IBM System Storage® DS6000 series

Interoperability Matrix

January 31, 2008

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About this Document

This document lists interoperable environments and configurations for the IBM System Storage DS6000 series.

The document is for informational and planning purposes only and may change at anytime. This version supersedes and replaces all previous versions. The latest version of this document is available at:

http://www.ibm.com/servers/storage/disk/ds6000/index.html

Not all combinations created from interoperable components are supported, nor will they necessarily function properly together. The customer is responsible for confirming that a specific configuration (i.e. server model, operating system level, patches, host adapter, and fabric product combination) is a valid and supported configuration by each of the vendors whose products are included in the configuration.

This document is not intended to be the sole resource for configuration information, requirements, and prerequisites. Refer to DS6000 series publications, vendor documentation, or your IBM Sales Representative or IBM Business Partner for additional information.

End-of-Service / End-of-Support

Throughout this document, this symbol – @ – indicates that the product vendor has announced that they no longer provide support for the product. If problems are encountered with existing installations, you may be required to update your configuration to a supported level before problem determination can take place.

Request for Price Quotations (RPQ)

If a desired configuration is not represented in this document, a RPQ should be submitted to IBM to request approval. To submit a RPQ, contact your local IBM Storage Specialist or Business Partner.

What's New

This version is dated January 31, 2008 and has been updated as noted below. It replaces the version dated December 7, 2007. Unless stated otherwise, these items are recommended with DS6000 LMC level 6.2.2.xx, or later.

Operating Systems, Path Management, and Clustering

- zLinux Red Hat RHEL 5.1 with FICON support

SAN Fabric Support

- 2005 Model B5K and R18 for the following (Fujitsu, Hewlett-Packard HP-UX, IBM System i, IBM Cluster 1600, IBM System p, IBM System z, Linux, Sun, and Windows)

Servers

- BladeCenter JS22
  - AIX 5.2 ML10, AIX 5.3 ML6, AIX 6.1 SP2, Linux SLES 10 sp1, Red Hat 4.5, and 4.6
  - 7998

DS6000 INTEROPERABILITY SUMMARY

For convenience, the following table summarizes the interoperable environments and configurations for the DS6000 series. Refer to the individual server pages for additional information, including prerequisites and limitations.

Table 1: Open Systems

	DS6800 (1750-511, 1750-522)	Fibre Channel	Clustering	SAN device support	Subsystem Device Driver (SDD)	DS Application Programming Interface (API)	DS Command Line Interface (DS CLI)
Fujitsu Primepower	✓	✓		✓	✓		
Hewlett-Packard (HP-UX)	✓	✓	✓	✓	✓		✓
Hewlett-Packard AlphaServer (OpenVMS)	✓	✓		✓			✓
Hewlett-Packard AlphaServer (Tru64 UNIX)	✓	✓	✓	✓			✓
IBM System i (AIX)	✓	✓	✓	✓	✓		✓
IBM System i (OS/400, and i5/OS)	✓	✓	✓	✓			✓
IBM System i (Linux)	✓	✓		✓	✓		
IBM System p (i5/OS)	✓	✓	✓	✓			✓
IBM System p (Linux)	✓	✓		✓	✓		
IBM System p, RS/6000, and Cluster 1600 (AIX)	✓	✓	✓	✓	✓	✓	✓
Linux (x86, x64, EM64, AMD64, IA64)	✓	✓	✓	✓	✓		✓
Intel Servers (NetWare)	✓	✓	✓		✓		✓
Intel Servers (VMware)	✓	✓					
Windows (x86, x64, EM64, AMD64, IA64)	✓	✓	✓	✓	✓	✓	✓
Apple Macintosh (OSX)	✓	✓					
SGI Origin Servers (IRIX)	✓	✓					
Sun (Solaris)	✓	✓	✓		✓		✓

Table 2: IBM System z and S/390

	DS6600 Model 511 or 522	Fibre Channel Protocol (FCP)	FICON
z/OS	✓		✓
z/VM	✓	✓	✓
VSE/ESA	✓		✓
z/VSE	✓	✓	✓
Transaction Processing Facility (TPF)	✓		✓
Linux	✓	✓	✓

DS6000 Licensed Machine Code (LMC)

This document contains references to minimum DS LMC levels. In many cases, the minimum level listed does not represent the latest available LMC level.

Customers are encouraged to keep their DS6000 series at the latest LMC level to take advantage of quality, reliability, and serviceability enhancements and to receive problem determination and fix support.

All items listed in this version of the document require DS6000 series LMC level 5.2.2, or later, unless otherwise noted.

Host Systems Attachment Guide

The *IBM System Storage DS6000 Host Systems Attachment Guide* should be referenced to obtain detailed information on attaching servers to the DS6000 series.

Host Adapters

This document contains only limited information regarding host adapter driver levels and other prerequisites. Host adapter firmware, driver, and fix level information is documented in the Fibre Channel Host Bus Adapter (HBA) Support Matrix. This matrix can be found at:
http://www.ibm.com/servers/storage/support/config/hba/index.wss

Additionally, review host adapter vendor documentation and web pages to obtain information regarding host adapter configuration planning, hardware and software requirements, driver levels, and release notes.

ATTO:	http://www.attotech.com
Emulex:	http://www.emulex.com/ts/dds.html
AMCC/JNI:	http://www.jni.com/
QLogic:	http://www.qlogic.com/support/oem_detail_all.asp?oemid=22

SAN Fabric Products

Fabric product vendor documentation and web pages should be reviewed to obtain information regarding configuration planning, hardware and software requirements, firmware and driver levels, and release notes.

IBM:	http://www.ibm.com/storage/ibmsan/products/sanfabric.html
Cisco:	http://www.cisco.com/go/ibm/storage

Channel Extension Technology Products

Channel extension technology product vendor documentation and web pages should be reviewed to obtain information regarding configuration planning, hardware and software requirements, firmware and driver levels, and release notes.

Cisco:	http://www.cisco.com/go/ibm/storage
Huawei:	http://www.huawei.com

IBM System Storage SAN Volume Controller

The IBM System Storage SAN Volume Controller is supported with the DS6800. The SAN Volume Controller is not interoperable with DS Copy Services. Refer to the following web page for specific interoperability information on the SAN Volume Controller:

http://www.ibm.com/storage/support/2145

IBM TotalStorage SAN File System

The IBM TotalStorage SAN File System supports the DS6800. For more information on support, please refer to the following web page:

http://www.ibm.com/support/docview.wss?rs=575&uid=ssg1S1002299

IBM System Storage Multi-path Subsystem Device Driver (SDD)

The SDD is designed to provide load balancing and enhanced data availability capability in configurations with more than one I/O path between the host server and the DS6800 system. Load balancing can reduce or eliminate I/O bottlenecks that occur when many I/O operations are directed to common devices via the same I/O path. SDD also helps eliminate a potential single point of failure by automatically rerouting I/O operations when a path failure occurs, thereby supporting enhanced data availability capability. The SDD is provided with the DS6000 series at no additional charge.

Refer to the individual server pages within this document for operating system level requirements and for DS6000 series LMC prerequisites.

Refer to the *IBM System Storage Multi-path Subsystem Device Driver User's Guide* for additional information.

Additional SDD information is also available at:

http://www.ibm.com/servers/storage/support/software/sdd/index.html

IBM System Storage DS Open Application Programming Interface (API)

The DS Open API supports routine LUN management activities, such as LUN creation, mapping, and masking, and the management of point in time copy and remote mirroring. It supports these activities through the use of a standard interface as defined by the Storage Networking Industry Association (SNIA) Storage Management Initiative Specification (SMI-S). It is implemented through the IBM System Storage Common Information Model Agent (CIM Agent) for the DS6000 series, a middleware application that provides a CIM-compliant interface. The DS Open API and CIM Agent are provided with the DS6800 at no additional charge.

- The DS API coordinates with Microsoft Volume Shadow (VSS) Copy Service and the DS6000 series FlashCopy function to create a consistent, point-in-time shadow copy of a Windows 2003 Server volume or group of volumes. This ensures consistency for VSS aware applications.
- The DS API also coordinates with Microsoft Virtual Disk Service (VDS). Microsoft VDS is a software interface that manages block storage virtualization. This interface module makes it possible for the DS6000 series to interoperate with applications that utilize the VDS Application Programming Interface in a Windows 2003 environment.

Refer to the individual server pages within this document for operating system level requirements and for DS6000 series LMC prerequisites. While the CIM Agent is available for only selected operating system environments, it can be used to manage all LUNs within a DS6000 series.

Refer to the *IBM System Storage DS Open Application Programming Interface Reference* for additional information.

IBM System Storage DS Command Line Interface (CLI)

The DS CLI is a single CLI that has the ability to perform a full set of commands for both configuration and copy services activities. The DS CLI is provided with the DS6000 series at no additional charge.

Refer to the individual server pages within this document for operating system level requirements and for DS6000 series LMC prerequisites. Refer to the *IBM System Storage DS Command-Line Interface User's Guide* for additional information.

IBM System Storage Continuous Availability

IBM System Storage Continuous Availability for Windows (formerly IBM TotalStorage Geographically Dispersed Clusters for Microsoft Cluster Server) is designed to allow Microsoft Cluster installations to span geographically dispersed sites and help protect clients from site disasters or storage subsystem failures. It is designed to enable a tier 7 disaster recovery solution and provide high availability for applications and data running in Windows clustered server environments by extending the distance that cluster nodes and storage can be separated, mirroring data between DS6000 series systems. Support for IBM System Storage Continuous Availability is available via an IBM services contract to implement and customize the solution for your environment. Contact your local IBM representative or Business Partner and request IBM RPQ.

IBM TotalStorage Productivity Center for Replication

IBM TotalStorage Productivity Center (TPC) for Replication V3.1 provides optional management of DS6000 series business continuance solutions, including FlashCopy and Remote Mirror and Copy functions. IBM TPC for Replication Two Site BC V3.1 also provides disaster recovery management support in a two-site DS6000 configuration. This management support is available with the IBM TPC for Replication software program (purchased separate from the DS6000 series).

IBM System Storage FlashCopy

IBM System Storage FlashCopy is designed to provide a point-in-time copy capability for DS6000 series logical volumes. FlashCopy creates a physical point-in-time copy of the data, with minimal interruption to applications, and makes it possible to access both the source and target copies immediately. FlashCopy is an optional capability, and is available with the point-in-time features on the DS6000 series.

