

# Compaq SANworks™

## Release Notes

### Data Replication Manager HSG80 Array Controller ACS Version 8.5P for Windows 2000 Server and Windows 2000 Advanced Server

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*This document summarizes features and characteristics of Compaq SANworks Data Replication Manager that are supported in Version 8.5P of the HSG80 Solution Software for Windows 2000 Server and Windows 2000 Advanced Server.*

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These Release Notes provide information for Data Replication Manager (operating with HSG80 Array Controller Software (ACS) Version 8.5P) not covered elsewhere in the documentation. Individuals responsible for configuring, installing, and using the Data Replication Manager solution should use this document.

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Data Replication Manager Release Notes for Windows 2000 Server and  
Windows 2000 Advanced Server  
First Edition (January 2001)  
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**Please read this entire document before installing or upgrading the software.**

These release notes include the following sections:

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## Cascaded Switches

Cascaded switch configurations are not supported at this time.

## Secure Path for Windows Software Update

Use the Secure Path Software Update 3, available on the web, to upgrade from version 3.0 to 3.1, and for 3.1 patches:

<http://www.compaq.com/storage>

In the SANworks Products drop-down menu box, choose Secure Path. In the Secure Path page, choose Secure Path v3.1 Software Update 3. Download the self-extracting .exe file and follow the installation instructions.

## Host Bus Adapter Driver Versions

The LP7000 and LP8000 HBA driver version qualified for this release of DRM is 4.41a7. This is available on the web:

<http://www.compaq.com/storage>

In the All Storage Products drop-down menu box, choose Host Bus Adapters. In the Host Bus Adapter Product Family page, choose 64-Bit/33-Mhz PCI-to\_Fibre Channel Host Bus Adapter. At the 64-Bit/33-Mhz PCI-to\_Fibre Channel Host Bus Adapter page, choose Emulex Driver Update Utility. Download the zipped file, unzip the file, then run Setup.

## Auto Failback

The Secure Path for NT *Auto Failback* feature currently is not supported in a Data Replication Manager configuration. Please disable this feature.

## SWCC Versions

SWCC versions qualified for Data Replication Manager are as follows:

- StorageWorks Command Console Version 2.2.0.213
- SWCC Agent Version 2.3 Build 77
- HSG80 ACS 8.5 Storage Window Version 2.3.0.13 (Client)
- CLI Window Version 2.0.0.33

## Avoiding Problem Situations

Under certain conditions, you may experience unusual system behavior. This section presents information to help you avoid such situations and to recover from them if they occur.

### SWCC

SWCC can be used for initial storage configuration, however, it is not designed to provide high availability management capabilities. In the event of a controller failure or path failure, be prepared to revert to the manual CLI interface for storage management.

### Check Status

If a target controller or switch becomes inoperative and the Windows 2000 host is rebooted, Secure Path Manager will not provide a report informing you that you have lost multi-path capability.

If you attempt to move a LUN to the inoperative path, a warning message appears indicating that you should check the Application Event Log for details. This may be an indication that you have lost multi-path capability.

Check the status of links, target switches, and target controllers.

### Full Copy Suspend

- When adding targets to multiple remote copy sets during the site failback process, the full copy operation may stall at 0% copied.
- To remedy this situation remove the target and immediately re-add it. The full copy operation should then proceed.

### **LUNs Numbered Incorrectly**

When LUNs are moved between hosts (such as during a site failover or a site failback), it is possible that the LUNs may become “out of letter order.”

To prevent the “out of letter order” status, before booting the Windows 2000 host, follow step 1 or 2 below:

1. Make sure all LUNs are failed over to one HSG80 path. From the HSG80 CLI prompt, issue the following command:  
Restart Other\_Controller
2. Use Disk Manager to assign the correct drive letter so that the disks will now match the units on the controller.
3. Once Windows 2000 sees the disks ordered properly, use Secure Path Manager to move the units to the correct path.

### **Changing Host Connection Unit Offsets**

If the UNIT\_OFFSET of a connection is changed, the host must be rebooted to recognize the change. The host will continue to operate using the offset that was previously in effect until it is rebooted. For example, if a host connection has a unit offset of zero, it will only be able to access units D0 through D7. If the offset is changed to 8, the host will still be able to access units D0 through D7 until it is rebooted. After reboot, it will only be able to access units D8 through D15.

