

Overview

Models

HP StorageWorks Secure Path v4.0C for Windows®
HP StorageWorks Secure Path v4.0C for Windows Workgroup Edition
HP StorageWorks Secure Path v3.0C for SUN Solaris
HP StorageWorks Secure Path v3.0C for HP-UX
HP StorageWorks Secure Path v3.0C for HP-UX Workgroup Edition
HP StorageWorks Secure Path v2.0D for IBM-AIX
HP StorageWorks Secure Path v3.0C for NetWare
HP StorageWorks Secure Path v3.0C for NetWare Workgroup Edition
HP StorageWorks Secure Path v3.0A for Linux
HP StorageWorks Secure Path v3.0A for Linux Workgroup Edition

Introduction

Secure Path is multi-path, high availability software that manages and maintains continuous data access to HP storage systems enabling no-single-point-of-failure (NSPoF) from server to storage. Secure Path is host-resident software that monitors the data paths between server and storage to increase availability of information. In the event that a path failure is detected, Secure Path fails over to an alternative path. When that path becomes available, Secure Path can automatically fail back to the original path. For Windows, Linux, SUN and HP-UX systems connected to the HP StorageWorks Enterprise Virtual Array or the HGS80 storage controllers, Secure Path can dynamically balance the workload among available paths to optimize system performance. Secure Path on the NetWare and IBM-AIX platforms provide static workload balancing.

- Secure Path v4.0C for Windows supports hosts connected to the HP StorageWorks Enterprise Virtual Array (EVA5000, EVA3000), HP StorageWorks Modular Array 8000 (MA8000)/Enterprise Modular Array 12000 (EMA12000)/Enterprise Modular Array 16000 (EMA16000), RAID Array 8000 (RA8000)/Enterprise Storage Array 12000 (ESA12000), Modular Array 6000 (MA6000) and the Modular Storage Array 1000 storage solutions. This release also supports hosts connected to the StorageWorks XP 48/512, XP 256, XP 128/1024, VA 7400/7100, VA 7410/7110 and the StorageWorks Continuous Access Storage Appliance.
- Secure Path v3.0A for Linux supports hosts connected to the HP StorageWorks Enterprise Virtual Array (EVA5000, EVA3000), HP StorageWorks Modular Array 8000 (MA8000)/Enterprise Modular Array 12000 (EMA12000)/Enterprise Modular Array 16000 (EMA16000), RAID Array 8000 (RA8000)/Enterprise Storage Array 12000 (ESA12000), Modular Array 6000 (MA6000) and the Modular Storage Array 1000 storage solutions.
- Secure Path v3.0C for HP-UX supports hosts connected to the HP StorageWorks Enterprise Virtual Array (EVA5000, EVA3000), HP StorageWorks Modular Array 8000 (MA8000)/Enterprise Modular Array 12000 (EMA12000)/Enterprise Modular Array 16000 (EMA16000), RAID Array 8000 (RA8000)/Enterprise Storage Array 12000 (esa12000), and Modular Array 6000 (ma6000) storage solutions. This release also supports hosts connected to the StorageWorks XP 48/512, XP 256, XP 128/1024, VA 7400/7100, VA 7410/7110 and the StorageWorks Continuous Access Storage Appliance.
- Secure Path v3.0C for SUN, and v2.0D for IBM-AIX support hosts connected to the HP StorageWorks Enterprise Virtual Array (EVA5000, EVA3000), HP StorageWorks Modular Array 8000 (MA8000)/Enterprise Modular Array 12000 (EMA12000)/Enterprise Modular Array 16000 (EMA16000), RAID Array 8000 (RA8000)/Enterprise Storage Array 12000 (ESA12000), and Modular Array 6000 (MA6000) storage solutions.
- Secure Path v3.0C for NetWare supports Novell NetWare hosts connected to StorageWorks Enterprise Virtual Array (EVA5000, EVA3000), storage solutions. Secure Path v3.0B for NetWare supports MA8000/EMA12000/EMA16000, RA8000/ESA12000, and RA4100/4000 storage solutions.
- Secure Path v4.0C for Windows Workgroup Edition supports Windows hosts connected to Modular Storage Array (MSA) 1000, VA 7400/7100, and VA 7410/7110 storage solutions.
- Secure Path v3.0C for NetWare Workgroup Edition supports Novell NetWare hosts connected to MSA1000 storage solutions. The RAID Array 4100/4000 is supported with Secure Path for NetWare v3.0B Workgroup Edition, which ships with v3.0C.
- Secure Path v3.0A for Linux Workgroup Edition supports Linux hosts connected to MSA1000 storage solutions.
- Secure Path v3.0C for HP-UX Workgroup Edition supports HP-UX hosts connected to VA 7400/7100, VA 7410/7110 storage solutions.