Remote Mirror and Copy Solutions

The D6000 series supports several hardware-based remote mirror and copy solutions. They are optional capabilities on the DS6000 series and are available with the remote mirror and copy features on the DS6000 series. IBM supports the following remote mirror and copy solutions. Refer to Table 3 for DS6000 series model support and LMC prerequisites. The DS6000 series system can participate in remote mirror and copy solutions with the Enterprise Storage Server (ESS) Model 750, ESS Model 800, and DS8000 series systems.

IBM System Storage Metro Mirror
Metro Mirror is designed to provide real time mirroring between two systems that can be located up to 300 km from each other. It is a synchronous copy solution where write operations are completed on both copies (local and remote site) before they are considered to be done.

Extending distances beyond 300 km is also possible however, due to network configuration variability, the customer must work with the channel extender vendor to determine the appropriate configuration to meet their performance requirements. IBM support approval for these longer distances can be requested by submitting a Request for Price Quotation (RPQ). The RPQ should include information on distance between sites, the channel extension technology, the type of telecom line, the amount of network bandwidth, the DS6800 system capacity, and a general description of the workload.

IBM System Storage Global Copy
Global Copy is a non-synchronous long-distance copy option for data migration and backup. With a non-synchronous operation, the distance between the primary and secondary DS6000 series system will have only a minimal effect on the application response time. Therefore, Global Copy can operate at very long distances.

IBM System Storage Global Mirror
Global Mirror is a high performance, asynchronous remote-mirroring copy solution. It is designed to provide a two-site disaster recovery and backup solution at virtually unlimited distances.

Since the distance between the primary and secondary DS6000 series system has little impact to host applications at the primary site, the remote site can be located at distances from the local site well beyond those supported with Metro Mirror. The distances are typically limited only by the capabilities of the network and channel extension technologies.

Remote Mirror and Copy Channel Extension, DWDM, and Network Connectivity

Distances beyond 300 km will require the use of channel extension technology, and the channel extender vendor will determine the maximum distance supported. The vendor should be contacted for its distance capability, line quality requirements, and WAN attachment capabilities.

IBM supports the use of the following products, in Table 3, with remote mirror and copy. Additionally, the product vendors should also be consulted regarding hardware and software prerequisites when using their products in a DS6000 series remote mirror and copy configuration. IBM is not responsible for third-party products.

When using remote mirror and copy with channel extenders, IBM supports the use of remote mirror and copy over all the network technologies that are currently supported by the channel extender products, including Fibre Channel, Ethernet/IP, ATM-OC3, and T1/T3. Evaluation, qualification, approval, and support of remote mirror and copy configurations using channel extender products are the sole responsibility of the channel extender vendor. The vendor should be contacted for its distance capability, line quality requirements, as well as SAN and WAN attachment capabilities.

Table 3: Minimum LMC levels for remote mirror and copy over Fibre Channel (FCP)

	Metro Mirror	Global Copy	Global Mirror
DS6800 (1750-511, 1750-522)	✓	✓	✓
Cisco IP Storage Service Modules	✓	✓	✓
Cisco ONS 15530 / 15540 / 15454	✓	✓	✓
CNT Edge Storage Router	✓	✓	✓
CNT UltraNet Storage Director-eXtended	✓	✓	✓
Huawei OptiX 6040/ 6100 (WDM)	✓	✓	✓
Huawei OptiX Metro OSN 1500 / 2500 / 3500 / 7500	✓	✓	✓
IBM 2027 Models R04 and R16	✓[2]	✓	✓
IBM 2005 Model R18	✓	✓	✓
IBM 2109 Model A16	✓	✓	✓
IBM 2005 Model R18	✓	✓	✓
IBM 2109 Model M48[1]	✓	✓	✓

[1] IBM 2109 Model M48 requires a fibre channel routing blade

[2] The IBM 2027 Models R04 and R16 support direct attach only.

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Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
HP Server • rp2400 series • rp3400 series • rp4400 series • rp5400 series • rp7400 series • rp8400 series • Superdome HP 9000 Enterprise Servers • K-Class • L-Class • N-Class • V-Class Itanium II Servers • rx1600 series • rx2600 series • rx4600 series • rx5600 series • rx7600 series • rx8600 series	HP-UX • 11i • PVLINKS • MC/Serviceguard 11.12, 11.13, and 11.14 • 11iv2 (11.23) • PVLINKS • MC/Serviceguard 11.16	Hewlett-Packard • A5158A • A6685A [1] • A6795A • A6826A • A9782A • A9784A • AB378A • AB379A	Cisco •MDS 9020, 9120, 9124 •MDS 9140 •MDS 9216, 9216A, 9216I •MDS 9506, 9509, 9513 •MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000- 256 • 2042-N16 IBM •2005 Model B16, B32, B64, B5K •2005 Models H08, H16, R18 •2026 Model E12, 224 •2026 Models 16E, 416 •2026 Models 32E, 432 •2027 Models 140, 232 •2027 Models R04. R16, 256 •2045 Model N16 •2109 Model A16 •2109 Models F16 and F32 •2109 Model M12 •2109 Model M14 •2109 Model M48 •2109 Models S08 and S16 •3534 Model F08 McDATA •ED-5000 •ES-3016 and ES-3032 •Intrepid •6064 •6140 •Sphereon •3216 •3232 •4300 •4500

[1] Supported with K-Class servers only.

General notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available for HP-UX.

DS CLI: Available for HP-UX 11i and 11iV2.

SDD:

- Available for HP-UX 11i and 11iV2.
- Multi-path support is natively available in HP-UX (PVLINKS).
- Available for MC/Serviceguard
- Remote Boot not supported

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
AlphaServer • 800 • 1200 • 4000, 4000A • 4100 • 8200, 8400 • DS10, DS20, DS20E • ES40, ES45, ES47, ES80 • GS60, GS60E, GS140 • GS80, GS160, GS320 • GS1280 Itanium Server • RX2600	OpenVMS • 7.3 • 7.3-1 • 7.3-2 OpenVMS Itanium[1] • 8.2	StorageWorks •KGPSA-CA •KGPSA-DA •KGPSA-EA	IBM • 2109 Model F16 • 2109 Model F32 • 2109 Models S08 and S16 • 3534 Model F08

[1] Supported only with Itanium II servers

General notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available for HP OpenVMS.

DS CLI: Available for HP OpenVMS.

SDD: Not available for HP OpenVMS.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support

AlphaServer
• 800
• 1200
• 2100
• 4000, 4000A
• 4100
• 8200, 8400
• DS10, DS20, DS20E
• ES40, ES45, ES47, ES80
• GS60, GS60E, GS140
• GS80, GS160, GS320
• GS1280
	Tru64 UNIX
	• 5.0A
	  • TruCluster 5.0A
	• 5.1
	  • TruCluster 5.1
	• 5.1A
	  • TruCluster 5.1A
	• 5.1B
	  • TruCluster 5.1B
	• 5.1B3
	  • TruCluster 5.1B3
	• 5.1B4
	  • TruCluster 5.1B4
		StorageWorks
		• KGPSA-CA
		• KGPSA-DA
		• KGPSA-EA
			IBM
			• 2109 Model F16
			• 2109 Model F32
			• 2109 Models S08 and S16
			• 3534 Model F08

General notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available for HP Tru64 UNIX.

DS CLI: Available for HP Tru64 UNIX.

SDD:

- Not available for HP Tru64 UNIX.
- Multi-path support is natively available in Tru64 UNIX.

Boot device support:

- The DS6000 can be used as a boot device on servers running Tru64 UNIX 5.0A and 5.1. Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
System i • 270 • 820, 830, 840 • 800, 810, 825, 870, 890 [4] System i5 • 520, 550, 570, 595 [4] System I (POWER6) [5] 570 (9406-MMA)	AIX [3] • Version 5 • 5.2 ML5 • 5.3 ML1 i5/OS • Version 5 • V5R3 • V5R4 OS/400 • Version 5 • V5R2 Red Hat Enterprise Linux [1, 2] • 3 U7, U8 • 4 U2, U3, 4.4, 4.5, 4.6 SuSE [1, 2] • SLES 9 SP2, SP3 • Linux Enterprise 10, SP1	IBM System i • FC 0612 [1] • FC 0625 [1, 3] • FC 0626 [1] • FC 0629 [4] • FC 0646 [1, 3] • FC 2766 • FC 2787 • FC 5760 [4]	Cisco • MDS 9020, 9120, 9124 • MDS 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509, 9513 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000-256 • 2042-N16 IBM • 2005 Model B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Model E12, 224 • 2026 Models 16E, 416 • 2026 Models 32E, 432 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model F16 • 2109 Model F32 • 2109 Model M12 • 2109 Model M14 • 2109 Model M48 • 2109 Models S08 and S16 • 3534 Model F08 McDATA • Intrepid • 6064 • 6140 • Sphereon • 3216 • 3232 • 4300,4500

[1] Linux is supported on the System i5 series. FC0612, FC0625, FC0626, and FC0646 host adapters are supported with Linux operating systems.

[2] Refer to the following link for details on Linux kernel levels:
http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en

[3] AIX 5.2 ML5 (or later), and 5.3 ML1 (or later) is supported with System i5, and the host adapter FC0625, and FC 0646.

[4] Host Bus Adapter FC 5760 requires i5/OS V5R3 or V5R4 running on Regatta and System i5 servers. Host Adapter FC 0629 supports AIX and Linux only and Regatta and System i5 servers only.

[5] Requires Operating System i5/0S V5R4m5

General notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent):

- Not available.

DS CLI:

- Available for System i AIX, OS/400 V5R2, i5/OS V5R3, and V5R4 platforms.

Boot device support:
Requires IOP 2847 and V5R3 M5 or later for System i servers. See the IBM System i Redbook for more information.

SDD:

- Not available. Multi-path support is provided in i5/OS V5R3.
- Available when running the System i platforms with supported AIX, SuSE SLES 9, Red Hat Enterprise Linux 3, 4 U2, and U3 (32-bit, x64-bit) operating systems.

Device Mapper Multipath (DMM):

- Available for SUSE Linux Enterprise 10. For more information, refer to:
http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en#DM

Boot device support

- The DS6800 is supported as a boot device on System i platforms that support Fibre Channel boot capability. Boot support is available for AIX and Linux operating systems with SDD. Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.

