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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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LTO Ultrium2 ドライブ Firmware 変更内容と来歴

| レビジョン | 変更内容 |
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| 53Y2 | <p>Fixes:</p> <ul style="list-style-type: none"> • Tape Alert flag Tape Directory Corrupted on Load not set with bad CM in tape • Add additional check for correct servo band before write operation • EOD shouldn't be updated if it is valid at CM recovery • Perm read error from append test additional Read ERP (Lateral offset ERP) • Prevent simultaneous code loads • FSC 931C caused timeout on write/read command • Fibre Chanel ABORT causes drive hang in some cases on TUR and INQ • FSC 7225 read perm error at EOW • Queue Hang by BUS_RESET on flushing of WFM1 • Gen 1 Bad cartridge detection • Change sense key of DETECT_NO_EOD for fail-safe • Add retry for FSC 7165 • Widen track following threshold during calibration • FSC 6017, unexpected RBSR register value • Include Drive serial number of last drive to write tape in CM • FSC 6353 target found not returned when FID read • tracking offset ERP doesn't work • FSC 6352 (BOT) is returned instead of FSC 6350 (FM detected) • target found is not returned when BOW read • Wrong Max Transfer Speed when Set_Config by LIB • fix FSC 7346 • No backhitch on 7115 errors during reads • Read Perm with erased servo • FSC 6353: Locate failure • Set Capacity of 100% decreases the cartridge capacity • Enhance the drive diagnostics • Flush requests cause ISM panic • Load count increments by 2 using 2 stage LDI unload • Tape Alert flag 18 set when Cleaner Cartridge is Loaded • restore ERP of power down mode for CM transfer • Cleaning Required function implementation • LUN1: Fix for RVEA cmd corrupting byte count of report field • LIB: Drive Status (FC drives) does not reflect if drive offline • Speed matching WFM wrap 0 problem • Drive status incorrect at unthread when FSC 2E05 occurs. |

- Insufficient Tape Alerts reported thru LDI
- Rewind fails if missing FID and EOD.
- Fix for FSC 7225
- SCSI drives don't reliably respond to selection
- A wrong max write pass was set when no DS came in resulted in FSC 6353
- Long CM transfer cause deadlock on write command FSC5888
- FCE_Command_Handler called too many times
- Time out during Space FSC 6017
- FSC 2C33 on init of new cart
- Rechuck ERP should be invoked before reaching 4m distance
- Sense Data handling improvement initialized Return code struct
- Enhance 7225 ERP to recover multiples of 16
- ACK in middle of message caused communication problem
- Reserve command timed out during Cleaning
- Common code hole in 7115 ERP method
- Fibre channel fixes
- Fibre channel PSM are failing to process correctly
- Mode Page 0x18 & 0x19 is not updated correctly
- FCA0 with forced Lport logic [direct connect Nport]

Fixes.

- Modifications to FC Drive Status
- SMC Command checking for library ready status not to spec
- Expired Cleaning Cart SCD is 0
- TapeAlert 12h is set with WritePerm
- after auto online disable drive won't work outside lib
- ERP for writing blk 1 protection flag
- FSC 7115 caused by multiple invalid lpos
- Latchable SRR redrive
- Additional FSC added when encounter FSC 6353
- FSC 1602 on read
- New Mode Page 2F for clean request
- Drive returns FSC 7365 on Write
- Incorrect reservation behavior for RBL and RDS comm.
- implement FLOGI N_port validation per FC-DA
- BQue and CmdQ INQ
- Need to support SK=06h, ASC/ASCQ=2F00h on CTS
- LUN1 logical unit reset is not notified to LDI
- C2 uncorrectable causes ISM panic
- Gen.3 cartridge must be rejected as unsupported cartridge.
- No deferred load error report on SCSI on manual insertion
- Fix for FCH_PROTOCOL_ETC related errors.
- Volume overflow incorrectly reported
- Enhance processing prior to FSC 7060
- diag with gen2 drive reports wrong req sense

