

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

Release Date: July 18, 2018

VRMF Level Data Results:

VRMF level From:	New version - no previous releases
VRMF Level To:	88.40.62.0
Report for:	All DS8880

Code Bundle Contents

DS8880 Code Bundle Level	SEA or LMC Version:	DSCLI Client	Heat Map Transfer Utility	Storage Manager	Copy Services Manager
88.40.62.0	7.8.40.180	7.8.40.180	7.8.40.180	5.8.40.1076	6.2.2

Overview of new features and functions supported by this release

At a glance:

- Support for High-Capacity 7.68 TB flash drives
- Enablement of FlashCopy in Transparent Cloud Tiering
- Containers support for IBM Storage

This new microcode release supports DS8880 systems only.

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

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

Acute: An irrecoverable error with potential loss of data.

None.

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

HIPER Host Adapter LRC errors

1. **Problem Description:** Open Systems volumes having more than 15 initiators that set persistent reserve may encounter a pointer exception that results in HA LRC errors, and repeated warmstarts.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID# 333868

Start Pending, devices boxed during PPRC suspend

1. **Problem Description:** While attempting to recover a Global Mirror session that was in prepared/severe state, the suspend process was allowed an excessively long timeout value.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 333890

0x2562 MLE / 0x11B6 MLE

1. **Problem Description:** Inconsistent Device Adapter task pointers resulted in multiple Microcode Logic Errors.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 334675

Incorrect reporting of bad data block

1. **Problem Description:** Sense data sent to IBM i host incorrectly identified the first block in the track as failed, rather than the actual failing block.
2. **Potential Impact of Problem:** Incorrect error recovery
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 335122

0x10F7 MLE

1. **Problem Description:** Improper handling of multiple stage errors in a single adapter command caused microcode logic errors.
2. **Potential Impact of Problem:** Repeated warmstarts, loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 335466

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

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

0x7ECB MLE

1. **Problem Description:** During a Flash Copy withdraw and split operation, a duplicate Flash Copy relation was registered.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID# 331890

XRC suspend with msg ANT8117I

1. **Problem Description:** Ref: APAR OA54082 - XRC suspend caused by an error in consistency time handling, when a datamover is idle.
 2. **Potential Impact of Problem:** XRC suspend
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID# 332112

0x0109 MLE running DELPAIR when single cluster

1. **Problem Description:** A locking exception can occur when primary is running single cluster, and there are no paths to the secondary.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID# 332574

0x625 MLE

1. **Problem Description:** When modifying a volume group, a Task Control Block type change was processed twice.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
- ID# 333704

Global Copy caused performance impact

1. **Problem Description:** Global Copy workload may affect Metro Mirror performance when bandwidth is constrained between primary and secondary systems.
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID# 334084

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

Excessive re-copying of data with suspended PPRC pair

1. **Problem Description:** In a Multi-Target PPRC environment, when one of the pairs is suspended, tracking of Out-Of-Sync tracks may incorrectly cause unnecessary re-copying of data when the pair is resumed.
2. **Potential Impact of Problem:** Delayed PPRC resync
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID# 334763

SRC=BE172000 LPAR crash dump

1. **Problem Description:** A read thread was waiting on a lock being freed by a write thread, but was unable to access the CPU because of a microcode logic error. This caused LPAR failover and reboot.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID# 335067

Higher response times after CDA to 88.24.6.0 or later

1. **Problem Description:** Excessive cache is being allocated to sequential workloads causing increased cache demote of random tracks.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes

ID# 335470

Service: A recoverable error, Service improvements.

DS GUI displays wrong LIC bundle level

1. **Problem Description:** DS GUI incorrectly parsed the CDA history.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID# 327155

Committed Bundle VRMF not updated after CDA

1. **Problem Description:** Needed logs were pruned. This defect addresses First-Time Data Capture improvement.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID# 327902

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

DS GUI did not display VOLSER of a CKD volume

1. **Problem Description:** When a new volume was created, DS GUI did not refresh the VOLSER, because there was no old VOLSER to update.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID# 331799

HTTPS certificate chain broken after CDA

1. **Problem Description:** Customer-provided certificate chain was missing the root Certificate Authority after code bundle update
 2. **Potential Impact of Problem:** Unable to access DS GUI
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID# 331866

DSCLI 'lssestg' and 'showestg' incorrect output

1. **Problem Description:** With DSCLI bundle from R8.1 or higher, and a target system on R8.0 or lower, DSCLI shows wrong percentage values.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID# 333772

SRC=BE3A290D during IPL

1. **Problem Description:** During z System IPL, DS8880 with zHyperLinks creates unnecessary serviceable events.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID# 334322

Incorrect status displayed after MT-PPRC failback

1. **Problem Description:** After successful PPRC failback in a Multi-Target environment, query of PPRC status continues to show 'Pri-Sus'
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID# 334362

Host bay firmware update failed

1. **Problem Description:** If the initial firmware query fails, the retry path does not correctly handle some host bay location codes.
 2. **Potential Impact of Problem:** none
 3. **Problem Severity:** Service
 4. **Pervasive Problem:** No
- ID# 334889

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

HMC backups could fill up /var filesystem in LPARs

- 1. Problem Description:** Function to prune old backup files fails to remove the files.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 336080

Improvements: Improvements for better usability

None.

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

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 - DS8880 Disk Storage

Microcode Bundle 88.40.62.0 Release Note Information

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.