Hitachi Adaptable Modular Storage 2000 Series Firmware 0893/B Release Notes

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About This Document

This document provides late-breaking information about the Hitachi Adaptable Modular Storage 2000 Series firmware version 0893/B. It includes information that was not available at the time the technical documentation for this product was published, as well as a list of known problems and solutions.

Intended Audience

This document is intended for customers and Hitachi Data Systems authorized service partners who license and use the Hitachi Adaptable Modular Storage 2000 Series.

Getting Help

If you purchased this product from an authorized HDS reseller, contact that reseller for support. For the name of your nearest HDS authorized reseller, refer to the HDS support Web site for locations and contact information. To contact the Hitachi Data Systems Support Center, please visit the HDS Web site for current telephone numbers and other contact information: http://support.hds.com.

About This Release

These release notes cover the Hitachi Adaptable Modular Storage 2000 Series firmware version 0893/B.

New Features and Important Enhancements

- Dynamic Provisioning Volume can be used as the volume for Copy-on-write Snapshot, TrueCopy Remote Replication and TrueCopy Extended Distance.
- VMware vStorage (Xcopy / WriteSame) with ShadowImage in-system replication, Modular Volume Migration, Copy-on-write Snapshot, TrueCopy remote replication and TrueCopy Extended Distance now supports the vStorage commands in Replication volumes.
- Remote Replication Write Control Mode is supported.
- Improved the method of displaying RAID Group and Dynamic Provisioning Pool status when reconstructing events.
- Improved the guarding logic of Depletion Alert at Dynamic Provisioning.
- Improved the host command response delay when “hard” errors occur on disk drives.

New System and Hardware Requirements

- None

Fixed Problems

- The processing of information between controllers has been improved to prevent controller access from being lost due to LSI failures during data transfers between controllers.
- Host access is no longer lost when errors occur in many sectors of a disk drive.
- A controller blockade no longer occurs following a power cycle, with the error “H90320 Watch-dog time-out” generated if cache access takes longer than expected on an array with Hitachi Dynamic Provisioning installed.
- Read/Write performance is no longer degraded when the subsystem receives many Sync Cache and Read/Write commands in a short period of time.

- A linkup failure no longer occurs on a Fibre Channel array following a non-disruptive firmware update.
- If a SATA HDU is removed from a slot and a SAS HDU is inserted into the same slot, the controller and newly inserted SAS HDU no longer fail.
- A controller blockade no longer occurs on a Fibre Channel array with LUN Manager installed if a target host's WWN is not registered as a Host Group and PDISC command is received to confirm login.
- A controller blockade that prevented WEB connection no longer occurs after an iSCSI array power supply is turned on.
- If arrays are connected through Fibre Channel switches for remote replication, removing a Fibre Channel cable from the remote array still causes a remote path failure. However, when the cable is connected to the array again, the remote path at both the remote and local arrays now recover automatically.
- The Phy Error Log counter no longer traces incorrectly when performing a simple trace or full dump.
- The ENC is no longer blocked if a SAS controller hardware error occurs.
- Read/Write performance is no longer degraded if CPU Load Reduction for Cross-CTL I/O Mode is set incorrectly on AMS 2500 arrays (hardware revision0200).
- TrueCopy operations now work properly when a TrueCopy pair is cascaded from a SnapShot (SS) pair.
- If an unsupported port number is specified to the remote path for a DF800 array, the DF800 controller for the remote path no longer fails with the HJ0914 Microprogram error[LSM] message. In addition, setting up both remote paths with unsupported port numbers no longer causes both controllers to fail and the subsystem to go down on the DF800.
- The subsystem no longer goes down when resynchronization and swap operations occur at the same time on TrueCopy Extended Distance pairs in a Consistency Group (CTG).
- In a configuration where a TrueCopy Extended Distance P-VOL is cascaded from a SnapShot P-VOL, a S-Vol to P-VOL swap operation can no longer be performed improperly, even when SS P-VOL is being restored.
- When executing RAID Group Expansion with TrueCopy Extended Distance, SnapShot, or Dynamic Provisioning enabled, the expansion operation no longer stops and host I/O for related LUs no longer becomes unresponsive.
- Setting the IP address for controller 0 or 1 to the same IP address as the SNMP Manager's IP address no longer causes the controller to fail.
- Controller failures no longer occur when a drive is read improperly.
- Pair names are now checked for duplication when creating a remote pair or renaming a pair.
- S-VOL LUNs are now checked during TrueCopy or TrueCopy Extended Distance pair creation to prevent remote path failures.

