.33.008	Y	N
456972-B2 1	Emulex	PCle	8Gb	456972-B2 1	2.00a4	3.11a5	LPe1205			6.03a11	2.50.007	Y	N
456972-B2 1	Emulex	PCle	8Gb	456972-B2 1	2.00a4	3.11a5	LPe1205			6.03a11	2.70.018	Y	N
456972-B2 1	Emulex	PCle	8Gb	456972-B2 1	2.00a4	3.11a5	LPe1205			6.03a11	2.43.004	Y	N
81e	Emulex	PCle	8Gb	AJ762A/B	2.00a4	2.02a2	LPe12000			5.03a10	2.33.008	Y	Y
81e	Emulex	PCle	8Gb	AJ762A/B	2.00a4	2.02a2	LPe12000			5.03a10	2.43.004	Y	Y
81e	Emulex	PCle	8Gb	AJ762A/B	1.11a5	2.02a2	LPe12000			5.03a10	2.33.008	Y	Y
81e	Emulex	PCle	8Gb	AJ762A/B	2.00a4	2.12a8	LPe12000			5.03 a13	2.50.007	Y	Y
81e	Emulex	PCle	8Gb	AJ762A/B	2.00a4	2.12a8	LPe12000			5.03 a13	2.70.018	Y	Y
81e	Emulex	PCle	8Gb	AJ762A/B	2.00a4	2.12a9	LPe12000			5.20a0	2.70.018	Y	Y
81Q	QLogic	PCle	8Gb	AK344A	Loaded By Driver	2.16	QLE2560			2.39AF	9.1.9.26	Y	Y
81Q	QLogic	PCle	8Gb	AK344A	Loaded By Driver	2.15	QLE2560			2.27AF	9.1.9.25	Y	Y
82e	Emulex	PCle	8Gb	AJ763A/B	2.00a4	2.02a2	LPe12002			5.03a10	2.33.008	Y	Y
82e	Emulex	PCle	8Gb	AJ763A/B	2.00a4	2.02a2	LPe12002			5.03a10	2.43.004	Y	Y
82e	Emulex	PCle	8Gb	AJ763A/B	1.11a5	2.02a2	LPe12002			5.03a10	2.33.008	Y	Y

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Name	Vendor	Bus	Speed	HP Part Number	Firmware Version	BIOS	Vendor Part Number	Old HP Part Number	EFI	Boot Image	Driver Version	Boot Support	Direct Connect Support
82e	Emulex	PCIe	8Gb	AJ763A/B	2.00a4	2.12a8	LPe12002			5.03 a13	2.50.007	Y	Y
82e	Emulex	PCIe	8Gb	AJ763A/B	2.00a4	2.12a8	LPe12002			5.03 a13	2.70.018	Y	Y
82e	Emulex	PCIe	8Gb	AJ763A/B	2.00a4	2.12a9	LPe12002			5.20a0	2.70.018	Y	Y
82Q	QLogic	PCIe	8Gb	AJ764A	Loaded By Driver	2.15	QLE2562			2.27AF	9.1.9.25	Y	Y
82Q	QLogic	PCIe	8Gb	AJ764A	Loaded By Driver	2.16	QLE2562			2.39AF	9.1.9.26	Y	Y
FC1142SR	QLogic	PCIe	4Gb	AE311A	Loaded By Driver	2.16	QLE2460		2.22	1.96AF	9.1.9.26	Y	Y
FC1142SR	QLogic	PCIe	4Gb	AE311A	Loaded By Driver	2.15	QLE2460		2.20	1.89AF	9.1.9.25	Y	Y
FC1143	QLogic	PCI-X 2.0	4Gb	AB429A	Loaded By Driver	2.15	QLA2460		2.20	1.89AF	9.1.9.25	Y	Y
FC1143	QLogic	PCI-X 2.0	4Gb	AB429A	Loaded By Driver	2.16	QLA2460		2.22	1.96AF	9.1.9.26	Y	Y
FC1242SR	QLogic	PCIe	4Gb	AE312A	Loaded By Driver	2.16	QLE2462			1.96AF	9.1.9.26	Y	Y
FC1242SR	QLogic	PCIe	4Gb	AE312A	Loaded By Driver	2.15	QLE2462			1.89AF	9.1.9.25	Y	Y
FC1243	QLogic	PCI-X 2.0	4Gb	AE369A	Loaded By Driver	2.15	QLA2462			1.89AF	9.1.9.25	Y	Y
FC1243	QLogic	PCI-X 2.0	4Gb	AE369A	Loaded By Driver	2.16	QLA2462			1.96AF	9.1.9.26	Y	Y
FC2142SR	Emulex	PCIe	4Gb	A8002A/B	2.82a4	2.01a2	LPe1150			5.03a10	2.33.008	Y	Y
FC2142SR	Emulex	PCIe	4Gb	A8002A/B	2.82x4	2.12a8	LPe1150			5.03 a13	2.50.007	Y	Y
FC2142SR	Emulex	PCIe	4Gb	A8002A/B	2.82x4	2.12a8	LPe1150			5.03 a13	2.70.018	Y	Y
FC2142SR	Emulex	PCIe	4Gb	A8002A/B	2.82x4	2.02a2	LPe1150			5.03a10	2.33.008	Y	Y

