TS7700 Release Notes - 8.50.0.134 (R5.0)

IBM System Storage TS7700

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

- EC: M14484 released November 22, 2019

New Function Supported:

- **Server Refresh**
- **Cache Refresh**
- **NPS (Net Promoter Score Survey)**
- **10TB DDM (Seagate Only)**
  - **Capacity on Demand allows customers to enable disk capacity in 20TB and 100TB increments concurrently**
- **Secure Data Transfer**
- **DS8K Object Store**

TS7700 CODE REQUIREMENTS

TS7700	8.50.0.134 (EC M14484, PN 02XV964, PN 02XV965, PN 02XV966, PN 02XV967 (DVD 1, 2, 3 & 4))
DB2	v11.1.4.4 Informational tokens are "DB2 v11.1.4.4", "s1902261400", "DYN1902261400AIX",and Fix Pack "4a"
AIX Base Level	7.2.3.15
AIX Fixpack	7200-03-02-1846+01
P9 Server Firmware	FW930.03 (VL930_068)
P8 Server Firmware	FW860.70 (SV860_205)
TCT	Version=1.1.7
Cloud Support	IBM Cloud Object Storage System (COS) appliance solution Version 3.13.1 April Maintenance Release (Storage_COSS_3.13.1.34) / S3 Protocol
	AWS, S3 Protocol
TS4500 (Anaconda) Firmware	1503-500
TS3500 (Anaconda) Firmware	H010
3592 J1A Tape Drive 3592 E05 Tape Drive 3592 E06 Tape Drive 3592 E07 Tape Drive 3592 E08 Tape Drive	D3I0_C90 D3I1_F1F D3I2_883 D3I3_D88 D3I4_990
TSSC	8.7.6 EC: M14485, PN: 02XV969
3956-CSB (2072-312 V5030E) Firmware	8.2.1.5 Code Build iFix: 147.16.1905201712024
HDD (3956-CSB)	Seagate Tatsu Non-SED 7200 rpm, 10TB, SAS 12Gb/s 4Kn / FW lvl BCGA
	Seagate Mobula Non-SED 7200 rpm, 10TB, SAS 12Gb/s 4Kn / FW lvl BCH7
3956-CSA Firmware Storage Manager GUI	08.30.50.00 11.30.6528.0 - 02PY212 - CDRom TSSC Storage Manager

	GUI v11.30.0A05.0028 for Hydra 64-bit Source
ISKLM	2.6.0.0
Atape	13.0.34.0
GPFS	GPFS Release 5.0.3
ITDT	9.3.1.20190326
AIX Diagnostics CD	Version 7.2
16Gbit Cisco Switch Firmware	BIOS level 2.1.17 Kickstart software level 6.2(9) System software level 6.2(9)
VTD EXECs	VTD_EXEC.080 v1.31 - Backup for server/frame replacement VTD_EXEC.081 v 1.33 - Create flag for frame replacement and update fixes for the replacement scripts VTD_EXEC.084 v1.26 - Merge pre-check VTD_EXEC.244 v1.06 - Add older versions of DB2 VTD_EXEC.261 v 1.11 - Frame replacement pre-check VTD_EXEC.222 v 1.5 - GGM vtd_exec to install/uninstall GGM proxy server in the CSG

Platform Requirements Matrix

Test	Software Level
zOS	V2R3
zTPF	1.1
zVM	6.3, 6,4
zVSE	5.2, 6.1, 6.2

Switch and Channel Extender Support Matrix

Product Vendor and Model	Product Levels of Microcode supported	TS7700 levels of microcode supported
Brocade DCX IBM 2499-384 (SAN768B) Nortel 10Gb/sec MOTR card supported End of Support: 11/14/2019	4.1.هb, 7.4.1d, 7.4.2a, 7.4.2a1	
Brocade DCX-4S IBM 2499-192 (SAN384B) Nortel 10Gb/sec MOTR card supported End of Support: 11/14/2019	4.1.هb, 7.4.1d, 7.4.2a, 7.4.2a1	

Brocade 8510-8 IBM 2499-816 (SAN768B-2) Brocade 8510-4 IBM 2499-416 (SAN384B-2)	4.1.هb, 7.4.1d, 7.4.2a, 7.4.2a1, 8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.2.0a	
Brocade 7800 IBM 2498-R06 (SAN06B-R) Brocade 6510	4.1.هb, 7.4.1d	
Brocade 6510 IBM 2498-F48 8, 16 GB/sec (SAN48B-5)	7.4.1b, 7.4.1d, 7.4.2a, 7.4.2a1, 8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.2.0a	
Brocade 7840 IBM 2498-R42 (SAN42B-R)	7.4.1b, 7.4.1d, 7.4.2a, 7.4.2a1, 8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.2.0a	
Brocade X6-4 IBM 8961-F0 (SAN256B-6) Brocade X6-8 IBM 8961-F08 (SAN 512B-6) Brocade G620	8.0.1b, 8.0.2b, 8.0.2b2,8.1.0c, 8.1.2a, 8.2.0a	

