

# TS7700 Release Notes - 8.60.0.115 (R6.0)

IBM System Storage TS7700

Release Notes for the TS7700 (3957/3948 VED/VEF )

- EC: N99205 released December 6, 2024

## New Function Supported:

- **TS7780 3948 VEF F08 Hardware Refresh**
- **32Gbps Fiber Channel Switch for Tape Attached TS7780**
- **32GB FICON Support**
- **Safe Guarded Export**
- **Disaster Recovery Testing with Objects**
- **Single Expansion Frame (2 Strings)**

## TS7700 CODE REQUIREMENTS

TS7700	8.60.0.115
DB2	V11.5.9.0_43682
AIX Base Level	AIX 7.2.5.207
AIX Fix pack	7200-05-08-2420+4
P9 Server Firmware	FW950.B0 (VL950_149)
Cloud Support	IBM Cloud Object Storage System (COS) appliance solution Version 3.16.8.49
	AWS, S3 Protocol
TS4500 (Anaconda) Firmware	1.8.0.4-B00
TS3500 (Anaconda) Firmware	H015
3592 E07 Tape Drive	EH7_DCB EH8_C8E
3592 E08 Tape Drive	60F_894
3592 60F Tape Drive	
TSSC	V9.6.10
CFD Firmware	8.7.0.0

P9+ Server drives (VEF)	Seahawks3 NVMe 6.4TB (PN: 01CM551)
HDD Disk Drives for 3948-CFD / 3948-XSD	<p>Seagate Exos X20 20TB, ISE, 3.5 inch, 7200RPM, SAS 12Gb/s, tier_nearline FW ECQ5 (PN: 00VN587)</p> <p>Seagate; Summit; 20000GB; 3.5"; 7.2k; SAS; 12Gb/s; 4Kn; SED (PN: 00VN593)</p> <p>WesternDigital (WD) WUH722020BL420 20TB, ISE, 3.5 inch, 7200RPM, SAS 12Gb/s, tier_nearline FW N6Z1 (PN: 00VN588)</p> <p>WesternDigital(WD) WUH722020BL4201 20TB, ISE, 3.5 inch, 7200RPM, SAS 12Gb/s, tier_nearline FW N6Z1 (PN: 00VN588)</p>
SSD Disk Drives for 3948-CFD / 3948-XFD	<p>Kioxia KPM6XRUG15T3 PM6 15TB, ISE, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash FW S6E8 (PN: 00VN940)</p> <p>Kioxia KPM7VRUG15T3 PM7 15.36TB, SED, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash FW S7S3</p>

	<p>(PN: 00VN977)</p> <p>Samsung MZILG15THBLA PM1653 15TB, ISE, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash FW SS82</p> <p>(PN: 00VN967)</p> <p>Samsung MZILT15THALA PM1643A 15TB, ISE, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash FW MS74</p> <p>(PN: 00VN386)</p> <p>Samsung ZILT15THMLA PM1643 15TB, ISE, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash FW MS3E</p> <p>(PN: 00VN331)</p> <p>Seagate, Jofa, 15360GB, 2.5", SAS, 12Gb/s, 1 DWPD, Non-SED</p> <p>(PN: 00VN271)</p> <p>Toshiba; Phoenix M5; 15360GB; 2.5"; SAS; 12Gb/s; 1 DWPD; NonSED</p> <p>(PN: 00VN314)</p> <p>Bear Cove Plus; 15360GB; 2.5"; SAS; 12Gb/s; 1 DWPD; Non-SED</p> <p>(PN: 00VN344)</p>
<p>3956-CSB/CFC (2072-312 V5030E) Firmware</p>	<p>8.5.0.13</p>

HDD (3956-CSB)	<p>Seagate Mobula 10TB, ISE, 3.5 inch, 7200 RPM, SAS 12Gb/s FW - BCHC</p> <p>Seagate Evans 10TB, ISE, 3.5 inch, 7200 RPM, SAS 12Gb/s, tier_nearline, FW BCL5</p> <p>Seagate Tatsu 10TB, ISE, 3.5 inch, 7200 RPM, SAS 12Gb/s, tier_nearline, FW BCGD</p> <p>Seagate EvansBP 10TB, ISE, 3.5 inch, 7200 RPM, SAS 12Gb/s, tier_nearline FW KCP5</p> <p>Seagate EvansBP (SED) 10TB, SED, 3.5 inch, 7200 RPM, SAS 12Gb/s, tier_nearline, FW ECP6</p>
SSD (3956-CFC / 3956XFC)	<p>Samsung 1643A 3.84TB, ISE, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash, FW MS74</p> <p>Samsung 1653 3.84TB, ISE, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash</p> <p>FW SS82</p> <p>Seagate Cooper 3.84TB, SED, 2.5 inch, N/A RPM, SAS 12Gb/s, tier1_flash, FW 8385</p>
RestAPI	Bundle Version 1.1.22

