

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Date: August 4, 2021

VRMF Level Data Results:

VRMF level From:	89.10.92.0
VRMF Level To:	89.13.7.0
Report for:	DS8900F

Code Bundle Contents

DS8900F Code Bundle Level	SEA or LMC Version:	DSCSI Client	Heat Map Transfer Utility	Storage Manager	Copy Services Manager
89.13.7.0	7.9.13.17	7.9.13.17	7.9.13.17	5.9.13.1007	6.2.12
89.12.8.0	7.9.12.19	7.9.12.19	7.9.12.19	5.9.12.1006	6.2.10
89.11.33.0	7.9.11.79	7.9.11.79	7.9.11.79	5.9.11.1029	6.2.10
89.10.92.0	7.9.10.275	7.9.10.275	7.9.10.275	5.9.10.1093	6.2.9.1

This is a summary of the fixes in the R9.1 microcode releases.

Select Modifications Included in this Release Note:

This is a list of some modifications contained across one or more LIC (License Internal Code) or microcode release(s). The potential impact is variable. Specific environments may aggravate or degrade the potential impact. Problem(s) fixed and reported in this release note may not be in higher levels of code bundles.

Definition of Problem Severity:

1	High Impact	- Acute: Irrecoverable error with potential loss of data. - Serious: Irrecoverable error with potential loss of access to data, or critical function.
2	Moderate	- A function not operational and/or performance might be degraded.
3	Service	- A recoverable error (no impact) and service improvements.
4	Improvements	- Improvement changes for better Usability and Serviceability.

HIPER: High Impact problem that is Pervasive: 3 or more occurrences

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Acute: An irrecoverable error with potential loss of data.

HIPER Potential DS8900F Data Loss during a system power outage

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6415607>
 2. **Potential Impact of Problem:** loss of data
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.12.8.0
- ID# 350299

HIPER Timeouts and drive failures on Flash Drives with low usage

1. **Problem Description:** Certain specific Flash Drive models are exposed to conditions that may lead to a permanent read error when accessing data.
<https://www.ibm.com/support/pages/node/6414097>
 2. **Potential Impact of Problem:** loss of data
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.12.8.0
- ID# 352345

Potential SGC volume corruption

1. **Problem Description:** A timing window exists in DS8900F running R9.1 code, where SafeGuarded Copy and z/OS Space Release, or open system Unmap, may both update a volume metadata track at the same time. This will cause the affected SafeGuarded Copy volume to be unusable.
 1. **Potential Impact of Problem:** loss of data
 2. **Problem Severity:** High Impact
 3. **Pervasive Problem:** No
 4. **Release Bundle:** 89.12.8.0
- ID# 352850

SafeGuarded Copy volume stuck in Rolloff state

1. **Problem Description:** After an error recovery event during SGC Rolloff, SGC consistency group formation fails with "try later" sense.
 2. **Potential Impact of Problem:** Loss of SafeGuarded Copy
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.12.8.0
- ID# 353027

HIPER Inconsistent SafeGuarded Backup data

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6368715>
 2. **Potential Impact of Problem:** Data inconsistency
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 349398

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Healthcheck SRC=BE33CEE1 callhome

1. **Problem Description:** During base and alias volume creation, insufficient locking may lead to incorrect LRC calculation.
 2. **Potential Impact of Problem:** loss of data
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 344090

0x10F7 MLE during array rebuild

1. **Problem Description:** During array rebuild, track recovery was unable to completely restore an unreadable track from the copy in cache.
 2. **Potential Impact of Problem:** loss of data
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346492

HIPER Inconsistent data on secondary after error recovery

1. **Problem Description:** Error recovery in DS8000 during Metro Mirror or FlashCopy Consistency Group formation, and with multiple LSSs in the consistency group, may result in one or more LSSs coming out of freeze earlier than the others.
 2. **Potential Impact of Problem:** Data inconsistency
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347624

Potential data inconsistency after failover

1. **Problem Description:** IBM i systems may encounter inconsistent data when skip writes are interrupted by cluster hardware failover.
 2. **Potential Impact of Problem:** loss of data
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348193

Inconsistent data on secondary after error recovery

1. **Problem Description:** Error recovery while forming PPRC Consistency Groups, across multiple LSSs, may result in one or more LSSs coming out of freeze earlier than the others.
 2. **Potential Impact of Problem:** Data inconsistency
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348783

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Pinned non-retryable data in cache after cluster failover

1. **Problem Description:** During failover, a narrow window exists where a task control block for a format write operation was not processed.
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348842

Pinned data after power loss

1. **Problem Description:** During IML with modified data, an exposure exists where a previously queued commit may not be restored to cache.
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 350519

Serious: An irrecoverable error with potential loss of access to data, or critical function.

Incorrect IEA497I message issued

1. **Problem Description:** An Invalid Track Format error was mis-reported as invalid Device Control Word error.
2. **Potential Impact of Problem:** Unplanned HyperSwap
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 351060

Loss of access caused by extended PCIe error recovery

1. **Problem Description:** CPC PCIe adapter hardware failure caused LPAR failover, and extended I/O enclosure PCIe recovery.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 352893

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Repeated track ID mismatch, 0x4433 MLE, and Host Adapter fence

1. **Problem Description:** An unusual CKD command chain exposed a microcode logic error in Host Adapter code.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 353928

PPRC suspend or I/O error during Space Release

1. **Problem Description:** Error recovery while performing Space Release on a SafeGuarded Copy source, exposed a potential timing condition that can result in a deadlock.
2. **Potential Impact of Problem:** temporary loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 354006

Removing volumes from an active XRC session may cause both clusters to reboot.