Path Control Module (SDDPCM):

- Available for System i platforms running AIX 5.2 ML5 (or later) and AIX 5.3 ML1 (or later) with latest released maintenance levels. Default PCM is not supported.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
System p • 610 Models 6C1, 6E1 • 615 Models 6C3, 6E3 • 620 Models 6F0, 6F1 • 630 Models 6C4, 6E4 • 640 Model B80 • 650 Model 6M2 • 655 Model 651 • 660 Models 6H0, 6H1, 6M1 • 670 Model 671 • 680 Model S85 • 690 Model 681 System p5 • A50, 510, 520, 550, 560,570, 590, 595 • 710, 720 System p (POWER6) [3] System p570 (9117-MMA) IBM BladeCenter [1] • JS20 • 8842 • JS21‡ • 8844 • JS22[3] • 7998 RS/6000 • 7013: S70, S7A • 7015: S70, S7A • 7017: S70, S7A, S80 • 7025: F50, F80, H70 • 7026: H50, H70, H80, M80 • 7043: 270 • 7044: 170, 270	AIX [5] Version 5 •5.1 ML7 • VERITAS Volume Manager with DMP 4.0 • VERITAS Cluster Server 4.0 •5.2 ML5 • VERITAS Volume Manager with DMP and SDD 4.0, 5.0 • VERITAS Cluster Server 4.0, 5.0 •5.3 ML1 • VERITAS Volume Manager with DMP and SDD 4.0, 5.0 • VERITAS Cluster Server 4.0, 5.0 •6.1 SP2 HACMP •5.1.0, 5.2.0 and 5.3.0, 5.4 i5/OS [7] •V5R3 IBM Virtual I/O Server (VIOS) [6] •1.1 Red Hat Enterprise Linux [4] •3 U7, U8 •4 U2, 4.4, 4.5, 4.6 SUSE [4] •SLES 8 •SLES 9 SP2, SP3 •SLES 10, SP1	IBM System p & RS/6000 • FC 1905 • FC 1910 • FC 1957 • FC 1977 • FC 5716 • FC 5758 • FC 5759 • FC5773 • FC5774 • FC 6228 • FC 6239 BladeCenter [1] IBM 13N2203 26R0884 39Y9186 48P7061	Cisco [2] •MDS 9120, 9124, 9140 •MDS 9216, 9216A, 9216I •MDS 9506, 9509, 9513 •MDS 9134, 9222i CNT (Inrange) •FC/9000-64, -128, -256 •2042-N16 IBM •2005 Model B16, B32, B64, B5K •2005 Models H08, H16, R18 •2026 Model E12, 224 •2026 Models 16E, 416 •2026 Models 32E, 432 •2027 Models 140, 232 •2027 Models R04, R16, 256 •2045 Model N16 •2109 Model A16 •2109 Models F16 and F32 •2109 Models M12, M14,M48 •2109 Models S08 and S16 •3534 Model F08 IBM BladeCenter [1] •P/N 02R9080 McDATA •ED-5000 •ES-3016, ES-3032 •Intrepid •6064, 6140 •Sphereon •3216, 3232 •4300, 4500

[1] BladeCenter is supported with AIX 5.2 ML5 (or later), and Linux operating systems only. For more information on BladeCenter SAN support, refer to the following website: http://www.ibm.com/servers/eserver/serverproven/compat/us/

[2] Supports the IP Storage Service Module for iSCSI on Cisco MDS fabric products. Refer to the following link for more details: ftp://service.boulder.ibm.com/storage/san/cisco/ipStorServMod.pdf

[3] The POWER6 IBM System p and JS22 are supported with the following: AIX 5.2 ML10, AIX 5.3 ML6, AIX 6.1 SP2, Linux SLES 10 sp1, Red Hat 4.5, and 4.6.

[4] Refer to the following link for details on Linux kernel levels: http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en

[5] Refer to the most current APARs for AIX 5.2 ML5 (or later) and AIX 5.3 ML1 (or later).

[6] Refer to the following link for details on IBM VIOS: http://www14.software.ibm.com/webapp/set2/sas/f/vios/home.html

[7] The i5/OS operating systems are only supported with System p5 servers, and host adapter FC2787.

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Available for AIX 5.1 ML7 (or later).

DS CLI: Available for AIX 5.1 ML7 (or later), 5.2 ML5 (or later), and 5.3 ML1 (or later), HACMP 5.1.0, 5.2.0, 5.3.0, 5.4.0, and i5/OS operating systems.

DS Copy Services: HACMP running with Remote Mirror and Copy functions (including HACMP-XD) is supported.

SDD:

- Available for AIX 5.1 ML7 (or later), 5.2 ML5 (or later), and 5.3 ML1 (or later).
- Available for SuSE SLES 8, SLES 9, and Red Hat RHEL 3, and 4 (32-bit and x64-bit).
- Available for HACMP-XD
- Not available with i5/OS operating systems.

Device Mapper Multipath (DMM):

- Available for SUSE Linux Enterprise 10. For more information, refer to:

http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en#DM

Path Control Module (SDDPCM):

- Available for AIX 5.2 ML5 (or later) and 5.3 ML1 (or later) with latest released maintenance levels. (Default PCM not supported.)

Boot device support:

- The DS6800 is supported as a boot device on RS/6000, System p, and System p5 servers that support Fibre Channel boot capability. Boot support is available for AIX and Linux operating systems with SDD. Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.

Table 4: AIX and HACMP Support Matrix

	DS6800 (1750-511, 1750-522)	SDD	SDDPCM
AIX 5.1 ML7 with HACMP 5.1.0	Yes	Yes	
AIX 5.2 ML5 with HACMP 5.1.0	Yes	Yes	
AIX 5.1 ML7 with HACMP 5.2.0	Yes	Yes	Yes[1]
AIX 5.2 ML5 with HACMP 5.2.0	Yes	Yes	Yes[1]
AIX 5.3 ML1 with HACMP 5.2.0	Yes	Yes	Yes[1]
AIX 5.2 ML5 with HACMP 5.3.0	Yes	Yes	Yes[1]
AIX 5.3 ML1 with HACMP 5.3.0	Yes	Yes	Yes[1]
AIX 5.2 ML5 with HACMP 5.4	Yes	Yes	Yes[1]
AIX 5.3 ML3 with HACMP 5.4	Yes	Yes	Yes[1]
AIX 6.1 SP2 with HACMP 5.3.0	Yes	Yes	Yes[1]
AIX 6.1 SP2 with HACMP 5.4.1	Yes	Yes	Yes[1]

[1] Enhanced Concurrent Mode for volume groups only. HACMP-XD is not supported with SDD PCM.

Table 5: AIX Clustering for IBM System p servers

	DS6800 (1750-511, 1750-522)	SDD Level	SDDPCM
AIX 5.1 ML7 with: ●PSSP 3.4, 3.5 ●GPFS 2.2	Yes	✓	--
AIX 5.2 ML5 with: ●GPFS 2.2, or 2.3 ●RVSD 3.5 or 4.1	Yes	✓	✓
AIX 5.3 ML1 with: ●CSM 1.3.n ●GPFS 2.3 ●RVSD 4.1	Yes	✓	✓
AIX 6.1 SP2 with ●CSM 1.7.0.1	Yes	✓	✓

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
System p • 610 Models 6C1, 6E1 • 615 Models 6C3, 6E3 • 620 Models 6F0, 6F1 • 630 Models 6C4, 6E4 • 640 Model B80 • 650 Model 6M2 • 655 Model 651 • 660 Models 6H0, 6H1, 6M1 • 670 Model 671 • 680 Model S85 • 690 Model 681	AIX [1] • Version 5 • 5.1 ML7 • 5.2 ML5 • 5.3 ML1	IBM RS/6000 • FC 6228 • FC 6239 • FC 5716 • FC 5758 • FC 5759	Cisco • MDS 9020, 9120, 9124 • MDS 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509, 9513 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000-256 • 2042-N16 IBM • 2005 Model B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Models 16E, 416 • 2026 Models 32E, 432 • 2026 Model 224 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model A16 • 2109 Models F16 and F32 • 2109 Model M12 • 2109 Model M14 • 2109 Model M48 • 2109 Models S08 and S16 • 3534 Model F08 McDATA • ED-5000 • ES-3016 and ES-3032 • Intrepid • 6064 • 6140 • Sphereon • 3216 • 3232 • 4300 • 4500

[1] Refer to the most current APARs for AIX 5.2 ML5 (or later) and AIX 5.3 ML1 (or later).

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Available for AIX 5.1 ML7 (or later).

DS CLI: Available for AIX 5.1 ML7 (or later), 5.2 ML5 (or later), and 5.3 ML1 (or later).

SDD:

- Available for AIX 5.1 ML7 (or later), 5.2 ML5 (or later), and 5.3 ML1 (or later).

Path Control Module (SDDPCM):

- Available for AIX 5.2 ML5 (or later) and AIX 5.3 ML1 (or later) MPIO with latest released maintenance levels.

Boot device support:

- The DS6800 is supported as a boot device on IBM Cluster 1600 servers that support Fibre Channel boot capability. Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.

