Release Date: June 23, 2017

VRMF Level Data Results:

VRMF level From:	86.31.203.0
VRMF Level To:	86.31.215.0
Report for:	All DS8800

Code Bundle Contents

This table includes code component reference information.

DS8000 Code Bundle Level	SEA or LMC Version: Used with dscli ver command.		Storage Manager Code Level
86.31.215.0	7.6.31.4080	7.8.23.87	5.6.31.1405

Overview of new features and functions supported by this release on DS8800, 242x model 951

At a glance:

- Unified DSCLI version
- Remote Support Console option
- Problem fixes
- Serviceability enhancements
- Improvements

This new microcode release supports only the DS8800.

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

Acute: An irrecoverable error with potential loss of data.

HIPER When running Global Mirror on DS8000, if the host requests an update to a track that is in transit via the background copy process, the data for that track may be sent incorrectly to the secondary

1. Problem Description: http://www.ibm.com/support/docview.wss?uid=ssg1S1010217

2. Potential Impact of Problem: loss of data

Problem Severity: HIPER
 Pervasive Problem: Yes

ID#: 326551

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

Call Home on first instance of a Host Adapter MLE

- 1. **Problem Description:** Original design of DS8K was not to call home for HA Microcode Logic Errors until the third occurrence. These are normally recoverable by warmstart, but in some cases, temporary loss of access can occur.
- 2. Potential Impact of Problem: loss of access

3. Problem Severity: High Impact

4. Pervasive Problem: No

ID#: 310655

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

DDM media errors caused performance impact

- 1. Problem Description: Fix lowers correctable media error thresholds
- 2. Potential Impact of Problem: degraded performance

3. Problem Severity: Moderate

4. Pervasive Problem: No

ID#: 321413

0x7D10 MLE

- 1. **Problem Description:** Microcode Logic Error caused by a race condition between checkpoint process and volume create
- 2. Potential Impact of Problem: Warmstart

3. Problem Severity: Moderate

4. Pervasive Problem: No.

ID#: 321631

Performance degraded on workloads dependent on hw reserves

- 1. **Problem Description:** Hardware device reserve processing may delay allowing a disconnected device to reconnect
- 2. Potential Impact of Problem: degraded performance

3. Problem Severity: Moderate

4. Pervasive Problem: No

Long I/O and transaction purge during XRC Resync

1. Problem Description: Merge of XRC metadata N and N-1 bitmaps can cause performance impact with large volumes

2. Potential Impact of Problem: degraded performance

3. Problem Severity: Moderate4. Pervasive Problem: No

ID#: 326652

Service: A recoverable error, Service improvements.

Incomplete lost frame analysis

1. Problem Description: Fibre Channel Lost Data Frame counters also include counts for Lost Non-Data Frames. Also there is no summary for lost non-data frame counts

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

ID#: 298786

DSCLI will not install in Windows 10 environment

1. Problem Description: DSCLI installer using an older version of InstallAnywhere that is not compatible with Windows 10

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

ID#: 314695

Secure Data Overwrite false pre-check failure

1. Problem Description: Drives were in a good state for SDO, but failed pre-check because a service state flag was not reset.

2. Potential Impact of Problem: Extended SDO duration

3. Problem Severity: Service4. Pervasive Problem: No

ID#: 322705

Change Assist OnSite Access Control List group

1. Problem Description: Change to allow only the single AOS ACL group IBM/BLUE/GTS/EMEA/STORAGE/DS8000 for EMEA systems.

2. Potential Impact of Problem: none

3. Problem Severity: Service4. Pervasive Problem: No

ID#: 324050

DDM Serviceable Event lists wrong DDM serial number

1. Problem Description: When multiple DDMs are rejected from an array, the DDM serial number in the FRU callout may be incrorrect

2. Potential Impact of Problem: none

3. Problem Severity: Service4. Pervasive Problem: No

Security scan flags SLPd service active

1. **Problem Description:** Service Location Protocol service was left active when CIM Agent was not running

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

ID#: 324342

HMC WUI broken NLS support

1. Problem Description: HMC WUI shows garbage characters in IE11 if set for Japanese language.

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

ID#: 324566

Multiple drives rejected in an enclosure during power cycle

1. **Problem Description:** Drive notification of power off was incorrectly treated as an error.

2. Potential Impact of Problem: Extended service action

3. Problem Severity: Service4. Pervasive Problem: No

ID#: 325229

No serviceable event for HMC ethernet adapter failure

1. Problem Description: Add detection code for adapter interface errors, and generate callhome

2. Potential Impact of Problem: none

3. Problem Severity: Service4. Pervasive Problem: No

ID#: 325469

Callhome fails via modem

1. Problem Description: After update to R6.3 SP15, call home via modem doesn't generate a PMH

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

ID#: 325953

Hung Device Adapter health check process

1. Problem Description: DA health check process was hung, which then prevented subsequent health checks to run.

2. Potential Impact of Problem: none

3. Problem Severity: Service

4. Pervasive Problem: No

ID#: 326097

Repaired HPFE SES error reported again after CDA

1. Problem Description: LPAR SES log directories were not sync'd to the new CDA preload image.

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

Restore ICSs and CS Pokes after LPAR hard drive rebuild

1. Problem Description: Add necessary directories to HDR backup restore list.

2. Potential Impact of Problem: none

Problem Severity: Service
 Pervasive Problem: No

ID#: 326561

Improvements: Improvement for better usability

Update AOS to latest 4.0.1

1. Problem Description: Assist OnSite maintenance release

Potential Impact of Problem: none
 Problem Severity: Improvement

4. Pervasive Problem: No

ID#: 320543

Change notification time for HMC network surveillance errors

1. Problem Description: Enables function in WUI to change the current 8 hour notification time to a shorter value

Potential Impact of Problem: none
 Problem Severity: Improvement

4. Pervasive Problem: No

ID#: 326007

Remote Support Console

1. **Problem Description:** Add support for RSC method for remote access.

Potential Impact of Problem: none
 Problem Severity: Improvement
 Pervasive Problem: No

ID#: 325539

RSC auto-reconnect after HMC reboot

1. Problem Description: After rebooting HMC, Remote Support Console will auto-reconnect to an existing session.

Potential Impact of Problem: none
 Problem Severity: Improvement

4. Pervasive Problem: No

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.

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.