

H E W L E T T - P A C K A R D C O M P A N Y
hp StorageWorks modular SAN array 1000 Support Software CD Version 6.51-02

Introduction:

The hp StorageWorks modular SAN array 1000 Support Software CD contains server storage drivers and installers to install the required Fibre Channel Host Bus Adapter (HBA) drivers and other configuration utilities for the following operating systems:

- Microsoft Windows Server 2003 - 64 bit
- Microsoft Windows Server 2003 - 32 bit
- Microsoft Windows 2000
- Microsoft Windows NT 4.0
- Novell NetWare 6.0
- Novell NetWare 5.1
- Red Hat Enterprise Linux 2.1 (AS, ES)
- Red Hat Enterprise Linux 3 (AS, ES, WS)
- SuSE Linux Enterprise Server 8 (SLES 8)

Use of the software is subject to the enclosed hp software license terms

NOTE:

* Host server must have a minimum of 256MB of RAM when booting from this CD.

IMPORTANT NOTES and SERVICE CONSIDERATIONS

* If you are upgrading an existing MSA1000 installation to the newest driver and firmware, DO NOT USE THE INSTRUCTION IN THIS KIT! Visit the MSA1000 web site at <http://www.hp.com/go/msa1000> and refer to the document 'Upgrading the MSA1000 for Enhanced Features' for up to date upgrade steps and potential issues that may be encountered.

* MSA1000 path redundancy requires two isolated fibre channel fabrics and associated hardware/software for correct operation. This includes Fibre Channel array controllers, fibre bay modules, fibre channel hubs/switches, fibre channel host bus adapters, and StorageWorks Secure Path software. The MSA1000 does not support path redundancy using a single fibre channel host adapter or single fibre channel array controller. A single fibre channel switch is supported if zoned properly, but not recommended because it can be a single point of failure.

* When installing or updating Fibre Channel HBA drivers in a Microsoft Windows environment, it is important that you always use the driver installation utility from the MSA1000 support software CD or from the MSA1000 web site at <http://www.hp.com/go/msa1000>. HP does not recommend using the device manager 'upgrade driver' option. Your MSA1000 will not perform as intended if the driver is upgraded manually. Further, drivers downloaded from Emulex.com are not supported with the MSA1000. Although they may work, they are not tested and qualified with the MSA1000 and its associated configuration and management utilities. A copy of the MSA1000 software support CD can be downloaded from <http://www.hp.com/go/msa1000>.

* If your installing the StorageWorks Secure Path option and are running in a Windows 2000 or Windows Server 2003 environment it is important to follow EVERY server reboot prompt that is presented. Failure to acknowledge a reboot prompt can result in your path redundancy software not functioning properly. StorageWorks Secure Path software requires 2 reboots during installation: 1) after file copy from source media and 2) Following reboot #1 Windows PnP will attach the redundancy driver to all configured LUNS then prompt for another reboot. If the operating system does not prompt for a second reboot within 5 minutes of logging in, manually reboot the server.

* If your using redundant MSA array controllers and your MSA1000 is used with an operating system other than Microsoft Windows, you must configure the MSA1000 firmware for the correct host environment. Information about setting the MSA1000 host mode can be found in the Array Configuration Utility or the Command Line Interface sections of the MSA1000 user guide.

* To obtain best performance, reliability, and cable management when attaching the MSA1000 to an additional StorageWorks SCSI disk enclosure, HP recommends using the 3ft external SCSI cables that ship with the MSA1000 kit.

* For MSA drive configuration, the array configuration utility (ACU) or the Command Line Interface

CLI should be used independently. HP recommends using the UI based ACU OR the CLI--not both on the same MSA1000

* When implementing a boot from SAN configuration on your MSA1000 in a Microsoft Windows environment, hp and Microsoft recommend creating a pagefile that is located on disks internal to the server. For more information, visit:

<http://support.microsoft.com/default.aspx?scid=kb;en-us;305547>

* If your MSA1000 is used in a Microsoft Windows operating system environment with Securepath Software installed, deleting logical drives from the MSA1000 using the ACU could cause a path fail-over to occur and/or cause ACU to display an error message saying that a hardware failure has occurred. To avoid the path fail-over issue, these steps should be followed when deleting logical drives from the MSA1000:

1. Using Disk Manager, delete the partition that corresponds to the logical drive you want to delete

2. Using Device Manager-->Disk Drives, Right Click and Un-install the disk drive that corresponds to the logical drive you want to delete and the partition that you just deleted in step 1

3. Use ACU to delete the logical drive

* Users of SanWorks Virtual Replicator should visit the technical notes and whitepapers section on the MSA1000 web site at <http://www.hp.com/go/msa1000>

prior to upgrading any of the MSA1000 software or hardware components.

Known errata in this release

* For a list of configuration rules when using the MSA1000 with Proliant B-Class Blade Servers and Intel 64-bit Itanium 2 servers please check here for the latest support information:

<http://h18006.www1.hp.com/products/storageworks/msa1000/documentation.html#rn>

* Using the FCA-2404 HBA with the MSA Embedded Fabric Switch 6 will not work and is not supported

* The MSA command line interface may report that the World Wide Node name has the same value as the World Wide Port Name when the MSA1000 is originally configured with the Array Configuration Utility. ACU does not pass the WWnn parameter back to the MSA during a configuration save process, which results in the CLI duplicating the WWNN field with the data from the WWPN field. Because the MSA1000 basis LUN access restrictions only on the WWPN, access of configured storage is not affected by this issue. A fix will be available in a future version of ACU

* The Array Diagnostics Utility (ADU) support is not yet available for MsA1000 configurations using the FCA2214DC or the FCA2404 Fibre Channel HBA's. An updated MSA1000 support software CD will be posted to <http://www.hp.com/go/msa1000> soon which will contain an updated ADU with support for these HBA's

* The Array Diagnostic Utility (ADU) Save Report function is obscured. In order to use this function, scroll the report view to the left from the top of the report page.

