Compaq SANworks

Release Notes

Secure Path Version 3.0B for Novell NetWare
AA-RN73C-TE

This document summarizes the features and characteristics of both the full and the limited editions of SANworks Secure Path Version 3.0B for Novell NetWare. The full edition of SanWORKS Secure Path Version 3.0B for Novell Netware contains a High-Availability software solution for use with StorageWorks RA4000/RA4100, MA8000, and ESA12000 RAID Storage Systems. The limited edition for SANworks Secure Path Version 3.0B for Novell NetWare is a High-Availability software solution for use with StorageWorks RA4000/RA4100 only.

Release Notes Contents

These release notes provide information for SANworks Secure Path Version 3.0B for NetWare not available elsewhere in the product documentation, and takes precedent over all other sources. Individuals responsible for configuring, installing, and using this software should use this document.

Please visit our website at http://www.compaq.com/storage/index.html to obtain the latest information and upgrades.

NOTE:

Read this entire document before installing or upgrading the software.

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Secure Path Install Contents

■ Secure Path Version 3.0B

❏ Location pointer to the download directory

http://www.compaq.com/products/sanworks/secure-path/downloads.html

❏ NetWare directory

❏ Windows directory

❏ Docs directory

■ Version 3.0B Release Notes (this document)

Current Component Versions

Table 1		
Component Edition	**Description**	**Version**
Full	Secure Path Manager	3.1.027
	Secure Path Agent	Version X1.3 Build 014
	CPQFC.HAM Driver	2.52
Limited Edition	Secure Path Manager	3.1.027
	Secure Path Agent	Version X1.3 Build 014
	CPQFC.HAM Driver	2.52

Notes and Warnings

To run a Windows server in a heterogeneous environment, you must update the Windows agent by using the file: *SecurePathAgent.exe,* which you can download from the website: http://www.compaq.com/products/sanworks/secure-path/downloads.html

Novell NetWare Operating Systems

■ When installing the Automatic Server Software, to specify a path name other than the default, perform the following procedure:

    a. Under Product Options, enter "Install product not listed".

    b. Press the **Enter** key.

    c. On the Install Product Not Listed screen, press the **F3** key.

    d. Type the installation path in the following format:

       NWSPV30:/NetWare

    e. Press the **Enter** key.

A screen message displays "NWCONFIG is loading another NLM..."

> **NOTE:** Find a complete description of the Automatic Server Software Install procedure in the *Secure Path Installation and Reference Guide.*

■ Path verification is defaulted to *enabled* for all Novell NetWare systems.

■ Load distribution is not provided for Novell NetWare systems.

■ Secure Path supports Netware Verison 5.0, 5.1 and 6.0. In cluster configurations, all servers must have the same revision and the latest Secure Path version.

■ Do not unload the CPQFC.ham driver while running the Secure Path (SP) Agent.

■ The Secure Path Manager (SPM) automatically uses a platform-appropriate device identifier, based on the platform type for the agent returning this Logical Unit Number's (LUN) data. The appropriate default identifier for NetWare is the first volume label.

■ If the array becomes totally inaccessible, all servers in the cluster abend. Therefore, mirror your SBD partition across storage devices during the cluster installation if you have two identical external storage devices. By mirroring SBD partitions, you can lose one array and still maintain the cluster connectivity. Refer to NetWare documentation for more information.

■ Novell NetWare does not currently support clusters in a mixed environment of NetWare 5.0, 5.1 or 6.0 servers.

■ For more information on heterogeneous SANs, refer to the *Enterprise/Modular Storage RAID Array for Novell NetWare Quick Setup Guide* located at:

 http://www.compaq.com/products/storageworks/ema16000/documentation.html

■ NetWare Cluster Server/Software (NWCS) issues a "heartbeat" every 10 seconds or so to make sure all the servers are still alive. If this "heartbeat" is not received in the appropriate amount of time, the cluster abends the server in question in an attempt to reestablish communications. Running the install from a floppy, or simply loading any nlm from a floppy, can potentially delay the server from sending it's "heartbeat". This is basically a timing issue. As long as the floppy access starts and completes within the same "heartbeat" window, everything works fine. As soon as the floppy access keeps the "heartbeat" from being issued however, the abend occurs.

Windows NT/Windows 2000 Operating Systems

■ Passwords are case-sensitive. You must use the same letter case each time you enter the password.

■ The SPM displays only the first (or primary) appearance of all repeated logical device names in a cluster. Therefore, do not use the same logical device name on different clusters.

■ In a NetWare Cluster configuration, use selective storage presentation to present LUNs through only one port per controller (two ports per LUN maximum). For HSG80 controllers, all four controller ports may be used as long as any single LUN is accessible through two ports. For example, LUN A is presented through port 1 of both controllers, while LUN B is presented through port 2 of both controllers.

To ensure that no-single-point-of-failure is maintained throughout your Secure Path Storage System, only redundant RAID types should be configured. Those include RAID 0 +1, 1, and 3/5.

To obtain the latest version, visit our website at:

http://www.compaq.com/products/sanworks/secure-path/downloads.html

■   The SP Agent Configuration utility occasionally appends a period to the end of the client's name as shown in the client box. This prevents client connections to the agent. If this occurs, perform the following procedure:

   a.   Select the client name with the period from the Client box.

   b.   Choose Delete Client.

   c.   Choose Add Client.

   d.   Re-enter the name without the period in the Selected Client box.

■   A single profile of SPM is capable of managing heterogeneous / homogeneous configurations of Novell NetWare and Windows systems. Clusters MUST be either Windows NT, Windows 2000 or NetWare.