Overview

Benefits

Feature	Function	Benefit
Multiple path management; up to 32 paths/LUN depending on host	Reroutes I/O to functioning alternate path in case of hardware failure	No-single-point-of-failure from server to storage
Dynamic Load Balancing	Monitors and reroutes data to balance I/O load using the models as follows: round robin, least I/O, and least bandwidth on the Windows and Sun platforms and round robin on the Linux and HP-UX platforms.	Increased performance
Proactive path checking	In the background, determine failed path and take necessary action to ensure availability of path between host and storage	High availability
Remote Management with Secure Path Manager	Web-based graphical user interface Displays current path status and optimizes path utilization for Windows and NetWare hosts	Ease of use
Automatic fail back	Online automatic return of storage sets to repaired preferred I/O path	Lights-out operation
LUN expansion with Windows 2000 dynamic disk support	Allows most maintenance without loss of services	Improved availability for 7 x 24 support
Partitioned LUNs across multiple hosts	Two or most hosts of the same type can share a partitioned RAID set, allowing maximum utilization of resources (Windows, SUN, Linux and HP-UX support only)	Storage consolidation

Standard Features

No-Single-Point-Of-Failure

Multiple path failover capability and redundant components architecture eliminate single points-of-failure from server to storage in a clustered or single server configuration. Secure Path supports up to 32 paths per LUN, depending on the host. See Technical Specifications below for more details.

High Availability

Secure Path provides high availability in complex SAN (storage area networks) ensuring application and data availability in enterprise solutions. Fibre Channel storage controllers provide redundant paths for continuous 24x7 data access. Redundant physical connections define separate physical "paths" in a Secure Path hardware configuration. Each path originates at an HBA port on the server and ends at a unique RAID controller port in the storage system.

Performance

Secure Path products provide automatic load distribution for Windows, Linux, SUN and HP-UX hosts across the available paths to optimize the performance of the storage controllers. Administrator-controlled load balancing capability is available for IBM-AIX and NetWare hosts. Load balancing is supported with the XP, Virtual Array (VA), EVA5000, EVA3000, MA8000, EMA12000, EMA16000, RA8000, ESA12000, and MA6000 solutions.

Clustered Server Support

Secure Path provides cluster support for host level fault tolerance and high system availability. Cluster software supported includes:

- Microsoft® Cluster Server (MSCS)
- Oracle Parallel Server (OPS) on Windows, and Oracle Real Application Clusters (RAC) on Windows with EVA and MSA1000 and Linux with MSA1000
- SteelEye LifeKeeper for Linux (for 2 node clusters)
- NetWare Cluster Server
- VERITAS Cluster Server (on SUN)
- SUN Clusters
- HP ServiceGuard for HP-UX and for Linux
- HACMP

Standard Features

Manageability

Windows and NetWare hosts are managed with Secure Path Manager v4 (SPM), a web-based management application that allows continuous monitoring of the multi-path environment, displays path status and alerts on significant events. Secure Path Manager presents a SAN-wide view of path connectivity between managed hosts and LUNs. Its easy to use interface allows users to customize paths and optimize availability and performance for the specific SAN.