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Name	Vendor	Bus	Speed	HP Part Number	Firmware Version	BIOS	Vendor Part Number	Old HP Part Number	EFI	Boot Image	Driver Version	Boot Support	Direct Connect Support
FC2142SR	Emulex	PCIe	4Gb	A8002A/B	2.82x4	2.02a2	LPe1150			5.03a10	2.43.004	Y	Y
FC2143	Emulex	PCI-X 2.0	4Gb	AD167A	2.82x4	2.02a2	LP1150			5.03a10	2.43.004	Y	Y
FC2143	Emulex	PCI-X 2.0	4Gb	AD167A	2.82x4	2.02a2	LP1150			5.03a10	2.33.008	Y	Y
FC2143	Emulex	PCI-X 2.0	4Gb	AD167A	2.82a4	2.02a2	LP1150			5.03a10	2.33.008	Y	Y
FC2143	Emulex	PCI-X 2.0	4Gb	AD167A	2.82x4	2.12a8	LP1150			5.03 a13	2.50.007	Y	Y
FC2143	Emulex	PCI-X 2.0	4Gb	AD167A	2.82x4	2.12a8	LP1150			5.03 a13	2.70.018	Y	Y
FC2242SR	Emulex	PCIe	4Gb	A8003A/B	2.82x4	2.12a8	LPe11002			5.03 a13	2.50.007	Y	Y
FC2242SR	Emulex	PCIe	4Gb	A8003A/B	2.82x4	2.12a8	LPe11002			5.03 a13	2.70.018	Y	Y
FC2242SR	Emulex	PCIe	4Gb	A8003A/B	2.82a4	2.02a2	LPe11002			5.03a10	2.33.008	Y	Y
FC2242SR	Emulex	PCIe	4Gb	A8003A/B	2.82x4	2.02a2	LPe11002			5.03a10	2.43.004	Y	Y
FC2242SR	Emulex	PCIe	4Gb	A8003A/B	2.82x4	2.02a2	LPe11002			5.03a10	2.33.008	Y	Y
FC2243	Emulex	PCI-X 2.0	4Gb	AD168A	2.82x4	2.02a2	LP11002			5.03a10	2.43.004	Y	Y
FC2243	Emulex	PCI-X 2.0	4Gb	AD168A	2.82x4	2.02a2	LP11002			5.03a10	2.33.008	Y	Y
FC2243	Emulex	PCI-X 2.0	4Gb	AD168A	2.82a4	2.02a2	LP11002			5.03a10	2.33.008	Y	Y
FC2243	Emulex	PCI-X 2.0	4Gb	AD168A	2.82x4	2.12a8	LP11002			5.03 a13	2.50.007	Y	Y
FC2243	Emulex	PCI-X 2.0	4Gb	AD168A	2.82x4	2.12a8	LP11002			5.03 a13	2.70.018	Y	Y

Notes:

General Host Bus Adapter (HBA) (57) Notes:

- 1) Storport driver requires hotfix KB932755 or later.
- 2) Please refer to the 3PAR Legacy HBA Support document under SPOCK Home->Other Hardware->3PAR for support details on older HBA model/driver/firmware levels.
- 3) 2Gb Fibre Channel Switches are not supported as of 3PAR OS 3.1.2
- 4) Emulex 4Gb HBAs LP11000 and LPe11000 are also supported using the same driver/firmware/bios combinations stated as supported for FC2143/LP1150 and FC2142SR/LPe1150 respectively.