### **CCL Device**

When the HSG80 controllers are in SCSI-3 mode, Windows 2000 Plug and Play will detect the CCL as a device and prompt for a driver. Follow this procedure to disable this function:

1. When the *Found New Hardware* wizard appears, click Next. The *Install Hardware Device Drivers* window will appear.
2. Select Search for a suitable driver for my device (recommended) and click Next.
3. On the *Locate Driver Files* window, clear all of the check boxes and click Next. The *Driver Files Search Results* window will appear.
4. Select Disable and click Finish to close the wizard.

This process must be repeated for each command console LUN (CCL). If the CCLs are not disabled, the *Found New Hardware* wizard will appear every time the server is booted.

### **Invalid VTDPY Percentages**

During the transition time between site failover and site failback, the log, merge, and copy percentages on the original initiator displayed by VTDPY are not valid. Disregard these percentages.

### **Performance Considerations-Full Copy Operation**

During full copy operations, host I/O performance will be moderately reduced and the length of the copy operation will increase.

### **Performance Considerations-Write History Log Merge**

During Write History Log merge, host I/O performance will be drastically reduced due to the high priority given to the merge operation. The length of time required for the merge operation will not be affected by host I/O.

### **Association Sets**

Association Sets can now contain up to 12 remote copy sets. However, because all copy sets within an association set are moved between controllers as a group, all remote copy sets within an association set must be accessed by the same server.

For instance, 6 remote copy sets (one association set) could be accessed by one server and 6 remote copy sets (another association set) by the other.

In a Windows 2000 cluster configuration, all remote copy sets within an association set must be placed in one cluster resource group.

### **Switch Zoning**

More than 64 connections on the fabric requires zoning to limit the number of connections visible to the controller. The controller may crash if the 64 connection number is exceeded. For more information about switch zoning, refer to the *Data Replication Manager HSG80 ACS Version 8.5P Operations Guide for Windows 2000 Server and Windows 2000 Advanced Server*.

## **I/O Pause**

When servers log into (boot) or log off (shutdown) the fabric, you will notice a nominal 1 to 3 second pause in I/O functions on all servers connected to the fabric. This brief cessation of read/write operations is normal.

## **Non-Remote Copy Set LUNs**

Up to 12 non-remote copy set LUNs may be connected to each initiator and target controller pair. These LUNs should, however, be low usage drives. High usage of these non-remote copy set LUNs will have a serious impact on the performance of the remote copy set LUNs, saturating the controller and possibly starving a full copy operation during failback.

When a saturated controller condition begins to occur (approximately at 25% idle time), you may see Aborted Command errors through the Command Line Interface (CLI).

To prevent controller saturation:

1. Avoid placing heavy use loads on the non-remote copy set LUNs.
2. Use the VTDPY screen to monitor controller idle time percentage.
3. Compaq recommends an idle time of greater than 25%.

## **Target Drop**

RAID 5 remote copy set targets may be dropped under the following combined conditions:

- No write history log disk configured.
- Host I/O is accessing the initiator remote copy set LUNs.
- When both target controllers are shut down, a full copy operation will be triggered.
- When the target controllers are restarted, they will begin a 3 minute memory diagnostic.

While the memory diagnostics are running, the full copy I/O to RAID 5 target LUNs will be stalled. Therefore, after approximately 2 minutes a timeout will occur and the target LUNs will be dropped from the remote copy set.

This problem occurs only on RAID 5 remote copy set LUNs.



Remedies:

- Wait 5 minutes to allow for the target controller memory diagnostics to complete, then add the targets back into the remote copy sets. The full copy operation will begin.
- Before target controllers are booted or powered on, set port\_2\_topology on both initiator controllers to *offline*. Wait 5 minutes after target controllers are restarted to allow for memory diagnostics to complete before setting port\_2\_topology on the initiator controllers back to *fabric*.

### VTDPY Host Display

The HSG80 controller may crash when using the Display Host functionality in VTDPY. If more than 21 connections are displayed (the equivalent of one page), the controller will crash with a last fail code of 01932588. Zoning can be used to limit the number of connections visible to the controller.

## Visit our Website for the Latest Information

Check our website for the latest drivers, technical tips and documentation for the Data Replication Manager solution. Visit the Compaq website at:

<http://www.compaq.com>

<http://www.compaq.com/storage>

<http://www.compaq.com/products/SANworks>

<http://www3.compaq.com/support>

Use the following keywords to search for the required information:

- Secure Path
- DRM
- SANworks
- SWCC
- Drivers
- Support