Atape	14.0.5.0
Python level	3.9.20
GPFS	GPFS Release 5.2.1.0
ITDT	9.5.2.20211117
AIX Diagnostics CD	Version 7.2
16Gbit Cisco Switch	BIOS level 2.1.17
Firmware	Kickstart software level 6.2(9) System software level 6.2(9)
32Gbit Cisco Switch	BIOS Level 1.04.0
Firmware	Kickstart software level 8.4(2a) System software level 8.4(2a)
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

## Test Processor Support Matrix

Code Name	Processor	Channel Speed
zEC12	2827	8Gbit
zBC12	2828	8Gbit
Z13	2964	16Gbit
Z14	3906	16Gbit
Z15	8561	16Gbit
Z16	3931	16+Gbit

## **PROBLEM FIXES:**

Problems fixed in this level are described below. There are 1171 enhancements/defects fixed in this release; 110 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:** Fix for issue where zSTD records cannot be uncompressed

Pervasive: No

Reference: 97454

**High Impact:** Fix for issue where zSTD records cannot be uncompressed

Pervasive: No

Reference: 97453

**High Impact:** Fix for issue where partially written logical volumes are not copied to other clusters.

Pervasive: No

Reference: 96274

**High Impact:** Fix for issue where zSTD records cannot be uncompressed

Pervasive: No

Reference: 96103

**High Impact:** Fix for issue where zSTD records cannot be uncompressed

Pervasive: No

Reference: 95959

**High Impact:** Prevent data loss of logical volume after Grid to Grid Migration (GGM), GGM was issued two times to same logical volume.

Pervasive: No

Reference: 95277

**High Impact:** HYDIN0960W and HYDIN0961W warnings added to inform customers the library is in maintenance mode and that the premigration queue is excessive

Pervasive: No

Reference: 95944

**High Impact:** Premigration does not work because borrow/return does not work.

Pervasive: YES

Reference: 95316

**High Impact:** Multiple system checkout processes running at once cause out of memory condition

Pervasive: No

Reference: 96460

**Acute:** Fix for ABEND 813-04 when trying to access cloud migrated logical volumes.

Pervasive: No

Reference: 97210

**Acute:** TCT SSL validation error occurs due to vtd\_set\_permissions

Pervasive: No

Reference: 96453

**Acute:** The TS7700 Cloud Attach cluster unexpectedly rebooted due to the Hierarchical Storage Manager (HSM) process coring.

Pervasive: YES

Reference: 96444

**Acute:** Prevent creation of zero-byte logical volume which causes ghost copy when logical volume is written by different cluster.

Pervasive: No

Reference: 96362

**Acute:** First time data capture for missing cluster heartbeats

Pervasive: No

Reference: 94831

Serious: Cloud Storage Tier AWS connection problems

Pervasive: No

Reference: 97005

Serious: Database export to cloud failed.

Pervasive: No

Reference: 96839

Serious: Sick but not dead cluster due to stuck processes

Pervasive: No

Reference: 96584

Serious: Cluster reboot due to cloud, container or object names exceeding 255 characters.

Pervasive: No

Reference: 96578

Serious: Cluster reboot

Pervasive: No

Reference: 96516

Serious: Cluster reboot MDE B070

Pervasive: No

Reference: 96147

Serious: Cluster reboot

Pervasive: YES

Reference: 95131

Serious: Cluster reboot MDE C095

Pervasive: No

Reference: 94762

Serious: Stuck copies after LI REQ command to decrease the number of copy threads

Pervasive: No

Reference: 93949

Serious: Partial logical volumes cannot be mounted or read

Pervasive: YES

Reference: 88889

Serious: First time data capture to collect fresh cache snaps for CSB and CFD

Pervasive: No

Reference: 97662

Serious: Join failure

Pervasive: No

Reference: 97613

Serious: Degraded checkout messages due to missing FRU 01FT753 (PN 01FT751)

Pervasive: No

Reference: 97546

Serious: Grid link degrades reported in system checkout

Pervasive: No

Reference: 97545

Serious: Missing call home for FRU: 02XX946(PN:01FT757 and 01FT751) / 03PL334(PN:01FT754 )