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| | <ul style="list-style-type: none"> • Write Perm after 7A00 calibration • ISM panic caused exception • Fix Fibre Channel Lport issue • Calibration Enhancements • BOT reached reported twice • All TPRLO requests are broken • Change the drive behavior for an SCD 'A' on recal • Persistent Reserve out returns a ASC/ASCQ 2/04/01 • Fix for FSC7520 write perm after rechuck. • Eme: Gen.1 cartridge is misjudged as CM corrupted • Non-Imd WFM0 returns GOOD after Write Perm • Fix FC-DA processing • Error correction counter in VPD is not correct • iSeries: Download ITD records not correct • Expired clean cartridge no SCD 7 • Write failure FSC 7888 • PARM byte 5 bit 7 should not be Illegal Request • TA18 is set when an uninitialized cartridge is loaded • timeout on RES command • improved handling on locate after write FSC 6353 • PES error detection fix • Drive is Fenced due to overrejected cartridge FSC 2E01 • Fibre Channel HIB FIFO timeout Fix |
| 4772 | <p>Fixes:</p> <ul style="list-style-type: none"> • iSeries failure to connect - PTP not supported • Incorrect Fibre status on PIN 5 &6 of ALPA/LID conn • Last block location is less at WFM2 |
| 4770 | <p>Fixes:</p> <p>Fix potential data error issue if a permanent write error occurs while writing data from an internal drive buffer while 1) writing 2 filemarks OR 2) getting a rewind, unload, locate, or space command. If this issue occurs, new data can not be appended to existing data. The cartridge can be rewritten from the beginning of tape</p> |
| 45DH | <p>Fixes:</p> <ul style="list-style-type: none"> • Fix for FC Drive Status reporting incorrect speed • Queue Hang by SCSI BUS Reset • FSC1602 on read after non-immed WFM0 was aborted • Wrong Reselection caused unexpected sense data • fence cause B884: correct FSC fence behavior • panic due to resource conflict in library copnt. • VPD LUN1 corrupted => LUN1 Inquiry fails w Illegal Request • additional bad tape format media detection • Tape Alert 18 does not display in corrupt CM • fence cause B884: mount cartridge during fence state. • Data Recovery Code Fix • FC Data Path failover enhancement • Incorrect Wrap number is reported when read perm • ExtraAck pulse error is not reported • SRV_CHECK_SERVO_BAND_CHANGE • Drive Hang • FSC 5175 (Old dataset) on scaled Cartridge • EOD Corruption on FSC 7015 • Catch bad servo tracks on media. • Panic on read after abort for RESERVE on calib. • FM Abort reposition issue |

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| | <ul style="list-style-type: none"> ·Library VOLSER must be reported with the highest priority ·Persistent Reserve fixes for zSeries ·FSC 0000 in Forced Error Mode ·Enhancement of DPF(saving Persistent Reservation) ·LUN1 - Mode Select 10 sends wrong parameter data ·Fibre Channel Nexus tracing enhancement ·buffer can not be read via host(Fibre) I/F ·Tape will not eject due to bus reset during space ·SCSI/FC Wrap Test w/o wrap plug reports Sense Key 0 ·FSC1602: CRC Error after abort command during read ·Speed Matching Problem. ·CRC Error on Read w/ Overrun (READ IO error) ·add time stamp to serial trace ·FSC 5070 encountered on Locate ·FSC 6353 LPOS out of range (code boundary cond.) ·Add tracing info for CM Logical error ·Calibration causing host timeout ·Queue hang by TARGET_RESET on write ·Reject Message makes the drive reboot ·code in trap after FSC 7030 in unbuffered mode. ·FSC 2C00 on LUN1 command mishandling. ·iLUN1 RES - fix for elem. descriptor sizes and compression ·Clearing of tape directory algorithm improvement ·FSC6401/FSC1022 ¶par ·I/O errors - Hang on I/O during paused write/read ·Dfrd sns to lib cmd on SCSI ·Read Perm during Locate/Space returns not FSC 6353 but 7060. ·iSeries: Accept PPR negotiation after POR. ·Load fail after Reach EOT on previous Write ·Queue hang just after immed wfm. ·LIP does not complete after a cable pull ·C1 IBC Error on Post-B ·Pin mispick failure ·WFM after FSC 7075 causes FSC 4000 ·FSC 7800 fix ·drv to report FC config over LDI ·Old cleaner cartridges result in wrong behavior. ·Change SCD5 to 6 for errors which could be caused by Media ·Overlap commands cause unexpected SCSI bus reset ·repeated deferred sense rather than current sense ·Panic with 0xbff3 for READ after write. ·Incorrect Drive Usage Statistics ·Backup Fails if Eject button is pushed while doing backup ·Drive is hung by "Write Drive Dump to Tape" during calibration ·Unload req. except SCSI on calib. causes infinite queued write ·fix CM queue max wrapping when next req = 0 ·Correct temporary error handling to avoid the missing Filemarks. ·Corrected Abort Handling. |
| 42D0 | <p>Fixes:</p> <ul style="list-style-type: none"> ·Corrected Write ERP handlers. ·Corrected command sequence handling to avoid a type of hang. ·For unsupported command, what the drive should do is just returning check condition as invalid CDB. ·Corrected handling of library interface commands. |
| 3AY5 | <p>Fixes:</p> <ul style="list-style-type: none"> ·Clear tape alerts per the T10 specification. ·Inquiry data cache corrected to provide the appropriate fail-over support. |
| 3AY0 | <p>Fixes:</p> <ul style="list-style-type: none"> ·Corrected the behavior per the T10 specification. ·Relax boundary condition checking to permit the reposition operation to complete without error. ·Correct the behavior of the internal buffer flush operation. ·Check for valid session prior to resuming. ·Tape Directory recovery was enhanced to accommodate unexpected media errors. |
| 3AV0 | <p>Fixes:</p> <ul style="list-style-type: none"> ·Corrected register access. |

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| | ·Fixed race condition. |
| 3A30 | Fixes: ·Error recovery for a hardware failure. ·Display of drive activities on 3580. ·Reporting of data transmission pages. ·Recovery algorithm when reading near wrap end. ·Changed head calibration setpoints. ·Handling of tape during loading by non-standard methods. ·Internal queue handling. ·Memory allocation algorithm. ·Cartridge loading code response to Load requests. |

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