

TS7700 Release Notes - 8.51.1.26 (R5.1 PGA1)

IBM System Storage TS7700

Release Notes for the TS7700 (3957 VED / VEC)

- EC: P25133 released February 19, 2021

New Function Supported:

- DS8K Object Store Compression/Encryption
- Cloud/Tape Export and DR Recovery
- DS8K Offload
- Multi Cloud from Single Pool
- MI Performance improvements

TS7700 CODE REQUIREMENTS

TS7700	8.51.1.26 (EC P25133, PN 02XX323, PN 02XX324, PN 02XX325, PN 02XX326 (DVD 1, 2, 3 & 4))
DB2	v11.1.4.5 Informational tokens are "DB2 v11.1.4.5", "s1911120100", "DYN1911120100AIX", and Fix Pack "5"
AIX Base Level	AIX 7.2.4.0
AIX Fixpack	7200-04-01-1939+03
P9 Server Firmware	FW940.10 (VL940_050)
P8 Server Firmware	FW860.70 (SV860_205)
TCT	Version=1.1.8-1281
Cloud Support	IBM Cloud Object Storage System (COS) appliance solution Version 3.14.2.100 April Maintenance Release (Storage_COSS_3.14.2.100) / S3 Protocol AWS, S3 Protocol
TS4500 (Anaconda) Firmware	1703-A00
TS3500 (Anaconda) Firmware	H010
3592 E06 Tape Drive 3592 E07 Tape Drive 3592 E08 Tape Drive	D3I3_DCB D3I4_B12 D3I5_69E
TSSC	9.1.7
3956-CSB (2072-312 V5030E) Firmware	8.3.1.2
HDD (3956-CSB)	Seagate Evans Non-SED 7200 rpm, 10TB, SAS 12Gb/s 4Kn / FW BCL3 Seagate Tatsu Non-SED 7200 rpm, 10TB, SAS 12Gb/s 4Kn / FW lvi BCGA

	Seagate Mobula Non-SED 7200 rpm, 10TB, SAS 12Gb/s 4Kn / FW lvl BCHB
3956-CSA Firmware Storage Manager GUI	08.40.60.01 11.30.0A05.0037 Storage Manager GUI level
GKLM	4.1.0.0
Atape	13.0.36.0
GPFS	GPFS Release 5.0.5.1
ITDT	9.3.0.20181029
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	

Platform Requirements Matrix

Test	Software Level
zOS	V2R4
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
Brocade 8510-8 IBM 2499-816	8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1e, 8.2.2a, 8.2.2b, 8.2.2c, 8.2.2d

(SAN768B-2)	
Brocade 8510-4 IBM 2499-416 (SAN384B-2)	8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1e, 8.2.2a, 8.2.2b, 8.2.2c, 8.2.2d
Brocade 6510 IBM 2498-F48 (SAN48B-5)	8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1e, 8.2.2a, 8.2.2c, 8.2.2d
Brocade 7800 IBM 2498-R06 (SAN06B-R)	7.4.0a, 7.4.1b, 7.4.1d, 7.4.2g, 8.1.2j, 8.2.2a, 8.2.2b
Brocade 7840 IBM 2498-R42 (SAN42B-R)	8.0.1b, 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1c, 8.2.1e, 8.2.2a, 8.2.2b, 8.2.2c, 8.2.2d, 8.2.2d
Brocade X6-8 IBM 8961-F08 (SAN512B-6)	8.0.1b , 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1e, 8.2.2a, 8.2.2b, 8.2.2c, 9.0.0b
Brocade X6-4 IBM 8961-F0 (SAN256B-6)	8.0.1b , 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1e, 8.2.2a, 8.2.2b, 8.2.2c, 9.0.0b
Brocade 620 IBM 8960-F64 8960-N64 (SAN64B-6)	8.0.1b , 8.0.2b, 8.0.2b2, 8.1.0c, 8.1.2a, 8.1.2b2, 8.1.2j, 8.1.2k, 8.2.0a, 8.2.1a, 8.2.1e, 8.2.2a, 8.2.2b, 8.2.2c, 9.0.0b
Brocade X7-8 IBM 8961-F78 (SAN512B-7)	0.0.0b
Brocade X7-4 IBM 8961-F74 (SAN256B-7)	9.0.0b
Brocade G720	9.0.0b

IBM 8960-R64/8960-P64 (SAN64B-7)	
Cisco MDS9250i IBM 8977-R50 (SAN50C-R)	6.2(11d), 6.2(11e), 6.2(11e), 8.1(1a), 8.1(1b), 8.4(1a), 8.4(2), 8.4(2b)
Cisco MDS9710 IBM 8978-E08 (SAN384C-6)	6.2(5a), 6.2(5b), 6.2(11c), 6.2(11e), 8.1(1a), 8.1(1b), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
Cisco MDS9706 IBM 8978-E04 (SAN192C-6)	6.2(5a), 6.2(5b), 6.2(11c), 6.2(11e), 8.1(1a), 8.1(1b), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)

PROBLEM FIXES:

Problems fixed in this level are described below. There are 233 enhancements/defects fixed in this release; 50 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: Host IO, tape/cloud premigration stop suddenly.

Pervasive: No

Reference: 90443

Acute: LWORM volume could not be appended when a bad trailer was encountered.

Pervasive: No

Reference: 90304

Acute: Add the ability to change the logical volume compression type to help with access to the logical volume.

Pervasive: No

Reference: 90296

Acute: EXISTDEL function moves the ownership but does not move it back to the original cluster.

Pervasive: No

Reference: 89946

Serious: Special operation to invalidate copy job token may leave the token in locked state.

Pervasive: No

Reference: 90838

Serious: Once AWS cloud URL is created with SSL certificate, the cloud URL cannot be modified if none is selected as SSL certificate.