Secure Path Manager runs on either the SAN Management Appliance or on a Windows 2000 server. Users can browse to Secure Path Manager using standard web browsers. Secure Path Manager allows the user to enable automatic load balancing to ensure maximum I/O efficiency, when managing the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000, XP, and VA storage solutions.

SUN and HP-UX hosts are managed with the Secure Path Management Tool (secure path manager), which is a command line application and has the following features:

add - Add a new device to the Secure Path configuration.

alias - Assign an alias to an object.

delete - Removes a device from the Secure Path configuration.

display - Displays information about configured Secure Path devices.

log - Sets logging to the console, system log file and email notification.

notify - Manage email address and event logging severity to each email recipient.

prefer - Assign a preferred attribute to a path (for HP-UX only)

quiesce - Move active I/O to an alternative object and temporarily remove selected object from use.

restart - Return a previously quiesced object to an active or available state.

restore - Restore one or more devices to their preferred I/O path.

select - Select a path for I/O. On the Sun platform, select also supports preferred path

set - Enable or disable special driver functionality.

unalias - Delete an alias.

unprefer - Remove a preferred path attribute (for HP-UX only)

update - Update the driver persistence file.

With SUN and HP-UX hosts, you are notified of changes in the state of the paths via the console, email or syslog. The Sun Spmgr tool supports command management from a remote host.

Linux hosts are also managed with the Secure Path Management Tool (secure path manager) and support the above commands with the exception of "add", "delete", and "update"

The Secure Path for IBM-AIX Management tool (CamBex Fibre Channel Storage Management) includes the following options:

listdev - Prints a list of all devices connected to the Fibre Channel adapters with status of the paths to the device.

listpath - Displays information about the paths to a specific device.

unfail - Changes the state parameter of a device path from Failed or from Standby to Online.

listadapt - Lists the Fibre Channel adapters in the system.

config - Configures paths to all devices that are connected to the adapter.

listall - Displays full path, adapter and device information.

Multi-host Management

Secure Path Manager v4 also supports the concept of management groups (or profiles) to manage groups of hosts. One profile can have up to 128 hosts and up to 128 storage systems. Multiple profiles can be created to manage more hosts or storage systems. A profile can contain a mixture of clustered and non-clustered hosts.

Easy Upgrade

Secure Path for Windows and SUN includes an upgrade process that quickly allows you to take advantage of the new features without re-configuration of the storage systems. The upgrade procedure is designed to convert a current configuration to the new configuration.

Packaging

Software kit containing CD-ROM media, documentation and license.

Warranty

Standard Industry 90-day conformance.

Service and Support, HP Care Pack and Warranty Information

Software Warranty HP warrants only that the Software media will be free of physical defects for a period of ninety (90) days from delivery.

Software Product Services Product Support gives the customer access to HP's experienced technical support resources as well as access to HP's Information Services database for support on a variety of multi-vendor/multi-platform software products. Product support includes escalations and problem coordination with the appropriate engineering group. HP offers a variety of options to allow you to tailor your product service to meet the needs of your organization. Basic services on products can be uplifted from day one to ensure you receive the service you need when you need it.

Available software product services

- Software Support 24 x 7 is available 24 hours per day, Monday through Sunday, including holidays.
- Installation and Startup Service (software installation, configuration, startup testing and knowledge transfer)
- Tailored support contracts based on personalized statement of work: contact your local support center via <http://www.hp.com/support/>

Software Product Services Included with the Product One year of Software Support 24 x 7 HP Care Pack Service (includes software technical support 24 x 7 and software product and documentation updates).

The following services are offered as HP Care Pack Services at the time of product order

- HP Care Pack services are available to upgrade the one year of Software Support 24 x 7 included with the product to 3 full years.
- Installation and startup services.
- HP Care Pack services are prepaid, are configured using Sales Builder for Windows and must be ordered with the product.