IBM 8960-F6 IBM 8960-N64 (SAN64B-6)		
Cisco MDS9506	6.2.11c/6.2.11d, 6.2(11e)	
IBM 2062-D04		
IBM 2054-E04		
Cisco MDS9509	6.2.11c/6.2.11d, 6.2(11e) 12, 24 & 48 port blades only	
IBM 2062-D07		
IBM 2054-E07		
Cisco MDS9513	6.2.11c/6.2.11d, 6.2(11e) 12, 24 & 48 port blades only	
IBM 2062-E11		
IBM 2054-E11		
Cisco MDS9222i	6.2.11c/6.2.11d, 6.2(11e) 12, 24 & 48 port blades only	
Cisco MDS9250i	6.2.11c/6.2.11d, 6.2(11e), 8.1(1a)	
Cisco MDS9710	6.2.11c/6.2.11d, 6.2(11e), 8.1(1a) 12, 24 & 48 port blades only	

PROBLEM FIXES:

Problems fixed in this level are described below. There are 2338 enhancements/defects fixed in this release; 266 defects occurred or were related to problems in client installations. They are described below with the following designations:

HIPER = High Impact & Pervasive

High Impact = Loss of access or loss of data

Acute = An unrecoverable error with potential loss of data

Serious = An 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

High Impact: Reading older format volumes causes CRC error to host if all clusters are upgraded to 8.41.200
Pervasive: No
Reference: 84850

High Impact: Logical volumes with corrupted trailers cannot be recovered, mounts fail
Pervasive: No
Reference: 85571

High Impact: Potential data loss occur when TVC cluster has a pending copy and the parallel copy and the data update occurs simultaneously.
Pervasive: No
Reference: 84677

High Impact: When LI REQ EXISTDEL setting is configured with the options CRITERIA (ALL) and WHEN (AUTO), EXISTDEL could delete the last consistent copy in the Grid unexpectedly.
Pervasive: No
Reference: 84488

High Impact: A recall from a physical volume in read-only-recover state was resulting in failed mounts
Pervasive: No
Reference: 88135

High Impact: Grid performance after bringing a cluster on-line
Pervasive: No
Reference: 88026

High Impact: CL 6 Ficon compression of ZTD not inherited from source CL4
Pervasive: No
Reference: 87918

High Impact: Device allocation assist (DAA) tvc selection not optimal
Pervasive: No
Reference: 87551

High Impact: Virtual tape device hangs requiring a device reset when Sync copy mount fails
Pervasive: No
Reference: 85651

High Impact: Modifying the grid network from direct connection to a switched resulted in a total grid outage.
Pervasive: No
Reference: 85261

High Impact: Problems with the tape library resulted in poor pre-migration performance
Pervasive: No
Reference: 84397

Acute: Busy grid does not throttle workload and uses up all system resources resulting in a reboot

Pervasive: YES
Reference: 87018

Acute: For a TS7700 with no tape attachment, the physical library's operational state is set to offline. This causes incoming copies in a Grid to not get processed.
Pervasive: YES
Reference: 84910

Acute: After code upgrade cluster could not go online - failed to merge token information with an on-line cluster
Pervasive: No
Reference: 87545

Acute: Cluster will not go on-line after code upgrade when the cluster was set for Flash Copy D/R testing before the code upgrade
Pervasive: No
Reference: 83089

Acute: The WWID for worm volumes are not reconciled when a cluster is in service and comes back online
Pervasive: No
Reference: 88443

Acute: Recovery of a deleted logical volume fails if the volume size is > 2GB
Pervasive: No
Reference: 87938

Acute: During a DR of the system disk, the cache code did not properly identify that there was valid data on the cache and the cache was deleted

Pervasive: No
Reference: 87033

Acute: Channel adapter device driver (CADD) experiences a lock race condition and causes a dead lock.
Pervasive: No
Reference: 86255

Acute: Update firmware on cache fibre adapter to latest level.
Pervasive: No
Reference: 85533

Acute: Unreported DDM issues
Pervasive: No
Reference: 85224

Acute: Hardware issues may not be recovered from correctly due to a corrupted configuration file
Pervasive: No
Reference: 81330

Serious: Host write of header 1 (HDR1) label can fail after host issues a back space file (BSF) when stacking data on a volume

Pervasive: YES
Reference: 86702

Serious: Database REORG Stuck resulting in filling up active transaction logs and system rebooted
Pervasive: YES
Reference: 86658

Serious: Write fails when a volume was written past the logical end of tape (LEOT) warning and hits physical end of tape (PEOT) and returns the wrong length of data written
Pervasive: YES
Reference: 86068

