HPE 3PAR OS 3.2.2 MU4 Patch 102 Release Notes

Abstract

This release notes document is for Patch 102.

Notices

Acknowledgements

Purpose

The HPE 3PAR OS 3.2.2 MU4 Patch 102 provides support for new drives and drive firmware updates.

IMPORTANT:

See the **HPE 3PAR OS and Service Processor Software Update Guide (HPE 3PAR OS 3.2.x HPE 3PAR Service Processor 4.x)** for instructions on updating your specific software.

Guidance

This is an as needed patch.

Prerequisites

- SP prerequisite: SP-4.4.0.GA-58 plus the latest SP patch
- Base OS: OS-3.2.2. See Requires in Patch details.

Patch details

Patch ID: P102

Synopsis: Provides support for drive FW updates

Date: July 27, 2018, 15:36:15 PDT

Description: See the Release Notes for details about this patch

Affected Packages: tpd-drivefw, tpd-fwdb, tpd-prerevert

Obsoletes: OS-3.2.2.612-P101

Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59,OS-3.2.2.612-P84,OS-3.2.2.612-P92,OS-3.2.2.612-P94

Build Version: 3.2.2.754

Patches Partially Superseded: None

Patches Included: None

Patches Obsolete by Combination: None

Support Revert: Yes

Notes: Description of the obsoleted patches:

   Patch ID: P101

   Synopsis: Provides support for drive FW updates

   Date: January 16, 2018, 19:36:50 PST

   Description: See the Release Notes for details about this patch

   Affected Packages: tpd-drivefw, tpd-fwdb, tpd-prerevert

   Obsoletes: OS-3.2.2.612-P57,OS-3.2.2.612-P74,OS-3.2.2.612-P95

   Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59,OS-3.2.2.612-P84,OS-3.2.2.612-P92,OS-3.2.2.612-P94

   Build Version: 3.2.2.718

   Notes: Description of the obsoleted patches:

      Patch ID: P57

      Synopsis: Provides support for drive FW updates and new drives

Date: February 21, 2017, 15:51:53 PST

Description: See the Release Notes for details about this patch

Affected Packages: tpd-drivefw, tpd-fwdb, tpd-sysmgr, tpd-prerevert

Obsoletes: OS-3.2.2.612-P50

Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P56

Build Version: 3.2.2.628

Notes: Description of the incorporated patches:

    Patch ID: P50

    Synopsis: Provides support for drive FW updates and new drives

    Date: December 08, 2016, 14:35:12 PST

    Description: See the Release Notes for details about this patch

    Affected Packages: tpd-fwdb, tpd-drivefw, tpd-prerevert

    Obsoletes: None

    Requires: OS-3.2.2.612-MU4

    Build Version: 3.2.2.617

    Notes:

Patch ID: P74

Synopsis: Provides support for drive FW updates and new drives

Date: April 25, 2017, 12:44:06 PDT

Description: See the Release Notes for details about this patch

Affected Packages: tpd-drivefw, tpd-fwdb, tpd-utils, tpd-prerevert

Obsoletes: OS-3.2.2.612-P58,OS-3.2.2.612-P73

Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59

Build Version: 3.2.2.647

Notes: Description of the incorporated patches:

    Patch ID: P58

    Synopsis: Provides support for drive FW updates and new drives

    Date: March 16, 2017, 21:06:22 PDT

    Description: See the Release Notes for details about this patch

    Affected Packages: tpd-drivefw, tpd-fwdb, tpd-prerevert

    Obsoletes: None

    Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P56,OS-3.2.2.612-P57

    Build Version: 3.2.2.636

    Notes:

    Patch ID: P73

    Synopsis: Provides additional support for SSD drives

    Date: April 14, 2017, 14:45:58 PDT

    Description: See the Release Notes for details about this patch

    Affected Packages: tpd-fwdb, tpd-prerevert

    Obsoletes: OS-3.2.2.612-P72

Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P56,OS-3.2.2.612-P57,OS-3.2.2.612-P58

Build Version: 3.2.2.645

Notes: Description of the incorporated patches:

    Patch ID: P72

    Synopsis: Provides additional support for SSD drives

    Date: March 31, 2017, 19:44:14 PDT

    Description: See the Release Notes for details about this patch

    Affected Packages: tpd-fwdb, tpd-prerevert

    Obsoletes: None

    Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P56,OS-3.2.2.612-P57,OS-3.2.2.612-P58

    Build Version: 3.2.2.641

    Notes:

Patch ID: P95

Synopsis: Provides support for new drive and drive FW updates

Date: October 30, 2017, 17:48:31 PDT

Description: See the Release Notes for details about this patch

Affected Packages: tpd-drivefw, tpd-fwdb, tpd-prerevert

Obsoletes: OS-3.2.2.612-P91

Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59,OS-3.2.2.612-P74,OS-3.2.2.612-P84

