

IBM System Storage DS8700 Disk Storage

76.10.xx.x Release Notes Cumulative Summary v3

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Date: February, 2012

VRMF Level Data Results:

VRMF level From:	76.10.122.0
VRMF Level To:	76.10.144.0
Report for:	DS8700

Code Bundle Contents

DS8000 Code Bundle	SEA or LMC Version: Display with dscli ver command	CLI Client Level	Storage Manager Code Level
76.10.144.0	6.6.10.500	6.6.10.500	5.6.1.1520
76.10.141.0	6.6.10.410	6.6.10.410	5.6.1.1508
76.10.139.0	6.6.10.410	6.6.10.410	5.6.1.1468
76.10.130.0	6.6.10.171	6.6.10.171	5.6.1.1468
76.10.122.2	6.6.10.171	6.6.10.171	5.6.1.1468
76.10.122.0	6.6.10.171	6.6.10.171	5.6.1.1468

Select Modifications Included in this Release Note:

This is a list of some modifications contained across one or more LIC levels (License Internal Code) or microcode release(s). The potential impact is variable. Specific environments may aggravate or degrade the potential impact.

Problem(s) reported in this release note may not be in higher levels of code bundles.

Release 6.1 Microcode, 76.10.x.x was built on the 75.15.x.x base.

76.10.x.x bundles support advanced features not available in 75.x.x.x

Definition of Problem Severity:

- 1 HIPER - Acute: An irrecoverable error with potential loss of data.
- Serious: An irrecoverable error with potential loss of access to data.
- 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.

Pervasive: Problem with 3 or more occurrences

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Acute: An irrecoverable error with potential loss of data

Warmstart Re-init during CKD Sort Jobs causing data error

- 1. Problem Description:** If there is a warmstart re-init during a sort job in a CKD environment the cache fast write ID does not increment. The host application is not aware of the possible loss of the cache fast write data and does not restart the job. The data may be corrupted and the host application gets down level data for the sort job.
 - 2. Potential Impact of Problem:** loss of data
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
 - 5. Release Bundle:** 76.10.144.0
- ID#: 260801

FSP reset time-out failure results in pinned data

- 1. Problem Description:** FSP reset time-out error handling in single cluster mode could result in pinned nonretryable data due.
 - 2. Potential Impact of Problem:** Loss of access, data loss possible
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
 - 5. Release Bundle:** 76.10.122.0
- ID#: 256146

No call home for serviceable events identifying MAP3200

- 1. Problem Description:** There is no call home for serviceable events that MAP3200 needs to used, there is customer notification only. This event needs to call home as it indicates DDMs with media errors.
 - 2. Potential Impact of Problem:** Data loss
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
 - 5. Release Bundle:** 76.10.122.0
- ID#: 253804

Serious: An irrecoverable error with potential loss of access

Hosts with new WWPNs unable to re-login

- 1. Problem Description:** When multiple hosts have new WWPNs some ports will be stuck in a busy state due to a microcode error. This problem might be encountered after re-cabling host to control unit connections.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** HIPER
 - 4. Pervasive Problem:** Yes
 - 5. Release Bundle:** 76.10.144.0
- ID#: 262822

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During CCL IML of the second cluster on previous code level

1. **Problem Description:** During CCL if a failure occurs after the first cluster has completed the code update and the second cluster is allowed IML back on the lower code level after repair loss of access will occur.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.144.0
ID#: 261727

Microcode logic error results in dual cluster reboot

1. **Problem Description:** During cluster IML Back the available DA sends global metadata to the partner DA. If an error is detected in the metadata then error recovery incorrectly reboots both clusters.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.144.0
ID#: 261787

Incorrect setting on adapters after internal fabric error

1. **Problem Description:** An internal fabric error during cluster failover can result in incorrect length setting on adapters in the I/O enclosure due to a microcode error.
2. **Potential Impact of Problem:** Loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.139.0
ID#: 261801