Serious: 16Gb Host adapter code needs to save data pattern which caused DMA compression FIFO error, for failure analysis.
Pervasive: YES
Reference: 85460

Serious: EEH is triggered during TS7700 online because the receiver error bit in PCIX register is enabled.
Pervasive: YES
Reference: 84597

Serious: Modify the log collection to include additional status files
Pervasive: YES
Reference: 88412

Serious: Can't login with LDAP after installing vtd_exec.269
Pervasive: YES

Reference: 87966

Serious: Token audit not exchanging correct information in a R4.12 and R4.2 mixed configuration
Pervasive: YES
Reference: 87913

Serious: Cluster was flooded with library state change after exiting service
Pervasive: YES
Reference: 87391

Serious: Cluster reboots when LI REQ OTCNTL operation is initiated
Pervasive: YES
Reference: 86288

Serious: CSA cache drawer MES may fail with 4TB and 8TB DDMs configuration.
Pervasive: YES
Reference: 85903

Serious: Tape attached TS7700 experienced a stack overflow resulting in a reboot.
Pervasive: YES
Reference: 85797

Serious: Physical mounts would fail due to a database issue.
Pervasive: YES
Reference: 85565
Serious: False out of scratch condition when a storage pool with active data has a target reclaim pool that is different than the home pool.

Pervasive: YES
Reference: 85060

Serious: Writing large volumes with a dataclass that has Surface EOT set for 3490 Counters Handling will induce a 7084 error to be reported, causing a job abend.
Pervasive: YES
Reference: 85007

Serious: When Flash Copy/Write Protect operation takes more than 4 minutes internally, LI REQ command from the host times out and fails.
Pervasive: YES
Reference: 83067

Serious: Cluster reboots when checking the temporary removal threshold and a network issue occurs
Pervasive: No
Reference: 87986

Serious: Ficon panic
Pervasive: No
Reference: 87790

Serious: Logical volume mount fails and leaves drive in unusable state
Pervasive: No
Reference: 87692

Serious: Client deleted an existing dataclass and then was unable to read the data on a recall
Pervasive: No

Reference: 87604

Serious: Concurrent ESM replacement failed
Pervasive: No
Reference: 87577

Serious: Cluster rebooted because the grid component did not throttle the incoming requests and exhausted system resources
Pervasive: No
Reference: 87424

Serious: Ficon panic
Pervasive: No
Reference: 87415

Serious: Online database reorg held up transactions and the cluster rebooted
Pervasive: No
Reference: 87413

Serious: After mounting a tape, a rewind gets an equipment check error
Pervasive: No
Reference: 87276

Serious: Ficon panic
Pervasive: No

Reference: 87154

Serious: Over 200K damaged token interventions were generated resulting in MI issues, Token Reconcile...
Pervasive: No
Reference: 87032

Serious: When the data in SBM (Sequence Buffer Memory) is transferred from the adapter to CEC (central electronic complex), the data is split too small block and exhaust DMA resource.
Pervasive: No
Reference: 87028

Serious: Ficon Panic
Pervasive: No
Reference: 86490

Serious: A race condition occurs when collection adapter information from an adapter, an incoming message does not get processed or retried.
Pervasive: No
Reference: 86450

Serious: Ficon Panic During I/O
Pervasive: No
Reference: 86384

Serious: Database reorg hit a lock issue resulting in a cluster reboot
Pervasive: No

Reference: 86309

Serious: Mount fails after flash copy DR test.
Pervasive: No
Reference: 86251

Serious: 8Gb FICON adapter failed to write data with FICON-compression.
Pervasive: No
Reference: 85844

Serious: When the TS7700 back end tape drives cannot communicate with the physical tape library for an extended period of time, the TS7700 sometimes cannot automatically recover.
Pervasive: No
Reference: 85730

Serious: MDE 7084 may occur when using Surface EOT for 3490 Counters Handling option
Pervasive: No
Reference: 85582

Serious: Performing data secure erase on a private volume then attempting to write to that volume results in a corrupted volume
Pervasive: No
Reference: 85126

Serious: Mounts can be left pending at the host forever
Pervasive: No

Reference: 85083

Serious: Machine may reboot due to false alarm in new database transaction monitoring algorithm.
Pervasive: No
Reference: 84888

Serious: The TS7700 runs out of system resources causing the system to reboot.
Pervasive: No
Reference: 84822

Serious: Empty private volume may fail the mount when service-prep is in progress or a cluster which has the ownership is in service (or unavailable).
Pervasive: No
Reference: 84767

Serious: Private LVOLs written from BOT on 4.1.2 cluster cannot be read by another cluster at a lower code level when LVOL previously had data on it.
Pervasive: No
Reference: 84602

