TS7700 Release Notes - 8.40.2.11 (R4.0 PGA 2)

IBM System Storage TS7700

Release Notes for the TS7700 (3957 VEC / VEB / V07)

- EC: M13936 released July 7, 2017

New Function Supported:
  None

TS7700 CODE REQUIREMENTS

Hydra	**8.40.2.11 (EC M13936 , PN 01PL097, 01PL098 and 01OL099 (DVD 1, 2 &**
DB2	10.5.0.5, (Included under EC M13546A) Informational tokens: "DB2 v10.5.0.5", "s141128", "IP23626", and Fix Pack "5"
AIX Base Level	7.1.4.0 (Included under EC M13546A)
AIX Fixpack	**7100-04-01-1543+07**
P8 Server Firmware	**FW860.20 (SV860_082)**
TS4500 (Anaconda) Firmware	**1.4.0.0-C00** 1.3.0.0-104.01 1.3.0.5
TS3500 (Anaconda) Firmware	**F330** E220 F270
3592 J1A Tape Drive 3592 E05 Tape Drive 3592 E06 Tape Drive **3592 E07 Tape Drive** **3592 E08 Tape Drive**	D3I0_C90 (Included under EC M13546A) or D3I0_C90 (PN 45E6140) D3I1_F1F (Included under EC M13546A) or D3I1_F1F (PN 95P8734) D3I2_883 (Included under EC M13546A) or D3I2_883 (PN 12X4428) D3I3_A88 (Included under EC M13546A) or D3I3_98B (PN 2726326) **D3I3_B87** D3I4_68E (Included under EC M13546A) or D3I4_520 (PN 2726329) **D3I4_7A4**
TSSC	**8.2.14 (EC M13856)** 8.1.18 (EC M13614, PN 2726415 (DVD 1))
TSSC Documentation	(EC M13614 PN 2726416)
3956-CCA/CSA Firmware **3956-CC9/CS9 Firmware** Storage Manager GUI	**08.20.16.00** **08.20.21.00** 11.20.0G05.0018 (EC M13614 PN2726417)
TKLM	TKLM v2 2.0.0.2, 2.0.0.5
ISKLM	2.6.0.0
Atape	**13.0.15.0**
GPFS	Release 4.1.1 PTF 7 code (Included under EC M13546A)
OpenLdap	2.4.40
ITDT	9.0.1.20160222 (Included under EC M13546A)
AIX Diagnostics CD	V7.2.0.0 (EC M13546A, PN 2726118)
16Gbit Cisco Switch Firmware	BIOS level 2.1.17 Kickstart software level 6.2(9) System software level 6.2(9)

PROBLEM FIXES:
Problems fixed in this level are described below. There are 154 defects fixed in this release; 79 defects occurred or were related to problems in client installations. They are described below with the following designations:

HIPER = High Impact & Pervasive (3 or more occurrences)

High Impact = Loss of access or loss of data (less than 3 occurrences)

Acute = A unrecoverable error with potential loss of data

Serious = A unrecoverable error with potential loss of access to data

Moderate = A system path is not operational and performance might be degraded

Service = A recoverable error, Service Improvements

Improvement = Improvement for better usability

Pervasive: Problems with 3 or more occurrences

HIPER: Unexpected cluster reboot
Dev fix description: Code updated to better synchronize Event table updates
Pervasive: YES
Ref: 80969

High Impact: "Configure Local TS7700 Cluster with Remote Cluster Grid Network IPs" SMIT menu may cause loss of cluster access
Dev fix description: Code logic updated to prevent loss of cluster access during Cluster IP testing
Pervasive: YES
Ref: 81840

High Impact: Scratch mount fails with "CBR4105I No eligible scratch volumes available in library" when primary category has Write Protect enabled
Dev fix description: Code logic modified to allow scratch mounts with Write Protect enabled
Pervasive: YES
Ref: 82576

High Impact: Physical drive recovery of a mounted drive caused next mount to fail with drive in
Dev fix description: Code modified to fully clean up physical drive during recovery
Pervasive: No
Ref: 81176

High Impact: C095 gridmgr reboot
Dev fix description: Code updated to more efficiently update the events table preventing timing issue that causes reboot
Pervasive: No
Ref: 82102