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6439821>
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.12.8.0

ID# 350819

MGM session would not start after site swap

1. **Problem Description:** Metro-Global-Mirror start H1-H2-H3 failed because of incorrect Out-of-Sync track bitmaps.
2. **Potential Impact of Problem:** Replication failure
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.12.8.0

ID# 351900

Last Device Adapter fenced

1. **Problem Description:** A microcode logic error during adapter recovery caused the only available adapter to be fenced.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 341982

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

REST API failure after code bundle update

1. **Problem Description:** In systems running with an alternate internal IP address range, REST API requires manual intervention to restore Transparent Cloud Tiering function after code bundle update.
 2. **Potential Impact of Problem:** loss of access to cloud data
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350876

0x014E MLE during failback

1. **Problem Description:** Cluster failback could not complete because it could not access metadata on a quiesced rank.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351315

Pinned data after a power failure

1. **Problem Description:** Safe Data modified time was mis-calculated such that it was a negative value relative to Safe Data start time. This caused the pinned tracks to be left in NVS.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351363

Loss of access exposure running ESE Sizing Tool

1. **Problem Description:** If an LPAR is running the ESE Sizing Tool, and has a failure, the partner LPAR would be unable to take over, and would also fail. Once the system is recovered, copy services relations would have to be reconfigured. Exposure was discovered in code review.
 2. **Potential Impact of Problem:** loss of access, loss of replication
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351682

Last Device Adapter fenced

1. **Problem Description:** A microcode logic error during adapter recovery caused the only available adapter to be fenced.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 341982

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

HIPER SRC=BE352662 Host Adapter zHPF Global CRC error

1. **Problem Description:** An unusual zHPF chain led to CRC errors, and fencing of multiple Host Adapters.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 345019

I/O adapter failure caused multiple warmstarts

1. **Problem Description:** PCIe error recovery did not recognize that the adapter was presenting power fault
 2. **Potential Impact of Problem:** Multiple warmstarts
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 345611

0x01B7:801A MLE

1. **Problem Description:** Summary Event Notification processing is using inefficient iterative methods, contributing to thread timeouts.
 2. **Potential Impact of Problem:** ODD Dump, Warmstart, Failover, or HyperSwap Failure
 3. **Problem Severity:** Varies depending on workload
 4. **Pervasive Problem:** Yes - ODD Dump
 5. **Release Bundle:** 89.10.92.0
- ID# 345941

SRC=BE1E218D Fixed block microcode timeout

1. **Problem Description:** SafeGuarded Copy ran into an out-of-space condition, but older backups were not rolled off.
 2. **Potential Impact of Problem:** Temporary loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346455

Data inaccessible exposure after input power failure

1. **Problem Description:** If Rack 1 loses power ~6 seconds before Rack 2, some ranks may require manual intervention once power is restored.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346582

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

VRAID adapter left in service mode

1. **Problem Description:** After a pseudo-repair of a VRAID adapter, the adapter was left in service mode. Subsequent repair of the partner adapter was allowed to proceed, causing loss of access.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346737

SafeGuarded Copy filling up extent pools

1. **Problem Description:** SGC was filling up pools faster than older backups were being removed. Fix provides a pokeable setting to fail the SGC relation if the pools are filling up, to avoid failing host I/O.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347244

Repeated 0x0109 MLEs running Concurrent Copy

1. **Problem Description:** 0x7D0E ODD Dump failed to clear a lock, leading to multiple 0x0109 MLEs and repeated warmstarts.
 2. **Potential Impact of Problem:** Repeated warmstarts, single cluster reboot
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347490

NVDIMMs deconfigured after power failure

1. **Problem Description:** After a hard power off, a p9 firmware problem caused NVDIMMs to be deconfigured.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347579

Repeated warmstarts and LPAR reboot

1. **Problem Description:** Device Adapter MLE processing invalid failed track logs led to repeated warmstarts, and reboot of both clusters.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 349270

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x0632 MLE and cluster failover

1. **Problem Description:** A microcode logic error was encountered while converting a Global Copy primary relation with change recording, to MetroMirror and start Incremental Resync.
2. **Potential Impact of Problem:** Warmstarts, cluster failover, Possible loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349654

FB background task timed out

1. **Problem Description:** I/O bay PCIe issues led to I/O timeout after waiting 5 minutes for a SCSI Command to complete.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349671

0x1024 MLE and dual reboot

1. **Problem Description:** When expanding a large extents volume that does not end on an extent boundary, and had been migrated from a different geometry, the first and last track information for the last extent may be mis-calculated.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349898

Multiple 32Gb Host Adapters fenced

1. **Problem Description:** zHPF Format Write with an irregular track format was mis-handled by the HA firmware. Only 32Gb adapters are susceptible to this condition.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349936

Potential Loss of Access using DB2 System Backup Restore utility with Preserve Mirror

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6253915>
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 350053

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

TCT Recall fails with Invalid Track Number

1. **Problem Description:** Transparent Cloud Tiering Recall task that spans multiple volumes may fail because a microcode logic error handling parallel recall threads.
2. **Potential Impact of Problem:** Recall job failure
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 350598

HIPER HyperSwap may fail in a Cascaded Metro Global Mirror environment managed by CSM

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6259481>
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 350674

Moderate: A system path is not operational and/or performance may be degraded.

0x01B7:5083 MLE

1. **Problem Description:** Task timeout caused by excessive sidefile lock contention.
2. **Potential Impact of Problem:** ODD Dump
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 89.13.7.0

ID# 349736

IEA491E PPRC Suspended

1. **Problem Description:** PPRC suspend after creation of new pairs, if the first I/O is a two-track (Torn Page) atomic write.
2. **Potential Impact of Problem:** PPRC suspend with freeze
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 350891

No callhome after I/O enclosure fenced

1. **Problem Description:** Hardware resource was fenced, but no serviceable event was created.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 351183

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Host Adapter Header bad CRC

1. **Problem Description:** During an XRC read operation, the Host adapter detected an invalid Cache Record Control Block header.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 351247

Incorrect FRU call-out for PCIe link errors

1. **Problem Description:** Serviceable event called out a FRU that was not part of the error domain.
2. **Potential Impact of Problem:** Repeated service actions
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 351270

Poor TCT read performance

1. **Problem Description:** Slow Transparent Cloud Tiering reads when compression is enabled.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 351699

Repeated 0x20EC MLEs

1. **Problem Description:** During warmstart processing, a timing window exists where NVS and Cache SafeGuarded Copy metadata may end up out of sync.
2. **Potential Impact of Problem:** Warmstarts, single LPAR reboot
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
- 5.