Serious: Changing dataclass of volumes existing before 4.1.2 code level to new compression method (LZ4 or ZSTD) causes LVOLs to be unreadable.
Pervasive: No
Reference: 84588

Serious: Channel adaptor device driver (CADD)detects a sequence error and reboots the box
Pervasive: No

Reference: 84564

Serious: Only secondary copy is recreated (no primary copy is recreated) by read only recovery
Pervasive: No
Reference: 84436

Serious: Ficon adapter unable to recover from adapter panic.
Pervasive: No
Reference: 84354

Serious: Host adapter Ficon panic when ficon switch is configured so that it polls RDP (Read Diagnostics Parameter) .
Pervasive: No
Reference: 84353

Serious: Volume close was stuck behind a system call resulting in selective resets
Pervasive: No
Reference: 83291

Serious: Excessive number of recalls queued up and no available tape drives resulted in a timeout and failed recall
Pervasive: No
Reference: 82733

Serious: Fast ready mount failed and left a volume locked
Pervasive: No

Reference: 81967

Serious: Conversion to 10GB grid links fails and cluster can't go online
Pervasive: No
Reference: 88487

Serious: Log collection hung up
Pervasive: No
Reference: 88457

Serious: During a code activation or exec.326 installation, running db tools can cause an import to fail
Pervasive: No
Reference: 88409

Serious: Offline replacement of the fibre channel card to the cache resulted in an elongated online because the server could not reach the storage
Pervasive: No
Reference: 88404

Serious: When performing a disaster recovery for the system disk, repeat attempts at recovery corrupted the filesystem.
Pervasive: No
Reference: 88341

Serious: The permissions on a login file are wrong and logins are blocked
Pervasive: No

Reference: 88126

Serious: Add recovery for local drive discovery when drives are not accessible
Pervasive: No
Reference: 88034

Serious: When a volume has a bad trailer, the trailer is rebuilt during the mount. If a cache error exists during this rebuild the mount will hang
Pervasive: No
Reference: 87832

Serious: Cluster rebooted when going offline
Pervasive: No
Reference: 87824

Serious: Code activation fails in processing the local disks available
Pervasive: No
Reference: 87668

Serious: Upgrade DB2 to 11.1 Mod 4
Pervasive: No
Reference: 87649

Serious: The library operational offline bit was left ON when it should be OFF after the physical library returned to a good state.
Pervasive: No

Reference: 87444

Serious: False CBR3750I message is posted when copy exported volumes become sunset after tape drives are upgraded
Pervasive: No
Reference: 87185

Serious: Code activation failed because of the existence of a temporary table
Pervasive: No
Reference: 87156

Serious: Cluster rebooted due to an invalid state transition
Pervasive: No
Reference: 87090

Serious: Frame Swap MES failed due to missing database files
Pervasive: No
Reference: 86834

Serious: LDAP users unable to login due to older TLS version, need to enable TLS V1.2
Pervasive: No
Reference: 86828

Serious: The ntc process was having an issue in synching and this prevented the update of the vital product data
Pervasive: No
Reference: 86801

Serious: MI user permissions not set correctly after code upgrade
Pervasive: No
Reference: 86591

Serious: Join failed because a needed server was not running
Pervasive: No
Reference: 86499

Serious: Service tool documentation and error prevention
Pervasive: No
Reference: 86259

Serious: Cluster rebooted due to a hung physical tape reclaim
Pervasive: No
Reference: 86238

Serious: After a frame swap MES, virtual devices above 256 could not be varied online
Pervasive: No
Reference: 86196

Serious: Certain database values are not transferred over correctly from the source cluster to the target cluster during a frame swap.
Pervasive: No
Reference: 85940

Serious: Grid join precheck may fail with errors pertaining to NTP configuration.
Pervasive: No
Reference: 85906

Serious: Code activate fails when there are more than 50k records in the grid to grid merge (GGM) table
Pervasive: No
Reference: 85676

Serious: Prevent enhanced error handling (EEH) after re-boot for ficon host adapters.
Pervasive: No
Reference: 85628

Serious: Grid join precheck may fail with errors pertaining to NTP configuration.
Pervasive: No
Reference: 85603

Serious: Code activation time elongated due to cleanup of excessive number of temporary files
Pervasive: No
Reference: 85410

Serious: Hdisk replacement fails when AIX is reporting missing status
Pervasive: No
Reference: 85319

Serious: Can't restart a first time install in a DR situation (VTD_EXEC.317)
Pervasive: No
Reference: 85256

Serious: On a TS7700 using LDAP, excessive calls to check if http is enabled causes a memory leak.
Pervasive: No
Reference: 85114

Serious: Error being reported was not defined in the Information Center
Pervasive: No
Reference: 85104

Serious: When pre-check fails during an unjoin and user abandons the process, the unjoin flag is not cleaned up.
Pervasive: No
Reference: 85035