For additional software product services information for North American HP Care Pack services, as well as orderable part numbers, please refer to the URLs listed below:

All storage services: <http://www.hp.com/hps/storage/>

HP Care Pack Priority Services: http://www.hp.com/hps/carepack/storage/cp_networked.html

Software Support HP Care Pack Services: http://www.hp.com/hps/carepack/software/cp_storage.html

If you have specific service questions contact your local HP representative. Contact information for your local area can be found at: <http://www.compaq.com/support/>

Maintenance releases, bug fixes and software patches are available at no charge at the following Web site:

<http://www.compaq.com/support/sanworks/>

The following contractual software support services are available at the point of product sale or post product purchase These services are offered via an HP Services sales representative or selected channel partners and include:

- Software Support 24 x 7 is available 24 hours per day, Monday through Sunday, including holidays.
- Installation and Startup Service (software installation, configuration, startup testing and knowledge transfer).
- Tailored support contracts based on personalized statement of work: contact your local support center via <http://www.hp.com/support/>

NOTE: These Web sites are available in English only.

Ordering Information

Order one Secure Path license for each host that you want to manage with Secure Path.

	Product Description	UPC Code	Part Number
Secure Path for Windows supports the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, and MA6000 solutions	Secure Path v4.0C for Windows one license	808736757416	165989-B25
	Secure Path v4.0C for Windows five licenses	808736757423	231292-B25
	Secure Path v4.0C for Windows 10 licenses	808736757430	231293-B25
	Secure Path v4.0C for Windows 25 licenses	808736757447	231294-B25
	Secure Path v4.0C for Windows 50 licenses	808736757454	231295-B25
	Secure Path v4.0C for Windows Upgrade	808736757409	165988-B25
	Secure Path v4.0C for Windows for ProLiant BL line 8 licenses	808736757461	325633-B23
Secure Path for Windows Japanese Edition supports the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, and MA6000 solutions	Secure Path v4.0B for Windows Japanese Edition one license	808736958783	291866-293
	Secure Path v4.0B for Windows Japanese Edition five licenses	808736958790	291867-293
	Secure Path v4.0B for Windows Japanese Edition 10 licenses	808736958806	291868-293
	Secure Path v4.0B for Windows Japanese Edition Upgrade	808736992152	165988-292
Secure Path for Windows Workgroup Edition supports the MSA1000	Secure Path v4.0C for Windows Workgroup one license	808736757331	213076-B26
	Secure Path v4.0C for Windows Workgroup Edition five licenses	808736757348	231316-B26
	Secure Path v4.0C for Windows Workgroup Edition 10 licenses	808736757362	231317-B26
	Secure Path v4.0C for Windows Workgroup Edition 25 licenses	808736757379	231318-B26
	Secure Path v4.0C for Windows Workgroup Edition 50 licenses	808736757386	231319-B26
	Secure Path v4.0C for Windows Workgroup Edition Upgrade License	808736757324	261715-B24
	Secure Path v4.0C for Windows Workgroup Edition for ProLiant BL line 8 licenses	808736757355	325634-B23
Secure Path for Windows Japanese Edition supports the MSA1000	Secure Path v4.0B for Windows Workgroup Edition Japanese Edition one license	808736958899	291869-293
	Secure Path v4.0B for Windows Workgroup Edition Japanese Edition five licenses	808736959001	291870-293
	Secure Path v4.0B for Windows Workgroup Edition Japanese Edition 10 licenses	808736959018	291871-293
	Secure Path v4.0B for Windows Workgroup Edition Japanese Edition Upgrade	808736992169	325634-292
Secure Path for SUN supports the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, and MA6000 solutions	Secure Path v3.0C for SUN one license	808736762014	165991-B25
	Secure Path v3.0C for SUN 5 licenses	808736762021	231300-B25
	Secure Path v3.0C for SUN 10 licenses	808736762038	231301-B25
	Secure Path v3.0C for SUN 25 licenses	808736762045	231302-B25
	Secure Path v3.0C for SUN 50 licenses	808736757485	231303-B25
	Secure Path v3.0C for SUN Upgrade license	808736762007	165990-B24
Secure Path v3.0B for NetWare supports the RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000, RA4100 and RA4000 solutions	Secure Path v3.0B for NetWare one license	720591290948	165993-B21
	Secure Path v3.0B for NetWare five licenses	720591722685	231308-B21
	Secure Path v3.0B for NetWare 10 licenses	720591722586	231309-B21
	Secure Path v3.0B for NetWare 25 licenses	720591722609	231310-B21
	Secure Path v3.0B for NetWare 50 licenses	720591722623	231311-B21

