



Exos[®] CORVAULT[™]

S120R002-02 Release Notes

Part Number 205071100-01, B • January 2024

Description

This package delivers firmware for the Exos CORVAULT storage enclosure.

Model	Firmware version
6575	S120R002-02

Update recommendation

This is a recommended firmware update.

NOTE After updating to S120, downgrading to S100 firmware is not supported.

Operating systems

Supported operating systems include:

- Windows 2022 Hyper-V, Windows Server 2022, Windows Server 2019
- Ubuntu 20.04 LTS, 22.04 LTS
- Debian 11, 12
- CentOS 7.90, 8.5
- Redhat RHEL 8.7, 9.1
- SuSe 12.5, 15.4
- VMWare ESXi 7.0, 8.0
- Rocky Linux 9.1

Installation instructions

To install this firmware by using either the Storage Management Console or the SFTP/FTP interface, see the *Seagate Exos CORVAULT Storage Management Guide*.

Known issues and workarounds

! **IMPORTANT** The Intelligent Drive Firmware Update feature has known issues and it is recommended not to use this feature.

ADR

Issue: Drives that are queued for Autonomous Drive Regeneration (ADR) will become `Failed` if the controller that owns them is restarted through a shutdown/restart, fail/unfail, or power-cycle operation.

Workaround: Do not perform any of the above operations while a drive is queued for ADR (drive health: `Fault`; fault description "The system needs to perform a remanufacture operation on the disk, but that operation is pending while another remanufacture operation is in progress"). The remanufacture operation typically completes within 48 hours after starting.

If a restart does occur while the drive is queued for ADR (drive usage: `Failed`; Health: `Fault`; fault description "The disk has a probable hardware failure"), replace the drive.

Issue: If a power cycle occurs while two Autonomous Drive Regeneration (ADR) operations are ongoing, the ADR operation that finishes last will result in the drive being marked as `Failed`.

Workaround: Replace the `Failed` drive.

Issue: When two Autonomous Drive Regeneration (ADR) operations start at the same time, multiple other drives can incorrectly show their status as `Degraded` for being queued for ADR.

Workaround: If drives are showing as `Degraded` for being queued for ADR (but not starting ADR), then when the two active ADRs complete, and within an applicable service window where downtime is acceptable, power cycle the system.

Issue: If both controllers are running Autonomous Drive Regeneration (ADR) operations and both also have ADR operations queued, there is a rare chance that a drive queued for ADR will become `Leftover` (`LEFTOVER`) when it is ready to start ADR, and subsequent queued drives will be `Failed` or be marked `Leftover`.

Workaround: Clear metadata on the `Leftover` drive and replace the `Failed` drives.

Firmware update

Issue: In rare cases, a system firmware bundle update operation can error out with error "BP: Error: Fatal".

Workaround: Wait 15 minutes after seeing this error and check whether the update succeeded. If it did not succeed, retry the codeload.

Issue: Downgrading controllers from S120R002-01 to S120R001-02 with Full Disk Encryption (FDE) enabled can result in the disk groups becoming `Quarantined Offline` (`QTOF` status).

Workaround: Do not downgrade from S120R002-01 to S120R001-02 if FDE is enabled. If it's necessary to downgrade, contact technical support.

Issue: In rare occasions, system firmware bundle update will fail with error "EXCEPT: timeout – timed out".

Workaround: Wait 15 minutes and then check whether the update eventually succeeded. If it did not succeed, retry the codeload.

Issue: While drive firmware is being updated with the Intelligent Drive Firmware Update (IDFU) feature, drive firmware can still be updated using the single drive firmware update method.

Workaround: If the `show firmware-update-status` command shows `IDFU In-Progress`, do not perform any other drive firmware updates. Further, it is not recommended to use IDFU in this release.

Issue: In rare occasions, a system bundle firmware update operation will fail with error "Error: Partner communication timed out".

Workaround: Retry the update operation.

Issue: In very rare cases, codeload can fail due to the midplane experiencing an I²C failure. In this case, the MC on the controller experiencing the I²C failure will be down.

Workaround: Reboot the controller that experienced the I²C failure.

Shutdown/restart

Issue: In rare cases following a shutdown/reboot or fail/unfail, multiple drive slots will show as `Degraded`.

Workaround: Within an applicable service window where downtime is acceptable, power cycle the system.

Issue: In rare cases, a controller will crash on boot during host channel diagnostics.

Workaround: Within an applicable service window where downtime is acceptable, power cycle the system. If the issue persists, replace the controller.

Issue: In rare cases, a controller can crash on boot during diagnostic tests.

Workaround: The controller will automatically recover after 3-4 minutes.

Drive pull

Issue: If a Degraded disk is pulled and replaced while its owning disk group is undergoing Reconstruct, the slot status for 5 to 11 other drives will briefly show as Degraded.

Workaround: Wait 3 minutes for the Degraded drive slot status to clear.

Issue: When multiple drive models are present in the system and multiple disk firmware bundles are loaded to the system, the bundles will incorrectly show as Active in the CLI and WBI.

Workaround: To activate one of the disk firmware bundles, ignore that the bundle status shows Active and run the `activate firmware` CLI command on the bundle.

Crash/hang

Issue: The Management Controller can hang resulting in failed logins via the WBI, Telnet, and FTP.

Workaround: Wait 6 minutes for the Management Controller to auto-recover.

Issue: In the rare case of an expander firmware crash, some drives' Usage will show Leftover (LEFTOVR).

Workaround: Clear the metadata on the Leftover drives and add them back into a disk group.

Issue: In rare cases, a controller can crash with a page fault after this sequence of operations: create a disk group, run `trust` on the disk group, and then map volumes on the disk group.

Workaround: From the partner controller, run the `unfail controller` CLI command to restore the failed controller.

FRU replacement

Issue: If a power-supply unit (PSU) is removed, old version information for the removed PSU remains displayed even though the health is reported as Fault and there is a warning for the PSU being missing or not operational.

Workaround: Replace the missing PSU.

Issue: After online expander replacement, one or more disks in a disk group become Leftover (LEFTOVR). Subsequent actions depend on whether the disk group has moved into a quarantined state.

- If the disk group is *not* quarantined (sufficient disks remain in the disk group for data integrity), the storage system will use the spare capacity to reconstruct the disk group and then rebalance the disk group. After rebalancing is complete, run the `clear disk-metadata` CLI command to clear the metadata on the Leftover disks, which will enable the disk group to automatically incorporate those disks.
- If the disk group is quarantined, run the `rescan` CLI command to recover the disk group with no data integrity issues.

If you have questions about these procedures, contact technical support.

Workaround: None.

General

Issue: Help is not available for the `abort disk-firmware-update` CLI command.

Workaround: Refer to this text:

`abort disk-firmware-update` aborts an in-progress disk firmware update operation. The batch of disks currently being updated will complete, but no further updates will start. To determine which disks were updated, run `show disksfirmware`. The minimum role is standard. The command has no parameters.

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