Serious: Activation failed due to database backups being taken while the database backup file system was not mounted.
Pervasive: No
Reference: 84541

Serious: Not all data collected due to incorrect data collection rules.
Pervasive: No
Reference: 84123

Serious: Cluster will not go online due to token ownership transfer issues
Pervasive: No
Reference: 83933

Serious: Timing issue and the second phase of activation did not update the status before the server rebooted.
Pervasive: No
Reference: 83832

Serious: Ran out of dynamic memory allocations (DMA) contexts in host busy situation resulting in reboot.
Pervasive: No
Reference: 83364

Serious: LDAP port was not configured causing system check to report Degraded status.
Pervasive: No
Reference: 82372

Serious: Data collection should collect all vtd_exec logs regardless when they were created.
Pervasive: No
Reference: 82237

Serious: When a cluster is removed from grid, depending how busy the rest of grid is, there is a tiny timing window where VPD information exchange among the rest of remaining cluster may not be sequential.
Pervasive: No
Reference: 81992

Serious: Ficon host adapter code panic resulting in job abends.
Pervasive: No
Reference: 81305

Serious: Database table synchronization in grid fails to delete temporary files.
Pervasive: No
Reference: 80830

Moderate: Ping -S does not work with new Cisco feature
Pervasive: YES
Reference: 88136

Moderate: Background token merge threads get stuck due to network hiccups which can result in stuck copies because hot tokens are not resolved.
Pervasive: YES
Reference: 84930

Moderate: When collecting data from a TPF environment the rasutil dump is impacting system performance
Pervasive: YES
Reference: 88390

Moderate: BVIR output filling up a filesystem
Pervasive: YES
Reference: 87842

Moderate: Li Req STATUS,GRID on pre R4.0 cluster does not show status from R4.0 or later clusters.

Pervasive: YES
Reference: 81585

Moderate: The system monitoring process was not running on a cluster
Pervasive: YES
Reference: 81366

Moderate: Report tape drive encryption issue in a timely manner
Pervasive: No
Reference: 87988

Moderate: Add multi path I/O (MPIO) checks to cache to the regular system checks
Pervasive: No
Reference: 87144

Moderate: System check reports degraded when grid links and gateway share the same subnet.
Pervasive: No
Reference: 84338

Moderate: 16GB adapter code panic resulting in job abends.
Pervasive: No
Reference: 85606
Moderate: Sick-but-not-dead algorithm introduced in 8.412 may locally fence a cluster if there is a database timeout involving a volume that contains D401 in the label.
Pervasive: No
Reference: 84931

Moderate: The fix to allow the usage of wildcards for ldaps users didn't consider the scenario when the cluster is offline or in service, so ldap users matching the wildcard pattern won't be able to access the MI while the cluster is not fully online.
Pervasive: No
Reference: 86668

Moderate: When Flash Copy Disable command is issued and one of DR family member still mounts a volume, the command fails and the subsequent Flash Copy Disable command all hang until the cluster is rebooted.
Pervasive: No
Reference: 83879

Moderate: Provide a tool for relabeling many tapes
Pervasive: No
Reference: 88438

Moderate: Cluster Unjoin Resulted in Damaged Tokens
Pervasive: No
Reference: 87155

Moderate: Fence alert threshold set too low on busy system
Pervasive: No
Reference: 86925
Moderate: Permissions not set correctly on directory resulting in error executing database recovery tools
Pervasive: No
Reference: 84306

Moderate: Transport Layer Security (TLS) 1.2 with sp800 transition mode is failing the ssl handshake causing Management Interface to be unusable.
Pervasive: No
Reference: 84029

Moderate: Tape daemons are kept offline after the third attempt to restart since online, improve the logic and allow up to 5 restarts a day and the counter is reset daily.
Pervasive: No
Reference: 87709

Moderate: Moving >30TB of data to the premigration queue caused a cluster to hang
Pervasive: No
Reference: 87708

Moderate: Resource contention when many mounts come in at the same time
Pervasive: No
Reference: 87295

Moderate: Cancel on a channel resulted in a halt on the subchannel
Pervasive: No
Reference: 86926

Moderate: After the join, Grid Copy to joined cluster invoked by COPYRFSH can get stuck.
Pervasive: No
Reference: 86424

Moderate: Lvols on cache file system are not migrated to tape.
Pervasive: No
Reference: 86163

Moderate: Ficon host adapter panic followed by adaptor reset resulted in adaptor getting re-initialized with an incorrect setting.
Pervasive: No
Reference: 85554

Moderate: When customer uses logical volume with maximum size too small to contain all the records in a database with millions of logical volumes, the BVIR Volume Status request specifying all records (parameter__) to be returned will result in a file handle leak.
Pervasive: No
Reference: 85236