■   Install the modified SP Agent on Windows server systems in heterogeneous environments.

■   You can choose an identifier to be used for all LUNs associated with a specific platform. Your selection is persistent – that is, the platform specific default identifier survives closing and relaunching of the SPM. Perform the following steps to choose an identifier:

   a.   In the View menu option, select Device Identification. You access a pop-up list box displaying the platform types: *WNT* and *NetWare*.

   b.   Click on one of these platform types to view a list of its device identifiers.

   c.   Click on an identifier to be used for all LUNs associated with that platform type. Invalid selections in pop-up list boxes are greyed-out.

■   If there are multiple volume labels, drive letters or other identifiers associated with a LUN, the SPM precedes the device icon with the "+" box (this is true only if there are multiples of the specific identifier type currently displayed for the LUN); clicking on the box causes a left-pane expansion under the LUN, showing a list of the multiple identifiers, with one entry per line (even for drive letters).

Fixes and Enhancements for Novell NetWare Version 3.0B

Netware Secure Path Agent:

■ Added support for multiple network interfaces

■ Fix for an abend in the CPQSPAGT when unloading the CPQFC.HAM driver while CPQSPAGT.NLM is loaded.

■ Changes to allow users to utilize DNS in order to define Clients and their IP addresses as needed.

■ The Agent user interface now displays but will not allow the user to change any of the global mode settings (LoadDistribution, PathVerification, AutoFailback).

■ PINSTALL upgrade that will install CPQSHD in addition to CPQFC driver files.

Netware Compatible Secure Path Manager (GUI)

■ Corrects a memory jump after F5 (refresh)

■ Fixes Disk numbers being missed.

■ Corrects an application error when more than 5 hosts were entered.

■ Fixes the right pane info missing after hot swap or after F5 in heavily loaded systems.

■ This build supports API version 5 Agents, 3.1 NT-Win2K.

■ Always displays the last used profile in the combo box list of profiles.

■ Fix for chassis name and number of LUNs on a storage system with no LUNs attached.

■ Addition of an *X* placed next to the FAILED paths for a clear identification

■ Replacing hyphen "-" with | in the host-profile name. It also reads old profiles and replaces their hyphen with vertical line.

■ For heterogeneous environments, NT & Netware, if Path verification and Load Distribution were not in sync between hosts, SPM used to disable these settings for all. Now only the NT hosts are checked for these global settings and Netware agents are not sent any disabling command. However, the Auto Failback is disabled for all if not in sync, regardless of being an NT or Netware host.

■ Polling interval would not stay fixed after SPM exit and it would go back to default setting.

■ Mismatch of Auto Failback, Path verification, and Load distribution settings from what is shown as set, in the bottom right hand corner boxes of the main view window, and what the menu and storage system information would indicate. This is seen in profiles involving NetWare hosts.

CPQFC.HAM Driver

■ Added Fabric support for the RA4000.

■ Corrected hot swap of driver problem.

■ Revised to 2.52 for Netware V6.0, Novell Certification

Novell NetWare Operating Systems

■ Path verification for Novell NetWare systems are greyed-out and defaulted to enabled.

■ Load distribution for Novell NetWare is greyed-out and defaulted to disabled.

■ Modifications to device volume labels made with the NetWare Disk Administrator require that the SP Agent be stopped manually and restarted before the labels become visible in SPM.

Windows NT / Windows 2000 Operating Systems

■ All controller-based partitions built on a single storage set must be assigned to the same controller and the same host.

■ SPM cannot be launched from the StorageWorks Command Console (SWCC). If you double-click the SPM window icon in the SP folder of SWCC, the following message appears:

```
AppletManager: Failed to create object. Be sure the object
is entered in the system registry.
```

■ Replacement of a controller requires that all cluster servers sharing the affected storage system be rebooted to re-synchronize the SP databases.

■ SPM passwords/Agent passwords for all hosts in a profile must be the same.

Configuration Information

Information about SP configuration is available in the *Secure Path Installation and Reference Guide* which can be found:

■ In the *Docs* directory

■ In hard copy in the Secure Path Version 3.0 Kit

■ On our website:

http://www.compaq.com/products/sanworks/secure-path/sptechdoc.html

Secure Path Supported Configurations

The following list defines operational configuration limits for Secure Path Version 3.0B for Novell NetWare. The effective limit may be less, because of NetWare storage constraints, storage system type, or interconnect requirements. Configuration limits include:

■ Maximum 16 storage systems shared by a set of hosts (per profile)

■ Maximum 16 hosts per set of shared storage systems (per profile)

■ Maximum of 16 profiles

■ Maximum 64 LUNs per target

■ Maximum 8 paths per LUN

Secure Path Installation

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Secure Path Operational Features

Secure Path Manager Refresh

SPM automatically refreshes the display every 90 seconds. If you wish to update the displayed information sooner press the F5 key. To change the amount of time between when the display refreshes, perform the following steps:

a. From the Properties menu, select Interval Dialog Box.

b. Edit the polling interval. The valid range for the polling interval is 5 seconds to 30 minutes.

Secure Path Manager Controller Designations

In the SPM display, the controller designations are based on manufacturing–designated serial numbers assigned to physical controllers in your RAID Array cabinet. The designation does not necessarily correlate to the physical position (upper and lower) of the controllers within the cabinet. Always reference the controller serial numbers if you need to associate information in the SPM display with the controllers.

Controller Hot-Swap

To hot-swap one of the RAID Array controllers in a storage system, schedule a reboot of each cluster server sharing that system then re-synchronize the SP databases. If only one of the servers is rebooted, SPM management capability is compromised.