# HPE 3PAR OS 3.3.1 Patch 01 Release Notes

**Abstract**

This release notes document is for Patch 01 and intended for HPE 3PAR Operating System Software 3.3.1.215.

# Contents

# Purpose

The HPE 3PAR OS 3.3.1 Patch 01 provides several quality improvements.

**Guidance**

- This patch is intended for HPE 3PAR OS 3.3.1 GA.
- This is a recommended patch.
- All HPE 3PAR StoreServ Storage Systems running HPE 3PAR OS 3.3.1 GA are susceptible to the issues corrected in this patch.

**Prerequisites**

- SP prerequisite: SP-5.0.0.0-22913
- OS prerequisites: OS-3.3.1.215-GA

**Patch details**

Patch ID: P01

Synopsis: Provides several quality improvements

Date: April 24, 2017, 11:52:40 PDT

Description: See the Release Notes for details about this patch

Affected Packages: tpd-admck, tpd-cachesvr, tpd-cli, tpd-fwdb, tpd-kernelpatch, tpd-sysmgr, tpd-prerevert

Obsoletes: None

Requires: OS-3.3.1.215-GA

Build Version: 3.3.1.217

Supports Revert: Yes

Notes:

**NOTE:**

- Applying this patch to the 3PAR OS might restart the affected OS components. With these restarts, events and alerts might be generated and this is an expected behavior. The system continues to serve data, but existing CLI or SSMC sessions might be interrupted.
- Hewlett Packard Enterprise recommends installing patches in the same sequence as they are released, unless instructed otherwise.
- When displaying the `showversion` command output from the SP, the CLI Client version is fixed in the SP code and might differ from the output displayed from any other system.

# Modifications

The following issues are addressed in this release:

**Issue IDs:** 203770, 203920

**Issue summary:** An internal data structure used by compression encounters a deficiency that results in slow compression memory management and freeing cache memory pages (CMPs).

**Affected platforms:** StoreServ 8000, StoreServ 10000, StoreServ 20000

**Affected software versions:** 3.3.1 GA

**Issue description:** A memory management deficiency related to the compression feature causes CMPs to held captive, for extended periods, when CMPs servicing other requests (zero writes) occur. This causes the remaining memory resources to deplete which in turn causes the array to become less responsive.

**Symptoms:** The System Manager and CLI commands become slow or unresponsive.

**Conditions of occurrence:** Overwrite to compressed data followed by ZERO write with special timing. Special timing is the period between the two processes - time when request to read the compressed data from back-end is made and the time when the request is fulfilled.

**Impact:** High

**Customer circumvention:** Install Patch 01 to prevent further memory utilization issues. However, installation of the patch does not release captive memory resources.

**Customer recovery steps:** Once the issue has been isolated by HPE Support, a reboot of the controller node is required.

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**Issue IDs:** 165323

**Issue summary:** The `createfsnap` task shows failure even when the snapshot creation is successful. This can also lead to retention not being enforced.

**Affected platforms:** StoreServ 7000c, StoreServ 8000, and StoreServ 20000

**Affected software versions:** 3.3.1 GA

**Issue description:** A scheduled task of creating snapshots may incorrectly report it has failed when executed from the CLI resulting in the retention not being enforced and expired snapshots will not be removed.

**Symptoms:** While creating a snapshot with retention value, snapshot is created successfully but retention value is ignored for deleting the snapshot even when limit is reached.

**Conditions of occurrence:** The array is configured with File Persona, is serving a heavy I/O load and the customer executes a large number of snapshot tasks.

**Impact:** Medium

**Customer circumvention:** Install Patch 01

**Customer recovery steps:** User can use `removefsnap` to delete snaphots which are not getting removed.

**Issue IDs:** 200606

**Issue summary:** The `showvv -s` command output may report a negative value for used size (Snp,Usr or Total) for compressed volumes.

**Affected platforms:** StoreServ 8000, StoreServ 20000

**Affected software versions:** 3.3.1 GA

**Issue description:** The `showvv -s` command output may report a negative value for used size (Snp,Usr or Total) for compressed volumes.

**Symptoms:** An obviously incorrect and negative value in one or more of the used size columns for a compressed volume.

**Conditions of occurrence:** This is a transient and infrequent occurrence when running `showvv -s` on compressed volumes.