Moderate: After a frame swap MES, incorrect pmthlvl and pmprior values calculated because of Feature Code 5274 (Enable 1TB Tape Capacity) mismatch
Pervasive: No
Reference: 84507

Moderate: LI REQ OTCNTL operation can't be stopped.
Pervasive: No
Reference: 84423
Moderate: Copies delayed for 16 hours, suspect cache issue need first time data capture
Pervasive: No
Reference: 82550

Moderate: Cache started filling and the auto removal was slow because the scratch removal candidates were small and many
Pervasive: No
Reference: 82315

Moderate: Beta-Display # of each feature key installed on smit display FC's
Pervasive: No
Reference: 88845

Moderate: On a V5K cache, code activation failed in validating that local encryption was enabled because the usb key drive was not installed
Pervasive: No
Reference: 88842

Moderate: MI tape encryption must use IP address as workaround
Pervasive: No
Reference: 88832

Moderate: Hot swap of chaple card failed
Pervasive: No
Reference: 88763

Moderate: V5K Configuration changes
Pervasive: No
Reference: 88731

Moderate: After code activation the MI main page is not loading
Pervasive: No
Reference: 88017

Moderate: Send a message to the host when Physical Library is in a degraded state
Pervasive: No
Reference: 88009

Moderate: MI event related to tape drive encryption was not automatically cleared
Pervasive: No
Reference: 87927

Moderate: Online processing did not clean up the copy queue correctly
Pervasive: No
Reference: 87600

Moderate: LDAP port change results in users unable to login
Pervasive: No
Reference: 87285

Moderate: Service-prep on a cluster did not complete due to incomplete CUIR vary-offline devices using the incorrect WWNN
Pervasive: No
Reference: 87282

Moderate: Provide construct information in dump output
Pervasive: No
Reference: 87162

Moderate: Compressed volumes using LZ4 or ZSTD do not show as compressed
Pervasive: No
Reference: 87134

Moderate: Error notification on re-insert of bad cartridge
Pervasive: No
Reference: 87100

Moderate: The number of available cells in the library is reported as 0.
Pervasive: No
Reference: 87092

Moderate: Working with planned tape library outage
Pervasive: No
Reference: 86812

Moderate: On 16Gb Ficon adapter, compression ratio of write data is not worse than 8Gb ficon.   This issue is recreated only during Ficon compression. No problem on software compression.
Pervasive: No
Reference: 86684

Moderate: Virtual volume details not displayed correctly after copy export.

Pervasive: No
Reference: 86646

Moderate: A file handle leak in database directory cleanup code will cause various database operations to fail.
Pervasive: No
Reference: 86628

Moderate: Various database changes performed during a join/merge may lead to volume ownership issues or stuck copies after issuing a copy refresh.
Pervasive: No
Reference: 86496

Moderate: Add new operator messages to let RMM know ejected and copy exported volumes information
Pervasive: No
Reference: 86467

Moderate: Unexpected ownership change occurred after LI REQ COPYRFSH completes.
Pervasive: No
Reference: 86222

Moderate: User program receives unexpected wrong result from TS7700 16Gb FICON host adapter for Read Buffer Log command to a tape device. i.e. Failure on Read Buffer Log command to the tape device.
Pervasive: No
Reference: 86210

Moderate: When cluster and URL association fails, error event message may be confusing because it does not indicate cloud container name.

Pervasive: No
Reference: 86206

Moderate: Admin user name in the Management Interface gets repopulated after a code upgrade despite being previously deleted.
Pervasive: No
Reference: 86139

Moderate: If a DDM goes into an Unresponsive State, no MI event and host notification is sent out.
Pervasive: No
Reference: 86089

Moderate: Incorrect task message is displayed when a cloud configuration is updated while cloud premigration is running on another cluster in the same Grid.
Pervasive: No
Reference: 86078

Moderate: Obsolete LVOL_TO_CLOUD records remain incorrectly.
Pervasive: No
Reference: 86075
Moderate: Atape rejects the tape operation after the drive code is remote upgraded or a tape drive is replaced. Atape works as design to also check if the version of drive code is match as that one during Atape configured this drive.
Pervasive: No
Reference: 85933

Moderate: Online Reorg doesn't complete and the cluster needs to be rebooted for the recovery.