ID# 351750

Performance (RPO) Degradation

1. **Problem Description:** Potential performance degradation in systems with large number of CPUs, caused by bitmap locking contention.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 351934

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

I/O delays on some Linux hosts during microcode update

1. **Problem Description:** During Failover/Failback, and Host Adapter Fastload, systems with 16Gb and 32Gb adapters terminate the Fiber Channel exchange without sending an abort sequence.
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352227

Unable to login to DS GUI

1. **Problem Description:** HMC was continually trying to communicate with a disconnected DS CLI session, causing the message router queue to become full.
 2. **Potential Impact of Problem:** Login failure
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352690

Performance impact running mkflash from IBM i

1. **Problem Description:** Host I/O was impacted by large numbers of Unit Attentions (State Change Interrupts) sent to the host.
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352819

Transparent Cloud Tiering slowdown

1. **Problem Description:** Timeout duration for TCT sockets can impact overall copy job performance.
 2. **Potential Impact of Problem:** degraded TCT performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352830

SRC BE1E2170 deadlock while performing SafeGuarded Copy

1. **Problem Description:** A task was holding an exclusive lock on a metadata track, while waiting in queue behind other tasks, that also needed access to that same metadata track.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353029

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Host Adapter 0xB03E MLE

1. **Problem Description:** Periodic test I/O was sent to a PPRC path that was in High Failure Rate state, but the port had been taken offline.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 353058

Global Mirror session shows as cascaded instead of Multi-Target

1. **Problem Description:** Attempt was made to create a MTIR pair where one already existed for the same volume pairs. This caused the original MTIR pairs to be set to cascaded.
2. **Potential Impact of Problem:** Full copy of data
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 353239

Enforce minimum SafeGuarded Copy multiplier value

1. **Problem Description:** Change SafeGuarded Copy minimum multiplier value to 1.5.
2. **Potential Impact of Problem:** SGC 'out of space' failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 353447

Global Copy/Global Mirror performance degraded

1. **Problem Description:** PPRC performance impacted by overly aggressive pre-staging of Customer data tracks.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 353463

Old CSM backup restored during manual version update

1. **Problem Description:** When using DS CLI 'installsoftware' to manually update to a newer Copy Services Manager version, an incorrect backup was restored.
2. **Potential Impact of Problem:** Revert CSM configuration changes
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 89.13.7.0

ID# 353660

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x05E0 MLE

1. **Problem Description:** A data track was moved from the cache fast write list, to destage wait list, while safe data commit scan was attempting to destage the track.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 354148

Latency Spikes while running SafeGuarded Copy

1. **Problem Description:** High SGC activity, combined with lock contention on the backup volumes, consumed NVS space, impacting production workload.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.13.7.0

ID# 354245, 354928

Warmstart during code update

1. **Problem Description:** During FastPath CDA, LPAR quiesce collided with a background ODD dump process.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.12.8.0

ID# 351157

DS GUI/DSCLI CMUN00018E failure accessing HMC

1. **Problem Description:** An ESSNI deadlock condition caused login token processing failures.
2. **Potential Impact of Problem:** HMC access failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.12.8.0

ID# 351973

0x7F0E MLE

1. **Problem Description:** A status field in a Data Mover task control block was updated after the task control block had been freed.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.12.8.0

ID# 352851

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x790E MLE when removing a SafeGuarded Copy volume

1. **Problem Description:** When removing a fenced SGC volume, code is trying to update tables that no longer exist.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.12.8.0

ID# 352855

0x01EF MLE while terminating SGC volume(s)

1. **Problem Description:** Terminating SafeGuarded Copy relations, that are still active, may result in a Microcode Logic Error.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 347908

HMC filesystem full

1. **Problem Description:** /tmp filesystem is filling up with NICacheEvent files
2. **Potential Impact of Problem:** HMC failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 348877

DSCLI authentication failure

1. **Problem Description:** User login timed out while synchronizing the authentication state with the peer HMC.
2. **Potential Impact of Problem:** Unable to process commands
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 349931

0x01B7:2005 MLE during FlashCopy

1. **Problem Description:** Excessive lock contention querying In-Memory Relation Table entries during cache pre-stage grouping process.
2. **Potential Impact of Problem:** ODD Dump, FlashCopy performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 350508

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x4730 MLE during logical configuration

1. **Problem Description:** When configuring a new Logical Subsystem (LSS), a timing window exists for a Microcode Logic Error, when LSS created flag is true, but performance stats table is not yet created.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350570

0x05E0 MLE

1. **Problem Description:** zHyperLink processing failed to obtain a Task Control Block, and took a wrong recovery path, leading to a Microcode Logic Error.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350974

TCT restore failure after TS7700 restarted

1. **Problem Description:** Error conditions on the Transparent Cloud Tiering network socket are not flushed by recovery routines.
 2. **Potential Impact of Problem:** Retryable restore failure
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351062

Incremental Resync failure

1. **Problem Description:** On R9.1 GA - 89.10.92.0, Metro-Global Mirror Incremental Resync from A->C with Force, will fail with 0F-7B-10 sense, if a C->L pair is present.
 2. **Potential Impact of Problem:** Replication failure
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351089