Build Version: 3.2.2.710

Notes: Description of the obsoleted patches:

    Patch ID: P91

    Synopsis: Provides support for new second source drives and drive FW updates

    Date: August 14, 2017, 15:29:35 PDT

    Description: See the Release Notes for details about this patch

    Affected Packages: tpd-drivefw, tpd-fwdb, tpd-prerevert

    Obsoletes: OS-3.2.2.612-P90

    Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59,OS-3.2.2.612-P74,OS-3.2.2.612-P84

    Build Version: 3.2.2.682

    Notes: Description of the incorporated patches:

        Patch ID: P90

        Synopsis: Provides support for drive FW updates and enhanced logging.

        Date: July 31, 2017, 11:43:58 PDT

        Description: See the Release Notes for details about this patch

        Affected Packages: tpd-drivefw, tpd-fwdb, tpd-prerevert

        Obsoletes: None

        Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59,OS-3.2.2.612-P74,OS-3.2.2.612-P84

        Build Version: 3.2.2.680

        Notes:

NOTE:

Hewlett Packard Enterprise recommends installing patches in the same sequence as they are released, unless instructed otherwise.

Modifications

Patch 102 provides support for the following drives.

Drive	Category	Capacity	Speed	StoreServ 10000	StoreServ 7000	StoreServ 20000	StoreServ 8000	FW
AREX0480S5xnNTRI	SSD	480GB	100K	No	Yes	Yes	Yes	3P07
AREX0920S5xnNTRI	SSD	920GB	100K	No	Yes	No	No	3P07
AREX1920S5xnNTRI	SSD	1.92TB	100K	Yes	Yes	Yes	Yes	3P07
AREX3840S5xnNTRI	SSD	3.84TB	100K	No	Yes	Yes	Yes	3P07
AREX0400S5xnNTRI	SSD	400GB	150K	Yes	Yes	Yes	Yes	3P03
AREX0920S5xnFTRI	SSD	920GB	100K	No	Yes	Yes	Yes	3P03
AREX1920S5xnFTRI	SSD	1.92TB	100K	No	Yes	Yes	Yes	3P03
AREX3840S5xnFTRI	SSD	3.84TB	100K	No	Yes	Yes	Yes	3P03
DOPM3840S5xnNMRI	SSD	3.84TB	100K	No	Yes	Yes	Yes	3P07
DOPE0480S5xnNMRI	SSD	480GB	100K	No	Yes	Yes	Yes	3P0A
DOPE1920S5xnNMRI	SSD	1.92TB	100K	No	Yes	Yes	Yes	3P0A
STHB0600S5xeN010	FC	600GB	10K	Yes	Yes	Yes	Yes	3P03
STHB1200S5xeN010	FC	1.2TB	10K	Yes	Yes	Yes	Yes	3P03
STHB1800S5xeN010	FC	1.8TB	10K	Yes	Yes	Yes	Yes	3P03
SSKB0600S5xeN010	FC	600GB	10K	Yes	Yes	Yes	Yes	3P01
SSKB1200S5xeN010	FC	1.2TB	10K	Yes	Yes	Yes	Yes	3P01
SSKB1800S5xeN010	FC	1.8TB	10K	Yes	Yes	Yes	Yes	3P01
SSKB1200S5xeF010	FC	1.2TB	10K	Yes	Yes	Yes	Yes	3P01
HCFP0600S5xeN010	FC	600GB	10K	Yes	Yes	Yes	Yes	3P00
HCFP1200S5xeN010	FC	1.2TB	10K	Yes	Yes	Yes	Yes	3P00
HCFP1800S5xeN010	FC	1.8TB	10K	Yes	Yes	Yes	Yes	3P00
HCFP1200S5xeF010	FC	1.2TB	10K	Yes	Yes	Yes	Yes	3P00

Patch 102 addresses the following issues.

Issue ID: 210885

Issue Summary: Certain drive models cause data miscompare due to undetected writer head degradation.

Platforms affected: All StoreServ

Affected Software versions: 3.2.2 MU3 – MU6, 3.3.1 MU1 – MU2

Issue Description: The affected drive models can cause a data miscompare due to head element degradation, which, over time, loses the capability to overwrite existing data with new data. This firmware update increases the monitoring frequency and will remove the degraded disk from the system.

The following drive models are affected:

STHB0600S5xeN010

STHB1200S5xeN010

STHB1800S5xeN010

STHB0900S5xeN010

Symptoms: Data inconsistency.

Conditions of Occurrence: The affected drive models are installed.

Impact: Low

Customer Circumvention: None.

Customer Recovery Steps: None.

Issue ID: 207486, 211833, 221852, 235211, 231272, 235211

Issue Summary: Unsuccessful upgrade of HDD firmware for drive models beginning with DOPE and DOPM.