Ordering Information

Secure Path v3.0C for NetWare supports the EVA5000, EVA3000, and MSA1000 solutions	Secure Path v3.0C for NetWare one license	613326505618	165993-B22
	Secure Path v3.0C for NetWare five licenses	613326505632	231308-B22
	Secure Path v3.0C for NetWare 10 licenses	613326505656	231309-B22
	Secure Path v3.0C for NetWare 25 licenses	613326505670	231310-B22
	Secure Path v3.0C for NetWare 50 licenses	613326505694	231311-B22
Secure Path for NetWare Workgroup Edition supports the MSA1000, RA4100 and RA4000 solutions	Secure Path v3.0C for NetWare Workgroup Edition one license	613326505298	222411-B22
	Secure Path v3.0C for NetWare Workgroup Edition five licenses	613326505519	231324-B22
	Secure Path v3.0C for NetWare Workgroup Edition 10 licenses	613326505533	231325-B22
	Secure Path v3.0C for NetWare Workgroup Edition 25 licenses	613326505557	231326-B22
	Secure Path v3.0C for NetWare Workgroup Edition 50 licenses	613326505571	231327-B22
Secure Path for HP-UX supports the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, and MA6000 solutions	Secure Path v3.0C for HP-UX one license	808736984041	261705-B24
	Secure Path v3.0C for HP-UX five licenses	808736984058	261706-B24
	Secure Path v3.0C for HP-UX 10 licenses	808736984065	261707-B24
	Secure Path v3.0C for HP-UX 25 licenses	808736984072	261708-B24
	Secure Path v3.0C for HP-UX 50 licenses	808736984089	261709-B24
Secure Path for HP-UX Workgroup Edition supports the Virtual Array Solutions	Secure Path v3.0C for HP-UX Workgroup Edition one license	808736757997	347079-B21
	Secure Path v3.0C for HP-UX Workgroup Edition five licenses	808736757973	347080-B21
	Secure Path v3.0C for HP-UX Workgroup Edition 10 licenses	808736757959	347081-B21
	Secure Path v3.0C for HP-UX Workgroup Edition 25 licenses	808736757935	347082-B21
	Secure Path v3.0C for HP-UX Workgroup Edition 50 licenses	808736757911	347083-B21
Secure Path for IBM-AIX supports the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, and MA6000 solutions	Secure Path v2.0D for IBM-AIX one license	808736757492	231495-B24
	Secure Path v2.0D for IBM-AIX five licenses	808736757508	231312-B24
	Secure Path v2.0D for IBM-AIX 10 licenses	808736757515	231313-B24
Secure Path for Linux supports the EVA5000, EVA3000, RA8000/ESA12000, MA8000/EMA12000/EMA16000, and MSA1000 solutions	Secure Path v3.0A for Linux one license	808736760560	282412-B22
	Secure Path v3.0A for Linux five licenses	808736760577	282413-B22
	Secure Path v3.0A for Linux for Proliant BL line 8 licenses	808736760584	326266-B22
	Secure Path v3.0A for Linux 10 licenses	808736760591	282414-B22
	Secure Path v3.0A for Linux 25 licenses	808736761802	282415-B22
	Secure Path v3.0A for Linux 50 licenses	808736761819	282416-B22
Secure Path for Linux Workgroup Edition supports the MSA1000 solutions	Secure Path v3.0A for Linux Workgroup Edition one license	808736761826	291536-B22
	Secure Path v3.0A for Linux Workgroup Edition five licenses	808736761956	291537-B22
	Secure Path v3.0A for Linux Workgroup Edition for Proliant BL line 8 licenses	808736761963	326267-B22
	Secure Path v3.0A for Linux Workgroup Edition 10 licenses	808736761970	291538-B22
	Secure Path v3.0A for Linux Workgroup Edition 25 licenses	808736761987	291539-B22
	Secure Path v3.0A for Linux Workgroup Edition 50 licenses	808736761994	291540-B22