Table 6: AIX Clustering for IBM Cluster 1600 Servers

	DS6800 (1750-511, 1750-522)	SDD Level	MPIO Level
AIX 5.1 ML7 with: •GPFS 2.2 •PSSP3.4 • RVSD 3.5	✓	✓	--
AIX 5.2 ML5 with: •GPFS 2.2, or 2.3 •PSSP 3.4, 3.5 • RVSD 3.5 or 4.1	✓	✓	✓
AIX 5.3 ML1 with: •GPFS 2.3 •CSM 1.3.n • RVSD 4.1	✓	✓	✓

FICON

Servers	Operating Systems	Host Adapters	Fabric Support
System z z800 •IBM 2066 System z z890 •IBM 2086 System z z900 and z990 [2] •IBM 2064 •IBM 2084 z9 EC •IBM 2094 Z9 BC •IBM 2096 S/390 Parallel Enterprise Server •IBM 9672 Generation 5 •IBM 9672 Generation 6	z/OS • Version 1 Release 4 • Version 1 Release 5 • Version 1 Release 6 • Version 1 Release 7 • Version 1 Release 8 • Version 1 Release 9 z/OS.e • Version 1 Release 4 • Version 1 Release 5 • Version 1 Release 6 • Version 1 Release 7 • Version 1 Release 8 • Version 1 Release 9 z/VM • Version 4 Release 4 • Version 5 Release 1 • Version 5 Release 2 • Version 5 Release 3 z/VSE • Version 3 Release 1 • Version 4 Release 1 VSE/ESA • Version 2 Release 7@ Transaction Processing Facility (TPF) • Version 4 Release 1 Red Hat Enterprise Linux • 3 and above • 4 U2, U3, and above • 5.1 and above SuSE • SLES 8 and above • SLES 9 SP2, SP3 and above • SLES 10, SP1 and above	System z • FC 2315 • FC 2318 • FC 2319 • FC 2320 • FC 3319 [1] • FC 3320 [1] • FC 3321 • FC 3322 • FC 3323 • FC 3324 S/390 • FC 2314 • FC 2316	Cisco •MDS 9216, 9216A, 9216I •MDS 9506, 9509 •MDS 9134, 9222i CNT (Inrange) •FC/9000-64 •FC/9000-128 •FC/9000-256 •2042-N16 IBM •2005 Model B16, B32, B64 •2026 Models 32E, 432 •2027 Models 140, 232 •2027 Models R16, 256 •2045 Model N16 •2109 Model F32 •2109 Model M12 •2109 Model M14 •2109 Model M48 McDATA •ED-5000 •Intrepid •6064 •6140 •Sphereon •3232

[1] FC 3319 and FC 3320 host adapters are supported only on the IBM 890 and IBM 990 servers.

[2] The IBM 990 requires driver level 55.

Fibre Channel Protocol (FCP)

Servers	Operating Systems	Host Adapters	Fabric Support
System z z800 • IBM 2066 System z z890 • IBM 2086 System z z900 and z990 [1] • IBM 2064 • IBM 2084 z9 EC • IBM 2094 Z9 BC • IBM 2096	z/VM • Version 4 Release 4 • Version 5 Release 1 • Version 5 Release 2 • Version 5 Release 3 z/VSE • Version 3 Release 1 • Version 3 Release 1.1 • Version 4 Release 1 Red Hat Enterprise Linux • 4.4, 4.5 and above SuSE • SLES 8 Submarine and above • SLES 9 SP2, SP3 and above • SLES 10 SP1	System z • FC 2315 • FC 2318 • FC 2319 • FC 2320 • FC 3319 [2] • FC 3320 [2] • FC 3321 • FC 3322 • FC 3323 • FC 3324	Cisco • MDS 9216, 9216A, 9216I • MDS 9506 • MDS 9509, 9513 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000-256 • 2042-N16 IBM • 2005 Models B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Models 32E, 432 • 2045 Model N16 • 2109 Model F16 • 2109 Models S08 and S16 McDATA • Intrepid 6064

[1] The 990 requires driver level 55.

[2] FC 3319 and FC 3320 host adapters are supported only on the IBM 890 and IBM 990 servers.

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available for System z.

DS CLI: Not available for System z.

Fibre Channel Protocol (FCP):

- Multi-path support is available with LVM.
- Multi-path support for RHEL 4.4 and above, and RHEL 5.1 and above, and SLES 9 sp3 and above are available with DMM.

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Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Enterprise • 220R, 250, 420R, 450 • 3000, 4000, 5000, 6000 • 3500, 4500, 5500, 6500 • 10000 Netra • 1125 SPARCcenter / SPARCserver • 1000, 1000E • 2000, 2000E Sun Fire V120, V210, V240, V250 V280R V440, V480, V490 V880, V890, V1280 3800 4800, 4810, 6800, 6900 12000, 15000 E20K, E25K E2900,E4900, E6900 T1000, T2000 Ultra • 1,2, 5, 10, 20, 30, 60, 80 Opteron [5] x4100, x4200, x4600 V20z & V40z	Solaris • 8 • Sun Cluster 3.1 • MPxIO 4.4.2 - 4.4.11 [2] • VERITAS Volume Manager with DMP • 4.0, 4.1 • VERITAS Cluster Server • 4.0, 4.1 • 9 [1] • SunCluster 3.1 • MPxIO 4.4.2 - 4.4.11 [2] • SF RAC 4.1 • VERITAS Volume Manager with DMP • 4.0, 4.1, 5.0 • VERITAS Cluster Server • 4.0, 4.1, 5.0 • Solaris 10, u1, u2, u3 [4] • SunCluster 3.1 • MPxIO (bundled) • VERITAS Volume Manager with DMP • 4.1, 5.0 • VERITAS Cluster Server • 4.1, 5.0 • SF RAC 4.1	AMCC / JNI [3] • FCX-6562 / FCX2-6562 • FCE-1473-N • FCE-6460-N Emulex • LP9002L / LP9002DC • LP9002S • LP9402DC • LP9802 • LP10000 / LP10000DC • LP11000/LP110002 QLogic • QLA2310F/QLA2310FL • QLA2340/L / QLA2342/L • QLA2460 • QLA2462 Sun • 6727A • 6757A • 6767A (SG-XPCI1FC-QF2) • 6768A (SG-XPCI2FC-QF2) • 6799A • SG-XPCI1FC-EM2 • SG-XPCI2FC-EM2 • SG-XPCI1FC-EM4-Z • SG-XPCI2FC-EM4-Z • SG-XPCI1FC-QF4 • SG-XPCI2FC-QF4 • SG-XPCI1FC-QL2 • SG-XPCI2FC-QF2-Z	Cisco • MDS 9020, 9120, 9124, 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000-256 • 2042-N16 IBM • 2005 Model B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Model E12, 224 • 2026 Models 16E and 416 • 2026 Models 32E, 432 • 2027 Models 140 and 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model A16 • 2109 Models F16 and F32 • 2109 Model M12, M14, M48 • 2109 Models S08 and S16 • 3534 Model F08 McDATA • ED 5000 • ES-3016 and ES-3032 • Intrepid • 6064 • 6140 • Sphereon • 3216 and 3232 • 4300 • 4500

[1] The Sun filesystem requires patch 113454-14.

[2] MPxIO is supported only with the Sun host adapters. MPxIO 4.4.9 is not supported. MPxIO 4.4.10 or 4.4.11 are required for four node support.

[3] Not interoperable with DS6800 Fibre Channel ports shared with remote mirror and copy configurations.

[4] Sun Solaris 10 is not supported with AMCC / JNI host adapters.

[5] Sun Solaris 10 OS support with Host Adapters LP10000DC and QLA2462 only.

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available for Solaris.

DS CLI: Available for Solaris 8, 9, and 10.

SDD:

- Available for Solaris 8, 9, and 10.
- Available for Solaris 10 with Opteron x64 Servers
- Available to coexist with VERITAS Volume Manager 4.1 for Solaris 9 and 10
- SDD is not supported in Sun Cluster environments.
- SDD does not support Sun adapters.
- SDD is not supported with SAN Boot.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Intel Pentium II Xeon and above •1.5 Ghz or faster •2 – 16 processors •512 MB RAM or higher IBM BladeCenter [1] •HS20 •8678 •8832 •8843 •HS21 •8853 •HS40 •8839 •LS20 •8850 •LS21 •7972 IBM System x Servers [1] •100 •206/206m •225 / 226 •235 / 236 •255 •260/3800 •306/306m •335 / 336 •345 / 346 •360 / 365 •366/3850 •440 / 445 •450 / 455 •460/3950/3950E	Novell NetWare • 5.1 SP 7 • Cluster Services 1.01 • 6.0 [2] • Cluster Services 1.6 • 6.5 SP 3, 4, 5 • Cluster Services 1.70, 1.80 • OES SP1	BladeCenter • IBM • 13N2203 • 26K4841 • 26R0886 • 39Y9186 • 48P7061 Emulex • LP9002L / LP9002DC • LP9402DC [2] • LP9802 • LP10000 / LP10000DC • LP1005DC IBM System x / Netfinity • P/N 19K1246 • P/N 24P0960 QLogic • QLA2310F / QLA2310FL • QLA2340/L / QLA2342/L • QLA2460 • QLA2462	Cisco • MDS 9020, 9120, 9124 • MDS 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509, 9513 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000-256 IBM • 2026 Model E12, 224 • 2026 Models 16E, 416 • 2026 Models 32E, 432 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Models F16 and F32 • 2109 Model M12 • 2109 Models S08 and S16 • 3534 Model F08 IBM BladeCenter [1] • P/N 02R9080 • P/N 26K5601 • P/N 26R0881 • P/N 32R1812 • P/N 32R1813 • P/N 32R1833 McDATA • ED-5000 • ES-3016 and ES-3032 • Intrepid • 6064 • 6140 • Sphereon • 3216 • 3232 • 4300 • 4500

[1] For information on OS and HBA support, refer to the following link: http://www.ibm.com/servers/eserver/serverproven/compat/us/

[2] Supported via RPQ only.

3 The IBM BladeCenter LS20 supports Novell 6.5, but does not support Novell Cluster Services

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not Available

DS CLI: Available with NetWare 5.1, 6.0, 6.5, and OES SP1.

