Compaq SANworks™

Release Notes

Data Replication Manager HSG80 ACS Version 8.5P for Sun Solaris Version 8

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 the Sun Solaris platform kit.

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 Sun Solaris Version 8
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Please read this entire document before modifying your system.

These release notes include the following sections:

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Software Version Information

- Operating System: Sun Solaris 8 is supported with the latest patches from Sun Microsystems, Inc., which can be found at http://sunsolve.sun.com.

  Optional installations of Veritas Cluster Server v1.2.1 and Veritas Volume Manager v3.1 are also supported.
- HBA Driver: The HBA multipath driver version qualified for this release of DRM is FCA SCSI/IP v2.5.9.
- Secure Path: The Secure Path version qualified for this release of DRM is v2.1c. The update from Secure Path v2.1a is found on the Platform Kit v8.5c.
- SWCC: The SWCC versions qualified for this release of DRM are:
  - SWCC Command Console Version 2.2.0.213
  - CLI Window Version 2.0.0.33
  - HSG80 ACS85 Storage Window Version 2.3.0.13 (client)
  - SWCC Agent Version 2.3.0.77
- Fibre Channel Switch Firmware: The Fibre Channel switch firmware version qualified for this release of DRM is:
  - Version 2.1.7 for ATM configurations
  - Version 2.1.9g for all other configurations
- ATM Gateway Firmware: The ATM gateway firmware version qualified for this release of DRM is Version OSG 2.2.5.

Cascaded Switches

Cascaded switches are supported for non-ATM configurations. The number of hops allowed between server and storage is defined in the *Compaq Heterogeneous Open SAN Design Reference Guide*. This document can be found at:

http://www.compaq.com/products/storageworks/techdoc/san/AA-RMPNA-TE.html.

Cascaded switches are not supported for ATM configurations.

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.

Full Copy Suspend

When adding targets to multiple remote copy set LUNs 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.

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 (cache data allocation parity error).

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 operations 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 should be owned 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.

Switch Zoning

When there are more than 64 connections on the fabric, zoning is required to limit the number of connections the controller sees. The controller may crash if the 64-connection limit is exceeded. For more information about switch zoning, refer to the *Data Replication Manager HSG80 ACS Version 8.5P Operations Guide for Sun Solaris.*

I/O Pause

When servers log into (boot) or log off (shut down) the fabric, you will notice a 1- to 3-second pause in I/O functions. 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. However, these LUNS should be low usage drives. High usage of these non-RCS LUNS will have a serious impact on the performance of the RCS LUNs, saturating the controller and possibly starving a full copy operation during failback. When a saturated controller condition begins (approximately at 25% idle time), you may see Aborted Command errors through the Command Line Interface (CLI).

To prevent controller saturation:

- Avoid placing heavy use loads on the non-RCS LUNS.
- Use the VTDPY screen to monitor controller idle time percentage.
- Compaq recommends an idle time 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 five minutes to allow 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 memory diagnostics to complete before setting port_2_topology on the initiator controllers back to *fabric*.

Compaq Website

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