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HITACHI エンタープライズサーバ EP8000 シリーズ マシンコード更新手順

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3584LTO ライブラリ Firmware 変更内容と来歴

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レビジョン	変更内容
5050	<p>Library code version 5050 adds no new function.</p> <p>Significant fixes from previous code version 5040:</p> <p>Fixed problem where library diagnostics may send invalid move command to drive resulting in illegal request</p> <p>Fixed problem where library verify may fail with invalid destination element if 2 LTO diag carts are needed</p> <p>Fixed problem where lib verify may send invalid move command in library with more than one generation of LTO drive</p> <p>Fixed problem where intermittent cartridge presence sensor problems could cause a dual accessor library to not properly fail over</p>
5040	<p>Library code version 5040 adds the following new functions:</p> <ul style="list-style-type: none"> <li>- Improvements in error recovery for Move Medium to storage slot when ALMS enabled.</li> <li>- Improved detection of removal of previously configured frame(s).</li> <li>- Allow configuration of I/O station type that has no frames of the same type to simplify future mixed media support.</li> <li>- Improvements in sensor diagnostics.</li> <li>- Added drive display to web interface.</li> </ul> <p>Significant fixes from previous code version 4870:</p> <p>ALMS: Modified code to more gracefully handle an invalid attempt by a user to change logical library zero configuration</p> <p>Code change to avoid possible long delays in updating inventory after inserting or ejecting cartridges from the I/O</p> <p>Code changes to avoid possible timeouts of Read Element Status commands</p> <p>Inventory: Improved detection of bad or out of calibration bar code scanner which could lead to Element Address 0 being reported</p> <p>ALMS: Fixed problem where cartridges moved within the library might become unassigned</p> <p>Dual Accessors: do not post X Authorization errors on the Operator Panel - only log them.</p> <p>Fixed problem where import of a Cleaning Cartridge could fail with Illegal Request/Destination full</p> <p>Call Home: Fixed memory allocation problem which could cause Call Home to be unable to send logs and VPD info</p> <p>Fixed problem that could result in library staying in Initializing status for a long time after closing a frame door</p> <p>Fixed exposure for an MCP to display F8 after loading 4680 or later code on a library with a pre-4680 level of code</p> <p>ALMS: Fixed problem where 25xx error would be reported when a Dxx frame without an FCA was added</p> <p>Fixed problem that could report a CCCC error on Move Medium commands that were issued shortly after a library inventory</p> <p>Fixed potential problem where monitoring of drive power supply status could cause a power supply to turn off</p>

	<p>immediately following library power on</p> <p>ALMS: Fixed problem that could potentially cause the library to move a cartridge to the wrong location</p> <p>Configuration: Fixed problem where the library would not recognize that a drive had been replaced with a different generation (ex: replace LTO Gen 1 with LTO Gen 2)</p> <p>Inventory: Fixed timing window that could result in an I/O station inventory reporting incorrect data</p> <p>Fixed exposure for Read Element Status commands to fail in a variety of ways</p> <p>Web: Fixed problem where displaying an error on the web did not show the destination element address</p> <p>Fixed problem where Library could report CCCC errors when nothing was wrong - command to turn off motors took too long to report completion status</p> <p>Call Home: Fixed problem that did not correctly limit the number of call homes that could be sent resulting in multiple call homes from the same error</p> <p>Fixed problem where cleaning cartridge page no longer displayed remaining counts</p> <p>Ethernet: Fixed problem with DHCP not setting the gateway correctly</p> <p>Inventory: Avoid timing window that could report incorrect Read Element status data for a few seconds after the I/O station door was closed</p> <p>Web: Fixed problem where web node card and logical library pages would not display correctly after updating library code</p> <p>Web: Fixed exposure to losing web security settings after updating library code</p> <p>Fixed problem where error log entry had incorrect ASC_ASCQ</p> <p>Fixed exposure that could cause the library to report a single drive error multiple times</p> <p>ALMS: Fixed problem that could result in a cartridge being assigned an Element Address outside the range of its logical library</p> <p>Fixed exposure that could cause cartridge moves to an LTO 16-slot I/O station to fail and report destination unexpectedly full</p> <p>Fixed problem that could result in false detection/reporting of frame sequencing errors</p> <p>Fixed problem where replacement of an ACC FRU could result in incorrect SNMP settings and/or could result in the library reporting Unconfigured</p>
4870	<p>Library code version 4870 adds no new function.</p> <p>Significant improvements were made in the installation and configuration procedures for libraries with dual accessors.</p> <p>Significant fixes from previous code version 4680:</p> <p>Description:</p> <p>Very high I/O Station usage may result in Read Element Status timeouts and other problems</p> <p>Improve internal message handling to prevent Read Element Status commands from failing (timing out at host)</p> <p>Improved detection of bar code scanner problems to avoid reporting an element address of 0 with ALMS</p> <p>Added code to detect memory deallocation problems.</p> <p>Importing a Cleaning Cartridge might fail with Illegal Request/Destination full</p> <p>Call Home might not send data files due to a memory deallocation problem.</p> <p>Error 25xx might be flagged when adding a storage-only Dxx frame.</p> <p>Move medium commands that occur shortly after a library inventory might report CCCC errors.</p> <p>After powering up the library a drive power supply could shut down when polled for status.</p>

