

Compaq SANworks

Release Notes

SANworks Secure Path for Windows 2000 on RAID Array 4000/4100 Version 3.1

This document summarizes features and characteristics of SANworks Secure Path for Microsoft Windows 2000 on RAID Array 4000/4100 Version 3.1, a High-Availability software solution for Intel-based Platforms for use with StorageWorks RA4000 and RA4100 RAID Storage Systems.

These *Release Notes* provide information for SANworks Secure Path Version 3.1 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 web site <http://www.compaq.com/storage> to obtain the latest information and upgrades.

NOTE: Read this entire document before installing or upgrading the software.

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1. NOTES AND WARNINGS

- To ensure driver compatibility with Secure Path, server setup must be completed with the *SmartStart and Support Software CD release 4.90*, or later, using the “assisted” installation process with external storage attached.
- If you are using Microsoft Cluster Services (MSCS) Software, ensure the proper network adapter binding order. From Windows 2000 Advanced Server:
 1. Click **Start**, point to **Settings**, and click **Control Panel**.
 2. Double-click **Network and Dial-up Connections**.
 3. On **Advanced** menu, click **Advanced Settings**.
 4. In the **Connections** box, make sure your bindings are ordered as follows:
 - first: external public network
 - second: internal private network
 - third (if applicable): remote access connectionsRe-order if necessary.
- Secure Path Manager (SPM) is unable to start with hosts that use hyphenated Host Names (for example. *my-host*). Any hyphen indicates a cluster profile member to SPM. The workaround is to add the name of the host without the hyphen to the Host file. Add this name to the *client.ini* file with the Agent Configuration program, and use this name to log in with SPM. The Host file needs to be modified with the unhyphenated name on all client systems because DNS will not be able to resolve the name correctly.
- Due to the extended error checking features inherent to Secure Path software, there may be some delay with SPM failed path reporting.
- In a Windows 2000 installation, the addition of new LUN(s) may cause the hardware wizard to display an error in initializing the LUN(s), and “yellow warning” signs may show up in the device manager. This is resolved by reboot(s) of the system.
- The Secure Path Agent Configuration utility will occasionally append a period to the end of the client’s name as shown in the Client box. This will prevent client connections to the Agent. If this occurs, first select the client name with the period from the Client box and choose **Delete Client**. Then re-enter the name without the period in the selected Client box and choose **Add Client**.

- Configurations of greater than 64 LUNs may inhibit the Secure Path Agent from automatically starting. If this occurs go into the services control panel, and set the recovery option to restart after the first failure. From Windows 2000 Advanced Server:
 1. Select **Start**, point to **Programs, Administrative Tools**, and select **Services**.
 2. Right click **Secure Path Agent**, select **Properties**, then select **Recovery**
 3. Select recovery option to **Restart after the first failure**.
 4. Click **Apply**, and then **OK**.

After the Server reboot, Secure Path Agent automatically starts.

2. SECURE PATH GUIDELINES

- Booting from Secure Path devices is not supported.
- The Windows NT Fault-Tolerant driver (for host-based RAID sets) may not be used in conjunction with Secure Path.
- There is no support for more than eight LUNs per target ID.
- There is no support for Windows 2000 dynamic disks.
- Standalone and clustered hosts may not be assigned to the same SPM profile.
- SPM passwords for all hosts in a profile must be the same.
- Changing the Agent's list of authorized clients or passwords requires that the Agent be manually stopped and restarted.
- Modifications to device volume labels made with Windows Disk Manager require that the Agent be manually stopped and restarted before they will become visible in SPM.

3. SECURE PATH INSTALLATION

The following procedure is the preferred method for Secure Path installation. It varies from the instructions published in the *Secure Path Installation and Reference Guide* found on the release media. The instructions here take precedence.

If installing or upgrading a Compaq ProLiant Cluster HA/F200 then please refer to the instructions located in the cluster kit for complete installation details.

1. Install and configure all Windows servers and all HBAs, referencing the user documentation included with your hardware. Attach the HBAs to the applicable Fibre hubs or switches at this time.
2. Install the Windows 2000 Advanced Server operating system, using the SmartStart version 4.90 assisted installation utility.
3. If your RA4000/4100 storage systems were not configured during the initial SmartStart assisted installation process, use the Array Configuration Utility (ACU), which was installed during the Windows 2000 Advanced Server installation process, to create storagesets and provide unit attributes for the required LUNs.
4. Using Windows 2000 Disk Management, configure your basic disk partitions as required.
5. Install the Secure Path for Windows 2000 on RAID Array 4000/4100 Version 3.1 software. You will be prompted to restart the server after the installation process is complete.

Following system reboot, verify the Windows 2000 Event Log shows a successful RaiDisk driver start event.

Verify the Windows 2000 application Event Log shows a successful Secure Path Agent start event.

4. SECURE PATH OPERATIONAL FEATURES

4.1 Secure Path Manager Refresh

SPM automatically refreshes the display every 90 seconds. If you wish to update the displayed information sooner use the F5 key.

4.2 Secure Path Manager Controller Designations

In the SPM display, controller designations are based on manufacturing designated serial numbers assigned to physical controllers in your RAID Array cabinet. This 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.

4.3 Controller Hot-Replace

Auto-Failback and/or Path Verification can be either enabled (or disabled).

1. Remove either ***active or standby*** Compaq RA4000 Controller.
2. Disconnect Fibre cable from removed controller.
3. Insert replacement controller
4. Wait for “heartbeat” (led #8 flashing) before continuing to step #5.
(Allow several minutes for controller to come fully online.)
5. Connect Fibre cable to replaced Compaq RA4000 Controller.
6. Rescan by either pressing F5 function key or by selecting View – Refresh under Secure Path Manager.
7. Note change in (replaced) controller serial number

NOTE: In order to swap a previously removed Compaq RA4000 Controller into its original slot/location, the system must be re-booted. In a clustered configuration, this can be accomplished without taking the cluster off-line by using proper failover/failback techniques and re-booting one server at a time.

5. CONFIGURATION INFORMATION

5.1 Operating System Compatibility

Secure Path for Windows 2000 on RAID Array 4000/4100 Version 3.1 is supported on Intel-based platforms running the following operating system:

- Microsoft Windows 2000 Advanced Server for the Secure Path Server installation (or combined Server-Client installations)

NOTE: Microsoft Windows 2000 Advanced Server includes Microsoft Cluster Services (MSCS) for cluster configurations as a component.

- Microsoft Windows 2000 (all versions) for the Secure Path Client installation)

5.2 Supported Storage System Types

Compaq StorageWorks RAID Array 4000 and RAID Array 4100 storage systems with Compaq RA4000 Controller firmware revision 2.58 or later.

5.3 Secure Path Supported Configurations

The following list defines operational configuration limits for Secure Path Version 3.1. The effective limit may be less due to Windows storage constraints, storage system type, or interconnect requirements.

- Maximum 9 storage systems shared by a set of hosts (per profile)
- Maximum 2 hosts per set of shared storage systems (per profile)
- Maximum 8 LUNs per target

5.4 Fibre Channel Configurations

Please check at the <http://www.compaq.com/support/storage> Compaq web site for the latest HBA device drivers.

6. SECURE PATH INSTALL KIT CONTENTS

- Secure Path for Windows 2000 on RAID Array 4000/4100 v3.1 CD
- Secure Path for Windows 2000 on RAID Array 4000/4100 v3.1 Installation and Reference Guide
- Secure Path for Windows 2000 on RAID Array 4000/4100 v3.1 Release Notes (this document)
- License
- Warranty Card
- Warranty Addendum