Converged Network Adapter (CNA) (12)									
Name	Bus	Vendor	Ethernet Speed	Vendor Part Number	CEE Firmware	Firmware	Driver Version	Boot Support	Direct Connect Support
CN1000E	PCIe	HP	10 GbE			4.0.360-15	2.50.007	Y	N
CN1000E	PCIe	HP	10 GbE			4.1.402.20	2.70.018	Y	N
CN1100E	PCIe	HP	10 GbE			4.0.360-15	2.50.007	Y	N
CN1100E	PCIe	HP	10 GbE			4.1.402.20	2.70.018	Y	N
NC551i	LOM	HP	10GbE			4.1.402.20	2.70.018	Y	N
NC551i	LOM	HP	10GbE			4.0.360-15	2.50.007	Y	N
NC551m	PCIe	HP	10 GbE			4.0.360-15	2.50.007	Y	N
NC551m	PCIe	HP	10 GbE			4.1.402.20	2.70.018	Y	N
NC553i	LOM	HP	10GbE			4.0.360-15	2.50.007	Y	N
NC553i	LOM	HP	10GbE			4.1.402.20	2.70.018	Y	N
NC553m	PCIe	HP	10 GbE			4.1.402.20	2.70.018	Y	N
NC553m	PCIe	HP	10 GbE			4.0.360-15	2.50.007	Y	N

Fibre Channel Switch (52)				
Name	Class	Vendor	Bandwidth	Port Count
Brocade 4Gb SAN Switch for HP c-Class BladeSystem, Brocade 4/12 SAN Switch	Embedded Switch	Brocade	4Gb/s	8 internal, 4 external
Brocade 4Gb SAN Switch for HP c-Class BladeSystem, Brocade 4/24 SAN Switch	Embedded Switch	Brocade	4Gb/s	16 internal, 8 external

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Name	Class	Vendor	Bandwidth	Port Count
Brocade 4Gb SAN Switch for HP c-Class BladeSystem, Brocade 4/24 SAN Switch Power Pack	Embedded Switch	Brocade	4Gb/s	16 internal, 8 external
Brocade 8Gb SAN Switch for HP BladeSystem c-Class, 8/12c	Embedded Switch	Brocade	8Gb/s	12
Brocade 8Gb SAN Switch for HP BladeSystem c-Class, 8/24c	Embedded Switch	Brocade	8Gb/s	24
Brocade 8Gb SAN Switch for HP BladeSystem c-Class, 8/24c Pwr Pack+	Embedded Switch	Brocade	8Gb/s	24
Cisco MDS 8Gb Fabric Switch for HP BladeSystem c-Class	Embedded Switch	Cisco	8Gb/s	16 internal, 8 external
Cisco MDS 9124 Fabric Switch	Edge	Cisco	4Gb/s	24
Cisco MDS 9124e Fabric Switch for c-Class BladeSystem	Embedded Switch	Cisco	4Gb/s	8 internal, 4 external
Cisco MDS 9134 Fabric Switch	Edge	Cisco	4Gb/s	32
Cisco MDS 9222i Multiservice Fabric Switch	Edge	Cisco	4Gb/s	66
HP SN3000B 16Gb 24/12 Fibre Channel Switch	Edge	Brocade	16Gb/s	24
HP SN3000B 16Gb 24/24 Fibre Channel Switch	Edge	Brocade	16Gb/s	24
HP SN6000B 16Gb 48-port/24-port Active Fibre Channel Switch	Edge	Brocade	16Gb/s	48
HP SN6000B 16Gb 48-port/24-port Active Power Pack+ Fibre Channel Switch	Edge	Brocade	16Gb/s	48
HP SN6000B 16Gb 48-port/48-port Active Fibre Channel Switch	Edge	Brocade	16Gbs	48
HP SN6000B 16Gb 48-port/48-port Active Power Pack+ Fibre Channel Switch	Edge	Brocade	16Gb/s	48