Pervasive: No

Reference: 90418

Serious: During join/merge operation an existing I/O running cluster may fail to mount a new vol.

Pervasive: No

Reference: 90352

Serious: Cache firmware update for CSB and XSB cache types.

Pervasive: YES

Reference: 89787

Serious: Regeneration of keys for CSB cache type for External and Local encryption types is only happening for String0 (base cache).

Pervasive: No

Reference: 90725

Serious: Post AIX error report entry to indicate tape library is in Maintenance Mode.

Pervasive: No

Reference: 90674

Serious: MI shows a ddm has been copying back for 191 hours but TS7700 does not show any errors.

Pervasive: No

Reference: 90617

Serious: Detect low TX power on Bluefish FCP adapter, report error in vtd_check and generate a call home.

Pervasive: No

Reference: 90516

Serious: Eject fails when the eject target volume is being used as source of Grid Copy.

Pervasive: No

Reference: 90399

Serious: Within the internal TS7700 database, a memory issue occurred, causing the database to terminate. Once the database aborts, all other critical TS7700 processes that use the database in real-time also abort, causing the machine to reboot.

Pervasive: No

Reference: 90375

Serious: A Grid to Grid Migration copy isn't executed and the pending copy can't be cleared.

Pervasive: No

Reference: 90359

Serious: Grid join failed check point restart does not restart at correct location.

Pervasive: No

Reference: 90312

Serious: Disable the automation of db2 health checks to avoid conflict with 7700 activity

Pervasive: No

Reference: 90221

Serious: Database re-org fails to run due to missing hourly database statistics.

Pervasive: No

Reference: 89977

Serious: After a long time without restart Management Interface, Websphere's default log increase its size big enough to fill /dev/hd2 partition.

Pervasive: No

Reference: 88066

Moderate: Enable MDE_B067 (Early expire for time delayed Premig not working) to call home.

Pervasive: No

Reference: 90703

Moderate: Early Expiration does not work and CPx enters over commit state.

Pervasive: No

Reference: 89240

Moderate: When a machine in the field calls home, db2 support data is not included in the hydradump.

Pervasive: No

Reference: 90491

Moderate: Excessive database connections need to be closed to prevent fenced cluster.

Pervasive: No

Reference: 90660

Moderate: There is a possibility that the number of Premigs does not increase expectedly when large value is set to PMTHLVL.

Pervasive: No

Reference: 90818

Moderate: Auto-removal was slow because HSM was deleting small volumes in scratch category when there is no host write but grid copy writes.

Pervasive: No

Reference: 90732

Moderate: Primary physical volume or grid copy is not selected when ROR fails to recall from a read only physical volume which is set as a secondary physical volume.

Pervasive: No

Reference: 90073

Moderate: Multiple drives going offline w/o callhome, causing delay in production (throttling).

Pervasive: YES

Reference:

Moderate: Unable to enable dual control via the Management Interface.

Pervasive: No

Reference: 90744

Moderate: PLF-PRSD-ID/IVC/CID don't consider SDAC configuration properly when the request comes from over 0xFF devices.

Pervasive: No

Reference: 90738

Moderate: Block code updates from 8.412.x.x and below to 8.51.x.x microcode level, only 8.42.x.x and higher to 8.51x.x is allowed.

Pervasive: No

Reference: 90702

Moderate: P1 volumes not migrated out of cache when cloud attached - cache shows over-committed on CP1

Pervasive: No

Reference: 90637

Moderate: Specifying 0 for any EKM port can result in unwanted alert messages.

Pervasive: No

Reference: 90553

Moderate: Copy export is not filling tapes and resulting in partially filled tapes

Pervasive: No

Reference: 90510

Moderate: Management interface shows information for cluster B even though accessing cluster A.

Pervasive: No

Reference: 90430

Moderate: During Remove/Replace of tape switch failed to detect adapter card port to execute switch replacement.

Pervasive: No

Reference: 90150

Moderate: Copy export uses more tapes than expected.

Pervasive: No

Reference: 87401

Moderate: BVIR Volume Status reports -1 as partition for TS7700 Disk Only and tape attach cluster.

Pervasive: No

Reference: 87323

Service: Improve Cloud Daemon error handling during reboot.

Pervasive: No

Reference: 90337

Service: Unexpected CHECK3 is reported in the selective reset code path.

Pervasive: No

Reference: 90557

Service: Hardware FC Adapter TEMP error was calling home.

Pervasive: No

Reference: 89169

Service: Join fails with incorrect logging when ownership movement of global lock fails.

Pervasive: No

Reference: 85501

Service: Mount process proceeds to open lvol despite that the mount was canceled and the lvol was not actually recalled. This causes entry into error recovery path.

Pervasive: No

Reference: 90438

Improvement: Update Dual Control help to add dual control requires custom roles to remove any permissions around access.

Pervasive: No

Reference: 90762

Improvement: Library Request command syntax incorrect for Tape library removal policies.

Pervasive: No

Reference: 90579

Improvement: First Time Data Capture fix to increase log collection for a week or more.

Pervasive: No

Reference: 90490

Improvement: BVIR starts failing if multiple valid copy modes are set to the BVIR volume.

Pervasive: No

Reference: 90713

Improvement: The Knowledge Center (KC) incorrectly states FC 3401 as plant only. It should be plant and field.

Pervasive: No

Reference: 90580

Improvement: Improve q_disk script to detect Sever P-Disk hardware failures.

Pervasive: No

Reference: 90405

Improvement: Customer KC incorrect the number of logical volumes that can be inserted is up to 100K volumes at a time currently it states only up 10K volumes.

Pervasive: No

Reference: 89403

Improvement: CPx entered over commit state and host write became very slow.

Pervasive: No

Reference: 89313