0x01B7:70E4 MLE

1. **Problem Description:** In 192 CPU systems with high Global Mirror collision activity, excessive contention on an LSS-level lock may cause task timeouts and impact performance.
 2. **Potential Impact of Problem:** Odd Dump, degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351146

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x7EB0 MLE

1. **Problem Description:** In a cascaded relationship, if Fast Reverse Restore or ReverseFlash is running on a source volume that is being removed, a mismatch of 'B' volume source and target counters may occur.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351227

0x19A4 MLE and failover during a warmstart

1. **Problem Description:** An LRC error occurred during rank creation, when a process failed to obtain a lock. Later, an unrelated warmstart discovered the LRC error, and by design, the LPAR was restarted to clean up the rank LRC.
 2. **Potential Impact of Problem:** Warmstart, single LPAR reboot
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351525

0x7DB3 MLEs during RPFLC withdraw on suspended GM primary

1. **Problem Description:** Systems running Multi-Target PPRC on R8.5 SP7 - 88.57.8.0 or R9.0 SP4 - 89.4.8.0, are exposed to Microcode Logic Errors when withdrawing Remote Pair FlashCopy relations on a Global Mirror primary that is suspended.
 2. **Potential Impact of Problem:** Warmstarts, failover
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351609, 351910

LPAR DSI during mkfbvol

1. **Problem Description:** DSI during mkfbvol if two threads try to update the LUN traces for the new volume at the same time.
 2. **Potential Impact of Problem:** LPAR DSI and failover
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 351729

Resource Manager failure

1. **Problem Description:** Resource Manager runs out of Adapter Platform Object Model (APOM) file descriptors.
 2. **Potential Impact of Problem:** Copy Service Manager / CS Toolkit communication failure
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 320360

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

MetroMirror suspended

1. **Problem Description:** Data arrived out of order at the secondary, causing the secondary to send unexpected status to the primary.
2. **Potential Impact of Problem:** PPRC Suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID# 340716

0x2475 MLE

1. **Problem Description:** A PRSD request (Prepare for Read Subsystem Data) exposed a small MLE window in Global Mirror exclusive access flag processing.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 341749

0x05E0 MLE

1. **Problem Description:** Incorrect control structures were found when presenting PPRC path notifications.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 89.10.92.0

ID# 341866

0x7003 MLE

1. **Problem Description:** With PPRC paths in a High Failure Rate condition, a data mover task was failed, while another completed with success. A microcode logic error led to reporting an illegal status combination.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 343404

Stale LDAP cache

1. **Problem Description:** ESSNI does not detect LDAP changes, and continues to use cached tokens.
2. **Potential Impact of Problem:** Security exposure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 344326

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Slow throughput running Transparent Cloud Tiering

1. **Problem Description:** Insufficient threading for TCT implementations with low per-thread bandwidth.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 344422

Host timeout during HyperSwap

1. **Problem Description:** Add a poke to disable the release space process during PPRC Failback.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 344999

CMUN02947E error removing SafeGuarded Copy volumes

1. **Problem Description:** After withdrawing SafeGuarded Copy consistency groups and terminate SGC, reservations remained on the volumes, preventing their removal.
2. **Potential Impact of Problem:** Unable to remove former SGC volumes
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 345211

XRC Suspend

1. **Problem Description:** No Record Found, or Invalid Track Format on XRC secondary, when using Remote Pair FlashCopy and/or XRC. A track update was not sent to the secondary because of improper sidefile processing.
2. **Potential Impact of Problem:** XRC Suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 345644

Copy Services Manager unable to communicate with HMCs

1. **Problem Description:** ESSNI is unable to execute firewall scripts because of a path issue.
2. **Potential Impact of Problem:** HMC communication failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346028

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

RPO falling behind

1. **Problem Description:** Large Global Mirror environments may exceed existing resource allocations for FlashCopy per cluster and port.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346138

PPRC path throughput imbalance

1. **Problem Description:** Path selection algorithms may incorrectly calculate path activity in some environments. Additional options are being provided, that can be enabled by poke.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346458

0x1D07 MLE

1. **Problem Description:** During high zHPF write activity, a write operation may encounter a microcode logic error while waiting for a data buffer.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346587

Erratic SafeGuarded Copy consistency group performance

1. **Problem Description:** SafeGuarded Copy check-in task is not running at a high enough priority.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346680

FB task timeouts after cluster hardware failover

1. **Problem Description:** After a sudden cluster down failure, PCIe error recovery may take longer than expected.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346864

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

PPRC path inoperative after a FC link event

1. **Problem Description:** Link recovery on a PPRC path led to a Destination ID (D_ID) change in the Host Adapter port, but the old D_ID also remained, creating a duplicate entry. Condition requires manual intervention to restore the path.
 2. **Potential Impact of Problem:** loss of path
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 346912

0x0109 MLE

1. **Problem Description:** Pathing thread attempted to lock a unit address control block that it already held the lock for.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346977

Vary path online failure

1. **Problem Description:** Host Adapter ports were stuck in "Remove Logical Path in Progress" state.
 2. **Potential Impact of Problem:** loss of path
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346983

I/O timeouts during V-RAID recovery

1. **Problem Description:** Array takeover after VRA failure was stalled by the secondary failure of a Flash Drive.
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347080

Stuck FlashCopy relation using BackGround Copy

1. **Problem Description:** When BGC is started and the first tracks of the target are not allocated, a timing window exists where BGC may start repeatedly on the same rank, but never move on to the next rank.
 2. **Potential Impact of Problem:** FlashCopy failure
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347081

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

EasyTier rebalance halt within the same Device Adapter pair

1. **Problem Description:** EasyTier does not rebalance when DA pairs are near full bandwidth utilization, even when source and target are within the same DA pair. Fix will allow rebalance within a DA pair, as this does not add to overall DA pair utilization
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347175