SDD:

- Available with NetWare 5.1, 6.0, 6.5, and OES SP1.
- Clustering Support: Available with NetWare 5.1, 6.0, and 6.5.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Intel Pentium II Xeon and above [1] • 1.5 Ghz or faster • 2 – 16 processors • 512 MB RAM or higher AMD Opteron and above • 1.6 Ghz or faster • 512 MB RAM or higher IBM BladeCenter [1] • HS20 • 8678 • 8832 • 8843 • HS21 • 8853 • HS40 • 8839 • LS20[3] • 8850 • LS21 • 7971 • LS41 • 7972 IBM System x Servers [1] 100, 206, 206m, 225, 226, 235, 236, 255, 260, 306, 325, 326, 326m, 335, 336, 345, 346, 360, 365, 366, 440, 445, 450, 455, 460, 3105, 3200, 3250, 3400, 3455, 3500, 3550, 3650, 3655, 3755, 3800, 3850, 3950, 3950E, •	VMware • ESX 2.5.0 • ESX 2.5.1 • Vmotion[3] • ESX 2.5.2, 2.5.3 • Vmotion[3] • ESX 3.0 • Vmotion[3] • ESX 3.0.1 • Vmotion[3] VMware guest support [2] • Windows 2000 • Windows 2003 R2 • SuSE SLES 8, 9, 10 • Red Hat Enterprise Linux 2.1, 3, 4.0	BladeCenter • IBM • 13N2203 • 26K4841 • 26R0884 • 26R0886 • 26R0890 • 39Y9186 • 41Y8527 • 48P7061 Emulex • LP9402DC • LP9802 • LP 9002/ LP9002DC • LP10000/LP10000DC • LP1005DC IBM Netfinity / System x • P/N 19K1246 • P/N 24P0960 QLogic • QLA2310F / QLA2310FL • QLA2340/L / QLA2342/L	Cisco • MDS 9120, 9124 • MDS 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509 • MDS 9134, 9222i IBM • 2026 Model E12, 224 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2109 Model A16 • 2109 Models F16, F32 • 2109 Model M12, M14 • 2109 Model M48 • 2109 Models S08 and S16 • 3534 Model F08 IBM BladeCenter [3] • P/N 02R9080 • P/N 26K5601 • P/N 26K6477 • P/N 26R0881 • P/N 32R1790 • P/N 32R1812 • P/N 32R1813 • P/N 32R1831 • P/N 32R1835 • P/N 48P7062 • P/N 90P0165 McDATA • ES-3016 and ES-3032 • Intrepid • 6064 • 6140 • Sphereon • 3216 • 3232 • 4300, 4500

[1] For more information on server minimum requirements, refer to: http://www.vmware.com/products/server/esx_specs.html

[2] For information on OS and HBA support, refer to the following link: http://www.ibm.com/servers/eserver/serverproven/compat/us/

[4] For more information on VMware guest support, refer to: http://www.vmware.com/support/pubs/vi_pubs.html

[3] Supported via RPQ only.

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available with VMware.

DS CLI: Not available for VMware.

SDD: Not available for VMware.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Intel Pentium II Xeon and above • 1.5 Ghz or faster • 2 – 16 processors • 512 MB RAM or higher AMD Chipset • 1.6 GHz or faster • 512 MB RAM or higher IBM BladeCenter • HS20 • 7981, 8678, 8832, 8843 • HS21 • 8853 • HS40 • 8839 • LS20 • 8850 • LS21 • 7971 • LS41 • 7972 IBM System x Servers [1] 100, 206, 206m, 225, 226, 235, 236, 255, 260, 306, 325, 326, 326m, 335, 336, 345, 346, 360, 365, 366, 440, 445, 450, 455, 460, 3105, 3200, 3250, 3400, 3455, 3500, 3550, 3650, 3655, 3755, 3800, 3850, 3950, 3950E,	Red Hat Enterprise Linux [4] • 2.1 • 3 U6, U7, U8 • VERITAS Volume Manager w DMP[5] • 4.1 [5] • VERITAS Cluster Server [5] • 4.1 [5] • 4 u1 (AS, ES) U2, U3, 4.4, 4.5, 4.6 • VERITAS Volume Manager w DMP[5] • 4.1 [5] • VERITAS Cluster Server [5] • 4.1 [5], SuSE [4] • SLES 8 SP4 • SLES 9 SP2, SP3 • VERITAS Volume Manager w DMP[5] • 4.1 [6] • VERITAS Cluster Server [5] • 4.1 [6] • Linux Enterprise 10 Asianux 1.0 [4] • Red Flag Linux DataCenter • v4.1 [3] Red Flag Linux Advanced Server [4] • v4.1 [3]	BladeCenter • IBM • 13N2203 • 26K4841 • 26R0884 • 26R0886 • 26R0890 • 39Y9186 • 41Y8527 • 48P7061 • Emulex • LP1005DC • 43W6859 Emulex • LP9002L / LP9002DC • LP9402DC • LP9802 • LP10000 / LP10000DC • LP11000 (IBM 42D0405) • LP11002 (IBM 42D0407) • LPE11000 (IBM 42C2069) • LP11002 (IBM 42C2071) IBM Netfinity/ System x • P/N 19K1246 • P/N 24P0960 • P/N 39M5894 • P/N 39M5895 QLogic • QLA2310F / QLA2310FL • QLA2340/L / QLA2342/L • QLA2460 • QLA2462 • QLE2460 (IBM P/N 39R6525) • QLE2462 (IBM P/N 39R6527)	Cisco [2] • MDS 9020, 9120, 9124, 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509. 9513 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64, -128, -256 • 2042-N16 IBM • 2005 Model B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Model E12, 224 • 2026 Models 16E, 416 • 2026 Models 32E, 432 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model A16 • 2109 Models F16, F32 • 2109 Model M12, M14, M48 • 2109 Models S08, S16 • 3534 Model F08 IBM BladeCenter [1] • P/N 02R9080 • P/N 26K5601 • P/N 26R0881 • P/N 32R1790 • P/N 32R1812 • P/N 32R1813 • P/N 32R1833 • P/N 90P0165 McDATA • ED-5000, ES-3016, ES-3032 • Intrepid 6064, 6140 • Sphereon • 3216, 3232, 4300, 4500

[2] Supports the IP Storage Service Module for iSCSI on Cisco MDS fabric products with. Refer to the following link for more details: ftp://service.boulder.ibm.com/storage/san/cisco/ipStorServMod.pdf

[3] Supported with Qlogic adapters only.

[4] Refer to the following link for details on Linux kernel levels: http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en

[5] Supports x86 only.

[6] Supported with x86-bit and x64-bit.

X86, X64, EM64T, AMD64 AND IA64 BASED SERVERS - LINUX

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Available with Red Hat Enterprise Linux 3.

DS CLI: Available with Red Hat Enterprise Linux 2.1, 3, and SuSE SLES 8 and 9.

SDD:

- Available for 32-bit with Red Hat Enterprise Linux 2.1, 3, 4, SuSE SLES 8, SuSE SLES 9, Asianux, and Red Flag.
- Available for ia64-bit with Red Hat Enterprise Linux 3, and SuSE SLES 8.
- Available with AMD based servers 325, 326, and x86_64 with Red Hat Enterprise Linux 4, and SuSE SLES 9.

Device Mapper Multipath (DMM):

- Available for SUSE Linux Enterprise 10. For more information, refer to:

http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en#DM

Boot device support:

- The DS6800 is supported as a boot device on Red Hat Enterprise Linux 2.1, 3, 4 u1, SuSE SLES 8, and SuSE SLES 9 that supports Fibre Channel boot capability. This support is only available with Qlogic adapters: QLA 2310F/QLA2310FL, QLA2340/L/QLA2342/L.

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x86, x64, EM64, AMD64, IA64 Based Servers - Windows

IBM
Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Intel Pentium II Xeon and above • 1.5 Ghz or faster • 2 – 16 processors • 512 MB RAM or higher AMD Chipset • 1.6 GHz or faster • 512 MB RAM or higher IBM BladeCenter • HS20 • 7981, 8678, 8832, 8843 • HS21 • 8853 • HS40 • 8839 • LS20 • 8850 • LS21 • 7971 • LS41 • 7972 IBM System x Servers [1] 100, 206, 206m, 225, 226, 235, 236, 255, 260, 306, 325, 326, 326m, 335, 336, 345, 346, 360, 365, 366, 440, 445, 450, 455, 460, 3105, 3200, 3250, 3400, 3455, 3500, 3550, 3650, 3655, 3755, 3800, 3850, 3950, 3950E,	Microsoft Windows 2000 • Server • Advanced Server including Cluster service • Datacenter Server Microsoft Windows 2003, SP1, 2, R2 • Standard Edition • VERITAS Volume Manager 4.3 [4] with DMP or SDD • VERITAS Cluster Server • 4.3 [4] • Enterprise Edition including cluster service • VERITAS Volume Manager 4.3 [4] with DMP or SDD • VERITAS Cluster Server • 4.3 [4] • Datacenter Edition including cluster service	BladeCenter • IBM • 13N2203 • 26K4841 • 26R0884 • 26R0886 • 26R0890 • 39Y9186 • 41Y8527 • 48P7061 • Emulex • LP1005DC • 43W6859 Emulex • LP9002L / LP9002DC • LP9402DC • LP9802 • LP10000 / LP1000DC • LP11000 (IBM P/N 42D0405) • LP11002 (IBM P/N 42D0407) • LPE11000(IBM P/N 42C2069) • LPE11002(IBM P/N 42C2071) IBM Netfinity/ System x • P/N 19K1246 • P/N 24P0960 • P/N 39M5894 • P/N 39M5895 QLogic • QLA2310F / QLA2310FL • QLA2340L / QLA2342L • QLA2460 • QLA2462 • QLE2460(IBM P/N 39R6525) • QLE2462(IBM P/N 39R6527)	Cisco [2] • MDS 9120, 9124, 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509, 9513 • MDS 9134, 9222i CNT • FC/9000-64 • FC/9000-128 • FC/9000-256 • 2042-N16 IBM • 2005 Model B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Model E12, 224 • 2026 Models 16E, 416 • 2026 Models 32E, 432 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model A16 • 2109 Models F16 and F32 • 2109 Model M12, M14, M48 • 2109 Models S08 and S16 • 3534 Model F08 IBM BladeCenter [1] • P/N 02R9080 • P/N 26K5601 • P/N 26R0881 • P/N 32R1790 • P/N 32R1812 • P/N 32R1813 • P/N 32R1833 • P/N 90P0165 McDATA • ED-5000 • ES-3016 and ES-3032 • Intrepid • 6064 and 6140 • Sphereon • 3216 and 3232 • 4300, 4500

[2] Supported with the IP Storage Service Module for iSCSI on Cisco fabric products. Refer to the following link for more details: ftp://service.boulder.ibm.com/storage/san/cisco/ipStorServMod.pdf

[3] Supports 32-bit only, and VERITAS Cluster Services clustering supports 2 nodes maximum.

X86, X64, EM64, AMD64, IA64 BASED SERVERS -WINDOWS

IBM – Fibre Channel
General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Available for Microsoft Windows 2000 and 2003.

DS CLI: Available for Microsoft Windows 2000 and Microsoft Windows Server 2003 (32-bit only).