	<p>Fixed problem where the library would attempt to move a cartridge to the wrong location.</p> <p>Replacing a drive with a different model drive could result in incorrect configuration of the drive.</p> <p>Fixed timing window where the I/O station inventory could be incorrect</p> <p>Fixed problem where library could stay in an initializing state for a long time</p> <p>Fixed problems that might result in Read Element Status commands failing</p> <p>Fixed problem where Library would report CCCC with no obvious failure</p> <p>Fixed display of cleaning cartridge counts on web user interface.</p> <p>Calibration problem could leave bar code scanner offsets at default values.</p> <p>After a code update, some web pages were not displayed correctly.</p> <p>Moves to LTO 16-slot I/O stations might fail with destination unexpectedly full</p>
4680	<p>Library code version 4680 adds support for the following new capabilities:</p> <ul style="list-style-type: none"> <li>- Dual active accessors (new library frame model HA1, dual accessors and service bays).</li> <li>- LTO Ultrium-3 tape drive (3588 model F3A).</li> <li>- optional 6 character volser reporting (reporting the first 6 characters of the bar code label volser to a host).</li> </ul> <p>Significant fixes from previous code version 4390:</p> <p>WEB USER INTERFACE Fixed problem where user was allowed to create duplicate accounts on web user interface</p> <p>ERROR RECOVERY Fixed problem where a cartridge could be left protruding from the drive if the cartridge jams about an inch from the fully loaded position</p> <p>CALL HOME Fixed problem with Heartbeat Call Home duplicating time stamps</p> <p>SNMP Fixed problem with recovered barcode scans not reporting the marginal label over SNMP</p> <p>ETHERNET Fixed problem where web would reset MCP with F2 error</p> <p>OPERATOR PANEL Fixed problem with operator panel reporting incorrect I/O station counts</p> <p>OPERATOR PANEL Fixed op panel hang on display drive VPD</p> <p>CONFIGURATION Fixed problem where Device IDs weren't being deleted during a Config if the MCP for a frame was pulled out.</p> <p>ALMS Fixed problem with adding frames with ALMS enabled</p> <p>ETHERNET Fixed ethernet problem where nmap or high network loads could cause ethernet to hang</p> <p>CALIBRATION Fixed problem where calibration of library may fail on library with LTO/3592 grippers or in L22/L52 frame</p> <p>ERROR RECOVERY Fixed problem where a gripper with a bad cartridge present sensor would be used before the problem was fixed</p> <p>OPERATOR PANEL Fixed internal messaging problem that could cause op panel to hang</p> <p>ALMS Fixed problem where NVRAM would report uninstalled, disconnected drive as a Control Port when ALMS Enabled</p> <p>ERROR RECOVERY Fixed problem where an incorrect SCSI SetVolTag command could result in a SCSI timeout instead of reporting illegal request</p> <p>ALMS Fixed problem where an uninstalled drive could report a communication error</p> <p>WEB USER INTERFACE Increased Web User Interface inactivity timeout based on customer feedback</p> <p>ALMS Fixed problem with cartridge going unassigned if manually removed from gripper</p> <p>AUTO CLEAN Fixed problem where cleaner cartridges manually placed in drives could end up incorrectly in the host inventory</p>