High Impact: ficon adapter panic 00000000020000CA
Dev fix description: Code updated to reset the correct device when a device is forced reset via SMIT
Pervasive: No
Ref: 80972

High Impact: Tape Mark overwritten when doing a private mount of a logical volume with no data followed by a FSF
Dev fix description: Code logic change to position after the Tape Mark of the 'fake' label during a FSF command
Pervasive: No
Ref: 82211

High Impact: Newly joined cluster cannot go online without intervention
Dev fix description: Code logic changed to add a retry if join updates fail the first time
Pervasive: No
Ref: 81766

High Impact: Mount of partial logical volume fails
Dev fix description: Code logic changed to allow mount of partial logical volume
Pervasive: No
Ref: 80271

High Impact: Mount failures after system board replacement
Dev fix description: Code logic updated to keep a timestamp of the database to prevent online if it is downlevel
Pervasive: No
Ref: 77886

High Impact: Mount pending; reboot required to recover
Dev fix description: Code logic modified to properly restart VPD
Pervasive: No
Ref: 82021

Serious: Premig failures
Dev fix description: Code updated to enhance recovery actions to recover drives when there is a library, drive or switch issue
Pervasive: YES
Ref: 81461

Serious: Cluster time sync may cause unexpected reboot
Dev fix description: Code updated to use a new method to change the time
Pervasive: YES
Ref: 81142

Serious: Service prep did not complete; reboot required
Dev fix description: Code updated to exit more efficiently
Pervasive: YES
Ref: 81134

Serious: Slow mounts; online process extended after code upgrade
Dev fix description: Expand search criteria for DB migration process
Pervasive: YES
Ref: 81103

Serious: Unexpected reboot due to network issues related to virtual IPs
Dev fix description: Code updated to better manage virtual IP switchover in the event of network issues
Pervasive: YES
Ref: 79794

Serious: Copy Operations Disabled after library issues
Dev fix description: Code updated to prevent timing issue that causes copy operations to be disabled because the library is thought to be paused
Pervasive: No
Ref: 80374

Serious: Mount timeouts.
Dev fix description: Mount code modified to prevent the timeout condition. Also extra logging added
Pervasive: No
Ref: 81528 c 3 field 1 700 1

Serious: Unexpected reboot
Dev fix description: Code updated to prevent Ethernet transmit failures
Pervasive: No
Ref: 81471

Serious: Missing channel and device end and Start pending
Dev fix description: db reorg updated to allow customized settings to allow it to run when the cluster is less busy
Pervasive: No
Ref: 81047

Moderate: D SMS,LIB(ALL),DETAIL shows incorrect machine type
Dev fix description: Code updated to retrieve the machine type from VPD
Pervasive: YES
Ref: 81946

Moderate: Logical volumes migrated after offsite reclaim processing Dev fix description: Code updated to not check residency status after offsite reclaim processing
Pervasive: YES
Ref: 82085

Moderate: False out of cache condition reported
Dev fix description: Code updated to more accurately calculate out of cache to prevent the false message
Pervasive: YES
Ref: 81999

Moderate: MIH timeout on LI REQ GGM,SRCVLCHG command
Dev fix description: Code logic changed to prevent delay on SRCVLCHG LI REQ
Pervasive: No
Ref: 82189

Moderate: Command processing may be impacted because of full filesystem
Dev fix description: code logic added to prune events history file to prevent filling filesystem
Pervasive: No
Ref: 82224

Moderate: Reboot required to fix preferred pathing issue
Dev fix description: Code updated to fix a communication issue that was causing non-preferred pathing issue.
Pervasive: No
Ref: 82405 c 3 field 1 925 1

Moderate: Security concern after scan identified exposure from version of NTP server
Dev fix description: Updated version of NTP (time protocol) component code
Pervasive: No
Ref: 80450

Moderate: Inconsistent Grid state
Dev fix description: Code updated to add a retry so the Grid state will be accurate
Pervasive: No
Ref: 81875

Moderate: Construct not created automatically when not defined as done in prior levels
Dev fix description: Code logic change to remove side effect of logic change in R3.3 code
Pervasive: No
Ref: 81549