Ordering Information

To upgrade from Secure Path v3.x for Windows to Secure Path v4 for Windows, order part 165988-B25 for the upgrade kit. If you have Secure Path for SUN v2.1, you may purchase the upgrade kit to migrate to v3.0C. Order part 165990-B24.

Secure Path for Windows is also included in the ProLiant Cluster HA/F500 kits. Secure Path for Windows Workgroup Edition is included in the ProLiant Cluster HA/F200 for MSA1000 kits. Secure Path v3.1 for Windows for RA4100 and RA4000 is also included in the ProLiant Cluster HA/F200 cluster kit.

Secure Path software updates are available to download. Continue to check this site for future updates:

<http://www.Secure Path Software Updates.com>.

NOTE: This Web site is available in English only.

TechSpecs

Shipping Dimensions

	Secure Path v4.0C for Windows	Secure Path v4.0C for Windows Workgroup Edition	Secure Path v3.0B for NetWare	Secure Path v3.0C for NetWare Workgroup Edition	Secure Path v3.0C for HP-UX Workgroup Edition
Height	9.125 in (23.18 cm)	9.125 in (23.18 cm)	9.125 in (23.18 cm)	9.125 in (23.18 cm)	9.125 in (23.18 cm)
Width	8.125 in (20.64 cm)	8.125 in (20.64 cm)	8.125 in (20.64 cm)	8.125 in (20.64 cm)	8.125 in (20.64 cm)
Depth	1.125 in (2.86 cm)	1.125 in (2.86 cm)	1.125 in (2.86 cm)	1.125 in (2.86 cm)	1.125 in (2.86 cm)
Weight	2 lb (0.91 kg)	2 lb (0.91 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)
	Secure Path v3.0C for SUN	Secure Path v3.0C for HP-UX	Secure Path v2.0D for IBM-AIX	Secure Path v3.0A for Linux	Secure Path v3.0A for Linux Workgroup Edition
Height	9.125 in (23.18 cm)	9.125 in (23.18 cm)	9.125 in (23.18 cm)	9.125 in (23.18 cm)	9.125 in (23.18 cm)
Width	8.125 in (20.64 cm)	8.125 in (20.64 cm)	8.125 in (20.64 cm)	8.125 in (20.64 cm)	8.125 in (20.64 cm)
Depth	1.125 in (2.86 cm)	1.125 in (2.86 cm)	1.125 in (2.86 cm)	1.125 in (2.86 cm)	1.125 in (2.86 cm)
Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)

Windows

Basic Configuration

RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000, and EVA5000, EVA3000, XP 48/512, XP 256, XP 128/1024, VA 7400/7100, VA 7410/7110 solutions: Host with one or more HBAs and storage system with dual controllers Supports 32 paths/LUN.

MSA1000 and RA4000/4100 solutions: Host with multiple HBAs and storage system with dual controllers. Supports 2 paths/LUN.

Storage Controller Software

RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000 solutions: Supports ACS v8.6 and ACS v8.7. EVA5000, EVA3000 solutions: Supports VCS v2.0, v3.0, v3.01.