Pervasive: No

Reference: 97543

Serious: HYDGE4749I checker issue with Data Classes control

Pervasive: No

Reference: 97541

Serious: Join fails after checkpoint 90

Pervasive: No

Reference: 97449

Serious: Address an issue where the MI login fails if the administrator account is not correctly set in the database

Pervasive: YES

Reference: 97236

Serious: IO drawer FCS card replacement fails with SMagent errors

Pervasive: No

Reference: 97235

Serious: Dual Control: incorrectly stating not enough checkers available

Pervasive: No

Reference: 97206

Serious: Dual Control: LDAP user create/modify operation gets discarded

Pervasive: No

Reference: 97205

Serious: Internal error HYDME0291E when trying to access Data Class constructs

Pervasive: No

Reference: 96951

Serious: Join failed at vpd synchronization

Pervasive: No

Reference: 96883

Serious: Unable to setup Cloud via MI due to network customer network issue

Pervasive: No

Reference: 96649

Serious: Failed frame replace due to incorrect enclosure sequencing

Pervasive: YES

Reference: 96556

Serious: Code upgrade from 8.52.102.13 to 8.54.1.27 fails due to encryption

Pervasive: No

Reference: 96532

Serious: Cache system checks issuing unnecessary VPD calls

Pervasive: No

Reference: 96495

Serious: vtd\_exec.081 line 2824: /usr/lpp/vtd.hnode.hdb/keyck: not found

Pervasive: No

Reference: 96440

Serious: RCL Upgrade code failure to complete act\_go

Pervasive: No

Reference: 96365

Serious: Database restore fails without giving an error message.

Pervasive: No

Reference: 96187

Serious: Cloud MES propagate SG settings to all clusters

Pervasive: No

Reference: 96127

Serious: False [81AD] Found data volumes that were unexpectedly deleted by Cache Walk error reported.

Pervasive: No

Reference: 95986

Serious: Unable to view web logs

Pervasive: No

Reference: 95963

Serious: Incorrect file permissions for java file which may cause issues encrypting/decrypting strings.

Pervasive: No

Reference: 95954



Serious: Add additional logging information for processes in CLOSE\_WAIT state and increase threshold before posting error.

Pervasive: No

Reference: 95931

Serious: Fix timing issue for back-up of certificates, Customer tries to replace a certificate it fails, and the original certificate was deleted.

Pervasive: No

Reference: 95615

Serious: Cluster fails to go online

Pervasive: No

Reference: 95091

Serious: System checkout hung after code upgrade

Pervasive: No

Reference: 95078

Serious: Prevent invalid characters to be entered as IP addresses

Pervasive: No

Reference: 95012

Serious: Improve error messages for LWIKS certificate replacement.

Pervasive: No

Reference: 94972

Serious: Confusing questions as part of FTI can cause a cluster to end as a standalone cluster vs part of the grid.

Pervasive: No

Reference: 94937

Serious: Cleanup of expired certificates from the MI leaves zero-byte certificates and caused the cluster to lose connection to Encryption Key Servers.

Pervasive: YES

Reference: 94619

Serious: DR family is not updated during cluster renumbering

Pervasive: No

Reference: 94217

Moderate: EEH handler stopped running

Pervasive: No

Reference: 96738

Moderate: Cluster reboot, MDE 5602

Pervasive: No

Reference: 97117

Moderate: Once the tape library returns to operational state, host write throttling is applied till tape premig q becomes less than PMPRIOR.

Pervasive: No

Reference: 96457

Moderate: Fix timing issue preventing eject of physical volume, demount was not issued causing eject to fail.

Pervasive: No

Reference: 95830

Moderate: RUN device end held for 4 minutes due to cloud object check

Pervasive: No

Reference: 95621

Moderate: LDAP login from the MI fails after code upgrade

Pervasive: No

Reference: 97682

Moderate: Addresses an issue where the client can not create a Management Class or Logical Volume Search

Pervasive: No

Reference: 97277

Moderate: IDEA TS77-I-193 Add more information to the LVOL resp in LI REQ

Pervasive: No

Reference: 97089

Moderate: TCT object delete fails

Pervasive: No

Reference: 97085

Moderate: Data class page inaccessible

Pervasive: No

Reference: 96974

Moderate: MDE 8188 reporting Firewall check takes too long

Pervasive: No

Reference: 96816

Moderate: Unable to access the Management Interface after code upgrade

Pervasive: No

Reference: 96793

Moderate: TCT status reports offline when a customer's network goes through a proxy server.

Pervasive: No

Reference: 96539

Moderate: OP0156 Physical volume near the End of Life message includes the incorrect physical volume.