Moderate: LI REQ SETTING,RECLAIM,RCLMSMAX does not change the setting
Dev fix description: Code updated to return a warning when the command runs with homogeneous drives
Pervasive: No
Ref: 82539

Moderate: 10 Gb FCoE card not upgraded to newer firmware during replacement (caused performance problem)
Dev fix description: Updated firmware package for adapter to later level
Pervasive: No
Ref: 82000

Moderate: Error condition set on offsite reclaim volume caused offsite reclaim to be suspended
Dev fix description: Code logic improvement to keep reclaim from stopping
Pervasive: No
Ref: 80973

Moderate: Performance issues due to deferred copy throttle
Dev fix description: Code updated to more efficiently apply copy throttle
Pervasive: No
Ref: 81703

Moderate: Unexplained error on Virtual Volume Details page
Dev fix description: Code updated to display a detailed message when volume conditions to not permit a detailed display
Pervasive: No
Ref: 82271

Moderate: System checkout reports network errors if LDAP DNS names contain dashes
Dev fix description: Code updated to not flag dashes as an error in checkout
Pervasive: No
Ref: 82075

Moderate: Private mount of an empty logical volume fails when a cluster is in service
Dev fix description: Code updated to allow private mount of an empty volume when a cluster is unavailable
Pervasive: No
Ref: 81785

Moderate: MI display of a large copy queue fails to complete
Dev fix description: Code updated to allow larger copy queues to be displayed
Pervasive: No
Ref: 81573

Moderate: After a cluster join the joining cluster may inherit pinned storage classes from the existing cluster
Dev fix description: Code updated to change the removal policy of the incoming storage class based on the machine type of the joining cluster
Pervasive: No
Ref: 81483

Moderate: Statistical information missing for a heterogeneous tape drive setup
Dev fix description: Code updated to properly populate statistics with information for both drive types
Pervasive: No
Ref: 80732

Moderate: CBR3750I Message with false alert about a large copy backlog
Dev fix description: Code updated to more accurately calculate the copy backlog
Pervasive: No
Ref: 82320

Moderate: FS full due to MI errors
Dev fix description: Code updated to archive old logs and dumps Pervasive: No
Ref: 82140

Moderate: MI fails forced demount
Dev fix description: Code updated to display a warning during forced demount and allow the customer to proceed
Pervasive: No
Ref: 82176

Service: Hardware checkout tool giving incorrect adapter count when 10 Gb FICON adapters installed as part of MES upgrade to model VEC
Dev fix description: Code logic changed to remove false error
Pervasive: YES
Ref: 81368

Service: Grid/DB2 data files not available for debug (not created unless manual command issued)
Dev fix description: Code logic changed to perform data collection process when error occurs
Pervasive: YES
Ref: 80703

Service: Message special characters cause host console issues
Dev fix description: Code modified to replace special characters with spaces
Pervasive: No
Ref: 81587

Service: Filesystem /dev/pfelv0 full
Dev fix description: Code added to monitor and warn filesystem
Pervasive: No
Ref: 82097

Service: /usr/vtd/ts7740_dump folder became 100% full
Dev fix description: Code added to monitor /usr/vtd/ts7740_dump and alert when it reaches 90% of its capacity
Pervasive: No
Ref: 82082

Service: Running VTD_EXEC.182 may cause a reboot
Dev fix description: Code logic changed to prevent system reboot when running VTD_EXEC.182
Pervasive: No
Ref: 81792

Service: System checkout disk data hard to read
Dev fix description: Text added to clarify system checkout disk output
Pervasive: No
Ref: 78377

Service: netstat -rnC output is not included in hydradump
Dev fix description: code logic updated to add netstat -rnC output to hydradump
Pervasive: No
Ref: 71070

Service: After a join NTP sources were redefined preventing clusters to time sync
Dev fix description: Code modified to search for a NTP source if none found; alert on unsuccessful search
Pervasive: No
Ref: 80342

Service: Atape logs missing from hydradump
Dev fix description: Atape logs added to hydradump
Pervasive: No
Ref: 79067

Service: System checkout hangs
Dev fix description: code logic added to monitor system checkout processes and terminate when needed
Pervasive: No
Ref: 78406

Service: Collect a GPFS snap after a check1
Dev fix description: Collect a GPFS snap after a check1
Pervasive: No
Ref: 81538