Platforms affected: All StoreServ

Affected Software versions: 3.2.1 MU5, 3.2.2 MU3 – MU6, 3.3.1 MU1 – MU2

Issue Description: The DOPE 3P0A firmware corrects an issue when upgrading DOPE drive models from firmware versions prior to 3P07. All versions of DOPE firmware can now be upgraded using version 3P0A.

The DOPM 3P07 firmware corrects an issue when upgrading DOPM drive models from firmware versions prior to 3P05. All versions of DOPM firmware can now be upgraded using version 3P07.

Symptoms: Data inconsistency.

Conditions of Occurrence: Upgrading firmware on DOPE/DOPM disk drives.

Impact: Medium

Customer Circumvention: None.

Customer Recovery Steps: None.

Issue ID: 215795, 196915

Issue Summary: Data miscompare issue with previous firmware versions.

Platforms affected: All StoreServ

Affected Software versions: 3.2.1 MU5, 3.2.2. MU3 – MU6, 3.3.1 MU1 – MU2

Issue Description: Firmware versions previous to 3P03 or 3P07 for certain AREX drive models can cause a data inconsistency issue.

Symptoms: Data inconsistency was reported.

Conditions of Occurrence: AREX0920S5xnFTRI, AREX1920S5xnFTRI, AREX3840S5xnFTRI drives with firmware prior to version 3P03.

AREX0400S5xnNTRI drives with firmware prior to version 3P03.

AREX0480S5xnNTRI, AREX0920S5xnNTRI, AREX1920S5xnNTRI, AREX3840S5xnNTRI drives with firmware prior to version 3P07.

Impact: High

Customer Circumvention: None.

Customer Recovery Steps: Upgrade the drive FW.

Issue ID: 220731

Issue Summary: The field replaceable units file is out of date.

Platforms affected: All StoreServ

Affected Software versions: 3.3.1 MU1 – MU2

Issue Description: As new drives are released, the array needs to be updated to provide the new field replaceable unit part numbers.

Symptoms: Drives show UNKNOWN in the Spare_PN field.

Conditions of Occurrence: StoreServ Systems with SSKB0600S5xeN010, SSKB1200S5xeF010, SSKB1200S5xeN010, SSKB1800S5xeN010, HCFP0600S5xeN010, HCFP1200S5xeF010, HCFP1200S5xeN010 model drives.

Impact: Medium

Customer Circumvention: None.

Customer Recovery Steps: None.

Affected components

Component	Version
Firmware Database	3.2.2.751 (P102)
Drive Firmware	3.2.2.751 (P102)

NOTE:

Applying an HPE 3PAR OS patch can cause a restart of the affected OS components. When components are restarted, events and alerts are generated and this is an expected behavior. The system continues to serve data, but existing CLI or SSMC sessions could be interrupted.

Installing Drive Firmware

After a firmware patch is installed successfully, the firmware (drive or cage) must be updated manually. To update the firmware, run the CLI command `starttask admithw -ni`. This command runs the update process as a task. Record the task ID for monitoring purposes. Monitor the task for successful completion using the CLI command `showtask -d <task_ID>`. See the appropriate upgrade documentation for details on patch installation. If the task fails, resolve the issue due to which the task failed. After the issue is resolved, issue the CLI command `starttask admithw -ni`. Note the new task ID number and monitor the `admithw` task completion. The `admithw` task should be run to successful completion as soon as possible after installing patches.

IMPORTANT:

Drive firmware patches that are installed and then reverted prior to activation of the firmware upgrade requires that the CLI command `showfirmwaredb -l` is executed after the patch revert is completed. This final, manual step in the revert process ensures that the PD state is changed from `degraded` `old_firmware` back to `normal`. While revert is possible, it is not recommended to revert a patch that delivers firmware after the `admithw` has been run.