SDD:

- Available for Microsoft Windows 2000 32-bit, Microsoft Windows Server 2003, SP1, 2, R2 for 32-bit and ia64-bit.
- Not supported on 64-bit AMD or EM64T servers.
- Not supported with IBM BladeCenter LS20, and BladeCenter HS20 8832. Storport drivers are not supported.

Boot device support:

- The DS6800 is supported as a boot device on Windows 2000 (32-bit) or Windows Server 2003 (32-bit or ia64-bit) servers that support Fibre Channel boot capability. It is supported with host adapters QLA 23xx (32-bit or ia64-bit) and LP9xxx (32-bit support only). Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.
- Not available for IBM BladeCenter LS20, and BladeCenter HS20 8832.

SDD DSM:

- Available for Microsoft Windows 2003 SP1, 2, and R2 32-bit and x64 (AMD or EM64T servers). Requires Storport drivers.
- Available for IBM BladeCenter LS20, and BladeCenter HS20 8832.

Boot device support:

- The DS6800 is supported as a boot device on Microsoft Windows 2003 SP1, 32-bit and x64 (AMD or EM64T servers). Refer to the IBM System Storage DS8000 Host Systems Attachment Guide for additional information.

x86, x64, EM64, AMD64, IA64 Based Servers - Windows

Hewlett Packard
Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
HP ProLiant 32-bit Servers •DL 145 G2 •DL 320 G3, G4 •DL 360 G4, G4p •DL 380 G4 •DS 560 •DL 580 G3 •DL 740 •ML 110 •ML 150 G2 •ML 310 G2, G3 •ML 350 G4, G4p •ML 370 G4 •ML 570 G3 •ML 580 G3 HP ProLiant 64-bit Servers •DL385 •DL 585 HP ProLiant 32-bit Blade System •BL 20p •BL 30p •BL 40p HP ProLiant 64-bit Blade System •BL 25p, BL35p, BL45p •BL465c, BL685c •BL 460c, 480c	Microsoft Windows 2000 • Server • Advanced Server including Cluster service • Datacenter Server Microsoft Windows 2003, SP1, 2, R2 • Standard Edition • VERITAS Volume Manager [2] 4.2, 4.3 with DMP or SDD • VERITAS Cluster Server • 4.3 [2] • Enterprise Edition including cluster service • VERITAS Volume Manager [2] 4.2, 4.3 with DMP or SDD • VERITAS Cluster Server • 4.3 [2] • Datacenter Edition including cluster service	Emulex • LP9002L / LP9002DC • LP9402DC • LP9802 • LP10000 / LP10000DC • LP11000/ LP11002 • LPE11000 / LPE11002 HP ProLiant Blade System • 300874-B21 • 354054-B21 • 361426-B21 • 381881-B21 • 394588-B21 QLogic • QLA2310F / QLA2310FL • QLA2340L / QLA2342L • QLA2460 • QLA2462 • QLE2460 • QLE2462	Cisco [3] • MDS 9120, 9124, 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509, 9513 • MDS 9134, 9222i CNT • FC/9000-64, -128, -256 • 2042-N16 IBM • 2005 Models B16, B32, B64, B5K • 2005 Models H08, H16, R18 • 2026 Model E12, 224 • 2026 Models 16E, 416 • 2026 Models 32E, 432 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model A16 [4] • 2109 Models F16 and F32 • 2109 Model M12, M14, M48 • 2109 Models S08 and S16 • 3534 Model F08 McDATA • ED-5000 • ES-3016 and ES-3032 • Intrepid • 6064, 6140 • Sphereon • 3216 and 3232 • 4300 • 4500

Hewlett Packard – Fibre Channel

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Available for Microsoft Windows 2003.

DS CLI: Available for Microsoft Windows 2003 (32-bit only).

SDD:

- Available for Microsoft Windows Server 2003, SP1, 2, R2 for 32-bit and ia64-bit,
- Not supported on 64-bit AMD or EM64T servers.
- Storport drivers are not supported.

Device Mapper Multipath (DMM):

- Available for SUSE Linux Enterprise 10. For more information, refer to:

http://www.ibm.com/support/docview.wss?rs=540&context=ST52G7&dc=D430&uid=ssg1S4000107&loc=en_US&cs=utf-8&lang=en#DM

Boot device support:

- The DS6800 is supported as a boot device on Windows Server 2003 (32-bit or ia64-bit) servers that support Fibre Channel boot capability. It is supported with host adapters QLA 23xx (32-bit or ia64-bit) and LP9xxx (32-bit support only). Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.

SDD DSM:

- Available for Microsoft Windows 2003 SP1, 32-bit and x64 (AMD or EM64T servers). Requires Storport drivers.

Boot device support:

- The DS6800 is supported as a boot device on Microsoft Windows 2003 SP1, 32-bit and x64 (AMD or EM64T servers). Refer to the *IBM System Storage DS6000 Host Systems Attachment Guide* for additional information.

ADDITIONAL STORAGE ATTACHMENT

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Macintosh G4 and G5	OS X 10.3	Apple • Fibre Channel PCI-X card • 065-5136 ATTO [1] • 3300 • 3321	IBM • 2109 Model F16 • 2109 Model M12 McDATA • Intrepid • 6064

[1] Only one PCI slot on the G5 can be used with the ATTO Host Adapter.

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available.

DS CLI: Not available.

SDD: Not available.

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Primepower •200, 250 •400,450 •650 •800, 850 •900 •1000, 1500 •2000, 2500	Solaris • 8 • 9 • 10	Emulex •LP9002DC •LP9002L •LP9402DC •LP10000 •LP10000DC	Cisco • MDS 9020, 9120, 9124, 9140 • MDS 9216, 9216A, 9216I • MDS 9506, 9509, 9513 • MDS 9134, 9222i CNT (Inrange) • FC/9000-64 • FC/9000-128 • FC/9000-256 • 2042-N16 IBM • 2005 Model B16, B32,B64, B5K • 2005 Models H08, H16, R18 • 2026 Model E12, 224 • 2026 Models 16E and 416 • 2026 Models 32E, 432 • 2027 Models 140, 232 • 2027 Models R04, R16, 256 • 2045 Model N16 • 2109 Model A16 • 2109 Models F16, F32 • 2109 Model M12, M14, M48 • 2109 Models S08 and S16 • 3534 Model F08 McDATA • Intrepid • 6064 • 6140 • Sphereon • 3216, 3232 • 4300, 4500

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available.

DS CLI: Not available.

SDD:

- Available for Solaris 8, 9, and 10.
- SDD is not supported in Cluster environments.
- SDD is not supported with SAN Boot

NAS Gateway	Fabric Support
NAS Gateway 500 • 5198 Model 001	Cisco •MDS 9120, 9140, 9506, 9509. 9216 CNT •FC/9000-64 •FC/9000-128 •FC/9000-256 IBM •2109 Models F16, and F32 •2109 Model M12 •3534 Model F08 McDATA •Intrepid 6064 and 6140 •Sphereon 3216, 3232, 4300, and 4500

Fibre Channel

Servers	Operating Systems	Host Adapters	Fabric Support
Origin Servers • 200 • 2100 • 2200 • 2400 • 2800	IRIX • 6.5.13 • 6.5.14 • 6.5.15 • 6.5.16 • 6.5.17 • 6.5.18 • 6.5.19 • 6.5.20 • 6.5.21 • 6.5.22 • 6.5.28	SGI • PCI-FC-1P-OPT • PCI-FC-1P-OPT-A • PCI-FC-1POPT-B • PCX-FC-2POPT-B	IBM • 2109 Model F08 • 2109 Model F16 • 2109 Model M12 • 2109 Models S08 and S16

General Notes:

This Interoperability file will be sun-setting, please begin to use and familiarize yourself with the System Storage Interoperation Center (SSIC): http://www.ibm.com/servers/storage/support/config/ess/index.jsp

DS Open API – (CIM Agent): Not available for SGI Servers.

DS CLI: Not available for SGI Servers.

SDD: Not available for SGI Servers.

APPENDIX A: DS6000 HOST CONNECTIVITY AND CABLES

Table 7: DS6000 Series Host Connectivity Ports

Feature Number	Features Description	Supported Models	Minimum LMC Level
1310	2Gb SW FCP/FICON SFP Pair	511	5.0.0
1315	2Gb LW FCP/FICON SFP Pair	511	5.0.0
1320	2Gb SW FCP/FICON SFP Pair	522	5.2.2
1325	2Gb LW FCP/FICON SFP Pair	522	5.2.2

Table 8: DS6000 Series Fibre Channel / FICON Cable Features

Feature Number	Feature Description	Cable Length	Supported Models
1350	50 um Fibre cable (LC)	2 meters	511
1351	50 um Fibre cable (LC)	7 meters	511
1352	50 um Fibre cable (LC)	31 meters	511
1360	9 um Fibre cable (LC)	2 meters	511
1361	9 um Fibre cable (LC)	7 meters	511
1362	9 um Fibre cable (LC)	31 meters	511
1370	50 um LC-SC interposer	2 meters	511
1371	9 um LC-SC interposer	2 meters	511
1380	50 um Fibre Cable (LC) Set (4 cables)	2 meters	EX1
1381	50 um Fibre Cable (LC) Set (4 cables)	7 meters	EX1
1382	50 um Fibre Cable (LC) Set (4 cables)	31 meters	EX1
1353	50 um Fibre cable (LC)	2 meters	522
1354	50 um Fibre cable (LC)	7 meters	522
1355	50 um Fibre cable (LC)	31 meters	522
1363	9 um Fibre cable (LC)	2 meters	522
1364	9 um Fibre cable (LC)	7 meters	522
1365	9 um Fibre cable (LC)	31 meters	522
1372	50 um LC-SC interposer	2 meters	522
1373	9 um LC-SC interposer	2 meters	522
1383	50 um Fibre Cable (LC) Set (4 cables)	2 meters	EX2
1384	50 um Fibre Cable (LC) Set (4 cables)	7 meters	EX2
1385	50 um Fibre Cable (LC) Set (4 cables)	31 meters	EX2