0xB10A MLE

1. **Problem Description:** Host adapter received unexpected PProcess LogOut on a PPRC path. PRLO is specific to FICON, and should not be seen on a Fibre Channel Protocol port.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347305

Global Mirror FlashCopy hang

1. **Problem Description:** While attempting to quiesce Background QuickInit on a volume, a data structure was zeroed, causing quiesce code to indicate the quiesce was still in progress
 2. **Potential Impact of Problem:** PPRC suspend
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347334

0x05E0 MLE

1. **Problem Description:** A task freed it's lock before it was completely done processing.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347497

0x6070 Host Adapter MLE

1. **Problem Description:** Host Adapter received Link Busy from a FICON channel, when no I/O was in progress.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347540

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

FlashCopy performance degradation

1. **Problem Description:** In large configurations with heavy FlashCopy usage, the system may run out of journal resources.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347611

Host Adapter communication timeout after cluster quiesce

1. **Problem Description:** Code load process requested ODD collection, but did not wait for data collection to finish, before quiescing the next LPAR.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347685

FlashCopy performance degradation with Type 2 Change Recording

1. **Problem Description:** Requests for task control blocks to set Change Recording bits were being held up
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347782

FlashCopy performance degradation

1. **Problem Description:** Lock contention for In-Memory Relation Table resources while copying large volumes, or a source to two targets.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347783

Slow cluster hard drive

1. **Problem Description:** A failing, but still operational, cluster hard drive caused performance impact, and cluster failover
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347791

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

FB BUSY STATUS on read

1. **Problem Description:** Read operation on FlashCopy source is receiving "Try later" response caused by invalid flags while checking for a revertible relation.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347832

DS GUI and DSCLI login fails with CMUN00018E

1. **Problem Description:** Authentication timeouts led to a timer failing to reset.
2. **Potential Impact of Problem:** Unable to access the HMC
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347870

Make journal block reclamation pokeable persistent

1. **Problem Description:** csjrFreshMgrTimeoutSec pokeable did not persist through cluster IML.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 347918

0x7EA8 MLE running SafeGuarded Copy

1. **Problem Description:** During check-in, an error recovery event may cause the track counter to roll backward and go negative, resulting in a Microcode Logic Error.
2. **Potential Impact of Problem:** SafeGuarded Copy failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348074

Adjust data stripe destage calculations

1. **Problem Description:** Destage code is not optimized for current stripe structure, where extents may not begin on a stripe boundary.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348119

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Read cache performance on background copy workloads

1. **Problem Description:** Changes made to improve cleaning of metadata extents created some unintended side-effects for sequential read operations.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348133

Read response times elongated by cross-cluster FlashCopy

1. **Problem Description:** While XC FlashCopy will consume more resources, multiple locking inefficiencies were found to be contributing to the problem.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348371

SafeGuarded Copy Thaw while check-in is still running

1. **Problem Description:** SGC implementations not under Copy Services Manager control may exceed the check-in default timeout.
2. **Potential Impact of Problem:** SafeGuarded Copy Failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348513

Elongated NVS wait queue times

1. **Problem Description:** Multiple QuickInit metadata destages for the same track are not being grouped into a single operation.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348729

p9 Server firmware update did not complete in the time allowed

1. **Problem Description:** NVDIMM firmware update adds ~60 minutes to the overall firmware update, causing the process to exceed the time allowed for completion.
2. **Potential Impact of Problem:** CDA suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 89.10.92.0

ID# 349010

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

XRC suspend during cluster failback to dual

1. **Problem Description:** If Remote Pair FlashCopy or XRC establish or withdraw occurs during a cluster failback, the session will suspend.
2. **Potential Impact of Problem:** XRC suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349025

0x110A MLE

1. **Problem Description:** Device Adapter failover timed out waiting for a Task Control Block.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349140

0x1159 MLE

1. **Problem Description:** Release Space is being called before I/O is fully quiesced for the extent
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349185

Global Mirror commit failed

1. **Problem Description:** GM commit failed, and pairs suspended, when a FlashCopy relation was incorrectly removed. Fix will allow GM to finish committing as many copies as possible.
2. **Potential Impact of Problem:** GM suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349269

0x1C12 MLE during Flash Drive replacement

1. **Problem Description:** Process to remove the config of the old drive collided with the process to harvest the information from the new one.
2. **Potential Impact of Problem:** Warmstart and LPAR failover
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349355

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Resource Managers hung on LPAR

1. **Problem Description:** Unable to query or stop/start RMs, or quiesce/resume the LPAR, because of a deadlock between a volume delete command, and a query operation.
2. **Potential Impact of Problem:** DSCLI command failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349388

0x7D0A MLE

1. **Problem Description:** Preserve Mirror FlashCopy command required a large buffer, so a new Task Control Block was allocated to send the command to the secondary. But the calling function could not handle a callback to the new TCB, and triggered a Microcode Logic Error
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349420

Remote Pair FlashCopy failure

1. **Problem Description:** On a FlashCopy establish with multiple extents requested, the command parameter size exceeded the 8-bit integer value.
2. **Potential Impact of Problem:** FlashCopy failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349522

0x1D02 MLE running SafeGuarded Copy

1. **Problem Description:** During SGC rolloff, the Device Adapter encountered an extent with an unexpected (but legal) size.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349635

False 0x2031 MLE

1. **Problem Description:** Microcode Logic Error was triggered by a condition other than what it was designed to recover from.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 350506

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Service: A recoverable error, Service improvements.

zHyperLink wrap test missing prompt

1. **Problem Description:** While running a zHyperLink wrap test, SSR was not prompted to install the wrap plug.
 2. **Potential Impact of Problem:** Repair/Verify failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 351966

Incorrect VRAID adapter resource state

1. **Problem Description:** After a CDA recovery, VRAID adapter Resource Manager attributes incorrectly showed the adapters in 'Offline' state.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352042