	ALMS Fixed problem where in ALMS, drives could be set to polled mode, and not be reset to non-polled mode
4390	<p>Problem fixes from previous code version 4370:</p> <p>Note: Most of these problem were detected in internal testing and have not been reported on customer machines.</p> <p>ALMS issues:</p> <p>ALMS:Fixed problem where cartridges with Virtual Storage Element Address (VStEA) past MAX_CARTRIDGE displayed incorrectly.</p> <p>ALMS:Fixed problem with moves failing if VStEA was valid but beyond the end of the configured physical StEA.</p>
4370	<p>Problem fixes from previous code version 4350:</p> <p>Note: Most of these problem were detected in internal testing and have not been reported on customer machines.</p> <p>I/O Station issues:</p> <p>Fixed problem with Prevent/Allow Media Removal command not working in some library configurations</p> <p>Fixed problem with I/O station locking and unlocking when it should not</p> <p>Bar code scan retry issues:</p> <p>Modified Library code to not send TapeAlert 23 (Recovered Bar Code Scanner error) to the host</p> <p>Modified Library code to send tape alert 23 (Recovered Bar Code Scanner error) over SNMP.</p> <p>ALMS issues:</p> <p>Modified ALMS Migrate to handle Storage Element Element Address (StEA) preservation and new Starting StEA Address when creating Logical Library</p> <p>Modified ES Master to handle starting VStEA for a logical library that can be any valid StEA</p> <p>Fixed problem with ALMS incorrectly rejecting moves with SK 5 ASC/ASCq 3000 illegal request, incompatible media</p>
4350	<p>New Function:</p> <p>Support for Feature Code 1690: Advanced Library Management System</p> <p>Problem fixes from previous code version 4090:</p> <p>Note: Most of these problem were detected in internal testing and have not been reported on customer machines.</p> <p>Call Home and SNMP issues:</p> <p>Added support to provide 3592 drive FID via call home and SNMP</p> <p>Fixed problem with missing node card data in call home mrpd file</p> <p>Fixed problem where Call Home can timeout on a socket getting a drive dump so no dump gets uploaded</p> <p>Fixed problem where CE tool can timeout getting a drive dump if call-home is also acquiring a drive dump</p> <p>Call Home modified to assign URC to 3592 drive errors based on drive FID.</p> <p>Updated SNIA SML MIB to revision 1.18</p> <p>Fixed problem where drive scsi/error sense log in call home did not transfer all the data</p>

Configuration issues:

Fixed problem where drives were not assigned to a logical library when configuring using labels  
Fixed problem where op panel online request interrupted config run from the web  
Fixed problem where library stays initializing after config if frame serial number did not match OPC and ACC  
Fixed problem where removing frame from config would leave MCP data for that removed frame in VPD display

Calibration issues:

Fixed problem where the incorrect error code was reported on a calibration failure of an I/O station  
Fixed problem where storage slots under drives would not be calibrated when the machine type label was incorrect  
Changed the X location of calibration sensor scans on 3592 cartridges to avoid a textured surface on the cartridge  
Changed the X location of calibration sensor check in library verify in an L22 to avoid a textured surface on the cartridge  
Fixed a problem where the calibration sensor check in library verify was performed too low with a universal gripper

I/O station issues:

Fixed issue where the I/O station could be erroneously unlocked during a move medium or exchange medium command  
Fixed problem where failure to lock the lower I/O station would be reported as failure to lock the upper I/O station

Misc issues:

Fixed problem where media type for logical library displayed as 0 if library not calibrated  
Corrected problem where CE tool would fail communicating with library when library very busy.  
Fixed problem where storage slot status showed 3592 volsers as zeros  
Fixed problem where 3592 drive port 2 speed/topology settings displayed as "unavailable"  
Fixed problem with failed drive diagnostic returning B881 instead of B882  
Fixed problem where user was unable to move a cartridge from one drive to another using drive status page  
Fixed problem where error msg was displayed although user did not change speed/topology settings  
Fixed problem where user was allowed to select SCSI drive for fibre speed/topology settings  
Fixed display of drive usage stats where some drives were not always listed  
Fixed problem where CE cartridge may remain in gripper after put failure at drive during library verify  
Fixed problem where library verify would return the wrong HEC/HECq  
Fixed problem where library verify may fail due to no CE cart present when CE cart was in gripper  
Fixed incorrect op panel display when unconfigured drive sent clean message  
Fixed problem where incorrect error could be reported during library verify if drive canister power cable is bad  
Fixed problem where cartridge range display was incorrect if duplicate or unknown cartridges were present in library  
Fixed problem where clean manager was logging invalid entries  
Fixed problem where a CAN communication problem would cause a column of storage to not be inventoried  
Fixed problem where user was given incorrect warning if attempting to move an unassigned cartridge  
Fixed problem where user was allowed to enter lower case volsers on data cartridge page  
Fixed problem where "cancel" on import pop-up would refresh I/O data in pop-up window  
Fixed problem where 3592 counts were off one line on physical manage library page