Table 9: Fibre Channel Host Adapters

Adapter	Description
AMCC/JNI FCX-6562	FibreStar PCI-X-to-Fibre Channel Host Bus Adapter (2Gb)
AMCC/JNI FCX2-6562	FibreStar PCI-X-to-Fibre Channel Host Bus Adapter (2Gb) (two ports)
AMCC/JNI FCE-1473-N	FibreStar 2Gb 64-bit SBus-to-Fibre Channel Host Bus Adapter
AMCC/JNI FCE-6460-N	FibreStar 2Gb 64-bit PCI-to-Fibre Channel Host Bus Adapter
Apple 065-5136	Apple PCI-X Fibre Channel Host Adapter
ATTO 3300	ATTO ExpressPCI Fibre Channel Host Adapter
ATTO 3321	ATTO ExpressPCI Fibre Channel Host Adapter
Emulex LP9002L	LightPulse Fibre Channel PCI Host Adapter (2Gb)
Emulex LP9002DC	Light Pulse Fibre Channel PCI Host Adapter (2Gb) (two ports)
Emulex LP9402DC	LightPulse Fibre Channel PCI-X Host Adapter (2Gb) (two ports)
Emulex LP9802	LightPulse Fibre Channel PCI-X Host Adapter (2GB)
Emulex LP10000	LightPulse Fibre Channel PCI-X Host Adapter (2Gb)
Emulex LP10000DC	LightPulse Fibre Channel PCI-X Host Adapter (2Gb) (two ports)
Emulex LP11000	LightPulse Fibre Channel PCI-X Host Adapter (4Gb)
Emulex LP11002	LightPulse Fibre Channel PCI-X Host Adapter (4Gb) (two ports)
Emulex LPE11000	LightPulse Fibre Channel PCI-Express Host Adapter (4Gb)
Emulex LPE11002	LightPulse Fibre Channel PCI-Express Host Adapter (4Gb) (two ports)
Hewlett-Packard A5158A	PCI Tachlite Fibre Channel Adapter
Hewlett-Packard A6684A	HSC Tachlite Fibre Channel Adapter
Hewlett-Packard A6685A	HSC Tachlite Fibre Channel Adapter
Hewlett-Packard A6795A	PCI Tachlite 2Gb Fibre Channel Adapter
Hewlett-Packard A6826A	PCI 2Gb Fibre Channel Adapter
Hewlett-Packard A9782A	PCI-x 2Gb Fibre Channel Adapter
IBM System i FC 0612	Linux Direct Attachment (PCI Fibre Channel Disk Controller)
IBM P/N 39R6525	QLogic 4Gb FC (single port) PCIe HBA for IBM System x
IBM P/N 39R6527	QLogic 4Gb FC (dual port) PCIe HBA for IBM System x
IBM P/N 42C2069	Emulex 4Gb FC HBA PCI-E Controller Single Port (LPE11000)
IBM P/N 42C2071	Emulex 4Gb FC HBA PCI-E Controller Dual Port (LPE11002)
IBM P/N 42D0405	Emulex 4Gb FC HBA PCI-X Controller Single Port (LPA11000)
IBM P/N 42D0407	Emulex 4Gb FC HBA PCI-X Controller Dual Port (LPE11002)
IBM System i FC 0626	Linux Direct Attachment (PCI-X Fibre Channel Disk Controller)
IBM System i FC 2766	PCI Fibre Channel Disk Controller
IBM System i FC 2787	PCI-X Fibre Channel Disk Controller
IBM System i FC 5760	PCI Fibre Channel Disk Controller (4 Gb)
IBM Netfinity P/N 19K1246	Netfinity FAStT FC2/66 Fibre Channel Adapter
IBM Netfinity P/N 24P0960	Netfinity FAStT FC2/133 Fibre Channel Adapter
IBM System p FC 1905	4Gb Fibre Channel 1-port PCI-X DDR Adapter
IBM System p FC 1910	4Gb Fibre Channel 2-port PCI-X DDR Adapter
IBM System p FC 1957	2Gb Fibre Channel 1-port PCI-X Low Profile Adapter
IBM System p FC 1977	2Gb Fibre Channel 1-port PCI-X Adapter

Adapter	Description
IBM System p FC 5716	Fibre Channel Adapter 64-bit for PCI-x Bus (2 Gb)
IBM System p FC 5758	Fibre Channel Adapter 64-bit for PCI-x Bus (4 Gb)
IBM System p FC 5759	Fibre Channel Adapter 64-bit for PCI-x Bus (4 Gb)
IBM System p FC 5773	4Gb Fibre Channel 1-port PCI-E DDR Adapter
IBM System p FC 5774	4Gb Fibre Channel 2-port PCI-E DDR Adapter
IBM System p FC 6228	Fibre Channel Adapter 64-Bit for PCI Bus (2Gb)
IBM System p FC 6239	Fibre Channel Adapter 64-bit for PCI Bus (2Gb)
IBM System z FC 3319	FICON Express2 LX
IBM System z FC 3320	FICON Express2 SX
QLogic QLA2310F	66MHz PCI-X Fibre Channel Adapter
QLogic QLA2310FL	66MHz PCI-X Fibre Channel Adapter (low profile)
QLogic QLA2340/L	133MHz PCI-X Fibre Channel Adapter (low profile)
QLogic QLA2342/L	133MHz PCI-X Fibre Channel Adapter (two ports; low profile)
QLogic QLA2460	4Gb Fibre Channel to PCI-X 2.0 266 MHZ, multi-mode optic (1-port)
QLogic QLA2462	4Gb Fibre Channel to PCI-X 2.0 266 MHZ, multi-mode optic (2-ports)
QLogic QLE2460	4Gb Fibre Channel to x4 PCI Express, multi-mode optic (1-port)
QLogic QLE2462	4Gb Fibre Channel to x4 PCI Express, multi-mode optic (2-ports)
SGI PCI-FC-1P-OPT	Optical SW 1GB Fibre Channel Adapter
SGI PCI-FC-1P-OPT-A	Optical SW 1GB Fibre Channel Adapter
SGI PCI-FC-1POPT-B	Optical SW 2 GB Fibre Channel Adapter

Table 9: Fibre Channel Host Adapters (cont.)

Adapter	Description
SGI PCX-FC-2POPT-B	Optical SW 2GB Fibre Channel Adapter (two ports)
StorageWorks KGPSA-CA	64-bit / 33 MHz PCI-to-Fibre Channel Host Bus Adapter
StorageWorks KGPSA-DA	64-bit / 66MHz PCI 2Gb Fibre Channel Adapter
StorageWorks KGPSA-EA	PCI-x 2Gb Fibre Channel Adapter
Sun 6727A	64-Bit PCI-to-Fibre Channel Adapter (33MHz or 66 MHz) (dual port)
Sun 6757A	25 MHz SBus Fibre Channel Adapter (dual port)
Sun 6767A (SG-XPCI1FC-QF2)	66MHz PCI-X 2Gb Fibre Channel Adapter
Sun 6768A (SG-XPCI2FC-QF2)	133MHz PCI-X 2Gb Fibre Channel Adapter (two ports; low profile)
Sun 6799A	64-Bit PCI-to-Fibre Channel Adapter (33MHz or 66 MHz)
Sun SG-XPCI1FC-EM2	LightPulse Fibre Channel PCI-X Host Adapter (2Gb) (single port)
Sun SG-XPCI2FC-EM2	LightPulse Fibre Channel PCI-X Host Adapter (2Gb) (dual port)
Sun SG-XPCI1FC-EM4-Z	PCI-X Fibre Channel Host Adapter (4Gb, single port)
Sun SG-XPCI2FC-EM4-Z	PCI-X Fibre Channel Host Adapter (4Gb, dual port)
Sun SG-XPCI1FC-QL2	2Gb Fibre Channel to x4 PCI Express, multi-mode optic (single port)
Sun SG-XPCI2FC-QF2-Z	2Gb Fibre Channel to x4 PCI Express, multi-mode optic (dual port)
Sun SG-XPCI1FC-QF4	4Gb PCI-X Fibre Channel Host Adapter (single port)
Sun SG-XPCI2FC-QF4	4Gb PCI-X Fibre Channel Host Adapter (dual port)

Fibre Channel / FICON Intermix

The DS6000 series supports Fibre Channel / FICON intermix. With intermix both FCP (Fibre Channel Protocol) and FICON upper level protocols can be supported within the same director when deployed independently by port.

For specific support, implementation details and operational information for using intermix refer to the Fibre Channel Director websites.