MSA1000 solutions: MSA1000 controller firmware version 2.0

RA4000/4100 solutions: HP RA4X00 controller firmware version 2.60

XP 48/512: firmware 01.18.71.00, 01.19.03.00

XP 256: firmware 52.49.21.00, 52.49.23.00

XP 128/1024: firmware 21.05.06.00, 21.05.23.00

Operating System Support

EVA5000, EVA3000, RA8000/ESA12000, MA8000/ema12000/EMA16000, MA6000, XP 48/512, XP 256, XP 128/1024, VA 7400/7100, VA 7410/7110 solutions: Microsoft Windows NT® 4.0, Windows NT 4.0 Enterprise Edition Service Pack 6A, Microsoft Windows 2000 and Windows 2000 Advanced Server Service Pack 3 and Service Pack 4, Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition 32 bit version, Windows Server 2003 Enterprise Edition 64 bit version.

MSA1000 solutions: Microsoft Windows NT 4.0, Windows NT 4.0 Enterprise Edition Service Pack 6A, Microsoft Windows 2000 and Windows 2000 Advanced Server Service Pack 3 and Service Pack 4, Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition 32 bit version, Windows Server 2003 Enterprise Edition 64 bit version.

Application Support

Microsoft Cluster Server, Oracle Parallel Server (OPS), and Oracle Real Application Clusters (RAC) on Windows with MSA1000 and EVA.

Host Adapters

HP StorageWorks 64bit/33MHz PCI-to-Fibre Channel host bus adapter, FCA2101 2 Gb/s FC HBA, FCA2355 dual channel 2Gb/s HBA, FCA2214 PCI-X 64 bit 133MHz 2Gb/s HBA, FCA2214DC Dual Channel PCI-X 64 Bit 133MHz 2Gb/s HBA, FCA2404 PCI-X 64 Bit 133MHz 2Gb/s HBA, FCA2404DC Dual Channel PCI-X 64 BIT 133MHz 2Gb/s HBA, FCA2408, A7298A, Qlogic QLA2200, QLA2300, QLA2310, QLA2344 depending on the storage array. See the storage array QuickSpec for details on supported HBAs.

Host Platform

ProLiant servers from HP or other leading x86 servers ; rx2600, rx5670.

TechSpecs

SUN	
Basic Configuration	RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000, and EVA5000, EVA3000 solutions: Host with one or more HBAs and storage system with dual controllers Supports 32 paths/LUN. Support for 1-128 RAID systems per SUN host.
Storage Controller Software	RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000 solutions: Supports ACS v8.6 and ACS v8.7. EVA5000, EVA3000 solutions: Supports VCS v2.0, v3.0, v3.01.
Operating System Support	Solaris v2.6, Solaris v7 (32, 64-bit mode), Solaris v8 (32, 64-bit mode), Solaris v9 (32, 64-bit mode)
Application Support	SUN Clusters v2.2 VERITAS Cluster Server v3.5 VERITAS File system v3.4, v3.5 VERITAS Volume Manager v3.2 and v3.5 with DMP coexistence
Host Adapters	HP 32-bit PCI Fibre Channel Adapter, 380576-001 HP 64-bit Sbus Fibre Channel Adapter, 123503-001 HP StorageWorks cPCI-to-Fibre Channel Host Bus Adapter for Solaris, 254457-B21 HP StorageWorks SBus-to-Fibre Channel Host Bus Adapter for Solaris, 254458-B21 HP StorageWorks PCI-to-Fibre Channel Host Bus Adapter for Solaris, 254456-B21 Support for 1-28 host adapters per SUN host.
Host Platform	SUN SPARC-based servers using the SUN 4U architecture.