Service: Misleading errpt entries
Dev fix description: Code improvements to add logging and more clearly identify error in the errpt
Pervasive: No
Ref: 80536

Service: runmqras zip file is not into hydradump log definitions
Dev fix description: Add runmqras zip file to hydradump log definitions
Pervasive: No
Ref: 79159

Service: Some core files missing from hydradump
Dev fix description: Add core file definitions to hydradump
Pervasive: No
Ref: 74134

Service: Java update can fail with out of space condition
Dev fix description: Code updated to check for available space before starting the Java update
Pervasive: No
Ref: 81183

Service: No SIM generated for file system errors
Dev fix description: Code added to create a SIM for file system errors
Pervasive: No
Ref: 81210

Service: Special token ownership not moved during unjoin
Dev fix description: Code logic updated to move special tokens to remaining cluster
Pervasive: No
Ref: 82168

Service: MEL log fills with AUTH_FAIL_PASSWORD
Dev fix description: Code updated to use the appropriate role in the issued command
Pervasive: No
Ref: 80885

Service: Unknown cache event when rebuild is in progress
Dev fix description: Code improvements to File system checkout to report degraded while rebuild is in progress and flag events correctly
Pervasive: No
Ref: 82292

Service: MES Frame replace failed
Dev fix description: Code updated to prevent invalid data strings in VPD
Pervasive: No
Ref: 81523

Service: Join failure with /db2/data 80% full
Dev fix description: Checks added to compare database size against filesystem free space
Pervasive: No
81266

Service: Database restore deleted during frame swap
Dev fix description: Migration process reorganized to prevent the mistaken database deletion
Pervasive: No
Ref: 81253

Service: Drive dump not available for debug
Dev fix description: Code logic changed to collect data when error occurs
Pervasive: No
Ref: 81147

Service: Cluster unable to enter Service prep
Dev fix description: Change code to check valid cluster mask to list hot tokens to be reconciled
Pervasive: No
Ref: 80994

Service: Join failed in step 80
Dev fix description: Code updated to increase join monitor timeout and to show by percentage how much of the restore has completed
Pervasive: No
Ref: 80822

Service: 10 Gb FCoE grid card (replaced at lower firmware level from stock) could slow performance
Dev fix description: Provide warning to CE that a reboot (to upgrade firmware) might be needed
Pervasive: No
Ref: 82038

Service: LDAP service events don't clear automatically
Dev fix description: Code logic change to not flag intermittent LDAP network events
Pervasive: No
Ref: 79135

Service: Storage frame MES may fail if an empty expansion frame is being installed
Dev fix description: Code updated to omit a query if the frame is empty
Pervasive: No
Ref: 82324 c 2 field 1 620 1

Service: System checkout reports intermittent LDAP server ping errors and the errors generate call homes
Dev fix description: Code updated to add a threshold to the LDAP server ping check and only generate an error when the threshold is reached
Pervasive: No
Ref: 79141

Improvement: Request to allow LDAP to run in a very restrained environment
Dev fix description: Allow LDAP to be used by specifying a DN pattern in the filter field
Pervasive: YES
Ref: 81326

Improvement: CBR3750I Message Reporting the Wrong Cache Size
Dev fix description: Formula updated to more accurately reflect cache size
Pervasive: YES
Ref: 81704

Improvement: LI REQ OTCNTL,CONFIG,CAT does not allow 0xFFFF as a target category
Dev fix description: code logic added to allow 0xFFFF as a target category
Pervasive: No
Ref: 81535

Improvement: Some MI Events and host messages contain a misleading large number
Dev fix description: Code updated to prevent misleading large numbers in messages
Pervasive: No
Ref: 81912

Improvement: New LI REQ to provide Grid-Grid RPC statistics.
Dev fix description: New LI REQ
Pervasive: No
Ref: 80430

Improvement: New LI REQ to allow live copy volume access through devices attached to a DR family member.
Dev fix description: New LI REQ
Pervasive: No
Ref: 75882

Improvement: Intervention required message posted during HOST IPL without any active MI event
Dev fix description: Code logic improved to eliminate auto-cleared event from posting to MI
Pervasive: No
Ref: 81139