**Impact:** Low

**Customer circumvention:** Install Patch 01

**Customer recovery steps:** None

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**Issue IDs:** 203495, 201975

**Issue summary:** De-fragmentation IO logs are incorrectly processed during a controller node down recovery situation.

**Affected platforms:** StoreServ 7000, StoreServ 8000, StoreServ 10000, StoreServ 20000

**Affected software versions:** 3.3.1 GA

**Issue description:** When defrag IO is running and a controller node goes down, the log for defrag IO is not handled correctly. When subsequent IO comes to the same offset after recovery, it will cause an unexpected controller node restart because the log is not handled correctly.

**Symptoms:** The recovering controller node restarts unexpectedly or the array may unexpectedly restart.

**Conditions of occurrence:** This may occur if a planned or unexpected node restart occurs while defrag I/O is being processed.

**Impact:** Medium

**Customer circumvention:** Install Patch 01

**Customer recovery steps:** Wait for the controller node or controller nodes to restart.

# Affected components

| Component | Version |
|---|---|
| CLI Server | 3.3.1.217 (P01) |
| CLI Client | 3.3.1.217 |
| System Manager | 3.3.1.217 (P01) |
| TPD Kernel Patch | 3.3.1.217 (P01) |

*Table Continued*

| VV Check Tools | 3.3.1.217 (P01) |
| --- | --- |
| Firmware Database | 3.3.1.217 (P01) |

# Verification

The installation of P01 can be verified from an interactive CLI session. Issue the CLI command `showversion -a -b` to verify that P01 is listed:

```
cli% showversion -a -b
Release version 3.3.1.215
Patches:  P01

Component Name                   Version
CLI Server                       3.3.1.217 (P01)
CLI Client                       3.3.1.217
System Manager                   3.3.1.217 (P01)
Kernel                           3.3.1.215
TPD Kernel Code                  3.3.1.215
TPD Kernel Patch                 3.3.1.217 (P01)
CIM Server                       3.3.1.215
WSAPI Server                     3.3.1.215
Console Menu                     3.3.1.215
Event Manager                    3.3.1.215
Internal Test Tools              3.3.1.215
LD Check Tools                    3.3.1.215
Network Controller               3.3.1.215
Node Disk Scrubber               3.3.1.215
PD Scrubber                      3.3.1.215
Per-Node Server                  3.3.1.215
Persistent Repository            3.3.1.215
Powerfail Tools                  3.3.1.215
Preserved Data Tools             3.3.1.215
Process Monitor                  3.3.1.215
Software Updater                 3.3.1.215
TOC Server                       3.3.1.215
VV Check Tools                   3.3.1.217 (P01)
Upgrade Check Scripts            170330.U004 (3.3.1.215)
File Persona                     1.3.0.74-20170309
SNMP Agent                       1.10.0
SSH                              6.0p1-4+deb7u5
VASA Provider                    3.0.12
Firmware Database                3.3.1.217 (P01)
Drive Firmware                   3.3.1.215
UEFI BIOS                        05.02.54
MCU Firmware (OKI)               4.8.60
MCU Firmware (STM)               5.3.17
Cage Firmware (DC1)              4.44
Cage Firmware (DC2)              2.64
Cage Firmware (DC3)              08
Cage Firmware (DC4)              2.64
Cage Firmware (DCN1)             4082
Cage Firmware (DCN2)             4082
Cage Firmware (DCS1)             4082
Cage Firmware (DCS2)             4082
Cage Firmware (DCS5)             2.78
Cage Firmware (DCS6)             2.78
Cage Firmware (DCS7)             4082
Cage Firmware (DCS8)             4082
QLogic QLA4052C HBA Firmware     03.00.01.77
QLogic QLE8242 CNA Firmware      04.15.27
QLogic 260x HBA FC Firmware      174.03.70
QLogic 27xx/268x HBA FC Firmware 174.03.70
```

```
QLogic 83xx HBA FCoE Firmware      08.01.05
QLogic 8300 HBA iSCSI Firmware     05.07.35
Emulex LP11002 HBA Firmware        02.82.x10
Emulex LPe12002 HBA Firmware       02.10.x02
Emulex LPe12004 HBA Firmware       02.10.x02
Emulex LPe16002 HBA Firmware       11.1.220.6
Emulex LPe16004 HBA Firmware       11.1.220.6
3PAR FC044X HBA Firmware           200A8
LSI 9201-16e HBA Firmware          17.11.03
LSI 9205-8e HBA Firmware           17.11.03
LSI 9300-8e HBA Firmware           10.00.08
```

# 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, see the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products* document, available at the Hewlett Packard Enterprise Support Center:

**www.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:

**www.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:

**www.hpe.com/info/reach**

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

**www.hpe.com/info/ecodata**

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

**www.hpe.com/info/environment**

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