NetWare

Basic Configuration	Host with multiple HBAs and storage system with dual controllers. Supports 8 paths/LUN with Enterprise Virtual Array, eva3000, ra8000/esa12000, ma8000/ema12000/ema16000, ma6000 solutions and msa1000 solutions and 2 paths/LUN with ra4100 and ra4000 solutions.
Storage Controller Software	EVA5000, EVA3000 solutions: Supports VCS v2.0, v3.0, v3.01 MA6000, RA8000 and ESA12000: supports ACS v8.6f and ACS v8.7 MSA1000 v2 firmware HP RA4X00 controller firmware: v2.58
Operating System Support	Novell NetWare v5.1, v6.0, v6.5
Application Support	NetWare Cluster Server (up to 6 nodes per cluster)
Host Adapters	120186-B21, FCA2210, depending on the storage array. See the storage array QuickSpecs for details on supported HBAs.
Host Platform	ProLiant or other leading x86 servers.

TechSpecs

HP-UX

Basic Configuration	RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000, EVA5000, EVA3000, XP 48/512, XP 256, XP 128/1024, VA 7400/7100, VA 7410/7110 solutions: Host with one or more HBAs and storage system with dual controllers Supports 32 paths/LUN. Support for 1-128 RAID systems per HP-UX host.
Storage Controller Software	RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000 solutions: Supports ACS v8.6 and ACS v8.7. EVA5000, EVA3000 solutions: Supports VCS v2.0, v3.0, v3.01. XP 48/512: firmware 01.18.71.00, 01.19.03.00 XP 256: firmware 52.49.21.00, 52.49.23.00 XP 128/1024: firmware 21.05.06.00, 21.05.23.00
Operating System Support	HP-UX v11.11 (32 and 64 bit) and 11.23
Application Support	HP ServiceGuard v11.13, v11.14 or later.
Host Adapters	HP A5158A, HP A6795A, HP A6826A, and HP A9782A for all supported HP server models and A6685A for K class servers only. Support for 1-28 host adapters per HP-UX host, dependant on HP server capacity.
Host Platform	HP K, V class, rp2400 (A-class), rp5400 (L-class), rp7400 (N-class), rp8400, rx5670, rx2600, zx6000, rx4640, rx7620, rx8620, and Superdome server models.

IBM

Basic Configuration	Stand-alone storage configuration with dual controllers. Supports 2 paths/LUN.
Storage Controller Software	RA8000/ESA12000, MA8000/EMA12000/EA16000, MA6000 solutions: Supports ACS v8.6 and ACS v8.7. Enterprise Virtual Array, EVA3000 solutions: Supports VCS v2.0, v3.0, v3.01.
Operating System Support	IBM-AIX v4.3.3, v5.1, v5.2
Application Support	HACMP v4.4 and 4.5 on AIX 4.3.3 and 5.1, 5.2
Host Adapters	DS-SWIA1-PD, 197819-B21 PCI to FC HBA for AIX (FC-AL & FC-SW) – Bundle, 253739-001 Cambex PC2000LC Host Bus Adapter for IBM AIX
Host Platform	RS/6000 32- and 64-bit.

Linux

Basic Configuration	RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000, and Enterprise Virtual Array, EVA3000 solutions: Host with one or more HBAs and storage system with dual controllers Supports 8 paths/LUN.
Storage Controller Software	RA8000/ESA12000, MA8000/EMA12000/EMA16000, MA6000 solutions: Supports ACS v8.7. Enterprise Virtual Array, EVA3000 solutions: Supports VCS v2.0, v3.0, v3.01.
Operating System Support	United Linux 1.0/SLES SP2A Errata Kernel 2.4.19-304 RedHat Enterprise Linux Advanced Server 2.1 Kernel 2.4.9-E27
Application Support	SteelEye LifeKeeper for Linux v4.2 and later (2 nodes per cluster) HP ServiceGuard version 11.14
Host Adapters	FCA2214, FCA2214DC. See the storage array QuickSpecs for details on supported HBAs.
Host Platform	ProLiant servers.

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