- A controller failure no longer occurs with a watchdog time-out when fetching Simple Trace or CTL Alarm Trace information during high workload periods.
- An ENC blockade no longer occurs when an ENC firmware retry is performed due to a port or cable failure.
- A controller no longer fails if a SnapShot pair status transitions to PSUE.
- If Dynamic Provisioning and SNMP Agent Support Function are used, and e-mail alerts are enabled , illegal email and SNMP notifications are no longer sent if the option to send alerts when the current value exceeds threshold is disabled.
- If “unfinished areas” remain following the recovery of a Hitachi Dynamic Provisioning pool, a drive failure no longer occurs if the data is read for host access.
- Using the Data Retention Utility, the attribute that prohibits write operation can now be set to the SI P-VOL in PSUS(SP) status.
- Setting up command devices on multiple Navigator 2 PCs at nearly the same time no longer sets up only the last command device while the other command devices are not set up
- The synchronization rate now displays correctly during TrueCopy resynchronization operations.
- The synchronization rate now displays correctly when referencing pair status on Navigator 2 or RAID Manager.
- After shrinking and expanding an LU and then using Navigator 2 to perform a quick format of the expanded LU area, rebooting the array, performing an online firmware update, or inserting a controller online no longer displays the message “Unformatted area remains in the LU(LU-XXXX). Please contact support for assistance.”
- In a VMware vSphere 4.1 or later configuration, receiving a Write command within 5 second after an ATS command has been received at the same address no longer causes a controller blockade.
- A controller blockage no longer occurs when AMS is used by USP_V/VM's Universal Volume Manager function.
- A controller blockade no longer occurs due to an LA error.
- If a failure occurs when reducing the number of LUs during a RAID group deletion operation, the firmware no longer decrements the number of LUs again when the system recovers from a failure.
- Performance degradation no longer occurs with sequential write operations on SATA drives.
- A controller failure no longer occurs at boot up with the following message on arrays that have an 8 Gbps Fibre Channel interface: *HD2100 Host transfer DMA error was over the threshold*
- A controller failure no longer occurs at boot with following message: *H0A500 PCI Configuration access error was detected[Host0_PCI Express core, 0x00004000]*

- An illegal controller failure is no longer caused by link failures occurring in the array's backend diagnostics at boot up.
- If `config.txt` has illegal contents after installing the SNMP key, SNMP can now work normally even if the `config.txt` is fixed.
- A controller failure no longer occurs when executing high-load Write operations whose data length exceeds 256KB.
- SAS drive failures no longer occur due to path failures between the ENC and the drive.

Known Problems

- None

Notes on Installation

- None

Documentation

Related Documents

None

Documentation Update

MK-97DF8007EN-13	Hitachi AMS 2500 Storage System Hardware Guide
MK-97DF8008EN-12	Hitachi AMS 2000 Family Storage System Reference Guide
MK-97DF8009EN-11	Hitachi AMS 2000 Family Storage System Service Guide
MK-97DF8010EN-12	Hitachi AMS 2100/2300 Storage System Hardware Guide
MK-97DF8019-02	Hitachi AMS 2000 Data Retention Utility User's Guide
MK-97DF8039-08	Hitachi Storage Navigator 2 Advanced Settings User's Guide
MK-97DF8052-08	Hitachi AMS 2000 Family TrueCopy Remote Replication User Guide
MK-97DF8054-08	Hitachi AMS 2000 Family TrueCopy Extended Distance User Guide
MK-97DF8089-15	Hitachi Storage Navigator Modular 2 Command Line Interface (CLI) Unified User's Guide
MK-97DF8121-09	Hitachi AMS 2000 Family Command Control Interface (CCI) Reference Guide
MK-97DF8123-09	Hitachi AMS 2000 Family Command Control Interface (CCI) User's Guide

MK-97DF8124-09	Hitachi AMS 2000 Family Copy-on-write SnapShot User Guide
MK-97DF8129-09	Hitachi AMS 2000 Family ShadowImage In-system Replication User Guide
MK-97DF8148-09	Hitachi Storage Navigator 2 Storage Features Reference Guide for AMS
MK-98DF8149EN-10	Hitachi AMS 2000 Family Site Preparation Guide
MK-08DF8188-09	Hitachi Modular iSCSI Host Installation Guide
MK-08DF8189-09	Hitachi Modular Fibre Channel Host Installation Guide
MK-97DF8153-07	Hitachi Storage Navigator 2 Command Line Interface (CLI) Replication Reference Guide for AMS
MK-09DF8201-04	Hitachi AMS 2000 Family Dynamic Provisioning Configuration Guide

Documentation Errata

None