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Name	Class	Vendor	Bandwidth	Port Count
HP SN6000C Fibre Channel Switch (Cisco MDS 9148 Fabric Switch)	Edge	Cisco	8Gb/s	48
HP SN8000B 16Gb 32-port Fibre Channel Blade	Module	Brocade	16Gb/s	32
HP SN8000B 16Gb 48-port Fibre Channel Blade	Module	Brocade	16Gb/s	48
HP SN8000B 4-Slot Power Pack+ SAN Director Switch	Director	Brocade	16Gb/s	32 to 256
HP SN8000B 4-Slot SAN Director Switch	Director	Brocade	16Gb/s	32 to 256
HP SN8000B 8Gb 32-port Enhanced Fibre Channel Blade	Module	Brocade	8Gb/s	32
HP SN8000B 8Gb 48-port Enhanced Fibre Channel Blade	Module	Brocade	8Gb/s	48
HP SN8000B 8-Slot Power Pack+ SAN Backbone Director Switch	Director	Brocade	16Gb/s	32 to 512
HP SN8000C 13-Slot Director Switch (Cisco MDS 9513 Multilayer Director Switch)	Director	Cisco	4Gb/s	528
HP SN8000C 6-Slot Director Switch (Cisco MDS 9506 Multilayer Director Switch)	Director	Cisco	4Gb/s	192
HP SN8000C 9-Slot Director Switch (Cisco MDS 9509 Multilayer Director Switch)	Director	Cisco	4Gb/s	336
HP StorageWorks 4/16 SAN Switch	Edge	Brocade	4Gb/s	16
HP StorageWorks 4/256 SAN Director	Director	Brocade	4Gb/s	16 to 384
HP StorageWorks 4/8 SAN Switch	Edge	Brocade	4Gb/s	8
HP StorageWorks 8/20q Fibre Channel Switch	Edge	QLogic	8Gb/s	20
HP StorageWorks 8/24 SAN Switch	Edge	Brocade	8Gb/s	24

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Name	Class	Vendor	Bandwidth	Port Count
HP StorageWorks 8/40 SAN Switch	Edge	Brocade	8Gb/s	40
HP StorageWorks 8/8 SAN Switch	Edge	Brocade	8Gb/s	8
HP StorageWorks 8/80 SAN Switch	Edge	Brocade	8Gb/s	80
HP StorageWorks DC SAN Backbone Director Switch	Director	Brocade	8Gb/s	16 to 384
HP StorageWorks DC Switch Encryption FC Blade	Module	Brocade	8Gb/s	16
HP StorageWorks DC04 Power Pack+ SAN Director Switch	Director	Brocade	8Gb/s	16 to 192
HP StorageWorks DC04 SAN Director Switch	Director	Brocade	8Gb/s	16 to 192
HP StorageWorks Encryption SAN Switch	Edge	Brocade	8Gb/s	32
HP StorageWorks SAN Switch 4/32B Base	Edge	Brocade	4Gb/s	32
HP StorageWorks SAN Switch 4/32B Base Full	Edge	Brocade	4Gb/s	32
HP StorageWorks SAN Switch 4/32B Power Pack	Edge	Brocade	4Gb/s	32
HP StorageWorks SAN Switch 4/64 Base	Edge	Brocade	4Gb/s	64
HP StorageWorks SAN Switch 4/64 Base Power Pack	Edge	Brocade	4Gb/s	32/48/64
HP StorageWorks SAN Switch 4/64 Power Pack	Edge	Brocade	4Gb/s	64
HP StorageWorks SN6000 Fibre Channel Switch	Edge	QLogic	8Gb/s	24
HP StoreFabric SN6500B 16Gb 96/48 FC Switch	Edge	Brocade	16Gb/s	48
HP StoreFabric SN6500B 16Gb 96/48 Power Pack+ FC Switch	Edge	Brocade	16Gb/s	48