Encryption key retrieval failures

1. **Problem Description:** When periodic key retrieval delivered invalid certificate data, ESSNI failed to return an error indication, because of a NegativeArraySize exception.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352068

SAN 'feping' utility fails on newer Host Adapters

1. **Problem Description:** Extended Link Service Echo command returns "not supported" response on 16Gb and 32Gb host adapters.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 352177

Management Enclosure power supply replacement failure

1. **Problem Description:** In DS8910F model 993, using Customer-supplied PDUs, repair will fail because iPDU resource manager objects show iPDU state is "Not Present".
 2. **Potential Impact of Problem:** Repair action failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353307

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

CDA suspend while second LPAR is being updated

1. **Problem Description:** An ESSNI query of a new Resource Manager attribute caused the Resource Manager to terminate.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353588

DS CLI 'setauthpol' failures

1. **Problem Description:** Some parameters in the setauthpol command are rejecting values containing spaces.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353722

0x01B7:1000 MLE

1. **Problem Description:** Insufficient retries allowed for NVS Track ID list lock spin processing.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353730

Attention LED turned off

1. **Problem Description:** Health checker turned off the Attention LED when a problem had not yet been resolved.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353778

Incorrect FRU list order

1. **Problem Description:** HPFE Gen2 midplane VPD error incorrectly prioritizes Expander module replacement before the midplane.
 2. **Potential Impact of Problem:** Repeated service actions
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 353886

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

mkaliasvol fails with CMUN04003E error

1. **Problem Description:** Creating multiple CKD alias volumes may trigger an internal Resource Manager core dump, if the RM exceeds available resources.
 2. **Potential Impact of Problem:** Failure to create PAVs
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 354071

SRC BE19005A caused by RPC register corruption

1. **Problem Description:** While running a procedure to recover the Storage Facility Resource Manager configuration to the HMC, parallel threads were accessing the same RPC register location, leading to corrupted register contents.
 2. **Potential Impact of Problem:** Repeated repair actions
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 354545

Code bundle activation hang

1. **Problem Description:** A locking exception caused the code update process to hang while backing up HMC critical data.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.12.8.0
- ID# 351993

Security Key Lifecycle Manager configuration failure

1. **Problem Description:** Key size error when adding a SKLM server that uses IBM Proprietary Protocol over TCP port 1441, or upgrading an existing IPP server to a version that uses port 1441.
 2. **Potential Impact of Problem:** Unable to configure SKLM
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.12.8.0
- ID# 352152

0x01B7:50DB MLE

1. **Problem Description:** A task timed out because a prior task in the thread ran longer than expected.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350212

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Remove unused AOS Access Control List entries

1. **Problem Description:** Clean up ACL entries in the Assist OnSite remote support configuration file.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350357

Incorrect TKLM status display

1. **Problem Description:** lskeymanager command incorrectly showed 'critical' status when a thread with multiple processes exceeded the timeout value.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350404

MES install failure

1. **Problem Description:** Drive failure during HPFE Gen2 MES install required manual intervention to complete the install.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350777

Unable to export system summary using DS GUI

1. **Problem Description:** An empty attribute in an HMC Resource Manager object caused a number format exception.
 2. **Potential Impact of Problem:** Export function failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.11.33.0
- ID# 351420

LPAR Extended Error Data not offloaded to HMC

1. **Problem Description:** During serviceable event data collection, a microcode logic error cause some LPAR Extended Error Data (EED) types to be missed.
 2. **Potential Impact of Problem:** First-Time Data Capture failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350555

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

CSM update failure on HMC1

1. **Problem Description:** When Copy Services Manager is updated using DSCLI via HMC1, installation files are not removed after update is completed on HMC2. Install process then fails on HMC1, because it does not have space to download the files again.
 2. **Potential Impact of Problem:** CSM upgrade failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350684

Unable to determine user role permissions in logs

1. **Problem Description:** Custom user role permissions are only shown when creating them. Once those logs are wrapped, the permissions assigned to a custom user role cannot be determined.
 2. **Potential Impact of Problem:** Extended problem determination
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350757

Resource Manager crash during system field install

1. **Problem Description:** During flash drive certify phase, a timing window exists where Storage Enclosure Power Supply Unit harvest may trigger Resource Manager process to fail.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350758

0x063C MLE and failover during system field install

1. **Problem Description:** During system install, one server initially came up with a reduced number of available processors. This caused the Host Adapter Port harvest function to exceed system resources.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350763

MES install failure

1. **Problem Description:** Drive failure during HPFE Gen2 MES install required manual intervention to complete the install.
 2. **Potential Impact of Problem:** Extended service action
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350777

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Missed key server responses

1. **Problem Description:** When key server is configured using IP addresses, code incorrectly tries to reverse-resolve the address. If the name server does not contain PTR records for the key servers, the key server handshake may not complete in time.
2. **Potential Impact of Problem:** Key server degraded indication
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0
ID# 350988

Unable to export system summary using DS GUI

1. **Problem Description:** An empty attribute in an HMC Resource Manager object caused a number format exception.
2. **Potential Impact of Problem:** Export function failure
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 89.11.33.0
ID# 351420

Incorrect information in mkauthpol command help

1. **Problem Description:** mkautopol 'short' usage help message is showing [-enc enabled|disabled] flag, but the function is not implemented.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0
ID# 351524

0x7D0E MLE running XRC or Concurrent Copy on VM with minidisks

1. **Problem Description:** Code attempted to free a lock that was already freed.
2. **Potential Impact of Problem:** ODD Dump (88.11.45.0 and later)
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 89.10.92.0
ID# 324851

DS GUI display issue using Multi-Target Incremental FlashCopy

1. **Problem Description:** When FlashCopy pairs are designated as Multi-Incremental (Type 2), the DS GUI table does not show anything in the "Recording" column. FlashCopy Properties display, and DSCLI, are not affected.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0
ID# 334418