Automated error handling incorrectly resets the I/O bay

1. **Problem Description:** Error recovery incorrectly resets the I/O bay in a specific internal I/O fabric error. This reset leaves the link signal active on the host adapters in the failing I/O bay.
2. **Potential Impact of Problem:** Loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.139.0
ID#: 261611

Processor check stop with 8Gb host adapters causes loss of access

1. **Problem Description:**
<http://www-01.ibm.com/support/docview.wss?uid=ssg1S1003931>
2. **Potential Impact of Problem:** Loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.130.0
ID#: 262681

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Internal I/O Fabric error causes DA cache read command to hang

- 1. Problem Description:** An I/O fabric error causes a DA cache read command to hang due to an internal microcode error.
- 2. Potential Impact of Problem:** Loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0
ID#: 256941

LUN marked long busy by PPRC during suspend

- 1. Problem Description:** A LUN can be marked long busy by PPRC during suspend PSF due to a microcode error.
- 2. Potential Impact of Problem:** Loss of access to LUN
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0
ID#: 246566

Performance improvement for IMS WADS datasets

- 1. Problem Description:** A change to the handling of WADS datasets will allow cache to decrease the probability of cache misses on these specific datasets.
- 2. Potential Impact of Problem:** Improved performance for IMS WADS datasets
- 3. Problem Severity:** HIPER
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0
ID#: 249265

Channel Command Word WTD with early end causes loss of access

- 1. Problem Description:** When CCW chain contains the WTD command with an 'early end' a microcode error can result in a Data Storage Interrupt. This problem requires the length of data for the WTD command be more than one record and less than two records.
- 2. Potential Impact of Problem:** Loss of access
- 3. Problem Severity:** HIPER
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0
ID#: 254445

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

GM hang condition due to a microcode error

- 1. Problem Description:** Global Mirror hang results from a microcode error. Sometimes the microcode error is detected and warmstart recovers the error and sometimes the error is not detected by microcode and warmstart must be forced to recover the error
 - 2. Potential Impact of Problem:** Global Mirror hang
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
 - 5. Release Bundle:** 76.10.144.0
- ID#: 262177

Host Adapter keeps link light active after internal fabric error

- 1. Problem Description:** Host Adapter keeps link light active after internal fabric error recovery due to a microcode error. The paths to the host adapter ports appear active for 30 seconds after the failure.
 - 2. Potential Impact of Problem:** Elongated path failure
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** No
 - 5. Release Bundle:** 76.10.139.0
- ID#: 261530

Host adapter reset for an invalid error

- 1. Problem Description:** Host adapter is reset due to an error condition being improperly detected by microcode. This results in a full adapter reset.
 - 2. Potential Impact of Problem:** Loss of path during host adapter reset
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** No
 - 5. Release Bundle:** 76.10.139.0
- ID#: 260080

Repeated warmstarts when SEFLC repository is nearly full

- 1. Problem Description:** When the repository is nearly full a microcode error can occur when working with the last slice of the repository.
 - 2. Potential Impact of Problem:** Warmstarts, FlashCopy suspend
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
 - 5. Release Bundle:** 76.10.122.0
- ID#: 245177

Global Copy initial copy performance is slow

- 1. Problem Description:** Global Copy initial copy performance is slow when the target mapping is not 1:1 due to a microcode error.
 - 2. Potential Impact of Problem:** Increased copy times
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
 - 5. Release Bundle:** 76.10.122.0
- ID#: 245034

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I/O Priority Manager excessively throttles medium priority I/O

- 1. Problem Description:** For open systems configurations I/O Priority Manager will excessively throttle I/O on the volumes in the medium priority group, approximately 4x the expected value.
- 2. Potential Impact of Problem:** Poor performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes
- 5. Release Bundle:** 76.10.122.2

ID#: 259186

PPRC secondary not able to send asynchronous messages

- 1. Problem Description:** When PPRC initiator logs out and back in a PPRC secondary is unable to send asynchronous messages to the primary.
- 2. Potential Impact of Problem:** PPRC suspend or performance problems
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0

