

IBM System Storage - DS8870 Disk Storage

Microcode Bundle 87.31.23.0 Release Note Information v1.1

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Release Date: March 31, 2015

VRMF Level Data Results:

VRMF level From:	87.31.16.0
VRMF Level To:	87.31.23.0
Report for:	All DS8870

Code Bundle Contents

This table includes code component reference information.

DS8870 Code Bundle Level	SEA or LMC Version:	DS CLI Client	Easy Tier Client	STAT Tool	Heat Map Transfer Utility	Storage Manager
87.31.23.0	7.7.31.50	7.7.31.50	7.7.31.50	7.7.31.50	7.7.31.50	5.7.31.1022

Overview of new features and functions supported by this release on DS8870, 242x model 961

At a glance:

- “Soft Fence” fix
- SSLv3 security vulnerability, aka “Poodle” fix
- Fixes for PPRC suspends and deadlocks
- Host I/O timeout fix
- Automatic ODD collection when PPRC secondary goes into Simplex

This new microcode release only supports the DS8870.

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: 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.

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

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Acute: An irrecoverable error with potential loss of data.

None.

Serious: An irrecoverable error with potential loss of access to data.

HIPER Volumes suspended after Hyperswap

1. **Problem Description:** DA has a race condition from the master CEC when setting and resetting the Soft Fence Pending flags on the remote owning CEC. This will leave volumes in a soft fence condition.
 2. **Potential Impact of Problem:** Hyperswap failure/Loss of Access
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** Yes
- ID#: 302939

iSeries system hang after array went read-only

1. **Problem Description:** Inquiry page C0h is not reported to iSeries hosts, preventing the host from detecting a write inhibit condition
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
- ID#: 298671

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

Global Mirror performance problem

1. **Problem Description:** The High Failure Rate (HFR) algorithm avoids performing I/O on PPRC links where timeouts have occurred. But the algorithm depends on I/O traffic to determine whether the path is still having problems. This change implements functionality to test the viability of PPRC links, at the host adapter port level.
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
- ID#: 253139

Copy Services-Cache deadlock

1. **Problem Description:** Copy Services component deadlocks while waiting for access to metadata track that is in the Cache prestage task queue.
 2. **Potential Impact of Problem:** I/O timeout, PPRC suspend
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
- ID#: 265169

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Host Adapter MLE

1. **Problem Description:** During fabric re-login after a disconnect, the host adapter returned an unexpected Remote Point Indicator value, causing a microcode logic error.
 2. **Potential Impact of Problem:** loss of path
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID#: 299032

Incorrect logical path state reporting

1. **Problem Description:** PPRC links that are in High Failure Rate (HFR) status may incorrectly transition to Failed status when coming out of HFR.
 2. **Potential Impact of Problem:** loss of path
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID#: 299525

Cache Metadata Track function hang

1. **Problem Description:** The CMT function, which is used by CS to clear certain Copy Services metadata information, hangs in r7.4 code.
 2. **Potential Impact of Problem:** Unable to perform function
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID#: 302608

Service: A recoverable error, Service improvements.

TPC - HMC communication failure

1. **Problem Description:** HMC failed to clean up sockets and threads after a connection failure, causing a file descriptor leak
 2. **Potential Impact of Problem:** TPC cannot connect to HMC
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID#: 300923

CDA failed 'updating schedule'

1. **Problem Description:** If SSR logs in HMC within a few minutes after reboot and start CDA, a deadlock between CDA problem processing activities and SFPV problem init process may cause CDA to hang
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID#: 301004

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Change warmstart notification text

1. **Problem Description:** Warmstart notification SRCs display "no service required", which may or may not be accurate.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID#: 301987

Non-deferred DDM failure did not call home

1. **Problem Description:** After DDM sparing, failed DDM should have been called home for service.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID#: 302829

Storage enclosure interface card replacement failure

1. **Problem Description:** FCIC repair fails during FRU level identify when enclosure serial number contains the letter 'T'
 2. **Potential Impact of Problem:** Extended repair
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID#: 303200

Improvements: Improvement for better usability

DCR 7520 Host Adapter port live reset

1. **Problem Description:** When a recoverable port parity error is received, all active IO will be cleaned up and the port reset without going through warmstart.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Improvement
 4. **Pervasive Problem:** No
- ID#: 293926

SSLv3 security vulnerability

1. **Problem Description:** Closes CVE-2014-3566 "Poodle" Vulnerability, in DS CIM agent by disabling SSL v3 access.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Improvement
 4. **Pervasive Problem:** No
- ID#: 302535

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