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x01B7:506A MLE

1. **Problem Description:** Metadata lock contention on Metro Mirror secondary when it is also a Global Copy or Multi-Target Incremental Resync primary.
 2. **Potential Impact of Problem:** ODD dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 337694

0x01B7:1006 MLE

1. **Problem Description:** A segment pool function is holding a thread longer than allowed.
 2. **Potential Impact of Problem:** ODD dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 338996

REST API shows incorrect CKD capacity

1. **Problem Description:** Capacity units were changed from extents for both Fixed Block and Count-Key-Data, to MB for FB, and cylinders for CKD. But conversion was not provided for cylinders to MB.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 341739

0x7E3A MLE with Global Mirror FlashCopy

1. **Problem Description:** Extent-Space-Efficient space release during background copy encountered a microcode logic error.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 341999

LPAR dumps "re-compressed" during IML

1. **Problem Description:** When pruning old dumps, the newest should not be pruned, regardless of age.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 342391

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0x01B7:3043 MLE

1. **Problem Description:** High numbers of unsolicited status interrupt threads may encounter ReConnect Control Block contention, leading to thread timeouts.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 343541

Ambiguous HyperSwap failure sense

1. **Problem Description:** In a HyperSwap "go to sync" failure, the sense needs an additional qualifier to clarify the reason for the failure.
 2. **Potential Impact of Problem:** Extended problem determination
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 345088

DS GUI export incomplete

1. **Problem Description:** Current GUI Export System Summary function does not provide all the information that the previous GUI export provided. But previous GUI export may not provide reliable information.
 2. **Potential Impact of Problem:** Incorrect exported information
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 345308

0x01B7:506A MLE

1. **Problem Description:** Lock contention on Copy Services SideFile and eXtended Distance Consistency Session locks, during periods of high Global Mirror collision activity.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** Yes
 5. **Release Bundle:** 89.10.92.0
- ID# 345989

0x5170 MLE

1. **Problem Description:** FlashCopy withdraw encountered a deadlock condition when the target volume was also in Validation Required state.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346528

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Unable to access DS GUI

1. **Problem Description:** After code update, DS GUI cache refresh was slowed by query threads consuming large amounts of CPU time.
 2. **Potential Impact of Problem:** DS GUI login failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346852

CMUN80000E login failure after Customer network IP change

1. **Problem Description:** If the first configured remote authentication URL is unreachable, HMC does not retry over the second configured URL.
 2. **Potential Impact of Problem:** Unable to authenticate via LDAP
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 346946

CSM communication failure

1. **Problem Description:** A stuck thread in ESSNI causes queries from Copy Services Manager to fail. This change will perform a thread dump when an ESSNI PE package is collected prior to restart.
 2. **Potential Impact of Problem:** CSM in Severe status
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347048

0x7E1D MLE during PMFLC establish on cascaded secondary

1. **Problem Description:** After waiting 15 seconds for sync to complete, primary retried the Preserve Mirror FLashCopy establish, but retry found the relationship already exists.
 2. **Potential Impact of Problem:** ODD Dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347123

Incorrect DSCLI help text

1. **Problem Description:** Help text for lsckdvol and lsfbvol commands shows columns that are not shown by DSCLI itself.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347203

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

0xB049 MLE

1. **Problem Description:** Read Diagnostic Parameter scan flag was set in the Host Adapter port, but RDP sequence never arrived.
 2. **Potential Impact of Problem:** ODD dump
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347205

Private network IP range change fails with peer node offline

1. **Problem Description:** Process to re-establish peer node communication can fail because of intermittent network issues. Fix changes the process to a more resilient method.
 2. **Potential Impact of Problem:** Extended service procedure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347535

Incorrect attribute name in REST response

1. **Problem Description:** In PPRC query response, attribute "name" was used, rather than "ID".
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347769

Change DS GUI column names

1. **Problem Description:** Rename Mirroring and FlashCopy table columns
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347801

Read/Write counters are incorrectly reporting usage

1. **Problem Description:** Interval counters may under-report sequential R/W activity
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 347829

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Change of internal address range caused code upgrade failure

1. **Problem Description:** While CDA preload was active, the internal networks were changed to an alternate address range. Subsequent code activation reverted the change on the internal servers.
2. **Potential Impact of Problem:** Extended service action
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0
ID# 347854

HMC code update failure

1. **Problem Description:** HMC failed to function after code update, because a required function was not updated.
2. **Potential Impact of Problem:** Extended code update activity
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0
ID# 347978

EasyTier shows incorrect capacity

1. **Problem Description:** For CKD, EasyTier raw data are reported in MB units, while GUI and export tool are showing the same in cylinder units.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0
ID# 348054

HMC login hang

1. **Problem Description:** Login hangs after accepting the password containing the "%" character.
2. **Potential Impact of Problem:** Unable to login
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0
ID# 348090

AOS config panel display incorrect

1. **Problem Description:** AssistOnSite config panel displays incorrectly when authenticated proxy is configured with a password containing "@".
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0
ID# 348208

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

mkarray failed with CMUN02013E

1. **Problem Description:** In device adapter pairs with an intermix of drive capacities and speeds, an array site may become intermixed because of prior failures and subsequent repair actions. If an intermixed array is removed, the intermix condition may prevent reconfiguring the array.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348279

HMC WUI failed to start up

1. **Problem Description:** During HMC reboot, functional code failed to initialize because WUI attempted to start up prematurely.
 2. **Potential Impact of Problem:** Additional reboot
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348348

HMC heartbeat callhome triggers SNMP alert

1. **Problem Description:** If SNMP is configured for Trap 3 notifications, after the next HMC reboot, SNMP will begin also reporting Trap 13 events.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348520