	<p>Fixed problem with barcode scanner misreading a single character</p> <p>Fixed problem where expired cleaning cartridges would show up as not expired or with overly large remaining cleans on the web</p> <p>Fixed problem with prevent allow medium removal command not unlocking the I/O station in a mixed media library</p>
4090	<p>Fixes:</p> <p>Calibration:</p> <p>Calibration - Fails on L52/L22 that is not capacity expanded and has slots in column 7</p> <p>This fix was only necessary for manufacturing.</p> <p>Field machines at 4080 do not need to go to 4090</p>
4080	<p>Fixes:</p> <p>Accessor:</p> <p>Accessor could perform incorrect erp moves in Y after a rezero attempt</p> <p>Protect gripper if a door is opened during operation</p> <p>Address problem of pick failures in some columns</p> <p>Calibration:</p> <p>Operator panel not calibrating columns if storage is removed</p> <p>not correctly handling an illegal request</p> <p>X and Y limit different than previously saved</p> <p>fiducial value was stored for column that was not installed</p> <p>status not ready message caused calibration to exit prematurely</p> <p>timeout problem with 16 frame library</p> <p>Combined gripper and pivot failures could cause gripper calib to occur in wrong location</p> <p>Gripper calibration could occur even if a gripper was blocked</p> <p>Call Home:</p> <p>Update MRPD data</p> <p>reporting urc x'FFFF' for library detected drive errors</p> <p>reporting underscore instead of dash</p> <p>'e' instead of 'h' for heartbeat and test call homes</p> <p>reduce missing date/time stamps in call home records</p> <p>not uploading drive dump on drive error call homes</p> <p>problem wrapping the company name record</p> <p>cluster number now reported as '0'</p> <p>removed extra '00' from serial number reported</p> <p>modified the order of reporting the data</p> <p>New Function now places heartbeat call home every 7 days</p> <p>log error if CH is disabled when a test call home is issued</p> <p>MRPD TAPEDRIVE fields in data call home</p> <p>MRPD NODECARD fields in data call home</p> <p>modem stayed online if library reset while online</p> <p>starving lower priority threads such as the web</p>

F1 due to memory error

Config:

operator panel may display incorrect count of Ultrium 1 drives  
failing automatic logical library config due to a Y coordinate beyond max limit  
Fixed physical configuration screen to display correct drive counts  
Bar code scanner position problem searching for logical library labels  
Bar code scanner calibration could fail on an unconfigured library  
Operator panel allowed config with no drives in the library  
don't wait for user input before going ready after a configuration  
poorly labeled cartridges could be incorrectly detected as drive locations  
Fixed confusing double question on Advanced Config logical library commit screen.  
not detecting storage arrays correctly  
Fixed CCCC error during configuration by changing drive process timeouts  
Library may not go ready with a loose library door

Ethernet:

Potential loss of connectivity in busy networks  
Potential loss of ethernet when attacking web server  
Potential Ethernet hang under heavy network load  
IP config screen - display ethernet port number  
TCP/IP stack not responding over ethernet in busy networks  
static IP address continues to be displayed on Op Panel after DHCP is enabled

I/O:

Closing and quickly reopening I/O door could report error locking I/O door

Inventory:

Fixed problem where cartridges labels in drives could not be read if they were in the unloaded position  
drive " " contents" " area not correct if list sorted by media type"  
IES with range starting with last drive in frame returns B480 error  
improper handling of the Imp/Exp for IEE Element Status  
Improved reliability putting cartridges in LTO2 drives  
I/O Imp/Exp bit showing export if unreadable volser placed into prior empty slot  
Fixed Source Valid to report source when a cartridge moves from storage to storage  
Fixed Error reporting when a move is issued to a loaded drive to report Illegal

Op Panel:

Operator Panel hang due to Element Status Cache timeout  
Fixed op panel Cleaning Cartridge Expired message  
Operator panel storage slot status screen - incorrect cartridge totals  
Op panel displays incorrect message when no cleaner cartridges are in library  
Fixed word wrapping issue on OP panel.  
Fixed problem where the operator panel could hang