Verification

The installation of P102 can be verified from an interactive CLI session. Issue the CLI command `showversion -a -b` to verify that P102 is listed.

```
$ showversion -a -b
Release version 3.2.2.612 (MU4)
Patches:  P56,P59,P84,P92,P94,P102

Component Name                  Version
CLI Server                      3.2.2.712 (P94)
CLI Client                      3.2.2.712
System Manager                  3.2.2.712 (P94)
Kernel                          3.2.2.612 (MU4)
TPD Kernel Code                 3.2.2.612 (MU4)
TPD Kernel Patch                3.2.2.712 (P94)
CIM Server                      3.2.2.612 (MU4)
WSAPI Server                    3.2.2.612 (MU4)
Console Menu                    3.2.2.612 (MU4)
Event Manager                   3.2.2.612 (MU4)
Internal Test Tools             3.2.2.612 (MU4)
LD Check Tools                  3.2.2.612 (MU4)
Network Controller              3.2.2.612 (MU4)
Node Disk Scrubber              3.2.2.612 (MU4)
PD Scrubber                     3.2.2.612 (MU4)
Per-Node Server                 3.2.2.687 (P92)
Persistent Repository           3.2.2.612 (MU4)
Powerfail Tools                 3.2.2.612 (MU4)
Preserved Data Tools            3.2.2.612 (MU4)
Process Monitor                 3.2.2.626 (P56)
Rolling Upgrade Tools           3.2.2.612 (MU4)
Software Updater                3.2.2.712 (P94)
TOC Server                      3.2.2.687 (P92)
VV Check Tools                  3.2.2.612 (MU4)
File Persona                    1.2.2.6-20161017
SNMP Agent                      1.8.0
SSH                             6.6p1-4~bpo70+1
```

```
VASA Provider                     2.2.10
Firmware Database                 3.2.2.754 (P102)
Drive Firmware                    3.2.2.754 (P102)
UEFI BIOS                         04.08.38
MCU Firmware (OKI)                4.8.29
MCU Firmware (STM)                5.2.53
Cage Firmware (DC1)               4.44
Cage Firmware (DC2)               2.64
Cage Firmware (DC3)               08
Cage Firmware (DC4)               2.64
Cage Firmware (DCN1)              4078
Cage Firmware (DCN2)              4078
Cage Firmware (DCS1)              4078
Cage Firmware (DCS2)              4078
Cage Firmware (DCS5)              1.93
Cage Firmware (DCS6)              1.93
Cage Firmware (DCS7)              4078
Cage Firmware (DCS8)              4078
QLogic QLA4052C HBA Firmware      03.00.01.77
QLogic QLE8242 CNA Firmware       04.15.08
QLogic 8300 HBA FC Firmware       08.01.05
QLogic 8300 HBA FCoE Firmware     08.01.05
QLogic 8300 HBA iSCSI Firmware    05.07.06
Emulex LP11002 HBA Firmware       02.82.x10
Emulex LPe12002 HBA Firmware      02.03.x11
Emulex LPe12004 HBA Firmware      02.03.x11
Emulex LPe16002 HBA Firmware      10.6.248.4
Emulex LPe16004 HBA Firmware      10.6.248.4
3PAR FC044X HBA Firmware          200A8
LSI 9201-16e HBA Firmware         17.11.00
LSI 9205-8e HBA Firmware          17.11.00
LSI 9300-8e HBA Firmware          07.00.00
```

NOTE:

When displaying the `showversion` command output from the SP, the CLI Client version is fixed in the SP code and may differ from the output from any other system.

Websites

General websites

    Hewlett Packard Enterprise Information Library

      www.hpe.com/info/EIL

    Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix

      www.hpe.com/storage/spock

    Storage white papers and analyst reports

www.hpe.com/storage/whitepapers

For additional websites, see **Support and other resources**.

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

    http://www.hpe.com/assistance
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

    http://www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:

    Hewlett Packard Enterprise Support Center
    www.hpe.com/support/hpesc
    Hewlett Packard Enterprise Support Center: Software downloads
    www.hpe.com/support/downloads
    Software Depot
    www.hpe.com/support/softwaredepot
- To subscribe to eNewsletters and alerts:

    www.hpe.com/support/e-updates
- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:
    www.hpe.com/support/AccessToSupportMaterials

> IMPORTANT:
> Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

Customer self-repair

Hewlett Packard Enterprise customer self-repair (CSR) programs allow you to repair your product. If a

CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience.

Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

http://www.hpe.com/support/selfrepair

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

Remote support and Proactive Care information
HPE Get Connected
www.hpe.com/services/getconnected
HPE Proactive Care services
www.hpe.com/services/proactivecare
HPE Proactive Care service: Supported products list
www.hpe.com/services/proactivecaresupportedproducts

HPE Proactive Care advanced service: Supported products list
www.hpe.com/services/proactivecareadvancedsupportedproducts

Proactive Care customer information
Proactive Care central
www.hpe.com/services/proactivecarecentral
Proactive Care service activation
www.hpe.com/services/proactivecarecentralgetstarted

Warranty information

To view the warranty for your product or to view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products* reference document, go to the Enterprise Safety and Compliance website:

ww.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional warranty information
HPE ProLiant and x86 Servers and Options
www.hpe.com/support/ProLiantServers-Warranties
HPE Enterprise Servers
www.hpe.com/support/EnterpriseServers-Warranties
HPE Storage Products
www.hpe.com/support/Storage-Warranties
HPE Networking Products
www.hpe.com/support/Networking-Warranties

Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

ww.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional regulatory information

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

ww.hpe.com/info/reach

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

ww.hpe.com/info/ecodata

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

ww.hpe.com/info/environment

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