Pervasive: No

Reference: 96509

Moderate: Call home not working after First Time Install

Pervasive: No

Reference: 96443

Moderate: When user attempts to run BVIR report for PHYSICAL MEDIA POOLS, JD/JL/JE/JM media types are not being printed out.

Pervasive: No

Reference: 96203

Moderate: LI REQ DRSETUP composite setup does not fit in the 50-line limit. Add distributed library ID as a parameter.

Pervasive: No

Reference: 96175

Moderate: Enhancement for Dual Control to prevent user with two different level accounts to create new users for themselves.

Pervasive: No

Reference: 96088

Moderate: Cannot change password for a user ID with a custom role.

Pervasive: No

Reference: 96085

Moderate: Update help documentation to Add Group to a Storage Authentication Service or LDAP policy page that group is case sensitive.

Pervasive: No

Reference: 96061

Moderate: NF: Alert if premigration queue exceeds a threshold, new LI REQ keywords (ALERT, PMGQHIG, PMGQLOW)

Pervasive: No

Reference: 95130

Moderate: Delete Expired Function did not remove several old lvols as expected.

Pervasive: No

Reference: 95029

Moderate: Enabling flash copy failed the first time they attempted it, and then it did work the second time they attempted the flash copy.

Pervasive: No

Reference: 94860

Moderate: Slow RACF group search

Pervasive: No

Reference: 94356

Moderate: 8188 Check Process Grid Network Check Abort

Pervasive: No

Reference: 94147

Moderate: Sometimes MI shows an error and does not show any Historical Summary for some time ranges

Pervasive: No

Reference: 93934

Moderate: VEHSTAT report of active data show a drop of 4 PB in one hour

Pervasive: No

Reference: 93136

Moderate: VEHSTAT report of active data show a drop of 4 PB in one hour

Pervasive: No

Reference: 93128

Moderate: Improvement of empty pvol selection

Pervasive: No

Reference: 92933

Moderate: Alert if premig queue exceeds a threshold

Pervasive: No

Reference: 89253

Service: Global hydradump can cause a core on a non-cloud cluster

Pervasive: YES

Reference: 96202

Service: Fix unnecessary Call Home for CMQ invalid pointer errors after un-join had just completed.

Pervasive: No

Reference: 95294

Service: Incorrectly removed trusted certificate from keystore after customer uploaded a new certificate.

Pervasive: YES

Reference: 94602

Service: MDE B091 logical volume has a wrong mode

Pervasive: No

Reference: 94143

Service: CBR message OP0217 Inbound Copy operations for COPYRFSH

Pervasive: No

Reference: 95893

Service: Change wording of drawer related warning in system checkout

Pervasive: No

Reference: 96276

Service: Customer receiving unknown SNMP traps

Pervasive: YES

Reference: 95996



Service: Temporary error "OP0759 a problem was found on the volume or file system: GPFS"

Pervasive: No

Reference: 97180

Service: Time difference calculation for VPD response time can cause false positives which may cause unnecessary Call Homes.

Pervasive: No

Reference: 95875

Service: MDE 8082 Core dump call home

Pervasive: YES

Reference: 95528

Service: No call home for second failed DDM in the same disk pool

Pervasive: No

Reference: 96527

Service: SBND: Monitor internal process and restart to prevent cluster hung.

Pervasive: No

Reference: 95874

Improvement: False cache errors reported after act\_go

Pervasive: No

Reference: 96879

Improvement: First time data capture, failed cache MES

Pervasive: No

Reference: 96874

Improvement: First time data capture, Call Home and gather data when CRC error is detected for a logical volume.

Pervasive: No

Reference: 96375

Improvement: First time data capture, Call Home and gather data when CRC error is detected for a logical volume.

Pervasive: No

Reference: 96363

Improvement: New function, post MI Event after LI QUEUEINV completes

Pervasive: No

Reference: 96889

Improvement: New function, post MI Event after LI QUEUEINV completes

Pervasive: No

Reference: 96673

Improvement: EOL New Setting Control MediaEOL will be marked ROR or not

Pervasive: No

Reference: 96266

Improvement: Add support to post warning when physical media is near EOL(End of Life) .

Pervasive: No

Reference: 96234

Improvement: EOL New Setting Control MediaEOL will be marked ROR or not

Pervasive: No

Reference: 96233

Improvement: EOL New Setting Control MediaEOL will be marked ROR or not

Pervasive: No

Reference: 96232

Improvement: LI REQ LVOL Copy Req field output change

Pervasive: No

Reference: 96070

Improvement: New Host Command Line Request (Library, QueueInv) to initiate Library Inventory Upload.

Pervasive: No

Reference: 95318