HMC Hardware API fails to start

1. **Problem Description:** If resource manager query returns rack2 objects first, HW API may fail to start.
 2. **Potential Impact of Problem:** Unable to login to HMC
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348614

HMC WUI fails CE and Customer login

1. **Problem Description:** CE or Customer login returned "Invalid user name or password specified" because of a Pluggable Authentication Module (PAM) failure.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 348649

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

NTP server config missing after HMC update

1. **Problem Description:** Function to remove default public NTP servers can also remove Customer-configured public NTP servers.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348834

Flash Drives rejected for SAS path errors

1. **Problem Description:** Flash drives were incorrectly rejected for SAS path errors that were affecting multiple drives.
2. **Potential Impact of Problem:** Extended service actions
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 348994

Flash drive errors not cleared during repair

1. **Problem Description:** HPFE drive error counts are preserved through the replacement process, when the same drive is still in the enclosure.
2. **Potential Impact of Problem:** Drive pseudo-repair fails
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349062

HMC filesystem full

1. **Problem Description:** Rack Power Control traces were being logged in two places.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349075

Non-Contiguous volume creation fails

1. **Problem Description:** Creating volumes fails if two ranges are specified with a gap between them.
2. **Potential Impact of Problem:** Multiple creation actions required
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349080

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Closed serviceable event reappeared after an hour

1. **Problem Description:** CDA Preload Manager process got into a deadlock trying to display "Preload complete" message to a user session that should not be receiving it.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349130

LPARs logging 'Cluster Failure' messages

1. **Problem Description:** LPAR - HMC management heartbeats failing after internal private network IP range was changed.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349188

0x01B7:1000 MLE

1. **Problem Description:** During 'stage grouping' on cascaded FlashCopy target, the thread may exceed the timeout limit.
2. **Potential Impact of Problem:** ODD dump
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349225

RemotePathStateChanged message incomplete

1. **Problem Description:** Status message should display 9 fields for PPRC path status, but only 8 are shown.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349226

HMC network description settings lost

1. **Problem Description:** During private network IP range change procedure, a persistent information file was removed.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349227

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Transparent Cloud Tiering time out with no error message

1. **Problem Description:** When an abort is received, TCT waits for the pipe to empty before posting a message
2. **Potential Impact of Problem:** ODD Dump
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349337

SDO does not report failed HPFE drives

1. **Problem Description:** Secure Data Overwrite is reporting SDO Complete, even when HPFE drives are failed.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349519

SCSI DISK_ERR5 messages on AIX host

1. **Problem Description:** When performing a write same unmap command, DS8K does not receive a data block from the host before starting the unmap.
2. **Potential Impact of Problem:** Host errors
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349562

Enclosure Service Module repair failure

1. **Problem Description:** HPFE Gen2 ESM repair failed because a prior recovery left the adapter device busses in a quiesced state.
2. **Potential Impact of Problem:** Extended repair action
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349576

Excessive metadata pre-stage activity

1. **Problem Description:** On PPRC primary, a flag is not being cleared after every valid metadata pre-stage.
2. **Potential Impact of Problem:** Unnecessary work being done
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 350070

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

False SRC=BE34002B 'Out of Spares' condition

1. **Problem Description:** A function to query predicted capacity was left open, each time it was run. Eventually enough resources were consumed, to the degree that Resource Manager functions began to fail.
 2. **Potential Impact of Problem:** Resource Management failure
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.10.92.0
- ID# 350490

Improvements: Improvements for better usability

Remove EMC super administrator HMC role

1. **Problem Description:** Remove HMC role that is no longer used.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Improvement
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.13.7.0
- ID# 350825

Add periodic midplane VPD validation

1. **Problem Description:** If Vital Product Data are corrupted or unreadable, scrub routines will detect and rewrite the VPD.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Improvement
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 340870

SafeGuarded Copy performance enhancement

1. **Problem Description:** Support a cascaded Global Mirror session to perform the SafeGuarded Copy. The cascaded session will form consistency groups when the primary GM is paused with consistency.
Note: Implementation requires APAR PH31059.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Improvement
 4. **Pervasive Problem:** No
 5. **Release Bundle:** 89.11.33.0
- ID# 350308

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Customer access to AOS logs

1. **Problem Description:** Provide ability for Customer to view and offload AOS audit logs from the HMC WUI.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 351015

LSS-Based Query for improved SGC Performance

1. **Problem Description:** SafeGuarded Copy performance improvement using a new 0x4E LSS-based query command
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.11.33.0

ID# 351100

Improve accuracy of DS GUI performance graph

1. **Problem Description:** Add Read Physical Disconnect Time and Write Physical Disconnect time to Device Performance Statistics.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346042

Allow SafeGuarded Copy target to be persistent

1. **Problem Description:** For GDPS environments, support is added to allow persistent SGC volumes.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 346529

Enhance host health checking on secondary volumes

1. **Problem Description:** Allow FICON Read Accessibility Mask (RAM) command to a secondary device
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349826

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Improve storage enclosure cable check

1. **Problem Description:** Storage enclosure mis-cabling during field install
2. **Potential Impact of Problem:** Extended install duration
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No
5. **Release Bundle:** 89.10.92.0

ID# 349842

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

Trademarks

The following terms are trademarks of the International Business Machines Corporation in the United States, other countries, or both.

- > AIX
- > Enterprise Storage Server
- > ESCON
- > FICON
- > i5/OS
- > iSeries
- > IBM
- > pSeries
- > S/390
- > System Storage
- > TotalStorage
- > z/OS
- > zSeries

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at Copyright and trademark information at <http://www.ibm.com/legal/us/en/copytrade.shtml>. Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, and Windows NT are trademarks of Microsoft Corporation in the United States, other countries, or both.

© Copyright IBM Corp. 2004, 2011

Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

IBM System Storage - DS8900F Disk Storage

89.10.x.x Release Notes Cumulative Summary v3

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATIONS "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.