TS7700 Release Notes - 8.42.2.12 (R4.2 PGA2)

IBM System Storage TS7700

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

- EC: M14425 released October 23, 2019

New Function Supported:
- **None**

TS7700 CODE REQUIREMENTS

TS7700	8.42.2.12 (EC **M14425**, PN **02PY911**, **02PY912** and **02PY913** (DVD 1, 2 & 3))
DB2	11.1.0.0 Informational tokens: "DB2 v11.1.0.0", "s1606081100", "DYN1606081100AIX", and Fix Pack "0"
AIX Base Level	7.2.2.0
AIX Fixpack	7200-02-01-1731+04
HV32 Firmware	AL730_152
TCT	Version=1.1.5.1, RPM_BuildNumber=22
Cloud Support	IBM Cloud Object Storage System (COS) appliance solution Version 3.14.2.100 S3 Protocol
	AWS, S3 Protocol
TS3500 (Anaconda) Firmware	H010
TS4500 (Anaconda) Firmware	1600_B00
3592 E06 Tape Drive 3592 E07/EH7 Tape Drive 3592 E08/EH8 Tape Drive	883 D88 990
TSSC	8.6.6
3956-CC7/CS7 Firmware Storage Manager GUI	07.60.63.00 11.10.0G05.0023
3956-CC8/CS8 Firmware Storage Manager GUI	07.84.54.00 11.10.0G05.0023
3956-CC9/CS9 Firmware Storage Manager GUI	08.20.27.00 11.30.6528.0
3956-CSA Firmware Storage Manager GUI	08.30.50.00 11.30.6528.0
ISKLM	3.0.1.0
Atape	13.0.24.0

GPFS	Release 5.0.1.0
SSPC	1.3.1, 1.3.2, 1.5
ITDT	9.3.1.20190326
AIX Diagnostics CD	V7.1.1.0 (EC M13368, PN 95P7969)
4Gbit Emulex Switch Firmware	3.55
8Gbit Emulex Switch Firmware	1.7
4Gbit Host FICON Firmware	BJ273X15
8Gbit Host FICON Firmware	BJ113X2
16Gbit Host FICON Firmware	8.0.9
Mandatory VTD EXECs	N/A.

PROBLEM FIXES:

Problems fixed in this level are described below. There are 176 enhancements/defects fixed in this release; 88 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: 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

Acute: Busy grid does not throttle workload and uses up all system resources resulting in a reboot
Pervasive: YES
Reference: 87018

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: 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: Unreported DDM issues
Pervasive: No
Reference: 85224

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

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

Serious: Can't login with LDAP after installing vtd_exec.269
Pervasive: YES
Reference: 87966

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

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

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

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

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

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: Update the cache firmware to latest level
Pervasive: No
Reference: 87275

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

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

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

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

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

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

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

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

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: Fence alert threshold set too low on busy system
Pervasive: No
Reference: 86925

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: 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: 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: 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: 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: 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: Admin username 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: Online Reorg doesn't complete and the cluster needs to be rebooted for the recovery.
Pervasive: No
Reference: 85753

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

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

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

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

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

Service: Cache MES with mixed cache containing ds3k fails
Pervasive: No
Reference: 87634

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: Grid could not query state of other clusters resulting in a reboot
Pervasive: No
Reference: 82421

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

Improvement: Customer knowledge center needed updating for read only recovery information
Pervasive: No
Reference: 86679

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

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

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

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

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