Pervasive: No
Reference: 85753

Moderate: Memory leak resulted in MI failure
Pervasive: No
Reference: 85669

Moderate: Auto sense data is overrode when run Reset and Check path commands in passthru mode.
Pervasive: No
Reference: 85511

Moderate: Copy Export Recovery/Copy Export Merge may fail on microcode 8.41.200.63 or above.
Pervasive: No
Reference: 85462

Moderate: Prioritized reclamation of a physical tape was not honored
Pervasive: No
Reference: 85431

Moderate: AOTM check gets alerted because TSSC code level is older than 8.4.4.
Pervasive: No
Reference: 85346

Moderate: The /var directory on the TS7700 gets full and a call home is generated
Pervasive: No
Reference: 85312

Moderate: Cache throttle reported incorrectly.
Pervasive: No
Reference: 85277

Moderate: Provide capability to collect dump data from all clusters in a grid from a single cluster.
Pervasive: No
Reference: 85183

Moderate: When pre-check fails during an unjoin and user abandons the process, the unjoin flag is not cleaned up.
Pervasive: No
Reference: 85076

Moderate: Dump of the database component data caught on a system call to hdb_status and cluster rebooted
Pervasive: No
Reference: 84980

Moderate: Reading previous format logical volume will update database to latest level.
Pervasive: No
Reference: 84937

Moderate: Include cluster list information in MRPD
Pervasive: No
Reference: 84621

Moderate: Used an old mechanism to create SSL connections which could cause connectivity errors under certain circumstances.
Pervasive: No
Reference: 84497

Moderate: Active task status is not replicated across the grid resulting in a task to be left open.
Pervasive: No
Reference: 84447

Moderate: System check shows FAILED message for NTP server when cluster is offline or in service mode.
Pervasive: No
Reference: 84282

Moderate: Offsite reclamation of a copy export tape fails
Pervasive: No
Reference: 84267

Moderate: Ficon1 enhanced error handling (EEH) causes system to go down until power drain.
Pervasive: No
Reference: 83696

Moderate: Provide the customer with a knob to manage the removal of E (exists) copies
Pervasive: No
Reference: 82857

Moderate: TS7700 may report DR setup error to host due to VPD errors, enhance VPD to prevent errors.
Pervasive: No
Reference: 82157

Moderate: Column Size/MiB Used in Damaged Virtual Volume Details page shows 0 when the volser have less than 1 MB of data.
Pervasive: No
Reference: 81756

Moderate: Information regarding installed execs is lost after a cluster renumber
Pervasive: No
Reference: 81057

Moderate: Improve the efficiency of the periodic cache walk consistency checks
Pervasive: No
Reference: 80991

Moderate: Copy export merge should fail immediately if not run on the lowest level cluster in the grid.
Pervasive: No
Reference: 80129

Moderate: Unable to access LDAP after cluster join
Pervasive: No
Reference: 79550

Moderate: Error modifying management class when containing Portuguese characters
Pervasive: No
Reference: 76867

Moderate: Under poor network conditions, WAN test can appear to hang because it takes a long time to complete.
Pervasive: No
Reference: 68197

Service: False out of scratch warnings for physical tape
Pervasive: YES
Reference: 85725

Service: Security scanners complaining about missing a HTTP header that provides more protection against direct attacks.
Pervasive: No

Reference: 86636

Service: Change host alert status from serious to informational when the code generates a drive dump
Pervasive: No
Reference: 86618

Service: When confirming cache drawer installation on a VED/V5K the incorrect leds were illuminated
Pervasive: No
Reference: 88683

Service: Operator interventions are not closed out with the correct id making it appear that they are still open
Pervasive: No
Reference: 87922

Service: Cache hit vs Cache Miss reported incorrectly via MI
Pervasive: No
Reference: 87509

Service: MI not operational due to a large number of events
Pervasive: No
Reference: 87035

Service: If using LDAP there is no way to login into the box locally.
Pervasive: No
Reference: 85249

Service: The aix_cfg script is missing capabilities required for troubleshooting
Pervasive: No
Reference: 85054

Service: Incorrect physical tape drive location displayed when attached to 3584 tape library.
Pervasive: No
Reference: 84443

Service: A tape event is cleared even though the problem persists
Pervasive: No
Reference: 84351

Service: Grid core /reboot HDB logging shows current context count negative
Pervasive: No
Reference: 88240

Service: Correct the severity of events G0005 and G0030 from informational to warning
Pervasive: No
Reference: 87071

Service: Disable Archive Mode Unthread (AMU) support on 3592 E08 and 60F tape drives
Pervasive: No
Reference: 86886

Service: System check Incorrectly reporting logical volume issue
Pervasive: No
Reference: 87477

Service: Unnecessary routine calls resulting in excessive logging
Pervasive: No
Reference: 87294

Service: Stand-alone dump from z/OS fails when data spans multiple tapes
Pervasive: No
Reference: 86826

Service: Process for a tape attached system being monitored under disk only systems.
Pervasive: No
Reference: 84884

Service: Mount fails because of auto removal activity
Pervasive: No
Reference: 84317

Service: Stale user sessions need to be terminated
Pervasive: No
Reference: 83480
Service: Grid could not query state of other clusters resulting in a reboot
Pervasive: No
Reference: 82421