* Status events displayed on the Primary MSA1000 array controller may be duplicated on the Standby MSA1000 array controller when a path transition between controllers occurs. For instance, say you hot plug a new hard drive on November 1st, then a controller/path failover event occurs on November 30th. The LCD panel event from the drive hot-plug may display as a new event on the standby controller when the standby controller takes over. Event logs and Insight Manager will not duplicate the event. This issue will be addressed in a future version of MSA1000 firmware

* For the latest supported Linux deliverables, visit <http://www.hp.com/go/msa1000> regularly--new support is added between releases of the MSA Support Software CD.

Windows Server 2003 Notes

* For more information on migrating your operating system environment from Windows 2000 to Windows Server 2003, visit

<http://www.hp.com/go/windowsserver2003>

- * For more information on migrating your Windows 2000 clusters using the MSA1000 to Windows 2003 visit

<http://h18000.www1.hp.com/solutions/enterprise/highavailability/microsoft/win2003.html>

- * Unlike Windows 2000 cluster behavior, the Windows Server 2003 disk management utility displays both owned and un-owned cluster volumes. Un-owned cluster volumes should display a disk status of ?Unreadable? in the disk manager applet. For clustered volumes that reside on the MSA1000 however, the un-owned cluster volumes will have a disk status of ?Not-Initialized?. When a disk has a status of ?Not-Initialized?, the Disk Initialization wizard will appear each time you open the Disk Management applet. Do not use the Disk Initialization Wizard to initialize newly added LUNS. Cancel out of the wizard and manually initialize the LUNS by right clicking on the new Disk number. This issue will be addressed with Windows Server 2003 SP1
- * The FCA-A6826A Dual Channel HBA is the only controller supported with IA64 bit platforms.
- * When adding additional LUNS to any of the existing Linux installations that have Secure Path software installed, a server reboot is necessary to correctly address the new storage and have Secure Path protection applied to them.

CD Contents:

\WINNT4: Contains drivers and installer for Windows NT 4.0.
\NETWARE: Contains drivers and installer for Novell NetWare 5.1 and 6.0.
\LINUX: Contains Linux drivers, installation script and documentation.
\LINUX\ONACU: Contains ACU Linux RPM file.
\RDP: Contains Smart Components and other data for RDP Deployment Tools

Drivers / Utility Versions :

- * Microsoft Windows 2000/Windows Server 2003 Emulex SCSI Port Drivers Version 5-5.10a9
- * Microsoft Windows 2000/Windows Server 2003 QLogic SCSI Port Drivers Version 9.0.0.13
- * Windows 64-Bit Server 2003 Drivers:

Emulex Version 6-5.00a11
FCAC version 5.22.0.64

* Novel NetWare 5.1 and 6.0 Drivers:
FCA-2210 Fibre Channel Adapter driver: 6.51B
CPQSHD.CDM driver: 2.0
CPQSEB.NLM Event Broker: 1.10.01

* HP StorageWorks Fibre Channel Adapter Driver for Linux
(BL20P, FCA2214, and A6826A) hp_qla2x00src-7.00.03-2004-05-20.tar.gz

* Windows 32 bit Array Configuration Utility : v6.45-1.0
* Windows 64 bit Array Configuration Utility : v6.41-8.0
* Linux Array Configuration Utility : v6.45-1.0

* Linux Bootable Array Configuration Utility Version: v6.45-1.0
* Linux Bootable Array Diagnostic Utility Version: v2.30-6.0

MSA1000 UTILITIES AND SMART COMPONENTS IN THIS CD:

In the \RDP\Windows directory:

CP004118.exe - HP StorageWorks Fibre Channel Adapter kit for the
Emulex SCSI Port Driver (MS Windows 2000/2003)
CP004434.exe - HP StorageWorks FC-HBA Configuration Utilities by
Emulex (MS Windows 2000/2003)
CP004229.exe - HP StorageWorks Fibre Channel Adapter Kit for the
QLAxxxx SCSI Port Driver (MS Windows 2000/2003)
CP004177.exe - HP StorageWorks Array Configuration Utility for 32 bit
Windows (ACU)
CP004067.exe - HP StorageWorks Array Configuration Utility for 32 bit
Windows (ACU)
CP003872.exe - HP StorageWorks Array Configuration Utility for 64 bit
Windows (ACU)

In the \RDP\Linux directory:

hp_qla2x00src-7.00.03-2004-05-20.tar.gz HP StorageWorks Fibre Channel
Adapter Driver for Linux (BL20P, FCA2214, and A6826A)
* RedHat Advanced Server 2.1 (x86 and ia64)
* RedHat Enterprise Linux 3 (x86 and ia64)
* SuSE Linux SLES8 (x86 and ia64)
cpqacuxe-6.45-1.linux.i386.rpm:

In the \RDP\Linux\ACUXE and \Linux\onacu directory:

cpqacuxe-6.45-1.linux.i386.rpm:

HP StorageWorks Array Configuration Utility for Linux (ACUxe)

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