Fixed problem where operator panel could reset

Service:

Drive FRU Replacement could fail with CBCD error

Library Verify with a powered-off drive could indicate gripper failure

Drive Head Test fails due to timeout

Drive FRU Replace displayed unexpected RS/422 error

Drive read/write test failing intermittently

operator panel appears to hang after drive FRU replacement

drive code update could fail after FRU replacement

drive not going offline before replacement

library verify must handle sense key 2 status from drive

Prepare for drive replacement reports Error 0000

Drive dump data could be misdirected if another command was already in progress

Operator panel could hang when replacing a drive

library diagnostic drive test reporting drive 'timeout' instead of 'not ready-media not loaded'

16 frame calibration went back to active screen before completion

SNMP:

problem with drive tapealerts reporting incorrect corrective action

tape alert strings didn't match the Operator Guide

Allow SNMP Configuration if the library is not configured

Fixed SNMPv2c trap decode problem with Tivoli Netview

errors were being discarded by call home.

settings could change to version 2 traps after replacing an MCP

report current cache data for library name, description etc."

Fixed v1 traps to report the current ethernet IP

report ""deprecated"" when a OID is deprecated"

report ""unknown"" for drive version if the drive is not responding"

PhysicalMedia-MediaDescription correctly report cartridges with a L2 label as Ultrium 2

send a trap when I/O station doors left open for more than 5 minutes

modify v2c traps to better conform with RFC 3584 and allow trap numbers to be shown in NetView

Web:

display active sessions resulted in communication error

canceling code load could cause operator panel hang

get log could result in F1 hang.

view frames drop down list did not change if config changed frame count

F1 hang due to http error

advanced config would not work if library not previously configured

WWNN link not displayed until home page is refreshed

drive code load via the web could timeout

Add Logical Library field to IO page

user could move a cartridge into a slot that is a source STE for a cartridge in a drive



	<p>user initiated insert notification change did not change the setting  move to home slot would not work if attempted from drives page  Admin user should not be able to change the userID of the default admin account  a data cartridge in the reserved diag cartridge slot shouldn't be displayed  ACC card F1 hang when attempting to change a control path  configuration was allowed to continue with out drives  Fixed problem where drive sort icons will not display if cartridge sort is ""by location""  Fixed F1 on display of multiple page SCSI/Loop IDs screen.  "Fixed problem with delay request command not finishing after data return, asterisks would continue to display"</p> <p>Drive/Host:  Drive status message could be sent to wrong code object  Control path failover fixes  Reports Illegal Request instead of Eject Fail when using gripper 2 on get failure from drive  XY thread would return status data with command message type vs MT_RETURN_STATUS  Reported illegal op code for illegal mode sense command forwarded by drive  Some drive errors could cause drive communication to be disabled  Drive communication error during simultaneous implicit unload and web requested drive data  Fixed problem where a host SCSI command could timeout  Added ability to enable a required control path  Request/Command Sequence Error  Fixed timing window where a read element status may not reflect current data after a move medium  Library could report a HEC/HECq CCCC incorrectly  Changed reporting of the B882 HEC/HECq to a command sequence error  Fixed problem with reporting a command sequence error when the drive has a hardware error</p> <p>Misc:  Modify memory allocation error checking to avoid F1 hang  Redundant library power could be lost after a library configuration</p>
3484	<p>Fixes:  Ensure volser information is populated during inventory of cartridges inserted in the drives.  Increase the processing efficiency of Call Home.  Increased MRPD data storage allocations for Call Home.</p>
3482	<p>Fixes:  Multiple dataID/header data enhancements for Call Home.  Add support for 10 character volders.  Call Home: Send ACC/OPC/MDA event logs for library detected errors involving drives.  Return illegal request/command sequence error when a move medium is received for a drive that is reporting busy status.  Set import/export bit after the insertion a cartridge of the I/O station.</p>
3480	<p>New Functionality:  Added support for modifying SNMP settings via the Web  Added support for SNMP MIB  Added support for Heartbeat Call Home</p>

	Added ability on the web interface for users to migrate cartridges across logical libraries Added support for 10 character volser labels Added support for B884 ERP to power cycle drives Added support for Dual CAN bus Added three new option to demo mode; by logical library, by element address, and by media type
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