Service: Failed to eject sunset JA media
Pervasive: No
Reference: 87147

Improvement: New LI REQ feature to allow the client to set the copy queue warning threshold to a value other than >= 24 hours
Pervasive: YES
Reference: 79137

Improvement: Beta-no help section in the security settings for Endpoint identification on LDAPS connections
Pervasive: No

Reference: 88907

Improvement: Reporting of adaptor information is out of order
Pervasive: No
Reference: 86827

Improvement: Customer knowledge center expire hold descriptions required updating
Pervasive: No
Reference: 86568

Improvement: Event description mis-spelled scratch.
Pervasive: No
Reference: 85560

Improvement: Customer had issues searching Knowledge Center for read only recovery (ROR).
Pervasive: No
Reference: 84757

Improvement: Increase the number of grid logs to allow for more effective data capture
Pervasive: No
Reference: 88098

Improvement: Capture additional data on write error with header 1 (HDR1) following header 2 (HDR2)
Pervasive: No
Reference: 88097

Improvement: Need to run new devscan tool to help determine mpio issues
Pervasive: No
Reference: 87968

Improvement: Include the DEVSACN tool on the TS7700 to allow development additional resource for troubleshooting issues with pathing to the cache
Pervasive: No
Reference: 87964

Improvement: Core dump for TS7700 Removable Media Manager process occurred and the dump file was not collected by Call Home.
Pervasive: No
Reference: 85645

Improvement: Need more information gathered when a machine reboots to better understand root cause
Pervasive: No
Reference: 84679

Improvement: Modified log collection to collect shutdown logs.
Pervasive: No
Reference: 82948

Improvement: Added additional logging during merge/join needed for failure analysis.
Pervasive: No
Reference: 82153

Improvement: Add AIX dump to data collection.
Pervasive: No
Reference: 81481

Improvement: NPS survey changes
Pervasive: No
Reference: 87702

Improvement: New function - a host can only see the volumes which can be accessible from the host only through PLF-PRSD-IV
Pervasive: No
Reference: 87658

Improvement: New function to track memory usage by components
Pervasive: No
Reference: 87586

Improvement: Need to collect more channel path data to troubleshoot channel errors
Pervasive: No
Reference: 87454

Improvement: Slow mounts/close were experienced when using device allocation assist (DAA)
Pervasive: No
Reference: 87279

Improvement: Add recovery for physical mounts when the tape library aborts a move command
Pervasive: No
Reference: 87250

Improvement: Provide a knob to allow customers to identify that the attached tape library is in service. When exiting service improve the throttling of premigrating the data to tape.
Pervasive: No
Reference: 87029

Improvement: Add database reorg information to Knowledge Center.
Pervasive: No
Reference: 85807

Improvement: Provide longest copy queue age (family deferred/time delayed/others (except those)) into stats.
Pervasive: No
Reference: 85465

Improvement: Management Interface needs to be updated in order to allow up to 128 excluded categories.
Pervasive: No
Reference: 85208

Improvement: Increase the number of write-protect excluded categories which customers can define from 32 to 128.
Pervasive: No

Reference: 85204

Improvement: Allow hot swap of the I/O drawer
Pervasive: No
Reference: 84871

Improvement: Collect additional information with call home data.
Pervasive: No
Reference: 84689

Improvement: Tool to support field analysis
Pervasive: No
Reference: 84553

Improvement: There is no method to re-label a physical tape when the external and internal labels do not match.
Pervasive: No
Reference: 84496

Improvement: Fencing a cluster after 30 minutes of slow cache activity is too long need the 30 minute threshold lowered to 10
Pervasive: No
Reference: 84393

Improvement: Include battery install time in MRPD
Pervasive: No
Reference: 84137

Improvement: LI REQ to force the relabeling of a physical tape on next write at beginning of tape
Pervasive: No
Reference: 84108

Improvement: Do not move the logical volume ownership by COPYRFSH and other internal functions other than the host I/O and LI REQ OTCNTL.
Pervasive: No
Reference: 84027

Improvement: New function add packet retransmission statistics to grid link statistics
Pervasive: No
Reference: 83441

Improvement: Allow delete expire to expire more than 2000/hr
Pervasive: No
Reference: 82894

Improvement: New LI REQ feature to initiate service-prep
Pervasive: No
Reference: 82404

Improvement: Sessions are being left active by TSSC when users do not exit gracefully.
Pervasive: No
Reference: 82358

Improvement: Provide LI REQ to get up to 40 copy jobs for various types. Also provide LI REQ to cancel copy job.
Pervasive: No
Reference: 82333

Improvement: vtd_execs that were installed prior to code activation are not listed
Pervasive: No
Reference: 79089

Improvement: Provide active copy job in-flight time (duration) in LI REQ, COPY, ACTIVITY.
Pervasive: No
Reference: 78950

Improvement: Allow users to change an expired password
Pervasive: No
Reference: 78803