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Name	Class	Vendor	Bandwidth	Port Count
HP StoreFabric SN6500B 16Gb 96/96 FC Switch	Edge	Brocade	16Gb/s	96
HP StoreFabric SN6500B 16Gb 96/96 Power Pack+ FC Switch	Edge	Brocade	16Gb/s	96

Notes:

General Fibre Channel Switch (52) Notes:

- 1) The Brocade Mi10K Director is only supported with the 2Gb speed blades.
- 2) 2Gb Fibre Channel Switches are not supported as of 3PAR OS 3.1.2

Fibre Channel over Ethernet (FCoE) Switch (5)						
Name	Class	Vendor	FC Port Speed	FC Port Count	Ethernet Port Speed	Ethernet Port Count
Cisco Nexus 5010 Converged Network Switch	Edge	Cisco	4Gb/s	8	10Gb/s	26
Cisco Nexus 5020 Converged Network Switch	Edge	Cisco	4Gb/s	16	10Gb/s	52
HP StorageWorks 2408 FCoE Converged Network Switch	Edge	Brocade	8Gb/s	8	10Gb/s	24
HP StorageWorks 2408 FCoE Power Pack+ Converged Network Switch	Edge	Brocade	8Gb/s	8	10Gb/s	24
HP StorageWorks DC SAN Director Switch 10/24 FCoE Blade	Module	Brocade	8Gb/s	n/a	10Gb/s	24

Router (7)							
Name	Vendor	Class	Port Speed	Port Count	Port Type	Ethernet Port Speed	Ethernet Port Count
HP StorageWorks 1606 Base Extension SAN Switch	Brocade	Router-Gateway	8Gb/s (FC/FCR)	16 (FC/FCR, 4 licensed)	FC/FCR/FCIP	1Gb/s	6 (2 licensed)
HP StorageWorks 1606 Full Extension SAN Switch	Brocade	Router-Gateway	8Gb/s (FC/FCR)	16 (FC/FCR)	FC/FCR/FCIP	1Gb/s	6
HP StorageWorks 1606 Power Pack+ Extension SAN Switch	Brocade	Router-Gateway	8Gb/s (FC/FCR)	16 (FC/FCR)	FC/FCR/FCIP	1Gb/s	6
HP StorageWorks 400 Multi-protocol Router 7500	HP	Router-Gateway	4Gbit	16	FC/FCR/FCIP	1Gbit	2
HP StorageWorks DC SAN Director Switch Multiprotocol Extension Blade	Brocade	Router-Gateway	8Gb/s (FC/FCR)	12 (FC/FCR)	FC/FCR/FCIP	1Gb/s and 10Gb/s	ten 1Gb/s and two 10Gb/s
HP StorageWorks Multi-protocol RouterBlade FR4-18i	HP	Router-Gateway	4Gbit	16	FC/FCR/FCIP	1Gbit	2
HP StoreFabric Enhanced Multiprotocol Extension Blade	Brocade	Router-Gateway	8Gb/s (FC/FCR)	12 (FC/FCR)	FC/FCR/FCIP	1Gb/s and 10Gb/s	ten 1Gb/s and two 10Gb/s

Path Management (6)			
Name	Vendor	Category	Software Version
3PAR MPIO	3PAR	Multipath	1.0.22.7
3PAR MPIO	3PAR	Multipath	1.0.23

Name	Vendor	Category	Software Version
Veritas DMP (Dynamic Multipathing)	Symantec	Multipath	5.0
Veritas DMP (Dynamic Multipathing)	Symantec	Multipath	5.1
Veritas DMP (Dynamic Multipathing)	Symantec	Multipath	5.1 SP1
Veritas DMP (Dynamic Multipathing)	Symantec	Multipath	5.1 SP2

Notes:**General Path Management (6) Notes:**

- 1) For Symantec Storage Foundation 5.1 SP1, VxDMP Load balancing policies "Weighted Path" and "Round-Robin with Subset" are not supported at this time.
- 2) Symantec/Veritas Storage Foundation (VxDMP/VCS) is only supported in a FC-Fabric attach (FC-switched) configuration.
- 3) Symantec Storage Foundation 5.1 does not support volumes with 16-byte WWN's implemented on 3PAR OS 3.1.2. For further information, refer to HP 3PAR Windows Server 2003 Implementation Guide