ID#: 251371

Cluster failover on GM master results in degraded I/O performance

- 1. Problem Description:** Cluster failover on GM master may result in a large number of out of sync tracks. After failover consistency groups with many out of sync tracks can result in degraded I/O performance
- 2. Potential Impact of Problem:** Performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0

ID#: 227436

Host performance issues during Global Mirror startup

- 1. Problem Description:** Global Mirror forces a drain when forming the first consistency group. This can cause host performance problems if the Global Mirror is started during heavy host work loads
- 2. Potential Impact of Problem:** Host performance impact
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes, in long distance environments
- 5. Release Bundle:** 76.10.122.0

ID#: 242323

Global Mirror extended distance session is hung

- 1. Problem Description:** Global Mirror can be hung and Consistency Groups are older than expected. This is due to a microcode error on the subordinate control unit.
- 2. Potential Impact of Problem:** GM hang, old CGs
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No
- 5. Release Bundle:** 76.10.122.0

ID#: 242476

Global Mirror drain time-out errors cause failures forming CGs

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1. **Problem Description:** After a drain failure the number of OOS tracks is not calculated correctly the first time due to a microcode error. The second and subsequent calculations are correct.
2. **Potential Impact of Problem:** Failures forming consistency groups, host performance could be impacted
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 76.10.122.0
ID#: 249937

XRC suspend caused by microcode detected error

1. **Problem Description:** XRC suspend is caused by a microcode error processing side file entries.
2. **Potential Impact of Problem:** XRC suspend, failover possible
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.122.0
ID#: 246531

Service: A recoverable error, Service improvements.

CEC op panel displays B1811404 for recovered error

1. **Problem Description:** After a temporary CEC to RPC communication failure the CEC op panel will display B1811404 due to a microcode error
2. **Potential Impact of Problem:** Unneeded RPC replacement
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.144.0
ID#: 259445

DSCLI Isavailpprcpath command returns CMUC00234I error

1. **Problem Description:** Command reject prevents all valid PPRC paths from being displayed by the Isavailpprcpath command. This problem is due to a microcode error.
2. **Potential Impact of Problem:** Invalid PPRC path information
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.144.0
ID#: 265457

DSGUI menus not accessible with Mozilla Firefox® 3.5

1. **Problem Description:** DSGUI main page will load but when a menu is selected it will not complete loading.
2. **Potential Impact of Problem:** No DSGUI access from browser
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
5. **Release Bundle:** 76.10.144.0
ID#: 264541

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Support for 4 port FSP card

- 1. Problem Description:** Add support for the new 4 port FSP card.
 - 2. Potential Impact of Problem:** none
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** N/A
 - 5. Release Bundle:** 76.10.141.0
- ID#: 265609

SSD drives rejected invalidly

- 1. Problem Description:** A drive can drop sending status due to a drive firmware error. This can result in the drive being rejected if the problem occurs frequently.
 - 2. Potential Impact of Problem:** Unneeded drive replacement
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** N/A
 - 5. Release Bundle:** 76.10.139.0
- ID#: 263581

Power ePLD MES failures on 4th and 5th rack

- 1. Problem Description:** Installing the ePLD feature on 4th and 5th rack can fail from a time-out due to a microcode error.
 - 2. Potential Impact of Problem:** Failed installation, extended service
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** No
 - 5. Release Bundle:** 76.10.122.0
- ID#: 253127

Improvements: Improvement for better usability

Call home and customer notification of warmstart

- 1. Problem Description:** Call home and email notification to the user when a warmstart occurs can be enabled by IBM support.
 - 2. Potential Impact of Problem:** N/A
 - 3. Problem Severity:** Improvement
 - 4. Pervasive Problem:** N/A
 - 5. Release Bundle:** 76.10.122.0
- ID#: 254872

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