Table 10: SAN Fabric Products

Product	IBM Machine Type and Model or Part Number	Description
Cisco MDS 9120	IBM 2061 Model 020	Cisco 9120 Multilayer Fabric Switch (2Gb, 20-port)
Cisco MDS 9124	IBM 2053 Model 424	Cisco 9124 Multilayer Fabric Switch (4Gb, 24-port)
Cisco MDS 9134	IBM 2053 Model 434/S34	Cisco 9134 Multilayer Fabric Switch (4Gb, 32-port)
Cisco MDS 9140	IBM 2061 Model 040	Cisco 9140 Multilayer Fabric Switch (2Gb, 40-port)
Cisco MDS 9216	IBM 2062 Model D01	Cisco 9216 Multilayer Fabric Switch (2Gb, 48-port)
Cisco MDS 9216A	IBM 2062 D1A / IBM 2054 D1A	Cisco 9216A Multilayer Fabric Switch (2Gb, multi-port)
Cisco MDS 9216I	IBM 2062 D1H / IBM 2054 D1H	Cisco 9216I Multilayer Fabric Switch (2Gb, multi-port)
Cisco MDS 9222I	IBM 2054 Model E01	Cisco 9222I Multilayer Fabric Switch (4 GB, 18/4 ports FCP/IP)
Cisco MDS 9506	IBM 2062 Models D04 / T04	Cisco 9506 Multilayer Director (2Gb, 128-port)
Cisco MDS 9509	IBM 2062 Models D07 / T07	Cisco 9509 Multilayer Director (2Gb, 224-port)
Cisco MDS 9509	IBM 2054 E07	Cisco 9509 Multilayer Director (4Gb, 224-port)
Cisco MDS 9513	IBM 2054 E11 / IBM 2062 E11	Cisco 9513 Multilayer Director (4Gb, from 12 to 528 ports)
CNT (INRANGE) FC/9000-64	IBM 2042 Model 001	CNT (INRANGE) FC/9000 Fibre Channel Director (2Gb, 64-port)
CNT (INRANGE) FC/9000-128	IBM 2042 Model 128	CNT (INRANGE) FC/9000 Fibre Channel Director (2Gb, 128-port)
CNT (INRANGE) FC/9000-256	IBM 2042 Model 256	CNT (INRANGE) FC/9000 Fibre Channel Director (2Gb, 256-port)
CNT UMD	IBM 2042 Model N16	CNT Ultranet Multi-service Director (2Gb, 256-port)
IBM 2005 Model B16	P/N2005B16	IBM TotalStorage SAN16B (4Gb, 8-, 12- & 16- port)
IBM 2005 Model B32	P/N2005B32	IBM TotalStorage SAN32B-2 (4Gb, 32-port)
IBM 2005 Model B64	P/N2005B64	IBM System Storage SAN Switch (4Gb, 32, 48 and 64 ports)
IBM 2005 Model H08	P/N 2005H08	IBM TotalStorage SAN Switch H08 (2Gb, 8-port)
IBM 2005 Model H16	P/N 2005H16	IBM TotalStorage SAN Switch H16 (2Gb, 16-port)
IBM 2005 Model R18	2005R18	IBM System Storage SAN Router SAN18B-R (4Gb, 16 ports, GbE 2 ports)
IBM 2026 Model 16E		IBM TotalStorage SAN Switch HVEC Model (4Gb, 16-port)
IBM 2026 Model 416	SAN416M-2	IBM TotalStorage SAN Switch (4Gb, 16-port)
IBM 2026 Model 32E		IBM TotalStorage SAN Switch HVEC Model (4Gb, 32-port)
IBM 2026 Model 432	SAN432M-2	IBM TotalStorage SAN Switch (4Gb, 32-port)
IBM 2026 Model 224	P/N 2026224	IBM TotalStorage SAN24M-1 (2Gb, 24-port)
IBM 2026 Model E12		IBM TotalStorage SAN12 (2Gb, 124-port)
IBM 2027 Model 140	P/N 2027140	IBM TotalStorage SAN140M (2Gb, 140-port)
IBM 2027 Model 232	P/N 2027232	IBM TotalStorage SAN32M-1 (2Gb, 32-port)
IBM 2027 Model 256	SAN256M	IBM TotalStorage SAN256M (10Gb ISL capable, 256 port)
IBM 2027 Model R04	SAN04M-R	IBM SAN router 4 ports (iFCP x2 and iSCSI x2)
IBM 2027 Model R16	SAN16M-R	IBM SAN Router 12 + 4 ports
IBM 2045 Model N16	P/N 2045N16	IBM TotalStorage SAN256N (2Gb, 256-port)

Product	IBM Machine Type and Model or Part Number	Description
IBM 2109 Model A16	P/N 2109A16	IBM TotalStorage SAN Switch A16 (4Gb, 16-port, 1GbE 2 Ports)
IBM 2109 Model F16	P/N 2109F16	IBM TotalStorage SAN Switch F16 (2Gb, 16-port)
IBM 2109 Model F32	P/N 2109F32	IBM TotalStorage SAN Switch F32 (2Gb, 32-port)
IBM 2109 Model M12	P/N 2109M12	IBM TotalStorage SAN Switch M12 (2Gb, 64-port)
IBM 2109 Model M14	P/N 2109M14	IBM TotalStorage SAN Switch M14 (2Gb, 128-port)
IBM 2109 Model M48	P/N 2109M48	IBM TotalStorage SAN Switch M48 (4Gb, 256 port)
IBM 2109 Model S08	P/N 2109S08	IBM TotalStorage SAN Switch S08 (1Gb, 8-port)
IBM 2109 Model S16	P/N 2109S16	IBM TotalStorage SAN Switch S16 (1Gb, 16-port)
IBM 3534 Model F08	P/N 3534F08	IBM TotalStorage SAN Switch F08 (2Gb, 8-port)
IBM BladeCenter	P/N 48P7062	BladeCenter 2 Pt Fibre Channel Switch Module
IBM BladeCenter	P/N 02R9080	BladeCenter HS20 Optical Pass Thru Module
IBM BladeCenter	P/N 90P0165	BladeCenter Internal Brocade Switch
McDATA ED-5000	IBM 2032 Model 001	McDATA ED-5000 Fibre Channel Director
McDATA ES-3016	IBM 2031 Model 016	McDATA ES-3016 Fabric Switch (1Gb, 16-port)
McDATA ES-3032	IBM 2031 Model 032	McDATA ES-3016 Fabric Switch (1Gb, 32-port)
McDATA Intrepid 6064	IBM 2032 Model 064	McDATA Intrepid 6064 Director (2Gb, 64-port)
McDATA Intrepid 6140	IBM 2032 Model 140	McDATA Intrepid 6140 Director (2Gb, 140-port)
McDATA Sphereon 3216	IBM 2031 Model 216	McDATA Sphereon 3216 Fabric Switch (2Gb, 16-port)
McDATA Sphereon 3232	IBM 2031 Model 232	McDATA Sphereon 3232 Fabric Switch (2Gb, 32-port)
McDATA Sphereon 4300	IBM 2034 Model 212	McDATA Sphereon 4300 Fabric Switch (2Gb, 12-port)
McDATA Sphereon 4500	IBM 2031 Model 224	McDATA Sphereon 4500 Fabric Switch (2Gb, 24-port)

December 7, 2007

Operating Systems, Path Management, and Clustering

- AIX 6.1 SP2 (IBM System p)
- AIX 6.1 SP2 with HACMP 5.4.1 (IBM System p)
- AIX 6.1 SP2 with CSM 1.7.0.1 (IBM System p)
- Red Hat RHEL 4.6 (IBM System i, IBM System p, X86, EM64T, IA64, and AMD64 servers)
- zLinux SLES 10 SP 1 for FCP

SAN Fabric Support

- Cisco MDS 9134 (Fujitsu, Hewlett-Packard HP-UX, IBM System i, IBM Cluster 1600, IBM System p, IBM System z, Linux, N Series, NetWare, Sun, VMware, and Windows)
- Cisco MDS 9222i (Fujitsu, Hewlett-Packard HP-UX, IBM System i, IBM Cluster 1600, IBM System p, IBM System z, Linux, N Series, NetWare, Sun, VMware, and Windows)

Servers

HP Blades BL 460c, 480c with Microsoft Windows 2003

Host Adapters

Blade Host Adapter 43W6859 for Windows and Linux

September 14, 2007

Operating Systems, Path Management, and Clustering

i5/OS V5R4 M5
zLinux Red Hat RHEL 4.5 for FICON, & FCP
zLinux SLES 10 SP 1 for FICON

SAN Fabric Support

Servers

System I (POWER6) 570 (9406-MMA)
HP Blades BL465c, BL685c with Microsoft Windows 2003

Host Adapters

Blade Host Adapter 41Y8527 for Windows, Linux & VMWare

June 29, 2007

Operating Systems, Path Management, and Clustering

z/VM Version 5 Release 3 FICON and FCP
Novell SLES 10 FICON for System z
AIX 5.2 ML10 and AIX 5.3 ML6
SUN Solaris 10 u3
Linux Red Hat RHEL 4.5 for System p/i/x
Linux Novell SLES 10 SP1 for System p/i/x
HP TRU64 5.1B4

SAN Fabric Support

BladeCenter 39Y9284
BladeCenter 39Y9280

Servers

X Series Servers 3105, 3200, 3250, 3400, 3455, 3500, 3550, 3650, 3655, 3755
System p (POWER6) p570 (9117-MMA)
Opteron Servers x4100, x4200, x4600, V20z & V40z

Host Adapters

FC 5773
FC 5774
AB378A
AB379A
IBM BladeCenter 39Y9306

April 24, 2007

Operating Systems, Path Management, and Clustering

- System z z/VSE Version 4 Release 1
- Sun Solaris MPxIO Level 4.4.2 – 4.4.11

Fabric Support

- Cisco MDS 9124
- Cisco ONS 15454
- IBM 2026 Model 12E

December 15, 2006

General – PLEASE READ

- IBM System Storage is excited to announce Release 1 of the System Storage Interoperation Center (SSIC). IBM has created a single repository to display IBM Enterprise Disk Interoperability information. There are over 23,000 Interoperation configurations for IBM Enterprise Disk systems. This interoperability file will be sun-setting and we ask that you please begin using and familiarizing yourself with the SSIC website. See the SSIC link as follows:

http://www.ibm.com/servers/storage/support/config/ess/index.jsp

Operating Systems, Path Management, and Clustering

- IBM BladeCenter LS41 7972 (NetWare, VMware, Windows, Linux)
- Linux support for IBM BladeCenter HS20 7981, and HS21 8853
- NetWare support for Cluster Services 1.80
- NetWare support for IBM BladeCenter HS20 8843, HS21 8853, LS20 8850, and LS21 7971
- VMware support for IBM BladeCenter HS20 (8878, 8832, 8843, HS21 (8853), HS40 (8839), LS20 (8850), and LS21 (7971)
- VMware ESX 3.0.1 (includes Vmotion support via RPQ)
- VMware guest support for Red Hat Enterprise Linux 4
- Windows support for IBM BladeCenter HS20 7981, and HS21 8853

Servers:

- Hewlett Packard Windows – ProLiant 64-bit DL 385

Host Adapters

- Fujitsu support for Emulex LP9002DC and LP9402DC
- IBM P/N 39R6525 and 39R6527
- IBM P/N 42C2069, 42C2071, 42D0405, and 42D0407 (for Emulex)

November 15, 2006

Operating Systems, Path Management, and Clustering

- IBM DS CLI support for HACMP 5.3.0 and 5.4.0
- IBM System z FCP support for RedHat Enterprise Linux 4.4
- IBM System z z/OS Version 1 Release 8
- IBM System z z/OS e Version 1 Release 8
- SGI IRIX 6.5.28

Servers

- IBM BladeCenter LS21 7971 (Linux and Windows)
- Sun Servers E2900, E4900, and E6900

Fabric Support

- IBM BladeCenter 4Gb Switch Module P/N 26R0881, P/N 32R1812, P/N 32R1813, and P/N 32R1833 (Linux, Netware, and Windows)
- IBM 2005 R18 Support for Global Copy

Host Adapters

- Emulex LightPulse 4Gb Fibre Channel PCI Express Adapters LPE11000 and LPE11002 (Linux and Windows)
- IBM BladeCenter 4Gb SFF 26R0886 and 39Y9186 (Linux, Netware, and Windows)
- IBM System z FC 33